

new products

(and developments)

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 Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.

A new miniaturized dc-operated TV camera and control unit, Model 326-C, has been announced by Systems Research Laboratories, Inc., 2800 Indian Ripple Rd., Dayton, OH 45440. The camera needs an external 12-V dc power supply for complete operation. Standard 525-line operation is obtained with an internal crystal-controlled sync generator. The camera and control unit are separated by multiconductor cables which allow the user to locate the individual units in a variety of space factor configurations. The camera is 6 $\frac{3}{8}$ in long, 2 $\frac{1}{2}$ in wide and 3 $\frac{1}{8}$ in high. The control unit is 10 $\frac{1}{2}$ in long, 5 in wide

and 1 $\frac{1}{8}$ in high. The system can be used for airborne applications. The system (camera and control unit) is priced at \$2,488. Available optional accessories include a combination internal/external sync capability, a 3-axis gimbal mount with servo positional control and a video transmitter and receiver.

The Ultra Audio WV-063 combination waveform monitor and 5-in picture monitor has been announced by Ultra Audio Products, P.O. Box 921, Beverly Hills, CA 90213. The system requires 7 in of rack space and is intended for monitoring the output of each camera in a studio. The waveform monitor has a vertical axis bandwidth of 7 MHz (-3 dB), a calibration voltage of 1 V peak-to-peak, internally generated and a sweep frequency of 15.75 kHz/2 TV h. It requires a power supply of 115 V, 60 Hz, about 55 VA. The picture monitor has a horizontal resolution of 600 lines at the center and 450 lines at the corners. The vertical resolution is 350 lines. Price of the WV-063 is \$995.

Unimedia SMT color studio monitors employing the Sony Trinitron single gun system have been announced by Universal Media Corp., 29115 Mission Blvd., Hayward, CA 94544. The system offers inherent sharp focus and greater brightness without recurring convergence problems. The series includes 9-, 12-, 15-, 17-, and dual 9-in rack mount models. A single 9-in model with a Tektronix Type 528 Waveform Monitor is also available. An option-

al package available for all units provides front panel switch control of two separate inputs and Pulse-Cross. The Pulse-Cross mode permits shifting the picture either horizontally or vertically or both together to display Sync, Burst, Blanking, Vertical Interval Test and Reference signals. Model SMT-12 is priced at \$795.

The Matthey Chroma Corrector for color television has been announced by Matthey Printer Products Ltd., William Clowes St., Burslem, Stoke-on-Trent ST6 3AT, England. The United States distributor is Television Equipment Associates, P.O. Box 1391, Bayville, NY 11709. The corrector is connected permanently into the video circuit. It corrects for linear distortions known as luminance/chrominance amplitude and delay inequalities. It can correct up to $\pm 40\%$ amplitude inequality and up to ± 100 ns delay inequality. There are separate controls for amplitude or delay adjustment. Since stabilized dc voltages determine the amount of correction introduced, the device can be remotely controlled. For users who prefer not to provide remote control facilities at the engineering console or mixer, the equipment is fitted with local controls on the front panel. Also on the front panel are auxiliary outputs for both gain and delay, so that local monitoring can be carried out when required. An automatic by-pass device is included in case of power failure and a manual override is located on the front panel. The appropriate vertical interval test signal is selected, and manipulation of

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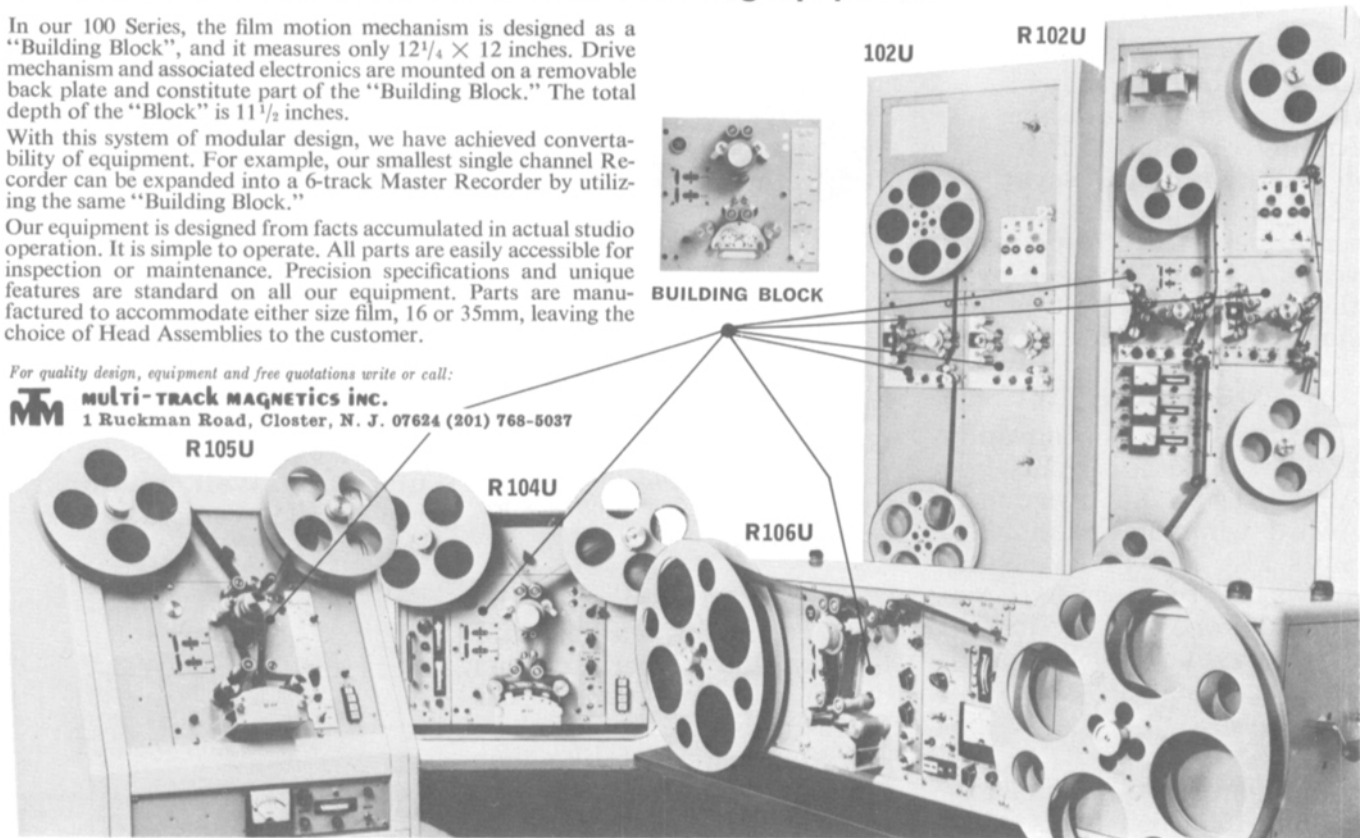
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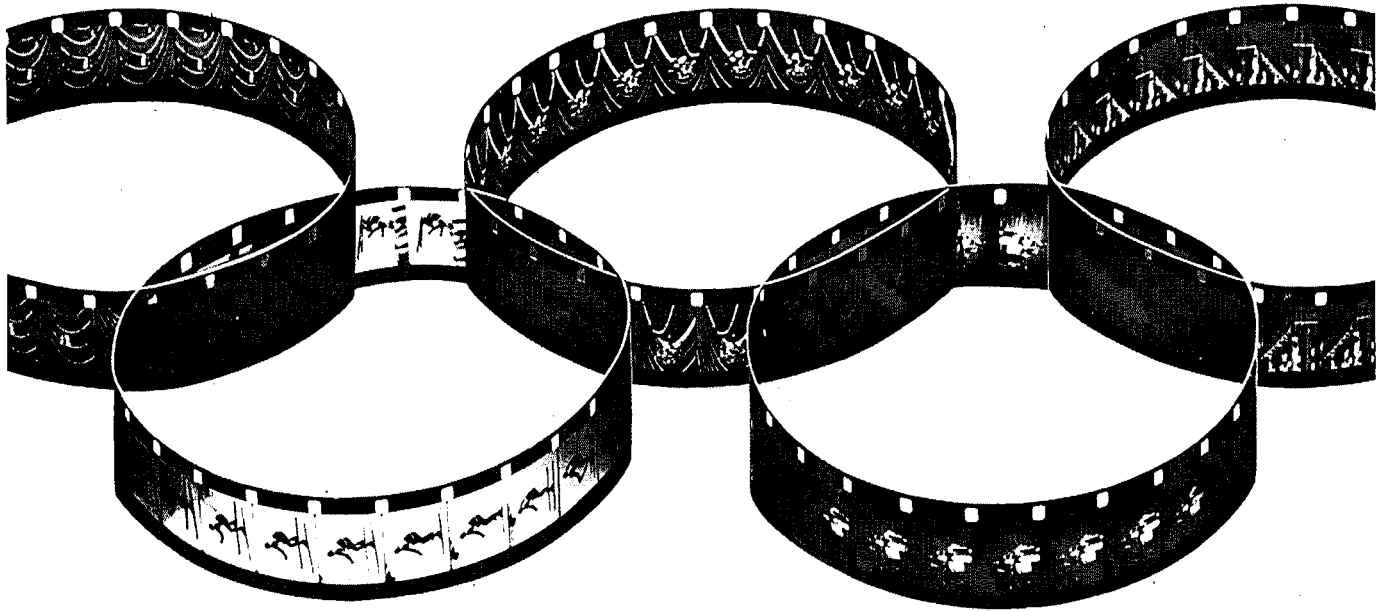
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the gain and/or delay controls, while viewing the 20T chrominance modulated pulse, cancels amplitude or delay inequalities which may be present. Provision is made for varying the slope of the amplitude/frequency response if required. Models are available for use in either PAL or NTSC systems. The device is supplied as a 19-in rack unit 1 3/4 in high. The price is about \$2,000.

Accessories for the Delta 44 Time Base Corrector have been announced by Television Microtime, Inc., 1280 Blue Hills Ave., Bloomfield, CT 06002. The Delta 44 is a stand-alone unit compatible with all broadcast videotape recorders including Ampex and RCA quad units and the heliscan IVC 900 and the Ampex 7900 videotape recorders.

The new accessories include the Delta 28 Time Base Director, a unit which extends the time base correction capabilities of the color Delta 44 to include heliscan electronic editor videotape recorders, older quad videotape recorders not equipped with intersync or Pixlock capabilities and some line-locked cassettes and reel-to-reel videotape recorders. The unit tracks the video output of the videotape recorder and generates a drifting sync or subcarrier reference for the Delta 44. The Delta 44 4.4 μ s input window follows the off-tape video and reduces total raster and color jitter to ± 3 ns and maximum deviation from the off-tape reference. The Delta 28 is available in monochrome and NTSC color versions. Prices start at \$1,650.

The Delta 635 Full Line Drift Corrector

provides the broadcaster or teleproduction studio with the full-line, wide-window corrector necessary to transfer any cassette or heliscan videotape recorder tape to a teleproduction videotape recorder for further processing, duplication or transfer to film. The machine is reported to reduce off-tape jitter to less than $\pm 0.5 \mu$ s referenced to studio sync. The price is \$15,000.

Other accessories include the 400 Video Head-Servo Drift Suppressor, a device that uses the internal voltage input to the Delta 44 Delay Status Meter to generate a steering voltage of ± 12 V dc, and the 7 Head Velocity Error Corrector. This accessory can be used as a unit or in combination with a Delta 44 to eliminate color distortion or streaking which is especially noticeable on interchanged tapes on quadruplex videotape recorders or heliscan videotape recorders after time base correction.

Tapcode, a system which records individual numerical information on every frame of a tape without interfering with the picture content and which exhibits the data on a solid-state display panel during both record and playback modes, has been announced by Denlen Electronics Corp., 23 Guardsman Rd., Thornhill, Ont., Can. The system is manufactured by Video Electronics Ltd. in Manchester, England. The recordings can be made on any videotape machine and replayed on any other compatible unit while retaining complete correlation between numerical and picture information. Numerals may be elapsed time, 24-h clock time, digital counts up to

99,999,999 or binary coded output from a computer, teletape or digital instrument. Without altering the recorder, the system can be extended with a Cuecode unit to operate mechanical or electronic switches automatically at presettable points of the tape to initiate external sequences, such as machine start or projector changeover. Applications include fields where videotape recording is used, including medicine, security, industrial training, process control, teaching and research. The system is priced at about \$800.

The FMT-2000, a system which combines a crystal-controlled receiver and an FM modulator to add National Bureau of Standards frequency and time broadcasts to any CATV or CCTV system, has been announced by CATEL, Div. of United Scientific Corp., 1030 W. Evelyn, Sunnyvale, CA 94086. The NBS broadcasts are available 24 hours a day transmitted by WWV, Ft. Collins, Colo., on 2.5, 5, 10, 20 and 25 MHz. Similar transmissions are made in Canada from CHU on 7.335 (East) and 14.670 MHz (Midwest and East). In addition to time announcements, broadcast in Greenwich Mean Time, the broadcast service provides transmissions of standard audio frequencies at 400, 500 and 600 Hz and the 440 Hz standard musical pitch (A above middle C). The service also provides geophysical alerts, storm and hurricane warnings. The FMT-2000 is a companion to the FMW-2000 Weathermod which provides 24-hour weather and emergency bulletin service of the National Weather Service. Each unit is priced at \$695.

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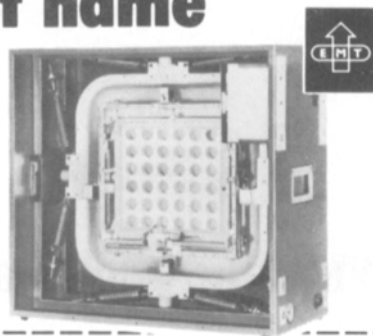
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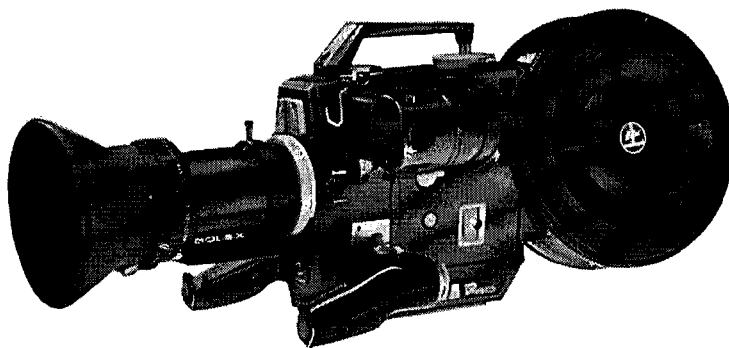
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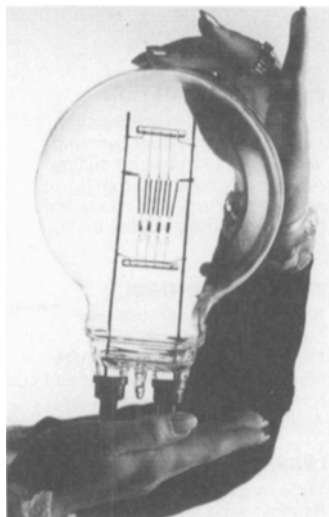


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Sandcastles, the first motion picture for network TV recorded on videotape with the single-camera technique, has been produced by Metromedia Producers Corp. with the aid of an Ampex VR-3000 portable videotape recorder mounted in a specially constructed vehicle. Compact Video Trucks, Inc., Burbank, Calif., built the 10½-ft enclosed vehicle, starting with an engine and steering mechanism. The vehicle is a four-wheel-drive jeep, air-conditioned and accommodating a four-man crew. In addition to the VR-3000, the equipment includes a Norelco PCP-70 camera, an audio recorder and a separate

power supply. Lights, cables and grip equipment are carried in a truck when necessary. The 90-min motion picture was taped in 12 days. When the on-location taping was finished, Metromedia converted the high-band VR-3000 videotape to a monochrome workprint with an Ampex VR-2000 VTR. The workprint was then edited on a CMX off-line computer which produced a paper tape reflecting the editing. The paper tape was then fed into a CMX on-line computer interfaced with a VR-2000. As the VR-2000 played the original color tape, the computer gave it editing instructions, producing the final tape.



New lamps announced by General Electric Co., Nela Park, Cleveland, OH 44112, include the Econo-Kleen, a tungsten-halogen lamp available in 2,000- and 5,000-W configurations, the latter available at a price of about \$80. The new lamp, designed especially for use in lens-type spotlights used in motion-picture and TV production, offers a midway choice between lower cost incandescent lamps and the halogen-cycle quartz lamps, such as the GE quartzline. Features include the use of clear, heat-resistant glass. This is said to be "the first use in this country" in a lamp with a halogen regenerative cycle. The halogen cycle occurs throughout the interior of the 6- and 8-in spherical bulbs rather than being confined in a quartz tube as in Quartzline lamps. The new

lamp maintains about 90% of the initial light output throughout its rated life.

Other new lamps include the Q10M/T24/3Cl, a 10-kW Quartzline lamp permitting use of smaller, lighter and more efficient reflectors and equipment than with the larger globe-shaped lamps with the same light output. It is a tubular, 16-in lamp which employs a halogen regenerative cycle to maintain a color temperature of 3,200 K throughout its 300-h rated life with virtually no drop in its 290,000-l output. It is priced at \$250.

Also new is the GE XE-500, a 5000-W xenon arc projection lamp designed for use in projectors in small motion-picture theaters and school auditoriums for the projection of 8mm, super-8 and 16mm films and slides. The xenon arc tube is mounted inside a 5¼-in diameter sealed beam bulb at the focal point of its elliptical reflector. The reflector has a dichroic filter which reflects the light but transmits much of the lamp's heat back through the reflector. The lamp is priced at about \$280.

A new xenon arc light system has been announced by Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago, IL 60613. The system has been developed to provide the closest possible equivalent to natural sunlight. Applications include chemical testing, aerospace technology, photographic applications, film projection, color technology and others. The systems are available as independent, self-contained units, as conversion units for installation in existing Atlas Carbon-Arc Weather-Ometers and Fade-Ometers or as individual components for special needs. The systems include either 600-W or 2500-W water-cooled xenon lamps. They

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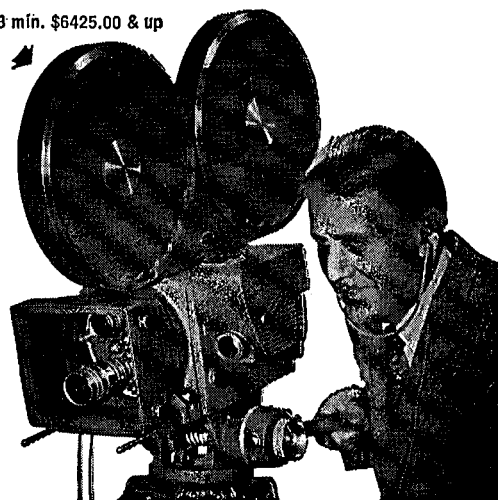
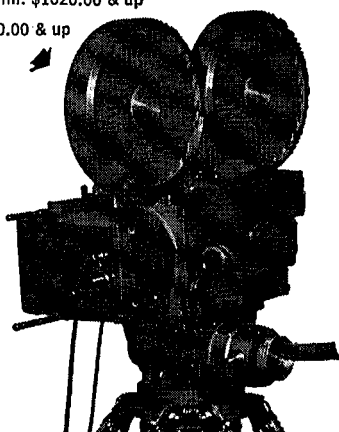
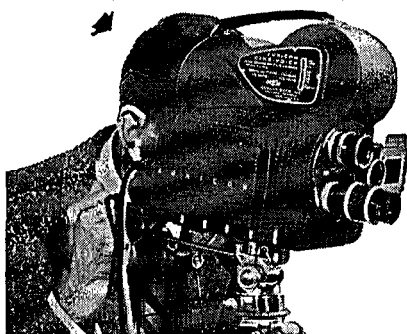


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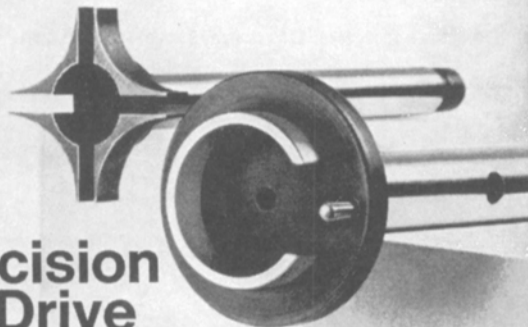
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The Astral solid-state dimmers for stage and studio lighting control have been announced by Skirpan Lighting Control, 41-43 24th St., Long Island City, NY 11101. Available in power capacities ranging from 2 to 12 kW, the new dimmers feature relay rack format design to minimize installation time and cost while providing for expansion. The Astral 2 (2kW) requires 1½ in rack space and weighs 7 lb. Other features include quiet operation (less than 35 dB), RFI noise reduction (less than 10 quasi peak μ V), adjustable transfer characteristics and a plug-in printed circuit logic card. The dimmers will operate in any ambient temperature up to 50° C. The price range is \$480 to \$680.

A 12,000-W alternator that mounts under the hood of a small truck and provides power to operate two 50-A Colortran Maxi Brute lights has been announced by Alan Gordon Enterprises Inc., 5362 N. Cahuenga Blvd., North Hollywood, CA 91601. The alternator, developed and built by United States Energy Corp. to AGE specifications, operates off the main engine at just above idle speed. Other alternator systems are available ranging from 6,000- to 15,000-W, 120-V dc. Three-phase, 220-V systems are also available.

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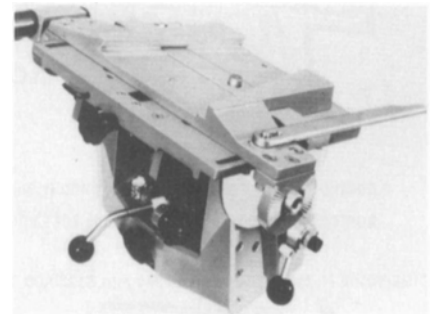
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The Mark 5 Pan and Tilt Head and the Low Angle Dolly, Type 723, are among new products recently announced by W. Vinten Ltd., Western Way, Bury St. Edmunds, Suffolk, England (represented in the United States by Listec Television Equipment Corp., 35 Cain Dr., Plainview, NY 11803). The Mark 5 is a lightweight (24-lb) design developed especially for modern compact broadcast cameras. It can support 180 lb. It provides a 60° tilt angle each way from the horizontal. Braking and friction controls are entirely separate and conveniently placed for ease of operation. The Mark 5 uses the Vinten cam and roller bearing system. The price is about \$1,095.

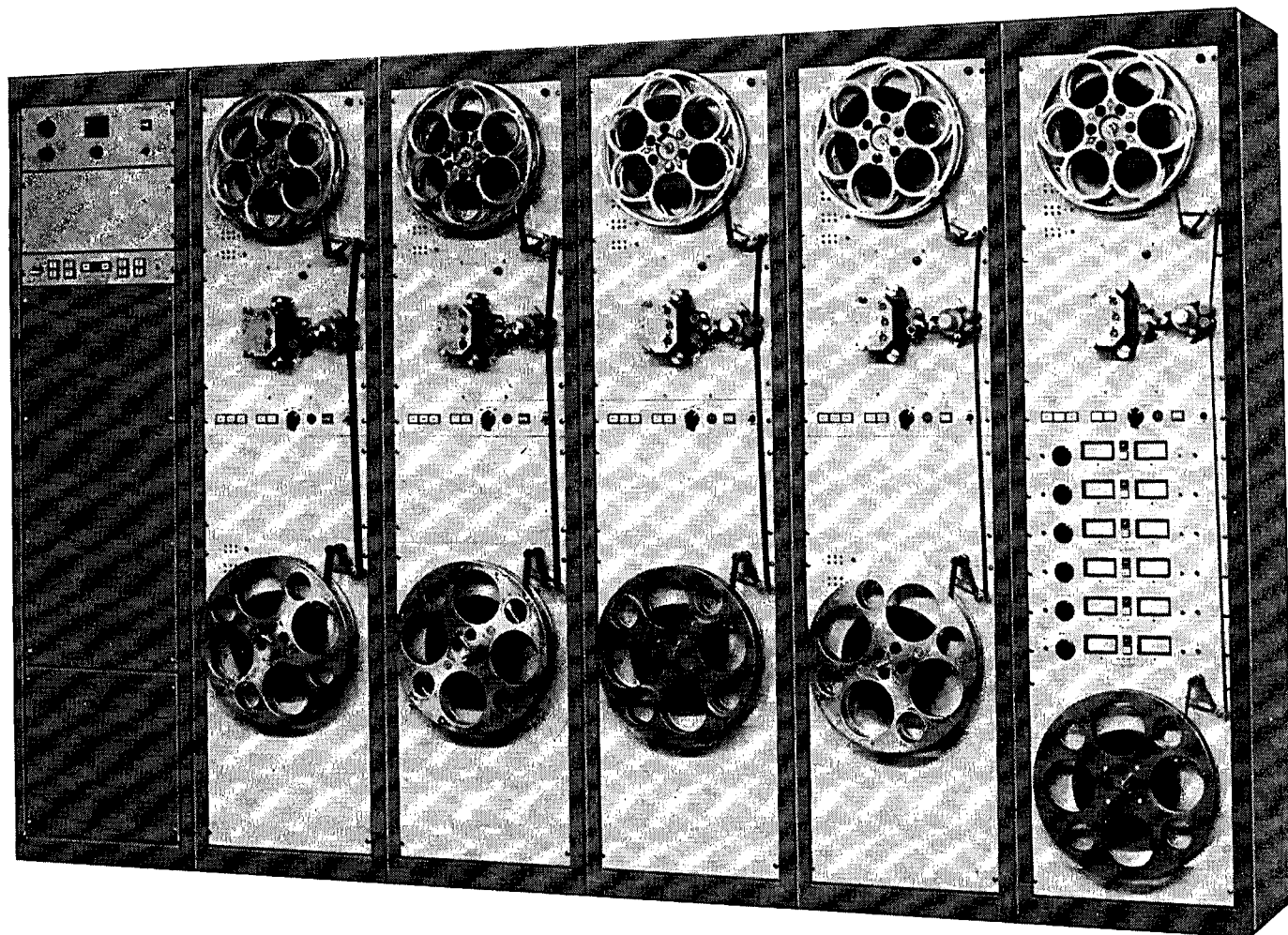
The Low Angle Dolly is designed to obtain low angle shots without sacrificing camera maneuverability. Of hydro-pneumatic operation, it has a 21-in range of movement from 4½ in to 25½ in in height. The jib arm operates from a four-wheel platform. The dolly weighs 150 lb. The price is about \$2,695.



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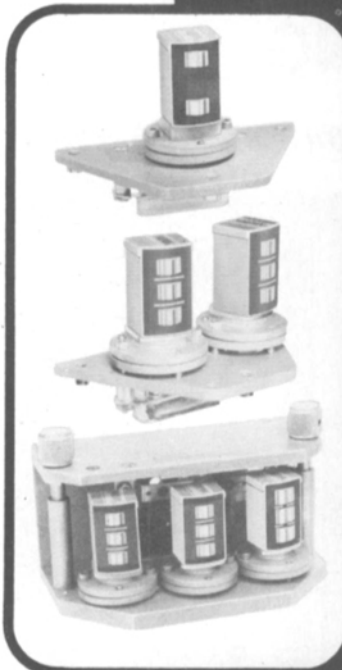
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- Cinesound International, Ltd., Imperial Studios, Maxwell Road, Borehamwood, England
- Magna-Techtronics (Aust) Pty., Ltd., 49 Whiting St., Artarmon, N.S.W., Australia 2064

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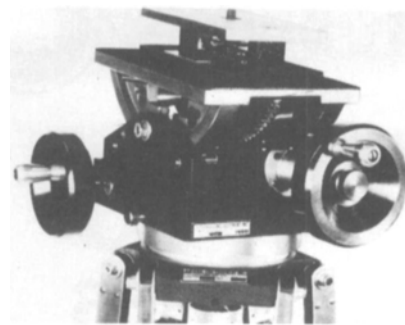
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A cradle gear head, Model CGH, designed for small to medium-sized cameras (up to 50 lb), has been announced by National Cine Equipment, Inc., 4140 Austin Blvd., Island Park, NY 11558. Designed to work smoothly, the CGH uses no fluid-damping system. Features include fingertip controlled two-speed pan and tilt, Teflon-coated cradle slides, ball and roller bearings and larger-diameter balanced handwheels for smoother operation. Model CGH is priced at \$1,395.

A new Hydrofluid tripod head, called Model EC, has been announced by National Cine Equipment, Inc., 4140 Austin Blvd., Island Park, NY 11558. It is designed for both the Eclair NPR and conventional cameras. By rotating the mounting plate, it provides a stable mount for the NPR; in the upper position it functions for conventional cameras as a conventional tripod head. The new EC head is equipped with built-in level and telescoping handle. It pans 360° and tilts 90° either side of center in temperatures ranging from -60° to +350° F. The price is \$539.50.

The firm also announced the Hydrofluid Mini designed for cameras weighing up to 20 lb. Features include a quick-lock ¼- or ⅜-in camera tie-down screw as well as patented no-leak ball and roller bearing construction. The price is \$299.50.

The Foba all metal professional motion-picture tripod, which is manufactured in Switzerland, has been announced by Alan Gordon Enterprises Inc., 5362 N. Cahuenga Blvd., North Hollywood, CA 91601, exclusive distributor in the United States. The tripod has tubular legs which allow it to be used in standard or baby positions and a Pro Jr. flat-top plate which accepts Pro Jr. O'Connor models C and 50 and Miller F fluid tripod heads. The maximum height is 73 in, with the riser fully extended, and the minimum height is 18½ in. It weighs 16 lb. The price of \$269 includes triangle-type leg locks.

New rain covers for Arriflex, Eclair and a number of other cameras have been announced by Alan Gordon Enterprises Inc., 5362 N. Cahuenga Blvd., North Hollywood, CA 91601. The rain covers are made of Nappa artificial leather and have a special insulated lining. They are weather-proof and lightweight, weighing only two or three ounces. They are designed to cover the camera completely while allowing necessary camera functions and adjustments. The covers also protect the cameras from sun and heat. Prices range from \$14.95 for the Arri 16S 400-ft magazine to \$45.00 for the Arriflex 16BL and Eclair NPR with 400-ft magazines.

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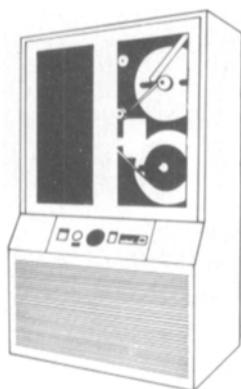
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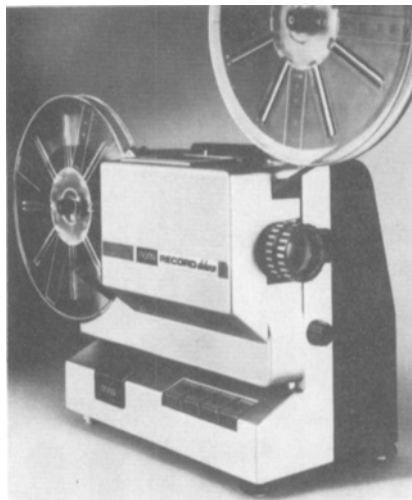
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Three new large-screen TV projectors have been announced by General Electric's Visual Display Equipment Operation, Bldg. #6, Electronics Park, Syracuse, NY 13201. Model PJ625, a color television projection unit provides pictures that can be varied in width from 2 to 20 ft. It is designed to work from wideband red, green and blue video signals. Developed primarily for European and foreign markets, it is designed to operate on RGB signal inputs at the frequency of 625 lines/50 fields/s. The price is \$43,000. Model PJ710 is a monochrome version providing the same size of picture. It is priced at \$30,000.

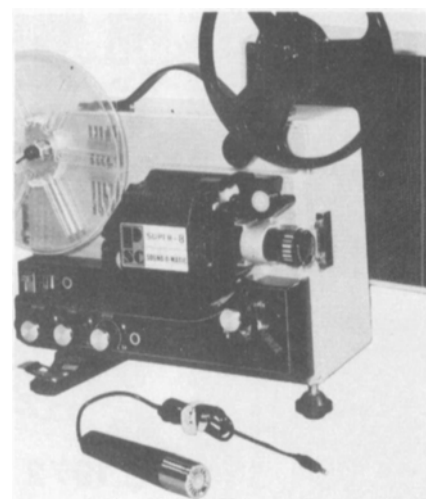
Model PJ500, which accepts either RGB or NTSC encoded video signals, incorporates a new light valve which operates with a single electron beam and optical path. The equipment can be used in front- and rear-projection applications. A compact unit, it can be used in various applications. By using mirrors to fold the optical path and video sweep reversal techniques, the projector can be used in small areas as well as in large auditoriums and theaters. It is priced at \$41,500.

The Vior Model 10 monochrome video projector has been announced by VIOR Corp., 114 Pleasant Ave., Upper Saddle River, NJ 07458. It projects on screens from 3 to 24 ft wide and can be used for either front or rear projection. Employing a Schmidt optical system, Model 10 has a projection kinescope incorporating rare earth phosphors for maximum brightness and resolution. The control box is easy to operate and can be used remotely up to 200 ft from the unit. A pushbutton tuner (VHF/UHF), audio system and picture enhancer are included. Model 10 weighs about 100 lb. It is about 25 in long, 16 in wide and 19 in high (including base). It is priced at \$3,950.



The Norimat de Luxe which combines a super-8 or a dual 8 projector with a completely integrated sound cassette tape recorder in one self-contained unit has been announced by Karl Heitz, Inc., 979 Third Ave., New York, NY 10022. The machine is manufactured by Noris Projektion GmbH in Nürnberg, Germany. The projector is compact (13 × 6 × 9 in), lightweight (18 lb) and provides instant sound projection with standard 1/8-in tape cassettes. Reel-to-reel threading and loop setting are completely automatic. The projec-

tor has a wide-range 15-30mm *f*/1.3 Vario-Zoom lens, and a pre-centered, high-intensity 12-V, 100-W halogen cold-light mirror lamp. There are illuminated pushbuttons for forward, reverse, single frame and stop. Features include frame-to-frame advance, frame-line adjustment and rapid reel-to-reel rewind. A powerful blower, excellent ventilation and an automatic drop-in filter protect the film against heat. Mechanical coupling and electronic interlocking of the 1:1 motor drive provide synchronization of film and tape without any picture/sound intervals. Positive sprocket drives and a chromium-plated film channel behind the tiltable lens-housing reduce wear of the film, which has no magnetic stripe, to a minimum. Sound-on-sound recording, automatic volume control, VU-meter, noise-reducing switch, microphone and headset permit recording and mixing of music, lip synchronization and sound effects. Instant sound for any silent film can be chosen from standard music cassettes or from self-recorded cassettes. The Norimat de Luxe S for super 8 is priced at \$439.50. The Norimat de Luxe SD for dual 8 is priced at \$469.50.

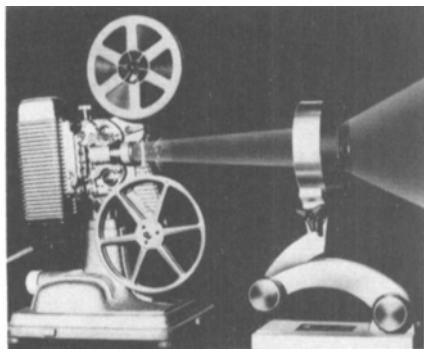


The PSC Sound-O-Matic Super-8 Projector has been announced by Producers Service Corp., Photo Instrumentation Div., 1200 Grand Central Ave., Glendale, CA 91201. The projector, which weighs 16 lb, can also be used as a public address system. It has fully automatic self threading and has a film capacity of up to 400 ft. The projector is provided with an *f*/1.4 20 mm fixed focus or *f*/1.5 20-32 mm zoom lens; a Philips type 12-V, 100-W two-pin base; and a dichroic mirror-condenser integrated tungsten-halogen lamp. Features include continuously variable film speeds between 18 and 24 frames/s. The motor is a dc commutator 30 V, 20 W, 550 mA with self-controlling governor. Provisions are included for reverse projection and fast rewind, tone/volume controls, framing and elevation adjustment and film leader cutter. The price of \$196 includes a detachable ac power supply cord, a 400-ft automatic take-up reel and a limited direction microphone.

The ELB, a new Quartzline reflector lamp, a 30-V, 80-W, 15-hour-average-life light source, has been announced by General Electric Co., Nela Park, Cleveland, OH 44112. It produces brightness close to

that of 21-V, 150-W projection lamps. Because of the lamp's low wattage and a heat-transmitting filter on the surface of its 2-in-diameter glass reflector, only a small amount of heat reaches the film. As a result, film life is prolonged without sacrificing screen illumination. The light source itself is a jelly-bean-sized tungsten-halogen lamp mounted in a dichroic reflector which reflects all the light but less than half the heat generated by the lamp. The ELB is priced at \$11.40.

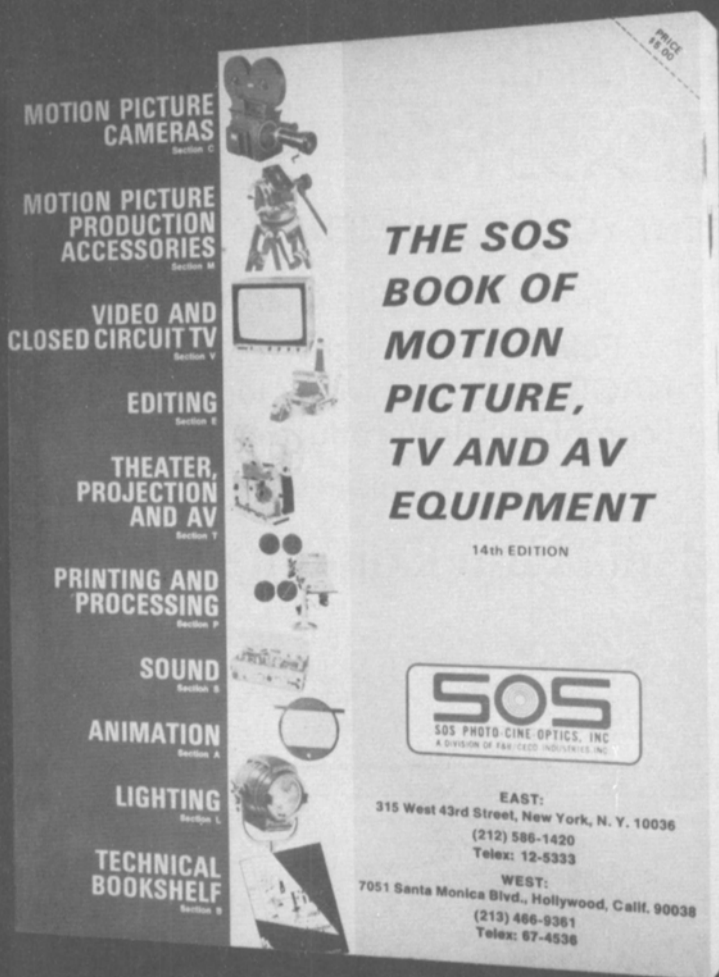
Other new lamps are the 100-W BHH and 75-W BNF designed for use with XL type cameras with fast lenses and ASA 160 film to supplement room lighting and eliminate unwanted shadows. Both lamps are bulb-shaped, 1 $\frac{3}{8}$ in in diameter and have double-contact bayonet bases. They operate on 120-V household current and produce about 1,200 center beam candlepower. The BHH is priced at \$2.25 and the BNF is priced at \$2.65.



Super-Vision, an optical device that can be placed in front of any focusable projector to expand the projected image to a picture six to 10 times larger than that projected by the normal lens alone, has been announced by Anton Process Co., P.O. Box 183, Woodside, NY 11377. The device can be used with 8mm, super-8 or 16mm projectors and can also be used with slide projectors using a 3-in lens, or a lens with shorter focal length. In use, the Super-Vision lens is placed in front of the projector and lined up with the optical axis. The projection lens is then focused in the conventional manner to produce a picture as large as 10 ft wide. If a smaller image is desired the device is moved closer to the projection lens. The price is \$135.

The 1000-B Minicord, a lightweight 16mm cine/pulse camera for photorecording has been announced by Producers Service Corp., Photo-Instrumentation Div., 1200 Grand Central Ave., Glendale, CA 91201. The camera is available in four models with maximum pulsed rates of 5, 10, 20 or 30 frames/s and one cine rate of 8, 16, 24 or 34 frames/s. All models meet military specifications for operation to 65,000 ft at temperatures to -65° F. The camera offers several pulse modes, including closed-to-closed shutter for instrument panel recording or time-lapse photography; open-to-open shutter for scope recording; and closed-open-closed (shutter-dwell) for time exposures. The camera measures 6 x 3 $\frac{3}{8}$ x 2 $\frac{7}{8}$ in. With a 50-ft magazine it weighs 2 lb 14 oz; with a 100-ft magazine it weighs 3 lb, 12 oz. The camera is priced at \$1,495. The price does not include accessories, magazine or lens.

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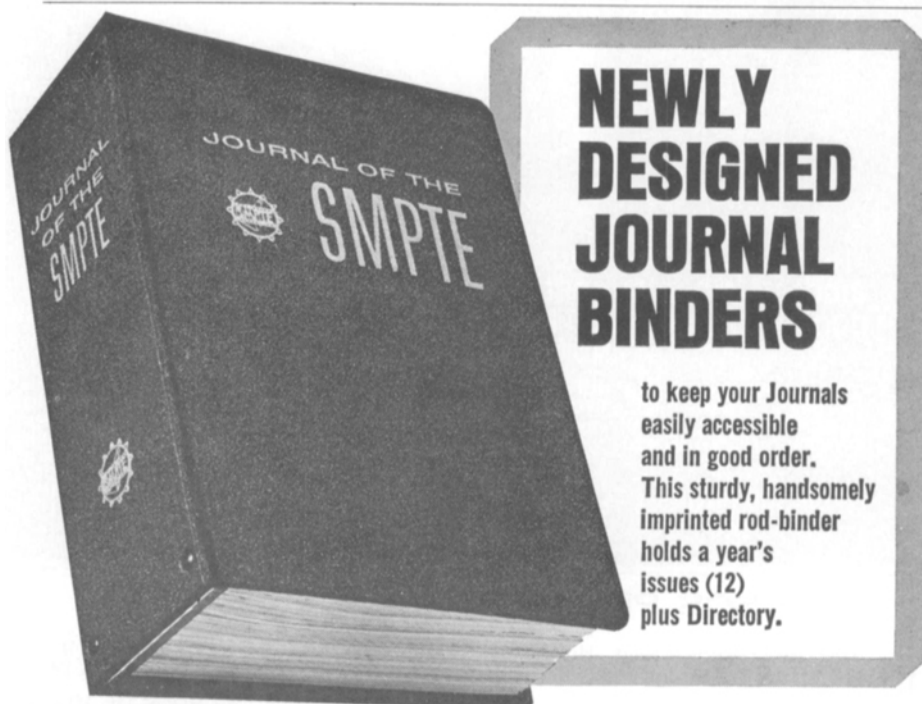
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Model 16-H, a professional, heavy-duty 16mm viewer/editor, has been announced by Maier-Hancock Industries, 13212 Raymer St., North Hollywood, CA 91605. The unit is equipped with a blower and a long-life 12-V, 50-W halogen lamp. It incorporates four rollers, one sprocket wheel and a mirror-finish film pressure plate. It operates in both directions, feeding from left or right. The light automatically turns off when the film gate is opened. The price is \$205.

Model GP-9 High Voltage Pulse Generator, designed to produce fast rise and fall time (1500-V pulses with repetition rates up to 2 MHz) has been announced by Lasermetrics, Inc., 19 Legion Pl., Rochelle Park, NJ 07662. The instrument has a balanced output, i.e., two output connectors each providing pulses of up to 750 V of opposite polarity. The outputs are summed across the capacitance of an Electro-Optic Light Modulator (EOM), effectively doubling the pulse amplitude appearing at either output connector. The GP-9 can be used for driving an EOM in pulsed or CW laser applications. In pulsed laser systems, high repetition rate capability permits generation of multiple light pulses during each flashlamp firing. When the instrument is used with an EOM modulated CW laser, the modulator can function as a high-speed, repetitive shutter generating light pulses having a width as low as 200 ns and a 2 MHz repetition rate. The GP-9 is priced at \$3,250. The price includes internal source, gate and delay. The instrument is also available as Model GP-9E without internal source, gate and delay at a price of \$2,625.

Humitemp instruments for the measurement and control of relative humidity and temperature have been announced by Phys-Chemical Research Corp., 36 E. 20 St., New York, NY 10003. The series consists of the Humitemp for direct readout, the Humitemp-I for readout and control (with single adjustable control points for both humidity and temperature) and the Humitemp-II for readout and control (with Hi and Lo adjustable control points for both humidity and temperature). Sensing probes in the series utilize the PCRC-11T humidity sensor and the G-31 platinum glass-sealed temperature sensor. The humidity sensor is automatically temperature-compensated by means of an additional G-31 temperature sensor positioned in close proximity to the humidity sensor. All sensors are housed in a plastic probe assembly. Linearized readout and control are possible throughout the entire range of relative humidities (0 to 100%) and tem-



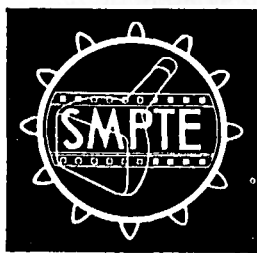
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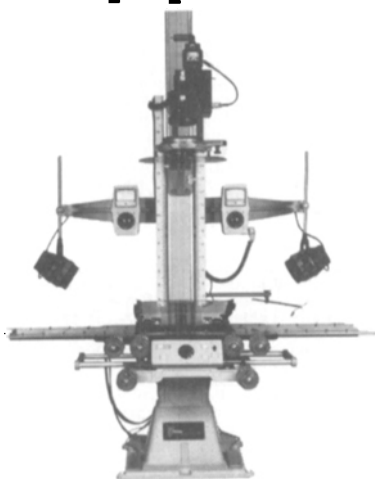
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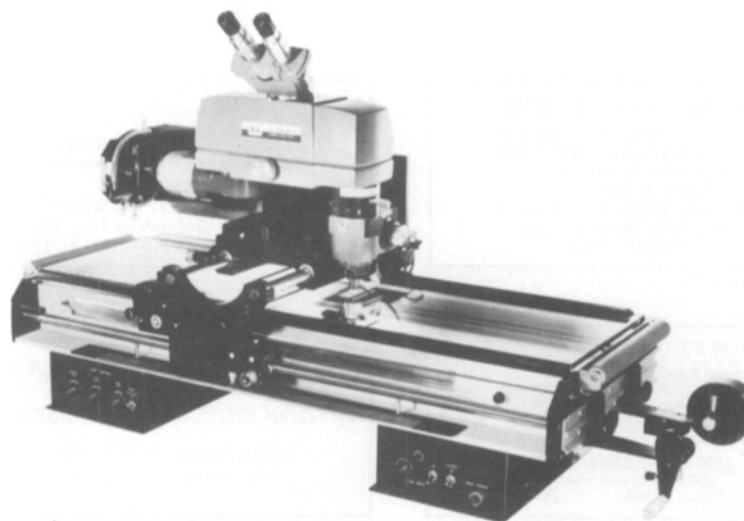
peratures (0 to 100° C). All instruments provide linear analog output-signal record jacks for both humidity and temperature. Among possible applications are included chemical industries, cleanrooms and photography.

Recoma SmCo₅ magnets having an energy product of about 16×10^6 G.Oe and an almost linear demagnetization curve with a very high coercivity (7000 Oe) have been announced by the Brown Boveri Research Centre, BBV-WE/Fachpresse, CH-5401 Baden, Switzerland. The new magnets are possible because of a new group of materials, the RECo₅ class (RE = Y, La, Ce, Pr, Nd, Sm and mixtures of these elements) which have joined materials of the Alnico class and the ferrites normally employed for the manufacture of permanent magnets.

The first investigations into intermetallic compounds between rare earths and 3d transition elements were made some 12 to 13 years ago. At that time, the crystalline structure and magnetization were the main points of interest. The real interest in these magnetic materials was not aroused until 1966 when Hoffer and Strnat discovered that YCo₅ crystals were highly anisotropic. Thereupon several laboratories started intensive research into such intermetallic compounds, including the

Brown Boveri Research Centre. It was found that compounds with the best prospects were of the type RECo₅ since they have a high saturation point, high Curie temperatures and their crystals are highly anisotropic, making them suitable for the manufacture of permanent magnets.

The Series 7000 Laminar Downflow Clean Work Stations has been announced by Agnew-Higgins, Inc., 7091 Belgrave Ave., Garden Grove, CA 92641. The line includes full console and counter-top models and features modular construction of the blower-filter section, table and cabinets. The HEPA filters used in each station are effective in trapping all particles down to 0.3 μ m in size. The blower-filter cabinet has been placed overhead on its own legs independent from work surface supports to eliminate vibration. An extra large work chamber, 28½ in high by 28½ in deep is offered and all models fit easily under an 8-ft ceiling. In the fume-hood versions, 16-gage sheet metal ducts with acid resistant linings are used to protect the operator from acid solutions. In addition to the fume-hood versions there is a bio-safety model for the handling of pathogens, as in tissue cultures. The price range is from \$1,380 to \$2,555.



The Itek Visual Edge Match Comparator, developed primarily for evaluation of the quality of reconnaissance films (original negatives and duplicates), has been announced by Itek Corp., Optical Systems Div., Lexington, MA 02173. The visual edge comparison technique (VEM) involves visually matching a photographic edge of unknown quality against a calibrated, laboratory-made array of edges. Image quality analysis by the VEM technique offers direct determination of system performance from operational photography in the absence of special test patterns; precision comparable to resolution testing; no requirement for complex equipment such as a microdensitometer; and simple, rapid analysis by nontechnical personnel.

The edge array, or matrix, consists of rows and columns of edges that vary in

contrast and sharpness. Each matrix is calibrated in terms of 2:1 contrast resolution. Matrices can be made on any photographic material to match the operational film and processing method.

To perform the analysis, the edge matrix is placed on one side of a split-field, double-microscope comparator and an unknown photograph is placed on the other side of the comparator. The operator selects a suitable edge in the unknown photography and matches it in contrast to a matrix edge. The observer then moves the matrix in the sharpness row until a sharpness match is obtained.

Price range of VEM equipment is from about \$18,000 to \$23,000. Prices of edge matrices begin at \$1,600 with prices depending on film type and polarity.