

REDUCED COST POINTING STICK CIRCUIT

ABSTRACT

A low-cost circuit processes, with high precision, the output signals of a pointing stick used for controlling a cursor on a computer display screen. A two-stage method of high precision moderate range analog-to-digital (A/D) conversion is combined with a known method of A/D conversion by sweeping a reference voltage across the range of the voltage to be measured at a known rate and noting the time of coincidence. Operational amplifiers (17) of moderate quality are used in an open-loop mode, so that the operational amplifier inputs are high impedance. The resulting circuitry is capable of detecting a very small signal in noise spikes many times larger.

Fig. 1