

(mount plate to wall)

machine screws



built-in collar

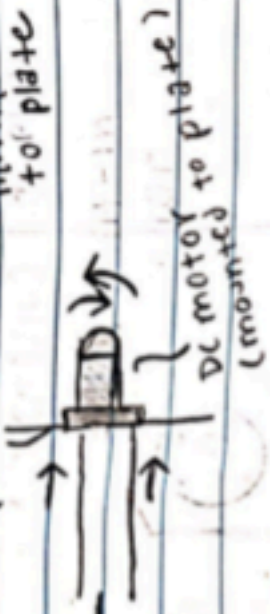
concept 1:

motor plastic

screws

plastic collar

machine screws mount motor to plate



DC motor to plate (mounted to plate)

torques

plastic shaft

threaded screws

outer covering

plastic (lightweight & shaft inexpensive)

remote control

to trigger motor



shaft collar

if $I = 120 \text{ mA}$ and $r = 1 \text{ cm}$

$$T = I a \sin \theta = .120 \text{ ft} (\pi (.01 \text{ m})^2) \sin (90^\circ)$$

$$T = 3.77 \times 10^{-5} \text{ N-m}$$

right angle



shaft

rotates clockwise & counter-clockwise