

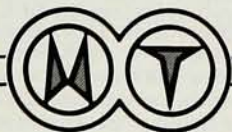
NEW

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new products

Transient recorder with up to 32 channels

The new CAMAC-compatible, medium-speed transient recorder, Model 3232, announced by Aeon Systems is available in versions with 4, 8, 16 or 32 channels. The unit digitizes signals at up to 250 kHz for one-channel operation and up to 10 kHz when all channels are used. Individual sample-and-hold circuits for each input allow all inputs to be sampled simultaneously. The analog-to-digital converter has true 12-bit linearity. The unit is compatible with the Aeon Systems Model 7062 32 000-word memory module or the Model 7064 64 000-word memory module.

Two operating modes are available. In the post-trigger mode, the unit waits for a trigger signal to begin digitizing. It continues to sample and digitize data until all available memory has been filled or until it is stopped by command. In the pretrigger mode, the unit starts digitizing on command. Upon receipt of the trigger signal it continues to digitize until a predetermined number of samples have been taken. If the collected data exceeds the available memory, new samples replace the old samples, beginning with the oldest. One can retrieve each data word from memory at full CAMAC speed, but to conserve bandwidth the unit can be set to transfer every second, third, fourth, and so on, sample only. The 32-channel version is priced at \$2995. Aeon Systems, 1704 Moon N.E., Albuquerque, New Mexico 87112

Circle number 143 on Reader Service Card

Integrating sphere for high-power lasers

Labsphere has introduced a series of four liquid-cooled integrating spheres that can collect and measure radiation from infrared lasers with power levels of up to 20 kW. The integrating spheres have three identical ports spaced by 90° on the horizontal equator. The four models have inner diameters of 4, 6, 8, and 10 inches. The absolute reflectance of the diffuse gold coating is 0.91 at 700nm and reaches 0.95 at 10 600 nm. A diffuse gold-coated port plug effectively removes the influence of a port if only two ports are used. A conical laser target is also provided with the system. The cooling liquid can be normal tap water, but other cooling liquids, such as ethylene glycol, may also be used. Labsphere, P.O. Box 70, North Sutton, New Hampshire 03260

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Plasma generator for electrodeless applications

The new high-power, high-frequency power source, the HPG-2, introduced by ENI Power Systems, is suitable for electrodeless plasma-discharge applications. Other applications include dielectric sputtering, plasma etching, plasma-induced polymerization, afterglow generation for gas chromatography, high-temperature-plasma-torch applications and atomic-emission spectroscopy. A built-in ignitor provides short bursts of overvoltage to assist discharges in gases that are difficult to ionize or where low power is desired.



The solid-state unit is air cooled. It covers the frequency range of 125-375 kHz and can deliver up to 10 000 V peak to peak at capacitive electrodes with a maximum forward power of 150 W. One can connect the capacitive electrodes to the rear of the unit by either a high-voltage anticorona wire or an optional low-leakage teflon coaxial cable. By adjusting the built-in impedance-matching network, one can set the load power to forward power ratio at a maximal value; load power and forward power are displayed on a front-panel meter. One can adjust forward power with a front-panel control or by an external process controller; the unit keeps the power delivered to the plasma constant regardless of changes in gas mixture or pressure. ENI Power Systems, 100 Highpower Road, Rochester, New York 14623

Circle number 145 on Reader Service Card

Portable digital oscilloscope storing signals up to 20 MHz

The new digital oscilloscope introduced by Gould captures and processes repetitive signals up to 20 MHz. The Gould 1425 is a dual-trace instrument and features automatic on-screen cursor measurements of time and voltage. One can transfer data to and from a

computer through the built-in RS 232 serial port. This port is also used for reading the instrument setting, as well as for controlling most front-panel controls. Built-in hardware permits the plotting of stored waveforms, scales and gratitudes in different colors on Hewlett Packard Graphic-Language compatible plotters. A number of processing functions, including averaging 256 events per channel, can be performed locally with the instrument by using the optional plug-in keypad, the Type 125 Waveform Processor.

Each of the two channels has a 1-kbyte memory. Together with an 8-bit vertical resolution this provides high resolution in the x and y directions. The maximum sampling rate is 2 MHz; at this rate it can capture and store single-shot transients as short as 2 microseconds. Other features of the instrument include pretrigger viewing up to 100%, roll mode, the ability to display a stored and a continually updated waveform on separate channels and overlap them for comparison, analog output of stored waveforms for recording and a 10× time-axis expansion in both storage and real-time modes. The instrument is priced at \$2950, the optional wave processor at \$750. Gould, 3631 Perkins Avenue, Cleveland, Ohio 44114

Circle number 146 on Reader Service Card

Compact filter monochromator with four different slit widths

The new filter monochromator FM-1 from Kratos Analytical can be used in place of a series of filters for isolating line spectra or wavelength bands in the visible spectrum. One can select the wavelength by turning a knob, and the monochromator can operate with four



different slit widths ranging from 20 to 40 nm. The nominal transmission is 45 to 55%. The size of the unit is small (2.25×5.50×0.625 inches) making it adaptable to many standard optical bench and table configurations. One can mount the unit vertically or horizontally with two standard 1/4-20 threaded mounts. The monochromator is priced at \$425. Kratos Analytical Instruments, 170 Williams Drive, Ramsey, New Jersey 07446

Circle number 147 on Reader Service Card

Thermometer pair for sensing minute atmospheric turbulences

Atmospheric Instrumentation Research has announced the CT-1A-T, an instrument for measuring the temperature structure function, C_T . (This function is a measure of the scattering of sound waves and light scintillation due to temperature differences caused by turbulence.) The system consists of two Kaiman-Ochs fast-response thermometers that use a 12-micron platinum wire helically wound on a spiral wire frame to sense temperature fluctuations of up to 0.05 °C at frequencies up to 25 Hz. The thermometers are connected with coaxial cables to the control unit. The control unit automatically calculates C_T ; the output is an analog voltage of 0 to 5 V proportional to C_T . The coaxial cables connecting the thermometers can be up to several hundred meters long. *Atmospheric Instrumentation Research, 1880 South Flatiron Court, Boulder, Colorado 80301*

Circle number 148 on Reader Service Card

Fast vacuum photodiode with high red response

The new, very fast 3/4-inch vacuum photodiode introduced by ITT has a high sensitivity for red light and a luminous response greater than 230 μ A per lumen. The F4014RP is a direct replacement for the F4014(S20). The quantum efficiency is at least 1% at 800 nm, which is 20 times greater than its predecessor's efficiency. *ITT Electro-Optical Production, P.O. Box 3700, Fort Wayne, Indiana 46801*

Circle number 149 on Reader Service Card

Single-channel thermal oscillograph

Western Graphtech has introduced the WR 7200, a new one-channel thermal oscillograph. The chart width is 100 mm (4 inches) and the instrument uses a thermal stylus. The frequency response is 0-50 Hz at 20 mm, and the maximum sensitivity is 40 mV at full scale. The accuracy is within 2.5% of full scale, including deviations from linearity and the dead zone.

The instrument weighs 7 lbs (3.2 kg) and its width is 7.3 inches (18.5 cm). The unit contains a preamplifier module that provides 12 measuring ranges. The six-speed chart drive has full remote-control capability. The unit is priced at \$1190. *Western Graphtech, 12 Chrysler Street, Irvine, California 92718*

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50 MHz PHOTON DISCRIMINATOR



Model 511
\$600.00



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