

WHAT'S NEW



This listing is intended only as a service to the reader by calling his attention to items of possible interest. No endorsement should be inferred. Item numbers correspond to numbers on the READER SERVICE CARD.

30. Edgerton, Germeshausen & Grier, Inc., Boston, Mass., announces the availability of the LG100 **high speed linear gate**, one of 20 modules in its M100 high-speed counting system. High-speed gating of linear signals up to 200 Mc in the range of ± 1 V with 1% linearity is achieved by the unit, which can be gated at rates up to 75 Mc by standard M100 logic pulses of -700 mV, according to the manufacturer.

31. Nuclear-Chicago, Des Plaines, Ill., announces Model 1002 Ac-tigraph III, a new **radiation counting system** designed specifically for paper-strip radiochromatography. Innovations claimed are fast foolproof paper-strip loading, vertical paper travel to minimize detector contamination, a completely shielded 4π geometry detector, and a large paper take-up receptacle. Also featured are four detector collimator slits, 19 ratemeter count-rate ranges (both linear and logarithmic), a wide choice of ratemeter response-time constants, and a selection of strip transport speeds from 3.75 to 325 cm/h. Model 1002 scans both sides of the paper strip, and the 4π gas-flow detectors can be operated windowless or with an ultra-thin window. Data read-out is by means of a chart recorder synchronized with the paper-strip transport speeds.

32. A heavy-duty **30-A connector**, designed to take heavy loads with minimum size and weight, is now available from Masterite Industries, Inglewood, Cal., for use in any circuit using heavy-current solid-state controlled rectifiers. Voltage breakdown is 2300 V root mean square. Stud terminals are gold plated No. 6 screws with 0.400 in. minimum clearance between studs.

33. Introduction of new platinum, palladium, silver, and tin **brush-**

plating solutions in gel form has been announced by Technic, Inc., Providence, R.I. The gel form of the new solutions is said to facilitate application and prevent waste. Of high viscosity, the gels prevent dripping and loss and allow wand plating in hard-to-reach areas. The platinum solutions come in two types, one of which will plate directly on titanium, stainless steel, and other difficult-to-plate metals, according to the manufacturer.

34. A new subminiature, high accuracy **pressure transducer** has been developed by the American Wiancko Instrumentation Division of Tamar Electronics, Inc., Anaheim, Cal. The new instrument is claimed to be half

the size and weight (less than 1 in. diameter, 1 1/2 in. long, 3.5 oz weight) of present transducers designed for similar functions. Linearity over the full pressure range is better than 0.25%, hysteresis is 0.1% or less, over-all accuracy is 1.0% of full scale, and the temperature drift is less than 0.01% of full scale per degree Fahrenheit. The instrument puts out 0 to 5 V proportional to pressure using an input of 28 V dc (7 mA) for which regulation over the range 21-50 V dc is provided. Pressure ranges from 0-2 to 0-10000 lb/in.² are available.

35. New **cleaning equipment**, developed by Veith Instruments Co., Linden, N. J., combines ultrasonic

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resonance with jet streams to overcome the major drawback to cleaning with ultrasonics alone, viz the inability to wash away separated contaminants. Sonic resonance is imparted to an encompassing area of jet streams of cleaning medium impinging on the item being cleaned. The medium is returned to its reservoir, filtered, and recirculated. Cylindrical chambers eliminate contamination entrapment.

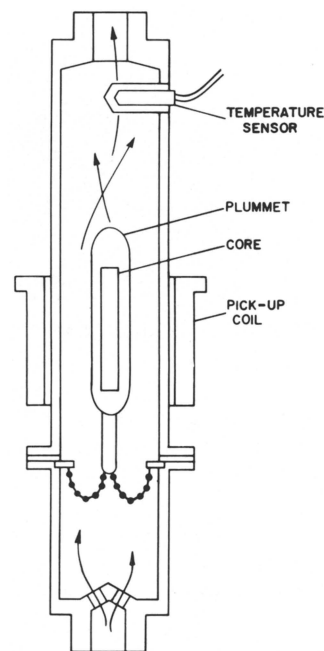
36. A 12-page brochure, available from Digital Equipment Corp., Maynard, Mass., describes a new **tape transport and tape control**; the DECTape 555 and 552 represent a low-cost in-out data-storage facility and updating service. Special features include fixed-position addressing, automatic word transfers, pre-recorded timing and mark tracks, and pocket-size reels. The brochure gives detailed specifications, diagrams, and programing information.

37. A new **rf-shielded cable tray**, manufactured by Chalfont Products Co., Cleveland, O., prevents signal distortion and interference. An integrated unit is made from straight sections, fittings, splice plates, and covers, easily assembled to form a protective cable enclosure tight enough to resist moisture. Available in aluminized steel, stainless steel, or galvanized steel and in an 18-in. radius with 6-in. tangents, standard fittings are of three-piece construction with solid bottoms spot welded to side channels at three-inch intervals. Standard cable loading depth is four inches and widths are 12, 18, and 24 in.; other dimensions are available.

38. A brochure, available from Applied Health Physics, Inc., Pittsburgh, Pa., describes the use of **ANTI-C barrier coatings** and strip coatings to protect surfaces and equipment and in cocooning contaminated objects to be removed for decontamination.

39. The Spectronic-600 **spectrophotometer**, offered by Bausch & Lomb, Rochester, N.Y., is a compact, double-beam, double-grating, ratio-indicating, ultraviolet-visible instrument with a range from 200 $m\mu$ to 650 $m\mu$ (extendable to 800 $m\mu$ with selected photomulti-

pliers), designed to accommodate all of the B&L V.O.M. series recorders. Standard bandwidths are 5Å and 50Å; photometric accuracy is 0.5%, and wavelength accuracy is 5Å. Other features include automatic zero adjustment, a built-in combination light source and power supply, three synchronous scanning speeds, and plug-in replacement parts.



40. **Liquid density** changes as small as $25/10^6$ can be measured and controlled continuously with the Densitrol, according to the maker, Precision Thermometer and Instrument Co., Southampton, Pa. Accuracies of 0.02% are claimed for any application where a hydrometer is presently being used. A plummet, supporting part of the weight of an attached chain, is suspended in dynamic equilibrium in a flowing stream of the liquid to be measured. Equilibrium position is a function of liquid density and may be read visually or electrically. The device is applicable to all types of liquids and light slurries of various viscosities.

41. **Modules and bins** for constructing instrument racks conforming to the standardized design adopted by the AEC Committee on Nuclear Instruments Modules are available from Mega Engineering Company, Mountain View, Cal. The bins fit standard 19-in. racks and are avail-

Solid-State "Genetics"

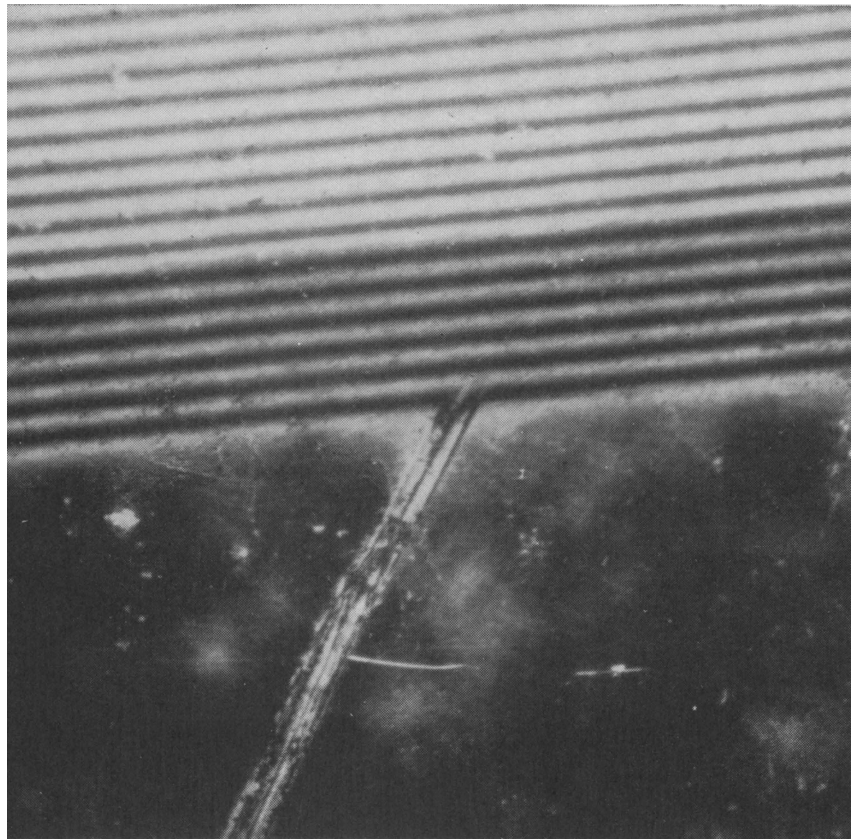
able in two heights; individual modules are furnished in six sizes for either bin height.

42. A kit of Thermcoat materials for cementing fine-gage thermocouples in place on metal, plastic, and ceramic surfaces is supplied by Omega Engineering, Inc., Springdale, Conn. It contains low-temperature and high-temperature cements and silicone lacquers and an assortment of ceramic insulators and inconel tubing.

43. A function generator (Model 3300A) offered by Hewlett-Packard Co., Palo Alto, Cal., is a compact multipurpose source of **test waveforms**. It provides two simultaneous outputs that may be any two of three waveforms (sine, square, or triangular) of common frequency (0.01 to 10^5 c/s) and constant amplitude. Frequency is controllable by either a front-panel dial or an external voltage to a rear terminal for controlled sweeps or programed frequency. It delivers a single cycle on demand, in known phase with an outside signal, or multiple cycle operation with variable start/stop phase. A phase-lock loop permits synchronization to any periodic signal from 10 to 10^5 c/s.

44. A new **pulse generator**, also offered by Hewlett-Packard, puts out a 10 V flat-topped pulse with a repetition rate of 10^6 c/s and a rise time below 10 ns. Overshoot and pulse type variations of the Model 8000A Pulser are held below 2%. The flat top is maintained for at least 100 ns, and the fall time is less than 20 ns.

45. A new breadboard module incorporating the **digital logic function** of $A(B + C) + D(E + F)$ in a single plug-in package has been announced by The Roback Corp., Huntingdon Valley, Pa. The Pulse Gate PG-6256 provides a nominal $1.5 \mu\text{s}$ positive pulse when any of four input clock lines are triggered with a *one* level. Two separate gate lines provide an *and/or* function between the four gate inputs. Four standard loads may be driven. A diagram on the front indicates logical function, and an integral front-panel light indicates logical state of the circuit at a glance.



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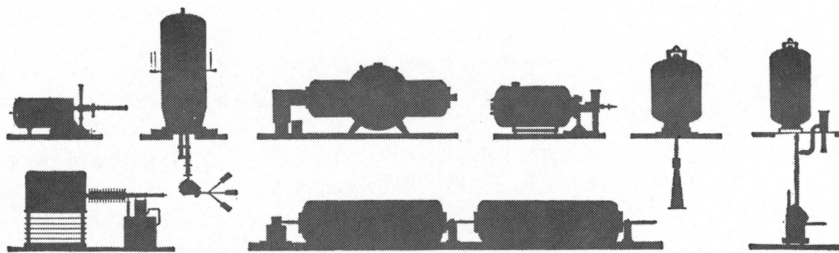
This implantation of Boron-11 ions to a depth of 1.5 microns into a silicon substrate typifies research achievements in solid-state technology made possible with HVEC Particle Accelerators.

Accelerators used for ion implantation have been paving the way for further advances in semiconductor research. High yields of solar cells have already been produced with spectral response characteristics matching those of the solar spectrum. Ion-implanted solid-state radiation detectors have combined the best characteristics of diffusion-produced p-n junction detectors and sur-

face barrier detectors. And ion-implantation techniques have produced excellent small area mesa and planar diodes.

HVEC Particle Accelerators — with their precisely controllable energy, intensity, and low energy-spread, with freedom of particle choice — are ideally suited for applied nuclear research.

For more details on particle accelerators, write High Voltage Engineering Corporation, Burlington, Mass., or HVE (Europa) N.V., Amersfoort, The Netherlands. Subsidiaries: Electronized Chemicals Corporation, Ion Physics Corporation.



High Voltage Engineering produces a complete line of particle accelerators ranging from 300-keV to 30 MeV.



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