PRINTOUT

JOSEPH B. SIDOWSKI
University of South Florida, Tampa, Florida 33620

PRODUCTS

Proximity Sensor

The Model 178 proximity sensor is used to study tremors, respiration, startle reflex, and drinking, eating, or sleeping habits of humans and subhuman animals. The device is designed to convert the slightest body movements into proportional voltage signals. The sensor works on electric capacitance principle, wherein the subject is placed between two electrodes of a capacitor. The subject's movements create small alterations in the capacitance which are converted into electrical signals. Each movement large enough to trigger the threshold detector advances a counter by one.

Columbus Instruments International Corporation
950 North Hague Avenue
Columbus, OH 43204

Microelectrode Puller

With the Brown-Flaming type microelectrode puller, electrodes with tip diameters less than .1 micron can be consistently and reliably pulled. Very small tip diameters are produced, as short as 6 mm in length (taper). A fine-tipped, stiff electrode for penetration of small cells results. The puller operates on the principle of rapidly cooling the electrode heater to produce electrode lengths shorter than conventional pullers capable of pulling fine tips. Two symmetrical electrodes can be pulled at the same time. Price: \$2,500.

David Kopf Instruments
7324 Elmo Street
Tujunga, CA 91042

Telemetry Activity Monitor

RATAM was developed for remote monitoring of human or animal movements under field conditions. It is intended for larger subjects, such as dogs, rabbits, horses, humans, etc., which are able to carry 170 g of the transmitter. Accelerometer-sensor produces electrical signals proportional to the acceleration of the animal limb to which it is attached. Sensitivity is high enough to record tremors or shivering. Electrical signals are transmitted over 100 yards to the receiving station. Signal from the radio receiver is fed to the threshold circuit which controls a printing counter. Optional (RATAM Model 2S) makes it possible to separate small signals from larger signals and record them on a two-channel printing counter with one channel assigned,

for example, to tremors and another to major body movements.

Columbus Instruments International Corporation
950 North Hague Avenue
Columbus, OH 43204

Programmable Attenuator

The Model D programmable attenuator handles 127.75 dB in .25-dB steps. Frequency response: dc to 20 kHz $\pm$ 1 dB; -3 dB at kilohertz. Switching time: less than 10 microsec. Switching transient: at output, worst case, 1 V x 200 nsec. Input impedance: more than 10 kohm. Input range: 15 V p-p, maximum. Each attenuator is supplied on a two-sided plated-through printed circuit board that fits into a standard DEC double-height backplane. The analog input circuit contains a differential amplifier for maximum common mode rejection, and variable system gain is provided at the input and output of the circuit to achieve optimum signal-to-noise ratio for any desired signal voltage range. The logic circuit contains polarity options on all inputs and a 9-bit latch for attenuation data. Options include high slew rate (\$40) and dc offset trimmers (\$15). Attenuator price approximately \$250.

Charybdis
Box 2595
Boston, MA 02208

Osmotic Minipump

The Alzet osmotic minipump is a capsule-sized, implantable, self-powered pump that can administer experimental solutions or suspensions continuously at the rate of 1 ml/h for as long as 1 week. Alzet can be used to deliver bioactive substances intravenously, intraperitoneally, or subcutaneously. It has also been used for localized delivery into the cerebral ventricles and stereotactically defined regions of the brain in unrestrained animals. Ten-pack Alzet osmotic minipump, Model 1701, reservoir volume 170 microliters, and nominal pumping rate of 1 microliter/h: \$135. A 50-pack costs \$602.50.

Alza, Department Y
950 Page Mill Road
Palo Alto, CA 94304

Filmstrip Projector

Insta-Load 35 sound/filmstrip projector permits move-

ment of filmstrip or cassette in a search or review mode, while maintaining complete sound and sight synchronization. Cue-Lok uses a microprocessor to remember the precise location of the filmstrip or audio program. The memory does not require extra pulse-track recording or optical coding of film, since it operates with any 50-Hz filmstrip cassette program recorded to ANSI standards. The system also has a push-button enabling the operator to mark a particular frame and later command the unit to return to that frame in sight and sound synch when desired.

Singer Education Systems
Department C-L
Rochester, NY 19603

Heat Flow Sensor

The Model HFTA-2 heat flow sensor measures heat loss from any area of the skin surface. The sensor can be used to study blood flow, thermal stress, etc., and can be implanted in animals. The unit is thoroughly waterproof. Sensor diameter is 25.4 mm; thickness is 1.5 mm.

Thermonetics Corporation
Box 9112
San Diego, CA 92109

Blood Pressure

The Cardio-10 electronic blood pressure meter gives both an audible and flashing light-emitting diode (LED) indication of blood pressure, with no stethoscope required. Range is 200 mm Hg to 300 mm Hg. The unit is battery operated but an ac adaptor is available.

Burlington Bio-Medical Corporation
100 Fairchild Avenue
Plainview, NY 11803

Programmer for KIM-1

A programmer for the KIM-1 microcomputer is capable of programming both 2708 and 2716 (5 V only) EPROMS. Any RAM starting address may be specified up to 65K; any p/ROM starting address may be specified along with the number of bytes to be programmed. The programmer is on a single pc board with connector. Program runs on all computers that use MOS Technology 650X microcomputer and have I/O ports 1700 to 1703 available. Cost: \$59.95.

Optimal Technology, Inc.
Blue Wood 127
Earlyville, VA 22936

S-100 Light Pen and Interface Board

Sunset Technologies has introduced the first low-cost professional-quality light pen and plug-compatible S-100 interface board usable with any video board. The interface board utilizes four I/O ports that occupy

four successive I/O addresses selectable by dipswitch. Package, including light pen and pc board (tested and assembled), is \$250.

Sunset Technologies
201A East Ortega Street
Santa Barbara, CA 93101

Inexpensive Miniprinter

The new MP-44 miniprinter is a 5 by 7 dot matrix printer for microcomputer systems which sells for \$257. Electrosensitive paper is used to make permanent copies at speeds up to 88 characters/sec with 44 characters/line. The printer is housed in an enclosure 4½ x 8¾ in.

Electronic Product Associates, Inc.
1157 Vega Street
San Diego, CA 92110

BRIEFS

BKP Scientific

BKP Scientific has recently been appointed as the sole worldwide distributor for the Grason-Stadler 3002 SCAT hardware and software. BKP will be responsible for all sales and service for both new and existing SCAT systems.

BKP Scientific was formed by Don Church, formerly of Grason-Stadler. All requests concerning SCAT should be directed to Mr. Church.

BKP Scientific has also been appointed New England representative for both Med Associates, Inc., a manufacturer of physiological monitoring equipment, and LVB Corporation, a manufacturer of solid state programming modules.

BKP Scientific
P.O. Box 34
Berlin, MA 01503

Coulbourn Instruments

"Response," a free publication from Coulbourn Instruments, recently ran a two-part article on electrodes: placement, use, care, and artifacts. The information is useful and clear.

Coulbourn Instruments, Inc.
Box 2551
Lehigh Valley, PA 18001

or

Box 194
Laramie, WY 82070

Computer Application in Medical Care

The second annual Symposium on Computer Appli-

cations in Medical Care will be held November 6-8, 1978, in Washington, D.C. A segment on the use of computers in clinical psychology will be included. Anyone interested in submitting papers should contact James Johnson, PhD, Department of Psychiatry and Behavioral Sciences, Eastern Virginia Medical School P.O. Box 1980, Norfolk, VA 23501 (804-446-5890).

National Conference on the Use of On-Line Computers in Psychology

The Eighth National Conference on the Use of On-Line Computers in Psychology will meet in San Antonio, Texas, at Trinity University, on Wednesday, November 8, 1978. The Conference will be held 1 day prior to the meetings of the Psychonomic Society in San Antonio, Texas. John Durrett, Psychology Department, Southwest Texas State University, is Local Arrangements Chairman. Individuals interested in suggesting topical areas or submitting papers should write to John W. Cotton, University of California at Santa Barbara, Graduate School of Education, Santa Barbara, CA 93106, or Richard Millward, Department of Psychology, Brown University, Providence, RI 02912. Students with computer interests are invited to apply for student membership. Information concerning membership may be obtained from the Conference Secretary-Treasurer, Cynthia Null, College of William and Mary, Williamsburg VA 23185.

Microprocessor Microcourse

Popular Electronics has been running a series of tutorial-type articles (see, e.g., April and May 1978 issues) covering microprocessors. The series covered binary, octal, and hexadecimal number systems, as well as basic logic gates, combinational and sequential logic circuits, memories, bus-oriented logic, and microprocessor organization.

Voice Data Entry

Threshold Technology Inc. of Debran, N.J. has introduced the Threshold 2000, a minicomputer-based clustered intelligent terminal controller that can interface as many as 32 Threshold voice data entry terminals to IBM mainframes. The controller, which communicates with the CPU via 3270 protocol, connects to terminals with RS232 interfaces. Each voice data entry terminal can recognize at least 64 utterances (defined as sounds of 2-sec or less duration) expandable to 600 utterances. Vocabularies can change from application to application. A Threshold 2000 system with 3270 communications and one voice entry terminal with a 64-utterance capacity, sells for about \$25,000.

Research Telemeters

Newly developed, dual-channel, miniature implantable telemeters are particularly appropriate for chronic studies with small animals. Form factor, location of sensor, and suture points may be varied. Operation lifetime: 6 months or more. Weight: 7 g.

R. M. Goodman, Principal Scientist
Physical and Life Sciences Department
The Franklin Institute Research Laboratories
20th and Race Streets
Philadelphia, PA 19103

GE Terminet Printer Terminal (Used)

The Terminet Model 300 printer terminal is for sale used and refurbished, supposedly in excellent condition, for \$750. Catalog No. TM21K402.

Herbach and Rademan, Inc.
401 East Erie Avenue
Philadelphia, PA 19134

KIM Microcomputer

The KIM-1 microcomputer, built and tested, is available for \$245. The KIM-4 expander motherboard is \$119. KIMS1, S100 compatible, is \$165 built and tested (\$125 in kit form). Power supply is \$40.

Computer Warehouse
584 Commonwealth Avenue
Boston, MA 02215

Recording Multiple Aspects of Social Gaze

(Submitted by A. Rodney Wellens, Department of Psychology, University of Miami, Coral Gables, FL 33124)

Mutual gaze or eye contact has been the focus of an increasing number of empirical investigations within social psychology during the past 15 years (Argyle & Cook, 1976). One area of recent interest has centered upon the differential functions of various aspects of looking during social interaction, including looking while talking and/or listening (Argyle & Ingham, 1972; Exline, Gray, & Schuette, 1965; Goldberg & Wellens, in press; Schulz & Barefoot, 1974). A common method of obtaining measures of these and other aspects of looking behavior has been the use of event recorders linked to switches used by groups of raters who simultaneously witness experimental social exchanges. This technique requires the coordinated scheduling of several trained raters and many hours of transcribing data. While the use of computer-compatible digital recording equipment (Sidowski, 1977) may significantly reduce transcribing time, the cost of such instrumentation may be prohibitive and the need for multiple raters and additional data processing inconvenient.

One relatively inexpensive and effective method I have found useful for recording various aspects of social gaze involves the use of surplus counters and relay equipment found in many operant conditioning laboratories. When appropriately wired, these devices reduce the number of individuals needed for rating and automatically collapse the raw data into suitable units for analysis. One such system (wiring diagram available from

the author) used sound-activated relays to replace raters normally assigned the task of judging subjects' talking and listening times. These relays serve as logic gates for differentiating looking while talking and looking and while listening from raters' judgments of simple looking time. Frequency and duration data may be obtained directly by connecting the relays and switches to electromechanical counters and cumulative timers. These provide instant numerical readout at the end of each rating session without the need for additional data processing. If videotapes are used, a split screen device may be used to insert an image of the running counters above or below the image of the rated subject. This is especially useful for spot checking the accuracy of ratings and for recording data in experiments that require a comparison of behaviors observed during different segments of an interaction.

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