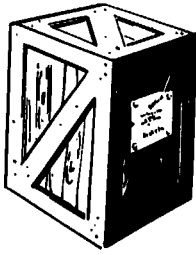


# new products

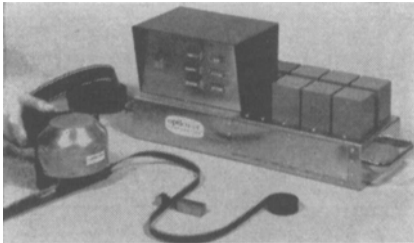
(and developments)

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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.



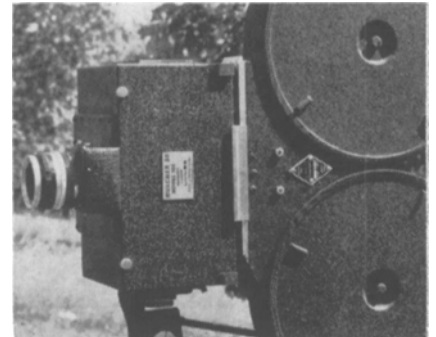
called Opticue, was introduced at the Society's Conference in Chicago. The system, for controlling the printing of motion-picture film, is interchangeable and compatible with present RF and notch cue systems to the extent that it can be installed on the printing machine together with the other two systems. The diffraction cues are applied to the film and the infrared source/detector modules are located on the printer. The punched paper tape, used to encode printer light changes, fades and dissolves, remains unmodified. Cues, consisting of inscribed, finely spaced parallel lines, are located in an area bounded by the picture frame, sprocket holes and the outer edge of the film. The pattern of inscribed lines causes a "blaze" or sharp line of radiation to be diffracted at right angles to the lines. The infrared source/detector set senses only the diffracted radiation when a cue passes into the optical system. With solid-state electronics, signals are amplified, printer light changes are triggered, and adjustable time delays inserted if desired. Cues are inscribed on the film (or cancelled if necessary) in one second by a handheld, rechargeable battery-powered applicator. The infrared source/detector is usable on both 16mm and 35mm printers.

Western Reserve University in Cleveland to study the existence of high-energy electrons in the upper atmosphere. The gondola has made 10 flights into the atmosphere and the camera has taken more than 250,000 photographs. Equipped with a special 800-ft magazine, the camera can take 40,000 photographs during each flight. The spark trails are visible from 3 to 5  $\mu$ s and the camera is operated with an open shutter. After an event is photographed, the shutter is closed while the camera advances one frame. Some of the flights have been made at night when temperatures in the gondola reached  $-5$  C. Daytime temperatures of 28 C were recorded. In addition to recording the event, the camera simultaneously photographs a clock, a register and a magnetometer so that land-based scientists can know at what time and where in the atmosphere each event occurred. A solid block of Lucite was hollowed out to house the spark chamber. High-voltage circuits are contained in a pressurized dome. These are the only components in the system that are pressurized. The camera measures  $6\frac{1}{2}$  by  $4\frac{1}{8}$  by  $4\frac{1}{8}$  in. It weighs 4 lb. The gondola weighs 200 lb fully instrumented.



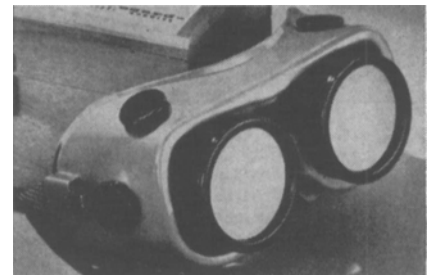
A motion-picture film cuing system based upon infrared diffraction has been announced by Opticolor Corp., 207 Newtown Rd., Plainview, N.Y. 11803. The system,

A high-speed 16mm camera, Model IIIB, a product of Flight Research Div. of Gianini Scientific Corp., P.O. Box 1-F, Richmond, Va., is used in a spark chamber gondola that is carried to altitudes as high as 25 mi by a 10-million-ft<sup>3</sup> polyethylene balloon. The gondola is used at Case



A 35mm double-frame sequence camera, Model 105, which uses the same design principle as the Hulcher 70 cameras, has been announced by Charles A. Hulcher Co., 911 "G" St., Hampton, Va. 23361. The camera uses 100-ft rolls of film or it may be adapted for use with magazines. It is available for use with 12-V dc or 24- to 28-V dc battery supplies as well as 115-V ac. It can be adapted for use with most standard 35mm lenses. It can be used as a streak or as a framing camera with all necessary equipment for converting from one mode to the other. Streak camera speeds are 3 in. to 48 in./min. Frame rates are 5 to 20, 10 to 50/s or single frame.

The basic 35mm sequence camera, 2-speed, 12V, simple reflex focusing, less lens, costs \$1,395. The Model 105 streak camera (geophysical, streak only) costs \$3,975 and the Model 105 combination streak and sequence camera costs \$4,400.



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near-infrared laser radiation is inadvertently viewed by flight crew or ground crew personnel have been announced by Spectrolab, a Textron company, 12484 Gladstone Ave., Sylmar, Calif. Designated Type SN-1, the spectacles have a high optical density to neodymium laser (1.06  $\mu\text{m}$ ). Visual transmission is said to be 80% average 400-700 nm. The spectacles are spectrally neutral so as not to affect color preception. The price is \$150 a pair.



An improved version of the National Camera Motion Analyzer called the Master Model Mark IV Motion Analyzer has been announced by National Camera Supply, Dept. KH, Englewood, Colo. 80110. The earlier analyzer, designed to measure shutter speed, motion-picture speeds, electrical contact action, synchronization and other variables in photographic equipment was built to be accurate within 5%. The new analyzers are capable of accuracy within 2% of absolute measurement. The Mark IV analyzers are supplied on special order. The price is approximately \$635.



The Spectra  $\times 10$  Booster, for use with the Spectra 3-color meter to increase its sensitivity by approximately 10 times, has been announced by Photo Research Corp., 837 N. Cahuenga Blvd., Hollywood, Calif. 90038. The Spectra 3-color meter is used to measure the color quality of all light sources, including non-blackbody radiators, such as arc light, fluorescents and daylight. Formerly, the meter required a minimum of 50 fc to be operational. With the  $\times 10$  booster, it can be used at a level of 4 or 5 fc. The booster is a solid-state electronic amplifier powered by two 4.05-V mercury batteries. It measures about  $2\frac{3}{4}$  by  $1\frac{1}{2}$  by

1 in. Present users of the 3-color meters may have the  $\times 10$  Booster factory-installed at a price (including booster and installation) of \$100. A new Model B 3-color meter including the booster is also available at a price of \$429.50.

A new group of resolving power test targets based on the United States Air Force 1951 Air Force Target configuration has been developed by W. & L. E. Gurley, 514 Fulton St., Troy, N.Y. 12181. The 1-line-pairs/mm to 228-line-pairs/mm target format is available on  $2\frac{1}{2}$ - by  $2\frac{1}{2}$ -in. Estar Base Film in negative or positive imagery. The targets are manufactured in high, medium or low contrasts. Prices range from \$40 to \$100 each.

A color broadcast camera weighing about 35 lb and designed for one-man coverage of news and sports events has been developed by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063, at the request of the American Broadcasting Co. The camera can be operated over a miniature cable and it may also be operated as a battery-powered unit via a built-in microwave link. The camera head weighs less than 20 lb and is mounted on a shoulder harness to permit handheld operation. Equipped for microwave operation, the backpack weighs 30 lb. When equipped for cable it weighs 15 lb. The color picture from the camera is relayed by cable or microwave to a base station, which consists of the processing

electronics, and encoder, picture and waveform monitors and sync generator. From the base station the picture is fed to the television station for broadcasting. The camera is 18 $\frac{1}{2}$  in. long with its 6:1 zoom lens, 13 in. high and 7 $\frac{1}{2}$  in. wide with the electronic viewfinder. The backpack is 23 by 13 $\frac{3}{4}$  by 6 in. The camera can operate up to 2,000 ft from the base station via a specially designed cable 0.47 in. in diameter. Operating with 150 fc the camera has an SNR of 42 dB and a bandwidth of 4 MHz. Designated the BC-100, the camera contains a 1-in. electronic viewfinder. An intercom system links the camera operator and the base station. The camera is always locked to the studio's sync whether used with microwave or land line.

A portable color television camera called the Norelco PCP-70 "Little Shaver" has been introduced by Philips Broadcast Equipment Corp., 299 Route 17, Paramus, N.J. 07652. The camera head with lens weighs 23 lb and the entire assembly including electronic backpack and harness weighs 44 lb. A cable from the backpack allows the cameraman to go as far as 3,000 ft from the central camera control electronic equipment. The miniature system is designed for full compatibility with the camera control unit used with the Norelco PC-70 (*Journal*, pp. 745-748, Aug. 1966). The "Little Shaver" will be used during the 1968 political conventions to televise live action in color from the floor. Price of the system, including camera head, viewfinder, lens, backpack, harness and cable is \$41,450.

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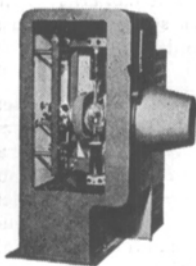
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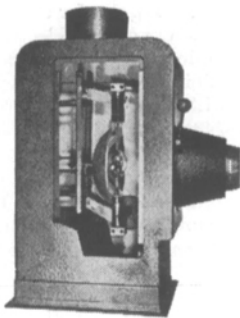
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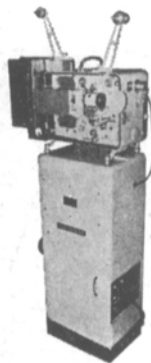
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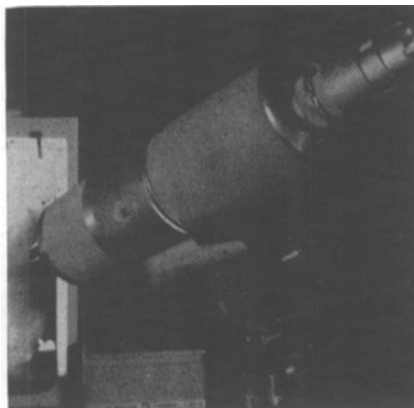
A "man-pack" color television camera designed to be carried by an astronaut on a lunar mission has been developed by RCA's Astro-Electronics Div., Princeton, N.J. camera and power supply together weigh only 56 lb (on earth). The camera, said to be of broadcast quality, while designed primarily for space missions, is also expected to have broadcast and industrial applications. Materials used are mainly magnesium and aluminum. Integrated circuits and spacecraft packaging techniques make possible the compact size and light weight. The camera uses three 1-in. vidicons (electrostatic focus, electromag-

netic deflection) and an f/1.8 electrically driven zoom lens, 25 to 100 mm. It has self-contained batteries operating one hour without recharging. The batteries can be charged without interrupting the broadcast. Operating temperature is -15 to +50 C. Pictures taken by an astronaut on the moon could be viewed instantly on earth TV receivers and also stored on video tape for later detailed analysis. The camera would transmit the pictures to a base station and the pictures could also be relayed through commercial TV networks to give home TV viewers a real-time live view of the moon.



A three-vidicon color camera designed to provide color in closed-circuit applications at a cost comparable with that for monochrome has been introduced by International Video Corp., 67 E. Evelyn Ave., Mountain View, Calif. The camera, designated IVC-100, uses all-solid-state circuitry (except image tubes and nuvistor preamplifiers). Its special color optics system is sealed against dust and does not require adjustment. The camera is self-contained, with a built-in integrated circuit synchronizing generator, and built-in encoder, with encoded output from a single coaxial connector. Separate red, blue and green video outputs are available simultaneously with encoded output, allowing R, G and B monitors to be used. A viewfinder with switcher allows viewing of

red, blue or green or any combination. A Y matrix permits viewing of the luminance signal. Supply voltages are electronically regulated. Registration problems are eliminated by extreme sweep stability. The camera can be driven from a remote sync generator and all of its video outputs are source terminated. Available with a 6:1 zoom lens, operator controls and adjustments are few and simple and routine operation can be conducted with only an On-Off switch and zoom lens control. Limiting resolution is 400 lines at center and corners. Power consumption is 63 W. The camera (without viewfinder) is 8 in. wide, 9 in. high and 23 in. long. It weighs 28 lb. The IVC-100 camera is priced at less than \$10,000.



The ST-3 camera, a closed-circuit television camera which features a gamma correction circuit that permits the operator to adjust the intensity of selection shades in the black to white scale to improve the contrast of any high detail analog

signal, has been announced by Diamond Power Specialty, a subsidiary of Babcock & Wilcox Co., 161 E. 42 St., New York, N.Y. 10017. Capability for control of shading gradations and for providing 1200 lines of horizontal resolution makes possible such applications as televising documents, radar screen scanning, remote X-ray readings and microscope magnification and intensification. External test points on the front of the camera's separate power unit modules permit measurement under dynamic conditions and without special monitoring equipment or disassembly. The camera is 4 in. in diameter, 14½ in. long and weighs 9 lb. The power module is 5 in. high, 8½ in. wide, 14 in. long and weighs 11 lb. Camera and control may be up to 1500 ft apart. The ST-3 is priced at \$2,885. A model is also available with camera and control module in one housing, called the ST-3U, it is priced at \$2,965.

A compact, low-cost vidicon camera has been introduced by Raytheon Learning Systems Co., 475 South Dean St., Englewood, N.J. Designated Model 605, it is designed especially for educational, industrial, military and security applications, and priced at \$600. The camera has a 1-in., f/1.4 lens and employs a 525-line random interlace. It measures  $4\frac{1}{2} \times 5\frac{1}{2} \times 10\frac{1}{2}$  in. and is completely automatic and requires only an On/Off switch for operation. The circuitry is assembled on two etched circuit boards. One is the power supply module and the other contains the video control circuits, beam, target and focus. These are plugged into each other to eliminate complex interconnections and improve reliability. Video and modulated RF output are standard. The RF output may be set for TV channels 2 through 6 and viewed directly on a conventional home receiver. Transistorized circuitry reduces power requirements to 20 W from a nominal 120-V ac current. The camera is designed to withstand voltage fluctuations from 108 to 132 V and ambient temperature variations from 4 F to 122 F without picture degradation.

A new color television tape recorder designed to provide high-band picture quality at considerably less cost than earlier high-band color recorders has been introduced by the Broadcast Communications and Products Div. of RCA. Designated TR-50, the color recorder is priced at \$54,500. An earlier "deluxe" high-band color recorder, the TR-70, is priced at \$87,500.

Two improved high-band color video tape recorders have been announced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063. The new Model VR-2000B is an advanced generation of the VR-2000 introduced in 1964, and replaces it. The VR-1200B is an improved version of the VR-1200A. Its recording and playback specifications closely approach those of the VR-2000B and it is available in four configurations. The VR-1200A remains on the market. The VR-2000B features a completely redesigned audio system to improve sound quality through better SNR and improved frequency response. Improved performance of the VR-1200B over the VR-1200A includes a reduction of the "K" factor (an evaluation of picture quality) to 1.5% better SNR characteristics, improved frequency response, improved differential gain and differential phase and a reduction in moire. The VR-2000B is priced from \$66,500 to \$100,000. The VR-1200B is priced from \$55,000 to \$90,000.

Two compact video-tape recorders, the VR-5000 and the VR-7800, have been introduced by the Consumer and Educational Products Div. of Ampex Corp., 2201 Lunt Ave., Elk Grove Village, Ill. 60007. The new recorders are compatible with each other and with previous Ampex video-tape recorders using 1-in. tapes. Both recorders operate at a tape speed of 9.6 in./s, a writing speed of 1,000 in./s and provide one hour of playing time, as well as stop-motion. The VR-5000 weighs 62 lb and is priced at \$995. The VR-7800 is equipped with a monochrome electronic editor and an automatic tension servo. It

requires no modification for international use, since it is designed to record or play back tapes made on either the 525- or 625-line standard. A 50/60 field switch allows instant change to either standard. The recorder's operation is independent of the power line frequency. The price range is from \$9,500 to \$16,500, depending on features.

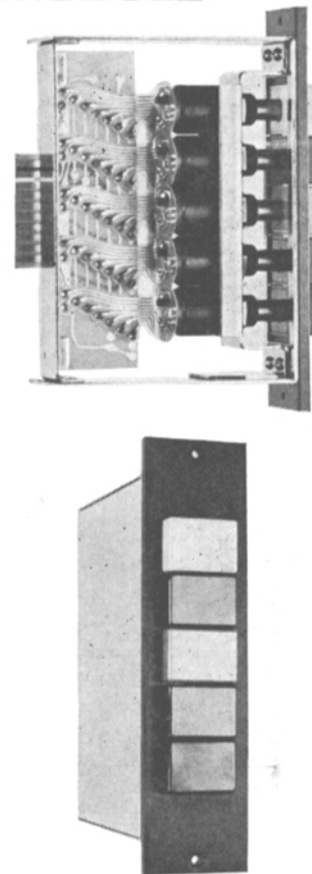
Three new video-tape recorders, primarily for educational, business and industrial training have been introduced by Diamond Power Specialty Corp., a subsidiary of Babcock & Wilcox, 161 E. 42 St., New York, N.Y. 10017. The DP-1 is a portable unit designed for on-location training so that students can immediately observe and correct their performances. The recorder is  $11\frac{1}{2}$  in. high,  $20\frac{1}{2}$  in. wide and  $17\frac{1}{2}$  in. deep. It has 220 lines resolution and records on  $\frac{1}{2}$ -in. tape in black-and-white, or, with an optional adapter, in color. It is in the \$1,000 price range. The DP-2 Professional VTR and the DP-3 Master VTR both have more than 350 lines resolution. Both models are designed with removable circuit modules and record on 1-in. tape in either black-and-white or color. The DP-3 has an internal editing unit designed for formalized teaching, video-tape libraries, remote news pickup and other applications. The DP-2 is in the \$4,000 price range and the DP-3 is priced at about \$8,500.

A self-contained video-tape recorder, Model SV-800U, has been announced by Shibaden Corp. of America, 58-25 Brooklyn-Queens Expressway, Woodside, N.Y. 11377. Features include tape interchangeability between one SV-800U and another, or any other model in the SV  $\frac{1}{2}$ -in. series, even after the heads are replaced. The machine has a built-in 9-in. receiver/monitor and an audio-video monitor. Two rotary heads of specially developed metal operate on the helical scan recording principle. Response is said to be better than 3.5 MHz, horizontal resolution, more than 300 lines and SNR 42+ dB. Up to 60 min of continuous recording is possible using  $\frac{1}{2}$ -in. tape on a 7-in. reel at 7.5 in./s. The recorder is 30 in. wide, 11 in. high and  $17\frac{1}{2}$  in. deep. It weighs 75 lb and is priced at \$1,695.

A self-contained remote control model of the EV-200 (called the EV-200R) Video-recorder has been announced by Sony Corp. of America, Industrial Products Div., 516 W. Florence Ave., Inglewood, Calif. 90301. The EV-200R has eight push-buttons on a detachable control panel that can be used up to 300 ft away from the recorder. The controls are Audio Dub, Record, E-E (electronics to electronics), Slow, Fast Forward, Forward, Stop, Rewind. The EV200s can be retrofitted to accept the remote control unit. The EV-200R is priced at \$3,995.

A system for parallel-operated transmitters to assure an uninterrupted FM broadcast signal has been announced by Radio Corp. of America. The "working standby" FM transmitter system (said to be a "first") is available for 10-, 20- and

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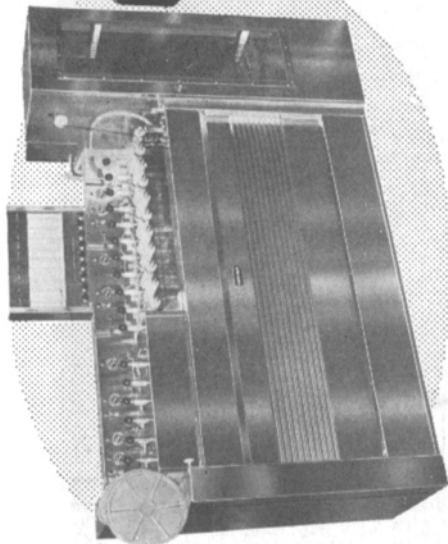
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40-kW output (that is, two 5-kW, two 10-kW and two 20-kW transmitters). The technique has been used in television broadcasting, but has not previously been used in FM. With parallel operation, the station automatically switches to reduced power if one of the two transmitters fails. Outputs of the parallel transmitters are fed into a single transmission line through a combiner and output switcher. The two transmitters are driven by one exciter and provide automatic switching to a spare in the event of an exciter failure.

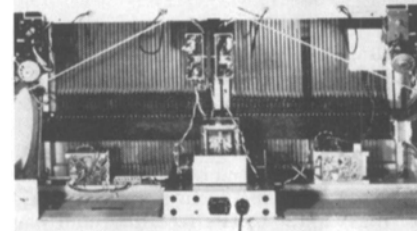


The HP 8051A Loudness Analyzer, announced by Hewlett Packard, 1501 Page Mill Rd., Palo Alto, Calif. 94303, provides a continuous  $\frac{1}{3}$ -octave analysis of airborne noise and computes loudness in sones. The unit's response corresponds to a loudness level of 40 phons, i.e., the level of a quiet room. The Analyzer is based on the Zwicker method developed from the findings of Prof. Dr. -Ing. Eberhardt Zwicker who formulated a procedure for measuring loudness to account as fully as possible for the observed characteristics of the human ear and nervous system. (Realistic measurements of loudness are difficult because of the lack of a simple relationship between the physical properties of sound and the resulting subjective sensation of loudness.) Dr. Zwicker's method is incorporated in ISO Recommendation 532, Method B.

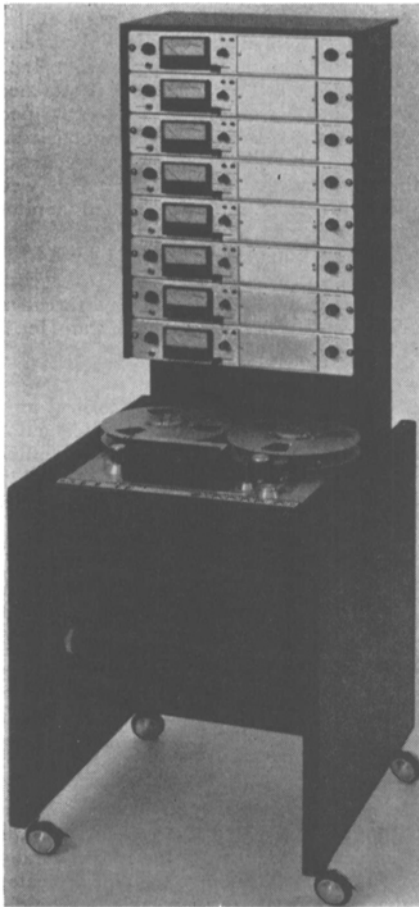
The Loudness Analyzer separates the audible spectrum into 20 frequency bands using a bank of parallel filters. The gain through each filter channel is adjusted for the amplitude and frequency response of the human ear. The instrument also accounts for the "masking" effect, wherein predominant sounds mask weaker, higher frequency sounds. After subjective weighting, each channel is displayed sequentially on a cathode-ray tube so the loudness contribution of each frequency band can be analyzed. A meter indication of total loudness is derived by integrating the area underneath the CRT curve to present an accurate measure of loudness for broadband sounds as well as for narrowband sounds. The analyzer has a condenser microphone input with a second input for tape recorders or other sources providing signals with millivolt amplitudes. Front panel switches select compensating networks for analysis of sounds picked up either in a diffused sound field, as in a room, or in a plane, frontal sound field, as in an open space or anechoic chamber. The analyzer is priced at \$5,500.

Two new solid-state multichannel audio recorder/reproducers, the 24-channel AG-1000-24 and the 16-channel AG-1000-16, have been announced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063.

The new recorders permit each instrument or group of instruments at a recording session to be recorded separately on 2-in. magnetic tape. If one musician makes a mistake, or if an instrument or vocalist is not present at the time of recording, that single track can be recorded at a later date. Balance and blending can be achieved by the engineer and the director after the musicians have left. The new recorders utilize an Ampex broadcast video-tape recorder transport and special components developed from the Ampex line of theater sound systems. Because of the large number of tracks available for recording, specially developed 2-in. tape is used. The AG-1000-24 is 40 in. high, 42 in. wide and 27 in. deep. It weighs about 550 lb and is priced at \$32,000. The AG-1000-16 is 44 in. high, 42 in. wide and 29½ in. deep. It weighs about 550 lb and is priced at \$24,950.



The Mellotron Sound Effects Console, manufactured by Mellotronics Ltd., 28-30 Market Place, London W.1, England. The console looks like an electronic organ and has 26 main sound groups, including industrial, traffic, animal, weather and war sounds. Any of 1,260 different sound effects can be located within 20 s and injected directly into motion-picture films, television and sound broadcasting at either the dubbing or initial recording stages or in direct transmission. Pushbutton switches above the keyboard select the range of effects and the keys on the piano keyboard then control the individual sounds or related sequence. Sound effects can be played simultaneously, with individual spot effects synchronized. The sound effects, which are compiled from the British Broadcasting Corp.'s library, are stored on 70  $\frac{3}{8}$ -in. magnetic tapes, each carrying three tracks. The tracks are each divided into six sections of recorded information, providing 1,260 sections. The sound effect can continue for 8 s at a normal speed of 7½ in./s, with speeds variable at  $\pm 20\%$  to vary the pitch and speed of the effect. The unit contains amplifiers and loudspeakers. The console is 39 in. high, 51 in. wide and 27 in. deep. It is priced at \$8,400 and distributed exclusively in the U.S. by Todd-AO Corp., 1021 N. Seward St., Hollywood, Calif. 90038.



An 8-channel version of the AG-440 series of professional audio recorder/reproducers has been announced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063. Called the AG-440-8, the machine uses 1-in. tape instead of the  $\frac{1}{4}$ - and  $\frac{1}{2}$ -in. tape used by the earlier AG-440 series. The AG-440-8 includes the same plug-in solid-state modular electronics, plug-in head assemblies, tape lifters, adjustable azimuth for individual head stacks, three-way editing capability and scrape flutter idlers as the rest of the AG-440 series. The AG-440-8 is priced at \$12,500.



The 3M professional tape recorder featuring Dynatrack electronics and Isoloop tape transport has been adapted for motion-picture use, it was announced by 3M Company, 3M Center, St. Paul, Minn. 55119. The new film sync recorder makes it possible to record the synchronizing or

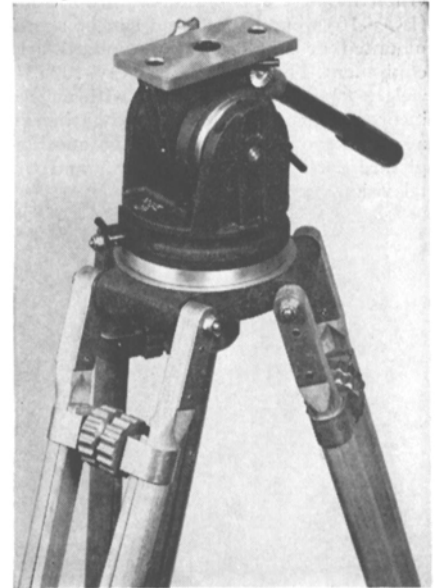
pilot tone from the motion-picture camera and soundtrack audio on the same  $\frac{1}{4}$ -in. tape. The recorder consists of a standard  $\frac{1}{2}$ -in., two-track transport combined with a Dynatrack electronics module. In the professional recorder, the Dynatrack system records two low-noise tracks simultaneously with a single signal at different sound levels. In the film sync module the NAB audio functions are unaltered, but the second track is converted to an independent record-playback system for the pilot tone track. To make the recorder more suitable for transporting around a motion-picture lot on a sound dolly, a set of mechanical brakes was added to the standard transport. Whenever the ac power to the deck is removed, differentially opposing brakes hold each reel hub. In the event of slack tape loop on the machine, any vibration of the deck will tend to tighten the loop. During normal operation of the deck, only the dynamic braking system is operative. The professional tape recorder (unmounted) is priced at \$4,270. The film sync recorder is in a comparable price range.

A system for duplicating cassette stereo tapes which permits recording 10 copies of an hour-long program in two minutes has been announced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063. The system consists of Model ADM-500A duplicator master which drives up to 10 Model AD-150 duplicator slaves. The system utilizes two Ampex 3300 master units at the head of each duplicating line to permit continuous duplicating by eliminating the need for stopping the slaves while the master tape is rewound. The master duplicators use  $\frac{1}{2}$ -in. tapes recorded at  $7\frac{1}{2}$  in./s on Ampex AG-300-4, AG-440-4 or MR-70-4 master recorders. The master duplicators operate at 120 in./s. The slave units record at 30-in./s on 150-mil tape. The slave reels contain up to 3,600 ft of tape. Features include a tape tension control mechanism and dual capstan drive to prevent the tape from stretching and virtually eliminate flutter and wow. A new guide system is used to eliminate tracking problems. The system is priced at about \$77,500 for the master and 10 slave units.



The Vari-Beam "1000" designed to provide a continuously variable light output has been announced by Berkey-ColorTran, 1015 Chestnut St., Burbank, Calif. 91502. The lamphouse accepts any one of 16 single-ended tungsten-halogen quartz lamps operating at 120 V, ac or dc. The lamps are available in 500, 750 and 1,000 W. Using a 1,000-W 3,200 K clear lamp,

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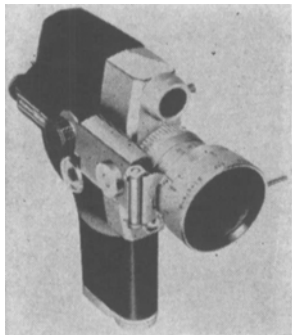
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the Vari-Beam "1000" produces 151 to 948 fc at 10 ft from flood to spot focus positions. Available in both motion-picture and television models, the motion-picture version (LQV-10) weighs 9½ lb and can be stand-mounted or supported by standard grip equipment. The TV version (LQV-10/TV) weighs 8½ lb and is supplied with a yoke incorporating a C-clamp for mounting on an overhead rail or pipe. The motion-picture version is priced at \$85 and the television version is \$89.



The Fujica P-300 is a new Single-8 Instant Load movie camera produced by Fuji Photo Film Ltd. of Japan and distributed in the United States by Ehrenreich Photo-Optical Industries, Inc., 623 Stewart Ave., Garden City, N.Y. 11533. The camera is equipped with a CdS-activated automatic electric eye exposure system powered by a

2.6-V mercury battery. The camera, which weighs 27 oz, has a single-8 cartridge which places take-up and feed reels in an over-and-under configuration instead of side by side. This configuration permits wind-back of the film to provide capability of making optical effects in the camera. The film forward gear-drive is released by pushing a button and rewind to any previously filmed point becomes possible. To fade-in and fade-out for lap dissolves, this feature plus a front-of-the lens polarizing accessory filter is used. The P-300 is priced at less than \$125.

Fujica has also announced two new black-and-white films called the Fujipan R200 and the Fujipan R50. The R200 is intended especially for use in filming dimly-lit scenes. The R50 is intended for use in outdoor scenes in brilliant daylight and indoors under floodlights or other photographically adequate lighting.

A 25-kV trigger transformer designed to provide external triggering of xenon flash-lamps has been announced by PEK, Inc., 825 E. Evelyn Ave., Sunnyvale, Calif. Designated Model T-201, the transformer features a rugged, completely encapsulated compact design.

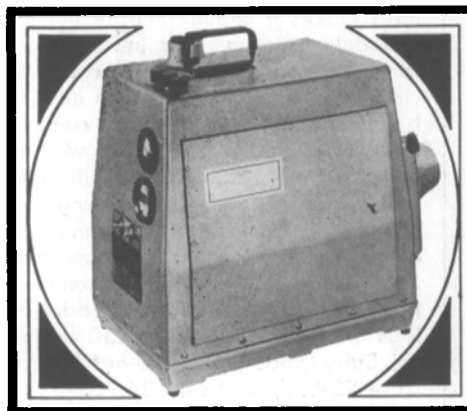
Performance capabilities include 25-kV peak output voltage, 50-A primary current capability, low rise and delay times (0.35 µs and 0.1 µs, respectively) and short pulse width capability. It is priced at \$17.60.

A camera and monitor mounting plate for use with small closed-circuit TV cameras has been announced by Quick-Set Inc., Skokie, Ill. 60078. The camera is attached to the plate by a screw which enters a tripod socket in the camera. The monitor is confined by rails at the front and rear edges of the plate and held in place by a ¼-in. web strap and buckle. Both camera and monitor can be reversed to provide access to controls. The plate, measuring 8½ by 14., is made of hard-board faced with cork composition and provided with a threaded hole for mounting on a Samson Pan Head. It is priced at \$24.

An improved random access control unit designed for use with Selectroslide automatic 2 × 2 slide projectors has been announced by Spindler & Sauppe Inc., 1329 Grand Central Ave., Glendale, Calif. 91201. The unit's keyboard has been redesigned to incorporate square pushbuttons to provide more surface area for greater ease of operation. All the pushbuttons light up, giving the operator positive indication of projector function. Numbered buttons light to show the slide number being projected. The SEQ button lights, when depressed, to indicate that the projector is operating sequentially. It is unlit in the random access mode. The push-push ON button lights when the projector is turned on and goes out when the projector is switched to standby; one-half of the A/B button lights to indicate which magazine is functioning on a dual magazine 96-slide projector model. Models are available for single magazine or dual magazine projectors, with or without remote focus control and with or without the sequential operation feature. The price range is from \$474 to \$664.

A copy and close-up stand for duplication of transparencies and micro-slides, making slides from negatives and preparation of filmstrips has been announced by Karl Heitz, Inc., 979 Third Ave., New York, N.Y. 10022. Called the Macrodia, the stand is equipped with a movable object stage for critical focusing. Three interchangeable discs give a choice of backgrounds and lighting effects. If desired, an electronic flash can be used instead of the stand's flexible close-up light. It is priced at \$299.90.

The Resolution Bar Test Pattern for quickly checking camera system resolution has been announced by Diamond Power Specialty Corp., P.O. Box 415, Lancaster, Ohio 43130. The resolution test pattern group (200- to 800-line slides and 200- to 1,000-line transparencies) is designed to be used to check the horizontal and vertical resolution obtainable from camera systems. The resolution, which is a square wave response (from white-to-black-to-white) is indicated at the center, sides and corners of the test pattern. The test pattern has nine blocks of closely spaced parallel lines uniformly located on the pattern. The center and corner blocks have vertical lines to test the horizontal resolution and the blocks along the four sides have horizontal lines to test the vertical resolution. The spacing of the parallel lines determines the resolution of the test pattern. The slides are priced at \$12.00 and the transparencies at \$15.



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