



X1	LM2903 dual comparator or equivalent
TR1, TR2	BC639 or equivalent
TR3, TR4	BC640 or equivalent
R1, R2	470R resistor
R3, R4	56k resistor
VR1, VR2	20k trim pot
C1, C2	0.1 μ F dipped ceramic capacitor
C3, C4	100 μ F electrolytic capacitor
M1, M2	3 V dc motor
B1	2 x AA battery pack
B2	2 x AA battery pack
S1	DPDT slide switch

Notes

1. The table surface should be perfectly smooth and flat.
2. When a 'feeler' switch closes, either by contact with an object, or by reaching the edge of the table, the motor on the same side is put into reverse. The length of time it remains in reverse once the switch opens is set by pot VR1 or VR2. Adjustment of these pots provides scope for experimentation by the user. The wire feelers on the prototype will need to be re-engineered for production.
3. Four AA size batteries are used here, but AAA size may be preferred to reduce the size of the battery pack.
4. The prototype does not have an on/off switch – just push the connector on to the battery holder.