

AIRduino Guitar Manual

Software Setup

1) Loop MIDI: (Andrew)

Loop MIDI will allow us to classify the port as a MIDI port which is supposed to pass MIDI data.

Download link of the software here: <https://www.tobias-erichsen.de/software/loopmidi.html>

After downloading the software:

- a) Change the name of the port to whatever you want.
- b) Press the '+' button to add the port and the '-' button to remove it.

2) Hairless MIDI: (Nadim)

Hairless MIDI will translate the serial messages to MIDI messages.

Download link of the software here: <https://projectgus.github.io/hairless-midiserial/>

- a) Select the Serial Port as the name of the Arduino board (it should have the COM name next to it).
- b) Since we are sending MIDI signals out of the Arduino, we select the MIDI out as the name you chose in Loop MIDI.

3) Digital Audio Workspace (DAW): (Mohamad)

Any DAW of your choice will work with this one since all of them support MIDI devices. We will explain the steps using CakeWalk by BandLab since that is the DAW of our choice for this product.

- a) Open the DAW and select a blank project with no tracks.
- b) Go to: Edit > Preferences, or just press P on the keyboard.
- c) Find the MIDI section and press on Devices which should show you the available MIDI devices plugged in to your computer.
- d) Pick the name you chose for the port from the Loop MIDI section as MIDI output.
- e) Then access the Instruments section from the tab that is on the right side and pick the type of guitar that you want. (NOTE: It is worth noting that CakeWalk does not come with a guitar plugin from the start, but it can be downloaded on line and added to it).
- f) Find below the links for the guitar plugin we used and a list of video tutorials that can teach you how to use CakeWalk and download plugins:
 - i. <https://www.amplesound.net/en/index.asp>
 - ii. <https://discuss.cakewalk.com/index.php?/topic/35356-cakewalk-tutorial-series-for-beginners/>

Air Guitar Setup (Andrew)

The guitar is properly set up but there are a few more steps before you can play. Press the reset button on the Arduino after uploading the file. Set your right hand still for 5 seconds for the accelerometer to calculate the offset. Then you can play!

How to use and Chord Layout (Nadim)

Press on any button and strum with your right hand just like you would with a real guitar, and depending on the distance between your hands the chord will be outputted as per the table below:

| Button (Finger) | Distance (cm) | Chords |
|-----------------|---------------|--------|
| Index | >45 | C |
| | <45 | F |
| Middle | >45 | A |
| | <45 | Am |
| Ring | >45 | E |
| | <45 | Em |
| Pinky | >45 | G |
| | <45 | D |