

6-8. Cell Structure and Function, 10th annual symp., Ann Arbor, Mich. (J. M. Allen, Dept. of Zoology, Univ. of Michigan, Ann Arbor.)

6-8. Oxford Ophthalmological Cong., Oxford, England. (I. Fraser, 21, Degpole, Shrewsbury, Shropshire, England.)

6-8. School and University Health, 3rd intern. cong., Paris, France. (Comité d'Organisation du Congrès d'Hygiène Scolaire et Universitaire, 13, rue du Four, Paris 6^e.)

6-11. Seed Testing, intern. conv., Oslo, Norway. (Intern. Seed Testing Association, Danish State Seed Testing Station, Thorvaldsensvej, 57, Copenhagen V, Denmark.)

6-12. Chagas' Disease, intern. cong., Rio de Janeiro, Brazil. (C. Chagas, Instituto de Biofísica, avenida Pasteur 458, Rio de Janeiro.)

7-10. Royal Medico-Psychological Assoc., annual meeting, Glasgow, Scotland. (RM-PA, 11, Chandos Street, London, W.1, England.)

12-17. American Waterworks Assoc., annual conv., San Francisco, Calif. (H. E. Jordan, AWA, 521 Fifth Ave., New York 17.)

13-17. National Assoc. of Power Engineers, natl. conv., Boston, Mass. (A. F. Thompson, Secretary, NAPE, 176 W. Adams St., Chicago, Ill.)

13-17. Plastic Surgery, 26th intern. cong., London, England. (D. Matthews, Organizing Secretary, Intern. Cong. on Plastic Surgery, c/o Inst. of Child Health, Hospital for Sick Children, Great Ormond St., London, W.1.)

13-17. Standardization, intern. (council meeting), Geneva, Switzerland. (ISO, 1-3, rue Varembe, Geneva.)

15. American Soc. of Facial Plastic Surgery, New York, N.Y. (S. M. Bloom, 123 E. 83 St., New York 28.)

15-17. Fluorine Chemistry, symp., Birmingham, England. (Chemical Soc. of London, Burlington House, Piccadilly, London, W.1.)

15-17. Shaft Sinking and Tunnelling, symp., Olympia, London, England. (Institution of Mining Engineers, 3, Grosvenor Crescent, London, S.W.1.)

15-18. British Assoc. of Urological Surgeons (members and guests), Glasgow, Scotland. (Joint Secretariat, 45, Lincoln's Inn Fields, London, W.C.2, England.)

15-18. British Cong. of Obstetrics and Gynaecology, 15th, Cardiff, Wales. (BCOG, Maternity Hospital, Glossop Terrace, Cardiff.)

15-24. British Medical Assoc., Edinburgh, Scotland. (BMA, Tavistock, Sq., London, W.C.1, England.)

16-24. Canadian Medical Assoc., 92nd annual meeting in conjunction with the British Medical Assoc., Edinburgh, Scotland. (A. D. Kelly, CMA, 150 St. George St., Toronto 5, Ontario, Canada.)

17. High Energy Nuclear Physics, 9th annual intern. conf. (Intern. Union of Pure and Applied Physics, Moscow, U.S.S.R.). (R. E. Marshak, Univ. of Rochester, Rochester, N.Y.)

19-24. American Crystallographic Assoc., Ithaca, N.Y. (J. Waser, Rice Inst., Houston 5, Tex.)

19-25. Pediatrics, 9th intern. cong.,

Montreal, Canada. (R. L. Denton, P.O. Box 215, Westmount, Montreal 6.)

20-26. Radiation and Atmospheric Ozone, joint symp., by Intern. Union of Geodesy and Geophysics and World Meteorological Organization, Oxford, England. (WMO, Campagne Rigot, 1, avenue de la Paix, Geneva, Switzerland.)

22-23. Rocky Mountain Cancer Conf., Denver, Colo. (N. Paul Isbell, 835 Republic Bldg., Denver 2.)

23-30. Radiology, 9th intern. cong., Munich, Germany. (Sekretariat des 9 Internationalen Kongresses für Radiologie, Reitmorstrasse 29, Munich 22.)

26-30. International Psychoanalytical Assoc., Copenhagen, Denmark. (Miss P. King, 37 Albion St., London, W.2, England.)

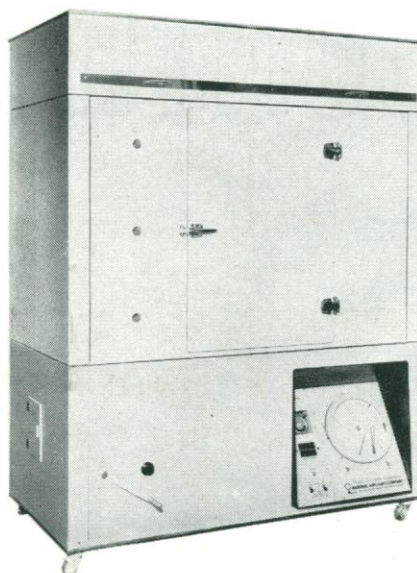
27-4. International Federation of Translators, Bad Godesberg, Germany. (Dritter Internationaler FIT-Kongress, Kongress Sekretariat, Bundesverband der Dolmetscher und Übersetzer e. V. (BDÜ) Hausdorfstrasse 2, Bonn, Germany.)

30-31. Computers and Data Processing, 6th annual symp., Estes Park, Colo. (W. H. Eichelberger, Denver Research Inst., Univ. of Denver, Denver 10, Colo.)

(See issue of 15 May for comprehensive list)

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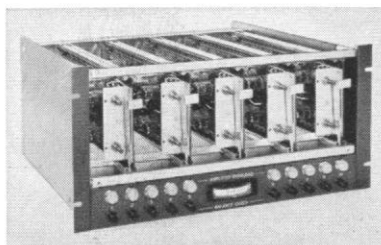
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11

New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable, and it reflects the claims of the manufacturer or other source. Neither Science nor the writer assumes responsibility for the accuracy of the information. A coupon for use in making inquiries concerning the items listed appears on page 1566.

■ **PHOTOJUNCTION CELL** type 7223 is a germanium p-n alloy junction type with S-14 response. The cells are of head-on design with shell diameter 0.08 in. and minimum window diameter 0.06 in. Wavelength of maximum response is 15,000 Å. Dark current with polarizing voltage of 2.5 v is $14 \mu\text{a}$. Sensitivity at 15,000 Å and 2.5 v polarization is $0.68 \mu\text{a/w m}^2$. Maximum polarizing voltage is 50. (Radio Corporation of America, Dept. 828)

■ **DELAY LINE** has band width up to 1000 Mc/sec. Six models have characteristic impedance of 50, 75, and 93 ohm. Total delays are 1.11 and 11.1 μsec and 47.5 m μsec . Rise time is less than 4 percent of delay at any point. Accuracy of better than 0.5 percent with correction factors is claimed. Maximum input voltage is over 500 v. (AD-YU Electronics Laboratory, Inc., Dept. 837)

■ **RADIOISOTOPE LABORATORY**, for use in training for analytical and industrial applications of radioactive isotopes, incorporates all equipment needed for measuring radioactive disintegrations. Typical laboratory includes a shielded Geiger-Mueller counter, sample changer, radiation absorber, scaler, sample preparation equipment, radioactivity standards, and radiation source. (Nuclear-Chicago Corp., Dept. 838)

■ **SERVO AMPLIFIER**, designed to operate in a 60-cy/sec servo system, obtains its input from a synchro control transformer or similar source and drives a 20-w servomotor. Input voltage for full 115-v r.m.s. output is 2.0. Input impedance is 20,000 ohm, output impedance $750 + j250$ ohm. The amplifier will operate from -55° to $+55^\circ\text{C}$ at full ratings. (DI/AN Controls, Inc., Dept. 839)

■ **INFRARED INCINERATOR** permits ashing of small amounts of organic materials. Heating is provided by focusing rays from an infrared lamp onto a crucible supported at the focal point of a gold-plated parabolic reflector. Operation is on 110 v a-c or d-c. (National Instrument Co., Dept. 850)

■ **MAGNET**, for removal of ferromagnetic particles from the eye, is said to exert an attractive force over 100 times the weight of the particles. A special cobalt-iron with high saturation flux density is used for the magnetic core. The magnet provides a clear field of approach out-

side a 120 deg cone angle with its apex at the pole tip. Weight is 15 lb. (Metropolitan-Vickers Electrical Co., Dept. 847)

■ **REFRIGERATED CENTRIFUGE** attains 40,000 *g* in its eight-place, 50-ml head and 26,000 *g* in a six-place, 25-ml head. Temperature is kept constant to $\pm 1^\circ\text{C}$ by a fin-coiled 1-hp evaporator and a combination of plastic-foam and fibreglas insulation. An electric tachometer indicates rotational speed. (International Equipment Co., Dept. 849)

■ **NITROGEN GENERATOR** produces nitrogen with any hydrogen content between 0.25 and 25 percent. The process draws nitrogen from both air and ammonia. The process is exothermic and the platinum catalyst used is said to have indefinite life. Generator capacities range from 50 to 10,000 ft^3/hr . Operation requires lines for water, air, and ammonia, and 110-v power. (Baker and Co., Dept. 842)

■ **PROXIMITY DETECTOR** is sensitive to metallic objects over a range of distance adjustable between 0.001 and 0.1 in. Output for open circuit is a change from 2 v to 0 v when metal approaches. Output impedance is 750 ohm. Response time permits counting at rate up to 7200 per minute. Models are available for magnetic and for nonmagnetic metals. (Parametrics, Dept. 844)

■ **CORROSION TEST CABINETS** provide chambers measuring 96 by 48 by 48 in. Construction material is stainless steel or epoxy-lined mild steel. The chamber is heated by water jackets on all four sides and bottom to temperatures up to 50°F . Temperature is controlled to $\pm \frac{1}{2}^\circ\text{F}$. Counter-weighted lid has a 23-by-17-in. window. (G. S. Equipment Co., Dept. 859)

■ **IRRADIATION SERVICES** are offered with outputs of two electron accelerator units. The smaller of the two produces 1 Mev at 2 kw, the larger 1.5 Mev at 15 kw. Output of the larger unit is equivalent to approximately 1 Mc of cobalt-60 and, when converted to x-rays, to radiation from 300,000 c of cesium-137. The service is available on either a single or sustained basis. Research assistance can be provided. (Radiation Dynamics, Inc., Dept. 861)

■ **INFRARED SPECTROPHOTOMETER** scans a spectral range from 1.0 to 15.5μ with NaCl optics and a range from 0.5 to 38μ with other available prisms. With NaCl optics accuracy of $\pm 0.015 \mu$ and reproducibility of $\pm 0.005 \mu$ are claimed. Resolving power is 0.02μ at 12μ . Stray radiation is less than 2 percent at 15μ with filter. Transmittance reproducibility



Roland Gohlke, Dow Chemical Company engineer, using Bendix Mass Spectrometer to identify compounds emerging from a gas chromatograph.

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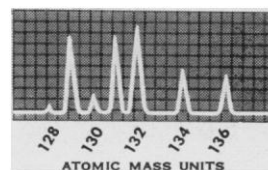
For complete details contact the Cincinnati Division, Dept. E6-5, 3130 Wasson Road, Cincinnati 8, Ohio. Export Sales: Bendix International Division, 205 E. 42nd St., New York 17, N. Y. Canada: Computing Devices of Canada, Ltd., Box 508, Ottawa 4, Ontario. ***TRADEMARK**

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is ± 0.5 percent. The instrument, of the double-beam, automatic-recording type, features automatic gain control and programmed scanning speed to obtain maximum information under different energy conditions. In automatic mode of operation, the instrument returns to its starting point and stops after completion of scan. In cycle mode, the instrument repeats the scan as many times as desired for observing changing spectra. (Perkin-Elmer Corp., Dept. 860)

■ **MAGNETIC RECORDER** for use in seismic exploration provides 24 data channels, one timing channel, and two auxiliary channels. The recorder operates on 12-v d-c power and requires a 0.5-ma signal for full modulation. Response is essentially flat from 20 to 200 cy/sec and is phase corrected within 1 msec over this range. A built in frequency standard monitors motor drive and timing signals. No warm-up before operation is required. The complete system weighs 60 lb. Techno Instrument Co., Dept. 855)

■ **OPTICAL CELLS** consist of U-shaped Vycor body with fused-on silica optical windows. Spectral range is 185 to 3500 m μ . Transmittance at 220 m μ with a cell filled with double-distilled water is greater than 70 percent. The length of

the light path is within ± 0.5 percent of nominal path length, which may be 5 or 10 mm. Cells are furnished only in sets matched to within 2-percent transmission at 240 and 270 m μ and to within 3 percent at 220 m μ . (Beckman Instruments, Dept. 853)

■ **SIGNAL SOURCE** is remotely tunable over the frequency range 100 to 16,000 Mcy/sec. Power output varies from 500 to 5 mw over this range. The tuning unit may be 2000 yd or more distant from the source; it is connected to the source by one shielded pair of wires, one two-conductor coaxial cable, and three single-conductor wires. For square-wave modulation an additional single-conductor coaxial cable is required. (Scientific-Atlanta Inc., Dept. 858)

■ **VOLTAGE COMPARATOR** trips a relay output when the unknown input signal exceeds the reference input. The completely transistorized device has overload capacity 1000 times rated sensitivity. Repeatability of trip point is ± 1 mv. Sensitivity is 5 mv a-c, 10 mv d-c. Input impedance is 2 megohm. Power required is 1 w with relay operating and 0.1 w with relay not operating. Weight of the device is 12 oz. (Trio Laboratories, Inc., Dept. 865)

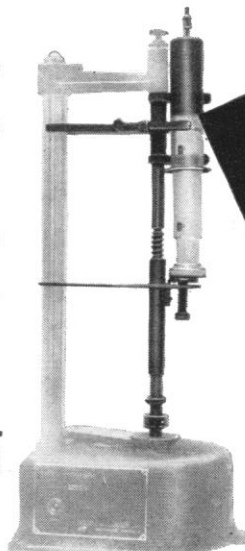
■ **SWEEPING OSCILLATOR** covers the range from 100 kcy to 225 Mcy/sec in six bands. Sweep is effected electronically, and automatic-gain-control circuits maintain output constant within ± 0.4 db. Eighteen crystal-controlled pulse markers, three in each band, provide frequency calibration. Sweep rate is variable around 60 per second and locks into line frequency. With sweep width reduced to a minimum, the instrument can be used as a continuous-wave signal generator. (Kay Electric Co., Dept. 843)

■ **TISSUE FREEZE-DRYER** for histochemical applications uses a condenser that completely surrounds the specimen. Specimens rest on a screen which permits unrestricted evaporation of molecules in all directions. Drying time for 2-mm-thick specimens is 6 hr. The temperature-control system permits selection of drying temperature. After drying, specimens are embedded in paraffin without breaking the vacuum. Evacuation is accomplished by a small combination mechanical pump and diffusion pump; liquid nitrogen is the condenser coolant. Canal Industrial Corp., Dept. 867)

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A threaded shaft, carrying a syringe holder and a pusher, is mounted in place of the regular drum spindle and rotated in the same manner. Syringes are clamped in place, or released by turning a single thumbscrew. The unit is designed to be attached to, and driven by, our Bird Kymograph #70-060. This propeller may be used with equal facility on our older model (four-speed kymograph).

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Syringe Driver

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Approximate Delivery Rates in Milliliters per minute					
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Speed No. 1	.0046	.0059	.0118	.0157	.024
Speed No. 2	.023	.030	.059	.078	.12
Speed No. 3	.116	.148	.29	.39	0.6
Speed No. 4	.58	.78	1.48	1.96	3
Speed No. 5	2.9	3.7	7.4	9.8	15

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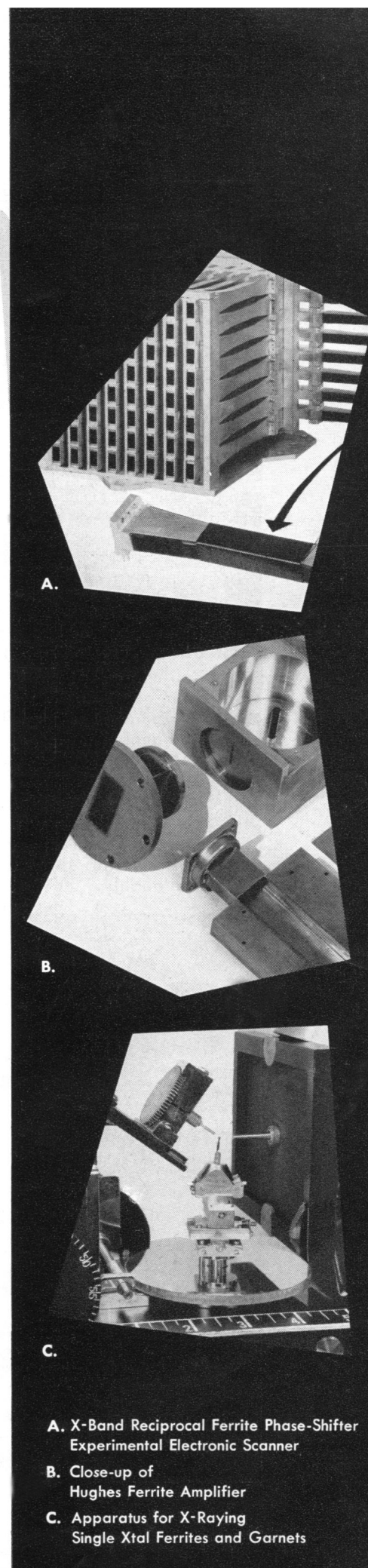
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A. X-Band Reciprocal Ferrite Phase-Shifter
Experimental Electronic Scanner

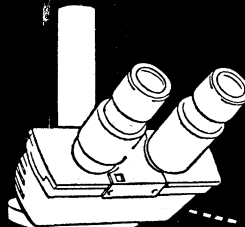
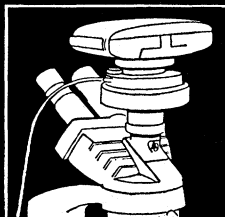
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C. Apparatus for X-Raying
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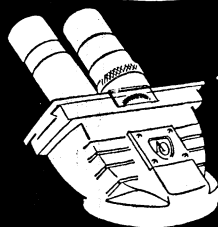


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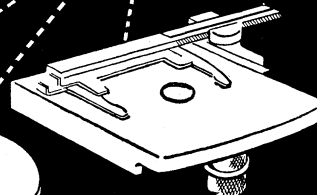
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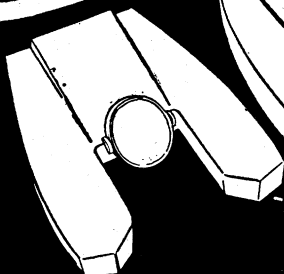
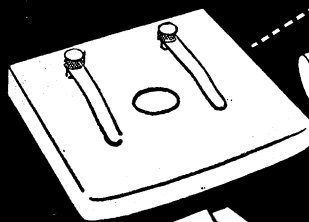
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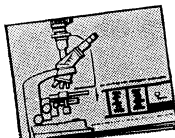


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