

stant of the ratio recorder is adjustable and can be set, for example, to provide a continuous average value of thickness of coating on moving strip. (Applied Research Laboratories, Dept. S779)

■ **MAGNETIC-STIRRING HOT PLATE** uses a motor-driven magnet rotating beneath a 7-by-7-in. hot plate to spin a stirring magnet placed in the liquid. Stirring speed may be varied to as high as 1140 rev/min. Temperature control to 700°F is provided. (Thermo Electric Manufacturing Co., Dept. S777)

■ **GAMMA-RAY WELL-LOGGING PROBE** is a self-contained scintillation counter. Output signal is a d-c voltage suitable for driving conventional millivolt-type recorders. A single conductor and ground are used to transmit the signal to the surface. Other signals may be simultaneously transmitted over the same conductor. (Mt. Sopris Instrument Corp., Dept. S778)

■ **LIQUID-LEVEL INDICATOR** utilizes the principle of ultrasonic pulse ranging. Level is read directly in feet in two ranges. The instrument is fully transistorized and consumes 5 w of power at 115 v, 60 cy/sec. (Bogue Electric Manufacturing Co., Dept. S783)

■ **SLAVE OSCILLOSCOPE** with 17- or 21-in. screen can be used with any standard low-frequency oscilloscope to provide a large replica of the oscilloscope pattern. The slave may be located up to 100 ft from the driving oscilloscope. The linearity of the x and y amplifiers is 1 percent of full scale. Frequency response is from d-c to 100 kcy/sec. (Allen B. DuMont Laboratories, Inc., Dept. S788)

■ **VACUUM-TUBE VOLTMETER** provides indications equal to the product of signal magnitude and the cosine of the phase angle between the signal and reference voltages. Single-range instruments have sensitivities from 10 mv on each side of zero. The meters are panel mounted. (Trio Laboratories, Inc., Dept. S782)

■ **INTEGRATOR** for chromatograph recorders automatically measures the area under each curve of the chromatography spectrum and displays the result on a six-digit counter. Integration is performed by a ball-and-disk mechanism which receives actuating signals related to the position of the recorder pen. Pulses from the integrator actuate the counter and a pipping pen that records units and tens tips at the edge of the chart. The maximum count rate is 500 count/min, but the rate can be increased to 1000 count/

min when no pipping pen is used. Accuracy is ± 0.5 percent of full-scale range. The integrator can be installed in existing recorders. (Minneapolis Honeywell Regulator Co., Dept. S780)

■ **ELECTRON MICROSCOPE** features magnification continuously variable from 1200 to 12,000 diameters and resolving power better than 50 A. The high-voltage supply is variable from 20 to 75 kv. A film cassette accommodates up to 36 exposures. Micrographs are made on 28- by 2.8-mm film, or on 3¼- by 4-in. plates. Stereomages can be produced by rotating the specimen holder under vacuum. A low-frequency beam wobblers aids in rapid determination of focus. Condenser, objective, and projector lenses are electromagnetic. No cooling water is necessary in the pumping system. Pump-down time, from a cold start, is 20 min. (Philips Electronics, Inc., Dept. S792)

■ **FILLING MACHINE** dispenses solutions at rates variable from 3 to 60 fills per minute with volumes adjustable from 0.002 to 16 oz per stroke. Piston displacement is regulated by a micrometer dial graduated in 0.001 in. (National Instrument Co., Dept. S791)

JOSHUA STERN
National Bureau of Standards

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