



# MAMI

# Tech Toolkit

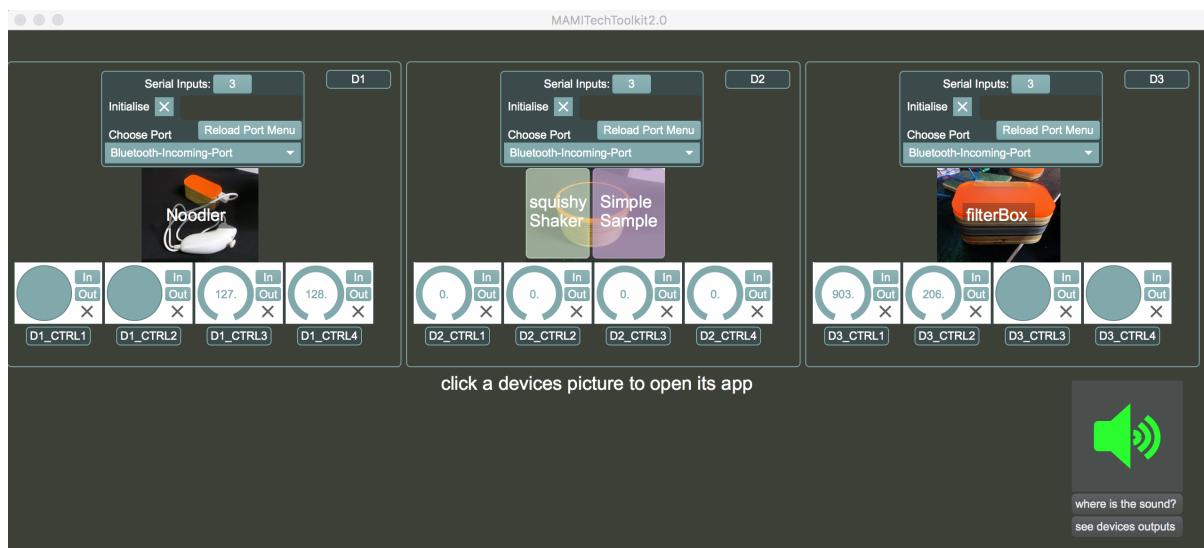
# Manual

Hello and thanks for agreeing to trial the use of the modular accessible musical instrument (MAMI) Technology Toolkit! Below are instructions for setting up the system and an overview of the features of the software.

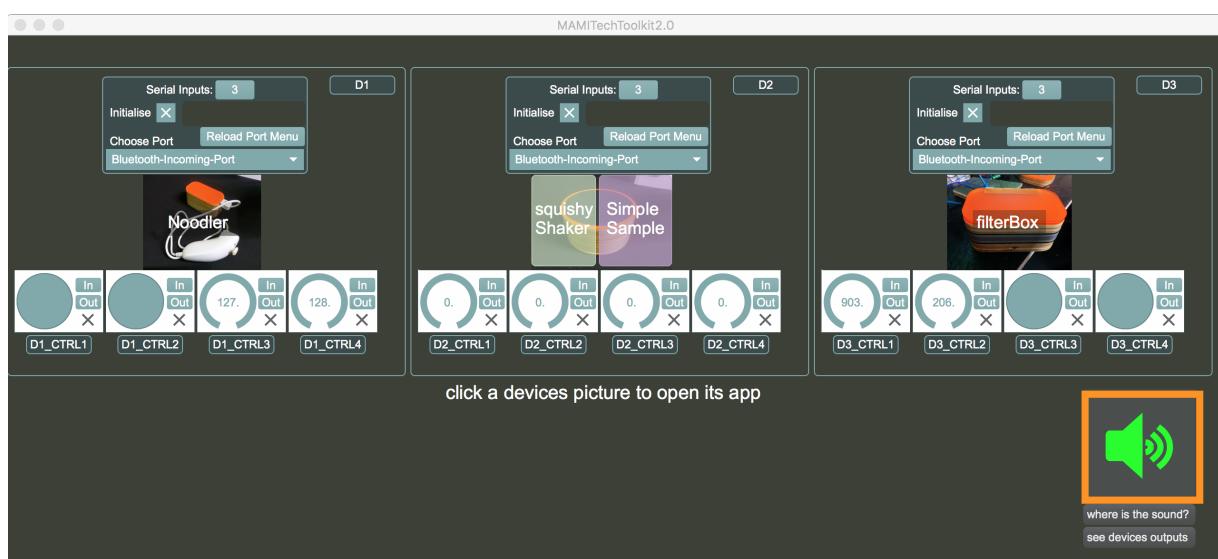
The software features a main application, alongside several apps to be used with each specific piece of hardware in the system.

### Setting up!

Double click the MAMITechToolkit2.0 application which once opened will look like below



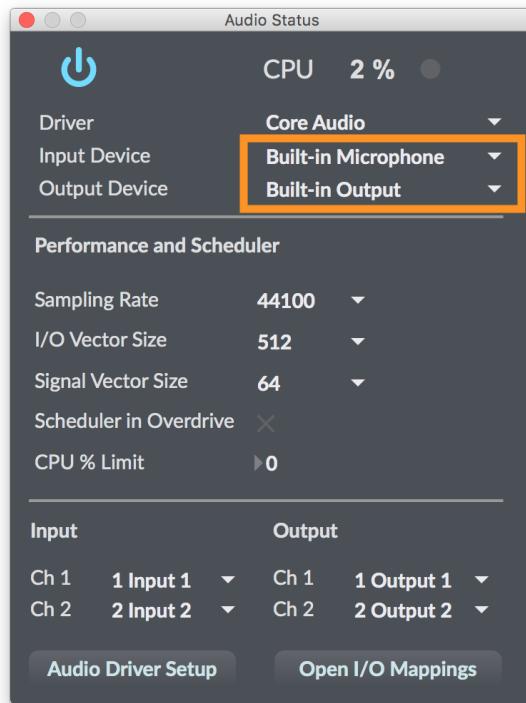
There are 3 sections corresponding to the 3 instruments supplied with the kits.  
There is also a button to activate the sound which by default will be on upon opening.

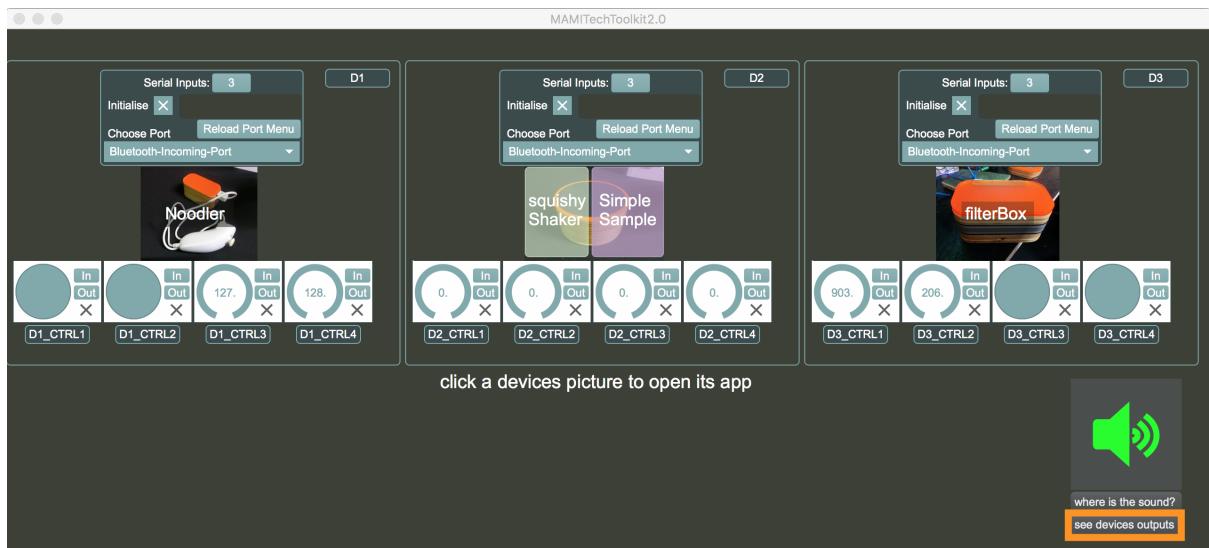


There is a button that open settings regarding how the audio is routed

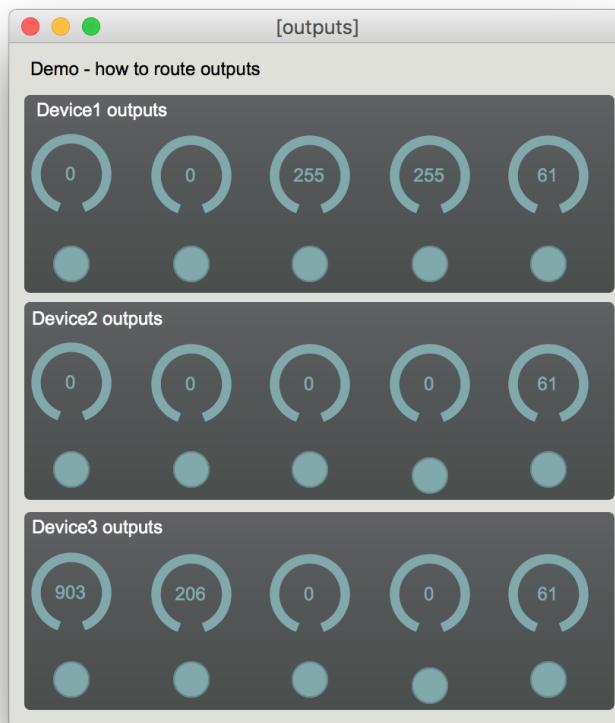


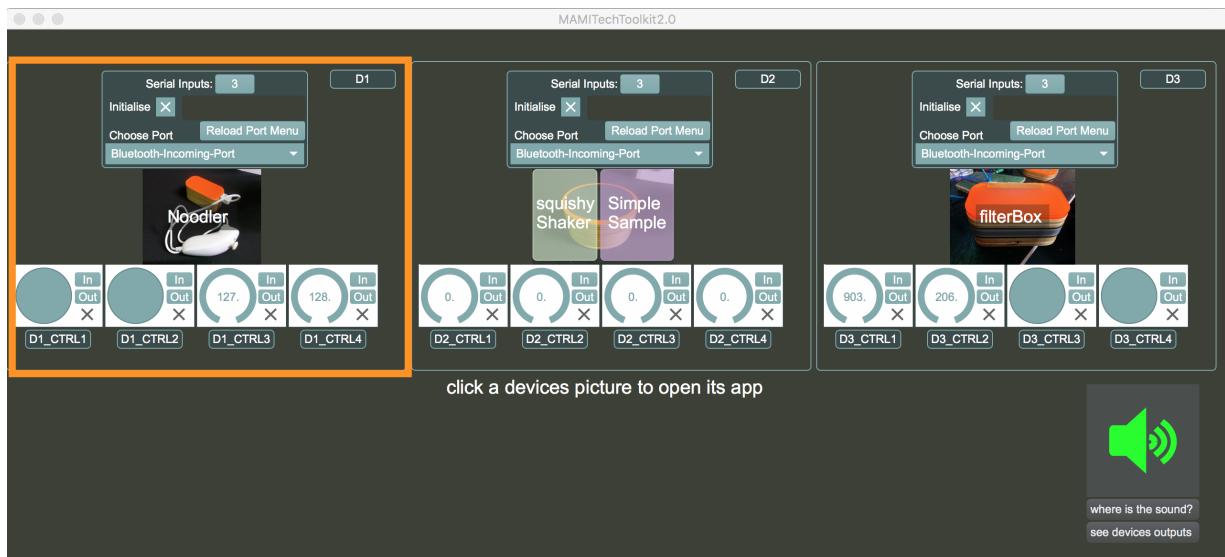
The ‘where is the sound?’ button can be clicked to show the input and output device for the application. A drop-down menu can be used to select the desired output based on your computer set-up and any microphones or speakers you may have plugged in.



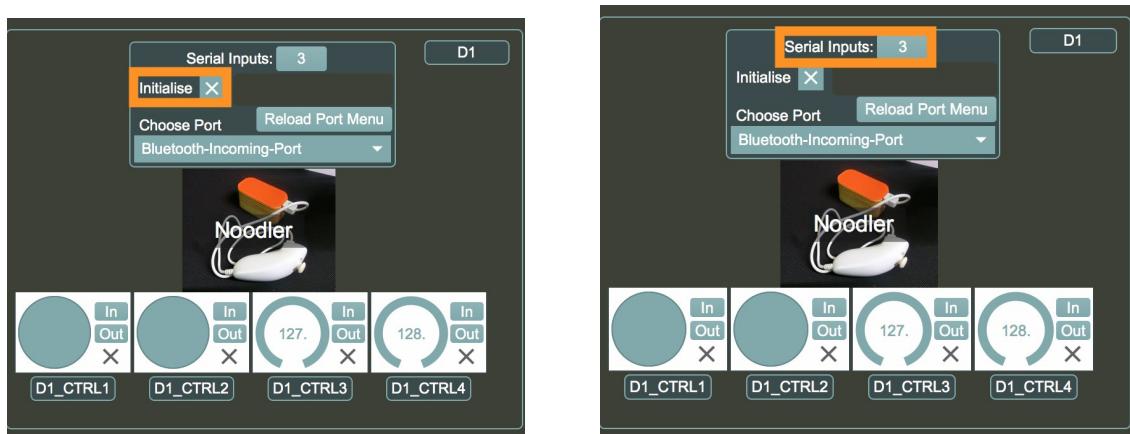


There is also a ‘see devices outputs’ button that can be clicked to show a pop-up of the output from the instruments that are plugged in and operating. The following ‘outputs’ window will be activated. When connected Device1 shows the Noodler output, Device2 shows the squishyDrum output and Device3 shows the filterBox output.





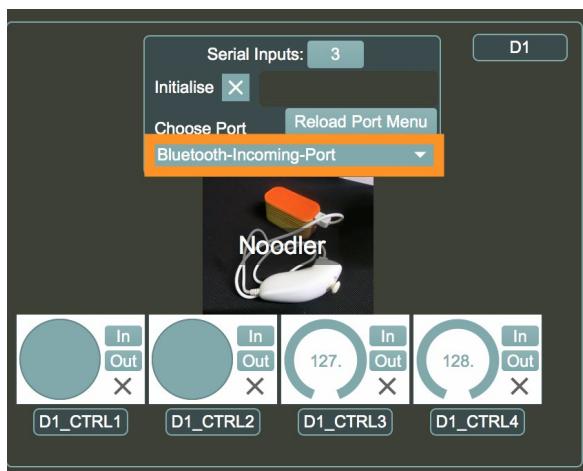
Section 1 marked in orange shows settings for connecting the Noodler.



By default, the devices will be initialised upon loading the application. Serial inputs will display 3 and can be ignored.



Plug the Noodler receiver into the USB socket on the computer and click the 'reload port menu' button to scan for connected devices. Turn on the Noodler device.



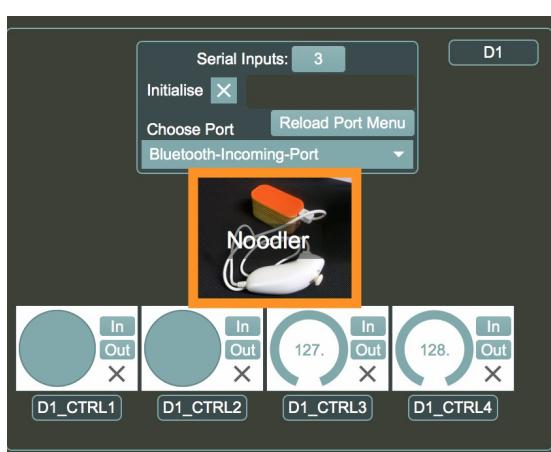
Then click the ‘choose port’ drop-down menu and select the corresponding Noodler receiver number (if you are unsure which port this is, try unplugging the receiver, pressing ‘reload port menu’ and then plugging the receiver back in and clicking ‘reload port menu’ a second time to see the a new addition to the menu).

The menu item will likely look something like this ‘wchusbserial1420’, although the 1420 number may differ for each device. This should then enable the connection between

the Noodler device and the receiver. Within a few seconds the displays within the Noodler zone (marked in orange below) should be showing input from the device with the red areas lighting up as the values from the Noodler are changed.

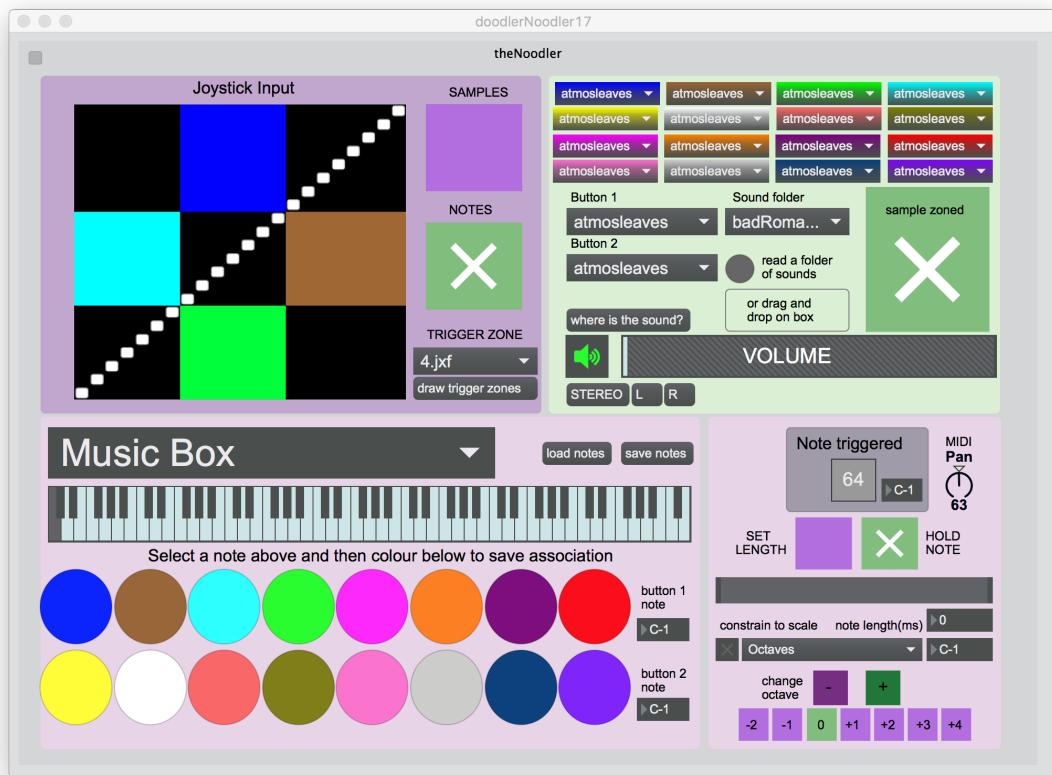


The other information within these boxes regarding the in and out are not used in this testing toolkit and can be ignored.

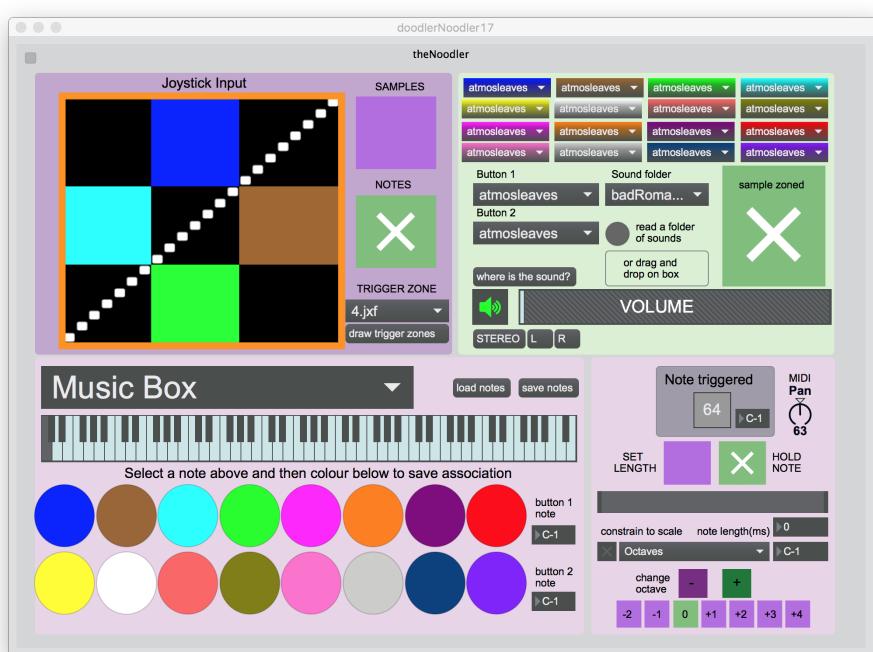


Clicking on the picture of the Noodler will load the Noodler App which will pop-up into a new window.

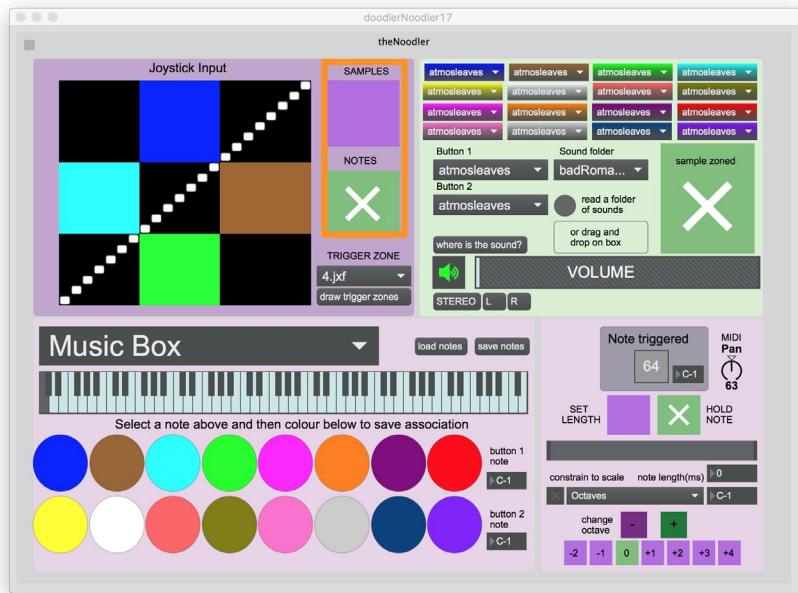
## Noodler App



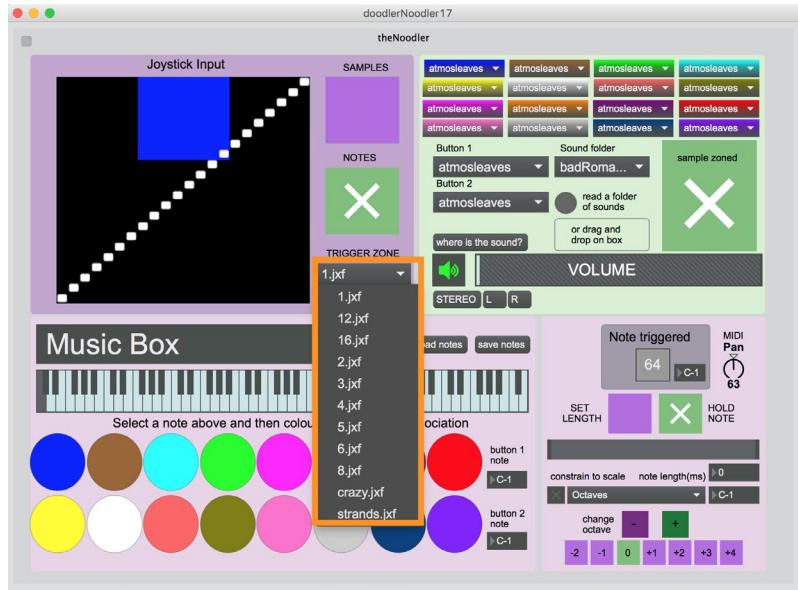
This is the main interface of the Noodler app!



The section marked in orange shows the input from the Noodler joystick (in the form of a white dot that follows the joysticks movement upon loading and without connection the white line above will be displayed).

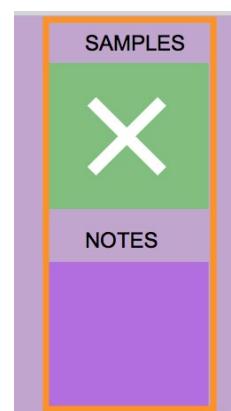


The application works by triggering notes or samples as the joystick moves through the trigger zones. The above is set to have 4 trigger zones (the blue, brown, green, and cyan areas, with the black areas denoting no trigger areas). The trigger areas correspond to the up, down, left, and right motion of the joystick.

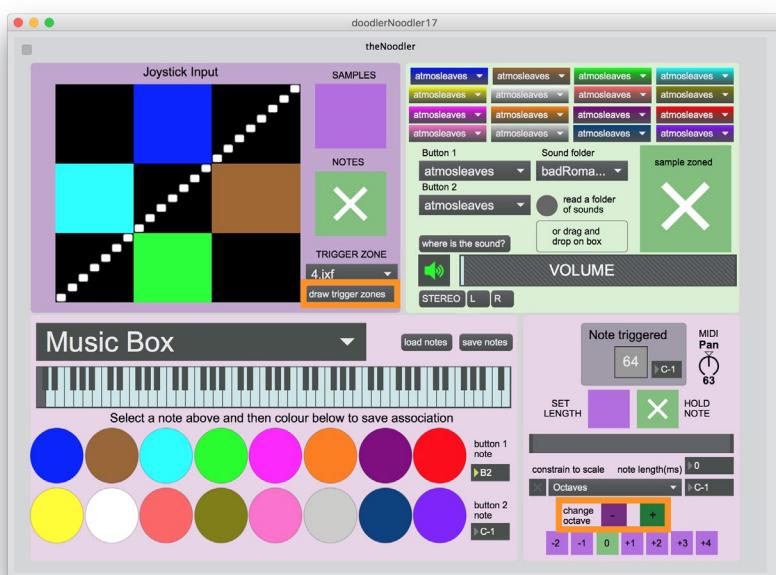


The amount of triggers in the trigger zone can be changed with the trigger zone drop-down menu.

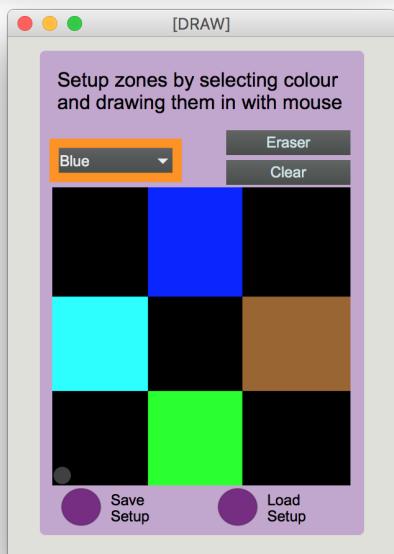
The trigger zones can be used to trigger MIDI notes or samples by clicking the corresponding box (a cross will indicate which option is selected).



## Drawing Customised Trigger Zones

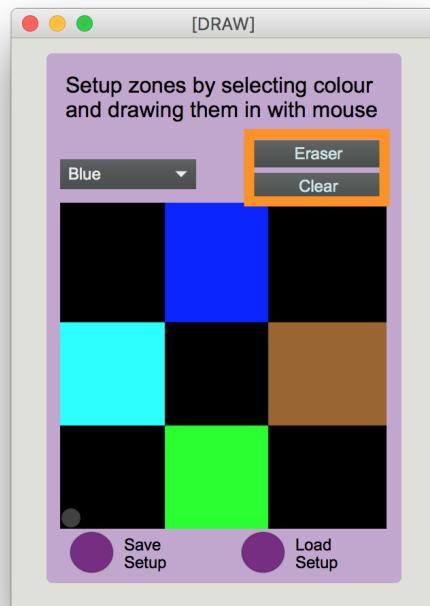


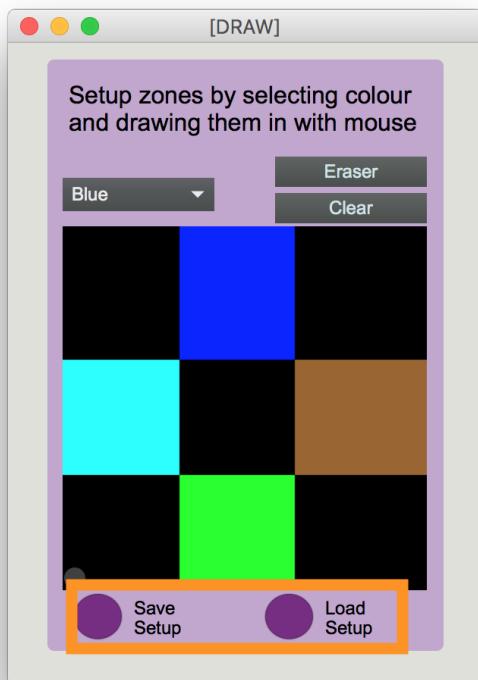
Clicking the 'draw trigger zones' button will allow you to draw customised trigger areas. A new 'draw' window will pop-up to allow this.



A colour (from 16 colours) can be selected from the drop-down menu and the mouse can be used to draw onto the trigger area in this colour.

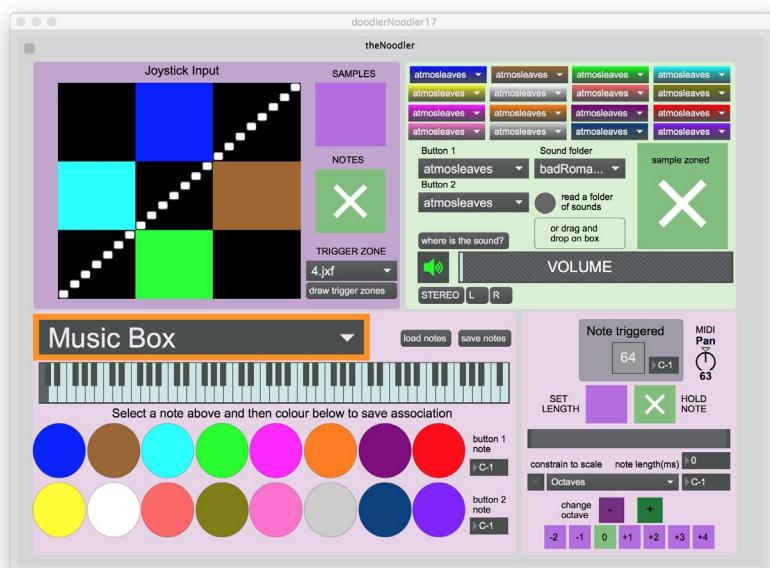
'Eraser' can be selected to erase areas of the trigger zone and 'clear' can be selected to completely clear all colours from the trigger zone.



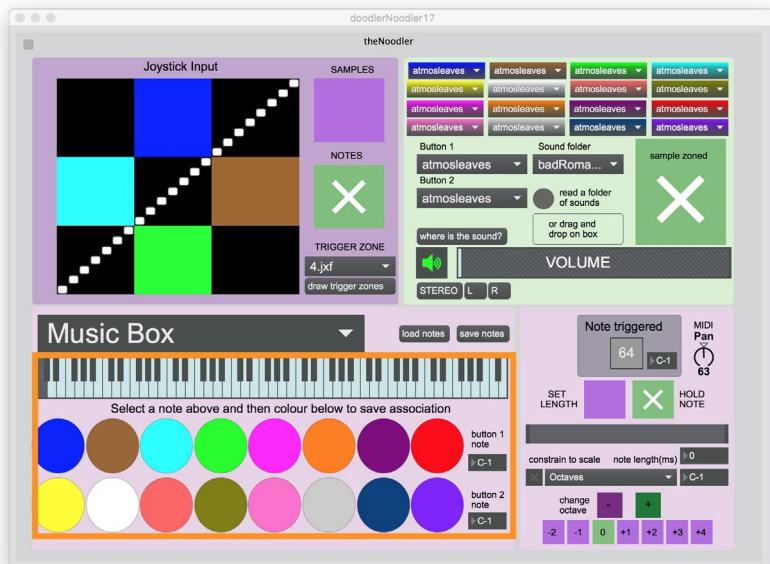


Once a trigger map has been drawn this can be saved using the 'save setup' button. This will create a pop-up box to allow you to navigate and store the file within your computer. Saved setups can then be subsequently loaded using the 'load setup' button.

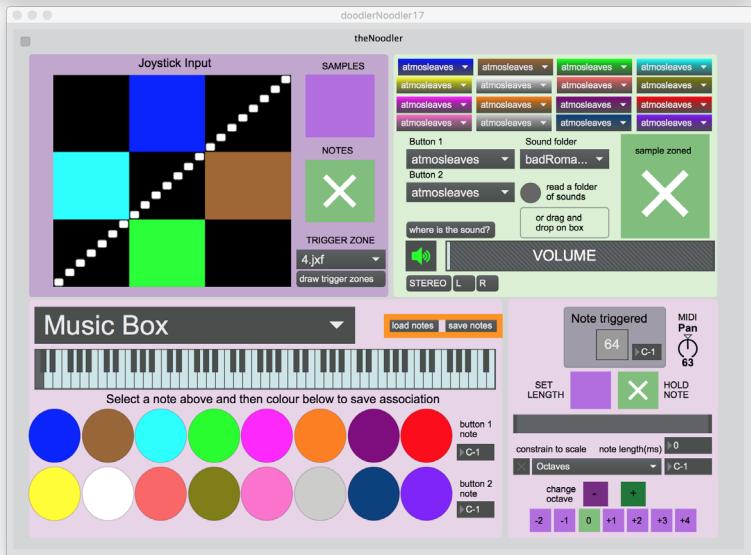
## MIDI features



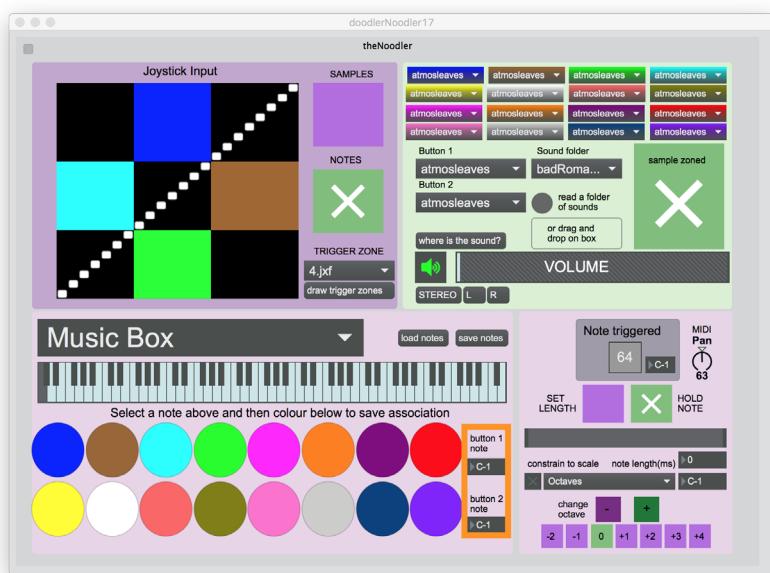
The type of MIDI instrument can be selected from the drop-down menu.



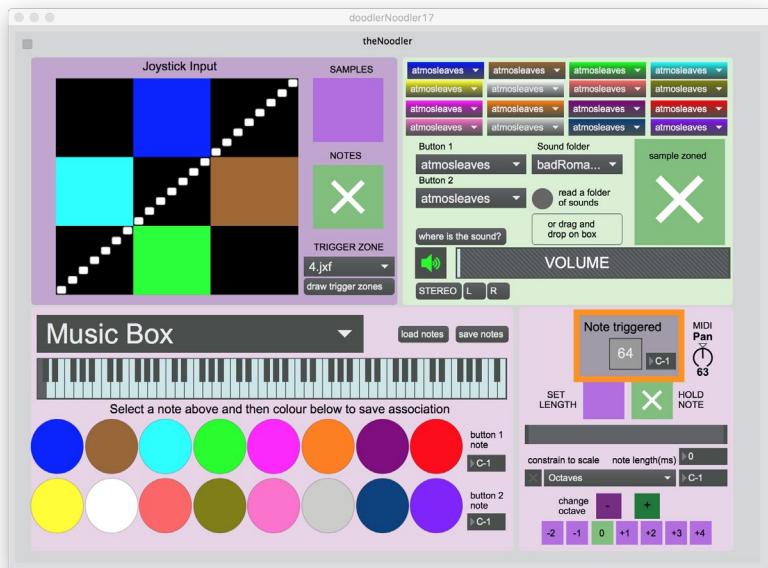
The on-screen musical keyboard can then be used to assign a note to a colour by first clicking the note and then clicking the coloured dot below to save the association automatically.



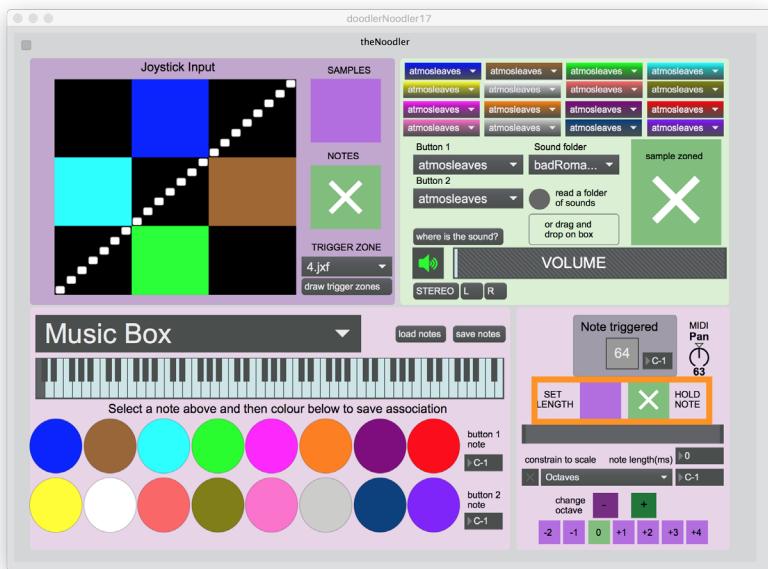
To save the assigned note associations for future the 'save notes' button lets you save a file with the note associations. These can then be recalled using the 'load notes' button. A pop-up will appear to when you click either option to allow you to save or reload the files at a location of your choosing on your computer.



To select a note for each button on the Noodler the boxes highlighted in orange to the left can be dragged or the box can be clicked (the triangle by the value will turn yellow) and a value can be typed in to assign that corresponding MIDI note.

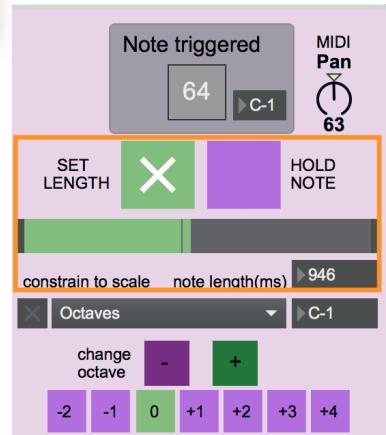


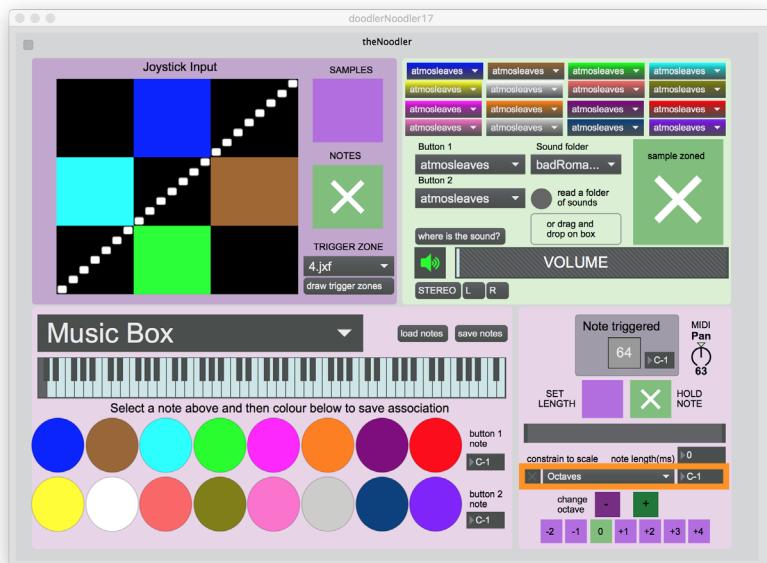
The ‘note triggered’ zone will display the note that is currently being played as a number and MIDI value.



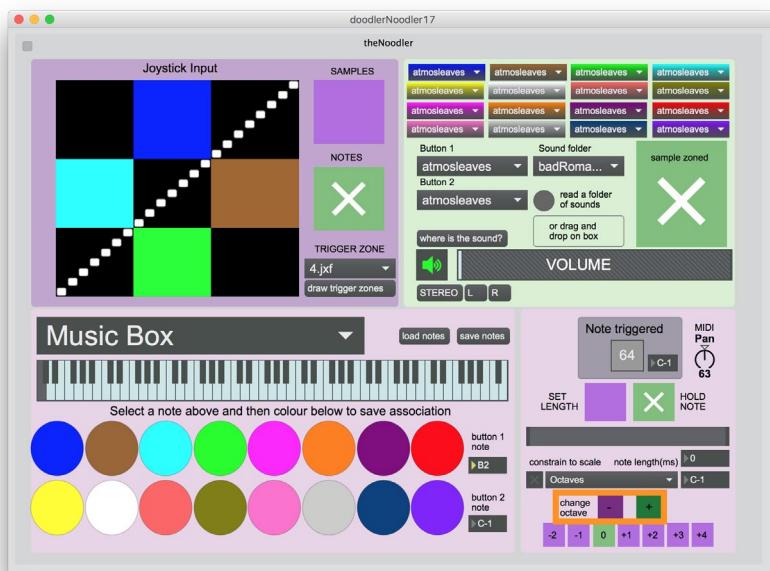
Notes can be set to trigger only while the Noodler stays in the trigger zone or to ring out for a set time by selecting either ‘set length’ or ‘hold note’.

If ‘set length’ is selected the time bar below becomes active and note length can be changed by sliding the bar. This selected length will then be displayed in miliseconds (ms) in the ‘note length’ box (946ms in the image below).

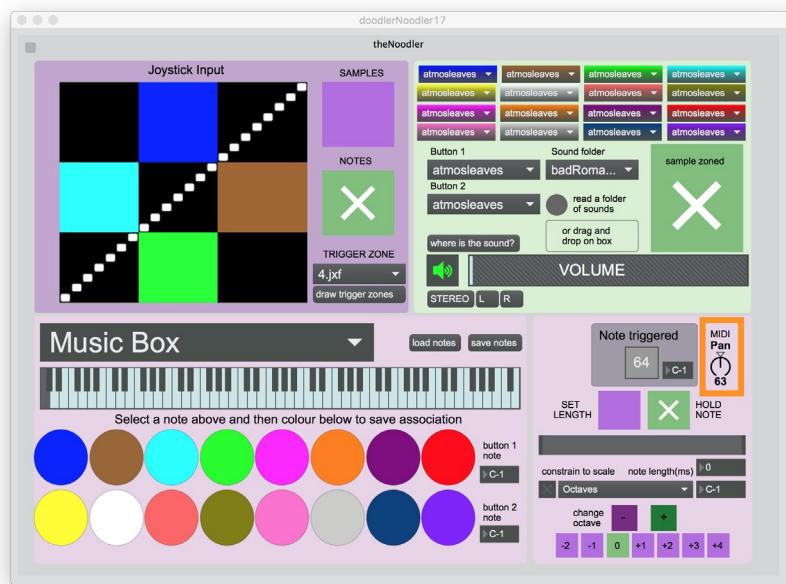




A beta feature of the app is the ‘constrain to scale’ function. If the small crossed toggle box is clicked to the left of the drop-down menu then the notes played should remain within the scale selected from the drop-down menu.

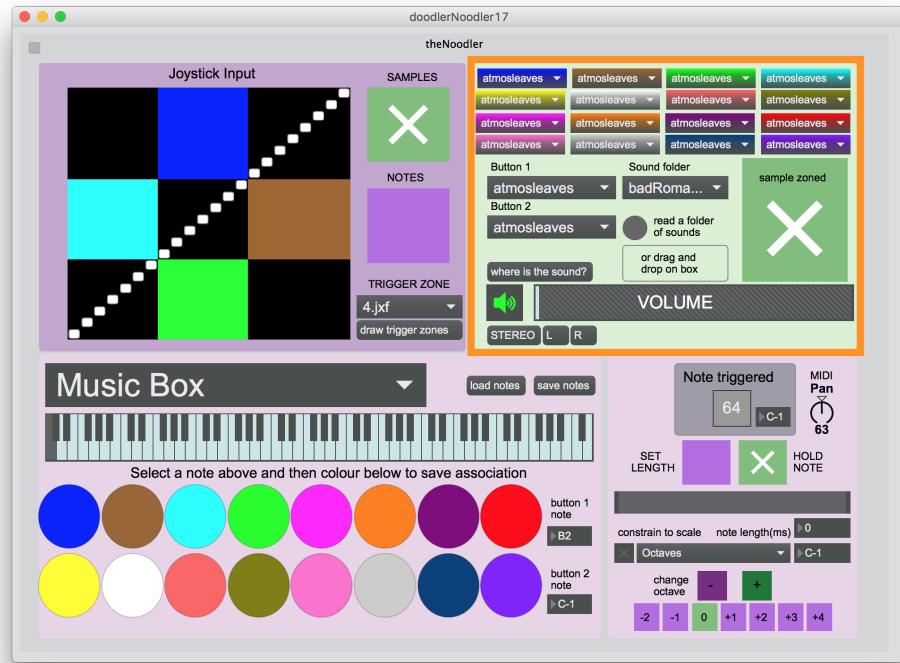


The ‘change octave’ buttons labelled with the ‘–’ and ‘+’ can be used to move up or down octave with the current selection being displayed in green in the boxes below.



The ‘MIDI Pan’ dial can be used to send out the MIDI notes via the left or right speaker if a stereo system is being used. By default it will be stereo.

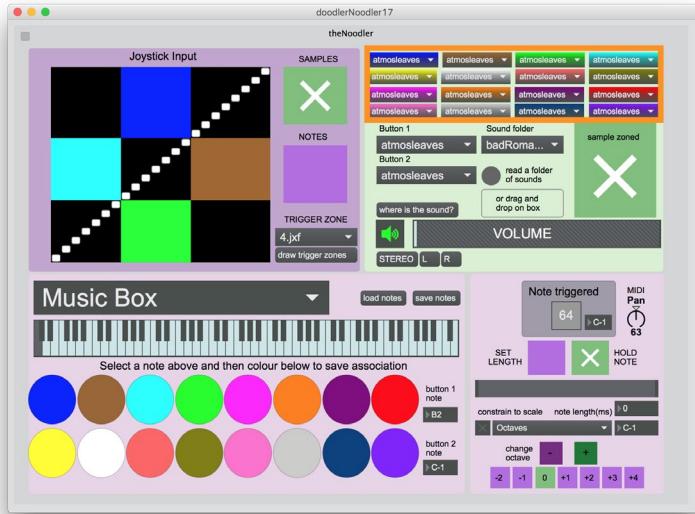
## Sample features



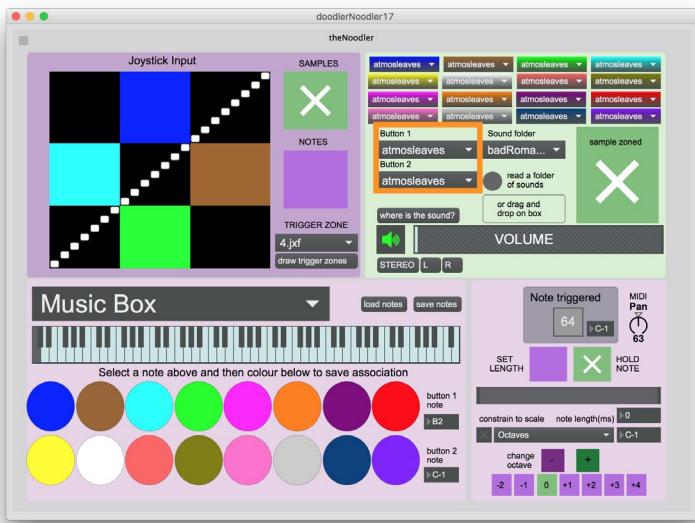
When the ‘samples’ section is selected denoted by the green cross to the right of the trigger zone the area marked in orange becomes active.



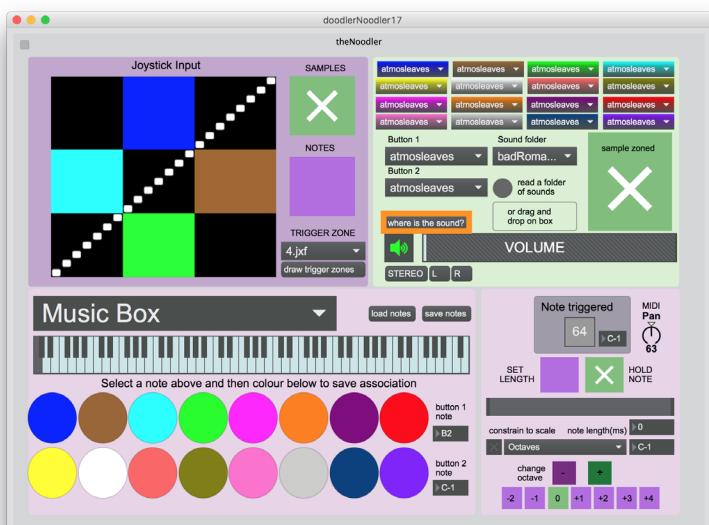
A folder of sounds can then be selected from the drop-down menu. The app comes with several pre-loaded. Using the button next to ‘read a folder of sounds’ allows for a custom folder to be selected or alternatively a folder of sounds can be dragged and dropped onto the ‘drag and drop’ box to auto load.



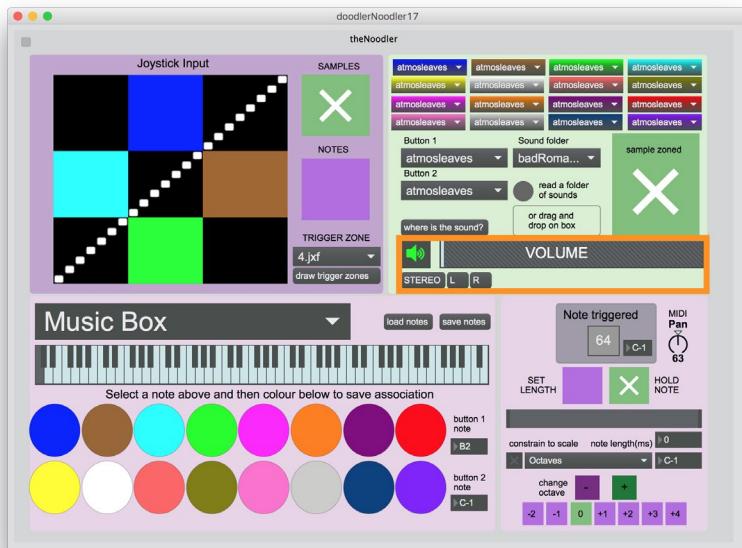
Once a folder of sound is selected the coloured drop-down menus will display the sound files in the folder selected and can be used to assign a sample to a coloured trigger zone.



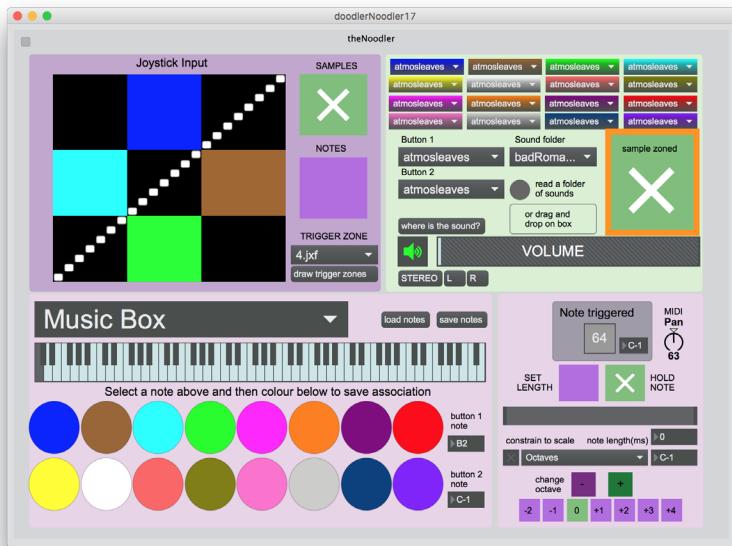
The 'Button 1' and 'Button 2' drop-down menus can be used to assign a sound file to the buttons on the Noodler.



The 'where is the sound?' button can be used to enable the pop-up window that shows how the audio is routed within the computer (the same as the main MAMI Teck Toolkit app).

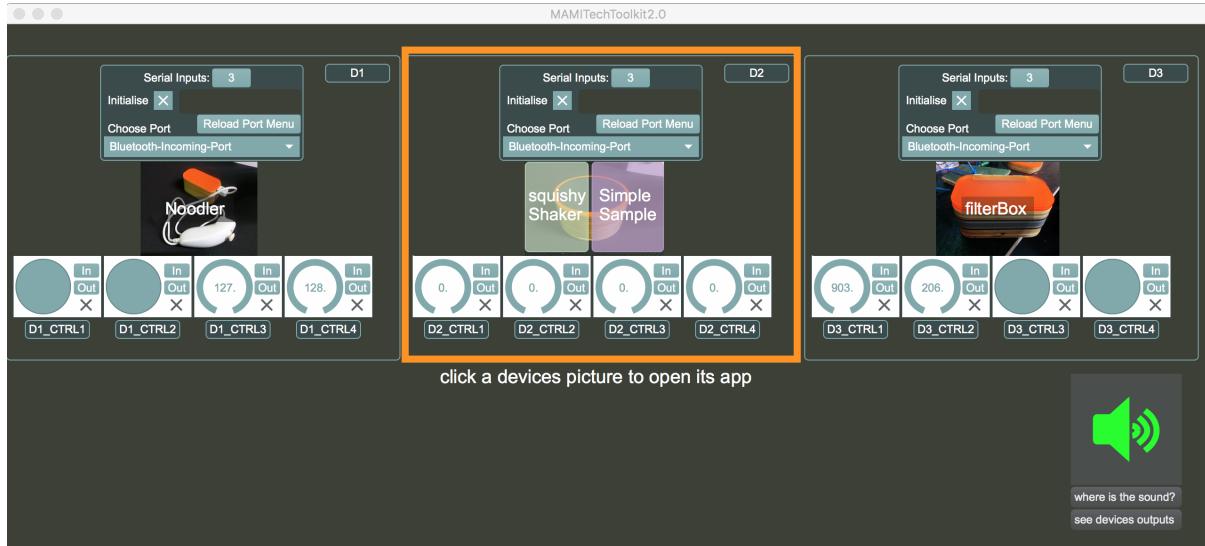


The sound can be turned off and on with the speaker icon and the volume adjusted for the sample playback with the slider. Stereo playback or playback from the left (L) or right (R) speaker can be selected also.



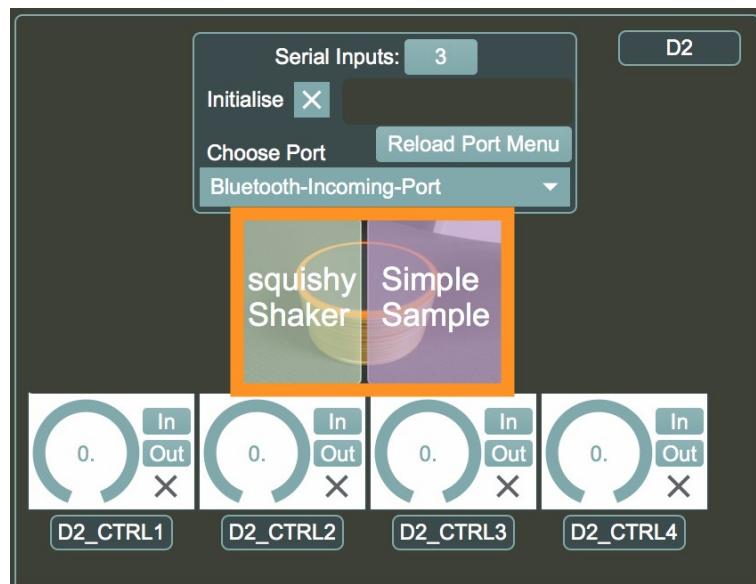
The 'sample zoned' area can be selected so that a sample is triggered only whilst the dot remains in the trigger zone and the sample will stop as soon as the dot leaves the trigger zone. If unselected the sample will play fully unless retriggered by re-entering the trigger zone.

## squishyDrum Apps

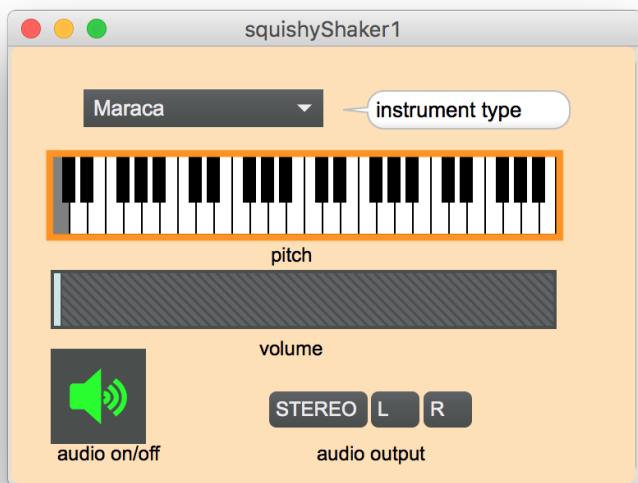
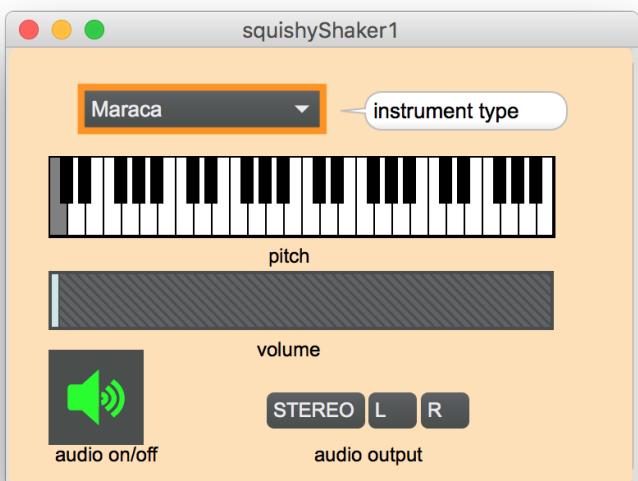


The middle section of the main app relates to the squishyDrum. To connect the squishyDrum the same procedure can be followed as for when connecting the Noodler. Plug in the receiver and turn on the device. Reload the port menu and select the correct port from the drop-down menu.

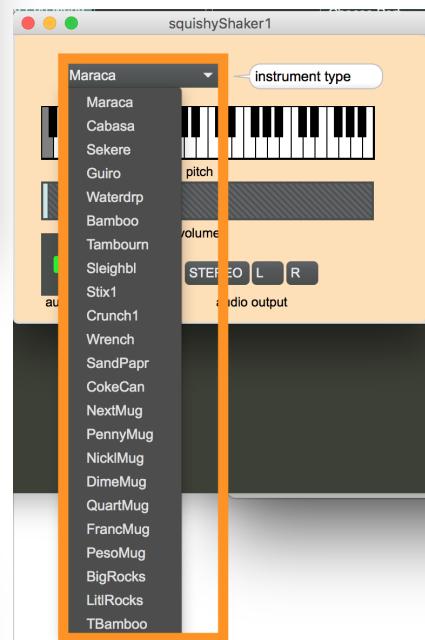
The squishyDrum has 2 available apps, squishyShaker and Simple Sample. squishyShaker creates noise based on the pressing of the 3 pressure pads on the squishyDrum surface and the Simple Sample triggers selected from a folder of sounds or allows you to record 3 sounds using your computer microphone and then playback these samples using the device trigger pads. To start either app click their name over the picture of the device. Once an devices picture has been clicked it will go green and the app will load.



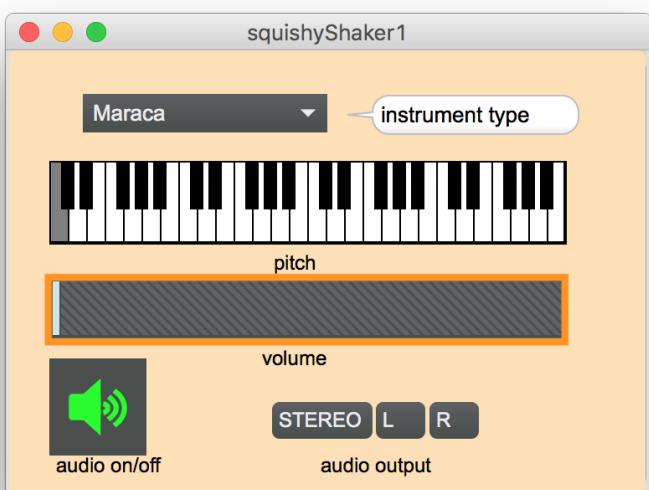
## SquishyShaker



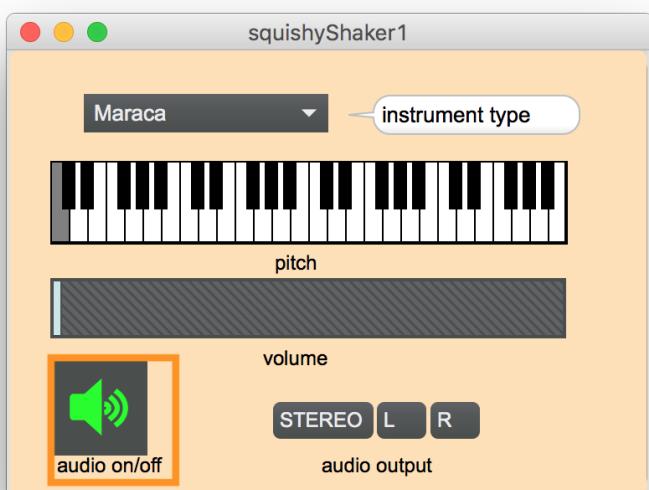
The main interface of squishyShaker features a drop-down menu can be used to select and 'instrument type'. These are based on percussive objects such as coins and stones.



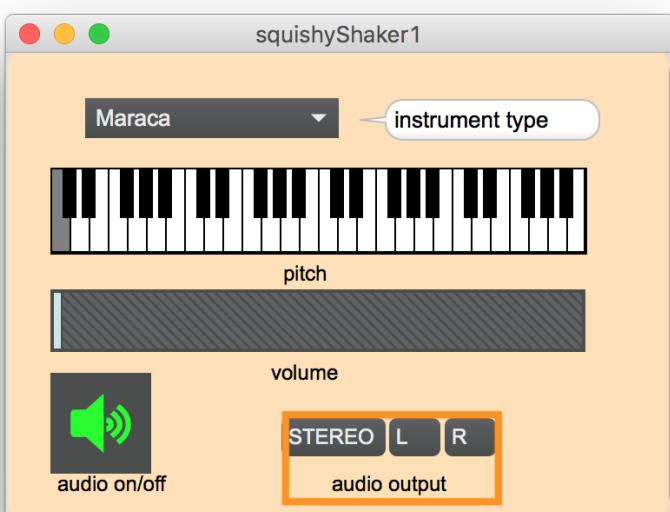
The pitch can be selected from the on screen keyboard.



The volume can be changed with the slider.

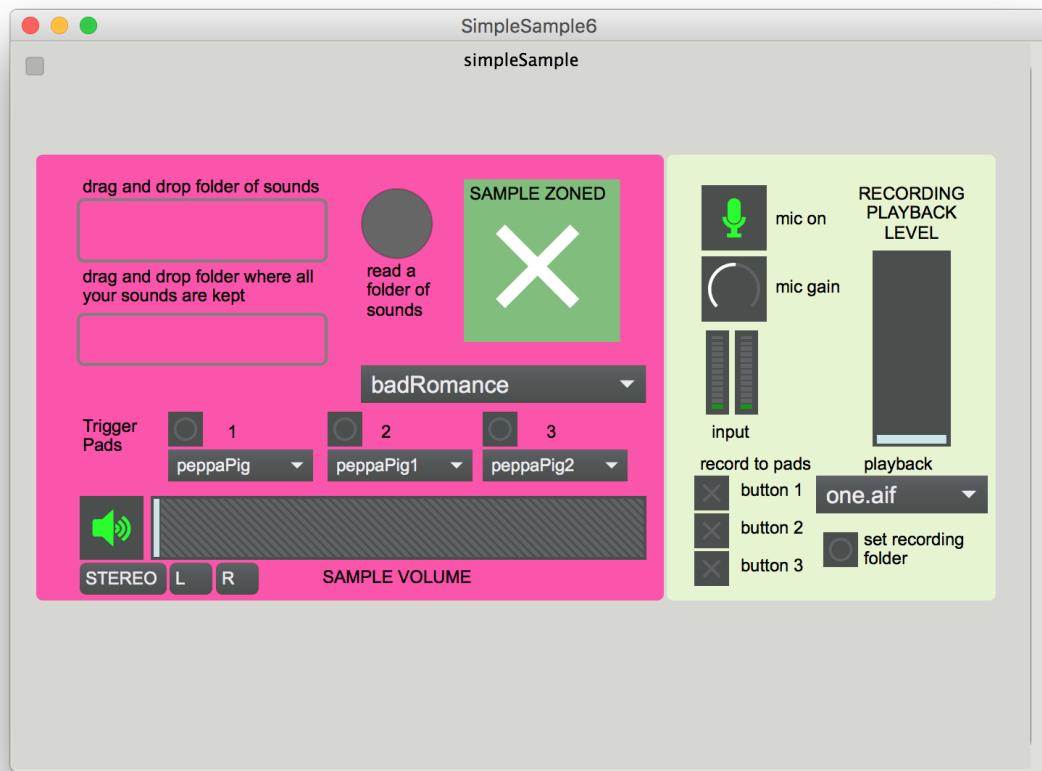


The audio can be turned on and off.

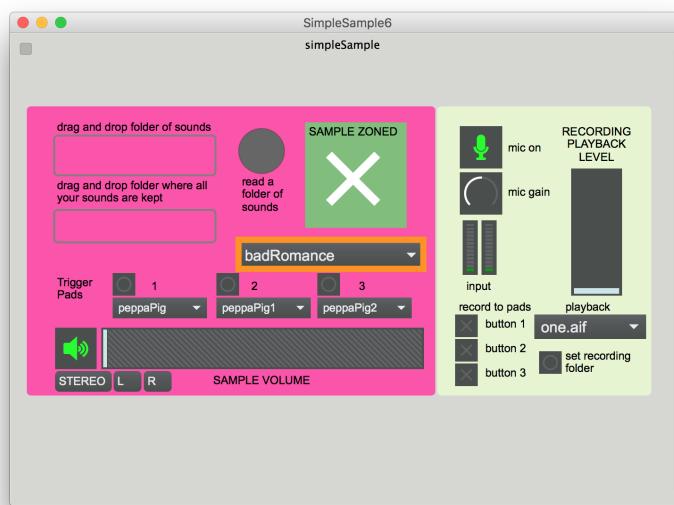


The audio output can be routed to stereo, ledft (L) or right (R).

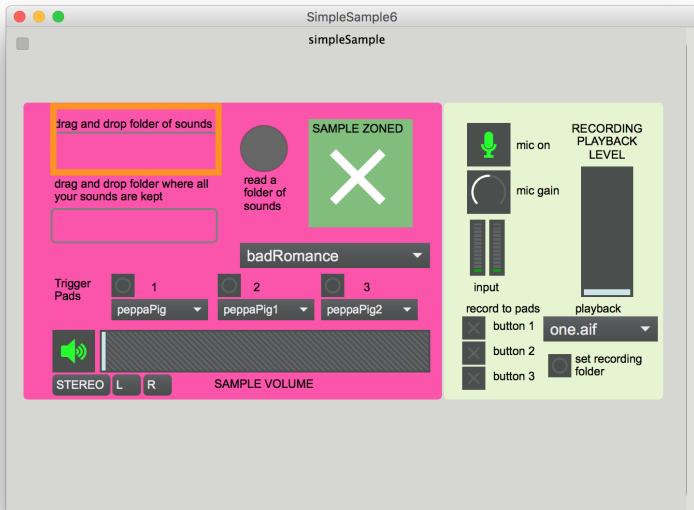
## Simple Sample



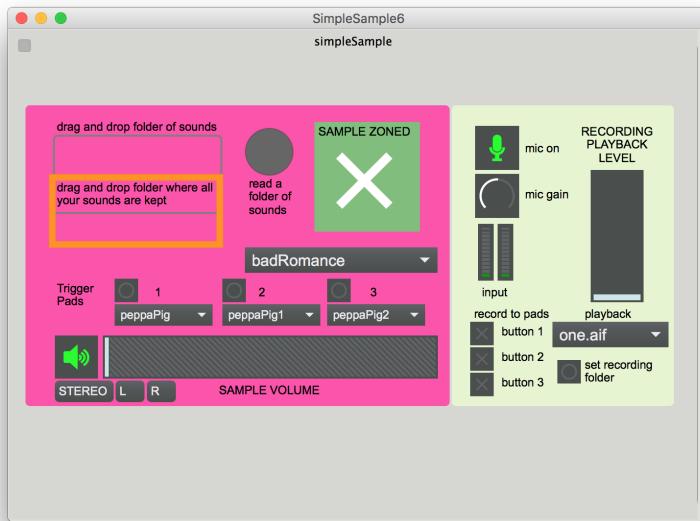
This is the main interface for the Simple Sample app.



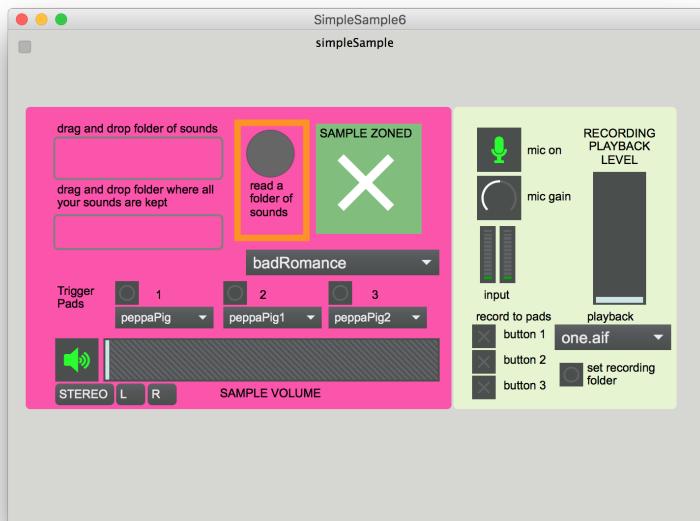
A folder with a selection of sounds is loaded by default which can be selected from the drop-down menu.



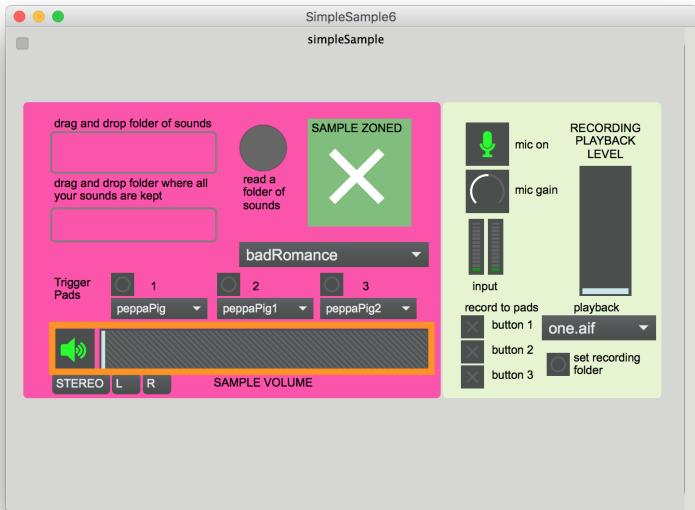
A folder of sounds can be dragged and dropped onto the box to autoload.



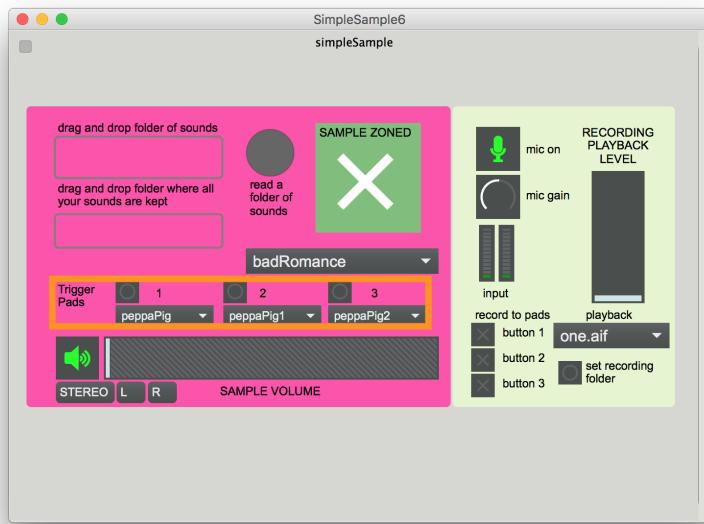
Or a folder can be dragged and dropped that contains folders of sounds to auto load.



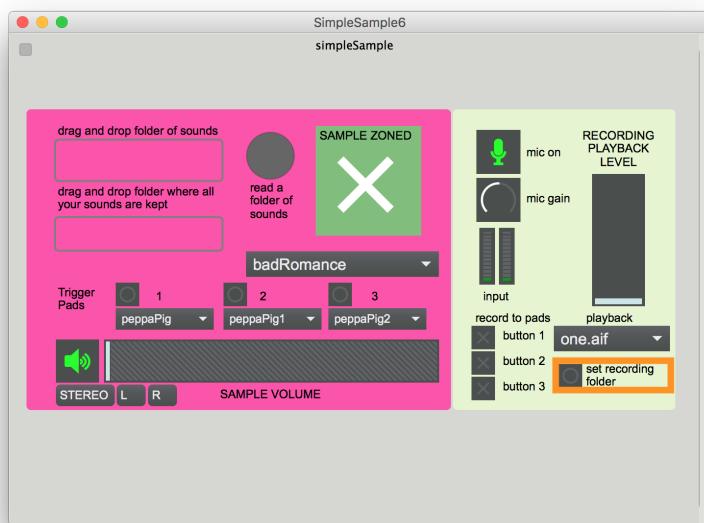
Or a folder of sounds can be navigated to on the computer using the button above 'read a folder of sounds'.



The audio can be turned off and on and the volume of the sample playback can be adjusted using the slider.

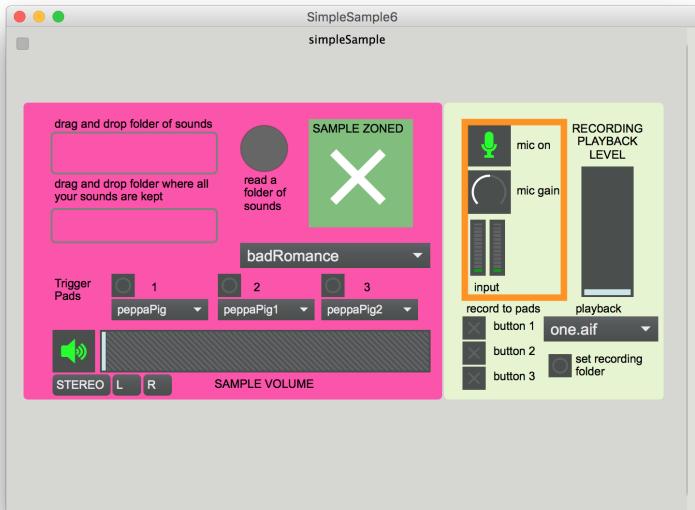


The content of the trigger pads can be tested by pressing the button next to the numbers 1, 2 or 3. The drop-down menu can be used to select the sample that the trigger pad triggers. The audio output can be set to stereo, left (L) or right (R).

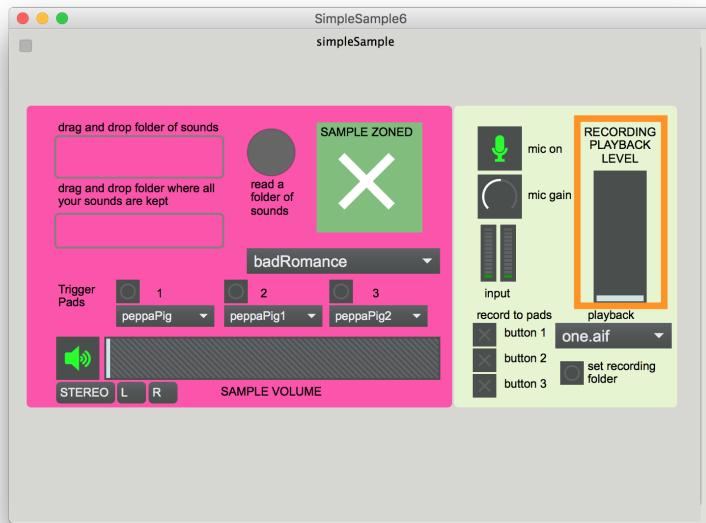


**When using the recording function it is important to set the recording folder before recording!!**

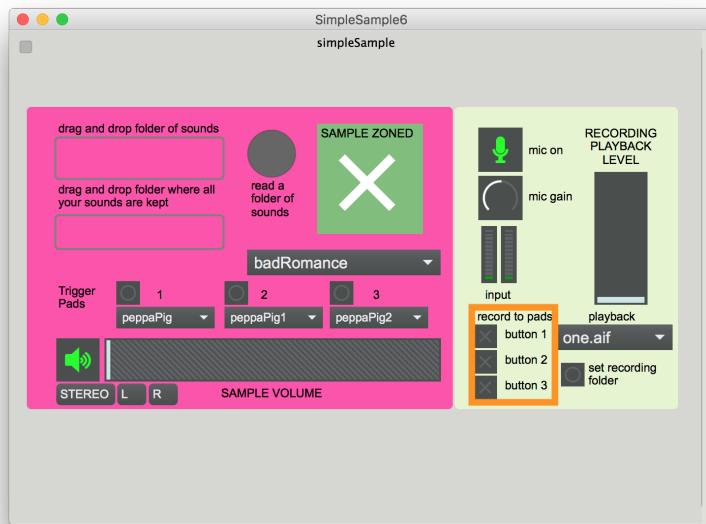
Clicking the button to the left of 'set recording folder' will allow you to create an empty folder for the 3 files that will be created as you record with each pad.



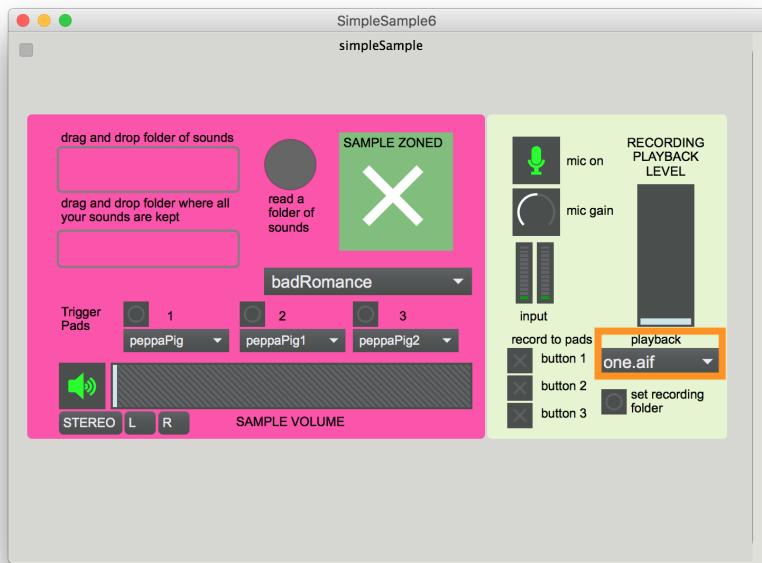
When the audio is armed the microphone selected in the audio routing window will be used for recording the sound. Moving the 'mic gain' dial up will show the input level from the mic in the meters below it.



The 'recording playback level' slider can be used to change the playback volume of the samples recorded.

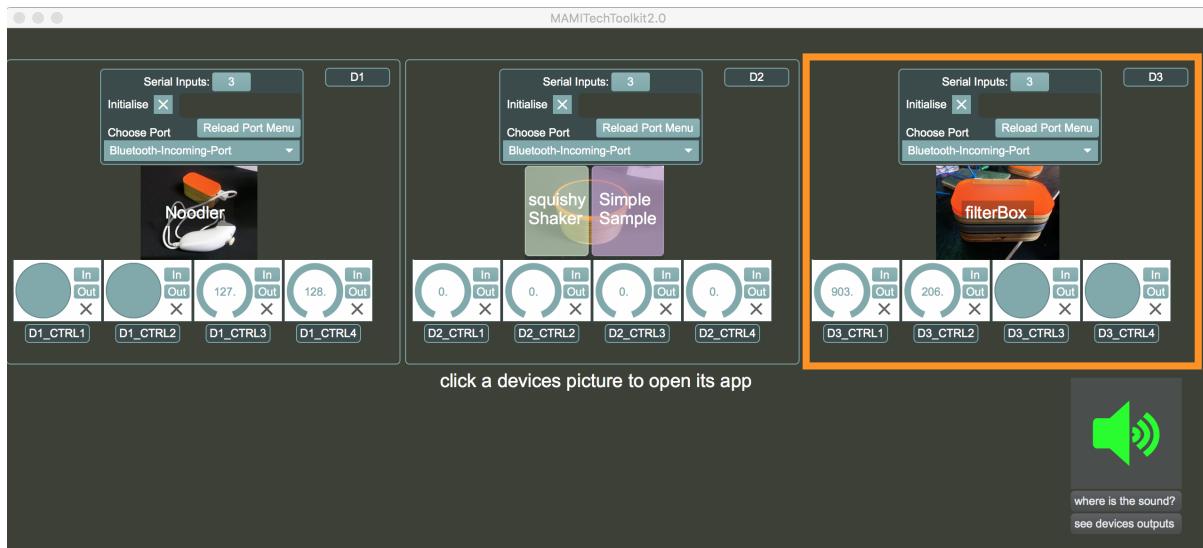


The 'record to pads' area is used to record sounds to the corresponding trigger pads. Clicking the cross box next to the button number will start the recording onto that pad. The recording will continue until the toggle is clicked again and the sound file will then be triggerable.

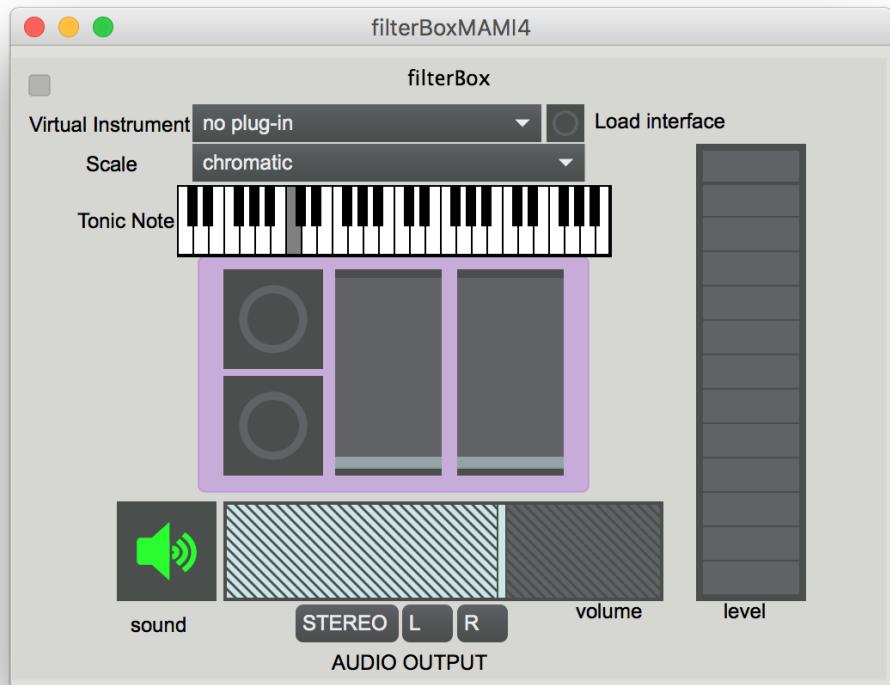


Playback from the pads can be shown in the playback area. The drop-down menu can also be used to play the sound files.

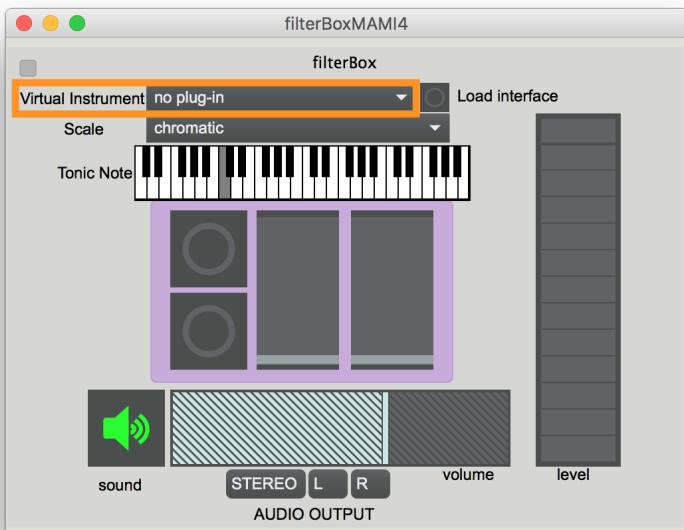
## filterBox



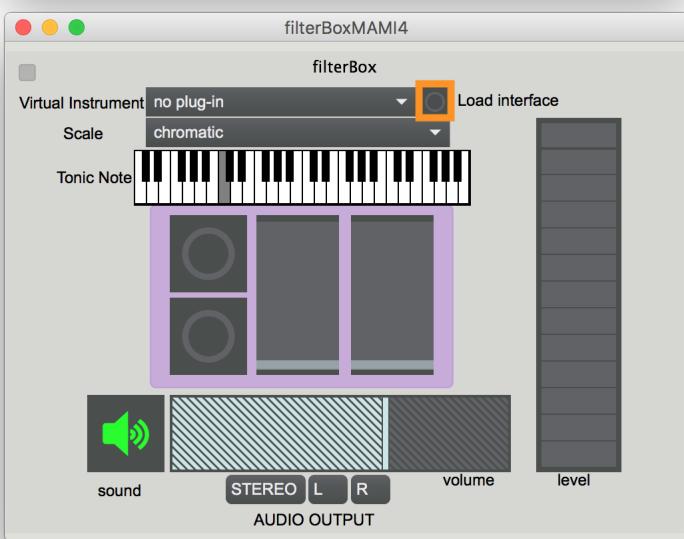
The filterBox can be connected in the same way as the other 2 devices. Plug in the receiver, turn on the device, reload the port menu and select the correct receiver from the dropdown menu. Click the devices picture to open its associated app.



The main filterBox app interface!



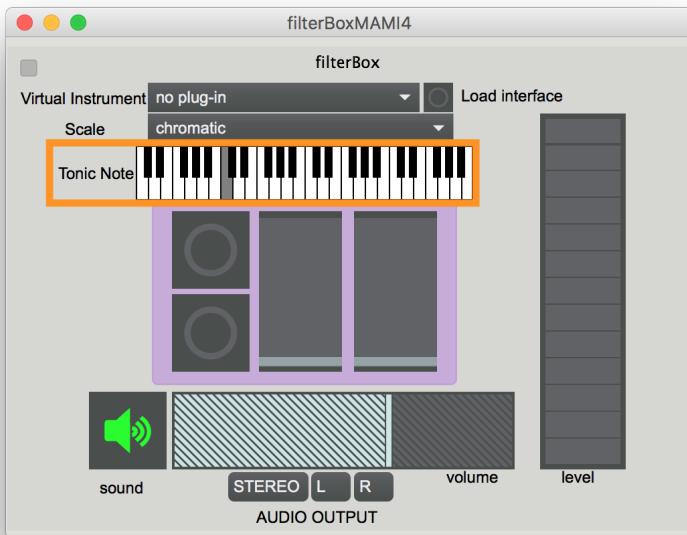
This app allows you to load virtual instruments that are included with the app.



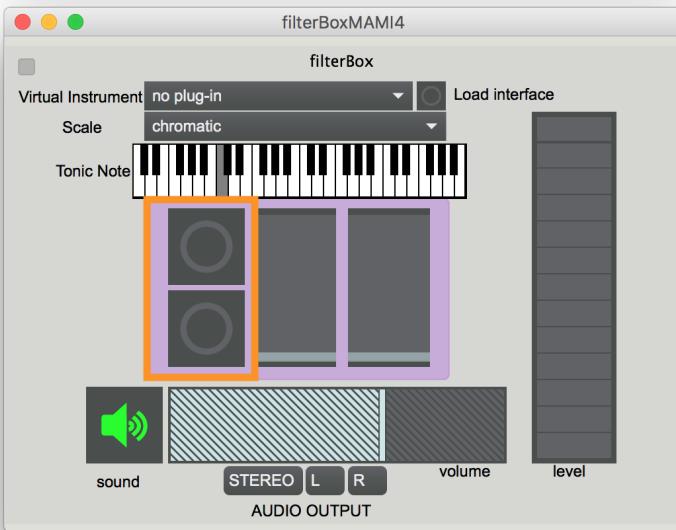
Once a virtual instrument has been selected from the drop-down menu. If you are feeling technical and want to see the interface for the chosen virtual instrument then the 'load interface' button can be used (**note that these are third party and can be very technical!!!**). However sound will be created without loading the interface!



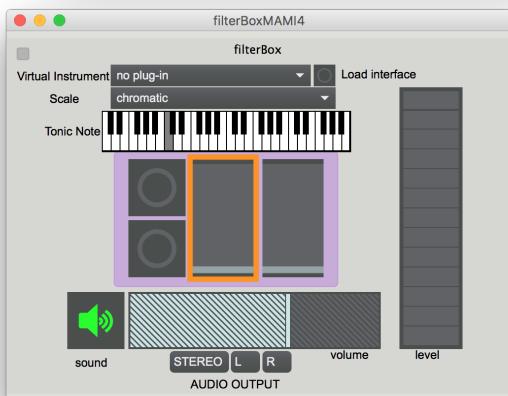
A scale can be selected from the drop-down menu and the notes triggered remain within that scale.



The tonic note for the scale can be selected from the on-screen keyboard.

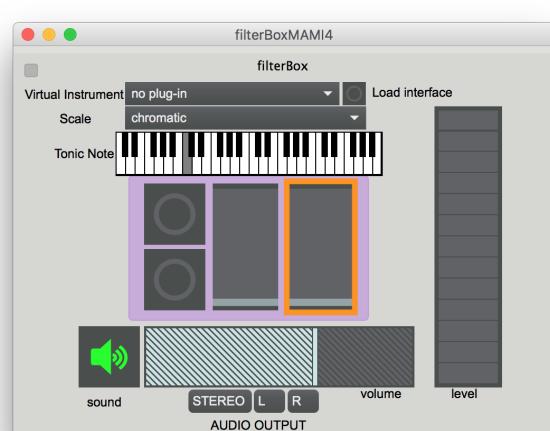


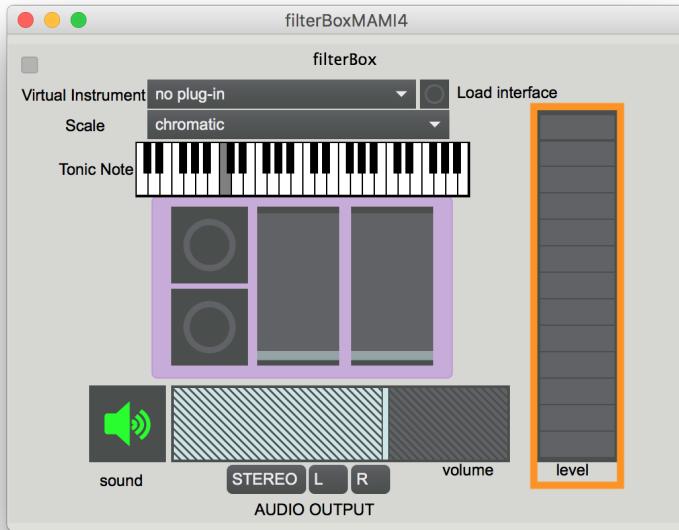
The two buttons will show the incoming button presses on the filterBox device.



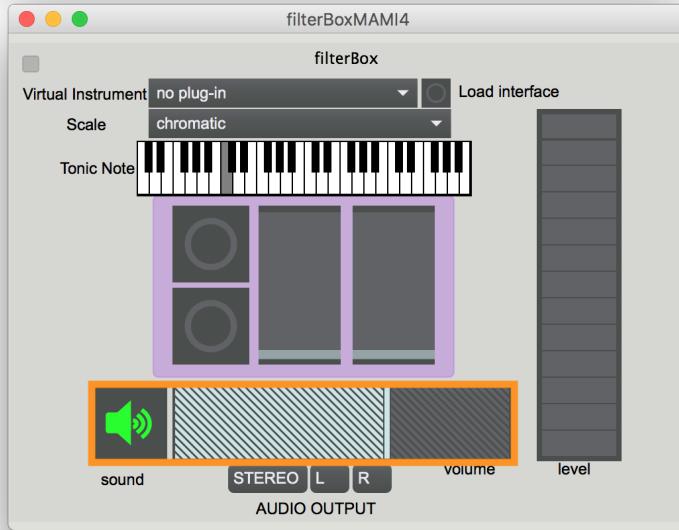
The left slider will show data from the pressure sensors.

The right slider will show the data from the light sensor.

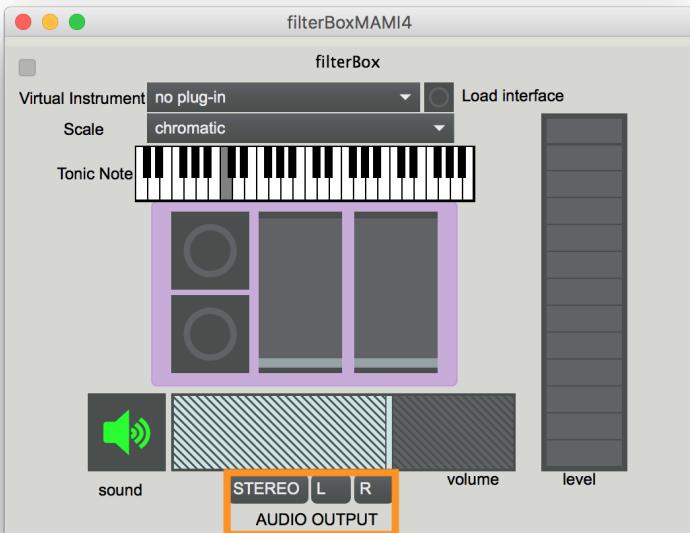




The level meter shows the level of the virtual instruments output.



The audio can be turned off and on and the volume can be adjusted with the slider.



The audio output can be routed to stereo, left (L), or right (R).