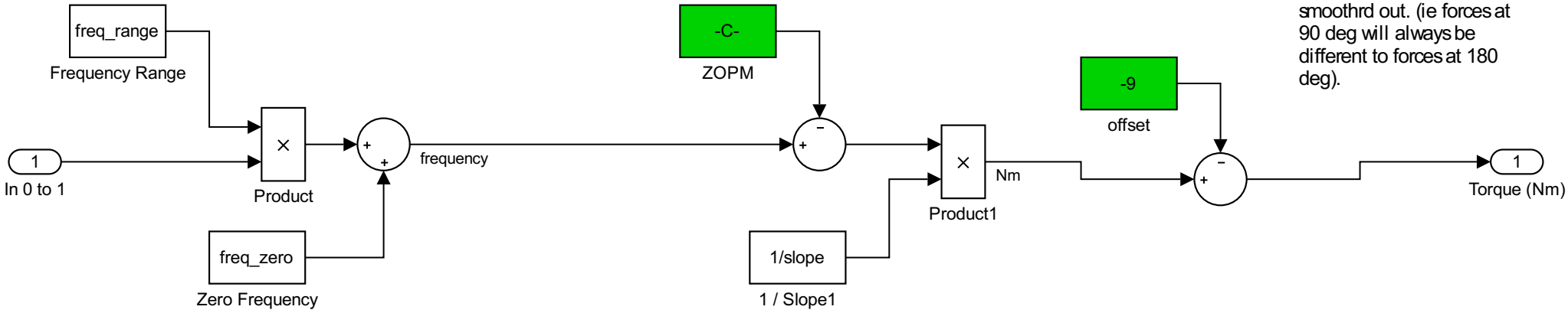
SRM Frequency to Voltage

This system reads in a 0 to 1 voltage from an AD card that comes from a frequency to voltage converter. The frequency signal comes from the SRM sensor meter. In order to work out the torque on the sensor the process has to be reversed. Thus the voltage has to be converted back into a frequency and then back into a torque.

Convert frequency to Torque (Nm)

The data for this can be gained from the SRM sensot itself. The ZOPM (Zero Offset of the Power Meter) is calculated and displayed by the SRM meter. Please check the SRM manual for details. The 'Slope' value can be read from the back of the SRM sensor.

The final signal is filtered. This may have a relatively large rise time so that cyclinc pedal forces are smoothrd out. (ie forces at 90 deg will always be different to forces at 180 deg).



Convert signal to frequency

The frequency to voltage converter was designed (at Glasgow by Gordon) such that 0 volts = 300 Hz and 5 volts = 1000 Hz. The mapping is linear.