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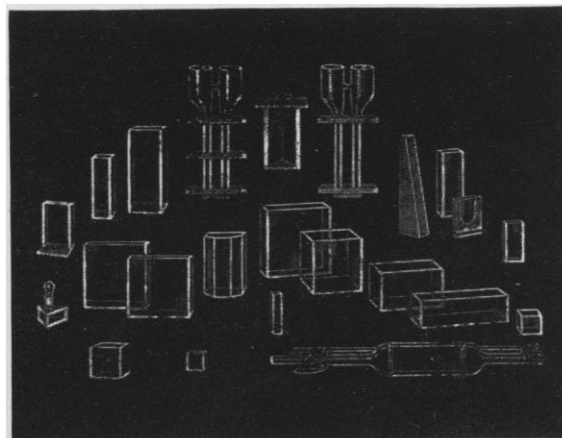
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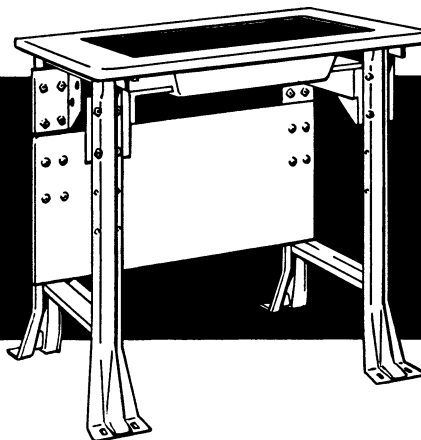
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# New Products

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.

■ **PHOTOELECTRIC READOUT MATRICES** for computer and data-processing applications feature response times the order of 10  $\mu$ sec. Each matrix is made up of a multiple array of self-generating silicon cells. Typical current response is 300  $\mu$ a for 0.01 in.<sup>2</sup> at 1000 lu/ft<sup>2</sup>. (International Rectifier Corp., Dept. Sci230, 1521 E. Grand Ave., El Segundo, Calif.)

■ **IMPEDANCE BRIDGE** measures resistance from 0 to 12 megohms in eight ranges, capacitance 0 to 1200  $\mu$ f in seven ranges, and inductance 0 to 1200 hy in seven ranges; dissipation factor is 0.001 to 1.000 at 1 kcy/sec; storage factor is 0.02 to 1000 at 1 kcy/sec. Corresponding accuracies in most ranges are said to be: resistance,  $\pm$ (0.1 percent + 1 dial division); capacitance,  $\pm$ (0.25 percent + 1 division); inductance,  $\pm$ (0.9 percent + 1 division); dissipation factor,  $\pm$ (5 percent + 0.0025); storage factor,  $\pm$ (5 percent + 0.0025). Plug-in RC networks permit selection of frequency from 100 to 10,000 cy/sec. (Rinco Inc., Dept. Sci231, 7962 E. Powell Blvd., Portland, 6, Ore.)

■ **ELECTROMAGNETIC BRAKES** for fractional-horsepower motors and gear trains are designed to be mounted directly on housings. Three sizes range from 1 to 2 in. in diameter with brake torques from 10 in. oz to 15 in. lb and power consumption 2 to 4 watts. Coils are available for 6, 12, 18, 28, 48, and 100 volt d-c. (Dial Products Co., Dept. Sci233, 19 Cottage St., Bayonne, N.J.)

■ **POWER SUPPLY** delivers 200 ma at 100 kv d-c. Operation is on 208-volt, 3 phase, 60 cy/sec power. A choke-input filter reduces output ripple to less than 0.1 percent. The high-voltage unit is contained in an oil-filled tank. The control unit, separately housed, provides motorized control of output voltage. Panel meters show kilovolts and milliamperes. (Del Electronics Corp., Dept. Sci240, 521 Homestead Ave., Mount Vernon, N.Y.)

■ **SPECTROPHOTOMETER** is specifically designed for measurement of hemoglobin concentration in whole blood. Analysis time is approximately 3 min, and the result is read directly as grams of hemoglobin per 100 ml of sample. (Coleman Instruments Inc., Dept. Sci-246, 42 Madison St., Maywood, Ill.)

■ **TIME-CODE GENERATOR**, for recording time signals in magnetic tape recording of test data, consists of a crystal-controlled oscillator and seven decades of frequency division. Eight timing signals are produced from 100,000 to 0.01 cy/sec. Each signal is coded by a different pulse width permitting mixing of signals to identify elapsed time. The generator can be controlled by external electrical signals or by contact closure. (Computer Measurements Co., Dept. Sci235, 12970 Bradley Ave., Sylmar, Calif.)

■ **AUTOMATIC TITRATOR** detects equivalent point by color change without electrodes. Change in the intensity of a beam of light passed through the solution cuts off titrant supply. All parts of flow-control valve in contact with the solution are of Teflon or glass. A time-delay mechanism and magnetic stirring are provided. (E. Leitz, Inc., Dept. Sci234, 468 Fourth Ave., New York, N.Y.)

■ **RECORDER** plots r.m.s. voltage of an a-c signal from 20 cy to 200 kcy/sec on a logarithmic scale against time or another parameter that can be made time-dependent. Input range is 0 to 40 db with sensitivity 1 mv at 0 db. The instrument is a pen-writing, servo-balancing device with interchangeable potentiometers for 20, 40, and 80 db ranges. Maximum writing speed is 20 in./sec. An accessory linear potentiometer permits conversion to d-c recording, 0 to 0.8 volt full scale. Paper speeds range from 2.5 to 75 in./min. (General Radio Co., Dept. Sci239, West Concord, Mass.)

■ **CALIBRATING MACHINE** for force-measuring devices is a knife-blade and lever machine said to be 99.8 percent accurate from a few ounces to 20,000 lb. Load ratios of 10, 20, 40, 75, and 100 to 1 can be arranged. A mirror and lens arrangement is used to detect balance. (W. C. Dillon & Co., Inc., Dept. Sci238, 14620 Keswick St., Van Nuys, Calif.)

■ **OSCILLOSCOPE** displays fast repetitive wave forms by sampling successive signals. Each sample point is delayed in phase from the preceding sample so that a different part of the signal is examined each time. The entire signal is explored by a predetermined number of samples, from 50 to 1000, which recreate the wave form on the cathode-ray tube. Resolution is 50 Mcy/sec with rise time 0.7  $\mu$ sec. Calibrated sweeps vary from 1 to 100  $\mu$ sec/cm. (Hewlett-Packard Co., Dept. Sci244, 275 Page Mill Rd., Palo Alto, Calif.)

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- a) The Directory of AAAS Officers and Activities, 96 pp., already published; and
- b) The General Program of the Annual Meeting, c. 200 pp., which will appear early in December

Both of these, sold at cost, may be purchased separately—in advance (see coupon below), or at the meeting. Some of their *respective* contents are:

#### The General Program

1. The two-session general symposium "Moving Frontiers of Science IV," arranged by the Committee on AAAS Meetings.
2. Programs of the 18 AAAS sections (symposia and contributed papers).
3. Programs of the more than 80 participating societies.
4. Sessions of the Conference on Scientific Communication, Conference on Scientific Manpower, and the Academy Conference.
5. The Special Sessions: AAAS Address and Reception, National Geographic Society, Phi Beta Kappa, Sigma Xi, RESA, Tau Beta Pi Association.
6. Details of the Morrison Hotel—center of the Meeting—and of the other session sites.
7. Titles of the latest foreign and domestic scientific films to be shown in the AAAS Science Theatre.
8. Exhibitors in the 1959 Annual Exposition of Science and Industry and descriptions of their exhibits.

#### The Directory

1. AAAS officers, staff, committees, for 1959.
2. Section committees and other AAAS Council members.
3. The 285 affiliated organizations.
4. Historical sketch and organization of the Association.
5. Complete roll of AAAS presidents and their fields.
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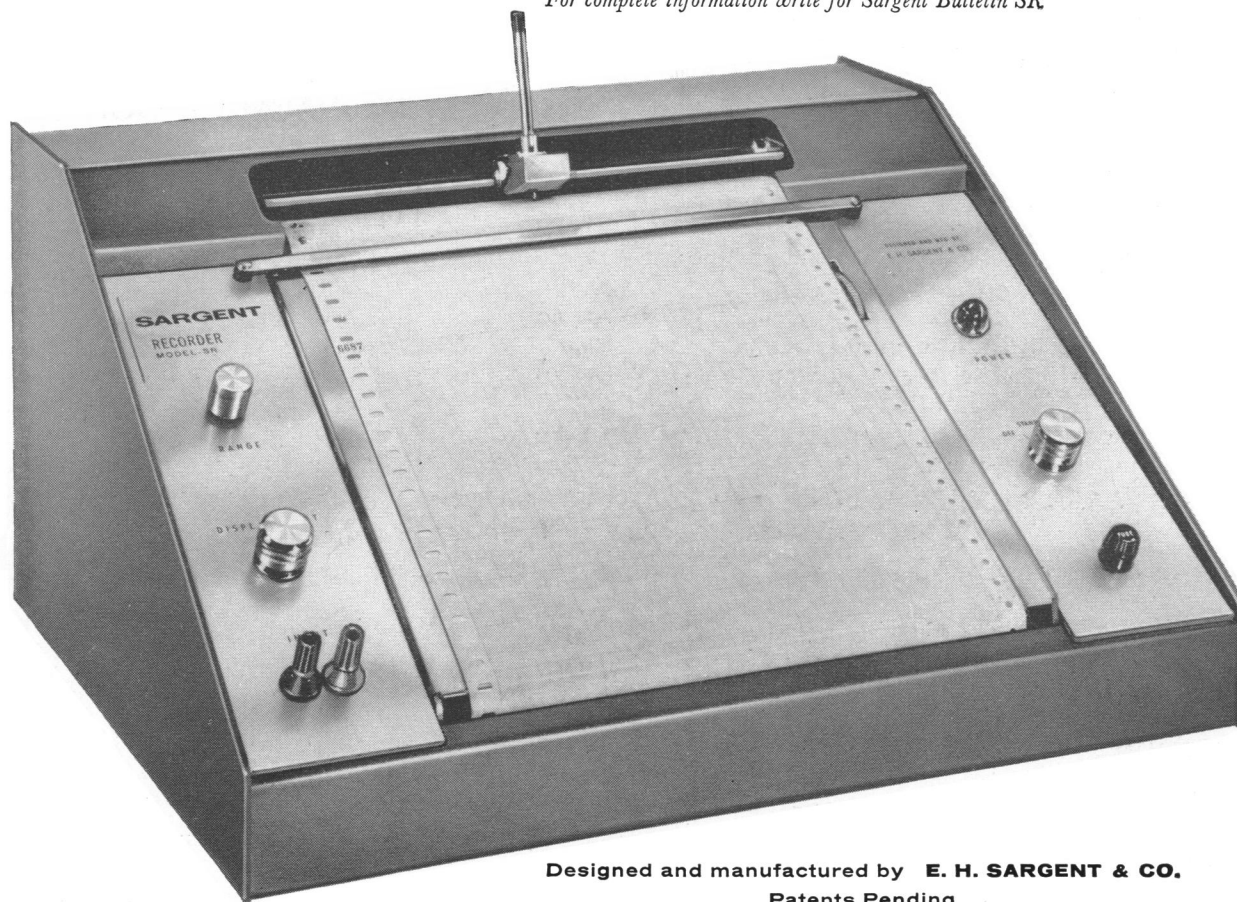
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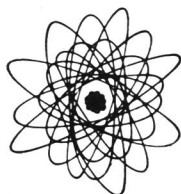
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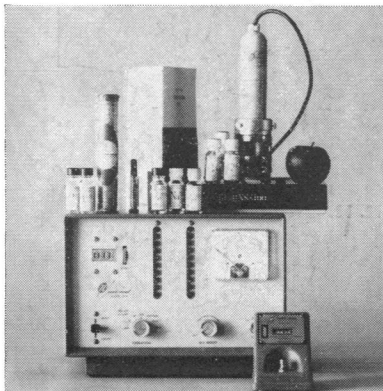
# NUCLEAR REVIEWS

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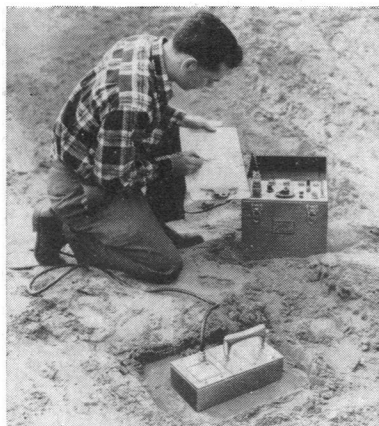
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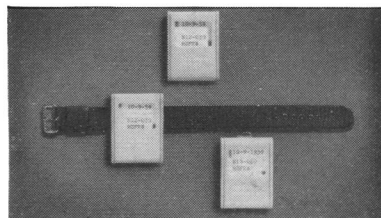
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