

HOMEBREW'D

DIGITAL MUSICAL INSTRUMENTS




WELCOME!

...and thanks for agreeing to take part in our study!

This short user guide will walk you through all the stages of the study.

We ask that, due to the remote nature of the study, you follow the steps below carefully, in order, and as documented so as to unify the process between participants as much as possible.

Thank You!



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PLEASE COMPLETE THESE THREE FORMS



Research **Ethics**

Please read the Research Ethics information sheet and sign the consent form on the last page. It will explain a little about what we want you to do and then ask for your consent to continue. You are free to stop at any point.

The forms are all in an envelope called 'forms' which was sent out with the kit. Please complete the forms using a pen and return them with the kit at the end of the study.

This step should take around 20 mins



Participant **Info**

Tell us a little more about you, your background and your habits. The study data is completely anonymised.



Musical **Sophistication**

Please complete this short questionnaire. It should take you no longer than 15 mins. This system has been developed by researchers to obtain a basic score for a person's musical sophistication.



THE KIT!

The next few pages are all about getting you comfortable with the instrument kit and introducing the study tasks.

You will need your laptop and the power adaptor...and around 20 minutes...

**If at any point you need technical assistance please ask.
Support can be given via phone, email, or video call.**

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LETS BREW!

This is a kit to make a digital musical instrument

The kit contains a Bela Mini loaded with four sound models (named Sound Model 1-4), a contact microphone which you can attach to items/objects in your home using the reusable tape provided, and a speaker to audition the sound.

The aim of the study is for you to make **four** unique digital musical instruments - one with each of the **four** sound models.

INSIDE YOUR INSTRUMENT KIT

The instrument kit comprises the following items:



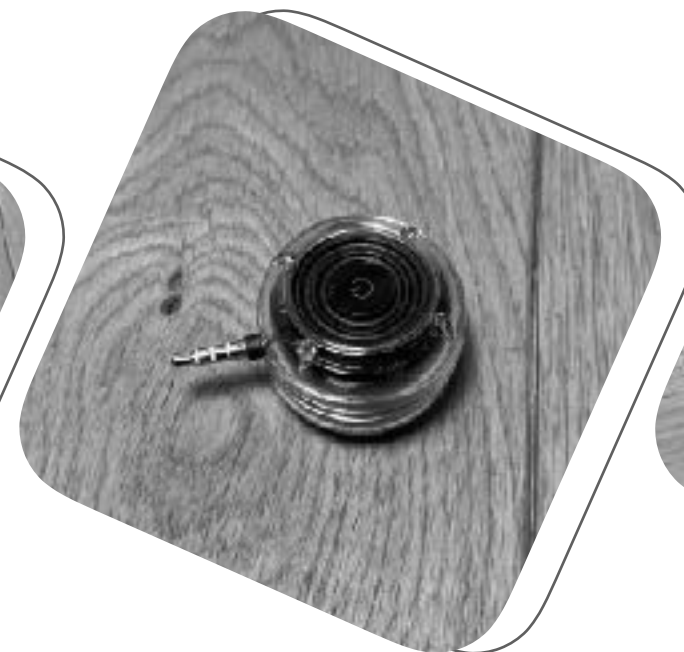
Bela in a **Box!**

The instrument runs on the bela platform. In order to minimise any potential risk of infection transmission, the instrument kit is completely wipe cleanable using the provided wipes. Please do not open the box.



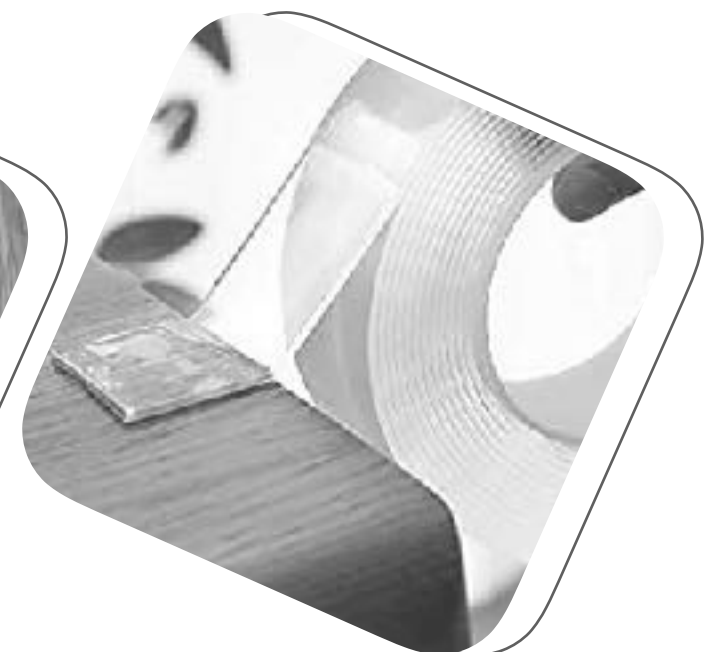
Contact **Microphone**

The contact microphone enables you to capture the vibrations of objects in your home. The microphone is also completely wipe cleanable using the provided wipes.



Chargeable **Speaker**

The battery on the speaker lasts for a few hours and will arrive fully charged. There is a Micro USB lead included should you need to recharge. The speaker is also completely wipe cleanable using the provided wipes.




Reusable Sticky **Stuff**

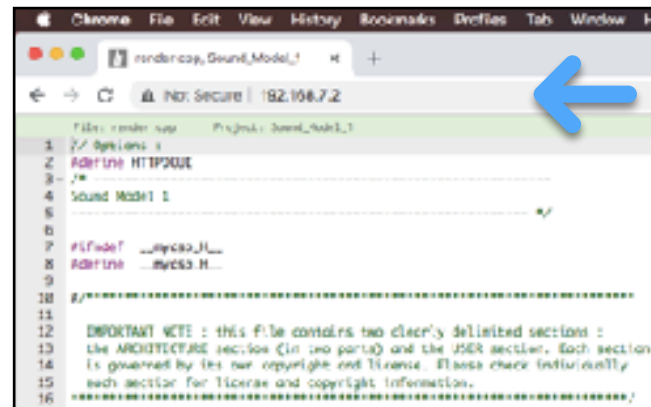
The better the connection between your household items/objects and the microphone, the better the signal to your instrument. This sticky stuff should keep the microphone stuck. **If it stops being sticky, wash with soap and water.**



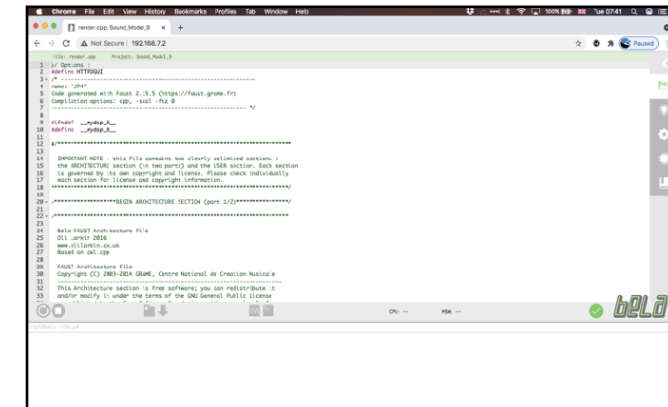
THE CONNECTIONS!

1. Plug the USB lead into your computer (you will see some blue flashing lights on the bela)
2. **The Microphone plugs into the Red tentacle of the kit.** Its quite sensitive, so you may want to avoid directly hitting it. Instead, **attach it to objects with which you interact and it will capture the key acoustic features of your interaction.**
3. **The Speaker plugs into the Blue tentacle of the kit.** There is an on/off  button in the middle of the speaker **on one side**
4. Use the tape to make a connection between the microphone and your objects. The better the connection, the better the signal. The Tape can be washed and reused (its nano tape)

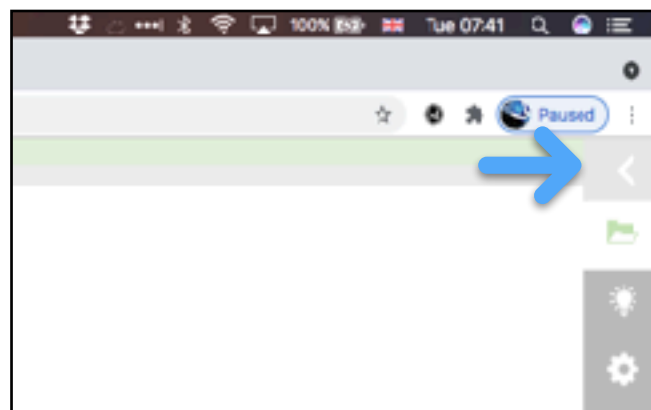
OPEN A NEW BROWSER WINDOW



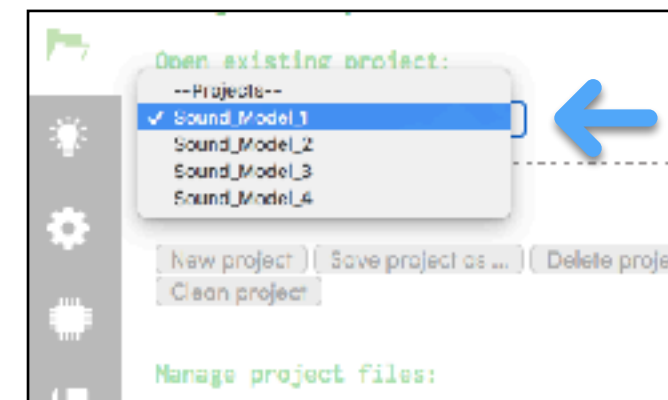
1 Enter the address 192.168.7.2



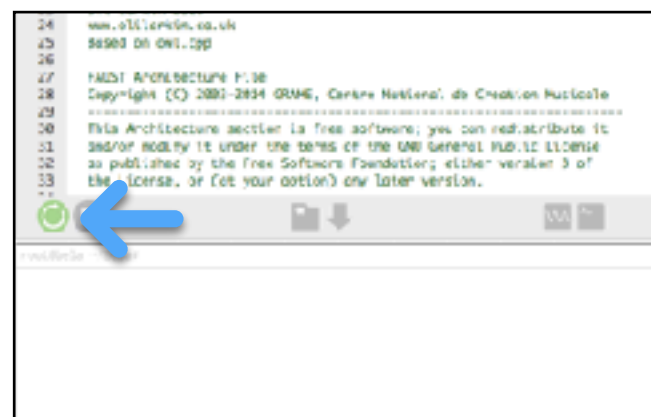
2 It may take a few moments, after which the IDE screen will display.



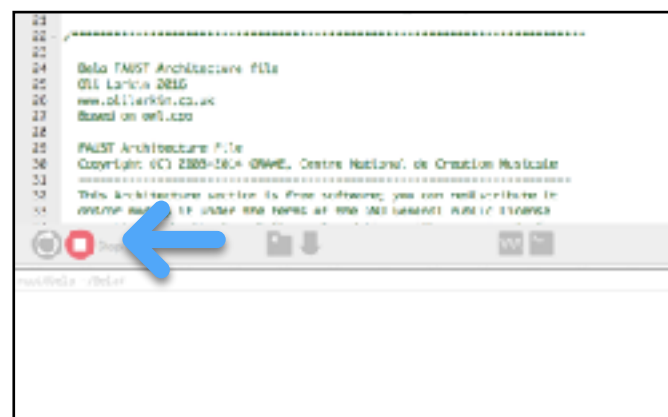
3 Open the project inspector with the arrow on the right



4 You can switch between sound models using the dropdown menu



5 To load a sound model and run it on the bela; click the Run button



6 The Stop button is just next to it for when you are done

SOME TIPS FOR THE DESIGN PROCESS!

Experiment by attaching the contact microphone to objects in your home. Select a sound model, turn on the speaker and explore the outcome. Please do think of the 'instrument' as a whole, a combination of the object you interact with and the sound that comes from the speaker.

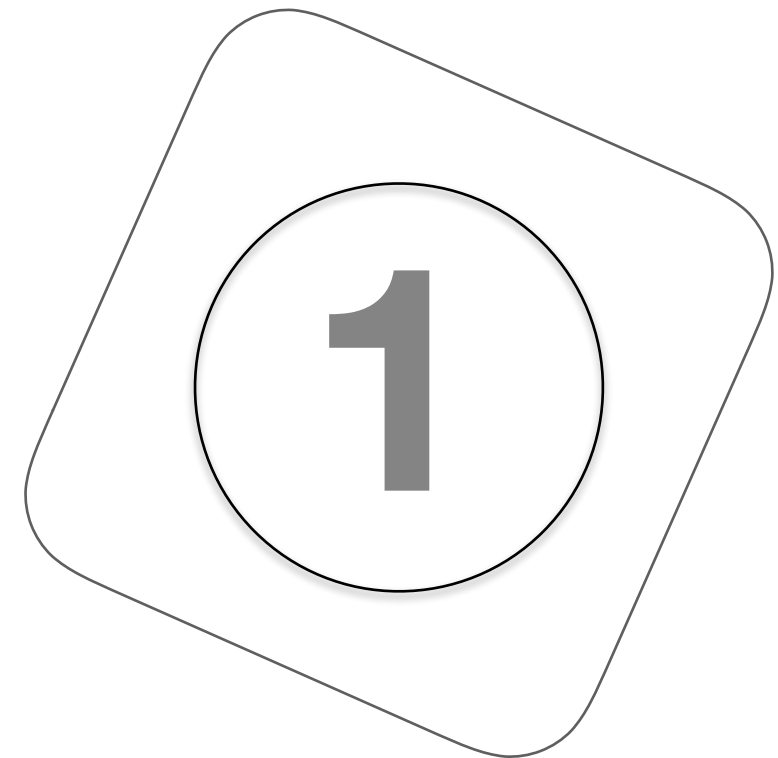
Explore interaction: how are sounds made, how are sounds controlled, what is the range of potential, what sounds /feels good to you? Feel free to be as conventional or unconventional as you wish. Experiment, there are no right or wrong choices.

Feedback! - If the speaker is in direct contact with the microphone or an object it is attached to, you may create a feedback loop. If so, the quickest way to stop it is to simply break to the connection by moving the speaker.

As prolonged feedback has the potential to damage the instrument kit, we ask you don't employ this as a method in your design.



STUDY TASK 1



Design and Make 4 New Digital Musical Instruments!

You should now be getting a better idea of how to use the kit and how to approach the task of designing your own instruments. During the course of the study you will make 4 unique instruments (one with each sound model), and record a short performance with each. This step will take around 2 hours. It can be done all at once, or as up to four 30 minute activities.

So lets make the first instrument!!!

Spend no longer than 30 minutes designing your first instrument. Once you are happy with it please document it by taking a few pictures from different angles, and proceed to Study Task 2.

[Please refer to the self recording advice on page 13 of this document]

STUDY TASK 2



Record a Short Performance

Please use the provided backing track for this task. It's on the flash drive sent out with the instrument kit, named 'Study_Task_2_Backing_Track.Wav'.

- ***Please record a 1-2 minute performance*** over the backing track with each of your instruments. *The nature of the performance is completely up to you. You can rehearse, prepare, or improvise. Really, we just want to see how you play your instrument, the types of gesture you use, and the sounds they make.*

Now repeat with the next instrument...(or proceed to the questionnaires if this is number four)...

[Please refer to the self recording advice on page 13 of this document]

SUMMATIVE QUESTIONNAIRES & RANKING ACTIVITY

The forms for this part of the study are all in an envelope called 'questionnaires' which was sent out with the kit. Please complete the forms using a pen and return them with the kit at the end of the study.

This step should take around 5 mins

Summative **Questionnaire**

Please complete **one** summative questionnaire sheet for **each** instrument, and ensure the instrument number field is completed. This should only take a few minutes.

Ranking **Activity**

There is just one of these, and we are all done!



SELF RECORDING

Photos

When documenting your instruments, please take a few pictures from different angles against a plain or natural background. If you can provide one or two showing how you hold or play the instrument that would be great too.

Video

We recommend making the recordings using your laptop or phone. If a Mac user, we recommend the video function in the Photo Booth app as this will capture audio and video effectively using the onboard microphone and camera. This will record at the same time as running your instrument with no processing issues.


Approach

We don't want the process of making the recordings to interfere with the actual study, so please don't over think this bit. It is important however that (to the best of your ability) you capture the way you are playing the instrument and it is possible hear the sound that it makes at the same time.

Please also consider the importance (where necessary) of capturing whole body gestures or smaller body movements.

SAVE

Please save your files as:
Instrument [1-4] Image / Performance



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CHECKLIST!

A huge thanks for taking part in this study. Its been a really challenging year for all of us, and working out how to do research in distanced environments has been interesting.

Just to make sure all the stages of the study have been completed, and that you have all the self generated data ready to return, please check you have the following:

- Three Forms.....
- Research Ethics.....
- Participant Info.....
- Musical Sophistication.....
- Have you built 4 instruments?.....
- Pictures of all 4 instruments.....
- 4 Performance Videos.....
- 4 Design Questionnaires.....
- 1 Ranking Activity.....



Please let us know you have completed the study, and we can arrange for the debrief in which we will spend approx. 30 mins undertaking a semi structured distanced interview over zoom.

Please do take care of any self generated data, as this is pivotal to the success of the study.