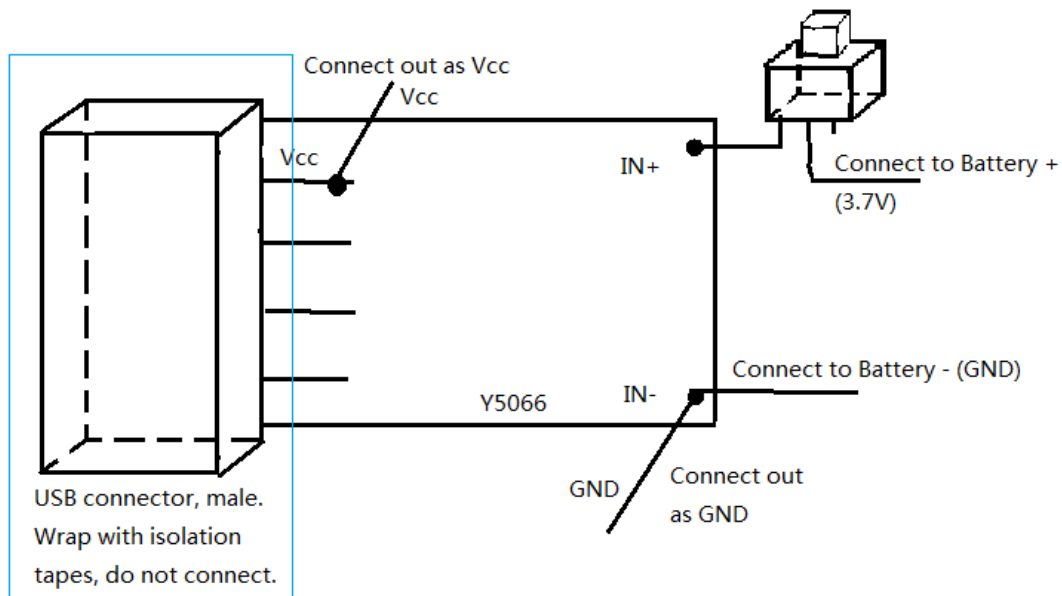


I. Circuit:

Within one cube, connect **ALL** parts with the same footage together, e.g. Vcc--Vcc; GND--GND; PLAY OUT—PLAY OUT.

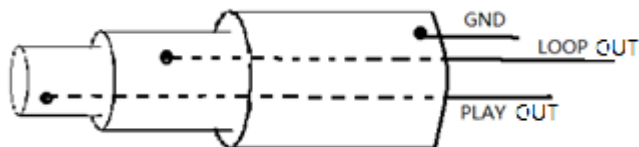
Parts that applies to all:

For all power supply:

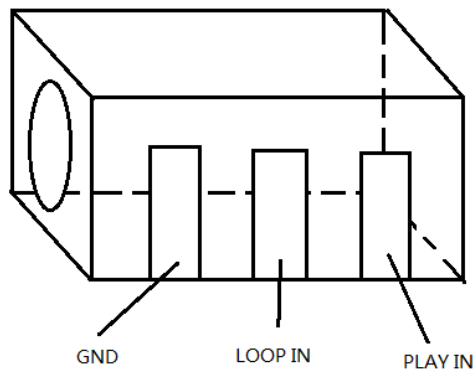


Note that the button connected with the battery will only stay connected when pressed down.

For all earphone plugs:

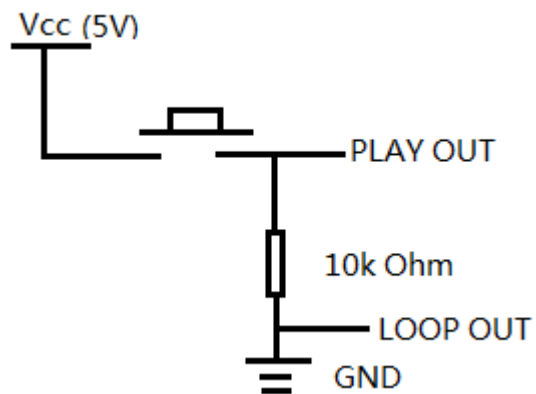


Earphone Plug Male

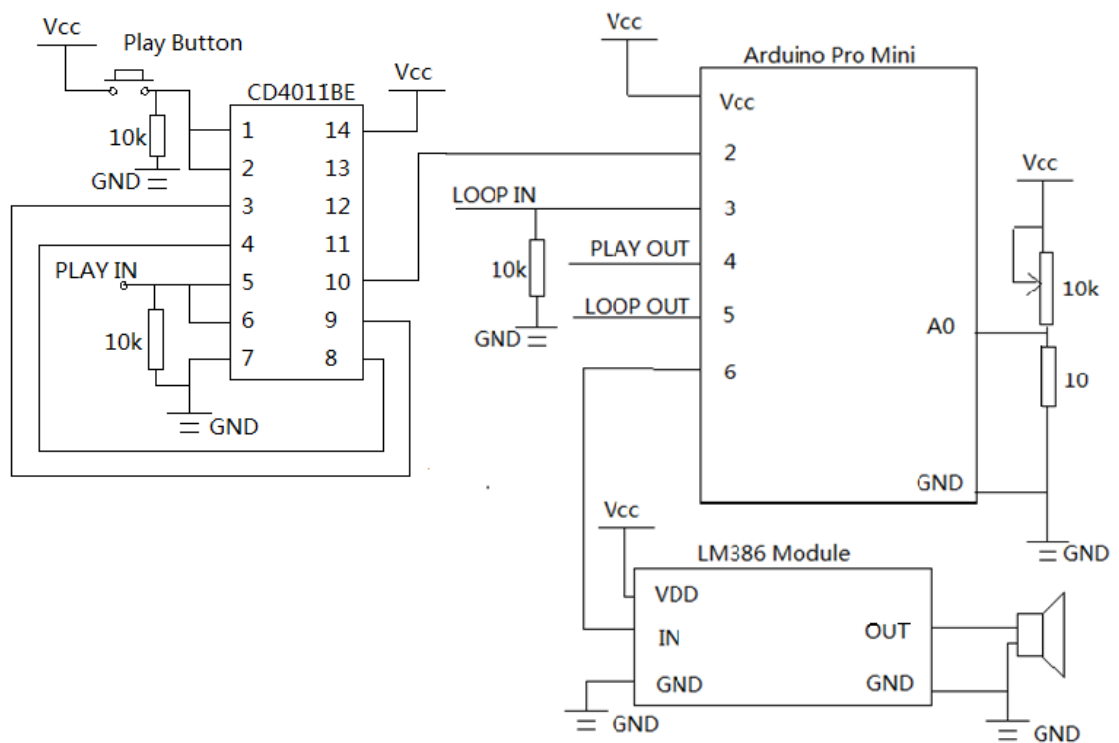


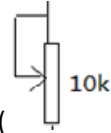
Earphone Plug Female

A. Block Start:



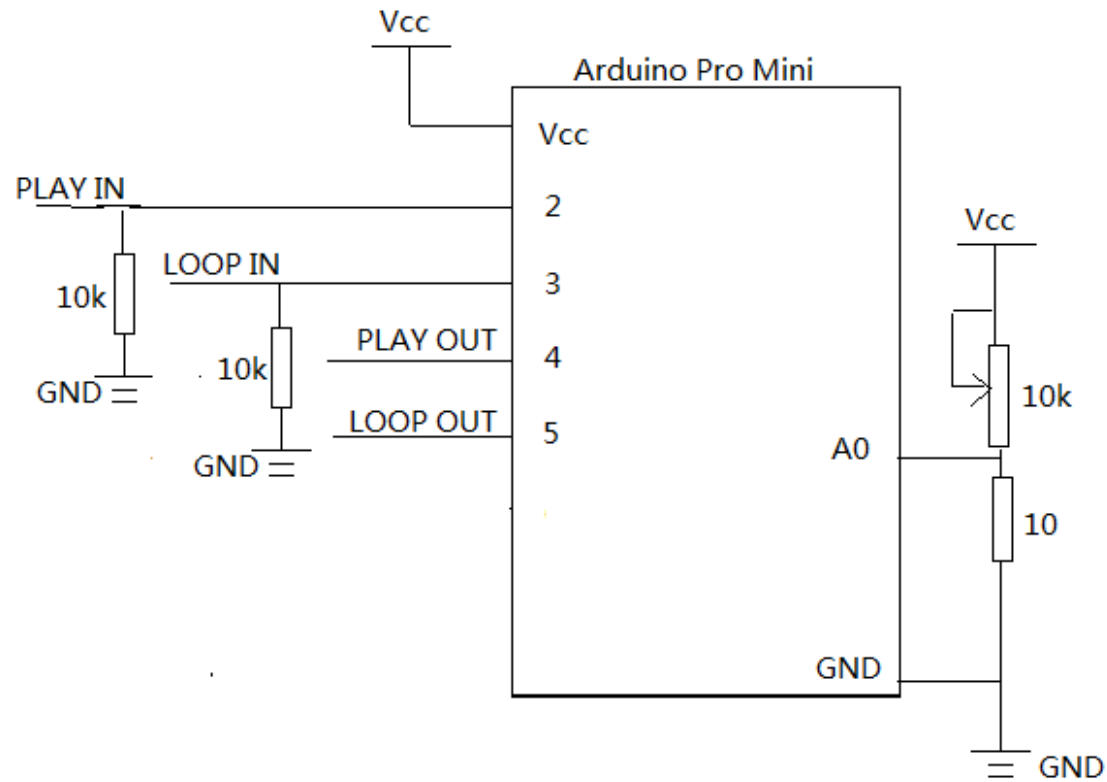
B. Block Note





The assembly of the 10k Ohm variable resistor () will be stated in later sections.

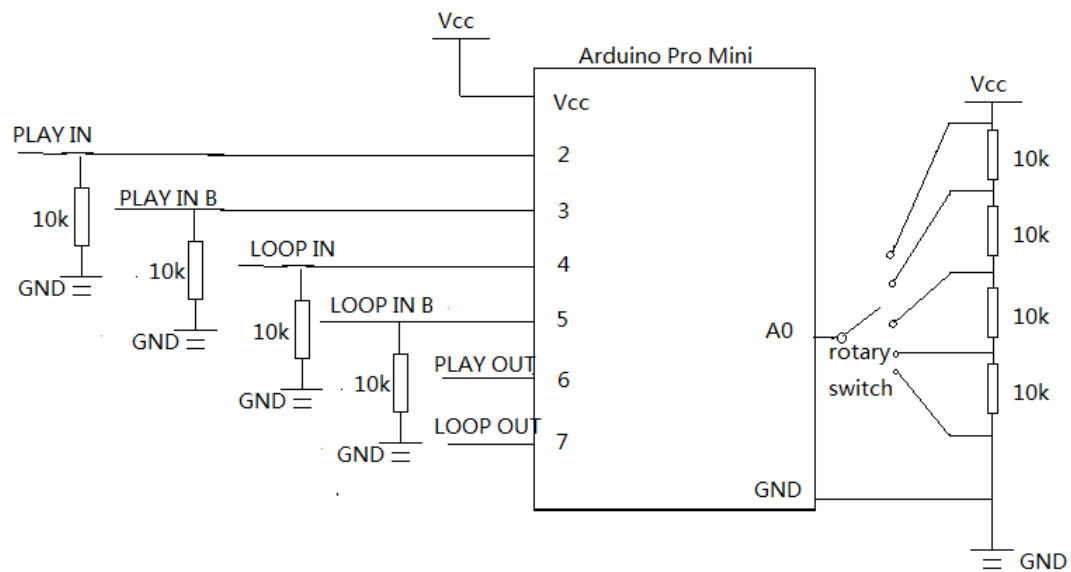
C. Block Pause



D. Block Loop Begins:

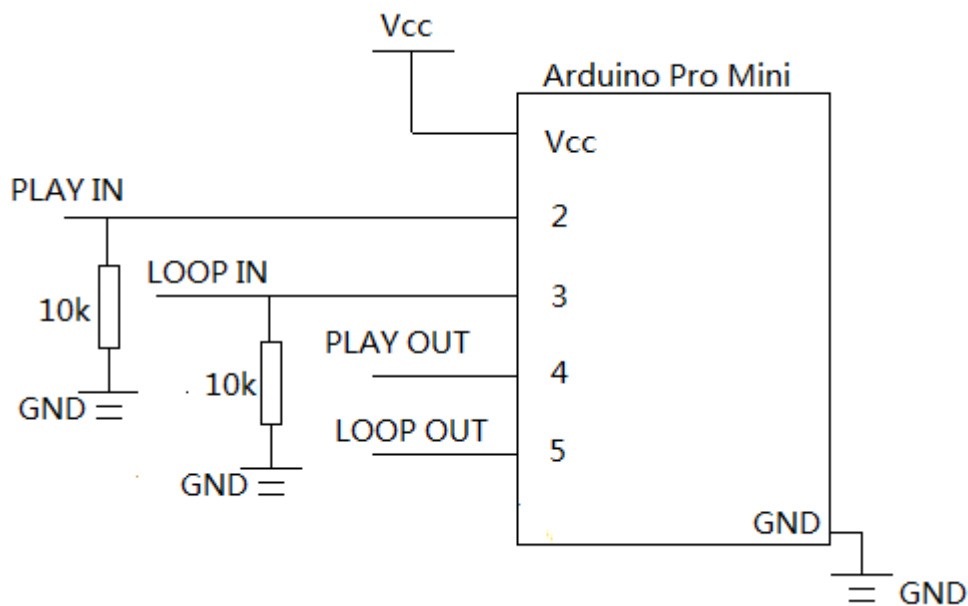
Note that PLAY IN B and LOOP IN B are wired out of the cube, and they do not connect with anything within the block. These two pins are connected with PLAY OUT and LOOP OUT of Block Loop Ends.

[PLAY IN B (of Block Loop Begins) – PLAY OUT (of Block Loop Ends); LOOP IN B (of Block Loop Begins) – LOOP OUT (of Block Loop Ends)].





E. Block Loop Ends

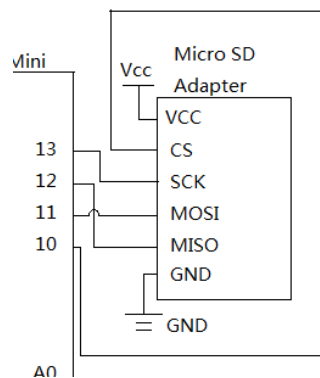
Note that PLAY OUT and LOOP OUT are connected **both with Block Loop Begins and the male audio jack**. [PLAY OUT (of the Arduino) -- PLAY OUT (of the male audio jack) – PLAY IN B (of Block Loop Begins); LOOP OUT (of the Arduino) -- LOOP OUT (of the male audio jack) – LOOP IN B (of Block Loop Begins)]




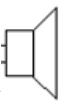
F. Block Recording

Note that:

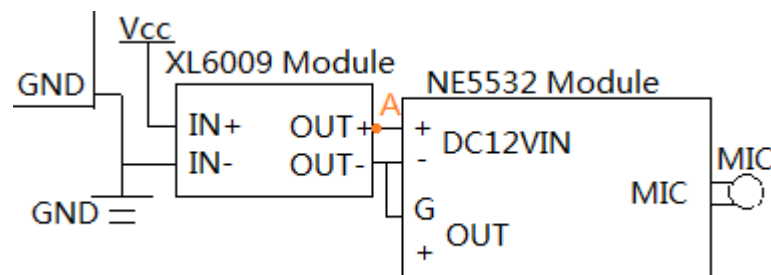
1. **DO NOT CONNECT** the wires with , they are two separate wires that should be insulated with one another (). For the Micro SD Adapter, **connect 13—SCK; 12—MISO; 11—MOSI; 10—CS**, and **connect these only. DO NOT CONNECT 12—MISO with 11—MOSI**



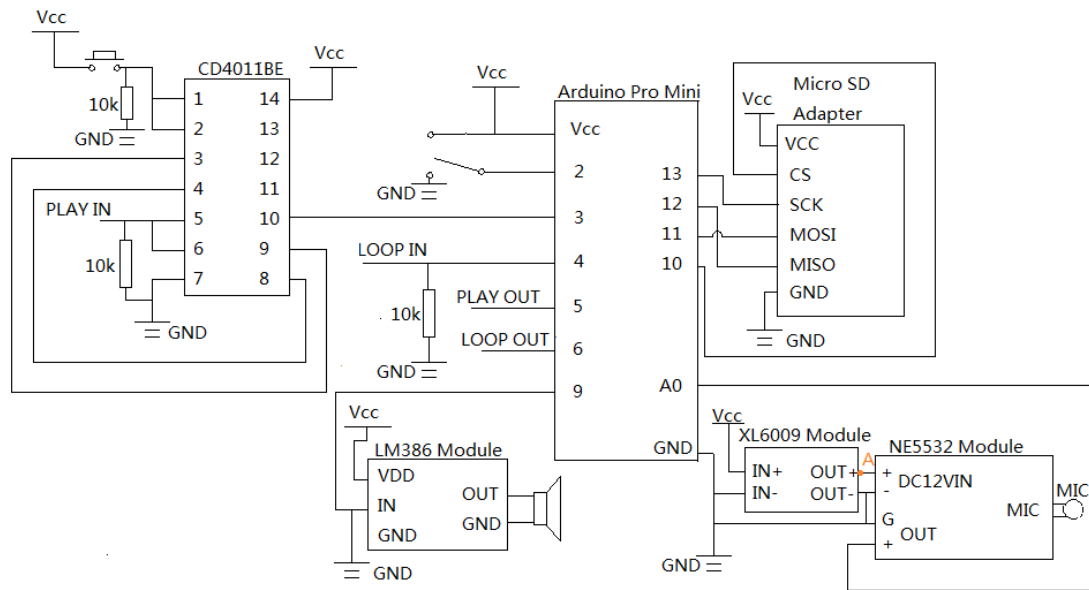
2. There is already a microphone () connect on the NE5532 Module. Lengthening the wire connecting the microphone and the NE5532 Module might be needed in order to fit everything in

the block. Both the microphone and the loudspeaker () needs to be exposed for better voice quality.

3. Check to make sure that **the voltage at point A (OUT+ of the XL6009 Module) is 12V when powered on BEFORE** connecting the NE5532 Module with the XL6009 Module, otherwise the NE5532 Module might be burnt.

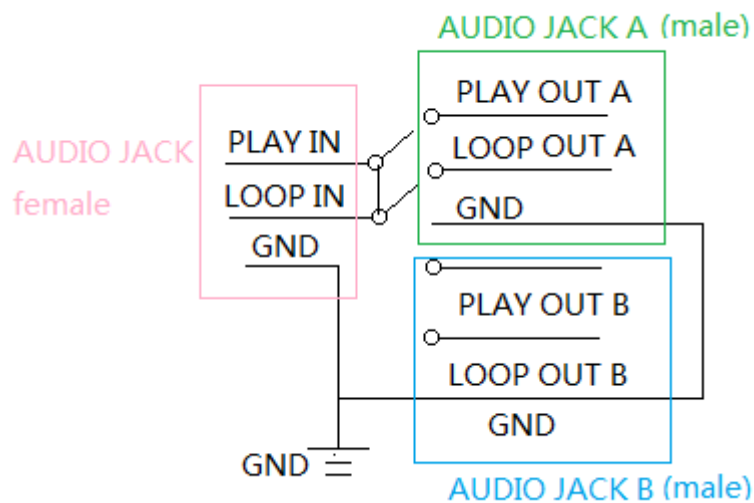


Full schematic of Block Recording:



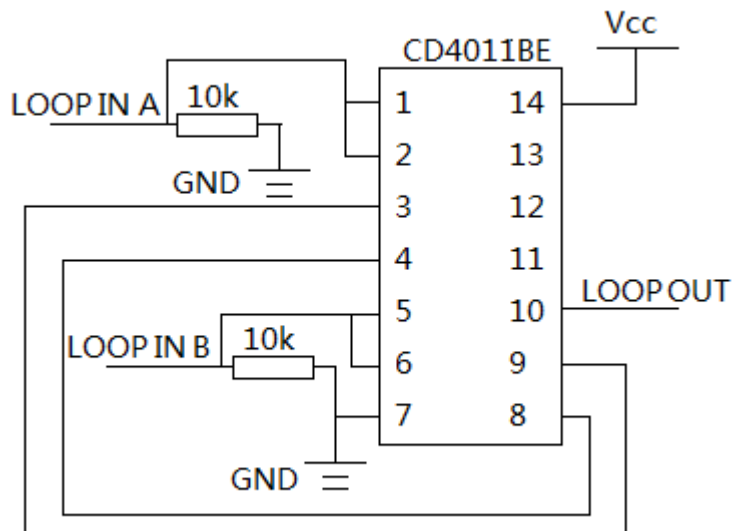
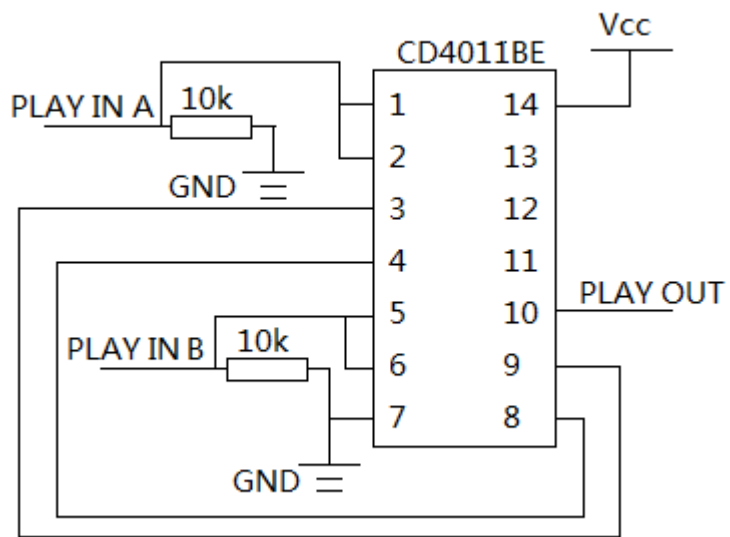
G. Block Switch Begins

Note that PLAY/LOOP OUT A will be connected to one male audio jack, and PLAY/LOOP OUT B will be connected to the other jack (2 male audio jacks for Block Switch Begins)



H. Block Switch Ends

Note that PLAY/LOOP IN A will be connected to one female audio jack, and PLAY/LOOP IN B will be connected to another female audio jack. (2 female audio jacks for Block Switch Ends)



Note that all strip bands are stuck here: bottom side of the strip band at 7 mm (d = 3) / 9mm (d = 5) above the lower ridge.
