PRINTOUT

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PRODUCTS

Heart Rate Monitoring

Lafayette Instrument Company recently announced three new heart rate monitoring devices. These units can provide accurate beat-by-beat heart rate monitoring on either an intermittent or continuous basis, plus the flexibility of biofeedback training. All units have solid state COS MOS circuitry, providing beat-by-beat heart rates in the range of 20-200 beats/min. The Model 76065 ($345) features complete portability with rechargeable NiCad batteries and an automatic gain input circuit. The Model 77066 ($485) is designed for continuous heart rate monitoring from one to three subjects, with three types of input available: (1) photoplethysmograph, (2) piezo electric pick-up, or (3) two-lead ECG. This ac-operated unit features internal calibration tests and an auxiliary analog output for strip chart recording. The Model 77067 biofeedback unit ($945) provides audio and visual feedback modes, in addition to binary threshold indicators and output. Time constants from .1 to 10 sec provide efficient biofeedback training. All three models which are described above have application in HPER, biomechanics, psychology, physiology, human performance, and biofeedback laboratories, or any time beat-by-beat heart rate information is required quickly and accurately.

Lafayette Instrument Company
P.O. Box 1279
Lafayette, IN 47902
(317) 423-1505

Eye Movement Analysis

The performance of the G & W Applied Science Laboratories Series 1900 eye view monitor/TV pupillometer systems has been substantially extended with the addition of a dedicated processor. The Model 1996 computer-based eye view monitor is a system designed for the unobtrusive measurement of the subject's eye position and corresponding pupil diameter. The processor allows greater subject freedom and a more natural testing situation. Head motion is increased to allow the eye to move in a volume of 1 to 2 cu in., a range sufficient to cover the majority of movements encountered in testing. Where additional head motion is required, ASL offers a manual or automatic tracking mirror with remote manual or automatic focusing. The computer also increases the allowable camera-to-subject distance up to 40 in., and allows more choice in placement of the eye camera. The system can accept partially closed eyelids, eyelash interference, and other artifacts. Truncation of the pupil from any direction and more than one corneal reflection can also be accepted routinely. Automatic calibration is also provided.

Visual Information Section
G & W Applied Science Laboratories
335 Bear Hill Road
Waltham, MA 02154

Cardioscope

The minicard cardioscope instantly displays an electrocardiograph by moistening the electrodes with water or saliva and placing the instrument directly over the heart. No patient cable is required. The unit weights less than 1 lb.

Resuscitation Laboratories
Box 3051
Bridgeport, CT 06605

Digital Thermometer

The Model 400 electronic thermometer uses a disposable probe cover which is placed on the probe and then placed under the patient's tongue. The readout appears on the digital display in seconds. A built-in TPR system allows the user to take accurate pulse and respiration readings at the same time. Intravenous drops can be measured also.

Diatek, Inc.
3910 Sorrento Valley Boulevard
San Diego, CA 92121

Teletype Interface

The CC 1200 code converter accepts 10 digits of parallel BCD data from any digital instrument and transmits the reading in serial ASCII to teletypewriters, CRT terminals, tape recorders, computers, and other data equipment.

Nationwide Electronic Systems
1536 Brandy Parkway
Streamwood, IL 60103

Speaking Device

This electronic Votrax speaking device consists of a voice box and a keyboard command device. Using the keyboard, the subject selects words that are represented by three-digit numbers. The voice box simulates the human voice with tonal qualities and inflection levels. The Handi-Voice system has a vocabulary of more than 400 words.

Vocal Interface Division
Federal Screw Works
500 Stephenson Highway
Troy, MI 48084

Split-Lens System

Twin lens enables one camera to display two images on one monitor with different magnifications and different scenes. The lens provides two views, horizontally or vertically split on the monitor. The views can be 180 deg apart, forward, backward, angled, or to one side.

Visual Methods, Inc.
Box 644
Westwood, NJ 07675

Pinch Strength

The Model PM-20 pinch meter is designed to measure pinch strength of fingers from 0 to 20 lb. It has a built-in memory with resettable dial and dual scale that facilitates right- and left-hand tests.

Psytech, Inc.
St. Michaels, MD 21663

Add-In Memory

Dataram offers its 16k x 12 DR-118 and DR-118/A single-board system for both the PDP-8 and PDP-8/A minicomputers. With the 16k designs you need only two boards to achieve the 8's maximum capacity of 32k x 12. The units are $1,840 each.

Dataram Corporation
Princeton-Hightstown Road
Cranbury, NJ 08512

Audioviewers

The Kodak Ektographic Audioviewer is a compact, lightweight rear-screen synchronized sound/slide projector. There are four models. Model 200 is for playback only; Model 250 is for playback and record. Model 400 is for playback and automatic pausing; Model 450 is for playback and record and programming automatic pausing. You can use prerecorded pulsed cassettes with your slides or produce original "soundtracks."

Motion Picture and Audiovisual Markets Division
Eastman Kodak Company
Rochester, NY 14650

Operant Chamber

The Opcon operant chamber is a multischedule Skinner box that is portable. It has a carry handle and weighs 14 lb. Full IC logic controls schedules and functions by switch selection. A tone signal and a cue light are built in. An optional counting module is available. A shock module is also optional. The unit contains two levers; one can be removed. The other lever is adjustable in and out, up and down. No programming or tape punching is required. The complete Opcon 100C system includes 101C control unit, 102C chamber with two levers, 103CA pellet dispenser, 50 disposable trays, and pellets. Cost is $895.

Life Science Associates
1 Fenimore Road
Bayport, NY 11705

Used Minicomputers

PDP-8/L with 4k, TC08, two TU55s, cabinet, and Teletype ASR33 costs $3,750. A PDP-8/I with 4k is advertised at $900. TU55 DECtape is $450. Kennedy 3112 mag tape nine track, 800 bpi is $990. A Data General NOVA Basic with 4k memory is priced at $1,350. A Diablo 21 disk and DCC controller for Data General and DCC computers is priced at $1,950.

Newman Computer Exchange
1250 North Main Street
Ann Arbor, MI 48104

Arteriole Tonometer

The ML-105 is a dual-trace monitor using a noninvasive, nonocclusive, atraumatic technique for continuous blood pressure monitoring. Digital display of heart rate, systolic/diastolic blood pressures, mean blood pressure along with the blood pressure waveform, and ECG waveform. Price: $7,000.

Nicolet Instrument Corporation
5225 Verona Road
Madison, WI 53711

BRIEFS

Microcomputer System: Best Buy

The Commodore PET microcomputer system was probably the most talked about system displayed at the recent (June 1977) National Computer Conference in Dallas, TX. The PET with 4k bytes RAM, a display, keyboard, and casette, all packaged into a small, inte-

grated, attractive system is priced at $595 complete. With 8k bytes RAM, the system sells for $795. The price is amazing, given the items included in the complete system, and it is an indication of what we might expect from other microcomputer firms in the near future.

Commodore International Ltd.
901 California Avenue
Palo Alto, CA 94304

Heath Microcomputer

The new LSI-11 microcomputer system sold by the Heath Company consists of a CRT and keyboard, with the CPU mounted in the CRT, along with 32k 16-bit words of memory. The total kit price is between $2,000 and $2,500. Peripherals include floppy disks and the DECwriter. The entire Digital Equipment Corporation PDP-11 software library is available at nominal cost to the Heath Kit LSI-11 buyer, including RSX11D, RSX11M, and the many higher level programming languages.

A second system, the Heath Kit 8080A, is a typical microcomputer with peripherals and capabilities equivalent to those generally available.

The Heath Company products are not compatible with anything else on the market today. All kits come as assembled boards, so there is no need to fool with chips. Boards are tested at the plant.

Hewlett-Packard Microcomputer

The MC2 microcomputer was developed with Silicon-On-Sapphire (SOS) technology, but uses CMOS as well. SOS allows faster microelectronics. Instructions execute in less than 1 microsec, but memory access logic is limited. You can load data from memory or store data in memory. The first 256 words of external memory are treated as a stack. The product was designed for process control and for internal use at Hewlett-Packard.

Mag Tape for PDP-11

Computer Labs introduced a magnetic-tape memory system for the DEC PDP-11 minicomputer, called the T9000. Incorporating a 75-in./sec magnetic-tape transport that they claim is the quietest in its class, the T9000 permits PDP-11 system integration without software changes for thousands of dollars less than the equivalent DEC system.

The nine-track PDP-11 compatible controller is available in either an 800-BPI NRZI version or one incorporating both NRZI and 1600-BPI phase-encoded formats. It runs RSX-11, RT-11, and DOS unaltered and is TM11/TU10 compatible on all commands and status

vector interrupts. It has the same device starting address (773050) as the DEC unit, thus assuring an error-free boot.

Computer Labs, Inc.
505 Edwardia Drive
Greensboro, NC 27409

Diskette-Based Computer

DEC is marketing a compact diskette-based computer unit for less than $8,000. Called DECstation, the system uses LSI and PDP-8 technology. An LSI version of the PDP-8 is integrated into a VT series video terminal as the central element of the system. The unit supports a maximum of 16k words of main memory.

The WT78 is a word-processing terminal similar to DECstation but without floppy disks. A DEC Word Station 78 is a single-user system consisting of the WT78 terminal, a dual floppy disk for local mass storage, and either Digital's existing letter-quality printer or a new 180-character/sec printer, the LA78. The WS78 costs $13,990 with letter-quality printer.

Low-Cost CRT Terminal

Research Inc.'s Teleray Division, Minneapolis, has introduced a family of CRT terminals. Major features of the 4001 units include block mode, multipage storage, and editing. Single-quantity price of $1,750 includes as standard block or character mode transmission, 1,920-character display, 1,640-character memory, upper- and lowercase, character and line insert, and delete, transmit line, page, memory, and partial page or memory. A microprocessor bus-oriented configuration is used with a 3,000 ROM firmware package and a 4,000 RAM buffer as standard.

Silent Portable Memory Terminal

At the recent National Computer Conference in Dallas, Texas Instruments featured its Silent 700 Model 765 portable memory terminal with a bubble memory module. The Model 765 portable terminal is said to use 20k bytes of memory, expandable to 80k bytes in 20k-byte increments. The new terminal is said to be capable of accessing any indexed record in memory in less than 15 msec. The unit is capable of transmitting data at rates of 300 BPS via a built-in acoustic coupler. Price is given at $2,995 for single quantities.

Computer Terminal with Arabic Script

HP's 2645R terminal enables users to switch from a standard 64-character Roman set to a 31-character Arabic script set whose characters are then displayed from right to left. A basic terminal costs $4,350.

Hewlett-Packard Company
1501 Page Mill Road
Palo Alto, CA 93404

Animal Lab Resurfacing

NuCrete is a resurfacing compound that is said to be ready for traffic 48 h after application. The compound comes in a variety of colors, is chemically resistant, and antislip.

Compact Chemical Corporation
P.O. Box 441
Mastic Beach, NY 11951

Computer Automation Minicomputer

Computer Automation, Irvine, CA, has introduced a "new generation" minicomputer family. The family's highlight is the LSI 4/10, a full 16-bit minicomputer on a board priced at $645 for single units.

Programmable Plotter

Four-color plotting is possible with a new x/y plotter that changes pens automatically. The 9872 is a microprocessor-based A3 sized plotter which works with HP desktop computers. Its features include addressable moves as small as .25 mm, selectable pen-speed point digitizing, window plotting, five resident character sets, off-scale data handling, dashed line fonts, and axes generation. The system is made by Hewlett-Packard of Palo Alto, CA.

Line Printer

The Axiom EX-800 is an 80-column line printer that operates at 160 characters/sec. The Ex-800 is a stand-alone unit that weighs 12 lb and is 9½ x 4 x 11 in. deep. Price: $655.

Axiom Corporation
5932 San Fernando Road
Glendale, CA 91202