Arduino Model Flight Simulator
P2: Project Protype

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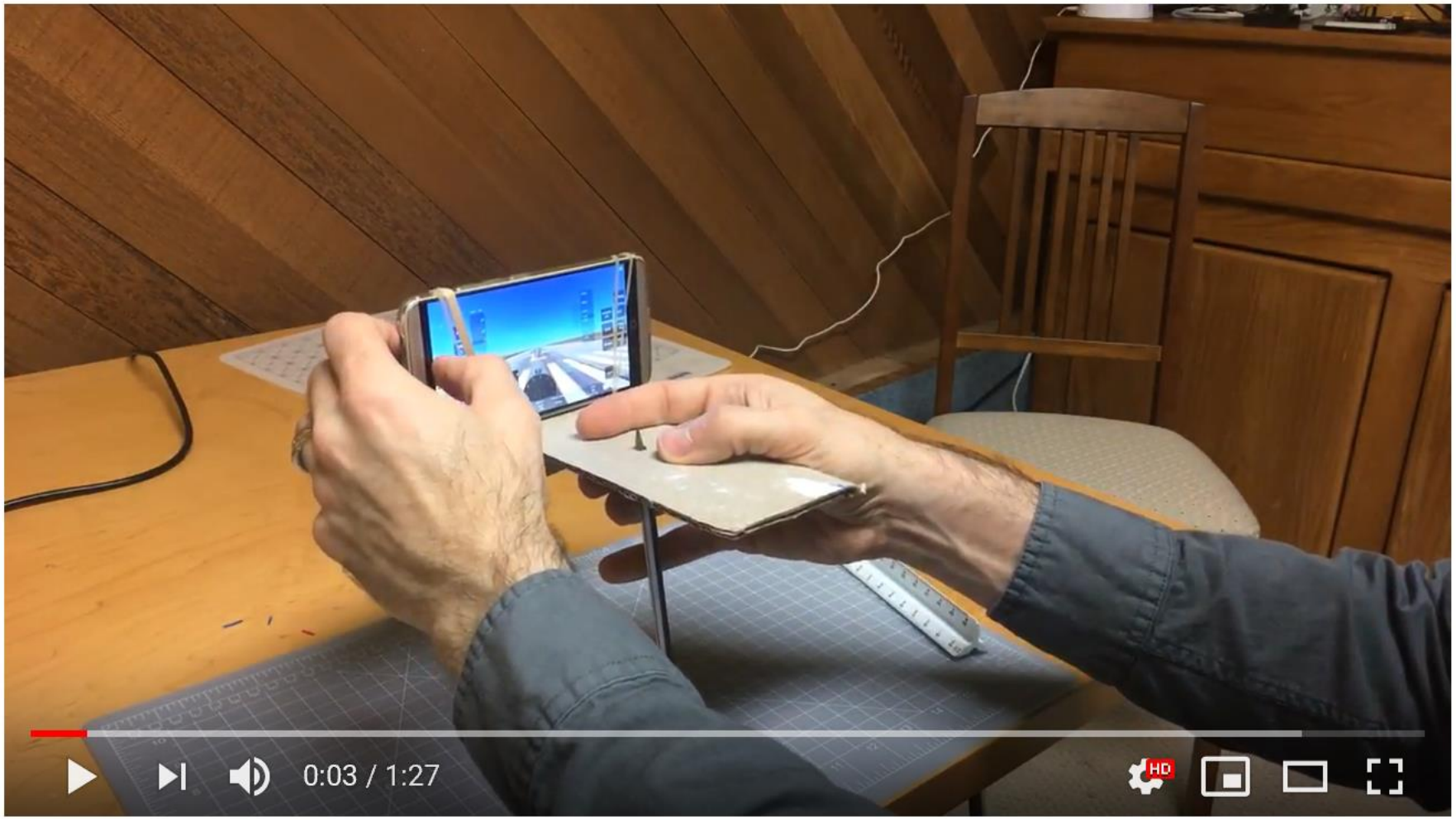
Paper Prototype



Cleverly stupid. Two pieces o cardboard, a glue gun, and some rubber bands are enough to make a protype platform once you balance it on a pencil. Placing a ruler beside the platform edge gives an idea of how much "tilt" the servos need to delivery in order to achieve takeoff, landing, and basic flight maneuvers. Looks like 0.5 to 1 inch will do the trick

See full video at https://youtu.be/EByNaTV4gio

Bluetooth/Motion Hybrid

Paper prototype platform provides pitch and roll; while Bluetooth game controller provide throttle (left thumb stick), Landing Gear up/down (B), Flaps down (X), Flaps up (Y).

So if I can get the Arduino to transmit Game controller button & stick states over Bluetooth, I can provide more physical controls for flying the simulator.

See full video at https://youtu.be/Wycs4KfiRxY

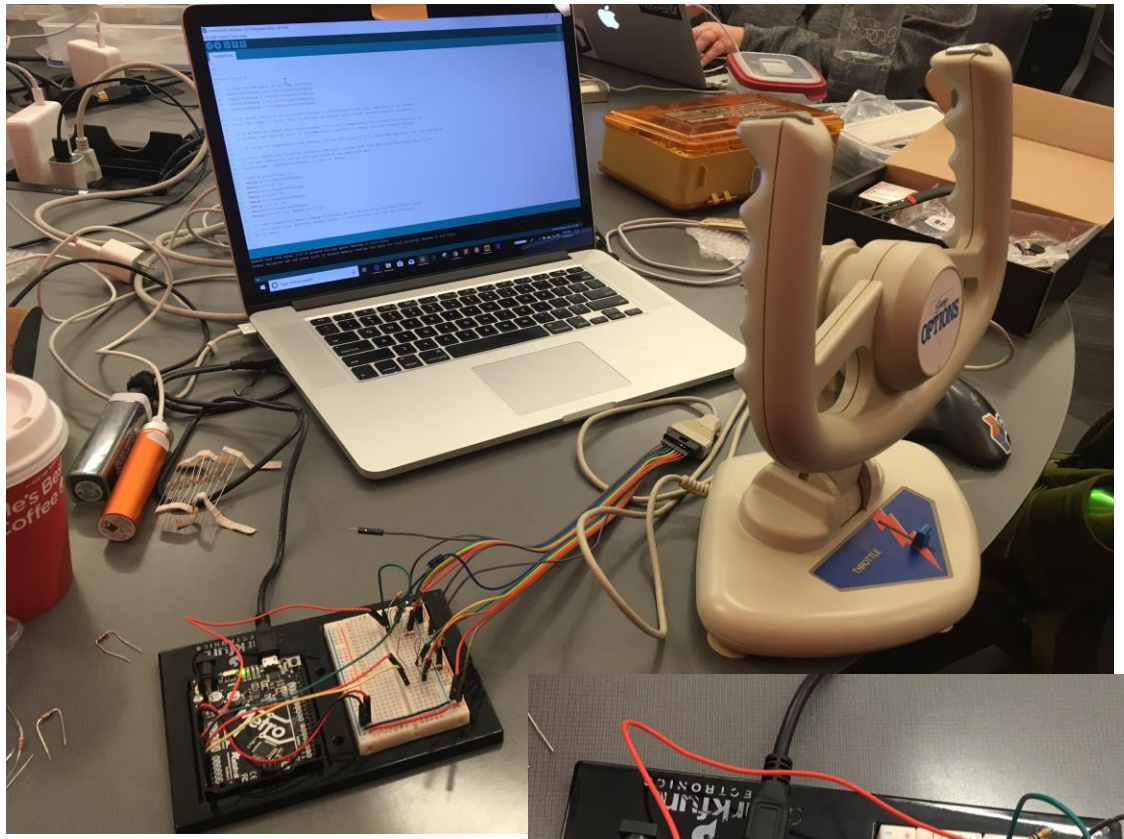
PC Joystick Breakout

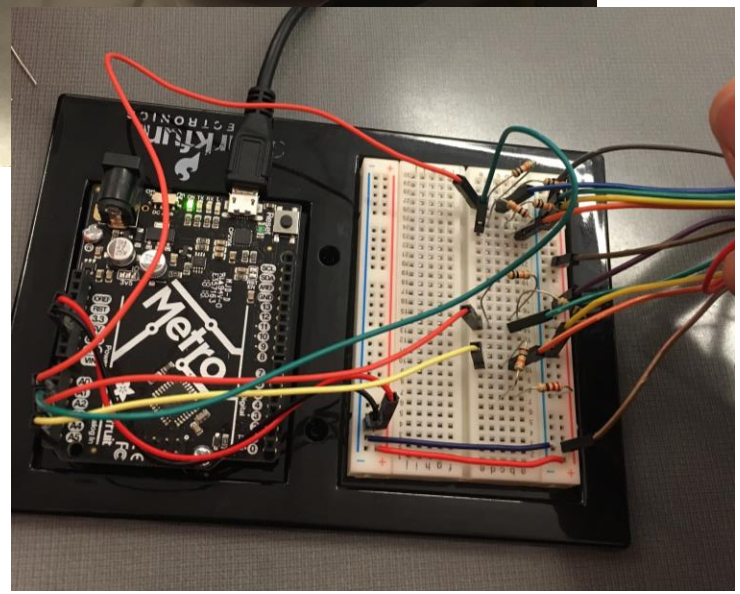
Two female-to-male ribbon jumper wires directly attached to male 15-pin D-SUB for easy breadboarding.

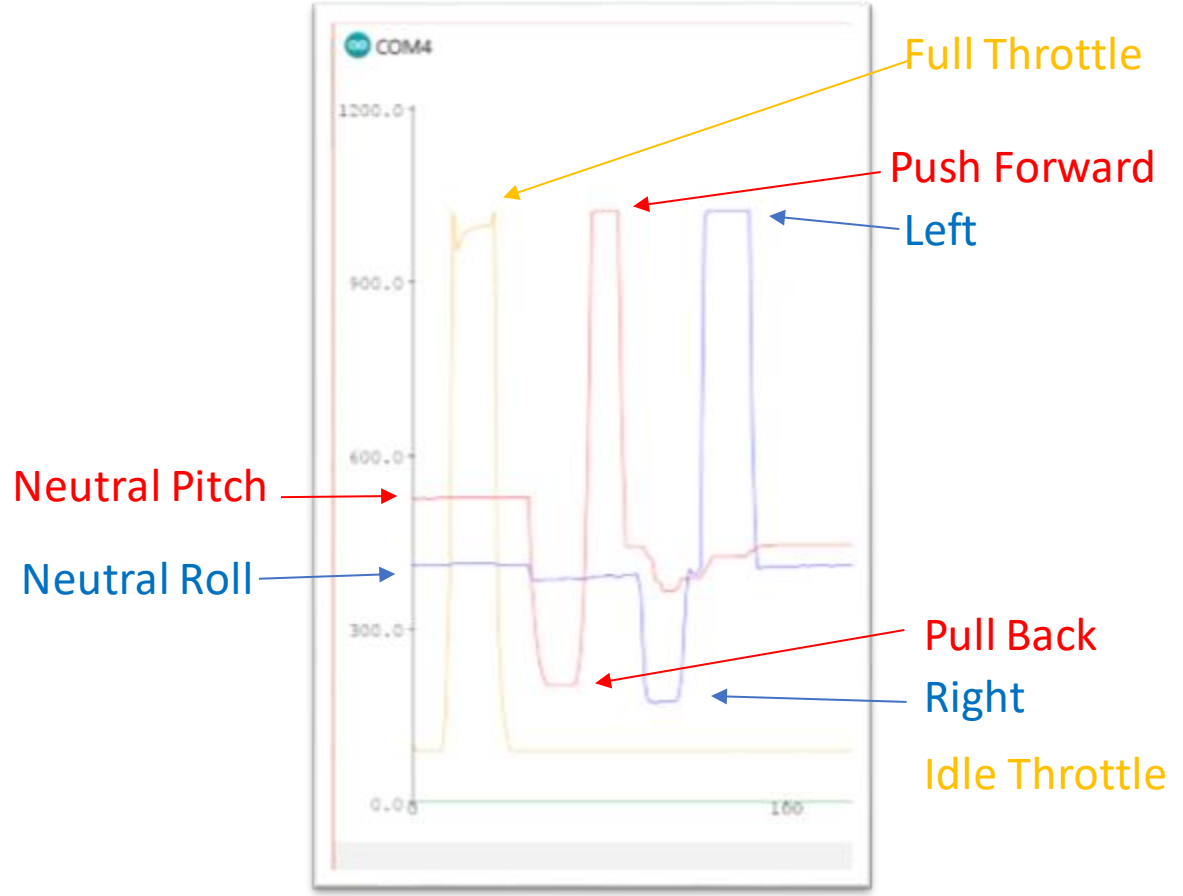
MOAR PARTS !!!

Balsa wood, heavy-duty servos & control arms, some miscellaneous RC off-road truck suspension parts, and some Tamiya plates. Shout-out to HobbyTown USA in Redmond! AndFry's for one more servo.

Reading the Joystick







Joystick Axes connected to Analog ports A2-5, with 20Kohm worth of pull-down resistors for each.

POT-Driven Servos