

{ Kokon Dansetsu Ma }



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Link to Final Project Development Diary:  
<https://dmsaguodadiary.tumblr.com/>

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# Synopsis

“Kokon Dansetsu Ma” is a kinetic installation, containing homemade instruments which are controlled by motors and are designed following traditional Japanese aesthetics. In Japanese kokon means ancient and modern times, all ages, past and present; dansetsu – tradition, legend; and ma – empty space, a gap in-between sounds. Both of the homemade string instruments used in this project are made as modern adaptations of traditional Japanese instruments shamisen and koto. With this installation the author intended to merge ancient and modern traditions of Japanese sound culture and explore the differences between the Western cultures and the Japanese approach to music.

## Artist Statement

The title of my final project is Kokon Dansetsu Ma [古今 伝説 間]. In Japanese kokon means ancient and modern times, all ages, past and present; dansetsu – tradition, legend; and ma – empty space, a gap in-between sounds. I chose this title, since for the purpose of my project I am looking into Japanese ma philosophy, music/sound approach within modern and ancient times, and I question what tradition is, and what criteria could apply to it.

“

Ma is the place in which life is lived; Ma organizes the process of movement from one place to another; Ma is maintained by absolute darkness; Ma is the sign for the ephemeral; Ma is the alignment of signs; Ma is an empty place where all kinds of phenomena appear, pass and disappear; Ma is the way to sense the moment of movement.<sup>1</sup>

”

<sup>1</sup> A. Isozaki, 'Ma: Japanese Time-Space', The Japanese Architect: International Edition of Shinkenchiku, no 262, 1979, p. 69-80.

This project is divided into three parts. The first one is about designing new instruments and exploring their individual possibilities in terms of sound. The main inspirations for this part are Terek Atoui's installation The Reverse Collection and Gorkem Sen Yaybahar. The design of the first instrument is a combination of a traditional Japanese three stringed lute shamisen and a cello. The body of this instrument has two resonant holes instead of one, and goat skin stretched on top of it, so it can also be used as a percussion instrument. Sound-wise, it resembles a cello, since three (C;G;D) cello strings are used, and the sound has a middle eastern flavour to it as well. The second instrument is an interpretation of Terek Atoui's Pipe Koto which has had a high influence on this idea. Koto is one of the most popular Japanese string instruments and for this project a modern version of this instrument is being built by using copper

pipes as resonant bodies for each string (it has 5 strings in total). Two of those copper pipes are attached to the tum and frame drums via springs. Percussion section is added for creating a more interesting composition and range of sounds; three different size singing bowls and a handmade aluminum gong (75 cm diameter) are used. These instruments are atmospheric and they are not amplified, since both, gong and singing bowls, have a long lasting and pervasive sound.

The second stage of this project is about connecting all of these instruments to the sound installation. The main influences for this part are Chico Macmurtre installation Robotic Church and University of Brighton Digital Music and Sound Arts course alumni Andrew Jarvis installation Sprungs. →Kokon Dansetsu Ma installation includes one step, twelve vibration motors connected to five different arduino's. Each arduino is controlled by RTC (real time clock) module. This entire mechanism is based on alarm clocks, and motors are triggered by set time. All of the five arduinos are divided within instruments. For Pipe Koto two arduinos are being used. One of them has four vibration motors (two of them are connected to strings and the other two are connected to tum and frame drums). Second arduino for Pipe Koto has one vibration motor that triggers copper pipe. Cello and shamisen hybrid has one smaller arduino circuit with two vibration motors. Additionally, there is a ping-pong ball machine next to it which is programmed to automatically release ping-pong balls on the percussive part of shamisen-cello instrument. This machine has a one stepper motor which is also controlled by a set time. The final two arduinos are used to control the percussion section. One of them has three vibration motors which are triggering three different size singing bowls. The final circuit has two vibration motors, both of those are connected to the gong.

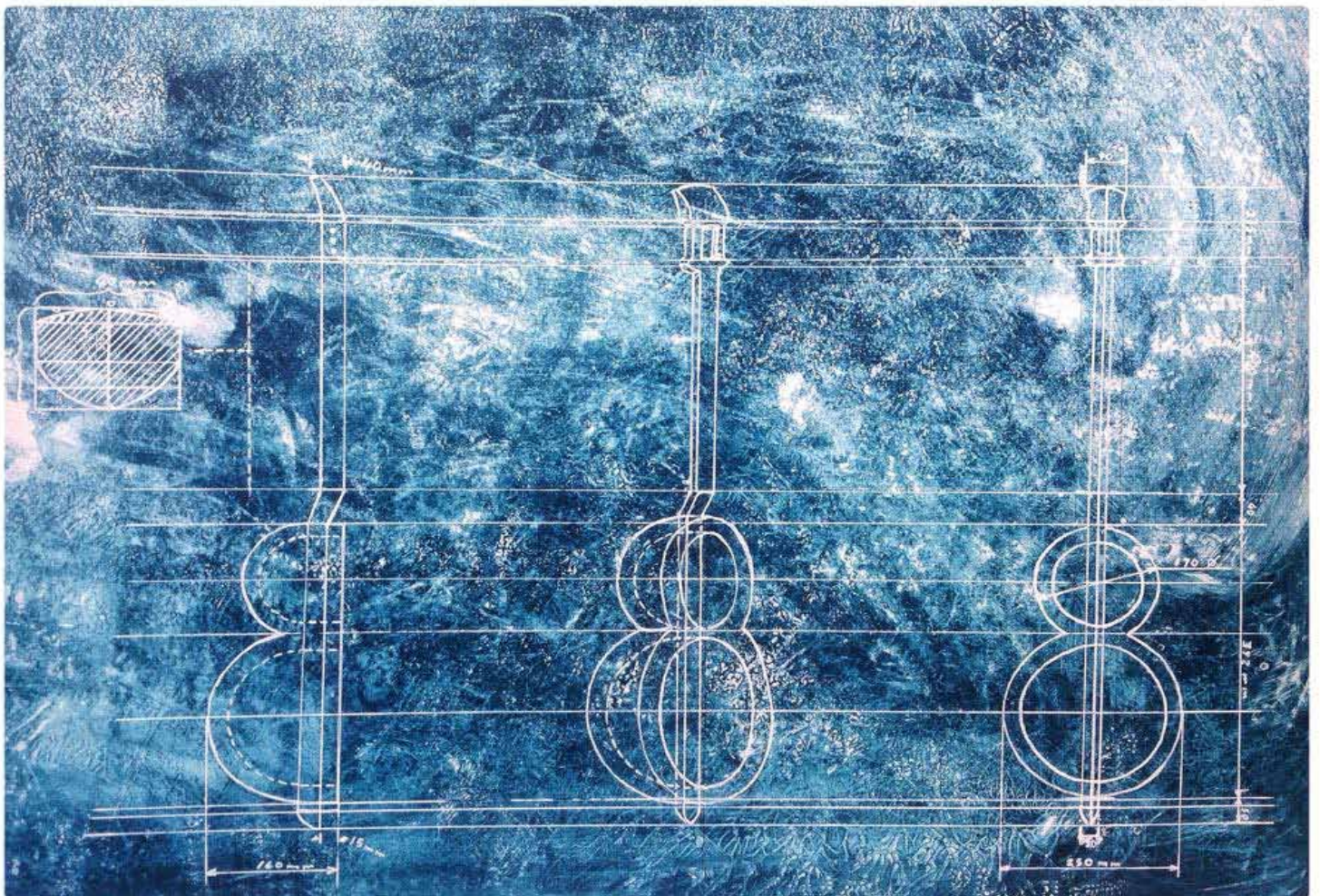
The third, and the last stage is, by using this kinetic installation as a one, unified instrument to compose a generative piece which is up to eight minutes in length. This composition is based on ma philosophy, Japanese aesthetic categories like mono no aware, yugen, wabi-sabi and sawari, the contrast between the sound and silence, and exploring the differences between the Japanese and the Western approach to music. The main influences for this compositional part come from works of Toru Takemitsu, Midori Takada, Ryūichi Sakamoto, Gaspar Claus and Toshiro Mayuzumi. These artists were composing their pieces by following the aesthetics and traditions of the Japanese sound culture. Overall, the main outcome of Kokon Dansetsu Ma project is to question tradition by trying to combine the past and the present/modernity and traditional elements together and discover differences between the Western and the Eastern approach to music.



# 1<sup>st</sup> Stage: Instruments Building

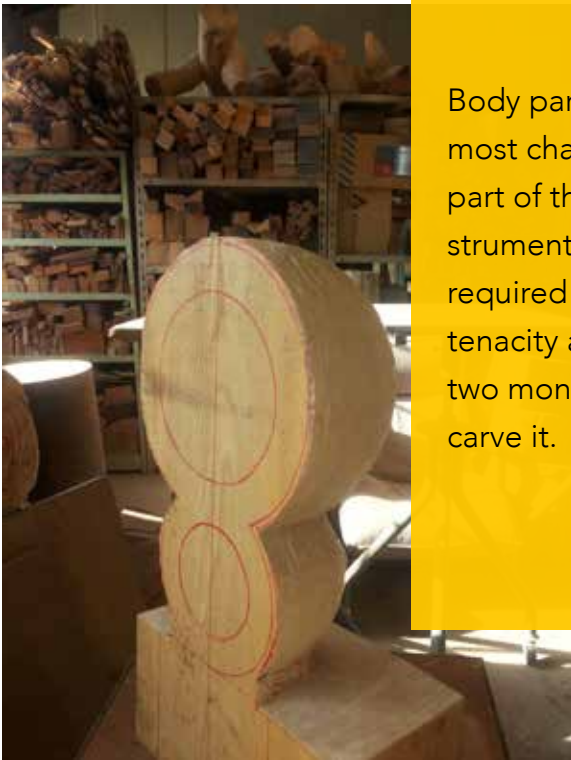
## 1) Shamisen - Cello

Japan is a country that has an amazing history and legacy of different musical instruments. Japanese music and culture in general was a main inspiration for this entire project. This particular instrument is based on Japanese traditional instrument called shamisen (translated from Japanese means literally “three strings”) crossover with classical violoncello. Designed body contains two resonant holes that have stretched skin on them (in this way it could be also used as percussion instrument). This instrument has three cello strings which can be plucked, bowed and strummed.





## a) Wood Carving



Body part was the most challenging part of this instrument. Since it required physical tenacity and it took two months to hand carve it.



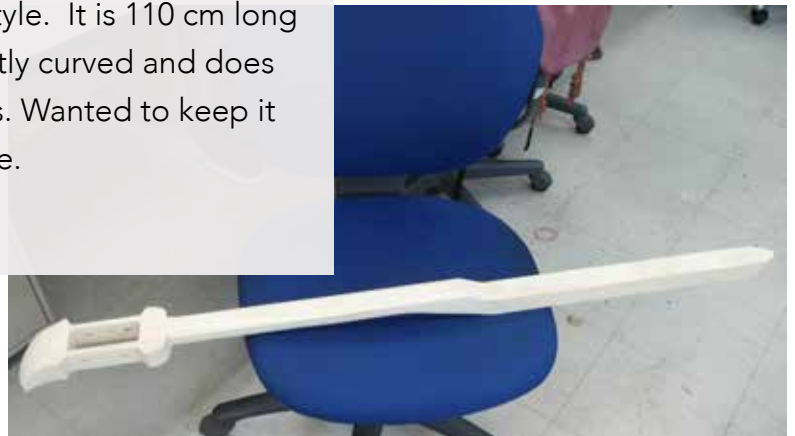
## b) Neck Making and Putting Construction Together



Second step after making body part was to make a neck. I chose to do it with different sorts of tools since it needs to be straight and technically precise.



Neck design is based on Japanese folk string instruments style. It is 110 cm long and 4 cm wide slightly curved and does not contain any frets. Wanted to keep it as simple as possible.

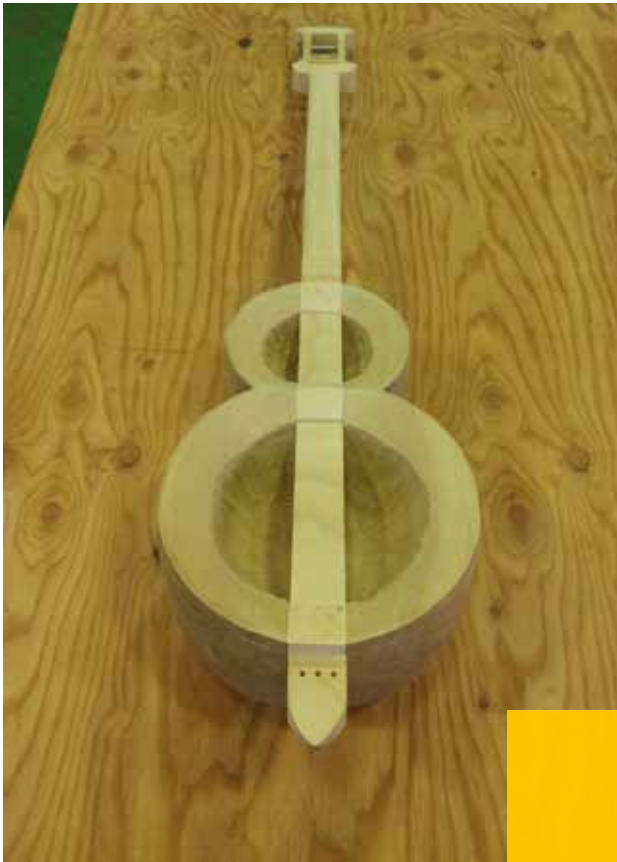


I had to cut three holes into the body part for assuring strong connection within the parts.





### c) Final Construction and First Prototype



This is how final construction looks like. At the end of the neck I also attached guitar machine heads since they will be strong enough to keep tuning for a long time. On the top of the machine heads tips I put small diameter metal tubes that extended length of surface (in that way string won't slip out of the tuning bit, and could be shinned as many times as needed).

First prototype was made for Roku exhibition in Nagoya University of Arts, Nagoya, Japan, 2016 July. It was not a completely finished instrument, since originally I wanted to stretched goat skin on it, but could not get any skin in Japan without speaking Japanese, so I had to change my plans and stretch canvas instead. There is a photo of finished prototype and my wood carving teacher sensei Iwai Yoshinao (on the left).



#### d) Skin Stretching Process

Later in the 2016 August I asked my friend Vytautas Svazas to help me with putting goat skin instead of temporary canvas that completely changed the quality of the sound. Now this instrument could be used as a drum as well. There is few photos from the goat skin stretching process. Link to the video : <https://www.youtube.com/watch?v=IRe0ep1JVl0>

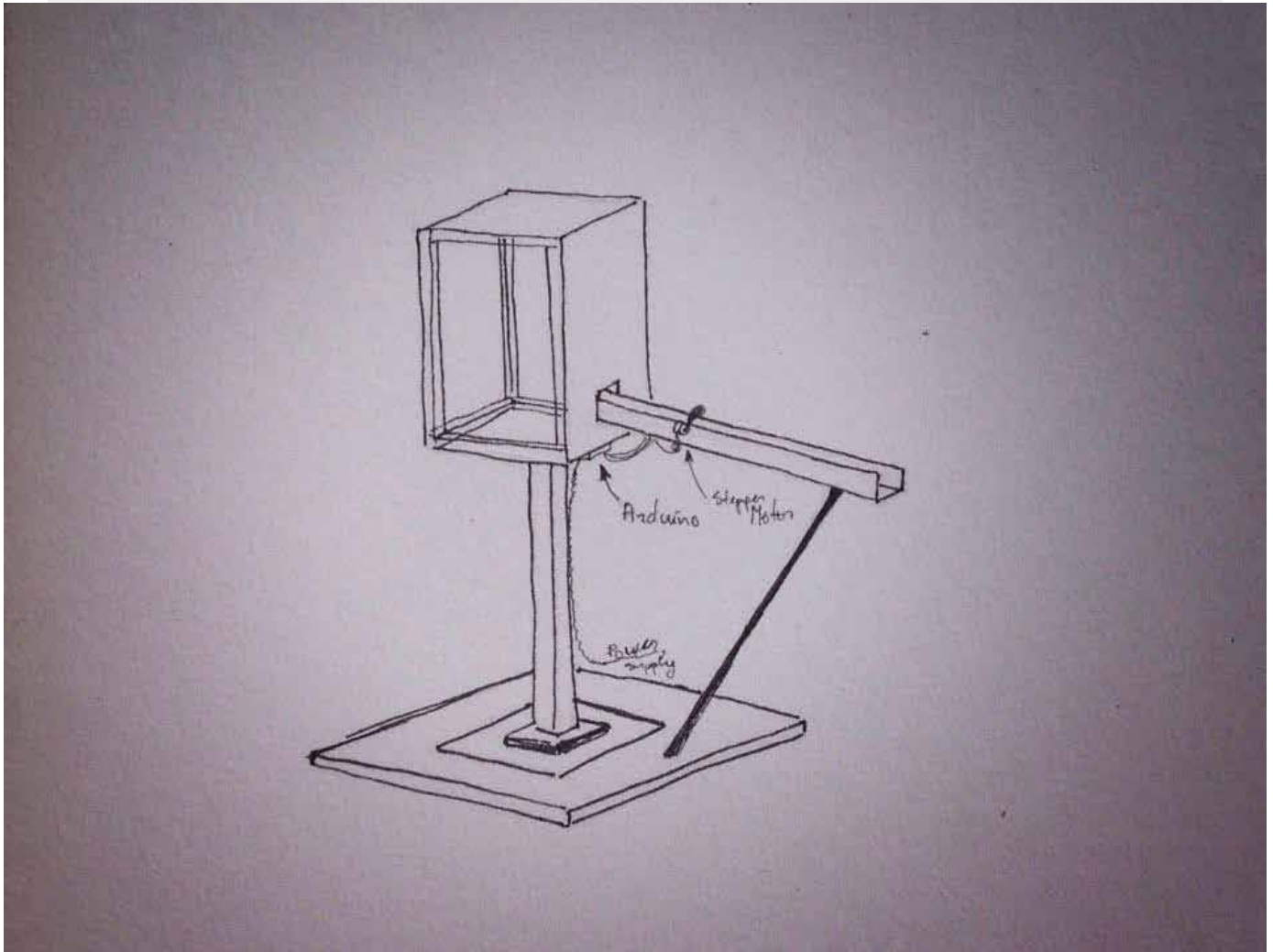


## Final Result



## 2) Ping-Pong Balls Machine

The reason why I decided to make Ping-Pong balls machine, is that I wanted to have something that would trigger generative percussion sound out of the percussive bit of shamisen-cello instrument. Falling Ping-Pong balls seemed like a reasonable choice. Design of this very basic machine is based on Japanese water fountain. This fountain is usually made out of bamboo or different wood material and it is based on complete balance. My design is mainly made out of pine-wood and one side of the box is made out of clear acrylic plastic so that audience could see what is happening inside of the box.





## a) Building Process



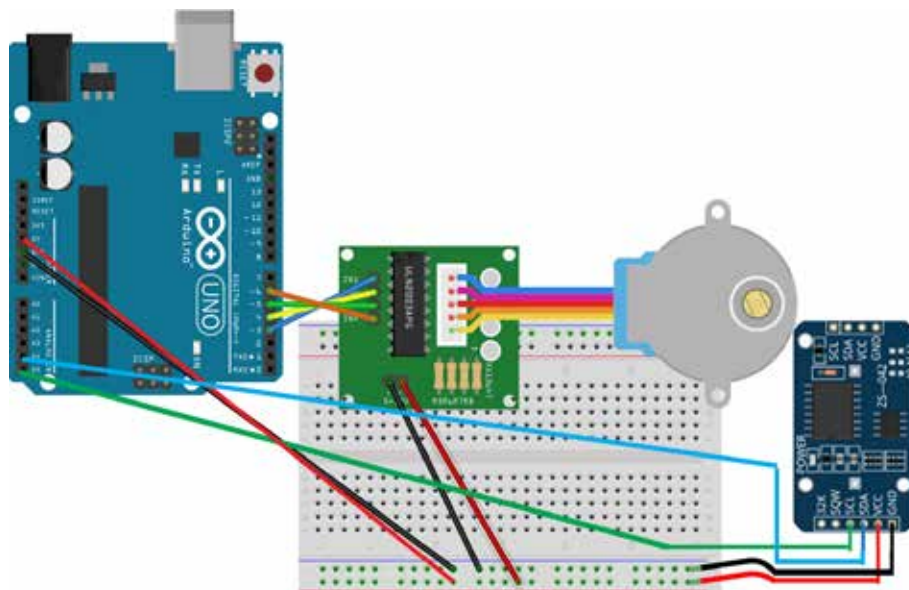
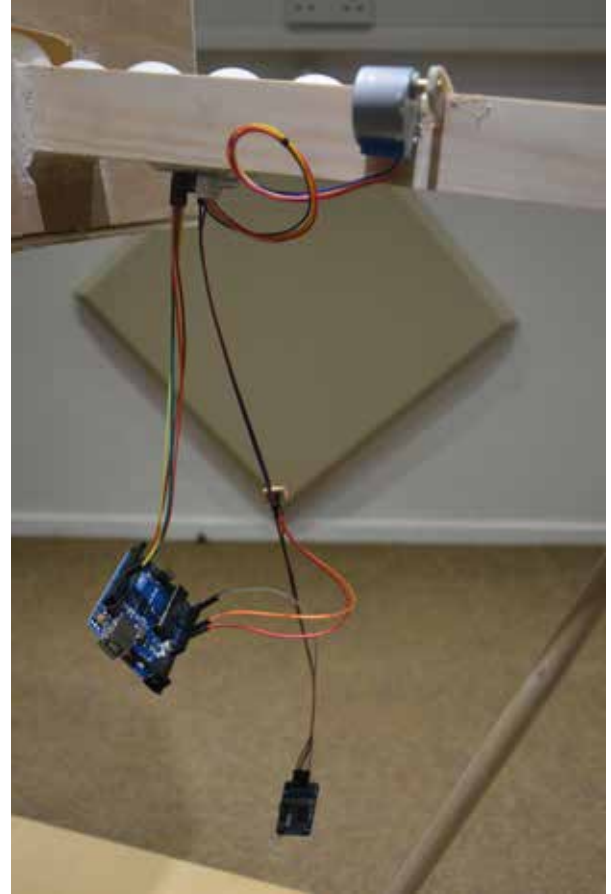
All of the wooden parts were cut by hand using a cutter and a saw. For putting everything together I used No Nails and Super glue since I did not want to use any screws for its aesthetics. For holding construction I used second handed table.



## b) Electronics and Arduino Circuit



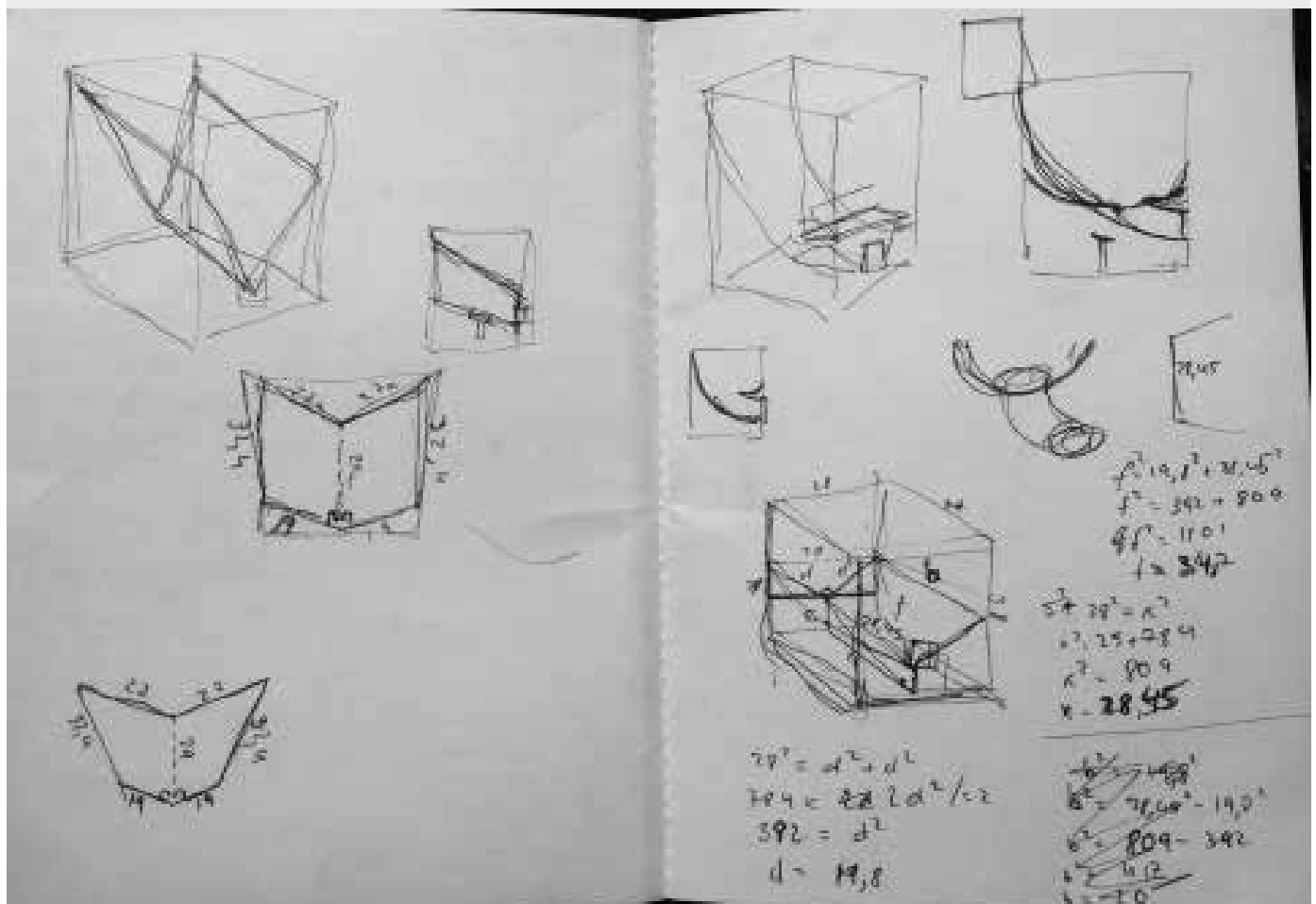
I decided to make a ping-pong releasing mechanism by using arduino, and real time clock module. After making some research on different motors, I decided that stepper motor would be the best fit for releasing ping-pong balls. Stepper motors are way more accurate than plastic or arduino type of servos. This mechanism is programmed in the same way as alarm clock: when certain time comes, motor will be triggered and release balls.



### c) Directig Ping-Pong Balls to One Point

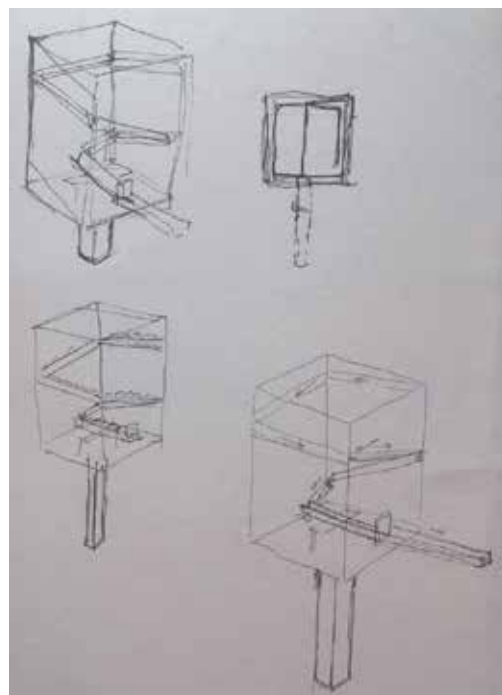


One of the biggest issues with this ping-pong ball machine project was how to direct ping-pong balls to one point. I decided to use 1,5 mm plastic sheets and form them into shape that would make them fall into hole. I made 90 degree corner curved plastic shape that would be similar to book shape and that would be slightly leaned towards a hole [for calculations and measurements look at sketches]. However, since ping-pong balls are very light, they stuck and cannot go through. There was two options left, either put transducer that would move balls that are inside but also will make a noise or find some completely different way for balls to travel through the box.

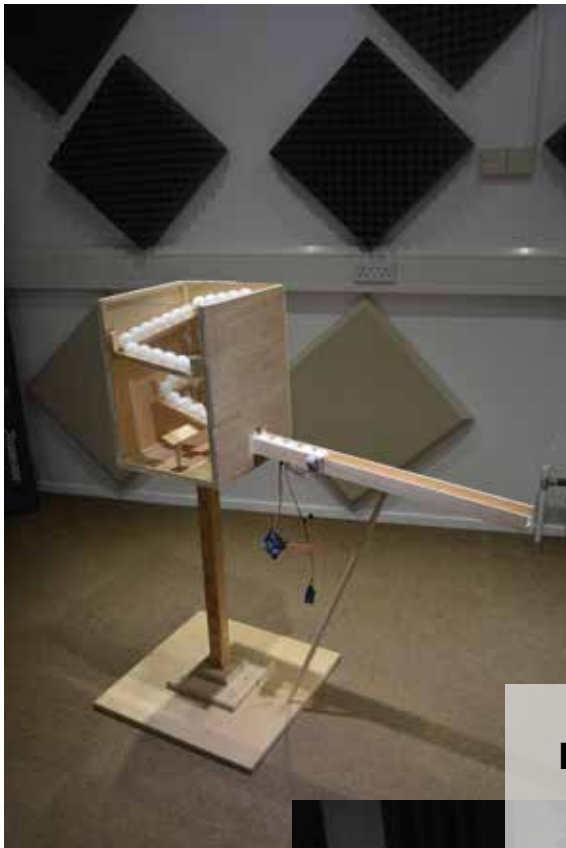




I decided to try to design construction where each ball would follow a track. Track is made out of the pine wood. It won't fit as many ping-pong balls as the first prototype, but it works well, without leaving any ping-pong balls inside a box.





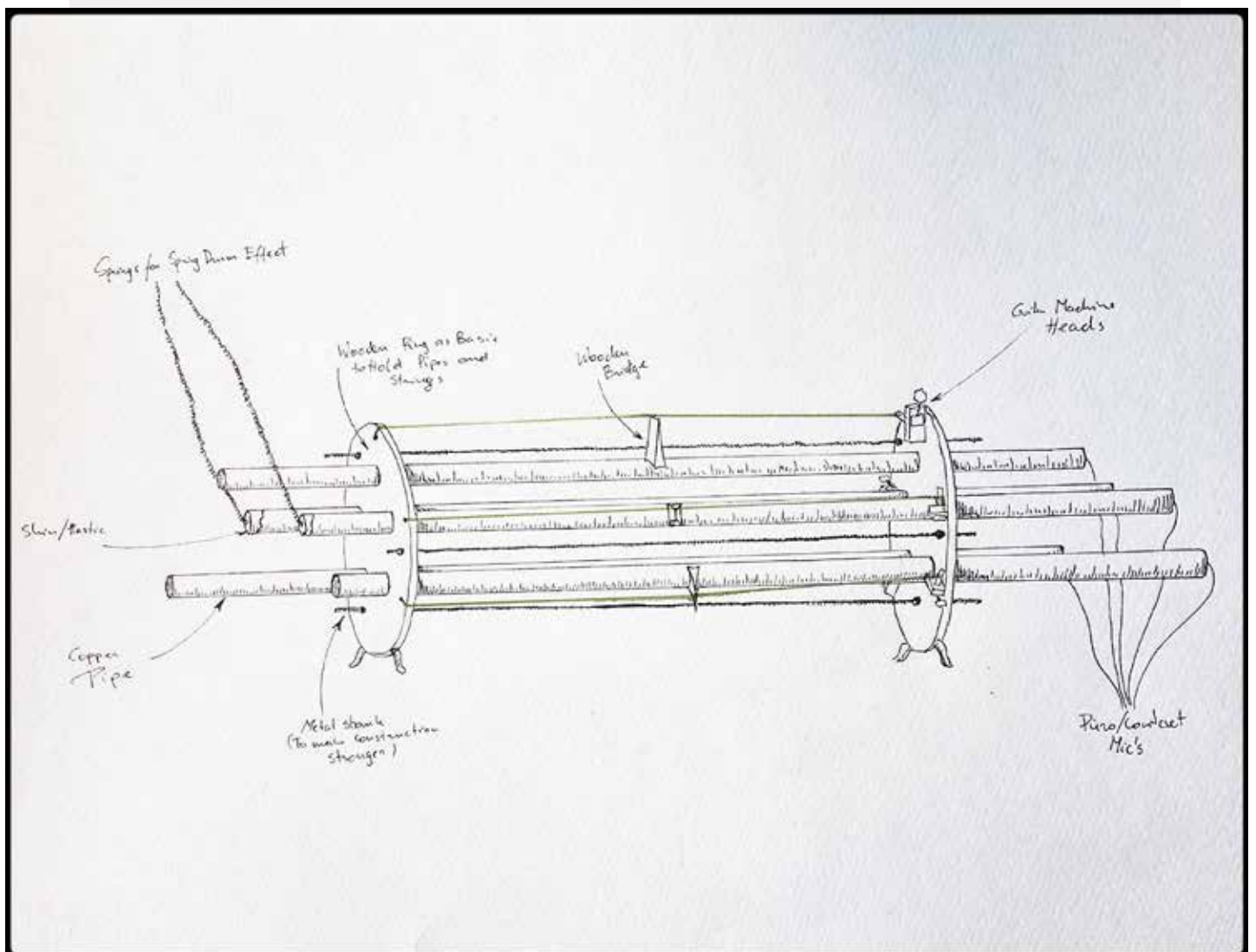


**Final Result**

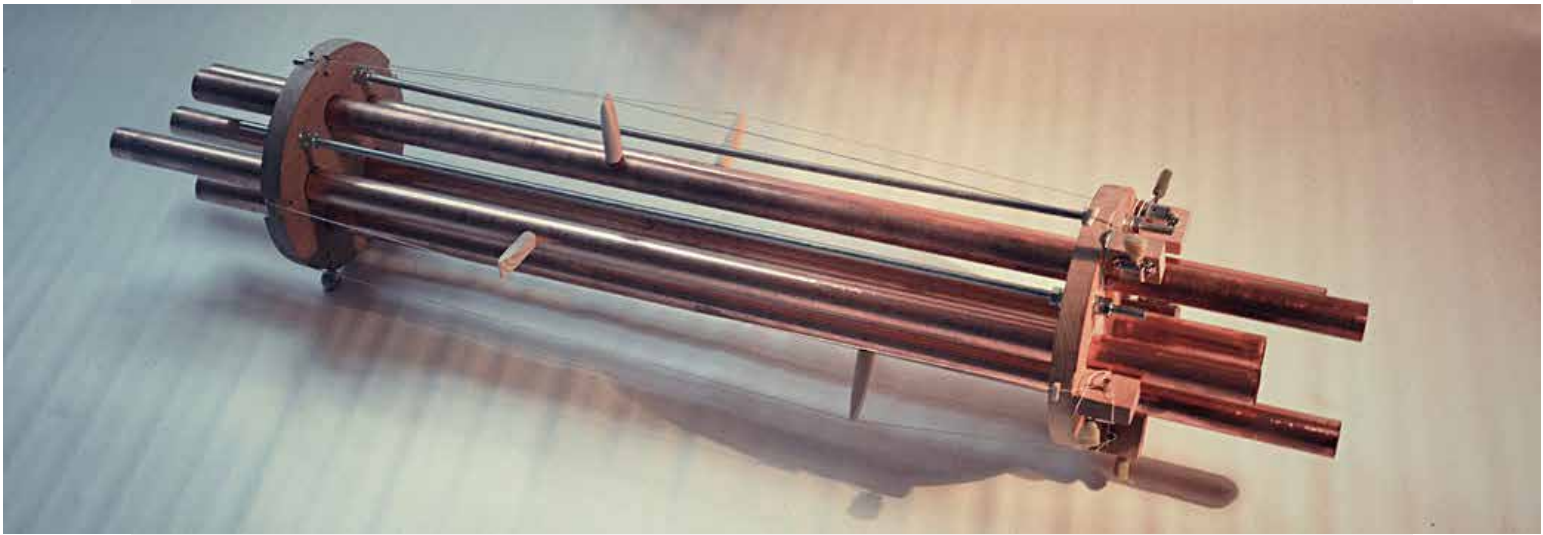


### 3) Pipe Koto

This instrument design was influenced by the same name Terek Atoui's artwork. First of all, I started with building two wooden rings which are the base of the construction. My dad helped a lot with it, he cut the wood and found the way to drill perfect size holes for copper pipes (which was difficult since we were using very hard wood so it won't bend from stretching strings). Machine heads were attached to separate wooden parts which were screwed onto the one of the rings. For this instrument stabilization I decided to add few round drawer's handles as legs so it could stand on the ground properly. There is also three metal strips between wooden rings which hold them in place and does not let them to slide when strings are stretched on. After putting the construction bit together I made small bridges for each string which is directing a vibration of single string to one of the pipes.



**The final result of designed instrument looks like this:**



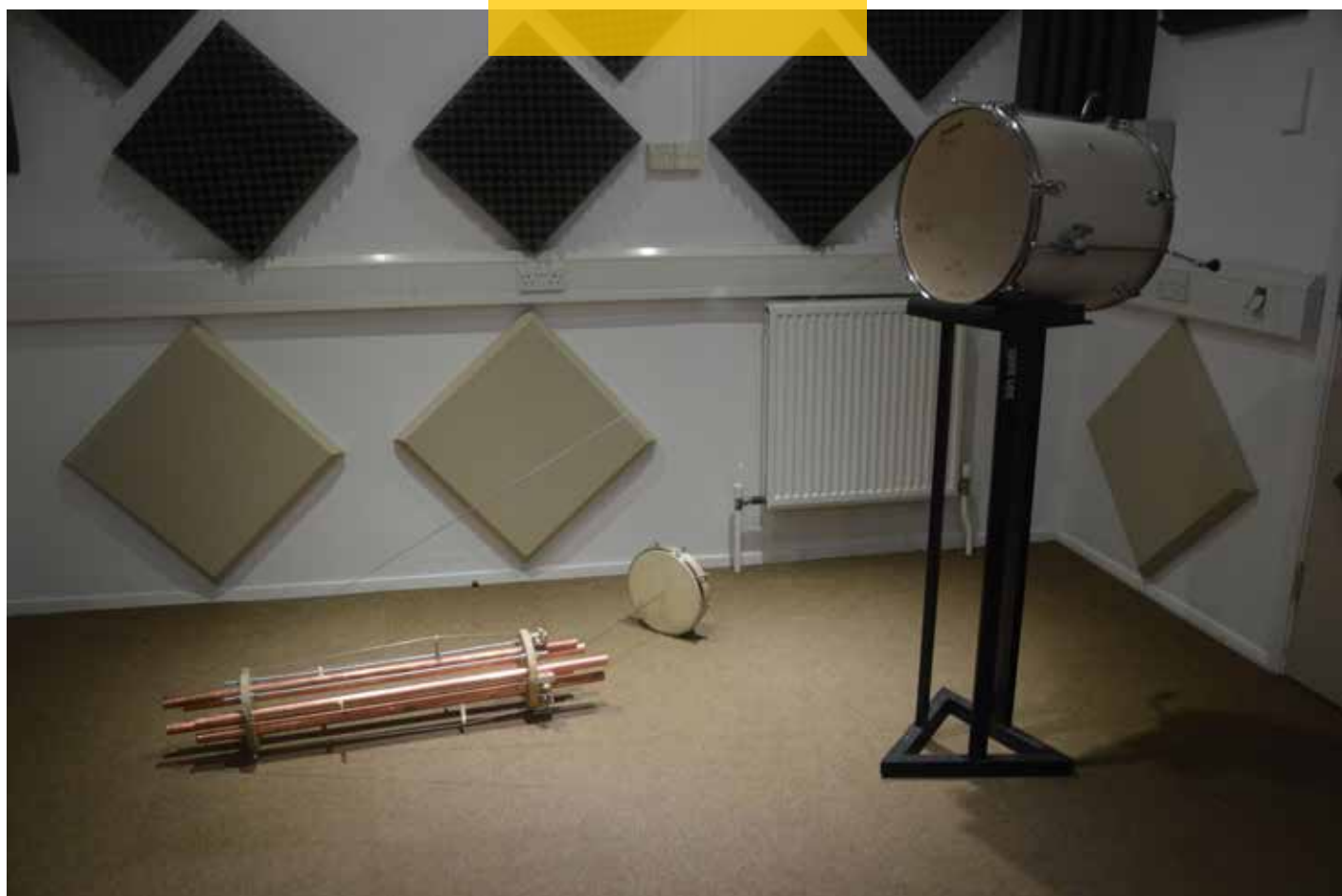
### a) Attaching Drums Via Springs

After finishing this instrument I was thinking how I could improve sound of it. So I decided to attach small frame drum and a tum drum to the end of the few pipes via springs. This very simple mechanism created spring reverb effect and added more depth to the sound. In the final set up tum drum will be hanging from the ceiling.





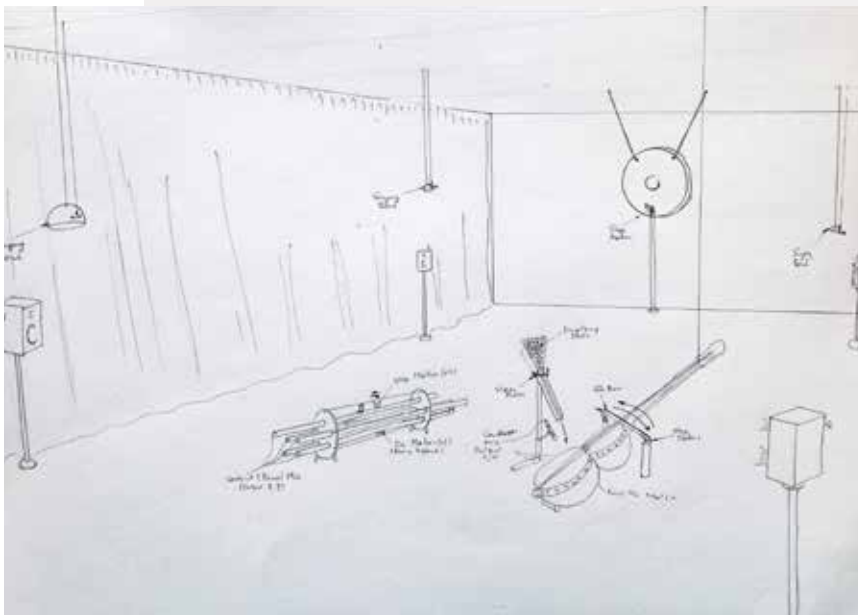
## Final Result



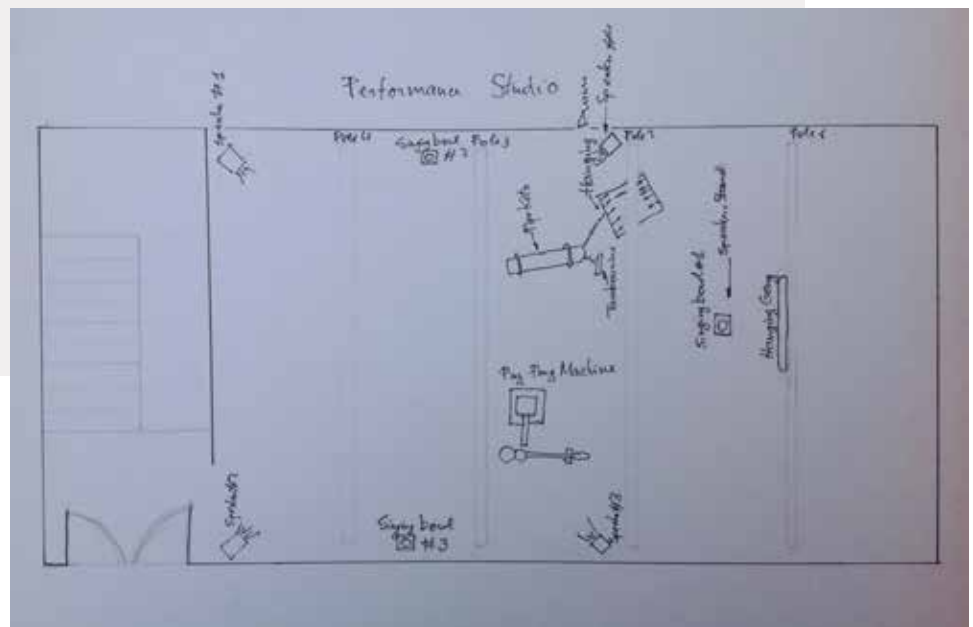
## 4) Gong

After making few string instruments, I decided that it would be great to add some percussion as well. First of all I thought that it would be enough to use three different size singing bowls, but after awhile I realized that all of them have quite high pitch and there was some deeper tone missing. I decided to make wide diameter (80cm) gong that would add more range to final installation.

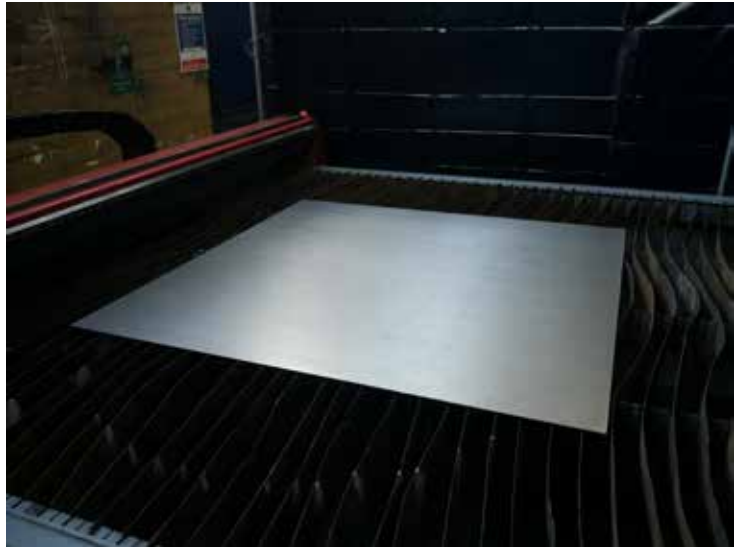
This could be called one of the most ambitious parts of this project, since gong making is very difficult and requires decades worth of experience with metal working and I haven't even tried blacksmithing before. However, I gave it a go, so hopefully something good will come from this experiment. I decided to use two different materials for experimenting: 80cm diameter and 3 mm thickness aluminum; 87mm diameter and 2mm thickness mild steel;



There is also first plan of the entire installation, with preliminary set-up and motors location. Space used in this sketch is University of Brighton performance studio located in Grand Parade campus.



## a) Metal Preparation



To cut the metal sheets into circles I used plasma cutter from University of Brighton Tech-hub. I had to cut three smaller circles (20-25 cm diameter) as samples since I could not do gong from a first try. That had influence on the main gong diameter.

### **b) Samples**

There is hand hammered 25 cm sample. Aesthetically it looks as I wanted but sound wise it does not work as expected since for 25 cm diameter, 3mm thickness aluminum is too thick. However, it should work fine with 80cm diameter circle.



### **c) Work in Progress**





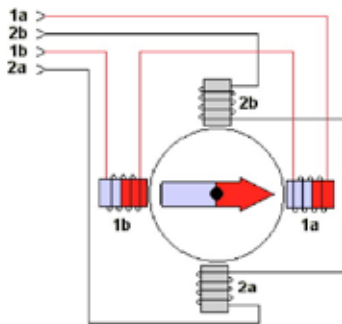
### **c) Final Result**



# 2<sup>nd</sup> Stage: Programming

## 1) Stepper Motor

I use one stepper motor in my entire project and it is for Ping-Pong ball machine. It was the best choice to achieve a precise result. However it still has its limitations when it comes to speed and efficiency.



Stepper motors are DC motors that move in discrete steps. They have multiple coils that are organized in groups called “phases”. By energizing each phase in sequence, the motor will rotate, one step at a time.

With a computer controlled stepping you can achieve very precise positioning and/or speed control. For this reason, stepper motors are the motor of choice for many precision motion control applications.

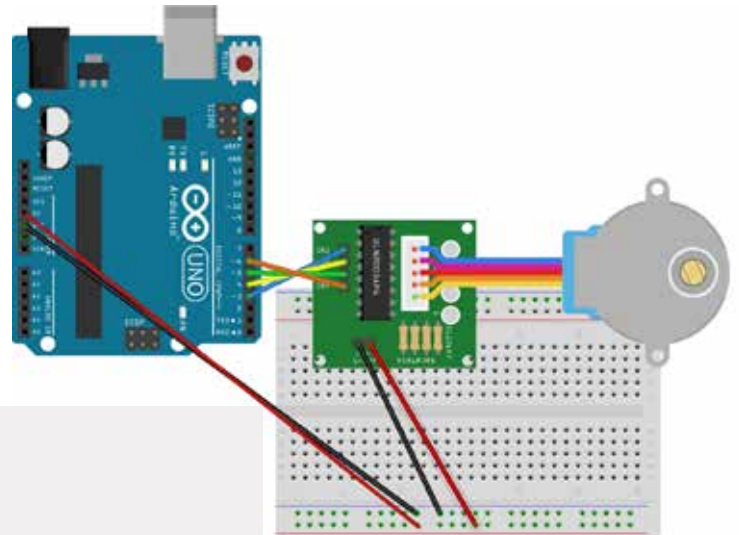
What are their limitations?

- Low Efficiency – Unlike DC motors, stepper motor current consumption is independent of load. They draw the most current when they are doing no work at all. Because of this, they tend to run hot.
- Limited High Speed Torque - In general, stepper motors have less torque at high speeds than at low speeds. Some steppers are optimized for better high-speed performance, but they need to be paired with an appropriate driver to achieve that performance.

What are stepper motors good for?

- Positioning – Since steppers move in precise repeatable steps, they excel in applications requiring precise positioning such as 3D printers, CNC, Camera platforms and X,Y Plotters. Some disk drives also use stepper motors to position the read/write head.
- Speed Control – Precise increments of movement also allow for excellent control of rotational speed for process automation and robotics.
- Low Speed Torque - Normal DC motors don't have very much torque at low speeds. A Stepper motor has maximum torque at low speeds, so they are a good choice for applications requiring low speed with high precision.

## Arduino Code and Circuit Scheme



```
/*  
Adafruit Arduino - Lesson 16. Stepper  
*/  
  
#include <Stepper.h>  
  
int in1Pin = 12;  
int in2Pin = 11;  
int in3Pin = 10;  
int in4Pin = 9;  
  
Stepper motor(512, in1Pin, in2Pin, in3Pin, in4Pin);  
  
void setup()  
{  
  pinMode(in1Pin, OUTPUT);  
  pinMode(in2Pin, OUTPUT);  
  pinMode(in3Pin, OUTPUT);  
  pinMode(in4Pin, OUTPUT);  
  
  // this line is for Leonardo's, it delays the serial interface  
  // until the terminal window is opened  
  while (!Serial);  
  
  Serial.begin(9600);  
  motor.setSpeed(20);  
}  
  
void loop()  
{  
  if (Serial.available())  
  {  
    int steps = Serial.parseInt();  
    motor.step(steps);  
  }  
}
```

### 3) Vibration Motor

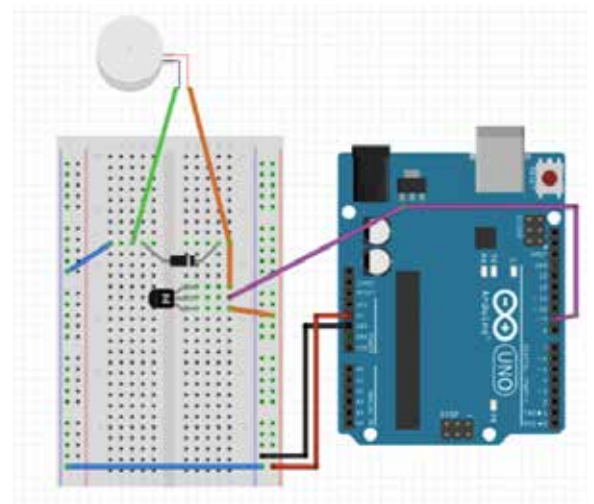
For this project I am mainly using vibration motors. These motors trigger the entire percussion bit (singing bowls and a gong). I placed few of them on string instruments as well. On shamisen-cello hybrid this motor triggers two strings and on pipe koto unit these motors are used to trigger drums, three strings and one of the pipes.

Vibration motor is a compact size coreless DC motor used to inform the users of receiving the signal by vibrating, no sound. Vibration motors are widely used in a variety of applications including cell phones, handsets, pagers, and so on.



#### Arduino Code and Circuit Scheme

```
void setup() {  
  pinMode( 6 , OUTPUT); // Must be a PWM pin  
}  
  
void loop() {  
  
  analogWrite( 6 , 153 ); // 60% duty cycle  
  delay(500);             // play for 0.5s  
  
  analogWrite( 6 , 0 );   // 0% duty cycle (off)  
  delay(4000);            // wait for 4s  
  
}
```



Components needed:

- PN2222 Transistor
- 1N4001 Diode



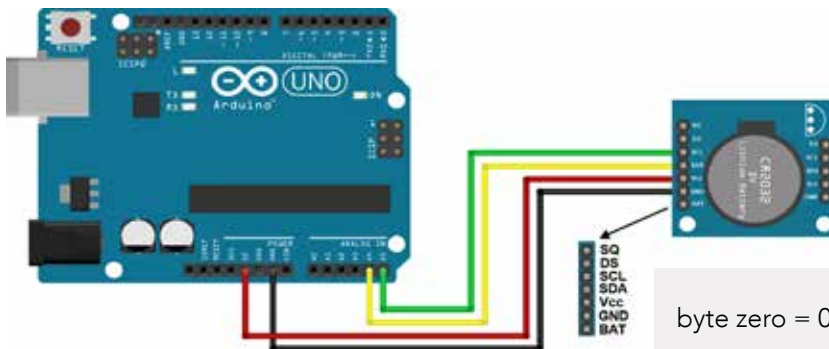
## 4) RTC Module

I am using RTC (Real Time Clock) as a motor trigger. Since for my entire project I am using 6 different arduino's I could not pluck them in into the power supply and hope that all of them will start working at the same time and keep up with the score. However, using RTC modules with every single arduino I can program motors as separate alarm clocks that will be triggered at the certain time.



A real-time clock (RTC) is a computer clock (most often in the form of an integrated circuit) that keeps track of the current time. Although the term often refers to the devices in personal computers, servers and embedded systems, RTCs are present in almost any electronic device which needs to keep accurate time.

### Arduino Codes and Circuit Scheme



Please note that arduino Wire library is needed in order to run these codes.

Code for setting up time:

```
byte zero = 0x00; //workaround for issue #527

#include <Wire.h>
#define DS1307_ADDRESS 0x68

void setup(){
  Wire.begin();
  Serial.begin(9600);
  setDateTime();
}

void loop(){
  printDate();
  delay(1000);
}

byte decToBcd(byte val){
  // Convert normal decimal numbers to binary coded decimal
  return ( (val/10*16) + (val%10) );
}

byte bcdToDec(byte val) {
  // Convert binary coded decimal to normal decimal numbers
  return ( (val/16*10) + (val%16) );
}
```

```

void setDateTime(){

    byte second = 40; //0-59
    byte minute = 8; //0-59
    byte hour = 10; //0-23
    byte weekDay = 1; //1-7
    byte monthDay = 3; //1-31
    byte month = 4; //1-12
    byte year = 17; //0-99

    Wire.beginTransmission(DS1307_ADDRESS);
    Wire.write(zero);

    Wire.write(decToBcd(second));
    Wire.write(decToBcd(minute));
    Wire.write(decToBcd(hour));
    Wire.write(decToBcd(weekDay));
    Wire.write(decToBcd(monthDay));
    Wire.write(decToBcd(month));
    Wire.write(decToBcd(year));

    Wire.write(zero); //start

    Wire.endTransmission();

}

void printDate(){

    // Reset the register pointer
    Wire.beginTransmission(DS1307_ADDRESS);

    byte zero = 0x00;
    Wire.write(zero);
    Wire.endTransmission();

    Wire.requestFrom(DS1307_ADDRESS, 7);

    int second = bcdToDec(Wire.read());
    int minute = bcdToDec(Wire.read());
    int hour = bcdToDec(Wire.read() & 0b111111); //24 hour time
    int weekDay = bcdToDec(Wire.read()); //0-6 -> sunday - Saturday
    int monthDay = bcdToDec(Wire.read());
    int month = bcdToDec(Wire.read());
    int year = bcdToDec(Wire.read());

    //print the date EG 3/1/11 23:59:59
    Serial.print(month);
    Serial.print("/");
    Serial.print(monthDay);
    Serial.print("/");
    Serial.print(year);
    Serial.print(" ");
    Serial.print(hour);
    Serial.print(":");
    Serial.print(minute);
    Serial.print(":");
    Serial.println(second);

}

```

Code for reading time without resetting it:

```
//Arduino 1.0+ Only
//Arduino 1.0+ Only

#include <Wire.h>
#define DS1307_ADDRESS 0x68

void setup(){
  Wire.begin();
  Serial.begin(9600);
}

void loop(){
  printDate();
  delay(1000);
}

byte bcdToDec(byte val) {
  // Convert binary coded decimal to normal decimal numbers
  return ( (val/16*10) + (val%16) );
}

void printDate(){

  // Reset the register pointer
  Wire.beginTransmission(DS1307_ADDRESS);

  byte zero = 0x00;
  Wire.write(zero);
  Wire.endTransmission();

  Wire.requestFrom(DS1307_ADDRESS, 7);

  int second = bcdToDec(Wire.read());
  int minute = bcdToDec(Wire.read());
  int hour = bcdToDec(Wire.read() & 0b111111); //24 hour time
  int weekDay = bcdToDec(Wire.read()); //0-6 -> sunday - Saturday
  int monthDay = bcdToDec(Wire.read());
  int month = bcdToDec(Wire.read());
  int year = bcdToDec(Wire.read());

  //print the date EG 3/1/11 23:59:59
  Serial.print(month);
  Serial.print("/");
  Serial.print(monthDay);
  Serial.print("/");
  Serial.print(year);
  Serial.print(" ");
  Serial.print(hour);
  Serial.print(":");
  Serial.print(minute);
  Serial.print(":");
  Serial.println(second);
}
```

## Alarm clock code :

```
#include <Wire.h>
#include "RTCLib.h"
#include "Time.h"
#include "TimeAlarms.h"

RTC_Millis rtc;

void setup(){
  rtc.begin(DateTime(F(__DATE__), F(__TIME__)));

  Alarm.alarmRepeat(10,30,0,buzz); // 10:30am every day
  Alarm.alarmRepeat(16,30,0,buzz); // 4:30pm every day
  Alarm.alarmRepeat(22,30,0,buzz); // 10:30pm every day -- modify this to your current time
  when running the example

  Serial.begin(9600);
}

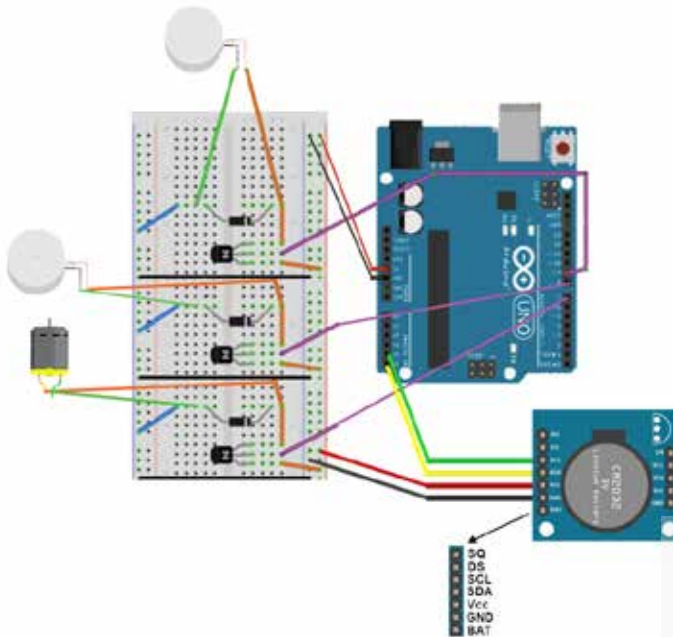
void loop(){
  //printing the current time
  DateTime now = rtc.now();

  Serial.print(now.year());
  Serial.print('/');
  Serial.print(now.month());
  Serial.print('/');
  Serial.print(now.day());
  Serial.print(' ');
  Serial.print(now.hour());
  Serial.print(':');
  Serial.print(now.minute());
  Serial.print(':');
  Serial.print(now.second());
  Serial.println();
  Alarm.delay(1000); // wait one second between clock display
}

void buzz(){
  tone(3, 220, 1000);
}
```



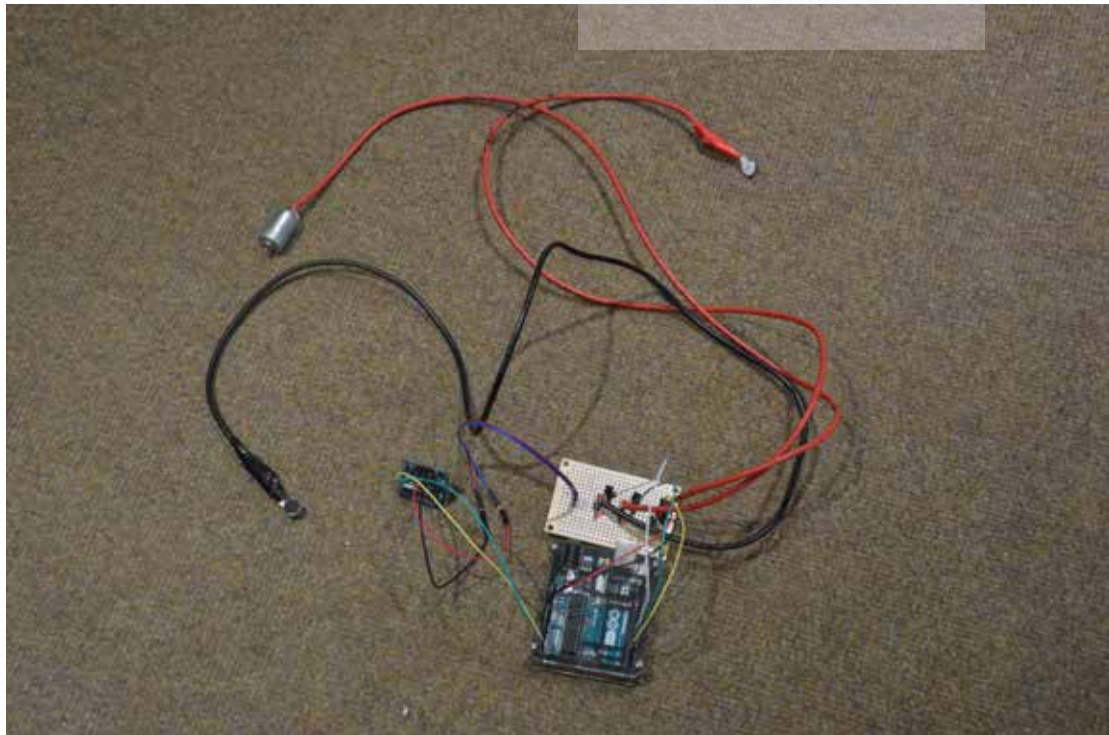
## 5) Shamisen-Cello Circuit



Shamisen-cello has three motors attached to it, one DC motor and two vibration motors, all of them triggering strings. This instrument percussion part is triggered by Ping-Pong balls that fall off Ping-Pong balls machine.

Components needed:

- Arduino Uno
- 3 x PN2222 Transistors
- 3 x 1N4001 Diode
- DC Motor
- 2 x Vibration Motors
- RTC Module



## Shamisen-cello code/template for other codes:

```
#include <Wire.h>
#include <RTCLib.h>
#include "Time.h"
#include "TimeAlarms.h"

const int motorPin1 = 3;
const int motorPin2 = 4;
const int motorPin3 = 5;

RTC_Millis rtc;

void setup(){

  // Wire.begin();
  // RTC setup
  rtc.begin(DateTime(F(__DATE__), F(__TIME__)));

  // motor setup
  pinMode (motorPin1, OUTPUT);
  pinMode (motorPin2, OUTPUT);
  pinMode (motorPin3, OUTPUT);

  Serial.begin(9600);
  DateTime now = rtc.now();
  setTime(now.hour(),now.minute(),now.second(),
now.day(),now.month(),now.year());
  // create the alarms

  Alarm.alarmRepeat(12,30,00,StartComposition);
  Alarm.alarmRepeat(12,32,40,StartComposition);
  Alarm.alarmRepeat(12,35,40,StartComposition);
  Alarm.alarmRepeat(12,37,00,StartComposition);

  // 1pm every day
}

void loop(){
  digitalClockDisplay();
  Alarm.delay(1000);
}

void StartComposition(){
  Alarm.timerOnce(11, buzz1);
  Alarm.timerOnce(12, buzz2);
  Alarm.timerOnce(17, buzz3);
  Alarm.timerOnce(18, buzz1);

  Alarm.timerOnce(21, buzz1);
  Alarm.timerOnce(22, buzz2);
  Alarm.timerOnce(27, buzz3);
  Alarm.timerOnce(28, buzz1);

  Alarm.timerOnce(80, buzz1);
  Alarm.timerOnce(81, buzz2);
  Alarm.timerOnce(82, buzz3);
  Alarm.timerOnce(83, buzz1);

  Alarm.timerOnce(90, buzz1);
  Alarm.timerOnce(91, buzz2);
  Alarm.timerOnce(92, buzz3);
  Alarm.timerOnce(93, buzz1);
```

```
Alarm.timerOnce(42, buzz3);
Alarm.timerOnce(43, buzz1);
Alarm.timerOnce(44, buzz2);

Alarm.timerOnce(90, buzz1);
Alarm.timerOnce(91, buzz2);
Alarm.timerOnce(92, buzz3);
Alarm.timerOnce(93, buzz1);

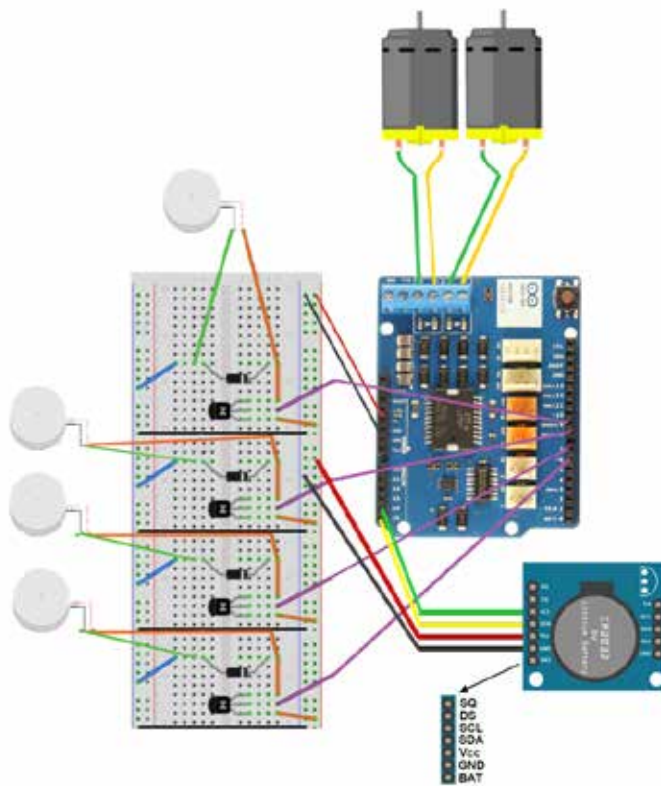
Alarm.timerOnce(99, buzz2);
Alarm.timerOnce(100, buzz3);
Alarm.timerOnce(100, buzz1);
Alarm.timerOnce(101, buzz2); }

void buzz1(){
  Serial.println('1');
  hit(motorPin1);
}
void buzz2(){
  Serial.println('2');
  hit(motorPin2);
}
void buzz3(){
  Serial.println('3');
  hit(motorPin3);
}
void hit(const int motor){
  digitalWrite(motor, HIGH);
  delay(1000);
  digitalWrite(motor, LOW);
}

void digitalClockDisplay(){
  // digital clock display of the time
  //Serial.print(hour());
  //printDigits(minute());
  //printDigits(second());
  //Serial.println();

  //printing the current time
  DateTime now = rtc.now();

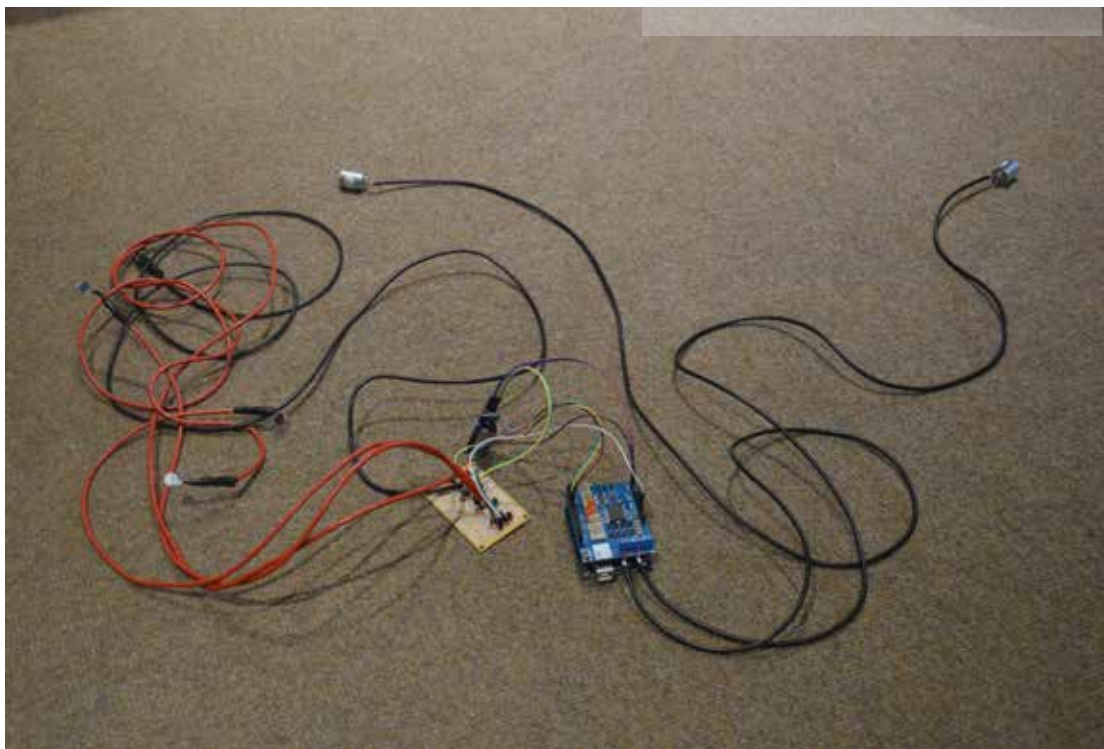
  Serial.print(now.year());
  Serial.print('/');
  Serial.print(now.month());
  Serial.print('/');
  Serial.print(now.day());
  Serial.print(' ');
  Serial.print(now.hour());
  Serial.print(':');
  Serial.print(now.minute());
  Serial.print(':');
  Serial.print(now.second());
  Serial.println();
  Alarm.delay(10000); // wait one second
  between clock display
}
```



Second Pipe Koto circuit is a bit more difficult. It is run through arduino motor shield Rev3. This motor shield has just two inputs that I used to connect two regular DC motors. Other four vibration motors were connected via separate circuit that includes transistor and diode. One of vibration motors and both of DC motors are triggering Pipe Koto strings. Two vibration motors are attached to drums for percussion sounds and last vibration motor is triggering one of the copper pipes.

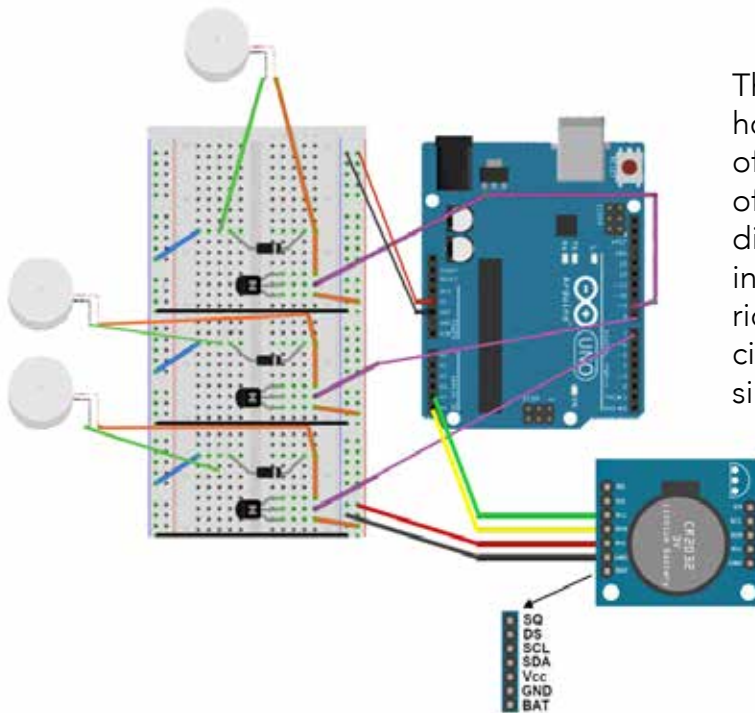
Components needed:

- Arduino Uno
- Motor Shield Rev3
- 2 x DC Motors
- 4 x Vibration Motors
- RTC Module
- 4 x PN2222 Transistors
- 4 x 1N4001 Diode





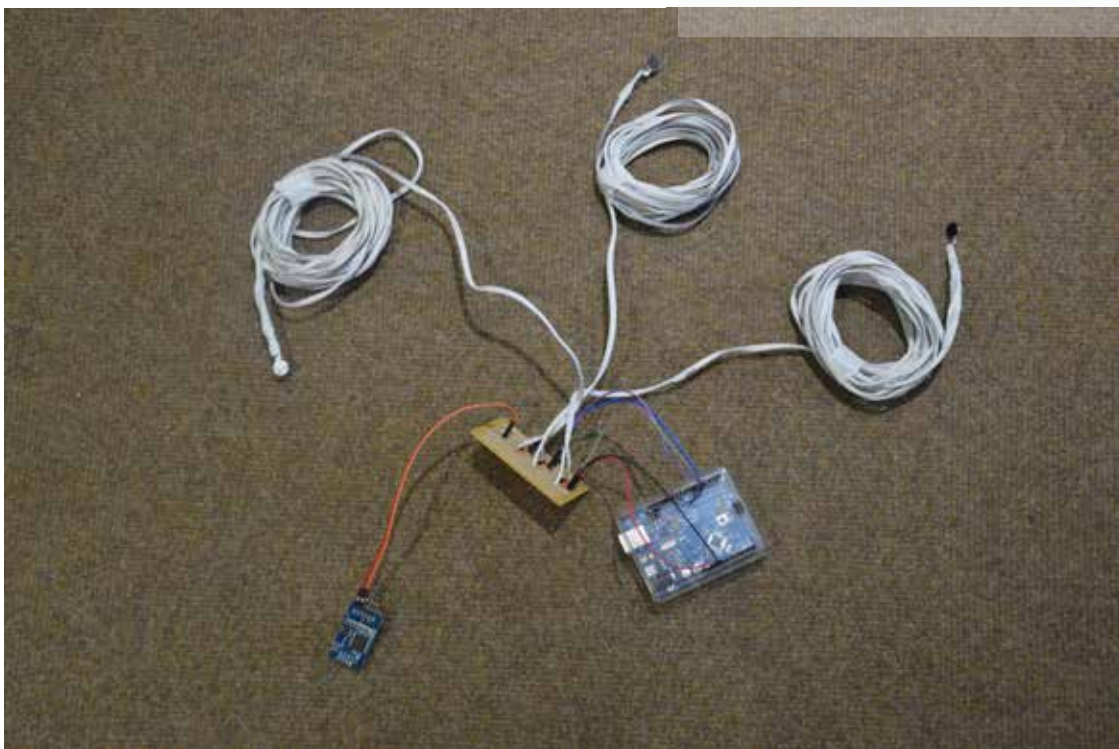
## 7) Singing Bowls Circuit



This circuit is made to control a homemade gong and one out of three singing bowls. Two out of three motors are attached to different parts of a gong with a intention to make its sound more rich. Third vibration motor of this circuit is used to trigger one of the singing bowls.

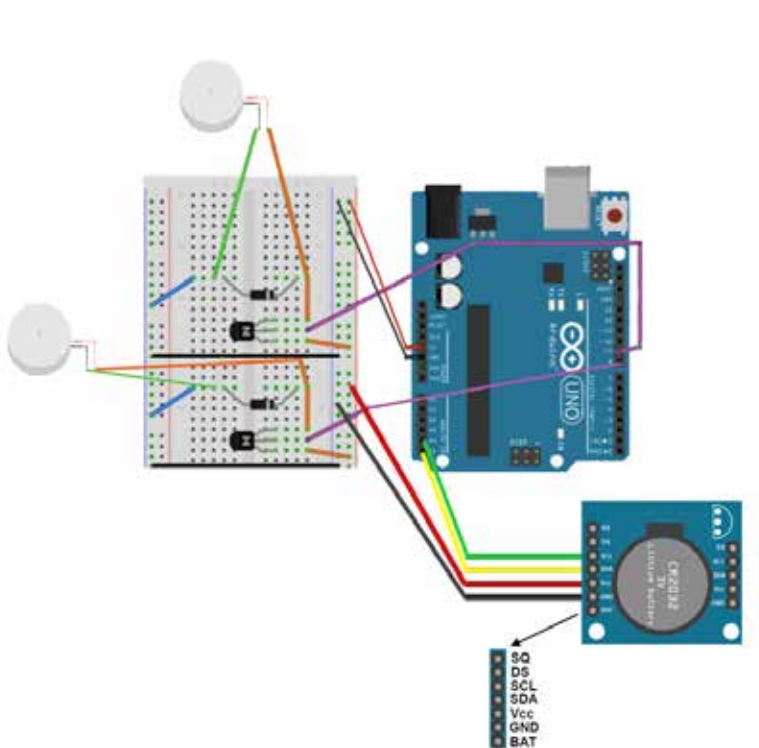
Components needed:

- Arduino Uno
- 3 x Vibration Motors
- RTC Module
- 3 x PN2222 Transistors
- 3 x 1N4001 Diode





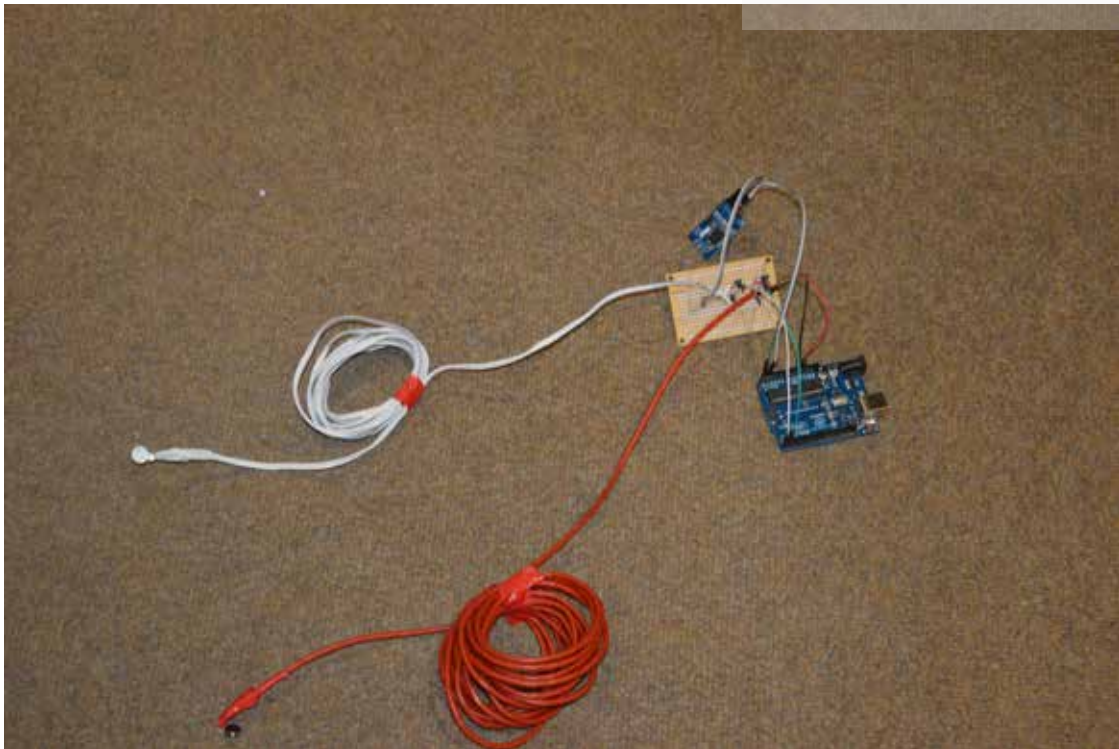
## 8) Gong Circuit



This is probably the simplest circuit that involves two vibration motors that are triggering two different size singing bowls. Leads used to connect motors to the board are quite long (2-3 meters) so that it could control separate singing bowls that are in different sides of the room used for installation.

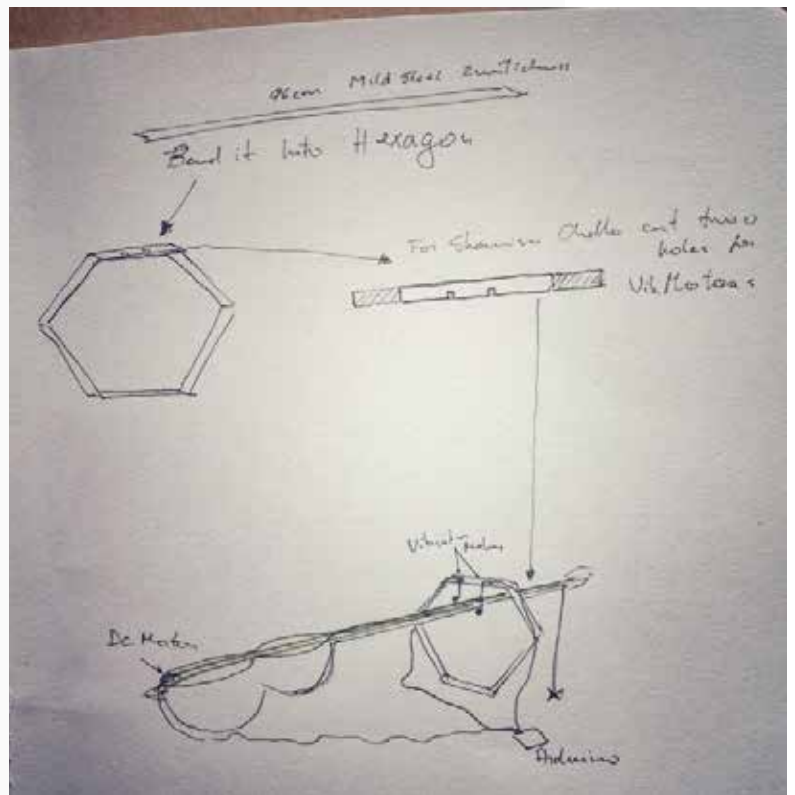
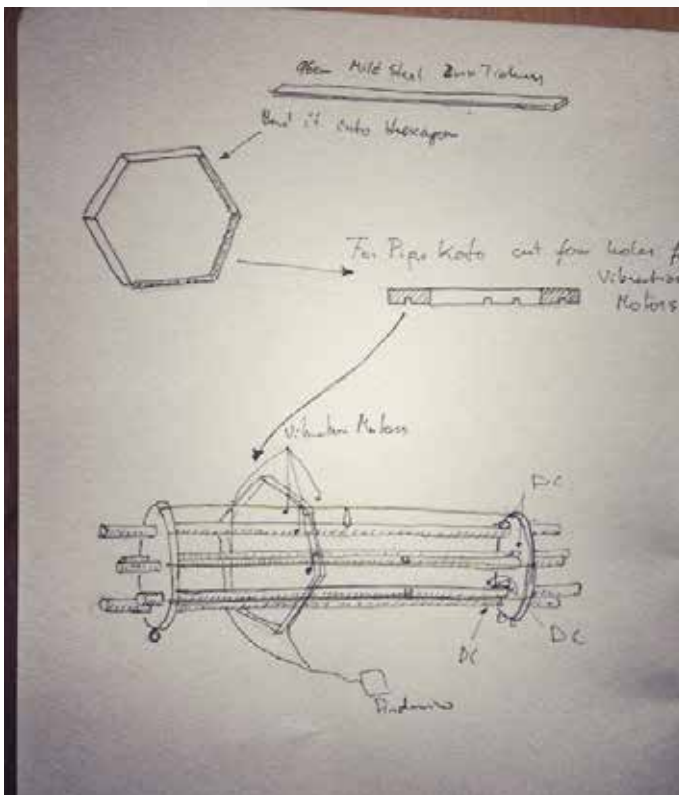
Components needed:

- Arduino Uno
- 2 x Vibration Motors
- RTC Module
- 2 x PN2222 Transistors
- 2 x 1N4001 Diode



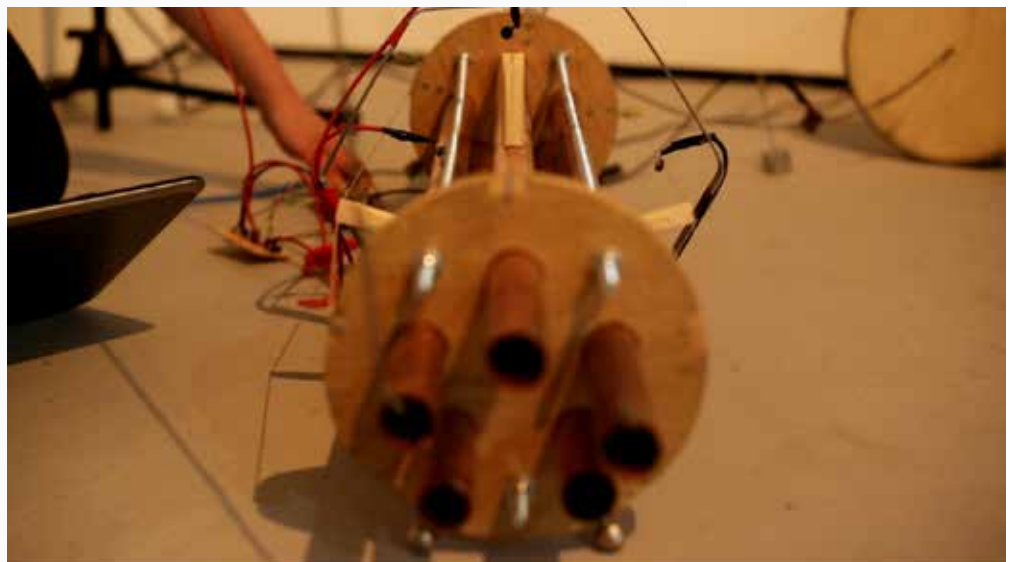
## 9) Motors Fixing Onto Instruments

After soldering all of the circuits there was a time to figure out how to fix them all onto the instruments. With percussion bit (gong, singing bowls and drums) everything seemed pretty straight forward, I decided to hang vibration motors from the ceiling. However this was not an option for shamisen-cello and pipe koto so I had to figure out another way to install motors. I decided to make a hexagon shaped metal holders for vibration motors, which won't interrupt the overall aesthetics of the instruments. Metal holders will be made out of mild steel stripes and will have small holes that will hold wires of vibration motors [see drawing and photos below].





## Final Result





## Final Visual Result of Entire Project



# 3<sup>rd</sup> Stage: Composing

## 1) Understanding Scores

"Western music is all about searching for perfection while repeating successful composers; meanwhile Japanese music is all about creating new things by yourself."<sup>1</sup>

This observation of a Lithuanian performance artist Benas Sarka could be seen as too harsh a criticism towards classical western music; a classical score is a great, time-checked way to preserve music for the future generations. Of course, currently there is a variety of advanced recording technologies which allow people to hear recorded sounds exactly the same way countless times, keeping in mind, the first sound recording device was invented just by the end of the 19th century. This means that without classical or traditional scores current cultures would not have an opportunity to reproduce and hear works of such renowned composers like Mozart, Beethoven or Tchaikovsky. Still, this poses a question, why is it important to seek a complete perfection and precision to repeat a composition which has been played multiple times? Why is it so important to write notations which are strict and hardly leave the performers freedom to improvise? The answer to this could be that in western cultures people with power generally want to have authority over others, and in this situation the composer is the one who is in power and takes control over performers as all that is needed is an instrument to produce a piece.

In the Japanese music, and oriental music in general, there is an opposite side. A notion of dominating music is for performers rather than for composers. Scores are not that precise and give improvisational freedom to a performer. Music should have a freedom to breathe.

**"Rather than on the ideology of self-expression, music should be based on a profound relationship to nature - sometimes gentle, sometimes harsh"**<sup>2</sup>. Music suffers when sound

is refined by ideas rather than having an identity of its own.

"When we cross the river or climb the mountain we exist in the eternal present of time; this time includes all past and present time. Crossing the river, climbing the mountain, living in a palace exist together, interrelated, in being-time. [...] Yesterday's time is experienced in our present existence. It appears to be passing but the past is always contained in the present. Like this, the pine tree is time, the bamboo is also time."<sup>3</sup>

This is how experience of *uji* could be described. It could be seen as equivalent with the Zen Buddhism concept of *hishiryō* (when subject is in the state of not thinking). Dogen thoughts about time could be easily applied to eastern music - when there is no past and no future, they coexist in the present. This understanding of time is what separates western and eastern understanding of music notation. While western cultures try to save music of the past with precise scores to pass it on for future generations as accurately as possible. Eastern cultures generally give space for present generations to interpret and improvise in their understanding what is written in graphic score. Since "music is shaped by many environmental conditions, collective movements of thought and theory, political events and cultural shifts, not simply by a lineage of narrow musical influence"<sup>4</sup>, flexible graphical score makes that music always relevant for narrative time.

<sup>3</sup> Z. Dogen, *Shobogenzo: The Eye and Treasury of True Law*, Volume 1, Tokyo: Nakayama Shobo, 1984, p. 69.

<sup>4</sup> D. Toop, *Into the Maelstrom: music, improvisation and the dream of freedom*, New York: Bloomsbury Academic, 2016, p. 151.

<sup>1</sup> Conversation with Benas Sarka by author, 2016 December, Vilnius, Lithuania.

<sup>2</sup> T. Takemitsu, *Confronting Silence: Selective Writings*. Tr. Yoshiko and Glenn Glasow. Berkeley: Fallen Leaf Press, 1995, p. 4.

## 2) Examples of Experimental Scores in Japanese Tradition

### a) Gaspar Claus - Jo Ha Kyu

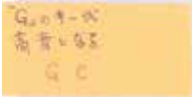
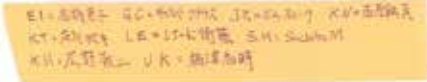
This album was released by the Modest Launch label in 2013 and composed and performed by the French cellist Gaspar Claus in collaboration with Japanese avant-garde musicians. This album does not give the audience the stereotypical traditional musical motives of East Asia; instead it gives an alternative viewpoint of it. Gaspar wanted to express the art between intuition and improvisation and he also claims that the tradition always belongs to the moment, which is namely the concept of the album.

Jo Ha Kyu is not completely improvised and has quite an unusual graphical notation which is made of some small written scenarios which describe what kind of feeling musicians should create. The piece is divided into three parts. The beginning is called Jo, middle - Ha and the end of this piece is Kyu, which is essentially trying to keep the ancient Japanese music philosophy of penetration, tearing apart and acceleration. Jo Ha Kyu was also referring to the order in which each artist will be recorded, since they never played together for an album. Gaspar Claus started with Leonard Eto and his taiko drums. He asked Leonard to play a 10-minute-long track which would represent acceleration with explosion. Then Claus went to the studio and recorded himself playing a cello over the drum track. Originally the cello track was not supposed to be on the record; its purpose was rather to give basic understanding to other musicians as to direct their improvisations. Gaspar Claus invited them one by one to come into the studio and to record their part. He was recording at day and editing at night. Everything is represented in the graphical score; each musician is identified with specific themes and specific timing. At the beginning of the Jo part, every musician was supposed to play the very first sound of the universe. They were given freedom within this topic; the author asked everyone to produce a sound depicting a sound of the universe however they might interpret it, and the musicians were asked to all play it at the same time, which produced resonance or echoes. This was followed by a solo

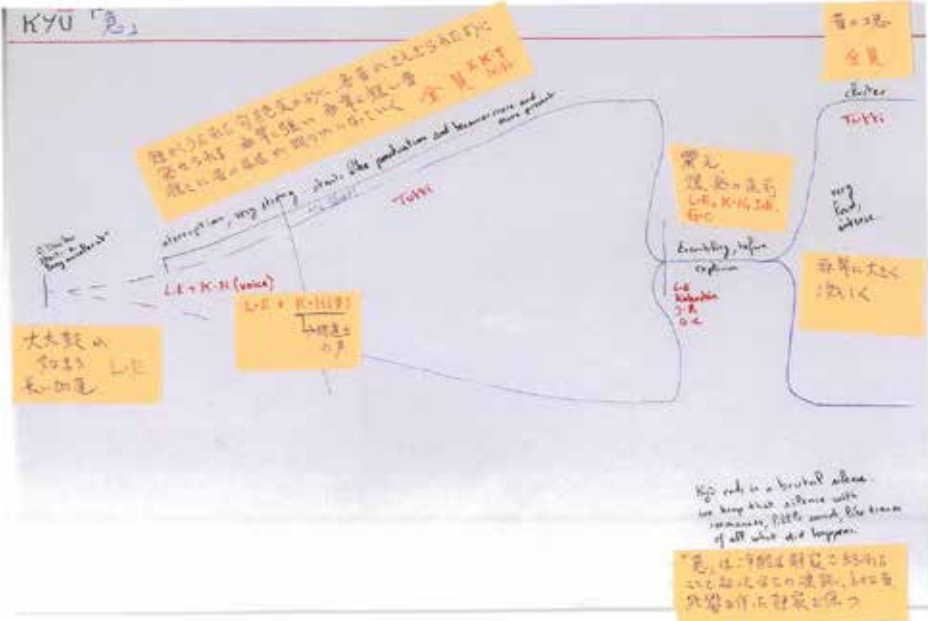
part of Eiko Ishibashi. Gaspar Claus joins him later on, and after a while Eiko Ishibashi stops playing and Kakushin Nishihara joins instead and in this way, everyone has their own moment and that is the end of the Jo part. The middle part was called Ha, which stands for tearing apart. It starts with Kazuki Tomokawa's vocal and guitar and it roughly interrupts the Jo part and acts as transition. Following this, Gaspar Claus joins in with a melodic cello and Hiromich Sakamoto with his electronic cello. Kazuki Tomokawa's vocals continues during this entire part, and in the background one can hear slightly growing sine waves made by Sachiko M. Before the end of the Ha part everyone starts playing simultaneously, creating a growing chaos which suddenly stops, leaving only the sound of Leonard Eto's taiko drums. This concludes the Ha section. The last part is Kyu which stands for acceleration. It starts in the same way as the second part ends, just with the slow tempo of the taiko drums. After a few minutes Keiji Haino interrupts with his strong vocals which start in slow archaic style, becoming more and more present. After this Kakushin Nishihara and Gaspar Claus change places with Keiji Haino attempting to represent the trembling before an explosion. Kyu ends in a brutal silence with small resonances, like traces of all that has happened.

During the whole piece, there is a lot of attention paid to the struggle between sound and silence which is often the case in Japanese music. As Gaspar Claus claims, **music is a moment when we break a silence**. Silence is especially important in Japanese communication. Nonverbal communication is mostly unconscious but it plays a crucial role in human relationships.

Jo Ha Kyū graphical notation, personal archive of Gaspar Claus, 2013.



Please note that 1-3 sections of this chapter are extracts from my dissertation: **Tradition in Question: Exploring Heritage and Exoticism in Japanese Sound Culture** ([https://media.wix.com/ugd/34a27d\\_31635729b-dac4e1ab451b-dfe2857a336d.pdf](https://media.wix.com/ugd/34a27d_31635729b-dac4e1ab451b-dfe2857a336d.pdf)).





## b) Toru Takemitsu - November Steps

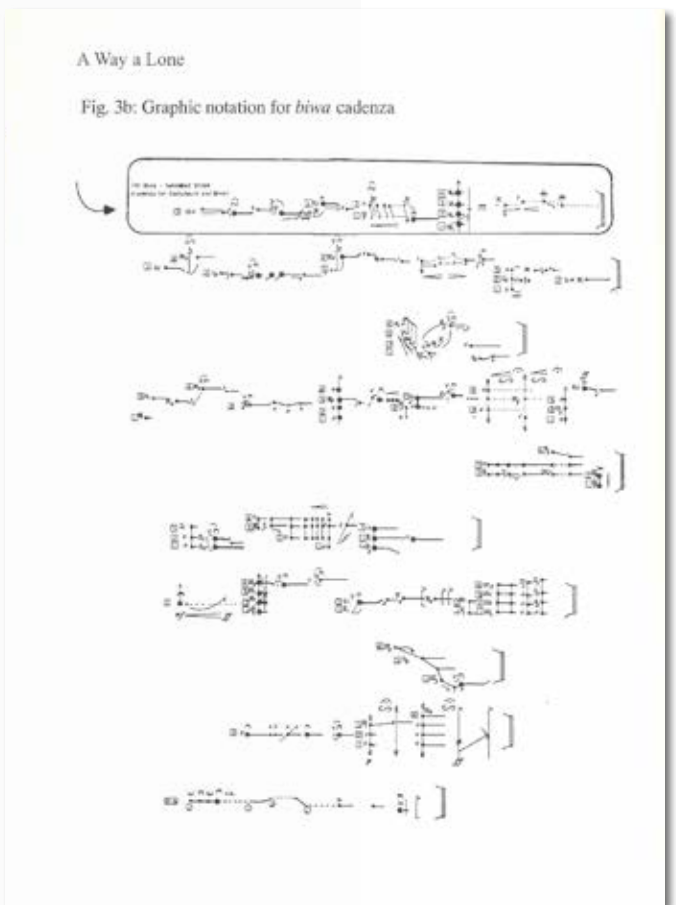
Toru Takemitsu is one of the most famous 20th century Japanese composers. His piece called November Steps is a great example of a successful attempt to integrate western and oriental music, and highlight the differences between them.

Adequate notation of this piece posed a problem for Takemitsu. He worked with an orchestral notation before and had not had issues with it, however Takemitsu could not adjust the western-based notation to the traditional Japanese instruments. While western music was all about following the score, and playing it perfectly without any deviation, Japanese or oriental music was based on listening and feeling which cannot be written down on the piece of paper. Takemitsu came up with a solution to make a separate graphical notation for biwa and shakuhachi which would allow more freedom to performers. For example, in the score's explanation it says: **"The first note of the playing is left to the performer's choice, then the performer should concentrate into the sound and listen to its changes of color and intensity"**<sup>1</sup>. It becomes more complex than that, and Takemitsu drew more precise illustrations of the sound as, for example, six different types of vibrations, but there is still a lot of left to the performer's imagination. In this way, just through the score of his piece, Takemitsu reveals one of the main differences between Oriental and Western music. Western approach to music is to dissociate from the world and split the music community into players and listeners by exalting a performer. Meanwhile, in Oriental or Japanese music the most important thing is to listen and merge with the world, and in such way leaving no boundary between player and listener.

"In the flow of Japanese music [...] short fragment connections of sounds are complete in themselves. Those different sound events are related by silences that aim at creating a harmony of events. Those pauses are left to the performer's discretions. In this way there is a dynamic change in the sounds as they are constantly reborn in new relationships. Here the role of performer is not to produce sound but to listen

to it, to strive constantly to discover sound in silence. **Listening is as real as making sound; the two are inseparable.**"<sup>2</sup>

<sup>2</sup> T. Takemitsu, *Confronting Silence: Selective Writings*. Tr. Yoshiko and Glenn Glasow. Berkeley: Fallen Leaf Press, 1995, p. 84-85.



November Steps by Toru Takemitsu graphic notation for biwa cadenza. Y. Narazaki, H, de Ferranti, A Way a Lane: Writings on Toru Takemitsu, Tokyo: Academia Music Ltd, 2002, p. 142.

<sup>1</sup> T. Takemitsu, *November Steps*, New York: C.F. Peter Inc, 1967.



### 3) Japanese Aesthetic Categories

Why could Toru Takemitsu's music and Gaspar Claus Jo Ha Kyu's project be called Japanese? What could be the actual criteria for traditional Japanese music? In the first chapter, a few stereotypes were discussed which might create an illusion of true traditional Japanese music, however, neither Claus, nor Takemitsu fit in those stereotypes. Some people might say that it is so because it shows the values of the contemporary Japanese music. However, the answer is that it actually connects deeply with sensitivity and noise/silence appreciation which is expressed by Japanese aesthetic categories, like **Mono No Aware, Yūgen, Sabi, Wabi** and previously mentioned **Ma** [see page 2]. All of these categories were and still are applied not just for music but for other Japanese arts as well. **Mono No Aware** is about appreciating temporality. It is the oldest Japanese aesthetic concept which mirrors sensibility and humanism from foreign Buddhist, Taoist values. Motoori Norinaga defined aware as "the voice of sorrow that comes out from what the heart feels after seeing, hearing or touching something"<sup>1</sup>. Another category is **Yūgen**, it "can be apprehended by the mind, but it cannot be expressed in words. Its quality may be suggested by the sight of a thin cloud veiling the moon or by autumn mist swathing the scarlet leaves on a mountain-side"<sup>2</sup>. **Sabi** can be defined as appropriation of the antiquity, age, hoariness and natural textures. And **Wabi** is mostly used to describe the atmosphere but it is also used as appreciation of "austere beauty". **Wabi Sabi** is often used together to emphasize beauty of imperfect, impermanent and incomplete. All of these aesthetic categories (including ma) fit Takemitsu's work and Gaspar Claus' Jo Ha Kyu project and that makes them examples of traditional Japanese music and emphasizes its differences from western culture.

<sup>1</sup> M. Marra, 'Japanese Aesthetic: The Construction of Meaning', *Philosophy East and West*, vol. 45. Honolulu: University of Hawaii Press, 1999 p. 127.

<sup>2</sup> R. Tsunoda; W.T. De Barry; and D. Keene, *Sources of Japanese tradition*, New York: Columbia University Press, 1958, p. 115.

"Musical instruments may be considered as extensions or enlargements of the human instrument. Or they may be seen as tools created to assist the expression of emotions beyond language. Viewed this way musical instruments definitely reflect the culture of a particular society – its customs, tastes, and the spirituality that society has nourished."<sup>3</sup>

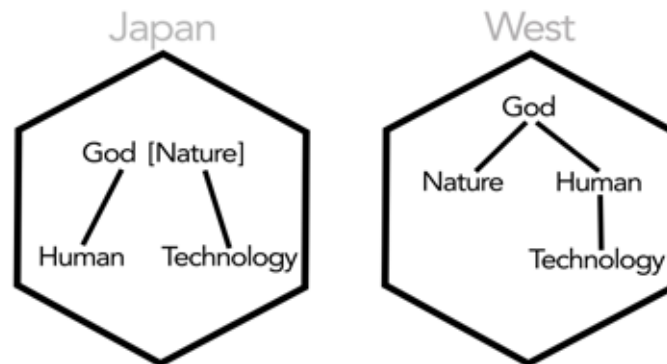
<sup>3</sup> T. Takemitsu, *Confronting Silence: Selective Writings*. Tr. Yoshiko and Glenn Glasow. Berkeley: Fallen Leaf Press, 1995, p. 53.

The Biwa could be called the mother of Japanese music. The shape of this instrument came from the original Persian lute. Physically it does not look much different but the invisible internal changes nearly created an entirely new instrument. Those changes are sawari phenomenon development in Japanese music. **Sawari** has a few meanings but the main concept of it is to produce harsh and unclear sound. While western musical instruments are made to have a perfectly tunable sound and in process of making it is very important to eliminate any possible noise. Japanese instruments, and particularly the biwa, were made to produce additional noise while playing with it and that sound is called sawari. As mentioned, sawari has few definitions, first one as a name of the biwa's part of the neck where four or five (depends on the type) strings are stretched over a grooved ivory plate. When a string is plucked, it hits the grooves and makes noise. Sawari also refers to the meaning of touch or to touch but this term is applied not just for music but also it contains wider significance which is useful in understanding Japanese aesthetics. And as an addition, sawari may also mean obstacle.

"In a sense it is an intentional inconvenience that creates a part of the expressiveness of the sound. Compared to the western attitude toward musical instruments, this deliberate obstruction represents a very different approach to sound."<sup>4</sup>

<sup>4</sup> *ibid.* p. 65

## 4) Difference Between Japan and West Cultures Approach to Technology



Japanese and westerners are working hard to discover new and improve already existing technology like computers/artificial intelligence. However, they have very different approach to it depending on their religious believes and cultural differences. As it is showed in the diagram in Japan there is understanding that God is a nature and everything equally comes from it. In west cultures there is understanding that God is some perfect indestructible creature that created nature and humans (making humans exceptional by bringing them more close to the God and give them consciousness) and then humans invented technology all by themselves.

Going back to sound culture and composing, in west cultures there is approach that performers can become like machines and perform compositions very precisely, exactly as it was written in the score. Machines could replace performers in the way to follow the score exactly as it is written but it could not replace composer witch is the most important in music making. In Japan, there is different understanding that performer has equal amount of power as composer, performer has a power to improvise within the frame that composer wrote down in the score or graphic notation. And that everything is equally important: composer, listener, performer and instruments that are used to make sounds. Any of these parts could be replaced by technology. With my project, I intend to compose a piece for motorized instruments. Even though score might look quite precise, with exact timing, but I tried to leave enough space for accidental sounds. For example I did not made Ping-Pong balls machine completely precise so every time it would release different amount of balls that will fall on different places of the instrument making composition generative.

## 5) Score/Graphical Notation for Kokon Dansetsu Ma

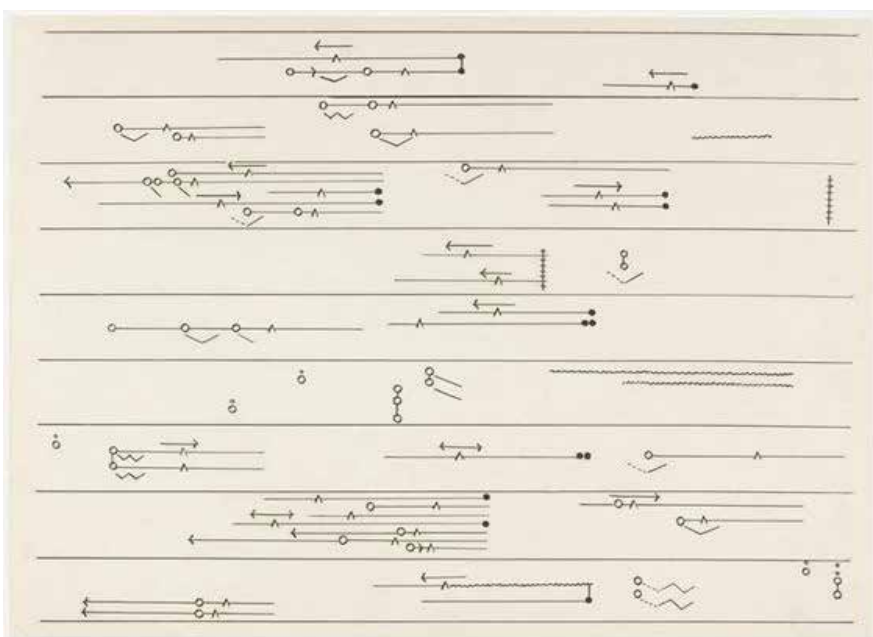
This part might seem as the easiest stage of entire project. In previous stages there was a lot of hard physical work and a bit of science like engineering and programming. However, composing is equally or maybe even most important part of this project. Making score was challenging since I am using 18 motors/sound triggers in general and entire thing is programmed as a massive alarm clock so score has to be quite accurate when it comes to timing.

I have never before in my life tried to draw fairly precise graphical notation for piece of music so I did not really knew where to start. After doing some research I got really interested into ancient tantric scores and some modern graphical notations that has been influenced by it. Tantric musical scores consist of notations that symbolically represent the melodies, rhythm patterns, and instrumental arrangements. In harmony with chanting, visualizations, and hand gestures, music crucially guides ritual performances. Quite a few modern composers like Karlheinz Stockhausen and R. Murray Schafer were slightly influenced by Tantric scores.

However, the one of the modern composers that had big impact on my score making was Toshi Ichiyanagi's Fluxus Scores. He began producing scores which promoted the unconventional and improvisational. These pieces, "open works" representing fields of meaning, introduced chance operations to the musical execution, and were accompanied by a conceptual sheet of instruction, thus giving creative agency to the performers and allowing them to rewrite the pieces in different spatial and temporal contexts.



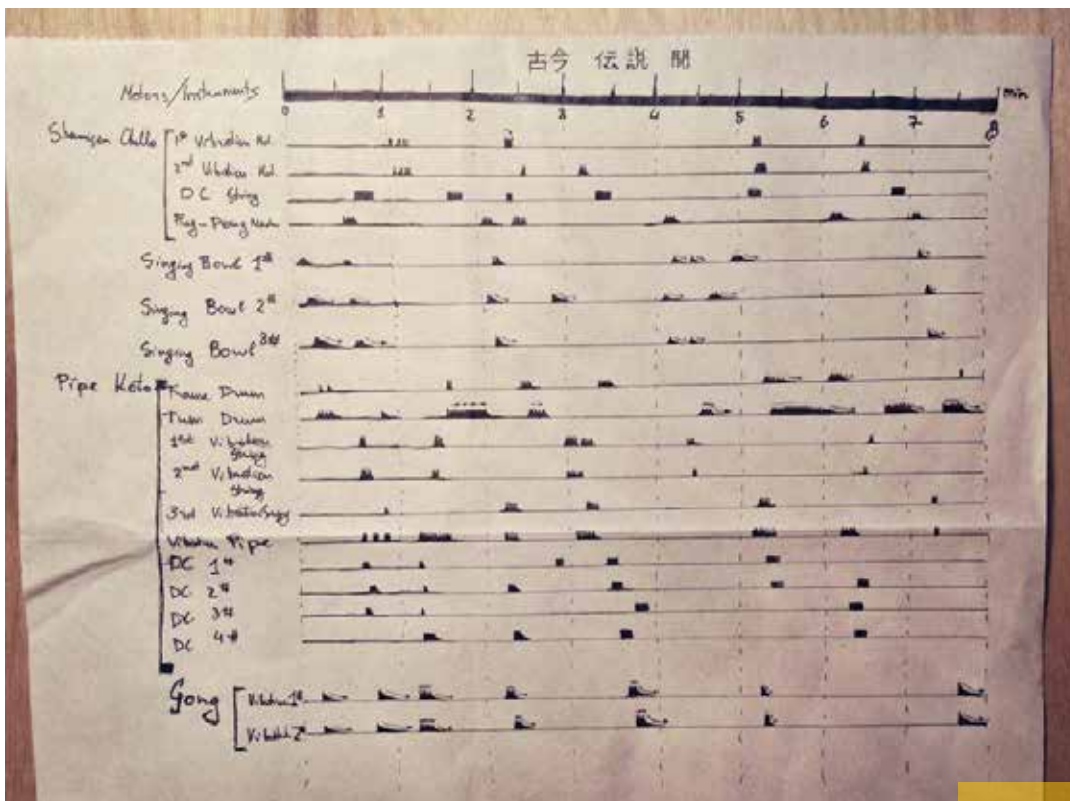
Tibetan buddhist tantric scores.  
[<https://blogthehum.wordpress.com/2016/02/29/tibetan-buddhist-tantric-scores/>]



Toshi Ichiyanagi. Kaiki [Recurrence] for Koto for John Cage, 1960  
[<http://socks-studio.com/2014/02/03/fields-of-indeterminacy-toshi-ichiyanagis-fluxus-scores/>]

“ The task of the composer should begin with the recognition of the more basic sounds themselves rather than with concern about their function, since when sounds are possessed by ideas instead of having their own identity, music suffers.<sup>1</sup> ”

<sup>1</sup> P. Burt, *The Music of Toru Takemitsu*, Cambridge: Cambridge University Press, 2001, p. 242.



One of the first graphical notation sketches for Kokon Dandetsu Ma project.



# Inspirations

## 1) Tarek Atoui - The Reverse Sessions



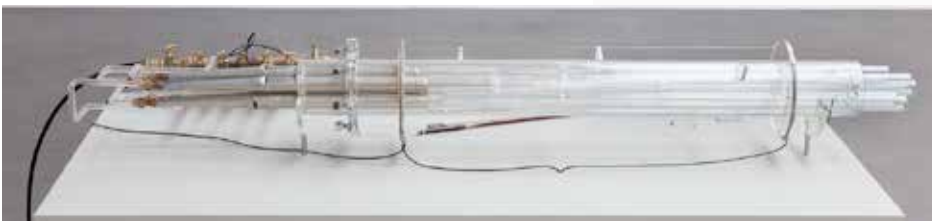
Tarek Atoui with the koto, organ pipes connected to an air compressor. Photograph: Oli Cowling/Tate Photography

As mentioned in previous chapters, Tarek Atoui's instrument called pipe koto had a lot of impact to the same name part of Kokon Dansetsu Ma. The koto is one of a group of sculptural instruments in Tarek Atoui's installation The Reverse Collection and any resemblance to the traditional Japanese string instrument of the same name is – at best – tentative. This koto is comprised of a bundle of organ pipes set on a table frame, connected via copper tubing and taps to an underfloor pipe that is connected to an air compressor.

Mounted at regular intervals around the bundle are metal strings, with a microphone installed beneath them to pick up your every move.

The 10 instruments of this installation are arranged as work stations on a factory floor. Several use compressed air, most combine percussive and drone-generating abilities, all of them are odd, at times even funny. There's the aquaflute (a wobbly plastic-air-and-water contraption); two sets of horns that function – very differently – with balloons and compressed air; the orgue à clapets or valve organ (all metal tubing and woodwork, strings and tiny objects), the babasse (a hurdy-gurdy of sorts), the toui (a kind of horizontal, deconstructed bagpipes) and a motorised bow. Lastly, on two raised platforms are the lithophone (a thicket of slate pieces balanced on conical cardboard feet) and the spin (a set of ceramic vessels, some small and unglazed, others, tall and lustrous, with frozen jellyfish-like layered skirts, along with a potter's wheel).

What these instruments have most in common is a kind of wilful abstruseness. As Butcher put it, "Most of us, in search of new methods and materials, have spent years controlling comparatively unstable things on our instruments." Here, the volatility is native, and it forces you to stay awake. Which is what improv at its best does anyway. Bradford Bailey, another of the musicians, said that that kind of destabilisation is what brought him to this world to begin with. "There's very little experiment in much experimental music," he added – by definition this project ensured there would be.



Tarek Atoui - Pipe Koto <<http://www.kurimanzutto.com/en/artists/tarek-atoui>>

[ Please note that this text is an extract from Dale Berning article "Why Tate Modern's new collection of musical instruments is striking an unfamiliar chord" { <https://www.theguardian.com/music/2016/sep/02/why-tate-moderns-reverse-collection-of-musical-instruments-is-striking-an-unfamiliar-chord>} ]



## 2) Chico MacMurtrie - Robotic Church

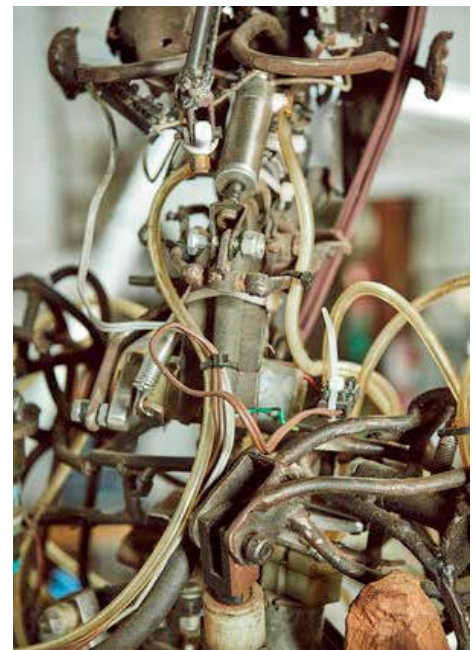
The Robotic Church is a site-specific installation and performance series comprising 50 computer-controlled pneumatic sculptures. Created between 1987 and 2006 and installed in ARW's studio, a former Norwegian Seamen's Church in, Brooklyn, New York, these machines mesmerize with their percussive sounds and gestures. They express themselves through rhythm and body language, ranging from introspective solos to powerful ensembles erupting from different corners of the space. Rather than merely amplifying sound, the percussive machines are programmed to beat, strum, vibrate, spin, and otherwise play their own bodies to communicate in their own unique voice. Their syncopated outbursts of call-and-response evoke the origin of communication.

This collection of animated machines, formerly known as the "Ancestral Path," traces the evolution of MacMurtrie's first robotic sculptures from the late '80s, from works such as "Tumbling Man" and "Drumming and Drawing Subhuman" to later ones possessed of more kinetic abilities and refined movements such as "Urge to Stand" and "Transparent Body." They all are part of MacMurtrie's/ARW's "Society of Machines," a body of work comprising over 250 individual sculptures, which have performed in different configurations in Europe and in smaller formats also throughout the United States, Latin America, and Asia.

[Please note that this text is an extract from official MacMurtrie website < <http://amorphicrobotworks.org/the-robotic-church/> >]



Chico MacMurtrie photo by Stacey Szczyk  
< <http://www.techtimes.com/articles/110323/20151126/robotic-church-founder-chico-macmurtrie.htm> >



Chico MacMurtrie Robotic Church. Photo by Eve Sussman



Chico MacMurtrie Robotic Church. Photo by Eve Sussman

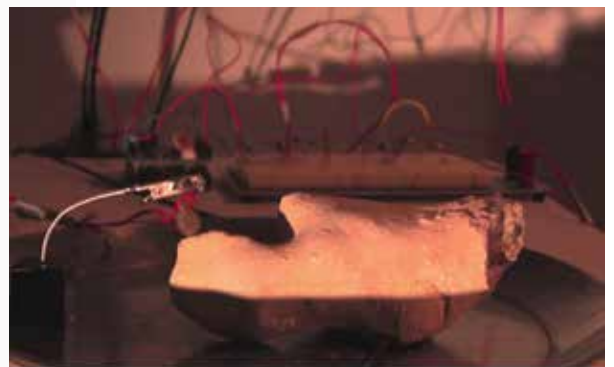
### 3) Andrew Jarvis - Sprungs

Sprung, is an immersive Sound Installation that explores the relationship between sound and its materials. The installation is built from multiple sound objects that reveal the inner nature and unique timbral structure of the sounding material. Assembled from a combination of constructed and found materials including Metal, springs, bowls, rock, and the flow of water in motion. The objects sound autonomously, with the interchange between the objects creating an absorbing, ever-changing, indeterminate sonic landscape. The installation invokes a primitive and ritualistic sense of connection to the materiality of sound in the objects that surround us. (<http://andrew-j-jarvis.tumblr.com/post/128850089993/andrew-jarvis-sprung-2015-sprung-is-an>)

This installation I've seen when I was in my first year of university and it impressed me a lot. It was one of the main inspirations for Kokon Dansetsu Ma for using vibration motors to control my instruments. Also, it is impressive how Andrew Jarvis use his installation as a tool or instrument itself to create musical composition. It is also based on Zen aesthetics and gives considers contrast between sound and silence.



Andrew Jarvis - Sprungs (2015) <<https://vimeo.com/134210709>>



Andrew Jarvis - Sprungs (2015) <<https://vimeo.com/134210709>>



Andrew Jarvis - Sprungs (2015) <<https://vimeo.com/134210709>>

## 4) Gorkem Sen - Yaybahar

Gorkem invented the Yaybahar about six years ago in a hunt for his own unique sound. The 33-year-old musician looked for inspiration to find his own unique sounds from all sorts of instruments: the Australian didgeridoo, the Turkish Ney and, most importantly, the thunder drum. The thunder drum is a small cylindrical instrument that has two drum-like membranes linked by a spring. When it's shaken, it makes big, echoing sounds, like rolling thunder — and like the Yaybahar.

Along with his ability to play it, the instrument itself has evolved from as many as 30 coils and membranes down to the two-springed Yaybahar Gorkem plays today.

The bouncy coils play a huge role in the Yaybahar's unique sound — so it makes sense that the instrument is named for them. "The coil string is 'yay,'" Gorkem explains. "Bahar" also means spring — as in the season. The whole idea of new life, a new beginning is important to Gorkem, he says.

[<https://www.pri.org/stories/2015-08-19/its-not-space-odyssey-its-yaybahar>]



Gorkem Sen playing Yaybahar  
< <http://factologia.net/art/273-yaybahar.html> >



Gorkem Sen's four coil Yaybahar  
< <http://gpidesign.com/2016/10/meet-the-makers-yaybahar-instrument-creator/> >



## 5) Midori Takada - Through The Looking Glass

In a perfect world, Japanese composer Midori Takada and her works for percussion would be as revered and renowned as that of Steve Reich. Much like that world-renowned American composer, Takada drew influence from a study of African drumming and Asian music, and surmised how these sensibilities dovetailed with that of minimalism, serving as means to break with the Western classical tradition.

While her American influences always had an exploratory aspect to their most famous works, there's never a moment on, say, "Music for 18 Musicians" where you feel like Reich lets loose his rein even a millimeter. There's something about Takada and the joy of creating this album that fully emerges in this last quarter-hour, as she builds energy up with her drums, her harmonium and that ever-present cowbell. In the liner notes to this reissue, Takada explained just what she learned in her studies of African and Asian music that led her to abandoned Western classical music as a pursuit way back when. "As a performer, this music asked you to personally examine your own physical transformation and to confirm and share this transformation with your counterpart, group or tribe," she said. "The music stops short of imposing sovereignty or nationality." And even as the finale builds to a glorious climax, it too stops short. Takada pulls it all away at the last possible moment, a thrill that allows her listeners—nearly thirty-five years on—to soar to a space well within themselves. It's a space well worth rediscovery.



Midori Takada

< <https://www.cafeoto.co.uk/events/midori-takada/> >



Midori Takada Through The Looking Glass album cover.

“Until then, most performers were expected to play their instruments with a sense of virtuosity. Looking back, I now feel that Western music is an outward-bound musical style that has a sense of aggression inserted in it. But at the time, after having played Western music for a while, I soon discovered in minimalism, for the first time, a musical style that does not place an emphasis on the expression of emotions. More specifically, it disavows expression itself. It is not a musical style whose expression comes from the individual. Its existence proves that just as in many social structures, a hierarchical system exist throughout many kinds of music. Through minimal music, you can examine how each individual sound is allocated within a structure. Minimalism abandoned previously held perceptions in classical music, its technical aspects and Western music's traditional, cultural mannerisms, and it altogether changed the meaning of performance. These qualities intrigue me.”<sup>1</sup>

<sup>1</sup>M. Takada, Through The Looking Glass, 2017 re-edition, RCA Red Seal, album inner sleeve.



## 6) Interview with Gaspar Claus



© M Vosgian, photo of Gaspar Claus

Gaspar Claus is experimental cellist based in Paris, France. He did various projects in different styles. From flamenco albums with his father Pedro Soler to the experimental projects with Japanese avant-garde musicians. This conversation concentrates on Japanese culture, understanding of orient and his collaborational album Jo Ha Kyu which was recorded in Tokyo in 2013. This interview took a place in Paris, September 2016.

**[Please note that this is just an extract. Link to the full interview: <https://www.guodadirzYTE.com/interview-with-gaspar-claus>]**

G.C.: So I did not have a feeling of doing some sort of confrontation between modernity and tradition. You know musical genres fusion? Like jazz mixed with electronics or anything else. I don't like this word, I think with the fusion you loose something, you loose two things that were at the beginning and you get something new. I like collision, it is like to cultures, two identities that are on their ways for so long and on one point we don't know reasons what happened but they just confront each other and from that you get a third thing without distorting first two and they provoke each other. And if this does not happen that culture just gets repetitive and kills itself. I met a lot of musicians in Mongolia who want to play in Paris in The Théâtre de la Ville but the problem was that their arguments were: I am a master because I play exactly as my grandfather was playing. And that is not true because you want to play in The Théâtre de la Ville and his grandfather was playing for his goats because that singing was supposed to help goats produce milk, this was the reason why they was singing back then, they weren't singing for critical audiences which is our culture, they were singing for just ordinary life purpose. So when a guy tells you I am singing exactly as my grandfather was, maybe he plays the same notes but he loose the reason of singing. And the reason why we play music is the definition of musical culture. Some people play music to get access to invisible world or to become a man (go from child to adult). But don't say that you do things as it was long time ago if you end up on a western musical stage. I just don't believe in this. But if collision happens, and it confronts something entirely different, then it becomes interesting.



Gaspar Claus Jo Ha Kyu album cover

G.D.: When I was in Japan I felt something. When you go in some sort of traditional place or even if you just listen to it, it just does not feel real, with all of those costumes, it just brings a question, what this is? This is not tradition, it is a parody of it. Their grandparents used this music and dances as way of communicating and it was a part of society and now people made a theater out of it. As you said they are doing everything in the same way, but they loose the purpose of doing it and it is a main thing of that tradition in a first place.

G.C.: Yes, this is a very similar thing. It has something very fake in it. But for example Leonard Eto, taiko player, he came to record Jo Ha Kyu with the whole traditional Japanese outfit and at first I was a bit skeptic about it. But he is good; I mean he is really good, really excellent musician. But it is a whole game, and it works, it keeps him busy: he has a takeaway in America, Italy and he is a part of a huge band and people like seeing these things because it imitates a contact with some strong, close identity. Kakushin Nishihara, I asked her for biwa to Naohito and I had to pick her up in train station and I was expecting 60 years old woman with kimono and biwa, and she arrives with pink hair, tattoos on her face, long nails with many different colors and very free style outfit. For me it was very unexpected, and she carries this instrument that is 800 years old and she plays that repertoire from another time but all of her habits are from nowadays existence. Best thing is that she is not even conscious of this, she does not represent something, this is what she is, she learned those repertoires, she is an amazing musician and at the same time she wants to eat at McDonalds and she is an Instagram addict and she is a child of our time. Some people can't decide how to bring traditional music into a modern place, but she does it without making decision of doing it, she is this. On stage on Kintsugi performance she has biwa and she has this score and she is extremely solid. Me and Serge Teyssot-Gay we just attacking her with guitar and cello sounds and we do some really hard stuff for her voice but she had not even slightest problem with it. Sometimes she would bring light sensors which would control a sound wave and make some really hardcore noise and after that she would just take her biwa and continuous singing. So she is a reincarnation of this modernity and tradition fusion process.



© Muga Miyahara, photo of Kakushin Nishihara playing satsuma biwa.

## 7) Interview with Naohito Koike



Naohito Koike, Tokyo, 2016 August

Naohito Koike is Tokyo based music and film producer. He runs Modest Launch label. Koike worked on various projects with Gaspar Claus, Japanese musicians Kazuki Tomokawa, Kakushin Nishihara, Otomo Yoshihide, Leonardo Eto and many others.

**[Please note that this is just an extract. Link to the full interview: <https://www.guodadirzyte.com/interview-with-naohito-koike>]**

G.D.: So where do you think is a boundary between what is traditional and what isn't traditional anymore?

N.K.: This is my personal opinion; in general tradition nowadays they do not care about purpose of playing and about spirituality. They think if they just wear kimono and play the same instruments same repertoire it will be traditional and same as it was ages ago. Originally I

think traditional music has a strong emotion inside, and as you mentioned that fake feeling of nowadays performances. But I am not saying that they are bad or something.

G.D.: I had very similar impression in Kyoto. Everyone talks about it as a most traditional city, which has saved a lot of ancient things. But when I went there, I was highly disappointed, and it just felt as a parody of Japan. It looked like westerners decided to make a theme park about Japan.

N.K.: I personally don't like Kyoto that much. And if I tell this to people, especially foreigners they also ask me why? It is so traditional and so nice. And yeah, Kyoto is okay, it is a beautiful city they try to preserve what it used to be. And it is beautiful compared to Tokyo, but Kyoto is just 700 years old so it is not that old. For example, Jo Ha Kyu album cover is made by manga artist Daijiro Morohoshi, he is a legendary manga artist in Japan but not a major one. He influenced Ghibli Studios' Hayao Miyazaki, but Morohoshi is not famous at all. So he is a manga artist who is mainly interested in ethnology and I am big fan of him. And after long research I finally got his contact, and I asked him if he could make an album cover which would illustrate an album. And I send a musical file to him, and he drew this by listening to it. And inside of the LP, it is all the original art, and for me this kind of expression and drawing style looks very Japanese, or just somewhere in Asia, before civilization. So my interest about traditional culture is like this, before religion and civilization. For example, people say that Buddhism is our national religion, or one of them, but obviously it came from abroad as civilization and government try to control people through religion. So if Vincent Moon wants to do film about Buddhism, I wouldn't join this. For me traditional is more ancient but of course it depends on person. Everyone has different opinion, but this is mine, tradition for me is something somewhere in east before different civilizations and countries started appear from abroad as civilization and government try to control people through religion. So if Vincent Moon wants to do film about Buddhism, I wouldn't join this. For me traditional is more ancient but of course it depends on person. Everyone has different opinion, but this is mine, tradition for me is something somewhere in east before different civilizations and countries started appear.

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