

## A Quiet Life

JOHANN DIEDRICK

[jo@quiet.life](mailto:jo@quiet.life)

A Quiet Life, New York City, United States of America

**ABSTRACT:** Over the course of this paper, sound artist Johann Diedrick looks at his work Good Vibrations and presents how his acoustic cartography listening tours have allowed acoustic explorers to reorient themselves to the outside world through expanded listening. The Good Vibrations project presents ways in which bodies interact with their environment by examining subtle sounds through amplified listening. By discovering previously unknown “sound”-able objects, these acoustic explorers begin to interact with the environment in a performative way, using the sounds around them as inspiration for play and exploration. In the paper he will present qualitative analysis in the form of feedback forms as a way in which sound artists can solicit responses about their work from an audience to help inform future iterations on their artistic practice.

**KEYWORDS:** sound, listening, space, environment, bodies, performance, amplifiers, microphones, DIY.

## 1. Introduction

Hi! My name is Johann Diedrick. I make installations, performances, and software that let people play with sound. The main themes of my work center around listening, environments, bodies, and the performance of these elements in time and space. Today I would like to present some of my past work and then go into one project in particular to explore how expanded listening practices can recalibrate our relationship to the world around us.

Before I do that, I want to introduce four main themes in my work. These themes include listening, space/environment, bodies and performance. For me these four themes are tightly intertwined within my work, as I will show throughout this presentation.

## 2. Listening, Space/Environment, Bodies, Performance

### 2.1. Listening

#### Good Vibrations

Listening is one of the biggest parts of my practice, and the topic I will be spending the most time on during the course of this talk. But for now, I'll briefly introduce my project *Good Vibrations*, which I presented at the last Invisible Places conference. *Good Vibrations* is a listening experience that focuses our attention to the subtle, quiet sounds in our environment through the help of mobile listening kits. The kits themselves are a relatively simple application of an amplifier and a collection of different microphones. Over the course of the project, the *Good Vibrations* mobile listening kits have included the following microphones:

- A contact microphone for surface vibrations
- A probe microphone for listening to the sounds inside materials
- A hydrophone for water-based sounds





The kit also includes a wooden dowel for activating surfaces. Along with these tools is an instructional guide for using the kit and “acoustic points of interest” sheet for some ideas of what to listen out for.

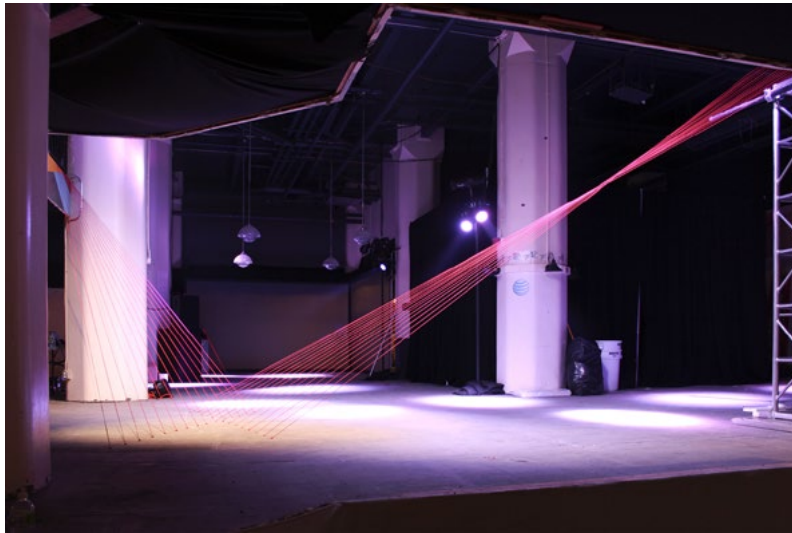
The project, conceived together in collaboration with Christie Leece, was meant to give us a novel way to access, consider, and respond to the world around us through a raised attention and heightened awareness of environmental sounds. It also gave us a tool to acknowledge atypical environmental sounds, especially ones overheard (used here in the way one might use the term overlooked) because of loudness or cliché. We wanted a way to become introduced to sounds that we probably would have not have had access to otherwise because of their diminutive quality, and also to sounds that were outside of the normal range of “environmental” sounds we are accustomed to when we think of urban sounds (traffic, construction, machines), natural sounds (birds, trees, rivers) or human sounds (conversations).

## 2.2. Space/Environment

### Strings

The theme of environment, and spaces in general, is another theme that I have been exploring throughout my work. This exploration first began with a series of sound installations called *Strings*. This series, in collaboration with Luisa Pereira Hors and Monica Bate Vidal, is a room-sized instrument that surrounds you. In five different iterations, we constructed a large interactive sculpture that resembled a harp or the inside of a piano. Visitors are able to use a bow to “stroke” the strings, or “pluck” the strings with their hands in later versions. In the bow version, contact between the bow and the strings closes a circuit, which is detected by an Adriano microcontroller and triggers a synthetic sound played back from a computer, using Ableton Live. In later versions, visitors can pluck the strings with their hands and the

vibration caused by the plucking vibrates a piezo element, which is again detected by an Arduino microcontroller and is used to control the playback of a synthetic sound, this time in Max MSP. For all of these versions, we wished to give visitors a more spatial experience of playing back sounds, one in which the line between performer and audience are blurred and any number of players can move freely around a space to interact and listen to sounds.

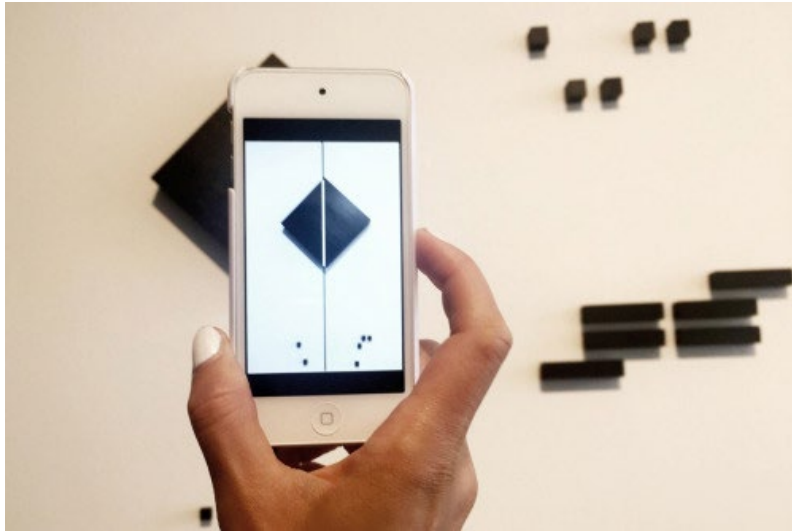


### Format No. 1 and Format No. 2

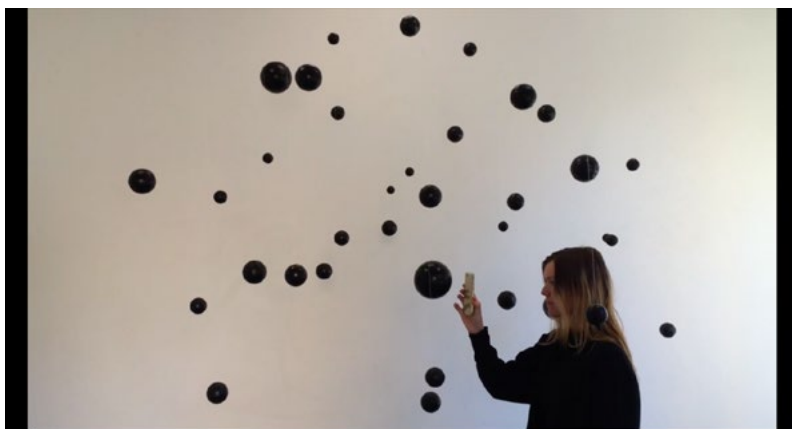
The performance of music in space has been explored in another collaboration between myself, Louise Foo, and Martha Skou, entitled *Format No. 1* and *Format No. 2*. For this collaboration, I was commissioned to develop a mobile application to accompany a visual, spatial musical score designed by the two artists. The mobile application, developed for iPhones, allowed users to play back a score that surrounded them.

For *Format No. 1*, the score was in the form of white and black geometric shapes, inspired by the history of musical composition from classic Western music notation, to the more abstract visual scores of Xannis to digital MIDI compositions.





For *Format No. 2*, an iPhone application was developed to play back a more three-dimensional spatial installation made of up black spheres and circular shapes hanging inside of a space. The application would play back sound samples depending on the position they were located on the screen, and the volume was adjusted depending on the size of the circle as it appeared on the screen.



With these tools for both *Format No. 1* and *Format No. 2*, visitors were able to recreate their own interpretation of the score by moving through the space and using the application to play back musical sounds as guided by the score created by the two artists.

### *Sirens*

Given my interest with sounds in outdoor environments, I wanted to create sound installations that introduce new sounds into the outside world, as opposed to experiences where we take sounds from the environment, using it as a source. This resulted in *Sirens*, which are inexpensive, solar-powered interactive sound installations that are easy to make. Inspired by the work of Laura Pearl and XXX's solar powered sound bot workshops, Evan Roth's LED

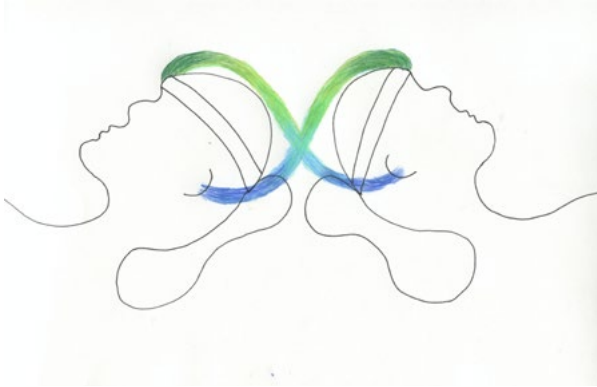


throwies and the public sound interventions of Max Neuhaus, *Sirens* provide a cheap way for sound artists to introduce sounds into the environment, with a simple yet effective way for it to respond to both the environment passively and human interaction actively. Each siren consists of six main parts: a solar panel for energy, a capacitor and integrated circuit (40106 or 74C14) and speaker for sound generation, a photo cell for pitch variation and interaction, and a magnet for installation on any kind of metallic surface (mailbox, road sign, public transportation, etc.). With a siren, I have reduced my idea of public interactive sound installations to a simple form that can be adapted to a number of spaces, each offering different variations of the type of sound and interaction that can be produced.



### 2.3. Bodies

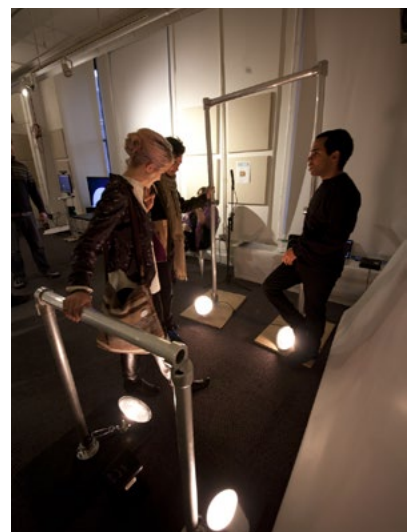
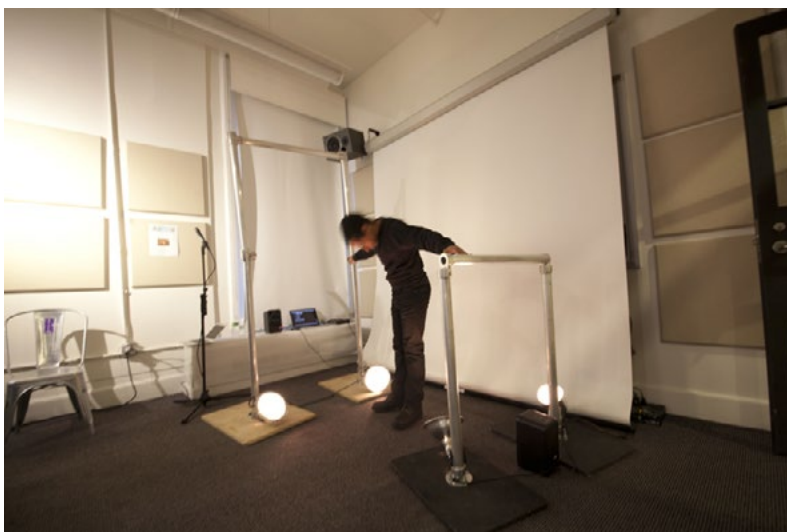
Environments are not exclusive as sites for sonic creation, as bodies are always present within the works I create within environments. Therefore some attention should be given to some of my works that have used bodies as a sonic source. In my work *Grand Dream*, I used two unconscious bodies as the performers for a sound installation. *Grand Dream* consists of two sleeping performers who are both wearing EEG readers. While dreaming, the EEG reader reads the brain activity of the first performer and translates these readings into sounds. These sounds are passed to the second performer via headphones. The second performer's brain activity, influenced by the sounds produced by the first performer, are read by their EEG reader and also translated into sounds, that are then heard back by the first dreaming performer. The two sleeping performers become locked into a neuroacoustic feedback loop, with their sleeping unconsciousnesses performing music that is projected into a space for an audience to hear.



## 2.4. Performance

### A Haunting

A Haunting is a performance within a sound installation that remembers the presence of bodies. In this performance, two or more bodies perform a choreography wherein bodies move, dance, and touch each other. When the bodies meet, a circuit is closed that in turn plays back a synthesized voice across a pentatonic scale. The sound installation itself is able to remember each one of these interactions, and will itself play the sounds back in the same sequence that the dancers have performed them. In this way A Haunting becomes imprinted by the past interactions of bodies that occur in the space, like a haunted memory.



## Transmissions

Transmissions is a return to a more traditional kind of performance that allows an audience of bodies to play the role of performer for a composed performance. For Transmissions, I was commissioned to create a mobile application that allows an audience to play along with musician Pat Noecker in his Transmissions performance. Over the course of one hour, the performance plays out as follows: for the first 25 minutes, an assortment of musicians (guitar, drone, synthesizer, saxophone, violin, bass, accordion etc.) play an A note. Afterwards, for the next 25 minutes, the musicians perform an E note. Finally, for the final 10 minutes of the performance, the musicians can play either an A or an E note on their instruments.

For this performance, the mobile application was provided so that the audience can play back an A or an E note on their phone. This synthesized note can be rendered in four different types of modes: a sine wave, a square wave, a triangle wave, and a sawtooth wave. The phone's flashlight was programmed to strobe along with the sounds to give the audience members some visual niceties.



## 2.5. Summary

Over the course of my work, these four themes are intertwined and manifest in different ways. I would like to turn my attention to one such project to analyze how all four themes are present, including how I have introduced some qualitative feedback forms to inform the progression of the project.



## 3. Good Vibrations

### 3.1. Introduction

#### Invisible Places, 2014

As introduced before in section 1.1, Good Vibrations is a listening experience that uses mobile listening kits as tools for tapping into the least audible sounds in our environment. At the Invisible Places conference in 2014 in Viseu, Portugal, I hosted three tours that took “acoustic explorers” on listening expeditions throughout the town.



#### Inspiration

The project was inspired by many different things from a variety of angles. For example, the original design of the listening devices was inspired by scientific monitoring equipment, both in color and form. Like a Geiger counter used to measure radioactivity in an area, the mobile listening kits were designed to measure sonic activity in an area.



## Influences

It occurred to me much later that one main influence on this project was one particular performance of “Baibaba Bimba” by the Tenniscoats. Their casual, charming rendition of this song by playing music with the environment around them must have been some seed influence for my desire to create an experience that let an audience hear and eventually perform their environment in a similar way.



## 3.2. Insights

### Listening

Spending even a little bit more effort to listening can be a revelatory experience for many people. In this presentation, I will present a number of case studies and examples of what is possible when listening becomes a primary mode for navigating one's environment. By making the experience of amplified listening mobile, we are able to deeply investigate sounds that are present but easy over-heard (analogous to sights being overlooked).



### Space/Environment

These listening tours usually occur outside, although some of my own explorations with my mobile listening kits have happened indoors as well. But generally, the tours have taken explorers to city streets, parks, college campuses, playgrounds, storefronts and sidewalks. Objects in space take on a new kind of significance. No longer are fences, bikes, grates, walls, windows, and poles merely inanimate backgrounds of our surroundings. During the tours, explorers begin by using our “acoustic points of interest” card. The card gives them ideas of what types of objects to look out for in their environment to listen to. This includes types of sound textures (“grainy”, “ringing”, or “scruffy”), substrates (soil, sand, plant matter), surfaces (marble, brick, metal) and currents (flowing liquid, electronic transmissions, neon). We also prompt explorers to find sounds that sound like every day objects they might encounter (typewriter, turntable) to ones that might be more rare or even imaginative (sea animals, alien commutation).





**GOOD VIBRATIONS AUDIO KIT**  
For use on normally inaudible vibrations

Plug in your headphones  
Turn the volume down and switch on

Plug in the contact microphones

Use on electrical devices, hollow pipes, percussive surfaces

**Vibration Checklist**  
The following sounds should be identifiable using the Good Vibrations Audio Kit

Textures	Substrates
Grainy	Soil
Ringling	Sand
Crackling	Plant matter
Humming	Garbage bags
Sloppy	
Scruffy	

Animated Surfaces (use of stick recommended)	Currents
Mudlike	Flowing liquid
Brick	Electric transmissions
Cement	Neon
Metal	Unintentional antennas
Trees/hard plants	

**Search for subtle vibrations that sound like:**  
Typewriter, turntable, sea animals, alien communication

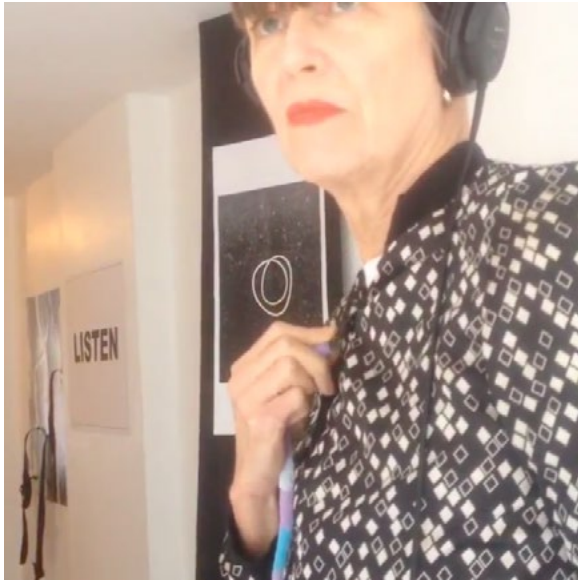
**Try to find sounds that:**  
Are activated by you  
Are activated by another person  
Are activated by no person at all

The card gives some final advice in case you get lost: Try to find sounds that are activated by you, activated by another person, or activated by no person at all. These final three prompts, along with the advice from before, combine to give our explorers the needed push to try to find or make sounds from any and everything in their environment. Listeners both listen to things already making sounds (neon, air conditioners) and find objects and bring out sounds that never existed without human intervention (bikes, grates). This to me unveiled one of the more interesting aspects of the project. The discovery of and understanding that all objects in our environment are “sound”-able, meaning that they all possess the quality to produce sound. It is not just that things produce sound, but that anything is “sound”-able if you creatively activate it. The listening tours I host expose people to the idea of uncovering the “sound”-able qualities of objects in their environment.



## Bodies

Bodies are also objects in space, and are an undeniable source of sound in our environment and on tours. On many occasions people have used the listening kits to listen to themselves and other people, such as what occurrence in a listening tour in Toronto.



## Performance

After sufficiently acclimated themselves to the world of “sound”-able objects, the listeners start to perform on their environment, using these newly recontextualized objects as sonic material. Some use bike tire spokes and sewer grates as xylophones and marimbas. Others move closer and away from neon signs as one might perform on a theremin. Still others find and record sounds and use them later for their own electroacoustic pieces. Either way, the tours begin at a place of exploring and tend to end up at a place of performing. Listeners take the time to discover “sound”-able objects in their environment, and they begin to naturally perform with these objects in public space. This radical re-imagining of how one is allowed to treat their environment is both a creative and political revelation. Spaces become activated in a way that is unintended, and listeners begin to take ownership of the world around them as something they can play with, operate on, and use for creative means.





## 3.3. Research

### Feedback forms

Along the way I have utilized a feedback form system to get qualitative responses about the tours, to see how people like them, what they respond to, and how I might improve them.

	C	D	E	F
1	What was the most interesting sound you heard on this tour?	What is something that you wish you knew about before the tour started?	What would you be interested in knowing about more after this tour?	
2	The bicycle wheel (spokes)	Techniques for using the mic	How to make/where to find a kit	
3	(probably) the bike spokes when listening this time - I had a watch	the sounds of electronics - can we hear a cou or gpo running? what about lights?	how can that be recorded and how can you record at a distance	
4	I found that when I put the mic to my front and laughed it would be electric/light	some description of tour eg. amplified nature sounds etc	how to build my own contact mic and how to record it?	
5	leaf - squashing/force	do you record these sounds? do you use them in collage or a documentation?	how delicate is the equipment? how can I make a kit?	
6	spouse needles	who is my tour guide?	no	
7	bamboo, tree leaves, steeltrapping on shop interiors	/	in field recording with customer made microphone	
8	bicycle wheel	how the sound is picked up by the contact	distance a sound can travel in optimal conditions	
9	vibrations from scratching a ribbed gravel wall	voices reverberating on a metal sign on a patio also pile of aspen	yes	
10	voices reverberating on a metal sign on a patio also pile of aspen	maybe to bring together interesting "activations" in addition to the recorded sound	what other kinds of surfaces/substrates produce interesting sounds?	
11	hollow-sounding trees	score background on your history of you getting here + your research	examples you've heard in the past	
12	the bicycle wheel made different notes - the chair link fence		near omission	
13	bike spokes	I wish I knew more about the sensitivity of the listening equipment	I wish I knew more about the sensitivity of the listening equipment	
14	the electric hum of a neon sign	maybe	how to get one	
15	metal glass - table wheels - glass	how should work the intensity	how to build one of these	
16	the water front awesome		how to make a microphone/how to distort sound	
17	dry leaves oscilling	the science of sound	nothing comes to mind	
18	radio signals from an intercom	nothing comes to mind - maybe that the contact mics are water proof	how to build one of these	
19	leaf tree fence	how not to break it	how to make one of these tiny packs	
20	fence	to bring objects like marbles	how the mic works (contact and radio frequency, energy) how articles use it	
21	tan bark on the slide, creek gate	nothing	preparation of place	
22	darkish humming	I don't know		
23	the frequency and the pitch of metal materials			
24	plants, hollow etc. (?)			
25				
26				
27	did you discover any surprising/joyful/interesting sounds? what was the most enjoyable part of the tour?		what was the least enjoyable part of the tour?	

**LISTENING TOUR FEEDBACK FORM**

What was the most interesting sound you heard on this tour?

What is something that you wish you knew about before the tour started?

What would you be interested in knowing about more after this tour?

What was the most surprising thing about this tour?

What is one thing you would have liked to make this tour better?

Do you have any feedback about this feedback form?

If you want to know about future tours, please leave your contact info below:

Some improvements have been showing people how to record the sounds. The beginning intention of the project was not about recording sounds, but since so many people have asked about it, I've been helpful along the way to assist people in doing that.

People have also asked how to make the kits, which is something I will be doing later at this conference.

## 4. Conclusions

### 4.1. Where to go from here?

My acoustic adventuring is still ongoing, and I'd like to share a few projects that I'm working on that can be seen as an offshoot of what I've done before.

## Transients

Transients is an iPhone app that allows you to record sounds. You can either tether them to the position where they were recorded, or drift them on a map for someone to pick up along the way, like a message in a bottle. This project debuted at Yami Ichi in New York City and is still a work in progress.



## Naked Ear

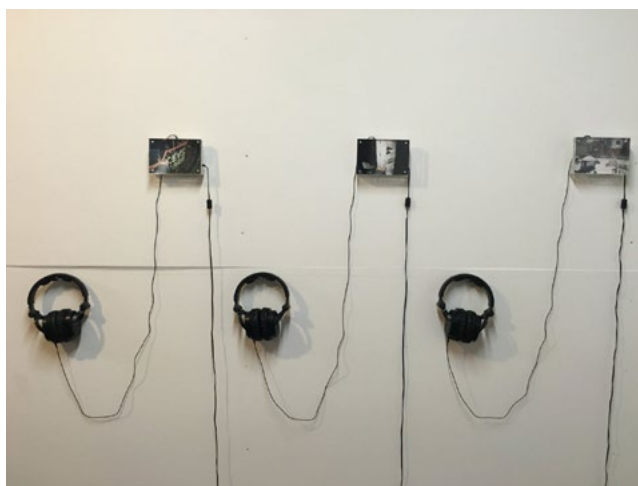
The *Naked Ear* workshop is for artists and researchers wanting to become more familiar with the potential of sound. Our focus begins on expanding our understanding of sound in an environment. This requires a basic vocabulary for talking about sound as a material, as well as the ability to make and use tools for investigating and manipulating sound for creative purposes.

The workshop will introduce participants to the world of sound art, while providing techniques for making tools for creating these experiences. This will include the fabrication of hand-made microphones and amplifiers for use in installations, performances, and scientific research. The goal of the workshop is to take these tools into the field and use them for artistic investigation and public engagement.



## It Is Impossible To Know About Earth... So We Must Hear Her Voice In Our Own Way...

*It Is Impossible To Know About Earth... So We Must Hear Her Voice In Our Own Way...* is a series of sound/photo diptychs that document hidden sounds I've discovered with my mobile listening kit. My acoustic explorations amplify subtle sounds that go unnoticed and generate new sounds that wouldn't have existed otherwise, including the reverberations of street life transduced through a hollow pole, the gliding of ocean waves against sand, and the soft patterings of light February snow. The diptychs' medium (disposable camera and lo-fi recording) encourages an artistic practice that prioritizes casual and informal ways of engaging with sound. This combination of mediums advocates for a sound art practice that uses tools and techniques for experimenting in ways that would be too expensive — monetarily, technically and conceptually — if not without tools that can be used freely. This work demonstrates how even the most mundane, everyday scenes contain exciting, unexpected and poetic sounds waiting to be discovered — if only we took the time to listen.



## Quiet Music, Weak Sounds

Quiet Music, Weak Sounds is collaboration between myself and sound artist Eisuke Yanagisawa to discover, amplify, and share the subtle sounds in Kyoto, Japan. Over the course of four weeks, we will explore Kyoto's soundscape with custom microphones, amplifiers and field recorders. Informed with their findings, we will host a series of workshops, teaching members of the community how to build and use their own sonic investigation tools. We will turn participants into acoustic explorers and take them on explorations of Kyoto to find, record, edit, and present their own found sounds. Afterward we will construct our own Aeolian Harps and introduce our own sounds to Kyoto's Kamogawa river path. Finally, we will present their findings to the community at large, in the form of a talk and reception party.



## Summary

So that's it! Thank you much.

## 4.2. Thanks and Acknowledgements

I would like to thank my collaborator Christie Leece and the Invisible Places committee for allowing me to present this paper. Thank you!

## 4.3. Questions, Comments, and Discussion

I am open to hear feedback about my ideas and presentation. Please feel free to contact me at [jo@aquiet.life](mailto:jo@aquiet.life).