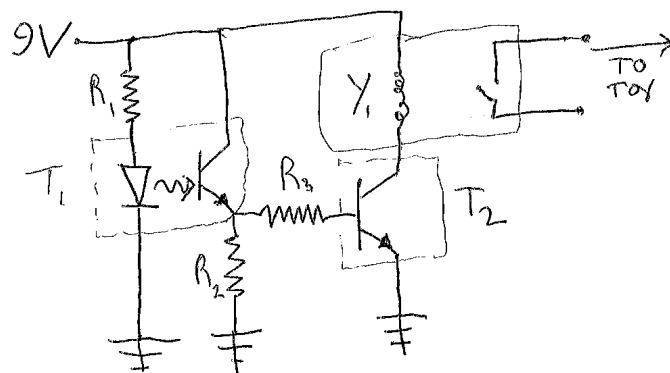
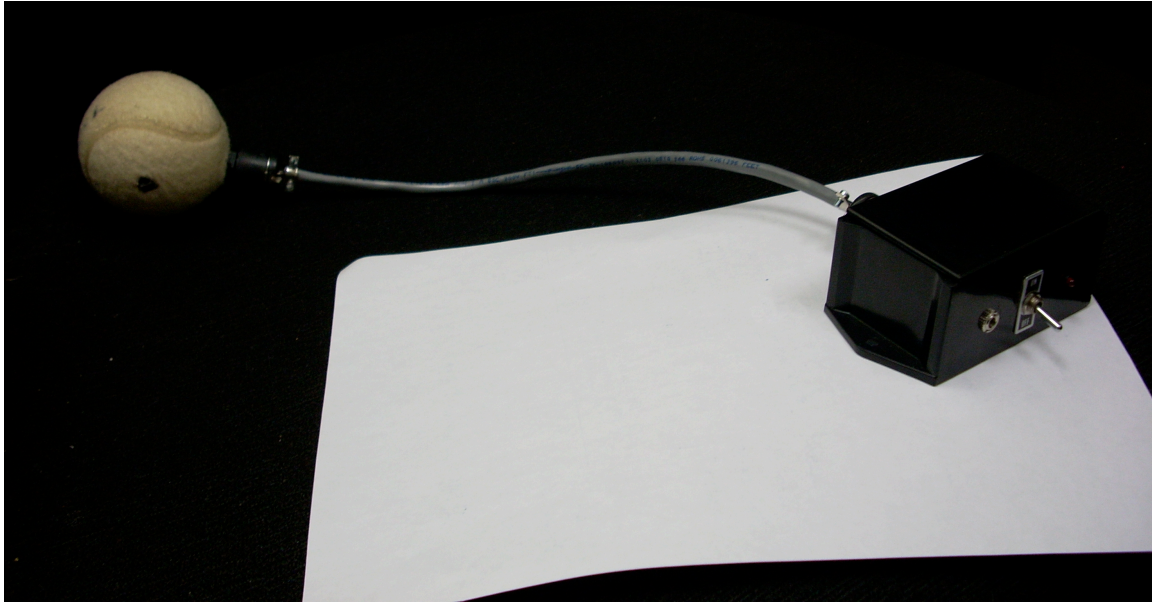


Ben's Non-pressure Switch: 2nd Design

A reflective object sensor (Fairchild semiconductor QRD1113) is mounted in a tennis ball. When a reflective object (eg a finger) is moved with 1 mm or so of the sensor, a relay establishes a short circuit between the tip and sleeve conductors of a mono 1/8th" TS plug. Power source is a 9V battery. On/off switch prevents the battery being drained powering the infrared diode in the reflective object sensor when not in use.



$$\begin{array}{ll} R_1 = 388\Omega & T_1 = \text{QRD1113} \\ R_2 = 10\text{ k}\Omega & T_2 = 2\text{N3904} \\ R_3 = 10\text{ k}\Omega & Y_1 = \text{T77S103-05} \end{array}$$

Comment: In next iteration would replace R2 and R3 by variable resistors to tune to find most robust operation.