NEW PRODUCTS

edited by
Prof. Demetrios Michalopoulos
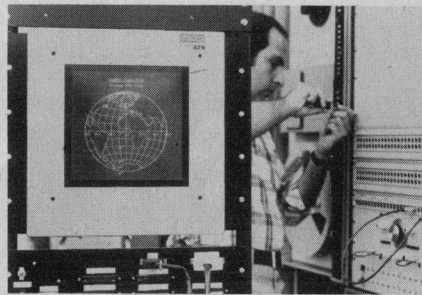California State University, Fullerton

Commercial plasma display announced by Interstate Electronics

Interstate Electronics has put commercial flat-panel plasma units back on the display market by introducing their Model PDA 142. According to Interstate, the PDA 142 plasma display unit, being built under design rights purchased from Owens-Illinois, is fully equivalent to the D-141 display unit discontinued by Owens-Illinois.

The 512 by 512 alphanumeric/graphic display has a nonformatted matrix. The display is flicker-free with no distortion, has a constant spot size with no drift, and offers excellent display resolution, repeatability, brightness, and contrast ratio, according to the manufacturer.

The PDA 142 has an inherent panel memory, requiring no refresh circuitry for image retention. A translucent projection screen on the rear surface of the panel allows rear projection of other images onto the display surface. The display unit uses address signals to specify a unique X-Y location in the 512 by 512 coordinate array and an operation command to illuminate points and form images. Single-point or 16-dot-parallel write/erase modes can be selected.

A self-contained assembly, the Model PDA 142 includes all necessary drive and

Commercial plasma display Model PDA 142 announced by Interstate Electronics is equivalent to the discontinued Owens-Illinois model.

display capability to produce images in an 8.5-inch square area on its .5-inch-thick glass display panel. A power supply is provided. When the unit is incorporated into a terminal or display system, the user supplies the character and vector generation circuitry for alphanumeric and graphic display information.

The PDA 142 is priced at $3475 each in OEM quantities of 50 or more, with delivery in 60 to 90 days, depending on factory lead-time commitment.

Reader Service Number 11

Ramtek's new GM-870 Series monochrome display monitors offer 1280 x 1024 pixel resolution on 19- and 13-inch screens.
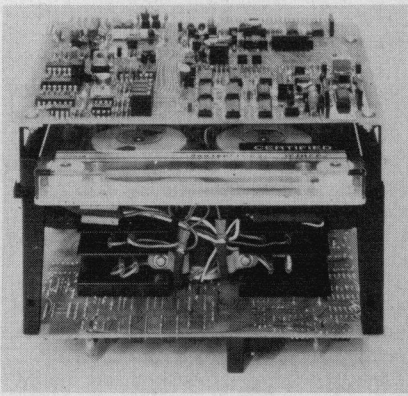
Monochrome monitor offers 1024 x 1024 pixel resolution

Ramtek Corporation announces the availability of its GM-870 Series of 1000-line monochrome display monitors for use in computer graphics and imaging applications.

The new series of display monitors offers 1280 x 1024 pixel resolution, five available phosphors, and comes in 13-inch and 19-inch diagonal screen sizes. A video bandwidth of 60 Hz to 40 MHz permits the high resolution and color compatability. The monitor, featuring a nominal 24-nsec pixel period and a 12-nsec pixel rise/fall time, is powered by 220 VA at 30 ft. lamberts.

Single-unit dimensions for the Model 873 (13″ screen) are 19″ x 17″ x 12.25″, rackmount, and 19″ x 17″ x 13″, cabinet. Model 879 (19″ screen) measures 19″ x 20″ x 17.5″, rackmount, and 19″ x 20″ x 18″, cabinet. The GM-870 Series monitors, compatible with Ramtek's 850 Series of color monitors, are priced under $3500. Delivery is 90 days after receipt of order.

Reader Service Number 13

Century Analysis releases fully integrated DBMS for NCR users

Plus/4, a fully integrated Data Base Management System developed for NCR users, has been released by Century Analysis.

Plus/4 can be used with existing and new files, allowing development to continue while present applications are placed under Plus/4's control. Multi-threaded, it can support both batch and on-line processing, permitting terminal users to make complex requests without affecting the performance of other users in the system.

The new DBMS provides element-level processing and multi-level indexing, and includes a multi-level security system. It has index, library retrieval, data movement, file access, and utility subsystems.

Modular in nature, Plus/4 permits user development in Cobol, Neat/3, or Pass/3. It can be implemented on any NCR 101 or above with a B1, B2, B3, B4, or VRX operating system. Plus/4 is priced at $10,000.

Reader Service Number 12

COMPUTER

Data Electronics launches 34M-byte digital cartridge tape drives

Streaming Microtape, the first in Data Electronics' new family of 34M-byte digital cartridge tape drives, resembles a continuous 3150-foot reel of magnetic tape. Accepting a stream of data at a transfer rate of 576K bits-per-second, Streaming Microtape becomes a "save-and-restore" medium for use with Winchester-technology fixed disk drives. In effect, according to the manufacturer, the drive is a FIFO memory.

Handling track address and directional control automatically, the drive reads or writes at 90 ips without stopping between data blocks. The interface is NRZ, and an internal error correction procedure assures less than one error in 30 cartridges. Data is committed to tape through group code recording with a data density of 6400 bpi.

The 34M-byte digital cartridge tape drive, utilizing 7-track recording on a standard ANSI/ECMA 1/4-inch tape cartridge, is priced at $1219 in OEM quantities.
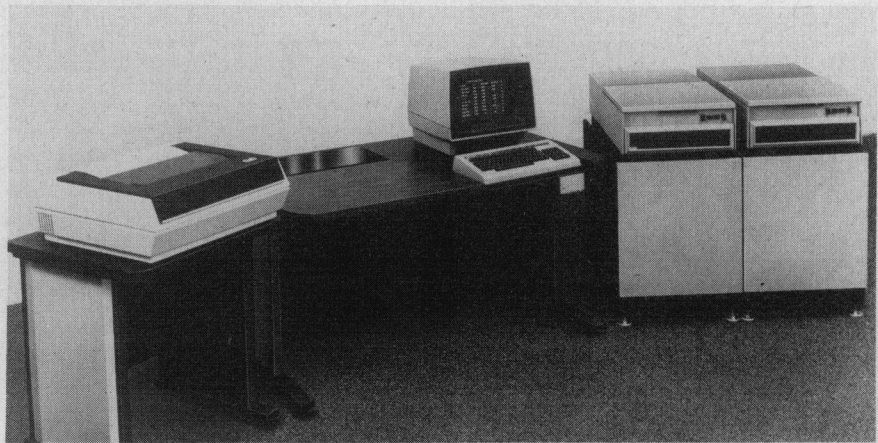
Reader Service Number 14

Micro Mode publishes project cost accounting system

Micro Mode, Inc., has published a software package entitled Project Cost Accounting that tracks the profitability of any number of projects simultaneously. Designed originally for an architect, the system is adaptable to engineering firms, CPAs, etc., that account for various employee billing rates, direct costs, and reimbursable costs by project or client.

Written in Microsoft Basic, it can operate without alteration on the 8080, 8085, or Z80 CPU microcomputers supporting the CP/M operating system.

Priced at $500, the package includes documentation, source code programs, and practice data files on eight-inch floppy disks.

Reader Service Number 15

Royal introduces System 9500 business computer

Royal's System 9500 business computer features the 4480 hard-disk storage module and a 5051 printer. Since the 4480 accommodates up to 80 million characters of information, one square inch of the disk surface can contain over 280 thousand characters of data, according to Royal.

Designed for medium printing requirements, the 5051 printer has a straight pin-straight path design and provides 160 lpm continuous printing. The printer also contains a built-in microcomputer that, when combined with a self-test feature, pinpoints potential service needs. The optional 5063 printer, designed for high volume printing needs, generates reports at a speed of 300 lpm.

The Royal System 9500 can support a maximum of seven interactive terminals, each utilizing a separate memory partition. Two application packages, one each for wholesaler/distributors and accountants, are available.

Reader Service Number 17

Intel markets software editor for CRT-based development systems

Credit, a software editing tool created by Intel for the corporation's CRT-based development systems, provides users with screen and command-line editing shortcuts. According to Intel, Credit will help reduce the cost of software development, a major concern in building complete microcomputer-based systems.

The text editor runs on Intel's Intellec-800 and Series-II microcomputer development systems equipped with an Intel-supplied CRT, flexible disk drive, and 64K bytes of RAM. Once loaded, Credit offers the user single key control of text character insertions, deletions, and corrections. A user can move page-by-page forward or backward through the text file, with all changes visible on the CRT screen.

Command-mode editing features allow code strings to be located, moved, copied, inserted, deleted, or changed. A sequence of commands frequently executed as a group can be labeled and subsequently called up using just the user-given name.

Credit, available on single- or dual-density flexible diskettes, is loaded into the development system via the flexible disk drive and operates under the control of the ISIS-II operating system. Intel's software editor is priced at $250.

Reader Service Number 16

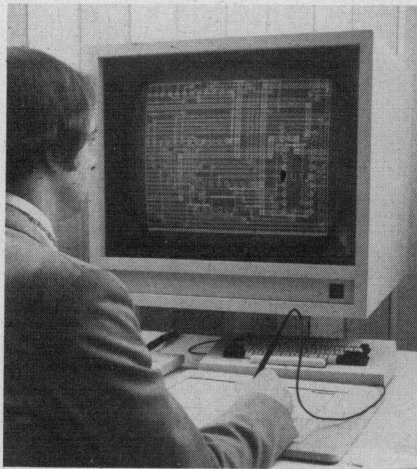## Dunn Instruments presents 631 color camera system for computer graphics use

Dunn Instruments' Model 631 color camera system makes photographic records of the display of a raster scan computer graphics system on 8" x 10" Polaroid Type 808 Polacolor 2 Land film, color transparency film for overhead projection, and 35mm color slides.

A stand-alone unit with a self-contained, high resolution, flat-faced CRT, the Model 631 is connected directly to the RGB outputs of a raster scan computer graphics terminal. Standing 45" high and measuring only 16" on the side, on a 20" square base plate, the color camera system has microprocessor controls and makes up to thirty 8" x 10" prints or 100 35mm slides per hour. The operator has only to turn the unit on, load film, and press the expose button.

For 60-second print processing with the Model 631, a Polaroid film holder and table-top film processor, both available from Dunn, are required if Polacolor film is used. The motorized 35mm slide system is optional. The Model 631, utilizing an 8" x 10" sheet film format, sells for $12,000. The 35mm slide option costs an additional $4000; the Polaroid Film holders, $80 each; and the Polaroid processor, $750.

Reader Service Number 18

Applicon presents improved PCB graphics system

Applicon Incorporated has introduced an improved version of its PCB graphics system. Called the Video PCB Graphics System, this computer-aided design/computer-aided manufacturing system is based on Applicon's new system concept IMAGE (Interactive Multi-Activity Graphics Environment), whereby users can perform design and routing tasks simultaneously with a single system.

The Video PCB Graphics System includes a Digital Equipment Corporation 16-bit, PDP-11/34 minicomputer working in tandem with Applicon's 32-bit minicomputer, Graphics 32, and features high contrast, 21-inch video display terminals viewable under ordinary light. The video terminal's immediate update, selective erase, and dynamic move capabilities increase system throughput by eliminating frequent screen repaints.

According to Applicon, the advantage of the video PCB System as a design and manufacturing tool is its ability to automatically extract from the design layout all the checking, documentation, and manufacturing outputs required to complete the entire process of PCB production.

Reader Service Number 19

Southern Systems offers mini/micro interfacing in M-200/S matrix printer

The M-200/S impact matrix printer has the flexibility to interface with either mini- or microprocessor systems and offers bi-directional printing at the equivalent of 200-plus lpm, according to its manufacturer, Southern Systems, Inc.

In the miniprocessor line, SSI's M-200/S is parallel compatible with interface to all DEC, Data General, Hewlett-Packard, and Interdata miniprocessors; Centronics parallel compatibility is also offered. For operation with microprocessor systems, the printer is available with an optional S-100 micro-compatible mode or with an asynchronous RS-232/current loop serial interface.

The M-200/S features a 14-pin wire matrix head and expanded, condensed, and standard height characters. Other features include the capability of up to six clear copies and easy forms-loading from front or bottom. A diagnostic display allows the user to monitor the printer system's functioning.

In quantity orders, the M-200/S is priced at $3000, with delivery in 30 days.

Reader Service Number 20

Memorex announces compact 8-inch rigid disk drive

Designed for OEMs, the Memorex Model 101 drive, the first in a planned family of 8-inch rigid disk drives, features 11.7M bytes of fixed storage capacity on two disks. According to Memorex, it provides many of the performance and reliability advantages of the company's 635M-byte end-user drive in a condensed format.

The 101 has a direct drive spindle motor. By incorporating the motor with the hub, Memorex engineers have eliminated belts, brackets, and side-loaded bearing wear.

The 101's compact design and mounting brackets allow it to share the same small cabinet as a flexible disk drive. It weighs less than 20 pounds and measures 14 x 8.55 x 4.38 inches. Its electronics package is mounted on the bottom of the head disk assembly for easy access while the drive is running.

Besides the HDA, designed specifically for the 8-inch OEM drive, a proprietary absolute filtration system provides further protection against contamination. A high-speed, low-wear band actuator requires no field adjustments and has low heat dissipation, according to Memorex.

Memorex Model 101 is priced at $1560 in quantities of 100 units, with shipments to begin in the first quarter of 1980.

Reader Service Number 22

Plantronics/Zehntel offers Model 100 programming station

According to Plantronics/Zehntel, the Model 100 programming station allows production test engineers to create analog and digital test programs, modify existing programs, and analyze failure data, freeing the Model 400 and 400/A system for virtually full-time circuit board testing.
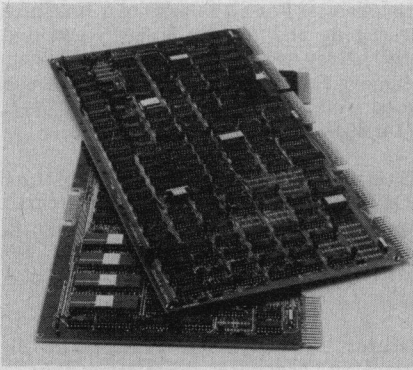
A microprocessor-based edit terminal utilizing a 25-line by 80-column CRT display, an alphanumeric keyboard with edit pads and control keys, and two single-sided, single-density disk drives, the Model 100 contains 48K bytes of dynamic RAM, of which approximately 40K bytes are reserved for user programs. User memory is organized into pages, with each page corresponding to 24 lines on the CRT. Portions of memory are accessed by calling up the appropriate page.

Disk formatting for the Model 100 is compatible with the Troubleshooter 200 (a tester without program-generation capabilities) as well as with the 400 and 400/A. With software currently being developed, the Model 100 will also support the Troubleshooter 800 digital test system.

The unit price of the Model 100, including all necessary software, is $23,950.

Reader Service Number 23

Dataroyal offers IPS-5000 family of general-purpose printers

Dataroyal has introduced the IPS-5000, a new family of general-purpose, microprocessor-based printers designed to handle a variety of small business text printing applications. According to Dataroyal, the printers, operating at 150 cps in a 9 x 9 dot matrix, are built for heavy duty cycles, yet are quiet enough for office operation.

The IPS-5000 can generate a 96 ASCII character set with true lower case descenders bi-directionally. It has a 256-character buffer, tractor feed, ribbon cartridge, short line capability, and six-part form

capability. Standard features include top-of-form control and selectable expandable characters. Optional features are an RS-232 interface, 100 to 9600 baud, TTY current loop interface, expanded buffer, and foreign character fonts, including Swedish, Danish, Italian, and German.

Dataroyal is marketing an 80-column version for $975, and a 132-column version for $1075, with delivery 90 days after receipt of order. OEM quantities are also available.

Reader Service Number 21

Ball 3211 disk controller interfaces PDP-11 and four SMD-type drives

Ball Computer Products' 3211 disk controller interfaces any PDP-11 series computer and up to four SMD or SMD-compatible drives in any mix of capacities.

Handling data rates from 806K bytes to 1.2M bytes per second, the host-resident controller mounts in a quad system backplane. Requiring only one non-processor request DEC Unibus load for direct access to memory for all read/write block transfer, the controller may be strapped to any arbitrary interrupt priority level (BR5 standard), interrupt vector address (254 standard), and device register address (776700 standard), Ball states.

Microprocessor based, the controller performs overhead processing required for software-compatible emulation. According to Ball, the 3211 emulates the command and register set of the DEC RM-02 controller, without modifications to the host computer's software disk driver.
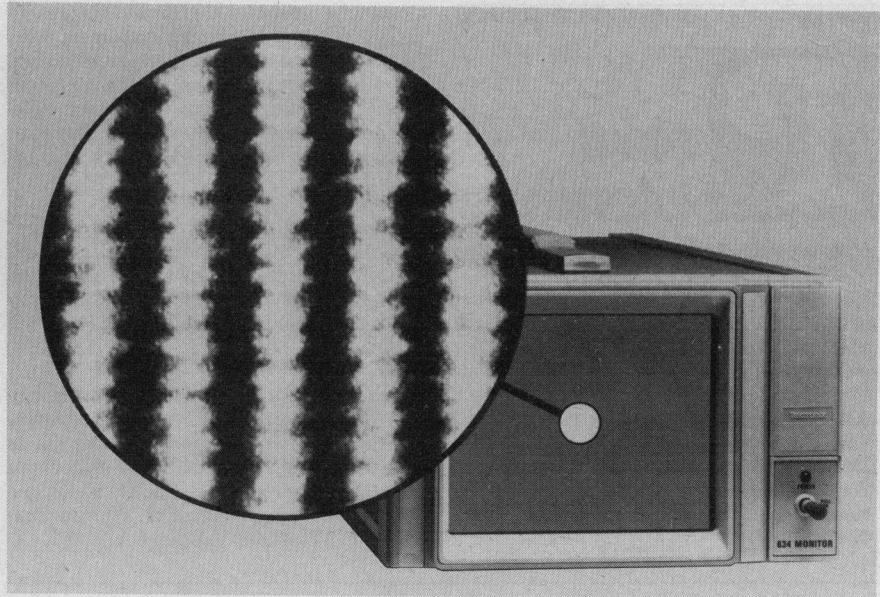
Timing errors and over/under run problems due to speed mismatch are eliminated by the controller's full four-sector buffering. A 2048-byte data buffer memory reduces the required data transfer rate with the host. Since the 3211's ECC (IBM 56-bit firecode) detects single burst errors up to 22 bits in length and corrects burst errors of up to 11 bits per sector, any disk pack within media specifications will deliver error-free data recording, according to Ball.

System throughput potential is increased and I/O command overhead is reduced by overlapping seeks, sector interleaving, and multiple sector transfers. A Unibus throttle control allows the user to preset burst time lengths, allowing operation on high-priority NPR devices without locking out lower-priority devices.

Read operations can be successfully retried, even when detected as uncorrectable data errors. A pre-determined offset/strobe sequence is automatically attempted when an uncorrectable data error is detected.
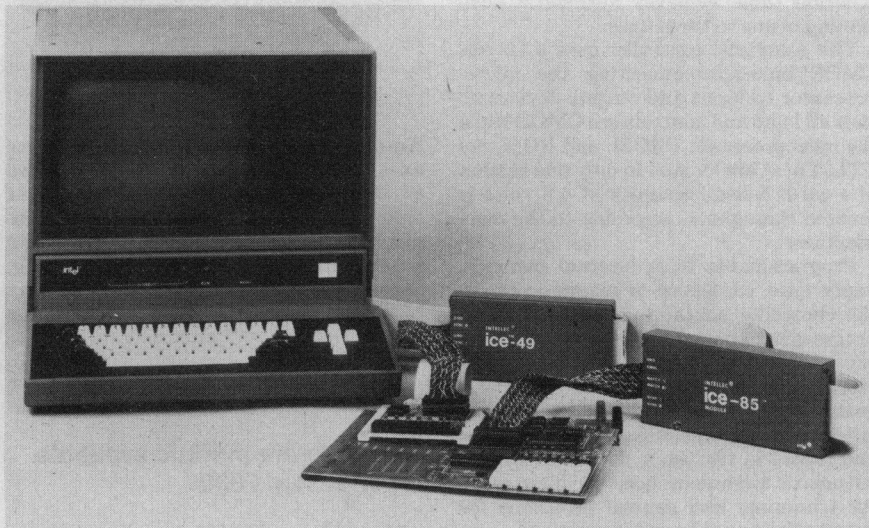
The 3211 disk controller is unit-priced at $6100, with OEM quantity discounts available.

Reader Service Number 24

Inset in the photo is an enlargement of a shot taken directly off the Tektronix Model 634 video display monitor for OEMs with options 14 and 15 that increase Z-axis bandwidth to 20 MHz and line rates up to 1084 lines per frame at 60 fields per second. The standard 634 monitor has a line/field rate of 525/60 (625/50). High line rate (option 15) and 20-MHz Z-axis bandwidth (option 14) add $180 to the $1195 price for the standard 634. Delivery is six weeks after receipt of order.

Reader Service Number 25

Intel software controls two in-circuit emulators

Intel has introduced a software package that enables a single Intellec microcomputer development system to control and coordinate the operations of two in-circuit emulators. Two coordinated ICE units are sufficient to debug most processing and control systems containing multiple microcomputers, according to Intel.

The Multi-ICE package supports the development of products containing up to seven types of microprocessors—8085 central processor units and 8049, 8048, 8748, 8039, 8035, and 8021 single-chip microcomputers.

The package, a resident software option for disk-based Intellec Model 800 and Series II Model 220 and Model 230 development systems, runs under Intel's standard ISIS-II diskette operating system. Available on single- and double-density diskette, the Multi-ICE package costs $1750.

Reader Service Number 26

New Literature

User surveys. Three reports compile user survey data, describe and compare available models, discuss the market, and offer guidance to prospective users. "All About Plug-Compatible Tape Drives" (18 pages), "All About Teleprinter Terminals," and "All About Plug-Compatible Disk Drives" (21 pages) are $12 each from Datapro Research Corp., 1805 Underwood Blvd., Delran, NJ 08075; (609) 764-0100.

Computer graphics. "Graphic Representation: Effective Communication," a four-page brochure treating computer graphics as an effective means of data representation, is available from Integrated Software Systems Corp., 4186 Sorrento Valley Blvd., San Diego, CA 92121; (714) 452-0170.

Portescap catalog. A 24-page general catalog covering the company's line of DC micromotors, tachometers, and reduction gear boxes is available from Portescap US, 31 Fairfield Place, West Caldwell, NJ 07006.

Wordplex/7. A six-panel brochure describing the Wordplex/7 shared-resource, multistation word processing system is available by requesting Publication 26-1055-001 from the Public Relations Dept., Wordplex Corp., 141 Triunfo Canyon Rd., Westlake Village, CA 91361.

Disk drives. For a 16-page color brochure describing the "Super Series" cartridge disk drives, write or call Perkin-Elmer, Memory Products Division, 7301 Orangewood Ave., Garden Grove, CA 92641; (714) 891-3711.

Rotary switch. A two-page brochure, "Oak Encoder Series Programmable Rotary Switches," is available as Bulletin F-1050 from Louise Evers, Oak Industries, Inc., Switch Division, Crystal Lake, IL 60014; (815) 459-5000.

Printer systems. An eight-page, illustrated brochure describing DAC's minicomputer line of printer systems is available from Joe Riggs, Digital Associates Corp., 1039 E. Main St., Stamford, CT 06902; (203) 327-9210.

Electrostatic plotters. "Plotting IC and PCB Drawings," a six-page report documenting the use of Versatec electrostatic plotters in six circuit design systems, is available as Report 388 from Versatec, 2805 Bowers Ave., Santa Clara, CA 95051; (408) 988-2800.

Temperature instrumentation. Containing descriptions of temperature sensors and instrumentation as well as signal conditioning devices, "Temperature Measurements and Signal Conditioners Short Form Guide" is available from Analog Devices, Route 1 Industrial Park, PO Box 280, Norwood, MA 02062.

Fast food system. An eight-page brochure describing the Positran Fast Food System that applies a computer system to fast food order entry and operations control is available from Scan-Data Corp., 800 E. Main St., Norristown, PA 19401; (215) 277-0500.

Complimentary subscriptions. Qualified individuals may request on their company letterhead complimentary subscriptions to *Testing Techniques,* a quarterly technology-oriented newsletter providing a forum for discussion of software testing techniques and quality assurance methods. Contact Software Research Associates, PO Box 2432, San Francisco, CA 94126; (415) 957-1441.

New journal. *Datanetics,* a new bi-monthly journal of data capture applications news, is provided at no charge to those who qualify. For information and a sample copy, contact Scan-Data Corp., 800 E. Main St., Norristown, PA 19401; (215) 277-0500.

Computer installation. A 10-page brochure, "Implementation Planning Guide for Eclipse Data Systems," highlighting the major steps of the computer installation process, is available as publication number 012-795 from Communications Services, M.S. 82310, Data General Corp., 15 Turnpike Rd., Westboro, MA 01581.

Automatic controller and positioning table introduced by Anorad

Anorad has introduced an automatic controller and a positioning table. The Anomatic controller uses a microprocessor for positioning up to four axes for combinations of linear or circular motion. The Anoride table achieves automatic positioning in one to three axes.

The Anomatic controller uses a 12-volt CMOS bus interconnecting the microprocessor to input and output devices so that all logic and controls are CMOS while the microprocessor, PROM, and ROM, are TTL. These are located in only one section of a card. Noise immunity of 4.8 volts is realized throughout, according to the manufacturer.

Programmable from internal memory, paper tape, cassettes, or magnetic cards, the controller contains a built-in PROM programmer to provide non-volatile memory and has full editing capabilities for stored programs. The system can be programmed for linear and circular interpolation, and the following subroutines: step and repeat in two axes, with skip option; automatic alignment; laser scribing; resistor trimming; and canned programs for automatic assembly and inspection.
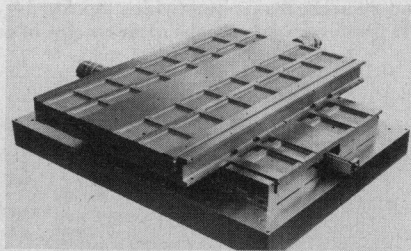
The Anoride table can be used in automatic electronic assembly, laser scribing and machining, and automatic inspection. Each axis consists of only two ribbed meehanite castings. Crossed roller bearings are captured in V-ways ground directly into the castings with built-in preload. The table includes a linear encoder that directly measures table position, independent of lead screw errors, and offers travel from 1" to 42". X-Y and X-Y-Z tables are made by combining two or three standard single axis stages.

Automatic positioning in two or three axes can be achieved by combining two or three standard single-axis stages of Anorad's new positioning table. The company has also introduced a microprocessor-based controller for use in laser scribing, assembly, and inspection.

3-D hardware module available for Whizzard 7000

Megatek is offering an optional three-dimensional transformation hardware module for its Whizzard 7000 vector refresh graphics series that allows a picture to be scaled, rotated, or translated in all three dimensions.

Adding three-dimensional transformation does not require any software rewriting. A special set of calls provided by Megatek Graphics Software places three-dimensional vector information in the Whizzard's display list, allowing vectors to be specified with 12-bit resolution in all three dimensions.

Reader Service Number 27

Reader Service Number 28