**Ty’s Barbot**

A picture containing text, indoor, cluttered

Description automatically generated

This Barbot is an open source Arduino cocktail mixing machine controlled by an app via Bluetooth. It has been designed to use 8 ingredients for making the cocktails, dispensing the correct amount from each to mix your cocktail of choice.

Cocktails can be chosen using the mobile app that connects to the Barbot via Bluetooth.

**Required Parts**

* 1x Arduino Uno
* 1x HC-05 Bluetooth module
* 8x 12V Food Safe Diaphragm Pump – Gikfun
* 4x L298N Motor Driver Controller
* 1x 12V Power Supply – Higher amperage is better
* 1x 16x2 LCD with I2C
* 1x DC jack
* Food Safe Tubing
* Jumper Wires
* Wood (see separate wood part list)
* Metal (if going with welding)

**Required Tools**

* Soldering Iron
* Solder
* Wire stripper
* Drill
* Drill bit – 28mm and 10mm
* Wood glue
* Super glue
* Screws for wood
* Screws for LCD

**List of 3D parts used in this project**

* Spout
* LCD cover

**Wiring diagram**

Diagram, schematic

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**Communication**

The mobile app and the Barbot communicates over the Serial port using the Bluetooth module HC-05. This requires a voltage divider on the HC-05 RX pin, due to it using a 3.3v level. Connect to this device in your Bluetooth settings before opening the app.

**App**

I built the app using MIT App Inventor. The source code (.aia) can be found in the repository of this project. The .apk can be found there as well.

**Additional information**

* These pumps might not work with thicker drinks.
* You can use Coca-Cola and other carbonated drinks with these pumps, but it will lose a little bit of carbonation.
* Wash pumps very well before and after every use, by running the cleaning command.