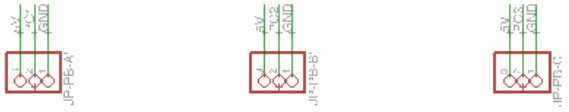
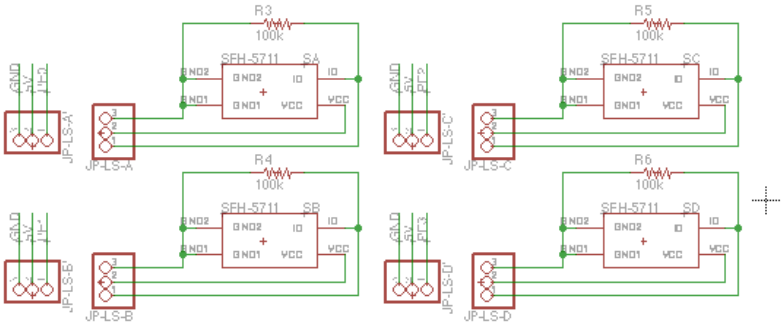
Push Button Sensors

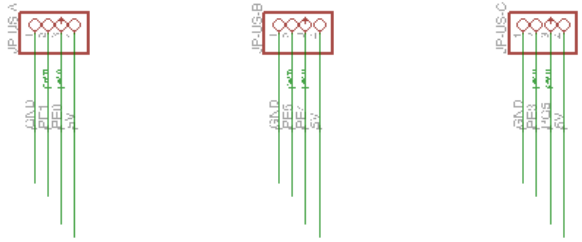


Light Sensors

* Note: Output current of Photodiode is in uA. Resistors placed to convert current to voltage; sent to analog input pins on controller.

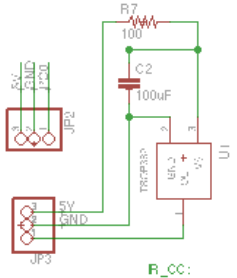


Ultrasonic Sensors



* Note: Both the Ultrasound and Contact Sensors will be free-hanging, rather than surface-mounted as is the case with the Light Sensors and IR communication

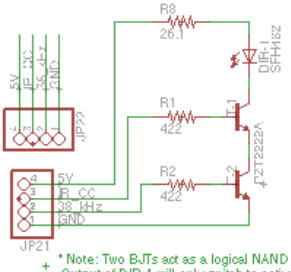
IR Receiver



IR_CC:
Digital 0V 'low' vs. 5V 'high'

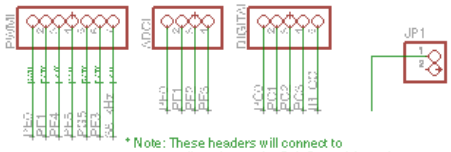
38_kHz:
Analog square wave

IR Transmitter



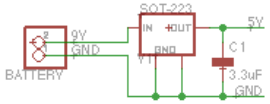
* Note: Two BJTs act as a logical NAND gate. Output of D1R-1 will only switch to active 'low' when both IR_CC and 38_kHz are 'high'.

Controller Interface/Headers



* Note: These headers will connect to corresponding pins on the SainSmart Mega via the use of jumpers.

Power Management



TITLE: Sensor and Communication Board	
Junior Design Team 18	REV: 2
Date: March 19, 2014	Sheet: 1/1