General Instructions for Excess Correlation Software/Hardware

Hardware Needed:
- Arduino UNO R3
- Toroid Coil
- Breadboard with electronic components
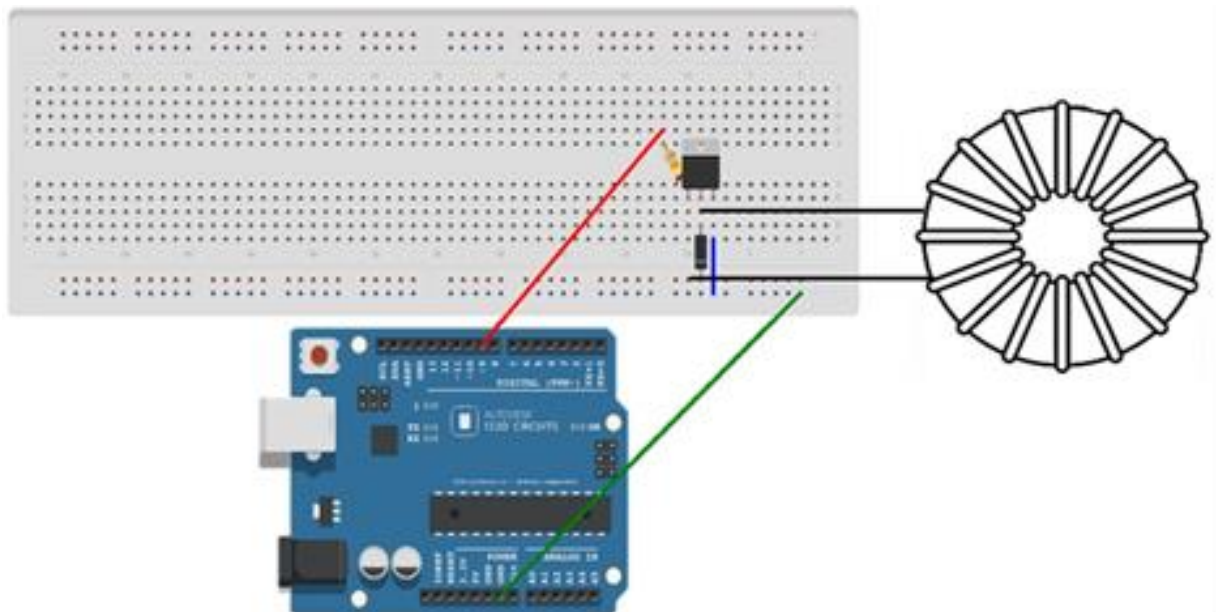- USB Cable
- Laptop Computer

Data Files Needed:
- "Primer.pde"
- "Effector.pde"

Hardware Instructions (repeat for both ensembles):

1) Plug the toroid into the breadboard circuit as per the schematic below. One lead should be placed between the diode and the center pin of the transistor. The other lead should be placed on the other side of the diode as per the schematic below.

The schematic demonstrates the setup required if the position of the head of the participant is such that you would be able to see his/her chin here. So, in other words, as you look at the toroid in the schematic, imagine the person is on the side of the toroid most proximal to you, facing to the right of this page so that you see only the bottom of his or her chin. That way, the current will run in a counter-clockwise rotation around their head.

2) Plug one end of the USB cable into the Arduino UNO microcontroller. Plug the other end into the laptop.

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Software Instructions (repeat for both ensembles):

1) Download Arduino IDE 1.0.6 software at: http://arduino.cc/en/main/software
      - Download the version compatible with your operating system

2) Assign the Arduino UNO to a Port:
      - Be sure the Arduino is plugged into the laptop
      - Open the Arduino IDE software
      - Tools > Port > Select Port (e.g. PORT 1)

3) Run Excess Correlation Protocol:
      - File > Open > Select File
      - Open "Primer.pde"
      - Click "Upload" Button (arrow pointing to the right)
      - LED on breadboard should start flashing
      - Run for 6 minutes

      - File > Open > Select File
      - Open "Effector.pde"
      - Click "Upload" Button (arrow pointing to the right)
      - LED on breadboard should continue flashing
      - Run for 12 minutes

4) Unplug Arduino from laptop (Complete)

Notes & Troubleshooting:
- The LED should blink as soon as you plug it in to the computer. That pattern should change to a rapid blink when you upload your files.
- The LED is used to visually indicate a successful upload (it is not in the schematic)
- If Upload does not result in LED flashing rapidly:
      - Check USB cable to be sure it is connected to both the laptop and the Arduino
      - Check under Tools> Port that a port is assigned (should be a check mark)
      - Click "Verify" (big check mark in a circle beside the upload arrow). Bottom text screen should read "Done compiling" which tells you the file is not corrupt or containing any errors.
      - Check Arduino board. Some lights on the board should be lit up, indicating it is being powered.
      - Check LED to be sure it's not fried (attach a resistor and a battery to either end of the LED to see if it lights up)

General Instructions:
 - Place the focus of excess correlation at the center of the toroid.
- If you want to place them over the head, you can attach cloth to the coils so that they sit over the head – avoid using any metal. Shower caps and bowl covers work best.
- The files included are assigned to buzzer pin "9" on the Arduino. Therefore, the only jumper cables leaving the Arduino should be plugged into buzzer pin "9" and a "Ground".

- This is a necessarily incomplete list of instructions that could be useful for you. If you need any assistance at all, please feel free to contact us.