

# 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 682.*

■ **AIR-SAMPLING KIT** for measuring lead concentration in air uses a small can of liquefied gas as its power source. The device includes a charcoal trap, midget impinger, and pump. Air samples are drawn into a glass scrubber containing an iodine solution to react with lead. The kit weighs 4.5 lb. A 1-lb container of Freon provides enough power for two samples. (Union Industrial Equipment Corp., Dept. 330)

■ **SIGNAL GENERATOR** is comprised of a power supply and interchangeable oscillators covering frequencies from 20 to 3000 Mcy/sec in five ranges. Two modulator units offer the option of high- or low-power operation in the 500- to 1000-Mcy/sec range. Frequency accuracy is  $\pm 0.5$  percent; stability  $\pm 0.1$  percent. (B. J. Electronics, Dept. 332)

■ **POWER SUPPLY**, transistorized and regulated, furnishes 0 to 300 v at 0 to 1 amp. Regulation for line changes from 105 to 125 v is  $\pm 0.01$  percent; for load changes, less than  $\pm 0.01$  percent or  $\pm 0.002$  v. Ripple is less than 1 mv rms. Recovery time is less than 50  $\mu$ sec. Temperature coefficient is less than 0.01 percent per degree centigrade. (Kepco Laboratories, Inc., Dept. 341)

■ **STRIP-CHART RECORDER** uses a 1 ma d-c d'Ars-o-nval movement to record on pressure-sensitive paper. The scale is rectangular and 2 5/16 in. long. Chart length is 63 ft. To record, the meter pointer is pressed against the paper at 2-sec intervals. Chart speed is 8 in./hr and may be varied to 30 in./hr by means of gear-train inserts. Accuracy is  $\pm 2$  percent of full scale. Size is 3 5/8 by 5 5/8 by 4 1/8 in., weight 3 1/2 lb. (Rust Industrial Co., Dept. 342)

■ **RADIOGRAPHIC UNIT** uses cobalt-60 to furnish radiation for inspection of heavy castings, weldments, and so forth. Six inches of steel can be radiographed in 15 min. The radiation source is contained in a steel-jacketed lead sphere flexibly mounted for aiming. A radiation shutter is controlled remotely. The equipment is mobile. (Picker X-Ray Corp., Dept. 346)

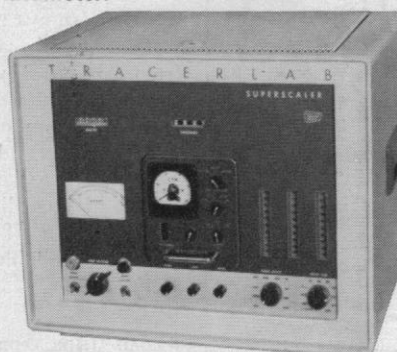
■ **COMMUTATOR** permits sampling of up to 100-voltage inputs at rates up to 1200 per sec. The commutator uses two groups of low-speed relays, two groups of high-speed relays, and two high-speed transistor switches. The relays are driven

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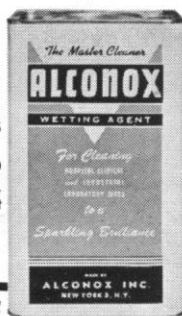
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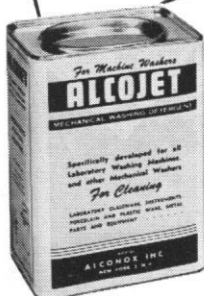
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by ring counters. The commutator is specifically designed to be used for input into the manufacturer's computer system. (Consolidated Electrodynamics, Dept. 345)

■ **REMOTE-CONTROL HEAD** for industrial television cameras is powered by two motors that provide tilt of 45 deg up or down and rotation of 370 deg. Cameras weighing up to 20 lb are handled. Operational speed is 2 deg/sec in elevation, and 3½ deg/sec in azimuth. (Houston Fearless Corp., Dept. 344)

■ **VARIABLE-VOLTAGE SOURCE** sweeps cyclicly through any voltage range up to 0 to 135 v at a rate of 10 v/sec. Output current capacity ranges from 2 to 20 amp for various models. The device consists of a motor-driven, reversible, variable autotransformer; a meter relay with independently adjustable upper- and lower-contact settings; and motor-control relays. (Amplifier Corporation of America, Dept. 347)

■ **WAVEFORM ANALYZER** is a superheterodyne instrument measuring the components of a complex waveform to a value - 75 db below the fundamental over a frequency range of 50 to 20,000 cy/sec. Input level of the fundamental can be ± 20 db relative to 1.0 mw into 600 ohm. Frequency stability is ± 1 percent, and response is flat within ± 1 db. Input impedance is 100 kohm. (Wayne Kerr Instruments, Dept. 348)

■ **DIGITAL VOLTMETER** has accuracy of ± 0.1 percent of full scale on any of six ranges from 0.01 to 1 v. Full-scale ranges or volts-per-digit values are continuously variable within each range step. Three decimal digits and the sign are displayed. Maximum read-out time, exclusive of reset and recording, is 0.8 sec. Output for operation of digital recording devices is available. (Data Instruments, Dept. 349)

■ **LOAD INDICATOR** uses a null-balance servo system to give continuous digital indication to 1 part in 1000. Accuracy is ± 0.15 percent. The instrument accepts standard four-arm strain-gage transducers of 120 or 350 ohm. Full-scale response time is 5 sec. An integrating network can be switched in to smooth fluctuating signals. (Performance Measurements Co., Dept. 350)

■ **OSCILLOSCOPE** for panel mounting consists of a cathode-ray tube with 1¼- by 3-in. screen; high-voltage power supply; escutcheon with positioning, beam, and focus controls and an edge-lighted graph screen. Sensitivity is 56 v/in. vertical and 80 v/in. horizontal. Weight is less than 5 lb. (Waterman Products Inc., Dept. 353)

■ **POWER-SUPPLY TESTER** measures internal impedance of power sources of 0- to 500-v (d-c) output. Nine ranges cover full-scale impedance from 0.1 to 1000 ohm. Also provided are 12 voltage-indication ranges from 0.001 to 300 v full-scale. Accuracy is ± 2 percent for resistance and ± 5 percent for voltage at frequencies from 6 cy to 500 kcy/sec. (Alto Scientific Co., Inc., Dept. 355)

■ **GAMMA INTENSITY RECORDER**, a portable, battery-operated, transistorized ion chamber, operates unattended to record intensity of gamma radiation as a function of time. Recording is done on magnetic tape with tape reloading at 12- or 60-hr intervals. Accuracy is ± 15 percent over the photon energy range of 0.2 to 2 Mev. Dose-rate levels from 0.1 to 100,000 r/hr may be recorded. (Land Air Inc., Dept. 351)

■ **TENSILE TESTER** is a pendulum-type table-model instrument. Speeds are variable between 2 and 20 in./min. Available ranges are 0 to 10, 0 to 30, and 0 to 100 lb. Other ranges can be supplied. A direct-reading elongation indicator is optional. (Thwing-Albert Instrument Co., Dept. 370)

■ **METERING PUMP** transfers liquids or gases through plastic or rubber tubing by means of rollers that compress the tubing. Tubing up to ¼ in. in diameter is accommodated. Models with flow rates as low as 2 ml/day and as high as 75 ml/min are available. The flow rate depends on the size of tubing, rotor speed, tubing compressibility, and roller pressure. Tubing can be inserted without access to the ends. (New Brunswick Scientific Co., Dept. 374)

■ **TWO-PHASE POWER SUPPLY** for 400-cy/sec operation provides three continuously variable outputs, two at 0 deg, and one at ± 90 deg. Total output power is 580 volt-amp. All outputs are individually fused and are isolated from input. The ± 90-deg output is isolated from the other two and can be switched rapidly to lead or lag. (Pacific Technical Co., Dept. 373)

■ **MASS SPECTROMETER**, for potassium-argon dating studies of minerals and rocks, consists of a glass spectrometer tube with an ion source and ion detector, analyzing magnet vacuum system, and associated electronic equipment. Evacuation is accomplished by a two-stage mercury diffusion pump and by pumping with the Bayard-Alpert gage provided for pressure measurement. Operating pressure of 10<sup>-11</sup> mm-Hg is attained in 48 hr. (Atomic Laboratories Inc., Dept. 352)

JOSHUA STERN  
National Bureau of Standards

# APPLICATION FOR HOTEL RESERVATIONS

## 125th AAAS MEETING

Washington, D.C., December 26-31, 1958

The list of hotels and their rates and the reservation coupon below are for your convenience in making your hotel room reservation in Washington. Please send your application, *not* to any hotel directly, but to the AAAS Housing Bureau in Washington and thereby avoid delay and confusion. The experienced Housing Bureau will make assignments promptly; a confirmation will be sent you in two weeks or less.

**As in any city, single-bedded rooms at minimum rates may become scarce; double rooms for single occupancy cost more; for a lower rate, share a twin-bedded room with a colleague.** Most hotels will place comfortable rollaway beds in rooms or suites at \$2.00 to \$2.50 per night. Mail your application *now* to secure your first choice of desired accommodations. All requests for reservations must give a definite date and estimated hour of arrival, and also probable date of departure.

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Hotels with an asterisk have sessions in their public rooms. For a list of headquarters of each participating society and section, see page 151, *Science*, July 18.

Hotel	Single	Double Bed	Twin Bed	Suite
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*Sheraton-Park	8.00-12.00	12.00-14.50	11.00-16.00	20.00-60.00
*Shoreham	all 9.00	all 12.00	all 12.00	20.00-50.00
*Statler	all 10.00	all 14.00	all 14.00	24.00-30.00
*Washington	7.00- 8.00	11.00-12.50	11.00-12.50	24.50-45.00
*Willard	10.00-12.50	13.00-17.00	14.00-18.00	25.00-35.00
Roosevelt	7.00- 9.00		10.00-12.00	18.00-24.00
Sheraton-Carlton	12.00-17.00		17.00-21.00	
Windsor Park	all 9.00	all 14.00	all 14.00	13.00-18.00

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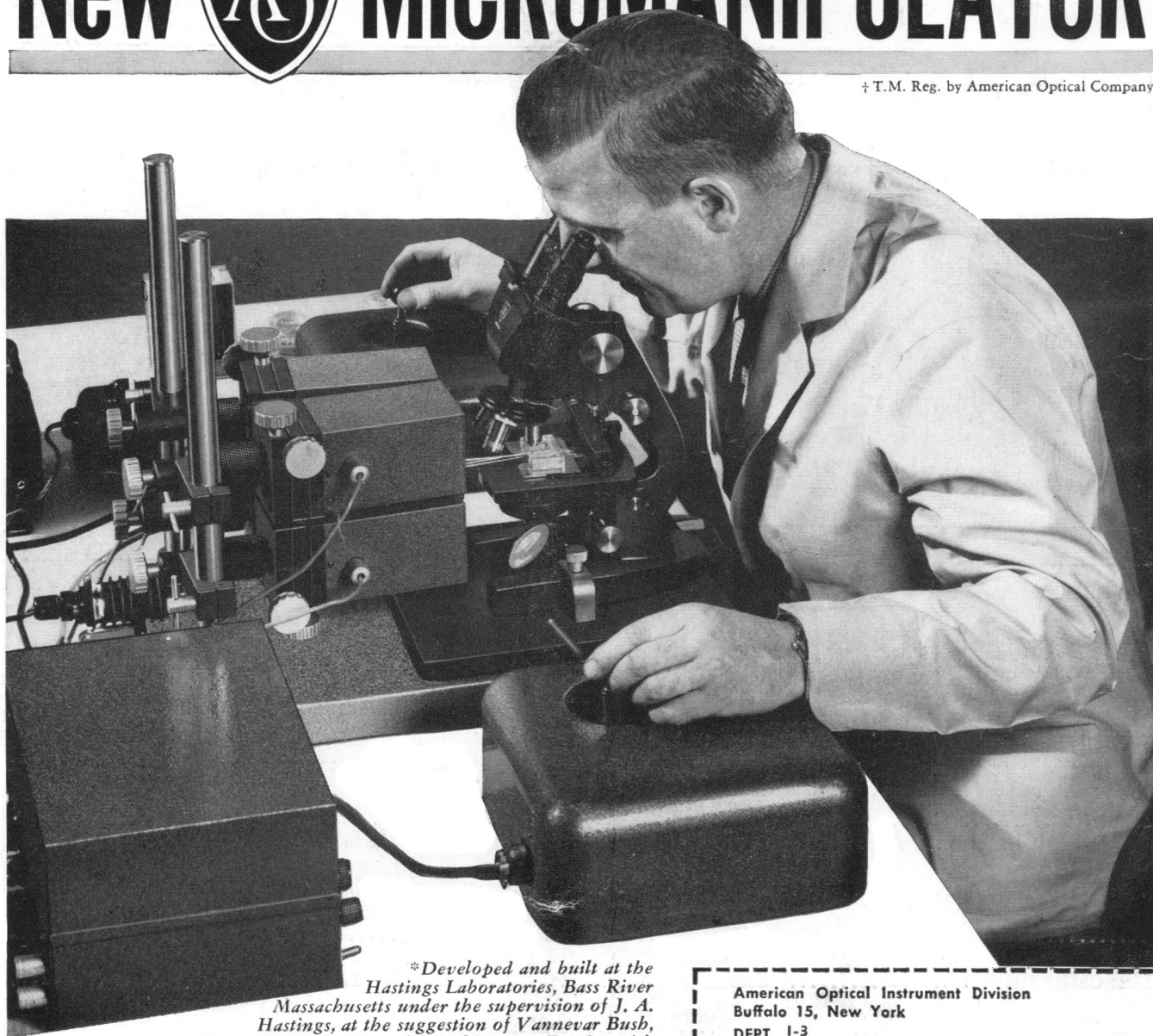
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