

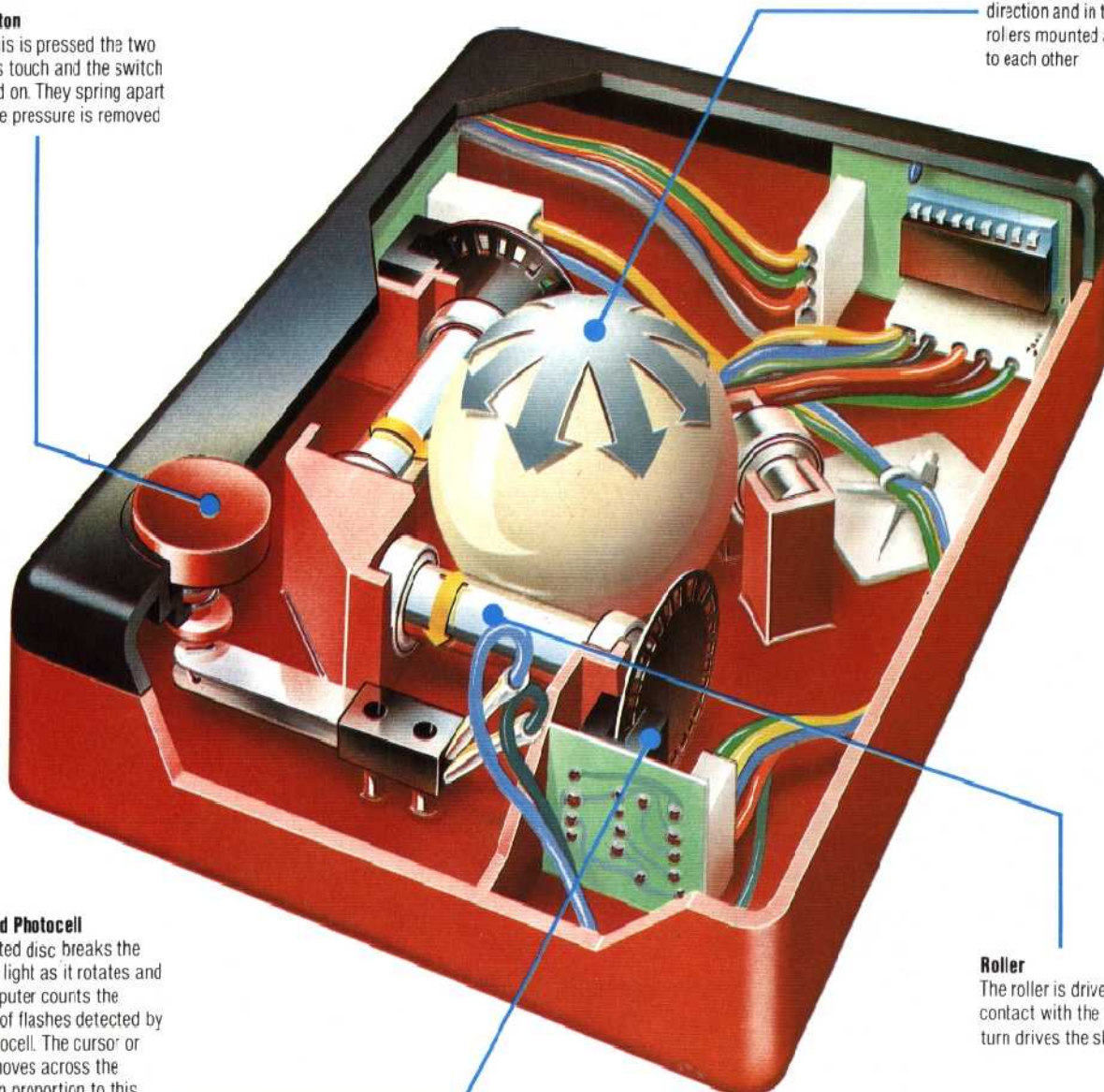


Fire Button

When this is pressed the two contacts touch and the switch is turned on. They spring apart when the pressure is removed

Roller Ball

The ball can be rotated in any direction and in turn drives two rollers mounted at right angles to each other



Light And Photocell

The slotted disc breaks the beam of light as it rotates and the computer counts the number of flashes detected by the photocell. The cursor or object moves across the screen in proportion to this number. To control both the vertical and horizontal movement on the screen there are two sets of disc and photocell

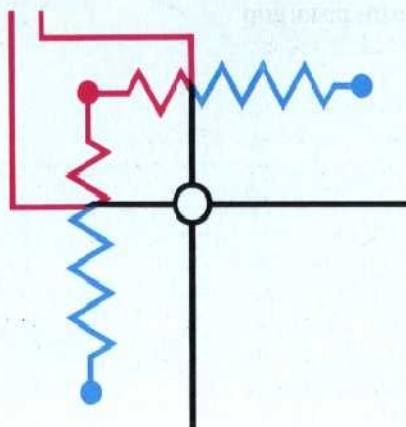
Roller

The roller is driven through contact with the sphere and in turn drives the slotted disc

Track Ball

Imagine you are guiding the screen cursor through a maze. You have to be able to advance the cursor and direct it through the passages as they twist and turn. The trackball is designed for this type of problem. The trackball uses a sphere the size of a billiard ball that you roll in the palm of the hand. As the ball rolls, the object moves in the same direction giving you complete and immediate control. Inside the device are two wheels set at right angles, which rub against the ball. As you roll the ball in the palm of the hand one wheel picks up the vertical part of the motion and the other the horizontal. The computer unites the two signals to recreate the movement.

Potentiometer Circuit



The lever of the joystick is connected to two variable resistors (called potentiometers)! The mechanical linkage moves the contact point (wiper) along either or both of the resistance tracks (represented as zig-zag lines). The position of the joystick therefore sets the electrical resistance of the two potentiometers. The computer checks the voltages and calculates the joystick's position. The computer then converts this information into positional changes on the screen