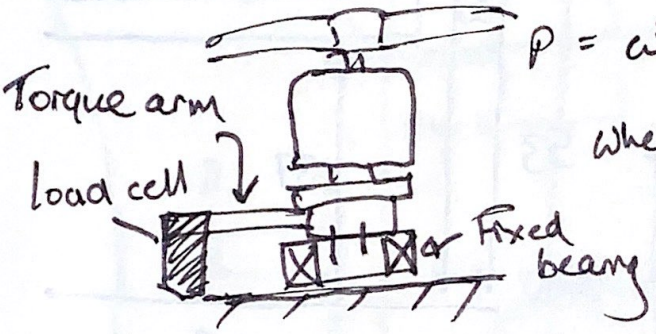
-> Check motor power/voltage

-> Power draw ~ Each motor? ESC?

-> Motor rpm ~ via ESC? or Auto pilot?

-> Calibrate efficiency of each motor with static torque, ω, η test.



$P = \omega T = f(VI, \omega)$

where VI is measured upstream of ESC

BUY

-> Load cell, get sensitive.

Look at megs, more sensitive than that Amazon?

-> Lightweight pressure scanners

-> Evolution Measurements.

-> postage stamp sized Sch?

- L> Own branding

L> store data?

L> serial? Output?

L> Arduino maybe?

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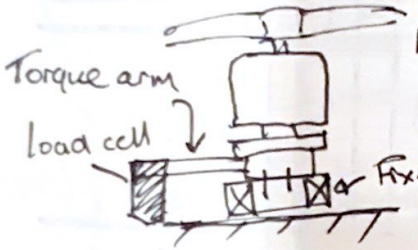

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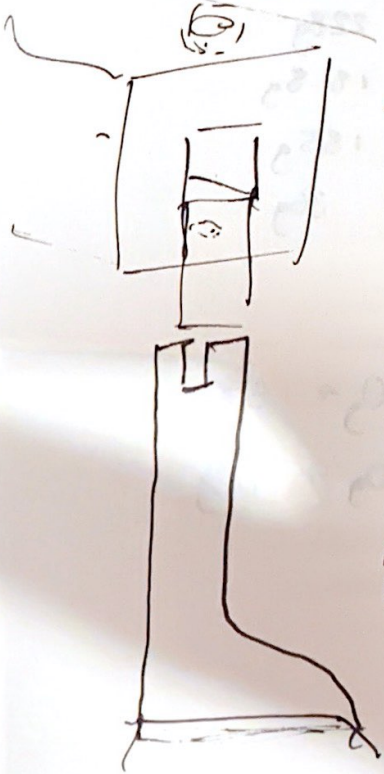
- L↳ store data?
- L↳ serial? Output?
- L↳ Arduino maybe?

→ Consider pressure sensing wrt tappings

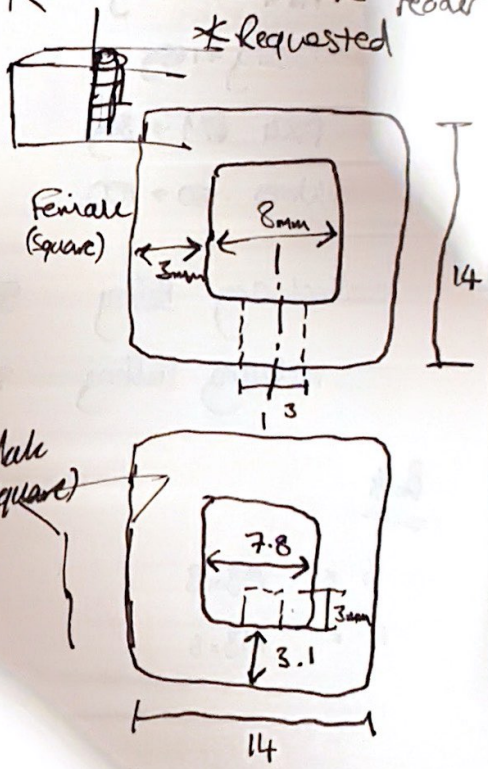
→ Make test mating joint. Use assembly

→ Bingo. Asst Megatron.

→ Assembly in CURA to change infills.



* Load cells & SD reader
* Requested



Weights

Adapter →	~5g x4	20g
Arm →	15g x 4	60g
Base →	~30g	30g
Electronics →		
ESC → 57g x4		228g (4x20g = 80)
Motor → 57g x4		228g
Pix4 → 15.8g		15.8g
Battery → 188g		185g
PX4 PM → 36g		36g
Wires 50 → 100		
∴ Excluding Battery		520g → 570g
including battery		710g → 760g

Bolts

16 x M3x8

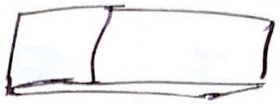
12 x M3x6

Charger

-> Torsion Load cell

-> Load cell on arm

Inventory

3x3 cm 

WOOD

① ~~2.5m~~ 2.4m × 6 ✓
② 2.18m × 4 ✓
③ 1.90m ~~× 6~~ × 7 ✓
④ 0.90m × 3

14 × 2.4m
3 × 3m

SCREWS

~5cm wood ~ ×80
Hinges × 3.

CHICKEN WIRE ~> 1cm grid

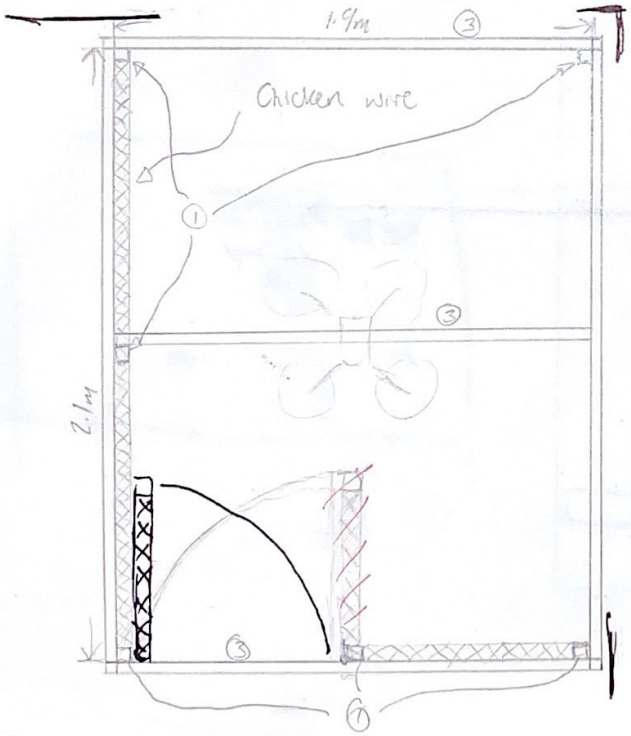
Ⓐ 2.16m × 2.5m ×1 (1.08 × 2.5 × 2)
Ⓑ 0.96m × 0.5m ×1
Ⓒ 0.96m × 2.5m ×1
Ⓓ 0.96m × 1.96m ×1
Ⓔ ~1.1m × 1.96m ×2

6x 8ft × 4ft
1" holes

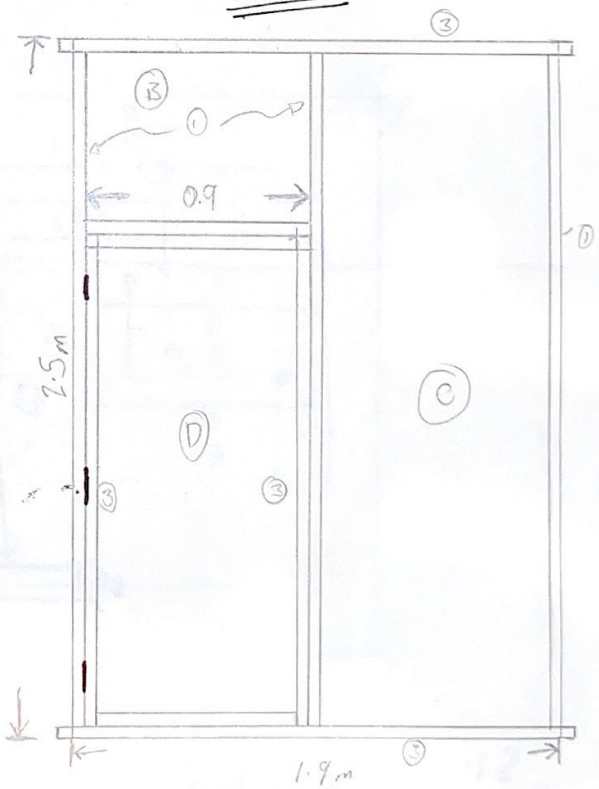
~¥177 Amazon

Cage

TOP VIEW



FRONT



Chat with Pawel @ RR

GCS → Ground Control

~~Sensor~~

RPM

- → Optical sensors on ali tape stuck on half of motor

Power

- → Use on board V & A measurements
- → How accurate?
- → How to get end power out, shaft power?

Pressure

- → Mini pressure sensor, talk to RPi

Position Hold

- → Use Maxbotix I²C XL Max Sonar ultrasonic sensor
- → How do I incorporate the sensors into the FC?
- → Tuning PID?

RPi

- → Sensible to use RPi for sensor management?
- → Synchronizing data?
  - Log rate on FC vs Log rate on RPi?

Pawel

- EWTOL
- Sensor integration
- Plug in from Simulink

→ Simulink
  - long time to debug
  - Need to develop
  - Contact Matlab to get help.
  - Can use

→ Sensors
  - use PWM, 6 analogue output sensors on PM4

→ Write control software on RPi
  Can incorporate with simulink.

→ Carmen Filters?

Power

- Calibrated on rig

PWM input to speed to power.

// 3-4 MHz dongle for serial comms.

Photo transistor

time → rpm

time → f

또는 $\frac{1}{T} = f$

$r = f \times 60$

FIXED QUANTITIES

ϕ, φ $\qquad \phi = \frac{V_x}{u}$

$$\varphi = \frac{1}{2}\frac{V_x^2}{u^2}$$

T_T $\qquad T_T = \frac{Mg}{4}$

$$T_T = T_{in} + T_{fan} + T_{diff}$$

Others

σ $\qquad$ Diffuser ratio $= \frac{A_e}{A_2} = \frac{A_4}{A_3}$

RAM/POWER

Weight $= f_n(\sigma, \tilde{r_c}, \tilde{r_h})$ $\quad \therefore L$

(T-W) fixed at ≥ 5