

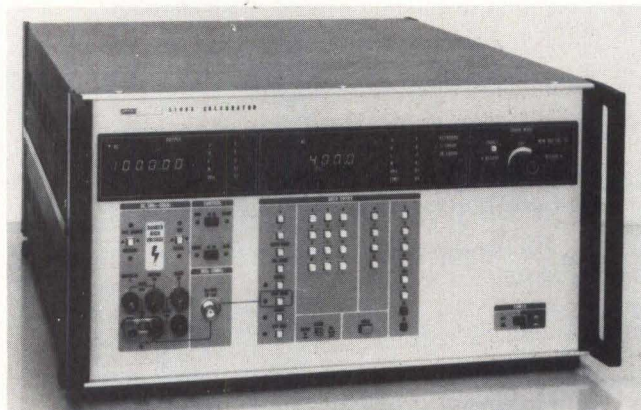
PRODUCTS

CRT and Line Printer Combine Visual Plotting and Rapid Hard Copy



Full graphic requirements from simple charts to complex engineering drawings and 3-dimensional views are met by the 2282 graphics CRT and the 2231W-3 matrix line printer. The CRT adds plotting and fully automatic alphanumeric lettering capability to the System 2200 CPU. A matrix of 800 X- and 512 Y-addressable locations are provided in a 7 x 6" (17.8 x 15.2-cm) area on the 12" (30-cm) diagonal screen. Plotting vectors are generated by turning a series of dots on or off. All CPU plotting output is displayed for possible operator modification. In addition, a 112-char ASCII set is stored in memory and can be plotted in 15 different sizes for different applications. The printer uses a 7 x 8 dot matrix for the same character set, printing at 120 char/s and 40 to 250 lines/min, depending on line length. Hard-copy of the CRT display is generated by printing strips of 800 x 8 dots under program control until the display is reproduced. Normal line feed spacing is reduced during image reproduction to provide vertical image continuity. An expanded character can be provided for highlighting. **Wang Laboratories, Inc.**, 1 Industrial Ave, Lowell, MA 01851. Circle 200 on Inquiry Card

Microprocessor-Controlled Calibrators Provide Multipurpose Capabilities



Circle 201 on Inquiry Card

Models 5100A and 5101A, combining the capabilities of several instruments, accept data through simple front panel keyboards or with optional system interfaces for calibration of VOMs as well as 3½-, 4½-, and most 5½-digit DMMs. Control is maintained by a microprocessor. Outputs include dc voltage to 1100 V with 50-ppm accuracy; ac voltage to 1100 V with a bandwidth of 50 Hz to 50 kHz; ac and dc current outputs from 10 µA to 2 A; and resistance of eight decade values from 1 Ω to 10 MΩ. An option provides wide-band ac from 10 Hz to 10 MHz with function ranging from -57.5 to 23 dBm. In addition, a tape cassette built into the 5101A provides a permanent storage of frequently used procedures. After a cassette containing output parameters is read into memory, the operator presses the advance key to select the sequence. Each cassette can store up to 58 procedural steps and can be programmed as easily as operating the basic instrument itself. **John Fluke Mfg Co, Inc.**, PO Box 43210, Mountlake Terrace, WA 98043.

Intelligent Keyboard Offers Broad Programming Options for Terminal Designers

Combining 103 Hall-effect logic scan key modules with a single-chip microcomputer results in a full-function key-



board for intelligent and distributed processing terminal applications. The microcomputer integrates 8-bit CPU, ROM, RAM, I/O lines, and a time/event counter on a single chip. A 40-pin EPROM, pin-compatible with the ROM, is available for prototyping. Features of the 19.38 x 16.34 x 1.44" (49.23 x 16.1 x 3.66-cm) model 103SD24-1 keyboard include 4-mode, 8-bit ASCII code assignment; choice of serial or parallel data outputs; 14 relegendable keytops for programming keys; 8-deep FIFO character storage; N-key rollover; and timed/auto repeat for selected keys. Each key module provides one isolated input and one isolated output. The output signal is valid when the input interrogation signal is true and the key is depressed. Enabled output will reflect the normal performance of a level sinking output. When the input is at high level, the output is inhibited by forcing the output transistor into off state. **Micro Switch Div of Honeywell**, 11 W Spring St, Freeport, IL 61032. Circle 202 on Inquiry Card