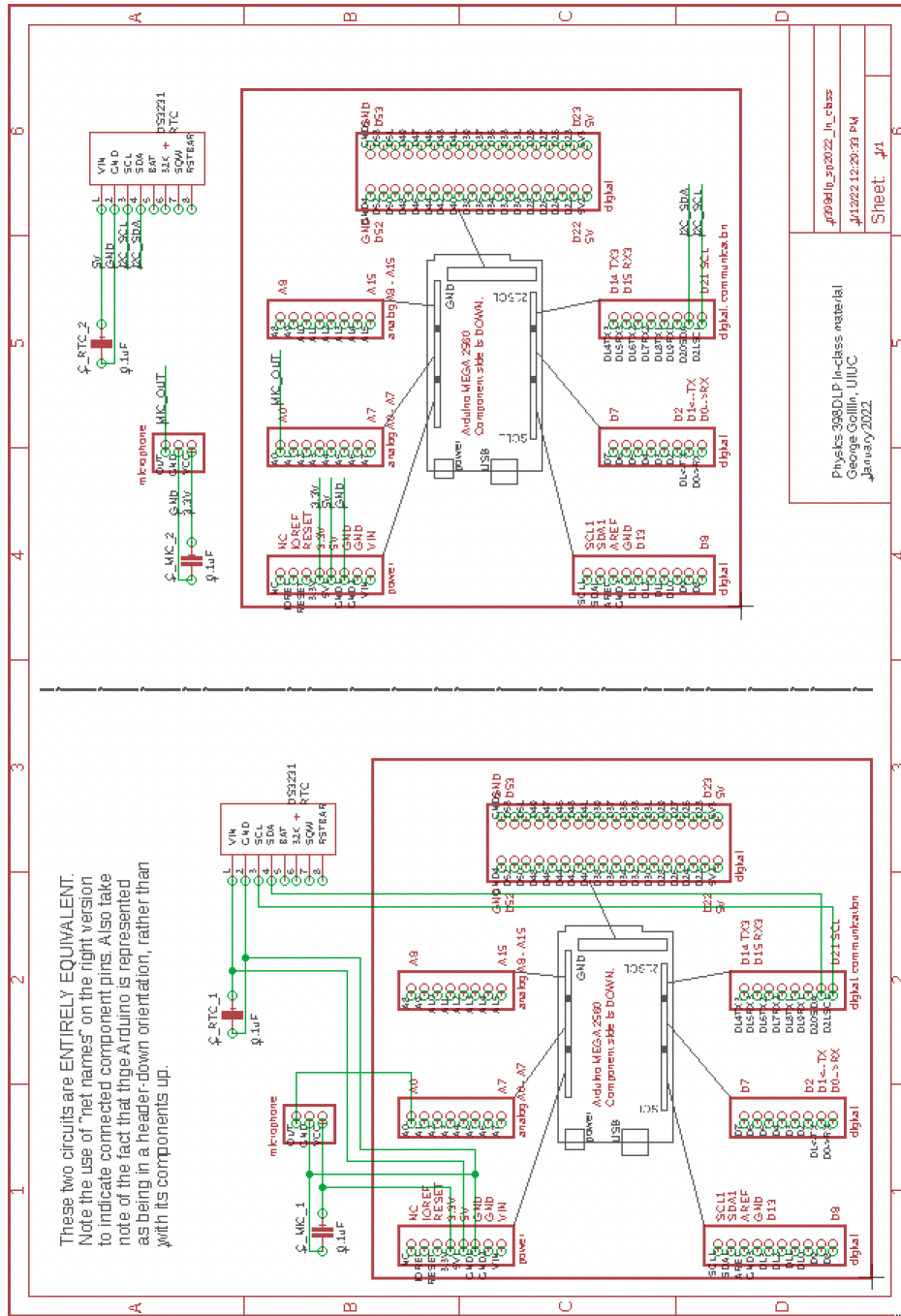
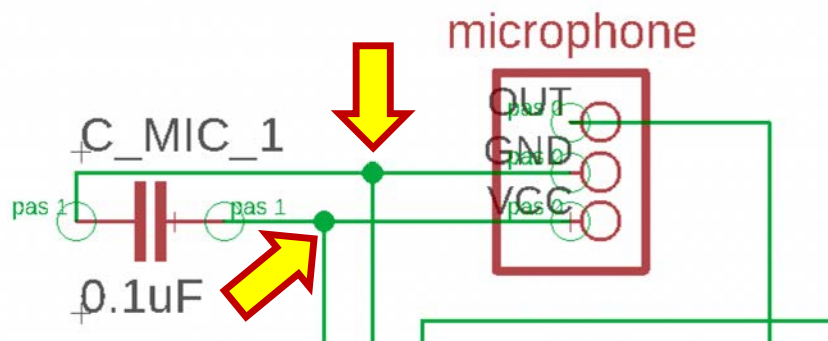


Reading a schematic

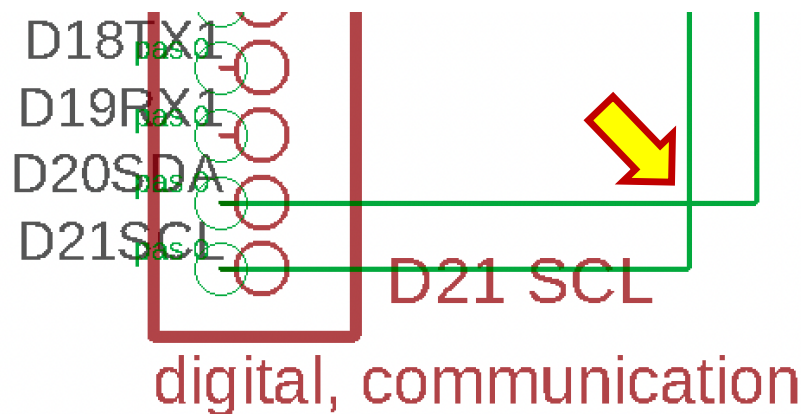
Here are schematic diagrams for two entirely equivalent circuits. In the diagram towards the bottom of the page I've indicated all the device-to-device connections with green "net" lines.



Note that an electrical connection between net lines that cross is marked by a junction symbol (a green dot), as in this piece of the circuit:

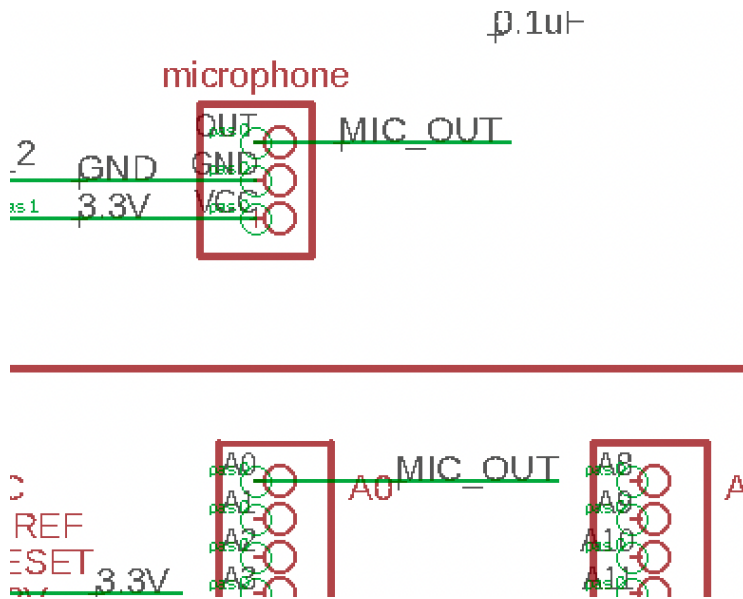


Net lines that cross *without* a junction symbol are electrically distinct, as in the following.



We have two ways of indicating electrical connections. One is to draw lines between various components and pins that are meant to be connected. But this approach can render a complicated circuit impenetrably messy! A better approach is to name various nets, with the understanding that all nets with the same name must be electrically connected by the builder during circuit construction.

Consider the following circuit fragment, below. In it, the net attached to pin 1 of the microphone is named “MIC_OUT.” A net with the same name is attached to the Arduino’s A0 pin. (A0 is one of the Arduino’s analog inputs, which can be digitized by the Arduino’s 10-bit Analog to Digital Converter.)



Again, it is up to the builder to make sure that all nets with the same name are actually connected.

There's not much more to reading a schematic than this.