

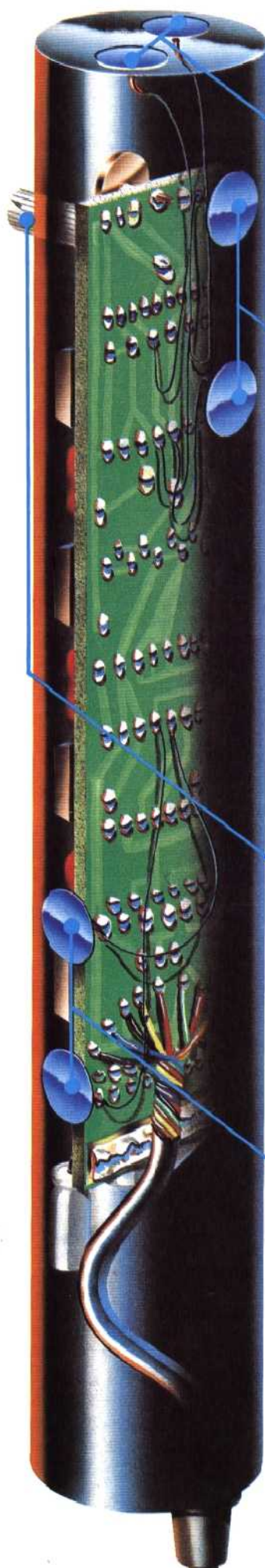
Hot Rods

Two new kinds of joysticks appear to have no moving parts. One uses mercury switches, the other picks up electromagnetic signals from your body

The personal computer industry is used to rapid technological developments, and these changes are not confined to the computers themselves — peripherals and add-ons are also subject to swift refinements. For instance, in the short time since we first discussed the mechanism of a joystick (see page 56), two completely new types have been marketed. The most recently developed joysticks have, in fact, almost entirely broken away from the conventional mechanical system described previously.

A device called *Le Stik* was the first analogue joystick to reject the usual signalling mechanisms. *Le Stik* consists of a contoured handgrip, fitted with a top-mounted fire button and a side-mounted pause control. Unlike other devices, which are mounted on base units, the joystick is simply held in the air and tipped from the vertical in the direction required, and the corresponding image on the screen moves accordingly.

The mechanism at the heart of *Le Stik* consists of four sealed tubes filled with mercury. As the joystick tilts away from the vertical the mercury flows in the chosen direction and makes one or more electrical contacts, just as though a switch



Trickstick

Horizontal Movement Controls
By rocking the thumb between these two pads, the forward and backward motion can be controlled

Vertical Movement Controls
The top pad controls upward motion, the lower one controls downward motion

Sensitivity Control
This allows the Trickstick to be adjusted to each individual player's efficiency as an aerial

Fire Buttons
Each generates an independent signal, so you could drop bombs with the bottom one and fire laser cannon with the other at the same time



Hands On

The Trickstick relies on 'mains hum', which is the electromagnetic radiation given off by the ring main in every house. Your body acts as an aerial to mains hum, and the sensors on the stick pick up different levels of hum according to the pressure exerted by your fingers