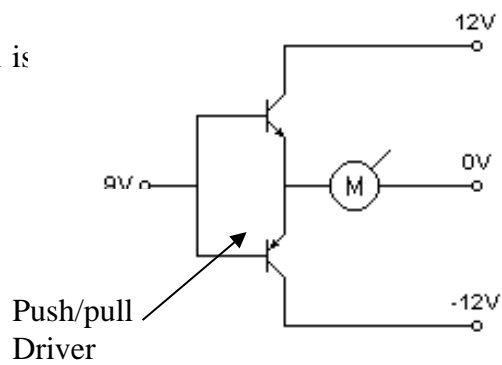


Homework 2.10

(a) V_{r1} is



(b) When the setting potentiometer

adjusted the op amp is unbalanced and will give a positive or negative output which will drive the motor M, rotating the aerial. A mechanical link to V_{r2} will cause the inverting input to be adjusted such that the output will switch off and the system will again be stable in the new position.

Homework 2.11

(a) **Comparator**

(b) As the inverting input is increased from zero to the midpoint of the pot the voltage will increase until it reaches 1.5V. The output which was originally +9V will switch to zero. Further increase of the voltage at the inverting input will cause the output to switch immediately to -9V.

