New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science *nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.*

Information logger is a 30-channel instrument designed and developed as a wind-data-conversion system. Sample time per channel is 100 μsec, and heading data time is 140 μsec. Multiplexing and conversion accuracy, based on 5-volt maximum input, is said to be $\pm$0.1 percent. Output data are available at either a high or low rate. High-speed data output is employed for external monitoring by magnetic tape. These data are also available to a supervisory display board that displays ten channels at a time, with each display capable of presenting any one of the possible channels as selected by switch. Lower-speed data acquisition, under the control of a 300-cy/sec paper-tape perforator, may be selected at a readout interval of 1, 2, 5, 10, or 60 sec. A manual control permits selection of other readout rates. The information logger accepts bipolar, analog-signal inputs that are converted into digital words. Each analog channel presents to the input transducers an input impedance of 50 kohm. The order of channel sampling can be changed by a plugboard arrangement. Each analog input channel can be checked for accuracy, linearity, and channel identification. (Lockheed Electronics Co., Dept. Sci515, U.S. Highway 22, Plainfield, N.J.)

Power supply that can be programmed provides a regulated continuously adjustable output, from 0 to 40 volts d-c, that can be changed with a front panel control or with an external resistance at 50 ohm/v. Full-load output current is 500 ma over the entire range. A current limit control, adjustable between 60 and 600 ma, protects circuits being tested. Programming can be accomplished from a distance by use of stepping switches to change resistance values. (Hewlett Packard Co., Dept. Sci512, 1501 Page Mill Rd., Palo Alto, Calif.)

Calibrator for transducers and associated instrumentation provides a multiplicity of mv/v or mv settings. The unit provides 55-mv/v output signals in five ranges, from 0–0.5 to 0–10, with 11 points per range. Each point is said to be accurate within $\pm$0.1 percent or $\pm$0.0003 mv/v, whichever is greater. A choice of 120- or 350-ohm source resistance is provided. The calibrator can be used for calibrating millivolt instruments if powered by a known regulated voltage. (Baldwin-Lima-Hamilton Corp., Dept. Sci514, 42 Fourth Ave., Waltham 54, Mass.)

Amplifier for signals from photovoltaic cells provides a gain of 10 to permit measurement of illumination levels less than 5 ft-ca. The self-contained device features $\pm$2 percent linearity, on-off control for zeroing of a moving-coil instrument, and a four-hole base for quick mounting. Power is provided by a 1.34-volt mercury cell. (Daystrom, Inc., Dept. Sci510, 614 Frelinghuysen Ave., Newark 14, N.J.)

Low-temperature chamber employs a standard commercial nitrogen cylinder as refrigeration agent. The temperature control system uses an electronic thermocouple potentiometer control network programmed by a plastic cam that can be shaped to produce any time-temperature curve desired. The system is said to respond at rates up to 25°C per minute over a range of

+20° to −200°C. The model 3005 provides controlled temperature over the entire range. The model 3005A, which uses a liquid-filled bulb system instead of the electronic thermocouple temperature network, provides temperature control between +20° and −100°C and functions at full refrigerating capacity below that range. (Cryo-Therm, Inc., Dept. Sci513, Fogelsville, Pa.)

D-c corona test set includes a 20-kv, corona-free, d-c high-voltage supply; corona pickup filter network; and corona detector. The test set displays the voltage pattern of corona discharge on a built-in oscilloscope. A vacuum bell jar and table allow simulated high-altitude testing of insulating materials, cable components, and assemblies. The high-voltage supply is continuously adjustable between 0 and 20 kv. Output metering ranges of 0 to 5 and 0 to 20 kv, and of 0 to 50, 0 to 500, and 0 to 5000 μa leakage current are provided. (Associated Research, Inc., Dept. Sci521, Chicago, Ill.)

Barium fluoride crystal is doped with uranium for laser applications and produces output radiation of wavelength 26,000 A. The crystals are ¼-in. diameter and are available in lengths up to 1½ to 1¾ in. They are priced at $150 per inch of length. Fabricated finished crystals for laser use are also available. (Semi-Elements, Inc., Dept. Sci-502, Saxonburg Blvd., Saxonburg, Pa.)

Signal conditioning system, a transistorized system of modular construction, accepts low-level signals from strain-gage transducers and produces an amplified voltage proportional to the input signals. The instrument incorporates input condition, automatic calibrator, power supply, balance indicator, and amplifier into a space that permits four channels to be accommodated by a rack 7 in. high and 19 in. long. The system's overall stability is said to be ±0.02 percent; noise less than 5 μv; output up to 100 ma. Plug-in cards permit change in value of calibration resistors and addition of dummy arms for one or two active-arm bridges, a resistance thermometer input, and a reference junction for thermocouple applications. (Allegany Instrument Co., Dept. Sci518, 1091 Wills Mountain, Cumberland, Md.)

JOSHUA STERN

National Bureau of Standards, Washington, D.C.

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