



# AMEGA '69

## SOUND SYSTEMS

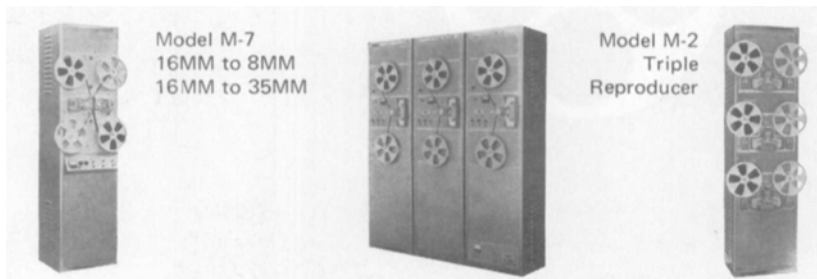
### Recorders Dubbers Interlock

### Super 8mm Duplication From 16 or 35mm Master Tracks

### 16mm "Master" Recorders Studio and Portable

### 16mm Interlock Dubbers For Music, Dialog and Effects

### 35mm and Combination 16/35mm Recorders and Dubbers



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PLEASE SEND THE NEW AMEGA '69 CATALOG

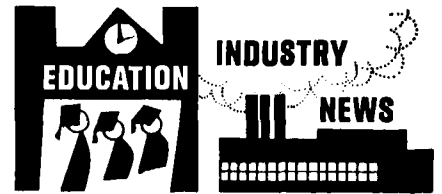
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The CBS Broadcast Electronic Video Recording camera (BEVR) will be manufactured and marketed by General Electric Co., Syracuse, N. Y., and Cohu Electronics, Inc., of San Diego, CA, according to licensing agreements with Columbia Broadcasting System. Broadcast EVR is an application of Electronic Video Recording. The first operating step in the Broadcast EVR system is the transfer of picture images from film to a master through electron beam recording techniques. Conventional photographic printing processes are then used to obtain black-and-white 16mm release prints from the master. At the television station a BEVR camera converts the black-and-white picture information and color coded information to a standard high-quality color signal for transmission. The camera, expected to be priced in the \$33,000 to \$35,000 range, is an integral component of Broadcast EVR.

The Electronic Video Recording system (EVR) was introduced by CBS in December 1967. It was reported in the November 1967 issue of the *Journal* (pp. 1165-1166). EVR technology consists of three main stages—Prerecording (an electronic process transfers film or videotaped programming to a special 8.75-mm unperforated thin film); Cartridge (the film is stored in a special cartridge); and Reproduction (the cartridge is inserted in a player attached to the antenna terminals of the television receiver and automatically played on the television screen).

An organization has been formed by Motorola, Inc., to market the EVR player. It has also been announced that the Great Plains National Instructional Television Library and CBS have agreed on conversion of video-tape titles to EVR cartridge format. The Library, located in Lincoln, NB, is said to have the largest collection of complete telecourses in the world. Earlier the New York Times announced plans to produce some 50 or more educational films for the EVR medium.

The Great Plains National Instructional Television Library announced that its initial venture in conversion of video-tape titles to the EVR cartridge format will be timed to coincide with early delivery of Motorola EVR players. Included will be a group of the Library's 30-min tapes.

Mecca Film Laboratories Corp., New York, has been purchased by Technicolor, 6311 Romaine St., Hollywood, CA 90038, it was announced by Paul W. Fassnacht, Technicolor President. The laboratory is engaged in processing television spot commercials.

The National Association of Educational Broadcasters announced the termination on February 28 of its agreement with the Government of American Samoa which provided that NAEB administer the five-year-old Samoan school system using tele-

**Troubled** by out-of-focus pictures?

**Troubled** by emulsion

pile-up in your camera gate?

**Troubled** by distracting camera

noise when shooting subjects who should not be distracted from what they are doing?

**Troubled** by cameras that are always in need of repair and adjustment?

**If so**, switch to Auricon, the only 16mm Camera that guarantees you protection against all these troubles, because it is so well designed! The Auricon is a superb picture-taking Camera, yet silent in operation, so that at small extra cost for the Sound Equipment, it can even record Optical or Filmagnetic sound in addition to shooting your professional pictures.

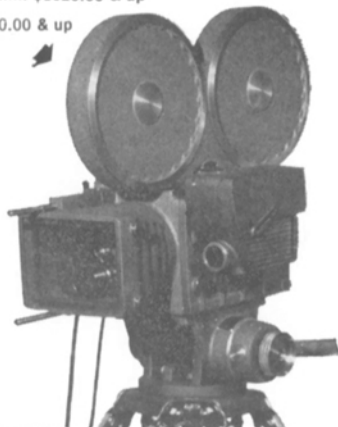


AURICON SUPER-1200, takes 1200 ft. Runs 33 min. \$6425.00 & up

AURICON "PRO-600 SPECIAL," takes 400 ft. Runs 11 min. \$1620.00 & up

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**GUARANTEE**  
All Auricon Equipment is sold with a 30-day money back Guarantee and a 1 year Service Warranty. You must be satisfied!

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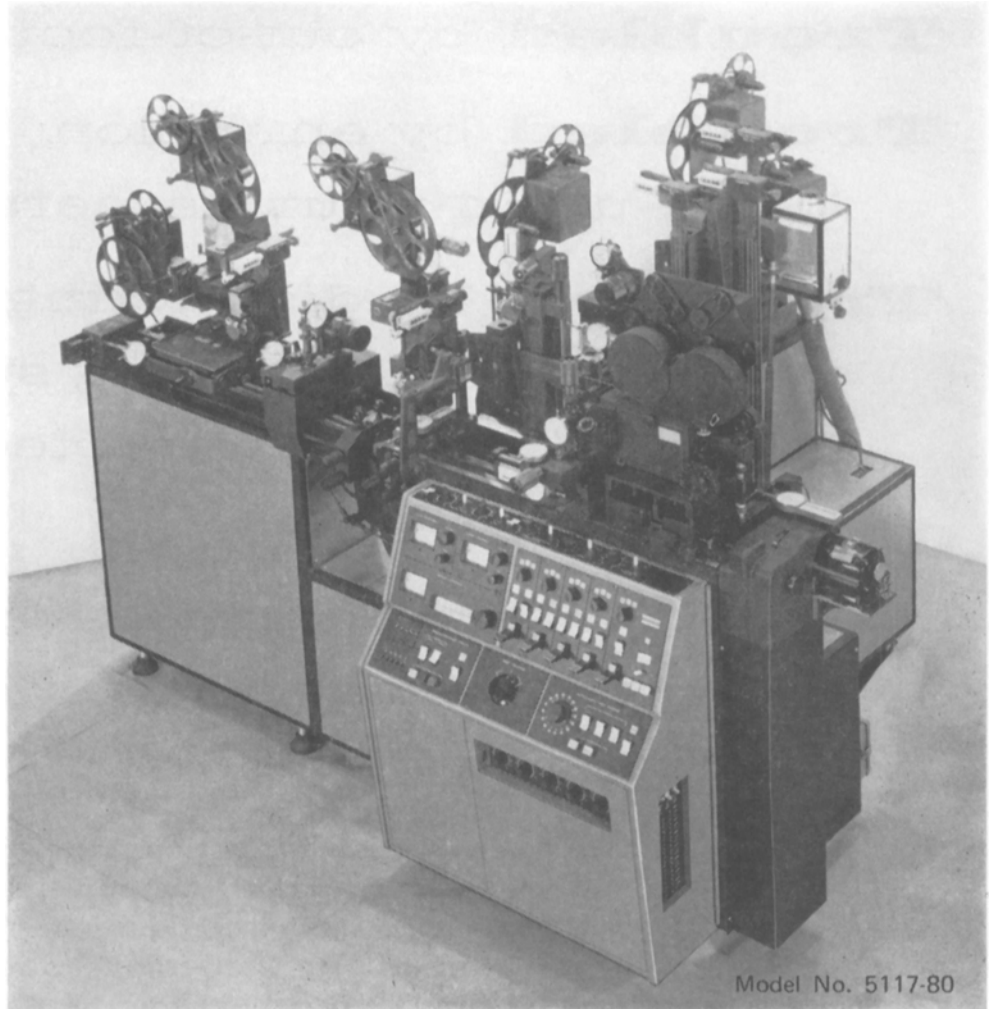
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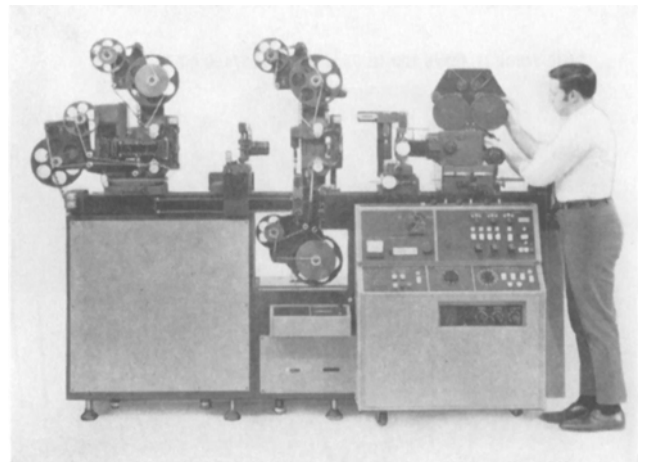
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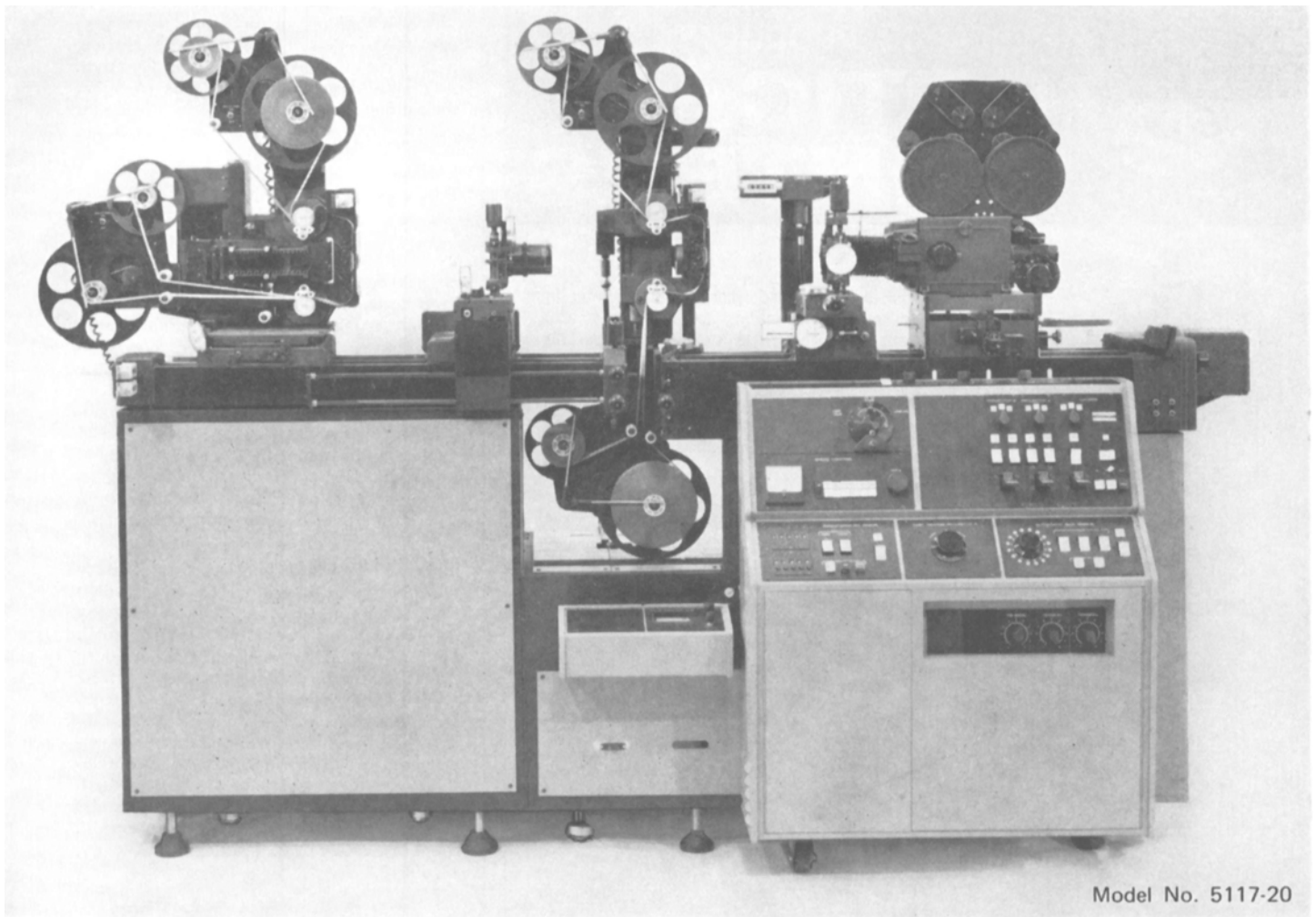


# New Special Effects

■ So advanced we no longer produce our

Just as OXBERRY introduced and made standard in the field of professional motion picture optical effects interchangeable 35/16mm components, automatic focus through 1:1, Aerial Image photography; so it introduces this new standard: a light valve with automatic or manual control so precise that incremental changes smaller than available with neutral density filters are readily made allowing on the fly zoom photography with the lens remaining at its best "f" stop setting.





Model No. 5117-20

# Step Optical Printer **SERIES 5117**

renowned 1500 and 1200 series Printers.

- Increased light with 1500 watt lamp • Automatic light control • Automatic focus from 3½:1 enlargement through 1:1 to 4:1 reduction with or without the Beam-splitter prism in place
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- Composing screen for group viewing • Engineered for simplified maintenance • Plus all the features of our previous Printers.

*"CONTROL" — A film describing this new OXBERRY Printer is available for viewing: request showing on Company letterhead.*

Detailed specifications and prices available upon request.  
Write Ed Willette

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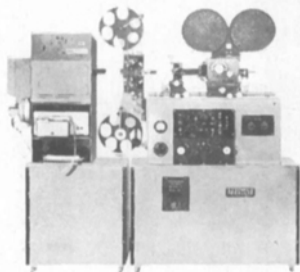
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Photo Inc. 

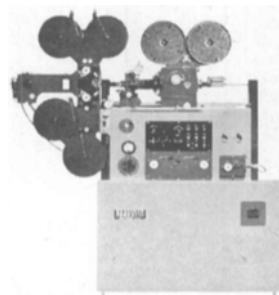
## RESEARCH PRODUCTS



# OPTICAL PRINTERS



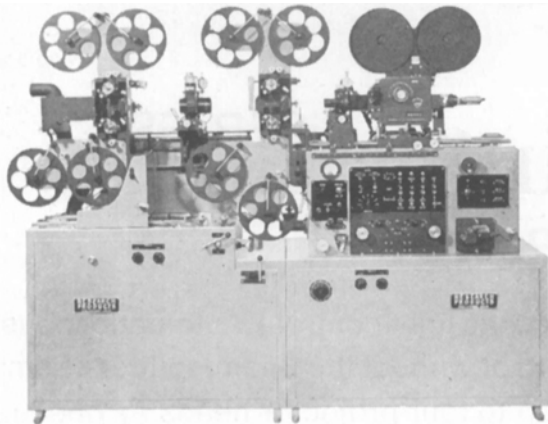
**MODEL 999** is a simplified laboratory-type printer intended for printing operations not requiring a wide range of special effects. It is a basic unit especially adaptable to Super-8mm needs. Can be ordered with either the standard subtractive light source or the Bell & Howell additive head (shown). This "bread-and-butter" printer has won wide acclaim in high-volume laboratories. Purchase and lease plans available.



**Model 1000** prints all format sizes from 70mm to 8mm in color or black and white. It utilizes latest design concepts to facilitate even the most complicated of optical effects. Provides an oversize optical bench, variable speed motor, automatic dissolve mechanism, and electric skip-frame programmer giving unlimited skip — or multiple — frame combinations.

**Model 1001** combines all the features of Model 1000, plus an automatic zoom capable of 4x enlargement to 5x reduction.

Purchase and lease plans available.



**Model 1002** makes use of the modular construction principle to effect a complete optical printing system. Adding a second in-line projector to a Model 1001, it provides a film-to-film aerial image for ease in accomplishing difficult traveling-matte shots. Optional features are a tilting camera, a motorized automatic zoom, and other special effects accessories. Aerial image module can be ordered at the same time as an optical printer or added at a later date, as feasible. Electrical and mechanical service problems are eliminated, as a replacement drive unit can be installed in minutes without disassembling printer. Custom engineering is available for unusual, specialized requirements, but the purchaser of any Research Products printer is assured equipment of custom quality and performance at the lowest price anywhere available. Purchase and lease plans available.

**Research Products Optical Printers** are the result of 25 years of experience in optical effects for theatrical, commercial and instrumentation films. They are designed around precision Acme camera and projector units, available in Super-8mm, 16mm, 35mm, 65mm and 70mm. All printers feature the Modular Drive, housing all mechanical drive parts in a single, easily-replaceable unit. Synchronization, being entirely mechanical throughout, is absolute.



Send for complete literature.

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vision as the core of the instructional process. NAEB President, William G. Harley, in a letter to Samoa Governor Owen S. Aspinall charged that, since Gov. Aspinall took office in 1967, "it has been clear that the Governor's tolerance of the NAEB and the main officials in the Department of Education was grudging and impatient." President Harley emphasized that Gov. Aspinall's actions have imposed additional hardships on the already difficult task faced by the instructional staff in Samoa. "There is just recently the public disclosure of wire-tapping by the Governor's office which has brought stern reprimand from an official in the Department of the Interior. The wire-tap equipment has been removed, but the man who felt it was necessary remains."

The Samoan educational system, conceived and developed by NAEB, includes 25 elementary and four high schools equipped to provide for more than 7,000 children whose geographic situation presents them with a fundamental educational handicap.

**The Illuminating Engineering Society** will hold its Fifth Annual Theatre, Television and Film Lighting Symposium May 25-27 at the Sheraton-Chicago Hotel, Chicago, IL. The program will include a "state of the art" report and a lighting progress show as well as a number of technical papers, panel discussions and practical lighting demonstrations. Latest developments in lighting in motion-picture, television and theatrical fields will be described. Further information is available from the TTFL Committee, IES, c/o Robert T. Stebbins, WGN, 2501 Bradley Pl., Chicago, IL 60618.

**An International Colloquium on Microcinematography as a Research Method in Cytology** will be held September 23-25 in Hradec Králové, Czechoslovakia. The colloquium will include discussions of the techniques involved in microcinematography and with applications to cytology. Official languages of the colloquium are English, French and German. Further information is available from Dr. Miroslav Hroch, Secretary of the Organizational Committee, Biological Dept., Faculty of Medicine, Charles University, Simkova 870, Hradec Králové, Czechoslovakia.

**The Building Film Competition**, a one-day event sponsored by the British Industrial and Scientific Film Association and the Building Center, took place February 26 at the Institution of Civil Engineers in London. The films shown were mainly of interest to architects, civil engineers and others engaged in building construction. Many of the films were of the "How-To" variety.

**The John Crerar Library**, Chicago, IL, has received a grant of \$69,784 from the National Science Foundation for partial support of the National Translations Center operated by the Library. Translations prepared by government agencies, industries, societies, academic institutions and individuals are contributed to the Center, which indexes them and makes them available to others on request at a nominal photocopying and service fee. The Center succeeds the Special Libraries Asso-



**"It's an automated projector"**  
**"It's a filmstrip projector"**  
**"It's a movie projector"**  
**"IT'S A STILL PROJECTOR"**

# It's Super Projector!

Is there a super 8 movie projector that can be many things to many people? Well, if there wasn't one before, there is one now. It's the super new *Kodak Ektagraphic MFS-8 Projector*.

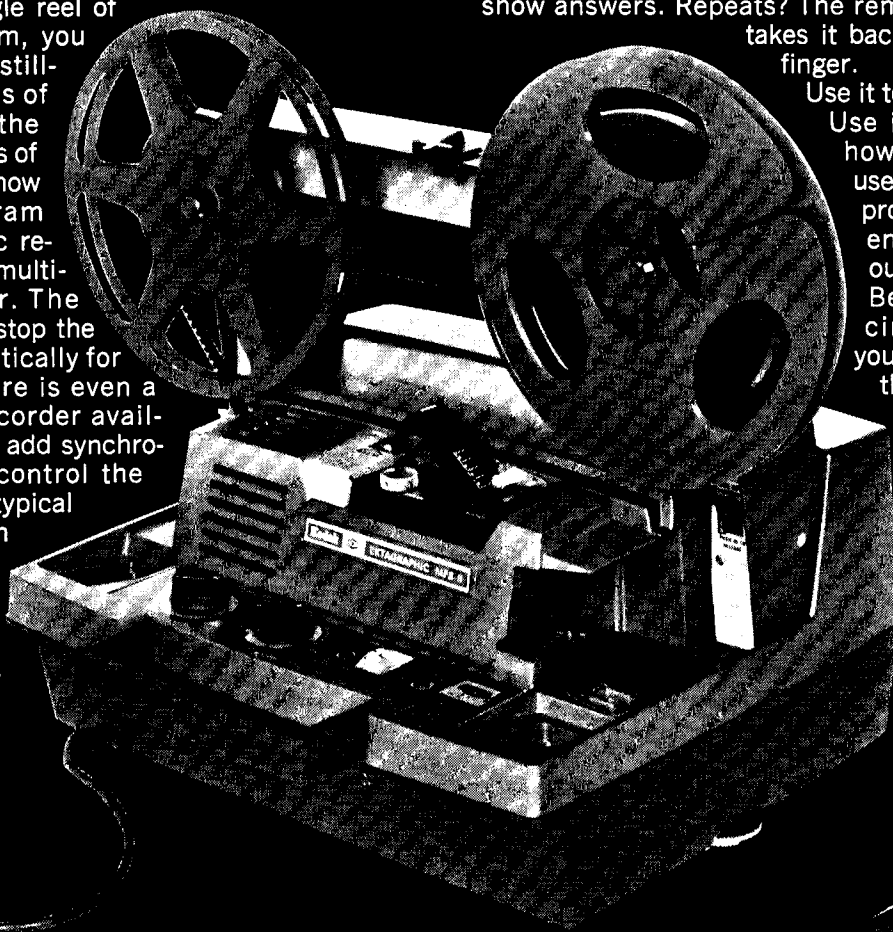
Now, on a single reel of super 8 color film, you can combine the still-frame advantages of filmstrips with the motion advantages of movies. And you show the entire program with an automatic remote-controlled, multi-speed projector. The cues on the film stop the projector automatically for still frames. There is even a cassette tape recorder available that lets you add synchronized sound to control the program. Take a typical show. A push on the remote-control start button and the projector operates just like an ordinary

motion picture projector until it senses a cue. Then it stops—for a title frame or whatever—and it holds until the start button is pushed again. Still frames may ask questions of learners, and then motion sequences may show answers. Repeats? The remote reverse control takes it back with a flick of the finger.

Use it to teach. Use it to sell. Use it to inform. Use it however you want, but use it—because this new projector represents an entirely new creative outlet for your talents. Be the first industrial cinematographer on your block to start using the super MFS-8 Projector. See your Kodak Audiovisual Dealer, or contact one of the offices listed below.

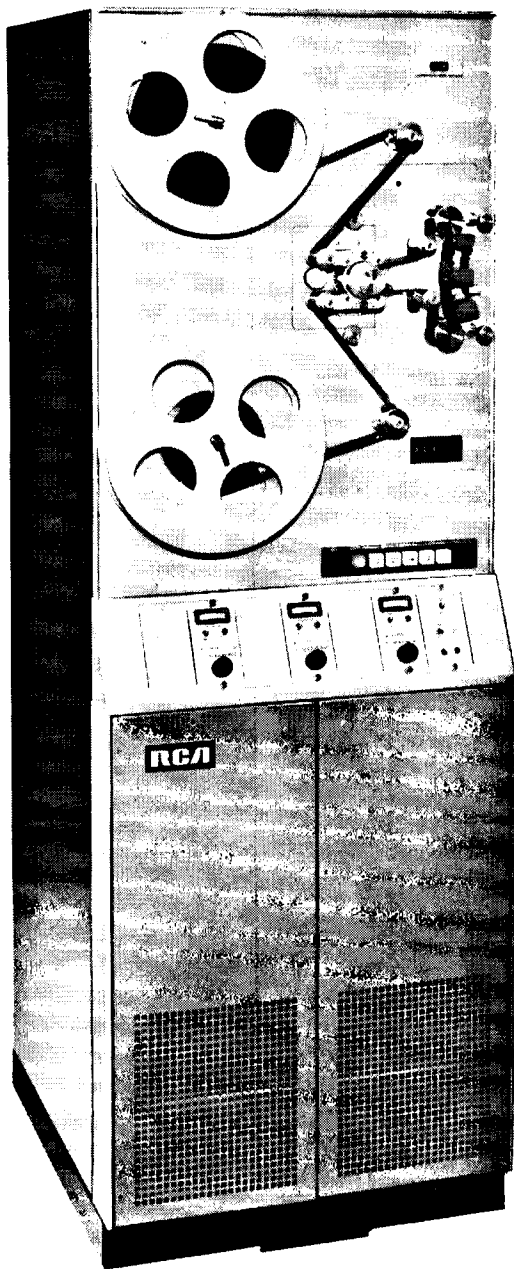
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## New FR-10 will still be "new" when other makes are obsolete.

Only this system gives you every one of the latest operational features. And packs 'em all into a low-profile, space-saving cabinet that fits flat against the wall — in fewer square feet of floor space than any previous system. And, FR-10 alone is ready now for tomorrow's automated accessories.

FR-10 combines everything you've ever wanted in a magnetic film recording system.

Like dual design, for example. Lets you switch from 16 to 35mm — and back again — in seconds, thanks to RCA's unique plug-in sprocket and head assemblies. Speed and equalization changeover are automatic, with only one interlock system needed.

Like silent, selective head switching — so you can update any section of any track without re-recording the whole reel. And exclusive "Unilogic" motor control system lets you choose between using either manual or automatic control.

Like automatic loop setter. It lets you thread up much faster and more easily. FR-10 rewinds — through the sprocket — at 1000 feet per minute, while handling up to 3000-foot reels. And you get complete metering for each channel, too, with up to six tracks available.

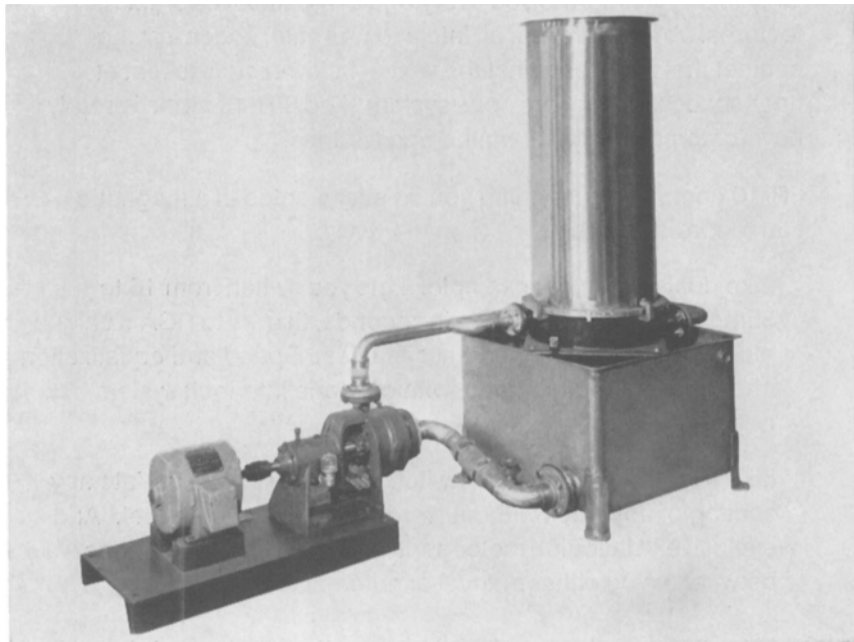
On top of all that, FR-10 delivers reliability even beyond what you've come to take for granted from RCA. Along with matchless sound quality, of course.

For complete information, write: RCA Film Recording, 2700 West Olive Avenue, Burbank, California 91505, or 1133 Avenue of Americas, New York, NY 10036. Cable RADIOFILM. Great Britain: RCA Ltd., Lincoln Way, Windmill Road, Sunbury-on-Thames, Middlesex.

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**RCA** Film  
Recording

# This silver-recovery and hypo-regeneration equipment can PAY FOR ITSELF WITHIN 1 YEAR...



## ...after that, it just boosts your profits

If your laboratory is processing at least 400,000 feet of 35 mm film (or the equivalent) per month, you are losing out on easy profits if you're not using a HI-SPEED silver-recovery system. These systems are conservatively rated for up to 7 ounces of electrolytically pure silver per hour, while regenerating enough used hypo to drop replenishment rates to 30% of normal.

In dollars and cents this means returns which can more than pay for the equipment and its installation within a year. Even if you are presently using some form of recovery system, it may be well worth your while to look into HI-SPEED high-efficiency equipment.

### Look at the Facts . . .

**Fact #1** — The hypo it takes to process 100,000 feet of 35 mm film (negative and positive) is worth about \$100.

**Fact #2** — In that hypo, after processing, there are approximately 130 ounces (average) of silver — worth approximately \$1.25 per ounce net.

**Fact #3** — With a modern silver recovery system by HI-SPEED, 70% of that silver — and 70% of that hypo — are recoverable.

**Fact #4** — The recoverable silver is worth approximately \$113.75. Not in savings, but in earnings. The recoverable hypo is worth \$70.00.

**Fact #5** — That "Used" hypo is worth approximately \$183.75 — 80% more than when it was fresh.

### Here is what users tell us . . .

"Our silver Tower S5 gives us higher returns than you estimated."

"Since installing the Silver Cell hypo replenishment has been reduced by 72% and we recover approximately 30 dollars a day in silver."

"... Previously we used approximately 2000 gallons of hypo a month; this has dropped to about 600 gallons a month."

Send for this free HI-SPEED brochure. It gives all the facts.



**hi-speed** EQUIPMENT

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ciation Translations Center established at Crerar in 1953. More than 100,000 translations have been supplied since then to scientists and industrial users in the United States, Canada and overseas. The collection numbers more than 135,000 translations into English, about 40% being from Russian scientific and technical periodicals. Records of translations available from other sources are also maintained.

A semimonthly bulletin, *Translations-Register Index*, prepared by the Center, announces new accessions and provides a quarterly cumulating index. It is available from the Special Libraries Association, 235 Park Ave. South, New York, NY 10003, at a subscription rate of \$30 a year.

**The Photographic Industry Council (PIC)** (*Journal*, p. 1230, Nov. 1968) has established headquarters at 919 North Michigan Ave., Chicago, IL 60611, and has announced results of its first election of officers. PIC's first Chairman is Claude F. Palmer. Allie C. Peed, Jr., is Vice-Chairman and Henry F. Sander is Secretary. Committee Chairmen appointed by Chairman Palmer include Joseph T. Morris who was named Chairman of PIC's Information and Public Affairs Committee. Mr. Morris, who is Executive Vice-President of the National Association of Photographic Manufacturers, was temporary chairman of the organizational group composed of representatives of four photographic trade associations, Master Photo Dealers & Finishers, Studio Suppliers, Professional Photographers of America and NAPM, which set up the framework for PIC. Chairmen of three other PIC committees, appointed by Chairman Palmer are Henry F. Sander, Membership; Allie C. Peed, Jr., Education, Training and Recruitment; and Van B. Phillips, Research and Development.

**A multi-function closed-circuit television system**, designed by Rosner Television Systems, Inc., of New York, for State University College, will be installed in the Potsdam Communication and Lecture Hall building. The system includes a production studio and control room with image-orthicon cameras; a master-control area incorporating two independently operating master-control consoles, three teletext islands, ten equipment racks for terminal equipment and RF distribution equipment; and an RF and baseband signal distribution system to 22 rooms and lecture halls. Included in the installation are three quadrature head video-tape recorders and two helical scan video-tape recorders.

**The Bell & Howell School of Instructional Technology** offers two separate five-day courses in color television, one in production programming and the other in service. The courses begin on Monday of each week and will continue through December 19. The service course is limited to 15 students (each week) and the production course is limited to 20 students. The school has a color-equipped closed-circuit facility and courses include classroom instruction and studio applications. The production course is for nontechnical people who will be involved in producing video-tape programs. The service course covers such subjects as color characteristics, color mixture curves,

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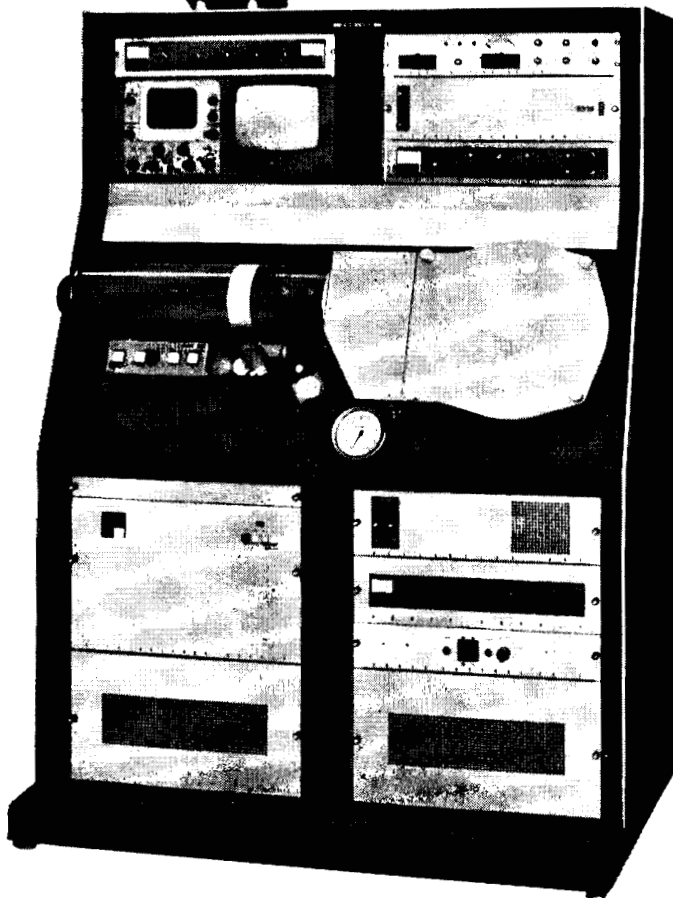
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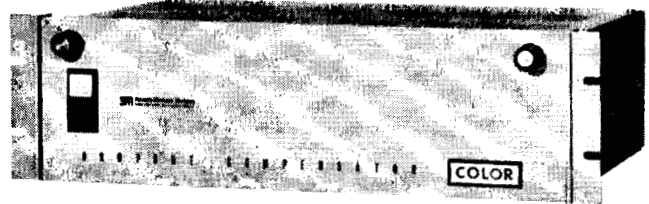
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# 3M HAS FORTY-FIVE MAJOR THESE ARE SOME



**EBR-100 Electron Beam Recorder** Now you can transfer live or tape TV to 16mm film electronically and get prints with 1000-line resolution. This is the first system to produce monochrome film copies comparable to the original live or video tape original. It has no optical components. Direct electron bombardment transfers image to film without face-plate halation or camera-lens light losses. Uses low-cost, fine grain film that can be projected after processing on any 16mm projector. Far superior to kinescope techniques. Opens new horizons for mass distribution of TV training and educational footage. Write for brochure.



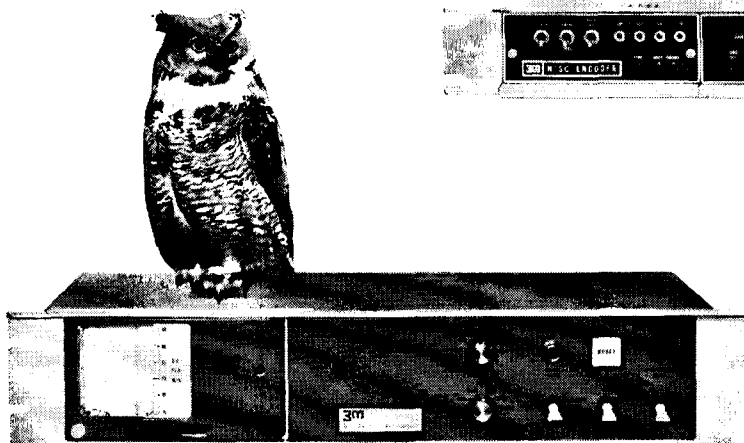
**Dropout Compensator (DOC) for Color Video** This is where hi-band color dropouts get turned off, and clarity and sparkle restored to damaged tape content. The 3M Brand DOC detects the dropouts as they occur, replaces the "lost" signal with stored information from the previous scan line of the same field. Provides precise color match and complete freedom from switching transients. Disturbance to time correction unit is eliminated. Proc amp and servo stability allow tape to play in full inter- sync or pixloc mode. Write for booklet.

**Dropout Profile Recorder (DPR) for Color Video**  
RIGHT: The logical companion to the DOC (above). The 3M Brand DPR produces a permanent strip chart showing the dropout rate and dropout annoyance factor during normal on-line video tape playback. It performs this evaluation electronically while the 3M DOC is compensating the dropouts. The DPR indicates when a tape is too degraded to commit to valuable programming. Five inches of chart reads one hour. Chart can be torn off and stored with video tape. Write for brochure.



# PRODUCT LINES ON THE WING. OF OUR VIDEO PRODUCTS.

The Mincom Division of 3M is deeply involved in sophisticated hardware like telemetry recorders and digital test systems. The same 3M technology and research brings you these four video products. Each pioneers new levels of performance. If you are interested in one or all, call our Video Products Information Phone at (805) 482-1911, Ext. 216, or write for brochures.



**Color Video Encoder** Has two unique features not obtainable elsewhere: 1) The color bar generator is completely (not partially) digital. When you get a reading you know it is accurate—needs no adjustments. Simpler to use and maintain than analog encoders. 2) Input clamping of video signals eliminates low frequency hum, noise and other unwanted effects on the matrix. *Works with smaller, less expensive cameras as well as large ones.* Give it the SMPTE color test and see the proof. The 3M Brand Color Encoder meets all FCC and EIA specs. Has monochrome switching. Meets or beats anything on the market, yet costs less. Write for a brochure.

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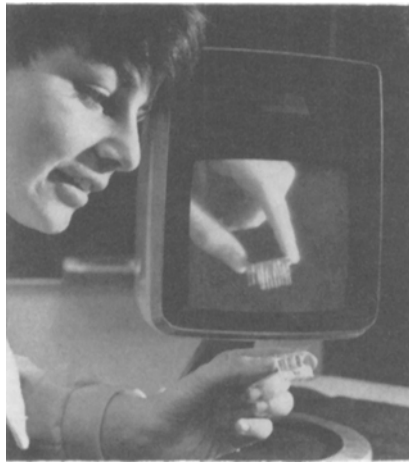
**THERE'S MORE COMING!**  
Watch our advertisements for announcements of new video products.

color signal analysis, color television receiver circuits and theory, and other subjects applicable to the servicing of color television. Detailed information is available from Miss Barbara Zella, Registrar, Bell & Howell School of Instructional Technology, 7235 N. Linder Ave., Skokie, IL 60076.

A collection of antique (before 1930) projectors is on display at Projection Systems, Inc., 202 E. 44 St., New York NY 10036. Included in the collection is a Stereopticon dating from the late 1800s and a 9½mm Pathex projector of the early 1920s. Allen A. Armour requests owners of pre-1930 projectors to communicate with him at the firm's headquarters with the dual purpose of gaining information about the display and possibly making arrangements to add to the collection.

Goonhilly 2, Britain's latest and largest space communications station, contains a 90-ft diameter space dish which operates through the Intelsat III satellite over the Atlantic. The space dish can carry simultaneously up to 400 telephone circuits and a television program. Built by Marconi Company for the Post Office, the new station has multiple-access facilities to enable it to communicate with several earth stations simultaneously. Goonhilly 2 is the fifth space communications station to have been completed by Marconi.

An integrated circuit, containing almost 600 electronic components in less than a



square inch, has been developed by Bell Telephone Laboratories to control timing actions in the Picturephone.® The integrated circuit controls the scanning rate and the number of pictures/s. It also controls interlacing. Shown above, the close-up lens and the graphic mode of the Picturephone are used to show the thin connecting prongs of the circuit on the screen. AT&T Co. recently began a trial of Picturephone service between the New York and Pittsburgh offices of the Westinghouse Electric Corp.

Culver Studios in California has been acquired from Perfect Film and Chemical Co. by Roberts Realty of the Bahamas, Ltd., a wholly owned subsidiary of OSF Industries Ltd. of Toronto, Can., according

to a recent rental-purchase agreement. Culver Studios, previously owned by Desilu Productions and Paramount, includes 11 sound stages, back lot, offices and facilities covering about 40 acres. It was originally Selznick Studios. Louis Chesler of Toronto, Chairman of the Board of Roberts Realty, will become Chairman of the Board of the studio company. He is a cofounder of the Seven Arts, the motion-picture-television company that later acquired Warner Bros. The new company will be called Beverly-Culver Studios. President will be Martin N. Leeds. The Studios will be used for the company's own productions as well as providing rental facilities for independent producers. Music publishing and recording activities are planned.

Posso, manufacturers of motion-picture and magnetic recording equipment, with headquarters in Paris, France, has acquired land covering 55,000 m<sup>2</sup> in Vallorbe, Switzerland, for a new plant for manufacturing computer tape and magnetic discs. According to the announcement, the facilities will increase the firm's capabilities to supply the needs of the European Economic Community and the European Free Trade Area.

Data Memory, Inc., of Mountain View, CA, is a new corporation formed to produce and market video magnetic disc recording systems. The new firm has acquired MVR Corp. (founded in 1961 as Mach-Tronics) and is now located in an 18,000-ft<sup>2</sup> plant housing administration, engineering and



## Perfect your CCTV system with COSMICAR® lenses

Shown are a few selected at random from COSMICAR lenses ranging from 8.5mm to 1,000mm and zooms.

COSMICAR is also prepared to custom-make lenses of any specifications.

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568, Shimoochiai, 2-chome, Shinjuku-ku, Tokyo Cable Address: "MOVIEKINO TOKYO"

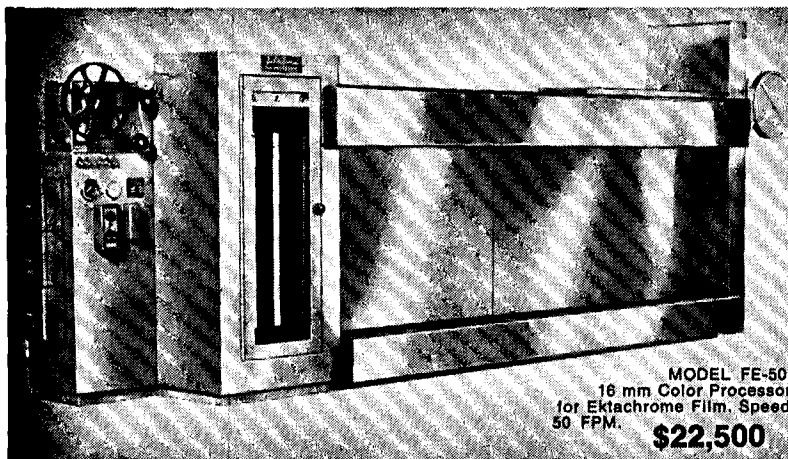
# The Money-Makers

## FILMLINE'S professional color film processors for motion picture laboratories.

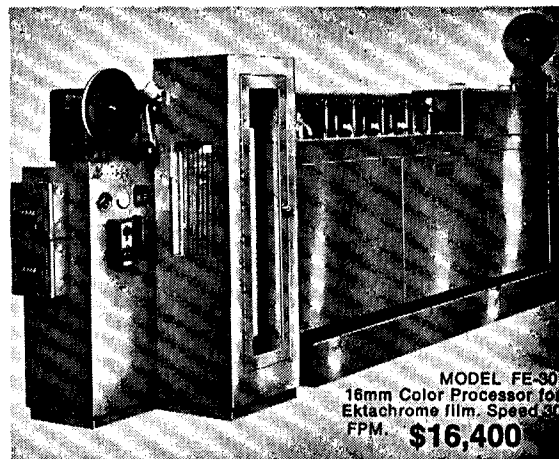
The Filmline Models FE-30 and FE-50 are fast, foolproof, troublefree and long-lasting. They turn out consistently superior work. The design is backed by Filmline's reputation as the world's leading manufacturer of film processors for the motion picture laboratory industry.

Now enjoy the benefits of professional equipment incorporating exclusive Filmline features that have paced the state-of-the-art in commercial, industrial and defense installations at a cost lower than processors offering less.

Check the exclusive Filmline features below:



MODEL FE-50:  
16 mm Color Processor  
for Ektachrome Film. Speed  
50 FPM. **\$22,500**



MODEL FE-30:  
16mm Color Processor for  
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FPM. **\$16,400**

● **"FILMLINE OVERDRIVE FILM TRANSPORT SYSTEM"**

This marvel of engineering completely eliminates film breakage, pulled perforations, scratches and operator error. The film can be deliberately stalled in the machine without film breakage or significant change of film footage in solutions. The heart of any film processor is the drive system. No other film drive system such as sprocket drive, bottom drive or simple clutch drives with floating lower assemblies can give you the performance capability of the unique Filmline Overdrive Film Transport System.

● **"TORQUE MOTOR TAKE-UP"** gives you constant film take-up and does not impose any stress or strain on the film itself. Completely independent of the film transport system. This FILMLINE feature is usually found in professional commercial processors but is incorporated on the FE-30 and

FE-50 models as standard equipment. Don't settle for less!

● **"TEMP-GUARD"** positive temperature control system. Completely transistorized circuitry insures temperature control to well within processing tolerances. Temp-Guard controls temperatures accurately and without the problems of other systems of lesser sophistication.

● **"TURBO-FLOW"** impingement dryer. Shortens dry-to-dry time, improves film results, and carefully controls humidity content of your valuable (and sometimes rare) originals. Immediate projection capability is assured because the film dries flat without the usual curl associated with other film processors.

**"ZERO DOWN TIME"** The reputation of any film processor is only as good as its reliability. The

combination of the exclusive and special added Filmline features guarantees trouble-free operation with absolute minimum down-time and without continual operator adjustments. Recapture your original investment in 2 years on maintenance savings alone. Filmline's "Push the button and walk-away processing" allows inexperienced operators to turn out highest quality film.

● **"MATERIALS, CONSTRUCTION AND DESIGN"** All Filmline machines are constructed entirely of metal and tanks are type 316 stainless steel, heliarc welded to government specifications. The finest components available are used and rigid quality control standards are maintained.

Compare Filmline features to other processors costing more money. Feature-by-feature, a careful evaluation will convince you that Filmline offers you more for your investment.

### Additional Features included in price of machine (Not as extras).

Magazine load, daylight operation ■ Feed-in time delay elevator (completely accessible) ■ Take-up time delay elevator (completely accessible) ■ Red brass bleach tank, shafts, etc. Prehardener solution filter ■ Precision Filmline Venturi air squeegee prior to drybox entry ■ Air vent on prehardener ■ Solid state variable speed D.C. drive main motor ■ Bottom drains and valves on all tanks ■ Extended development time up to two additional camera stops at 50 FPM ■ Pump recirculation of all eight solutions thru spray bars ■ Temperature is sensed in the recirculation line ■ All solutions temperature controlled, no chilled water required ■ Built-in air compressor ■ Captive bottom assemblies assure you constant footage in each solution ■ Change over from standard developing to extended developing can be accomplished in a matter of seconds ■ Impingement dryer allows shorter put through time.

Partial listing of Filmline Color Installations: — NBC- New York, NBC- Washington, NBC- Cleveland, NBC- Chicago, CBS & ABC Networks, Eastman Kodak, Rochester.

Laboratories: De Luxe Labs, General Film Labs (Hollywood), Pathe-Labs, Precision Labs, Mecca Labs, Color Service Co., Capital Film Labs, Byron Film Labs, MGM, Movie Lab, Lab-TV, Technical Film Labs, Telecolor Film Labs, Guffanti Film Labs, A-One Labs, All-service Labs, NASA Cape Kennedy, Ford Motion Picture Labs, TV Stations: WAPI-TV, WHP-TV, WMAL-TV, WXYZ-TV, WWL-TV, WMAR-TV, WJXT-TV, KETV-TV, WTOP-TV, WEAT-TV, WCKT-TV, WAVE-TV, WAVY-TV, KTVI-TV, WCPQ-TV, KTAR-TV, WSYR-TV.



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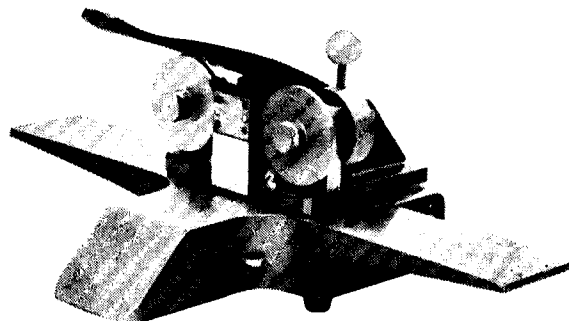
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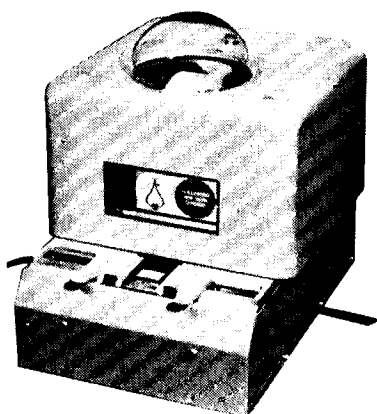
# HFC LABORATORY



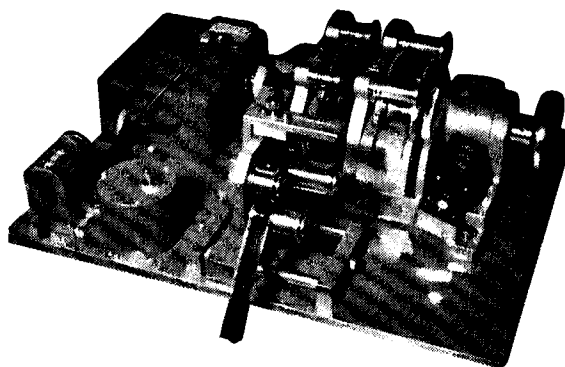
HFC PROJECTION ROOM COUNTERS



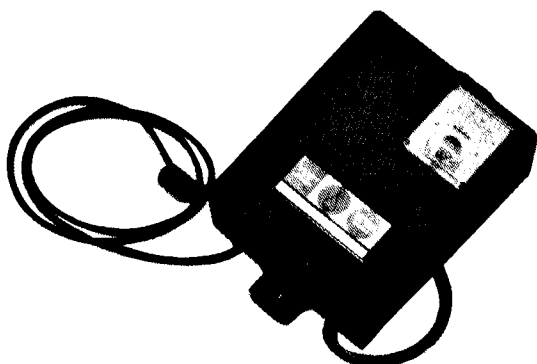
HFC TAB APPLICATORS



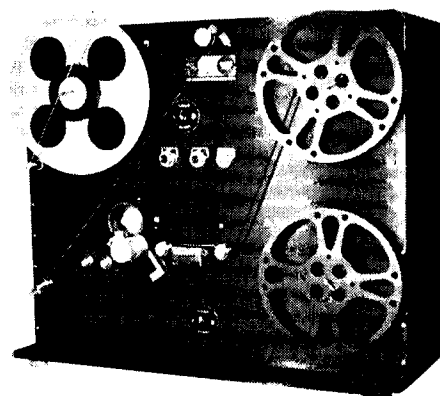
HFC PROCESSING SPLICERS



HFC CUE CHECKERS



HFC RFQ UNITS



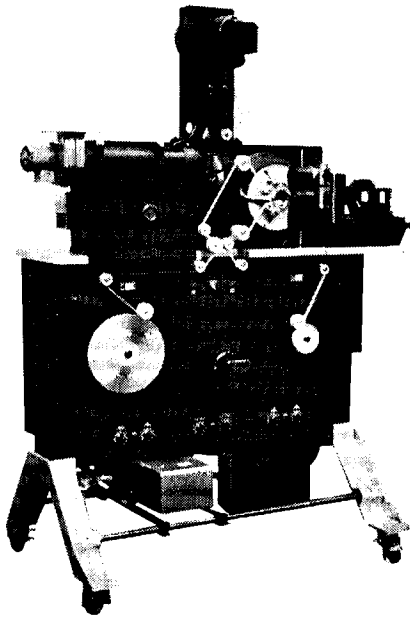
HFC FILM SLITTERS

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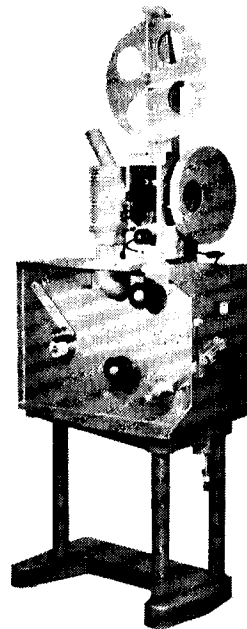
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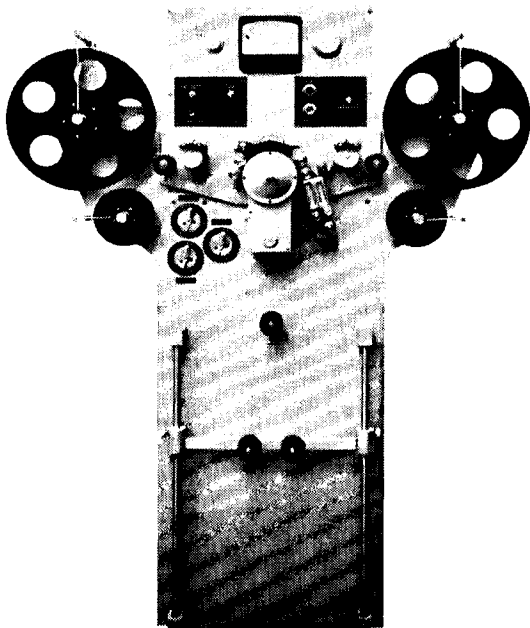
# EQUIPMENT HITS!



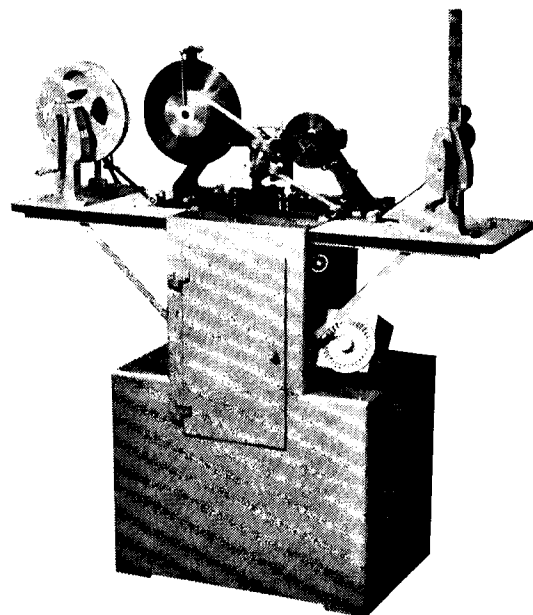
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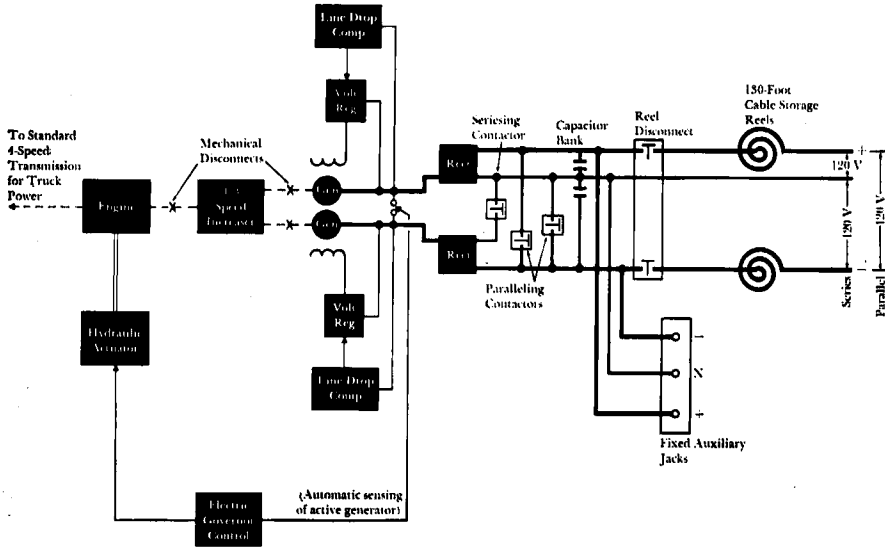
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manufacturing of recorders and a new disc-plating facility. The discs employ nickel-cobalt plating. Plans of the new firm include expanding magnetic disc recording into various visual and data information retrieval systems for video, analog and digital recording and memory devices for instrumentation, computer and television use. Ray S. Stewart is President of the new firm. Vice-President is Kurt Machein, former President of MVR.

A "rolling studio" contained in a 16-ft panel truck, designed in 1969 by Fouad

Said, a world-traveling cinematographer, was first used when he was on foreign location work for the *I Spy* television series. The truck contains six cameras, sound facilities, automatic crane, lights, reflectors, camera stands and an electric power system. All the equipments are as compact and lightweight as practicable. Lightweight aircraft generating equipment makes possible the compact power system provided by Westinghouse Aerospace Repair Plant in Compton, CA. There are two generators, which presently produce 750-A output, and each weighs 87 lb. The two

generators are driven from the truck engine through a 1:3 speed increaser (see diagram). The speed increaser and generators are mounted forward of the truck engine, permitting the entire rear space in the vehicle to be used for carrying cinematic equipment. The generators are similar to those used on 707 jet aircraft, except that they have been specially wound to provide a lower-voltage, higher-current output. They are integrally excited and brushless. Each generator is normally rated at 40 kVA from sea level to altitudes in excess of 40,000 ft. When used on location, the truck is parked some distance away from microphones. To the 130-ft cable reels mounted in the vehicle, additional 100-ft lengths of cable can be added as required.



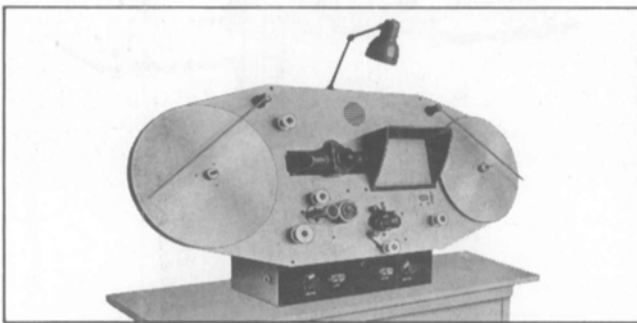
**International Video Corp.** has moved to a new 60,000 ft<sup>2</sup> headquarters building in Sunnyvale, CA. The new structure is the first in a three-part building program to be completed in 1970. The new building houses manufacturing, marketing, engineering and accounting operations as well as executive offices. The other two buildings will each add 45,000 ft<sup>2</sup> to the complex for a completed 150,000 ft<sup>2</sup>.

**Zoomar, Inc.**, 55 Sea Cliff Ave., Glen Cove, NY 11542, has announced that Closed Circuit Television Corp., 8390 Rue Mayrand, Montreal, Que., Can., has been appointed Canadian distributor for the Zoomar line of motorized and manually-operated vidicon zoom lenses. Repairs will also be handled at the Montreal location.

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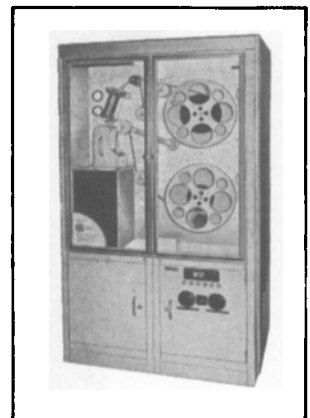
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- Enhances the entertainment value of motion picture film and improves commercials.
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# Victor Duncan chose the ARRIFLEX 16BL to avoid 'bugs' in filming for Volkswagen.

In ordering their 1969 Announcement Film to be produced by the Kerbawy Company, Detroit, Volkswagen had provided Director of Photography, Victor Duncan, with requirements that were almost contradictory.

Intended for large audiences in seven cities, the 45 minute lip-sync photoplay was to be projected on 22 foot screens. Ordinarily a job for 35mm...but the shooting schedule was tight, and involved travel to numerous Volkswagen dealers from California to Connecticut. "Choice of equipment was of special concern," writes Mr. Duncan, "not only because of the needle-sharp requirements of large screen projection, but also due to the fast moving, travel-light nature of the job." 16mm fulfilled the latter requirements—and Arriflex was used to ensure the all-important technical quality.

Choosing an Arriflex 16BL as his 'universal' camera for all sound work, and a 16S for wild shots and cutaways, Mr. Duncan headed for the many location challenges that awaited him. As he describes it, "it was an on-and-off the airplane routine, with short schedules at every stop. It was exciting as a technical and logistical problem. How many magazines, for example, do you carry? The BL's magazines being compact as they are, we were able to pre-load more than enough without overloading ourselves, but this is the kind of thing you've got to consider.

There were acoustical problems too—after spending six easy-going days with the 16BL on the sound stage, we found out just how miserable an automobile showroom—with its wide open, echoing spaces—can be for sound recording. And without many objects to hide lights behind, we often had to rely on available light, or relatively low levels of artificial light. Without much depth-of-field, we constantly had to ride the focus, and often from a camera position too cramped for an assistant. If it hadn't been for the brilliance of the Arri's viewfinder, and focusing grips I could really get my hands on, I'm not sure what we'd have gotten on those 22 foot screens."

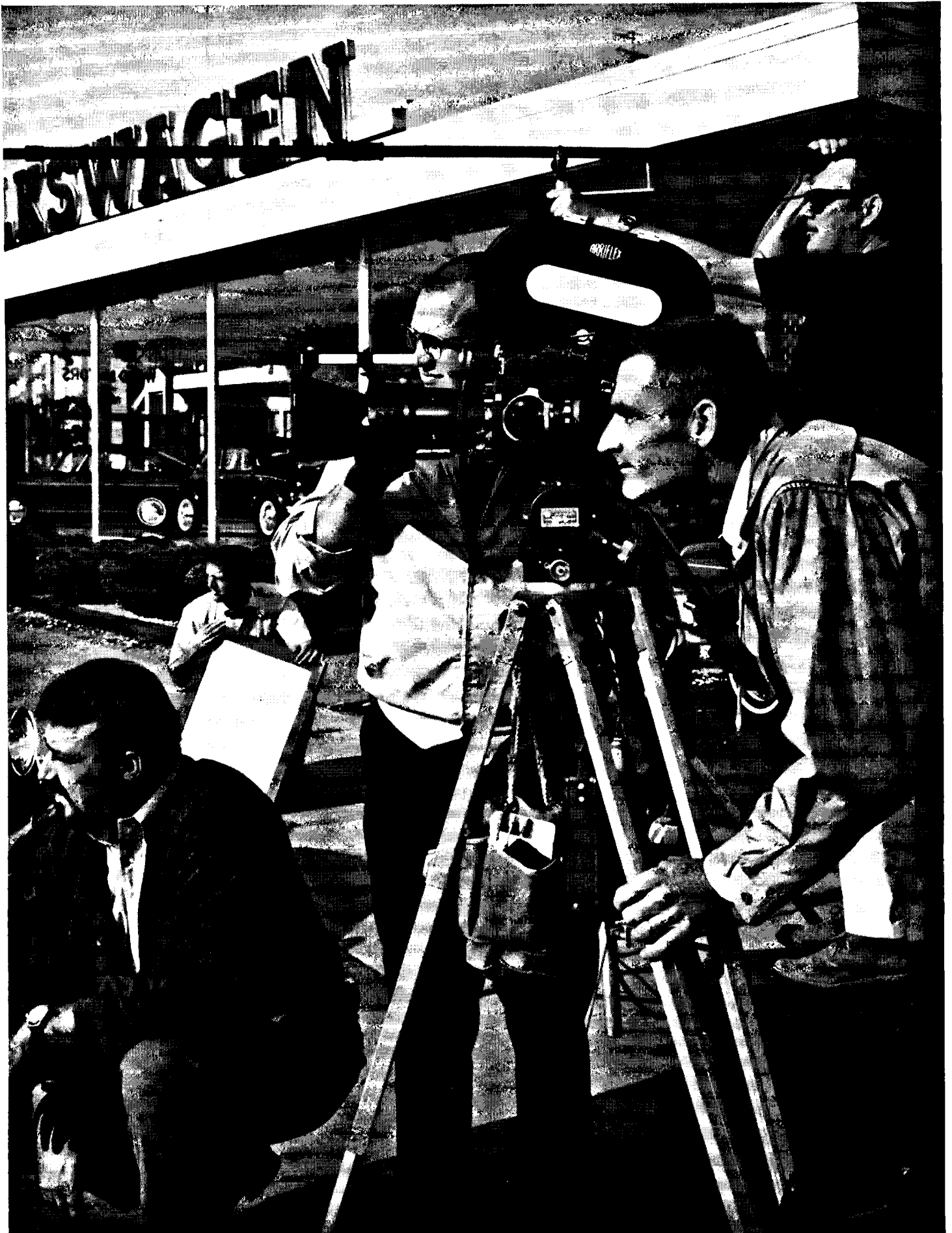
When not mastering filming problems like these, Mr. Duncan runs a lively equipment rental business. An enviable position for a cameraman—it not only keeps the most extensive resources at hand it also gives him an 'inside' knowledge of their performance.

Not only Mr. Duncan, but filmmakers all over the world who really know equipment, choose Arriflex.



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Gil Sorensen

Gerald Plumb

Victor Duncan

William Hevron

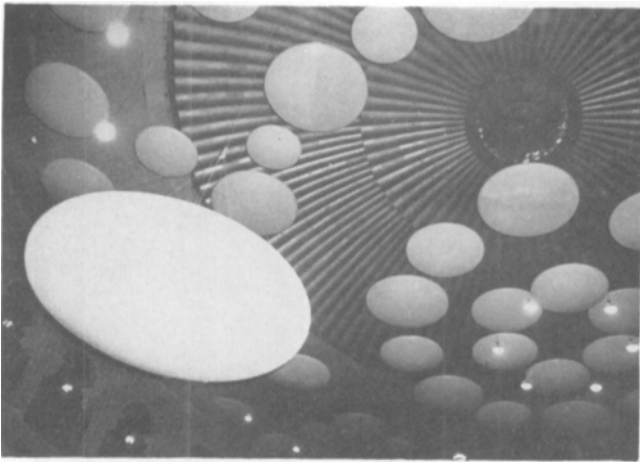


Fig. 1. Discs made of glass fiber backed with sound-absorbing foam are suspended from the dome of Royal Albert Hall.



Fig. 2. Experts testing the acoustics — with bassoon music and a gunshot — while installing the “flying saucers.”

### Echos in Royal Albert Hall

The problem of the echoes in London's historic Royal Albert Hall (constructed almost 100 years ago as an impressive memorial to Queen Victoria's consort) has been solved by means of (of all things!) plastic saucers. The echo in Royal Albert Hall was as notorious as the hall was famous. The prestige of a performance in the stately Hall was marred for the performers and the audience by the echoes that rolled from the splendid dome.

The cure for this condition was brought about by a British firm of consultants, Acoustical Investigation and Research,

which used 109 “flying saucers” (as they were inevitably dubbed by some commentators) in an £8,000 project that, according to British music critics, has practically eliminated the ancient echoes.

The saucers (disc diffusers) are made of glass fiber backed with sound absorbing foam. The discs are between 6 and 12 ft in diameter and are suspended, convex side down, from the dome to hang some 70 ft from the floor. The discs scatter the sound waves before these reach the dome. The discs can be “tuned” by adjusting the cables from which they are suspended. Although the echo has not been completely

eliminated, it is now so slight as to be of no significance, music critics agree.

According to Edward Greenfield, music critic of the *Guardian*, in commenting on the project. “It has removed the echo from the dome while leaving the warmth, resonance and volume, which would have been impaired had a flat ceiling been constructed . . .”

**Camera Mart, Inc.**, has announced establishment of new headquarters for its Lighting and Grip Division at 887 Ninth Ave., New York, as part of an overall expansion plan. The new headquarters repre-

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sents an investment of more than \$ $\frac{1}{2}$  million, the announcement stated. Manager of the new location is Richard Ordway. He will be assisted by Henry Ford.

**The Music Makers Group, Inc.**, creators of original music for film and TV, has announced establishment of a new sound dubbing facility at 3 E. 57 St., New York. The new facility for dubbing English on foreign films uses advanced equipment and techniques to "mesh" new voice sounds to existing lip movements for accurate synchronization, the announcement stated. The new studio will operate as part of the company's Sound Makers Division.

**The Super 8 Optical Recorder**, designed to record for super 8 in quad formats, has been installed at Cine Magnetics, Inc., 520 North Barry Ave., Mamaroneck, NY 10543. The Cine Magnetics Quad Quality System is used to record separately four identical super 8 soundtracks onto a 35mm sound negative film. The optical sound negative is combined with the picture negative to make composite optical prints in quad form which are then slit into four separate super 8 prints.

**Graflex, Inc.**, a subsidiary of Singer Company, Rochester, NY 14603, has formed an Audiovisual Systems Group to create complete audiovisual environments. Services include design of audio-visual presentation environments, selection of equipment, control devices and responsibility for instal-

lation. John King, Manager, Product Services and Systems is head of the new group.

**Spin Physics, Inc.**, 11633 Sorrento Valley Rd., San Diego, CA 92121, is a new firm formed to produce magnetic recording heads. The firm will use hot pressed ferrites and other exotic materials in the manufacture of the magnetic recording heads, the announcement stated. President of the new firm is James U. Lemke. Vice-Presidents are Jean Berchtold, Thomas W. Harleman, Joel O. Holliday and Robert A. Schneider.

**Infonics, Inc.**, has announced a move to new and larger quarters at 1823 Colorado Ave., Santa Monica, CA 90404. The firm was formerly located at 11650 W. Olympic Blvd., Los Angeles.

**The Film Production Association of Great Britain** has moved to 25 Green St., London W1Y 3FD, England. The offices of Central Casting Ltd. and British Commonwealth Film Corp. are located at that same address.

**Berkey Pathé**, division of Berkey Photo, Inc., has moved its headquarters to 343 W. 54 St., New York, NY 10019, site of the Berkey Pathé 54th Street Laboratory. A second laboratory is located at 322 E. 45 St. in New York. Robert Crane has been named President and General Manager of both the New York laboratories.

**Editing Film Center**, 946 N. Seward St., Hollywood, CA 90038, has completed an additional facility of 120 temperature- and humidity-controlled safety film vaults capable of storing 2,000 cans containing 1,000 ft of 35mm film. The owners, Ben and Harry Teitelbaum have announced that the facility now consists of 25 editing rooms and 275 film vaults.

**Eric A. Yavitz** has been appointed to the marketing management staff of Eastman Kodak Co. to handle special assignments under the direction of Gerald B. Zornow, Vice-President of Marketing, and Wylie S. Robson, Assistant Vice-President and Manager, Marketing Operations. Mr. Yavitz has been with Eastman Kodak since 1958 and for the past two years he has been a market research and analysis specialist for Kodak's radiography markets division.

**Birns & Sawyer, Inc.**, 1026 North Highland Ave., Los Angeles, CA 90038, has announced expansion of its lens repair facility. The new capability includes repair of all types of photographic lenses and a complete parts inventory.

**Don Horton** has joined the staff of Color Film Corp., Mamaroneck, NY 10543. He will be primarily involved with the firm's sales efforts. Mr. Horton was formerly with the Motion Picture and Education Markets Div. of Eastman Kodak Co.

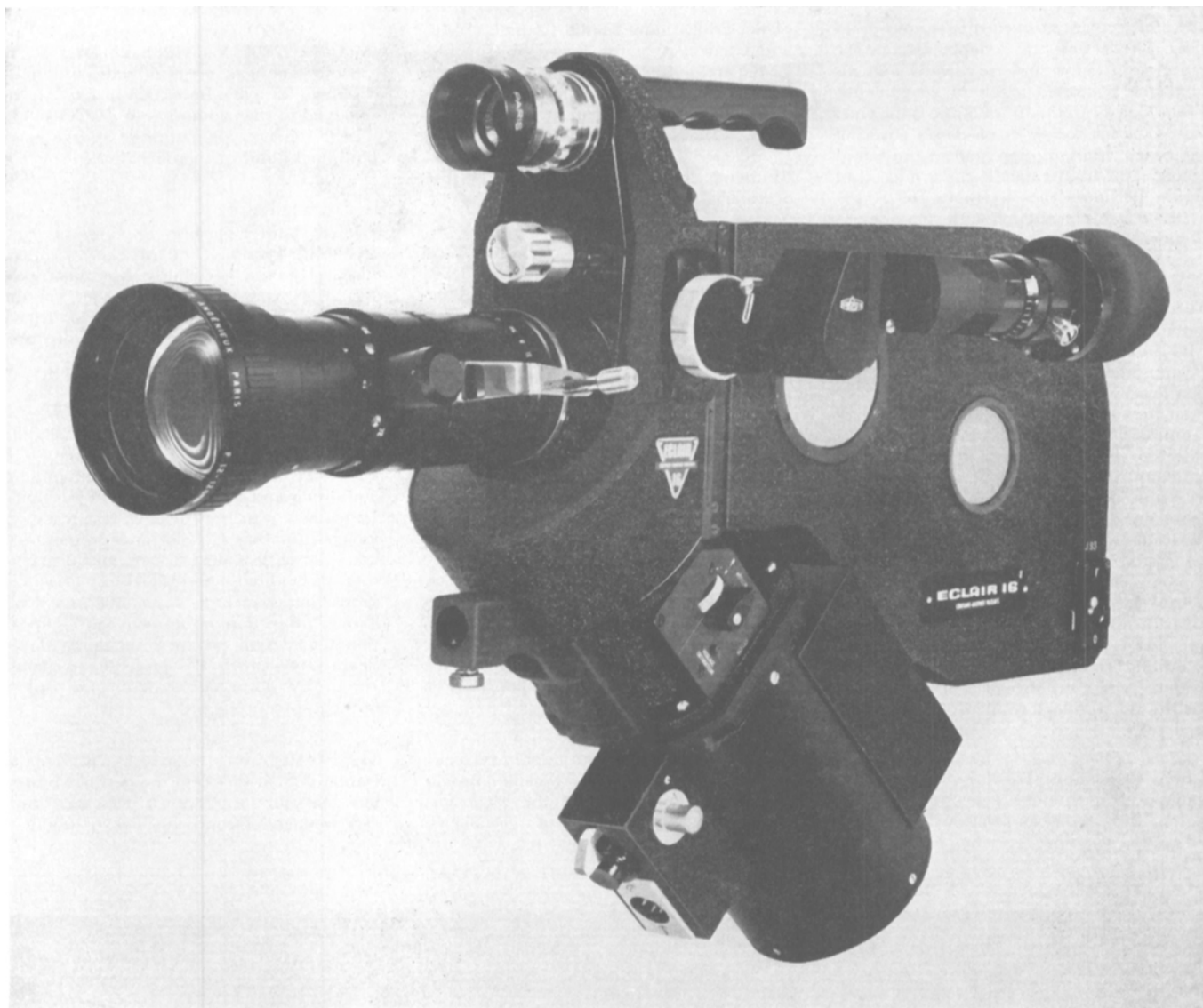
**Oliver Berliner** has been engaged by Watts Training Center, Los Angeles, to deliver a



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Most cameras on the market were designed before World War II. The prototype NPR appeared in 1961. Of course those pre-war designs have since been modified or scaled down from 35mm; but only the NPR's designers have been able to design a new camera from the inside out.

For example: the NPR motor's drive shaft directly turns the shutter, claw and registration pin. No gears; fewer moving parts: the classic formula for quiet running, efficiency and long wear. And the claw is wedge shaped. It slides quietly into the perforation and contacts its bottom edge before the

pull-down begins. Claw chatter isn't audible in the older camera designs; noise from the movement's gears drowns it out. But in the NPR it would have been significant — so the new claw was made a part of the new design.

Ten years ago, 16mm was a dirty word. Five years ago, zoom was another. Hand-held still is, in some quarters. But things change. With the improved emulsions, sharp zoom lenses and lightweight recorders now available, wrapping the same noisy old camera inside a blimp isn't good enough. With the NPR you get blimp-free silence in a camera that weighs twenty pounds

with lens and film. You also get precise reflex viewing, steady shoulder-resting, a rotating two-lens turret, a constant-speed motor with sync pulse generator and a five-second magazine change.

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series of lectures on recording studio practices. The lecture and practice sessions are especially for the underprivileged and attendance is limited to about 20 students. Frank Baird-Smith, Jr., of NBC, is the chief instructor for the series of classes covering radio, television, motion picture and sound recording. Mr. Berliner is the grandson of Emile Berliner, the inventor. He is the audio-visual consultant with Soundesign Engineers.

**G. F. Hohn** has been appointed Manager of Technical Operations for the USA Standards Institute, it was recently announced. Also announced was the resignation of F. Crampton Frost, Manager of Standardization Programs.

In his new post, Mr. Hohn will be responsible for all USASI staff activities involved in the approval and promulgation of national standards and for coordination with some 160 trade, technical, professional and labor organizations affiliated with the Institute and responsible for the development of voluntary standards. Prior to this appointment, Mr. Hohn was Director of the USASI Electrical and Electronics Div.

Mr. Frost will continue to serve the Institute on temporary assignment as special consultant on standards procedures. He is the author of a number of articles on standardization and lectures at Columbia University.

**Edwin G. Cohen**, Executive Director of National Instructional Television, Bloomington, Ind., has been re-elected President

of the Educational Media Council (EMC) and Chairman of the Board of Directors. EMC, created in 1960 and based in Washington, DC, coordinates efforts and facilities of principal educational media organizations. Other EMC officers are Robert E. Kieffer, Vice-President; Virginia H. Mathews, Treasurer; and F. A. White, Secretary.

**Harry Foster** has been appointed Vice-President and General Manager of F&B/Ceco Studios of Florida, Inc., it was announced by Arthur Florman, President of F&B/Ceco Industries. Mr. Foster was a Producer-Director and Eastern Production Manager for Columbia Pictures for 37 years. During that time he produced and directed more than 300 films and short subjects. In his new post, his headquarters will be at the new studio located at 14901 N.E. 20th Ave., North Miami, where he will be in charge of all studio activities and facilities and will supervise construction of more sound stages to be added during 1969.

**Richard Kloss** has been appointed Supervisor of the Kinescope Recording Dept., Reeves Sound Studios, 304 E. 44 St., New York, NY 10017. He was responsible for the development of color kinescopes from a shadow-mask tube.

**Richard E. Hill** has been appointed Television Consultant to a newly formed Broadcast Equipment Group of the Electronic Engineering Company of California

(EECO), 1601 East Chestnut Ave., Santa Ana, CA 92702. Mr. Hill has been active in various technical areas of radio and television for 25 years. In his new post he will be involved in the promotion of ECCO's "On Time" video-tape editing and control equipment and in the development of new products.

**Glen R. Snider** has been appointed Executive Vice-President of Mitchell Camera Corp. He was previously Manufacturing Manager and Deputy Manager of the Electronic Div., Otis Elevator Co. In his new post he will have broad operating and administrative responsibilities.

**James C. Tohill** has been appointed Mid-Western Regional Sales Manager for The Kalart Company, Inc., Plainville, CT 06062. Prior to joining Kalart he had held consulting and sales management positions. In his new post he will have responsibility for coordinating all sales and promotional activities with Kalart dealers and distributors throughout the Mid-West. His responsibilities include sales of 16mm and 35mm projection equipment and educational television products including Tele-Beam large-screen TV projection systems, 16mm TV film chain systems and projection equipment.

**Matao Mitsui** has resigned as President of Canon U.S.A. to accept the post of Managing Director of Canon's Research and Development Group in Tokyo. Shuichi

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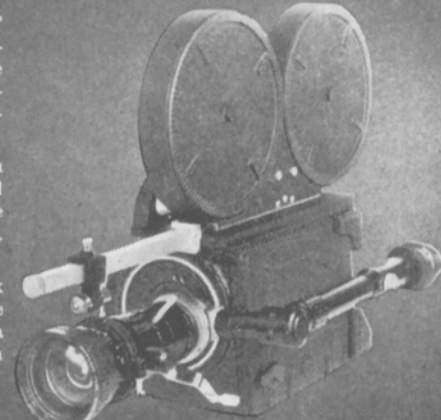
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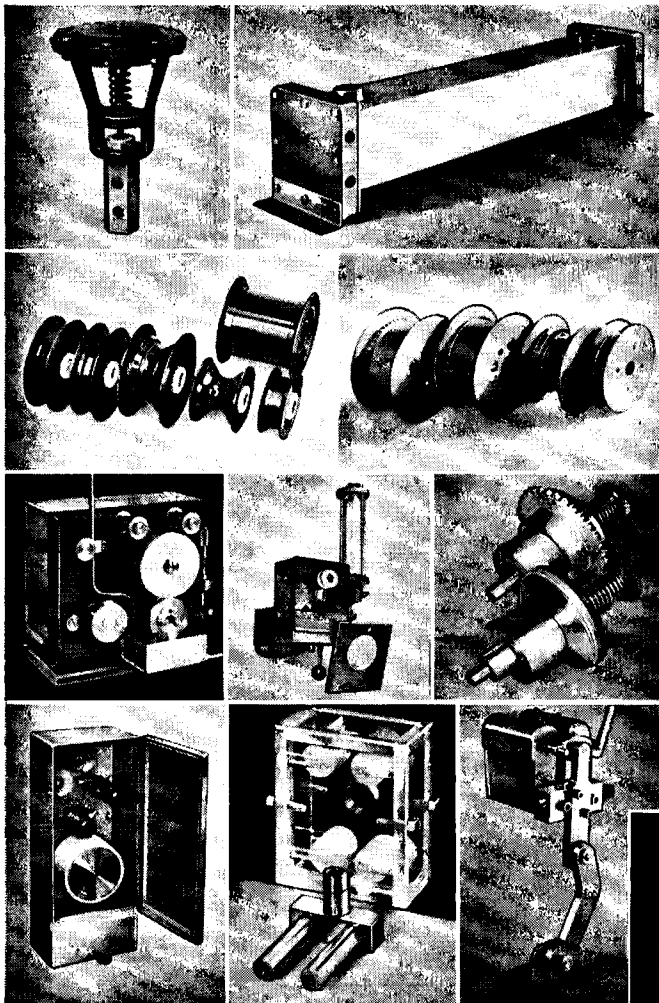
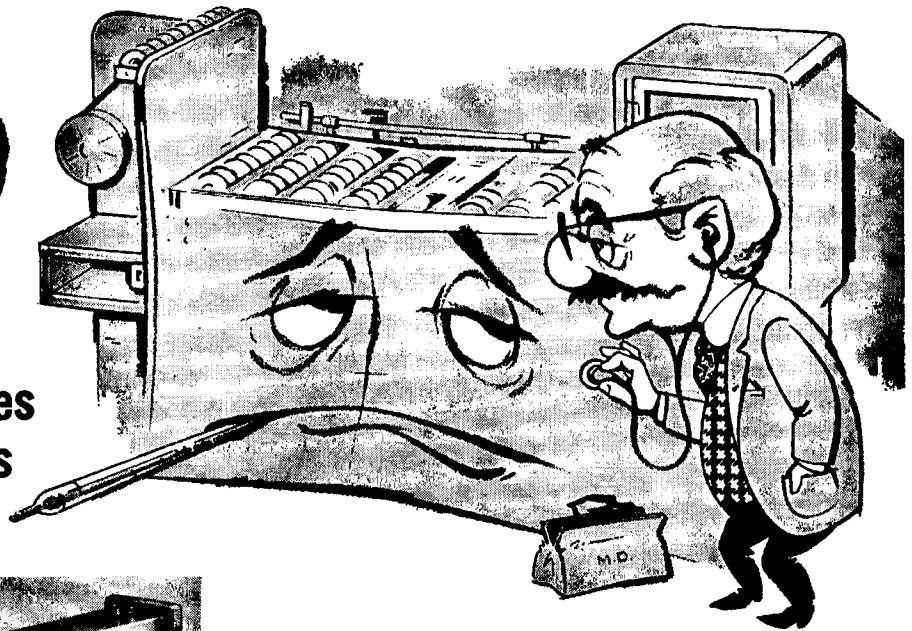


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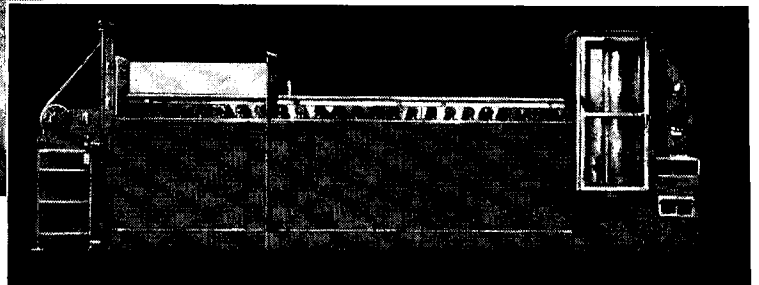


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