

American Cinematographer

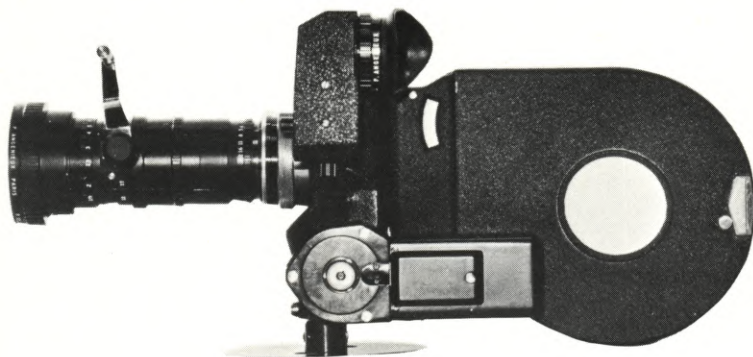
International Journal of Motion Picture Photography and Production Techniques

May 1973/75 cents



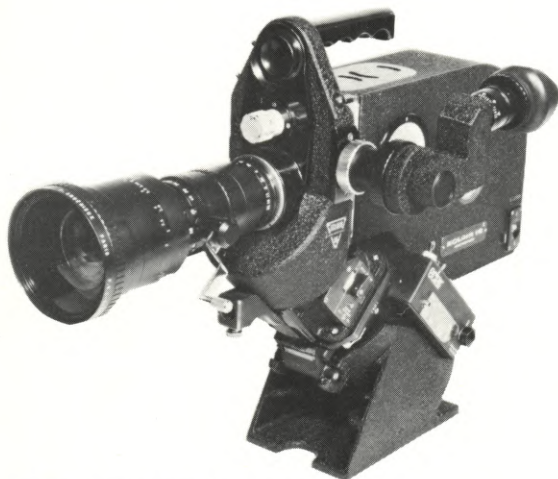
THE 45th ANNUAL ACADEMY AWARDS PRESENTATION

F&B/CECO & SOS Present a free ECLAIR seminar



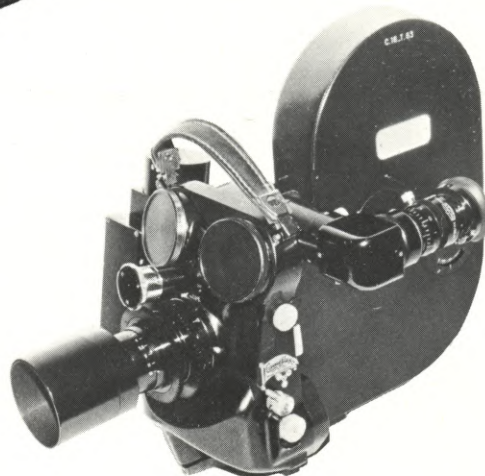
ECLAIR ACL CAMERA

Smallest lightweight 16mm blimped professional production camera in the world • Intermittent pull-down claw • 175° plane shutter • Mirror reflex shutter • Engraved ground glass • Built-in gel holder • Accepts Arri, Eclair and "C" mount lenses • "Auto" or manual clapper • Crystal controlled 12 volt motor • 200 and 400 ft. magazines • Plus dozens of accessories.



ECLAIR NPR CAMERA

Rugged well-balanced 16mm blimped professional production camera • Intermittent pull-down claw • Registration pin • Variable shutter from 5° to 180° • Mirror reflex shutter • Rotating turret takes Eclair and "C" mount lenses • Automatic clapper • Universal crystal controlled 12 volt motor • 400 ft. coaxial magazine • And other exciting features.



ECLAIR CM-3B CAMEFLEX CAMERA

Film in 16, 35mm and Techniscope with the most versital cine production camera ever made • Intermittent pull-down claws • Adjustable shutter from 0° to 180° • Mirror reflex shutter • Magnetic tachometer • Rotating turret accepts three Eclair mount lenses • Instant locking 400 ft. 16mm magazine, 400 ft. 35mm magazine or 35mm techniscope magazine • Variable speed, Governor and synchronous motors • Don't miss seeing this unique production camera and accessories!

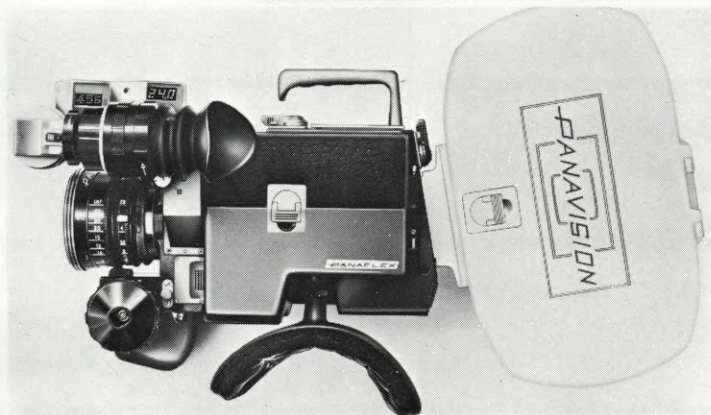
Saturday 26 May 1973, 9 am to 1 pm
Hollywood, 7051 Santa Monica Blvd.
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Continuous Camera Demonstrations
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F&B/CECO/SOS

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The source:



In filmmaking, compromises can be expensive. Especially when it comes to equipment.

When you want the performance of a Panavision camera or lens, you don't want to be "sold" on a substitute.

If you need the steadiness of a Tyler helicopter mount, you don't have time to gamble on someone else's.

If your sound man wants the versatility of a Fisher boom or dolly, you don't want to settle for something else.

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We've built a company around the idea. Offering the latest, finest cameras, lenses, lighting, grip, support and sound equipment from literally dozens of the world's top manufacturers. Either individually, as a package or on our own ultramodern multiple sound stages in the heart of Manhattan.

That's why we're known as "the source" to many motion picture people: their one stop for all the equipment and supplies they need. Because they don't want to settle for anything less.

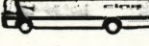


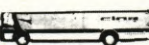
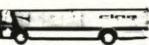
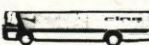
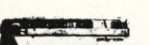
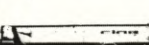
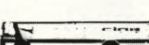
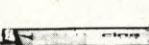
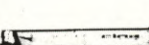
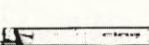
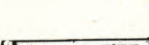

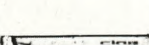






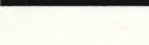
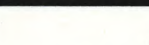
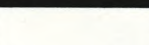

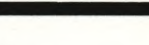

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21

**Cine
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 <p>HIT MARSEILLES, FRANCE PARAMOUNT PICTURES HARRY KORSHAK - PRODUCER SIDNEY FURIE - DIRECTOR JOHN ALONZO - CINEMATOGRAPHER</p>	 <p>THIEVES LIKE US MISSISSIPPI JERRY BICK/GEORGE LITTO - PRODUCERS ROBERT ALTMAN - DIRECTOR</p>	 <p>QB VII LONDON SCREEN GEMS DOUGLAS CRAMER - PRODUCER TOM GRIES - DIRECTOR PAUL BEESON - CINEMATOGRAPHER</p>
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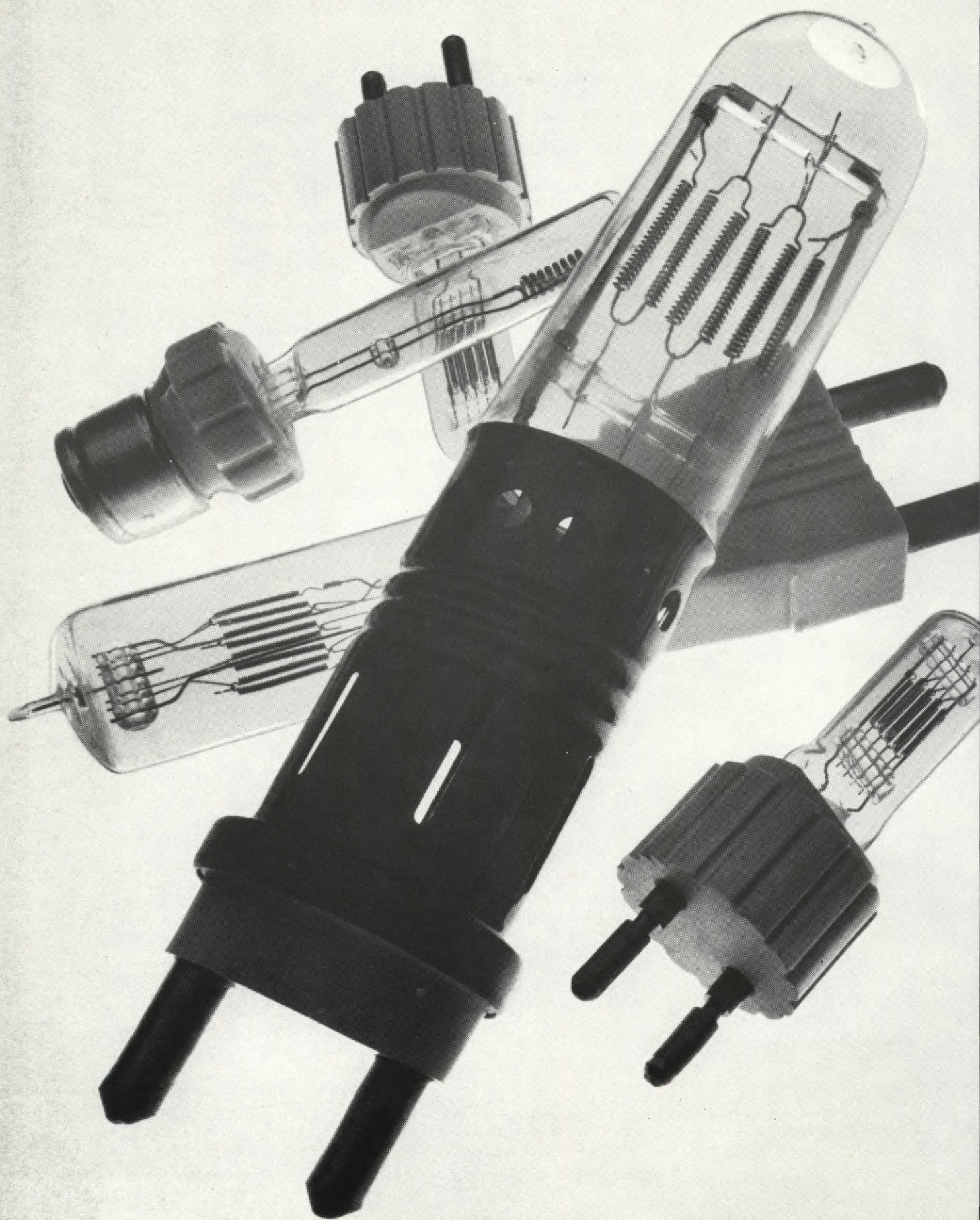
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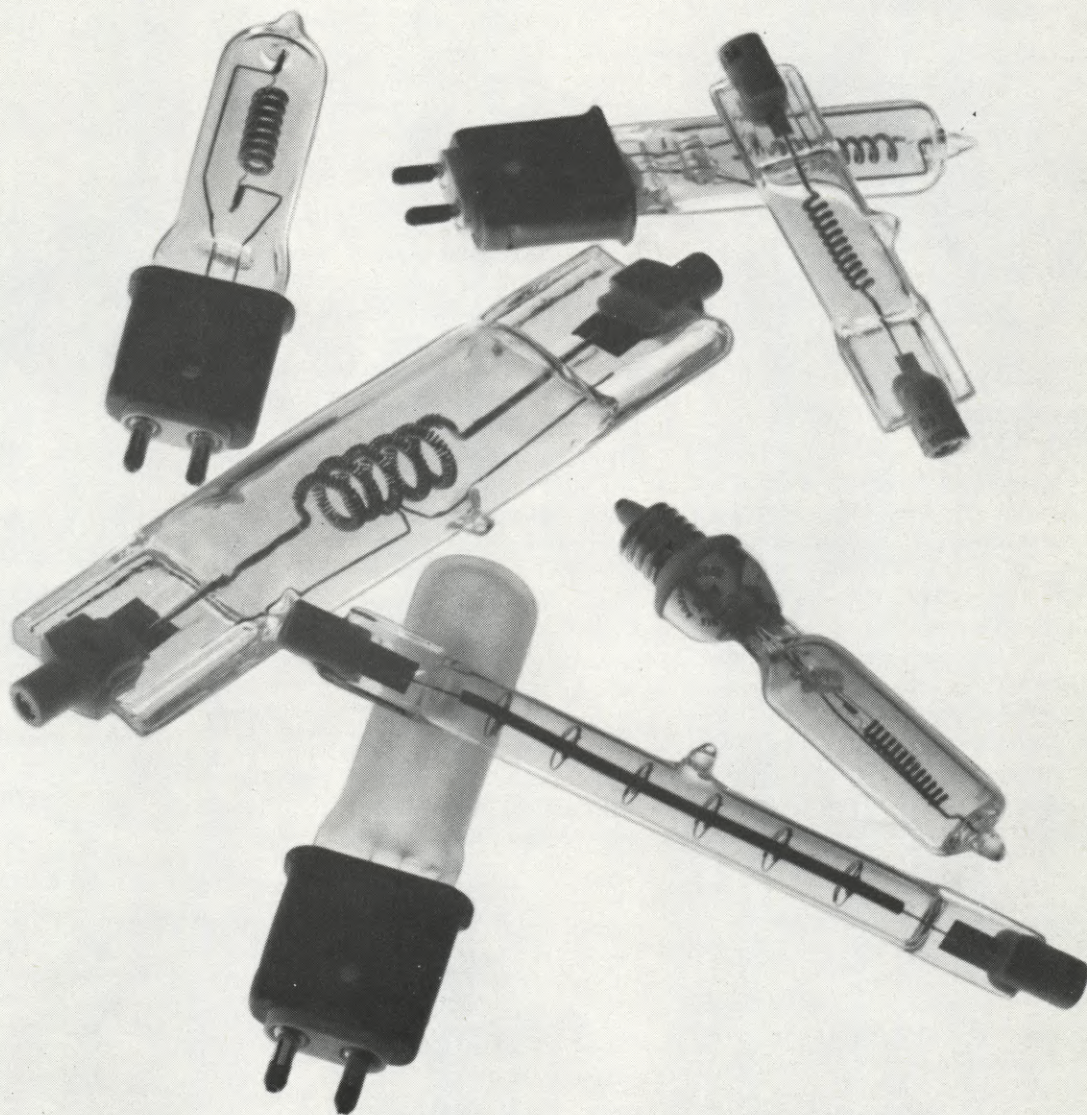
ON THE COVER: A stylistic interpretation of the Academy Award "Oscar" statuette, to symbolize the glamour and excitement of the industry for which it represents the highest degree of achievement. Design and photography of the cover and pages 542-543 by PERRI & SMITH.

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**Some of our substitutes
for those big, fat incandescents.**



Some of our substitutes for our substitutes.



Those big, fat incandescents blessed the world with a lot of big, fat fixtures and sockets.

So after we came up with our skinny, little tungsten-halogen lamps, the first thing we had to do was set them up on big, fat bases so that they'd fit the old sockets.

Which meant developing a complete line of Substitution Lamps. (You see some of them at the left.)

But soon new fixtures arrived on the

scene. These took full advantage of the inherent small size of Sylvania tungsten-halogen lamps.

(Which, by the way, outlast the fat incandescents about 3-to-1, don't blacken and lose brightness with age, and don't fall off in color temperature.)

For the new fixtures, we developed a complete new Standard Line of tungsten-halogen lamps, like the ones on the right.

Whenever studios replace their old fixtures with new ones, they can substitute

our new lamps for our Substitutes.

Which is OK with us.

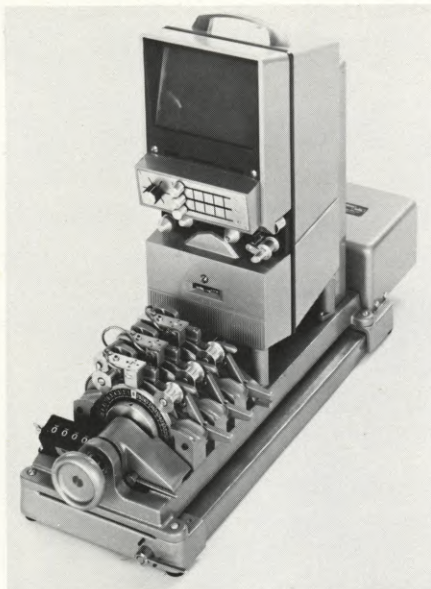
Because both of these lines are so much better than the old lamps, that no matter which our customers use, we feel we've done them a world of good.

And there's just no substitute for the new. We have a brochure on each line. For your copies, write to: Sylvania Light Center, Danvers, Massachusetts 01923

GTE SYLVANIA

WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



MAGNASYNC/MOVIOLA INTRODUCES NEW COMPACT EDITING SYSTEM

Magnasync/Moviola Corp has recently introduced the new M-79 Moviola Junior table editor, a compact editing system weighing about 40 pounds.

Aimed particularly at the television news media in an attempt to help them meet tight deadlines, Walter H. Mills, executive V-P of the company, explained, "Television has spurred this company into modernization. The television news people have to be extremely mobile and they must also meet incredibly tight deadlines. In our Moviola Junior we are giving them an editing machine they can carry right up to the news, if need be, and this advantage can make those dreaded deadlines more feasible.

"Today the editor is on the move. You can take the Moviola Junior anywhere and you can literally edit an entire film on it."

The cost? Under \$1,000.00.

Features include the Moviola M-50 viewer, three-gang synchronizer with 16mm mag heads, footage counter, sync motor drive and built-in solid-state mixer with amplifier utilizing slide attenuators. Options include a decoupler, under mag heads, and 35mm synchronizer.

The unit is ideal for the up-and-coming generation of editors, allowing them to work in a closet if necessary.

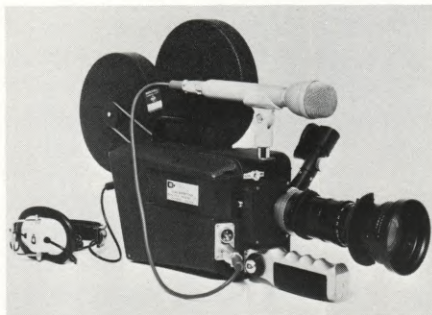
"We've become a part of the electronic age," Mills continued, "The last change in the Moviola editing equip-

ment was about two years ago when the company introduced its flat-bed process. Other than that, the Moviola has been used for many years with only minor changes. The next step in film editing equipment will probably be to a more computerized system. Such systems are available today but they're costly. We have already started in this direction in a small way by going to an electronic system. Moviola units used to be about 90% mechanical and 10% electronic. Today this is almost completely reversed. The flat-bed console is almost like putting the editor into the cockpit of a 747."

It is interesting to note that the Moviola Junior is almost the same size as the first Moviola built some 50 years ago. The original machine was called the Moviola Midget and was designed by Iwan Serrurier for the original Moviola company. It was sold to MGM Studios in 1924 before the advent of Sound.

Magnasync/Moviola has opened new offices in Hollywood, California, at 1001 N. Highland, which include a demonstration room with all of the motion picture products manufactured by the company available for industry testing. The facilities, headed by Gerry D'Almada, offer complete services in repairs, rentals and sales.

"It must be remembered, however," Mills concluded, "that no matter what any equipment has to offer, it is still the knowledge and creativity of the editor that brings forth the final result."



ACCESSORY MIKE/LIGHT BRACKET AVAILABLE FROM CINEMA PRODUCTS CORPORATION

Cinema Products Corporation announces the availability of a new Accessory Mike/Light Bracket for all CP-16 and CP-16/A 16mm motion picture cameras.

The new accessory Mike/Light Bracket is supplied with a removable 5/8" stud to accept a microphone. The bracket can be used as well to mount a light head onto the camera. The accessory Mike/Light Bracket can be easily and securely mounted to all CP-16 and CP-16/A camera models, permitting the TV-news/documentary cameraman an extra measure of freedom of movement when filming difficult assignments on his own.

The new accessory Mike/Light Bracket is priced at \$32.00. For further information, please write to Cinema Products Corporation, 2044 Cotner Avenue, Los Angeles, California 90025.



LEITZ INTRODUCES NEW SUPER-8 MOVIE CAMERA

A new Super-8 movie camera designed to be a nucleus for a universal Super-8 system has been introduced by E. Leitz, Inc. Called the Leica SPECIAL, the new movie camera offers maximum versatility for the advanced movie amateur, as well as wide ranging applications in the scientific and technological fields.

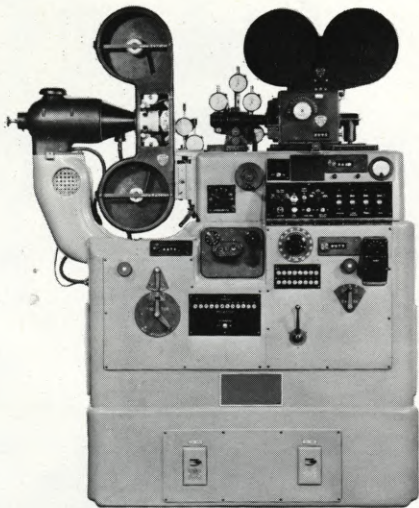
The first Leitz movie camera to accept LEICA-M bayonet base lenses, the Leica SPECIAL becomes an integral part of the LEICA/LEICAFLEX system of photography, enabling the user to take movies and still photographs with the same lenses. The cine lenses are available for use with the camera: a 10mm MACRO-CINEGON f/1.8 lens, and a 6-66mm OPTIVARON f/1.8 zoom lens. In addition, the Leica SPECIAL can use many lenses from still and cine cameras with appropriate adapters.

Its compact, lightweight body makes the Leica SPECIAL particularly suitable for use on a microscope or endoscope, for surveillance and time lapse studies. Its balanced design makes it convenient to operate with heavy telephoto lenses in photographing news, sports events, and wildlife.

Continued on Page 621

Improve Your Image

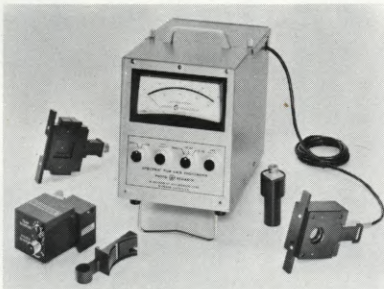
...with Acme Special Effects Optical Printers



The Model 103 printer pictured at left is one of a family of printers capable of producing basic special effects required by any Optical and/or Special Effects Department.

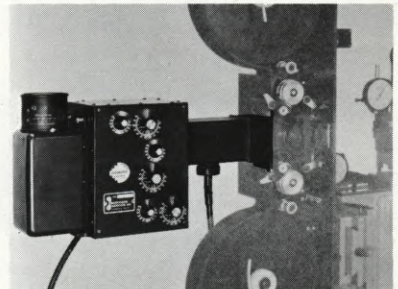
FEATURES:

- Stop Motion
- Skip Frame
- Matte Device
- Wipe-Over
- Flip-Over
- Image-Spin



Model 900 Film Gate Photometer
Reads directly in printer stops of 0.025 Log exposure units. Available with a variety of standard probes for use with Acme Optical Printers and Bell & Howell Model C Printers. Special probes for other printers available on request.

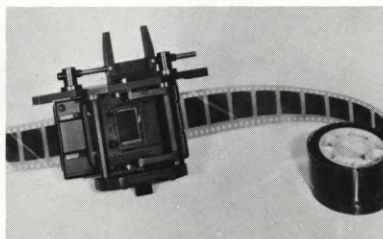
Precision Products for Optical and Special Effects Use



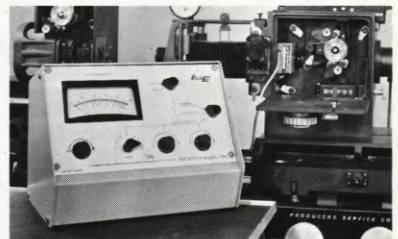
Manual Additive Color Lamphouse
No more filter problems. Direct replacement for subtractive lamp-houses. Designed specifically for Acme Optical Printers but easily adaptable to other printers. 120 steps of .025 Log exposure.



Model 7000 Sensitometer
This table-top unit is designed to provide precision sensitometric film strips at speeds up to 30 pairs per minute. 16mm and 35mm perforated or unperforated film.



Acme Series 100 Liquid Film Gate
Available in 8mm, 16mm, Super 16 and 35mm for Acme and Oxberry cameras.



Focatron Model P-122
Designed for fast precision focusing of optical printer cameras. Focatron will improve quality and reduce operating costs.

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Prestige

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quality on your 8 mm prints. Planes arriving and departing the Memphis International Airport every hour of the day and night, bring every city from coast to coast within quick and easy reach of MPL. Send your film to the *complete* 16mm laboratory—Motion Picture Laboratories, Inc.

INDUSTRY ACTIVITIES

CANON K-35 MACROZOOM LENS WINS ACADEMY AWARD

The unique Canon K-35 Macrozoom lens was honored by the Academy of Motion Picture Arts & Sciences, at its 45th annual awards presentation held on March 27, 1973, in Hollywood, for its contribution to the advancement of motion picture photography.

On hand to receive the Academy Awards for their contribution to the design and development of the Canon K-35 Macrozoom lens were Dr. Takeshi Mitarai, the distinguished Chairman of the Board and President of Canon Inc., Japan, Mr. Hiroshi Suzukawa, Executive Managing Director of Canon Inc., Japan, and Mr. Wilton R. Holm, Executive Director of the Motion Picture & Television Research Center, Los Angeles.

The Canon K-35 25-120mm Macrozoom lens is an outstanding vari-focal lens system that was developed by Canon Inc., Japan, to the exacting specifications of the Motion Picture & Television Research Center. To quote from the Academy of Motion Picture Arts & Sciences Award Citation:

... "This large-aperture, high-definition lens, because of its macrozoom capability, permits extreme close-up photography, in addition to its normal and extended zoom functions."

Canon's K-35 lens has the high resolution and distortion-free characteristics

of high-quality fixed-focal-length lenses, combined with an exceptional speed of T/2.8. It provides the professional cinematographer with one extremely versatile lens that covers the normal range of a whole set of fixed-focal-length lenses.

Following the annual Academy Awards presentation, a special reception was held on Wednesday, March 28, 1973, at the Beverly Wilshire Hotel in Beverly Hills, honoring the distinguished guests from Canon Inc. and the Motion Picture & Television Research Center of the Association of Motion Picture & Television Producers Inc.

The reception—which was heavily attended by key executives and noted personalities in the motion picture and television industries in the Hollywood area—was hosted by Mr. Keiichiro Ryu, President of Ryudensha Co. Ltd, Japan, world-wide exporter of the Canon K-35 lens, Mr. Milton Forman, President of RDS-Tek, Beverly Hills, world-wide distributor of the K-35 lens, and Mr. Ed DiGiulio, President of Cinema Products Corporation, sole distributor of the Canon K-35 lens in the U.S.

A special test film clip was projected at the reception, dramatically demonstrating the unique optical capabilities of the Canon K-35 Macrozoom lens.

Mr. DiGiulio, hosting the reception, hailed the K-35 Macrozoom lens as a major achievement which will creatively enrich the visual language of the motion

picture film medium since its independent Macrofocusing control permits unique perspective control of foreground and background, achieving new cinematic effects which were previously considered impossible.

The Canon K-35 Macrozoom lens is available for purchase or rental from professional motion picture equipment houses such as Mark Armistead, the Camera Mart, F&B/Ceco, Gordon Enterprises, Victor Duncan, Birns & Sawyer, Camera Service Center, etc.

CONSOLIDATED FILM INDUSTRIES AND IBM CORPORATION SHARE ACADEMY AWARD FOR TECHNICAL ACHIEVEMENT

Consolidated Film Industries of Hollywood and International Business Machines Corp. shared an Academy Award for technical achievement in the recent 45th Annual Academy Awards Presentation.

The two companies developed a technique for using a computer—an IBM System/7—to improve the reliability and efficiency of balancing colors in films made for theater and television viewing.

"The IBM system enables us to maintain a precise color consistency," said Sidney P. Solow, president of Consolidated Film Industries. "The computer is capable of detecting errors so minute that even the human eye can't spot them."

The Class II Award, presented by the Academy of Motion Picture Arts and Sciences, is given only in those years when the Academy determines that the achievement is of considerable significance to the motion picture industry.

Continued on Page 628

(LEFT) On occasion of receipt of Technical/Scientific Award for the Canon K-35 Macrozoom Lens at the recent 45th Annual Academy Awards Presentation, officials of Canon Inc., from Japan, are shown with local representatives of the lens and Academy presenter, Mr. Macdonald Carey. (Left to right) Mr. Keiichiro Ryu (President Ryudensha Co., Ltd.), Mr. Hiroshi Suzukawa (Executive Managing Director, CANON INC.), Dr. Takeshi Mitarai (Chairman of the Board and President, CANON INC.), Mr. Macdonald Carey (Official Academy Presenter, Technical/Scientific Awards), Mr. Wilton R. Holm (Executive Director, Motion Picture & Television Research Center) and Mr. Milton Forman (President, RDS-Tek Ltd.) (RIGHT) At reception held at the Beverly Wilshire Hotel in honor of the visiting Canon Inc. representatives, Canon President, Dr. Takeshi Mitarai delights those present with his witty speech.



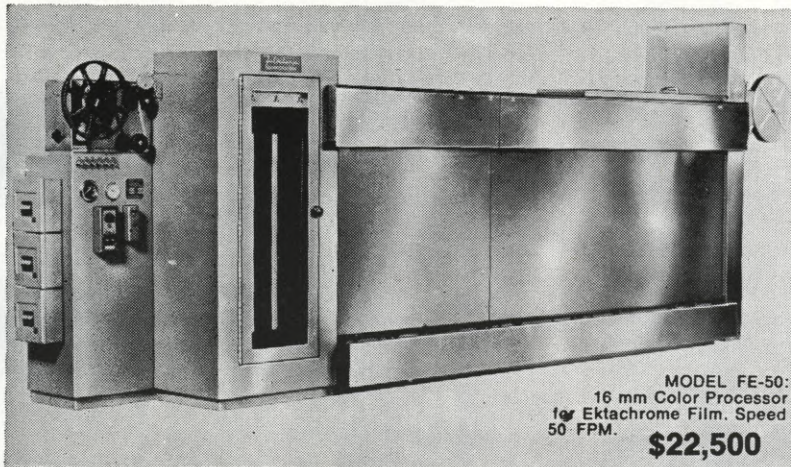
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FILMLINE'S professional color film processors for motion picture laboratories.

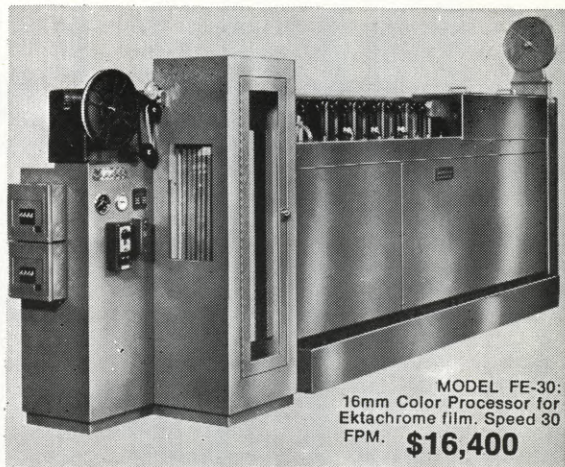
The Filmline Models FE-30 and FE-50 are fast, foolproof, troublefree and long-lasting. They turn out consistently superior work. The design is backed by Filmline's reputation as the world's leading manufacturer of film processors for the motion picture laboratory industry.

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
Ektachrome film. Speed 30
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.

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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, WKCT-TV, WAVE-TV, WAVY-TV, KTVI-TV, WCPQ-TV, KTAR-TV, WSYR-TV.

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CINEMA WORKSHOP



By ANTON WILSON

LIGHT METERS—PART II

Any discussion of light meters should begin with an emphasis on calibration. One can employ the most expensive light meter using the most sophisticated light measuring techniques and yet obtain an incorrect exposure due to improper calibration of the unit. Firstly,

what is calibration and within what limits is a meter considered to be "accurate"?

There are basically two steps in determining the proper calibration of a light meter. Firstly, the individual manufacturer chooses a particular "calibration constant" or "calibration point" that becomes the standard for that

particular company. This calibration point is usually determined by the manufacturer's own research department. In some countries, the government stipulates limits for the manufacturer's calibration constant. In England, for example, the manufacturer's calibration constant must be within $\pm 1/3$ stop of the Government Standard. In the United States there is no Government Standard as such, but it is safe to assume that almost all manufacturers have established calibration standards within a $2/3$ -stop range. In other words, even before a light meter is touched, one company may have set a standard for itself that is as much as $2/3$ stop different from that of another manufacturer.

Once the manufacturer has set his calibration point, he now is allowed a manufacturing tolerance, i.e. all the meters he manufactures must be calibrated within certain limits of his chosen calibration point. In practice this is also approximately $\pm 1/3$ stop. This is the second step.

Now, looking at the whole picture, the manufacturer is allowed approximately $\pm 1/3$ stop limits in choosing his personal calibration point, and another $\pm 1/3$ stop manufacturing tolerance on top of this. Thus, considering an extreme condition, a particular light meter from one manufacturer may indicate an exposure difference of as much as $1-1/3$ stop from a particular meter of another manufacturer and yet both are considered to be "calibrated." This, of course, is a "worst case" example and, in practice, meters of a single manufacturer are usually within $1/3$ stop of one another, and meters of different manufacturers are most likely within $1/2$ stop of each other. However, the situation can still exist where two meters may disagree by more than one stop, and yet each is within proper calibration.

I am stressing this point because I believe the cinematographer should not rely solely on the manufacturer's calibration. When using stocks of narrow latitude, the cinematographer cannot afford a calibration tolerance of $2/3$ stop. This is why most professional

Continued on Page 601

FIGURE 1



Magna-Tech's electronic method of altering sound tracks makes "looping" obsolete.



If you are still making hundreds of loops for a single feature, then consider a fast, precise and economical method of altering sound tracks that makes "looping" obsolete.

The new Magna-Tech system electronically synchronizes a reel of picture with a reel of full-coat magnetic sound-recording film. Footage and frame "PRESETS" permit the recordist to select the scene to be "dubbed" and to fully control the advance and return of the film as the actor voices the line to be "dubbed."

The system is so accurate it will even permit the change of a single word without danger of erasing an adjacent word.

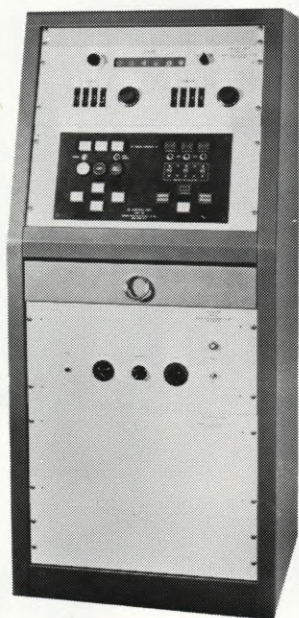
High speed return of the film to "start" saves time and permits new starts without waiting for a "loop" to complete its trip.

Actors, who so often succumb to the rhythm of a loop, are spared this hypnotic interference. Acceptable "takes" can be stored on the 3-track film and replayed for final selection.

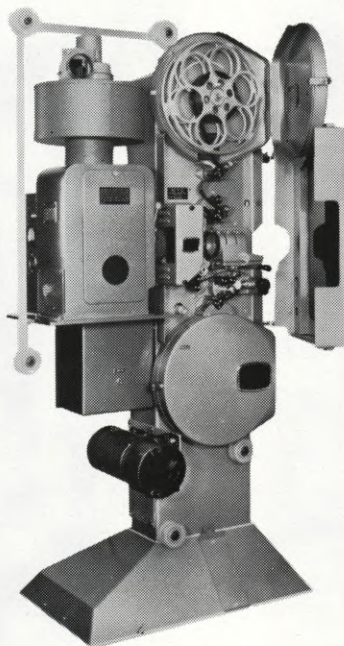
A complete remote control system is provided the director so that, once the recording engineer has preset footages, the director can take over if he wishes and directly control every facet of the recording.

The Electronic Looping System precludes the need for cutting loops and eliminates the need for editing of the track. Complete reels of the motion picture are run in synchronization with the full-coat magnetic film on which the sound track is recorded. Transfer of the best takes is then made to the third track of the same recorder.

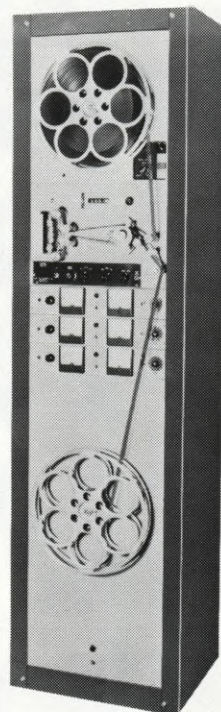
This track now has all of the final takes in sequential position and ultimately permits the screening of the picture and the final edited track in perfect synchronization. From this point the track is ready to go to a mix and no further editing is required.



Electronic Looping Console



35mm Projector



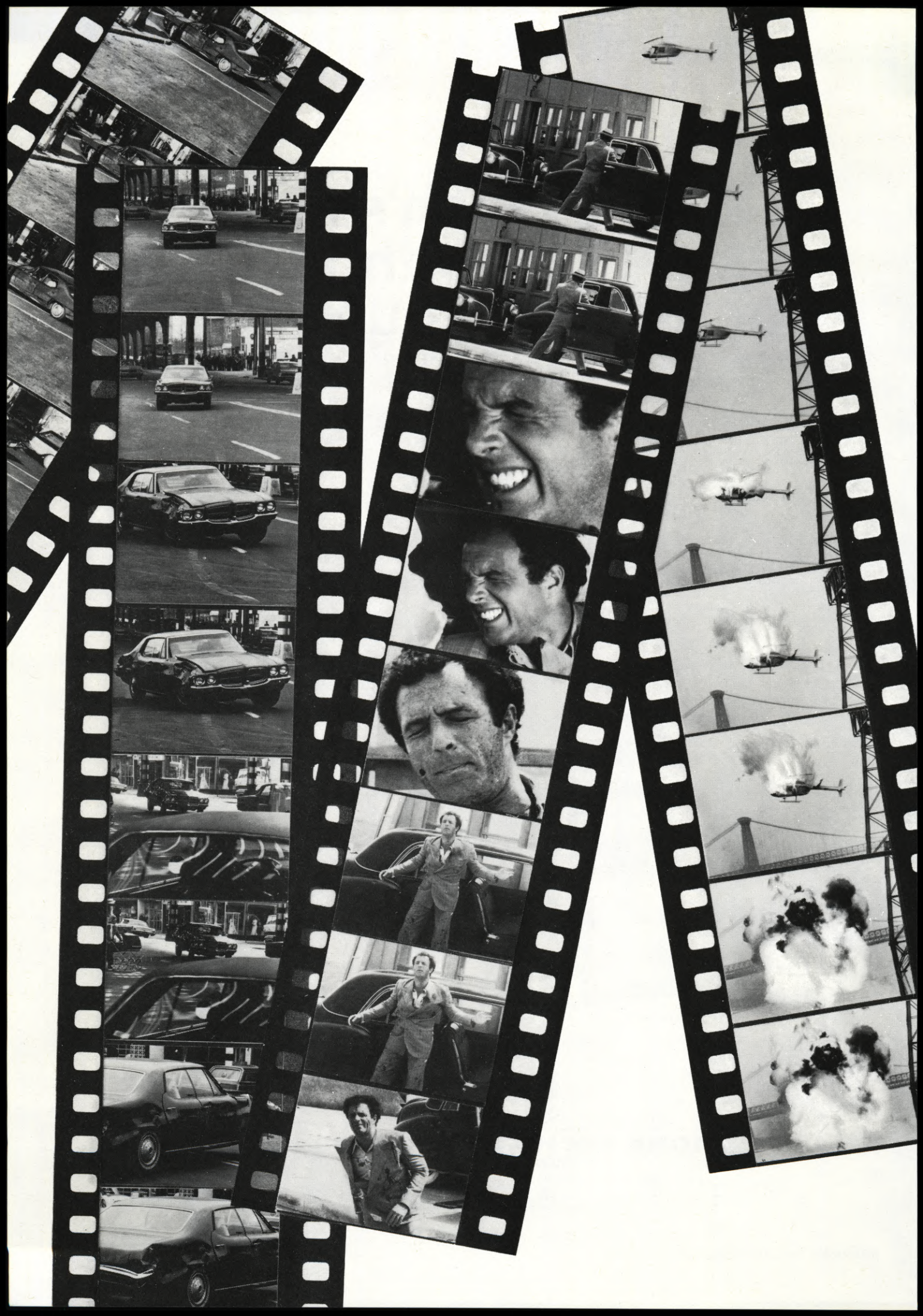
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"When we found out it would cost a hundred thou to kill Sonny Corleone, we figured we could do it only once. Jimmy Caan was wired with 110 explosive charges and we blew up a beautiful 1941 Lincoln Continental...but we ended up with a very realistic execution." Al Ruddy. Producer of "The Godfather."

"See, Shaft's supposed to shoot this helicopter down. We hauled a life-size mock-up 150 feet in the air over the Queensboro Bridge. Of course, traffic was blocked up for miles because the thing was full of high explosives. We got a beautiful take the first time. It's a good thing, because the cars would probably still be jammed up if we didn't." Urs B. Furrer. Director of Photography, "Shaft's Big Score."

"Shooting Popeye's chase with a subway train was a one-shot sequence that took five weeks. We'd set up a particular shot, check out all the safety angles, get the car and cameras going, and cross our fingers. In addition, a lot of unplanned things happened that we couldn't duplicate. The total result was a focal point of the film." Owen Roizman. Cinematographer, "The French Connection."

All classic scenes. All shot on Eastman film... the first and only time.

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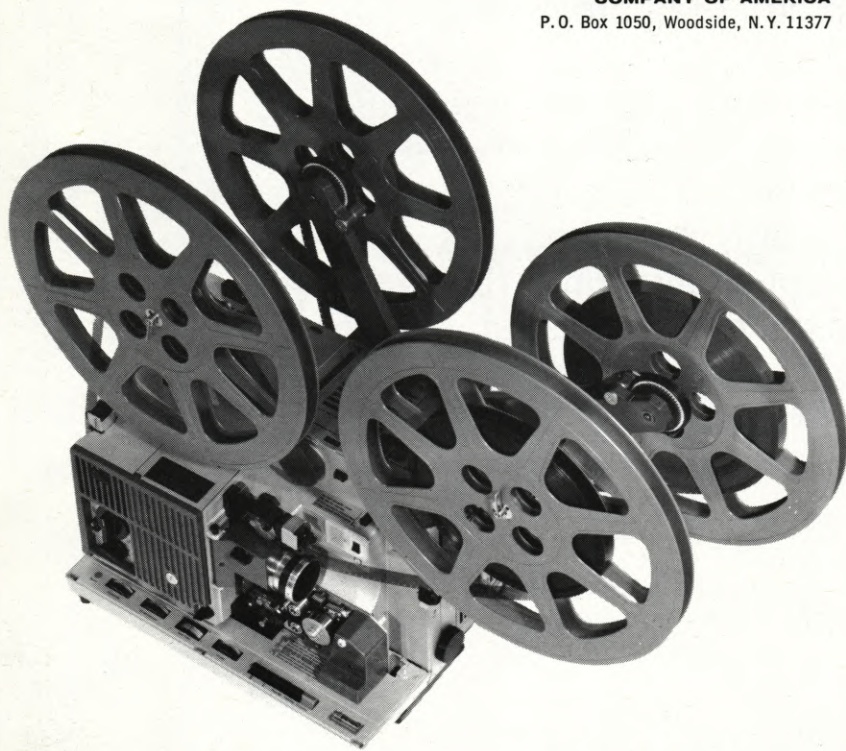
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THE BOOKSHELF

By GEORGE L. GEORGE

With the expansion of personal filmmaking—where one creative individual performs the multiple functions of a film crew—J. Kris Malkiewicz's *CINEMATOGRAPHY* (Van Nostrand Reinhold \$12.95/6.95) provides a most valuable service. While covering thoroughly the technical aspects of the cinematographer's craft, it touches succinctly on the techniques of editing, sound recording, and production logistics. Photographs, charts, a bibliography and a glossary complete this excellent book, useful to film teachers as well as to film-makers.

* * *

The remarkable growth of student interest in film/TV studies is reflected in the American Film Institute's new, updated *GUIDE TO COLLEGE COURSES IN FILM AND TELEVISION*. This comprehensive volume lists 613 institutions of higher learning with a total of 5,889 courses and full data on all aspects of each school's curriculum. (Acropolis, 2400 17th St. NW, Washington, D.C. 20009. \$5.95.)

* * *

Herman Buchman's *FILM AND TELEVISION MAKEUP* (Watson-Guption \$15.) is a definitive work by a top New York expert. This large-size book, with over 500 black and white illustrations and 139 color plates, is a comprehensive guide to makeup techniques, tools and materials. It covers all basic procedures and special effects, such as aging, burns and scars, and blood, sweat and tears, with a section devoted to the particular needs of black performers.

* * *

Pierre N. Sands' well researched work, *A HISTORIC STUDY OF THE ACADEMY OF MOTION PICTURE ARTS AND SCIENCES 1927-1947* (Arno Press \$11.), is a detailed examination of the Academy's role in the growth of the Hollywood film industry, its labor relations, its sponsorship of technical research, its extensive library and its publications. This scholarly volume, the first overall study of the subject, is a well-deserved tribute to an organization that has proved itself a vital and dynamic force in an essentially mercurial environment.

* * *

Ivan Butler's knowledgeable survey, *CINEMA IN BRITAIN* (Barnes \$15.), reviews in a convenient year-by-year arrangement feature film production from 1895 to the present, as well as

outstanding documentaries and shorts. For reference purposes and sheer enjoyment, this excellently illustrated and informative book affords many rewarding moments.

* * *

In *THE ITALIAN CINEMA* (Praeger \$10./4.95), French film scholar Pierre Leprohon draws a detailed panorama reflecting the influence on film production of Italy's turbulent cultural, political and social crises. Leprohon's narrative covers with informative insight the Italian film scene from its curious 1916 *avant-garde* experiments through its pre-DeMille spectaculars, its sterile Fascist era, its "neo-realist" innovations and up to its present sophistication.

* * *

A sociological study of the Soviet film industry, John Rimberg's Ph.D. dissertation, *MOTION PICTURE IN THE SOVIET UNION 1918-1952* (Arno Press \$14.) sees the content and size of film production as a compromise between political authorities, creative artists and domestic audiences. Documentation is abundant and research extensive, but the author's inherent anti-Soviet slant suggests reader caution in accepting his conclusions.

* * *

The development and history of the gangster film is discussed in two informative volumes. Colin McArthur's *UNDERWORLD USA* (Viking \$6.95/2.75) defines the conventions of this genre in an incisive exploration of its characteristic themes and iconographic patterns, completed by a critical analysis of such outstanding practitioners as Fritz Lang, John Huston, Nicholas Ray and Don Siegel.

* * *

Stephen L. Karpf's *THE GANGSTER FILM 1930-1940* (Arno Press \$15.) is an in-depth study of four movies (*Little Caesar*, *The Public Enemy*, *Scarface*, *The Petrified Forest*) and three actors (Robinson, Cagney, Bogart). The author considers these as archetypes of a genre born of the Depression, and eventually displaced by the nation's economic recovery, the imminent war, and the natural attrition in any popular concern.

* * *

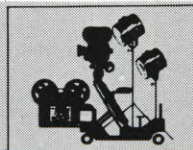
Following the entertainer's career from Russia, where he was born, to San Francisco where he died, via Broadway, Dixie and Hollywood, *JOLSON* (Stein & Day \$8.95) by Michael Freedland contains all the familiar ingredients of a successful rags-to-riches life story. Details of Jolie's film work, from *The Jazz Singer* to *Jolson Sings Again*, evoke the opulence and buoyancy of a memorable era. ■

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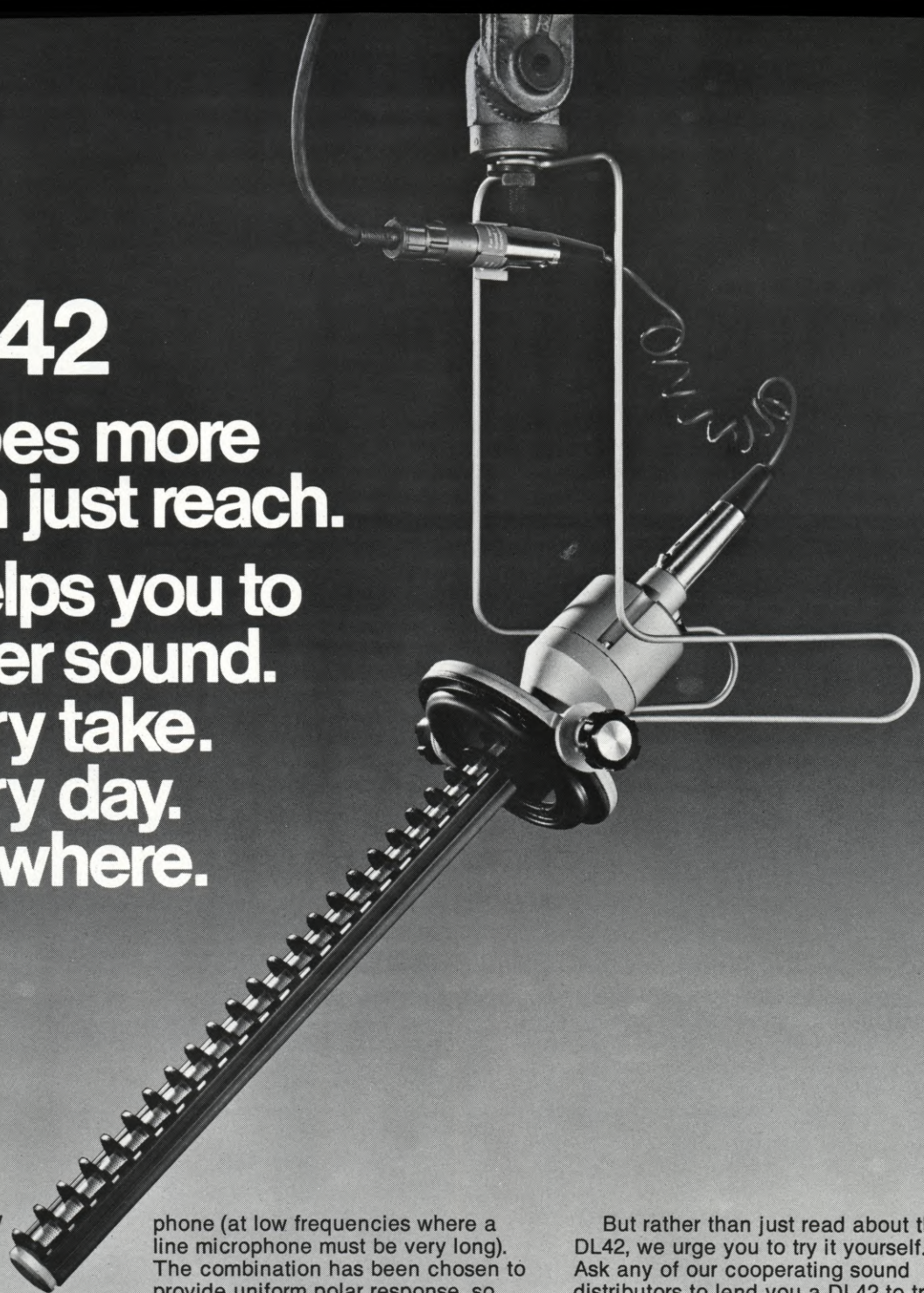


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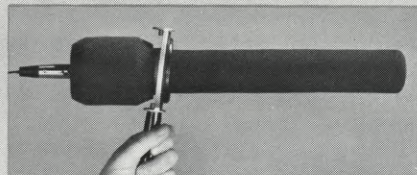
It's the E-V DL42.

Weight has been reduced to 1/4 of the 642... even less than most highly-directional condenser microphones. And size has been shaved wherever possible. The DL42 is a unique combination of line microphone (at the high frequencies) and cardioid micro-

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QUESTIONS & ANSWERS

Conducted by CHARLES G. CLARKE, ASC.
and WALTER STRENGE, ASC.



(Inquiries are invited relating to cinematographic problems. Address: Q. & A., AMERICAN CINEMATOGRAPHER, P.O. Box 2230, Hollywood, Calif. 90028.)



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Due to a typographical error we wish to repeat the correct answer to a question in the February issue:

Q What are the methods used to convert 24 frame-per-second films to 30 fps videotapes?

A The projection set-up that is used in modern television broadcast stations consists of a special projector and Vidicon camera. The projector has a unique pull-down cycle, so that frame #1 exposes two fields to the camera; frame #2 exposes three fields, frame #3 exposes two fields; frame #4 exposes three fields, and so on in repetition. The four frames cover 1/6th of a second and the ten fields (or five television frames) also cover 1/6th of a second. Thus, it is apparent that 24 film frames are converted into 30 television frames. It can readily be seen that the fundamental basis of this system is providing a projection mechanism that projects film with alternating dwell times of 1/30th of a second and 3/60ths of a second.

Q What does the symbol "f" mean with relation to the stops on a lens?

A The symbol "f" engraved on lens mounts usually means focal length; f-numbers or "stops" indicate a ratio between the focal length and the lens diameter. F-numbers are more complicated even than most photographers know. Also called the relative aperture of a lens, the f-number is determined by dividing the focal length of the lens by its effective aperture. The effective aperture is the diameter of the lens' iris diaphragm as magnified by the front element of the lens.

A 1-inch lens of f/2 relative aperture has an effective aperture of 1/2 inch. A 2-inch lens of f/2 relative aperture has an effective aperture of 1 inch. If both lenses are made the same way and of the same materials they both focus images of the same intensity at the focal plane—only the image made by the 2-inch lens is twice as big. To have an image twice as big rate the same intensity, the longer lens must transmit much more light. The f-number system relates these factors, for the convenience of

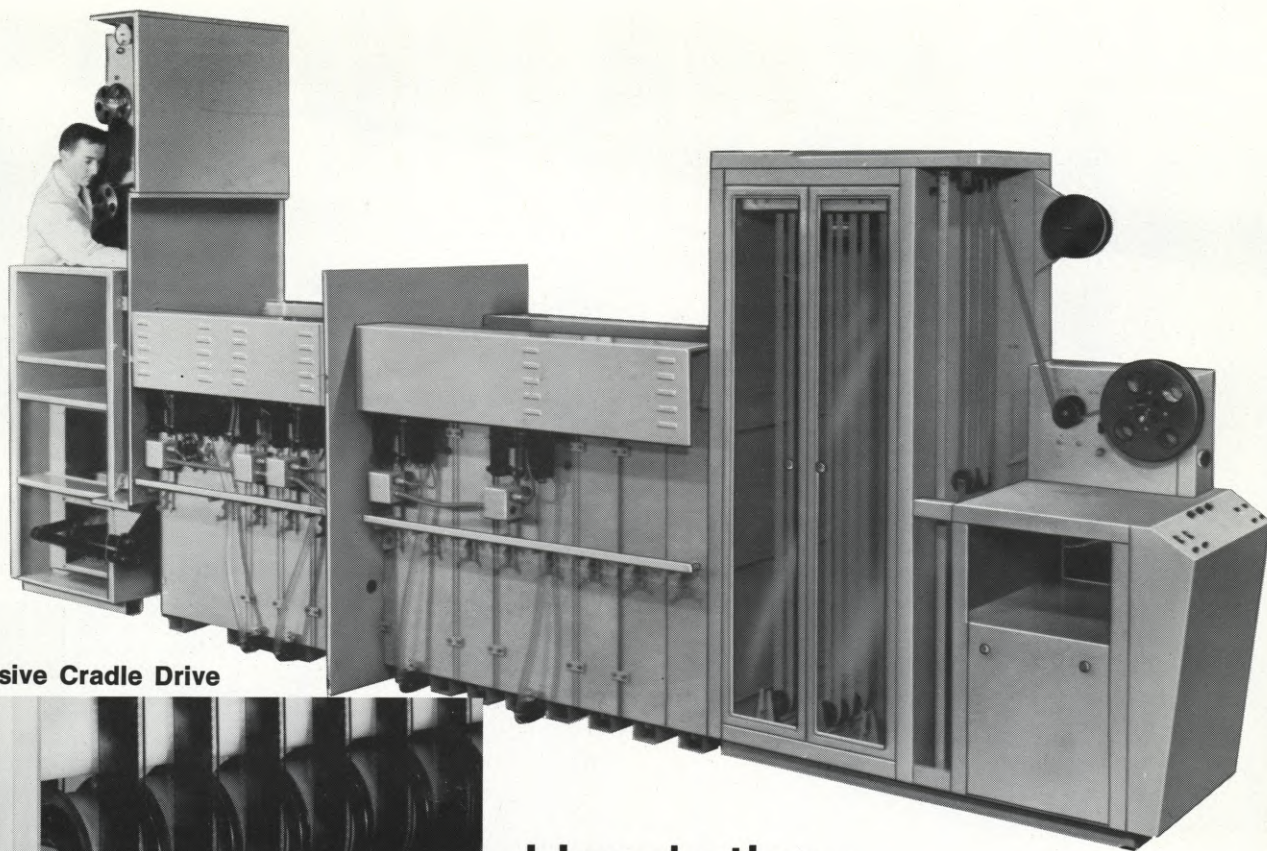
photographers in setting exposures. If he needs an exposure of f/2, the photographer can set either lens to f/2.

Q Has the introduction of faster black-and-white and color films reduced the number of lights used to illuminate a motion picture set?

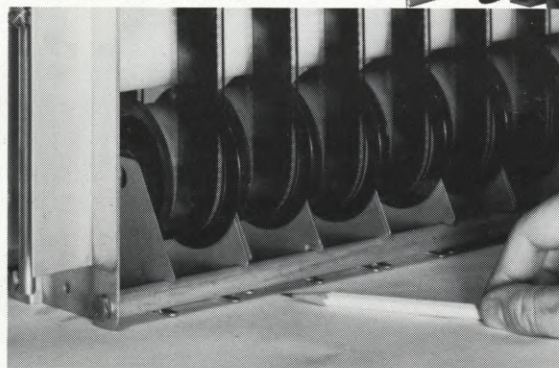
A Faster emulsions, in both black and white and color, have allowed shooting under lower available-light conditions both indoors and out. While this is a boon to newsreel and documentary cameramen filming on actual locations, it has not affected lighting techniques in the studio. The same number of lighting units are required to achieve a desired effect. Every light used on a studio set has a purpose, it is not used merely to provide additional illumination. The key, fill, kicker, back-cross, eye light, etc., are all used for a definite purpose and to aid in creating a predetermined lighting effect. Professional cameramen are making use of the increased film speed by using lower-wattage bulbs to lower the overall lighting level, or they are working at reduced apertures for increased depth of field. The smaller f/stop simplifies follow-focusing (in which the focus is altered as the subject or the camera moves about the set) and also makes easier the filming of dolly shots or other moving shots where focusing is critical.

Q In sound striping motion picture film, will a normal application of iron oxide magnetic track give better sound results than a laminated track? Should this be applied before or after applying a protective coat to the film? Also, if 16mm magnetic sound film is stored in a metal container, and wound on a metal spool, will this cause a loss of sound quality?

A There should be little or no difference in the sound quality rendered by either type of track. The track material should be applied to the film before the protective coating is applied. We know of no instance where magnetic film or tracks have been adversely affected by storage in metal containers or reels.



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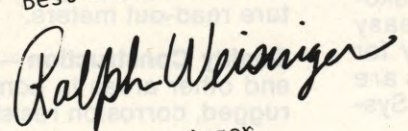
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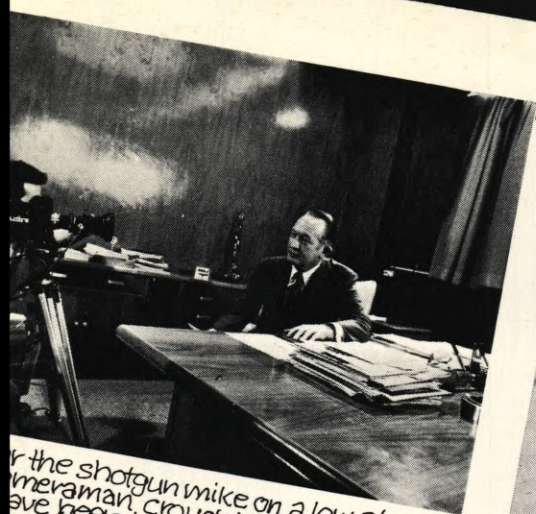
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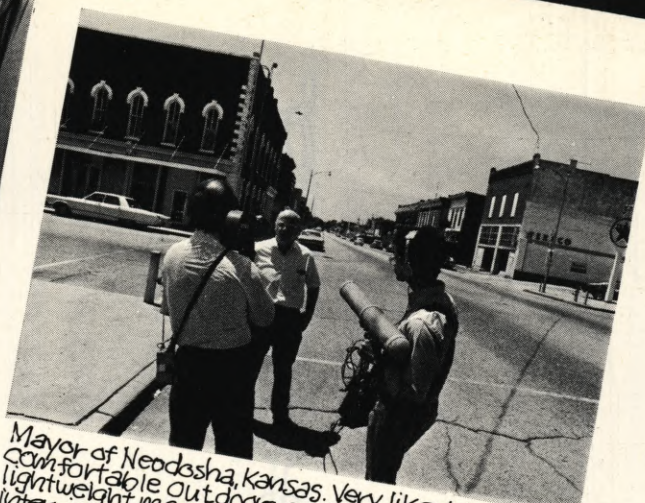


Ralph Weisinger

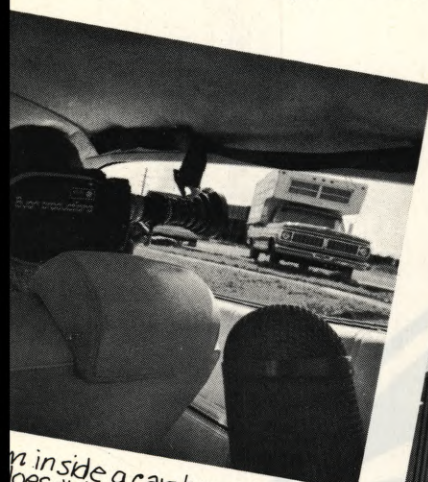
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For the shotgun mike on a low stand
the cameraman crouching in the corner
have been talking got over coffee.
and magazine changes kept
on flowing.



Mayor of Neodesha, Kansas. Very likeable... and
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through the interview.



ever I could walk.
that many hours
comfortable.



Shooting in a classroom can cause a stir, too.
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Avon Productions' new film "Opinion of the Publics" provides some remarkable insights about public relations — from the mouths of the 'publics' involved. Written and directed by Avon president Ralph Weisinger, it utilizes spontaneous material gathered over 12 months of shooting.

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THE HONOR ROLL



HAL MOHR, ASC—THE HONOR ROLL

Hal Mohr was once asked what had influenced him to get interested in cinematography.

He responded by telling of how, right after the 1906 earthquake and fire in San Francisco, he had seen a picture of a railroad train passing in one of the machines at the Crystal Palace and began to wonder how it was done. He had had a magic lantern that projected pictures with a coal oil flame and a dollar box Brownie and had been developing and printing his own pictures. He even did some finishing for a local drugstore to earn extra money.

After working with stills for a while he ran across a toy projection machine which he took to a high school manual arts class and converted into a camera, using the projection lens as the picture-taking lens. The take-up "magazine" was operated by the take-up arm of the projector. The arms of the projector acted as a holder and a receiver. There were no magazines; the camera had to be loaded and unloaded in the dark-room and, if it jammed while shooting a picture, that was the end of the picture-taking session. In a laboratory he set up in his basement at home, he developed his own negative and used the camera as a printer.

In 1912 the city of San Francisco was preparing for the Panama Pacific International Exposition and, as part of the publicity, they were able to get President Taft to attend a ground-breaking ceremony. In order to dress up the picture, the ground-breaking ceremony took place in Golden Gate Park, although the actual exposition was later held at the Marina (Cow Hollow). Although he had no contract for the motion picture-taking rights, Mohr managed to get an unofficial picture of the ground-breaking ceremonies and had it in the Orpheum Theater the next day.

The Patents Company controlled the patent on the loop mechanism in cameras and enforced the rights of the company by having spies out to look inside the cameras used by anyone not employed by the Patents Company.

Knowledgeable cameramen hired bodyguards to protect themselves from these detectives.

One day Mohr received a visit from two of the detectives, Kelly and Smith, who posed as oil men looking for a cameraman to do a film on their company. In order to prove that he was equipped to do the work, Mohr showed the men the inside of his camera, whereupon he was relieved of his camera.

The attorneys for the Patents Company explained that they were going to keep the camera as evidence of infringement on the rights and when Mohr understood what this meant the camera was shattered on the terrazzo floor of the attorney's office. This conveniently ended the case, as the evidence was no longer usable. Incidentally, the remains of this camera are now in Mr. Mohr's possession after having lain in the basement of his old home for years.

In the early years, Mohr worked as an inspector in the film exchanges for the Miles Brothers and Sol Lesser.

Sol Lesser later formed a company called General Films to make a local newsreel called the Golden Gate Weekly. Mohr was the cameraman, using an Erneman, and he went around San Francisco shooting things of interest, developed the negative, made the prints and distributed 15 prints each week.

On his first feature film called "Money", which was done for Jim Keene in a studio he bought in Fairfax, Jerry Ashe was the leading man.

In Berkeley Mohr worked for Arthur Rice with Alfred Einstein and operated a Gaumont Beater camera. It was a French camera and used a beater to move the film, thus getting around the patent on the loop. It was made of teakwood and Mohr made double exposures with the camera.

Mohr says, "I still don't know how I learned to make those double exposures, no one ever taught me."

The film was a fairy tale and the children used as performers were all deaf and dumb and were selected because of their ability to make graceful hand movements.

San Francisco's city fathers had decided to clean up the notorious Barbary Coast in order to prepare the city for the International Exposition and Efram Aher, Sid Grauman and Sol Lesser wanted to make a documentary on the

last night of the Barbary Coast. Hal Mohr photographed the area and, using discarded street arc lights, filmed Pacific Street and the various establishments located there. On Sunday morning, when things were more or less quiet, the filming was completed by taking some atmosphere shots of the alleys where the houses were located. Circumstances shortened the filming of the final sequences.

1914 brought the start of the war in Europe and the last of the European films. All the best films had been done in Italy and, inspired by this fact and the rather large Italian community in San Francisco, Mohr formed a company to make his own films called Italia-American.

The one and only product of this company was "Daughter of the Gods", filmed in a defunct studio in Berkeley, and the leading lady was Lorenza Lassarini. The movie was made for \$10,000 and Mohr constructed and used a traveling dolly to get some of the first dolly shots used in movies. The movie was never released.

Just prior to the United States' entry into World War I, Mohr came to Los Angeles and worked as an editor for Universal Studios, and then moved on to direct and write a one-reeler for Harold Lloyd called "The Big Idea", after which he went into the service.

After the war, Mohr worked in San Francisco and on up to Portland, Oregon to finish photographing Gene Hersholt's first picture.

Mohr photographed the first film in which an actor spoke words, "The Jazz Singer". And he did the "King of Jazz" with Paul Whiteman, working with Ray Rennahan, ASC, on this picture, with Jerry Ashe doing the animation.

Mohr received an Academy Award in 1935 for "Midsummer Night's Dream" and again in 1943 for "Phantom of the Opera".

In 1957 he received the George Eastman Award.

He is presently president of IATSE Local 659, and on the board of the Academy of Motion Picture Arts and Sciences and the American Society of Cinematographers. He served as president of the A.S.C. in 1930-1931, 1963-1965 and 1969-1970. ■



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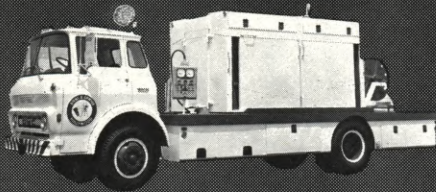
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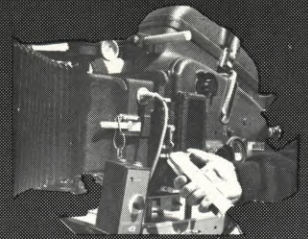
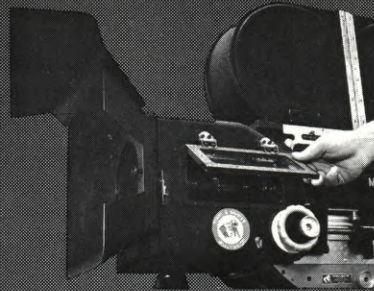
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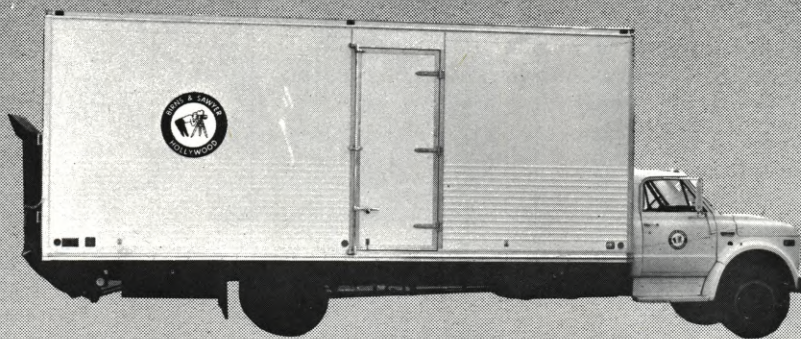


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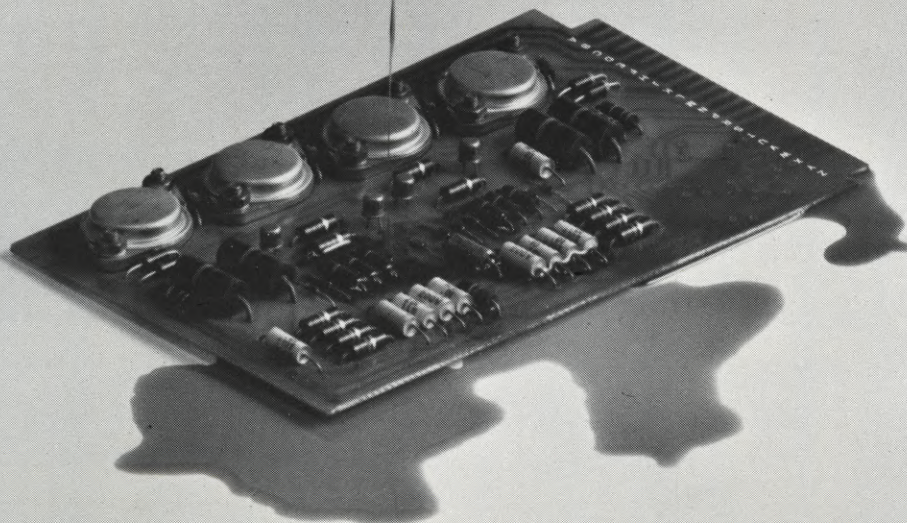
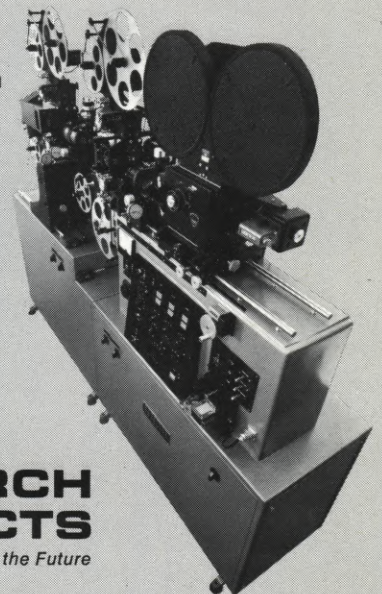
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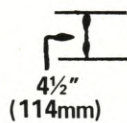
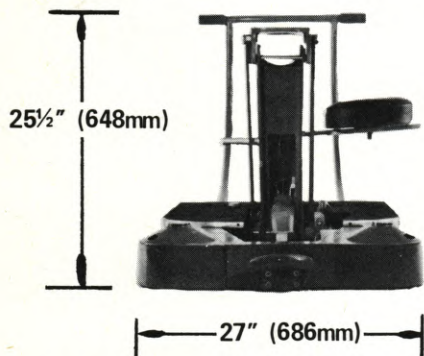
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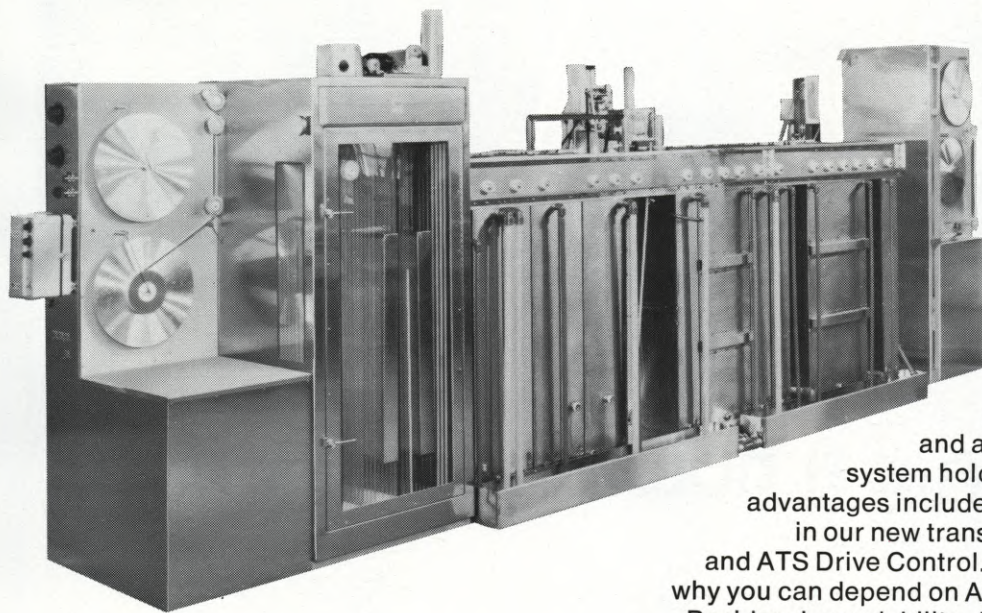
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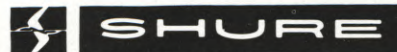


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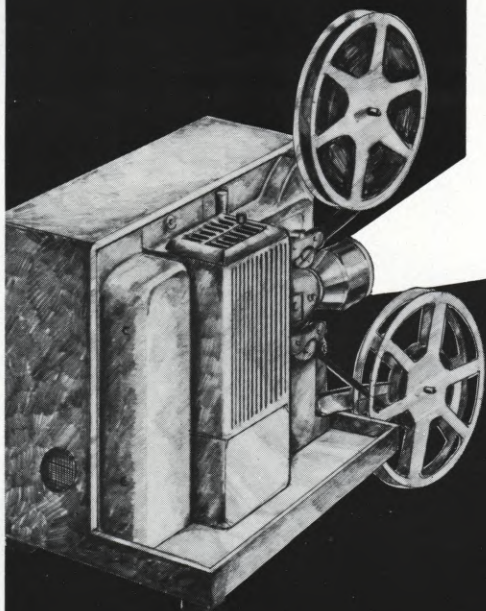
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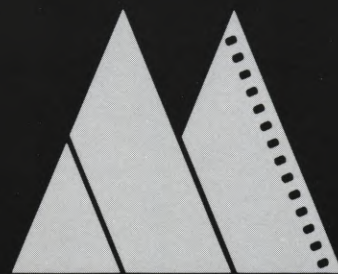
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THE 45th ANNUAL ACADEMY AWARDS PRESENTATION



"Oscar" again reigns supreme as Hollywood stages its annual Big Show and pays homage to the outstanding artists and craftsmen of the motion picture industry

Lights, Cameras and Action—the traditional trappings of Hollywood—were very much in evidence at the 45th Annual Awards Presentation of the Academy of Motion Picture Arts and Sciences, held on the evening of March 27 at the Dorothy Chandler Pavilion of the Los Angeles Music Center.

A glittering array of celebrities attended the affair, which blended outstanding entertainment with the suspense engendered by the opening of sealed envelopes to reveal winners for best cinematic achievements of 1972. There are 21 basic categories for which Oscars were awarded during the evening.

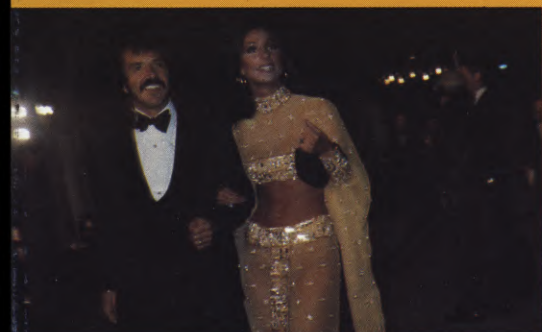
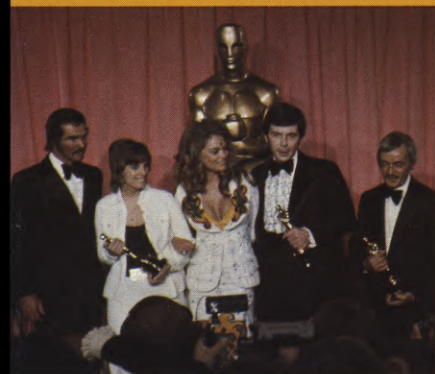
An estimated 76 million people in

the United States viewed all or part of the 45th Annual Oscar Awards Program, according to NBC Audience Measurement Department.

In addition, the program was presented live or on a delayed-broadcast basis in 17 locales outside the continental United States.

Live television coverage was carried in: Australia, Brazil, Canada, Mexico, Puerto Rico and Venezuela (Caracas). Because of the time difference, the communications satellite transmission was seen by Australian viewers starting at 1 p.m. Wednesday, March 28, Australian time. (The special telecast was repeated for prime time audiences at 8 p.m. that day Australian time.)

Delayed telecasts were scheduled





(LEFT) Press photographers in the photographic gallery of the Dorothy Chandler Pavilion click away at the lavish spectacle that heralded Hollywood's biggest night of the year. (RIGHT) All of the colorful Walt Disney characters gather on stage for elaborate musical production number, "A Salute to Disney". It served to honor the man who won more Oscars and received more nominations than any other individual in the entire history of the Awards.

in: Bermuda, Greece, Jamaica, Korea, New Zealand, the Philippines, Portugal, Taiwan, Trinidad and Tabago, Yugoslavia and Zambia. This marks the first time that the Oscar telecast was beamed to Trinidad and Tabago and Zambia.

Also, U.S. servicemen around the world watched the ceremonies via Armed Forces Television Stations.

Three men and one woman—Michael Caine, Charlton Heston, Rock Hudson and Carol Burnett—served as masters and mistress of ceremonies for the open-end program which ran approximately two hours and forty minutes in length. Miss Burnett is not the first woman to serve in this capacity. Claudette Colbert, Helen Hayes, Celeste Holm, Thelma Ritter and Rosalind Russell presided over past programs.

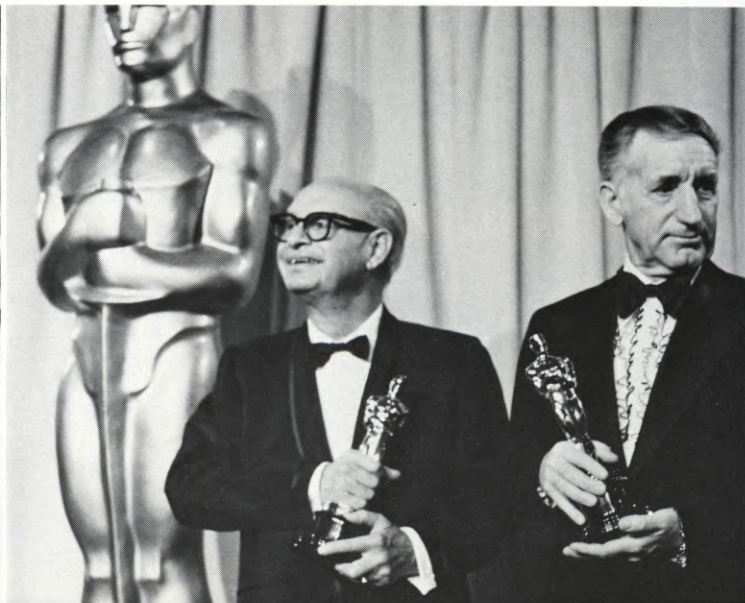
Personalities who made Awards presentations included Eddie Albert, Edward Albert, Julie Andrews, Beatrice Arthur, Marisa Berenson, Candice Bergen, Peter Boyle, Dyan Cannon, Sonny & Cher, Robert Duvall, Clint Eastwood, Greer Garson, John Gavin, Gene Hackman, Lawrence Harvey, Ben Johnson, Cloris Leachman, Jack Lemmon, Roger Moore, Merle Oberon, Burt Reynolds, Diana Ross, Katharine Ross, Frank Sinatra, Elke Sommer, Liv Ullmann, Billy Dee Williams, Robert Wagner, Raquel Welch and Natalie Wood. Three leading industry figures—Director George Stevens, Motion Picture Association of America President Jack Valenti and International Alliance of Theatrical Stage Employees (I.A.T.S.E.) and Motion Picture Machine Operators

President Richard F. Walsh—also presented awards.

The five nominated songs were sung by Glen Campbell, "Marmalade, Molasses and Honey"; Diahann Carroll, "Strange Are The Ways Of Love"; Michael Jackson, "Ben"; The Springfield Revival, "Come Follow, Follow Me"; and Connie Stevens, "The Morning After".

There were two other musical spots, an elaborate opening production number featuring Angela Lansbury and a special tribute to Walt Disney. Miss Lansbury's number was titled "Make A Little Magic". It was written by Billy Barnes, who wrote last year's opening number featuring Joel Grey, and choreographed by Carl Jablonski, choreographer of this year's program. The

(LEFT) Candice Bergen and Billy Dee Williams, presenters of the "Best Achievement in Cinematography" award, shown with Marisa Berenson, who accepted the cinematography award for absent "CABARET" Director of Photography, Geoffrey Unsworth, BSC. (RIGHT) L.B. Abbott, ASC, and A.D. Flowers, recipients of Special Achievement Award for Visual Effects in "THE POSEIDON ADVENTURE". The team had previously won Oscars for effects in "TORA! TORA! TORA!". This was the third Academy Award for Abbott ("DOCTOR DOLITTLE"), who has also won three Emmy's.



Disney spot was titled "A Salute to Disney" and featured all of the late producer's cartoon characters. It served to honor the man who won more Oscars and received more nominations than any other individual in the entire history of the Awards.

The theme of this year's Presentation was "Movie Magic Time" and the elegant set was a replica of a Hollywood sound stage.

Apart from the drama and suspense of the awards themselves, other program highlights were the music of the Academy Award orchestra under the direction of John Williams, a fashion parade on camera with models displaying the nominated costumes, and a grand finale involving everyone—presenters, entertainers and winners—on stage. This glamorous ensemble sang "You Ought

ACADEMY AWARD WINNERS FOR CINEMATOGRAPHY—1928 to 1972

Year	Class	Cameraman	Picture Title	Studio
1972		Geoffrey Unsworth, B.S.C.	"Cabaret"	ABC-Allied Artists
1971		Oswald Morris, B.S.C.	"Fiddler on the Roof"	U.A.
1970		Freddie Young, B.S.C.	"Ryan's Daughter"	MGM
1969		Conrad Hall, A.S.C.	"Butch Cassidy and the Sundance Kid"	20th-Fox
1968		Pasqualino De Santis	"Romeo and Juliet"	Para.
1967		Burnett Guffey, A.S.C.	"Bonnie and Clyde"	WB-7 Arts
1966	B&W	Haskell Wexler, A.S.C.	"Who's Afraid of Virginia Woolf?"	WB
1966	Color	Ted Moore, B.S.C.	"A Man For All Seasons"	Col.
1965	B&W	Ernest Laszlo, A.S.C.	"Ship of Fools"	Col.
1965	Color	Freddie Young, B.S.C.	"Doctor Zhivago"	MGM
1964	B&W	Walter Lassally	"Zorba the Greek"	Fox
1964	Color	Harry Stradling, A.S.C.	"My Fair Lady"	WB
1963	B&W	James Wong Howe, A.S.C.	"Hud"	Para.
1963	Color	Leon Shamroy, A.S.C.	"Cleopatra"	Fox
1962	B&W	{ Jean Bourgoin, Walter Wottitz }	"The Longest Day"	Fox
1962	Color	Freddie Young, B.S.C.	"Lawrence of Arabia"	Col.
1961	B&W	Eugene Shuftan	"The Hustler"	Fox
1961	Color	Daniel Fapp, A.S.C.	"West Side Story"	U.A.
1960	B&W	Freddie Francis	"Sons and Lovers"	Fox
1960	Color	Russell Metty, A.S.C.	"Spartacus"	Univ.
1959	Color	William Mellor, A.S.C.	"Diary of Anne Frank"	Fox
1959	Color	Robert Surtees, A.S.C.	"Ben-Hur"	MGM
1958	B&W	Sam Leavitt, A.S.C.	"The Defiant Ones"	U.A.
1958	Color	Joseph Ruttenberg, A.S.C.	"Gigi"	MGM
1957	One award	Jack Hildyard	"Bridge on the River Kwai"	Col.
1956	B&W	Joseph Ruttenberg, A.S.C.	"Somebody Up There Likes Me"	MGM
1956	Color	Lionel Lindon, A.S.C.	"Around the World in 80 Days"	Todd-U.A.
1956	Effects	John Fulton, A.S.C.	"The Ten Commandments"	Para.
1955	B&W	James Wong Howe, A.S.C.	"The Rose Tattoo"	Para.
1955	Color	Robert Burks, A.S.C.	"To Catch a Thief"	Para.
	Effects	John Fulton, A.S.C.	"Bridge at Toko-Ri"	Para.
1954	B&W	Boris Kaufman, A.S.C.	"On the Waterfront"	Col.
1954	Color	Milton Krasner, A.S.C.	"Three Coins in the Fountain"	Fox
1953	B&W	Burnett Guffey, A.S.C.	"From Here to Eternity"	Col.
1953	Color	Loyal Griggs, A.S.C.	"Shane"	Para.
1952	B&W	Robert Surtees, A.S.C.	"The Bad and the Beautiful"	MGM
	Color	{ Winton Hoch, A.S.C. Archie Stout, A.S.C. }	"The Quiet Man"	Argosy
1951	B&W	William Mellor, A.S.C.	"A Place in the Sun"	Para.
	Color	{ Alfred Gilks, A.S.C. John Alton }	"American in Paris"	MGM
1950	B&W	Robert Krasker	"The Third Man"	British
	Color	Robert Surtees, A.S.C.	"King Solomon's Mines"	MGM
1949	B&W	Paul Vogel, A.S.C.	"Battleground"	MGM
	Color	Winton Hoch, A.S.C.	"She Wore A Yellow Ribbon"	R.K.O.
1948	B&W	William Daniels, A.S.C.	"The Naked City"	U-I
	Color	{ Joseph Valentine, A.S.C. William V. Skall, A.S.C. Winton Hoch, A.S.C. }	"Joan of Arc"	R.K.O.
1947	B&W	Guy Green	"Great Expectations"	Rank-U-I
	Color	Jack Cardiff	"Black Narcissus"	Rank-U-I
1946	B&W	Arthur Miller, A.S.C.	"Anna and King of Siam"	Fox
	Color	{ Charles Rosher, A.S.C. Leonard Smith, A.S.C. Arthur Arling, A.S.C. }	"The Yearling"	MGM
1945	B&W	Harry Stradling, A.S.C.	"Picture of Dorian Gray"	MGM
	Color	Leon Shamroy, A.S.C.	"Leave Her to Heaven"	Fox
	Effects	John Fulton, A.S.C.	"Wonder Man"	Para.
1944	B&W	Joseph LaShelle, A.S.C.	"Laura"	Fox
	Color	Leon Shamroy, A.S.C.	"Wilson"	Fox
1943	B&W	Arthur Miller, A.S.C.	"Song of Bernadette"	Fox
	Color	{ Hal Mohr, A.S.C. W. Howard Greene, A.S.C. }	"Phantom of the Opera"	Univ.
1942	B&W	Joseph Ruttenberg, A.S.C.	"Mrs. Miniver"	MGM
	Color	Leon Shamroy, A.S.C.	"The Black Swan"	Fox
	Effects	Farciot Edouart, A.S.C.	"Reap the Wild Wind"	Para.
1941	B&W	Arthur Miller, A.S.C.	"How Green Was My Valley"	Fox
	Color	{ Ernest Palmer, A.S.C. Ray Rennahan, A.S.C. }	"Blood and Sand"	Fox
	Effects	Farciot Edouart, A.S.C.	"I Wanted Wings"	Para.
1940	B&W	George Barnes, A.S.C.	"Rebecca"	Selznick
	Color	Georges Perinal	"Thief of Bagdad"	Korda
1939	B&W	Gregg Toland, A.S.C.	"Wuthering Heights"	Goldwyn
	Color	{ Ernest Haller, A.S.C. Ray Rennahan, A.S.C. }	"Gone with the Wind"	Selznick-MGM
1938	Effects	Joseph Ruttenberg A.S.C.	"The Great Waltz"	MGM
		Farciot Edouart, A.S.C.	"Spawn of the North"	Para.
1937		Karl Freund, A.S.C.	"The Good Earth"	MGM
1936		Tony Gaudio, A.S.C.	"Anthony Adverse"	WB
1935		Hal Mohr, A.S.C.	"Midsummer Night's Dream"	WB
1934		Victor Milner, A.S.C.	"Cleopatra"	Para.
1933		Charles B. Lang Jr., A.S.C.	"A Farewell to Arms"	Para.
1932		Lee Garmes, A.S.C.	"Shanghai Express"	Para.
1931		Floyd Crosby, A.S.C.	"Tabu"	Para.
1930		{ William Van Der Veer Joseph T. Rucker }	"With Byrd at the So. Pole"	Para.
1929		Clyde DeVinna, A.S.C.	"White Shadows in the So. Seas"	MGM
1928		{ Charles Rosher, A.S.C. Karl Struss, A.S.C. }	"Sunrise"	Fox



"Best Performance" winners, Joel Grey and Liza Minelli ("CABARET"), with "Best Picture" producer Al Ruddy ("THE GOD-FATHER").

To Be In Pictures".

Howard W. Koch, one of Hollywood's most successful film producers and former head of production of Paramount Studios, produced the show. He had also produced last year's affair, acclaimed by critics and the public as one of the best in the history of the event.

A record number of nominees in the four acting categories attended this year, including Eddie Albert, James Continued on Page 586

“SOLO”



By MIKE HOOVER

How a more-than-intrepid young crew, new to mountain-climbing and film making, managed to create an Academy Award-nominated short

As the projector went silent, David Adams, head of Pyramid Films, seemed slightly less than disturbed by my 200 feet of random nature footage. Everyone else seemed to prefer "Mr. Adams" but I called him "Dave" even though I had just met him. "Dave, I want to

make a short little film about a guy climbing a mountain. Not conquering a mountain, but just going out by himself and climbing this mountain because it's fun. Most of the climbing films that I've . . ."

"How much do you think this short

little film is going to cost?"

"Well it's hard to say," I stalled while the figures clicked in my head. Film, develop, print, splicing tape, moviescope, some sound and finally the ol' answer print. The total seemed high, but knowing that I'm not very good



(LEFT) Roy Currance traversing across by rope to a new camera position. (CENTER) Mike Hoover shooting a POV shot with K-100 camera and Angenieux 5.9mm lens. This is from the summit of El Capitan, 3,000 feet above the valley. (RIGHT) Tom Cochran, Chris Holms and Gary Scott setting up the opening morning fog shot. This is in the Yellowstone National Park geyser field. Scenes in "SOLO" are among most spectacular ever filmed.

(LEFT) Hoover with home-made helmet camera, which mounts the K-100 camera and Angenieux 5.9mm lens. The entire rig weighs about 12 pounds. (CENTER) Shooting on the Columbia Ice Field in Canada, prior to arrest at border. (LEFT) An example of the perspective problems the cameramen had to deal with: This "roof" is 500 feet off the ground, but the sensation of height is lost as the cameraman works directly under the climber.





The daring young man dangling in space above magnificent Half Dome in Yosemite National Park is Mike Hoover, of Pasadena, California, director and "star" of the extraordinary mountain-climbing short subject "SOLO", which received a nomination as "Best Short Subject" in the recent 45th Annual Academy Awards Presentation. Though he appears to be hanging from a "sky-hook", he is actually roped to a rock overhang far above. The picture, made by an enthusiastic young crew, most of whom had never had any previous photographic or climbing experience, includes some of the most unique and thrilling scenes ever recorded on film. Picture is being distributed by Pyramid Films, with 35mm theatrical release by United Artists.

with money I doubled it, then blurted, "I'd feel like Cecil B. DeMille—I mean really doing it right—if I had \$3,000."

He chuckled knowingly and wrote me a check. "Thank you, Mr. Adams."

Assembling the crew was easy. "Tom, how'd you like to go on an expense-paid climbing trip? All you have to do is take a few shots of me climbing." If Tom couldn't go then I'd call Jeff or Roy or Gary or Constance. Somebody always wanted to go. After a while *nobody* wanted to go. Then I saw an ad in the L.A. Times by a Japanese student who wanted to do housework in exchange for board and room with an American family while he learned English. "Mizoguchi, how'd you'd like to go climbing and make a movie?" Not understanding a word he smiled and we were off.

I taught Ken Mizoguchi everything. His first complete sentence was, "Oh (every sentence started with 'Oh') I think I blake 85 on Angrirue zoom."

Teaching him climbing was easy. One weekend I talked one of the young rock-climbing leaders of the famed Sierra Madre Rescue Team into a free trip. All he had to do was climb up 1200 feet of rope and swing back and forth on the top line. Meanwhile Ken and I would do a slow zoom with an Angenieux 12-240 coupled with a Canon 1.6x extender (optically, this is slightly better than a Coke bottle) on a Photosonics 1-P. Even racked out at 380mm one could just make out a figure, so it didn't matter who it was up on the wall.

Across the valley Ken and I waited
Continued on Page 595

Mike Hoover with cameras used for filming "SOLO", the Arriflex S and PhotoSonics IPD. (Note compass on watch to indicate which direction is up.)





THE FIVE BEST PHOTOGRAPHED MOTION PICTURES OF 1972

In this time of convulsive transition and revolutionary technological change within the motion picture industry, certain truths remain constant—one of these being the fact that film is, first and foremost, primarily a *visual* medium. Because this is so, the special contribution of the cinematographer to the general excellence and audience impact of any motion picture presentation is, and always will be, of paramount importance.

The tools of the trade used by the Director of Photography and his crew continue to grow more compact, more efficient and more automated. His *metier* is much more than a kind of reflex expertise born of vast experience in his chosen field. It involves such all-important intangibles as taste and style and a peculiar gut-feeling for achieving the specific images that will best tell the story.

It is these abstractions of technique which make the work of each cinematographer distinctive—and variable, depending upon the dramatic demands of specific screen vehicles. How, then is it possible to choose a single "best" from among the highly diversified challenges which cameramen face during the course of a single production year?

Five superlatively photographed motion pictures were nominated for the Best Achievement in Cinematography "Oscar" to be bestowed during the 45th Annual Academy Awards Presentation. Obviously, only one could be the recipient of the cherished statuette. But the members of the American Society of Cinematographers consider the *nominations* for this highest accolade to be as important as the Award itself, and it is with that thought in mind that the membership of ASC salutes with pride the following Directors of Photography who received nominations in the category of "Best Achievement in Cinematography" for the Academy's 45th Annual Awards Presentation:

GEOFFREY UNSWORTH, BSC
"Cabaret"

CHARLES B. LANG, ASC
"Butterflies Are Free"

HAROLD E. STINE, ASC
"The Poseidon Adventure"

DOUGLAS SLOCOMBE, BSC
"Travels With My Aunt"

HARRY STRADLING, JR., ASC
"1776"

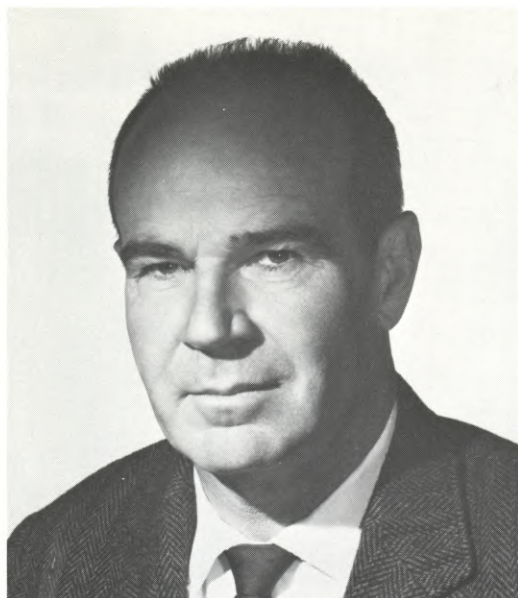


"CABARET"

"CABARET"—photographed by Geoffrey Unsworth, BSC, is the highly successful film adaption of a stage hit musical that takes place in Germany during that frantic period just before Hitler came to power. Technically impeccable, Unsworth's photography captures the decadent, hectic spirit of the era with sharp authenticity and his mobile camera floats with equal ease through the smoke-filled den that is the cabaret, a genteel-tacky rooming house and various mansions, converting the static stage original into pure cinema.

GEOFFREY UNSWORTH, BSC





CHARLES B. LANG, ASC

"BUTTERFLIES ARE FREE"—photographed by Charles B. Lang, ASC, is a gentle comedy about a wealthy blind youth who strikes out on his own and finds love with the kooky girl next door. In terms of production elements, it is essentially a one-set show, the great bulk of the action taking place in a cold-water Greenwich Village-type flat. But Lang, in his last film before retirement, makes that one set come alive through skilled camerawork and a wide variety of moods achieved by means of well-controlled lighting.

"BUTTERFLIES ARE FREE"



"THE POSEIDON ADVENTURE"

"THE POSEIDON ADVENTURE"—photographed by Harold E. Stine, ASC, is an action-suspense film story of the events that take place aboard a huge ocean liner before, during and after it is overturned by a giant tidal wave. Stine's fluid camera becomes a participant in the action and his unconventional lighting in upside-down sets points up the horror of the situation, as the survivors pick their way through the steaming bowels of the wounded ship in their attempt to escape impending watery doom.

HAROLD E. STINE, ASC

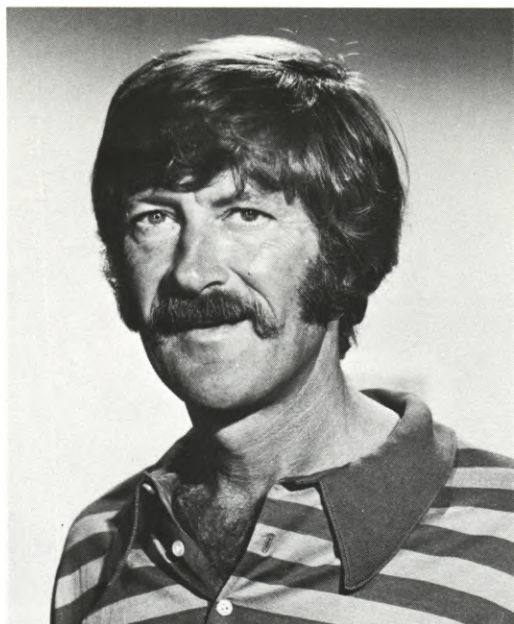




"TRAVELS WITH MY AUNT"

"TRAVELS WITH MY AUNT"—photographed by Douglas Slocombe, BSC, is a madcap comedy-adventure romp in which a wacky, Auntie-Mame-ish lady of not-too-difficult virtue abruptly changes the life-style of her stuffy nephew. Breezing through several exotic locales and flashing back into various colorful periods, the script is given rich visualization through Slocombe's super-elegant photography. Equally at home on rattling trains, in low dives and lush salons, his camera scores at every turn, lending the film a lavish pictorial quality.

DOUGLAS SLOCOMBE, BSC



HARRY STRADLING, JR., ASC

"1776"—photographed by Harry Stradling, Jr., ASC, is a movie musical transplanted from the stage and deals with the period in Philadelphia up to and including the signing of the Declaration of Independence. Though the action is somewhat static and confined within legislative halls, Stradling's smoothly moving camera, precise compositions and careful lighting do much to create visual interest and enlarge the scope of the production. It is the kind of high-gloss photography that adds life and lustre to the content of the film.

"1776"



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Rolux

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Tough Frost

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Tough Booster Frost

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rock concerts, opera, cinema verite . . . the list grows daily in recording, broadcasting, filmmaking, education and technology. We have not rested on achievements either.

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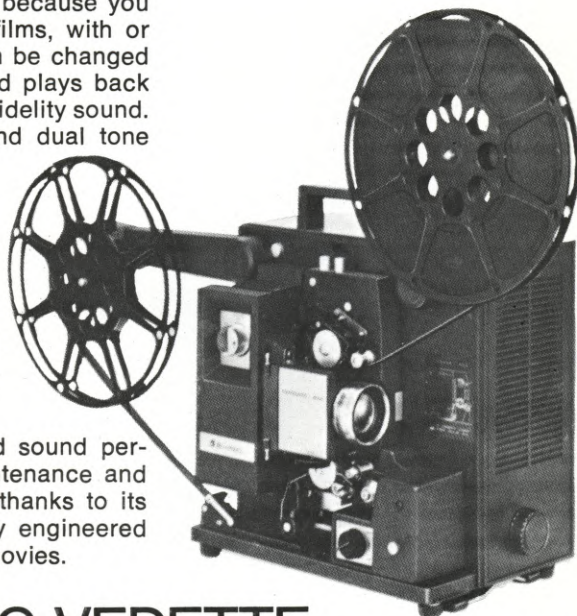
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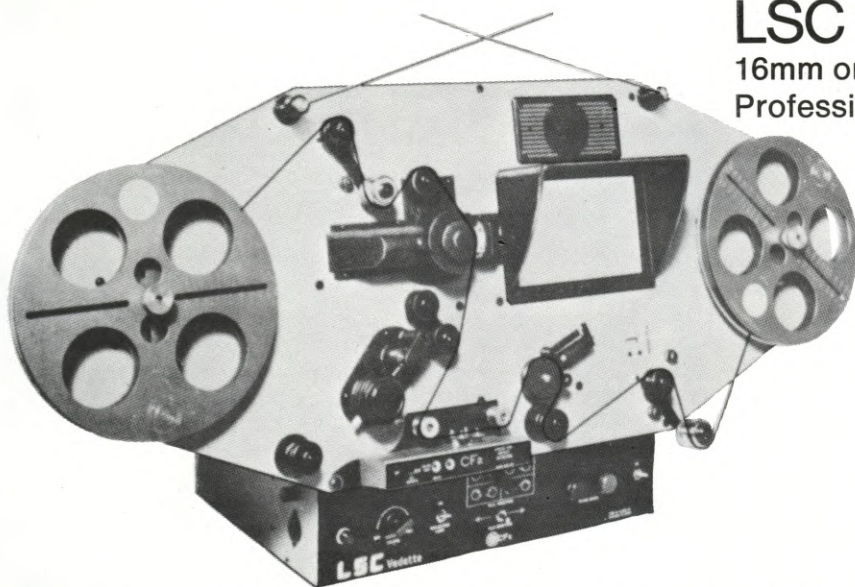
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HOW "OSCAR" NOMINEES ARE SELECTED AND AWARDS VOTED

Each year, the annual awards presentation of the Academy of Motion Picture Arts and Sciences fires the imagination and holds the rapt attention of hundreds of millions of people throughout the world who view the spectacular affair on television.

People understand how the final winners are determined, but the selection of nominees is a source of mystery to almost everyone outside the motion picture industry. Here is how these candidates are chosen:

A reminder list including the casts of all eligible pictures (those shown for a period of at least one week in the Los Angeles area starting in the calendar year 1972) is sent with the nominations ballots to all members of the Academy Actors Branch, who vote in the order of their preference for five acting achieve-

ments in four categories: best performance by an actor, best performance by an actress, best performance by an actor in a supporting role and best performance by an actress in a supporting role.

The five achievements in each category receiving the highest number of votes become the official nominations for final voting for the acting Awards.

The determination as to whether a role is a lead or support is made individually by members of the branch at the time of balloting. Rules prohibit a player from being nominated more than once in a single category. In the event two achievements by an actor or actress receive sufficient votes to be nominated in the same category, only the one in which the preferential tabulations process first receives the required number of votes shall be nominated. However, an

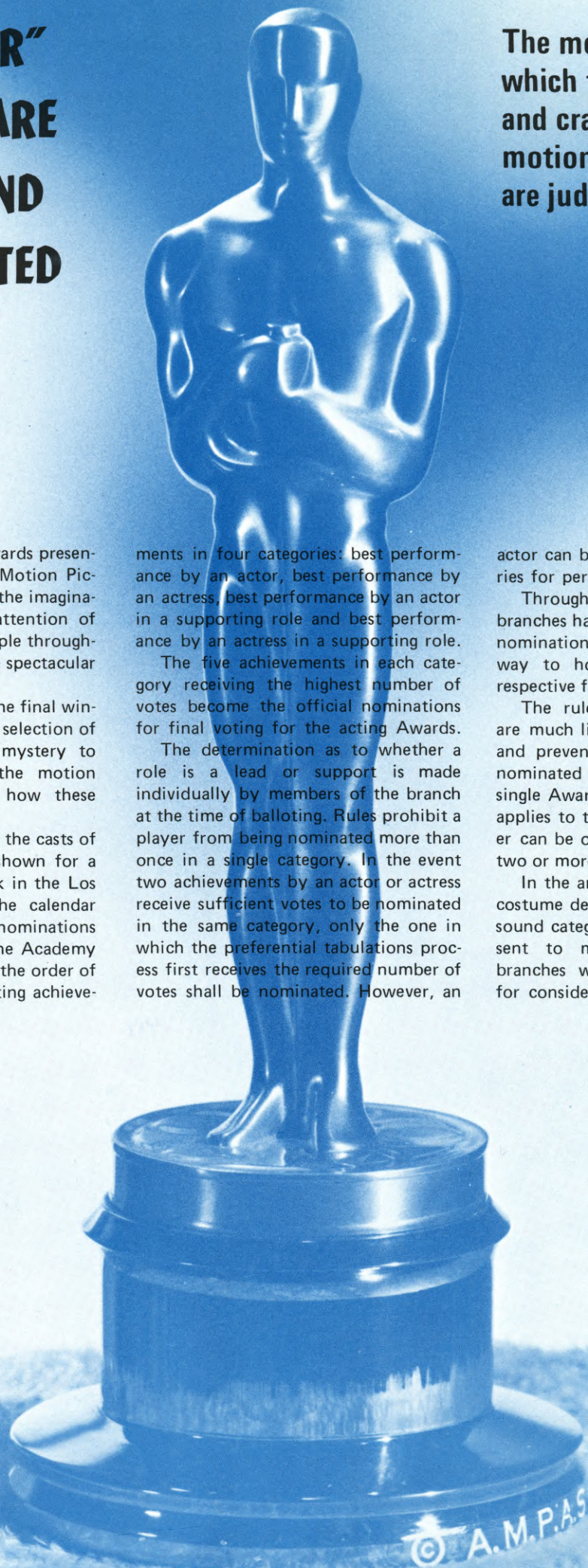
The method by means of which the top artists and craftsmen of the motion picture industry are judged by their peers

actor can be nominated in both categories for performances in different films.

Throughout the years, Academy branches have developed rules for voting nominations which seek out the fairest way to honor achievements in their respective fields.

The rules for directors and writers are much like those covering the actors and prevent one individual from being nominated more than once for any single Award. With writers, this rule also applies to teams, although a single writer can be on the ballot as a member of two or more teams.

In the art direction, cinematography, costume design, film editing, music and sound categories, a preliminary ballot is sent to members of the respective branches who select ten achievements for consideration. Following a series of





To the world at large, Hollywood means movie stars. Among those attending the 45th Annual Academy Awards Presentation: (LEFT) Mr. & Mrs. Robert Wagner (Natalie Wood). (CENTER) Diana Ross (nominated for "Best Actress") and her party. (RIGHT) Burt Reynolds and Dinah Shore. (BELOW LEFT) Cheering crowds greet the stars as they make their entrances at the Dorothy Chandler Pavilion of Los Angeles Music Center.



screenings, a nominations ballot listing the ten achievements is again sent to members of the branches who this time vote not more than five, these becoming the official nominations.

Other categories, including documentary films, short subjects, foreign language films, have slightly different rules, again determined by the individual branches or by special committees of experienced experts.

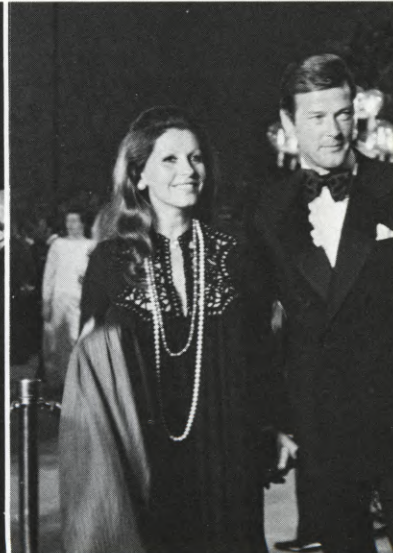
All members of the Academy's 12 branches cast nominating votes for the best picture. The five pictures receiving the highest number of votes become the nominations.

Special awards, such as the Jean Hersholt Humanitarian Award, Thalberg Memorial Award and Honorary Awards, are not voted by the membership, but by the Academy's Board of Governors, composed of two members from each of the 12 branches. This year, the Board voted Rosalind Russell the Hersholt Award, and Edward G. Robinson and Charles Boren, vice-chairman of the board of the Association of Motion Picture and Television Producers, Hon-

Continued on Page 624



(ABOVE RIGHT) Norwegian actress Liv Ullman, star of "THE EMIGRANTS" and "THE NEW LAND" (both nominated, but in separate categories), arrives on the arm of brilliant young Swedish Director/Cinematographer Jan Troell, who made both films. (BELOW LEFT) Director Blake Edwards, with wife Julie Andrews. (CENTER) "Best Actress" Award-winner Liza Minelli, with fiance, Desi Arnaz IV, and father, Director Vincente Minelli. (RIGHT) The new "James Bond", Roger Moore and wife.



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ARRIFLEX
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Arriflex keeps running despite 6G gravity force in Phantom cockpit.

The pilot would have blacked out, without his G suit. And this Arri 16S weighed 42 lbs, instead of 7 lbs.

“You can't move your arms, at six Gs,” says test pilot Nick Knickerbocker. “You have to fly the plane with wrist and finger movements.”

At six Gs, a 175 lb pilot weighs 1,050 lbs. Without a G suit to keep the blood up in his head, he would lose consciousness after about 10 seconds.

Three feet apart

For their award-winning film “Diamond In The Sky,” McDonnell Douglas needed air-to-air footage of the Navy's Blue Angels formation flying team. These men fly Phantom jets *three feet apart* at 500 mph. They also do dizzying aileron rolls; and six G turns.

Soaked in sweat

Another Phantom was used as a “narrator plane,” flying outside the formation, and making less abrupt maneuvers, so that a cameraman could follow the team's aerobatics with a hand-held Arriflex 16S.



THIS IS A FRAME FROM THE FILM.

“Beyond three Gs, you just can't hand hold,” says John Campoy, senior cameraman at McDonnell Douglas. “Even at *two Gs*, it's pretty rough. Your jaw begins to drop, and you get soaked in sweat, trying to keep the camera up.”

Abnormal stress

But they also needed close POV shots from *inside* the Phantoms doing the six G turns. So Jay Mermoud, manager of McDonnell Douglas Photo Services, mounted an Arri 16S in one cockpit.

At six Gs, that 16S and lens weighed 42 lbs, instead of 7 lbs. Loads on the claw and

registration pin were *six times* normal. But the camera ran perfectly; and the footage was spectacular.

Why Arriflex?

“Until we saw the rushes, we couldn't tell whether the camera had held up,” says Mr. Mermoud. “But we knew from past experience that the 16S is the *only* compact production camera that will take this sort of punishment.”

Sturdy movement

The same sturdy, cam-driven movement is used in the 16S, the 16M and the 16BL. “All our Arriflexes stand up to a lot of hard use,” says Mr. Mermoud. “We rely on them.”



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"THE FABULOUS FOX" TO SERVE AS HEADQUARTERS FOR THE SIXTH ANNUAL ATLANTA INTERNATIONAL FILM FESTIVAL

Marvelously ornate old theatre that is one of the last "grand palaces" of the movie world selected as screening site for Festival films in September

To celebrate "Super September", the Sixth Annual ATLANTA INTERNATIONAL FILM FESTIVAL has selected the fabulous Fox Theatre to be the Festival screening showplace. Built in 1929 at the staggering cost of four-and-one-half million dollars, the Fox Theatre is one of the last "grand palaces" of the film world. Constructed with 5,000 seats, it remains one of the largest theatres in the world, and one of America's last showplaces of a lost era in motion pictures.

The ATLANTA INTERNATIONAL FILM FESTIVAL, which has rapidly grown into one of the world's largest and most respected film festivals, felt that the Fox Theatre was the most exciting location possible for its 1973 "Super September" film competition. Located just one block from the Festival operations center in the elegant new 800-room Stouffers Inn, the Fox will be the screening center for over 30 world premieres during Festival Week, September 7th through 15th, 1973. Short subjects, documentaries, and TV productions will also be screened there.

Because of its unique concept and far-reaching design, the Fox Theatre has outlived the passing of the Golden Age of the movie palace. The famed Roxy Theatre in New York has been torn down to make way for a parking lot, the San Francisco Fox and the Los Angeles Palace are no more. But the Fox was a theatre of the future, and many modern, new theatres still have not caught up with it. The Fox boasts of the largest curved indoor Cinemascope screen in the world, vies with the Radio City Music Hall over which has the larger organ, has an orchestra pit which requires three giant elevators to raise it, and its elaborate Moorish decor contains more than \$70,000 in 14-karat gold.

The architectural design of the Fox Theatre simulates a Moorish City, its terraces ascending to a bronze dome surrounding the Mosque-like outside entrances; the inside designed so the 5,000 film-goers would be seated in what appeared to be a courtyard surrounded by castellated walls and grand towers. Overhead, stars twinkle in an everlasting blue sky and fluffy clouds float wistful-

ly by. A canopy, woven to imitate a Moorish tent, covers the balcony area.

The Fox Theatre possesses the largest Moller organ ever built. An amazingly complex instrument, it contains over 376 stops and a variety of special effects through which it can simulate everything from exotic animal sounds to the blaring horns of a traffic jam. Its 45 ranks of pipes were designed into special lofts at each side of the auditorium and over the stage. The Fox's Moller organ will be featured in several special ATLANTA INTERNATIONAL FILM FESTIVAL retrospects of great classic films of the silent era. The world famous theatre organist, Lee Erwin of New York City, will present these special Festival retrospects. Mr. Erwin is recognized as the world's foremost authority on theatre music of the silent film era.

THE ATLANTA INTERNATIONAL

FILM FESTIVAL, with such important premieres as "SOUNDER" and "DELIVERANCE" from last year's event, has the most fabulous showcase in the world for its Sixth Annual Festival. Premieres, Retrospects and Seminars will be held at the Fox Theatre and other activities, including equipment exhibits and symposiums, will be at Stouffers Inn.

In 1973 the Sixth Annual ATLANTA INTERNATIONAL FILM FESTIVAL will be recognized as a world festival of importance, excitement and motion picture history. The Fox Theatre is the perfect palace for such an event.

For the complete Festival Entry Packet, write: J. Hunter Todd, Director and Founder, ATLANTA INTERNATIONAL FILM FESTIVAL, Drawer 13258, Atlanta, Georgia 30324 U.S.A. ■

Interior of Atlanta's fabulous Fox Theatre, where screenings will be held during the Sixth Annual Atlanta International Film Festival, Sept. 7th through 15th. The famous movie palace was built in 1929 at the then-staggering cost of four-and-one-half million dollars. Constructed with 5,000 seats, it remains one of the largest theatres in the world and one of the last remaining showplaces of a lost era of motion pictures.



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ABOVE:

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Each has self-contained charger with retractable ac cord, can be replaced in seconds with a freshly charged unit, left on charge indefinitely without battery damage.

Crystal control gives rock-steady frequency stability with continuous 60-watt power output. Protective circuits give immunity to overloads and open and short circuits, and assurance against excessive battery discharge. An expanded-scale voltmeter shows output level.

Model 6060 Powerpacks find ideal application with all ac Auricons, Arriflexes, and Eclairs for single-system filming and are fully guaranteed.

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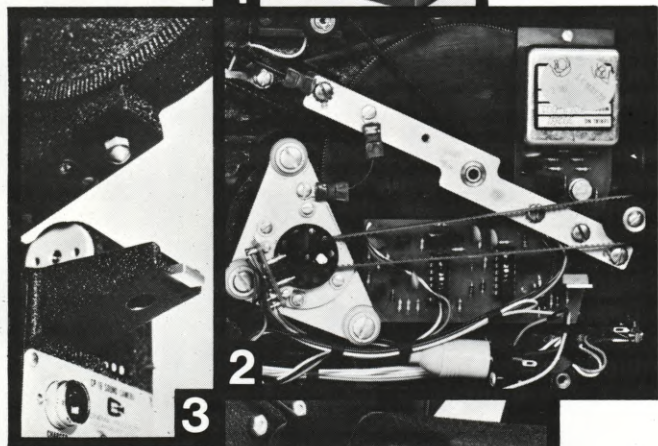
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Some of our most recent 16-35mm blow-ups — **Masters of the Sky**, Carl Boenish; **On Any Sunday**, Bruce Brown; **Sunshine Sea**, MacGillivray-Freeman; **Woodstock Three Days of Peace and Music**, Warner Bros; **Mad Dogs and Englishmen**, Joe Crocker; **Medicine Ball Caravan**, Warner Bros.

Why is the CP-16(A) camera different from all other documentary cameras?

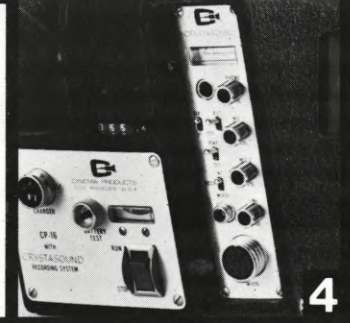


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- 5 3-XL MAGNETIC MODULE** For single system work, all CP-16 cameras now offer the new 3-XL magnetic head as an option. This unit has a head life roughly 3 times that of comparable modules. In addition, azimuth is adjustable for ultra high quality sound.

Not illustrated: **OPTIONAL TWO-SPEED OPERATION** The camera can be ordered with a two speed switch which allows an overcrank of 36 fps for semi-slow-motion work.



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ON LOCATION WITH "DELUGE"

On-the-scene report from the filming of the most ambitious motion picture ever produced in Poland

By D.W. SAMUELSON, F.B.K.S., B.S.C.

A shooting schedule of nearly eighteen months, a final cut length expected to be of at least five hours (which may eventually take the form of two three-hour parts), seventy actors in major roles, thousands of extras, the cavalry regiment which took part in "WAR AND PEACE" and "WATERLOO", a budget of 120 million zlotys makes "DELUGE" by far the biggest motion picture ever made in Poland.

The film (called "POTOP" in Poland) is based on the Nobel Prize-winning author Henryk Sienkiewicz's novel about the adventures of Andrzej Kmicic, a 17th Century Colour Sergeant who became a legendary folk hero during the period that Poland and

and tradition and so the people identify with it. They want to be able to 'feel' the earth and the fabric and even the snow."

Jerzy Wojcik is a likeable young man in his late 30's who studied at the Polish Film School at the same time as Roman Polanski and who speaks very good English. For him, of course this film is the opportunity of a lifetime.

When I visited the unit on location in the ancient Wawel Castle in Cracow I quickly sensed the feeling of rubbing shoulders with history which stemmed not only from the surroundings, but also from the sense of dedication which motivated the entire unit.

The principal problem facing the

debate. When a country like Poland spends in excess of \$3 million on a single motion picture every taxpayer feels he has a right to have a voice in the production.

They screened for me about half-an-hour of cutting print and I was very impressed. Battle scenes, snow scenes, drunken brawls, uprisings, religious processions, treasure, love with hatred, honour and bravery, and so on—the picture has every ingredient of the epic genre. How it will go together in terms of acceptability to Western audiences, when they make the English language version, may, of course, be another matter, but undoubtedly it will be Poland's "GODFATHER".



(LEFT) Main building of the Polish National Film School in Lodz. Staffed exclusively with practicing film-makers, its graduates include famed director Roman Polanski. (RIGHT) Wawel Castle in Cracow, where ancient Polish kings are buried, served as the location for "DELUGE", which is by far the biggest picture ever made in Poland. Its final cut will run at least five hours in length.

Lithuania became embroiled in wars with the Cossacks of the Ukraine, and with Russia and Sweden, and lost large amounts of territory.

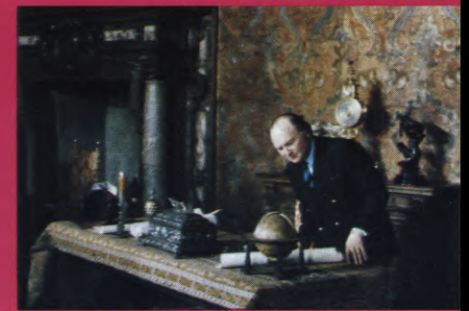
The Director is Jerzy Hoffman who directed "COLONEL WOLDY-JOWSKI".

No effort is being spared to make the film a monumental epic. As the Director of Photography, Jerzy Wojcik, put it, "This film is about real Polish history

makers of the film, it seems, is the fact that the novel from which the screenplay is taken has been read by almost every Pole, each one of whom has his own idea of how the film should be made and who should play the hero. After much debate in the press and elsewhere, Daniel Olbrychski was cast to play the lead, a decision which, at the time it was announced, split public opinion and led to even more vociferous

I asked Jerzy Wojcik about the photography which, when I was visiting the location, was being shot entirely with a single Panavision 50-500mm zoom lens. He explained to me that, while this is the only lens he required at the moment, there had been times during the past year when he had had a Panafocal 50-95mm vari-focal lens, a 50mm Auto Panatar and, for a sequence set in a

Continued on Page 637



(LEFT) Director of Photography Jerzy Wojcik, an alumnus of the Polish Film School, shown on location at Wawel Castle in Cracow for the filming of "DELUGE", by far the biggest motion picture ever made in Poland. (CENTER) The script girl slates the scene prior to command of "Action!". (RIGHT) The author, David Samuelson, examines some of the solid gold props used in shooting the picture.

(LEFT) Director Jerzy Hoffman demonstrates a bit of action for cast on the set of "DELUGE". (CENTER) Actor Wladslaw Hawcka enacts a dramatic scene. (RIGHT) Cinematographer Wojcik lines up a shot. A single Panavision 50-500mm anamorphic zoom lens was used for shooting most of the production. However, at times during the year of filming, Wojcik also used a Panafocal 50-95mm lens, a 50mm Auto Panatar, a 55mm, T/1.1 Panavision Ultra Speed and some of Panavision's very long anamorphic lenses.



THE NEW PANAFLEX CAMERA MAKES ITS PRODUCTION DEBUT

Long-awaited, the sleek new equipment arrives in Texas for the shooting of Universal's "THE SUGARLAND EXPRESS"

By HERB A. LIGHTMAN

SAN ANTONIO, TEXAS

Ever since the recent unveiling of the new Panaflex 35mm camera before select groups of goggle-eyed technicians in Hollywood, London and Tokyo, there has been rife speculation as to which film would be favored with the first usage of the new equipment in actual production.

The prototype had been tried out on several features for a few days at a time, but now (as rumor had it) the first production model had come off the line at Panavision's spectacular new plant, and the question hung in the air: *Who would get it?*

A call from Panavision President Robert Gottschalk finally dispelled the mystery. He told me that he had received more than 130 "firm" requests for the new camera and, after much agonized soul-searching, had decided to send the first production model to the company shooting the current Zanuck/Brown production for Universal, "THE SUGARLAND EXPRESS". This feature, he felt, posed some unique photographic problems and would give the Panaflex an "acid test" kind of shakedown.


The new camera (a few weeks overdue) had just been shipped to the company, presently on location near San Antonio, and knowing that *American Cinematographer* readers were most

curious to know how the Panaflex would perform in actual production, I decided to go along and report it firsthand. Which explains how I happen to find myself, at this moment, deep in the heart of Texas.

The Director of Photography on "THE SUGARLAND EXPRESS" is Vilmos Zsigmond and, even though my plane arrives in the middle of the night, he is at the airport to meet me, looking as bright-eyed and bushy-tailed as if he hadn't just put in a 14-hour day on a rough location.

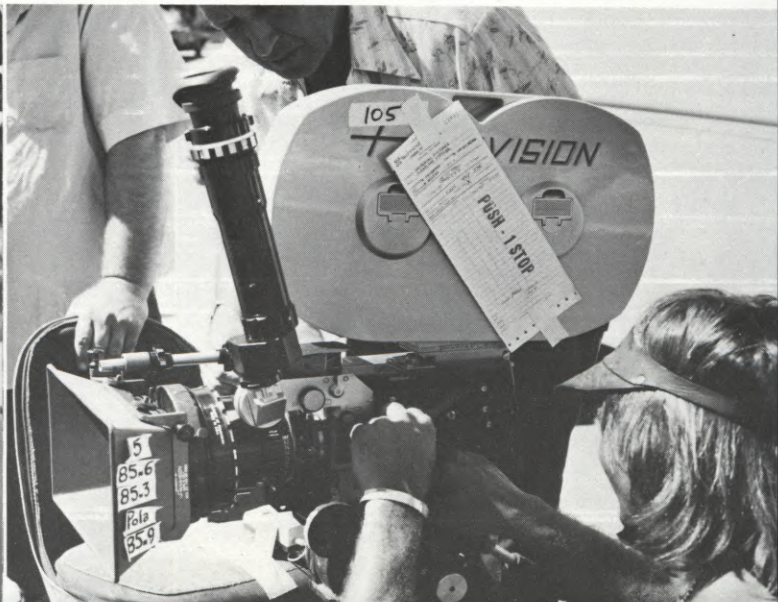
The company has been shooting about 40 miles away in and around the town of Floresville (3,701 souls), which is doubling for Sugarland. The next morning I ride out to the location with Vilmos and the picture's director, Steven Spielberg. Steve is 25 years old, highly-keyed, intense and exuding the air of a real pro. Although "SUGARLAND" is his first theatrical feature, two of his recent television directorial efforts, "DUEL" and "SOMETHING EVIL", were among the top-rated TV movies of 1972.

"The story of this picture is a one-note, simple, beautiful tale about two young people who are trying to get their infant son back after he's been taken away from them by the Child Welfare Board," Spielberg tells me. "Both the husband and wife, Clovis and Lou Jean



On location in Floresville, Texas, the Panaflex camera is mounted on the arm of the Chapman crane and given a few windings of shock cord for good measure. Not really necessary, but part of the Tender Loving Care accorded the new "baby".

(LEFT) Assistant Cameraman Nick McLean sets up the Panaflex for a low-angle shot. With 500-foot magazine mounted, the tiny camera looks almost like a toy, but is actually a super-sophisticated electronic instrument. (RIGHT) Threading the new camera is simple and fast. Camera report on side of 1,000-foot magazine reads "PUSH 1 STOP", which was standard operating procedure throughout filming of picture.





(LEFT) The crew sets up for shooting in the Main Square of Floresville. (RIGHT) Crowds of townspeople begin to arrive for the sequence. Filming was a new experience for them, and a holiday spirit prevailed. (BELOW RIGHT) Richard Zanuck, former head of 20th Century-Fox Studios, in his first time out as a working producer, has nothing but praise for his crew and for the Panaflex camera.

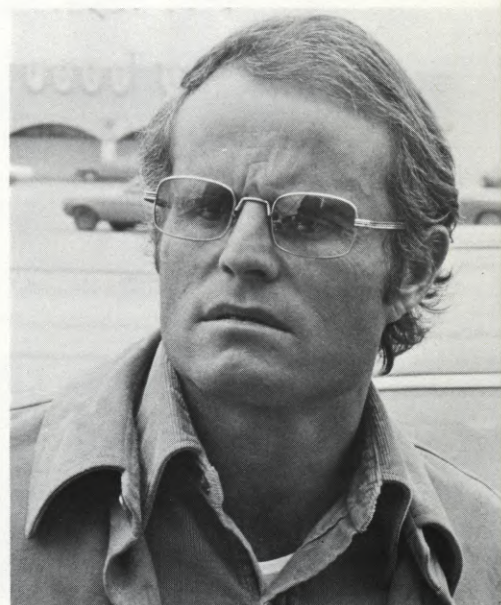
Poplin, had been spending some time in prison for aggravated petty larceny, and when the girl gets out of prison, she finds out that the authorities won't return the baby to her custody. She runs to the pre-release prison farm where her husband still has six months to serve and browbeats him into leaving the farm.

"What really begins the story is when they are pulled over by a highway patrolman for a routine check and the girl panics and takes his gun. They hijack the police officer and his car and take off. It's a very simple story that gets out of hand. What begins merely as a pursuit to get the baby back becomes an outrageous extravaganza, involving a caravan complete with 60 police cars and 200 civilian cars. The minute the media hear about it, the story gets onto

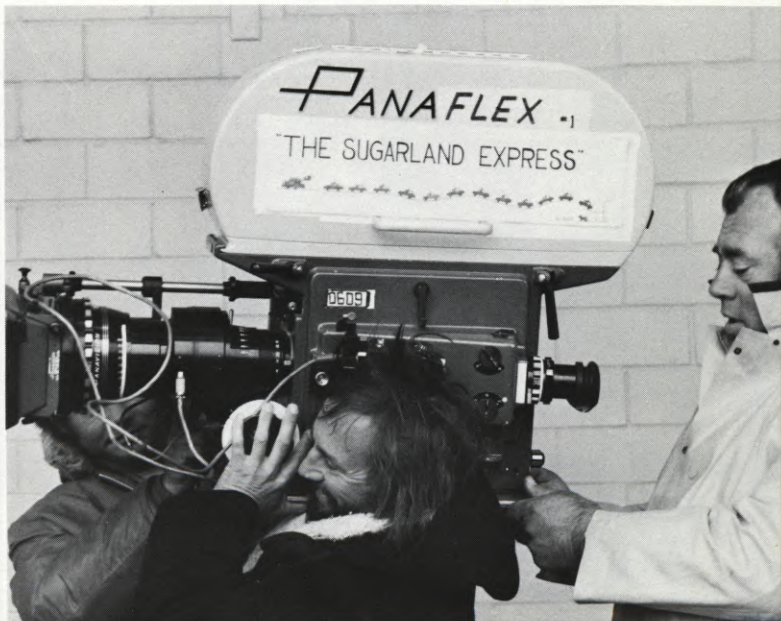
the airwaves and everybody joins in. The number of police cars grows and grows because of the 'posse theory' they have in Texas, whereby, when a fellow officer is in trouble, police from all over the state come down to help."

It sounds like a laugh a minute—especially since zany Goldie Hawn is playing the hijacking wife/mother.

When we arrive on the location, the sight is impressive even to these jaded eyes. Strung out for more than two miles along the highway leading into Floresville are at least 250 vehicles of every description—half of them police cars. Their drivers (local folk) are milling around, sitting on the roofs, playing guitars and enjoying being part of a movie. Little do they know that they will be doing the very same thing eight hours hence.



(LEFT) On the platform of an exotic crane, Director Steven Spielberg, Director of Photography Vilmos Zsigmond and Operator Sven Walnum run through a high-angle shot rehearsal. (RIGHT) A gag photograph, in which the Panavision R-200 camera (with sign changed to PANAFLEX) is "hand-held" by Zsigmond, with a little help from his friends. Photograph was sent to Panavision President Robert Gottschalk to help speed arrival of real Panaflex.





(LEFT) A dolly shot is rehearsed against fence with giant "SUGARLAND" sign. Actually, Floresville "doubled" for the real Sugarland, Texas. (CENTER) More than 200 cars, including many police vehicles are lined up for miles along blocked-off highway. Townspeople driving them spent the entire day in this same position. (RIGHT) Sound boom operator hand-holds the microphone high to catch dialogue of Ben Johnson.



(LEFT) The Chapman crane, with boom swung high, rolls down to main street of Floresville to film celebration sequence. (CENTER) High angle was necessary to give a "bird's-eye view" of the happening. (RIGHT) How the scene looked from camera position. All 3,710 of Floresville's citizens seemed to have turned out to be in the movie. Some called it "the most exciting day of my life."

(LEFT) Between set-ups, Zsigmond enjoys a rare moment of relaxation on the Chapman crane. (CENTER) Lining up a shot in the Main Square of Floresville. (RIGHT) The director looks through the lens of the Panaflex. The camera fascinated crew members, who were excited by new "toy", but treated it with elaborate care and caution. The positive expression of favor for the equipment seemed to be unanimous.



(LEFT) Producer Zanuck rides the boom during rehearsal. (CENTER) Scores of police cars from various parts of Texas line up on side street of Floresville prior to joining procession down the main drag. They have supposedly responded to "posse call" to help pursue fugitives who have hijacked another police vehicle and are holding its officer hostage. (RIGHT) McLean carefully checks threading of Panaflex.





In the rear seat of police car 2311, Cinematographer Zsigmond probes the feasibility of a complex pan shot, as Director Spielberg crouches down beside him. In the back Goldie Hawn grins her famous grin. Up front is William Atherton, who plays her husband in the off-beat picture. With the diminutive Panaflex, Operator was able to execute extremely intricate sync-sound shots within the car, including a 480-degree pan.

As the crew sets up for the first shot, the director takes off on a little motorcycle across a field, "posting" as he hits each furrow. He's letting off steam, priming the creative juices, getting it all together. Meanwhile, I am introduced to the film's producer, Richard Zanuck. He's a quiet, pleasant man who, for years, ran the sprawling 20th Century-Fox Studios. This picture marks his first time out as a working producer and it's clear that he's enjoying being in the big middle of the action. I ask him to tell

me a bit about the dramatic characteristics of this picture.

"Well, the important action of this picture is what takes place inside the vehicle—police car 2311—that has our principal people in it—Goldie Hawn, Michael Sacks and William Atherton," he tells me. "It's the slow evolution of their personalities during a 36-hour period that is really the backbone of the story. What we are shooting out here today with all these people and all these cars forms a terrific backdrop to that

wonderful personal story and very emotional drama that takes place inside the car. We've been able to achieve a very effective film on two levels—the intimate relationship between three people in very cramped quarters inside the car, while at the same time playing it against the broad canvas of this big Texas backdrop, with the police cars and all of that."

I ask him quite candidly how he feels about the team he has working with
Continued on Page 598

(LEFT) Twenty-five-year-old director, Steve Spielberg, runs over a scene in the script with Director of Photography Vilmos Zsigmond. A very close working rapport prevailed between them throughout the shooting of the film. (RIGHT) Between set-ups, Spielberg grabs a nap on the hood of a prop car. Though "SUGARLAND" is his first theatrical feature, he had previously scored with several outstanding TV features.



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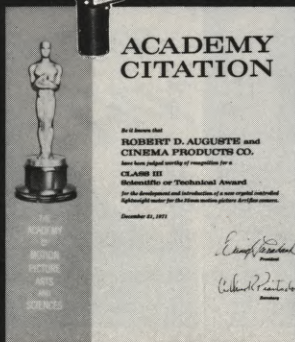
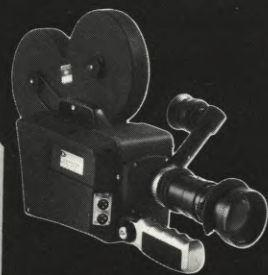
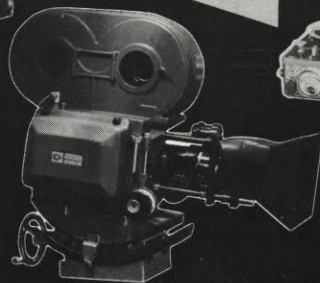
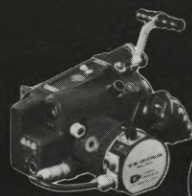
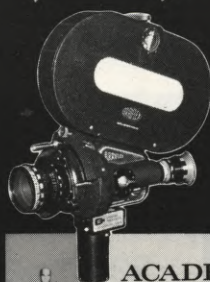
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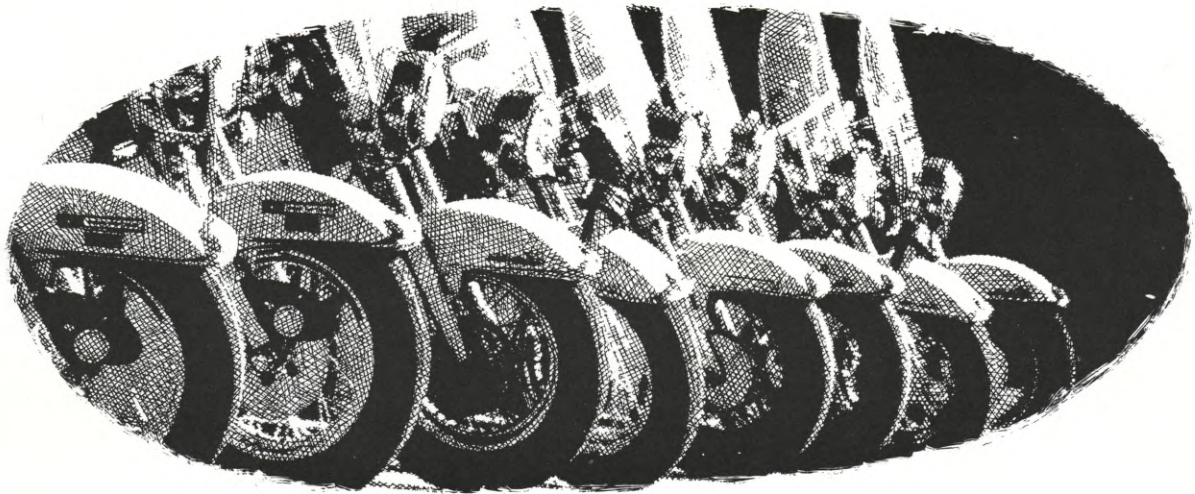
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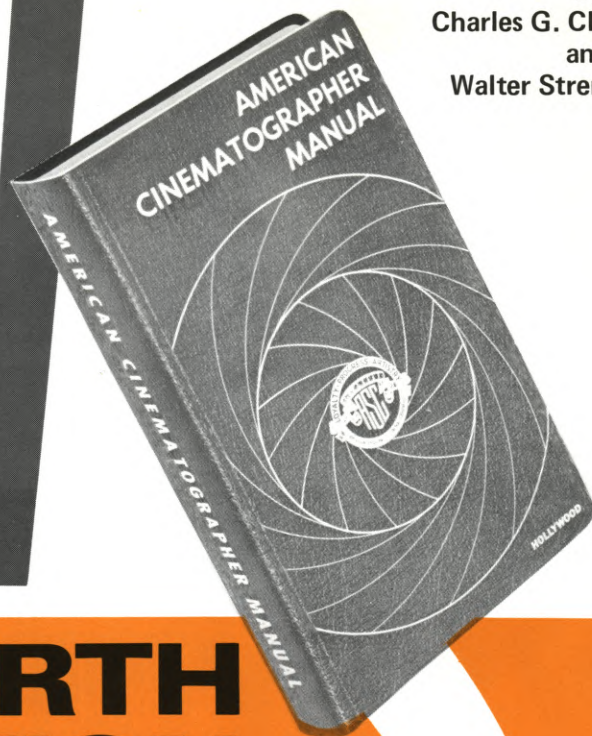
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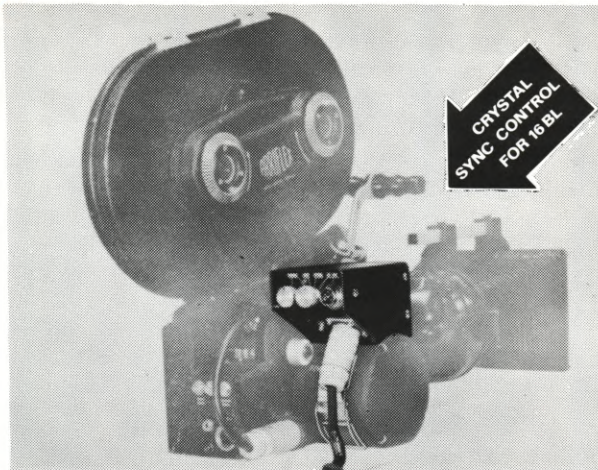
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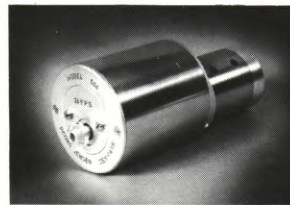
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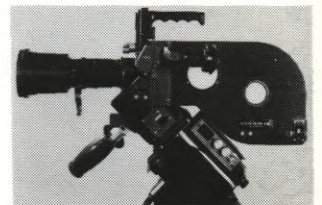
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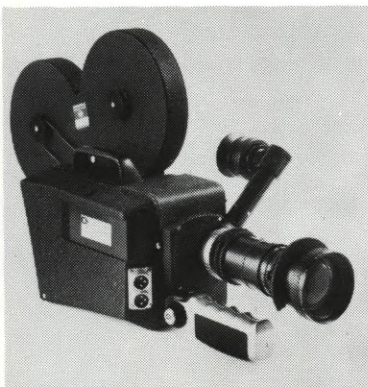


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We shot some pictures through the Cooke Varotal on a 35 mm still camera masked down to academy frame size. Look at these full frame blow ups and you'll see conclusive evidence of how the Cooke Varotal makes motion picture history.



For the first time you can hold the complete zoom at 27 inches object distance — that's only 13 inches from the front of the lens. Left — at narrowest angle. Right — at widest angle, 58° horizontal. At the wide angle you get perfect focus on the foreground yet you can still see detail in the background.



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The 16 mm version of the Cooke Varotal is the fastest high resolution 16 mm zoom lens in the world. At $f/1.3$ ($T/1.5$) you'll be able to shoot film in low light levels.



When it comes to image quality the Cooke Varotal again gives you the best results. Visually you'll be achieving 100 line pairs per mm on axis and 75 line pairs in the corners. You can hold this throughout the entire zoom range. And you won't get fuzzy imaging when the picture's projected. Meanwhile on the strictly practical side you can attach support cradles and controls to the barrel of the lens without distorting both mechanics and optics. With the Cooke Varotal your matte box and filters can be smaller than for wide angle zoom lenses with front focusing movements and air spacing. The Cooke Varotal's front element is fixed — you simply fit your matte box directly to the front of the lens.

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RYDER SOUND SERVICES, INC. CELEBRATES 25th ANNIVERSARY

Motion picture industry honors sound pioneer and his quarter-century-old company which is still going strong

This is the 25th Anniversary year for Ryder Sound Services, Inc. and the 45th year in motion picture sound service for its founder, Mr. Loren L. Ryder. Mr. Ryder states that the industry has been good to him and from where we sit, we can say that he and Ryder Sound Services, Inc. have been good for the industry.

Ryder Sound Services, Inc. was the starting point for a large percentage of the sound recording improvements we now enjoy. The marvel of today is the SNN recorder weighing one lb., one oz., with Crystal Sync and Automatic Level Control.

According to Mr. Ryder, one idea leads to another, so, at the S.M.P.T.E. Conference held at the Regency Hyatt

House in Chicago April 9 through April 13, 1973, Ryder Sound Services, Inc. and its associated companies demonstrated a camera-controlled mini-radio start-stop and bloop unit to go with the SNN recorder. This is simplification and automation at its best.

When Mr. Ryder looks back over the past 45 years, he sees an overloaded 11-ton truck, his pride and glory, the first self-contained location recorder he engineered for Paramount. It's hard to believe that the one lb., one oz. SNN makes a much better recording.

Optical-Photographic sound recording was standard throughout the motion picture industry until Mr. Ryder organized Ryder Sound Services, Inc. in 1948 and did the first magnetic recording for



(ABOVE RIGHT) Loren L. Ryder, founder and President of Ryder Sound Services, Inc. is responsible for many of the innovations in motion picture sound since its inception. He is a past President of SMPTE and an Associate Member of the American Society of Cinematographers. (BELOW) A sound crew on location using the first synchronous portable 1/4" tape recorder, jointly introduced into the United States by Perfectone and Ryder Sound Services. Within two years almost all location recording was being done with one of these recorders.



a motion picture "GERONIMO" and, for Rudy Vallee, the first magnetic recording for television. In retrospect, it seems strange that, with the exception of Paramount, it took from one to five years for the major studios to convert from optical to magnetic recording.

Frank Wisbar and his Fireside Theatre was the first series to use magnetic recording and almost overnight a small sound company, Ryder Sound Services, Inc., became important to the industry.

Next, Mr. Ryder and Ryder Sound Services, Inc. developed the 64-lb. sound channel, introduced magnetic sound editing and modulation writing for the optical sound-minded cutter, striped magnetic film for the convenience of the cutters and the use of salvage base which is now standard in the industry. Some of the early equipment may have been crude, but the Eldorado and Minx set a new standard and a new pattern for the industry.

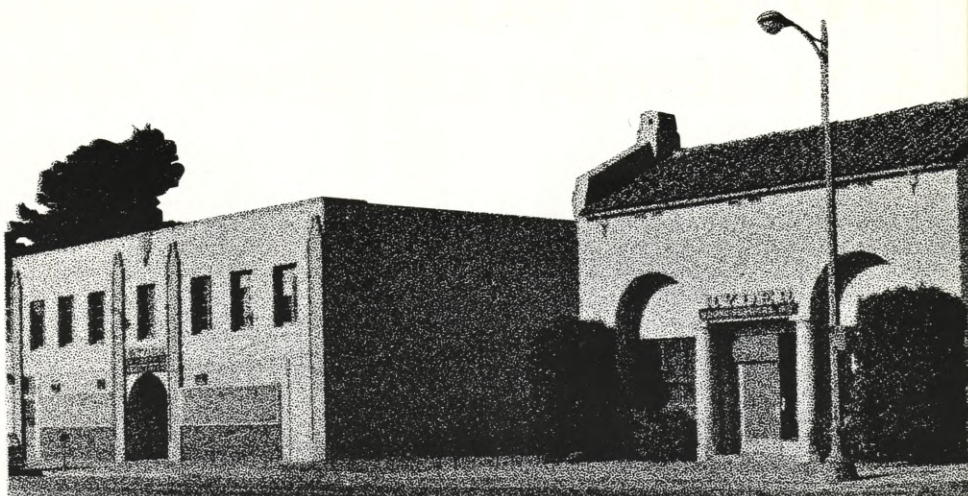
Established in 1948 by its founder and current President, Mr. Ryder, the company was originally located on Sunset Boulevard and, in 1951, moved to its present location on Vine Street, where it occupies two, large, completely equipped modern facilities. Also, as part of the operation, there is a theatre-size recording stage located at 650 No. Bronson Avenue.

Ryder Sound Services has the distinction of having been the first sound company to engineer, construct and install magnetic film production recording equipment, magnetic film transfer facilities and a magnetic film rerecording stage. It was the first company to service a production magnetically from stage and location recording to the final composite rerecording.

The impetus created by its introduction of magnetic film recording carried Ryder Sound Services forward, developing the company into an organization with multiple capabilities to include all requirements for motion picture sound recording from inception of production to conclusion.

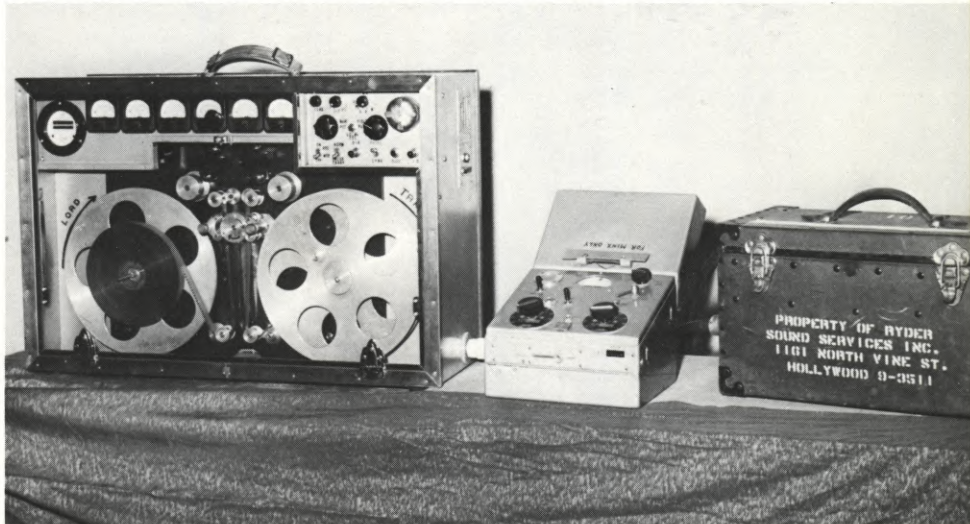
One of its first important accounts was Revue Productions, engaged at that time in the production of several television series at the old Republic Studios, now CBS Studio Center. Realizing the many advantages and economies to be gained by the use of magnetic film recording Revue turned all their sound servicing requirements over to Ryder's. Four Star Productions President, the late Dick Powell, followed their example, contributing further to the growth of Ryder Sound.

During this period of development, Loren Ryder continued in his position of twenty years as head of the sound

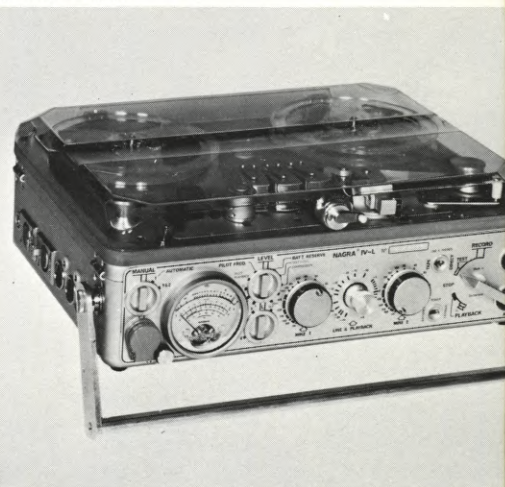


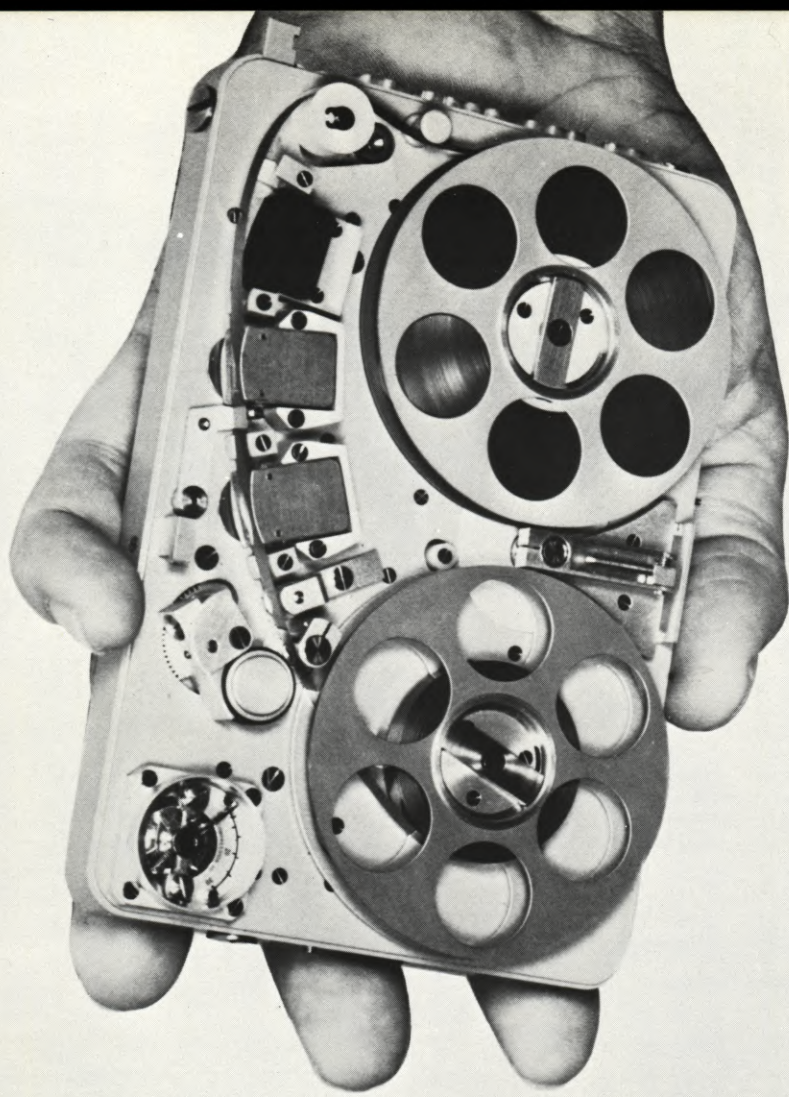
Originally located on Sunset Blvd. in Hollywood, Mr. Ryder's company moved in 1951 to its present location on Vine St., where it occupies two large, completely equipped modern facilities. There is also a theatre-size recording stage located at 650 No. Bronson Avenue.

The Ryder-designed "MINX" recorder, mixer and battery box combination was unique in that it included motor control and tachometer for monitoring speed of camera. Self-contained in an aluminum case, it weighed 60 pounds and could be started remotely from the camera. Its power source was 2-1/2 automobile storage batteries, providing 30 volts of current.



(LEFT) Ryder's pride and joy in the early days of sound was this 11-ton truck which housed "mobile" unit for location sound recording. (RIGHT) The Nagra recorder, light-weight unit which has become the industry standard, records a much finer quality of sound than the tons of equipment used in the early days—and weighs only 14 pounds.





(ABOVE LEFT) The tiny Nagra SNN recorder weighs one pound, one ounce and fits in the palm of the hand. Developed by Stefan Kudelski, it features crystal-sync and automatic level control, plus optional mini-radio start-stop and bloop accessory. (BELOW LEFT) Self-contained SNN unit fits neatly into an actor's pocket. (RIGHT) The "ELDORADO" perambulator-type recorder originally accommodated 3,000 feet of 35mm mag-stripe film, running at 45 feet per second and could run one hour without reloading. It was later adapted to 17-1/2" sprocketed full-coat and then to 1/4" tape.

60-pound suitcase-type, portable unit. Subsequently, his introduction of the small, transistorized Swiss recorders again revolutionized recording methods, with today's newest high-quality synchronous recorder weighing only one pound and one ounce.

In 1953, Ryder Sound Services, having concluded an exclusive contract with the ZIV Television Corporation to service a dozen television series, constructed and operated a rerecording stage on the ZIV Lot. Several years later, the ZIV Company left the Industry. The lot was sold and subsequently demolished, necessitating the removal of the Ryder rerecording stage. However, the continued pressure of expansion and growth led to the purchase by Ryder, of the Roderick Sound Company located at California Studios, now known as Producers Studio Inc. After extensive technical and physical remodeling, the stage was put into operation and continues to be used today for feature and television rerecording as well as a Foley stage for live recording of sound effects.

In 1969, Mr. Leo Chaloukian, Executive Vice President and General Manager, again demonstrating the Ryder willingness to pioneer, instructed the engineering department to install the Magna Tech computerized dialogue replacement system. This system eliminates the necessity of breaking down a motion picture into "loops" in order to

Continued on Page 626



department at Paramount Studios. He was honored with a number of awards for Outstanding Achievement in recording of many of Paramount's sound tracks. He was also awarded Oscars for his development and introduction of magnetic film recording and for development of the wide-screen process known as VistaVision.

Even though Mr. Ryder gained Oscar Plaque recognition for his work, he started all over again when the transistor was invented. The first synchronous portable 1/4" tape recorder was jointly introduced in the United States by Perfectone and Ryder Sound Services, Inc. Within two years almost all location recording was being done with one of these recorders.

With an eye constantly on the future, Mr. Ryder has continually contributed to the advancement of the state-of-the-art of sound recording for motion pictures. He succeeded in reducing the amount of location recording equipment from a cumbersome 11 tons to a



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A condenser microphone with excellent directional properties. Even at long distances it can be used without any loss of sound quality. Used in television and film studios whenever the microphone has to be out of the camera range. In spite of its unusual length the MKH 815 is relatively insensitive to wind and pop effects. Excellent signal-to-noise ratio. The MKH 815 can make the most difficult sound recordings with outstanding quality of sound.



Sennheiser MD 214 Lavalier Microphone

Provides natural voice quality. Reduces interference of rustle caused by rubbing of housing and cable against clothes. Rectangular design reduces microphone rolling from side to side on the wearer's chest. Pressure-operated moving coil microphone with omnidirectional characteristics. Cable removes easily in case of damage.

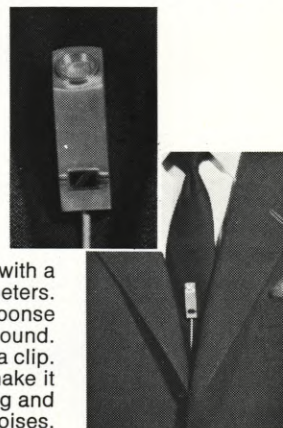
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A quick look

A silent-running
35mm camera that weighs
26 lbs and changes
magazines in seconds.



at the features of the 35BL

This is obviously a tool that you'll need to be familiar with. So here's a summary of its salient features:

Dimensions and weight

With a 50mm lens and a 400 foot magazine, the 35BL weighs 26 lbs and measures 20 inches from front to back, including matte box. You can see its low profile and shoulder-resting format in the photo at right.



The entire silent aperture is visible on the groundglass. You can see the microphone *before* it gets into the shot. And when the camera stops, the shutter is always open to the viewfinder. No more inching.

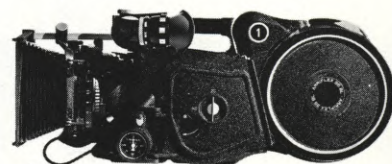
Pin-registered movement

For quiet running, the 35BL's movement uses a solid camshaft that is dynamically balanced to eliminate vibration. The film travels through a fixed film channel — no side or rear pressure plates, except right at the aperture.

Film is advanced by four claws and registered by two pins — one for vertical, one for horizontal registration. 35BL image steadiness is well within optical printer standards.

Many more features

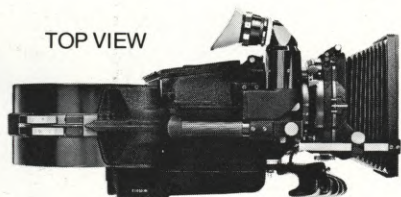
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TOP VIEW

Running noise level

Three feet from the lens blimp, the 35BL measures 31½ dBs, with film running. At close quarters on a sound stage, you may need a Barney over the magazine. On most locations, the 35BL is effectively inaudible, even with unblimped zooms.

Quick-change magazine

Changing the 35BL's co-axial magazine takes about 30 seconds. The empty one slides off; and the full one slides into place and locks at the rear of the camera body. No sprockets. Apart from putting the film on a guide pin in the gate, no threading. That's all done when you *load* the magazine. 400 foot loads now. 1000 foot magazines early next year.

Lens mount and housing

There's a standard Arri steel bayonet mount and a support rod for long lenses. The universal lens blimp lets you use fixed focal length lenses from 16mm to 85mm.

Universal DC motor

A 12 volt battery weighing 5½ lbs. drives 2400 feet of film through the 35BL on a single charge. A red warning light shows in the viewfinder if you're not on speed. There's also a large tachometer.

The standard motor built into the 35BL gives you 50Hz and 60Hz crystal-control sync at 24 and 25 fps. Plug-in variable speed attachments let you run at up to 100 fps.

Rotating reflex finder

The Arri mirror-shutter and new Zeiss optics deliver a finder image that's the brightest you'll find on a portable camera. The viewfinder rotates 90 degrees above and 30 below horizontal; and the image stays upright.

MINOLTA COLOR METER

Product report on an advanced 3-color-measuring, one-hand-operated meter for calculating color temperature and controlling mixed light balance



In these days of sophisticated electronic color analyzers of the types used in most modern laboratories, one might well ask: "Who needs a color meter?"

The question would seem like a valid one, considering the wonders that can be wrought by color correction in reliable laboratories employing the latest equipment and skilled timers. Indeed, there are many cameramen shooting these days who pay little heed to such niceties as color temperature and color balance. Their stock cop-out is: "They can correct it in the lab."

True enough, in many cases—but one of the hallmarks of the genuinely professional cinematographer is that he strives to exercise as much control as possible over what goes onto the film. Knowing that the evaluation of color rendition is often very subjective, he would prefer *not* to leave it up to the lab. Instead, he strives to photograph a scene as closely as possible to the way it should ultimately look on the screen. Ideally, in accordance with his sound logic, there should be *little or no* color correction necessary in printing.

In order to achieve such precision, one cannot rely on the eye, especially considering the amount of film being shot in actual locations, often with available light as the partial or total light source. Fluorescent light (of which there are many hues) and mixed light conditions pose especially sticky problems. The truly professional cinematographer prefers, when possible, to correct color temperature of his light sources by filtering the light. Failing that, he will effect an overall color correction of the scene by shooting it through the appropriate color correction filter. To achieve either of these adjustments, a rather precise color temperature measuring device is necessary. Hence the importance of a reliable color meter.

One of the newest and most impressive on the market is the Minolta Color Meter, an advanced 3-color-measuring, one-hand-operation color temperature meter which, besides featuring broad color measuring capabilities, can obtain accurate corrections for photographic film under difficult fluorescent lighting conditions.

Aside from its accuracy, the most impressive characteristic of the Minolta

Color Meter is that it is small and light in weight, affording convenient one-hand operation. Unlike some of the other color meters on the market, it does *not* come complete with a range of before-the-lens correction filters. However, on the back of the meter is a conversion table indicating what L.B., Wratten and/or CC filters are needed for any given correction. Presumably, the cinematographer can assemble his own kit of most frequently required filters in whatever form, shape or size is most convenient for him to use.

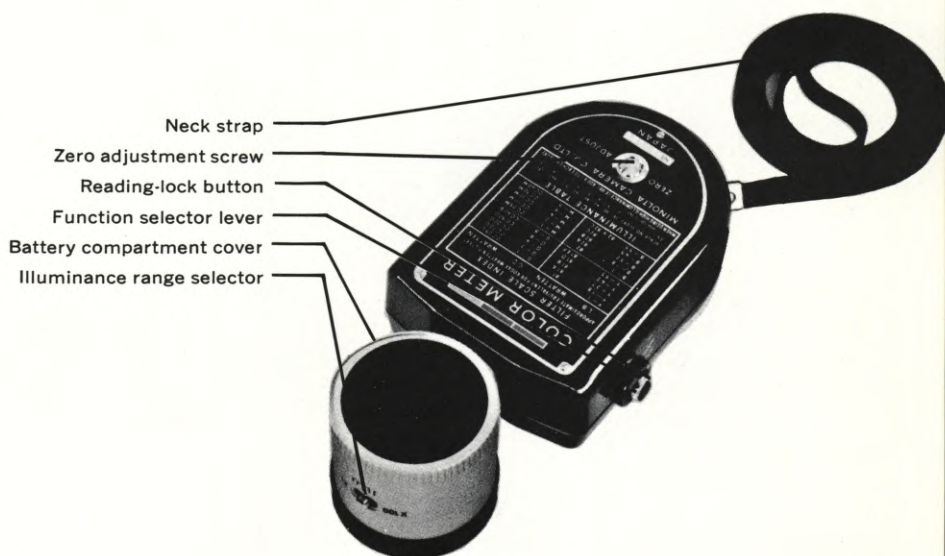
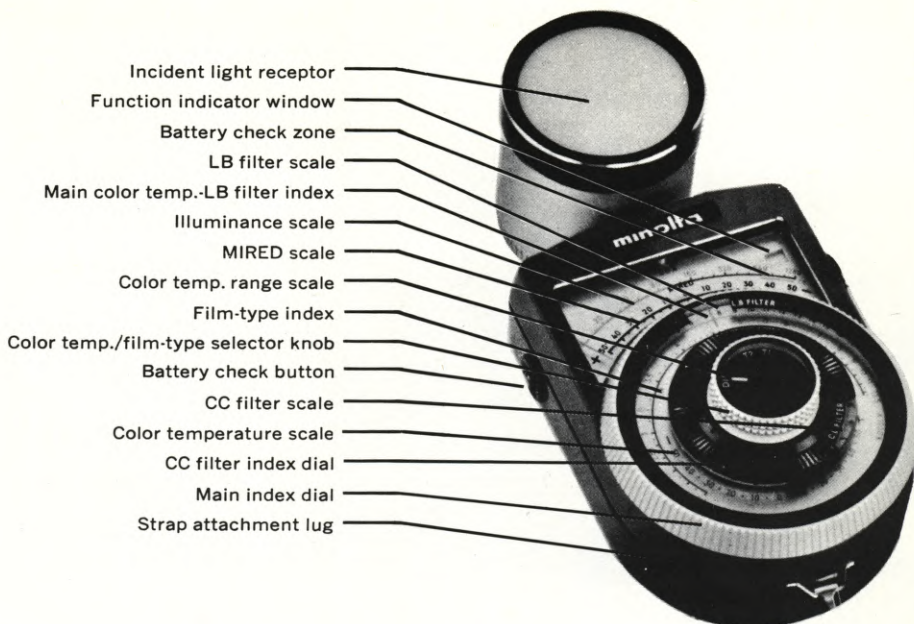
MANUFACTURER'S DESCRIPTION

The Minolta Color Meter, a 3-color-measuring device designed for precise professional measurement of light color temperature from any source including black-body radiator and direct determination of proper balancing or correction filters, provides high accuracy by dividing its broad measuring capability into four ranges.

Reads a wider range of color temperatures—from 2,500°K to 12,500°K—than any other color meter and gives consistently accurate readings regardless of variations in illumination level within an extremely broad range of from 10 to 128,000 luses.

Red, blue and green detectors incorporated in the light receptor feature spectral response similar to that of color films. A fourth detector measures incident light for the built-in illumination-intensity meter, permitting use as an ordinary photographic exposure meter or for determining illumination levels for other purposes.

Sturdy die-cast aluminum body contains hermetically-sealed transistor circuit that needs no warm-up. Needle locks automatically to "remember" reading.



TECHNICAL SPECIFICATIONS OF THE MINOLTA COLOR METER

Type: Incident-light measuring type that also measures reflected light with attachment and gives instant direct readings from a scale-dial that moves continuously and automatically by battery power, no needle-reading or manual dial alignment necessary

Measuring range (at ASA 100):

Incident: Low range: -3EV to 7EV; high range: 7EV to 17EV

Reflected: Low range: 0EV to 10EV; high range: 10EV to 20EV

Light receptors:

Incident with spherical diffuser

Reflected light attachment angle of acceptance: 10°

Scales:

Film speed range: ASA 6 to 25,000 DIN 9 to 45

Shutter speed range: 1/8,000 sec. to 2 hr.

F number range: F1 to F90

EV range: -7 to 25

Movie speed range: 8 to 128 fps (shutter opening angle = 180° for movie camera)

Power source:

6v silver oxide battery; Eveready NO. 544, Mallory NO. PX-28, or equivalent

Size: 42x67x131mm (1-5/8x2-5/8x5-1/8 in.)

Weight: 300g (10.4 oz.)

Accessories:

Disk-type diffuser for illuminance readings

Spot mask for enlarger exposure-measuring attachment

Pinpoint receptor with fiber optics for ground glass

Others: Over- and underexposure warning lamp

Battery check button and indicator lamp

Integrated-circuit electronics

Easy one-hand operation

High-accuracy, wide-range measuring

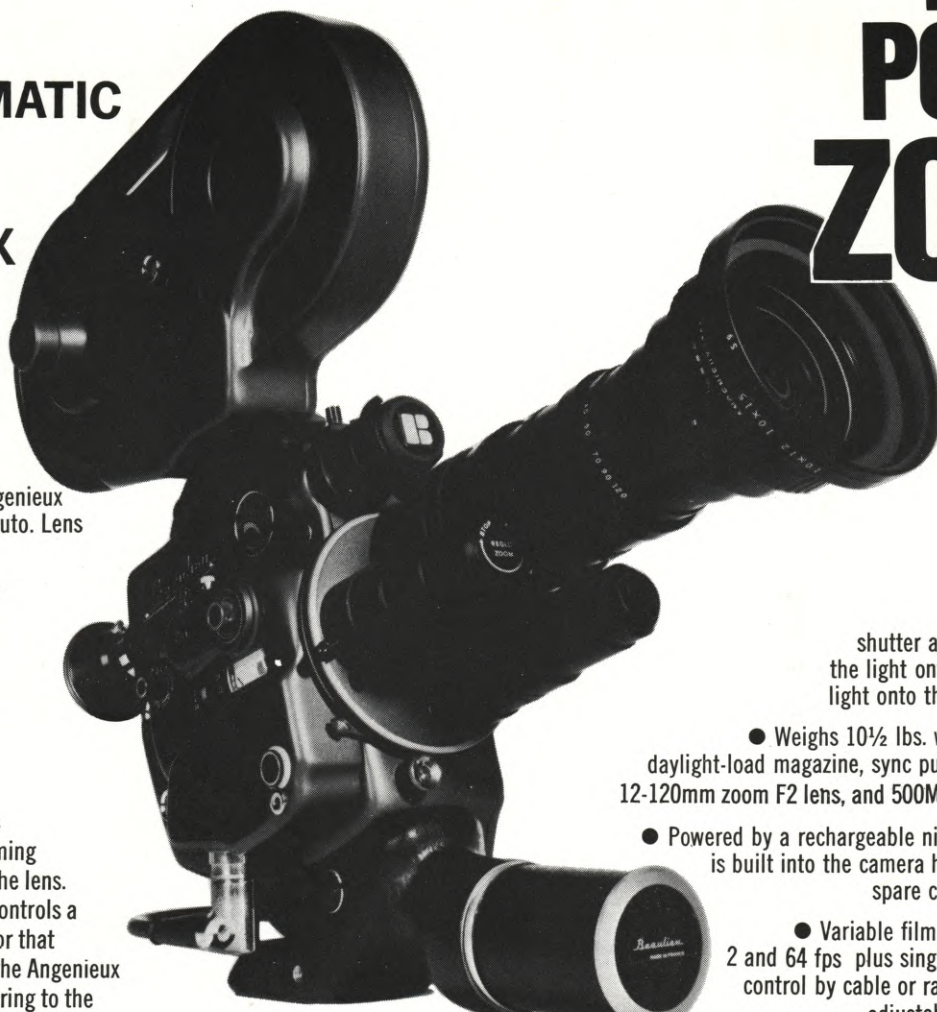
Rotating detector head

EV, Lux, ft-c conversion scales on back of body

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● Gossen light meter housed right in the reflex viewing system, measures light intensity coming directly through the lens. It electronically controls a miniaturized motor that instantly rotates the Angenieux lens's diaphragm ring to the correct aperture setting.

● Auto. 16mm camera with 3-15 sec. range power zoom.

● 45° angled mirrored shutter eliminates the need for a prism between

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● Weighs 10½ lbs. when equipped with 200-ft. daylight-load magazine, sync pulse generator, Angenieux 12-120mm zoom F2 lens, and 500MA nickel-cadmium battery.

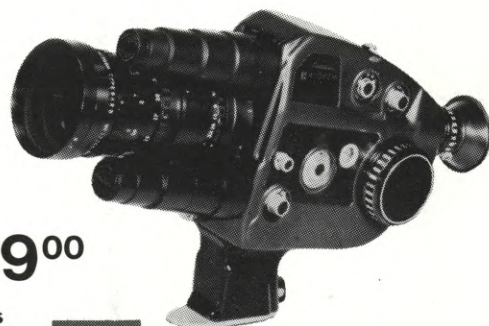
● Powered by a rechargeable nickel-cadmium battery that is built into the camera handgrip. A fully recharged spare can be installed in seconds.

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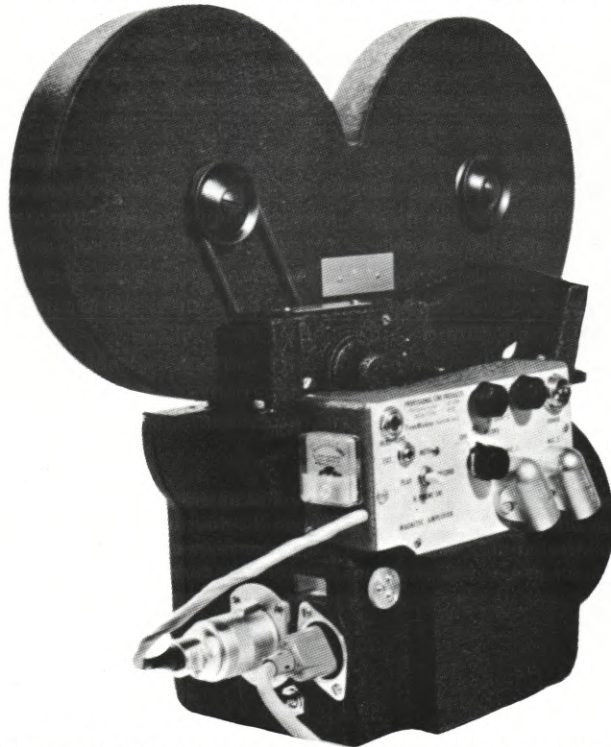
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2. The BEAULIEU R16B(PZ). One of the world's most advanced 16mm motion picture cameras. Has built-in power zoom with continuously variable zoom speed from 3 through 15 seconds and positive stop/start with manual override, coupled to the fine Angenieux 12-120 mm "auto" zoom lens. Mirrored shutter allows all the light to pass alternately to the brilliant reflex viewfinder and to the film. Fully automatic exposure control with manual override. Ultra-accurate speed control from 2 to 64 frames per second. Nickel cadmium battery screws into (and forms part of) camera handgrip - eliminating the need for battery back hanging over the shoulder or battery belt attached around the waist. Ability to accept most standard "C" mount lenses, and (with the use of lens adapters) an extensive range of still camera lenses, is only a part of the outstanding features that make the Beaulieu R16B(PZ) the favorite choice of the TV-news film and documentary cameramen, and the "new cinema" producers. The R16B(PZ) is also available with an Angenieux 17-68 mm zoom lens. An optional range of accessories include a 200 ft. magazine, 60 cycle sync generator, 500 mA and extra heavy duty 1000 mA Ni-Cad batteries, battery chargers, cases, etc. Inspect the BEAULIEU R16B(PZ) at Bel Air Camera where ALL your questions can be answered. Consider this fine instrument for your next sync/sound production.
3. The UHER 1000/N Neo Pilot 1/4" Sync Tape Recorder, specifically designed for sound film synchronization is ideal for use with the Beaulieu, Arriflex, Eclair, and similar first line cameras. Its lightweight 7 1/2 lbs., small and compact 11 x 9 x 3 1/2 inch size and the ready accessibility of its operating controls in the ever-ready shoulder case, make it the perfect unit for on-location sound filming. An assured frequency response of 20-20,000 Hz at a stroboscopically controlled speed of 7 1/2 l.p.s. combined with a full-track recording, produces precisely synchronized sound without variation. Ruggedly built and fully climatized. Has interruptible automatic photo-electric level control, interruptible low frequency filter, sync signal test button, battery condition test button, off-the-tape monitoring, built-in monitoring speaker, and adjustable CCIR or NARTB record equalization. Mixer jacks, 600 ohm balanced, for adding sound sources. Operates on self-contained batteries, car battery, or 110/250 volt AC power. Complete with microphone, 5 Ni-Cad batteries, AC Power Supply/Charger, case, and camera connecting cable.
4. The SONOREX Double/16 Sound Projector offers sound capabilities that far exceed those of a conventional 16mm machine. It permits single system optical playback and magnetic record/playback; it provides double system record and playback in perfect sync, and has extensive facilities for transfer, mixing, recording, and re-recording. Picture steadiness is better than 1/1000th of a picture height. The projector uses a 24 volt-250 watt Halogen lamp, a 1:6.9 ratio shutter, and a fast lens for a light output of approximately 500 lumens. A solid state amplifier with a power output of 20 watts continuous into 8 ohms has inputs for microphone, phono, and balanced +6db line. Outputs include built-in monitor, separate main speaker, balanced +6db line, and unbalanced adjustable line. Film-end and film-break safety switches are built in. Standard accessories permit multi-screen, multi-media, and similar special presentations, as well as multi-projector interlocks. Transfers from 1/4" tapes to 200 mil sound tracks on 16mm magnetic film may be made on the Sonorex. This projector is a "must see" for all serious film makers.
5. The BEAULIEU 4008ZM2 Zoom Macro represents the ultimate in advanced Super-8 motion picture cameras. The 4008ZM2 has double system synchronous sound capability (with automatic tape recorder start/stop control), continuously variable power zoom from 2 through 12 seconds, motorized macro focusing as close as 1 millimeter from the front element of its super wide angle Beaulieu-Optivaron f1.8 zoom lens (focal length 6-66mm), without added accessories. Superimpositions and lap-dissolves are possible (up to 100 frames duration) with this unique camera system. The 4008ZM2 accepts all standard C-mount lenses. And all 35mm still camera lenses as well (when used with suitable C-mount adapter). The super-luminous 27X magnification viewfinder functions with a mirrored guillotine-type shutter (set at 45° angle), which alternately directs ALL the light on to the film or into the viewfinder. The viewfinder is equipped with a fine-grain ground glass focusing screen. The variable shutter allows fade-ins, and fade-outs. Self-resetting footage counter and resettable frame counter (1-100). Continuously variable film speeds from 2 through 70 frames per second. Single frame and remote control filming is provided for. Self-contained 250 mA nickel-cadmium battery is readily recharged with a 30 mA charger. Uses standard 50 ft. Super-8 cartridges. With the Beaulieu 4008ZM2 you can produce motion pictures of true professional quality.
6. HEURTIER Super-8 STEREO SOUND Projector. This all new Super-8 projector - an innovation in Super-8 sound projectors - features a unique and revolutionary STEREO SOUND system. The Heurtier ST 42 STEREO's integral magnetic sound system provides professional STEREO SOUND quality, and is supplied with dual speakers, two microphones, and a headphone set. Its "twin head" magnetic recorder (using the main track stripe and balance stripe for recording), can be used for simultaneous full stereo recording, or recording on either one of the two tracks separately - with complete "sound mixing" control. Among other features, the ST-42 STEREO projector offers sound superimposition, sound transfer, echo effects, a built-in public address system, an 18-frame sound/picture separation, and an INSTANT START heavy duty flywheel for the best possible sound recording and playback quality. The ST-42 STEREO sound projector is ruggedly constructed and attractively designed. It provides rock-steady, critically sharp pictures, with a choice of projection speeds at 18 and 24 f.p.s., forward and reverse. PLUS . . . 800' reel capacity; SOM Berthiot 17-28 mm zoom lens, f:1.3; and completely automatic film threading from reel-to-reel.
7. HERVIC 16 mm and Super-8 Viewer-Editors. Large, brilliant projected image (16 mm: 3.2"x4.2"; Super-8: 2.9"x3.8"). Four sided optical prism (instead of shutter) prevents flicker. Sturdy all-metal 16 mm body weighs 8 lbs., all metal Super-8 weighs 5 1/2 lbs. Uses 6 volt 10 watt projection bulb. Optional 16 mm rewinds (2000 ft. capacity, weight 5 lbs.) fold for storage. Super-8 has built-in folding rewinds, 400 ft. capacity. Hervic Viewer-Editors feature a film pressure plate which maintains picture sharpness whether film is in motion or stationary, a frame marker, focusing and framing controls, and dust-proof glass screen. Hervic 16 mm & Super-8 Viewer-Editors are precision made, smooth operating, of professional quality, and are built for many years of service. (Illustration shows 16 mm model with rewinds).
8. MULTILAPSE - a remarkable instrument for time-lapse cinematography. Operates the camera, lights (flood or strobe flash), motors, background curtain, etc., at intervals from 4 frames per second to 1 frame every 45 hours! Entirely automatic, it may be left unattended for days, making time lapse exposures every 4 1/2 minutes, or any other of many selected intervals. Has "shutter hold" to expose several frames at a time, exposure counter, shutter thrust adjustment, flash charge outlet for strobe batteries, fine adjustment for flash synchronization, and many more features not found in any other instrument designed for time-lapse operation. Fully portable, operates on regular 100/120v AC power source. Requires no accessory elements - operates with your normal equipment.

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45th ACADEMY AWARDS

Continued from Page 545

Caan, Michael Caine, Jeannie Berlin, Robert Duvall, Joel Grey, Eileen Heckart, Liza Minnelli, Geraldine Page, Al Pacino, Diana Ross, Cicely Tyson, Susan Tyrrell, Liv Ullmann, Paul Winfield and Shelley Winters.

Gene Hackman, last year's best actor award-winner, for "The French Connection", and Raquel Welch, presented the Oscar to the winner in the best performance by an actress category in which the nominees were Liza Minnelli, "Cabaret"; Diana Ross, "Lady Sings The Blues"; Maggie Smith, "Travels With My Aunt"; Cicely Tyson, "Sounder"; and Liv Ullmann, "The Emigrants". Liza Minnelli was the winner.

year was presented by Clint Eastwood and went to "Cabaret". The other four pictures nominated were: "Deliverance", "The Emigrants", "The Godfather" and "Sounder".

Ben Johnson, last year's winner for "The Last Picture Show", and Diana Ross presented the award to the best actor in a supporting role. The nominees were Eddie Albert, "The Heartbreak Kid"; James Caan, "The Godfather"; Robert Duvall, "The Godfather"; Joel Grey, "Cabaret"; and Al Pacino, "The Godfather". Joel Grey won for his stunning performance as the painted, epicene master of ceremonies in "Cabaret".

Up for the supporting actress award, presented by Robert Duvall and Cloris Leachman, last year's winner for "The

that category.

Sonny & Cher presented the best song award after the five songs had been staged as part of the proceedings. The nominated songs were the title tune from "Ben"; "Come Follow, Follow Me" from "The Little Ark"; "Marmalade, Molasses and Honey" from "The Life and Times of Judge Roy Bean"; "The Morning After" from "The Poseidon Adventure"; and "Strange Are the Ways of Love" from "The Stepmother". "The Morning After" was judged the best of a rather poor lot.

Representatives of the foreign production companies which made the following foreign-language nominated pictures were in the audience to receive a statuette from Elke Sommer and Motion Picture Association of America



Liv Ullmann and Roger Moore were on hand to present the best actor statuette to one of the following: Marlon Brando, "The Godfather"; Michael Caine, "Sleuth"; Laurence Olivier, "Sleuth"; Peter O'Toole, "The Ruling Class"; or Paul Winfield, "Sounder".

A figurative bombshell burst over the proceedings when the absent Brando, spinning the award, sent in his stead an attractive Apache maiden, Shaneen Littlefeather, to voice his protest regarding the treatment of American Indians. His message was greeted by mixed boos and applause from the audience present. A later consensus indicated that, however worthy Brando's current cause might be, this was not the most appropriate time or place to air it.

The Oscar for the best picture of the

Last Picture Show", were Jeannie Berlin, "The Heartbreak Kid"; Eileen Heckart, "Butterflies Are Free"; Geraldine Page, "Pete 'N Tillie"; Susan Tyrrell, "Fat City"; and Shelley Winters, "The Poseidon Adventure". Self-styled "dark horse" nominee, Eileen Heckart, won.

Two-time Academy Award winner George Stevens and Julie Andrews presented the directing award to Bob Fosse, for "Cabaret". Others in the running were: John Boorman, "Deliverance"; Francis Ford Coppola, "The Godfather"; Joseph L. Mankiewicz, "Sleuth"; and Jan Troell, "The Emigrants". Fosse's directorial Oscar proved to be an exception to the rule that the Directors Guild of America award (previously won by Francis Ford Coppola) normally telegraphs the Oscar winner in

President Jack Valenti: "The Dawns Here Are Quiet" (Russia); "The Discreet Charm of the Bourgeoisie" (France); "I Love You Rosa" (Israel); "My Dearest Senorita" (Spain); and "The New Land" (Sweden). The winner was Luis Bunuel's arch "The Discreet Charm of the Bourgeoisie".

The other awards were presented by Greer Garson and Laurence Harvey (art direction and set decoration); Candice Bergen and Billy Dee Williams (cinematography); Marisa Berenson (costume design); Natalie Wood and Robert Wagner (documentary); Katharine Ross and John Gavin (film editing); Dyan Cannon and Burt Reynolds (music scoring); Beatrice Arthur and Peter Boyle (short subjects); Eddie and Edward Albert (sound); Jack Lemmon (writing).

Four special awards, voted by the

Board of Governors, were presented during the evening. Rosalind Russell received the Jean Hersholt Humanitarian Award which is given to an individual in the motion picture industry whose humanitarian efforts have brought credit to the industry. Frank Sinatra, last recipient of the award two years ago, came out of his self-imposed retirement long enough to make the presentation. Sinatra's tasteful and eloquent tribute to Miss Russell was the most touching moment of the evening.

The late Edward G. Robinson was granted an Honorary Award for his contribution to the art of motion pictures. The award was presented by Charlton Heston and accepted by the actor's widow. A six-minute clip of scenes from fourteen of the late star's films preceded the presentation of the award. Featured in the clip were scenes from "The Bright Shawl", Robinson's first film made in 1923, "Little Caesar", "Key Largo", "Bullets or Ballots", featuring Robinson in a scene with Humphrey Bogart, and his last film, the still-to-be-released "Soylent Green".

A special award was given to Charles Boren in recognition of his long service to the industry as chief executive for the Association of Motion Picture and Television Producers. Richard F. Walsh, president of the International Alliance of Theatrical Stage Employees (I.A.T.S.E.) and Motion Picture Machine Operators, presented the award to Boren.

The program was written by Leonard Spigelgass and William Ludwig, with special material by William Goldman.

The set was designed and created under the supervision of art directors Henry Bumstead and Keaton Walker. Ray Aghayan and Bob Mackie were the costume designers.

Marty Pasetta was director of the telecast for NBC Television.

Among the technical awards presented, the most significant to *American Cinematographer* readers was undoubtedly that for "Best Achievement in Cinematography." The Oscar in this category went to Geoffrey Unsworth, BSC, for his inspired lensing of "Cabaret". The presentation was made by Candice Bergen and Billy Dee Williams. Unsworth, busy photographing a picture in Europe, could not be present, but his award was accepted by Marisa Berenson, one of the stars of "Cabaret".

One of England's most accomplished "lighting cameramen", Unsworth has a long string of notable films to his credit, including: "The World of Suzie Wong", "Beckett", "Cromwell", "2001: A Space Odyssey" and "The Adventures



of Alice in Wonderland". In "Cabaret" he captured with superb precision the decadent, frenetically sick visual atmosphere of pre-Hitler Germany.

A Special Achievement Award for Visual Effects had been voted to "THE POSEIDON ADVENTURE".

Recipients of the Award, voted by the Academy Board of Governors and presented at the 45th Awards Presentation, were L. B. Abbott, ASC and A. D. Flowers.

In past years, a regular Award was made annually for Special Visual Effects. Last year the statuette went to "Bedknobs and Broomsticks". Under a recent rules change, the Award is no longer mandatory and comes under the category of Special Achievement Awards, to be voted by the Academy's Board of Governors "at such times as in the judgement of the Board of Governors there is an achievement which makes an exceptional contribution to

the motion picture for which it was created, but for which there is no annual Award category."

The "exceptional contribution" made to "THE POSEIDON ADVENTURE" by Special Effects wizards Abbott and Flowers was the extraordinary on-screen illusion they created of a 81,000-ton ocean liner being literally turned upside down by a giant tidal wave. Since the entire credibility of the film depended upon the realism of this complex effect, their contribution to the success of "THE POSEIDON ADVENTURE" was truly "exceptional."

Because the motion picture is an art form that depends for its expression upon a most intricate series of interrelated technologies, the Scientific or Technical awards tendered by the Academy are of the utmost importance and are of particular significance to those actually working in the motion picture

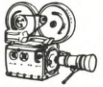
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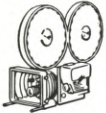
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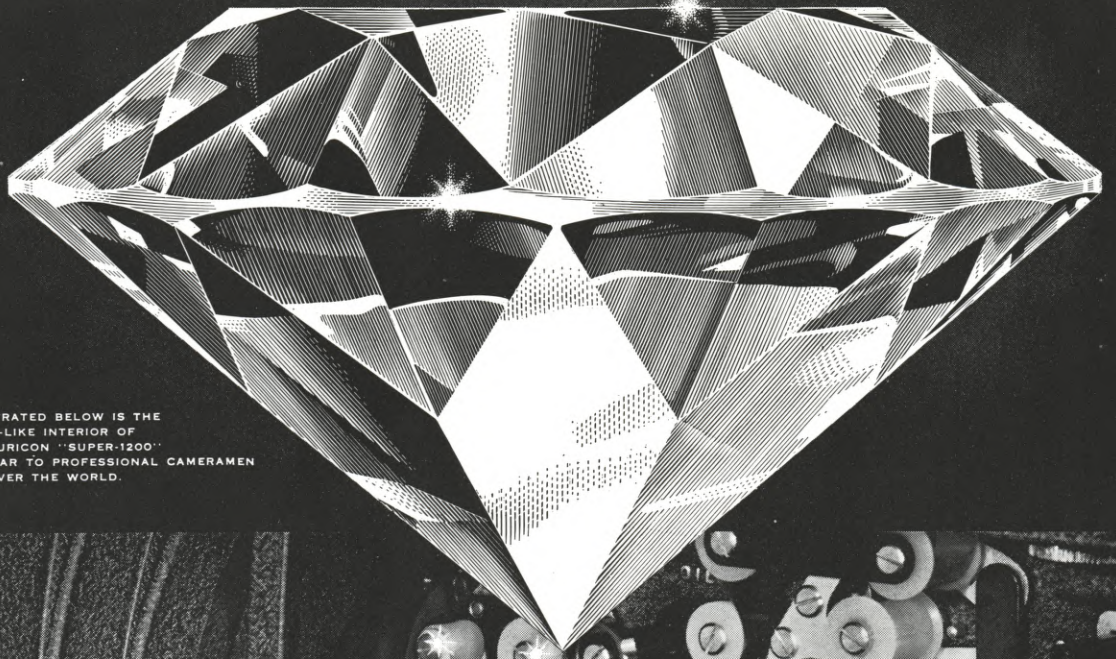
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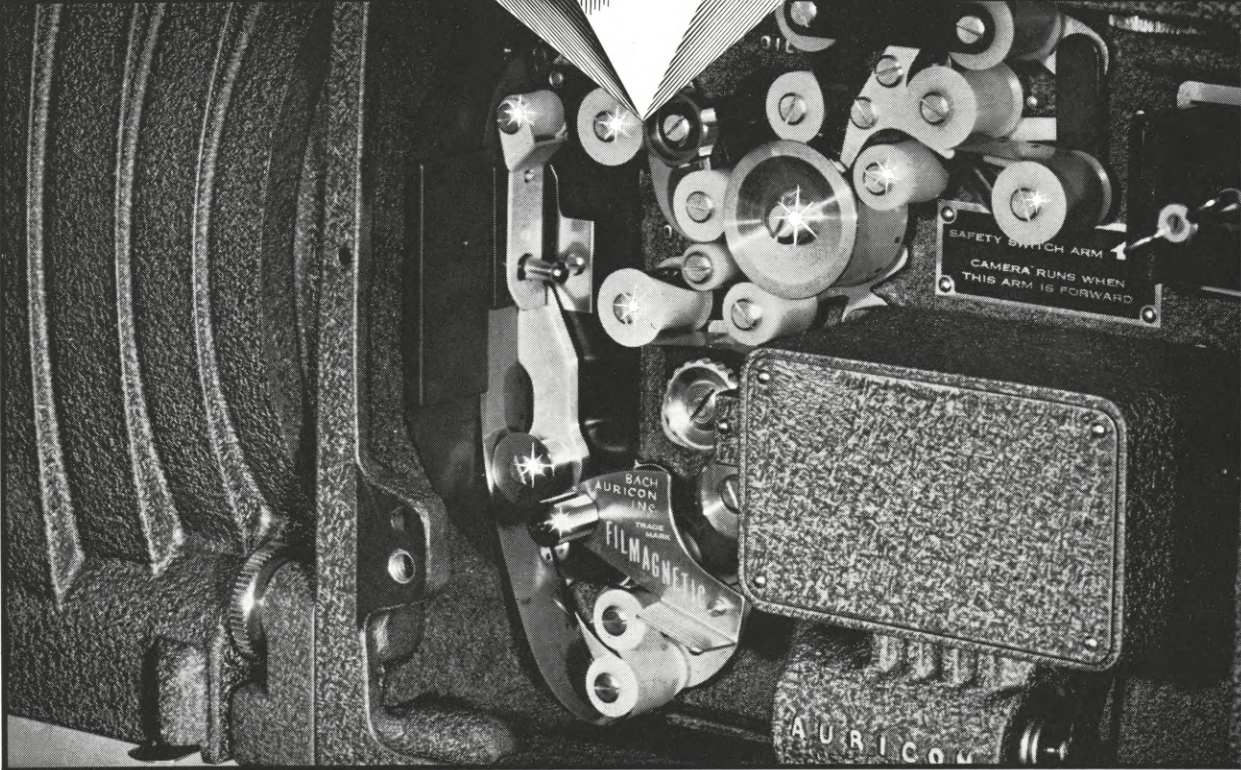
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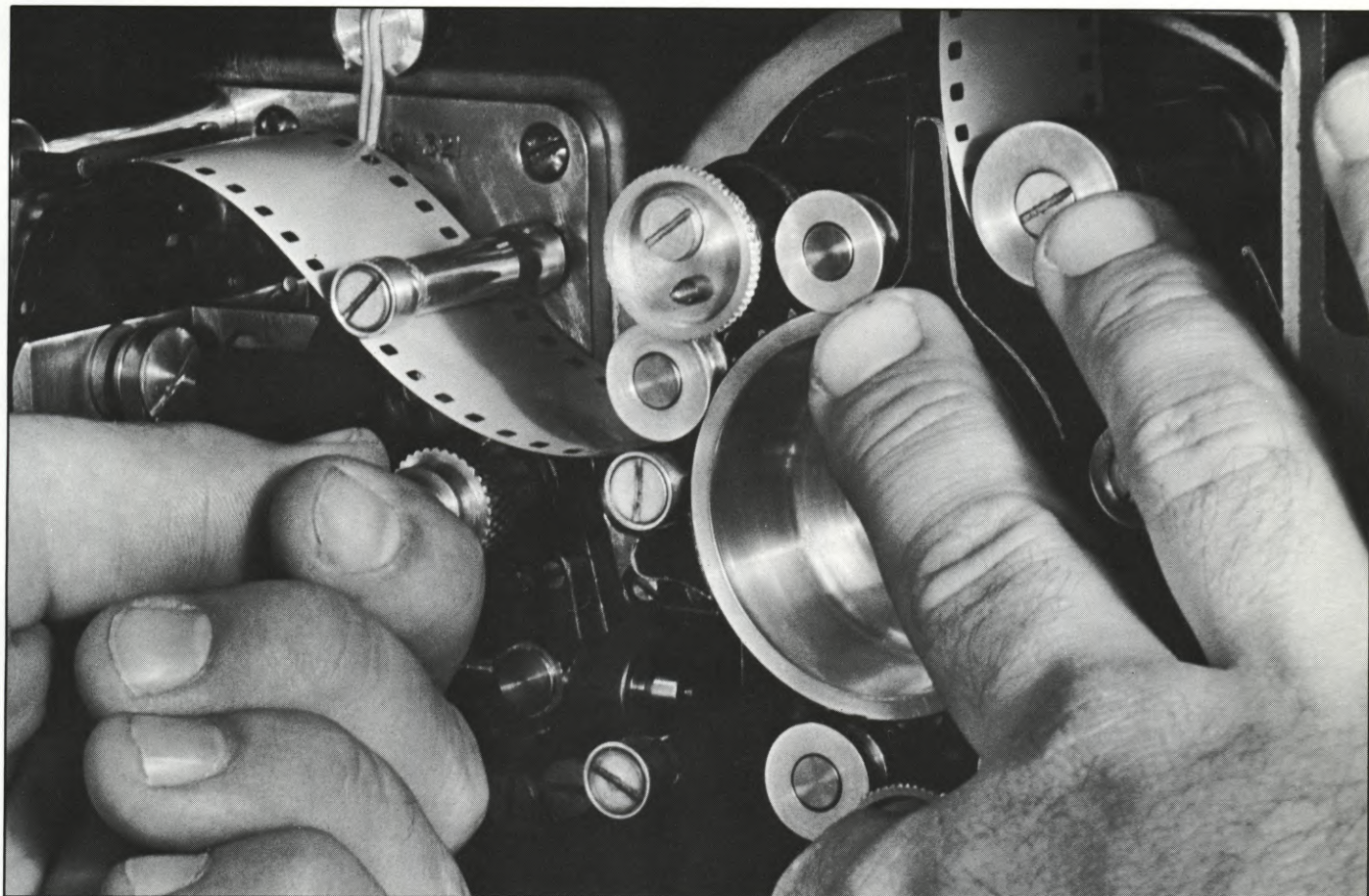
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Cameraman Jerry Callaway has taken Duncan rental cameras on location to South America and to Israel. He didn’t run tests on the cameras before leaving, in either

case. “I knew they’d done that at Duncan’s,” he says.



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"AN AMERICAN FAMILY"

How an energetic young husband and wife team filmed the twelve-part documentary series that is currently the most talked-about new program to be seen on public television

By ALAN and SUSAN RAYMOND

"AN AMERICAN FAMILY" is a twelve-hour documentary television series produced by the Public Broadcast Service. The concept was to film the daily life of a real family, the William Loud family of Santa Barbara, California, over a period of seven months and to isolate from this material certain universals about family behavior, attitudes and relationships. We were selected to be the filmmakers who would record the life of the Louds for this \$1,200,000 project.

Given no limit on the amount of film we could expose (we finally shot more than 1,000 400-foot rolls), we were asked not to stage or recreate anything for the camera but to try to capture as honestly as possible the daily life of the seven members of the family. Understanding that the final films would rely only on synchronous dialogue with a bare minimum of narration, we chose to work in the style of "*cinema verité*" filmmaking. Our crew consisted of myself (operating the camera), Susan (operating the sound recorder), and an assistant cameraman, Tom Goodwin, to load magazines and help out wherever he could.

Decisions on the content of what we filmed rested solely with Susan and myself with an occasional call to the producer to discuss major location shifts or dramatic changes in the family's life. At times we chose to follow one or more of the Louds more closely than the others but the focal point of our filming took place at the house and around the city of Santa Barbara, California. We also made four major side



(ABOVE) A group photograph of the entire Loud family, subjects of "AN AMERICAN FAMILY" documentary series. Top row, standing, from left to right: Kevin, Grant, Delilah and Lance. Seated, left to right: Michelle, Pat and Bill Loud. (BELOW LEFT) A scene of Bill Loud talking to his secretary in his office. Susan Raymond, with Nagra, is standing in front of painting, while Alan holds Eclair NPR camera. (RIGHT) Grant plays the guitar for his mother in the Loud's family room. Susan uses the Sennheiser 404 microphone to record the sound.





(LEFT) Director/cinematographer Alan Raymond hand-holds the Eclair NPR camera. Note custom-modified body brace. (CENTER) On location at one of several strip-mining locations for sequences showing Bill Loud conducting his business. (RIGHT) Raymond is dwarfed by rotary scoop of giant strip-mining machine. Locations included New York City; Taos, New Mexico; Eugene, Oregon, and most of the strip-mining companies in the Southwestern United States.



(LEFT) Susan Raymond recording a rock band rehearsal involving the Louds' sons. (CENTER) Filming a typical scene of Pat Loud making dinner. (RIGHT) Shooting a family siesta around the pool in the backyard of the Loud home. The crew worked long hours all the time, averaging 12 hours a day, seven days a week. Ultimately, they were treated as members of the family.

(LEFT) Filming a sequence of Bill Loud and son Kevin in Bill Loud's office. (CENTER) Shooting a sequence of Pat Loud on the telephone. A special sound set-up was rigged to record both ends of phone conversations. (RIGHT) Susan makes fine sound adjustments while recording rock band rehearsal. Because the crew had to remain as unobtrusive as possible throughout the lengthy shooting, highly portable filming system became most important.



trips during the course of our filming to New York City, Taos, New Mexico, Eugene, Oregon and to most of the major strip-mining companies in the Southwestern United States.

A typical day's shooting would be hard to describe, for they were all different. We did work long hours all the time, averaging about twelve hours a day, seven days a week. But this time was not always spent constantly filming. Some days we might shoot only a few rolls; on others we might expose as many as thirty rolls. We moved around a great deal: in and around the house, to the father's office, to the high school, following one or more of the family members through the various activities they might take part in. Luncheons, rock band rehearsals, shopping expeditions, dance classes, dates, meeting someone at the airport—these were typical scenes that always kept us on the go,

never allowing much, if any, time to set up our equipment. Microphone placement, lighting, camera positions—all these considerations had to be arrived at quickly and often while we were filming. Because of this, we developed a mobile, portable system of working that I shall try to describe in detail.

The first major problem we encountered was in lighting the house, a rambling ranch-style structure with twelve rooms. We had to be prepared to shoot in any area of the house at all times with no hesitations or delays. Even with these requirements, we also had to consider the family itself. The house was not a set. They had to live in it in as normal a fashion as possible even with our presence. Therefore I decided to make the lighting as minimal as possible. I began by seeing what happened when we replaced every bulb in every lighting fixture of the house with a No. 1

photoflood. It seemed to be a pretty good start but it really didn't work out well for large areas such as the family room where the Louds took most of their meals, received phone calls, and spent time socializing. Here I had to boost the light level even more. I decided to try the Lowell Softlight high up in one corner of the room. This seemed to fill in most of the shadow area and wasn't too unpleasant to look at. It also allowed me to shoot in almost any direction without flare problems or harsh shadows.

In some of the other rooms I used the Lowell-D quartz fixtures and bounced them off the ceiling. All of these were mounted high up on wall plates with 5/8" studs. In some cases I pinned silver space blankets to the ceilings to maintain correct color temperatures. In a few table lamps with cloth shades I used the Smith-Vector



The Raymonds, working unobtrusively in order not to interfere with the spontaneity of the action, film a typical dinner scene with Delilah, Grant, Kevin and Pat Loud. Key light, emanating from boosted overhead practical fixture, is augmented by Lowell Softlight at right. Bulbs in practical fixtures all over the house were replaced by 500-watt quartz lamps with adaptors that screw into conventional sockets. (BELOW LEFT) Susan works with Nagra IV, two Vega receivers, 805 Sennheiser mike and BS-II pre-amp which, when used in the line, can operate three microphones at the same time.



quartz adaptors which screw into conventional sockets and use a 500-watt quartz bulb. The effect here was quite pleasant for the light was bright enough to film by but also possessed a nice diffused quality through the white colored shades. My assistant became quite adept at fashioning mock shades and fixtures out of coat hangers and Marlux paper in those cases where we ran the risk of cracking an existing glass one with our high-intensity bulbs. We also used colored tape to dress all the cable, blending it with the background paint or wallpaper wherever we could.

I wasn't really interested in a high-key effect and only tried to maintain an f-stop of 3.2, or slightly more than wide open with Eastman reversal stock 7242 pushed one stop. Though, at times, I would have liked more depth of field or to have been able to use Eastman Ektachrome 7252 at ASA 50, I had to preserve as natural an effect as possible.

To a great extent I let the family determine the lighting in a room. During peak activity hours they would turn all the lights on. Late at night I might shoot only by the light of one table lamp. In this way, they weren't forced to accept an arbitrary lighting plan, but

could vary the mood in a room according to their own desires. I feel that if you are really interested in getting candid scenes in which people are relaxed and behave in a normal fashion you have to make sacrifices.

At times, during the daylight hours, I experimented with no lights at all. The house had many large picture windows and the Southern California sunshine was quite sufficient to film by. I made a special cloth reflector for the Lowell Softlight out of a daylight-blue Reflectasol umbrella silk and this was invaluable for shooting in late afternoon light inside the house. It gave just enough fill so that faces wouldn't go dark, and matched the outdoor color temperature at the same time.

I also taped a small Sun-Gun unit to the handle of the Eclair camera. This unit ran off the same, though separate, battery as the camera did, which made it very convenient to use. It contained a 100-watt quartz bulb and, though it gave off nowhere near the amount of light a bigger Sun-Gun would have, it was sufficient for my purposes. Often this little light meant the difference between no exposure and usable footage. It was especially useful for exterior

night scenes. It also had a small dichroic filter and thus could be used in daylight-balanced situations, as well.

When traveling away from the house I would usually shoot under available light, often pushing the emulsion one or two stops. I did carry photoflood bulbs and Smith-Victor quartz adaptors and, if time permitted, would place them in convenient fixtures. But here, again, I did not want to interrupt the continuity of a scene. I quickly learned through the process of trial and error that if I asked everyone to stop and wait for us to set up, the ensuing scene would invariably be stilted and unnatural. All the film was processed at CFI labs in Hollywood and we took advantage of their ability to post-flash the EF stocks. This process yielded quite pleasing results and I recommend it to anyone shooting in this fashion. I might add that, when screening rushes with the producer, he never argued for more light at the expense of reality or immediacy in scenes.

I used the Century Precision slip filters all the time, which allowed me to go from a tungsten to a daylight or a fluorescent situation and back without unscrewing the lens shade or having to remove the lens from its mount to switch a BTL gel. Often I found myself stepping outside the house (tungsten) to spend a few minutes by the pool (daylight 85) and then have to step back into the house (tungsten again) within a short scene. This is one of the classic problems in *cinema verité* shooting. If you aren't able to put on or remove a filter very fast, you'll wind up with some pretty unusable scenes. Slip filters, for those who are unfamiliar with them, are retainer rings for glass filters that have no threads but simply "slip on" the end of the zoom lens. They're made so that they fit tight enough not to fall off but can be removed easily by simply grasping their edges and pulling lightly.

Light readings were taken primarily with a Minolta Autospot meter which I



Alan and Susan Raymond shooting sequence at Santa Barbara High School. Susan is wearing one Vega wireless receiver in a canvas bag on her back. In order to film impromptu subject matter, the team required the most portable equipment available.

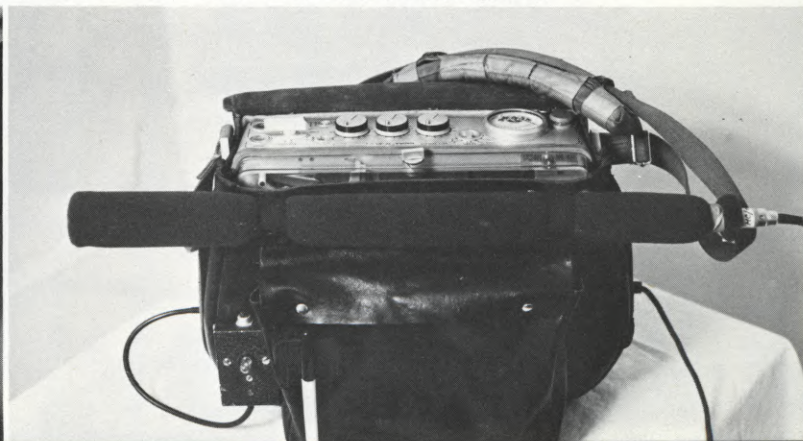
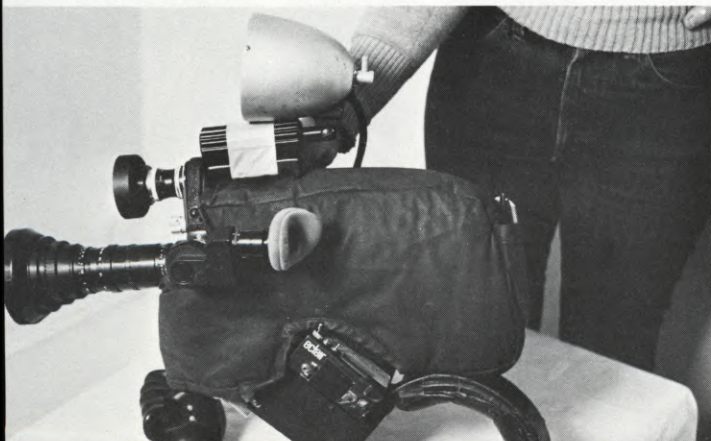
wore around my neck. This meter allowed me to take readings from across the room without disturbing my subjects. It was a little heavier than the other spot meters on the market but its 100% accuracy and its automatic, rotating scale made it very useful in fast set-up situations. Nothing, I might add, unnerves someone more than to stick a

Spectra meter in his face. Actors are used to it, real people are not.

I also designed my own sound barney for the Eclair NPR camera. I made a prototype out of rubber and took it to Matthews Studio Equipment in North Hollywood who reproduced it for me in black, waterproof canvas filled with a

Continued on Page 604

(LEFT) Alan's Eclair NPR camera with small quartz lamp unit taped to handle. Custom-designed sound barney covers the magazine. Lenses are Angenieux 12-120mm zoom and Switar 10mm, F/1.6. Shoulder Brace is part of an Eclair brace sold by Alan Gordon Enterprises. Part missing is an attachment to connect with a belt, which Alan does not use. (RIGHT) Modified Nagra IV recorder with 7" top. Case was custom-made by Al Compos of Western Costume. Blocks were inserted under machine so that it could be stood on end. Pouch on front is for extra tapes and accessories. Slate light at lower left is custom-made and operates by putting a tone on the track when button is depressed and bulb lights up.





Mike Hoover "setting a route", as he moves up the face of El Capitan peak in Yosemite. Photograph shot by a cameraman working up the same route.



(LEFT) A scene from "SOLO" just before reaching the summit, as the climber "hangs free" to grasp his next handhold. (CENTER) This unique camera angle required the cameraman to crawl through a tunnel, inch along several narrow ledges and jump a crevasse in order to end up perched precariously inside huge slabs of fallen rock forming this "jamcrick". (RIGHT) Lieback: This location was unique in that the cameraman could set up his tripod on a ledge perpendicular to the climb.

(LEFT) Tom Cochrane and Chris Holmes, with Arriflex S camera, 12-120mm zoom and Dynalens, on one of the many abortive attempts to film the summit pullback. (RIGHT) Carefree Ken Mizoguchi dangling off the summit overhang of El Capitan during the postfall filming. Previously untrained as climber or cameraman, he cheerfully risked his life to help shoot the extraordinary scenes in "SOLO".



FILMING "SOLO"

Continued from Page 547

and scanned the huge wall for the tiny rescue leader. Nothing after one hour. So we started off for the base and began to hear a faint "Help!" The guy had ascended only about 150 feet of rope when he became bound up by his own special safety devices. He then started to disconnect them one by one until there was nothing left to hold him. He fell about one hundred feet before the rope miraculously entangled his left foot,

Spaced out with the wonder of it all, Ken Mizoguchi gazes adoringly up at Alita Van Gores, who had become his "idol" during filming.



(LEFT) Hoover ropes his way under a "roof" of rock in his role of the one and only performer in the film. (RIGHT) He pauses to take a light meter reading. Mike climbed with the meter in his pocket and called out readings to cameramen hanging alongside.



leaving him hanging upside down. He quit climbing and sold his gear to me on the spot, but I couldn't get the shot so the whole trip was a blank. Ken suggested that he could go up the rope and the other guy help me with the zoom. He knew nothing about technical climbing and I guess that's why he did it. From then on it was Ken and me.

Let me back up to the time before I met Ken. The original plan for making the film was straightforward. Yosemite, then the Canadian Rockies and, finally, the Tetons. We'd film the best parts of the greatest climbs and put it all together into one super-climb. Tom, Roy and I jumped into my pickup for a paid vacation in the north.

We drove to Yosemite in late September but it was too hot to go up on the big walls. We tried, but in the summer months the thousand-foot-plus cliffs of gray granite that line the sides of the valley work like an oven. It might be 70 degrees in the shade on the valley floor and 140 degrees up on the rock. This simply means carrying about twice the water that we would normally need.



Like a couple of human flies, Ken and Mike cling to a sheer rock wall, while nonchalantly discussing details of the next scene to be shot.

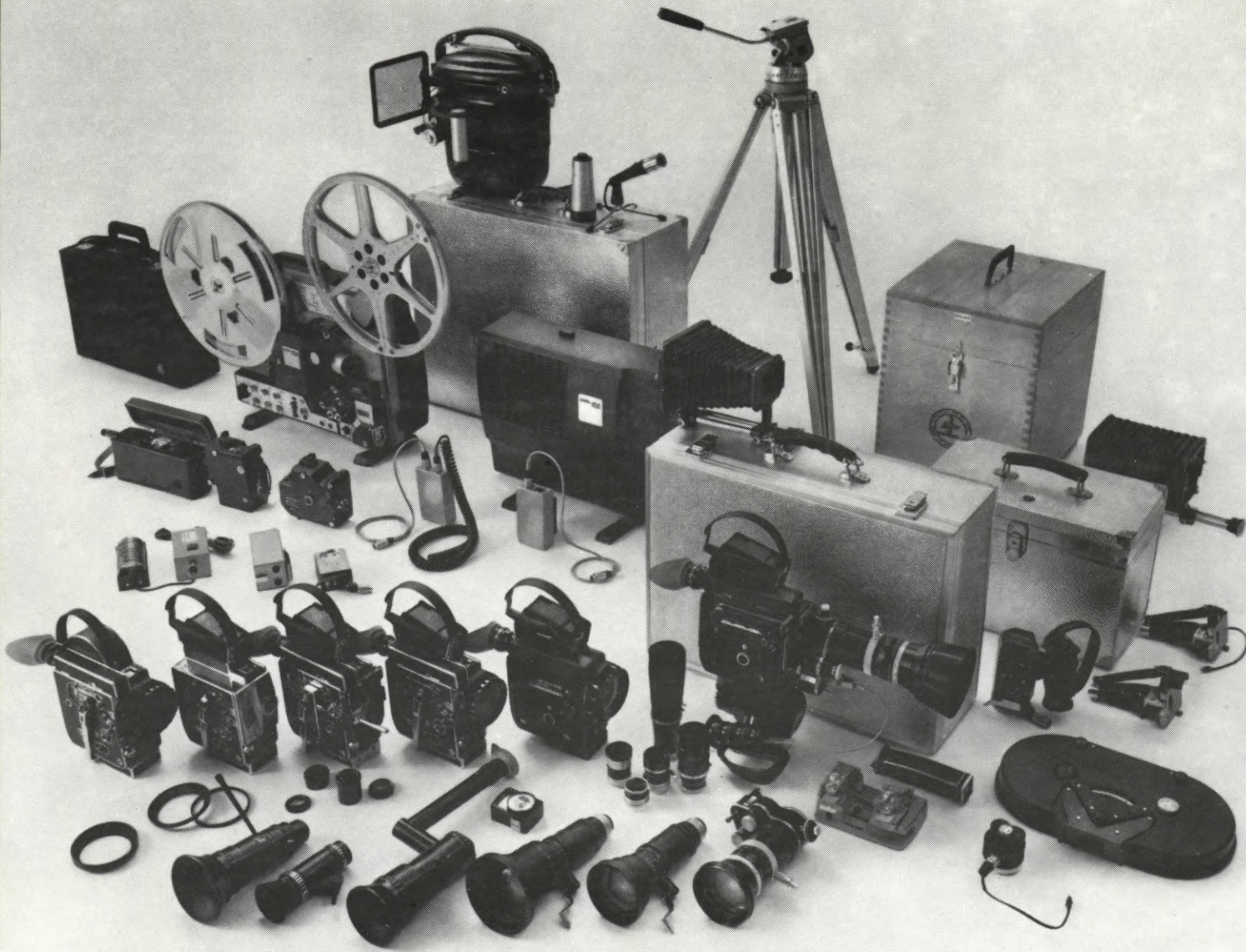
(LEFT) The complex array of climbing and photographic equipment used during the filming of "SOLO". Most of the time this gear had to be back-packed into remote areas where shooting was to be done. (RIGHT) Alita runs an equipment check before the day's shooting begins.



The more equipment you carry up the wall the longer it takes, which necessitates carrying additional weight in food and water which slows you down even more until you can't get off the ground. So we drove on into Canada.

We packed about 250 pounds up into the Bugaboos. This included: 1200 feet of ECO, Arri S, 12-120mm Angenieux, 300mm Kilfitt, 5.9mm Angenieux (indispensable on walls where both climber and cameraman must be on the same route), K-100 camera mounted on a helmet and a 70-DR Bell and Howell we used to drive in the tent stakes.

Continued on Page 608



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For instance: if you choose a spring-wound camera, you can automate easily with any one of three auxiliary motor drives, for time-lapse or animation, for variable speed shooting or for filming with sync pulse generator or crystal. The system offers you tripod; monopod; camera grips; blimps; an automatic fading device; cable releases; matte boxes (complete with masks); an underwater housing; attachable exposure meter; 400' magazine; closeup lenses; extension tubes; optical magnetic sound projector.

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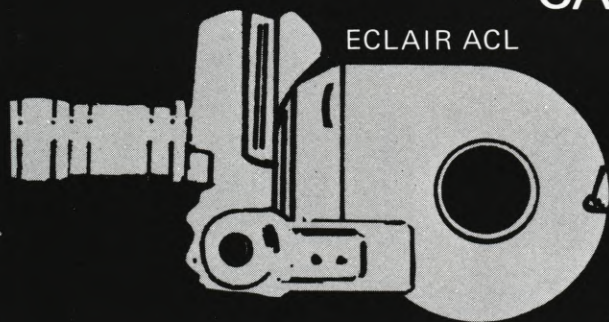


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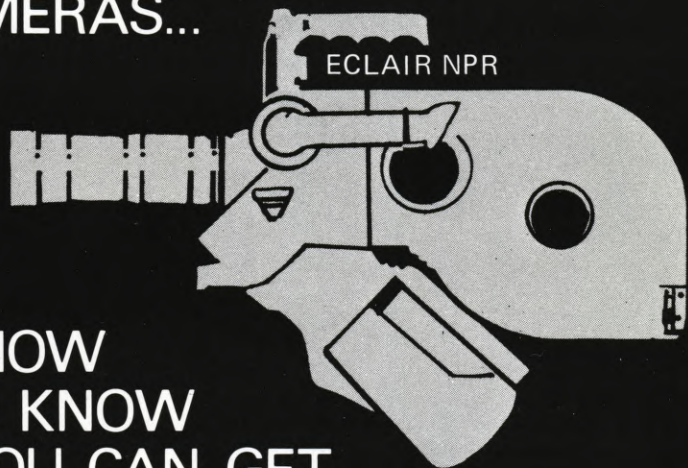
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(LEFT) Driver Pat Hustis, with Spielberg at his side, prepares to make a wild run in the "Bullitt" car, so-called because it was the vehicle originally designed to shoot the wild chase sequence in the film "BULLITT". (RIGHT) Operator Sven Walnum and Zsigmond set two "fender" cameras in preparation for the run. A third camera has been installed for remote shooting from low camera platform on front of the vehicle.

PANAFLEX MAKES DEBUT

Continued from Page 567

him—the director and cinematographer in particular.

"I'm terribly delighted with both the direction and the camerawork," he tells me. "Vilmos' work and his credits speak for themselves. I'd love to have him on every picture. And Steve is a real delight as a director. It's thrilling to see a young fellow like him have so much command and such presence. For a young man making his first theatrical feature, he's doing an exceptionally good job. He does his homework and he's well prepared—yet, when his eye sees something spontaneous on the set, he's very adaptable and very creative. I think that when this film comes out he's going to be a major director."

A few minutes later, the Panaflex camera comes up in conversation and Zanuck says: "I just think it's nothing short of sensational. I've never seen shots like those we've been seeing in dailies—360° pans from inside the car with two travelling vehicles involved. It's really fantastic. I don't know that much about cameras, but I've seen a lot

of film and I've never seen shots like that before. The Panaflex is just a super camera—super-efficient, super-quiet, super-small and super-light. It's perfect for this picture and we're very proud to be the first ones to use it. Bob Gottschalk, when he heard what kind of picture we were making, wanted us to use it and I think this picture will be a good showcase for the camera. Of course, everybody wants it now anyway, sight unseen. It's a great piece of equipment."

The first set-up of the day involves police car 2311 parked along the roadway on the outskirts of Floresville, with the long column of police and civilian vehicles several hundred yards away, strung out in the background. They have, according to the story, been ordered to keep their distance while the ranking law officer (Ben Johnson) gets on the radio and tries to persuade the amateur hijackers to give themselves up.

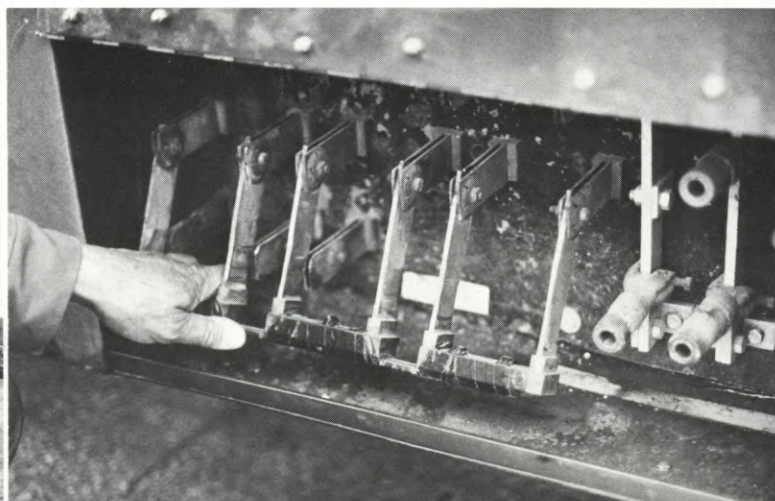
This is one of the few scenes in the picture in which the car is not moving, so the Panavision R-200 camera is simply set up on tracks alongside it for a short dolly movement. Moreover, there is a chance to use a bit of fill light, so

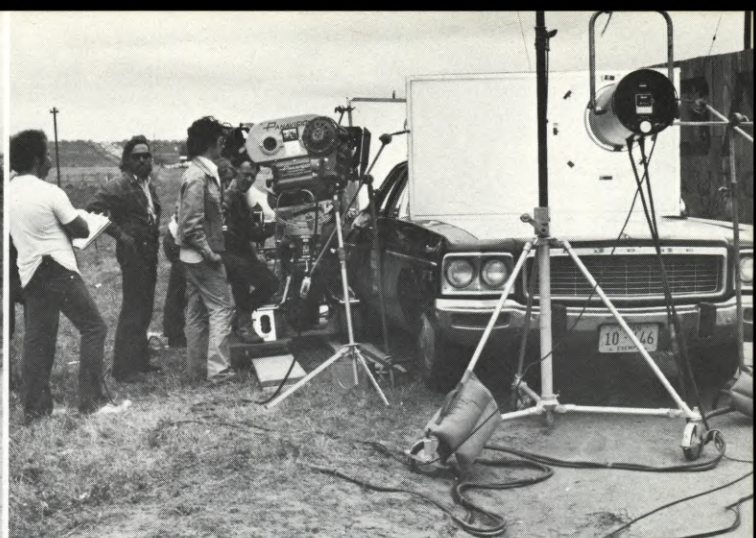
two Xenotech Sunbrutes are set up at either end of the car, shooting through sheets of plastic diffusion material.

I notice that there is not a generator anywhere around and that the cables from the xenon arcs lead, instead, to a camera truck equipped with a 12-foot crane. The truck belongs to Pat Hustis of Hollywood, who is on hand to run it, and he tells me that it is a brand new rig used for the first time on "THE SUGARLAND EXPRESS".

"I should call it the 'Xenon Express' because it was basically designed to run the xenon arcs," he says. "They had been using the battery cart system, which is an excellent system, except that it is a trailer which has to be towed. Jim Blair, our gaffer on this picture, came up with the idea of incorporating the batteries right into the structure of the truck. Jim came to me and wanted to know if I could build a 36-volt, 350-amp-capacity battery system into the camera car. In that way, they would have the power supply for the xenon arcs without having to pull the battery cart—which would make for greater versatility in scenes where we're towing an automobile. So we sat down in my

(LEFT) Unique camera car designed and operated by Pat Hustis features a 12-foot boom and an array of batteries concealed in various areas of the truck's body, so that banks of lights can be run without resorting to usual battery cart. (RIGHT) Throw-switch on side of truck, which permits quick conversion from 120 volts, for conventional lamps, to 36 volts needed to run xenon arcs. About 70% of lighting on film was run from these batteries, eliminating noisy generator.





(LEFT) Xenotech Sunbrute lamps are beamed through mylar diffusion screens to provide soft fill-light for scenes shot inside the stationary car. These small, highly efficient lighting units (which are no longer produced) obviated the necessity of taking along cumbersome conventional Brute arcs on difficult locations. Cinematographer Zsigmond had previously used them to good advantage in shooting tricky sequences for "DELIVERANCE".

shop and figured it out and then made a 120-volt single-throw switch conversion to 36 volts. This makes it possible for us to run conventional lights on small sets and also provide 36 volts for the xenon lights—with all the power coming from the camera car. On this picture it's worked out exceptionally well. We've been working with a rather small crew and in quite limited work areas and we've found that about 70% of the lighting for the picture could be done from the camera car itself. A lot of the action involves anywhere from one to 140 automobiles in pursuit of the camera car and, with the aid of the xenon lights, we've been able to light 100 to 150 feet behind the camera car. These lights are also excellent when we're stuck with bright sunlight and have to fill the faces."

I'm intrigued with what Hustis has done with his new camera car—which, incidentally, doesn't appear any larger than a conventional rig—and I ask him to tell about how and where he stashes the batteries, how long the charge lasts and what is the recharging time.

"We found that when burning two
Continued on Page 611



(LEFT) Zsigmond checks camera mounted on platform on the front of police car. (RIGHT) Outrigger platform on side of vehicle permits dolly shots with Panavision R-200 camera moving from rear to front window, while the car is in motion driving down the road. These shots were made prior to the arrival of the Panaflex on location, which would have made things a bit easier.

(LEFT) Zsigmond and McLean check rigging of lights and remote camera on the hood of a car. (RIGHT) Police car rigged within an inch of its life with lights and remote camera held on by suction-cup devices and other supports. Since the main action of "THE SUGARLAND EXPRESS" is a prolonged chase, most of the action takes place inside the car, necessitating the design and rigging of many complex mounts such as this.



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cinematographers own their own light meters and through experience (and trial and error) become acutely tuned to the specific personality and calibration point of their meter. Thus, a cinematographer may find that he gets best results by using a "T" stop of 1/3 less than his meter indicates, or vice-versa.

If a meter is dropped or damaged, it should be sent back to the manufacturer for recalibration. However, the cinematographer will once again have to establish the meter's specific personality.

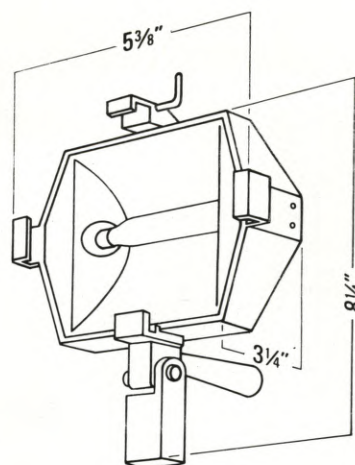
There are several additional comments on calibration. Many light meters use multiplication or ASA slides to facilitate direct "T" stop readout or allow extended range for high light levels. (See FIGURE 1.) These slides consist of a series of small holes. The manufacturer performs the fine calibration of these meters by adjusting the final dimensions of these holes. It is therefore a good practice to always keep a meter and its slides together and not allow slides from one meter to become confused with those from another. Meters of this type also employ a "photosphere" or disc type diffuser, usually constructed of translucent plastic. This plastic may become discolored with age, which will affect its calibration. Try to keep the sphere or disc as clean as possible and always cover the meter when not in use. If the sphere does become discolored, have it replaced and note the change it produces in exposure indication.

Also check that your meter gives the same readings in both the horizontal and vertical planes. If the movement is not perfectly balanced, the meter can give different readings depending on the position in which it is being held.

Last but not least, remember that the exposure meter is actually indicating "T" stops and not "f" stops. An "f" stop refers to the relative size of the aperture in the lens. However, there are light losses in the lens due to absorption and reflection. The "T" stop is a corrected "f" stop, i.e., it takes into account those internal losses. Therefore, when setting the iris of the lens, only the "T" stop has any meaning, the "f" stop scale has no relevancy to exposure. As a matter of fact, some zoom lenses will transmit less than half of the entering light and thus there will be more than a full stop difference between the "f" stop and the "T" stop.

With a firm understanding of calibration and "T" stops, we will next discuss exposure technique. ■

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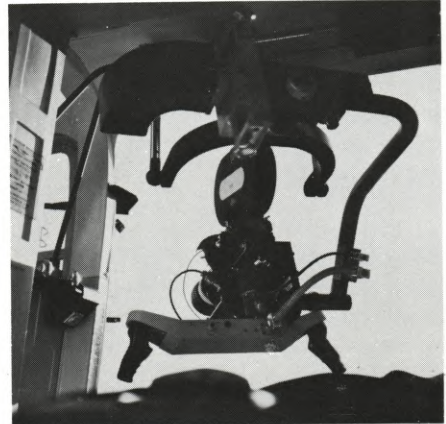


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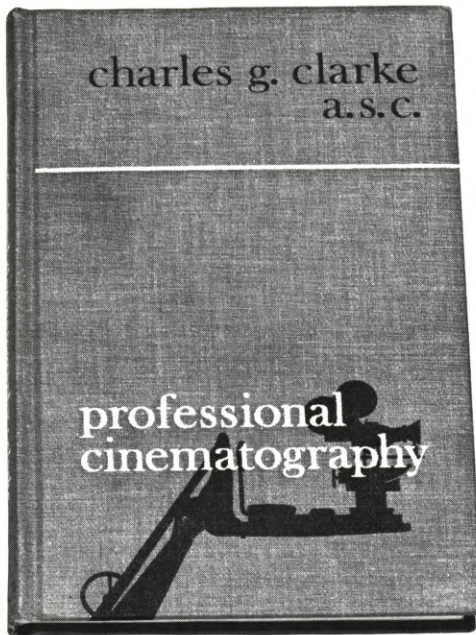


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ABOUT THE AUTHOR: Charles G. Clarke, ASC, a top Director of Photography at 20th Century-Fox for many years, and an ASC member, taught Advanced Cinematography at the University of California at Los Angeles, where he recognized a need for practical professional guidance for students striving to be the industry's future Directors of Photography. It is this need which has given rise to his publication of a book on the subject and subsequently the latest revised edition of Professional Cinematography. The first edition of this valuable book has become required reading at many universities and schools offering courses in cinematography.

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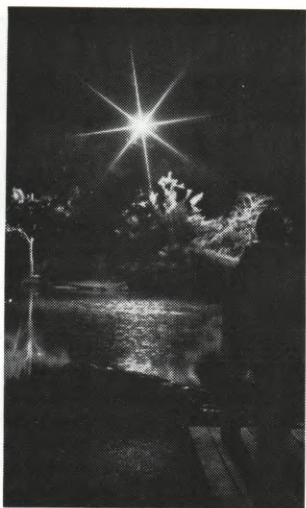
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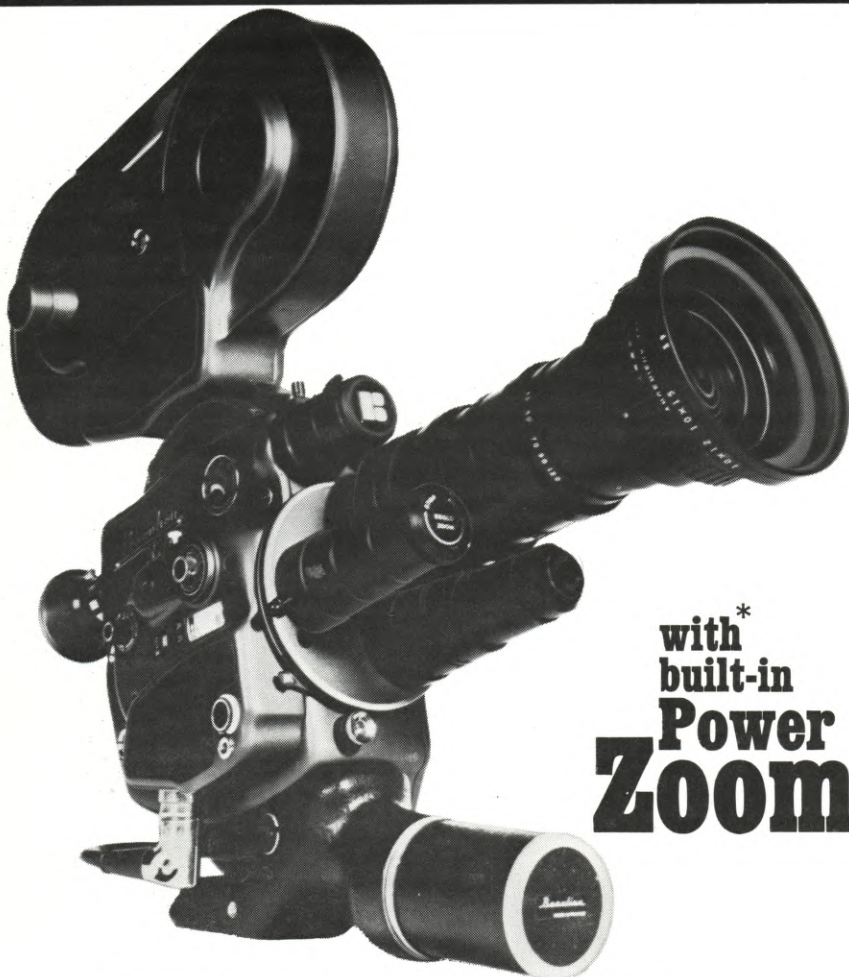
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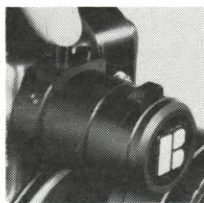
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Continued from Page 593

sound-dampening material. I feel that the official barney sold by Eclair is designed primarily for tripod shooting. It is cumbersome and too large for hand-held work. In addition, its bright blue color is a disadvantage, for it attracts attention when what it should do is blend in with the color of the camera, which is black. I know that the Eclair is supposed to be self-blimped, but magazines, especially rented ones, can vary in age and condition and these differences often result in noise levels that exceed what I would consider acceptable for close interior filming. Since the sound problems in this kind of work are so critical to start with, I felt I should try to help out as best I could, so I used my sound barney most of the time.

I used the Angenieux 12/120mm zoom lens. I usually worked fairly far back from my subjects and tried not to do too much zooming if I reframed or panned from one person to another. Instead of changing the focal length of the zoom, I would follow focus, trying to minimize the psychological effect of emphasis which the zoom shot always gives. I also avoided the extreme close-up which I feel creates false tension and is overused in this kind of filmmaking. I like to include backgrounds and favor the medium shot. In this way, I let the audience make the choice between watching a person's facial expression or his "body language", which often reveals more of what people are unconsciously doing or feeling. Detail is important and I always watch for it. A person's character often can be seen in his hands and how he uses them. Feet, too, can be revealing and two members of the family, Grant and Michele, often expressed themselves more in this manner than with their hands. I also like to hold on people between lines of dialogue. Often their pauses are more interesting than their words. Impatience in this kind of filmmaking yields nothing and an unmotivated pan or sudden move will often spoil what otherwise might have been a good shot.

We used crystal-sync in the camera and recorder, so there was no physical, umbilical connection between the two of us. This is absolutely crucial to *cinema verité* shooting. Though you have to be more careful in slating rolls, it totally frees the camera/sound team to move as they wish, independently of one another. Camera placement need not be sacrificed to sound position and vice versa.

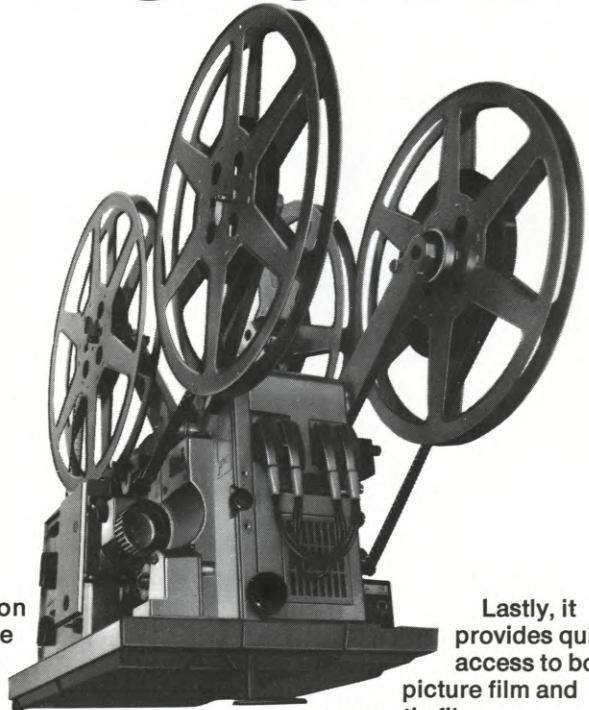
Our system utilized the Beala crystal

motor and the internal module of the Nagra IV. Both units held up throughout the seven months and we had no problems with floating sync. However, I must point out that in this type of shooting the camera/sound team must develop a kind of choreography where both parties are aware of each other all the time. The cameraman must listen to the dialogue and the sound recordist must watch what the cameraman is shooting. This is such a simple rule that it is surprising so many people ignore it. The idea here is to integrate sound and picture in the most sophisticated manner possible. It can't be done if either party has a chauvinistic attitude about his or her job. Susan and I have developed a set of subtle signals between the two of us and these help a great deal. For example, she can tell whether I am shooting wide or tight and I can tell whether she needs to go in closer for better sound.

We modified a Nagra IV so that it could accommodate a seven-inch roll of tape instead of a five-inch one. This allowed Susan to record 45 minutes, or four complete camera rolls, using Scotch 203 at 7½ ips. We built the extender plates and Ryder Sound in Hollywood sold us the new plastic top. One problem in making this modification must be pointed out. With the 7" top you can no longer stand the recorder on end. Also, your original case will be of no value. We solved this dilemma by getting Al Compos of Western Costume to make a new leather case for us in which he inserted blocks under the machine so it again could be stood on end. We also made a pouch on the outside of the case for extra tapes and accessories. We started with two basic microphones, the Sennheiser 805 and 404, which Susan always had plugged in and ready to use. The 805's reach and the 404's omnidirectional qualities allowed her to contend with different sound situations; when used in combination they blend well and greatly assist the miking of more than two people at a time. Because the 805 mike is often "directed" as people move, Susan recommends a cloth cable (the kind used on sound booms) rather than a rubber one to eliminate annoying "cable" noise.

Susan discovered, however, that these two mikes were not sufficient for all the sound situations she found herself in. Particular problems occurred in locations with a high degree of background noise such as restaurants. To solve these problems, we turned to the Vega wireless microphone system. Susan carried two sets with her at all times and they always worked. Not once did they

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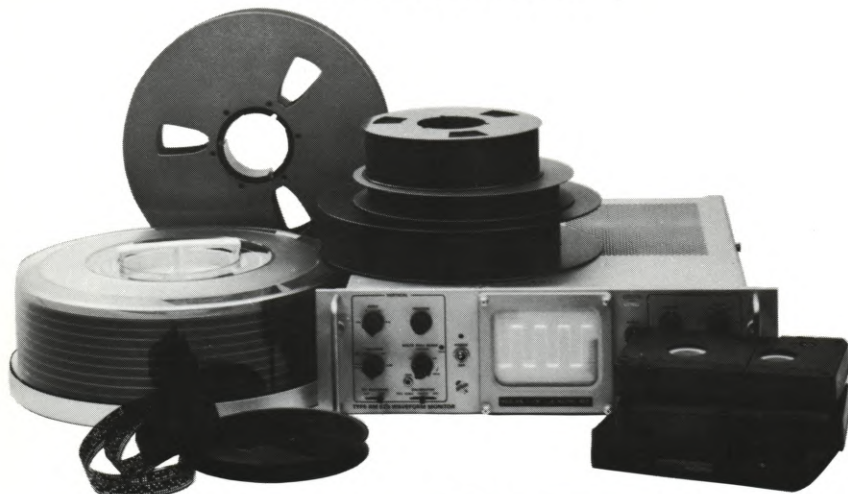
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break down or pick up any outside interference. Susan wore the receivers on her back, either singly or together in canvas bags and, at times, had two Vegas, plus the Sennheiser 805 as an open mike, all operating at once (the second Vega going into the line connection through a BSII pre-amp). It must be noted that to use the rather bulky Vega receivers in a canvas bag on one's back, you have to use an elbow connector on the antenna to change its direction.

We found the Vegas valuable in many ways. They freed both our subjects and us. Susan didn't have to follow so closely as she would have with an open mike; I was able to get extreme long shots without having to worry about microphones in the shot; and the Louds often forgot they were wearing the transmitters and were thus less self-conscious about being recorded. Restaurant scenes (and there are many important ones in the series) would have been all but impossible without the close lavalier miking the Vegas give. Sometimes only one Vega worked out quite well for us. During our business trip with the father, we often had to shoot near immense strip mining machines. In these situations, Susan would place one Vega on the father and this mike would be sufficient to pick up the voice of the mining engineer he would be talking to, plus the background noise of the machinery.

In the house Susan used many "planted" mikes, selecting for this purpose the Sony ECM-16 condenser microphones. (It is advisable to epoxy three alternate holes on the front of the mike to make it more compatible with the Sennheiser 805 and 404.) These microphones were placed in positions where people would congregate regularly, but, for geographic reasons, were "boxed-in" areas. Susan couldn't stand or sit in such places, for she would be in the shot. Long mike cables extended from the Sony ECM-16's and were coiled in convenient places. So all Susan had to do was plug them in. Even when connected in this way, cable slack allowed her to move around freely. The most successful planted mike was in the chandelier over the dining room table where as many as six people were recorded while eating, using only the small Sony ECM-16. In addition, Susan had two telephone taps (for the two different exchanges in the house) which plugged into the line input of the Nagra and enabled her to record both sides of phone conversations. Our trickiest sound problem occurred when conversations took place across large rooms in which case Susan had to use combina-

tions of the Sennheiser 805, 404 and planted mikes and mix them.

In continuous shooting, Susan always kept the Nagra running while a fresh magazine was being put on the camera. We didn't assume that dialogue not being filmed was useless. A clever editor can always insert it in a scene if necessary. Susan always kept a detailed log of what we shot on the back of the tape boxes. This proved very valuable for syncing and editing and is something you really have to do once you start to shoot large numbers of rolls. Throughout, Susan always remained "portable", for often we found ourselves having to move from one location to another with no warning at all. Many times, microphone placement decisions had to be made instantly with no time for setting up. As a general rule, Susan moved only when she had to and, if possible, would stay in one position once she had found it, allowing the camera to work around her. In this way our choreography didn't get too confusing.

The technical considerations discussed in this article were developed by us through a trial-and-error learning process. This type of shooting is not easy and requires a great deal of professionalism, for you really have to know how your equipment works and how best to use it in unpredictable situations. Another aspect of *cinema verité* filmmaking to consider is a knowledge of editing in the shooting. You must intuitively be able to sense if a scene is flowing well and that an editor will be able to achieve in the cutting room all that you saw in person. But there is also an intangible element to the success of *cinema verité* and that is the relationship between the camera/sound team and the people they are filming. You simply cannot remain a cold, objective observer. You must form a relationship with your subjects based on mutual trust and respect. People simply will not respond to the camera if they feel the person behind it is not sympathetic to them.

The series would not have been possible without the total cooperation of the Loud family. These remarkable people allowed us to live with them as members of their family and to share their sorrows and joys over a seven-month period. Though requiring a great degree of dedication, stamina and patience, this form of filmmaking is, to us, the most exciting of all possibilities. To quote Margaret Mead, "It is, I believe, as new and as significant as the invention of drama or the novel—a new way in which people can learn to look at life, by seeing the real life of others interpreted by the camera." ■

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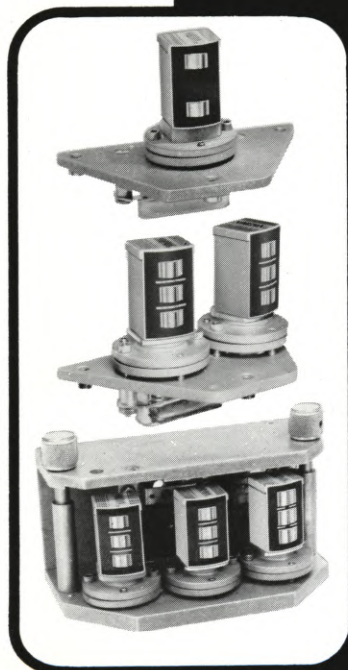
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FILMING "SOLO"

Continued from Page 595

After six days of clouds, fog and light snow we got a break in the weather. The mountains were great. A huge range furrowed with canyons through which once flowed majestic glaciers. 2,000-to-5,000-foot walls which were so sheer that the snow never touches their faces. The whole place was just dripping with light, the warm flood of *alpenglow*, the morning sunbursts, dashing waterfalls with their marvelous abundance of irised spray. We shot everything. Then we had a minor accident.

Tom, while helping Roy out of a crevasse, had suffered *enfootment* (a common accident on the ascent occurring when the foot of the first man lands in the face of the man behind him). But we had twelve rolls of good footage and were out of film, food, and batteries so we started down.

Back at the Icefield Lodge, the long awaited postman had arrived. The three of us broke up into three little groups, each eagerly reading whatever messages had come through from the States. Tom received a cherished card from his wife, Gloria, reading: "Tom: Having a wonderful time. Gloria." To compound matters, the preceding night's weather forecast had been ominous. We know that any day now we would be in for the onslaught of The Drizzlies.

Shrewdly perceiving a drop in morale, I decided that we had enough ice footage. As the clouds closed in we jumped into the truck and headed back to the U.S.A. and the Tetons in Wyoming about 700 miles to the south. We stayed on the obscure roads, reasoning that there was more to see on narrow twisty roads than on wide straight ones. Actually we were always looking for situations to use my four-wheel drive. "I guess we just didn't know any better," I was later to tell the judge.

Reconnaissance at the Canadian border showed that this route would not "go". The gate was locked—"Closed for the Season". As the leader, the decision was up to me. To retrace our tracks and make for the next border crossing was absurd due to the onset of The Drizzlies. I couldn't risk it. Tom and I would reconnoiter more thoroughly.

After crossing the front lawn of the deserted patrol house, we enfiladed a cow pasture, skirting the bull, and then came head up upon a fence. I looked at the terrain. To the east I caught sight of what looked like a breach in the fence. Then I looked at my watch. Precious time was slipping by. "Tom," I said, "we'll have to climb it." "I'm not

afraid," Tom said. Up and over we went and quickly discovered that the route might go. No time for reflections—we must get the truck through the *fluffes* (*Fluffe*—the space between two trees. Since this varies widely, not all *fluffes* are difficult.) and over to the break in the fence. "Thank goodness for four-wheel drive," Roy said with reluctance.

We made it. We had done the impossible. A savage exultation suffused us. We flexed our muscles and hoarse involuntary animal cries of sheer joy tore from our throats and sounded all over the countryside. Then I gazed around. I could see in the distance a sight that froze my heart with fear. The Border Patrol Truck, also with four-wheel drive.

The \$1,200 fine wasn't in the budget but I knew Dave would understand when I placed my one call to him. Fortunately he wasn't in and we got off with a \$25 fine and a promise never to do it again.

Roy had to return to work, so Chris came up with a Dynalens for the helicopter summit pullback shot. From the time he landed in Jackson, the summit of the Grand was socked in. After three days it broke enough to go up and look. Too windy. Then a new problem every day. Dynalens won't work. Helicopter has to go for another job. Then finally I climb the mountain and, for half an hour, watch the new supercharged Bell helicopter try to climb to 14,000 feet. Actually he started his approach at 15,000 and came towards me into the wind. But, as he got close to the mountain, the down-drafts knocked him down to about 12,000 feet. The pilot finally psyched out when he almost crashed into 12,000-foot Teewinot, so...

So we moved to a lower mountain range, where he'd have more power, the Wind Rivers. I wanted to be on the tallest peak in a group of spectacular summits. So we rented a Cessna 180 from some 19-year-old kid named Bill. It was rough flying. Our chopper pilot threw up twice all over the instruments. But Bill came through and we elected to try Mt. Temple.

Chris (Holms—editor on "FIVE EASY PIECES") went up and literally made the chopper pilot do it. The guy had 10,000 hours, but all in Nam and mountain flying is completely different. I climbed Temple and Chris forced the chopper through fifteen pullbacks. Eighteen seconds of good footage for \$3,200.

In summary: Budget \$3,000—actual cost \$17,000, including blow-up. Eight cameramen—none had ever shot before and only two had ever climbed before. All shots were taken just as they appear,

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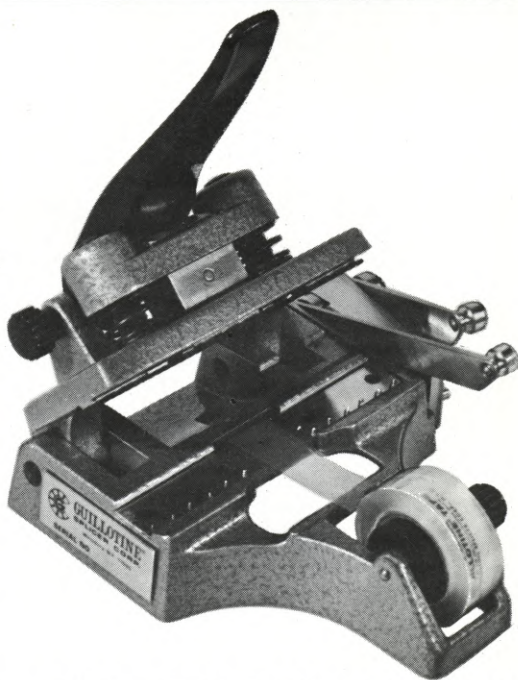
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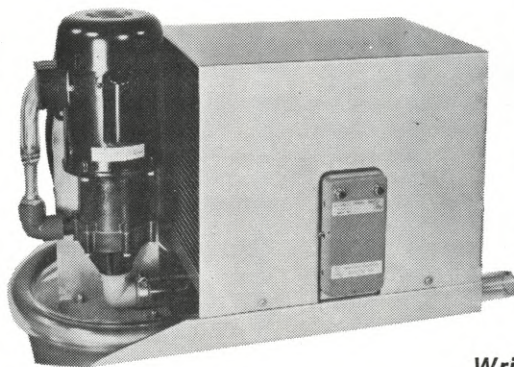
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NEW TRADE PAPER FOR BROADCASTING INDUSTRY

A new trade paper for the British broadcasting and TV/radio advertising industry will appear for the first time next week.

Called "Broadcast", it is a completely restyled and relaunched version of "Television Mail," the newspaper which has been serving the TV advertising industry for the past fifteen years.

"Now that broadcasting has become a mature, pluralistic industry, we felt the time had come to establish a trade paper which covered every aspect of this half-billion pound business," said Rod Allen, editor and publisher of "Broadcast", this week. "We shall naturally continue to cater for the advertising agencies and TV commercial production companies with our comprehensive coverage of the television advertising business. But we shall also cater for people working in the ITV programme contractors, in the BBC, and in the many, many independent companies which service the broadcasting industry. We shall also continue with our unique coverage of the growing commercial radio industry."

The paper's size changes to the international A4 magazine format, and the number of pages will increase. Among the features which will be of particular interest to broadcast professionals are Bernard Davies's respected column of programme criticism, "One Man's Television", and Roger de Freitas's unique weekly commercial radio column. New members are being added to the editorial team in preparation for the relaunch, which has been planned for the past six months, and a circulation promotion program is under way directed particularly at management and production executives in the ITV companies and the BBC.

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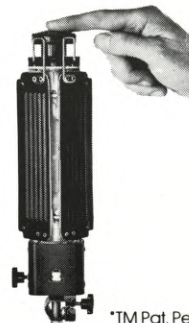
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PANAFLEX MAKES DEBUT

Continued from Page 599

xenon arcs there's about a 250-ampere-hour drain," he says. "This means that the batteries will last for about 30 minutes of actual filming time. Into the chassis of the camera car we've built a 120-volt (or 36-volt) 250-amp DC generating system that runs off the truck engine, which allows us to recharge at almost the same rate as the current is used. All day, between shots, we keep the engine running at full charge. Then, at night, we use a stationary charging unit that we plug in at the hotel (or wherever we happen to be) and this saves the truck engine from having to run so much during the day.

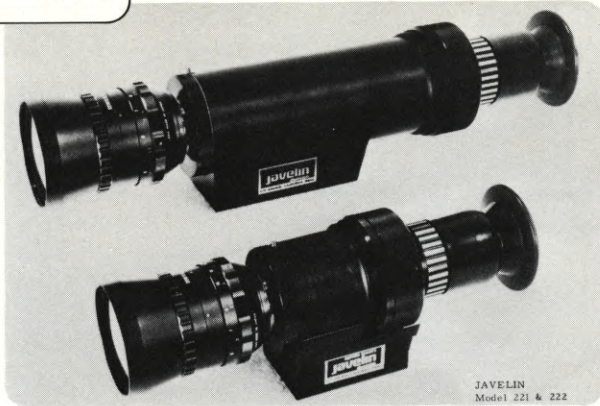
"The construction of the battery pack itself presented an extremely difficult problem because, in order to have enough capacity to last us at 250 amps for 30 minutes at a time, we found that we had to use very large Trojan batteries—and space is always a problem in any kind of mobile unit. We ended up by using 96 feet of 00 cable just to connect all of the batteries together, because they're set throughout the entire vehicle and wired into a central triple pole, with a triple throw-switch that converts the current from 120 to 36 volts. Distributing the batteries throughout the vehicle is actually advantageous to the operation of the camera car, because I was able to sit down and figure out where extra weight was needed to improve ride quality. For example, on this camera car we have a crane which extends 12 feet and it requires 1,200 pounds of counter-balancing. By the time you get all that stuff on a camera car it suddenly becomes a truck and, without proper weight distribution, you start to lose ride quality. It took a little time and thought to figure out where to locate the batteries to counteract this effect, but we built compartments under the hood, behind the seats and in the frame rails, so that the weight distribution is just right."

Since more and more shooting is being done on location these days—and since generators are a cumbersome, noisy drag at best—I want to know more about how this system can be used with conventional tungsten and quartz lamps.

"No problem," says Hustis. "We simply throw the switch to the 120-volt position and then it works the same as a conventional battery pack—and, of course, we have the 120-volt charging system built into the truck. Using 100 amps of conventional 120-volt lamps—which is what it takes to light one or two automobiles—we're good for about one-and-a-half hours of actual filming

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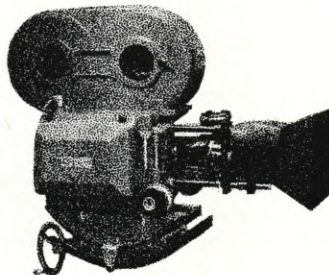
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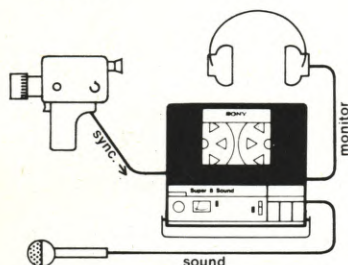
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time. That's almost a full day's production. We can recharge between set-ups or at lunchtime or whenever it's convenient. Using the truck engine is, of course, noisier than using a conventional plug-in charging system, but it's not offensive. You can still work around it, although you can't actually shoot while it's running. Prior to this we had to use conventional 400-amp aircraft engines to charge the batteries between shots, but they're too noisy, a bit offensive when you're trying to sit and talk. We started construction on this car last November—a camera car with a crane—and we planned to use the aircraft-type generator, but then along came Mr. Blair with this battery idea and we put all the boys in the shop to work on it with all of our brainpower. We designed and built the system specifically for testing on this picture and it's been working perfectly."

Round about mid-day the precious, newly-arrived Panaflex camera is broken out of its cases and set up. Not since the Arriflex 35BL camera was introduced during filming of the Munich Olympics have I seen a piece of equipment awaken such interest in a crew of technicians. The Panaflex is clearly the "darling" of the company. Everybody wants to pick it up, look through the lens or just pet it. They treat it as if it were a baby—ladling out great gobs of Tender Loving Care and exercising extreme caution in handling it, even to the extent of binding shock cord around it when it's mounted on the crane "just in case". Next to its "big brother", the imposing Panavision R-200 camera, the Panaflex looks almost like a toy, but it functions like the incredibly sophisticated electronic instrument that it is and everyone seems delighted with its performance.

After a better-than-average location lunch, I find myself in conversation with Director Steve Spielberg, and it runs like this:

QUESTION: Can you describe the visual style which you're using to put "THE SUGARLAND EXPRESS" onto film?

SPIELBERG: We've been filming this picture in a very simple direct way, without anything fancy. The action is the eccentricity of this film. so Vilmos and I have been shooting it in a very straightforward manner. I remember that when I was beginning in TV I used a lot of fancy shots. Some of the compositions were very nice, but I'd usually be shooting through somebody's armpit or angling past someone's nose. I did a lot of that early on and got it out of my system. I finally became less preoccupied with mechanics and began

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to search more for the literary quality in the scripts I was reading. I believe I've gotten to the point where I can appreciate a good piece of material and translate it into film without my own ego showing up on the screen. I think that's what has happened on "THE SUGARLAND EXPRESS".

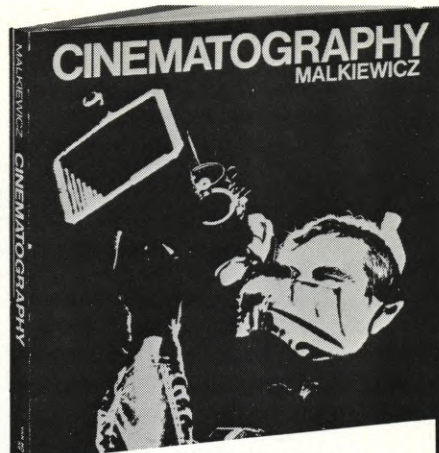
QUESTION: In terms of dramatic approach, what role does your camera assume in the telling of this story? In other words, is it predominantly objective or subjective?

SPIELBERG: We use the camera in two different ways: to represent the point of view of the Highway Patrol officers, and also the point of view of the fugitives inside the car. It's up to the audience to determine who's right or who's wrong. That's what this picture is all about. So, in that sense, I think the camera is nothing but a spectator—though Vilmos and I have let the camera editorialize when that's been necessary.

QUESTION: Have you been doing anything that you feel is visually innovative in this picture?

SPIELBERG: There is one thing that I've been doing that I've never tried before and it has to do with revealing a surprise to the audience. For example, there is one sequence in which I wanted to show police car 2311 running out of gas. The captive patrolman, in a private, personal effort to stop the fugitives, notices that the gas gauge is down to "E", but he decides to ride it out and see what happens. I chose to shoot this sequence near a very large dip (about 50 feet deep) in a major highway. We shot it with a 1000mm lens and, in the background, you'll see 15 police cars going into the earth behind a second horizon line that is very much in the foreground and so soft that it looks like the police cars are being eaten by the ground. Then the next thing you see, in almost startling closeup, is our car 2311 rising up out of that same foreground cutting piece. You see the three people in the car and then you hear the sound effects: *sputter . . . sputter . . . sputter . . .* The car stops as it runs out of gas and begins to sink back down the hill. All the way through this movie I've been using the terrain as interesting discovery pieces and it's worked out just beautifully so far.

QUESTION: I've noticed that there seems to be a very special working rapport between you and the Director of Photography on this picture. What is your usual approach in selecting a cam-



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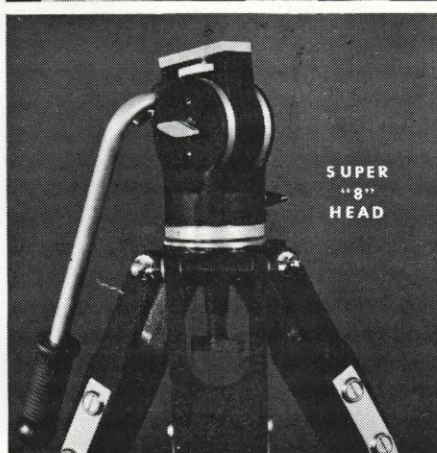
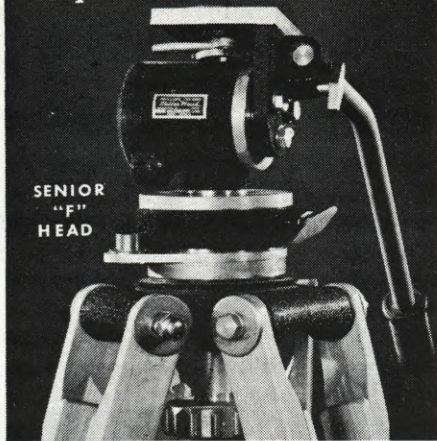
eraman to work with, and how did you happen to choose Vilmos Zsigmond to photograph this picture?

SPIELBERG: Up until now I've only worked on TV episodes and features for TV, but my usual approach to selecting a cameraman is to ask myself two questions: (1) Do I like the man personally?, and (2) How big is his ego? If his ego is too big, he's not going to want to do all the shots I want to make. He's going to give me a rough time and I'm not going to use him. But if he's the kind of guy who will experiment and try things he's never done before in his life—who will light a scene with eight foot-candles, if that's all that's available—then I'll grab him in a minute. In other words, I look for a cameraman who's not going to fight me by saying: "It can't be done." I'd seen "McCABE AND MRS. MILLER" (which is my favorite Vilmos Zsigmond film) and "IMAGES" and "DELIVERANCE" and parts of "THE LONG GOODBYE", and I'd heard about this crazy Hungarian who lights with six foot-candles and who'll try absolutely everything—so I sent the script to Vilmos and he loved it. I explained to him that I wanted to shoot this whole picture in the rain with windshield wipers going all the time, and he committed to it. Well, we haven't shot in the rain during the last 47 days, but we've had other interesting weather effects and, to me, he is the biggest joy on this film. It's great when you find a cinematographer who also can function as a director's sounding board, a kind of Devil's Advocate. It's an enormous help when egos don't clash and you can creatively exchange thoughts—not on just the momentary problems, but on conceptual ideas, as well. Vilmos is the kind of cameraman whom I'd invite into the cutting room, because he would have something to contribute. I would never do that with any other cameraman that I know. He's an amazing man.

QUESTION: What is your opinion of the new Panaflex camera?

SPIELBERG: It took a long time getting here, but it was worth the wait. It's a sensational tool, and I think it's going to revolutionize the business. Many times, in filming for TV, I've been romanced by a shot and have sacrificed performance because I was trying to get in real close with a 20mm lens. I like very much to keep the foreground and the background exceedingly sharp, and then allow the audience to choose what is commanding attention in the scene. Anyway, because of the noise from the

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camera working that close to the mike, the poor actors would have to come in later and loop the whole scene. The Panaflex is so quiet that it eliminates the necessity for looping. It's especially valuable on a picture like this in which at least 60 percent of the action takes place inside a car, but you still want to get a lot of variety. The Panaflex is so small—especially with the 250-foot magazine—that you can do just about anything with it. It's great for shooting in close quarters. You can't get in that close with the Panavision R-200 because it's so much bigger. For weeks on this film, while waiting for the Panaflex to arrive, we've had to take the R-200 and rig it on a special dolly track mount next to the car and dolly back and forth, because I couldn't actually stick it through the car window. But you can tie the Panaflex onto a board, start it going, shish-ka-bob it through the window and into the car and then pull the board out through the opposite window. In other words, with the Panaflex you can make a "dolly" shot straight through the guts of the car, without having to zoom from window to window. It's an amazing camera and I'm sure Mr. Gottschalk is very proud of it. The only sad thing is that it's late—about 20 years late.

That evening, in the projection room set up in the hotel, dailies are screened and I get my first chance to see what the Panaflex has been able to do in action. The results, especially the scenes shot inside the car while it is traveling, are nothing short of incredible. One in particular sticks in the mind. The operator, obviously riding in the back seat, starts on the husband and captive policeman in the front seat. It pans around to show Goldie Hawn in the back seat, then continues around so that we can see through the rear window that Ben Johnson, in another police car, is rapidly gaining on them. The camera pans front again as Johnson draws abreast on the left side. There is an exchange of dialogue between the two drivers. Then Goldie sticks a shotgun out of her window and, in ladylike tones, tells Johnson that if he doesn't get the hell out of there she'll blow his bloody head off. He falls back and the camera pans to the rear with him. A moment later, in the same shot, he draws up on the opposite (right) side of the car and there is another exchange of dialogue before the lead car pulls away from him and the camera settles on the men in the front seat. In the meantime, the Operator, probably tied in a pretzel by now, has covered a panning arc of at least 480 degrees in the one shot. It is the kind of

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shot one could visualize being made only by a midget contortionist hand-holding something like an Eyemo—but here it all is on the screen, with usable sync dialogue, yet.

Dick Zanuck leans over to me and says, "Incredible! There's never been a shot like that on the screen before." I'm willing to bet that he's right.

What is so impressive about these dailies is that, while the camera does some impossible things, it never calls attention to itself. There are no tricks for the sake of tricks. Even the zooms are so skillfully orchestrated that they are covered by the action and remain totally unobtrusive. When I mention this fact to Spielberg later, he says, "Vilmos is the only cameraman I know who thinks like me in terms of lateral dolly moves and in terms of hiding the zoom. I hate to see unmotivated zoom shots, and I see them so often on TV—*zoom in, zoom out!* Vilmos feels the same way about it, so we disguise all of our zoom shots. You don't notice that the camera has gone from close to far. By the time you would normally become conscious of the zoom a cut has been made and you are only faintly aware that the scene has assumed a different look. When you are working with what is essentially a caravan—as we are all the way through this picture—it could become very stagnant if you just kept cutting from close shots to long shots, so we've kept the camera moving but, at the same time, we've managed to disguise the moves, and that has given the film an interesting look."

The next morning, crack of dawn, we drive out to beautiful downtown Floresville, where the "big" sequence of the picture is to be filmed. By this time, according to the script, the fugitive car has acquired a caravan of followers, including hundreds of admiring fans (all on wheels) and sixty or seventy police cars from various headquarters. The caravan inches its way down the main drag, as the entire town turns out to stage their bucolic version of a royal welcome. The fully-uniformed high school band (complete with majorettes) is tooting away, trying to get it all together. Mounted Shriners, togged out in their ritual finery, fight desperately to control their nervous horses. A country-western band on a flat-bed truck is banging out rhythms never heard on this planet before. A miniature ferris wheel, set up in the street, rides the kiddies dizzy. Cold pop and cotton candy vendors are doing a brisk business. It appears that all 3,710 of Floresville's residents, plus dogs and cats, are on hand to join the fun—truly a sight to delight the heart. One wide-eyed young

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thing, practically orgasmic with glee, sighs: "This is the most exciting day of my life!"

In the midst of the chaos, a huge Chapman crane has appeared on the scene and taken up station at one end of the main street. The Panaflex is broken out and mounted on the end of the boom, with a grip tying shock cord around it "just in case."

Then the fun begins. The high school band, in a flourish of sour notes, begins to play. The majorettes begin to twirl. The crane starts to move down the street through the crowds, booming up as it goes. The diminutive Panaflex looks a bit ridiculous perched on the end of that huge boom, but it's getting the picture. At the far end of the street the crane booms down to embrace the Western band, by now in a lather of country rock. It's mind-boggling!

After eight or ten takes, cutaway shots are made, point-of-view shots from inside a bar out toward the street, and quick cuts in the town square where people are hanging from the tower windows of the courthouse and climbing trees to catch the action. Both the Panaflex and its "big brother", the Panavision R-200, are burning film like crazy.

Later, back at the hotel, Zsigmond and I have a chance to talk and the talk goes something like this:

QUESTION: Can you tell me a bit about the general photographic style you're using on this picture?

ZSIGMOND: Well, we aren't really going for a definite style on this picture. What we're going for is reality. We just want to photograph the action as real as it looks. We would like the audience to feel that they're with us every single minute—inside of the car, outside of the car, everywhere—and we would really like not to be noticed at all. That means that we're trying to avoid lighting the film. We're trying to make it look as though there're no cameras and no lighting involved at all. I tried to do the same thing on "DELIVERANCE" and most of the time it worked, but I think this is going to be even more "real" than "DELIVERANCE".

QUESTION: What are some of the unique challenges of this picture?

ZSIGMOND: Most of the action—50% or more—takes place inside a car and we have a young director who really wants to do the impossible. He wants to shoot the car from all angles at the same time. Many times he'll come up with an idea and he'll ask: "What would happen if

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you put a camera inside in the middle of the car and pan around 360 degrees?" The funny thing is that when we do the shot it turns out to be 480 degrees. Obviously, if you think about the problem, you will realize that we can't use any lights at all inside the car. We're making a pan all the way around and there's no place to put lights. Another problem is how to record detail in the faces without burning up detail of what's outside the car. You don't want the outside so overexposed that you can't see anything, but at the same time, you want to see the faces of the actors inside the car. Obviously, you cannot accept a silhouette.

QUESTION: I'll bite. How are you managing it?

ZSIGMOND: Technically, the only thing that helps me here is the technique we've developed for flashing the film. We've experimented with it on previous films and found that it works. Many times, on this picture, it's sunny outside the car and there is so much contrast that the only way I can help the situation is by flashing the film more than usual. Quite often we're using as much as 20% to 25% flashing, but it's been working fine. You see the detail in the faces, as well as the detail outside. What we're really doing is altering the characteristics of the film in order to handle this very contrasty kind of situation.

QUESTION: Does that mean that you haven't been using any lights at all inside the car?

ZSIGMOND: Let's put it this way: If we're in a situation where we can't use lights, then we don't use lights. But if we're doing shots where we don't move around, or where the car is stopped, then we do help the faces by using some lights and I can cut down a little on the flashing, because flashing is not really an answer for everything. I mean, whenever I can I will try to get the best result. The problem is how to blend that scene in with the others so that it doesn't look like a jump. You really have to be very careful how you do it. Even when we do light, we under-light the scenes. We're pushing the whole picture one stop in processing.

QUESTION: I can see how flashing would help expose the detail in the faces, but what about the exterior background outside the car. It's already so bright that there would seem to be a danger of really burning up those areas of the scene. Isn't that so?

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ZSIGMOND: *The interesting thing about flashing is that it really affects just the shadow areas. Let's think about the lighting ratios. Let's think of the places where the sun lights up a face, and we'll call that 100% lighting. The shadowy part, which catches some reflected light from the sky, has only 5% lighting. Now we are dealing with a ratio of 20-to-1. If you add 10% flashing to this, it really means that you are adding 10% more light to both sides of the face—the lighted area, as well as the shadow area. Now the original 100% becomes 110% and the 5% becomes 15%—so your ratio changes to something like 8-to-1, which is a ratio that the film can handle. It would not have been able to handle the 20-to-1 ratio. It's really like adding fill light. You use lights whenever you can, and when you can't use lights you use flashing.*

QUESTION: You are the first cinematographer to use a production model of the Panaflex on a feature. What are your impressions of it?

ZSIGMOND: *I think it's fantastic. It's like you dreamed about a camera with which you could do everything, and with this camera, I think, you can do everything. We've waited a long time for the Panaflex to arrive and we postponed shooting some scenes until then, so that we could shoot with sound inside the car. If we had shot with an ordinary camera, the scenes would have had to be looped. We tried to shoot inside the car with the R-200, but we just couldn't get the camera set in the right places. After six weeks of waiting we got the Panaflex and jumped right into shooting scenes with it. The results have been fantastic. One of the beautiful things about it is that you can mount the magazine in two positions—on the top or at the end. Most of the time, when shooting in the car, you have to mount the magazine at the back of the camera in order to get enough head clearance. You can also shoot through the windows and be high enough to see outside. I don't think there's any other camera that can do this.*

QUESTION: What are your reactions to working with this new young director?

ZSIGMOND: *Spielberg is probably the most talented director I've worked with. He's only 25 years old, but he seems to have had the experience of a man 40 years old. The way he directs a film makes you think that he must have many features behind him, but this is his first feature and it's really unbelievable. I can only compare him to Orson*

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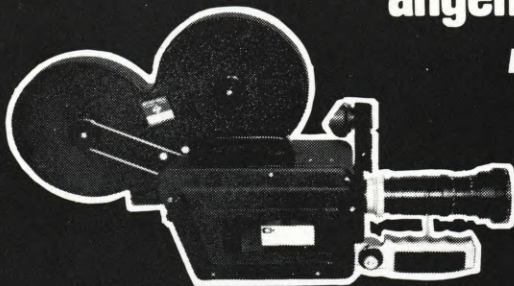
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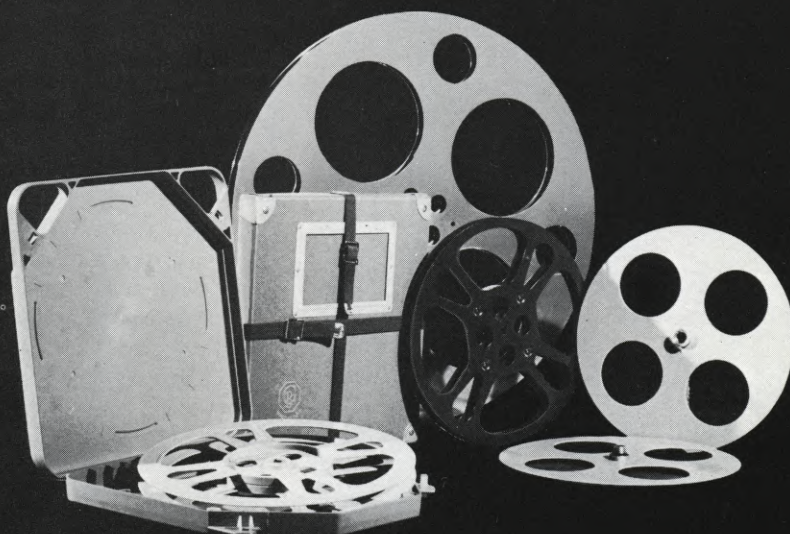
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Welles, who was a very talented director when he was very young. There's one great thing about him that I like very much. Most young directors, when they get their first film, somehow get timid; they pull back; they try to play it safe, because they are afraid that they will never get another chance to make a feature. Not Steve. He really gets right into the middle. He really tries to do the craziest things. Most of the shots he gets he could only dream about doing, up until now. He could never do them on TV. He did a TV feature called "DUEL" and it was magnificent, but he couldn't experiment much on that one. On this picture—where he has a nine-week schedule—he's really trying to fulfill his dreams. As a cameraman I think the best thing I can do for him is to really try to get the shots he wants. I never try to talk him out of a shot, even if what he wants to do seems impossible. Occasionally we just cannot do a certain shot he's dreamed about and I really feel badly, because I always feel, along with him, that there must have been a way to do that shot. But 90% of the time we succeed, because we both want to do the shot. Some of the people on the crew may laugh at us when we're going through the rehearsals and all that insanity, but at the end, when we've got it, they seem pleased that we did something that seemed impossible to do. ■

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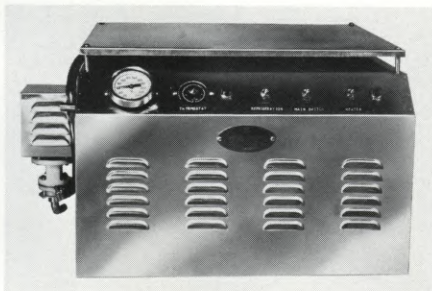
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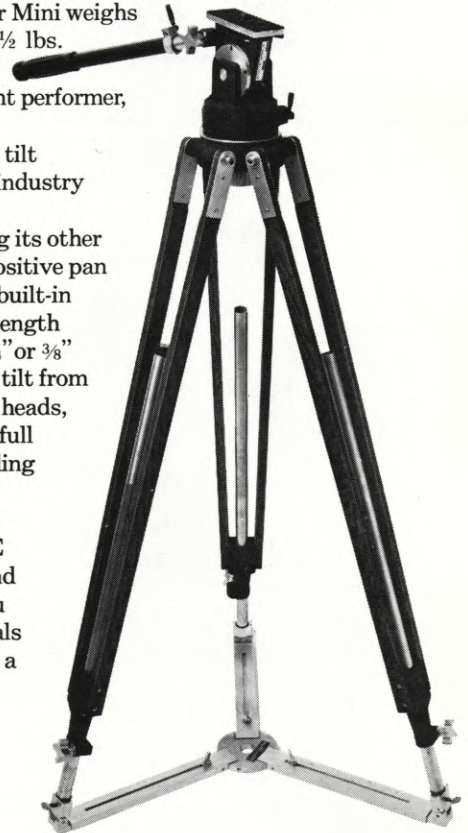
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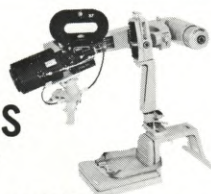
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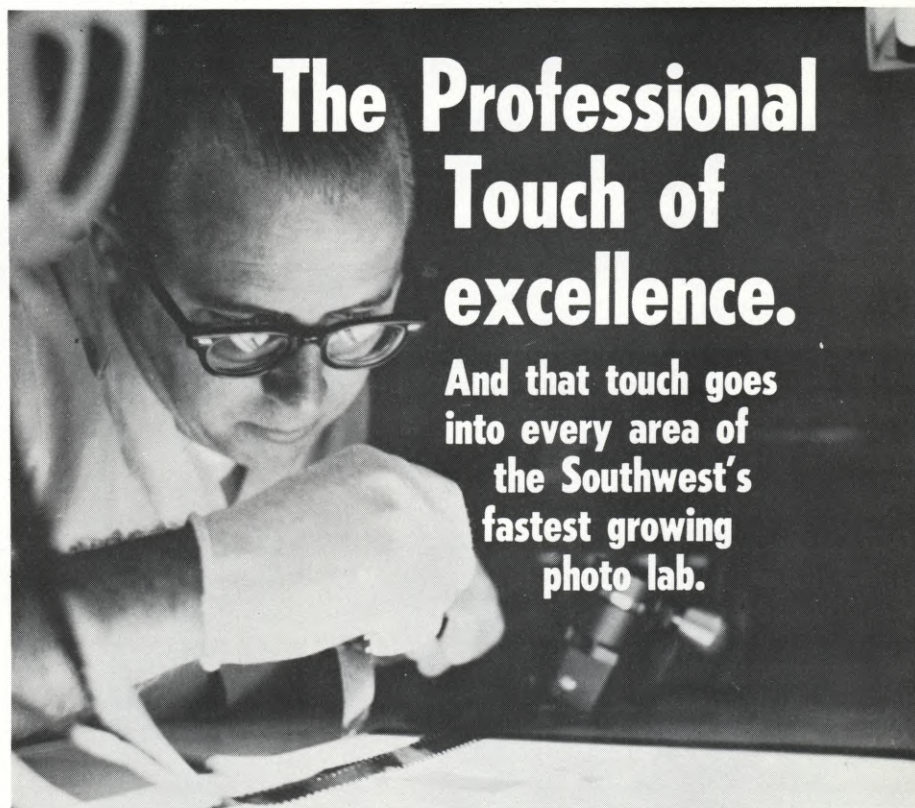
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"OSCAR" SELECTIONS

Continued from Page 555

orary Awards. These Awards, and all other Oscars, are presented at the Annual Awards Presentation, held for the past several years in the Pavilion of the Los Angeles Music Center.

Following the nominations, a series of screenings is conducted for the entire Academy membership, now numbering more than 3,000, at the Academy Award Theater. At the end of these screenings, a final ballot is sent to the entire voting membership who vote the final Awards in every category.

Tabulation of all ballots, whether for nominations or final Awards, is made by Price Waterhouse & Co., international auditing firm, and has been done by them for three decades with the utmost secrecy. Until the envelope is opened on the stage for each Award, the identity of each winner is a secret.

"Oscar", the film industry's gold-plated symbol of artistic achievement, has smiled upon many of Hollywood's top performers for their contributions toward the making of good pictures. In the years since the first Awards ceremony in 1929, some have been honored more than others for their talents and abilities.

With the advent of this year's 45th Annual Awards Show, which was presented on March 27, here are a few statistics on the top-ranking winners of both nominations and awards.

The best actress field is led by Katharine Hepburn, only female to win three Oscars. She received the statuettes for her performances in "Morning Glory", 1932/33; "Guess Who's Coming To Dinner", 1967; and "The Lion in Winter", 1968.

Six women have won two Oscars in the best actress category. They are Bette Davis ("Dangerous", 1935; "Jezebel", 1938); Luise Rainer ("The Great Ziegfeld", 1936; "The Good Earth", 1937); Vivien Leigh ("Gone With the Wind", 1939; "A Streetcar Named Desire", 1951); Ingrid Bergman ("Gaslight", 1944; "Anastasia", 1956); Olivia de Havilland ("To Each His Own", 1946; "The Heiress", 1949); and Elizabeth Taylor ("Butterfield 8", 1960; "Who's Afraid Of Virginia Woolf?", 1966).

Miss Hepburn holds top honors in the number of Oscar nominations, male or female. She has had eleven.

Right behind her is Bette Davis, with ten nominations. Greer Garson is next with seven nominations, including one win, "Mrs. Miniver", 1942.

Deborah Kerr and Norma Shearer have been nominated five times, with

Miss Shearer winning an Oscar for "The Divorcee", 1929/30.

The masculine side of the picture is considerably different. No male has won three Oscars in the best actor category and only three have captured the Award twice. They are Spencer Tracy ("Captains Courageous", 1937 and "Boys Town", 1938); Fredric March ("Dr. Jekyll and Mr. Hyde", 1931/32; "The Best Years Of Our Lives", 1946); and Gary Cooper ("Sergeant York", 1941; "High Noon", 1952).

Tracy has received the most nominations: nine. Laurence Olivier is next with seven nominations and one Award, "Hamlet", 1948. Right behind him comes Richard Burton with six nominations, one of which is for a supporting performance. March, Cooper, James Stewart, Marlon Brando, Paul Muni and Gregory Peck have been nominated five times, with Stewart, Brando, Muni and Peck each winning one Oscar. Arthur Kennedy also has received five nominations but only one in the best actor category. The other four came in the supporting category.

There are not nearly so many repeat winners in the supporting ranks, only four in fact. They are Walter Brennan, Anthony Quinn, Peter Ustinov and Shelley Winters. Brennan is a three-time winner, his Oscars coming for "Come and Get It", 1936; "Kentucky", 1938; and "The Westerner", 1940. Quinn's Oscars are for "Viva Zapata", 1952; and "Lust for Life", 1956; while Ustinov's are for "Spartacus", 1960 and "Topkapi", 1964.

Brennan, Claude Rains and Arthur Kennedy are tied for the most nominations, four. Kennedy, as previously noted, also has a best actor nomination. Next in line are Charles Coburn and Charles Bickford with three. Coburn won the Award in 1943 for "The More The Merrier".

Only actress to win two Oscars in the supporting field is Shelley Winters. She won them for "The Diary of Anne Frank", 1959 and "A Patch of Blue", 1965.

Thelma Ritter leads with six nominations. Ethel Barrymore is next with four nominations and one Award, "None But The Lonely Heart", 1944.

Tied with three nominations apiece are Celeste Holm, Agnes Moorehead, Anne Revere and Claire Trevor.

Helen Hayes is the only performer in the history of the Awards to win in both acting categories. She was named the best actress of 1931/32 for "The Sin of Madelon Claudet", and the best supporting actress of 1970 for "Airport".

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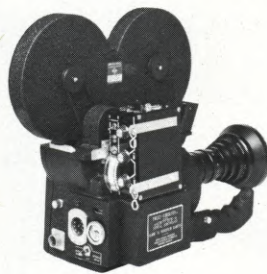
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RYDER 25th ANNIVERSARY

Continued from Page 576

replace dialogue tracks that were originally recorded under conditions which made the quality unacceptable. Since then, several studios, following the Ryder lead, have installed similar systems.

Mr. Chaloukian joined Ryder Sound Services in 1954. He began his career in the stock room, progressed to sound technician, joining Local 695, and is presently holding a Y-1 Rerecording Mixer card. He served in supervisory positions until June, 1965, when Loren Ryder appointed him to the position he holds today.

Mr. Chaloukian, a native of Chicago, was brought here at an early age, graduated from local schools and attended Columbia College. He is also a graduate of American Television Laboratories of California.

Leon D. Selznick, Sales Manager and Advertising Director, also joined the organization in 1954. His career with Ryder Sound followed much the same pattern. Starting in the stock room, joining Local #695 and serving for several years as a sound technician, he is currently classified as a sound recording engineer. He progressed through the ranks until Loren Ryder appointed him to the position he now holds.

Mr. Selznick, a native of New England, was educated there, attended Boston University and was employed as an executive by Interstate Theatres of New England. During World War II he was trained as a radio operator-mechanic and graduated from Scott Field Radio School.

Under the managership of Leo Chaloukian and with Selznick handling sales, the company, continuing the pioneering pattern set by Loren Ryder, has enjoyed outstanding growth and attained an enviable position of respect for their services in Hollywood and throughout the world. Today, Ryder Sound is servicing in excess of 600 accounts and the types of productions serviced run the gamut from educational, industrial and documentary films to Independent and Major features as well as television commercials, television specials, series and television feature motion pictures.

With an eye toward the future and with faith in the future of the Industry in Hollywood, Mr. Chaloukian is currently negotiating a lease for a new facility in which will be constructed three additional ultra-modern stages.

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placement stage for film and videotape, a dubbing stage, a projection and Foley stage, as well as new videotape dubbing services.

Engineering for the new facilities will be designed and supervised by Loren Ryder who, in addition to continuing in his capacity as President of Ryder Sound, is also President of Ryder Magnetic Sales Corp., a company which manufactures and distributes various sound recorder accessories. He is also Vice-President and General Manager of Nagra Magnetic Recorders, Inc., the main office of which is located in New York. Nagra Magnetic Recorders, Inc., is the exclusive U.S. importer and distributor of the world-famous Nagra synchronous recorder.

As an active member of the Academy of Motion Picture Arts and Sciences, Loren Ryder served as chairman of many important committees and his accomplishments have been recognized on various occasions by plaque presentations. His work with the Academy of Television Arts and Sciences is well known as is his valued association with the Society of Motion Picture and Television Engineers of which he is a past President.

There is an old saying "When better mouse traps are built, people will flock to your door." Stefan Kudelski is a perfectionist, an electronics engineer and a Swiss precision tool maker. He made a better recorder—the Nagra. It was tried in production at Ryder Sound Services, Inc. It proved to be a Swiss gem and is now the standard of the industry and recording people throughout the United States. But the story doesn't stop there. That little SNN is taking its place and it is Mr. Ryder's guess that within the next year, it will have reached the 50% point of all sync recording.

Management and personnel of Ryder Sound Services can look back at the first 25 years with great pride. They are looking forward to the coming years with the hope that their continued dedication will mean continued growth and continued service to the community.

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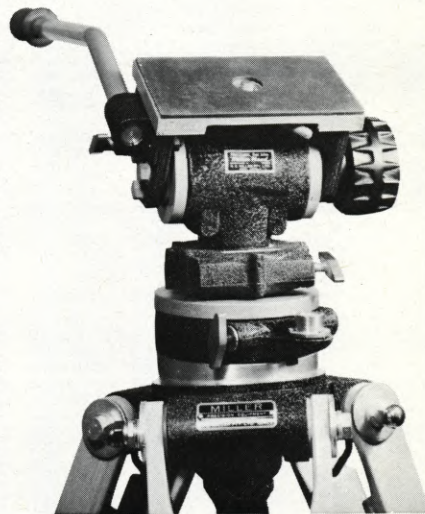
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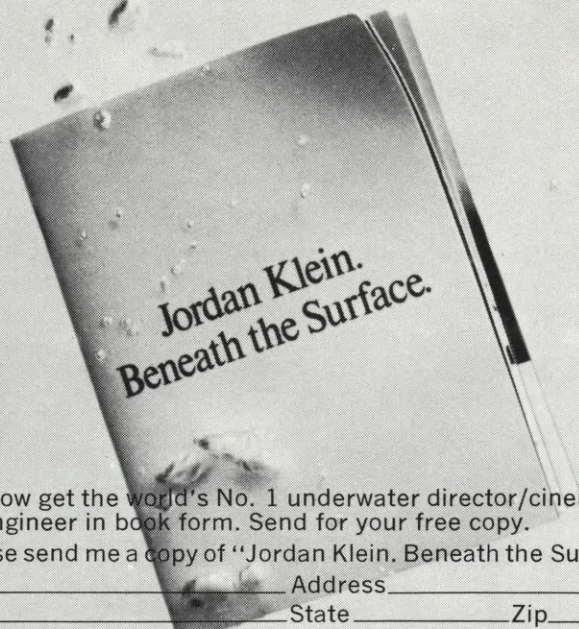
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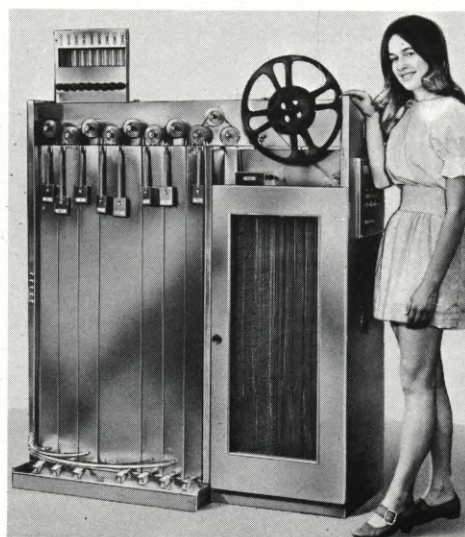
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INDUSTRY ACTIVITIES

Continued from Page 516

The new computer-assisted film printing technique enables a timer—the specialist who sets the color standards for a film being processed—to achieve precision and a uniformity of film quality never before possible in the motion picture industry, said Mr. Solow.

With the new technique Consolidated Film Industries is able to preserve and use more than one million feet of film each year that previously would have to be scrapped.

"The average movie viewer knows that scenes often have to be shot several times to get the right combination of acting, lighting and other effects," said Mr. Solow. "What isn't known is that miles and miles of otherwise good film is lost during printing and processing because of a color imbalance or error. For example, a blue sky suddenly becomes another color as a result of a malfunction in the printing process."

While the chemical aspects of film processing remain the same, the new technique utilizes a System/7, a computer that monitors the amount of basic coloring—reds, blues and greens—that go into the make-up of motion picture frames as they are converted from negatives into transparencies for projection.

The computer activates a flashing light warning system and shuts down the printing machine should the colors become imbalanced. It also prints information giving the scene number and the nature of the color error.

In the past, color imbalances that occurred during printing would go unnoticed until final inspection. Hours of time and thousands of feet of film could be lost.

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The academy singled out Edward H. Reichard and Howard T. LaZare of Consolidated Film Industries and Edward Efron of IBM Corp. for the engineering of the new system—"a computerized light valve monitoring system for motion picture printing." Mr. Reichard is vice president and chief engineer, Mr. LaZare is plant engineer and Mr. Efron is a computer systems engineer.

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The British Kinematograph, Sound and Television Society has appointed Rankin Kuhn of London as official travel agents for FILM '73, the international film-plus-tape technology conference and exhibition which is being held in London, June 25-29.

For the first time the Conference is being offered to both U.K. and Overseas delegates as a "package" based on attendance at the whole conference. The package fee includes: registration to the conference, Ladies social programme, accommodation at conference rates in a London hotel and transfers for overseas delegates from point of arrival in the U.K. to the hotels.

The price of the package varies according to the hotel grade required. Delegates unable to take advantage of the special package arrangements will still be able to register for the Conference and arrange for hotel accommodation through Rankin Kuhn.

Delegates from both the U.K. and overseas will also be able to take advantage of special tours which have been organised to take place immediately following the close of the Conference. These tours, which all depart on Saturday June 30 have been specially tailor-made for delegates and will take in the U.K. and Europe. The European Tours will have been planned to take in film studios and other technical establishments of interest to all delegates.

USC SUMMER SESSION OVERSEAS PROGRAM TO BE HELD IN GERMANY

"Communications Laboratory Berlin," an in-depth study of the film and other media in Germany, will be a special feature of the University of Southern California's 67th annual Summer Session's overseas programs.

The credit course, open to graduate students and seniors, will be conducted June 11 through Aug. 3 in Berlin, Germany, with related studies in Frankfurt, Wiesbaden, Mainz and Munich. Knowledge of German is not required.

Instructor will be Dr. Wolfram H. von Hanwehr, USC assistant professor of cinema, a specialist in European communications.

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The program will center on Berlin as a laboratory to observe a variety of communications media in both East and West, with primary focus on study of the film. Students will attend the Berlin International Film Festival for two weeks as part of the program.

IFPA ANNOUNCES 14th ANNUAL CONFERENCE

Information Film Producers of America (IFPA) 14th annual Conference, Trade Show and "Cindy" Awards will take place October 31–November 4, at the Palm Springs (California) Riviera Hotel and Country Club.

IFPA is the leading association of professional information film producers working in the 16mm format. Entries will be accepted for "Cindy" competition and for the Eugene C. Keefer Student Scholarship.

For further information contact: IFPA National Headquarters, P.O. Box 1470, Los Angeles, Cal., 90028.

MPL'S MOTION PICTURE SEMINAR SCHEDULED FOR JULY 21, 1973, IN MEMPHIS, TENNESSEE

The 15th annual Seminar, sponsored by Motion Picture Laboratories, Memphis, Tennessee, in conjunction with the Nashville Section, SMPTE (Society of Motion Picture and Television Engineers) will be Saturday, July 21, 1973, at the Memphis State University Center, Memphis, Tennessee

The Seminar is open to anyone interested in motion pictures.

For more information, write: Frank M. McGeary, President, Motion Picture Laboratories, Inc., Box 1758, Memphis, Tennessee 38101.

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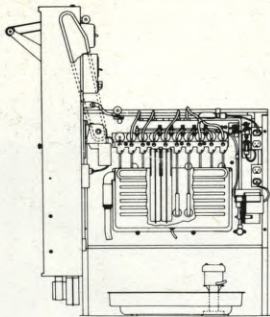
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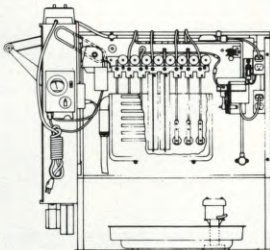
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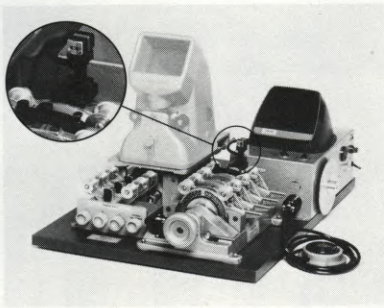
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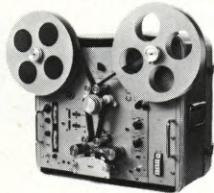
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Fellowships amounting to approxi-mately \$100,000 have been given to 46 New York State artists in the second round of financial assistance offered by the 1972-73 Creative Artists Public Service Program.

Fourteen choreographers, twelve mu-sic composers, ten video artists and ten filmmakers will join sixty visual artists who, earlier this year were awarded CAPS fellowships totalling \$172,000.

Through CAPS fellowships, artists are paid both to create new work and to introduce that work to the community. Therefore CAPS not only supports the creation of new films, video tapes, and music and dance compositions, but co-ordinates rehearsals, performances, workshops and screening situations so that these works can be enjoyed by residents of New York State. Each artist receives a professional fee of between \$1500 and \$5000.

Participating artists range from those with international reputations such as Karel Husa, whose musical compositions have been performed by orchestras throughout the U.S. and Europe, to younger artists such as Alexis Krasilov-sky, a documentary filmmaker, and Dimitri Devyatkin, an experimental vid-eo artist.

The selected choreographers repre-sent a wide variety of style and back-ground. At one end is the theatrical dance of Jean Erdman, who recently choreographed the Broadway produc-tion of "Two Gentlemen of Verona". At the other end are Kei Takei's and Micki Goodman's sculptural pieces deal-ing with light images. In between are such diverse choreographers as Morton Winston, creating works with Afro-American themes, and Beverly Fletcher, choreographing tap dance in relations to its cultural roots.

Among the composers receiving fel-lowships are David Behrman, Charles Morrow and Marzette Watts, who are creating "new music" with combina-tions of instruments, natural sounds and

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electronic synthesizers. Other such as Joseph Chambers, James Heath and Joseph Schwantner are writing and arranging jazz and classical compositions.

Many of the video artists are working closely with their local neighborhoods to develop a community video consciousness. Joanna Milton is organizing a storefront video center in Delhi, while Steven Kolpan is making tapes about local New Paltz residents. Other video artists such as John Keeler, Brent Sharman and David Sasser are documenting alternate life styles.

The varied directions of modern cinema are each represented among CAPS' film grantees this year. Ernie Gehr and Larry Gottheim are both exponents of the "structural" or abstract school, working with variable intensities of light, time and movement within the given space of the frame. Lawrence Varas is a documentary filmmaker concerned with contemporary Puerto Rican issues, and Linda Feferman, whose "Dirty Books" was recently shown at the Women Filmmakers' Series at the Whitney Museum, is a narrative filmmaker.

CAPS has generated both government and private support for individual creative artists. The program is made possible with assistance from the New York State Council on the Arts, National Endowment on the Arts, N.Y.C. Department of Cultural Affairs (PRCA), as well as community, foundation and corporate support.

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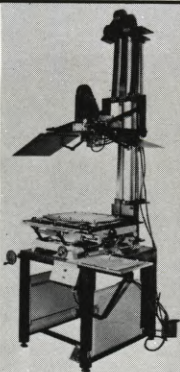
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BOOK REVIEW

MASCELLI'S CINE WORKBOOK, TEXT AND TOOLS, INTERNATIONAL EDITION, by Joseph V. Mascelli, ASC. Cine/Grafic Publications-Hollywood, Publishers, 1973. \$15.00.

Extremely rarely is an item offered that can be termed "a truly unique" working aid to the cinematographer, but such an item is "*Mascelli's Cine Workbook*", designed, compiled and written by Joseph V. Mascelli, ASC, cameraman and author of such well-known works as "*The Five C's of Cinematography*".

The title is a bit misleading and understates the case, because the "Workbook" is not really a book at all, but rather a collection of working tools and accessories adding up to an entirely new concept in visual aids for the professional cinematographer or cinema student shooting Super-8, 16mm, Super-16 or 35mm color film.

It is not meant to be a substitute for, nor does it cover the same material as, a cine data handbook such as *The American Cinematographer Manual*, which is designed in a format small enough to fit into the cinematographer's pocket for quick and easy reference during shooting.

"*Mascelli's Cine Workbook*" is quite a different animal. In form it consists of two Wire-O bound 5-1/2-inch x 8-1/2 inch books which fit into sleeves inside the covers of a vinyl binder that is almost two inches thick—hardly "handbook" size, but quite compact, considering that it contains a collection of working tools for the cinematographer.

The "*TEXT BOOK*" contains theory and diagrams for properly evaluating such aspects of cinematography as: Color Films, Color Balance, Exposure, Filters, Lenses and Laboratory Practices—text material that explains what the cameraman should do under various conditions and why. This volume could well stand alone as a basic text on the theoretical principles of professional cinematography.

The "*TOOL BOOK*" is actually a collection of working tools and accessories for the cameraman, which includes:

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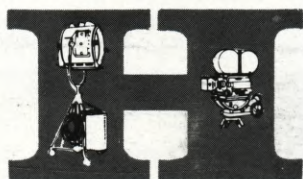
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45th ACADEMY AWARDS

Continued from Page 587

industry. This year the awards in that very special category were as follows:

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These Awards were voted by the Academy Board of Governors upon recommendation of the Scientific or Technical Awards Committee.

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To David Degenkolb, Harry Larson, Manfred Michelson and Fred Scobey of DeLuxe General Incorporated for the development of a computerized motion picture printer and process control system.

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ON "DELUGE" LOCATION

Continued from Page 562

wood where there was insufficient light for normal shooting, a 55mm T/1.1 Panavision Ultra Speed. These extra lenses had been flown out of London as and when required. He told me that for a battle scene in snow conditions to be shot in Minsk (in the Soviet Union), some of Panavision's very long anamorphic lenses will be required.

As this is the first Polish production to use equipment rented from a Western bloc country, it is an important step forward in terms of international filmmaking cooperation. The decision to use Panavision lenses was taken only after MTF testing and comparing on the optical bench all anamorphic lenses available. I was told that the lenses chosen had checked out better than any other.

He told me that because of the great national interest that there is about this film, authenticity has had to be the keynote even to the extent that national treasures, which normally rest in museums, have been made available for use as set dressings. "When priceless gold and silver objects are being used for props," he said "it is very important that the richness of it all shows on the screen."

During the course of the production temperatures have varied between -35 and +45°C (-31 to 113°F) and no problems have been experienced with either the cameras or the lenses, the zoom and focus movements of which have operated smoothly at either end of the temperature range. He asked me what type of lubricant we used and I explained that it was a special one which, I believed, had originally been developed for Apollo spacecraft use. He told me that was very interesting, as the camera had been lubricated with a special Russian compound developed for the Cosmos spacecraft and that this had functioned equally well. Who knows that this might have been the first little step in the USA-USSR space programme collaboration.

Eastmancolour 5254 negative is being used and he has a budget of 70,000 metres (22,000 ft.) for the entire production which is expected to be cut to approximately 10,000 metres (31,200 ft.). Release prints will be made on ORWO stock for reasons of foreign currency availability.

The 70mm show prints for the 12 cinemas in Poland which have such projection will be made on a Russian optical printer which they have recently bought.

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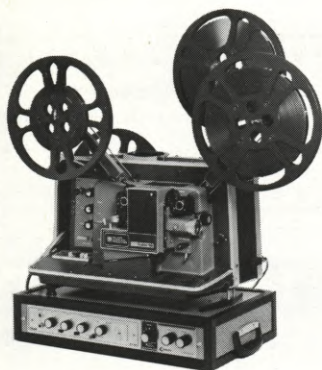
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Post-sync dialogue dubbing is standard practice in Poland and their recording facilities are very good, so no attempt is made to secure usable sound on location. The entire production is being shot with wild cameras.

Jerzy Wojcik told me that he is using a great deal of diffused lighting because the rough woollen clothing of the period and the leather which the inside walls of the castle are covered with "are very aggressive." I believe he meant that there are big differences in the subjects' reflective properties and that if he were to use hard lighting the overall effect would be very unpleasant. On interiors he was using 750 foot-candles for T/5.6 exposure. Because of this and the consequent heat problems, the lights were switched on only seconds before a take and off almost synchronously with the camera.

In Poland the clapstick is the responsibility of the Script Girl. As she keeps the camera record sheets and all the relevant information it seems logical to them that she should also mark the board and hold it in at the beginning of each take. Again, no time is wasted between switching on the camera, marking the take with a clap (the voice announcement is done before the camera is started) and the actor saying his first line. The whole run up to speed and the starting process is condensed to use as little film as possible. It seems to be the film-makers' particular contribution to the nation's hard currency problem.

Another difference between Polish and Western camera practice is that in Poland the focus assistant invariably stands on the right hand side of the camera. I asked why this was and was told it is because the use of zoom lenses has become so universal and when using such a lens, they say, the operator should do his own zooming to "feel the action with his heart." The focus assistant must stand on the far side of the camera to keep clear. "DELUGE" being somewhat of a special picture, they are using a geared head, so a separate assistant does the zooming—but, nevertheless, the focus assistant knows his place.

Distance scales engraved in feet and inches defeated the Polish assistants. When they first received the Panavision lenses the focus assistant tried to think and work in our strange measurements, but, eventually, the ubiquitous camera tape had to be applied to the focus scale and metric measurements clearly marked. The crew were most impressed with the way that eye and tape focusing have continued to agree absolutely even

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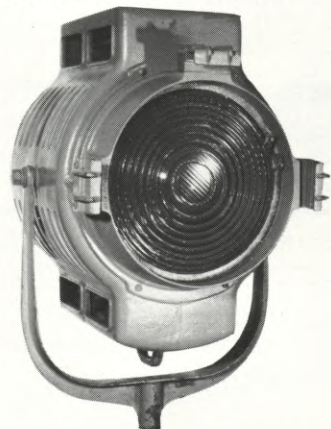
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after a year of what has very often been very rough usage. They realise that this is undoubtedly due to the "hard front" camera/lens mounting system.

Travelling from country to country visiting film units, one is often struck by the similarity of the operation everywhere. East or West there is not a great deal of difference, but somehow in Poland there is a little extra something which is difficult to define. An extra spark which energises their industry. I believe it stems from their Film School which has a standard and a tradition which many other film schools in the world try to emulate. The Polish National Film School at Lodz is an institution of which they can be, and are, very proud.

The standard of work of the students there is extraordinarily high due in large measure to the fact that the teachers, from the Dean downwards, are currently practicing film-makers. Top Directors and Cameramen become professors and continue to make pictures between teaching... or to teach between making films. The Dean of the Faculty, Kazimierz Konrad, was just finishing a picture when I visited the school. Adolf Forbert, a cinematographer of vast experience, takes pride in passing on his years of experience to the next generation who will carry on the tradition of the Polish cinema. His wife, Maria Kaniewska, directs pictures and television plays and, in between, she teaches and, together with Stanislaw Wohl, Mieczyslaw Lewandowski, Marek Nowicki, Mieczyslaw Jahoda, Andrej Amcuta and others, takes pride in the careers of their students. Who wouldn't when the list includes names like Polanski, Wojcik and many, many others? ■

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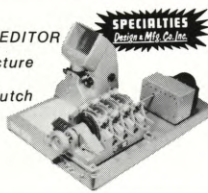
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ACKNOWLEDGEMENT

"Highlights from the History of Motion Picture Formats", by Richard Patterson, a feature article which appeared in the January, 1973 issue of American Cinematographer, was extremely well-illustrated with samples of various formats developed during the relatively short history of the motion picture medium. These format samples were part of a collection compiled by Mr. Kemp Niver, eminent film historian and Associate Member of the American Society of Cinematographers. We regret that Mr. Niver's credit for these fine illustrations was inadvertently omitted from the January, 1973 issue. American Cinematographer wishes, hereby, to express its gratitude to Mr. Niver for permitting publication of the aforementioned format samples and to acknowledge his many invaluable contributions toward documenting the history of the Cinema.



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HOUSTON Fearless Labmaster, NP-16/35, good shape, \$1000. Call CINELAB COMMUNICATION ASSOCIATES, (501) 751-7953.

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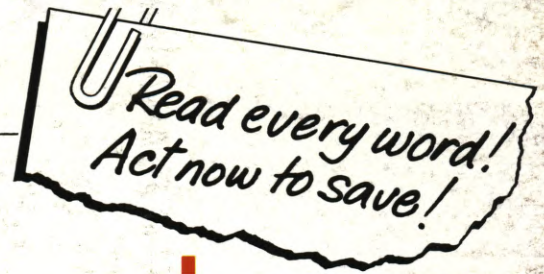
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byron on prices

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