NEW PRODUCTS

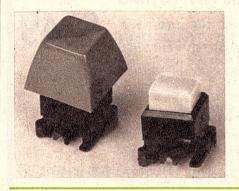
Calculator keyboard, bounceless buttons

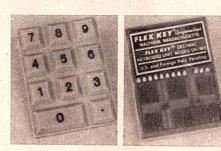
A low cost numeric keyboard for use in calculators and similar devices is available from General Electronics Services, also a mercury keyswitch range featuring zero contact bounce.

The numeric keyboard is the Flex-Key model DK, from Flex Key Corp of Gloucester, Massachusetts. Based on a patented switching technique employing a conductive elastomer membrane, it offers high reliability at low cost. Base of the keyboard is a rectangle of 1 / 8-in fibreglass printed board, with gold plated copper contact grids etched on the inside surface and swaged soldered terminals passing through to the rear.

A variety of models are available, with flat mylar key format, raised or recessed buttons, and optional illumination using either LEDs or incandescent lamps. All models are electrically compatible with DTL, TTL and MOS logic.

Also offered by GES are the "Mercutron" range of no-bounce keyswitch buttons, made by Mechanical Enterprises, Inc of





Alexandria, Virginia. These are based on an extremely simple but highly effective mercury switch assembly which is capable of operating in any position with zero specified bounce.

Essentially the switch consists of a small tube of flexible elastomer, containing a drop of mercury. When the key is in the raised position, the tube is constricted in the centre and the mercury effectively cut into two isolated drops. Pressing the key merely removes the constriction, and allows the mercury to re-combine, completing the SPST circuit.

The SS-10 and SS-11 Mercutron switches are rated to carry 100mA at 24V, with a life of 100 million cycles. Rise and fall times are rated at less than 10 nanoseconds.

Avariety of keytop formats are available, including lighted tops and a full set of tops with alphanumeric legends. The switches are pressure-mounted on printed wiring boards and have integral plastic alignment studs to obviate the need for alignment plates.

Enquiries regarding both Flex Key keyboards and Mercutron no-bounce keyswitches should be directed to General Electronics Services Pty Ltd, at 114 Alexander Street, Crows Nest NSW.

Rugged FET meter, solid state CRO

Parameters Pty Ltd have recently announced the availability of two interesting new instruments from Japan: the YEW type 3223 FET VOM, and the Trio CO-1303A solid-state oscilloscope.

The model 3223 electronic VOM is from the Yokogawa Electric Works, of Japan. It uses a balanced FET circuit to provide 11M input impedance for DC voltage measurement, 500k for low AC volts and 1M for high AC volts. Case of the instrument is shock-resistant ABS resin, and the meter movement is a sturdy taut-band suspension type.

type. There are basically 24 measuring ranges provided, eight of which are for DCV — 0.3V to 1200V FSD in 3/12 ratio steps. Other ranges are for direct current (120uA — 1.2A over five ranges), ACV (3-300V, five ranges) and ohms (2k — 200M, six ranges). The instrument runs from 8 x UM-3 dry cells and one UM-1 cell.

The CO-1303A oscilloscope is from the Trio Electronics company, also of Japan. Fully solid state apart from the 75mm



diameter CRT, it offers high sensitivity and 1.5MHz vertical bandwidth combined with compactness and low cost.

Designed primarily for servicing, the unit has simplified controls. Both vertical attenuator and sweep timebase consist of coarse decade switches combined with interpolating pots. Vertical input impedance is 1M/30pF, with a maximum sensitivity of 20mV/cm and a bandwidth of

(Continued on Page 107)

STA



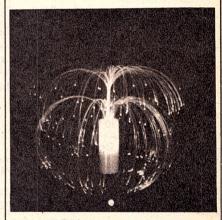
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