

American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

MAY 1976 / ONE DOLLAR

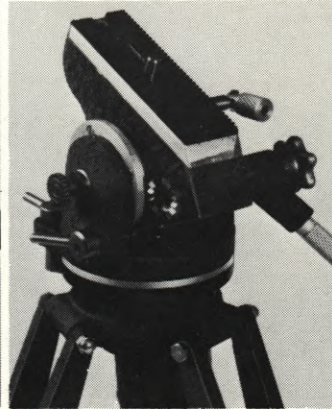
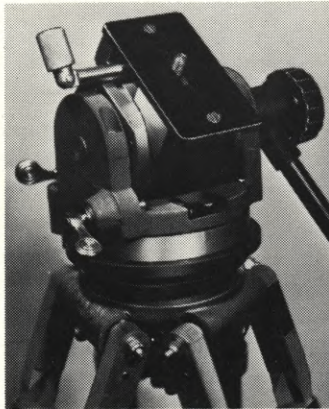
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Silicone fluid assures maximum smoothness. Features adjustable tie-down screw to balance camera; accessible camera-mounting knob; panhandle with adjustable angle position; L-spirit level; 360° pan, 55° tilt action backwards and forwards. Accommodates any camera up to 30 lbs. Weight: 11 lbs. Fluid Head Complete with Swivel Bowl and Legs. \$675.00. Without Legs \$550.



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Exclusive silicone formula fluid assures maximum smoothness. 360° pan, 55° tilt action backwards and forwards. Ball leveling. Spirit level. Tilt tension adjustment. Positive locks. Adjustable tie-down screw to balance camera. Accessible camera mounting knob; pan handle with adjustable angle positions. Swivel bowl and top tripod casting. Accommodates any camera up to 20 lbs. Weight 9 lbs. Head complete with swivel bowl and Mini-Pro Jr. Legs. \$450. Mini Fluid Head and Pro-Jr. V-Grooved. Legs. \$495. Without Legs. \$375.00.

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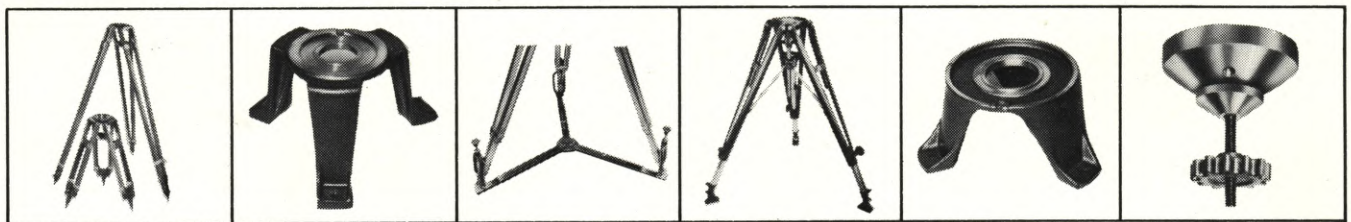
It has an instant leveling swivel bowl that helps you keep the camera level. It eliminates time consuming leg adjustments. And its magnesium fluid drive and friction drive heads can be used with all cameras. They're tough. They're dependable. They provide you with years of trouble-free service. Efficient operation is guaranteed in temperatures from 20° below zero through 120° above.

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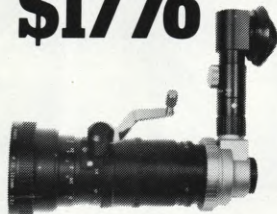
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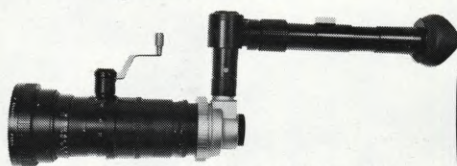
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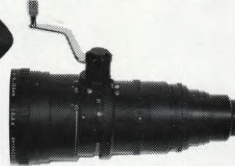
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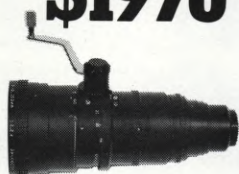
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12-150mm T2.3
WITHOUT VF

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10-150mm T2.3 WITHOUT VF

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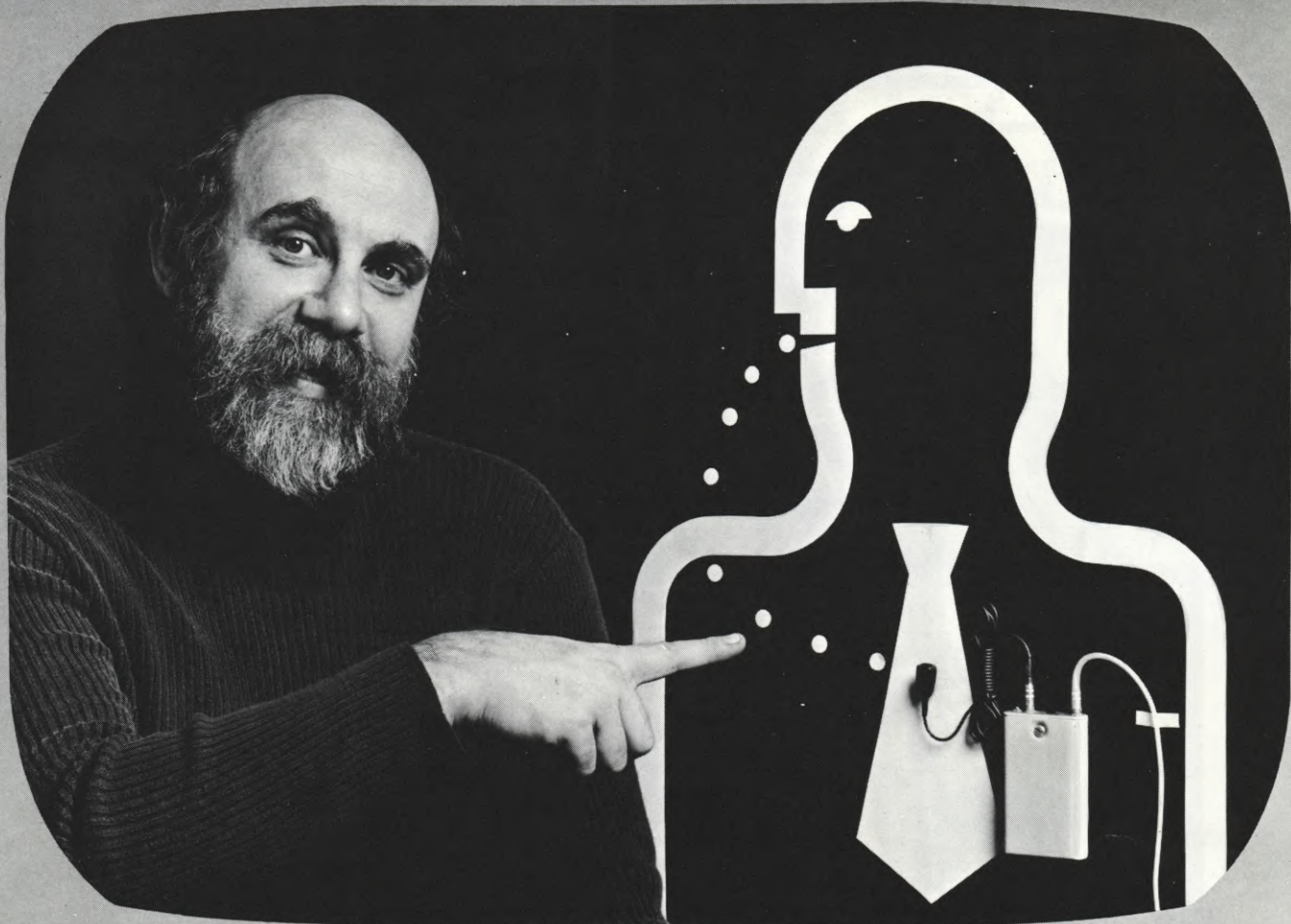


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And since talkies seem to be here to stay, smart movie makers are turning to Swintek when the job calls for a wireless system.

The technical aspects of Swintek's superiority could fill a brochure (there's one available), but there are some things you should know right now.

All Swinteks are available with an exclusive crystal front end. It limits interference from adjacent channels or from high power transmitters in close proximity. And it limits many forms of electrical interference. The crystal front end also

allows you to use two or more units within 50 KC of each other and touching.

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So come on in and see the Swinteks. From the Mark VI-50XL Hitchhiker (smallest and lightest—draws current from your camera or tape recorder) to the Mark III-50XL (popular and portable) to the Mark VII-50 (450 band, UHF, broadcast licensable).

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American Cinematographer

International Journal of Motion Picture Photography and Production Technique

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MAY, 1975

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VOL. 57, NO. 5

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ON THE COVER: Against a glittering multi-colored background, symbolizing the unique glamor of the Hollywood film industry, stand two "Oscars", the golden statuettes annually presented by the Academy of Motion Picture Arts and Sciences in honoring the top achievements in the art of the Cinema. Photograph courtesy of the Academy of Motion Picture Arts and Sciences.

AMERICAN CINEMATOGRAPHER, established 1920, in 57th year of publication, is published monthly in Hollywood by ASC Holding Corp., 1782 North Orange Drive, Hollywood, California 90028, U.S.A. **SUBSCRIPTIONS:** U. S. \$9.00; Canada, foreign, including Pan-American Union, \$10.00 a year (remit International Money Order or other exchange payable in U.S.). **ADVERTISING:** rate card on request to Hollywood office. **CHANGE OF ADDRESS:** notify Hollywood office promptly. Copyright 1976 ASC Holding Corp. Second-class postage paid at Los Angeles, California.

New lenses— not still-camera conversions. All genuine T1.4s.

Floating and aspheric elements, multiple coatings—these are the most *advanced* lenses you can buy.



Every photographic lens ever made was designed originally for one purpose, one lens-to-film distance, one film format. If you adapt it for a *different* use, it'll work—but not as well.

Adaptation compromises

Some high-speed lenses now available for motion picture use are adapted still-camera designs—but not ours. The others are good lenses—but, used in this different way, they're compromised.

Remounting problems

For example: The typical 35mm SLR still camera has a back focal distance about $\frac{3}{4}$

inch shorter than one major studio camera. So to adapt it, you have to put the SLR lens into a new mount, or even a completely new barrel. *Or even move the glass elements!*

Critical back focus

And back focus is critical, of course. With a 50mm lens at $f/2.8$, the depth of focus behind the lens is plus or minus two thousandths of an inch. With a 25mm lens at $f/1.4$, *it's a quarter of that.*

Wasted trade-offs

Moreover, the SLR lens was designed to cover the Leica frame. To get even coverage over the bigger format, *with high speed*, the designer had to make certain trade-offs. On the SLR, they may have been worth it. For the motion-picture frame, they're wasted.

Doing it the hard way

To design a high-speed lens exclusively for motion picture use takes more time and costs more money, naturally.

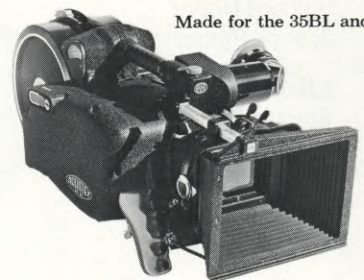
But, given a good designer, you get a better lens.

\$350,000 investment

So we invested just over \$350,000—and Zeiss designed a brand-new, no-compromise set of lenses. Specifically for Arriflex cameras.

New design parameter: "Make the best lenses."

The Zeiss designers had the unique advantage of starting from the beginning. We said: "Don't just make the best high-speed lenses. Make the best *motion-picture* lenses in the world." So they did.



Made for the 35BL and 352C

Most modern technology

Zeiss used aspherical elements, a floating element, and multi-layer coatings on every



The fastest set of lenses on the market — all with the standard Arri bayonet mount. The 25mm focusses down to 10 inches, the 35mm to 15 inches, the 50mm to 27.5 inches and the 85mm to 40 inches.

Designed by Zeiss for Arriflex.

glass-to-air surface. Up to six separate layers.

New spontaneity possible

These lenses are made for the new style of shooting encouraged by the 35BL.

Night-for-night: almost no flare. Distant detail

We've seen night-for-night footage. Wide open, on New York City streets — car

headlights, neon signs. Incredible. Almost no flare at all, and astonishing penetration. You can see details on this block and for several blocks beyond — lit just by those signs and the street lamps!

With good lighting, too: best lenses you can buy

Naturally, these lenses perform just as well in daylight and on the soundstage. They're

made by Zeiss, after all — using the latest design techniques, and sparing no expense. We hope you'll run some comparison tests. We're confident of the results.

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WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



HALLIBURTON TRAVEL CASES FOR CP-16 TYPE CAMERAS AVAILABLE FROM CINEMA PRODUCTS

Cinema Products Corporation announces the availability of a new Halliburton travel case for CP-16R cameras.

Extremely rugged and lightweight, with combination lock and top carrying-handle, the CP-16R Halliburton travel case (order code 1H132) is filled with foam padding pre-cut to accept CP-16R reflex camera, zoom lens, three 400-ft. magazines, two NC-4 battery packs, two NCC-6 chargers and other accessories.

Another version of this Halliburton travel case is pre-cut to accept standard CP-16 camera and zoom lens with viewfinder (order code 1H134). Each case is priced at \$250.00.

For further information, please write to Cinema Products Corporation, 2037 Granville Ave., Los Angeles, California 90025. Tel: (213) 478-0711.

SPECIALTIES ANNOUNCES NEW MODEL S-8 EDITOR FOR '76

Specialties S-8 Editor has for the Bicentennial '76 model a new plug-in integrated circuit amplifier with over twice the power of previous models. A new quiet "Posi-Drive" power transport mechanism system produces smoother sound.

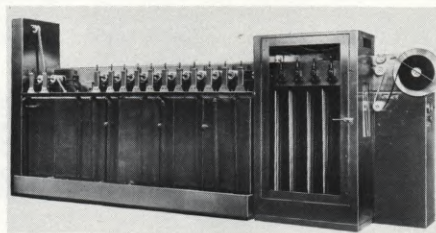
Specialties S-8 Editor is a compact editing system exclusively for Super-8 film to edit workprint, lip sync, sound

effect matching and dubbing, music scoring, thru negative cutting. A large light-well facilitates A & B editing.

Specialties S-8 Editor features include a four-gang synchronizer powered at synchronous speed, three magnetic heads, footage and frame counter with electronic indexing, built-in integrated circuit mixer-amplifier with individual control knob for each magnetic head and a separate volume control knob. In addition to a built-in speaker, a jack provides automatic switching for use with earphones or an external speaker. All controls are on the front panel for easy access and use. A pilot light indicates POWER ON because a very low noise level has been attained by careful engineering and selection of components.

Specialties S-8 Editor is available in Model A for use with viewers with sprockets toward you (Elmo type) or Model B for use with viewers with sprockets away from you (Minette type). Price is \$695.00

For further information contact: Specialties Design & Mfg. Co.; 3429 Encina Drive Dept. D; Las Vegas, Nevada 89121; Phone: (702) 451-5290.



FILMLINE'S CITATION SERIES FILM PROCESSORS:

A new line of color film processors featuring the patented Filmline Micro-Demand Drive is now offered by the Filmline Corporation. The Citation Series processors now make the numerous cost reduction factors of the Micro-Demand drive available to the smaller laboratory as well as the largest. Micro-Demand is the most advanced concept in film processing transports and it is now offered in machines designed for every commercial process and for operating speeds of 7 to 350 f.p.m.

Also featured are submerged developer racks, pumps for recirculation and agitation, professional spray bars, in-line filters on all required systems, professional air and wiper squeegees,

upper shaft and roller assemblies removable without tools, Temp-Guard solution temperature control with thermistor sensing and solid-state controller, Film-Guard drybox, individual switches for all control functions, bottom drains and valves on all tanks, Feather-Touch multi-format silicone elastomer transport roller "tires" and stainless steel construction throughout.

Pictured is the DC28-35/16N2, 28 f.p.m. 35/16mm, ECN-2 processor offered at approximately \$44,000.00. For further information please write to Filmline Corporation, 43 Erna Avenue, Milford, Connecticut 06460, or phone (203) 878-2433.



AVEX-1 EDIT/MIX NEW FROM MULTITRACK MAGNETICS AND BRAUN

The AVEX-1 edit/mix/record system is a fully modular series of units designed to provide high-quality recording, mixing and interlock viewing capabilities in a minimum of space.

Developed by Steve Talian, President of MultiTrack Magnetics Inc., and sold in Canada by Braun Electric Canada Ltd., the basic idea for the system came from the needs of those working in commercials, educational films, documentaries, and television stations. Talian said, "We wanted to retain all the necessary points of having reproducers interlocked to some kind of picture and use a console which is basically designed for film mixing. What we wanted to accomplish was to have a high-quality recording console physically located at the picture. An editing machine," Talian continued, "is nothing more than a stop-and-go device. It has to stop fast, it has to go fast from one point to another and it doesn't have the capability of moving film with a smooth motion needed to get a reasonable sound out of it."

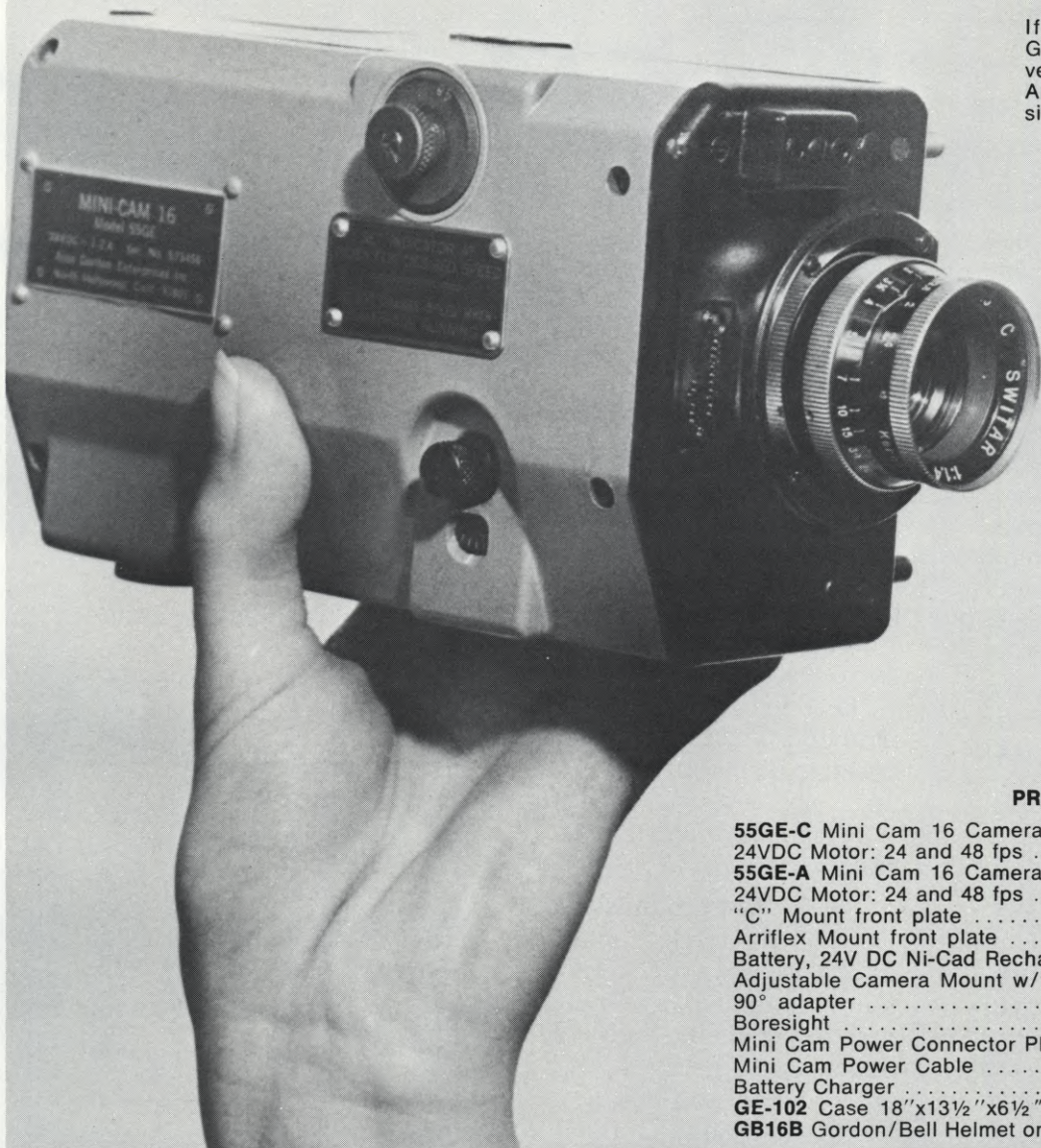
Talian's modular system provides
Continued on Page 583

MINICAM-16

... the ideal camera for those unusual action shots.

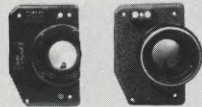
Keep in step with today's fast-moving world with the camera that puts the viewer in the picture, the Alan Gordon Enterprises MINICAM-16. This famous Bell & Howell G.S.A.P. camera has been modernized for today's 16mm action photography. It's the sports cinematographer's delight, ideal for filming unusual angles of skydiving, bike racing, skiing, motorboating and many other action-packed activities. The MINICAM-16 is lightweight, portable and uses pre-loaded

Eastman Kodak magazines in all popular emulsions: 7252, 7241, 7242 and 7256. Frame rates are 24 or 48 fps, and a special shutter provides sharp photography under adverse vibration conditions. The MINICAM-16 Model 55GE-C accepts C-mount lenses, while Model 55GE-A is available for Arri lenses. Power is 24V DC and the camera is attractively finished in tough Acrylic red, white and blue paint. The camera weights less than 2½ pounds.



CONVERT YOUR CAMERA

If you already own a B&H G.S.A.P. camera, you can convert it to accept C-mount or Arriflex lenses with the exclusive AGE Front Plates.



GORDON/BELL CAMERA HELMET GB-16B

A unique mount for the MINICAM-16. Camera mounts on one side of helmet and power pack balances other side.

PRICES

55GE-C Mini Cam 16 Camera Body, "C" Mount with internal 24VDC Motor: 24 and 48 fps	\$325.00
55GE-A Mini Cam 16 Camera Body, Arri Mount with internal 24VDC Motor: 24 and 48 fps	\$375.00
"C" Mount front plate	\$ 75.00
Arriflex Mount front plate	\$125.00
Battery, 24V DC Ni-Cad Rechargeable	\$185.00
Adjustable Camera Mount w/flat camera adapter	\$ 79.00
90° adapter	\$ 45.00
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Mini Cam Power Connector Plug	\$ 29.95
Mini Cam Power Cable	\$ 45.00
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GE-102 Case 18"x13½"x6½"	\$ 99.50
GB16B Gordon/Bell Helmet only state size	\$125.00

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MAKING IT IN FILM

Julia Phillips

As co-producer of "The Sting," you've become one of the best-known young producers in the business. Was that your first film?

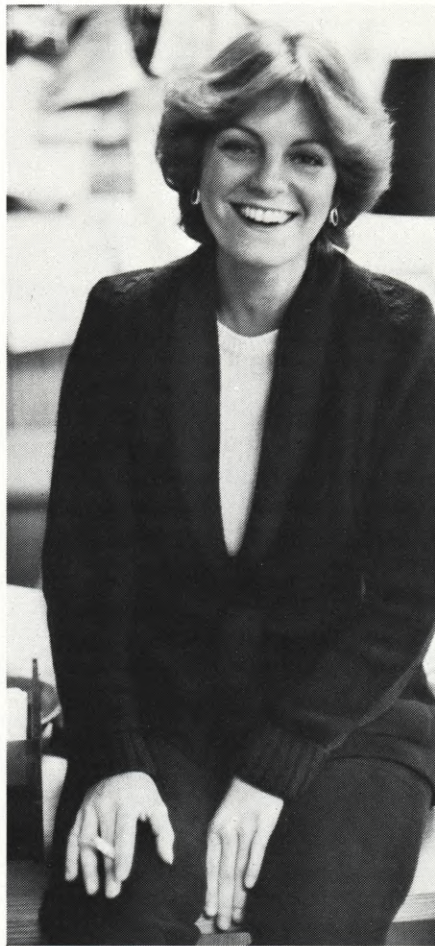
No. My first was "Steelyard Blues." I produced it with Michael Phillips and Tony Bill. Sometimes I wish the order had been reversed, then maybe "Steelyard" might have been more successful. But we learned a lot from it, and, like a first child, it will always be one of my favorites.

How do you define the producer's role?

Here's how I usually describe it: the producer is there long before the shooting starts and way after the shooting stops. Michael and I are involved with every phase of the production. From developing screenplays to casting, shooting, and editing. On our latest pictures, we have some of the top bright young writers, directors, and performers. It's great to work with our contemporaries because we develop a very creative relationship. I think that's one of the reasons they like working with us.

In this business you never stop learning. We're now producers on an extraordinary picture that's going to have more than fifty-five minutes of special effects. So I'm learning a lot more about the technical aspects of film. And it's nice to know you can always call a Kodak representative when you have any questions about Eastman film and what it can do for you.

It sounds like it's an advan-



...tage to have two people as producers.

Absolutely. Even with the two of us, I sometimes feel we need to be cloned, for those moments when we're supposed to be in four places at once.

What are some of your current projects?

We've just produced "Taxi Driver." A very dark movie, filled with sex and violence—but without one dirty frame in it. We're also executive producers on "The Big Bus" and producers on "Close Encounters of the Third Kind," directed by Steven Spielberg.

As a producer soon to become a director, how do you

feel about the prevailing attitude that women lack the stamina to direct?

Well, as a director you become a focal point, and if you look tired, your crew will feel tired. But I'm not worried about stamina. I've found that women like Marcia Lucas and myself generate more energy than anyone else on a set. And as a producer, I had to build up twice as much creative energy because half of it was drained just getting a picture off the ground. Take "Taxi Driver": it took four years, from the time we optioned the screenplay, to get the financing and other details worked out, before one frame of film was exposed.

It has to be in your blood because three times a day you ask yourself why you are doing this. Especially when you've done it before and you know up front it's going to be pure torture. But if you love the screenplay, and the director and cast amplify it, then it's magic—and the rewards are fantastic.



We've put together a booklet containing this and other interviews of interesting and talented people who are part of the fascinating world of the moving visuals industry. It also contains information about the role of Eastman Kodak Company developments and what they can do for you. For your free copy, write:

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Ray Hautala knows only one standard, Excellence.

When Ray Hautala visited the three-decked ship-of-the-line HMS Victory, his concern was research rather than sight-seeing. Photographing the minute details of the ship's rigging and construction was in preparation for

building a 53 inch model of the Victory. Just as every detail of a ship's plans must be exact before work begins, Ray, as Victor Duncan's Detroit Sales Manager, precisely studies the film producer's needs before developing the equipment package that matches his requirements and budget. Excellence, whether it comes from researching in a seaport, or "rapping" to discover equipment needs, it's the only standard Ray Hautala knows. And we're proud of it.



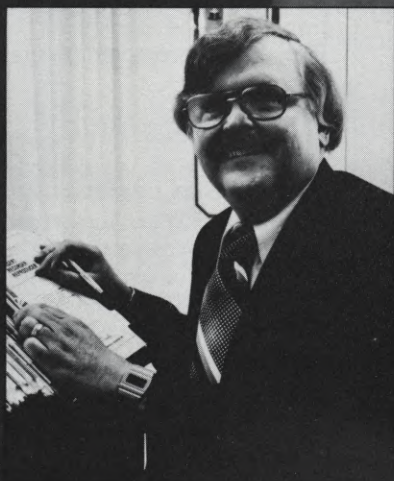
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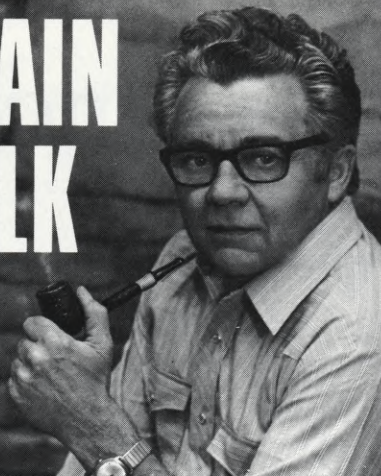
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... the check and
double check people

PLAIN TALK



by *J. Carl Treise*

We find it amazing that some firms will be suckers for a low price tag — not once, but several times!

We've seen it happen again and again.

A firm will order a film processor, wait for it weeks (and sometimes months) beyond the promised delivery date, discover it doesn't perform to specifications . . . and still reorder from the same guy the next time around!

Why? Is it the few bucks saved on a meaningless quote? Is it a locked-in habit pattern? Or just further proof of P. T. Barnum's famous statement?

Before you order a film processor from any manufacturer (— it doesn't matter who it is), find out who some of his customers are and ask them a few questions.

Does he have a reputation for prompt delivery? Will he build exactly what you want? Will the processor do everything it's supposed to do? If something goes wrong, will he come back and make it work?

In other words, does he really care, or just pretend he does?

If we sound tough on this subject, we mean to be. We're upset by any manufacturer who promises first-rate gear and delivers marginal equipment. But we're bothered even more by any buyer who doesn't take the trouble to look for the difference!

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PHONE: (213) 365-3124

QUESTIONS & ANSWERS

Conducted by CHARLES G. CLARKE, ASC.
and WINTON HOCH, ASC.

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



Q Could motion picture lenses such as the new Zeiss fast lens be adapted for use on 35mm still cameras, and if so would there be an advantage to it?

A Lenses made for motion picture cameras can be used on still cameras and vice versa. However, the cost of new mounts might mitigate against any advantages gained. With still cameras you can reduce the shutter speed to compensate for a slower lens.

Q I would like my Main Title to appear over live action scenes — having the text appear in white letters over the scene. What is the simplest method for doing this?

A This is best accomplished by the process known as *Bi-Pack printing* in which the developed title film negative is placed in contact with the developed positive background scene. Both are printed together on duplicating negative film stock — by one pass through the printer. The same bi-pack idea may be employed directly in the camera by threading the negative title film in front of the negative color film stock. The background scene is then photographed — such as waves breaking on white sand. The actual fade-in and out footage frames having been measured from the title negative (with sufficient footage in front for threading), the camera is faded in and out at these same positions. In this last case, the text will appear in *black* letters over the light background. It is best to photograph the titles on positive film for maximum contrast and clear film surrounding the lettering.

Q Using a Filmo 70-DA camera having single-frame exposure release what f/stop should I use for single-frame exposures with this camera, where same subject was shot at f/8 at 24 fps in the same light?

A According to Bell & Howell Company the exposure would be the

same for single-frames as for 24 fps — f/8.

Q When projecting a scene on a ground glass screen for rear-projection photography, a "hot-spot" often occurs. How can this be eliminated?

A Use a neutral density filter cut to size required and place in front of projector lens. Use of a lens too short in focal length is often a contributing factor where a "hot-spot" occurs. Try moving back with the projector and use a longer lens to project image.

Q In both rear and front projection rephotography where synchronization of camera and projector shutters isn't possible, how can flicker be reduced? Would use of a variable shutter and decreasing of the exposure per frame to 1/104 or 1/208 on the camera help reduce flicker?

A In rear projection or front projection where it is impossible to mechanically or electrically sync camera and projector shutter, the so-called flicker can be totally eliminated by using a two-wing shutter on the projector. The camera and projector must turn the same number of frames per second. When balancing the foreground to the background with this method, the projected image must win out by one stop.

Q How can I produce a visible rain effect? What kind of apparatus is needed to recreate the variety of flow, i.e., a heavy shower, or a misty sprinkle, etc.? I've heard that by adding milk to the water the drops become more visible to the camera.

A Rain effects are obtained by connecting a water pipe with lawn sprinkler heads. Mist or larger drops are created by adjustment of the heads and pressure. If you use a backlight on the rain, milk is unnecessary.

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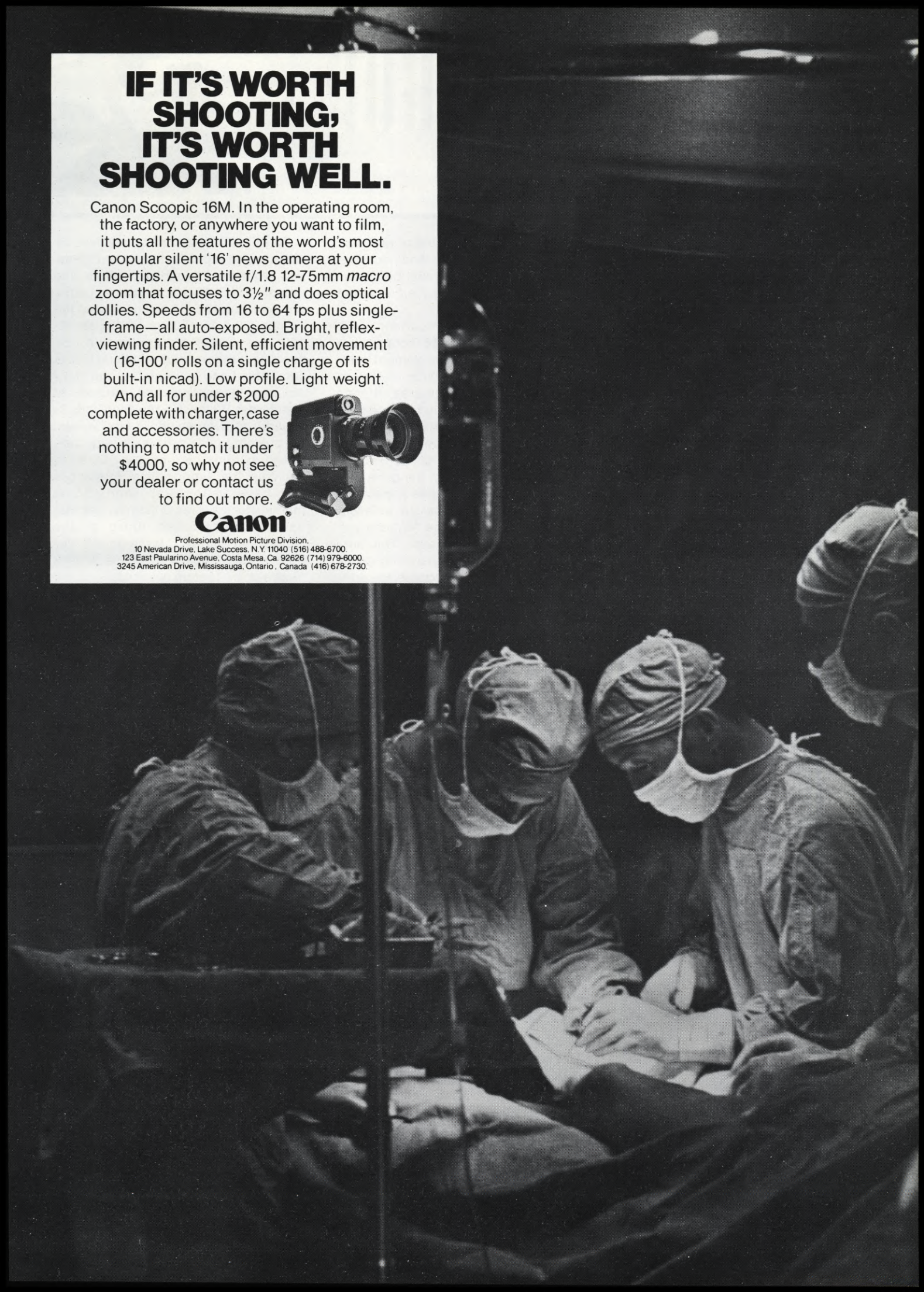
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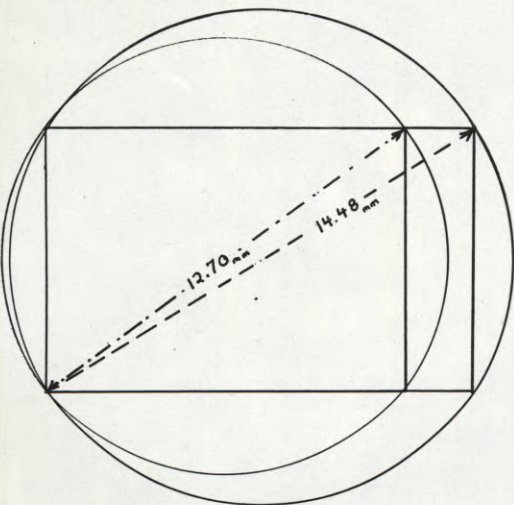
By ANTON WILSON

SUPER-16 — PART II

The Super-16 format was specifically developed for blow-up to wide-screen 35mm of 1.66:1 aspect ratio or greater. The extra width of the Super-16 frame provides almost 50% greater image area when compared to a 35mm wide-screen blow-up from a standard 16mm frame. However, the improved image quality of Super-16 does not come without its price.

For openers, the Super-16 conversion of a standard camera is quite an extensive operation. As an example, an Eclair NPR requires modification in no fewer than 14 different areas. Most obvious is the increased size of the aperture. The viewfinder must also be modified and, most critical, the optical axis of the lens must be shifted laterally. This lens-mount displacement makes a modified Super-16 camera unsuitable for standard 16mm. Thus, once a camera is converted for Super-16 it can no longer be used for the regular 16mm format. Moreover, only certain cameras can be modified to Super-16. The Arriflex 16B1, for instance, is not suitable for Super-16 conversion. Most often the Eclair ACL or NPR is chosen, although some of the Auricon-type cameras have also been successfully

FIGURE 1 — The Super-16 aperture has a diagonal of 14.48mm, which is significantly larger than the diagonal of standard 16mm (12.70mm). For this reason, standard 16mm cine zoom lenses will not cover the larger Super-16 format.



converted. Each magazine of an Eclair camera must also be modified. The rollers and film guides must be undercut so as not to scratch the film in the former soundtrack area.

This brings up an important point. The handling of Super-16 footage from the camera through development, editing, and printing, is a hairy matter, to say the least. The image area extends almost to the edge of the film opposite the sprocket holes. This leaves very little room for film handling. In the camera, care must be taken that the film does not breathe in the gate and, as mentioned above, rollers and guides must be precisely undercut to avoid damaging the film in the formerly unused and unprotected area. This narrow edge also causes handling problems throughout the processing, editing, and printing of the film. The extended film area is very vulnerable to scratching and few labs are equipped to properly handle Super-16 footage.

To make matters worse, there are few zoom lenses suitable for Super-16 use. From FIGURE 1 it can be seen that the diagonal for the wide-screen 16mm is 14.48mm, while that for standard 16mm is only 12.70mm. As a result, standard 16mm cine lenses will *not* cover the Super-16 aperture. In the strictest sense, with the exception of the Canon, there are virtually no zoom lenses designed and manufactured specifically for Super-16 application. The Super-16 cinematographer has two alternatives. Lenses designed for the 35mm format will obviously cover the Super-16 aperture, but the large size and weight will negate the inherent advantage of the wide-screen 16 system. The other alternative is the use of lenses designed for vidicon TV cameras. These lenses will easily cover the Super-16 format, as the vidicon diagonal is 15.8mm. This solution is not that simple, however. The quality-control standards of vidicon lenses are much less stringent than those for cine optics. As a result, the average vidicon lens will not perform nearly as well as a cine lens. This is even more ironic, considering that the demands of Super-16 are even greater than those of regular 16, and a lens of superior quality is mandatory.

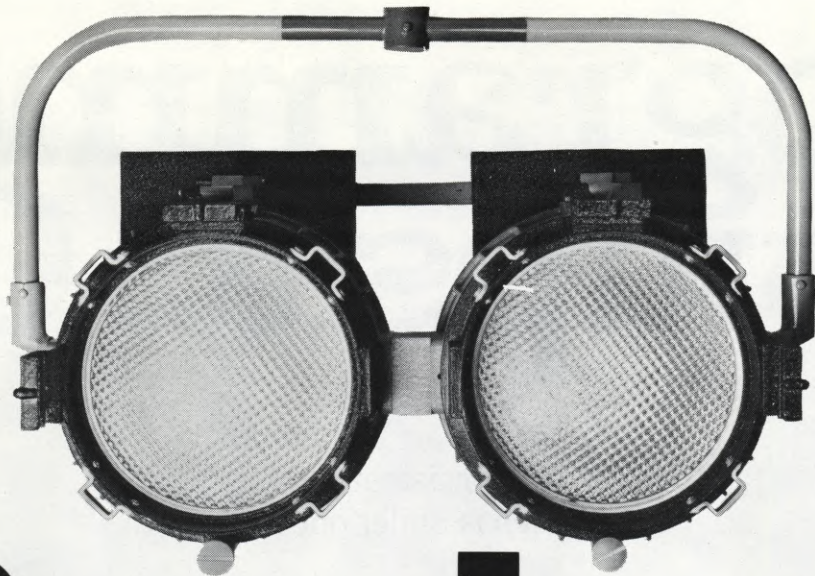
This predicament can be resolved by supertuning a production vidicon lens. For example, Angenieux offers the vidicon f/2.5 15-90mm zoom (same physically as 12.5-75 cine lens) and the vidicon f/2.8 15-150mm (same as 12-120) for Super-16 application. By special arrangement, the vidicon lens is supertuned and calibrated to the highest possible optical and mechanical standards. While the resulting lens is superior to even standard cine lenses, the custom tuning process is very costly and extreme care must be taken to maintain the super-critical tolerances that have been established. Some manufacturers offer vidicon lenses that have been so-called tuned at the factory and engraved for Super-16. For best results, however, these lenses must also be custom tweaked.

On the practical level, Super-16 is not all peaches and cream; special cameras with limited application, special costly lenses from a limited selection, potential problems of scratching, and, in general, a format that is difficult to handle — and exhibiting all the problems of a non-standard format. Financially the picture is not rosy either. Because Super-16 requires special attention throughout production, lab fees usually run higher than regular 16mm. The biggest bite is the liquid-gate optical blow-up to 35mm which is no cheap endeavor. Lastly, a price tag must be put on the inevitable time, effort, and aggravation that is always encountered whenever attempting to create a 35mm image from a 16mm frame. As a result, the financial advantages of Super-16 are not clearly apparent.

Lastly, the size and weight advantages of Super-16 are now disputable with the introduction of lightweight hand-held 35mm self-blinded cameras such as the Arriflex 35BL and the Panaflex. So where does that leave Super-16 at the present time?

It appears that under normal circumstances Super-16 offers no definite advantages over shooting in 35mm. Once the pros and cons are balanced, the 35mm format will most likely involve less hassles and an obviously superior image. The one exception would

Continued on Page 590



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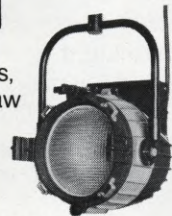
17 x 25 x 12" for the twin. Fit just about anywhere, for easy shipment and setup.

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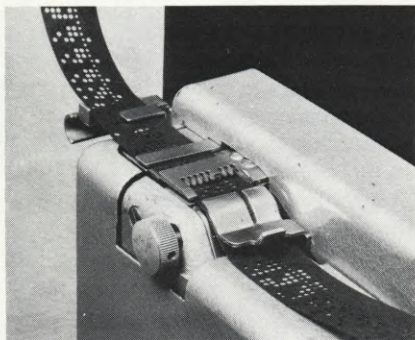
Every function—sensitometric, chemical, chromatic, mechanical, electronic and optical—must be fine-tuned to work best with the others. At CFI, there's a department that does nothing but monitor the whole system, *continually*.

Consistency

A blowup made at CFI benefits from this in two important ways. Benefit One: since it all goes through the one tuned system, quality is *consistently* the best possible.

One Light

For example—nine out of ten CFI blowups can be printed one light. For us, that means the system's working smoothly. For you, it means the job's ready sooner.



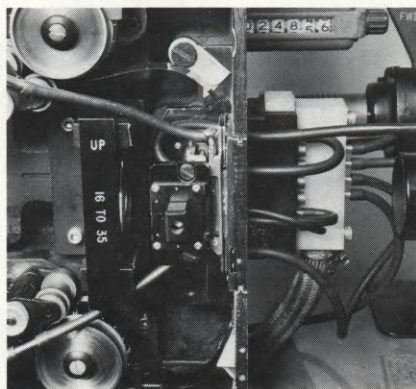
Computer punched tape automatically controls lamphouse timing settings during blowup.

Save Time

Benefit Two: faster service. Because it's all in-house, we can schedule every step whenever we choose—day or night. And our blowup machines are used *only* for blowups (not for titles, etc.). So they're always set up, ready to go.

Liquid Gate

Hiding scratches: some blowup machines coat each frame with liquid just



Rubber tubes pressurize liquid in glass gate. Film is fully immersed during entire exposure.

before it enters the gate. That works well, if the abrasions aren't too deep... At CFI, the film is *completely immersed* in a pressurized, glass-enclosed liquid gate.

Programmed

After timing the original on an electronic video analyzer, we make a 16mm first trial, which the timer corrects. A computer tape of his corrected timing is then fed into the blowup printer's program input.

Academy Award

The printer combines a standard additive-head lamphouse with a patented multicellular optical system. For this combination, (plus the liquid gate and programmed timing), the machine won an Academy Award. Here's why:

Subtle Control

This optical system transmits a great deal of light. That lets us take advantage of the additive head's subtlety (*fifty* timing settings for each of the three primary colors). And it lets us use a slow-speed finegrain internegative—and *still* make a 10 minute blowup from A and B rolls in 2½ hours.

More Awards

Three of this year's films nominated for Academy Awards were blown

up at CFI. A fictional short subject and two documentary features: *Dawn Flight*, *California Reich* and *The Incredible Machine*.

Deadline

"The Academy's delivery deadline was Tuesday at 6 PM. We arrived at CFI on *Monday* morning, with 58 minutes of A/B rolls," says Walter Parkes, who co-produced *California Reich* with Keith Critchlow.

Next Day

"At 5:30 PM the next day," says Mr. Parkes, "We picked up a 5,000 foot one-light 35mm print—and that's what the Academy projected!"

One Roof

Irwin Rosten produced *The Incredible Machine*. "I had the blowup made at CFI because they'd done the 16mm work," he says. "The quality is very, very good."

Service

"We came in with a 750 foot workprint and uncut negative," says Lawrence Lansburgh, who produced *Dawn Flight* with Claire Wiles. "But you'd think we were CFI's biggest customer."

Madman

"Everybody was *enthusiastic*," says Mr. Lansburgh. "The timer kept polishing until I couldn't *see* his changes. A real madman. And the blowup print actually looks better than one made from the camera original."

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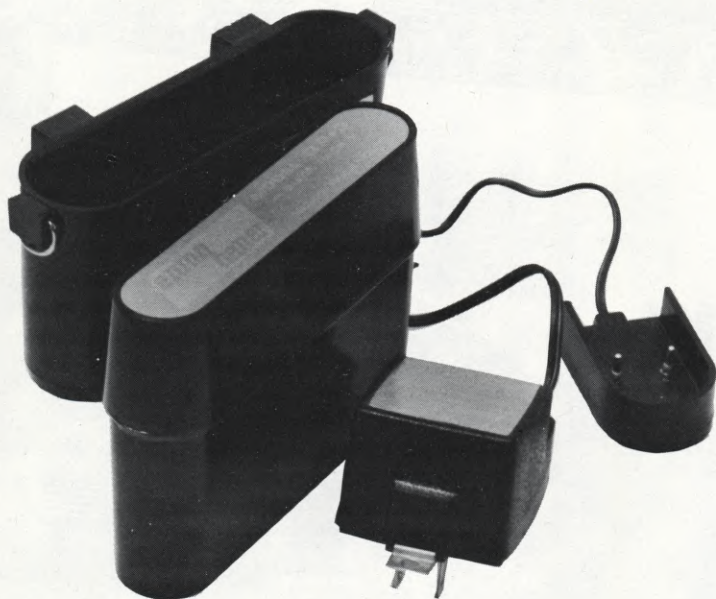
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By GEORGE L. GEORGE

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Jon Tuska's *THE FILMING OF THE WEST* is an impressive survey focusing on the outstanding Westerns of the last 70 years and on their stars, directors, cameramen. Historic as well as anecdotal, this could well be the definitive study of a perennially favorite genre. (Doubleday \$14.95)

John Grierson's name has always been the key word in the factual film domain. This is once more shown by Elizabeth Sussex, whose well-researched and highly readable *THE RISE AND FALL OF THE BRITISH DOCUMENTARY* traces the history of this significant type of film through lively and enlightening interviews with the movement's leaders (Legg, Jennings, Cavalcanti) expanded by her own knowledgeable comments. (U. of California Press \$11.95)

Expertly compiled by James Robert Parish and Michael R. Pitts, *THE GREAT GANGSTER PICTURES* provides an extensive listing of over 400 movies, mostly from the USA, together with cast-&-credits, plot outlines, press reviews and editorial comments. A valuable reference work. (Scarecrow \$15.)

An attractive assortment of famous off-screen movie world romances (with a dash of puffery), Dick Kleiner's *HOLLYWOOD'S GREATEST LOVE STORIES* recaps the lives together of such legendary couples as Hepburn-Tracy, Bacall-Bogart, Monroe-DiMaggio, Loren-Ponti and other cinematic headliners. (Pocket Books \$1.95)

From Crown Publishers, two volumes survey popular film types in reasonably literate texts and excellent stills. *SPEED: CINEMA OF MOTION* by Werner Adrian and *CINEMA OF MYSTERY* by Rose London cover tantalizingly their respective fields — assorted means of locomotion and the ominous supernatural. (\$2.95 ea.)

Derbibooks is a publisher specializing in the more sensational type of film literature, generally imported from England. This possibly accounts for the good writing and the excellently reproduced stills (in color and b&w) in such volumes as *HORROR MOVIES* by Alan

G. Frank, **THRILLER MOVIES** by Lawrence Hammond and **WESTERN MOVIES** by Walter C. Clapham (\$3.95 ea.). Other books include the giant (17"x12") spiral-bound **SPECTACULAR! THE STORY OF EPIC FILMS** by John Cary and John Kobal and **WAR MOVIES** by Tom Perlmutter. (\$9.98 ea.)

A MOVIE PORTRAIT GALLERY

Performers and directors who have made film history — over 2500 of them — appear in a monumental directory, **THE MOVIE MAKERS**, edited by Sol Chaneles and Albert Wolsky. Vital statistics, thumbnail personality sketches and film credits are extensively listed in this attractive volume. (Derbiboooks \$19.95)

A selection of "best directors of the year," culled from Peter Cowie's popular yearbook, **International Film Guide**, are gathered in an imposing volume, **FIFTY MAJOR FILM-MAKERS**, a perceptive commentary on new trends in world film production. (Barnes \$20.)

In the 4th volume of the **HOLLYWOOD PROFESSIONALS** series, directors Tod Browning and Don Siegel are appraised by Stuart Rosenberg and Judith M. Kass respectively, in knowledgeable and sensitive studies of their careers, work methods and creative approaches. (Barnes \$2.95)

David O. Selznick was a star-maker par excellence, whose obsession for quality is stressed throughout Ronald Bowers' **THE SELZNICK PLAYERS**. Ingrid Bergman, Vivien Leigh, Joan Fontaine, Joseph Cotten are among the performers discussed in appealing detail. (Barnes \$15.)

A substantial collection of articles selected by Stuart M. Kaminsky with Joseph F. Hill, **INGMAR BERGMAN: ESSAYS IN CRITICISM** assembles the thoughtful writings of 25 authors — psychiatrists, clergymen, academics and filmmakers — in an illuminating appreciation of Bergman's work. (Oxford U. Press \$4.95)

THE REFERENCE SHELF

A standard reference work published in Great Britain, **KEMP'S INTERNATIONAL FILM AND TELEVISION YEAR BOOK 1975-76** provides an exhaustive guide to the availability of personnel, services and facilities in over 30 countries.

Both a source book and buying guide for the growing a-v industry, **AUDIOVISUAL MARKET PLACE 1976** is an authoritative and thoroughgoing

directory containing over 4500 listings of manufacturers, producers and distributors of hard and software, service firms, associations, publications as well as extensive calendar of relevant events. (Bowker \$19.95)

A useful bibliography compiled by James Monaco and Susan Schenker, **BOOKS ABOUT FILM** offers a competently selected list of works in 13 categories, with a solid grip on the essentials of film literature. (N.Y. Zoetrope, 31 E. 12 St., NYC 10003; \$2.50)

Proffering a helpful guide for scriptwriters in all situations, the Writers Guild of America has issued **PROFESSIONAL WRITER'S TELEPLAY/SCREENPLAY FORMAT** in which Jerome Coopersmith offers valuable practical advice to his colleagues on the standard presentation of scripts submitted to producers. (WGA members and students \$2.; others \$2.50)

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In the 6th volume of the series, **PLAYBOY'S SEX IN CINEMA, U.S.C.** Prof. Arthur Knight discusses the most liberated films of 1975 and the new stars of the genre. A learned evaluation generously enhanced with color and b&w stills. (Playboy \$1.95)

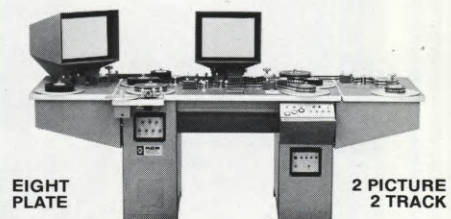
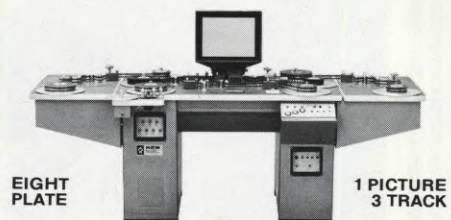
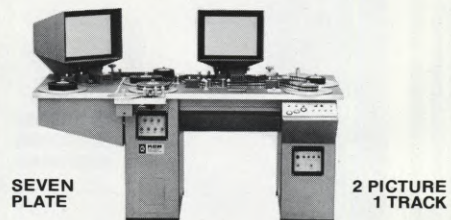
A sex symbol of bygone days, Mae West narrates the story of her life, both private and public, in David Hanna's **"COME UP AND SEE ME SOME TIME!"** If nothing else, this book epitomizes the extraordinary evolution of our mores in the past half-century. (Belmont Tower \$1.50)

Pictured as a contemporary sex goddess, but with an unusually troubled psyche, Marilyn Monroe haunts the pages of W. J. Weatherby's **CONVERSATIONS WITH MARILYN**, an intensely human document revealing without reticence her problems with men, life, and the rigors of film production. (Mason/Charter \$7.95)

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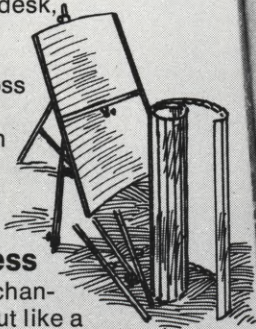
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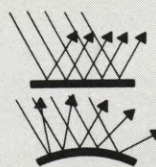
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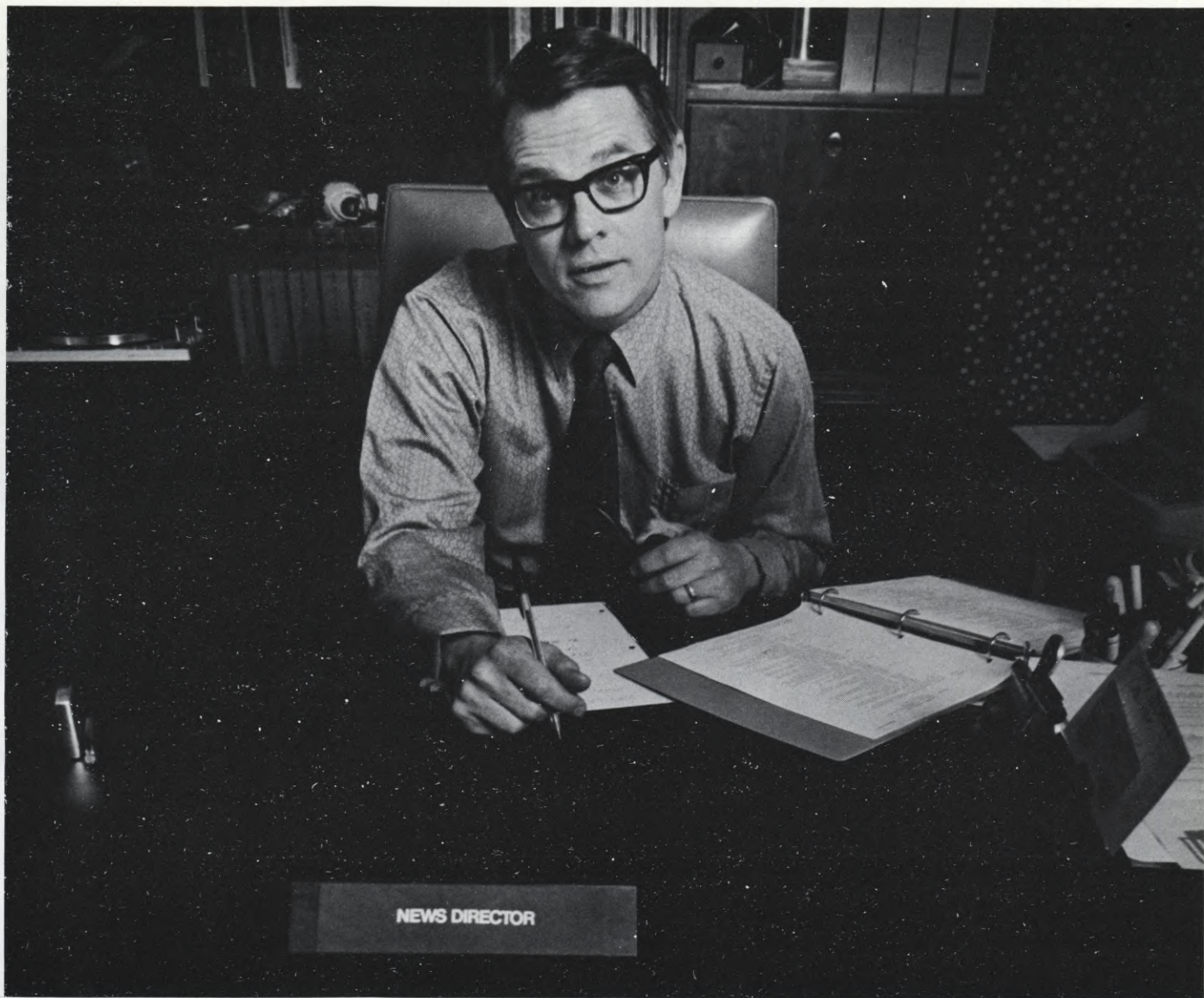
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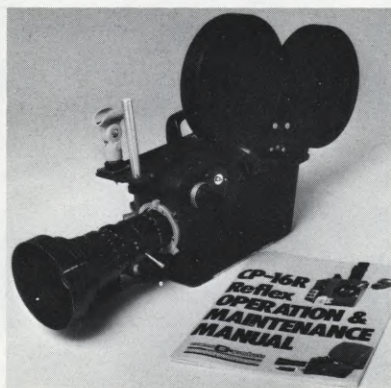
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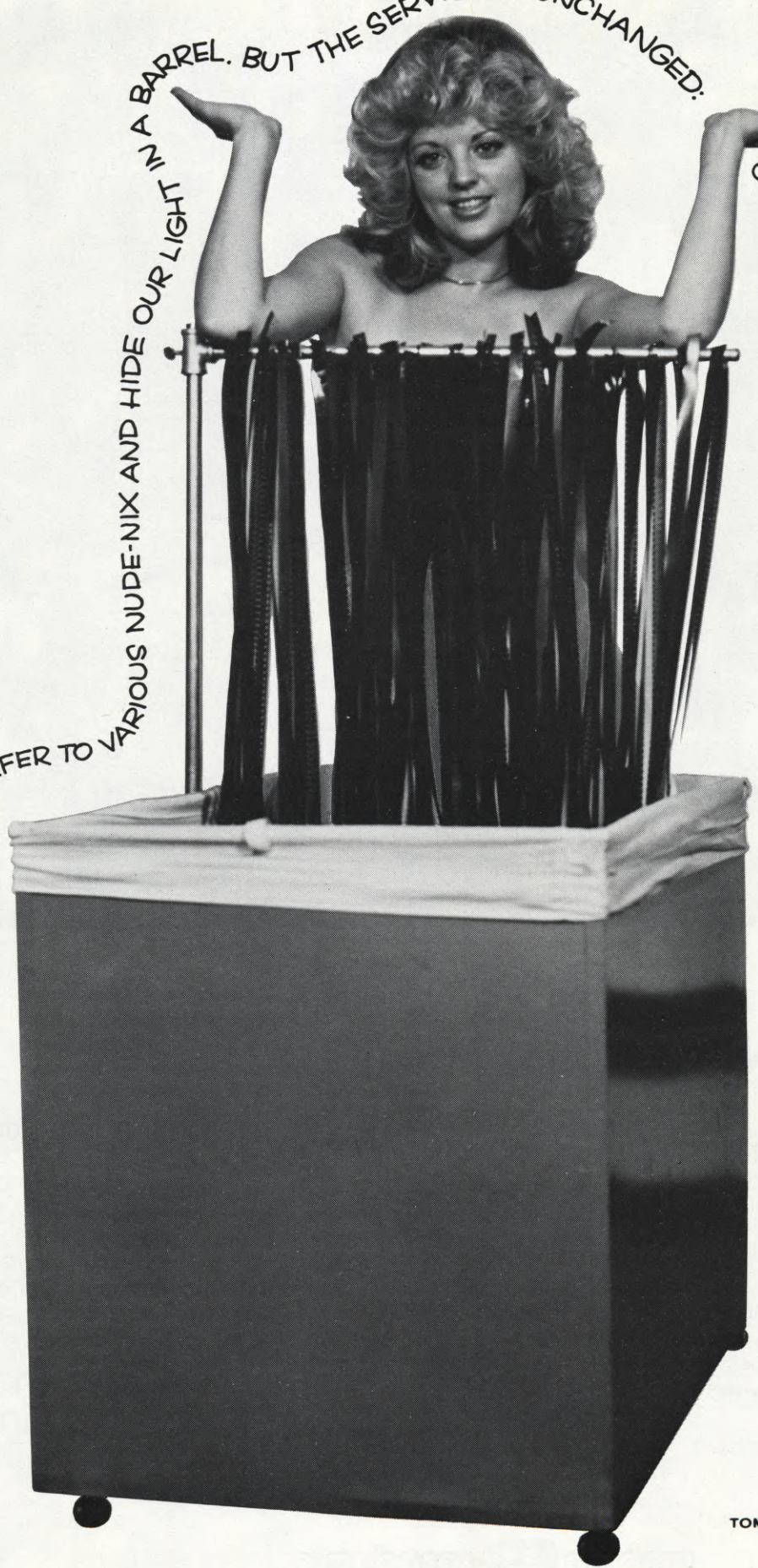
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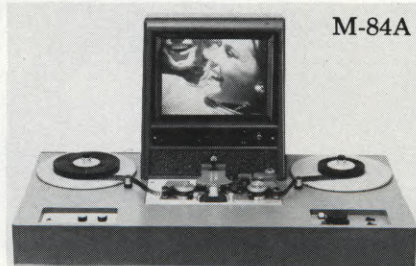
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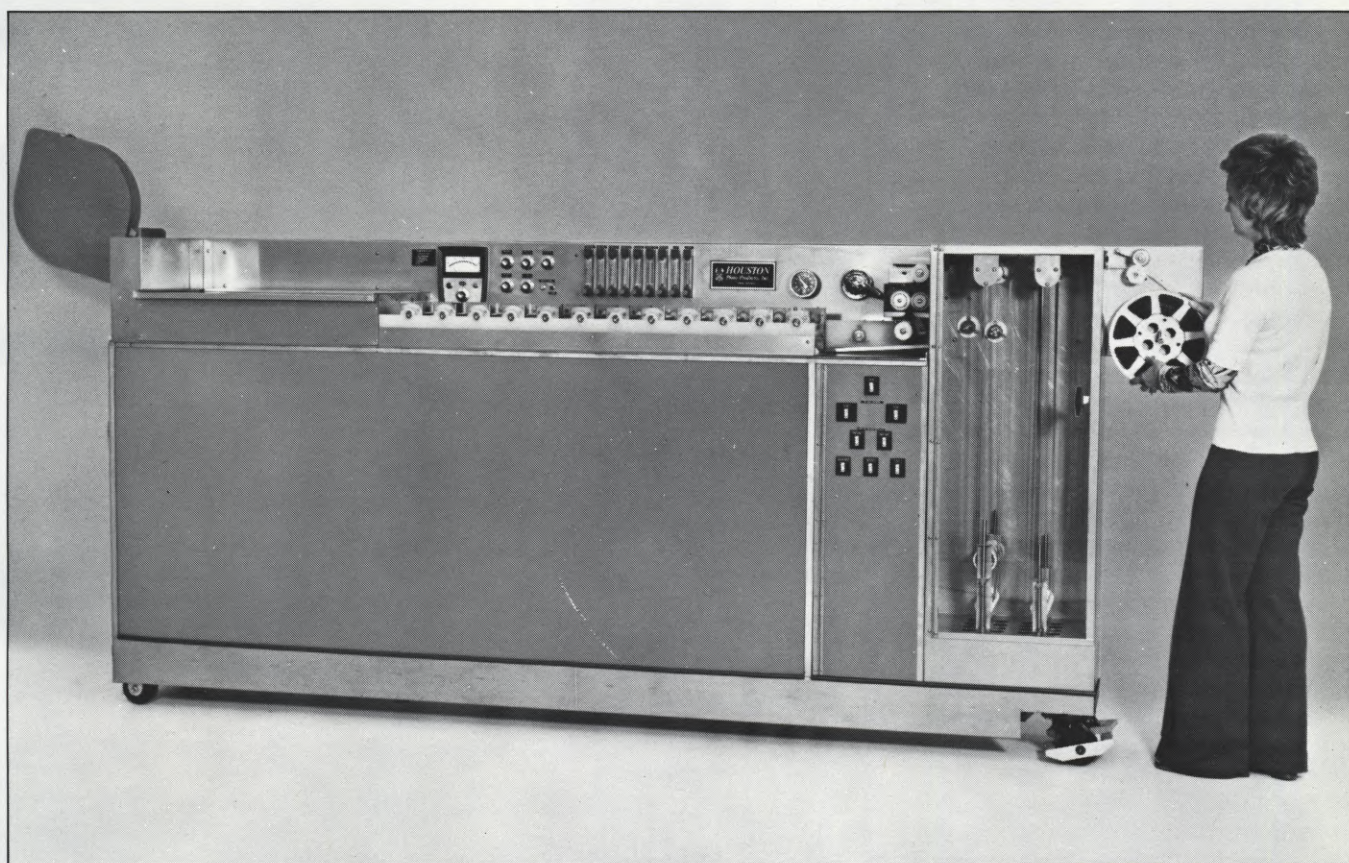


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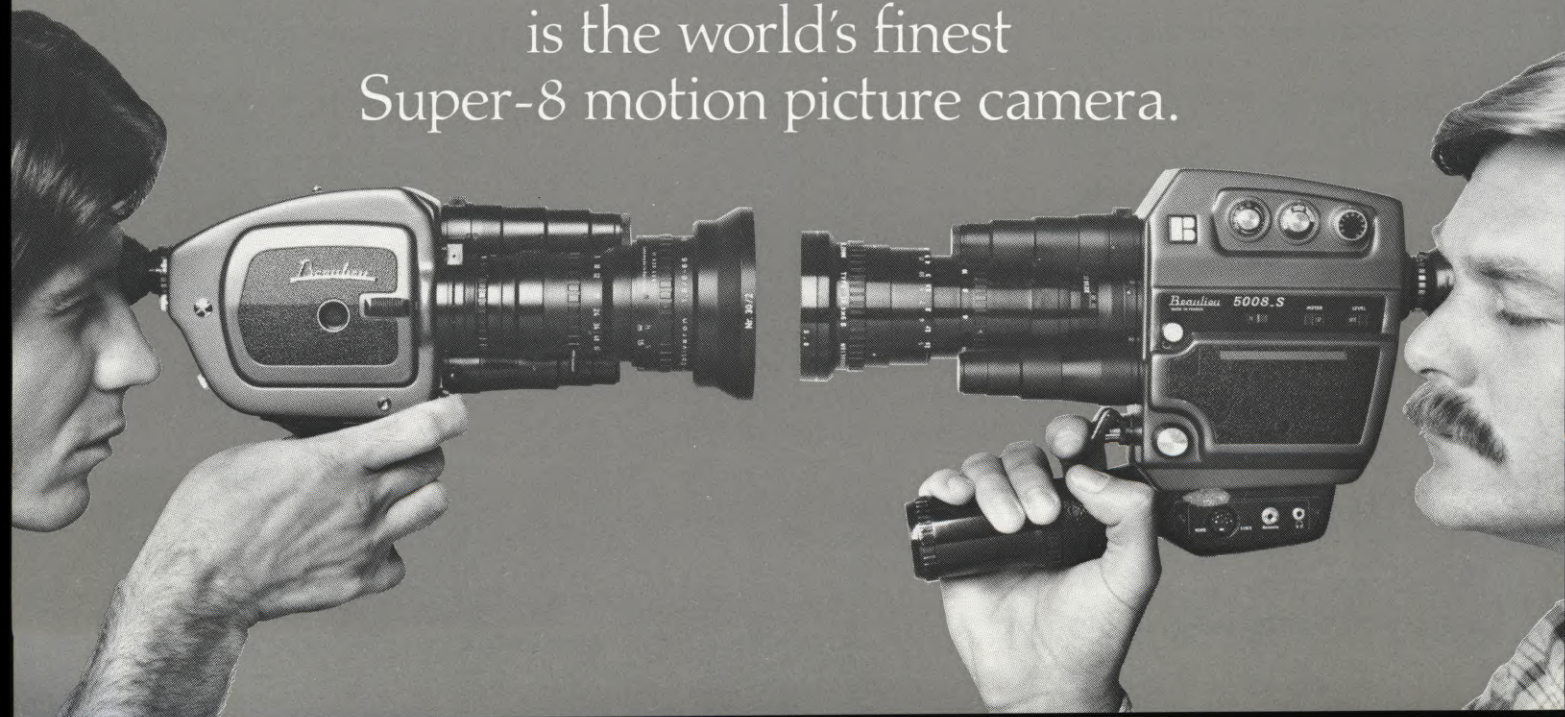
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“Shooting a National Geographic special for Public Television’s WQED in the most desolate location on earth, with no chance for lab reports, is intimidating.

“The Karakoram is the world’s largest collection of high mountains, a phantasmagoria of vertical dimension, mass and distance.

“When things seemed bleakest, we thought of Dan Sandberg and Bernie Newson of TVC, smiled and felt warm inside.

“The Glacierfilm expedition to the ‘third pole’ faced severe conditions: altitudes over 20,000 feet with deep blue sky, harsh snow glare and shadowed skin tones or high yellow desert, lush

green oases and cave-like native homes.

“Lighting conditions that all conspired to ruin exposures on ECN 7247.

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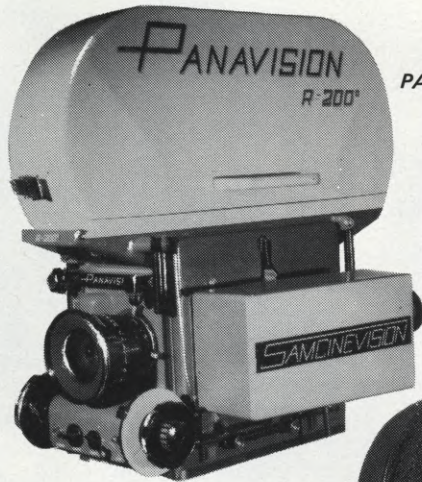
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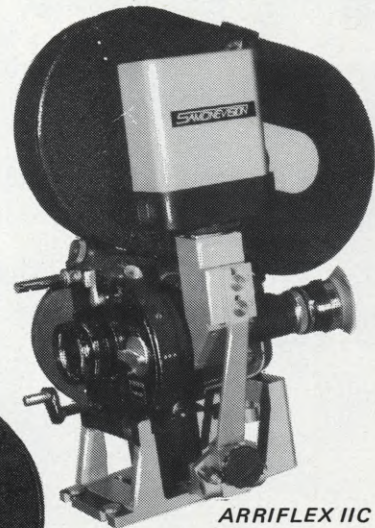
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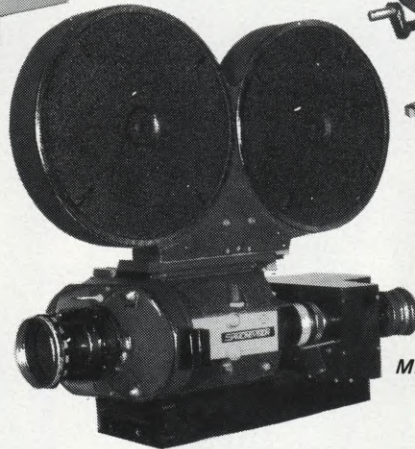
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1. To enable the director to view a take as seen by the operator, thus making it possible for the director to re-view doubtful takes and very often save re-takes.
2. To enable the director to check the performance of artists. This is particularly useful when the director is both directing and acting.
3. To reduce processing and print costs by checking takes before sending film to the laboratory.
4. For multi-camera shooting, to stop and start cameras to save film and laboratory expense.
5. As a guide to editing.
6. To check continuity.
7. To check lip movement and choreography on sequences shot to play-back.
8. To enable specialist technicians (wardrobe, hairdresser, make-up, props) to view a scene as seen by the camera in order to check their particular responsibilities.
9. To place objects accurately in relation to the camera. This is useful when shooting pack (product) shots for subsequent multi-image printing. If desirable, each component of a

shot may have its position drawn on the face of the TV monitor using a wax pencil.

10. For travelling matte composite photography: TV images of both the plate and the foreground action may be superimposed on a TV monitor as an aid to acting and operating.
11. To assist an artist to perform a precise movement in relation to the film camera.
12. To reduce the number of people who, for various reasons, may wish to look through the viewfinder.
13. To check the effect of slow or speed-up motion by playing back the VTR at slow or high speed.
14. To show a held frame from one take while another take is lined up in an exact relationship.
15. For checking all manner of special effects for believability.
16. To check technical aspects of a take — lighting, operating, focus etc.
17. To enable a camera to be placed in a remote, difficult or dangerous position and be operated by remote control.
18. Post-sync dialogue recording.

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THE 48th ANNUAL ACADEMY AWARDS PRESENTATION

By HERB A. LIGHTMAN

The special glamor and excitement of Hollywood's biggest event came to life on the night of March 29, when the 48th Annual Oscar Awards of The Academy of Motion Picture Arts and Sciences were presented live on the ABC Television Network and via satellite and tape to 42 foreign countries around the world.

The big show, which emanated from the Dorothy Chandler Pavilion of the Los Angeles Music Center, was viewed by an estimated audience of 70,000,000 Americans and at least twice that many again in other countries. This constituted the largest audience ever to watch the event.

The Annual Academy Awards Presentation is a unique sort of paradox. Avidly viewed by a worldwide audience numbering in the hundreds of millions, it is, by virtue of that fact, the most "public" event imaginable. Yet, to those who work in the film industry, it is a very "private" affair indeed — for it is on this occasion that the artists and artisans of the motion picture industry are honored by their peers within that industry. It is this recognition by their

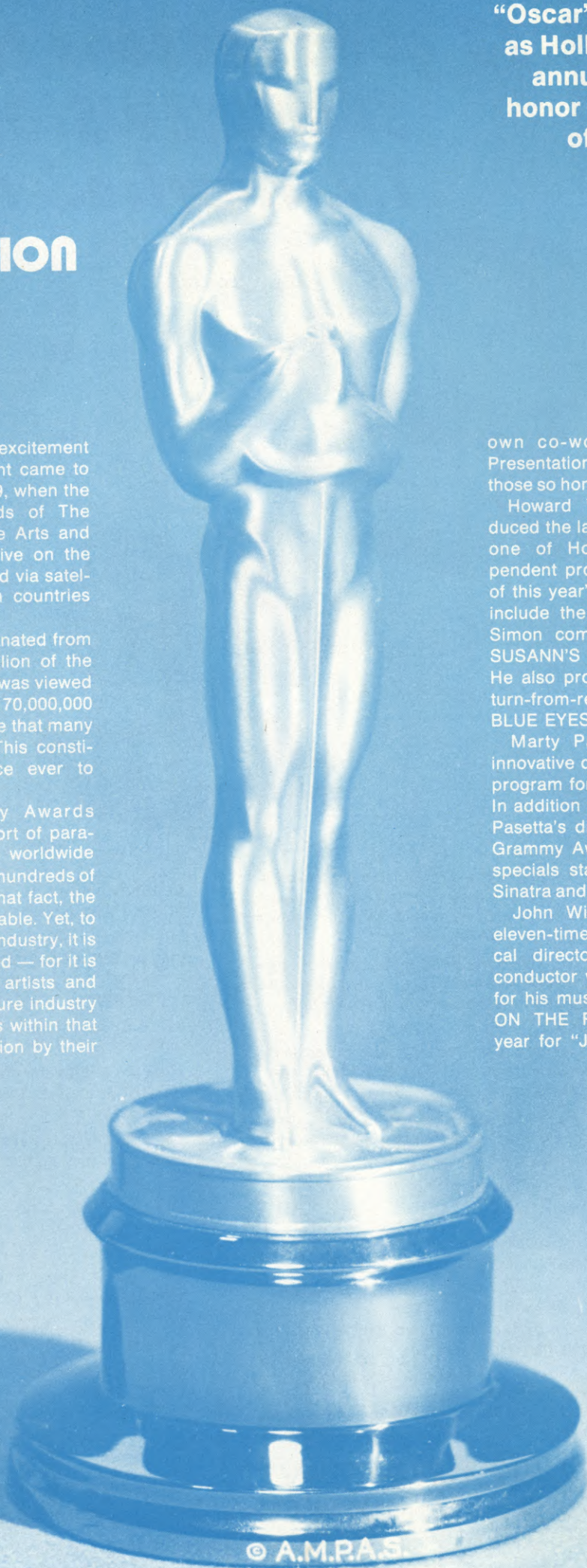
**"Oscar" reigns supreme
as Hollywood stages its
annual "Big Show" to
honor its own at the top
of the film industry**

own co-workers that makes the Presentation a very special event to those so honored.

Howard W. Koch, who has produced the last four Oscar shows and is one of Hollywood's leading independent producers, was the producer of this year's show. His screen credits include the film versions of five Neil Simon comedies and "JACQUELINE SUSANN'S ONCE IS NOT ENOUGH". He also produced Frank Sinatra's return-from-retirement TV special, "OL' BLUE EYES IS BACK".

Marty Pasetta, one of the most innovative directors in TV, directed the program for the fifth consecutive year. In addition to the Oscar Awards show, Pasetta's directing credits include the Grammy Awards, Emmy Awards, and specials starring Elvis Presley, Frank Sinatra and Bing Crosby.

John Williams, Oscar winner and eleven-time nominee, served as musical director. The noted composer-conductor won his first Oscar in 1971 for his music adaptation of "FIDDLER ON THE ROOF". He won again this year for "JAWS", and has composed







Once again enthusiastic fans packed the bleachers to cheer their favorites on, as dressed-to-the-teeth film stars arrived at the Dorothy Chandler Pavilion of the Los Angeles Music Center on the evening of March 29 to attend the 48th Annual Academy Awards Presentation. This year's elegant production was viewed by an estimated 70,000,000 Americans and at least twice that many in the 42 foreign countries licensed to carry the telecast.

the scores for such films as "THE TOWERING INFERNO", "THE POSEIDON ADVENTURE", "EARTHQUAKE" and "THE SUGARLAND EXPRESS".

Gene Kelly, Walter Matthau, Robert Shaw, George Segal and Goldie Hawn appeared as emcees. Kelly was making his ninth appearance on an Oscar show but his first as an emcee. He was

awarded an Honorary Oscar in 1951. Matthau, an Oscar winner in 1966 for "THE FORTUNE COOKIE" and a nominee in 1971 for "KOTCH" and again this year for "THE SUNSHINE BOYS", was making his sixth appearance on an Oscar show. Shaw was making his first appearance on an Academy Awards program. He was an

An obviously very happy John Alcott, BSC, holds the golden "Oscar" awarded for "Best Achievement in Cinematography", in recognition of his stunning camerawork in Stanley Kubrick's lush period film drama, "BARRY LYNDON". He is shown here with the presenters of the award, film stars Billy Dee Williams and Stockard Channing.



Oscar nominee in 1966 for "A MAN FOR ALL SEASONS" and is currently starring in "JAWS" and "ROBIN AND MARIAN". George Segal and Goldie Hawn, who are both starred in the upcoming film, "THE DUCHESS AND DIRTWATER FOX", teamed as the fourth emcee. Segal, an Oscar nominee in 1966 for "WHO'S AFRAID OF VIRGINIA WOOLF?", was making his second appearance on an Oscar telecast. Miss Hawn, an Oscar winner in 1969 for "FORTY CARATS", was making her third appearance in the program.

Presenters included (alphabetically) Alan Arkin, Burt Bacharach, Marisa Berenson, Jacqueline Bisset, Beau Bridges, Charles Bronson, Stockard Channing, Angie Dickinson, William Friedkin, Elliott Gould, Marilyn Hassett, Goldie Hawn, Margaux Hemingway, Audrey Hepburn, Charlton Heston, Anthony Hopkins, Jill Ireland, Madeline Kahn, Rod McKuen, Jennifer O'Neill, Charlotte Rampling, Telly Savalas, George Segal, Roy Scheider, O.J. Simpson, Marlo Thomas, Gore Vidal, Jack Valenti, Billy Dee Williams, and William Wyler.

Ray Bolger was featured in an unusual production number on the 48th Annual Awards Presentation. Titled "Hollywood Honors Its Own," the number opened the program and was written especially for this year's awards program by Buzz Kohan.

Bolger was backed by a group of 24 dancers in the elaborate number, staged by choreographer Walter Painter. This was Bolger's first appearance on an Oscar show.

The ambitious opening number began cleverly with a segment pre-taped in the wide open spaces outside the elegant Music Center and was picked up live without missing a beat, as Bolger and the dancers entered the Pavilion to finish the number onstage.

Other spectacularly choreographed production numbers were those highlighting nominations in the categories of "Best Costume" and "Best Song", the most stunning of the latter being Bernadette Peters' rendition of "How Lucky Can You Get?" from "FUNNY LADY".

A record number of foreign countries carried this year's Oscar show. Broadcasters in 42 countries outside of the United States plus Puerto Rico televised ABC's special coverage to more than 75 million foreign homes. The program was telecast live in Australia, Brazil, Canada, Mexico and the Philippines, as well as Puerto Rico. Other countries carried it via videotape or film.

The list of 42 foreign countries licensed by ABC International to tele-

ACADEMY AWARD WINNERS FOR CINEMATOGRAPHY — 1928 to 1975

wise the 48th Annual Academy Awards Presentation included: Antigua, Australia, Austria, Barbados, Bermuda, Brazil, Brunei, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, West Germany, Greece, Honduras, Hong Kong, Indonesia, Ireland, Israel, Jamaica, Lebanon, Malaysia, Mexico, Netherlands Antilles, New Zealand, Nicaragua, Pakistan, Philippines, Rhodesia, Saudi Arabia, South Africa, South Korea, Spain, Surinam, Taiwan, Thailand, Trinidad, United Kingdom, Venezuela and Yugoslavia.

Marking an Academy of Motion Picture Arts and Sciences first, Diana Ross appeared on this year's Oscar show live from Amsterdam, The Netherlands.



Czech director Milos Forman accepts "Best Director" Oscar for "ONE FLEW OVER THE CUCKOO'S NEST", first film in 42 years to sweep all five top awards.

Miss Ross interrupted a combined European concert tour and series of personal appearances in behalf of "MAHOGANY" to sing the "Theme From Mahogany" (*Do You Know Where You're Going To?*), nominated for the Best Song Award. She was beamed into the show by satellite and performed some time between four and five in the morning, Amsterdam time. It marked the first time in Academy history that a performer has appeared live on the Oscarcast from overseas.

The singer-actress, an Oscar nominee in 1972 for "LADY SINGS THE BLUES", was making her first appearance as a singer on an Oscar show. She was a presenter at the 45th presentation and a mistress of cere-

Continued on Page 564

Year	Class.	Cameraman	Picture Title	Studio
1975		John Alcott, B.S.C.	"Barry Lyndon"	WB
1974		Fred Koenekamp, A.S.C.	"The Towering Inferno"	20th-Fox and WB
1973		Joseph Biroc, A.S.C.	"Cries and Whispers"	New World Prod.
1972		Sven Nykvist, A.S.C.	"Cabaret"	ABC-Allied Artists
1971		Geoffrey Unsworth, B.S.C.	"Fiddler on the Roof"	U.A.
1970		Oswald Morris, B.S.C.	"Ryan's Daughter"	MGM
1969		Freddie Young, B.S.C.	"Butch Cassidy and the Sundance Kid"	20th-Fox
1968		Conrad Hall, A.S.C.	"Romeo and Juliet"	Para.
1967		Pasqualino De Santis	"Bonnie and Clyde"	WB-7 Arts
1966	B&W	Burnett Guffey, A.S.C.	"Who's Afraid of Virginia Woolf?"	WB
1966	Color	Haskell Wexler, A.S.C.	"A Man For All Seasons"	Col.
1965	B&W	Ted Moore, B.S.C.	"Ship of Fools"	Col.
1965	Color	Ernest Laszlo, A.S.C.	"Doctor Zhivago"	MGM
1964	B&W	Freddie Young, B.S.C.	"Zorba the Greek"	Fox
1964	Color	Walter Lassally, B.S.C.	"My Fair Lady"	WB
1963	B&W	Harry Stradling, A.S.C.	"Hud"	Para.
1963	Color	James Wong Howe, A.S.C.	"Cleopatra"	Fox
1962	B&W	Leon Shamroy, A.S.C.	"The Longest Day"	Fox
1962	Color	Jean Bourgois, Walter Wottitz	"Lawrence of Arabia"	Col.
1961	B&W	Freddie Young, B.S.C.	"The Hustler"	Fox
1961	Color	Eugene Shuftan	"West Side Story"	U.A.
1960	B&W	Daniel Fapp, A.S.C.	"Sons and Lovers"	Fox
1960	Color	Freddie Francis, B.S.C.	"Spartacus"	Univ.
1959	B&W	Russell Metty, A.S.C.	"Diary of Anne Frank"	Fox
1959	Color	William Mellor, A.S.C.	"Ben-Hur"	MGM
1958	B&W	Robert Surtees, A.S.C.	"The Defiant Ones"	U.A.
1958	Color	Sam Leavitt, A.S.C.	"Gigi"	MGM
1957	One award	Joseph Ruttenberg, A.S.C.	"Bridge on the River Kwai"	Col.
1956	B&W	Jack Hildyard, B.S.C.	"Somebody Up There Likes Me"	MGM
1956	Color	Joseph Ruttenberg, A.S.C.	"Around the World in 80 Days"	Todd-U.A.
1956	Effects	Lionel Lindon, A.S.C.	"The Ten Commandments"	Para.
1955	B&W	John Fulton, A.S.C.	"The Rose Tattoo"	Para.
1955	Color	James Wong Howe, A.S.C.	"To Catch a Thief"	Para.
1955	Effects	Robert Burks, A.S.C.	"Bridge at Toko-Ri"	Para.
1954	B&W	John Fulton, A.S.C.	"On the Waterfront"	Col.
1954	Color	Boris Kaufman, A.S.C.	"Three Coins in the Fountain"	Fox
1953	B&W	Milton Krasner, A.S.C.	"From Here to Eternity"	Col.
1953	Color	Burnett Guffey, A.S.C.	"Shane"	Para.
1952	B&W	Loyal Griggs, A.S.C.	"The Bad and the Beautiful"	MGM
1952	Color	Robert Surtees, A.S.C.	"The Quiet Man"	Argosy
1951	B&W	Winton Hoch, A.S.C.	"A Place in the Sun"	Para.
1951	Color	Archie Stout, A.S.C.	"American in Paris"	MGM
1950	B&W	William Mellor, A.S.C.	"The Third Man"	British
1950	Color	Alfred Gilks, A.S.C.	"King Solomon's Mines"	MGM
1949	B&W	John Alton	"Battleground"	MGM
1949	Color	Robert Krasker, B.S.C.	"She Wore a Yellow Ribbon"	R.K.O.
1948	B&W	Paul Vogel, A.S.C.	"The Naked City"	U-I
1948	Color	Winton Hoch, A.S.C.	"Joan of Arc"	R.K.O.
1947	B&W	William V. Skall, A.S.C.	"Great Expectations"	Rank-U-I
1947	Color	Winton Hoch, A.S.C.	"Black Narcissus"	Rank-U-I
1946	B&W	Guy Green, B.S.C.	"Anna and King of Siam"	Fox
1946	Color	Jack Cardiff, B.S.C.	"The Yearling"	MGM
1945	B&W	Arthur Miller, A.S.C.	"Picture of Dorian Gray"	MGM
1945	Color	Charles Rosher, A.S.C.	"Leave Her to Heaven"	Fox
1945	Effects	Leonard Smith, A.S.C.	"Wonder Man"	Para.
1944	B&W	Arthur Arling, A.S.C.	"Laura"	Fox
1944	Color	Harry Stradling, A.S.C.	"Wilson"	Fox
1943	B&W	Leon Shamroy, A.S.C.	"Song of Bernadette"	Fox
1943	Color	Arthur Miller, A.S.C.	"Phantom of the Opera"	Univ.
1942	B&W	Hal Mohr, A.S.C.	"Mrs. Miniver"	MGM
1942	Color	W. Howard Greene, A.S.C.	"The Black Swan"	Fox
1942	Effects	Joseph Ruttenberg, A.S.C.	"Reap the Wild Wind"	Para.
1941	B&W	Farciot Edouart, A.S.C.	"How Green Was My Valley"	Fox
1941	Color	Arthur Miller, A.S.C.	"Blood and Sand"	Fox
1940	Effects	Ernest Palmer, A.S.C.	"I Wanted Wings"	Para.
1940	B&W	Ray Rennahan, A.S.C.	"Rebecca"	Seiznick
1940	Color	Farciot Edouart, A.S.C.	"Thief of Bagdad"	Korda
1939	B&W	George Barnes, A.S.C.	"Wuthering Heights"	Goldwyn
1939	Color	Gregg Toland, A.S.C.	"Gone with the Wind"	Seiznick-MGM
1938	Effects	Ernest Haller, A.S.C.	"The Great Waltz"	MGM
1937		Ray Rennahan, A.S.C.	"Spawn of the North"	Para.
1936		Joseph Ruttenberg, A.S.C.	"The Good Earth"	MGM
1935		Karl Freund, A.S.C.	"Anthony Adverse"	WB
1934		Tony Gaudio, A.S.C.	"Midsummer Night's Dream"	WB
1933		Hal Mohr, A.S.C.	"Cleopatra"	Para.
1933		Victor Milner, A.S.C.	"A Farewell to Arms"	Para.
1932		Charles B. Lang Jr., A.S.C.	"Shanghai Express"	Para.
1931		Lee Garmes, A.S.C.	"Tabu"	Para.
1930		Floyd Crosby, A.S.C.	"With Byrd at the So. Pole"	Para.
1929		William Van Der Veer	"White Shadows in the So. Seas"	MGM
1928		Joseph T. Rucker	"Sunrise"	Fox
		Clyde De Vinna, A.S.C.		
		Charles Rosher, A.S.C.		
		Karl Struss, A.S.C.		



THE FIVE BEST PHOTOGRAPHED MOTION PICTURES OF 1975

It is said that imitation is the sincerest form of flattery — and so, in these days when award ceremonies are being held for everything from nail-biting to dog-catching, it is wise to remember that, at least in the field of entertainment, the Annual Academy Awards Presentation is the original.

To the general public it has become a television spectacle exuding Hollywood glamour, and over the years it has not lost its allure. This year, the largest audience in the history of the event — an estimated 70,000,000 in the United States alone — watched Hollywood honor its own, with at least that many more viewing the program in foreign countries.

To these people, the movie stars who enliven the telecast are the focal point of interest, and understandably so — but to the people who work in the motion picture industry, worldwide, the event has a far greater significance. It is the night on which the artists and artisans of this great industry-art are honored by their peers, the people best qualified to judge excellence in this very special area.

As in all of the film crafts, candidates for the "Best Achievement in Cinematography" award are nominated by their fellow craftsmen — in this case the cinematographers, the men who know best what is or is not great photography.

Since the final five pictures nominated for cinematography vary so widely in style and content, it is virtually impossible to choose a single one and say: "This is *the* best," — although the Academy general membership must ultimately make such a choice.

But to the members of the American Society of Cinematographers, all five are "winners" in the most literal sense of the word. And so, it is with the deepest sense of pride that the ASC membership salutes and congratulates the following Directors of Photography who received nominations in the category of "Best Achievement in Cinematography" for the Academy's 48th Annual Awards Presentation:

JOHN ALCOTT, BSC
"Barry Lyndon"

CONRAD HALL, ASC
"The Day of the Locust"

JAMES WONG HOWE, ASC
"Funny Lady"

ROBERT SURTEES, ASC
"The Hindenburg"

HASKELL WEXLER, ASC
BILL BUTLER
"One Flew Over the Cuckoo's Nest"

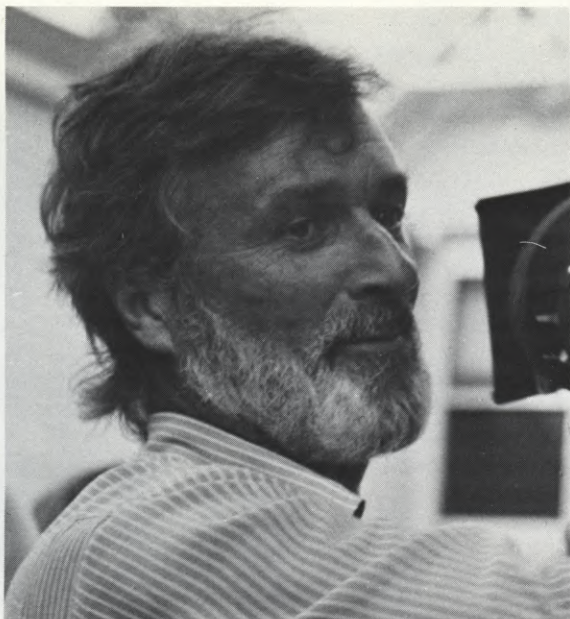


"BARRY LYNDON"

"BARRY LYNDON" — photographed by John Alcott, BSC, is Stanley Kubrick's cinematic saga of an 18th-Century Irish rake who aspires to join the English nobility — and almost makes it. Photographed in soft pastel tones, it is, as one famed film critic put it, "perhaps the most ravishing set of images ever printed on a single strip of celluloid." Filming entirely on location, Alcott has done an inspired job of re-creating the visual aura of a lushly romantic period, both in stately homes and on the countryside.

JOHN ALCOTT, BSC





CONRAD HALL, ASC

"THE DAY OF THE LOCUST" — photographed by Conrad Hall, ASC, is Nathanael West's apocalyptic vision of early Hollywood, brought to the screen with stunning artistry. Using silks and gauzes, Hall masterfully creates a world of golden-hazed fantasy in which the film's sleazy losers move, while struggling for movie fame and fortune. He sheathes the tacky reality of their dismal lives in an aura of romance and glamor — literally a dreamworld of dreams that stand no chance of ever coming true.

"THE DAY OF THE LOCUST"

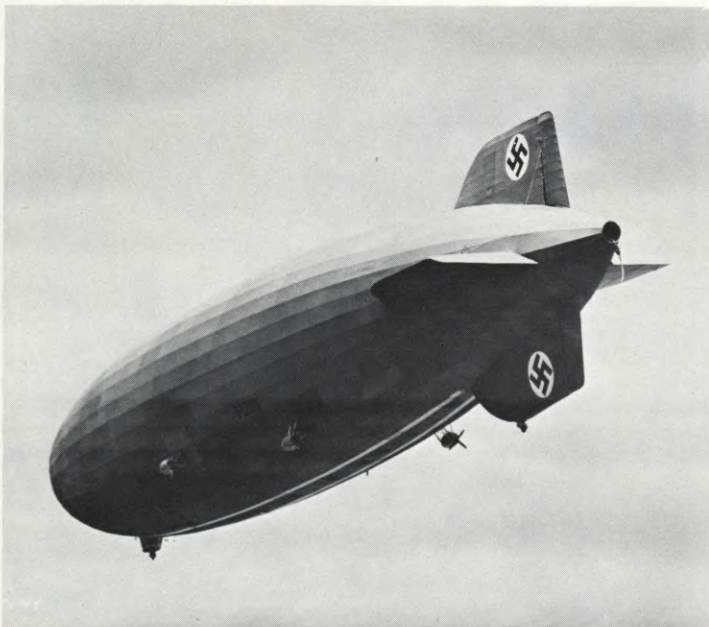


"FUNNY LADY"

"FUNNY LADY" — photographed by James Wong Howe, ASC, depicts the second half of Fanny Brice's life story. In it, two-time Academy Award-winner Howe, a Hollywood legend, proves that his camera artistry has not diminished through the years. His meticulous lighting and beautifully framed compositions faithfully recapture the nostalgia of a particularly colorful and exciting era of American showbiz. It is the kind of lush, glossy photography that made the Golden Age of Hollywood great.

JAMES WONG HOWE, ASC

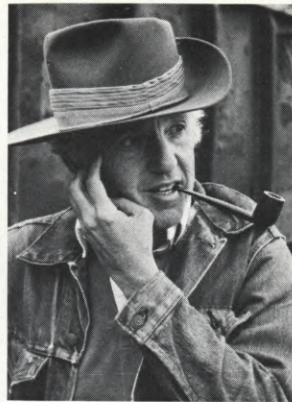




"THE HINDENBURG"

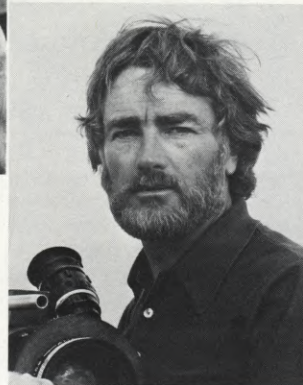
"THE HINDENBURG" — photographed by Robert Surtees, ASC, recreates on the screen the last voyage of a proud dirigible, one that ended in flaming tragedy. Working in sets that faithfully reproduced the extremely cramped quarters of the 800-foot lighter-than-air giant — sets that were almost impossible to light — Surtees, winner of three Academy Awards, managed to employ a smoothly moving camera to add mood and action to what might have been — in less skilled hands — a rather static subject.

ROBERT SURTEES, ASC



HASKELL WEXLER, ASC

BILL BUTLER



"ONE FLEW OVER THE CUCKOO'S NEST" — photographed by Haskell Wexler, ASC, and Bill Butler, is a peek behind the walls of an insane asylum — a stunning tour de force of tragic drama spiked with humor. Filming entirely on location, mainly inside an actual mental institution, the cinematographers had no interesting sets to work with, but managed to create a wide variety of visual moods, while maintaining throughout a pervading atmosphere of impending doom. Given little to exploit visually, they made it come alive on the screen.

"ONE FLEW OVER THE CUCKOO'S NEST"



ACADEMY SCIENTIFIC OR TECHNICAL AWARDS

A fitting tribute to the men behind the men behind the camera, whose technical and scientific achievements make motion pictures in their modern form possible

To the average filmgoer, the "magic of the movies" is personified by film stars and an occasional director loaded with charisma, such as Alfred Hitchcock. Audiences are not concerned about the mechanics involved in putting their favorites on the screen — and this is as it should be. But to those engaged in the actual making of film, those mechanics are of utmost importance, because without them, there would — quite literally — be no movie stars nor indeed, a film industry. The simple fact is that (including television) no other art form has been so completely dependent upon technical elements to express its artistry. That is why those engaged in this industry stand in special awe of the men behind the cameras — those engineers and technicians who invent and develop and improve the devices which make films and television possible. This, too, is the reason why the Academy of Motion Picture Arts and Sciences sees fit to honor these men in a specific way by granting awards for Scientific or Technical Achievement.

Realizing that such awards are of little interest to the general public, the Academy, quite wisely, no longer makes such awards on the televised annual Academy Awards Presentation, but honors the recipients at a special presentation ceremony.

Continued on Page 562

(LEFT) Director William Friedkin and Academy President Walter Mirisch present award to John Ehrenberg (accepting for Bell & Howell) "for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines." (Right) Award to David J. Degenkolb and Fred Scobey of DeLuxe General Inc. and John C. Dolan and Richard DuBois of the Awaklame Co. "for the development of a technique for silver recovery from photographic wash-waters by ion exchange."



Present at the ceremony bestowing Academy Scientific or Technical Awards were: (Bottom Row) Chadwell O'Connor, Harry Teitelbaum (accepting for Hollywood Film), Donzil D. Roberts (accepting for Lawrence Butler), Roger Banks. (2nd Row) William T. Michael (accepting for Westinghouse), William F. Miner, W.D. Carter (accepting for Carter Equipment), Joseph Westheimer. (3rd Row) Richard DuBois, Fred Scobey, John Ehrenberg (accepting for Bell & Howell). (Top Row) David J. Degenkolb, John C. Dolan, Roy Ridenour (accepting for Ramtronics).



PHOTOGRAPHING "ALL THE PRESIDENT'S MEN"

Some unusual cinematographic techniques applied to the filming of a best-selling book about a crucial moment in recent American history

By **GORDON WILLIS, ASC**

Director of Photography

"ALL THE PRESIDENT'S MEN" was photographed in Eastman color negative 5254. Ninety percent of the film was force-developed one stop. The format was 1.85-to-1. It was photographed with the Panaflex camera and Panavision spherical lenses.

The primary set in the picture is the newsroom of the Washington Post. The real newsroom in Washington, D.C. would have been impractical to work in, as seventy percent of the picture takes place there. So it was decided to reconstruct the entire office complex at Burbank Studios in California.

In reality the newsroom covers more than an acre of floor space, filled with desks, typewriters, files, tons of paper, and glass all over the place. It was no small feat reproducing this. George Jenkins, the art director, did a superlative job.

Prior to construction, the lighting was discussed at length and, since the real newsroom is lit exclusively with fluorescent lamps, my feeling was to keep it just that way. Fluorescent has a look all

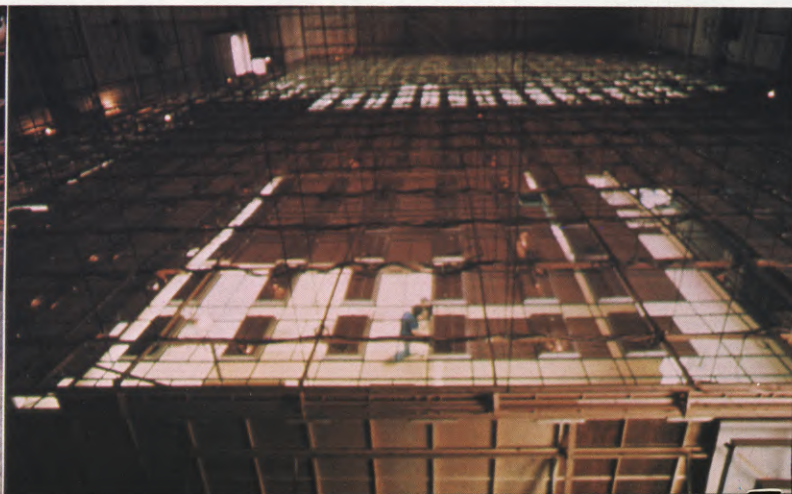
its own and I wanted to retain that look. So, fluorescent it was. The problem here was that we could not leave the ballasts that run the tubes on the stage, because of their inherent hum. So it took about 135 miles of wire to route the units away from the lamps and to the outside of the stage wall, where they were enclosed in air-cooled boxes. All in all, I think there were seven hundred fluorescents units and some fourteen hundred ballasts. Everything was carefully coded and, to the credit of George Holmes and the electrical department, the nightmare of loose connections, lost circuits and flickering lamps never came true.

The question of color rendition under fluorescent light is always just that — a question! I've never been concerned about fluorescent as fluorescent and I've left it just that way in past films. But there were too many scenes to be photographed on this set and I felt it would be very annoying to photograph that much material off-color. Not wanting to lose any stop with camera

filters (which are not positive at any rate), I turned the correction over to the laboratory. We retained that hard fluorescent look, but took out the green.

The fun was yet to begin, however. On one side of the newsroom there were smaller offices that looked into the main room and all of them had a generous supply of windows and a generous supply of glass. I like glass, though, and found the multiple reflections fun to work with. Getting back to the windows. An eighty-foot backing was required to cover these windows, one for day and one for night. The problem here was that only twelve feet of floor space remained between the set and the stage wall. Within that space we had to hang two translucent backings, on track, all the lighting, a white scrim between the windows and the backings, also on track, and a diffuser behind the backings, which was permanent. With this set up, we were able to slide the day or night backing in and out at will as well as add or re-

Since it was not possible to shoot in the actual facilities of the Washington Post (where much of the action of "ALL THE PRESIDENT'S MEN" takes place), the original blueprints of the building were obtained and two adjoining large stages at the Burbank Studios were taken over. The wall between them was knocked down and a 32,000-square-foot exact replica of the Post facility was constructed. These photographs show the set in various stages of construction, including the installation of 1,400 fluorescent lighting units, requiring 135 miles of wire. The furnishings were precisely faithful to the real thing — including the manufacture of 250 custom-designed desks.



move the scrim. The scrim, however, was used only for day, in order to break down the detail of the backing, since it ended up so close to the windows.

Now comes the straw that almost broke this camel's back. The lighting for the day backing was achieved by means of alternating 10K and 5K sky-pans. The night backing was lit selectively with smaller units on the floor. All of this lighting was tungsten. All of the lighting in the newsroom was cool white fluorescent. To bring the tungsten backing into correct color ratio with the fluorescent interior took a bit of doing. Since the lab was correcting, I had to find a color that would fall in line and, at the same time, look cooler than the interior. Since the picture started in Washington, I didn't have much time to test and when I did find a color it had to be available in large enough quantities to cover eighty feet of background lighting. Whatever we tried kept coming up pink. The color that finally hit was pure Cyan.

To appreciate the amount of light required for the day backing, one should know that the exposure for the newsroom was set at T/4.5 and my preference for exterior related to interior has always been two to three stops overexposed. So the backing ended up at T/11. That's being pushed through Cyan correction filters, diffusion, the backing and finally the scrim. It was too much light in too small a space. I didn't like it, but short of removing the stage wall, I had no choice. My sense of humor about the backing was limited.

Perhaps the most difficult part of

(ABOUT THE AUTHOR: GORDON WILLIS, ASC, has become one of the relatively few cinematographers whose names are familiar to a wide segment of the movie-going public. "He doesn't shoot a movie, he helps create it," says Producer Walter Coblenz. Francis Ford Coppola, for whom Willis photographed both "The Godfather" and "Godfather II," believes a good cinematographer is as important to a first-rate film as a good director, and he claims the contribution by Willis was immense. In the making of "ALL THE PRESIDENT'S MEN", Willis was reunited with director Alan Pakula, for whom he had photographed "Klute." For Willis, the story triggers the photographic approach to a movie, and no two pictures he has lensed look alike. The color and photography in "ALL THE PRESIDENT'S MEN" are fairly harsh, reflecting the eerie tenor of Washington during the Watergate crisis. For Willis, as for any truly talented filmmaker, the story is foremost and he looks askance upon any trickery which attracts attention to the camera work and distracts from the material. Other films Gordon Willis has photographed include "Loving", "The Paper Chase", "End of the Road", "Up the Sandbox", "Bad Company", "Little Murders", "Parallax View", and "The Drowning Pool".)



Gordon Willis, ASC, Director of Photography on "ALL THE PRESIDENT'S MEN", lines up a shoot on location. The color and photography of this film are intentionally rather harsh, reflecting the eerie tenor of Washington, D.C. during the Watergate crisis. The visual style is quite different from that employed by the same cinematographer in photographing "THE GODFATHER" and "GODFATHER II".

photographing "ALL THE PRESIDENT'S MEN," if not the most interesting, was the application of depth. There were times when backgrounds were just as important as foregrounds. That is to say, the environment could not be lost behind the actors, but had to be an integral part of the scene.

Our general attack on the problem was based on selective use of lenses

and a series of split diopters. Now, split diopters are nothing new, but we used them in a fairly outrageous fashion. Zoom shots, for instance, as well as pans, etc. The people at Panavision were kind enough to build a 360-degree rotating diopter frame that enabled us to slide the additional elements in and out at any given angle —

Continued on Page 546

Dolly tracks are set for a long tracking shot through the main news room of the *Washington Post*, a 32,000-square-foot replica of the real thing reproduced with the utmost fidelity on two adjoining sound stages of the Burbank Studios in California. The 60-plus teletypes all worked and 300 telephones were linked to an offstage "switchboard". Even the trash in the wastebaskets was authentic, having been imported from the *Post*.



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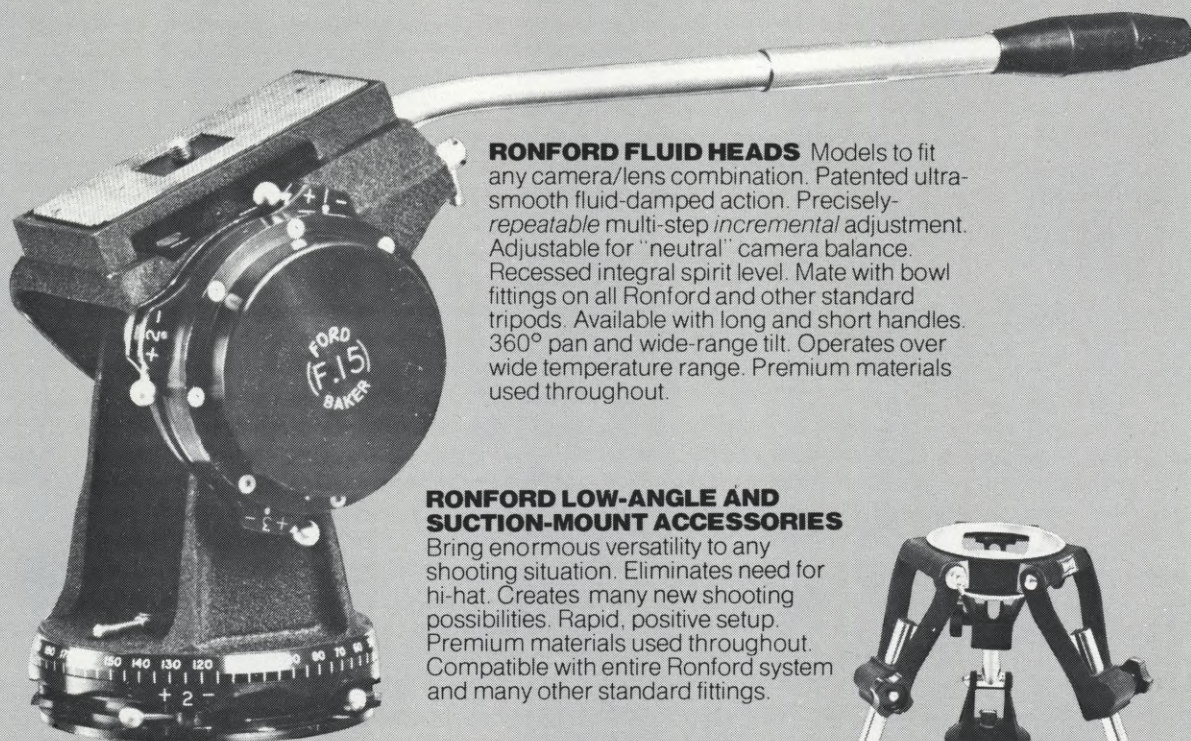
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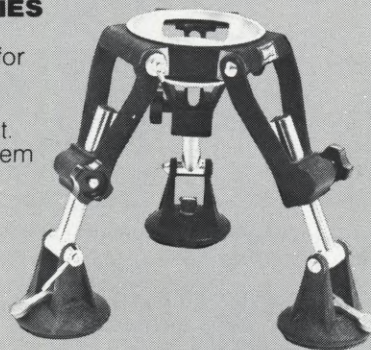
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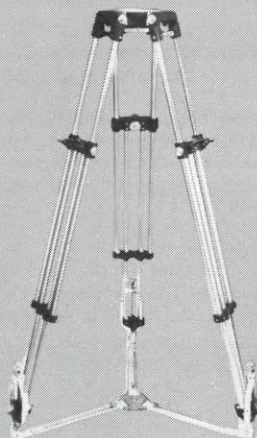
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HISTORIC HOLLYWOOD MOVIE STUDIOS - PART III

Concluding installment of a three-part pictorial backward glance at Movietown, U.S.A., in the days when it was growing up and cameramen were hand-cranking monarchs of all they surveyed

By MARC WANAMAKER

The business of making films, showing, selling or renting them, was, in the beginning, in the hands of a variety of technicians. R. W. Paul in England could make his own cameras. Cecil Hepworth invented a rotary drum on which film could be developed. Méliès and J. S. Blackton were draughtsmen, as well as entertainers.

In the early days, the camera served different purposes in Europe than it did in America. The inventor-artists such as Lumière and Méliès, focused their cameras on everyday human activities, such as a baby eating, a farmer working, street scenes, etc. These documentaries lasted about a minute and fascinated European audiences.

In America, the camera followed theatrical traditions from the beginning. Audiences saw circus acts, prize fights and staged scenes from plays. By the twenties, complete stage plays and original brief screen plays were shown all over the country. Simple dramas and comedies were produced by the same companies which spent millions of dollars on great spectacles. The days of the inventor-artists were gone.

Companies which were successful grew quickly to enormous size with special departments handling all production needs. The crafts became more specialized and included story



Cinematographers of the Camera Department at Universal Studios, photographed on March 15, 1915. Universal was a leader in creating and maintaining an efficient battery of cameramen and equipment ten years before it became a common practice in the modern studio system. (Several photographs appearing in Parts II and III of this series courtesy of 1st FEDERAL SAVINGS OF HOLLYWOOD.)

(LEFT) The Hal Roach Studio at Washington and National Blvds. in Culver City, as it appeared in 1938. It had become a miniature departmentalized movie plant by the end of the thirties. (RIGHT) Aerial view of the growing Metro-Goldwyn-Mayer Studio in Culver City, 1937. By the end of that decade, MGM was a huge departmentalized film factory employing thousands of people, including a huge roster of stars.





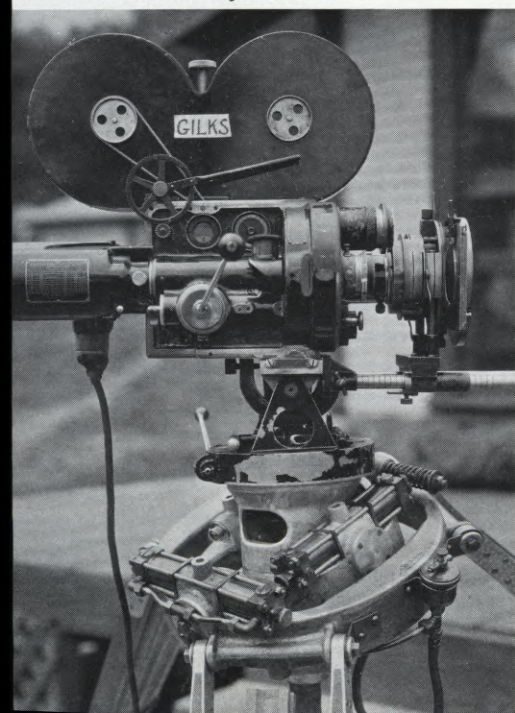
(LEFT) Early sound cameras required large, clumsy sound-muffling housings. Around 1930, the Pathé Camera and Sound Departments developed this design, credited to technicians L.E. Clark, Joe Wright, A.L. Domike and Ferol Redd. (RIGHT) A stockholders' meeting of the United Artists Studio in 1936. Top row, left to right: Charles Chaplin, Darryl F. Zanuck, Samuel Goldwyn. Seated: Mary Pickford, Joseph M. Schenck and Douglas Fairbanks.

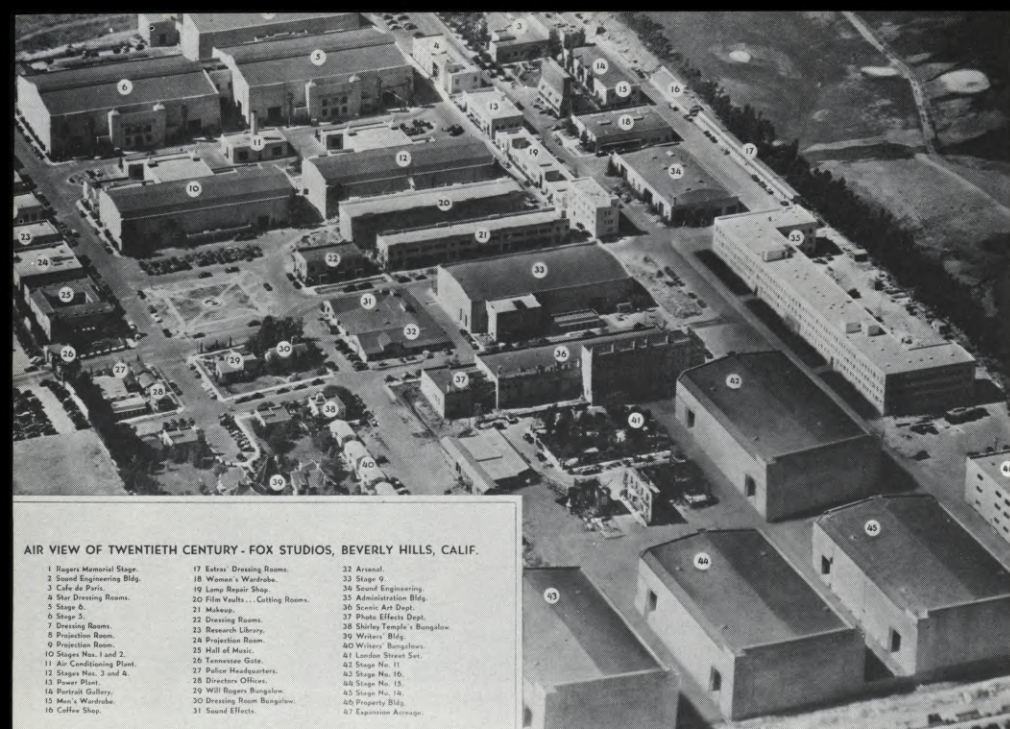
editors, music supervisors, art directors, costume designers and also cinematographers directing camera crews. The creation of separate departments in a studio led to the standardization of their films according to proven formulas, such as westerns, comedies, romances, spectacles, etc.

Most of the early directors were intimately involved in the writing of the script (if there was one) and in using the camera, and all of them worked very closely with a favorite cameraman. But by the 1920's, the public demand for movies skyrocketed and the workload became heavier. In each studio, the responsibility for producing numerous short films on a short schedule became



(ABOVE RIGHT) One of MGM's camera trucks outside the studio gate in 1934 — a highly specialized vehicle to meet the demands of a skilled camera crew. (BELOW LEFT) A smaller, more versatile camera used by Al Gilks in 1926 for the filming of "OLD IRONSIDES" at Famous Players Lasky. (RIGHT) The United Artists Studio in 1936. Originally called the Pickford-Fairbanks Studio in the twenties, it was taken over by Samuel Goldwyn in 1936.





AIR VIEW OF TWENTIETH CENTURY - FOX STUDIOS, BEVERLY HILLS, CALIF.

- | | | |
|----------------------------|---------------------------------|-------------------------------|
| 1 Rogers Memorial Stage. | 17 Extras' Dressing Rooms. | 32 Arsenal. |
| 2 Sound Engineering Bldg. | 18 Women's Wardrobe. | 33 Stage 9. |
| 3 Cafe de Paris. | 19 Lamp Repair Shop. | 34 Sound Engineering. |
| 4 Star Dressing Rooms. | 20 Film Vaults...Cutting Rooms. | 35 Administration Bldg. |
| 5 Stage 6. | 21 Makeup. | 36 Scenic Art Dept. |
| 6 Stage 5. | 22 Dressing Rooms. | 37 Photo Effects Dept. |
| 7 Dressing Room. | 23 Research Library. | 38 Shirley Temple's Bungalow. |
| 8 Projection Room. | 24 Projection Room. | 39 Writers' Bldg. |
| 9 Projection Room. | 25 Hall of Music. | 40 Writers' Bungalow. |
| 10 Stages Nos. 1 and 2. | 26 Tennessee Gate. | 41 London Street Set. |
| 11 Air Conditioning Plant. | 27 Pulley Manufacturers. | 42 Stage No. 11. |
| 12 Stages Nos. 3 and 4. | 28 Directors Offices. | 43 Stage No. 10. |
| 13 Power Plant. | 29 Will Rogers Bungalow. | 44 Stage No. 12. |
| 14 Portrait Gallery. | 30 Dressing Room Bungalow. | 45 Stage No. 14. |
| 15 Men's Wardrobe. | 31 Sound Effects. | 46 Property Bldg. |
| 16 Coffee Shop. | | 47 Expense Account. |

(ABOVE) An aerial view of the 20th Century-Fox Studios in 1938. Every number represents a different department in this highly-organized film-making plant. (BELOW) Part of a street at Fox-Movietone Studios in 1935, showing fronts of sound stages 3 and 4. Small buildings house air-conditioning plants.



The home of Warner Bros.-First National-Vitaphone Pictures, as it appeared in August of 1931. With the advent of sound, the stages at the major studios were built with sound-proofing and were located close to the technical departments which supported them.



greater and the director began to delegate authority and responsibility to others.

Still, the essence of motion pictures is *pictures*, and the art of the camera also underwent a transformation. The black box with the crank handle which turned out the spectacles of Griffith and the comedies of Chaplin was the standard instrument for which camera movements were designed in those days; movements which have, incidentally, never been excelled. But studio sets were then illuminated chiefly by mercury vapour tubes and arc lamps, which not only were noisy, but also gave off a cold hard light that caused distortions. They eventually gave way to large incandescent tungsten filament lamps which served until color film was invented.

Almost from the beginning, new techniques were developed for back-lighting and shadows, for the creation of bright or gloomy atmosphere and for dramatic effect. The camera itself took a leap forward, becoming smaller, more flexible and usable in a greater variety of ways. It became mobile and could be set on dollies and booms, allowing it to travel overhead, hang, swoop or crawl. It was able to view from a distance or bring a scene right into the face of an audience. It could pan horizontally from side to side, truck to and from an object or scene and bring the audience into the story with a long shot, closer with a medium shot and almost as a participant with a close shot. Men such as William "Billy" Bitzer (who worked with D. W. Griffith), Tony Gaudio, cameraman for the "IMP" (Independent Motion Picture Company), Henry Marvin, Max Schneider and H. Lyman Broening, emerged as innovators who helped further the science of cinematography.

As early as 1915, the Universal Film Company employed a battery of cameramen working on many different pictures. They maintained a complete camera department and in many cases worked as a team. As new companies went into production, more lighting men and cameramen entered the field, improvising and inventing as they worked.

With the advent of sound and color, the motion picture industry became a large, complex and specialized business, leaving little room for the executive heads to take an active part in the physical creation of a movie. As the making of pictures became more complicated technically, specialists began replacing the "jacks of all trades".

By 1929, the talkies established the future of films as well as of the studios.

Musicals were number one in popularity, color was becoming the vogue and the established studios grew to be giant film factories employing thousands of workers.

Some silent studios born in the "teens" and "twenties", advanced and prospered, while others disappeared altogether. One small early company survived into the thirties and forties: the Hal Roach Studio in Culver City. Located at what is now National and Washington Blvds., this studio was built in 1916 by Harold Lloyd and Hal Roach and was known as the "Rolin Film Company". By 1920 it became the Hal Roach Studio and the plant survived into the 1960's, when it was demolished.

With the coming of sound, many companies merged into larger ones. One of these was United Artists, formed in 1919 by D. W. Griffith, Charles Chaplin, Mary Pickford and Douglas Fairbanks. The company went through many changes and by 1922 it was located at the Pickford-Fairbanks Studio at 7200 Santa Monica Blvd. By the end of the thirties, Sam Goldwyn took control and United Artists was placed in a secondary position, as the new studio grew into a modern plant.

By the late thirties, Metro-Goldwyn-Mayer also was becoming a large production studio in its own right. Its many departments were developing into large, diversified units as the modernization of the film-making process progressed. By 1931, the camera department at the Warner Bros. Studio in Burbank was one of the most up-to-date and efficient in the world. The First National Corporation, which built the studio there in 1928, had already started to modernize its various departments, and when Warner Bros. took over, they improved and accelerated the process. In West Los Angeles, William Fox built the Fox Movietone Studio on Santa Monica Blvd., spanning south to Pico. Here was another example of the highly departmentalized construction needed in the sound era, a far cry from the silent days.

A number of new companies opened sound stages all over town in the thirties. The Tiffany Studio, located at the old Fine Arts-Triangle lot at 4500 Sunset Blvd., began to make pictures there in 1927. This was the same lot on which D.W. Griffith and Billy Bitzer had lived and worked during their most important years of movie-making. Nearby, in the Silverlake district, at 2719 Hyperion, the modest studio of Walt Disney was making cartoons and shorts. His product proved to be so successful that the company moved to

Continued on Page 534



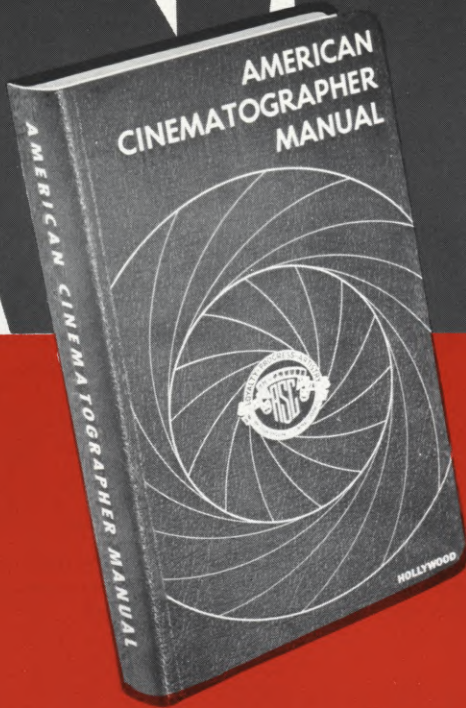
The Tiffany Studio, located at 4500 Sunset Blvd., in 1931. Formerly the Fine Arts-Triangle Studio, Tiffany moved to the lot in 1927. John Stahl Productions was housed at this studio for a time in the thirties, but by 1943 the property had become a rental lot.



(ABOVE) The Walt Disney Studio at 2719 Hyperion Ave., in 1935. Here Disney made his famous "SILLY SYMPHONY" sound cartoons, before moving in 1940 to a new and modern, highly departmentalized studio in Burbank. (BELOW) Sunset and Gower in 1947. Various called "Poverty Row" and "Gower Gulch", this intersection was the center of independent film company activity.



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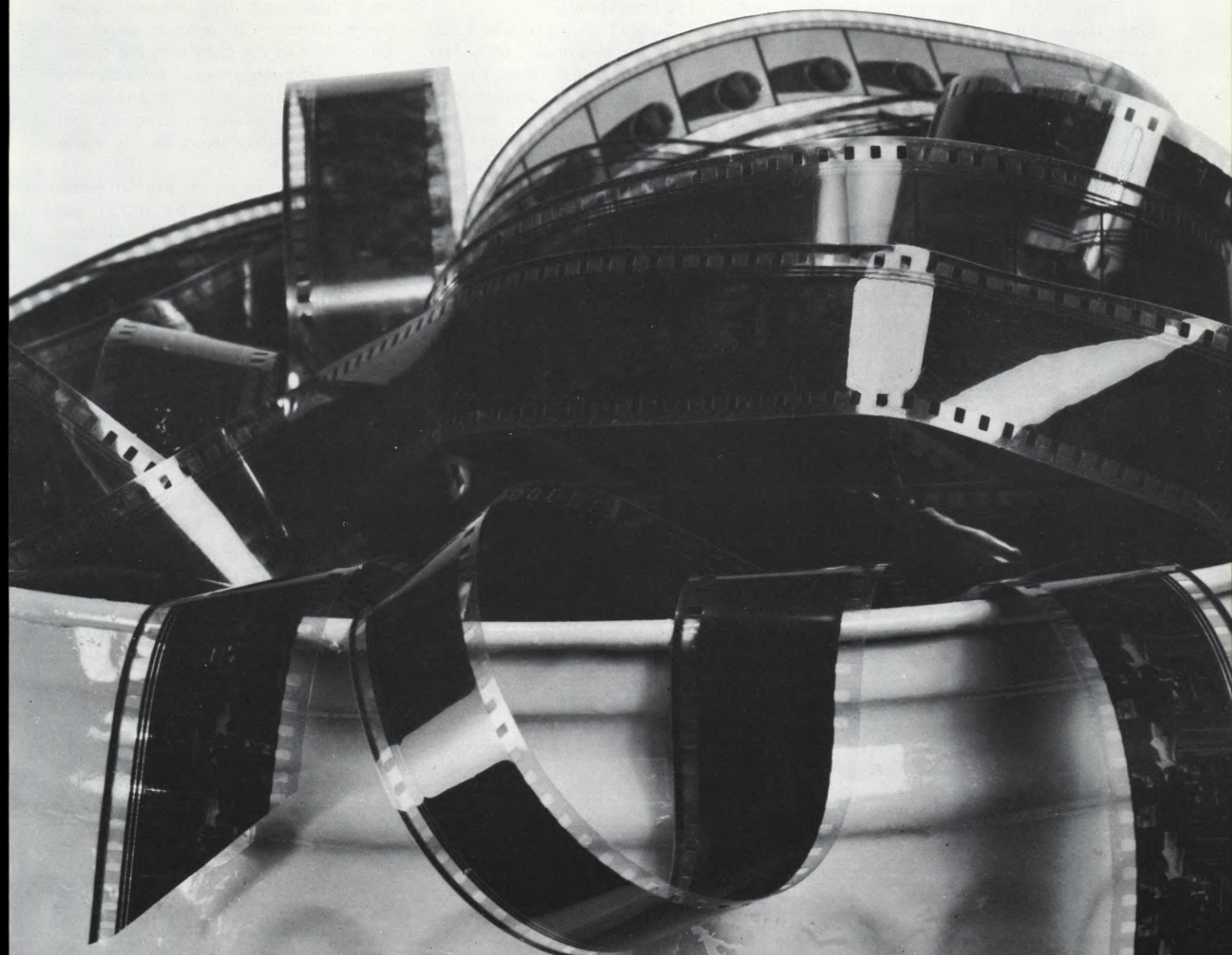
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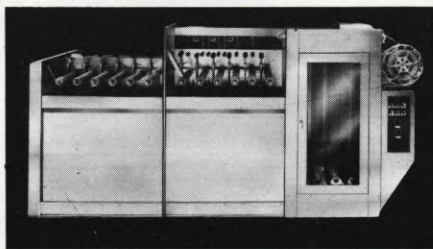
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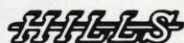


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THE ASSISTANT CAMERAMEN'S TRAINING PROGRAM IN HOLLYWOOD

A trainee's first-hand report, after almost a year, of what has transpired in Hollywood's ambitious program for developing skilled assistant cameramen

By ROBERT J. SCHOENHUT

Since August of last year nine young men and one young woman have been circulating around the various studios in Hollywood, training to become proficient, knowledgeable assistant cameramen. As one of the trainees, I felt a need to acquaint our future colleagues with those of us who will be first and second assistants in the years to come. We hope to be the beginning of a generation of assistants who enter the local with exposure to all aspects of motion picture production, as well as actual production experience assimilated from the 50 or more assistant cameramen we have encountered working on the many, varied productions in Hollywood. This program seems to be a step in the right direction towards the maintenance of high-quality photography, although it will be many years before this year's trainees actually have a say in deciding how a

scene is to be shot or lit.

It was in June of 1975 that over 1,000 aspiring men and women filed into various rooms at the University of Southern California's Founders Hall and took a marathon 8-hour test designed specifically to select trainees for this pilot program. The test, formulated by the USC Testing Bureau under the auspices of the Association of Motion Picture and Television Producers, was basically an academic effort with photographic potential being demonstrated in the form of an 8x10 photograph submitted by the applicant as an indication of his ability. Each applicant was asked to describe as concisely as possible what his or her intent was in taking this photograph and then do a critique on the shot as to why it failed or succeeded. The 70 applicants selected for interview as a result of this test were then asked to appear at the AMPTP offices for personal examination by test officials, heads of camera departments, AMPTP officials (including Jack Carlson who oversees and administers the program) and members of Local 659. In addition, a manual dexterity test was given, as well as a color harmony exam. The final 10 applicants were selected on the basis of their appearance, demeanor, general and specific photographic knowledge — as weighed against the results of the test scores at USC.

During the first weeks of the program we were divided up into three groups and sent to the loading rooms of Universal, Paramount and The Burbank Studios for instruction in various loading room techniques. Essentially, loading a film magazine is the same at all of the studios, although there were certain superficial differences to be found at each of them. The departments' paperwork, however, varies greatly from studio to studio. At Paramount, for example, under the direction of camera department head Dick Barlow, the trainee had the opportunity to participate in logging production camera reports and film usage reports under the supervision of the staff loader, Richard Salvatore. Richard emphasized for us the proper recording of total footage for a particular production and the keeping of production film flow reports. As part of the training we learned about the negative breakdown department from Dave Mathews who is head of the equip-

ment department. He gave each trainee the opportunity of actually using the equipment in the dark with old dailies which had been dimpled by a camera operator some time in the past. Because of reduced lab costs this function is rarely used on the Paramount lot today.

When transferred to the Universal lot, we were greeted by department head Bill Edwards and his assistant, Felix Schoedsack. The Universal operation presented a challenge to the trainee because of the high volume of film production that takes place year-around. The loading department, recently moved from near the front gate of Universal to a more central location, is a spacious and well-organized operation. The major difference between this lot and Paramount's is primarily the responsibility of the camera assistants. At Universal the assistant need only show up at the stage where filming is to take place for the day, and the camera department will see to it that the camera and accessories are delivered, prior to his arrival. At Paramount and The Burbank Studios, the assistant is responsible for picking it up and delivering it to the stage. It is Bill Mohl's responsibility at Universal to see that the right cameras go to the right stages or trucks for delivery to location. It is a monumental task, and each trainee had a great deal of experience through working with Bill in making sure that a PSR did not go where an Arri should have.

Another aspect of the loading department was seeing to it that the right film emulsions were sent to the right productions. Some shows used 5254 and others 5247 . . . not to mention Fuji, at the Burbank Studios. We learned to make certain that the right emulsion went to the proper destination and to be aware that on some features a mixture of both emulsions might be used, in addition to a specific batch number of both. It was quite complicated at times and tribute should be paid to the flexibility and competence of the loaders working there at the time, especially to Steve Schoedsack, who was of considerable help to those of us who only spent three to five weeks trying to learn the intricacies of the department.

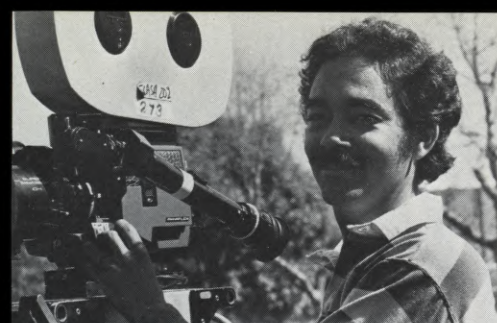
At The Burbank Studios we were welcomed by camera department head, Bill Widemayer. Under his tutelage we were given the opportunity to



KEN BALL

JOHN BREWER





DAVID CALLOWAY



TERRY HARKIN



LESLIE HILL



ROBERT SCHOENHUT

participate marginally, as with the other studios, in the actual loading of production magazines and in the processing of incoming and outgoing film, including the maintenance of film inventories. The major difference at The Burbank Studios is that almost everything is shot with Panavision cameras, so we were able to acquire a great deal of practice with Panavision magazines and equipment.

It was at this time that trainees began to filter out onto production to get their "feet wet" on the set; that is, moving equipment about, doing camera

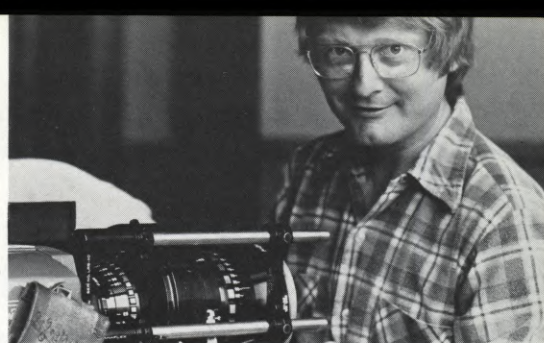
reports, and banging the slate for assistants who were willing to give them the responsibility.

Following the first nine weeks of loading room experience at the major studios we began the equipment training phase, which included familiarization, operation, and mechanics of the cameras and accessories used at the different studios. During this six-to-eight-week period we were exposed to the capabilities of equipment by means of department lecture and seminar, in addition to visits to various rental houses. Actual on-production learning of what the equipment would do was yet to come.

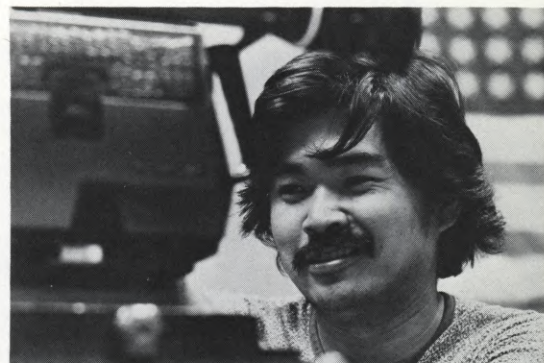
While at Paramount during this phase of training, Dick Barlow arranged for each group of trainees to spend time at rental and motion picture development companies such as Cinema Products. There we learned about the Mitchell Silent Pellicle Reflex (SPR) that Universal uses on production, the XR35 lightweight studio reflex, and the famous J-4 joy stick zoom control developed by Cinema Products. Characteristics of various lenses were explored, and we were taught how to check zoom and flat lenses in the field for various problems that might arise. Also how to clean delicate coated lenses effectively without damaging the coating. Collimating zoom lenses was part of the trainees' education both at Cinema Products and at other rental companies.

Gordon Enterprises was very helpful in explaining the care and maintenance of the Arri 35BL and its accessories. We were shown how to clean, assemble, lubricate and properly handle the camera and blimps with the standard Arri, Hi-Speed and Canon Aspherical optics. Alan Gordon's Dynalens was the subject of much interest among the trainees. How it works, assembles, and is used were part of the in-depth training at this international rental house. Gordons very graciously presented each trainee with an assistant's ditty bag to begin his career with.

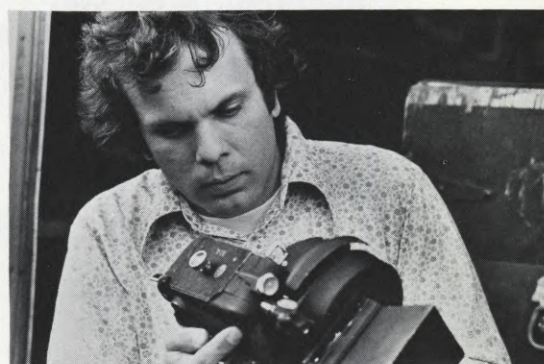
Birns and Sawyer provided the trainee with further insight into the inner workings of the Arri 35BL. It was interesting to note the differences in maintenance procedures, but all rental houses and studio camera maintenance departments are very meticulous in the care of all motion picture equipment. This fact was repeatedly emphasized so that all the trainees might fully understand that a major part of our responsibility is to treat the equipment with an equal amount of care and respect so as to lessen the necessity of repair as a result of carelessly handled equipment.



MIKE SCOTT



GLENN SHIMADA



LYNN TOMES

The field trip which we made to the Tyler aerial camera mounting systems and Continental Camera Systems which deal with aerial camera mounts and accessories proved to be both informative and necessary for rounding out our education. Mark Armistead Rentals summed up years of experience to the trainee by explaining in detail and with great patience the inner workings of the Mitchell 35SR, BNCR, and the camera operator's tool, the Worrall geared head. All facilities were very busy during our visits, but they kindly took the time to help us become good assistants.

Panavision's large complex in the Valley devoted two days to the trainees' program and proved to be an enriching experience for all. The Panavision PSR camera and related accessories were dealt with in detail by the helpful staff of technicians. They also explained the Panaflex camera and Panavision-modified Arri in addition to letting us assemble, disassemble and thread the cameras. We were given the

Continued on Page 580

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processing time made possible by process VNF-1 has been a real life-saver. This is true even though we have begun experimenting with electronic news gathering (ENG) by putting one video camera crew into the field.

That has provided some interesting grounds for comparison. It's true, for example, that we don't have to process ENG material. However, the time it takes to process the film is made up for by the fact that we can edit it a lot quicker than tape. Only in cases where getting back to the station is a problem, does our minicam — with microwave relay — really offer a time advantage, and then only for live reports. ENG is important for those breaking news stories that can be aired live, as they are happening.

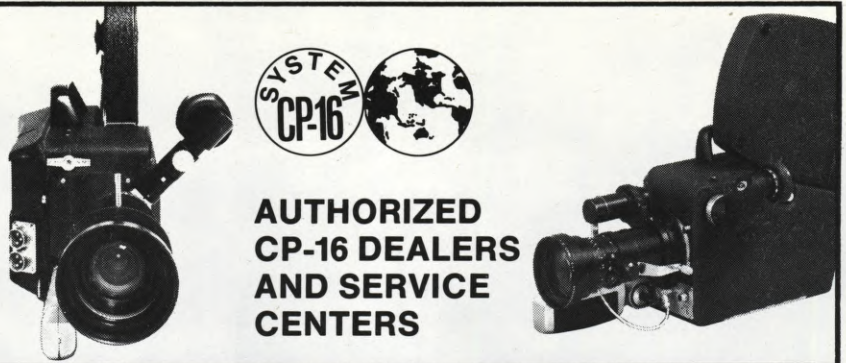
On the other hand, we lose a great deal of flexibility with ENG. We use an Ikegami camera, with Sony recorders, and both are fine pieces of equipment. Yet the electronic equipment is bulky and limits the mobility of the cameraman.

In addition, film cameras still have a considerable advantage over ENG equipment in low light levels. As our work with the new Ektachrome film has proven, excellent results can be obtained by using today's advanced film technology, even under adverse lighting conditions. The electronic images, on the other hand, tend to be very "noisy" as the signal is boosted to compensate for low light, and the background interference becomes a very real picture-degrading factor.

I think that ENG offers some advantages, but film will remain an important factor for many years to come. Even though advancements are being made in electronics, advancements in film technology — such as Eastman Ektachrome video news film 7240 — are taking place just as rapidly. The two media should form a strong team that lets stations give its viewers the best possible news coverage in the future.

But for today, our film operation has played a significant part in the success of WXYZ-TV "Action News." We try to hire the best in cameramen, sound people and reporters. We process the film through what we believe is the finest lab in the Midwest. Careful editing techniques, and the top telecine chain available complete the cycle to make the film we put on the air the best. We believe it and we strive for it.

It's hard to pin our high ratings down to any one thing — but I like to think that that extra inch we go has been one of the major factors. ■



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(LEFT) The Paramount Studios on Marathon Street in Hollywood, in 1933. It was originally the Brunton, then the United and finally the Famous Players-Lasky Studio before becoming Paramount. **(RIGHT)** The legendary Harry Cohn (center), President of Columbia Pictures, is shown here as he watches a scene being set up by Gregory Ratoff (looking through camera). Cohn was credited by studio employees with knowing what everyone on the lot was doing at any given hour of the day.



HOLLYWOOD MOVIE STUDIOS
Continued from Page 527

a large, modern plant in Burbank by 1940.

Columbia Pictures was the symbol of the successful small studio in the thirties. Located in the center of "Poverty Row" (a term coming from the establishment of store-front studios on Sunset Blvd. between Beachwood Drive and Gower St.), this studio grew to be a competitor to the major studios such as Fox, MGM, Universal, Paramount, etc. Led by Harry Cohn, the studio was departmentalized but cramped. Instead of providing separate buildings for each craft, all were located in a few buildings. Harry Cohn himself could easily walk around the

(ABOVE LEFT) General Service Studios at 1040 Las Palmas Ave., in 1954, formerly the Hollywood and Metropolitan Studios, where Harold Lloyd made many of his pictures. **(BELOW LEFT)** Looking north on the lot of Columbia Pictures Corp. in 1938. Growing out of "Poverty Row", this studio was competing with the majors by the 1930's. **(RIGHT)** W. Ray Johnston, President of Monogram Pictures Corp. purchased the movie lot in 1937 which had previously housed the Kalem, Charles Ray/Willis and Inglis and like Studio.

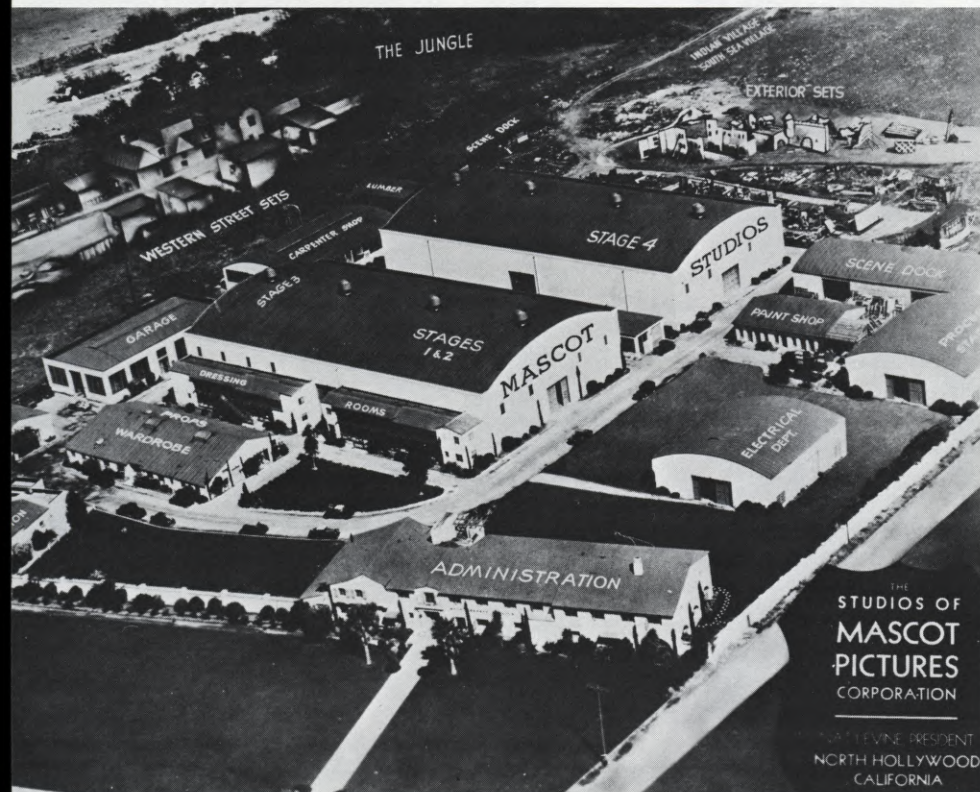


whole lot, checking up on each area of production.

As the sound era progressed, the small studios of "Poverty Row" and elsewhere were popping up and disappearing every year. At Gower and Sunset, where the Nestor-Christie studio once stood (the first studio in Hollywood proper), the Amalgamated Motion Picture Studios were renting space to indies. By 1937, this studio was razed, to make way for the construction of the Columbia Broadcasting System building. But some things didn't change. Across the street at Gower and Sunset, then and now, is the Columbia Drug Store. Many cameramen, actors and "cowboys" who worked for independent compa-



(ABOVE) The Universal Film Studios on Lankershim Blvd., in 1936. (BELOW) Mascot Pictures Studio on Radford Drive in Studio City, 1935. Formerly the second studio of Mack Sennett Productions, and later home of Republic Pictures, today the lot is headquarters for CBS Television.



by Harold Lloyd and Howard Hughes, it became the Metropolitan Studio and then General Service.

Other small companies were lucky in finding established studio sites that were available for sale. In 1937, Monogram Pictures, headed by W. Ray Johnston, took over the old Kalem, Charles Ray, Willis and Inglis, and Like Studio at 1425 Fleming St. (soon to become Hoover). The new address became 4376 Sunset Drive and until 1952, Monogram Pictures were made on that lot. In 1935, when Monogram was absorbed by Republic Pictures, Herbert Yates of the Consolidated Film Laboratories, which owned Republic, was a partner of W. Ray Johnston for two years, until Johnston took off to recreate Monogram Pictures again. Yates, who was renting space from Nat Levine at the Mascot Studio in 1934, would later take over the entire studio. Mascot Pictures, in existence for a very short time, was located in the former second studio of Mack Sennett. Sennett sold out to Mascot, Mascot Continued on Page 554

(BELOW RIGHT) "Gower Gulch", the corner of Gower and Sunset on "Poverty Row" in 1947. "Drugstore Cowboys" shoot the breeze outside the Columbia Drug Store, which was actually built on the site of an early-day horse-watering station. On this corner, for thirty years, actors and technicians gathered to exchange information about jobs that might be available at any of the small independent companies up and down the street.

nies in the twenties and thirties could be seen standing around talking shop and trying to land a job. This was the "Gower Gulch" of the thirties.

The independents who were producing films since the beginning of the film industry used rental studios all over Los Angeles. Many of them did not have the financial backing to build their own plants, making it very profitable for rental studios such as the General Service in Hollywood, at 1040 Las Palmas Ave., where it still stands today. The studio was built in 1919 as the Hollywood Studios. Use for many years



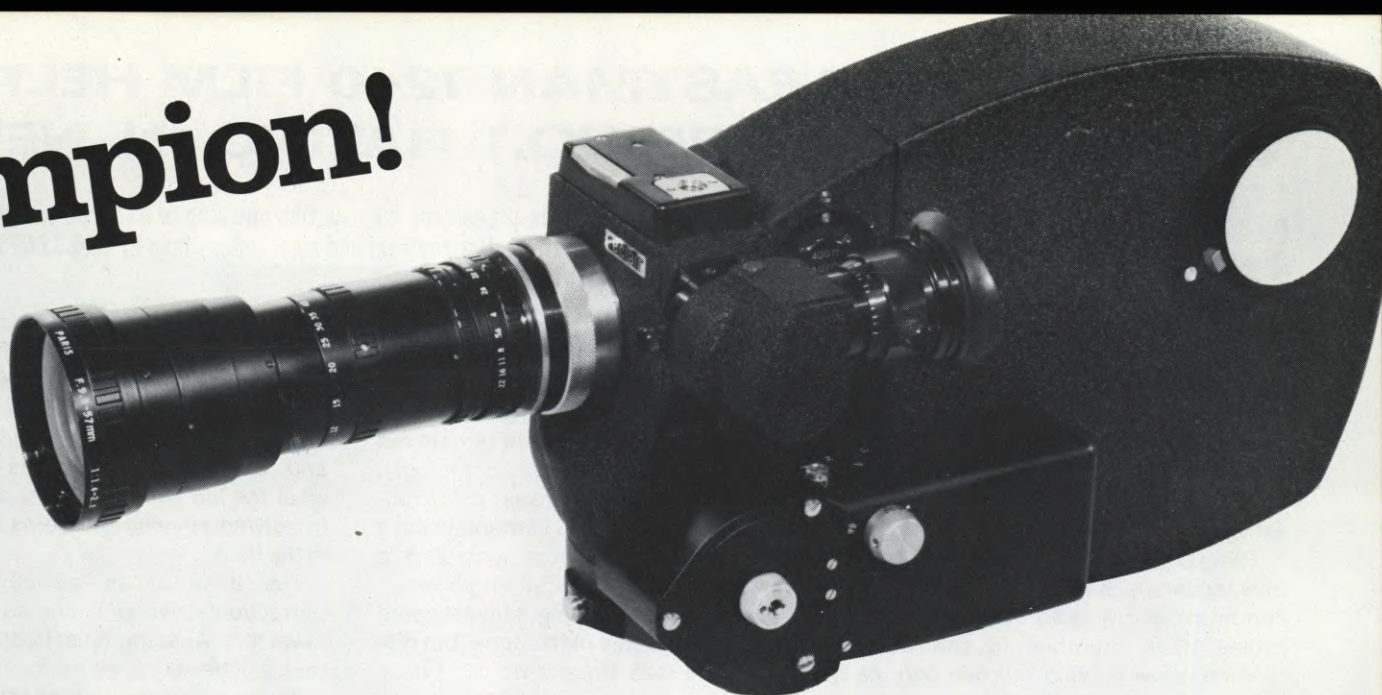
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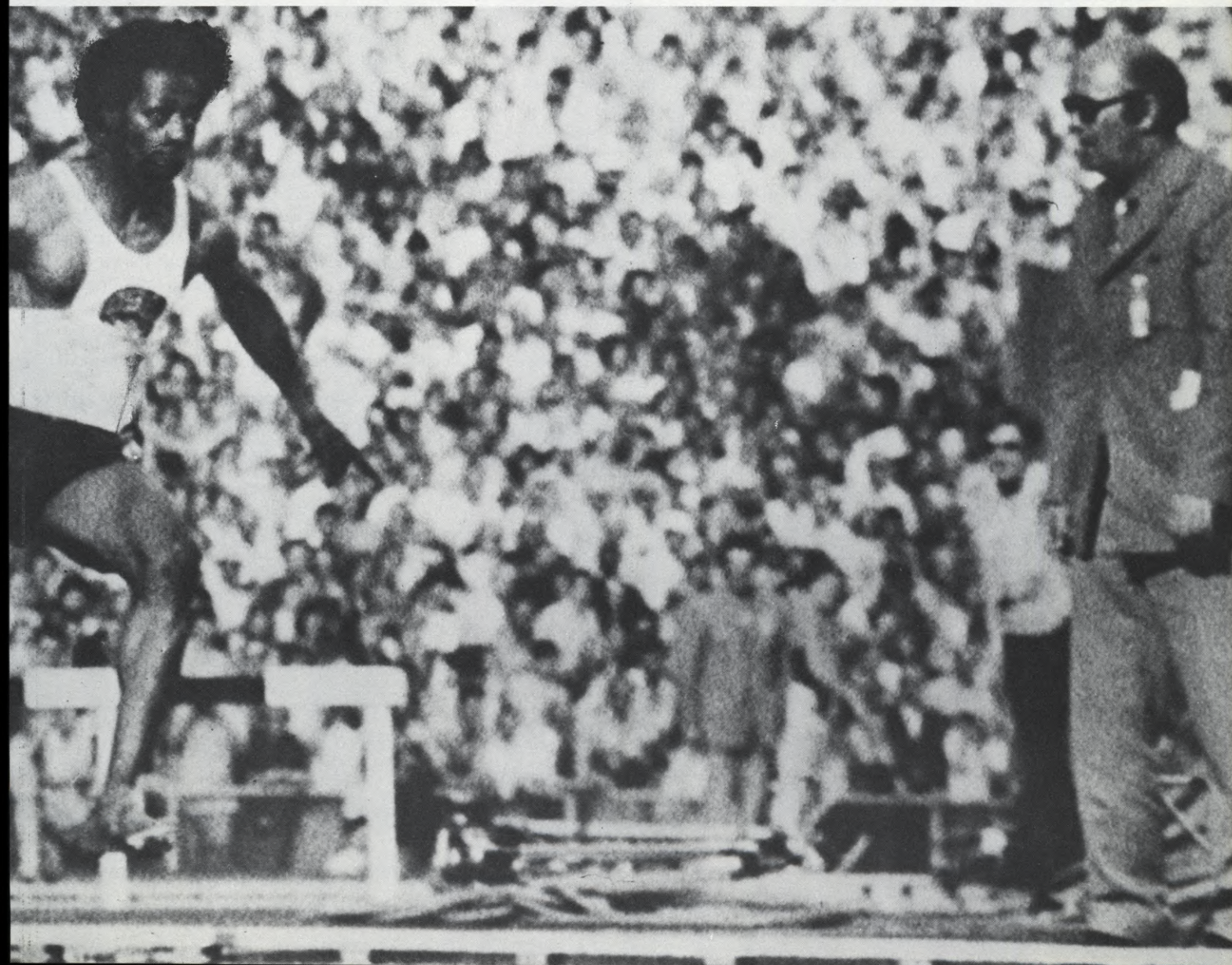


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HOW THE NEW EASTMAN 7240 FILM HELPED WXYZ-TV CAPTURE NO.1 RATING IN NEWS

By **JOSEPH DONETH**,
News Film Operations Director
WXYZ-TV, Detroit, Michigan

Force-processing the new film one stop to ASA 250 resulted in finer grain, better contrast and truer colors than EF film 7242 at ASA 125

Crouched on top of a switch tower, overlooking a section of Detroit's industrial railroad tracks, we were fairly certain that the teenage gang hadn't spotted us. Our camera was well-hidden, and a 300mm fixed-focal-length lens brought the gang's covert activities into close view.

The gang's method of operation was truly ingenious. It involved walkie-talkie communications and 10-speed bicycles. One member of the gang "sniffed" slow-moving railroad cars as they passed by on the tracks of the switch yard. Others timed the triggering of the car's air brakes to make it stop at a predetermined spot.

Then, as we filmed, members of the gang rushed up to the car, removed all the new tires that their "sniffer" had detected, released the brakes of the boxcar, and fled with the loot — all before the railroad police could catch them.

By using sophisticated night photography techniques, and by force-processing a new Kodak film we were testing, we were able to "capture" the gang on film. This project really gave us an opportunity to put, not only ourselves through the paces but Kodak's new Eastman Ektachrome video news film 7240 (tungsten). For Kodak had approached WXYZ-TV in April, 1975, to be among the first stations in the nation to test it.

For the industrial theft sequence, I knew the crew would be shooting under all sorts of lighting conditions, from broad daylight to dark night. I knew, too, that they would have to remain out of sight of the suspects. Accordingly, we set up atop a switch tower in the railroad yard with a CP-16 camera, using a 12-120mm Canon zoom lens and a rented 300mm fixed-focal-length lens.

For the night shooting, I investigated using an electronic nightscope, but discarded the idea since it wouldn't have provided the quality we needed for this series. Instead, our night shooting was done with the 12-120 zoom and the 300mm lens, wide open, and as I said, we force-processed the film one stop.

The results were excellent. Ektachrome video news film 7240 rated for an exposure index of 250 is as good as results that we have gotten from Kodak Ektachrome EF film 7242 (tungsten) at its normal E.I. of 125. The newer film exhibited finer grain and showed better contrast characteristics and truer colors. It is better in every respect. And improved processing, without the need for prehardener or neutralizer gives us quicker access to our film.

Though the teenage gang spotted us at times, we were able to put together a highly praised news report on industrial theft for our number-one-rated "Action News Shows."

This special project is just one of the

activities I've been involved in over the years, as WXYZ-TV's News Film Operations Director. My work is all-encompassing: I decide how a project should be filmed, recommend cameras and equipment, advise the crew on what the lab can do to help, and assist in solving specific problems for crews in the field.

I've been called something of a perfectionist when it comes to video news film. Actually, I just happen to feel that a little extra effort makes all the difference between adequate and outstanding news coverage. The reporter can do everything right, but if the cameraman doesn't get the story on film, or if the lab isn't doing its job, we don't have a story.

I've seen that extra effort pay off for WXYZ-TV News. When I came to the station in 1966, the ABC-owned-and-operated station's news program was rated third in what is one of the nation's top markets. All of us began working hard to turn things around. Today, we are a solid number one. WXYZ-TV's 11 p.m. "Action News" Show is a hefty favorite as is our hour-long 6 p.m. program.

We have a different philosophy about covering a story, now. In 1966, we would just go out and shoot the story and then come back and have it processed, edited, and put on the air. Today, our film work has a lot more re-

(LEFT) CP-16 cameras are used at WXYZ-TV. Here a camera operator loads up with Eastman Ektachrome video news film 7240 (tungsten), preparing to go out to film a story. (RIGHT) Radio-equipped news cars are loaded with a complement of camera and lighting equipment for covering fast-breaking news stories.





(LEFT) Most news stories are filmed on the scene and feature full visualizations, rather than merely "talking heads". **(RIGHT)** Because process VNF-1 for Eastman Ektachrome video news film 7240 (tungsten) eliminates the prehardener and neutralizer, WXYZ-TV has been able to shorten their film processing time to about 18 minutes.

porter involvement, and more in-depth reporting, reporter wrap-ups at the end and A and B roll editing.

Actually, I'm surprised to see that many stations are still editing only one roll. Most of our film is single-system sound that is A and B roll edited to eliminate lip flutter and other problems. This is just one of the things any station can do to enhance news programs.

Of course, paralleling WXYZ-TV's rise in the ratings has been an increase in the amount of news film used. WXYZ averages about 18 film stories a day, with a low of about 12 to a high of 24. These are produced by seven film crews, and about 25 people on the news team. Today, we have 100 news staffers. The greater number of personnel gives us much more freedom in the number and kinds of stories we cover.

Documentaries are generally filmed by our own crews, and, when necessary, we hire free-lancers to take up the slack in covering regular news assignments. Between our news assignments and our regular features, we average shooting about 6,000 feet of film daily.

Our crews consist of a soundman, cameraman and reporter. They use CP-16 cameras and wireless mikes. Management gave me a free hand in equipping our crews, and we're always looking for technical advances — such as better wireless mikes — that will give us the maximum amount of flexibility in covering a story.

And flexibility became an absolute necessity. For we are involved in an array of different filming activities under often difficult and demanding conditions.

In early July, we embarked on an

ambitious Bicentennial film project. We're producing one program a week for a year, documenting the history of the Detroit area. In a recent segment, we took viewers in a canoe down the Detroit River showing where the French explorer Cadillac landed in the 17th Century.

In addition to many documentaries, WXYZ-TV has a number of regular features that make good use of our filming capabilities. "Restaurant Critic" and "Theater Critic" take in-depth looks at local dining and entertainment. We take our cameras into theaters and restaurants and show the public what is going on there.

"Herrington Is" is another popular feature. Channel 7 reporter Jim Herrington tries out a new occupation every week in a George Plimpton-like quest for vocational immortality. One week Herrington was a gymnast, and the next a bricklayer, and then a chef. Our crews have quite a time keeping up with him!

In all our many projects, the new film has proved to be invaluable, giving us excellent results, whether exposed by the tungsten light, or outdoors using a Kodak Wratten gelatin filter, No. 85B. Moreover, its processing has made an important difference to our operations. We've shortened our process to 18 minutes from 26-28 minutes required for the older film. The chemical cost-savings realized from the elimination of the prehardener and neutralizer are not nearly as important to us as this quicker processing time.

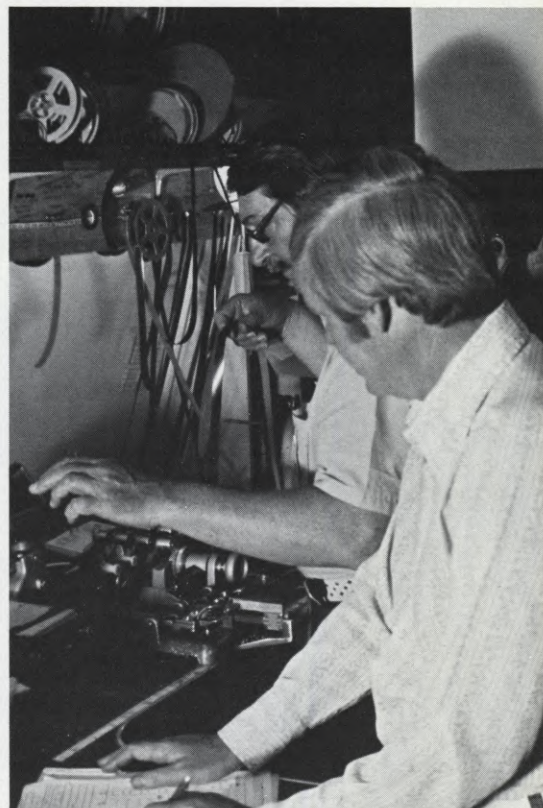
Although our processor is kept at operating temperature 24 hours a day, we run it primarily from 9 a.m. to 10 p.m. We process film whenever it comes in, without waiting for batches.

Often, we'll start running late-breaking film stories at 4:30 p.m. that will be ready for our 6 o'clock news show.

Film to be broadcast on the news show has actually arrived at the station after the program has gone on the air. From the time we receive it until the time it reaches the news room for editing, less than 15 minutes elapse — and that's for 150 feet. The shorter

Continued on Page 533

Editing of the film is done right in the newsroom area, enabling it to be put on the air within minutes after it is brought to the station.



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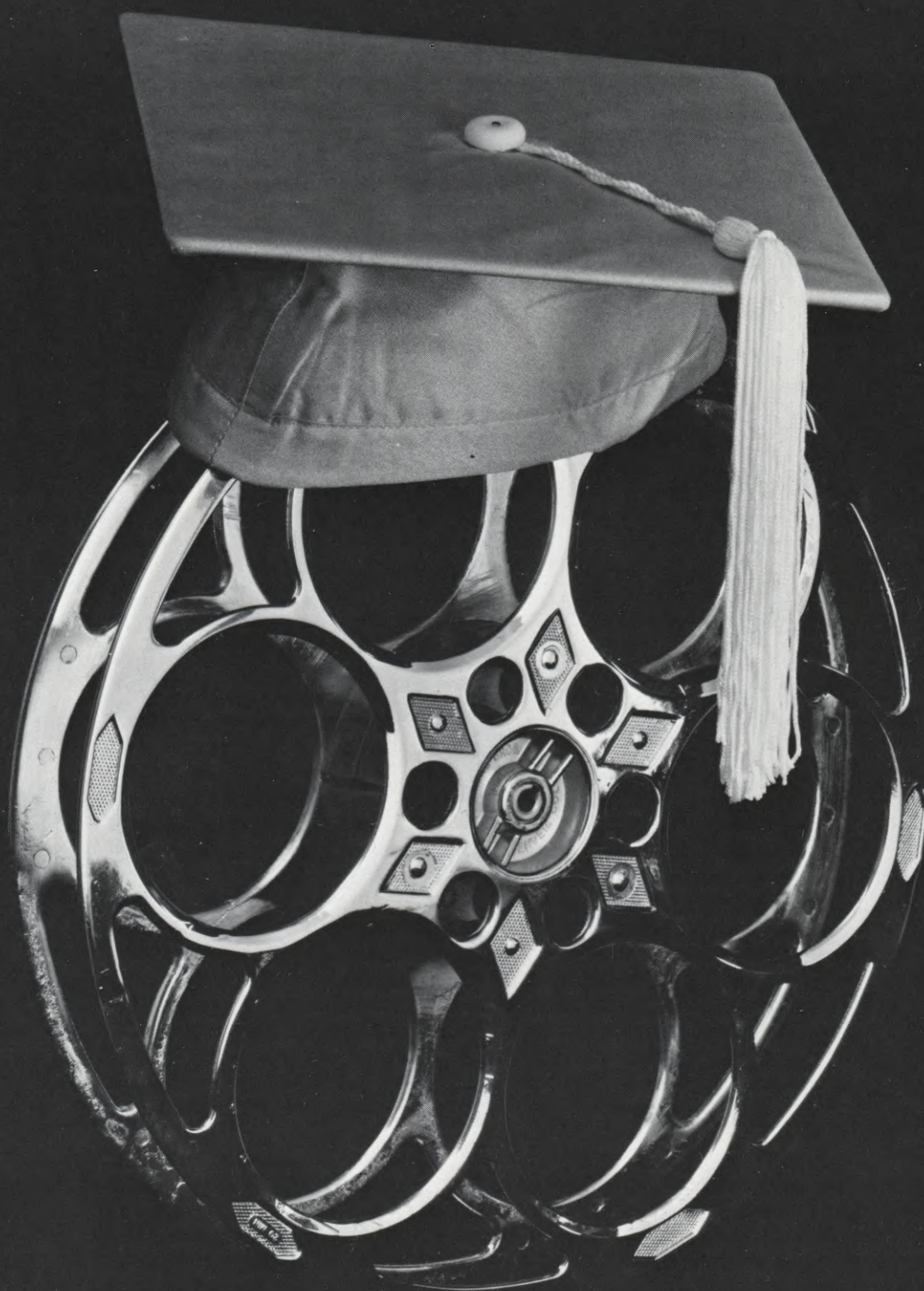


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STUDENT FILM AWARDS - WHY BOTHER?

Although they provide no assurance of jobs, such awards offer student film-makers much-needed encouragement and recognition of their talents



By GWEN FIELD

As film-making continues to attract increasing numbers of students at our nation's campuses, the need to recognize outstanding achievements in film production by college students has become apparent. At the Academy of Motion Picture Arts and Sciences, industry professionals have once again elected to devote their attention to honoring college film-makers.

WINNERS TO RECEIVE CASH PRIZES

1976 marks the third year in which Academy members will award prizes to the most talented of the nation's 25,000 film students. This year's winners will receive \$1000 in cash prizes donated by A.T.&T. and will be honored by the Academy and A.T.&T. at a banquet on June 23, 1976.

Recipients of the Academy's Student Film Awards are selected by the Academy following preliminary judging in regional competitions held throughout the country. The fifty states are divided into ten regions, based on film school density, and students in each region may submit entries in any of five categories: animation, documentary, dramatic, experimental, and

special jury — which is a category honoring films that do not easily define themselves in the four previous categories and which also enables regional judges to honor a film which may tie for first place in another category. Each region submits its five winning films to the Academy for final judging, and the fifty films thus received by the Academy are viewed by the Academy's Short Films Branch and Documentary Awards Committee, which nominates two films in each category for final judging by the Academy's entire membership. This year's deadline for entering films for regional judging was April 15, 1976.

"No one can promise anyone a job."

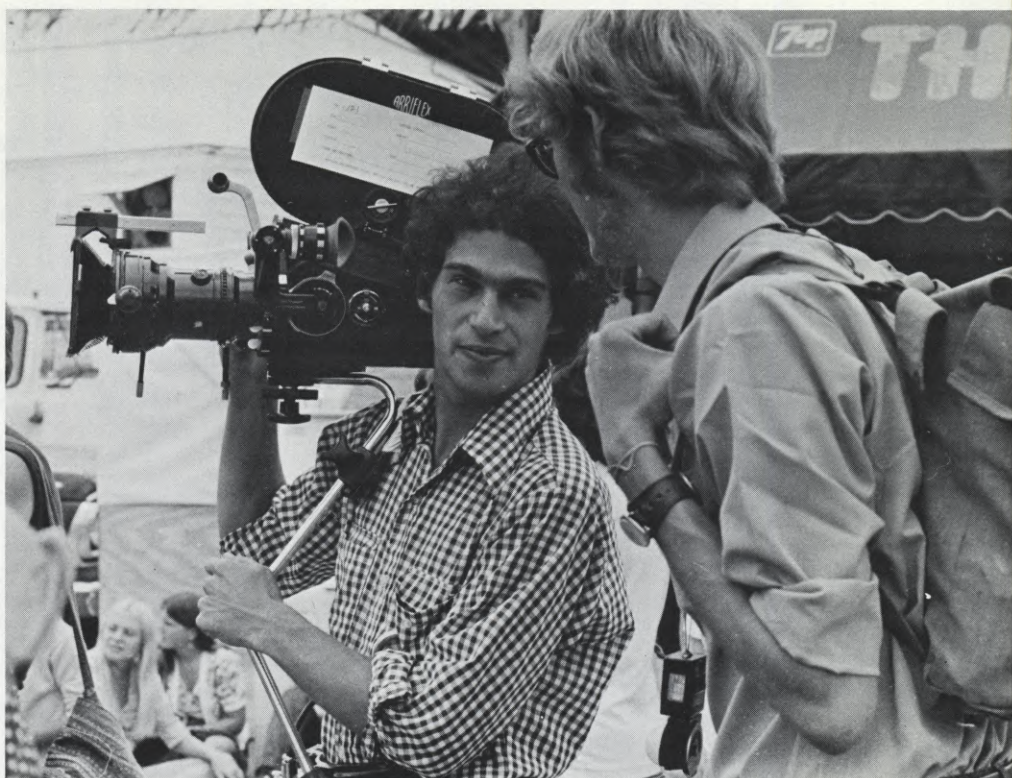
Hollywood professionals may well wonder whether the effort of judging and honoring the nation's student film-makers is worthwhile. For it is quite obvious that "No one can promise anyone a job," as Stanley Cortez, ASC, so aptly noted last year when the A.S.C. organized its own college photography awards.

Nevertheless, Hollywood recognition, by both the A.S.C. and the Academy, of excellence among student film-makers is a necessary and exciting endeavor, for the student film-makers of today may well be the heirs to the movie-making kingdom of tomorrow. Few of today's successful film-makers found their way to the top without struggle. Seemingly, each generation of film-makers complains that the obstacles to success are more impossible to surmount than those faced by the previous generation, and yet the combination of perseverance and talent have almost always led to success.

Recognition of excellence among student film-makers can provide the encouragement and inspiration to enable certain talented student film-makers currently enrolled in school to persevere.

It has been hotly debated that the only way to learn film-making is to go out and do it and, therefore, enrolling in film courses at college may seem a luxury that any serious film-maker can ill afford. However, given today's high labor and rental costs, as well as the current Hollywood trend to gamble big money on big pictures, film schools offer a viable solution to the aspiring film-maker who wants to make movies.

The typical film curriculum now offered at more than 194 universities and colleges which grant degrees in film enable young film-makers to practice film-making. In a two-to-four-year program, the film student has the opportunity to familiarize himself with a variety of film techniques. He may



Among the second year's winners receiving the Academy's Student Film Award in the Documentary category were Josh Hanig and Will Roberts, who "had never made a film before" when they began preparing "MEN'S LIVES" three years ago at Antioch College. They didn't even know, at the time, how to operate the Arriflex 16BL camera they had borrowed. "MEN'S LIVES" has been very successful, and they now have their own production and distribution companies.

begin his education with a primitive silent Super-8 exercise. In the course of his several years of study, he will graduate to 16mm, 16mm sync sound, animation techniques, and eventually 35mm film-making. Having to produce, direct, write, and photograph his own material will provide a student of film with a solid foundation for pursuing a film career. It will not be his passport to fame and fortune, but it will give him the necessary confidence to go out into the world and start the long, frequently frustrating climb towards professional status.

THE FILM-MAKER'S TASK

Recognition of a film student's excellence is, thus, logical and fitting. A student film award bestowed upon a film-maker by either the Academy or the A.S.C. (whose prizes more specifically concern the cinematographic merits of a film), will not eliminate the years of hard work and struggle facing all newcomers to the industry, but it certainly will enable student film-makers to go forth with renewed energy.

BREAKDOWN

The prestige of the Academy's student film awards has definitely benefitted its recipients. Two of the first year's winners, Reuben Trane and Ken Wiederhorn, creators of MANHATTAN MELODY, have just completed post-

production on their first full-length feature, DEATH CORPS, which deals with a shipload of experimental mutant soldiers on the rampage on an island in the Caribbean, where an old SS officer attempts to control them. DEATH CORPS was shot entirely on location in Dade County, Fla., using 16mm for blow-up. The movie stars David Caradine and Peter Cushing and features Brooke Adams and Don Stout.

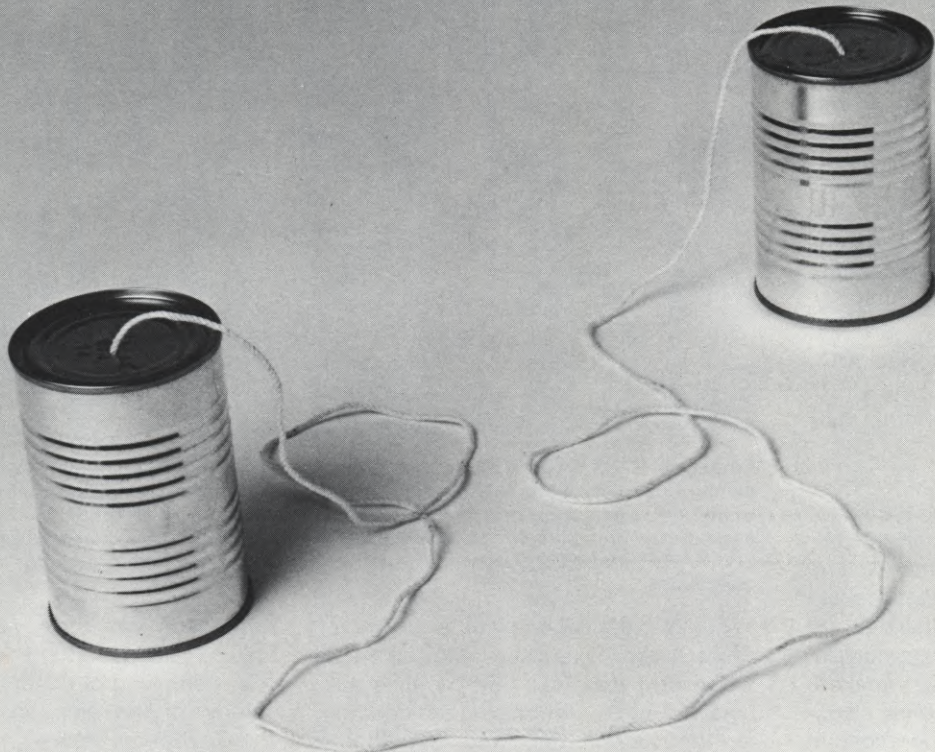
Among the second year's winners, receiving the Academy's Student Film Award in the Documentary Category was "very effective for promotional purposes," according to Josh Hanig and Will Roberts, who were honored for their very successful MEN'S LIVES.

Hanig and Roberts "had never made a film before" when they began preparing MEN'S LIVES three years ago at Antioch College in Yellow Springs, Ohio. Early on, they learned of the existence of an unused Arriflex 16BL at nearby Wright State, which had been purchased by that university on a government grant. With the encouragement of Antioch advisers, Hanig and Roberts were able to borrow the Arriflex 16BL from Wright State for the duration of their shoot.

The extent of their combined photographic knowledge was two rolls of Super-8 film which Josh Hanig had shot before teaming up with Will

Continued on Page 572

WIDENING THE GAP IN SOUND TECHNOLOGY.

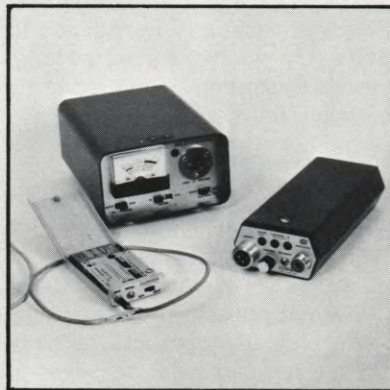


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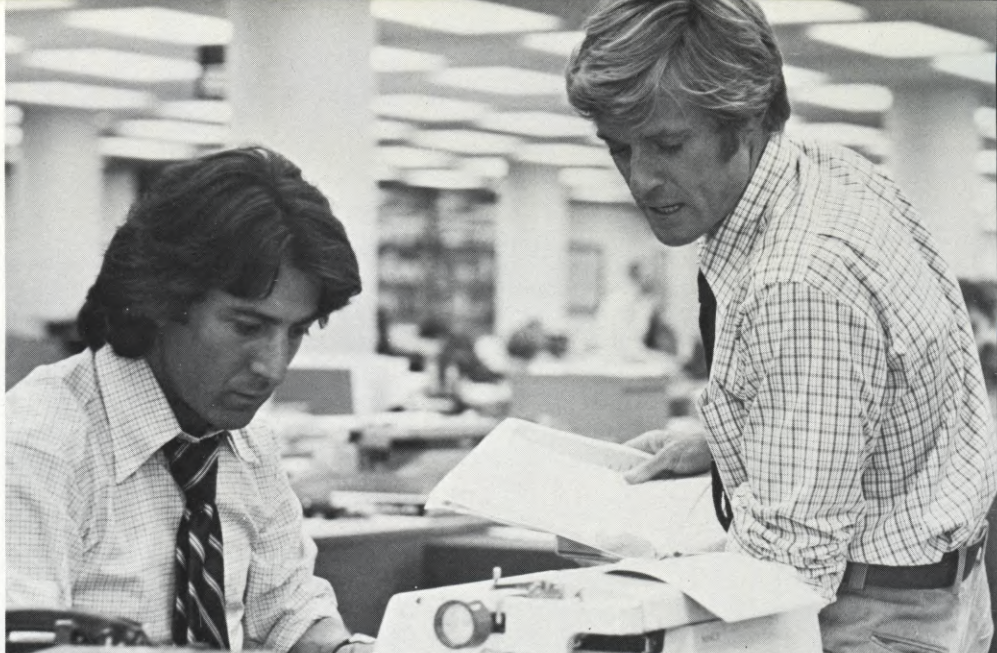
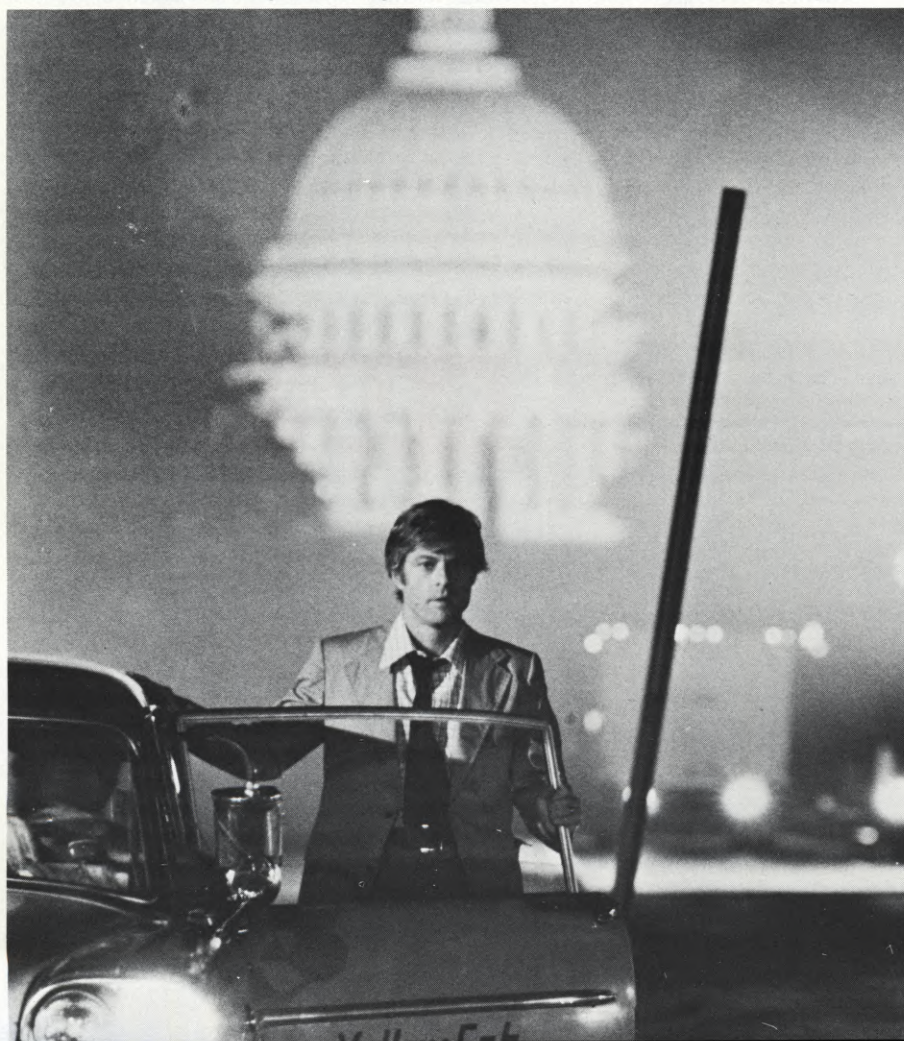
"ALL THE PRESIDENT'S MEN"
Continued from Page 521

and in conjunction with a moving camera. The splits or halves were made especially without framework so they could be moved across the shot without incumbrance. A full series of lenses was used on the film and the stops ranged from T/1.2 down to T/11. The diopters were applied generally in the range of T/4.5. I had a great deal of fun on the splits, especially the moving ones, and the system was extremely helpful when the requirements were there.

There is one last shot I might mention that could be referred to as out of the ordinary. It was made in the Library of Congress. It goes like this. We're looking down on file cards, very close. The actors are thumbing through the cards. The camera slowly pulls away from the cards and heads for the ceiling of the Library, more than one hundred feet in the air. Arriving there, we have a full shot of the Library of Congress and the two small figures still thumbing through the cards.

When Alan Pakula, the director, approached me with this idea, I liked it, but liking it and doing it are two

It was film idol Robert Redford who sensed in the early stages of the Watergate affair, and long before Bernstein and Woodward wrote the book version of "ALL THE PRESIDENT'S MEN", that a sensational story was developing that would rock the nation. He urged them to write the book and sewed up the film rights. He is shown here on location in Washington.



On the trail of the "Crime of the Century", Dustin Hoffman and Robert Redford portray Carl Bernstein and Bob Woodward, the two courageous *Washington Post* reporters whose exhaustive investigation of "a third-rate burglary" led to the astounding revelations that toppled Richard Nixon from the Presidency and sent many of his aides to prison.

different things! I didn't want to disappoint Alan if we couldn't pull it off so I said, "It's a maybe." The way the shot was finally accomplished was with a remote-controlled cable system and a radio-controlled focus and switch system. Tag lines had to be used on the

primary cable in order to correct the trajectory of the camera, as it did not start dead-center of the Library, but ended up that way at the top of the dome. The primary cable holding the camera was attached to an electric winch at the top of the Library and on cue it was slowly put into motion and raised to the top of the dome. The trick was coordinating the tag lines with the main cable. It took two tries on two different days to finally make it all come true. In its simplest form it was very difficult and Key Grip Bob Rose and his crew deserve a great deal of credit for their efforts. This shot, by the way, was made in natural lighting. A mixture of tungsten, and daylight from the dome.

I must say that Ray De La Motte, the first assistant cameraman, did an outstanding job at every level and accomplished one of the finest focus-pulling jobs I've ever seen. The problems he was faced with were enormous.

The picture was photographed in a graphic, poster-like quality that I felt was right for this story. It is a picture that can be run again and again. After all, it's part of American History. ■

BEHIND THE SCENES ON "ALL THE PRESIDENT'S MEN"

Although the public had been saturated with information on the burglary, the cover-up and use of the FBI, IRS and CIA to harass those on the enemies list created by high offices of the Nixon Administration, Robert Redford had apparently sensed correctly that this was surface information. He

Continued on Page 550

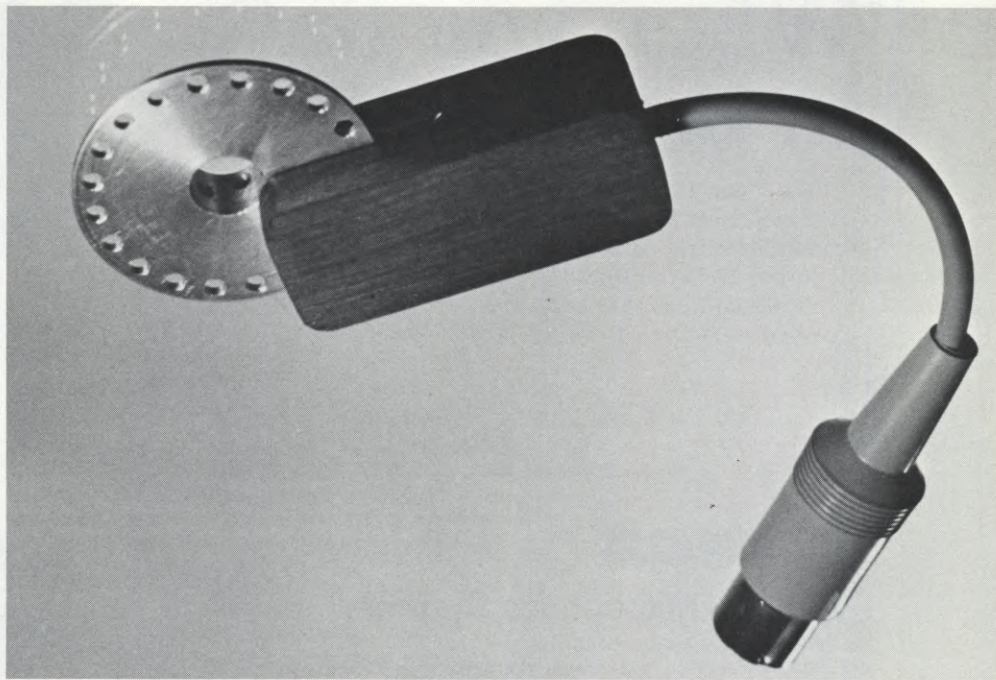
A LOW-COST SYNC GENERATOR FOR 16mm BOLEX CAMERAS

Necessity was the mother of ingenious invention for this young film-maker who couldn't afford expensive crystal-sync equipment

By CAL LEWIN

In the fifteen years since the expression "student filmmaker" became common, it has become something of a tarnished phrase, often implying a suspicious species of fast-talking, occasionally brilliant adolescent who doesn't return equipment. It's a reputation we partly deserve; after all, it takes a bit of conjuring to create a half-hour of entertaining dramatic art when you're just another kid with a Bolex and no visible means of support.

Student filmmaking is trial-by-small-



The CINEMATECH™ sync generator produces a 60-cycle sync tone when the camera is running at 24 fps (similar to all professional sync cameras). It weighs less than 2 ounces and is completely silent in operation. In use, the sync tone signal is fed by cable into the microphone input of a stereo tape or cassette recorder. The sync information is recorded on one channel, while the dialogue is recorded on the other channel.

own film, once.

To pay for my expensive habit, I ran a college film society. There was something righteous about running films to make films; I was learning from the masters and letting them subsidize my apprenticeship.

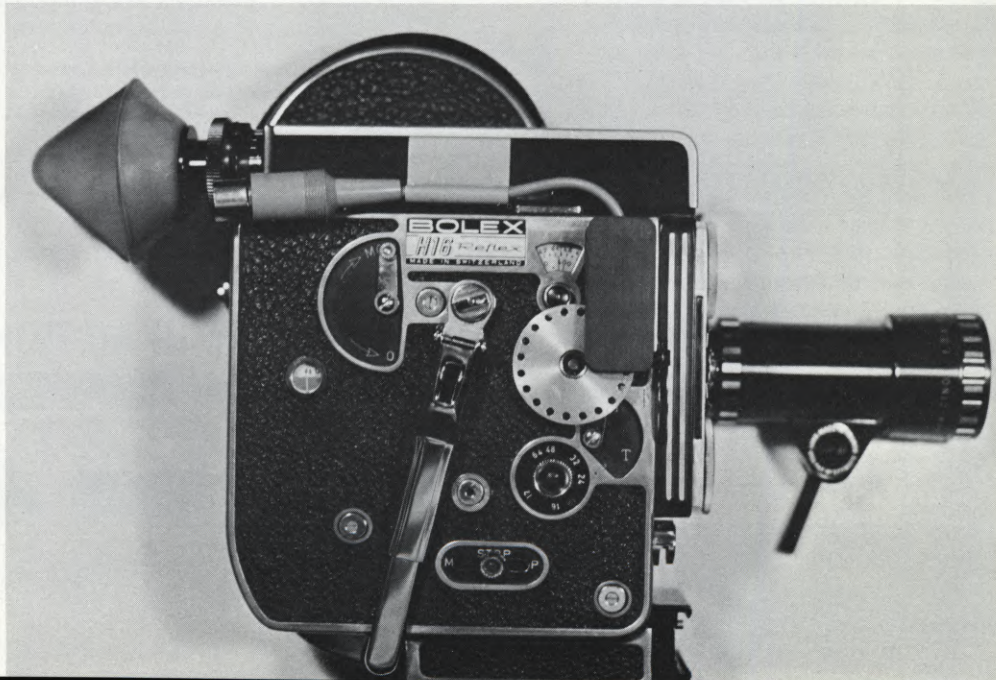
Surviving the experience generally sharpens the wits, and whets the ap-

petite for spending even more money — this time on a film with sound. Most student films have a minimum of sync sound because it's too costly renting an Eclair and Nagra at \$40 a day (that's 800 feet of B&W). Even in a film school you have to reserve a camera weeks ahead, and you're lucky if the equip-
Continued on Page 584

Easily attached to any Bolex H-16 camera, the CINEMATECH sync generator is designed to be used with any stereo tape recorder, making rental of a special tape recorder unnecessary. The ingenious sync generator may be used with either the camera's internal spring motor, or with the Bolex electric "unimotor" attachment.

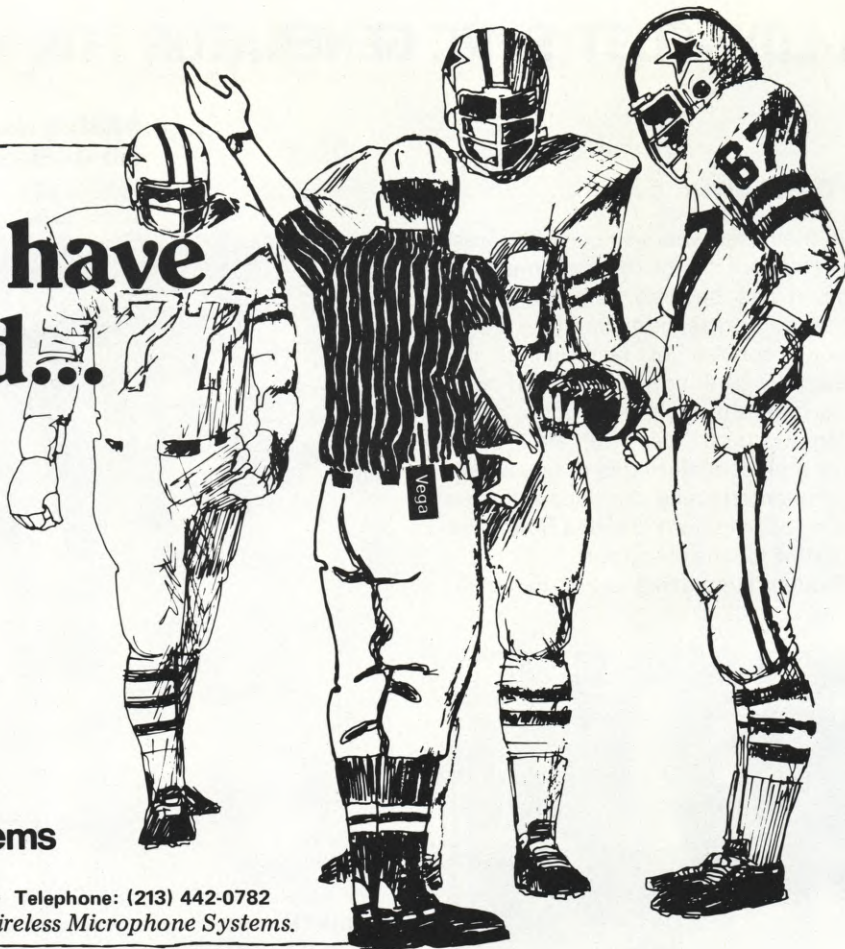
Using the low-cost sync generator which he originally developed for his own use, Cal Lewin watches rehearsal of a scene on the streets of Hollywood.

change; the Great 20th-Century Novel could be written with a Bic Banana, but even the Average 16mm silent short is going to set you back a couple of hundred. In my short-end days I had to improvise constantly to keep the state of the art higher than the current state of my bank account. With a little help from my friends, I made my own camera crane, dollies, tripods, lights, gobos, car mounts. I messed around with Cinemascope, 3-D and front projection — and I even tried processing my



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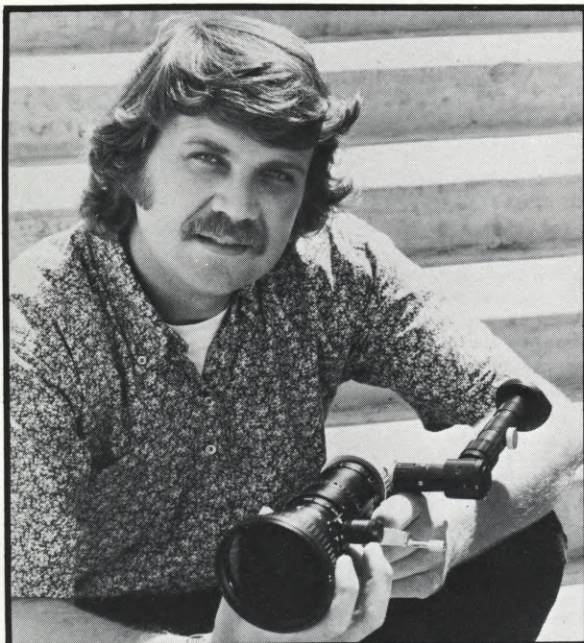
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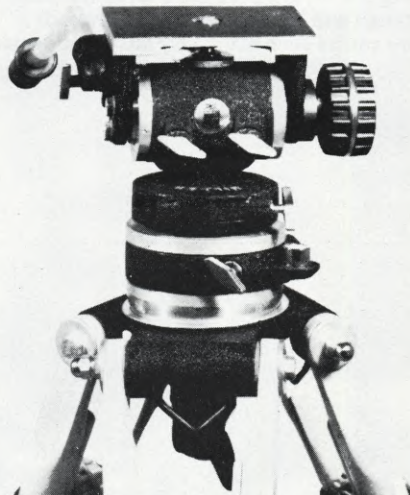
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BEHIND THE SCENES
Continued from Page 546

believed the subsurface information to be highly dramatic and suspenseful, and book reviewers agreed.

They praised the "gripping power" of "ALL THE PRESIDENT'S MEN" (Chicago Tribune), called it a "political thriller" (Atlantic Monthly), and "one of the greatest detective stories ever told" (Denver Post). The New York Times called it "a classic."

Says Robert Redford:

"My first concept was for a small movie, costing less than \$2,000,000. But Playboy ran excerpts from the book prior to publication. It became a hot item. Studios jumped into hectic bidding."

Warner Bros. purchased screen rights for Wildwood Enterprises for \$450,000 plus bonuses.

Originally Redford had intended using two unknown actors, since the reporters were themselves little known when the adventure began. But with costs so high for screen rights, story development, and set construction, it was apparent he would have to appear in the movie as Woodward — with another top star playing Bernstein — as insurance.

Warner Bros. gave Redford full freedom: "They agreed with my concept. They exhibited enormous faith in me by saying, 'Make what you want' . . . and they stayed out of my hair."

Research basic to a possible Water-gate film began in Spring, 1973, long before any certainty existed the film would be made, even before the book was written. Starting early in 1974 Redford spent much time in the Post newsroom, talked to reporters there and at The Boston Globe, Washington Star, and New York Times. Woodward says of Redford: "He is probably a better reporter than I am."

Screenwriter William Goldman had accompanied Redford to Washington a year earlier for the preliminary discussions with Woodward. One of the prime challenges was to assure that the mass of factual data did not obscure the human values. Another was how to reduce 400 pages of book to reasonable screen running-time without sacrificing clarity of the narrative or character delineation. Goldman developed a structure which remained constant through several successive refinements of the screenplay.

The people at the Post, especially Katherine Graham, publisher, and Ben Bradlee, executive editor, provided necessary cooperation. Alan J. Pakula came aboard as director. Dustin Hoffman, who had once hoped to acquire screen rights as a vehicle for his own company, was invited to play Bernstein, whom he resembles somewhat physically. Pakula descended upon the Post for many weeks of indoctrination into the mysteries of putting out a daily newspaper, plus an in-depth probe of

the philosophical and professional attitudes which propelled the Post's management into putting their corporate and individual professional futures on the line by publishing the Woodward-Bernstein revelations.

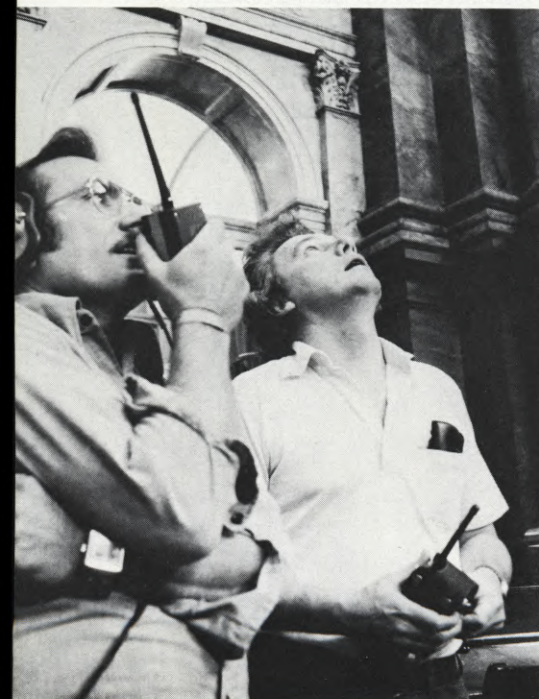
While about one quarter of the movie occurs in the Post's ultra-modern newsroom, early on Producer Walter Coblenz made the decision that it would not be possible to publish several editions daily, and shoot a major photoplay simultaneously in the same place. He asked production designer, George Jenkins, to consult with the architects of the Post building, which was opened in 1971, and with its decorators. Armed with the original blueprints, Jenkins took over two adjoining sound stages at The Burbank Studios, knocked down the wall between them, and constructed a 32,000-square-foot duplicate of the Post news facility so precise in scope and detail that when Ben Bradlee visited the set in California he gasped, "My God, I'm in my own office!"

The 250 desks were specially manufactured copies of custom-designed desks at the Post, finished in shades of blue, green, red and black selected by the paper's publisher, Katherine Graham. The graphics on the walls were identical to those at the Post. Imbedded in the flush ceiling, suspended eight feet above the floor, were over 675 electrical fixtures. The exact position of each reporter's and editor's desk in Washington was duplicated at the studio. Each desk at the Post was individually photographed so that the accoutrements of the trade — reference volumes, diaries, family photos, ash trays, gadgets, even extension telephone numbers — could be reproduced. The 60-plus teletypes all worked. More than 300 phones were connected to an off-stage switchboard. And around the perimeter of the room equal care had been given to recreating the reference library, the offices of Executive Editor Bradlee, Managing Editor Howard Simons, Metropolitan Editor Harry Rosenfeld, the giant communications center linking the Post to its worldwide staff, the nerve center of the Washington Post-Los Angeles Times News Service, and the quarters used by the sports, theatre, book review and other editorial departments.

Total cost of this single set: over \$450,000.

Equal care was taken to achieve authenticity in costuming. Both Woodward and Bernstein gave the film's costumers access to their personal closets, and the clothing worn by Redford and Hoffman is a fair repre-

(LEFT) Key Grip Bob Rose and Cinematographer Gordon Willis survey the situation inside the Library of Congress in preparation for shooting the most incredible shot in the picture. **(RIGHT)** Under the vast dome of the Library, Hoffman and Redford examine hundreds of library withdrawal cards. The rig carrying the camera can be seen at the very top of the dome.



sentation of the reporters' divergent tastes. Hoffman even carried in his pocket a wallet whose contents exactly duplicated the contents of Bernstein's wallet — though this does not figure as a prop in the movie. The search was for the feel of authenticity as well as its appearance.

Even the trash is honest. For several weeks, the Post collected all its newsroom refuse in huge boxes — suitably labelled as "National News Desk," "Foreign Desk," "City Desk," and so on — and shipped it to California where it was spread around the set.

Despite the fact that "ALL THE PRESIDENT'S MEN" is virtually a contemporary story, to the movie-makers it was a period piece, set in 1972-73. Calendars on the newsroom walls had to reflect actual dates tied to the specific scenes being played. Exact copies of the Post, the Washington Star and the New York Times were reprinted with the papers' help, for each such date. Phone directories on the reporters' desks, Congressional directories, magazines within camera range — all were the appropriate editions. For exterior scenes around Washington, no car later than a 1973 model could be seen.

Filming began May 12, 1974, in Washington, D.C., at such diverse sites as the Kennedy Center for the Performing Arts, where 1,500 socialites, including many highly-placed members of the bureaucracy, impersonated theatergoers. A deserted garage hidden among the highrise canyons of nearby Arlington, Va., served as the exterior of the garage where Woodward had his super-secret meetings with the informer known as Deep Throat. The interior was photographed 3,000 miles away beneath the ABC Entertainment complex in Century City, adjacent to Beverly Hills.

Other Washington scenes were lensed at Lafayette Park outside the White House (permission to film inside the White House was withdrawn mysteriously at the last minute after being approved), at the Capitol, the Treasury Department, FBI, Dupont Circle, the Sans Souci Restaurant (where Jason Robards, Hoffman and Redford did a scene at the table usually reserved for Henry Kissinger), at the Post and, of course, at the Watergate Office Building and Howard Johnson's Motor Lodge directly across the street.

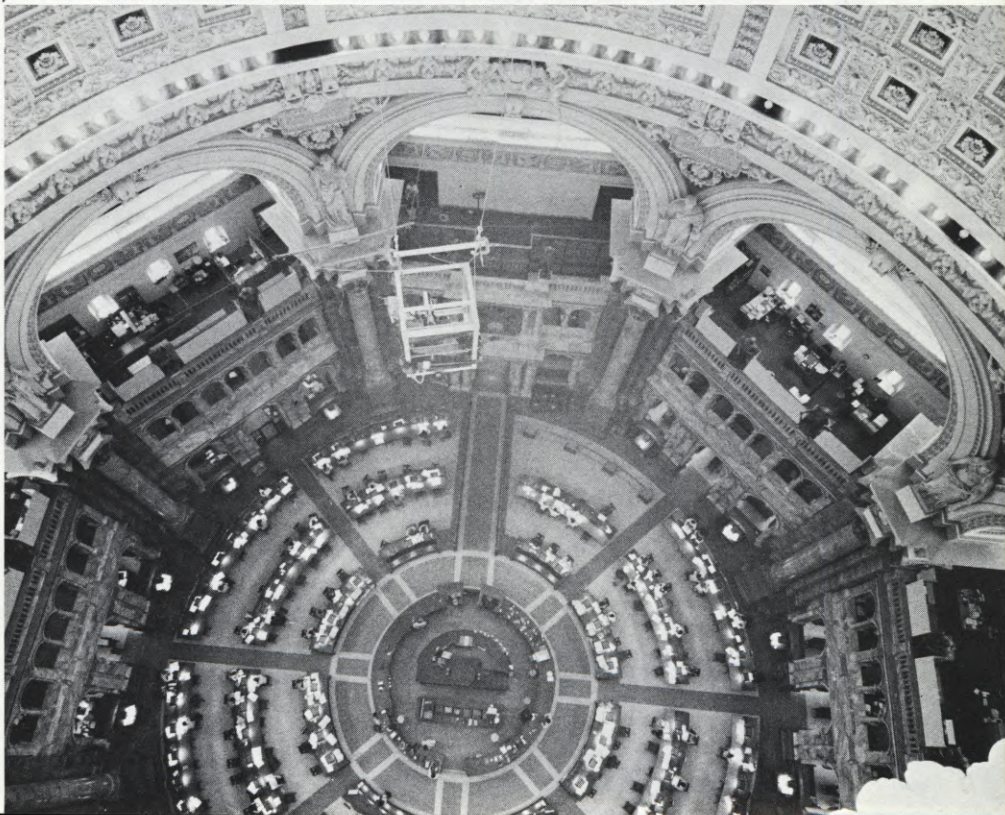
The burglary was restaged exactly as it happened and exactly where it happened. The movie burglars entered via the same door the real burglars had taped open not once but twice — thereby virtually inviting capture. They

Continued on Page 570



At its "closeup" position, the camera starts on a tight shot of the cards being shuffled. Mounted on a specially constructed cradle and remotely controlled, the camera then pulled up and up to a vantage point more than 100 feet in the air, which showed the entire floor of the Library of Congress, with its dozens of desks and the reporters still examining cards.

The camera rig on its way up to the top of the dome. The primary cable holding the camera was attached to an electric winch at the top of the Library. On cue, it was slowly put into motion to raise the camera. The trick was to smoothly coordinate the tag lines with the main cable. A most intricate shot, it took two tries on two different days to get it right.



THE ACTION CINEMATOGRAPHY IN "SKY RIDERS"

Hang-gliders and camera helicopters take to the air in wild maneuvers to film the incredible action for a high adventure feature in Greece

By **GREG MacGILLIVRAY** and **JIM FREEMAN**

MacGillivray/Freeman Films, Laguna Beach, Calif.

ATHENS BULLETIN: June 15, 1975

The wife and children of a wealthy American industrialist, Jonas Bracken, have been kidnapped by an army of revolutionary terrorists and are being held for ransom in an abandoned monastery. According to Athens police, the monastery is located on the tip of a spectacular mountain formation, inaccessible to all efforts of police rescue. "There will be no plans of rescue which will endanger my family," Bracken has stated emphatically.

Given such a predicament, 20th Century-Fox moved into Greece with an Army of its own, prepared not only to rescue the "kidnapped family", but to make a film of the event as well. That Army of specialized experts brought with them the means to silently invade the terrorists' mountain stronghold. Under cover of night, flying on the silent wings of hang gliders, a group of the finest flyers in the world descended on the monastery and covertly rescued the family. Then, upon leaving the secluded monastery, a spectacular battle ensued between the hang gliderists and the terrorists. Maneuvering sensationally between towering rock pinnacles, the hang gliders escaped from the mountain and delivered the hos-

With the camera mounted pointing down, hang-glider expert Bob Wills films scenes for "SKY RIDERS". In order to counter-balance the weight of the camera on the kite, two Arriflex batteries, a roll of gaffer tape and two rocks were attached to the other wing. The entire rig weighed so much that it took two people to launch Wills off the cliff into flight.

tages to safety.

The 20th Century-Fox Army included acting experts James Coburn, Susannah York, Robert Culp, Charles Aznavour, John Beck and Steven Keats. The army of production experts and the technical innovations used in bringing this exciting episode to the screen provide the subject matter for the following story.

THE LONG AND WINDING ROAD

Though the rescue by the hang gliders takes minutes on the screen, the production steps to bring this to celluloid took years. In 1974, Sandy Howard, who is a successful feature film producer, invited us to Hollywood to exhibit, for executives at 20th Century-Fox, some rough footage destined for a television special we were developing on man's dream of flight. The short sequence of hang gliding excited the audience with its beauty and visceral quality. The long road of production had begun.

Though glider pioneers such as Otto Lihenthal were soaring from German mountains in the 1890's, the airplane would be born from those maiden flights long before hang gliding as a sport would be developed. Because of its relative novelty, it was decided by

Fox that a test should be done to determine the possibilities and limitations of filming the exciting hang glider action. In December of 1974, Terry Morse, who produced the film for Sandy Howard, and our company went on location for five days to assess the feasibility of the project. The filmed test was successful and Fox committed itself to the project.



Jim Freeman prepares for helicopter filming. He and Greg MacGillivray received screen credit for direction of aerial sequences, plus co-Director of Photography credit with Ousama Rawi, BSC.

THE SCOUT

After scouting locations around the world, the spectacular Meteora, an area of pinnacles much like those in Monument Valley, was selected as the proper backdrop for the aerial maneuvering of the kites. Bob Wills, the best hang glider pilot in the world, Terry Morse, Jim Freeman and Peter Beale, 20th Century-Fox production head for Europe, tested the location with actual hang glider and helicopter flights, looking for possible problems of weather, winds, light, landing areas, as well as every imaginable production

Continued on Page 560





(LEFT) "Establishing shot" of the cluster of ancient monasteries at Meteora in Greece, location site for the filming of most of the action for the 20th Century-Fox release of the Sandy Howard production, "SKY RIDERS". (RIGHT) Greg MacGillivray behind the camera, with Pat Gilluly assisting, films scene of a hang-glider taking off from a cliff. The film story concerns kidnap hostages held in an isolated monastery, with a rescue attempt made by means of hang-gliders.



(LEFT) MacGillivray lines up a kite-mounted 100-foot Eyemo camera equipped with a 28mm lens in preparation for an inflight shot. The scenes shot from hang gliders were usually filmed at 32 frames per second in order to smooth out any slight unsteadiness. (RIGHT) There are no process or matte shots in "SKY RIDERS". The alternative, so that the principle actors would seem to be actually flying, was to suspend them from this giant crane in front of the camera.

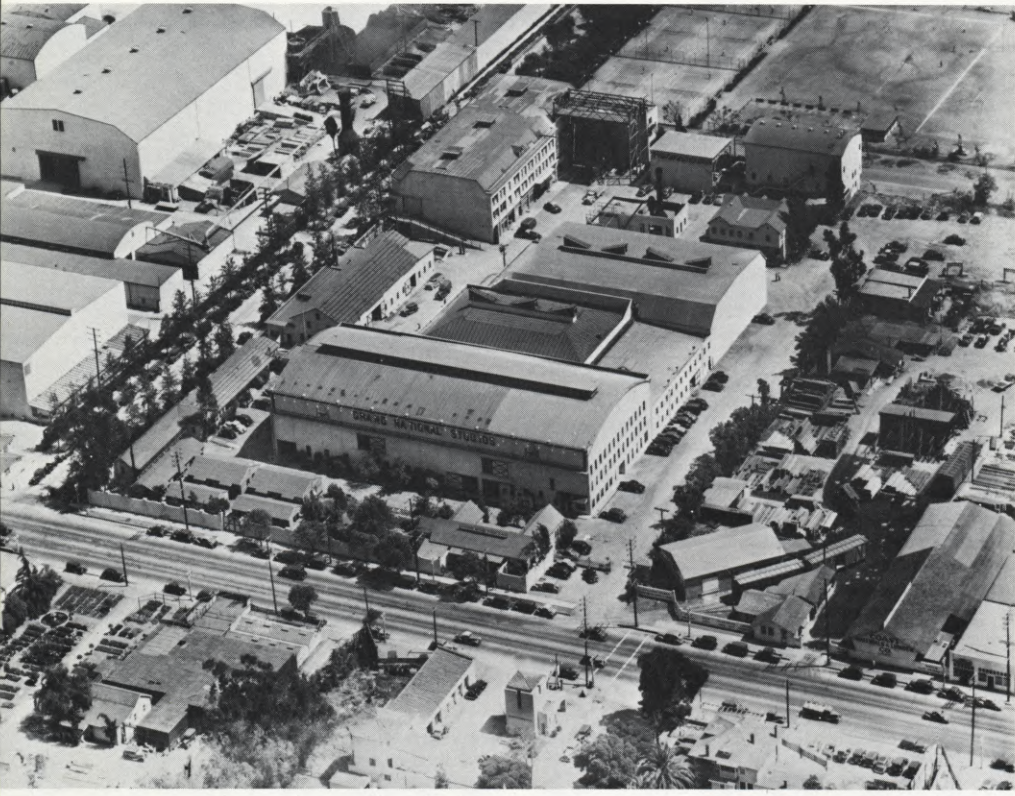


(LEFT) For this shot, the Eyemo was mounted on the tail of the kite. (CENTER) The hang glider soars into flight with the tail-mounted Eyemo. (RIGHT) Filming took place literally from dawn to dusk. (BELOW LEFT) Greg films the kites taking off in a day-for-night shot, actually photographed with black and white film. (CENTER) Flier had to land with the tail of the kite up to avoid damage to the camera. (RIGHT) Pat Gilluly and Greg make a last-minute check on the wiring and framing.





(LEFT) The Selznick-International Studio at 9336 Washington Blvd. in Culver City, 1939, where "GONE WITH THE WIND" was produced. This studio, built by Thomas Ince, later housed the DeMille, Pathe, RKO and Desilu production companies. **(RIGHT)** Site of the soon-to-be razed Amalgamated Studio in 1936. On this corner stood the first motion picture studio in Hollywood, built by David Horsley in 1911. The Columbia Broadcasting System has occupied the site since 1938.



(ABOVE) The Grand National Studios at 5823 Santa Monica Blvd., 1937. It was mostly noted for the production of James Cagney and Tex Ritter pictures in the late 1930's. **(BELOW)** Alvin Wycoff, one of the founders of the cameramen's union, shows a camera part to the late Peverell Marley, ASC, at Famous Players Lasky Studio in 1924.



HOLLYWOOD MOVIE STUDIOS
Continued from Page 535

sold out to Republic and the Republic Studio on Radford Drive in Studio City is today the CBS Studio Center.

This is typical of what went on between the independents in the thirties. Only a few survived. One of the more unsuccessful ones was Grand National, located at 7250 Santa Monica Blvd. in the old home of Educational Pictures. In 1936, this company was producing James Cagney and Tex Ritter pictures, but after only a few years, went bankrupt in 1940. Today this studio is a shopping center.

Other studio lots were taken over time and time again. The old Berwillia Studio at 5823 Santa Monica Blvd. near Van Ness was, in the thirties, the Larry Darmour Studio where the "MICKEY MAGUIRE" series with Mickey Rooney was shot. Later Key West, a rental company, took over, and by the 1950's the lot was used by Family Films.

On the other side of town in Culver City stood the Selznick Studio on Washington Blvd., one of the busiest lots in the late thirties, where "GONE WITH THE WIND" was produced. It was first built by Thomas Ince in 1919 and had a succession of owners, including C.B. De Mille, Pathé, RKO and, in the fifties, Desilu.

By the end of the thirties, the studio system of producing films had become an expensive and an expansive venture. The studio lots were taking up major sections of the city. Studio departments were employing thousands of workers, making the large movie factories of Los Angeles miniature cities in themselves.

Radio-Keith-Orpheum at 480 Gower St. was one of these. It had grown into a complicated maze of streets, stages and departments. Originally, the studio had been built by the Robertson-Cole Company, taken over by F.B.O. (Feder-

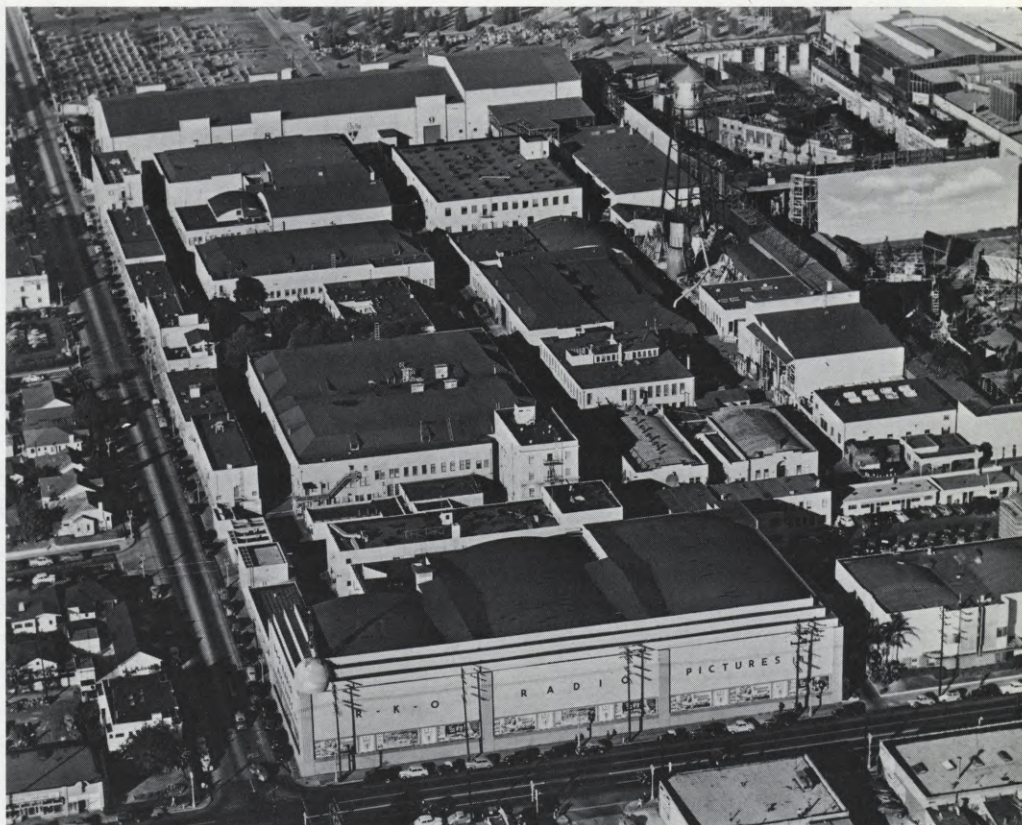


(LEFT) The home of Family Films at 5823 Santa Monica Blvd., 1973. Originally built by the Pacific Laboratory in 1916, this studio later housed the National, Bull's Eye, Berwillia and Larry Darmour companies. Today the lot houses a studio rental company and set-building facility. **(RIGHT)** The Republic Studios in Studio City. For 20 years Republic made hundreds of serials, westerns and dramas, until television literally took over the studio in the sixties.

ated Booking Offices) and then by the Radio Corporation of America, known as RKO (Radio-Keith-Orpheum) Radio Pictures Corporation.

The cameraman, during the development of the giant studios, was one among thousands of other workers employed in the studio system. Many cameramen will remember the days of work assignments from picture to picture without a break, at a time when fifty to sixty pictures a year were being produced routinely at one major studio. The trick to being in demand as a cinematographer was to make oneself known to the producers and directors. This was usually done by trying innovations, adding quality touches and style, or using existing decor with light changes, to avoid adding to the shooting schedule. In the old days, all the cameraman had to know was how to load the camera, set the speed, aim and crank away. Some twenty short years later, the cinematographer was a skilled technician working with other experts in the film-making process.

Along with the growth and develop-
Continued on Page 571



(ABOVE RIGHT) The RKO Studios at Gower and Melrose, 1946. This lot formerly housed the Robertson-Cole, Federated Booking Office (F.B.O.) and Radio Corp. of America in the 30's and 40's. It was later taken over by Desilu and is now part of Paramount. **(BELOW LEFT)** The Hollywood Technicolor plant on Cahuenga Blvd., 1949. Most of Technicolor's operation has now moved to a new, modern plant in Universal City. **(RIGHT)** Consolidated Film Industries, shown in 1930, is now one of the top labs in Hollywood.



KIRLIAN CINEMATOGRAPHY

A U.C.L.A. graduate student succeeds in filming the impossible—the "aura" of sparks surrounding an object placed in an electrical field

By CLARK DUGGER

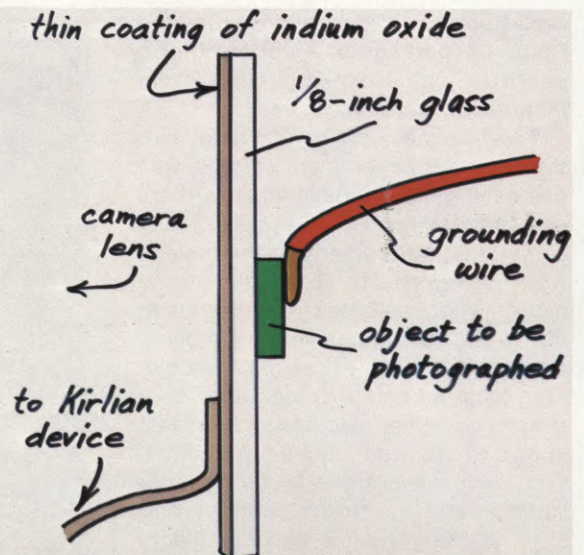
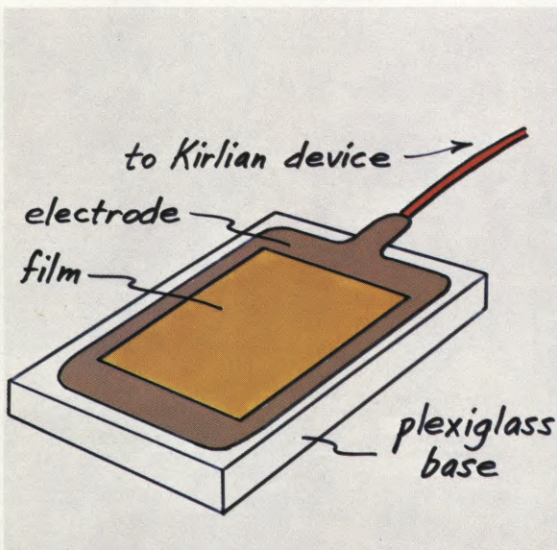
Dr. Thelma Moss, widely known for her research in parapsychology, has been conducting explorations in Kirlian photography at the Neuropsychiatric Institute of U.C.L.A. Until recently, her work dealt exclusively with still photography. Last year, while a graduate student of the Motion Picture/Television Division at U.C.L.A., I was contacted by Dr. Moss to see if motion pictures of the Kirlian effect could be obtained.

What is Kirlian photography? Named

after Semyon and Valentina Kirlian in the U.S.S.R., Kirlian photography is a process whereby an object is placed in an electrical field, which causes sparks of energy to emanate from it. This process, first discovered by Nicolas Tesla as early as 1893, was largely ignored until the Kirlians' research with their apparatus, in the late thirties. The Kirlians believed that explorations with this process could provide pertinent and, as yet, unknown information about

the nature of organic and inorganic materials. In particular, the energy fields surrounding living organisms.

The conventional arrangement for taking a still Kirlian photograph is essentially the same as contact photography. No camera or lens is used in taking the picture. A sheet of four-by-five sheet film is put in contact with an electrode plate. Then the object to be photographed is placed on the film. When the object is grounded (to com-

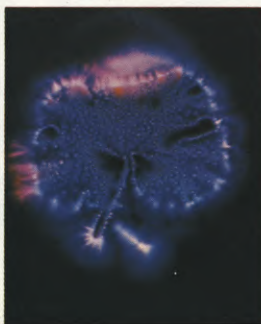
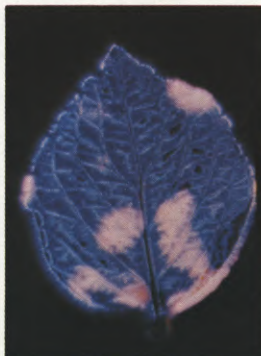


(LEFT) FIGURE 1 — No camera or lens is used in making a Kirlian photograph. A piece of four by five sheet film is put into contact with an electrode plate. (RIGHT) FIGURE 2 — The object to be photographed is placed on the film. When the object is grounded (to complete the circuit), current is applied to the electrode plate, sending out anywhere from 1,500 to 80,000 volts of alternating current. Exposure times are generally brief, ranging from .05 to 10 seconds, depending upon the size and nature of the object being photographed.

(TOP) Kirlian photograph showing sparks emanating from two fingertips. (BOTTOM) A Kirlian photograph of a penny.

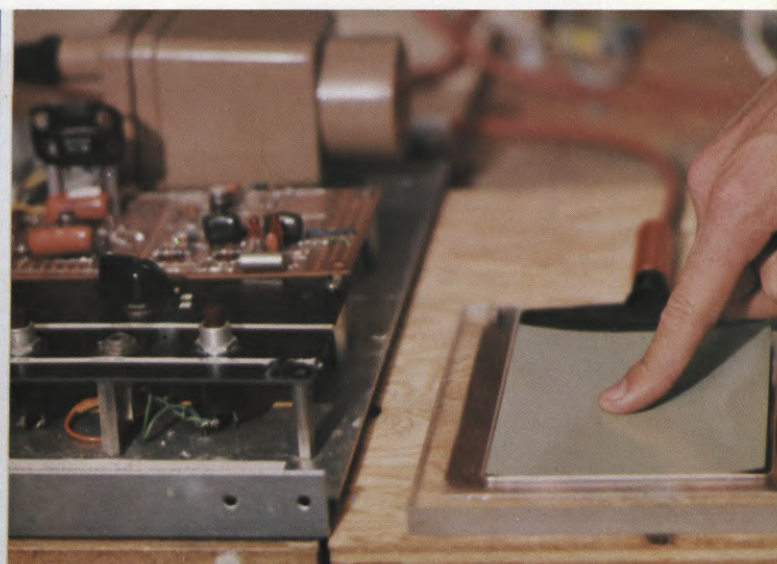
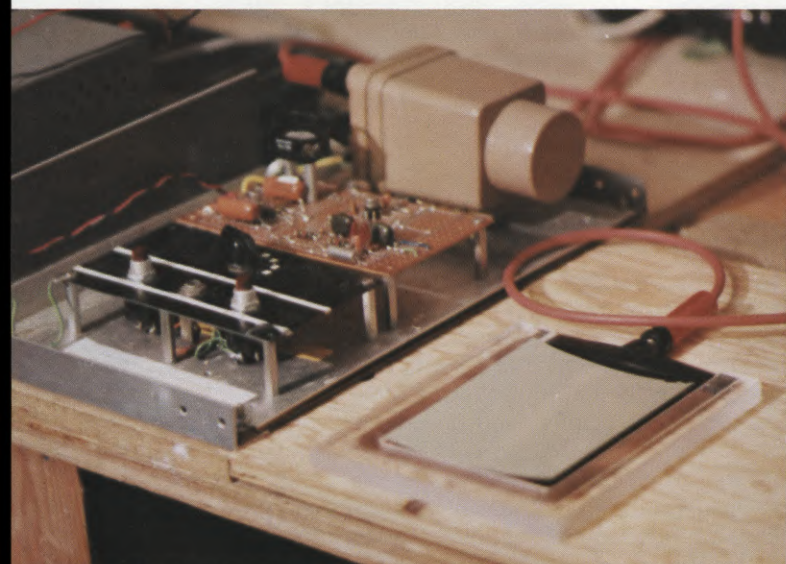
(TOP) a "normal" leaf. (BOTTOM) FIGURE 12 — The "phantom leaf" effect, in which photo registers outline of leaf tip which has been cut off.

The author, graduate Cinema student Clark Dugger, who succeeded with Kirlian cinematography, heretofore accomplished only in the Soviet Union.





(LEFT) Grounding wire is applied to a key, so that a Kirlian photograph can be made of it. (RIGHT) Dugger goes over a reel of his film with Dr. Thelma Moss, widely known for her research in parapsychology. Dr. Moss had made many still Kirlian photographs at the Neuropsychiatric Institute at U.C.L.A. Feeling that motion pictures of the effect in real time would reveal more, she contacted Dugger and asked him to help. He found that the technique for still photographs was not suitable for motion pictures, but persisted until he found a way.



For black and white pictures, orthochromatic film is typically used, so that work may be conducted in a suitable safelight. Color photographs are made on Ektachrome sheet film, which is generally converted to 35mm transparencies. Conventional developing techniques are employed. Using Four-X reversal film (7277), Dugger shot with an Angenieux f/0.95 lens at 12 frames per second and force-processed the film two stops in order to record the extremely faint emanations.

plete the circuit), current is applied to the electrode plate, sending anywhere from 1,500 to 80,000 volts of alternating current at .1 microamperes. FIGURE 1 provides a schematic diagram for such an apparatus. Exposure times are generally brief, ranging from .05 to 10 seconds, depending on the size and nature of the object being photographed. For black-and-white pictures, orthochromatic film is typically used, so that work may be conducted in a suitable safelight. Color pictures are made on Ektachrome sheet film, which is generally converted to 35mm transparencies. Conventional developing techniques are employed.

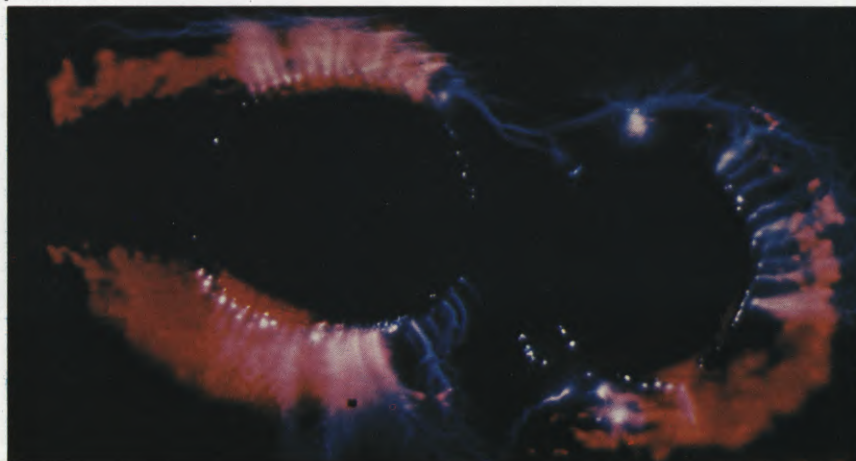
For more than four years, Dr. Moss and her associates had been working only with Kirlian still photography, as here described, and they had taken spectacular pictures of coins, leaves, and parts of the body. But, since they believed that real time pictures would give more information than these still

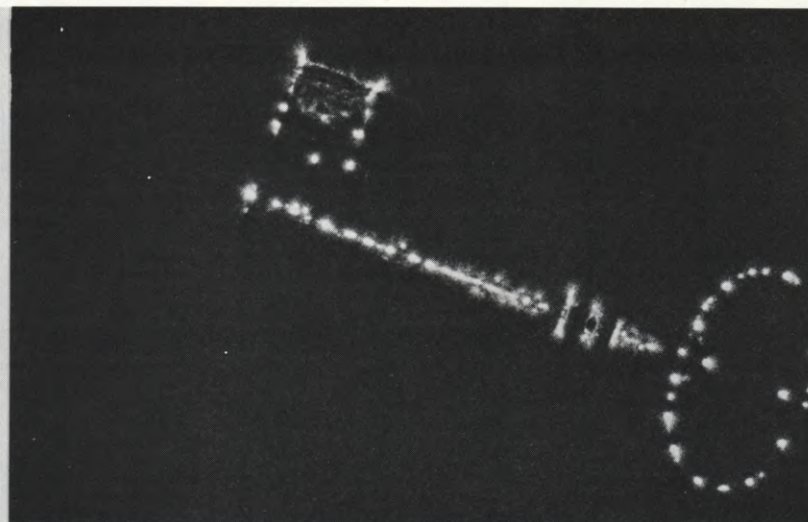
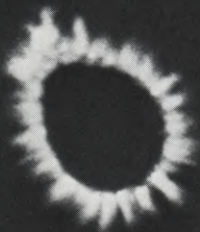
photographs, I was asked to explore the possibilities of achieving motion pictures of the Kirlian images. Such motion pictures were known to have been produced in the Soviet Union, but at that time it was thought that no other researchers had succeeded in this area.

There were special problems to be considered. For one thing, the contact

photography technique for still pictures was not suitable for motion picture work. Research associate John Hubacher offered a possible solution: to replace the metal electrode plate with a transparent material that was electrically conductive. One could then observe, and perhaps photograph, the emanations from the back side of the transparency. After experimenting with

Kirlian still photographs made in color result in some surprising and very beautiful effects. The photograph shown here of a fingertip might well pass for an abstract piece of modern art. Kirlian photography may well have some very important applications to medicine. Experiments are currently being made with it in conjunction with acupuncture.





(LEFT) FIGURE 4 — Kirlian photograph of a “normal” fingertip, as seen in one frame from the film. **(RIGHT) FIGURE 5** — Kirlian photograph of an antique Dutch key. For shooting in color, the author had hoped to use a color image intensifier, but the cost was prohibitive. Instead, he decided to use Ektachrome EF (7241), pushing it three stops in the processing and achieving an ASA speed equivalent to that of Four-X film pushed two stops.

various transparent electrodes, we felt that the best results were achieved with a sheet of 1/8-inch glass, coated thinly on one side with indium oxide. The typical procedure was to secure the object to be photographed on the uncoated side of the glass, and to attach the electrode from the power source to the coated side of the plate. When the object was grounded and the power applied, emanations became visible in a totally darkened room.

However, the emanations were of an incredibly low light level, too low to read on a light meter. I therefore decided to use a borrowed, low-power light intensifier in conjunction with a 40mm macro lens. I loaded an Arriflex S with Four-X Reversal (7277), set the lens wide open at f/2.8, and filmed at 24 fps. The film was processed normally. An example of this technique is shown in FIGURE 4, which is a normal fingertip as seen in one frame from the film.

In an effort to film without the intensi-

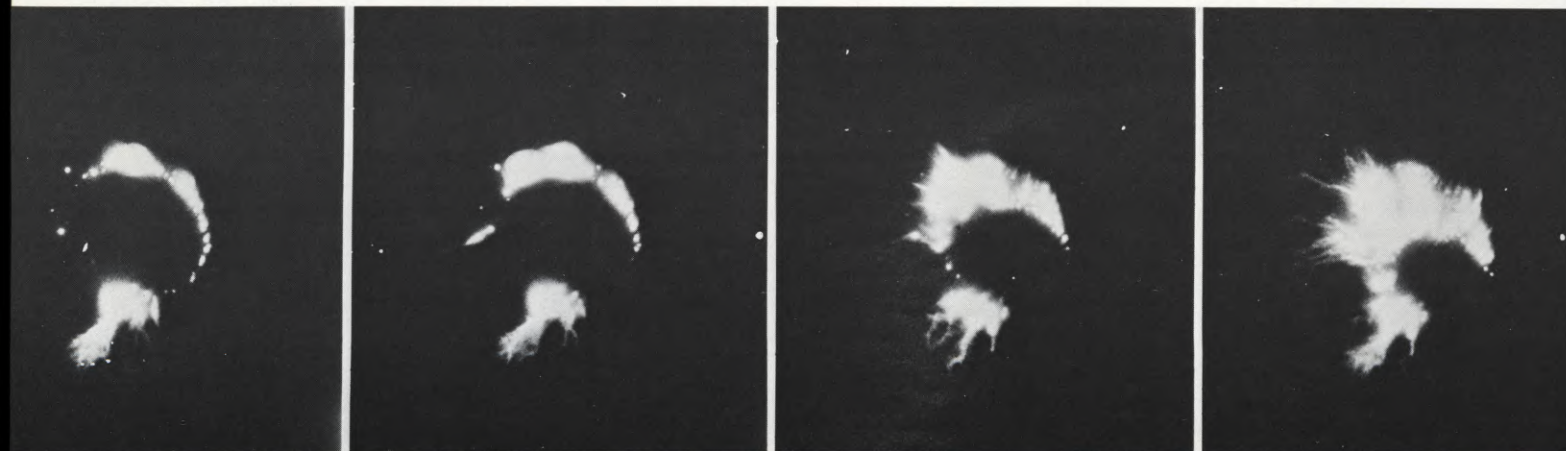
fier, I used a f/0.95 Angenieux with a plus-three diopter and reduced the camera speed to 12 fps. The Four-X film was force-processed two stops, with an effective speed of 1280. These pictures were of greater sharpness and better contrast than those shot with the intensifier. Encouraged by these results with black-and-white film without an intensifier, we decided to try color film. My first thought was to use a color image intensifier, but their price range was prohibitive. I decided to try Ektachrome EF (7241), pushing it three stops in the processing. This would result in the same effective speed as the 4XR pushed two stops. The pictures that emerged on EF were dim but acceptable, and a lightened workprint further improved the image. Examples of this color Kirlian moving pictures can be seen in FIGURE 5, showing an antique Dutch key, and a fingertip in FIGURE 6.

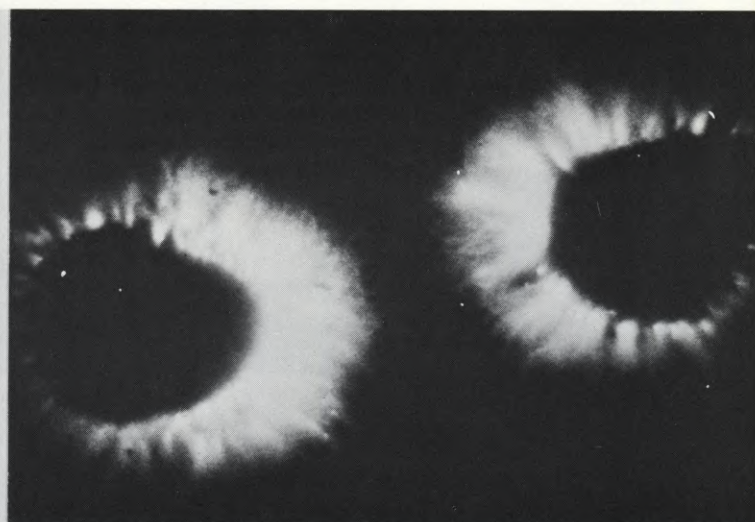
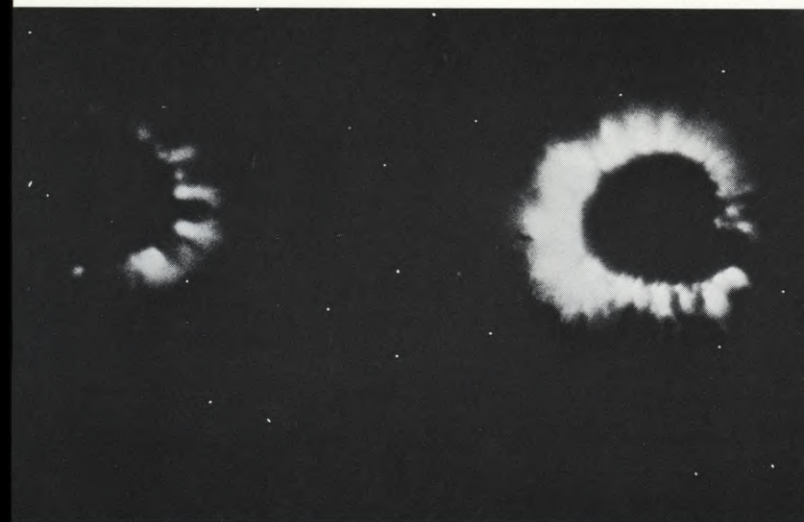
It is interesting to observe, in the

motion pictures, that the emanations from the key remain fairly constant from frame to frame, whereas the emanations radiating from the finger tip vary noticeably in length, intensity, and position. It has been repeatedly observed, too, that the finger tip emanations differ widely in different people.

Several series of experiments were subsequently conducted, using the motion picture techniques evolved both in color and black-and-white photography. In one study, two men were asked to place their finger tips on the transparent electrode, with the instructions that the man on the right try to make the emanations of the man on the left disappear. As the sequence progresses, one notices that the left finger tip begins to fade away. Then a curious thing occurs: the man on the left appears to fight back — and we see the image on the right disappear in one frame. Impressive, too, during this “fight,” is the spark that appears

FIGURE 6 — A series of frames from the film showing the changing “aura” of energy sparks emanating from a fingertip. Whereas the emanations from an inanimate object, such as the key shown above, remain fairly constant from frame to frame, the emanations from the “living” fingertip vary noticeably in length, intensity and position. It has been repeatedly observed, too, that the fingertip emanations vary widely from person to person.





(LEFT) FIGURE 8 — Emanations from the injured finger on the right seem to be flaring more brilliantly than those from the healthy finger on the left. **(RIGHT) FIGURE 9** — Kirlian photograph taken after the injured finger had been treated by means of an acupuncture needle inserted in the forearm of the patient. In this photograph, taken while the needle was still inserted, the emanations from the two fingers now appear approximately equal.

between the finger tips, travelling through the left finger and out the back.

Some of our best footage has resulted from experiments in conjunction with acupuncture research. Sometimes fortuitously. For example, a woman in the lab came in with a sprained ring finger one evening when two acupuncturists, Drs. Bresler and Kroenig, were scheduled to do acupuncture treatment. The sprained ring finger proved suitable for the research involving Kirlian cinematography. Therefore, Kirlian movies were made before treatment. FIGURE 8 shows the emanations from the injured finger, on the right, which are seen to be flaring more brilliantly than the healthy finger, on the left. (This had been a typical

finding of previous experiments with Kirlian still photography: the broken, or traumatized member invariably showing a bigger, brighter corona than its normal counterpart.) After these baseline movies were taken, the woman was treated by the insertion of a needle at a point in the forearm which, according to classical acupuncture theory, follows a meridian (an invisible channel) down into the ring finger. Kirlian movies were taken while the needle was still inserted. In this sequence, the emanations from both fingers appear about equal (FIGURE 9). It would seem that a balance of "energy flow" in the fingers had been achieved; at least, as seen through Kirlian cinematography.

Another acupuncture experiment involved the classical concept of "tonification" and "sedation" points. According to this theory, a "tonification" point energizes, and a "sedation" point tranquilizes. In this blind study, movies were taken of the subject's toes on both left and right feet, before any treatment. The Kirlian pictures revealed a fairly good balance of emanations from both sets of toes, as FIGURE 10 shows. The toes on the top part of the film belong to the right foot, the toes on the bottom to the left foot. After these films were taken, the acupuncturist inserted two needles at two different points. One needle was inserted on the left leg, just below the knee; the other between the

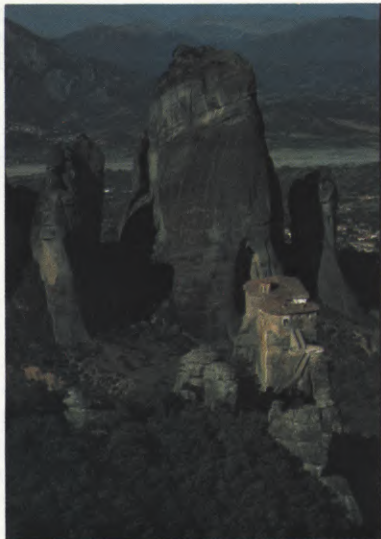
Continued on Page 566

(LEFT) FIGURE 10 — For a "tonification/sedation" experiment, toes at the top of the film belong to the right foot, while toes at the bottom belong to the left. **(RIGHT)** One needle was inserted in the left leg, just below the knee, the other between the first and second toes on the right foot. After twenty minutes the needles were removed and, as can be clearly seen in this Kirlian photograph, the toes on the left foot (bottom) are luminescing brightly in contrast to the "sedated" toes on the right foot.





(LEFT) The film's star, James Coburn, and John Beck take off for an actual flight in a hang glider. The actors wore wireless microphones in order to record lip-sync sound in flight. (CENTER) Two kites sneaking in on the monastery in order to take the kidnapers by surprise. (RIGHT) James Coburn actually hanging from the strut of the helicopter in flight. He insisted upon doing his own stunts in the film.



The Meteora monasteries, located in a wild part of Greece far north of Athens, constitute one of the wonders of the country. The most isolated monastery, located on a cliff all by itself, was selected as the one where the hostages are supposedly held captive in the film. Hang gliders are pressed into service as the only silent means of approaching the structure without tipping off the kidnapers.

ACTION IN "SKY RIDERS" Continued from Page 552

problem. Though the location passed the tests, alternative locations were selected, should time of year change the complexion of the wind and weather. Plans were made to begin filming in June 1975.

THE PREPARATION

During the intervening six months, preparation for the shooting was completed, including finalizing the script, casting, selection of crew and building the camera helicopter and kite mounts which would provide a unique and involving look to the film. Moreover, exhaustive tests were made to deter-

mine the most successful means of achieving a night look (day-for-night) against the daylight sky.

PREPARING THE MOUNTS

In order to create, for the audience, a feeling of participation in the film events, our style of filmmaking has always emphasized camera involve-

(LEFT) In the action of the film, the helicopter, bearing one of the kidnapers trying to escape, takes a swipe at Coburn in an attempt to knock him off the cliff. (CENTER) Coburn falls and rolls out of the way just in time. Freeman directing, MacGillivray shooting. The helicopter missed Greg's head by a fraction of an inch. (RIGHT) Cameras prepare to film Susannah York on the kite, suspended from the crane.



ment in action. With this in mind, a variety of camera mounts were built for placement on the hang gliders. Of course, the major factor in designing a camera mount for a kite is weight: too much weight will make the kite unmanageable in the air, or one step further, unflyable. We designed mounts which would conduct motorized pans and tilts of the camera, others which would keep the camera absolutely level with the horizon as the kite and flyer gyrate and bank, and others which were attachable to nearly every part of the hang glider. Unfortunately, some of these designs (most notably the motorized and remote-controlled designs) were too heavy to get off the ground. Working closely with a professional hang gliderist provided us with the input necessary for these critical decisions: not only was Bob Wills the flyer who would be carrying the "rigs", but he had extensive mechanical knowledge which contributed immensely to the building of these mounts.

After testing with weights, we narrowed the construction to two mounts, the gyro-stabilized mount and the mini-mount which could be attached anywhere on the kite. Tyler Camera Systems, and that inventive soul, Nelson Tyler, proceeded to build the mounts while Todd AO (with talents like Richard Vetter, John Farley and Paul Nielson), whose equipment and lenses we would use in Greece, converted two miniature 35mm Eyemo 100' daylight-load cameras to our required frames-per-second running speed and adapted and tested their wide-angle 28mm and 35mm anamorphic lenses on each camera. Both of these cameras as well as the Arriflexes, which would mount on the gyro platform with a 200' magazine, were tested and retested under adverse vibration and impact



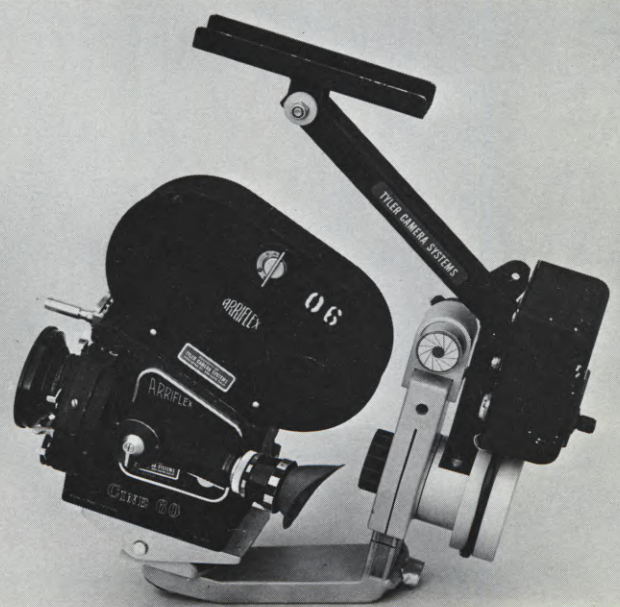
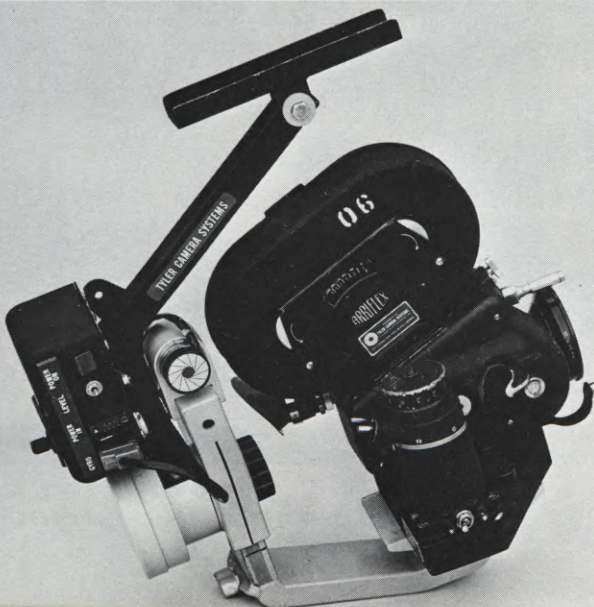
In this photograph the camera can be clearly seen mounted on the kite by means of the Tyler portable single-axis gyro-stabilizing mount custom designed and manufactured for MacGillivray/Freeman Films by Nelson Tyler. It made possible much of the spectacular hang-glider footage in "SKY RIDERS", giving the audience a first-hand view of what it's like to fly one of these kites.

conditions in order to avoid any need to replace or repair equipment in the remote interior of Greece.

The camera mounts recorded exciting and unique footage which gives the audience the feeling of running off a 1000' cliff with only a nylon sail for support. Moreover, cameras were positioned close to the flyer, looking both over his shoulder and back at his face. These essential close-ups were obtained in one of two ways. When the camera was trained on the flyer's face in the actual flight, special masks with the actor's likeness, but molded to the hang gliderist's face, were worn by the pilot. In this way, though no such prolonged exposure would work, quick cuts could be ob-

tained which would increase the dramatic effectiveness of the action. For longer records of the fear and concentration inherent in this dangerous activity, a crane was used to hoist the kite and simulate flight with the actor as pilot. Although the crane seemed like a smaller insurance risk, in actual fact, the professional pilots considered it a far more dangerous undertaking than free flying. Their reasoning, though biased, was explicit. Given the unstable wind conditions, any sudden gust could send the unsuspecting novice pilot hurtling against the crane arm which held the kite in its proxy flight. The professional pilots did not prove wrong in their eval-
Continued on Page 574

Two views of Arriflex camera mounted on the portable single-axis gyro-stabilizing mount designed for use on "SKY RIDERS" by Nelson Tyler, according to the special requirements of Jim Freeman and Greg MacGillivray. The device instantly stabilizes rolling or pitching motions of the shooting vehicle and, while carried aloft by hang-gliders during this filming, is expected to provide flexibility for several other kinds of cinematography. In "SKY RIDERS" the mount was used on the kites mainly with two converted miniature Eyemo 100-foot-load cameras equipped with wide-angle 35mm anamorphic lenses.



TECHNICAL/SCIENTIFIC AWARDS
Continued from Page 519

This year that ceremony was held on March 24 in the lobby of the Academy's magnificent new headquarters in Beverly Hills and was presided over by Academy President Walter Mirisch, with the participation of Director William Friedkin.

The awards were voted by the Academy Board of Governors from the recommendations made by the Scientific or Technical Awards Committee, of which Wilton R. Holm is Chairman.

The following awards were presented:

CLASS I [Academy Statuette]
NONE

CLASS II [Academy Plaque]

To Chadwell O'Connor of the O'Connor Engineering Laboratories for the concept and engineering of a fluid-damped camera-head for motion-picture photography.

The O'Connor fluid camera-head provides the operator with a motion-damped camera-support to effect smoothness in camera panning and tilting. The adjustments make it possible to apply the proper drag to prevent sudden starts, stops or jerks in motion-picture photography.

To William F. Miner of Universal City Studios, Inc. and the Westinghouse Electric Corporation for the development and engineering of a solid-state, 500 kilowatt, direct-current static rectifier for motion-picture lighting.



(LEFT) Award to W.D. Carter (Carter Equipment Co., Inc.) and Roy Ridenour (Ramtronics) "for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines." (RIGHT) Award to Lawrence Butler (Donzil D. Roberts accepting) and Roger Banks "for the concept of applying low inertia and stepping electric motors to film transport systems and optical printers for motion picture production."

This rectifier provides 500 kilowatts of direct-current power by use of solid-state components. It is engineered to supply low-ripple direct current with precise voltage regulation. It incorporates circuitry for paralleling with other rectifiers or generator sets.

CLASS III [Academy Citation]

To Lawrence W. Butler and Roger Banks for the concept of applying low inertia and stepping electric motors to film transport systems and optical printers for motion-picture production.

The stepping motors provide design flexibility and improve performance

of optical printers. The low-inertia motors incorporated in a motion-picture projector add the continuous, fast forward and rewinding capabilities required by the new generation of rerecording channels.

To David J. Degenkolb and Fred Scobey of DeLuxe General Incorporated and John C. Dolan and Richard DuBois of The Akwaklame Company for the development of a technique for silver recovery from photographic wash-waters by ion exchange.

This chemical system economically recovers silver in low concentration from photographic wash-waters.
Continued on Page 579

(LEFT) Award to Chadwell O'Connor of the O'Connor Engineering Laboratories "for the concept and engineering of a fluid-damped camera head for motion picture photography." (RIGHT) Award to William F. Miner of Universal City Studios and the Westinghouse Electric Corporation (William T. Michael accepting) "for the development and engineering of a solid-state 500-kilowatt, direct current static rectifier for motion picture lighting."



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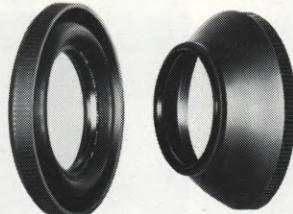
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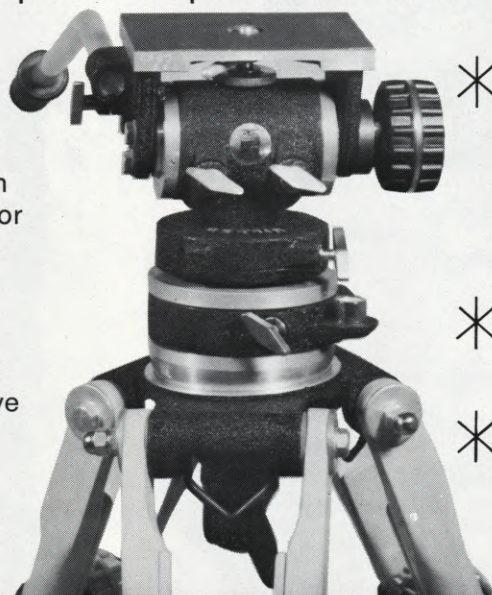
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ACADEMY AWARDS PRESENTATION
Continued from Page 515

monies at the 46th.

This year there were no unscheduled surprises to enliven the 150-minute Oscarcast — no “streakers” racing across the stage, no political “messages” from the podium — simply a straightforward tribute to the top artists and technicians of the cinema.

Honored with Special Awards voted by the Board of Governors of the Academy were two prominent motion picture figures, Mervyn LeRoy and Jules C. Stein.

LeRoy, director of some of Hollywood's most memorable films, was voted the Irving G. Thalberg Memorial Award, while Stein, former President, Chairman and now Director of MCA, Inc. and its subsidiaries including Universal Pictures, was voted the Jean Hersholt Humanitarian Award.

LeRoy is the 20th individual to receive the Thalberg Award since its inception in 1937. Not a mandatory award, it is given to “creative producers whose body of work reflects a consistently high quality of motion picture production,” and was last voted by the Board in 1973 to Lawrence Weingarten.

LeRoy turned out 75 films during his



Winners of “Special Achievement Awards for Visual Effects and Sound Effects” for their cinematic wizardry on Robert Wise’s “THE HINDENBURG” were (left to right) Glen Robinson (miniatures), Peter Berkos (sound effects) and Albert Whitlock (matte paintings). Mr. Robinson and Mr. Whitlock were part of the team that won the same award last year for their outstanding work on Mark Robson’s disaster-thriller, “EARTHQUAKE”.

long and distinguished career as a filmmaker, dating back to 1928. His range and diversity have seldom been equalled by any other producer-director and his list of films includes such screen classics as “LITTLE CAESAR”, “I AM A FUGITIVE FROM A CHAIN GANG”, “TUGBOAT ANNIE”, “GOLD DIGGERS OF 1933”,

“WIZARD OF OZ”, “LITTLE WOMEN”, “MISTER ROBERTS”, “QUO VADIS” AND “GYPSY”.

Jules C. Stein was voted the Hersholt Award for his untiring efforts in behalf of his fellow man. Founded in 1956, the Award, also not mandatory, is voted by the Board to “an individual in the
Continued on Page 586

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KIRLIAN CINEMATOGRAPHY

Continued from Page 559

first and second toes on the right foot. No one, except the acupuncturist (who was not present when the movies were shot) knew which was the tonification or sedation point. After twenty minutes, the needles were removed and Kirlian movies were taken again of the left and right toes (FIGURE 11). Now, quite vividly, one can see that the toes on the left foot (bottom) are luminescing brightly, in contrast to the toes of the right foot, which have become much dimmer. We subsequently learned that the left foot had been stimulated — "tonified" — by the needle inserted near the *knee*, not the needle placed between the toes, which was the sedation point.

Probably our most startling footage has been of the "phantom leaf" effect, first discovered by the Russians. Adamenko has reported that, on rare occasions, when a freshly plucked leaf was photographed, after a small part of the leaf had been cut away, the Kirlian image would reveal the *entire* leaf, including the "phantom" of the part that had been cut away. Dr. Moss had attempted to replicate that effect, but only after two years of repeated trials was she able to photograph the phantom leaf in still photography. A good example, in color, is given in FIGURE 12.

Encouraged by our other successes on motion picture film, we decided to see if the phantom effect could be recorded. To date, several phantoms have been successfully filmed. But, the effect is difficult to produce, and seems to depend upon several as-yet unknown factors. Our first success, on the first trial, revealed no phantom. The leaf photographed exactly as one would expect it to: the portion that was cut away is not visible. But then, by moving the grounding wire and replacing it on the stem of the leaf (at a different angle), we suddenly achieved the phantom effect.

Explorations in this new and exciting area of Kirlian cinematography have only just begun. It will require many many more rigorous experiments, and analyses, by the researchers now working in Kirlian photography around the world, before the Kirlian effect can be adequately explained. ■

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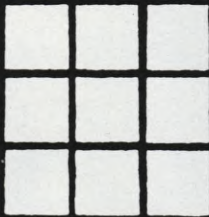
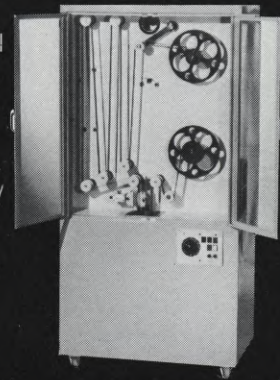
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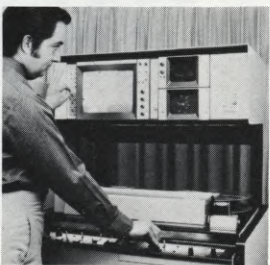
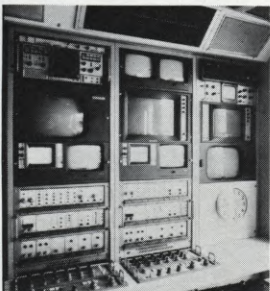
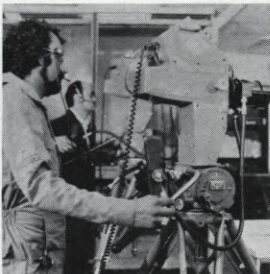
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INDUSTRY ACTIVITIES

GREER GARSON TO PRESENT ASC'S BEST COLLEGE FILM AWARDS

Actress Greer Garson will present the second annual American Society of Cinematographers award for Best Photographed College Film of 1975, event chairman Stanley Cortez has announced.

The Oscar-winning star will present specially-created ASC trophies to the winning college cinematographer and university representative. Plaques of accomplishment will be awarded to four other nominees.

More than 110 universities and colleges throughout the U.S. participated in this year's awards competition.

Miss Garson won her Academy Award for her best actress performance in "Mrs. Miniver".

The awards dinner will be held May 24 at the ASC headquarters, 1782 No. Orange, Hollywood.

SPSE PHOTOKINA '76 FLIGHTS OFFER ECONOMY AND DEPARTURE FROM EAST AND WEST COASTS

SPSE, for the fifth time, is arranging a three-week trip to Photokina. SPSE flights will leave from both New York and Los Angeles via Trans-International Airways, a certified CAB supplemental U.S. carrier arriving in Frankfurt, Germany, only a short distance from Cologne. Photokina will take place there Sept. 10-16, 1976. A technical meeting is being planned (details to be announced) in the departure city of Zurich, Switzerland. The cost is only \$316 round-trip from New York and \$416 from Los Angeles. SPSE membership is not required and all or part of the trip cost may be deductible for federal income tax purposes.

A Trans-International flight departs from New York Sept. 5, and arrives Frankfurt Sept. 6. The return flight departs Zurich Sept. 28 and arrives New York the same day. A Trans-International flight also departs Los Angeles Sept. 7, and arrives Frankfurt Sept. 8. The return flight departs Frankfurt Sept. 28 and arrives Los Angeles the same day. Reservations may be made by contacting SPSE no later than June 1. Contact: Mr. Fred Gerretson, Chairman; SPSE, 1330 Massachusetts Avenue, N.W.; Washington, D.C. 20005; Telephone: (202) 347-1140.



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Cinema Products Corporation will hold a special one-day regional CP-16 Maintenance Training Seminar and Lens Clinic on Sunday, May 16, 1976. The seminar will take place at the Huntsville Hilton Motor Inn, Freedom Plaza, Huntsville, Alabama 35802.

Marty Prager and Charles Jackson, highly experienced Cinema Products quality control and maintenance technicians (from the Los Angeles plant) will lead special sessions dealing with the operation and maintenance of CP-16 and CP-16R reflex cameras, emphasizing effective trouble-shooting and preventive care under field conditions.

For further information and applications to attend this one-day regional CP-16 Seminar, please write to Jim Sims, Bush & Millimaki Photo Equipment Service, 902 Bob Wallace Ave., Huntsville, Ala. 35801 Tel: (205) 534-2211, or contact: Gary Gross, National Marketing Manager, Cinema Products Corp., 2037 Granville Ave., CA 90025 Tel: (213) 478-0711.

**ASC MAKES DONATION TO NEW
BRITISH FILM/TELEVISION CENTRE**

The American Society of Cinematographers has announced that it has donated a founder's seat in the soon-to-be-completed International Film Centre in London, England.

The ASC participation was announced following discussions between Sydney Samuelson, chairman of the Society of Film and Television Arts Limited, which is building the Centre, and ASC executive board members.

"We are delighted to be a part of this splendid project," ASC president Lester Shorr told Samuelson. "Our board members feel it will do much to further good relations between the film and television industries in both countries."

The Centre, being built at 195 Piccadilly, was initiated by Queen Elizabeth and Prince Philip, who donated \$140,000 — their proceeds from the television film, "ROYAL FAMILY".

The new structure will be the headquarters of the industry in the United Kingdom — somewhat comparable to the Academy of Motion Picture Arts and Sciences in Hollywood. Its membership will approximate 2,000.

Other American groups and individuals who are participating include: Technicolor, Panavision, Elmer Bernstein, Otto Preminger and George Roy Hill.

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BEHIND THE SCENES
Continued from Page 551

invaded the same suite of sixth floor offices occupied in 1972 by the Democratic National Committee. And across the street at Howard Johnson's an actor portrayed Alfred Baldwin, who was stationed as lookout on the same balcony after midnight June 17, 1972, while his colleagues bumbled their bugging mission at DNC headquarters. The filmmakers even hired Frank Wills, the Watergate security guard who discovered the robbery and sounded the alarm, to play himself.

Woodward and Bernstein's apartments in the picture are reasonable approximations of their abodes when they were covering Watergate. The Library of Congress is the Library of Congress.

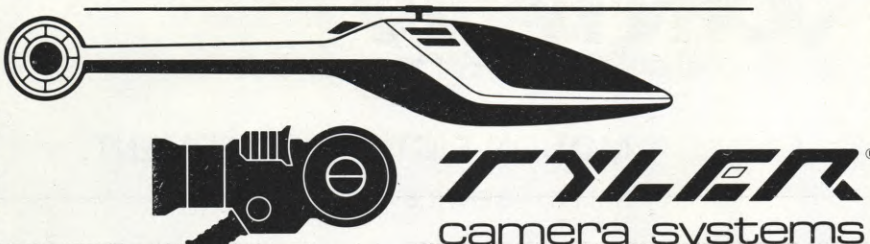
Moving to California in late June, the company spent seven weeks in the ersatz newsroom, then moved to Los Angeles City Hall, whose exterior doubled for the County Justice Building in Miami, Fla., and whose interior represents the FBI headquarters in Washington. Other Los Angeles locations: a McDonald's restaurant in Santa Monica, an apartment in Marina del Rey (Donald Segretti's residence in the film), and Century City for the Deep Throat garage meetings.

Principal photography was completed September 23, 96 days after the cameras first rolled, almost three years after Redford's interest in the venture was first aroused. Moviolas and other editing equipment were moved into space adjacent to the Wildwood offices at the Burbank Studios, and Pakula and the film editor, Robert Wolfe, commenced the arduous task of editing the picture.

But it would be a grievous error to stress too strongly the interesting logistics of a filmic undertaking of this nature.

"ALL THE PRESIDENT'S MEN" is many things. It is, first, entertainment, a newspaper story unlike any other ever made, a suspense story particularly terrifying because it is true, because it is current, and because the victims of the conspiracy are the very people seated in the audience viewing the picture.

Redford calls it a howdunit about a whodunit. It tells how the relatively inexperienced and always vulnerable reporters defied tremendous and frequently ominous opposition from sources of great power, persisting in their search for the truth about who did what to whom in the pastiche of politics and crime identified under the umbrella label "Watergate."

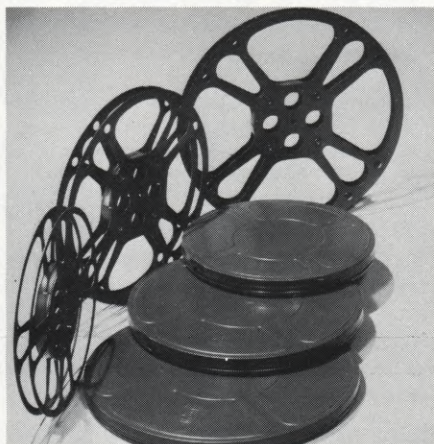
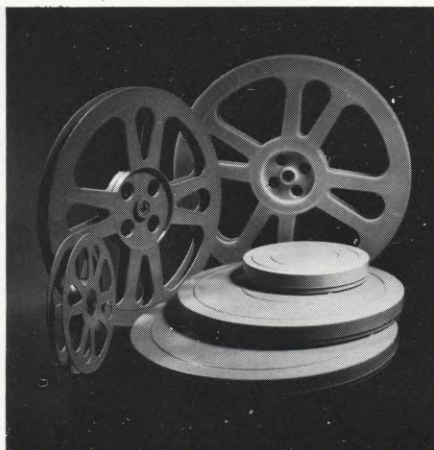
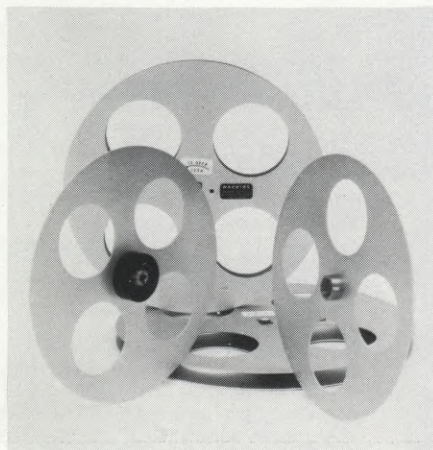


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HOLLYWOOD MOVIE STUDIOS
Continued from Page 555

ment of the studio system and the skill of the cameramen, came the advancement of the film laboratories, one of the most important links in the advancement of the industry.

Film laboratories were where all developing and processing was done. In the early days, the labs handled all the output of the studios, large and small. But with the advent of sound in the late twenties, the independent labs geared their departments to this new development.

The major studios had their own labs, but when Technicolor became popular by 1938, many of the studios used the Technicolor Company for almost all of their output. For many independents, however, this was too costly and they used private labs which not only developed their film, but also handled post-production details as well. The Consolidated Film Company begun by Herbert Yates, the founder of Republic Pictures, was one of the most successful of the independent labs.

The cinematographer's life was linked to his studio and the studio was linked to him. Without him and his camera, no film could be made, no studio could exist and no record of the industry could remain. ■

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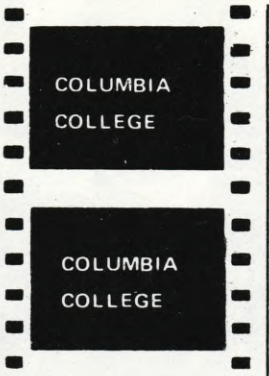
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STUDENT FILM AWARDS Continued from Page 543

Roberts. They picked up the Arriflex 16BL from Wright State and set it up on an Arriflex tripod to see how it worked. No one among their peers knew how to work it, so they took the never-used accompanying manual and began to study it. They then shot two test-rolls — "until we got the hang of it" — and began principal photography on *MEN'S LIVES*. Their main assistance throughout filming was a used Spectra Pro light meter with which they very carefully took several readings each time they had a new set-up.

Because they wanted to reach a broad audience they used Eastman 7242 reversal film which was processed by DuArt in New York. To compensate for hard-lighting results, they had DuArt flash the film.

Hanig and Roberts depended on available light as much as possible. With interviews conducted indoors, they usually placed their subjects next to big picture-windows, which also reduced the possibility of fluorescent greens. In situations where they could not get away with available light, such as in the interviews with the radio talk master and with Gerard, the factory worker, Hanig and Roberts used a Lowel mini-soft-light.

At a fraternity party scene, Hanig and Roberts used regular high wattage light bulbs rather than distracting projectors, which would have inhibited the action of the scene.

Hanig and Roberts completed *MEN'S LIVES* at Antioch and then set up their own distribution company, New Day Films, to promote it. They have been very successful at exhibiting *MEN'S LIVES*, and in the two years since completing the film, they have recouped all their expenses. They are currently living in San Francisco, where they have set up their own studio with the intention of producing several more provocative documentaries.

Animator Vince Collins, who won the Academy Student Film Award in animation for his film, *EUPHORIA*, believes that the award has been instrumental in helping him find more work in the industry. *EUPHORIA* is a standard animation film with cel-technique, using ink and paint, and its high-quality image caused many Academy members viewing it on the Evans customized RCA projector, to believe that it was done in 35mm. It was not.

Collins built his own animation stand and used a 16mm Bolex Rex 4, for which he rigged up a special dissolve unit with digital counter. This enabled Collins to control the variable shutter

speeds of the Bolex.

Collins theorizes that his good image quality is a result of using a 75mm lens, which he placed well above the animation stand. By using half-second exposure, the lens could be stopped down to f/5.6, resulting in greater color saturation.

EUPHORIA was presented on PBS' International Animation Festival, following Academy recognition of the film.

THANKS, HOLLYWOOD, FOR BOTHERING

The winners of Academy Student Film Awards are beginning to enter the film industry as professionals. It may be argued that their achievements would have been discovered regardless of this award. Nevertheless, receiving Academy recognition gave them an introduction to the professionals who have created the Hollywood film industry. Many Hollywood film-makers have seen their innovative films, and still others have availed themselves to the winners at some future date when the students will have created new projects.

As the award grows in prestige and stature — as it becomes more of a tradition in Hollywood, it most certainly will provide further benefits to its recipients. What is important about this Award, as well as the one bestowed by the A.S.C., is that it signifies recognition and encouragement by Hollywood of its aspiring heirs. For the generation that has succeeded in creating worldwide magic to honor the generation that would like to follow in its footsteps is in itself an achievement.

Film-making has certainly come of age when those responsible for creating films can have the foresight to insure its future in such a constructive and generous manner. ■

(ABOUT THE AUTHOR: GWEN FIELD is a directing Fellow at the American Film Institute, a former journalist for Sipa Press, Paris, and an Assistant Director on several films, including "FRENCH CONNECTION II".)

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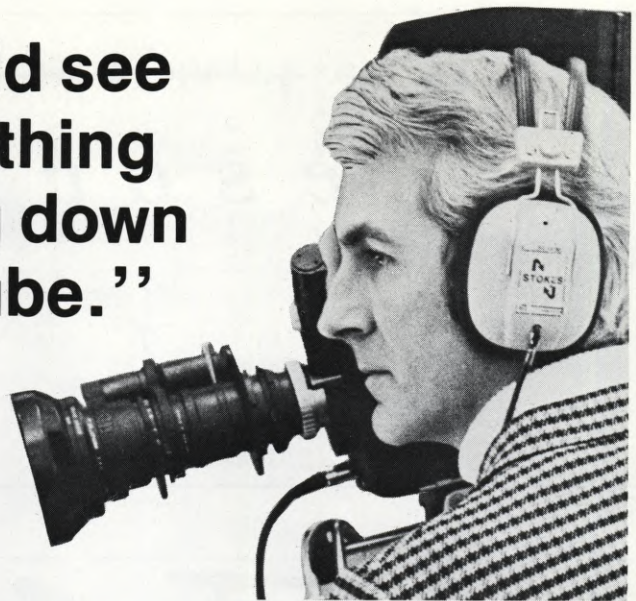
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FILMING "SKY RIDERS"
Continued from Page 561

uation, and all measures were taken to contain the kite with safety wire. Although there were no accidents, none of the actors' flights were uneventful, especially since so much time was required for the filming of each actor in order to achieve an authentic look of flight.

DAY-FOR-NIGHT DECISIONS

Also accomplished during the prep period were extensive tests with various methods to attain a successful day-for-night effect. As the story goes, the rescue team flies silently and undetected into the monastery grounds at night. Led by James Coburn, this flight of seven commandos was to be one of the high action moments of the film, so the day-for-night look demanded authenticity. To determine the exact photographic "look" we were searching for, we studied the natural nighttime light. At night, with moonlight, very little color is perceived, due to the physiological inability of our eyes to distinguish between colors under low-light conditions. Actually, at night we perceive little more than contrast: black, greys, and perhaps some blues. This stark light/shadow effect was our desired look for the bats (hang gliders) ominously flying in for the dramatic rescue.

We made tests against various backgrounds: sky, clouds, rocks, and foliage and in different lighting conditions with an assortment of stocks, filters, and exposures. We concluded that the most successful day-for-night approach utilized black and white PLUS-X film shot with a 29F (red) filter to increase contrast and provide "black" blacks. This camera stock was subsequently printed on color-printing stock with a printing light of 50, 20, 1, to achieve a cold blue night feeling. After editing, these day-for-night scenes would be timed and printed on CRI stock with blue added.

In using this method, an enormous amount of laboratory control becomes possible, with complete timing light and color correction latitude in making the first trial. In one instance in the completion of "SKY RIDERS", editor Chris Holmes desired to use a particular scene which was shot against a very hot white sky. By using the Black and White method, it was possible to produce two consecutive CRI's, which did slightly increase contrast and grain, but achieved the desired night effect. Though this method of "night" photography is not new, having been used at least twenty years ago, we were

introduced to it by Cinematographer Jack Couffer, ASC on "JONATHAN LIVINGSTON SEAGULL". Jack's lessons were sound; if it is correctly used, it is a great tool and creates a beautiful, graphic night-effect.

ON LOCATION

Having completed the various equipment and stock tests, the crew left for Greece. It has become increasingly more feasible in producing action features to use two separate crews for the entire shooting schedule. "SKY RIDERS" was no exception. The first unit was responsible for the basic story development, while the second unit handled the aerial action, as well as a substantial portion of the ground action. In this case our second unit was a sizable crew, composed of the most excellent group of technicians available. Moreover, the crew formed a homogeneous unit of compatible personalities which helped avoid any personal conflict on an already difficult shoot. The work of the entire second unit crew was so efficient and without extraneous delays that we finished ahead of schedule and accepted additional filming responsibilities from the first unit.

The second unit was a mixture of American, English and Greek professionals. From California, we brought our regular entourage, including the excellent Gaffer-Grip team of Troutman and Gilluly, plus hang glider experts Bob Wills, Chris Wills, Chris Price, Kurt Kiefer, Dix Roper and Dean Tanji, and kite equipment managers Roy Hooper and Gus "Hawkeye" Hawkins. Although we did experience two accidents that hospitalized Roy and Dix, the pilots were very successful in creating exciting, beautiful action against the backdrop of the spectacular Meteora.

The three months we spent in Greece presented some of the most difficult and challenging filmmaking conditions. It was only through the use of four helicopters and 15 Motorola radios that we were able to coordinate our complicated activity. Each morning the flyers were checked out with their own personal radio. Their helmets were especially designed with earphones and a small microphone attachment, giving them instant contact both with other flyers and the ground crew. The radios were designed so that the transmission button was taped to their wrists, thus creating a minimum of interference with their flying. The testing and distribution of this vitally necessary equipment was an early morning ritual of every filming day.

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The dozen Greek police, who worked for the second unit, had their own radios for transmission in Greek as well as one of our radios. Our bilingual production assistant, Nikki Clapp, would translate all information coming in from the flyers and film crew to the police so that they could proceed with their job of corralling the multi-national crowds of motorized tourists. These ever-curious throngs arrived originally to visit the ancient monasteries, but became even more intrigued with the modern birdmen.

Spectators are a nuisance to all on-location movie makers, but in this case they presented actual physical dangers for the airborne members of the crew. Five minutes before any flyer would launch himself from one of the several selected pinnacles, the signal was sent out on the radios to hold all traffic. Only after the gawking motorists were restrained behind police barriers and the roads were cleared, could the flyers take off. Their landing area, in addition to being complicated by turbulent wind conditions, was so small that when more than one kite was in the air, the road had to be used as an auxiliary landing place.

While the motorists were, at least theoretically, possible to control, the second unit was completely at the mercy of the extremely variable wind conditions. Even with the best of weather, six kites and four helicopters do not mix well in the same air space. The winds in the plains of Northern Greece were notorious for their dramatic shifts. When the prevailing wind direction would change, the whole second unit had to change locations. Scouting parties would be sent either by heli or mini-bus to test wind conditions at one of seven alternative flying sites, and then the whole caravan would begin its laborious move.

Even the helicopter pilots found their typically nerve-racking job complicated by the unsteady winds. As often as a dozen times a day, they were called upon to deliver their payloads of flyers and kites to the inaccessible tiny peaks of the 1000-foot-high pinnacles. Once having safely disembarked, the kite flyers hurriedly assembled their kites while the film crew secured themselves to available shrubbery on the cliff edge. However, more often than not, even the most efficient assembly of kites and cameras could not prevent the fickle wind from changing to dangerous flying conditions. Then the whole crew was forced to halt operations until the decision could be made to either shift locations or wait for even minimal flying conditions to return.

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spectacular flight path could only be attempted in the calm of the early morning. This hair-raising path led through gaps in the pinnacles that crowded next to the launching peak. Once the wind was gently blowing into the cliff face and waiting kite sails, kite and the patiently hovering camera ship would simultaneously glide out over the spectacular green depths surrounding the pinnacles. Only the most competent professionals could succeed in the endeavor that lay before them. Three kites, flying in formation with a circling camera ship, flew through gaps that were less than 75 feet wide, while the helicopter cameraman, Jim Freeman, radio-directed their line-up for his best camera angle. From the ground camera angles, both on top of the pinnacle and at its base, it often looked as though the kites were actually scraping the steep faces of the towering rock formations.

While the flyers were airborne, radio contact was forbidden to all but the helicopter cameraman, heli pilot and flyers. Constant communication was especially essential in the turbulent wind conditions, while attempting special formations with the multiple kites, two subject helicopters and the camera ship.

At one point, the story line called for both the terrorist helicopter and the police helicopter to be simultaneously aloft with the escaping flyers and their rescued hostages. This was additionally complicated by the presence of James Coburn hanging from one skid of the terrorist helicopter. Coburn, acting as the leader of the flying rescue party, enthusiastically insisted on doing his own stunt work. This particular sequence called for him to make a last frantic effort to stop the fleeing terrorist by grabbing hold of his retreating helicopter skid. Once underneath the belly of the craft, Coburn fires repeatedly into the transmission trying to force the helicopter to land, while maintaining his own precarious perch. The British pilot, David Dixon, who flew the terrorist helicopter, stretched his margin of safety to the limit in coping with the varying weight of a suspended body, as well as the varying positions of five kites and two other helicopters in his immediate air space. George Nolan, helicopter pilot of the camera ship, had an equally complex task of maneuvering Jim Freeman's camera into the most advantageous angle to maximize audience involvement.

Of course, there are individual stories that accompany nearly every ascent that was made by the multiple flying crafts, so incongruously composed of either metal rotors or

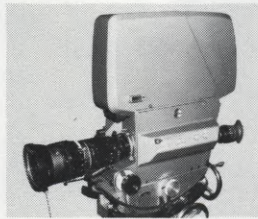
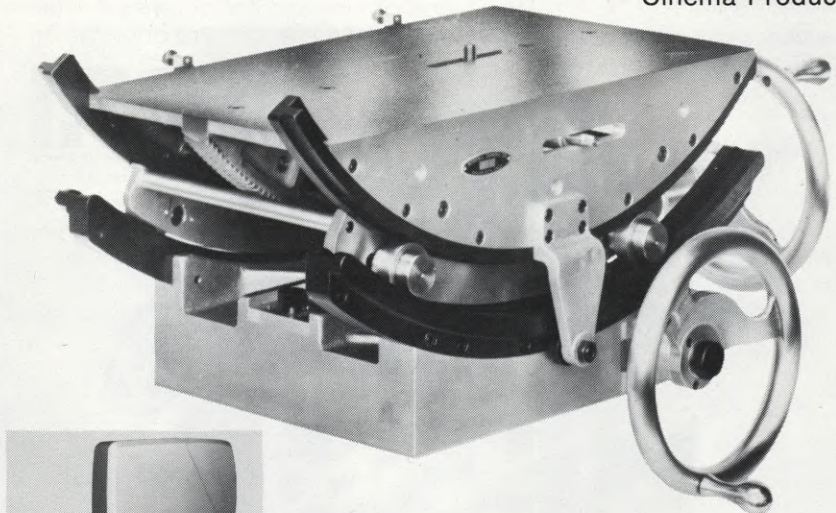
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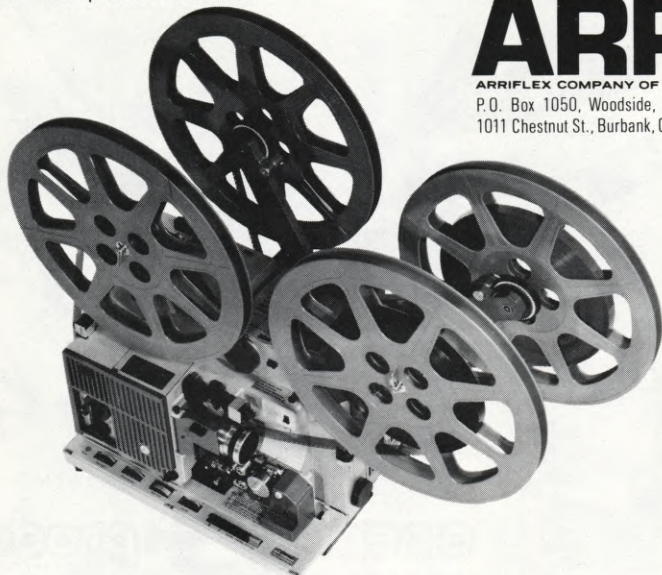
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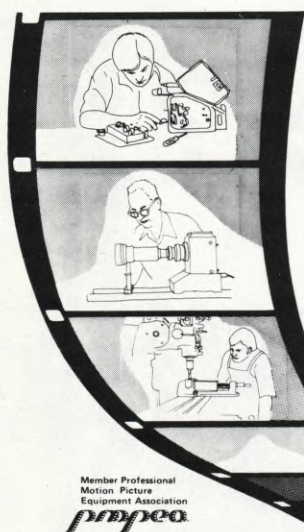
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cloth wings. Fortunately, though there were many pulse-raising close calls, there were never any aerial mishaps as a result of the unnatural partnership of kites and helicopters. This can only be attributed to the superb timing and excellent coordination on the part of all the airborne professionals. Ironically, one of the most fearsome dangers in the skies above the Meteora was the possible collision with a local Greek training Jet, rather than another hang glider or helicopter. As if the film project did not already have enough obstacles, it was soon discovered that the ideal flying locations lay directly in the path of Jets from an air base located discreetly adjacent to the Meteora. Despite an earlier arrangement that had been worked out with the air base, the Greek pilots still enjoyed making several spontaneous flights while the second unit was filming. Fortunately our flyers were never in the air at the same moments and hearts beat faster only from imagination rather than reality.

Filming the exploits of the hang gliderists amidst the contorted beauty of the Greek Meteora was a challenging assignment demanding interesting technical innovations as well as superb organization and communication. "SKY RIDERS" in its finished form immediately reflects the specialized skills that went into its creation. The dynamic visual impact of the action photography both from the air and ground creates a unique spell of audience involvement. ■

"SKY RIDERS" — TECHNICAL CREDITS

First Unit

Producer: Terry Morse Jr.
Executive Producer: Sandy Howard
Director: Douglas Hickox
Director of Photography: Ousama Rawi, BSC
Camera Operator: Ronnie Taylor
Assistant Director: Ted Stugis
Production Supervisor: Bernie Williams
Production Manager: Robert Watts

Second Unit

Director/Cameraman: Greg MacGillivray and Jim Freeman
Grip: Rae Troutman
Gaffer: Pat Gilluly
Camera Assistant: Phil Schwartz
Camera Assistant: Cindy Huston
Production Assistant: Barbara Smith
Helicopter Pilot: George Nolan
Helicopter Pilot: David Dixon
Helicopter Mechanic: Bob Cowan
Assistant Director: Bryan Cook
Assistant Director: Peter Bennett

(ABOUT THE AUTHORS: Greg MacGillivray and Jim Freeman operate their own production company in Laguna Beach, California, producing, directing and photographing features, shorts and commercials. They first built their reputation as a filming team through the production of several spectacular surfing films. Taking to the air, they became specialists in aerial cinematography, working on such productions as the short film "SENTINELS OF SILENCE" (winner of two Academy Awards) and "JONATHAN LIVINGSTON SEAGULL", among many others.)

TECHNICAL/SCIENTIFIC AWARDS
Continued from Page 562

Because silver salts are toxic, this technique also improves the ecological condition of the waste effluent.

To Joseph Westheimer for the development of a device to obtain shadowed titles on motion-picture films.

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To the Carter Equipment Co., Inc. and Ramtronics for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines.

This system not only constitutes a means for the preparation of color-control tapes used in additive motion-picture printers, but also facilitates making additions, deletions or changes in scene light-values and optical effects.

To the Hollywood Film Company for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines.

This system not only constitutes a means for the preparation of color-control tapes used in additive motion-picture printers, but also facilitates making additions, deletions or changes in scene light-values and optical effects.

To Bell & Howell for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines.

This system not only constitutes a means for the preparation of color-control tapes used in additive motion-picture printers, but also facilitates making additions, deletions or changes in scene light-values and optical effects.

To Fredrik Schlyter for the engineering and manufacture of a computerized tape punching system for programming laboratory printing machines.


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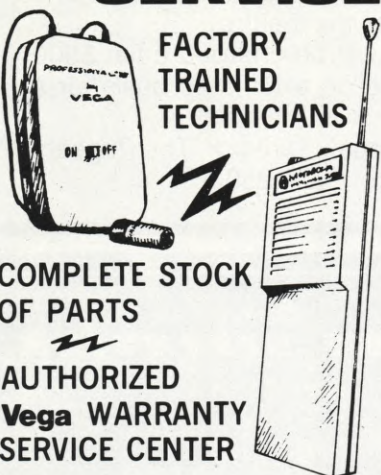

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TRAINING PROGRAM
 Continued from Page 531

opportunity to learn and understand the Panaflex which is being used most extensively on features at the studios today. Particularly, we learned how we, as assistants, can best care for and use intelligently this sophisticated model of technically advanced equipment. Emphasis was placed on handling, assembling, troubleshooting and, as with any motion picture camera, the importance of not trying to force parts to fit together.

The field trips combined with exposure to the various camera departments have allowed the trainee to obtain specific knowledge about the equipment that he will be entrusted to care for when the time comes for him to assume further responsibility. Each studio camera department has given the trainee the opportunity to handle the cameras and fully understand them.

Following this initial phase of the program what remained for us to learn was practical application. The trainee during the latter stage of the program has had the opportunity to use the equipment that he has learned about on productions that he is assigned to by camera department heads. During this stage the trainee goes through pre-production with the 1st and 2nd assistants who have the responsibility and learns the ways in which prepping is done. For the last 5 months all the trainees have been working as 3rd assistants and in some cases as 2nds, taking over for a 2nd who would coach them. Due to the fact that ultimate responsibility rests with the assistant assigned to a show, the trainee cannot always perform certain tasks that relate to picture. Usually, however, we had the opportunity to make a few shots by pulling focus or doing a zoom that was not too complicated. It is always the trainee's job to do his best in performing whatever his assigned task might be.

In addition — and of special importance to the trainee — is the on-stage and location presence necessary for him to be as efficient and unobtrusive as possible, while working within the confines of his responsibility and trying not to interfere with others — the necessity of laying marks for actors, when and when not to get involved in the rehearsal by pinning the actor down according to the instructions of the director and 1st cameraman. Learning to maintain close control on the amount of film used, when to suggest a change of magazines, how to properly maintain camera reports, what the relation-

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ship to the script supervisor and soundman entails, the necessity of getting along with all members of the cast and crew, since you work so closely with them, placing the slate in the proper place so the operator doesn't have to search for it on a "step-into shot" by an actor, and not banging the slate in the actor's face on a close-up are all elements which cannot be understood except through practical experience. Always being attentive to the 1st assistant's instructions and being aware constantly of the 1st cameraman's directions, organizing the equipment in an orderly fashion and keeping it clean and in good working order within your responsibility as a trainee and future assistant. In general, being of assistance to all we work with and, above all, maintaining a professional attitude about what we are doing, no matter what.

These things cannot be learned in school but only on the set in production during our training period. We have many more things to learn from others and on our own during the few weeks remaining before we officially become members of Local 659. We hope that we can live up to and even surpass the expectations of our colleagues in the months to come. We are fortunate in having been selected for this pilot program, and we are grateful beyond description for the opportunity we have had to enter the local in the status that we will. Fortunately, we have been able to work alongside assistants who have been in the industry for many years and who have given us the benefit of their matchless experiences so willingly and helpfully, in the hope that an industry that has proven so rewarding to them will be equally rewarding to us. It is with a great deal of humility that we trainees salute the cameramen, operators, and assistants who make up this industry and who have given of themselves to nurture the traditions that have made motion pictures what they are today.

In conjunction with this program, the American Society of Cinematographers and the American Film Institute hold a seminar one Saturday a month at the AFI's Greystone Manor in Beverly Hills. The seminar guests are cinematographers, both active and retired, who show one of the films they photographed and comment on it during the screening. Following the screening AFI Fellows, camera trainees (who are asked to attend), and all who wish to, enter into an informal question-answer period in AFI's seminar room. The cameramen pass on much technical information relating to the film and, in addition, relate some really wonderful stories about their

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days as assistants and camera operators. Guests this year have been: Charles G. Clarke, ASC, who screened "CAROUSEL"; George Folsey, ASC, "SEVEN BRIDES FOR SEVEN BROTHERS"; Lucien Andriot, ASC, "THE BIG TRAIL"; Milton Krasner, ASC, "THREE COINS IN THE FOUNTAIN", and William Fraker, ASC, "ROSEMARY'S BABY". The seminars are taped and later published in current issues of the *American Cinematographer* magazine. It is an important part of the training program and one I look forward to each month.

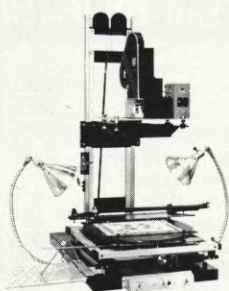
I personally would like to thank Bill Ranaldi for helping me during my training at Universal and for giving me a better understanding of motion picture traditions and practices. Further thanks go to Howard Schwartz, ASC, for his guidance on the set and at the American Film Institute Center for Advanced Film Studies, where I interned as a Fellow in Cinematography. Also to Jack Carlson of the AMPTP for his temperance and understanding under sometimes difficult situations during the course of the program. ■

BACKGROUNDS ON TEN TRAINEES

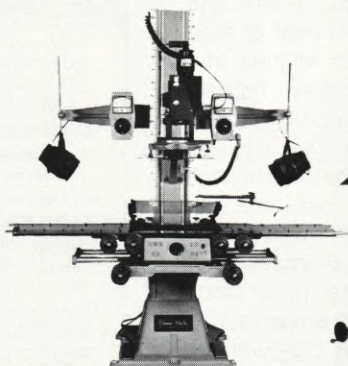
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A.B. Degree in Film from the University of San Francisco. M.F.A. Degree in Motion Pictures from U.C.L.A. Worked previously as an Assistant Cameraman, Director of Photography, Assistant Editor, and instructed a Film Workshop.
4. **Alan Disler**—New York
B.A. Degree in Political Science from the University of Pittsburgh. Worked previously as a Production Assistant and a Studio Camera Manager.
5. **Terence Harkin**—Pennsylvania
B.A. Degree in English from Brown University. Worked previously as an Assistant Cameraman, Editor, and in Motion Picture Production.
6. **Leslie Hill**—California
B.A. Degree in Communications and Broadcasting from Stanford University. M.F.A. (in progress) in Motion Picture Production from U.C.L.A. Worked previously as a Film Editor, Teaching Assistant for a Beginning Film class, Production designer, Film Editor and Supervisor, and Assistant Cameraman.
7. **Michael Scott**—California
Attended the University of Texas. Worked previously as an Assistant Cameraman and Operator.
8. **Glenn Schimada**—California
B.A. Degree in Graphic Design from the San Diego State University. Worked previously as an Assistant Editor and Photographer.
9. **Lynn Tomes**—Indiana
Attended Indiana University, Northwest. Worked previously as a Soundman, Assistant Cameraman, Leadman, and Camera Technician.
10. **Robert Schoenhut**—North Dakota
Graduate U.S. Naval Photographic School, USMC photographer, cinematographer, BPA Degree Brooks Institute of Photography in motion picture production and photography, Fellow in Cinematography, American Film Institute Center for Advanced Film Studies.

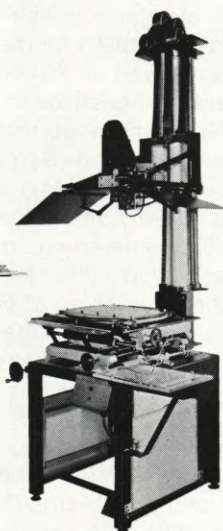
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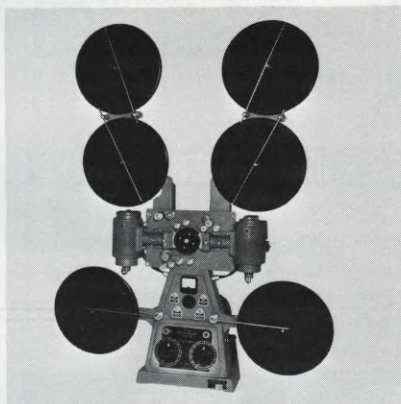
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WHAT'S NEW
Continued from Page 486

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Steve B. Cook, Manager of Braun's Motion Picture Division, stated that there is a definite need for this equipment in the Canadian film industry. "The very high quality of MultiTrack's recording and reproducing systems combined with the compact and efficient design, make the AVEX-1 very attractive for our film-makers and production houses."

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Berkey Manhattan Filmstrip and Slide Laboratories announced that all Super-8 filmstrips are being produced from a 35mm negative. Reduction from a large to a smaller format, actually increases sharpness and resolution. The print, which is then produced by the wet gate method on an optical bench, has the professional quality up to now obtainable only in 35mm.

Stated Leo Lukowsky, Berkey Manhattan's Marketing Director, "With the advent of Super-8 as a professional medium, it is incumbent upon the laboratories and all peripheral services to assure the producers that his Super-8 program will have color quality and definition consistent with the results he has come to expect in 35mm. This method gives him this assurance, because he is in effect getting production on his 35mm prints and Super-8 prints from the same negative master."

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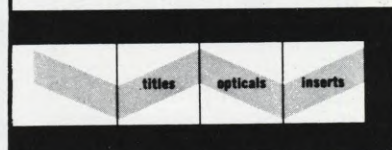
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SYNC GENERATOR Continued from Page 547

ment shows up on time and hasn't been mauled over by the Anthropology department. In a way, lack of sync sound is a hidden advantage, because it forces one to learn to tell the story visually.

But people do *talk*, and eventually you have to enter the sparkling world of dialogue. I tried everything. For instance, wild sound works well when all the takes are less than 5 seconds in length.

You can play dialogue over reaction shots, long shots, backs of heads, and great dramatic montages with voice-over monologues.

I made four films with post-recorded "looping," and got pretty good at it. My "looping stage" consisted of a projector stationed outside on the lawn, aimed through the living room window at a screen. The actor stood inside with a microphone connected to a tape recorder, trying to match his reading with the repeated loop image on the screen. The process works, but it doesn't exactly inspire spontaneity in the actor's performance.

So there I was, dreaming about owning my own sexy, European, crystal-sync Eclair, but forced to face my Bolex reality. I love my Bolex. When I bought it at age 14 it took my whole life savings. I trust it; it's simple — nothing automatic to go wrong. It never lets me down. But for all the fancy Bolex accessories available, there was no sync generator. So I decided I'd have to make my own.

I had a few notions about how to convert it to sync, so I talked to an engineer friend. After several prototypes and some help from a precision machine shop, the result was a tiny, inexpensive, attachment which converts any Bolex H-16 to sync without modifications. It works very simply, and when the camera is running, produces a 60-cycle standard sync tone.

You can film sync with the spring wind or with the electric "unimotor." The signal generated stays an accurate indication of any variations in the camera speed while filming. In use, it is connected into the microphone input of any stereo tape-or-cassette recorder, the sync tone being recorded on one track while the dialogue is recorded on the other track. The resulting 1/4-inch tape is transferred in sync at a sound lab to 16mm magnetic film for editing in the usual way.

The system is self-testing, because it can immediately play back the recorded sync tone. The sync generator can

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also be used to set the camera speed accurately at 24 f.p.s. before shooting.

Camera noise is handled with a blimp. I've tried various types and, inelegant as it looks, the most effective method by far is to take a couple of thick blankets, cut a hole in each, stick the lens through, and wrap the rest of the blanket around the camera and cinematographer. One looks not unlike a young Matthew Brady.

For those of us whose costs are way below the line, but whose visions are still in living Technicolor, the Bolex Sync Generator promises more independence, less hassle, and a few more feet of film. The sync generator is now being manufactured by CINEMATECH, and sells for around \$90.

Who knows, in its own way it may help polish up that tarnished phrase, "student filmmaker," and allow a little more of the brilliance to shine through.

Information on the sync generator may be obtained by writing to: CINEMATECH, 4104 Stansbury Avenue, Sherman Oaks, California, 91423. ■

(ABOUT THE AUTHOR: Cal Lewin was a student filmmaker from age 8; his films have won many awards both nationally and internationally. He is currently working for Chuck Jones Productions and completing his latest screenplay, "The Lover Fwy".)

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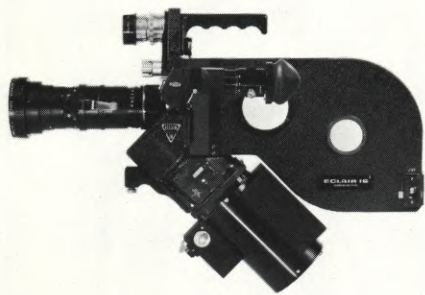
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ACADEMY AWARDS PRESENTATION Continued from Page 564

motion picture industry whose humanitarian efforts have brought credit to the industry." Fifteen individuals have received the honor, the last being Arthur Krim at last year's ceremony.

In making the Award, the Board took cognizance of the fact that "as a trained medical doctor, Dr. Stein has been uniquely able to make his influence felt in the fields of medical research and health care, as well as educational and cultural advancement." The Award specifically cited Stein for his unselfish work in behalf of the Jules Stein Eye Institute at UCLA, Research to Prevent Blindness, Hollywood Canteen and the Motion Picture Relief Fund, among many others.

Mary Pickford, "America's Sweetheart", Oscar-winner and Academy founder, was voted an Honorary Award by the Academy Board of Governors "in recognition of her unique contributions to the film industry and the development of film as an artistic medium."

The award was presented to Miss Pickford, 82, by Academy President Walter Mirisch, her acceptance having been filmed earlier at her home, Pickfair.

The actress, a superstar long before the word was coined, was the first great personality of motion pictures, and from her phenomenal rise grew the concept of the star system. She made her screen debut in 1909, and, unlike most "legitimate" actors of the day, had the vision to realize the potential of the motion picture. She stayed with the new medium that many derided as a cheap amusement and went on to build a career that eventually made her the most popular woman in the world. She starred in more than 200 films, retiring in 1933.

Miss Pickford's contribution to the industry extends beyond her personal success. She revolutionized the methods of film production by becoming the first independent star-producer. She was the prime mover in the formation of United Artists, the first organization to give creative talent artistic control over production and distribution.

Similarly, during a period when no one else took the time to care about the thousands of unemployed or low income workers in the industry, she was instrumental in the creation of the Motion Picture Relief Fund and the Motion Picture Country Home. The actress also was one of the original 36 founders of the Academy, she being one of those who believed that awards

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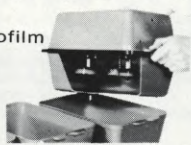
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would encourage the development of artistic excellence in film production.

A past Oscar-winner, Miss Pickford was honored at the second Awards presentation for her performance in "COQUETTE", one of her most successful films. Her other pictures include "REBECCA OF SUNNYBROOK FARM", "LITTLE LORD FAUNT-LEROY", "TESS OF THE STORM COUNTRY", "STELLA MARIS", "DADDY LONG LEGS", "POLLY-ANNA" AND "THE POOR LITTLE RICH GIRL".

For readers of *American Cinematographer*, the most significant Academy Awards are always those of least interest to the general public — namely, the behind-the-scenes technical awards. Whereas in past years, the Scientific or Technical Awards were somewhat sloughed over, being hurriedly bestowed during commercial breaks in the Oscar telecast, the Academy now accords them the honor and dignity of a separate Awards ceremony (See Page 519).

Presented during the telecast, however, were Special Achievement Awards to three of the "wizards" behind the scenes of Robert Wise's "THE HINDENBURG". Receiving these awards for Visual Effects and Sound Effects were Albert Whitlock (matte paintings) and Glen Robinson (miniatures) for Visual Effects and Peter Berkos for Sound Effects. The amazing achievements of these men and other technicians working on the epic production have been fully detailed in the January, 1976, issue of *American Cinematographer*. Mr. Whitlock and Mr. Robinson won in the same category last year for their outstanding work on "EARTHQUAKE".

Once a regular category in the Academy's award structure, the Special Effects awards are no longer mandatory, but are voted "only at such times as in the judgment 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."

To readers of this journal, the most important Oscar is always the one for "Best Achievement in Cinematography". This year that coveted statuette was awarded to John Alcott, BSC, for his breathtaking photography of Stanley Kubrick's "BARFY LYNDON" (See *American Cinematographer*, March, 1976).

Happily, Mr. Alcott was able to be present to accept his award personally, having journeyed from London for the occasion. The staff of *American Cinematographer* and the members of



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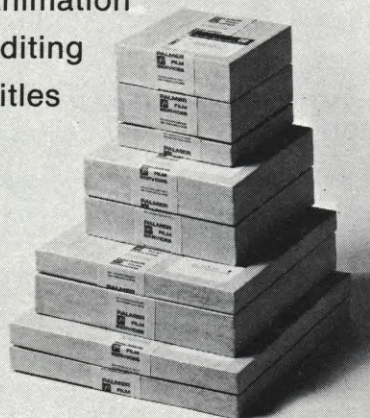
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HOW THE OSCARS ARE AWARDED

More than 3,000 voting members of the Academy of Motion Picture Arts and Sciences — in the United States and abroad — have determined which film achievements would be Oscar-honored during the 48th Annual Oscar Awards program.

Eligible for awards are any films which have been exhibited in 35mm or larger for paid admissions in a commercial motion picture theater in the Los Angeles area (defined as Los Angeles, West Los Angeles, and Beverly Hills) between January 1, 1975 and midnight of December 31, 1975, if the picture played at least seven days starting before midnight of December 31.

Each branch of the Academy of Motion Picture Arts and Sciences conducts its own nominating procedures under rules established during the 47-year history of the awards program.

In the Art Direction, Costume Design, Cinematography, Film Editing, Music and Sound categories, a preliminary ballot is sent to members of the respective branches, who then select 10 achievements for consideration. After a series of screenings, a nominations ballot listing the 10 achievements is sent to members of the branches, who this time vote for not more than five. The five achievements receiving the most votes then become the official nominations.

The Academy invites every country to submit its best film for consideration for the Foreign Language Film Award (best feature-length motion picture produced by a foreign company with a basically non-English sound track). Each country's entry is selected by a committee within that country. Only one picture is accepted from each nation, and all are screened by the Foreign Language Film Award Committee, a cross-section of Academy membership. This committee nominates five contenders.

Documentaries and Short Films also are nominated by committees. Scientific or Technical Awards are voted by the Board of Governors based on the recommendations of the Scientific or Technical Awards Committee.

In the nominations procedure, voters are confined to the individual branches and special selection committees. Cinematographers nominate cinematographers, directors nominate directors, costume designers nominate

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costume designers, actors nominate actors, etc.

After the nominations ballots are tallied and nominees announced, all nominated pictures are screened for the active Academy membership. Final ballots are sent to all voting members, who vote for one achievement in each of the 21 categories. There can be no write-ins.

In the final balloting, all voting members vote on all of the awards except those determined by the Board of Governors — Scientific or Technical, special achievement, Honorary, Jean Hersholt Humanitarian, Irving G. Thalberg Memorial Awards.

Ballots are tabulated by Price Waterhouse & Co., and results are kept secret until announced during the awards program. No one but Price Waterhouse ever sees the ballots after they are marked. ■

FACTS ABOUT "OSCAR"

Katharine Hepburn and Walter Brennan are *the only three-time acting winners* . . .

Jack Lemmon and Helen Hayes are the only performers to win Oscars in both Best Acting and Best Supporting categories . . .

Janet Gaynor and Emil Jannings were the first Best Actress and Best Actor winners. Ellen Burstyn, for "ALICE DOESN'T LIVE HERE ANYMORE", and Art Carney, for "HARRY AND TONTO", were last year's winners . . .

"BEN-HUR", 1959 winner, is the all-time record holder among winning motion pictures with 11 Oscars. Runner-up is "WEST SIDE STORY", with ten. "ALL ABOUT EVE", 1950, received the most nominations, 14. It won six awards . . .

Gene Autry was once nominated for an award. He wrote the music for "Be Honest With Me", nominated as one of the Best Songs in 1941 . . .

The first player ever to win a second Oscar was Luise Rainer. She won two in consecutive years, for "THE GREAT ZIEGFELD" in 1936 and "THE GOOD EARTH" in 1937 . . .

Al Jolson was the first entertainer to perform at an Awards Presentation. He sang at the very first ceremony in 1929

Irving Berlin is the only presenter ever to give himself an Oscar — when he opened the envelope in 1942 and read the winner of the Best Song, his own "White Christmas" . . .

Oscar was born on a tablecloth at the first meeting of the Academy of Motion Picture Arts and Sciences in 1927. The late Cedric Gibbons sketched him


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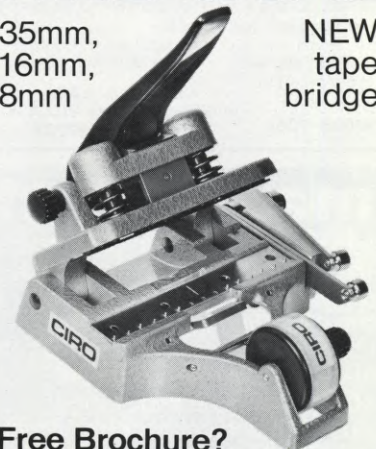
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The supporting player categories were established in 1936 . . .

The first Academy Awards program was held on May 16, 1929, at the Hollywood Roosevelt Hotel. Other ceremonies have been staged at the Biltmore Hotel, Ambassador Hotel, Shrine Auditorium, Academy of Motion Picture Arts and Sciences' own theater, the Santa Monica Civic Auditorium and the Los Angeles Music Center . . .

Walt Disney is the top award-winner. He won 30 Oscars and was voted the Irving Thalberg Memorial Award by the Academy's Board of Governors . . .

Barry Fitzgerald was nominated as both Best Actor and Best Supporting Actor for the same role in "GOING MY WAY". Rules now prevent a performer from competing in two races for the same film . . .

The youngest nominee for an acting Oscar was Jackie Cooper, who was just nine when he competed in the Best Actor category for "SKIPPY" . . .

There have been two ties in the Academy's 47-year history. The first occurred in 1932 when Wallace Beery, for "THE CHAMP", and Fredric March, for "DR. JEKYLL AND MR. HYDE", were awarded statuettes. History repeated itself in 1968 when Katharine Hepburn, for "THE LION IN WINTER", and Barbra Streisand, for "FUNNY GIRL", were voted Oscars . . .

CINEMA WORKSHOP
Continued from Page 494

be a documentary-style film for theatrical release involving the transport of equipment and film into remote and inaccessible locations, such as jungles or mountaintops. Here the savings in size and weight of equipment and film justify the inherent problems and limitations of Super-16. However, in almost all other situations, including low budget *cinema verité*, a careful analysis of cost and quality will undoubtedly suggest a 35mm production. ■

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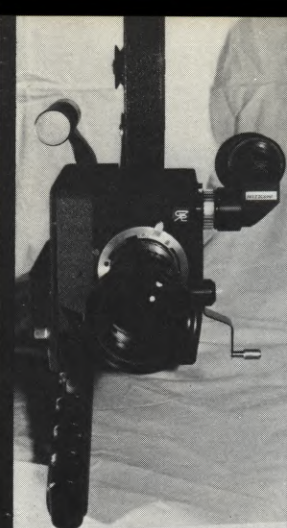
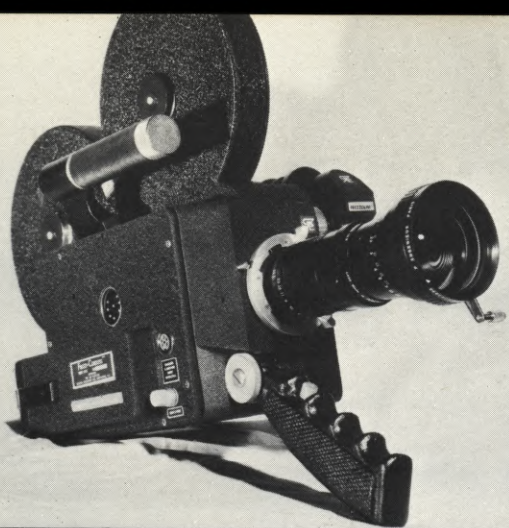
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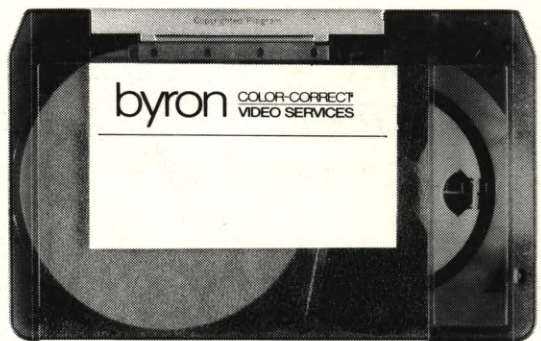


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