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# THE WAVE CAVE

INFO PACKET

!

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#### PROPOSAL CRITERIA

Create a pdf of the following information and submit via the web-form at http://wavecave.calarts.edu/call-works-spring-2022/

- a. Synopsis (50 100 words) Summary of the installation. What will one see, hear, do or experience inside the gallery?
- b. Detailed description of the piece (500 words max): Why & How: Elaborate on your conceptual intentions behind the installation, why the WaveCave specifically is an appropriate space and how you will technically achieve your vision.
- c. A diagram of the physical layout of the piece in the gallery. Can be as low-tech or hi-tech as necessary.
- d. If you are using electronics, include a system diagram.
- e. Links to your current or previous work that can help contextualize or further explain your proposal.
- f. Bio (200 words Max.)

Proposals are reviewed by a committee of CalArts music faculty and alumni. Proposals must follow the criteria above and should be clear, feasible and well considered.

\*See example proposals at the end of this document!\*

#### **BEFORE, DURING & AFTER**

#### **BEFORE**:

- Fill out an Event Checklist, included in this packet. This will ensure that your installation will be listed on the CalArts calendar. This should be done as soon as possible.
- Consider if you would like to plan to have an opening reception for your installation and if so include relevant information in the event checklist.
- Safety concerns need to be approved by the Institute Safety Coordinator before your installation date. This could include liquids, fabrics, fire hazards, etc. Contact Jason Palmer, the Risk Management Administrator at <a href="mailto:ithomas@calarts.edu">ithomas@calarts.edu</a>.

#### INSTALLATION:

- Installation begins on SUNDAY and must be de-installed by the next SATURDAY
- A copy of the key for the gallery and control room will be in the lockbox hanging from the door handle of room B309 - contact a TA ( miminissan@alum.calarts.edu
  - drewsensueweinstein@alum.calarts.edu) for the combo code.
- The artist is responsible for installing their piece. This includes independently providing materials that the WaveCave might not have and the process of physically installing the piece.
- DO NOT MOVE OR ADJUST THE SPEAKERS INSTALLED IN THE CORNERS
- Do not change the placement of the installed projectors. They are meticulously focused for their projections to fit the walls. If you need to readjust them for your installation you are responsible for refocusing them to their original settings.
- Prepare an information sheet for the display outside the WaveCave. This could include your name, the title of the piece and any information or text that you think is relevant.
- If the installation includes sound it must have a simple volume control or on/off switch. Alan Eder (<a href="mailto:aeder@calarts.edu">aeder@calarts.edu</a>), CalArts' piano tuner, often works in the ROD foyer and needs to be able to have access to temporarily turn off the sound from the installation so he can properly do his work! Leave a sheet in the control room with simple, legible and clear instructions for how to to quickly turn off the sound.

#### **DE-INSTALLATION:**

- Return the key to the lockbox!!!
- Leave the space in better shape than you found it:
- Make sure projectors, audio equipment or computer settings are set back to their original settings if they were adjusted.
- Keep the equipment organized and make sure all of your work is out of the space.
- Clean up any materials or trash left in the control room.

#### DOCUMENTATION:

Once everything is installed, it is requested that you send the following documentation to <a href="mailto:clay@calarts.edu">clay@calarts.edu</a> before the end of your installation.

- a) 1 to 5 very high resolution photo(s). Make sure at least one is an overall image of the entire space.
- b) A copy of the text in the display case on the wall.
- c) Name, artist bio and web link.

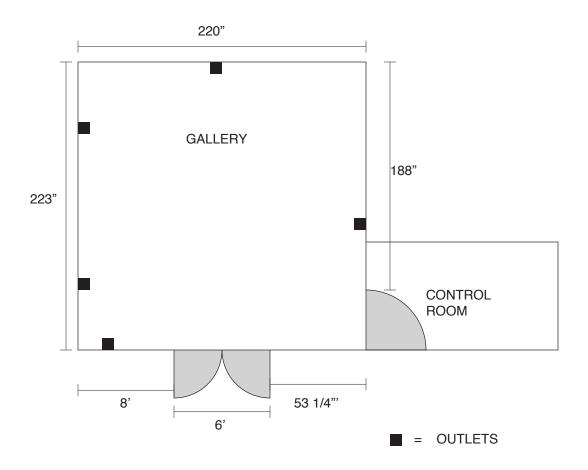
#### **GALLERY TAs:**

Miriam (Mimi) Nissan <u>miminissan@alum.calarts.edu</u>
Drew Sensue-Weinstein drewsensueweinstein@alum.calarts.edu

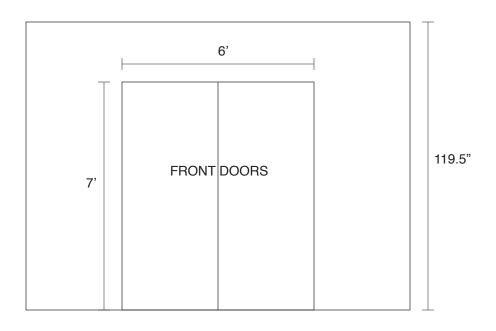
- Contact the gallery TA for the key.
- The gallery TA is not responsible for installing the piece or gallery sitting, but the gallery TA can help answer general questions, coordinate between the de-install and upcoming installation and provide information about available equipment.
- Gallery TA hours are 1-2PM on Mondays or as needed but please contact first.
- Contact the gallery TA if you have any questions regarding the proposal or installation process.

#### **EQUIPMENT LIST**

ITEM	MODEL	#	NOTES
Tracklights		12	
Audio Interface	Motu UltraLite mk4	1	
Mixer	Mackie 20 Channel	1	
Projectors	InFocus IN 126STa	3	2 are permanently installed
Speakers	Genelec 8030	4	installed in the corners of the space
Subwoofer	Genelec 7050	1	
iMac	MacOS Sierra 27-Inch Monitor	1	
Drills	Makita	2	
Black Out Curtains		1	
Usb hookup available for installing an arduino		1	



#### **ENTRANCE**



#### revised 8/17 Institute Scheduler 661-253-7717

# CALARTS FACILITIES EVENT/PERFORMANCE FORM

This form is mandatory for all events and performances on the CalArts campus. The completed form must be submitted to the Institute Scheduler (located in the Mailroom Service Center) at least 7 BUSINESS DAYS PRIOR (14 days if publicity is needed by the Office of Communications) to the date of the event. Space is approved on a first-come, first-served basis. If you are planning a reception, you must COMPLETE THE RECEPTION REQUEST. Only events and performances held in conjunction with Office/School projects will be considered.

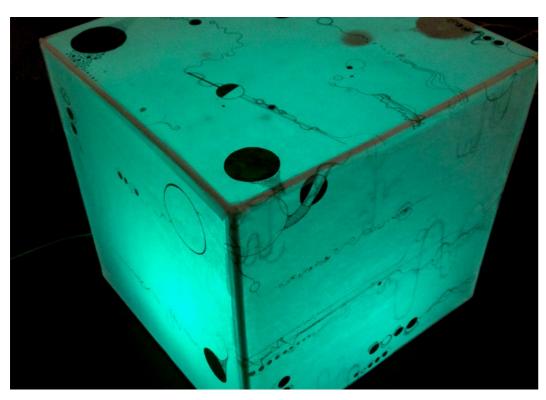
Tit	le of event	i:		
Pe	rson(s) in c	charge:		
Ph	one:		Email:	CalArts Box#
Ev	ent date(s)	:		Event time range:
Re	ception da	ite:		Reception time range:
(C	OMPLETE	THE REC	EPTION REQUEST)	
Lo	cation requ	uested: _		
Lo	cation app	roved by	(Administrator):	
Gr	oup Perfor	mance?	O Yes O No	Estimate number of attendees:
De	scription c	of event: _		
OF	FICE/SCH	IOOL RES	SPONSIBLE FOR EVENT:	
ΑP	PROVAL S	SIGNATUE		Date:
			ADMINISTRATOR	
Fa qu	acilities Ma estion, the	anageme Risk Mar	<b>nt:</b> Safety Regulations are availa nagement Administrator's signatu	able for each event and performance area. If you answer yes to either ure is required. Please attach additional pages if necessary.
1.			volve any effects (i.e. loud noises, t concurrent performances or m	loud amplified sound/music, incendiary devices, smoke machines, etc.) embers of the audience?
0	Yes	O No	If yes, please explain:	
2.	Will this	event inc	clude alterations to the space or	building structure in any way (i.e. construction, sets, hanging items, etc.)?
0	Yes	O No	If yes, please explain:	
_				
Sig	gnature:		DICK MANIACEMENT ADMINISTRATOR	Date:

#### revised 8/17 Institute Scheduler 661-253-7717

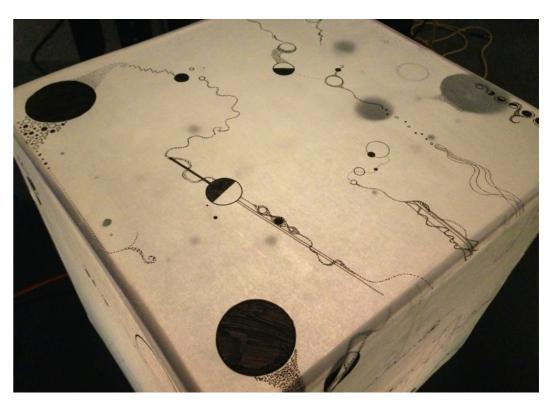
# CALARTS FACILITIES EVENT/PERFORMANCE FORM (CONT.)

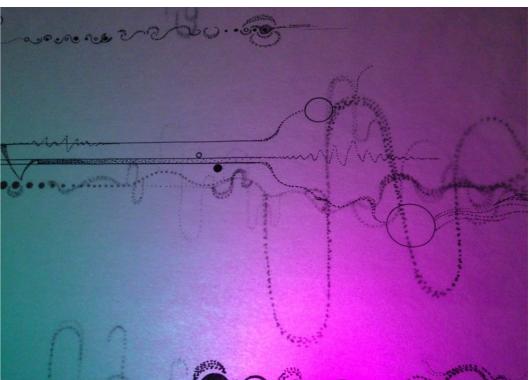
Facilities Manage	ement (cont.):				
Does this event inv	volve a live band?	○ Yes	O No		
If YES, are the perf	formers CalArts students?	○ Yes	O No		
IF YOU ANSWERE FOR APPROVAL.	D NO, THE ASSOCIATE VICE	E PRESIDEI	NT/CHIEF OPERAT	ING OFFICER (AVP/COO) MUST SIGN	
First and Last nam	es of non-student performer	^S:			
Signature:				Date: _	
orginatare.	ASSOCIATE VICE PRESIDENT	C/CHIEF OPERATIN	NG OFFICER		
form will automati <ul><li>Monitors in th</li></ul>	cally include your event in e			your event if publicity is requested. Comple inications to publicize the program through:	ting this
	email to subscribers				
Do you want Comr	munications to publicize?	○ Yes	O No		
DI EASE SEND AD	DITIONAL PUBLICITY MAT	EDIALS TO	), cotc@calarts odu		
	f this event is a fundraiser, S FUNDRAISER FORM 14 DA			ities Coordinator to discuss terms and comp	lete the
Is this event/perform	rmance a fundraiser?	○ Yes	○ No		
IF YES, THE ASSO	CIATE VICE PRESIDENT/CHI	EF FINAN	CIAL OFFICER (AV	P/CFO) MUST SIGN HERE FOR APPROVAL.	
Signature:				Date:	
	ASSOCIATE VICE PRESIDENT	CONTRACTOR CONTRACTOR	AL OFFICER		
participants and au				d that it is my responsibility to ensure the safet rent events. Any damages to Institute property	
Signature:				Date:	
· —	PERSON IN CHARGE				
For Institute Schedu	ıler:				
This event has been	placed in the Institute Calendo	ar of Events	:		
Distribution:	OFFICE OF COMMUNICATI	IONS	CAMPUS SAFETY		
	SCHOOL/OFFICE		PERSON IN CHARG	E	

**Disonillum** is an exploration into the representation and realization of sound in multidimensional space. Six illuminated 3D graphic scores will be installed, which will be interpreted by various performers throughout the week. The performers will be encouraged to explore the perimeter of the scores, as well as the inner layers of each score; to examine depth and dimensions both physically and aurally. As each performer leaves the space, their sonic imprint will remain as a low-level loop from one of 6 speakers positioned spatially and strategically throughout the room. The collective imprint will grow, morph, and decay, creating a commingling of visual, sonic, and temporal dimensions.



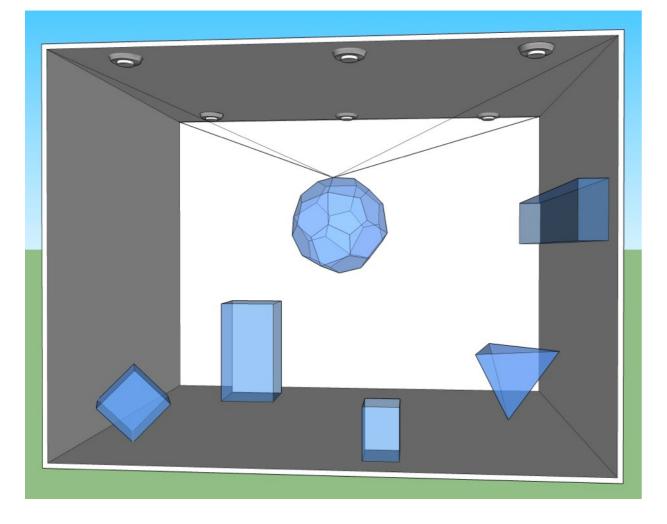
graphic score prototype



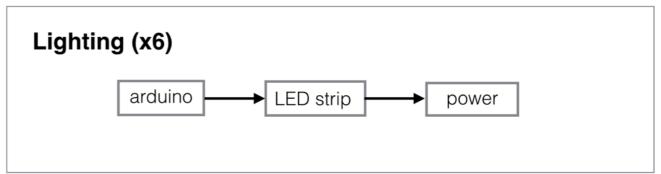


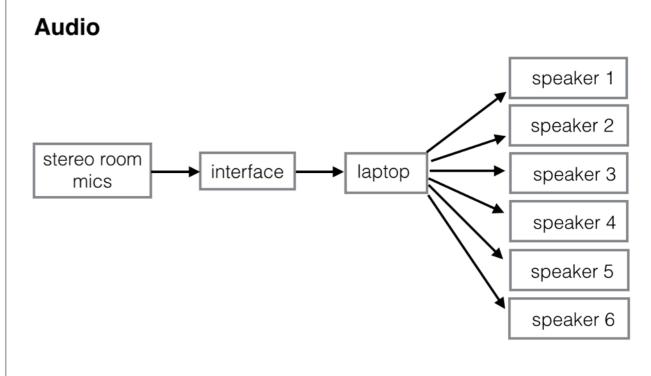
multiple layers of notation

## **ROOM LAYOUT**



### **SYSTEM DIAGRAM**





#### **DETAILED DESCRIPTION:**

The structure of this piece was inspired by the desire to create an experience that calls upon sculpture, installation, and performance, and yet can be viewed as simultaneously being all and none of these things. The compositional aesthetic builds upon lessons with Vinny Golia and the writings of Kandinsky, and seeks to explore visual dimension and perspective in the musical realm.

I will be building 6 three-dimensional polyhedral graphic scores, which will be constructed out of translucent plastic and vellum. Each of these score objects will be lit from within by an LED strip which will be controlled by an arduino. Each surface of the polyhedra will contain multiple layers of notation. When illuminated from within, the inner layers of notation shine through, allowing the interpreter to choose whether to focus on the foreground or the background of the score, or both simultaneously.

Every day at 10am\* a performance/recording session will take place. The performer is free to spend up to an hour in the space interpreting a particular score object, which they will be assigned to in advance. While they are performing, they will be recorded by stereo room microphones. Following the session, the recording will be mixed as a low level loop from a dedicated speaker located by the score object they interpreted. Each day as new performers record in the space, their sonic imprint will be layered into the environment. As new layers are introduced the previous ones will become obscured and lost in the overall texture.

#### **BIOGRAPHY:**

Sarah Reid is a trumpet player, intermedia artist, and composer who is described as having an onstage presence that is both captivating and passionate.

Actively involved in the commissioning and realization of new music, Sarah has premiered over a dozen solo works and numerous chamber and large ensemble pieces across North America. She has worked intensively with composers from countries all over the world including Brazil, Philippines, Iran, Canada and USA.

Sarah is an endlessly curious artist, one who collaborates closely with digital and multimedia artists, choreographers, programmers, and actors, and is always eager to experiment and explore novel approaches to expression. More than a trumpeter, Sarah has been described by audiences as a true "character" and "story-teller"; a musician whose drive to innovate and re-imagine performance is at the heart of her artistic vision.

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Justin Scheid: audio engineer; James Hurwitz: lighting designer;

<sup>\*</sup>exact time TBD based on music school/ROD schedule

1) Synopsis of the Piece (50 to 100 words) – What exactly will we see and hear as we enter the gallery and explore the work

In The Shortcut Room, you enter the WaveCave and are immediately drawn in. A carpet is laid down on the floor and comfortable chairs are scattered through the room, with small tables stacked with magazines placed between them. The lighting is soft and warm, and the entire room is welcoming and cozy. Minimalist music (of my own composing) and muted conversation fill the room, giving it the air of a waiting room. You sit on one of the chairs which, unbeknownst to you, triggers a sensor pad which, after a few seconds, starts a playback. The playback is my voice reading (at a volume that overpowers the rest of the sound in the room) some of my journal entries about anxiety, loneliness and disappointment.

2) Detailed Description of the Piece (500 words or less) – Tell us more about your approach both aesthetically and technically

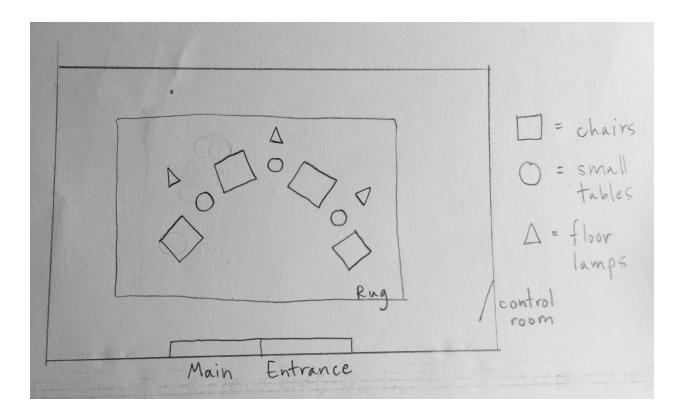
This work is loosely based on my experience being a newcomer at CalArts and the challenges that come with moving where I know nobody and meeting a whole new group of people at once. Making new friends is never easy, and one thing I've observed is that there's a certain progression to new friendships- a certain amount of time must pass before you share anything personal, and you're constantly testing the waters of what is appropriate to talk about. I want to subvert that in this installation. The space I create in the WaveCave will have both a comfortable friendliness and a slightly formal air- it will be comfortable, but the magazines, the glass doors and the public setting make it more like a doctor's office waiting room than a home living room. This friendly but slightly forced atmosphere creates the feeling of an interaction with a new acquaintance, but the audio playback (starting 15 seconds after the listener sits down, as a shock to them) will instantly break that trust that we've put in societal conventions. It will be far more personal than people expect to hear in public settings, thus creating a shortcut in the typical "friend-making" process (hence, The Shortcut Room). The playback recordings will be selected from my journals and notebooks and will consist of poems and notes on anxiety, loneliness and disappointment, which I will record myself reading. I chose those topics because they are ones that anyone can relate to, and as someone with generalized anxiety and panic disorder problems, I often struggle to figure out when things like that are appropriate or necessary to bring up in conversation with people I've recently met.

Technically, the piece will be running through Max/MSP. The patch I create will be running the background track on one loop, and have another sub-patch dedicated to the playback. Each chair will have a pressure sensor on it underneath a cushion, so when that is triggered, the

playback will start (it will randomly select one of 30 or so different readings) with a 15-second delay.

In this installation, I'm trying to provide an experience of simultaneous comfort and discomfort in the listener. I want people to leave feeling unsettled, but more importantly, thinking about the highly controlled interactions we have with strangers and whether or not that's a good thing. Is it beneficial to us to so strictly control our image, or is immediate honesty a better way to get to know people faster? I want this installation to make people think not about my words, but about their own interactions and preconceived notions of what is "too personal".

3) A diagram of the physical layout of the piece in the gallery



4) A system diagram of any electronics:

-The electronics in this piece are very simple. Under each chair cushion is a sensor mat, and the cables lead back to the control room, where they activate an arduino, which will trigger the max patch running the audio.

5) Pertinent links to your current / previous work that may help us understand the work you are proposing

http://irissidikman.wixsite.com/music

#### 6) Bio (200 words or less)

Iris Sidikman is a word composer, music author and cellist from Madison, WI. Her work incorporates spoken and written word with both through-composed and improvised music. Her work is informed by her background in gender studies and takes a self-conscious look at her identity as a woman, as an artist and as a person on Earth in general. She received her Bachelor's in Music from Northern Illinois University in cello performance and is currently an MFA 1 student in the Experimental Sound Practices program at CalArts. She is interested in taking the mundane parts of her life or the off-handed scribbles in her notebooks and turning them into art.

## What if I Can't Actuate?

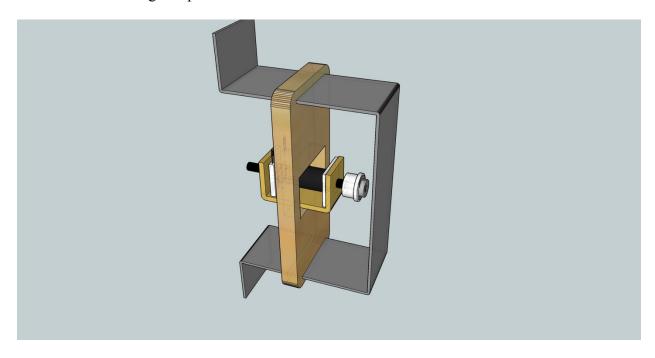
Spring 2016 WaveCave Proposal Eric Heep

#### **Synopsis:**

Through the glass of the WaveCave, you'll see what appears to be a circuit printed on the far wall; the circuit itself consists of a central hub that is connected to several cuboid objects that are also attached to the wall. Upon walking inside, you'll hear what resembles a chirping with infrequent rattling, the source of which is the objects that are connected to the circuit. Upon closer inspection of one of the objects, you'll find that it houses a small device with a striker that is extremely close to the wall that it's attached to. The device is coming extremely close to striking the wall, but it never does. The sound you head is simply the object's repeated attempts at striking the wall.

#### **Technical Description:**

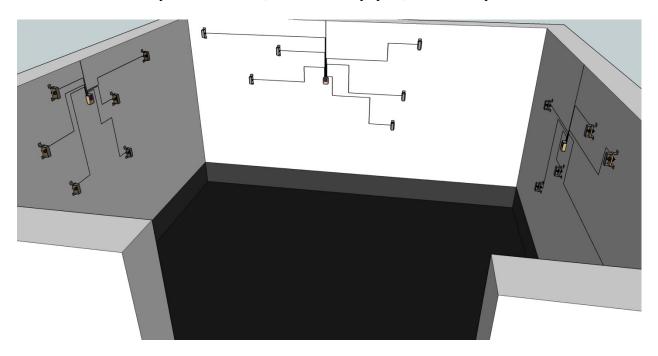
These objects, are a combination of metal and wood, with a small solenoid housed inside each. The striker of the solenoid is only a few millimeters away from striking the wall, but the solenoid itself is being driven so fast, that the striker never full extends, thus never striking the wall. I like describing this process as *over-actuation*.



*Fixture that houses the solenoid. The fixture itself will be drilled into the wall.* 

Each circuit consists of six of these fixtures, each fixture connected to a central hub that both powers and controls the housed solenoid. There will be one circuit for three of the walls

inside the WaveCave, which amounts to eighteen fixtures spread out across the space of the WaveCave. The sound heard inside the space will be of the eighteen solenoids attempting to strike the wall that they are attached to, it will be fairly quiet, but certainly audible.



The three circuits spread out across the walls of the WaveCave, each with six fixtures, amounting to eighteen solenoids attempting to strike the wall.

#### **Abstract Description:**

Early on in the semester, I totaled my car. It was a minor accident, and no one was hurt. The accident made me reminisce over the life of my car. I felt a strange attachment to it, I had driven it for nearly fifteen years, and it felt wrong that I had to discard it merely because it didn't function anymore. So what if there was a hole in the radiator? So what if the front bumper fell off? It was still my car, it got me to California from Texas when I started at CalArts, surely it was deserving of something better.



"And it was just like, a great dark wing, within the wings of a storm."

But I couldn't keep it, I couldn't fix it, I gave it away to a charity; no junk yard wants scrap parts from a fifteen year old car. Maybe I'm overly sentimental about the whole experience, but in the end I it felt like I lost an appendage.

I wonder about its future, how the charity I gave it to probably disemboweled the entire thing. I also think about what it would've meant if I had kept it. In it's last state it could turn over, but the radiator would probably overheat if I drove it for more than a few minutes, rendering it practically useless. What would it have meant to have kept an object that has no purpose? Then, what would its purpose be?

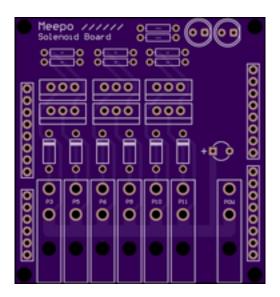
This sort of thought soon wandered over to my practice. What would it mean to design and create objects with no purpose? Or am I just creating an object with the purpose of not fulfilling *its* purpose.

This is the spirit of the installation, and these are the question that I plan to explore. The aesthetic of the project will be guided by purpose, or even lack of purpose. For instance, in deciding where I place each of the fixtures on the walls, I will be *forced* to find which spots sound the most pleasing when struck. Even though the solenoids will probably never strike that surface, I have to ensure that if they did, it would sound purposeful.

What if a solenoid accidentally *does* strike a wall? This is not something that will be programmed, but could possibly occur due to the nature of driving solenoids at very fast speeds. Would this theoretical emergent property of the circuit completely nullify my design; would it nullify the purpose of the object I created because it was allowed to fulfill *its* purpose?

#### **Technical Approach and Feasibility:**

This semester I learned how to form and weld metal, how to use a CNC router, and how to design printed circuit boards.

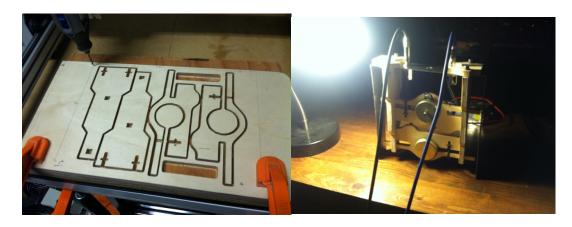


PCB design, revision 2, the installation will utilize a third revision that houses ATMEL chip instead of leaving mounting holes for an Arduino Uno; the third revision is completely unnecessary, and contributes to the over design.

I currently use a small CNC router that takes hours to make a cut, but I'm on good terms with Michael Darling, and will be able to use the fast CNC in the Scene Shop for the majority of my cuts. I will bend and turret all of the metal out of 16 gauge cold rolled sheet metal. It would be ideal to *drill* the fixtures into the wall, but if that's a problem I'm sure another solution can be found. I will design an enclosure for the power supply, but plan to leave the circuit board visible; I plan to show text relevant to the installation printed on the PCB itself.

#### **Pertinent Work:**

The following two works showcase the work I've accomplished this semester regarding digital fabrication and PCB design. *Animal* uses the same type of PCB, material, power supply that I'll be using for this installation.



Animal, mechatronic instrument for live performance.

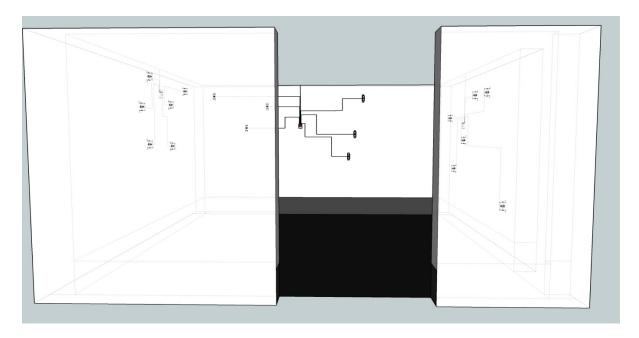
Made out of Baltic-Birchwood, sheet metal, two rotary solenoids, and two TRS input jacks.



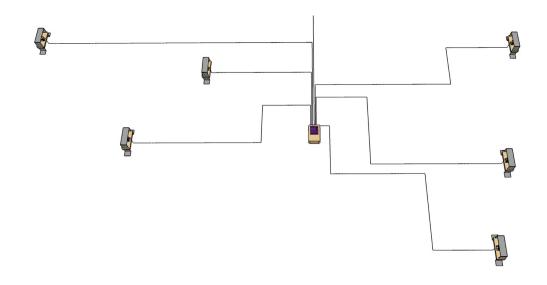
Work in progress, designed to vibrate and scratch up which ever surface it's on.

#### **Artist Bio:**

Eric Heep is an artist living in Val Verde, CA, while finishing an MFA in Music Technology at the California Institute of the Arts. His practice involves sound in practically every aspect, whether it be composition, mechatronic performance, or reading.



View from the door of the WaveCave.



Center wall.

#### THE WAVE CAVE – INSTALLATION PROPOSAL

#### FRIENDLY WINNERS

#### JAMES RUSHFORD

#### 1. Synopsis

Friendly Winners is a spatialized multi-channel sound work based on Feuillet's 17<sup>th</sup> century notation of Pecour's Baroque dance 'Aimable Vainqueur'. Using audio recordings of both the dance movement and its accompanying music, the installation will use hidden monitors behind walls (that of the gallery or handmade ones) in the left and right sides of the gallery, and a parametric speaker facing downward from the Wave Cave's ceiling (moving on a track), to quietly 'guide' the listener through the space and retrace the exact steps of the dance in a subtle and disorienting way.

#### 2. Detailed description

Friendly Winners is partly a re-mapping of Feuillet's dance notation, partly a deconstruction of the temporal perspectives of movement within a space through sound. It is designed for one audience member at a time, and will use the Wave Cave as a seemingly empty room in very low light.

In preparation for the installation, a recording needs to be made of the original dance according to Feuillet's notation, in consultation with a dance historian, in the Wave Cave itself (see details below). This dance will be performed with four live musicians on acoustic instruments interpreting the corresponding music, a 'Loure' from Campa's opera *Hesione*, and recorded in real time from two perspectives:

- 1. the sound of the dancer's movement through the rustling of their costume (using contact and DPA lavalier microphones).
- 2. the sound of the music/musicians in the room from the shifting perspective of the dancer (using binaural microphones).

Each of these recordings are then played back at low volume in the installation, which will appear as a mostly empty room with hidden speakers:

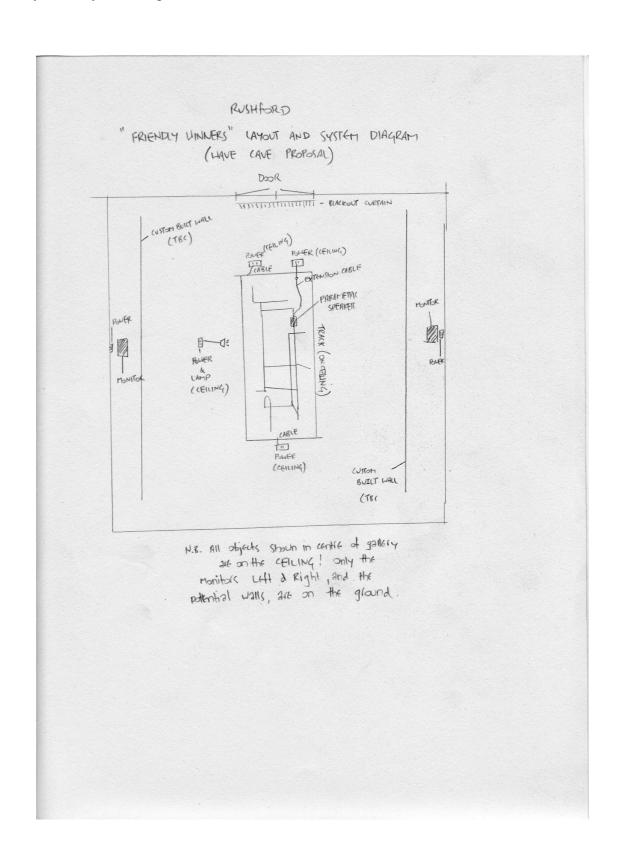
The first perspective (the recording of the dance itself through clothing) is played downward, facing the floor, from the roof of the Wave Cave using a small parametric hyper-directional speaker. This speaker will literally 'trace' the floor plan of the dance in real time, with the single audience member following the movement as if it were a sort of torch or light guiding the listener through the space (the *Aimable Vainqueur* dance is historically about a god of war shining their light like a torch upon the world). The sound will be quiet enough that one cannot hear anything until they are directly beneath the speaker, at which point the sound has the effect of coming directly from the listener's own head.

The second perspective of the dance (binaural recordings of musicians in the room) will be played back using two small studio monitors on each side of the gallery obscured behind white panels or situated 'within' the left and right walls of the gallery (discussion about how to 'embed' the speaker within the walls will be undertaken with the Wave Cave director/s). The playback in the monitors is diffused according to the shifting sense of perspective of the dancer i.e. when the dancer turns, the music changes direction. This aims to give the effect that the room itself 'turns' constantly, with the position of the musicians, who are physically absent, changing from side to side. As the audience member in the installation can only trace the floor plan of the original dance and not necessarily the various turns and head movements that were originally performed, the two speakers aim to emulate such movements by reversing the perspective of ears moving in a space - the room moving around the ears instead.

My specific interest in Baroque dance notation stems from continuous research into the tactility of notation, and the problems surrounding translation in inter-sensory experience (e.g. my CalArts DMA compositions from last year incorporated text and braille). Feuillet's notation became practically obsolete fifty years after its invention in the late seventeenth century, but it remains significant in how it attempts to document very specific physical movements at both head, body and foot levels.

A second concept underlying the installation is that of the 'sonic shadow', an image of how listeners re-cast an external performative experience into their own through a complex synthesis of time, space and physicality. As the audience member follows the original dance and music performance in the empty room of *Friendly Winners* (which could be seen itself as a sort of shadow or trace), they form their own perspectival shadow, re-imagining the temporal, spatial and physical phenomena presented into their own personal performance. Thus, a sort of 'conjuring' of experience is undertaken, almost as if the audience member is herself possessed by the dancer. Such a sensory infiltration is only possible through the phenomenon of sound, and this installation points towards the political implications of how sound can 'force' particular experiences, rather than simply suggest them.

#### 3. Physical Layout / Diagram:



#### 4. Technical requirements

The technical requirements for this piece include:

- 2 small studio monitors on the left and right side of the Wave Cave (exact position to be determined in consultation Wave Cave director/s).
- A small 'Soundlazer' parametric speaker (provided by the artist)
- A custom build moving 'track' for the 'Soundlazer' to be positioned within (provided by artist)
- 2 custom-built white 'walls' or panels to be placed in front of each monitor, roughly half the surface area of the walls of the gallery (provided by the artist)\*
- small hanging lamp (provided by artist)
- 4 Power outlets in the ceiling
- 2 power outlets on left and right sides of gallery
- materials for 'blacking out' the gallery space.

#### 5. Links

<u>www.james-rushford.com/audio</u> - *Food Court* - this collaboration, published by KYE, involves a singular and volatile interpretation of Solage's Rennaisance Ars Subtilior composition *Fumeux Fume Par Fumee*, demonstrating an unusual modern/antique aesthetic that connects to the proposed work

<u>www.james-rushford.com/audio</u> - 530 Versions of Night — this live recording of a score made from Braille, calligraphy and music notation demonstrates a preoccupation with score reading as an intimate tactile experience.

#### 6. Biography

James Rushford (b. Melbourne 1985) is a Los Angeles-based composer, keyboardist, violist and improviser. His work is drawn from a familiarity with specific concrète, improvised, avant-garde and collagist languages. He has been commissioned by ensembles including BBC Scottish Symphony (Glasgow), Melbourne Symphony Orchestra, Ensemble Neon (Oslo), Speak Percussion, Synergy Percussion, Ensemble Offspring, Soundstream, The Song Company, and Decibel, and has had work featured in the Melbourne International Arts Festival (2006 and 2008), Norway Ultima Festival (2011), Unsound Festival (New York 2014), Tectonics Festival (Glasgow 2013, Tel Aviv 2015) and the Liquid Architecture Festival (2010). Performance highlights include Steim Institute (Amsterdam), Logos Foundation (Ghent), Issue Project Room (New York), Instants Chavirés (Paris), Café Oto (London), Super Deluxe (Tokyo), Centre for Contemporary Art (Warsaw), Only Connect Festival (Oslo), Now Now (2011/2012), Adelaide Festival (2014) and the Melbourne International Jazz Festival (2011). Collaborative projects include work with Golden Fur (with Samuel Dunscombe and Judith Hamann), Jon Rose, Oren Ambarchi, Iancu

<sup>\*</sup>conditional upon access to space behind walls of gallery as an alternative placement for monitors

Dumitrescu, Ana-Maria Avram, Kassel Jaeger, Ned Collette, Graham Lambkin, Sophia Brous, Crys Cole, Francis Plagne, Klaus Lang, Tashi Wada, Michael Pisaro and Joe Talia. James has also scored soundtracks for films by Dennis Cooper and Michael Salerno. His music and performances have been published by Pogus (US), Touch (UK), Prisma (Norway), Mego (Austria), Bocian (Poland), Penultimate Press (UK), Black Truffle (AUS) and Kye (US).