

Equipment

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science does not assume responsibility for the accuracy of the information. A coupon for use in making inquiries concerning the items listed appears on page 718.

■ **ANGULAR-ACCELERATION GENERATOR** may be continuously adjusted within its range by exchanging or adjusting the position of weights and by varying the winding of the torsion bar that powers the generator. Widely different ranges may be attained by replacing the torsion bar. Acceleration range is thus 0.5 to 200 rad/sec². Motion generated is picked up by a potentiometer of 9000-ohm resistance. (Humphrey Inc., Dept. S958)

■ **DIGITAL VOLTMETER** compares the input voltage to be measured with an internally generated linear sawtooth voltage wave. When voltage coincidence occurs between the input and the generated reference, a pulse is generated. The time interval between the initiation of the sawtooth reference and the occurrence of this pulse is proportional to the input voltage. The time interval is measured and displayed by an oscillator-counter combination. Accuracy of a four-digit model is ± 0.01 percent with encoding rate of 98/sec. Range of 0.1 to 1000 v can be extended to 1 mv by use of external amplifiers. (Servonics, Inc., Dept. S961)

■ **ROLLER MICROMETER** sorts objects by allowing them to fall between the spaced rollers into a series of bins. Spacing of the two rollers varies from one end to the other so that the objects being sorted fall through the space at a location determined by their size. For example, with spacing differing by 0.001 in. from one end to the other, sorting by groups of 0.00005 in. can be achieved with good consistency. Fragile objects can be handled. (Affiliated Manufacturers Inc., Dept. S963)

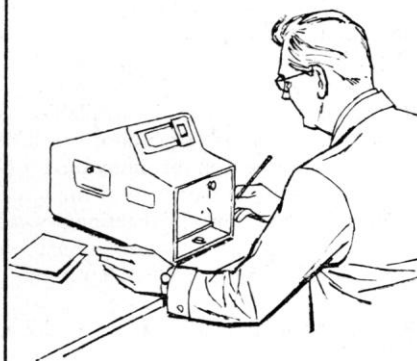
■ **PRESSURE TRANSDUCER** is water-cooled to operate at temperatures of 5000°F or higher. The device combines a diaphragm and a tubular strain gage. Frequency response is constant to 10,000 cy/sec. Accuracy is ± 1 percent of full scale, which may be 1000 or 2000 lb/in². (Norwood Controls Division of American Standard, Dept. S965)

■ **MAGNETOSTRICTIVE STORAGE UNIT** permits access time of 3 μ sec. The unit consists of eleven 120- μ sec delay lines, ten of which store a total of 600 bits at 1 Mcy/sec pulse repetition frequency. The eleventh line provides synchronization

High-speed precision scale saves time in research



MODEL 4142



SHADOGRAPH®

gives fast, positive stop reading
...eliminates parallax

Model 4142 Shadograph is recommended for weighing cancer tissue and tumors. Fully-enclosed weigh pan, easily removable for sterilization, is readily accessible through a clear plastic door. Unaffected by air currents. Weight indication by a light projection system gives fast, precise reading. Operates on 110 volts, 60 cycles. Rated capacity 15 grams; visible sensitivity to 5 milligrams. Movable dial viewer for 5 rows of graduations, each row 3 grams by 5 milligram graduations. Weight range selector has 5-notch beam corresponding to dial chart. Write for complete data and specifications.

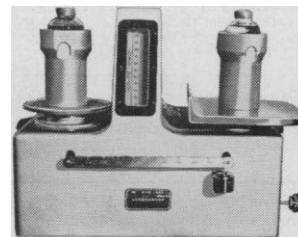
SMALL ANIMAL SCALE

Model 4203B-TC-SA recommended for fast, precise weighing of mice, chicks, frogs and small rats. Dial graduated in two columns: 0—30 grams and 15—45 grams in increments of 0.5 gram. Dial shutter with outside control to close off dial column not in use. Beam 100 grams by 1 gram. Other models up to 3 kilos, 350 milligram sensitivity for rats, hamsters and guinea pigs.



CENTRIFUGE BALANCE

Model 4206B-TC also for general laboratory use and small-animal weighing. Has tare control knob to zero the dial, or position for over-and-under reading. Capacity 3 kilos; sensitivity to 350 milligrams. Dial is graduated 0-100 grams in increments of 1 gram. Beam 500 grams by 5 grams.



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for computer control. Each line may be driven by a single tube or transistor. Read coils can be installed every 3 μ sec along the length of the line. Each pickup requires one tube or transistor for amplification and reshaping. Temperature coefficient of 0.005 percent per degree centigrade may be improved by compensation techniques. (Deltone Inc., Dept. S968)

■ **LINT-FREE CLOTHING** is available as lab-coats, coveralls, or uniforms. The garments are woven of individual extruded filaments rather than of the usual spun or twisted yarns. Exceptional wear properties and ease of decontamination are claimed. (Milburn Co., Dept. S967)

■ **PROXIMITY COIL** consists of two adding primaries and two bucking secondaries. Sensitivity may be controlled by adjusting a screw which unbalances the system. Passage of nonmagnetic material, such as zinc and lead parts, through the coil restores balance and actuates a relay. (Automatic Timing and Controls, Inc., Dept. S980)

■ **CHROMATOGRAPHS** use a centrifugal field to reduce the time necessary for chromatographic separation. Two units are available. One uses a paper disc 45 cm in diameter for simple chromatography; the other, for electrophoresis, uses a rectangular revolving head with swinging cups to collect fractions. Both units are equipped with motors variable in speed from 300 to 900 rev/min. A speed indicator and a timer are provided. The electrophoresis unit is supplied with an adjustable 1000-v supply. (Labline Inc., Dept. S974)

■ **VACUUM CALCULATOR** is a slide-rule device for computation of pumping capacity needed to evacuate a given volume to a specified vacuum in a given time, or to compute evacuation time if pump capacity is known. The device is available on request. (F. J. Stokes Corporation, Dept. S966)

■ **ANALOG- AND DIGITAL-COMPUTER LINK** permits simultaneous operation of full-scale analog- and digital-computer facilities. Analog-voltage-to-digital conversion is effected with resolution of 10 binary digits plus a sign bit. Conversion time is less than 30 μ sec; conversion repetition rate is 33 kcy/sec. Digital-to-voltage-analog conversion is accomplished in a conversion time of 2 μ sec. Output voltage is ± 100 v, and output impedance is 47 μ h and 100 ohm. (Epsco Incorporated, Dept. S969)

■ **MICROSPECTROPHOTOMETER WITH ULTRAVIOLET MICROSCOPE** furnishes a record of transmission or absorption as a function of wavelength of areas as small as 1 μ^2 . The spectrophotometer is of double-beam type adjustable from 2300 to 6000 Å. One beam provides a reference, the other goes through the microscope specimen. The microscope is furnished with one reflecting objective of magnification 53, one reflecting condenser, and one ocular of magnification 3.5. Fine focus may be adjusted in steps of 1 μ ; and stage may be rotated and moved in x and y directions. (Neutronics Research Co., Dept. S976)

JOSHUA STERN
National Bureau of Standards

PERSONNEL PLACEMENT

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Replies to blind ads should be addressed as follows:

Box (give number)
Science
1515 Massachusetts Ave., NW
Washington 5, D.C.

POSITIONS WANTED

Biochemist, Ph.D., 30, single; 4 years of medical and graduate teaching. Publications in protein metabolism and enzymology. Teaching and research position desired. Box 66, SCIENCE. 3/21, 28

Experimental Pathologist, background in bacteriology and bone marrow, research project leader, major company. Desires research position in animal pathology. Box 62, SCIENCE. 3/28

General Physiologist, Physical Biologist, Ph.D., wishes opportunity for teaching and independent research in biological science. Publications; 6 years of intensive research; 3 years of teaching and research. Box 78, SCIENCE. 3/28

(a) Immunochemist; Ph.D., 12 years' experience in medical research during which time he has done considerable free-lance medical writing. (b) Physician well qualified in physiology; 9 years' experience in teaching and research; now research director, important institution. Medical Bureau, Burnice Larson, Director, 900 North Michigan, Chicago. X

POSITIONS WANTED

Botanist, Ph.D., 32, male; 5 years' teaching experience. Elementary botany, morphology. B.S. in arts-education. Publications. Assistant professor large eastern university desires challenging teaching position. Box 68, SCIENCE. X

Pharmacologist, Ph.D., age 26. Research publications; teaching experience. Seeks staff position in medical institution while studying for M.D. Location immaterial. Box 83, SCIENCE. X

Physiological and Experimental Ecologist, zoologist, Ph.D. Publications; 15 years' experience. Desires teaching and research position. Box 76, SCIENCE. 3/28

Zoologist, Ph.D., professor, broad biological training and experience, desires department headship. Box 75, SCIENCE. 3/28

POSITIONS OPEN

Applications are invited for position, beginning September 1958, of Assistant Professor of Biology to teach invertebrate zoology. Opportunities for research available. Salary scale \$4400-\$6000. Appointment not necessarily at bottom of scale. University contributes toward moving expenses. Applications with curriculum vitae and names of three referees and a recent photograph should be sent to the Head, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada. 3/28; 4/4

(a) Endocrinologist; M.D., Ph.D. thoroughly experienced endocrinological research, head department staff of nine; prefer experience adrenal research; \$10,000 up. (b) Toxicologist; M.D., Ph.D., D.V.M. to head department; trained and/or experienced pathology; minimum \$8500; eastern pharmaceutical concern. (c) Laboratory Instructor; especially qualified teach bacteriology, hematology, eastern technician training school; to \$7200 for Ph.D. (d) Biochemist; M.S., Ph.D. to head active department, 200-bed general hospital; college city; Midwest. (e) Senior Research Virologist; Ph.D., experienced tissue culture for original independent research involving chemotherapeutic studies on human, animal virus; vaccine development; \$7500 up; East. Woodward Medical Bureau, Ann Woodward, Director, 185 North Wabash, Chicago. X

POSITIONS OPEN

Associate Medical Director to assist in clinical investigation for large Canadian firm of manufacturing chemists. Headquarters in Montreal. Some travelling involved. M.D. or Ph.D. in pharmacology. Box 74, SCIENCE. 3/28

Biologist-Pharmacologist. Unusual opportunity for aggressive man to head department. Independent research and testing organization. Send résumé to Dr. J. Eibert, Scientific Associates, 3755 Forest Park, St. Louis 8, Missouri. 4/4, 11

Graduate Research Assistantship in Pharmacology; M.S. and chemical background preferred; annual stipend \$2400 starting 1 July 1958; eastern metropolitan area. Box 82, SCIENCE. 4/4

Index Editors, biological science publication: (a) Junior Grade, B.A. or B.S., biology or cognate science, mature, \$3600; (b) Senior Grade, M.A. or M.S., index experience or other base for work potential above duties at junior level, \$4500. Career posts with automatic and merit increases after training. Biological Abstracts, Index Department, 3815 Walnut St., Philadelphia 4, Pa. 3/28

(a) Instructor, Assistant Professor and either Associate or Full Professor in Physiology; salaries respectively \$5700, \$7000, \$8000, and \$10,000; Ph.D. or M.D. with teaching and research experience; teaching principally in physiology course for medical students. (b) Virologist, preferably Ph.D.; master's considered; duties consist of conducting surveys; junior man, \$8000; seniors, \$12,000-\$17,000; Midwest. (c) Chief Chemist to head department, 500-bed general hospital affiliated university medical, East; \$6000-\$8000. (d) Directors of Organic and Biological Research, Ph.D.'s; new departments, pharmaceutical company; Midwest. 3-4. Medical Bureau, Burnice Larson, Director, 900 North Michigan, Chicago. X

Literature Biologist, with some library training and/or experience in acquisitions and records for challenging responsible position with biological information center in eastern city. Salary dependent upon qualifications; annual increases. Annual leave system; sick leave; retirement program. Please send details of qualifications and statement of salary requirements to Box 73, SCIENCE. 3/28

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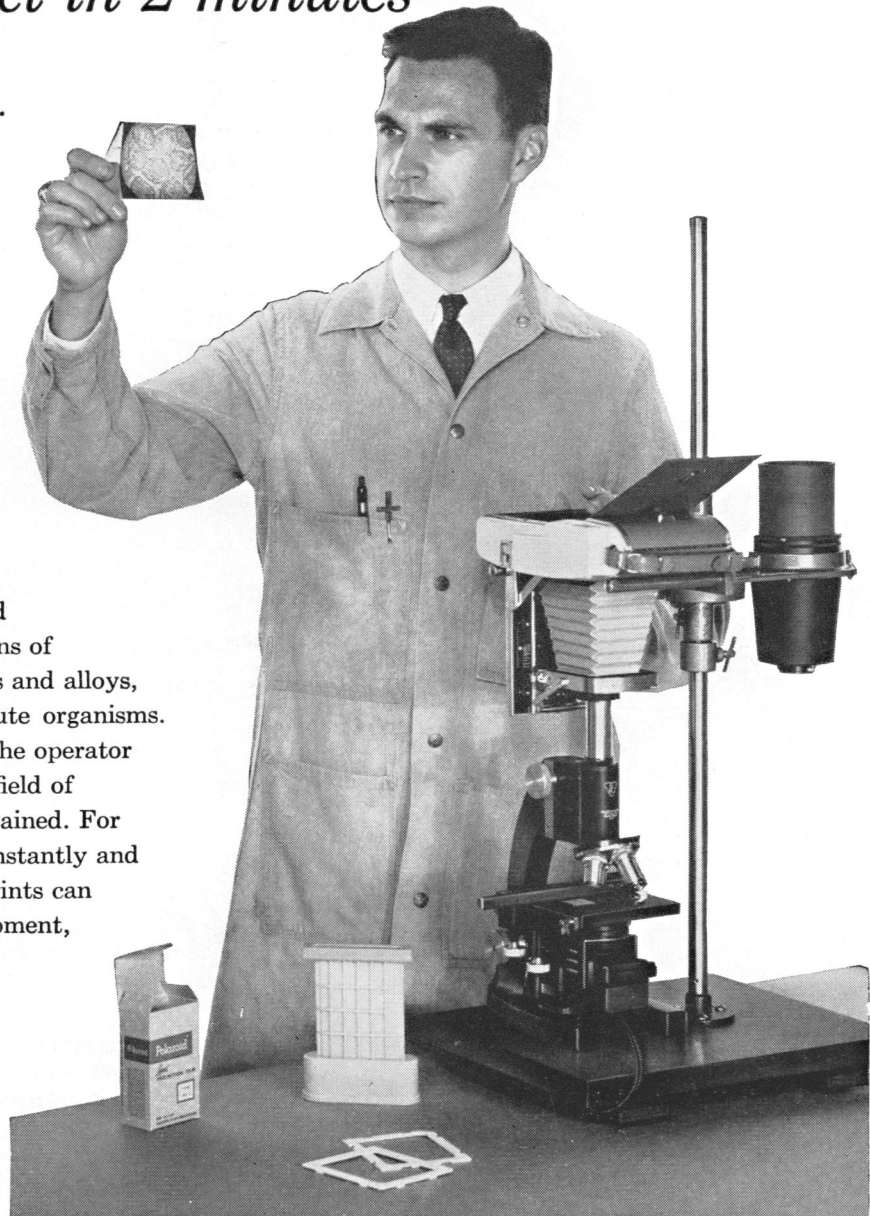
While the specimen is still available, the operator knows immediately whether the proper field of view and correct exposure time were obtained. For lecture courses, slides can be produced instantly and projected for classroom study. (Paper prints can be made simply by using the same equipment, but another film.)

The Cenco Micrography

Camera Support is custom-designed specifically for use with the Polaroid Land Camera. Height is adjustable to fit any make of microscope. A special viewer, which adjusts to the optical equivalent of the camera, is used to focus microscope—prior to moving camera into position.

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Projection Film produces finished black and white slides in two sizes: $2\frac{1}{4}" \times 2\frac{1}{4}"$ and $3\frac{1}{4}" \times 4"$, for use in lantern slide projectors. This panchromatic film has speed, range, contrast and latitude to produce high detail photomicrographs. (speed of 1000 daylight —ASA equivalent exposure index)



For further information, write for circular 1208P

No. 65730 Cenco Micrography Camera Support	\$87.50
No. 65735 Polaroid Land Camera	\$89.75
No. 65737	\$ 3.49

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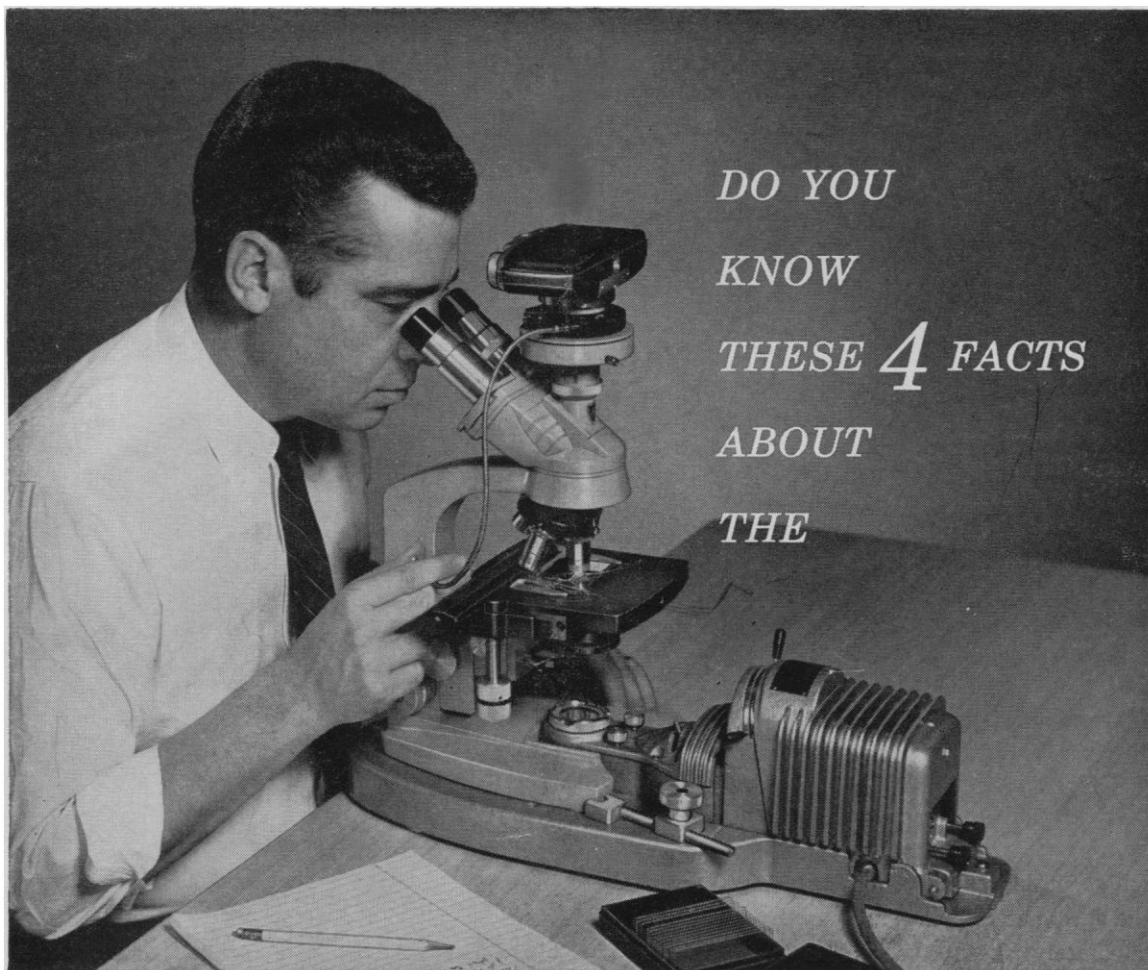
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