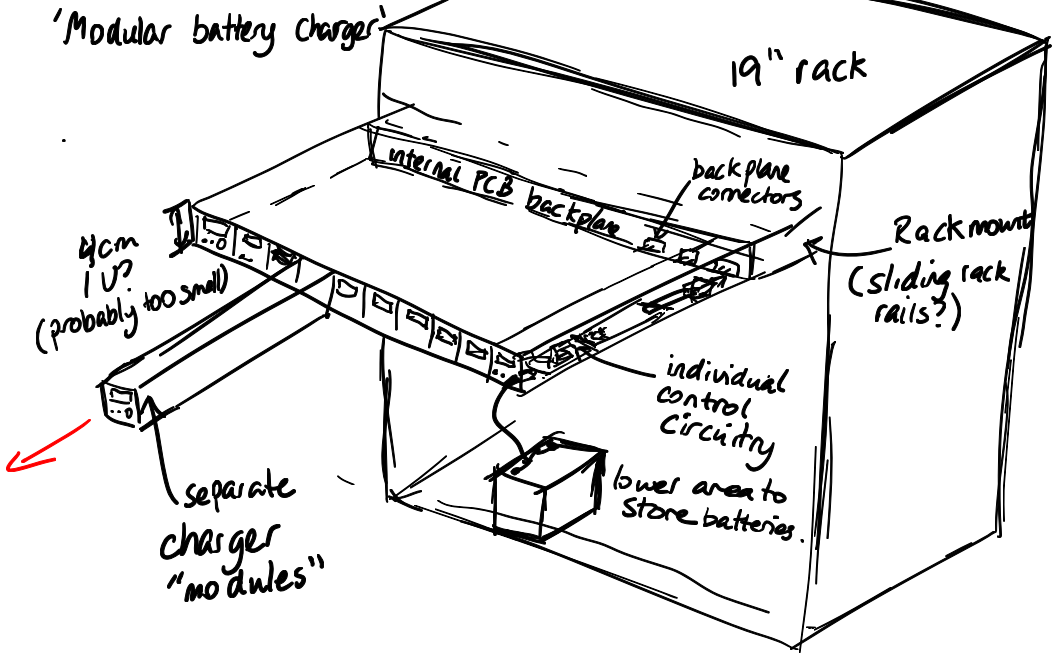
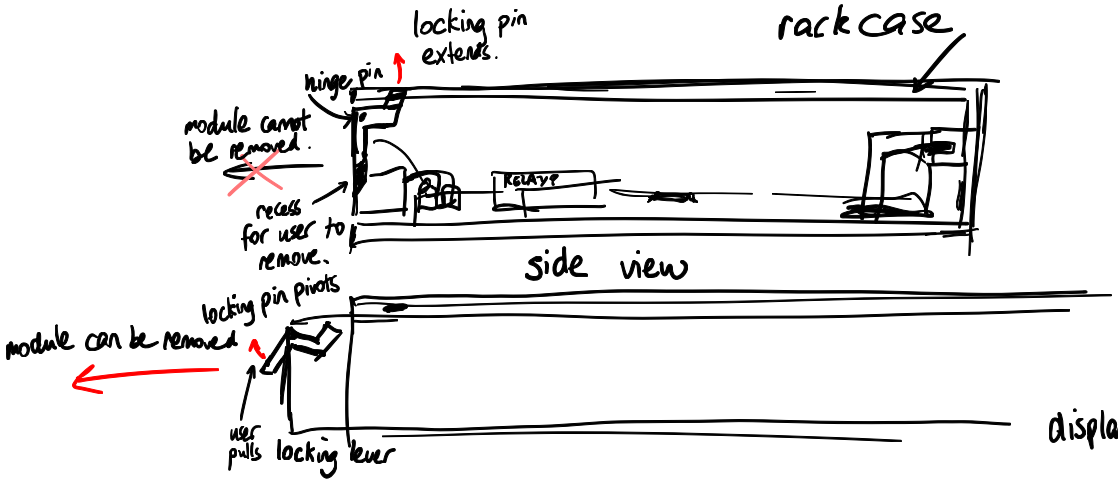
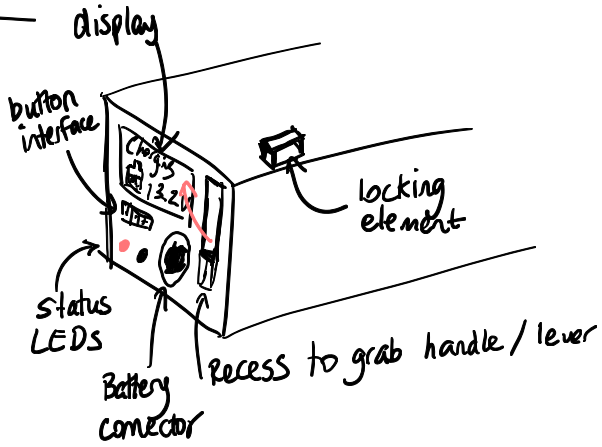
'Modules'

'Modular battery charger'





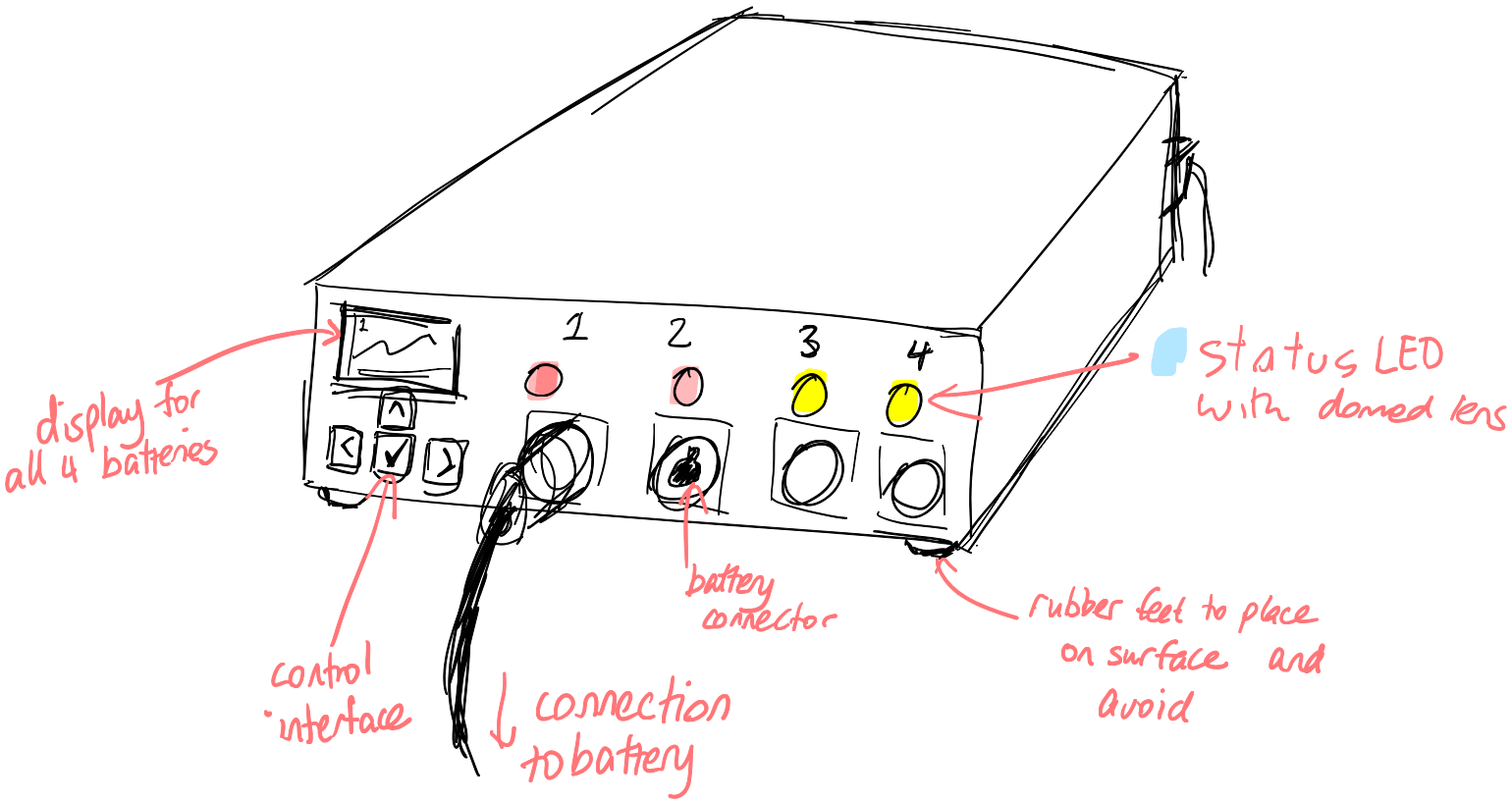


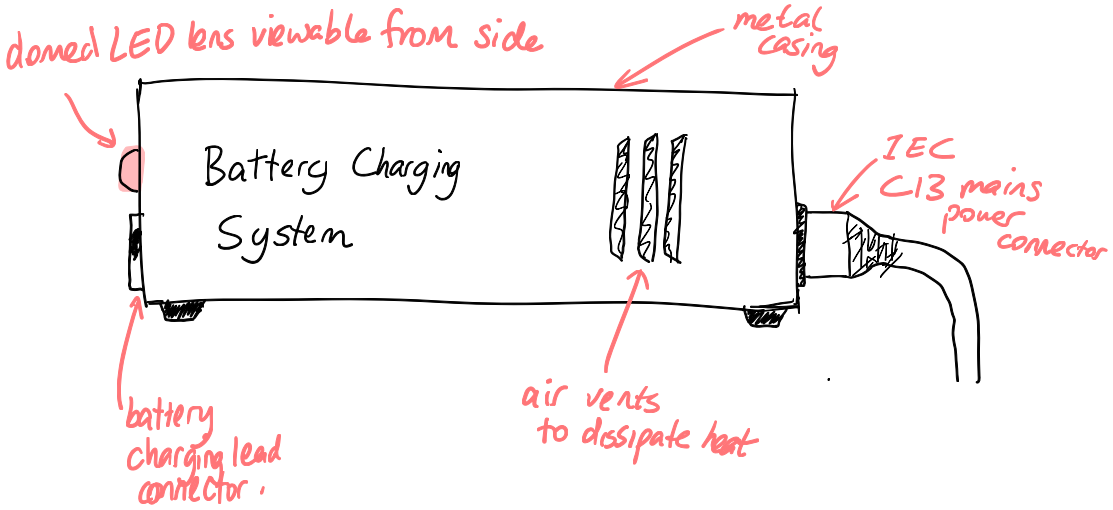
$$\sin 2\theta = 2\cos\theta\sin\theta \qquad \tan\theta = \frac{1}{2} \qquad \tan 2\theta =$$

$$\cos 2\theta = \cos^2\theta - \sin^2\theta = 2\cos^2\theta - 1$$

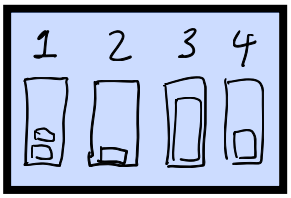
$$= 1 - 2\sin^2\theta$$

$$\tan 2\theta = \frac{2\tan\theta}{1-\tan^2\theta}$$

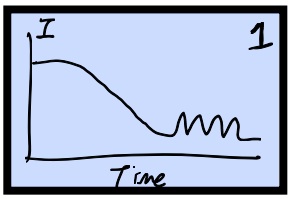




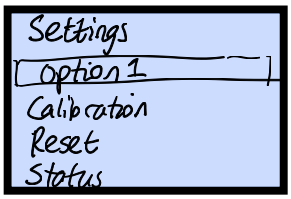
VI pages.



'Idle' / Dashboard shows status of all 4 batteries



Current graph - shows current history of one battery



Settings / Configuration Menu.

Status LED:

Red

$\tan\theta = \frac{1}{2}$

$\tan 2\theta = \frac{1}{1-\frac{1}{4}} = \frac{1}{\frac{3}{4}} = \frac{4}{3}$

$\sin 2\theta = 2\cos\theta\sin\theta$

$\sin A + \sin 2A$

IDs. ADH Trig II.

$2\cos^2\theta - \cos 2\theta \equiv 1$

LHS $\equiv 2\cos^2\theta - 1 + 2\sin^2\theta$

$\equiv 2 - 1$

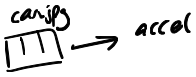
$\equiv 1$

RHS $\equiv \sin^2\theta + \cos^2\theta$

$\cos 2\theta \equiv 1 - 2\sin^2\theta$

$\sin^2\theta$

Kinematics with Hewitt.



v

$$\int 14t - 5t^2\,dt = 7t^2 - \frac{5}{3}t^3 + C \qquad 0 \le t \le 2.$$

disp $t=2$: $\frac{44}{3}$ metres

≈ 14.7

$t=5$: 47.7 metres

$$\int 13 - \frac{20}{t^2}\,dt + \frac{44}{3} = 35$$

$$\int_2^T 13 - \frac{20}{t^2}\,dt = \frac{61}{3}$$

$$13t + 20t^{-1} = \frac{61}{3} + 26 + 10$$

$$13t^2 + 20 - \frac{61t}{3} - 26t - 10t$$

$t = 3.94$s for $T \geq 2$

$$\int_0^6 6.3 + 2.1t \; + \int_6^{10} 29.7 - 1.8t = \frac{684}{5} \text{ meters}$$

$$\underline{136.8}$$

$t = 16.5$ max disp $= 175$ metres