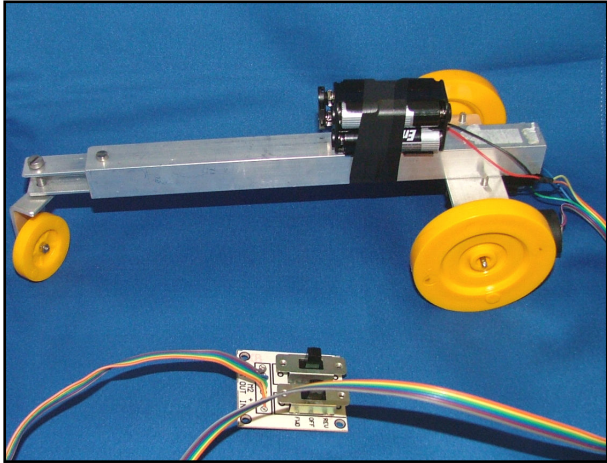
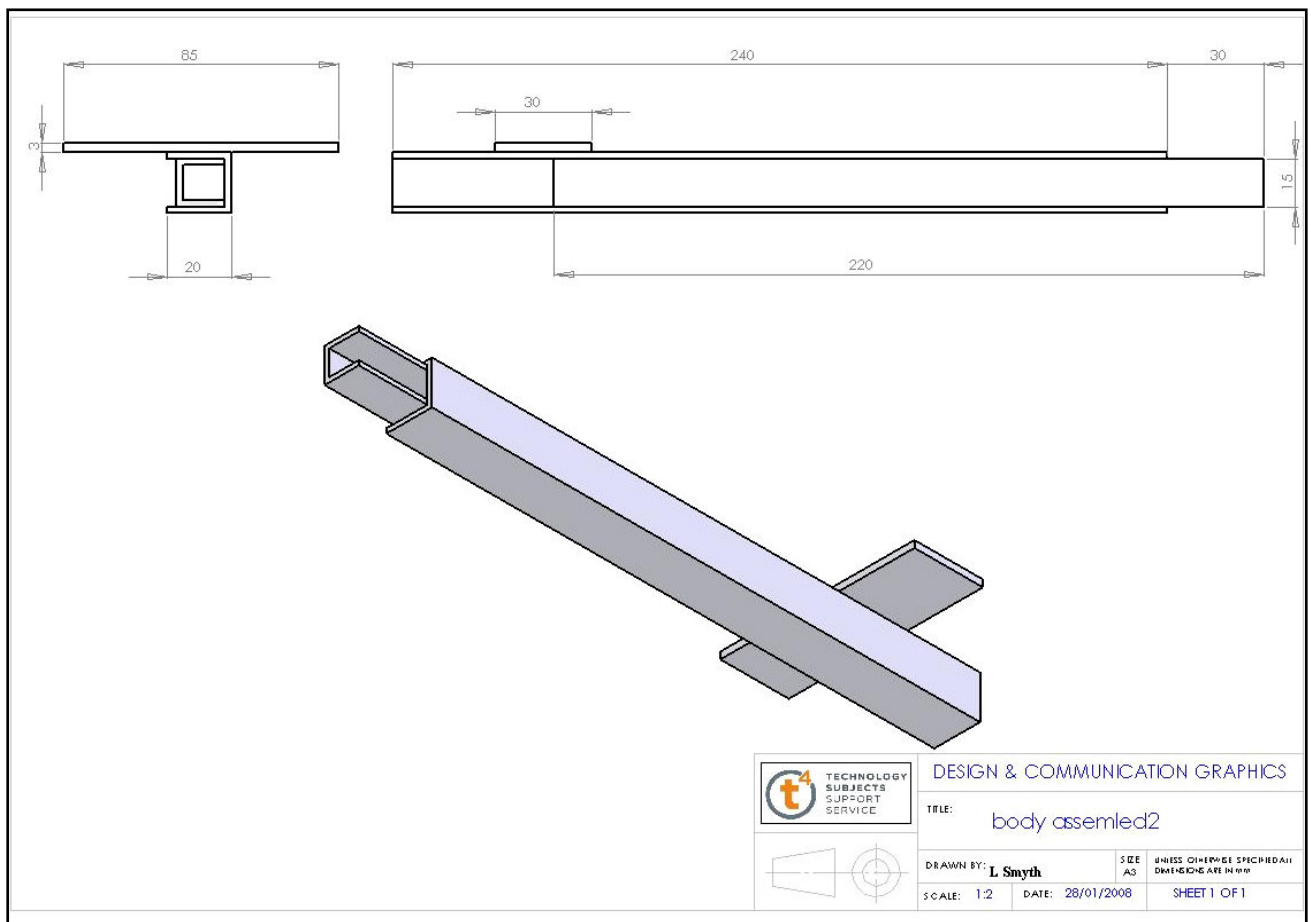


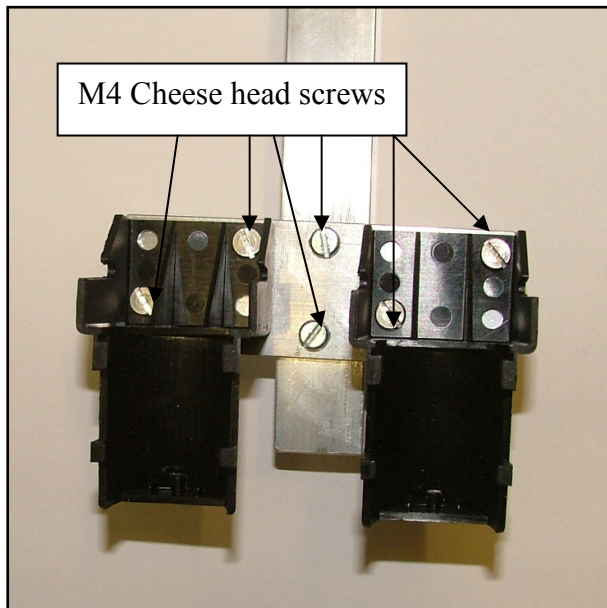
Dragster Project: emphasis on control of two motors



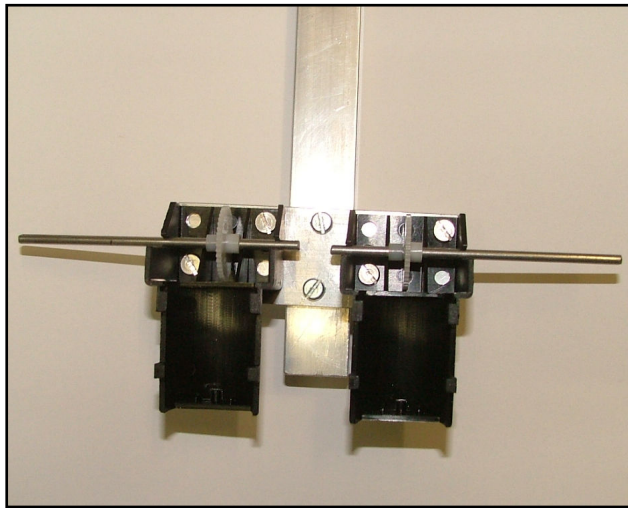
This is a simple project which uses 2 electric motors coupled to worm and gear axle assemblies. Each motor system axle drives 1 rear wheel of the three-wheeled vehicle. The front wheel is a castor wheel. The prototype in the photograph shows the main parts and structure of the project



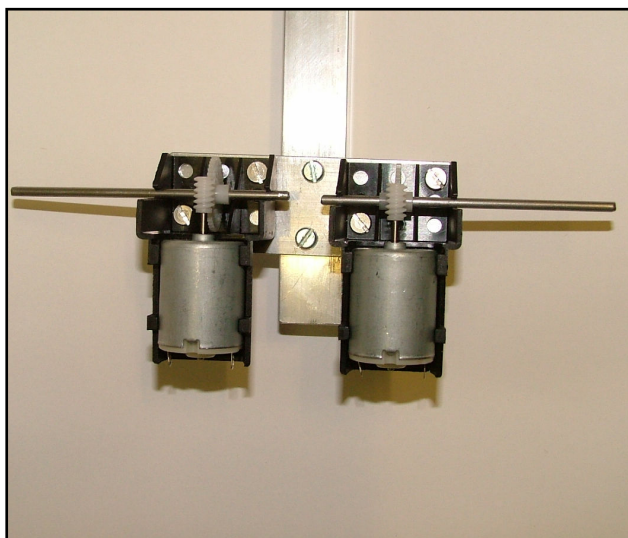
The two motors are controlled by Double Pole Double Throw (DPDT) sliding switches mounted on a prepared PCB board to which the ribbon wires are conned.



Attach the 2 plastic motor housings to the cross member by drilling holes and tapping M4.
The cross member is attached in a similar manner.

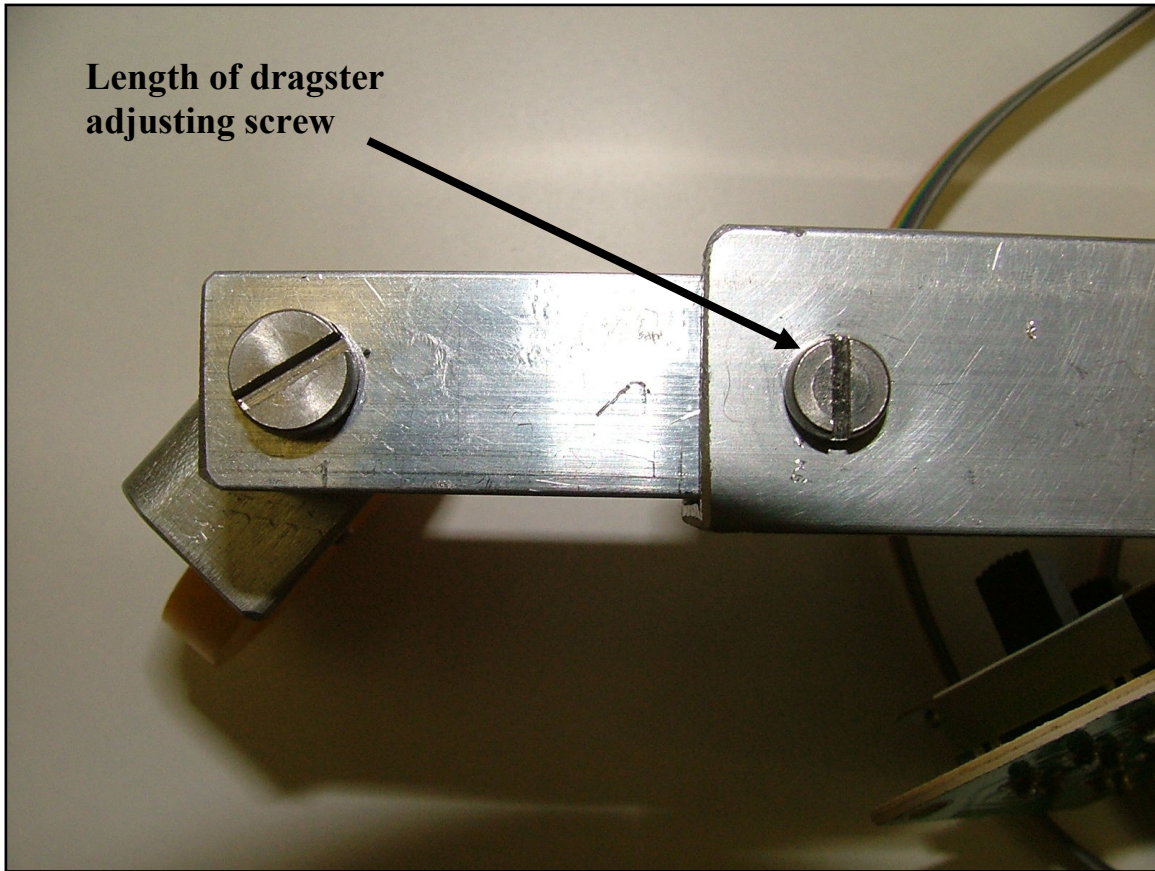


Cut the axles as required and fit them as shown.

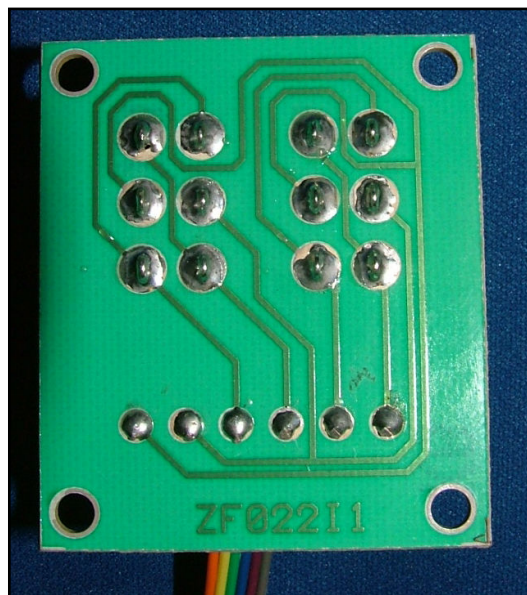
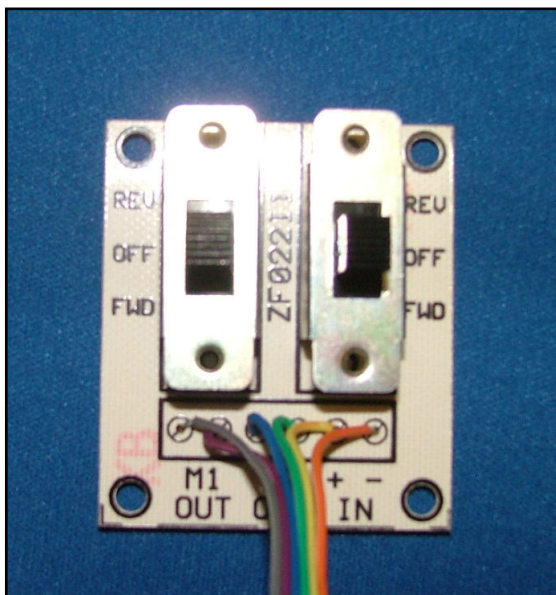


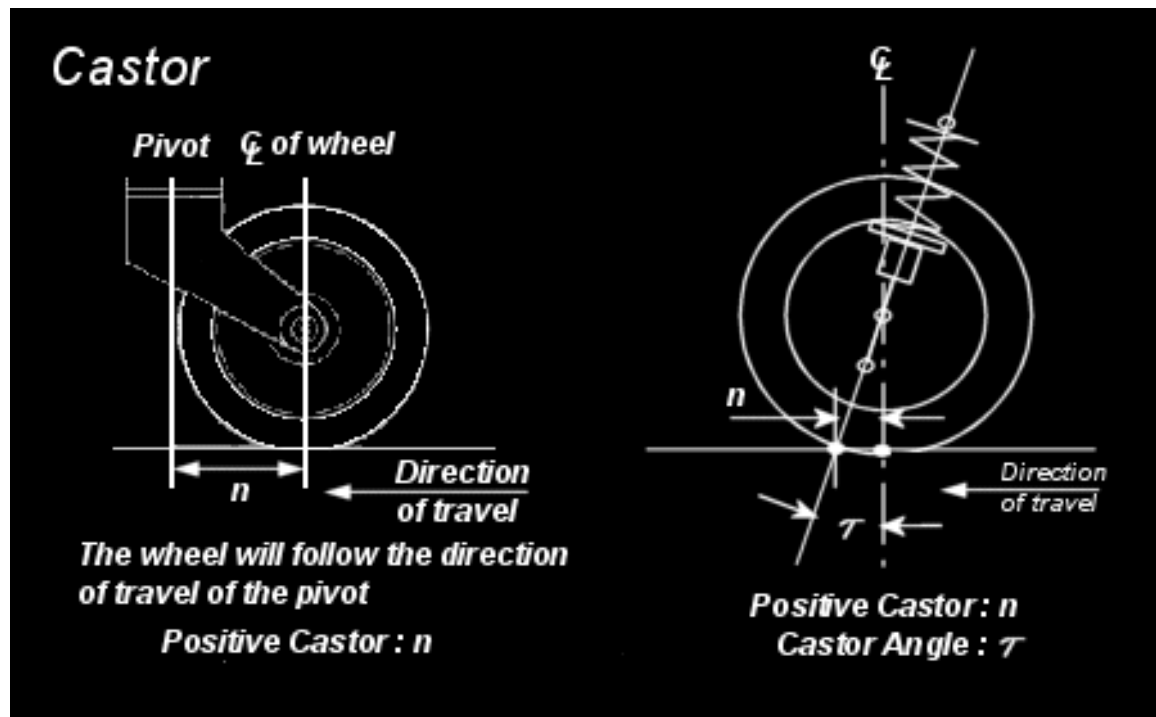
The motors are then placed and secured in position. Make sure that each assembly works well and that the worm and gears are neither too tight, nor too loose.

Length of dragster
adjusting screw

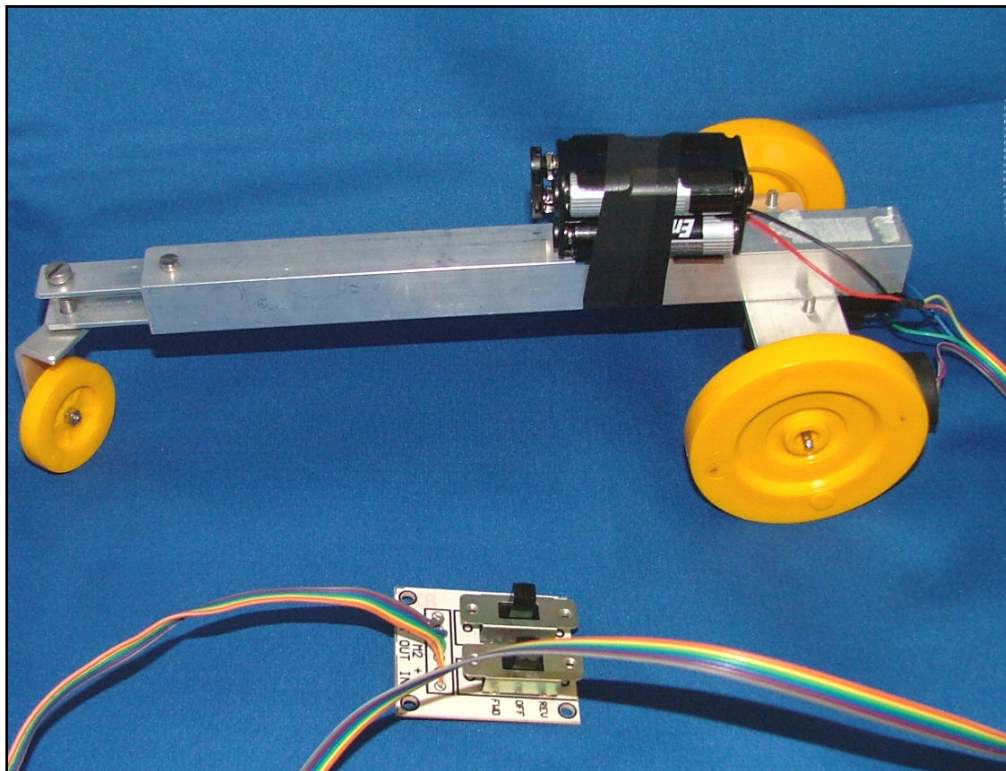


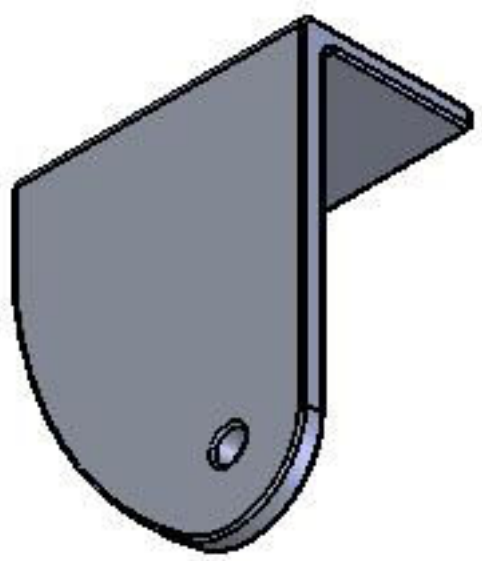
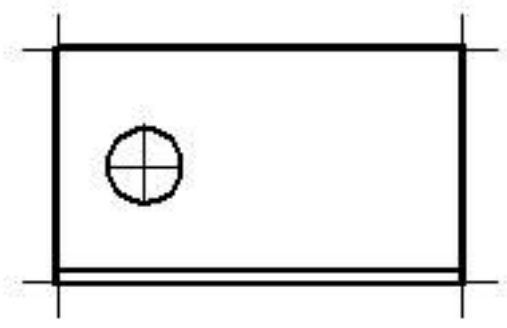
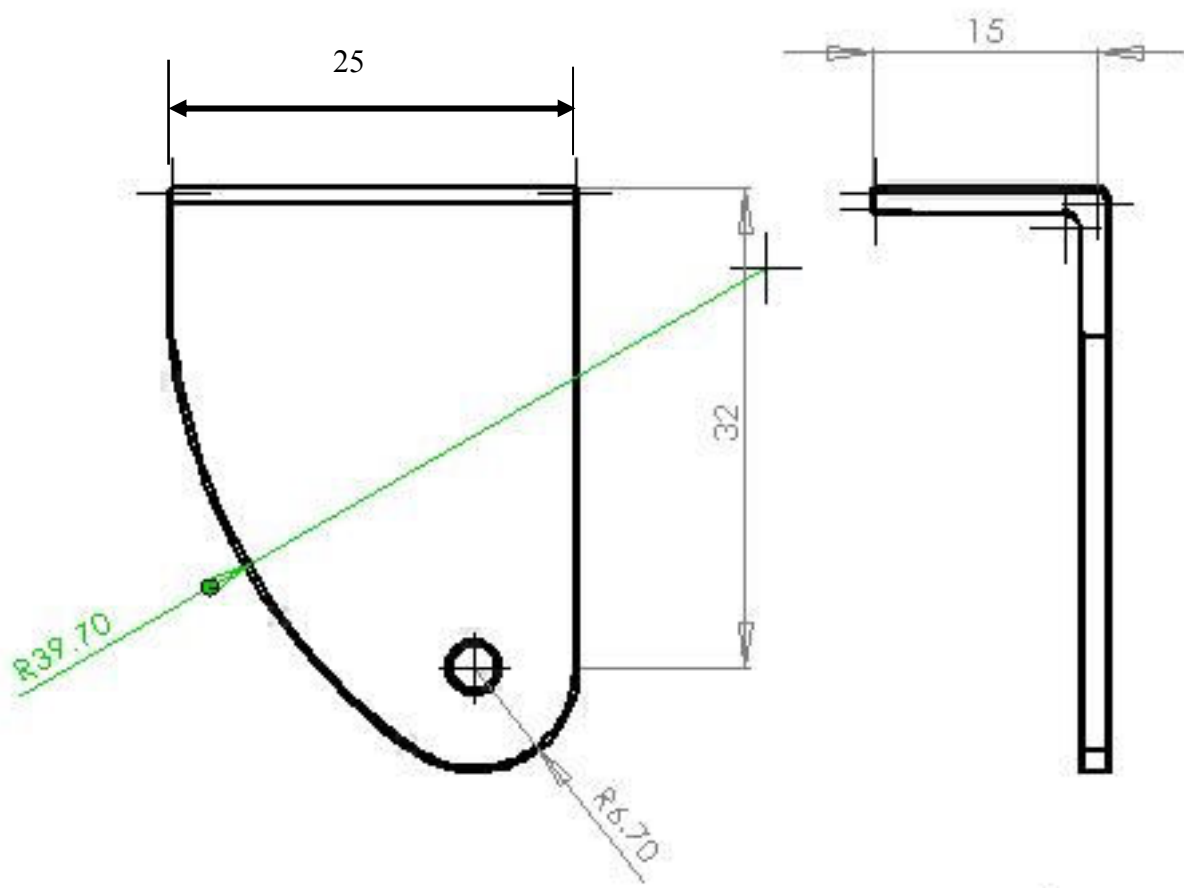
Top view of switch PCB on the left with copper side view on the right



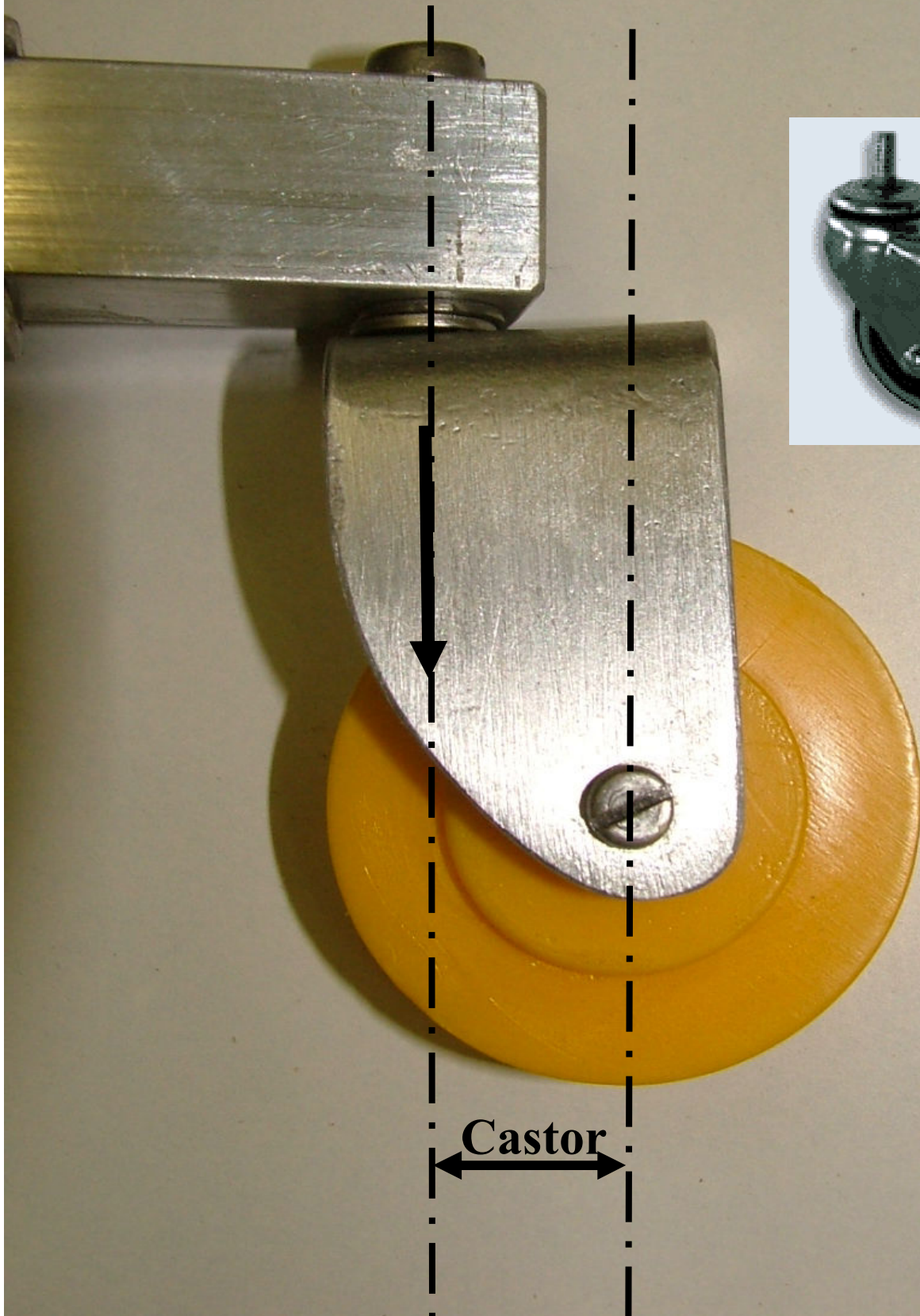


The concept of castor and its part in centre point steering in most road vehicles is often misunderstood. There are some simple examples such as the furniture castor and then bicycle forks might be examined: why can a bike rider ride with *no hands*?





Castor for reverse movement of dragster



Dragster Project

Material and component list

Each Project: -

2 of Clunk Click Gearboxes with 3mm shafts (Rapid: - code 37-0310)
2 of Spiked Tyres dia 75 (Rapid: - code 06-0656 or TEP: - code CS7 032))
4 of inserts for Spiked tyres (TEP: - code CW3 027)
1 of Forward Reverse control board to include switches (TEP: - code EW2 030)
1 of 4 x AA battery holder
4 of AA batteries
1 of PP3 Battery Clip
1 of Castor wheel dia. 38mm (TEP: - code CW3 027)

Materials for fabrication: -

Aluminium channel 20mm x 20mm x 2mm wall x 240mm long
Aluminium channel 15mm x 15mm x 2mm wall x 220 long
Aluminium unequal angle 35mm or 40mm x 20mm x 1.5mm wall x 25mm long
Aluminium bar 25mm or 30mm x 3mm x 85mm long

Machine screws: -

5 only M4 cheese hd x 8 or x 10 long
1 only M5 cheese hd x or 25 long
1 only M3 cheese hd x 15 or 20 long
2 only M5 flat washers
M3, M4, M5 nuts
Sticky pads to stick down battery holder
6 way ribbon cable (Rapid: - code 37-0310)

Tap Size mm .	Drill Size mm.
2.3	1.9
2.6	2.1
3.0	2.5
3.5	2.9
4.0	3.3
4.5	3.8
5.0	4.2
6.0	5.0
7.0	6.0
8.0	6.8
9.0	7.9
10.0	8.5
11.0	9.5
12.0	10.2
Tap Size mm .	Drill Size mm.