American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

AUGUST 1976/ONE DOLLAR

THE AIRBORNE FILMING OF "DAWN FLIGHT"

Now! The ultimate reflex BNC.

The most versatile camera of its kind available today.

Light weight:

The new CSC Reflex IIA is a precision scale-down of our world famous Reflex II. Weight, complete, 89 lbs.

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Now you have a choice. The IIA is the only reflex BNC engineered to accept Cookes. You'll see the big difference when you screen your dailies.

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9.8 mm	14.5 mm	15 mm	18 mm	20 mm	25 mm	32 mm	35 mm	40 mm	50 mm	75 mm	100 & up mm

Super speed Zeiss lenses:

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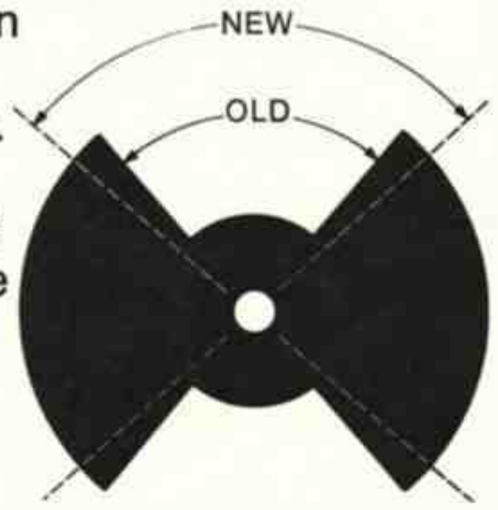

Our new BNC Reflex IIAs are immediately available. Call or write for details—today.

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gc general camera corporation

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Most flatbed editors can't do all the things that this one can. But, on the other hand, they cost more.

Take the world's finest 16mm flatbed editors, compare them feature by feature with ours, and you'd be hard pressed to find one that matches Showchron.

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Showchron is manufactured by Honeywell and sold only through authorized dealers with factory trained service technicians.

It has a patented single sprocket drive that significantly reduces the danger of film scratching. The core spindles incorporate a clutch which prevents friction damage to the film emulsion during instant braking at high speeds through the sprockets or during rewind. Showchron has a direct interlock drive system, a torque motor for each of its turntables and electromechanical brakes.

Each sprocket has an inching knob for manually locating frame-to-frame viewing, for marking, and for precise threading of start marks.

The sound track may be shifted forward or back for precise sync while film is in motion. The sound track may also be advanced or retarded, independent of film, at high speed.

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American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as Directors of Photography and have demonstrated outstanding ability. Not all cinematographers can place the initials A.S.C. after their names. A.S.C. membership has become one of the highest honors that can be bestowed upon a professional cinematographer, a mark of prestige and distinction.

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ON THE COVER: In a scene from the Academy Award-nominated short dramatic film "DAWN FLIGHT", made by Lawrence M. and Brian Lansburgh, Denis Arndt, playing the role of a glider pilot bedeviled by a mysterious red sailplane that seems to want to destroy him, stands his ground on a rocky pinnacle, as the ghostly craft heads straight for him.

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MAKING IT IN FILM

Verna Fields

Verna, you're credited with making major contributions to hit movies like "American Graffiti," "Paper Moon," and "Jaws," to name just a few. How would you compare the editing on those pictures?

I've been very lucky in my career, working with so many gifted directors. George Lucas, who made "Graffiti," has an excellent eye. All his shots are beautifully composed, and he conveys much of his information visually.

Peter Bogdanovich's "Paper Moon" has a particularly strong and emotional storyline. The father-daughter relationship and Peter's deft handling of it made that movie really easy to edit.

We thought we were going to have tremendous problems with "Jaws" because of the unpredictable weather and water conditions. But Steve Spielberg delivered so much good footage that it became an editor's dream. By not having to compromise, and by being able to cut on the exact frames needed, we were able to maintain the rhythm and pacing so important to this kind of high adventure film.

As a vice president of Universal, an executive creative consultant, a producer, and soon-to-be director, you must have a lot of young people asking you how to break into movies. What do you tell them?

Producers, writers, even successful ones, as well as students are always saying they want to be directors and I look at many of their films which were usually made in 16 mm or super 8—some very good. There is great advantage in their working this way since, without great cost or weighty equipment, they can learn composition, pace, rhythm and other essentials of filmmaking. If anyone needs help or information about film, I advise them to do what I do—call the local Kodak office. The people there are always helpful.

It's a business where you never stop learning. I was very impressed with Laszlo Kovacs. He's one of the top cinematographers. When he got the assignment for "Paper Moon," he hadn't worked with black-and-white film for a while, so he went out and shot about 12,000 feet of it. Testing different color lipsticks and costumes, and using different filters to find out which reproduced best in black and white. I think he deserves a lot of credit for the movie's look and style.

Getting back to our young filmmakers, when they're not out with a camera, I think they should be seeing movies and plays and doing a great deal of reading, not only novels, but plays as well, to learn about story construction and character development. There are a few people who seem to be born directors but most of us have to work hard at it, studying and learning from experience.

I'm getting involved in a million different areas—trouble-shooting, consulting on scripts, sitting in on all the Universal dailies, consulting with producers, directors, writers and executives. Every day I learn something new. It's a lot of hard work. But I can't think of anything more stimulating. Or more fun.

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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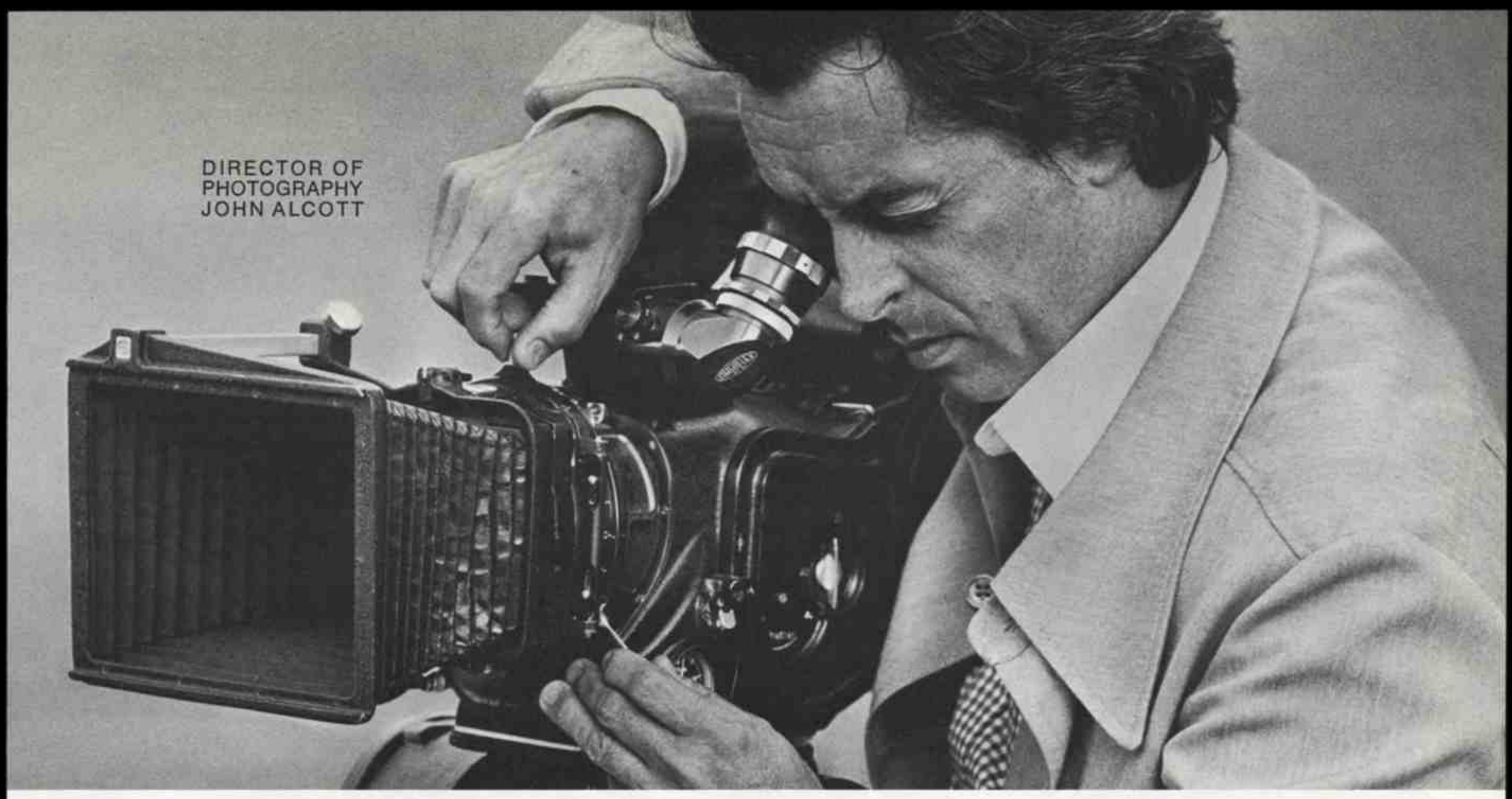
11-8



John Alcott won the Best Cinematography Academy Award for BARRY LYNDON. He used an Arriflex 35BL. His comments:

"Nothing compares with
looking through a 35BL," he says.
"You're *right there*."

"We considered several cameras for *Barry Lyndon*," says John Alcott. "We decided on the Arriflex for several reasons."

"With the big, geared diaphragm controls, it was easier to make subtle stop changes when the sun went behind a cloud during a take. And we found it helpful to have a camera the actors couldn't hear, even for hand-held wild shots."

A scene from *Barry Lyndon*.

A scene from *Barry Lyndon*.

"The 35BL's viewing is brighter than the competition," says Mr. Alcott, "*And there's no sense of looking through a tunnel.* The camera's swivelling finder and small size allowed us to back into tight corners—or to put the camera down on a table, which we did during one of the dinner party sequences."

"Every scene of *Barry Lyndon* was shot on location. You never knew how a setup would work until you tried it. The light weight of the 35BL allowed us to try different angles easily and *fast*. **To me, it's a cameraman's camera.**"

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Arriflex Company of America: P.O. Box 1102C, Woodside, New York 11377; phone: (212) 932-3403. Or 1011 Chestnut St., Burbank, Calif. 91506; phone: (213) 845-7687.

WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE

NEW SUPER SPEED ZEISS DISTAGON LENSES FOR ARRIFLEX 16mm CAMERAS

A series of new fixed focal length Super Speed Distagon lenses for Arri 16mm cameras has been announced by the Arriflex Company of America. The lenses are rated at a fast T/1.3 and include three focal lengths: 12, 16 and 25mm. The new series is the answer to the filmmaker's urgent need for new, improved lenses, capable of providing both optimum performance at large apertures and at low light levels and, in addition, producing superior pictures at all typical f-stops and lighting conditions.

The lenses in the new series are designed specifically for the 16mm format, with none of the "compromises" so frequently made in many lenses for the sake of covering additional larger formats. The Super Speed Distagons are supplied in Arri Bayonet Lock, heavy duty steel mounts for maximum enduring precision. They can be used on all Arriflex 16SR, 16S/B-16M/B and 16BL cameras. In the case of the 16BL, when noise levels are critical, the lenses must be used with the Universal Lens Housing for the 16BL together with a new adapter ring set.

A technical data sheet with complete information is available from authorized Arriflex dealers, or from Arriflex Company of America, P.O. Box 1102, Woodside, N.Y. 11377; (212) 932-3403.

•

NEW VEGA DIVERSITY WIRELESS MICROPHONE SYSTEM

VEGA, a division of CETEC Corporation, introduces their Diversity Wireless Microphone System. This system utilizes the VEGA PRO Series transmitters and receivers in a diversity reception mode that virtually eliminates all fades and dead spots.

Fades and dead spots are caused by interference between direct and reflected radiation that cancel, resulting in loss of signal. The problem is most prevalent in "studio" operations, but also occurs outdoors.

In the diversity mode, two VEGA PRO receivers, placed three feet or more apart, both receive the transmissions. Because the two receivers are more than one-half wavelength apart, both will not have signal cancellations at the same instant. Both receivers feed a Model 62 Diversity Combiner that selects the receiver with the best signal strength within microseconds. The switching is immediate and noiseless. The resultant audio, the best of both receivers, is noise-free and dropout-free.

The VEGA Diversity System is composed of Models 54 or 55 Transmitter, two Model 58 Receivers and Model 62 Diversity Combiner. For technical application notes on this new concept, call or write Kenneth L. McKenzie, Sales Manager, Wireless Products, Vega, Division of Cetec Corporation, 9900 Baldwin Place, El Monte, CA 91731 or call (213) 442-0782.

•

COMPREHENSIVE SERVICE CORPORATION ANNOUNCES NATIONWIDE, TOLL-FREE, "HOTLINE" SERVICE FOR FILM AND VIDEO SUPPLIES AND SUNDRIES

Jules Leni, president of Comprehensive Service Corporation, recently announced that the firm has installed a nationwide toll-free 'hotline' to aid commercial film and video users in locating supplies and sundries.

Said Mr. Leni in making the announcement, "Now, instead of making numerous calls to locate items that dealers usually don't stock, professional film and video users can make a single, toll-free call to find over 2,000 frequently — and not-so-frequently — used items. Simply by dialling 800-223-5460 from anywhere in the country (except within New York State, where the number is 212-586-6161), people can locate film supplies and sundries, as well as video supplies and accessories, which in most instances can be shipped immediately from our East-Coast or West-Coast stocking warehouses. And, in the unlikely event that we don't carry the item, we can usually tell the caller where to locate it — and we do.

"Reaction to the service during our trial period has been extremely enthusiastic . . . although some people have been a little surprised at the fact that we've referred them to other sources. But, not surprisingly, callers have also been amazed to discover the number of different items and variations we stock — from reels, cans and shipping cases to editing supplies, lamps and gaffer's necessities, to connectors, adapters, cables, lighting, graphic tools, editing kits, test equipment, tape and literally hundreds of other accessories for film and video.

"I think that one of our customers recently summed it up best when he referred to our new 'hotline' as the fail-safe way to get the supplies he needs without spending a lot of expensive time and money searching for them."

•

CINEMA PRODUCTS ANNOUNCES SPECIAL MAG HEAD TRADE-IN OFFER

Cinema Products Corporation announces the availability of Crystasound 3XL-IAZ magnetic record/playback head at the *special price* of $270.00 with the *trade-in* of any professional type magnetic record head (regardless of condition).

3XL-IAZ mag heads are designed for use with CP-16 reflex and non-reflex cameras, and all other 16mm cameras accepting Auricon-type magnetic heads.

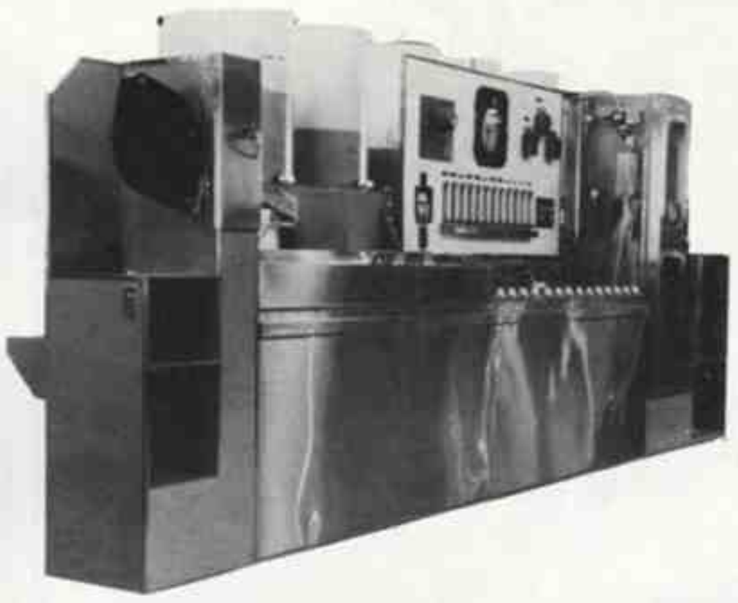
Built of a special hard alloy which provides extra long wearing time, the 3XL-IAZ magnetic heads feature precise azimuth adjustment of the *individual* record and playback heads, to provide optimum recording and monitoring performance.

For further information on this special 3XL-IAZ magnetic head *trade-in* offer (Order Code: 1M194), please contact your local CP-16 dealer, or write to Cinema Products Corporation, 2037 Granville Ave., Los Angeles, CA 90025. Tel: (213) 478-0711.

Continued on Page 936

wet and dry laboratory equipment

PROCESSORS



Houston Photo Products Color Processor Model BD 3516-30

For 16/35 ME4 and ECO 2 processing at 30 fpm. This machine is built for continuous use in commercial photo processing laboratories. It is being offered as a complete system, brand new, with necessary spares. A detailed technical manual will be sent on request. Original price, $45,000.00.

Our Price, brand new **$25,000.00**

Mini-Color Processor Model MC16 ME4
Fully automatic and ideal where smaller volumes of film must be processed on a minimum budget. Sold new for $7500.00.

Our Price, rebuilt, excellent **$5400.00**

"Little Max" 16mm Color Processor Model LTM ME4
A proven performer, processes 16mm film at 11 fpm, 28 minutes dry to dry. Fully automatic for top quality. Another ideal processor for smaller volumes of film which must be processed economicaly. List price, $8750.00

Our Price, used, excellent **$5500.00**

Houston-Fearless Model A-11
For 16mm or combination 16/35 B&W negative/positive and reversal. Speeds to 20 fpm.

Our Price, rebuilt **$3995.00**

Houston-Fearless Model S120 PN B&W 16/35 Hi-Speed Spray Processor, 18-150 fpm.

Our Price, excellent condition ... **$5500.00**

Houston-Fearless Model 22B B&W 16mm Negative/Positive
Speeds: negative, 18-35 fpm; positive, 25-45 fpm.

Our Price, used **$3495.00**

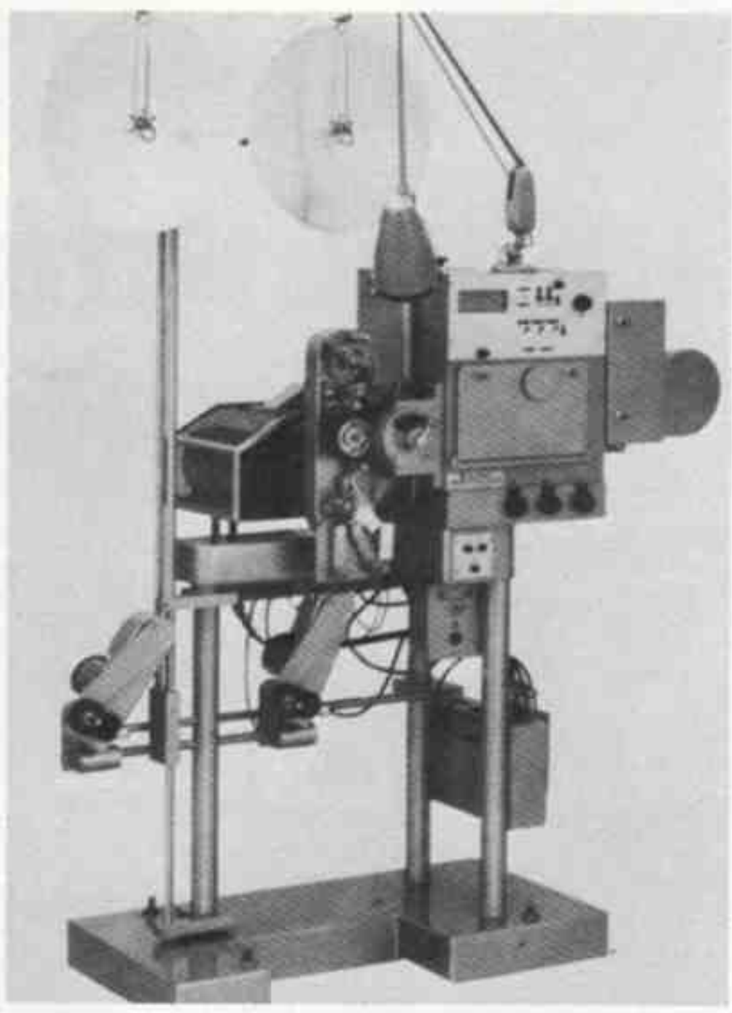
Houston-Fearless Model L 16/35 NP Labmaster B&W Processor
Speeds to 40 fpm. Simple modular sections. Easy to operate, daylight load operation, easy accessibility for cleaning. Open face construction. Sold new for $6500.00.

Our Price, used **$3650.00**

Fulton Tube Machine, 16mm color ME 4, used, good **$1695.00**

Fulton Tube Machine, 16mm B&W, used, good **$795.00**

PRINTERS



B&H Model 6100 CT Additive Color Printer
Manual operation provides basic color and density balance. Includes three manually-operated light vaves with 52 steps of trim. Model 6160A 1200W rectifier. Printer speed is 180/60 fpm. Film capacity, 2400 feet. One side edge light. Like new condition, less than 40 hours of operation. Current price, new $22,490.

Our Price, like new **$16,500.00**

B&H Model D 35mm Cine Printer, rebuilt **$4995.00**

Same as above, used, as is **$2595.00**

B&H Model J 16mm Cine Printer, rebuilt **$5650.00**

Same as above, used, as is **$4250.00**

Two Each B&H Model 6200 MB 35mm Color Printers
These two used color printers have suffered freight damage. One printer can easily be made from the two. Features include single light valve, standard speed reader, rectifier and sound printing head. Each machine originally sold new for $28,000.00.

Our Price, pair, as is **$15,000.00**

B&H Model J Printer w/fader, power supply, very good condition. **$5995.00**

B&H Model JC Printer w/edge numbering light, very good condition **$5250.00**

Depue Optical Reduction Printer Model K3532, daylight operating, rebuilt, good condition **$5500.00**

Depue 35-32 Reduction Printer, as is **$1700.00**

Arriflex 35mm Step Printer w/punch tape control, used, as is **$995.00**

Herrnfeld Model 35mmm Printer w/shotgun color filter changer, used, as is **$795.00**

Kodak 35-16mm Optical Sound Track Reduction Printer, rebuilt **$5200.00**

B&H 35-32 Contact Printer, needs work, as is **$2950.00**

Depue 16mm Contact Printer, continuous picture and track, like new **$4995.00**

PRINTER ACCESSORIES

Deluxe additive type lamphouse, used, as is **$1850.00**

Depue 35-32 Fish-Schurman additive lamphouse w/DC power supply, as is .. **$2500.00**

Depue light control board for use w/Depue optical reduction printers. Provides 22 light changes, 75 or 150 scene changes, used **$450.00**

EDGE NUMBERING MACHINES

Model ENM-16 PT, list price, $4750.00, used **$2495.00**

Model ENM-16, list price $3480.00, used **$1690.00**

DENSITOMETERS

Macbeth TD 203A transmission densitometers, new price, $1495.00, like new **$850.00**

SPLICERS

Unicorn A 2816, 16mm, list price, $2200.00, used, good condition, missing dome **$1100.00**

Unicorn A 2835, 35mm, list price $2200.00, used, good condition, missing dome **$1100.00**

FILM DRYER

EL 13A, 16/35/70mm, sold new for $4950.00, our price, rebuilt **$3400.00**

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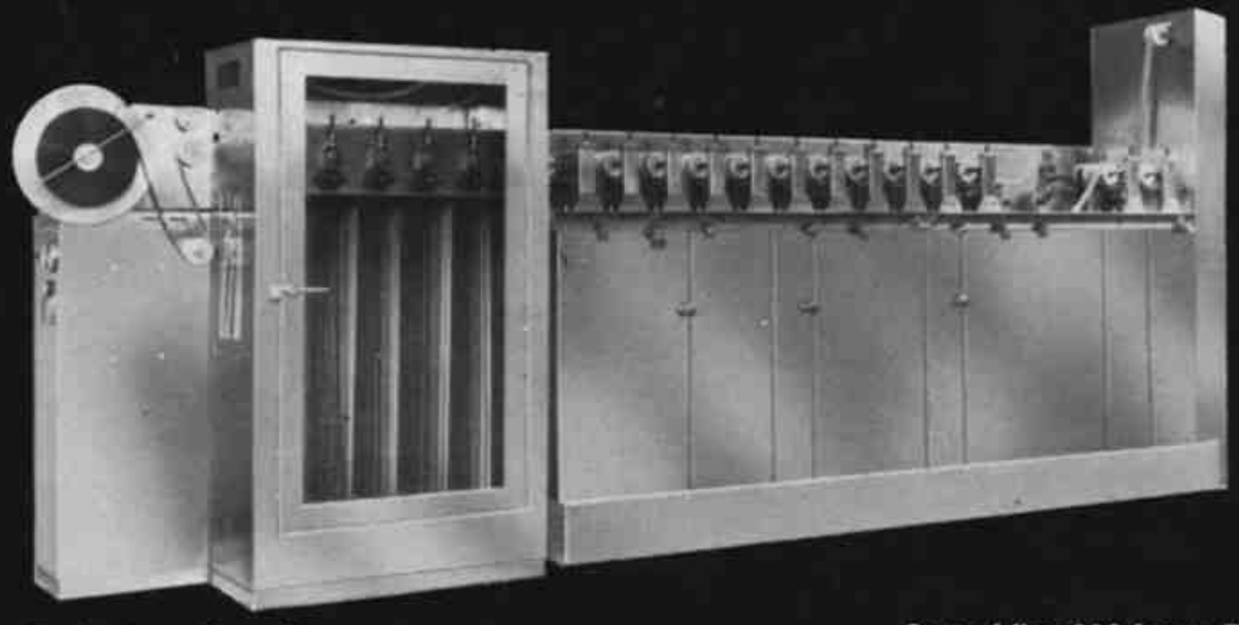
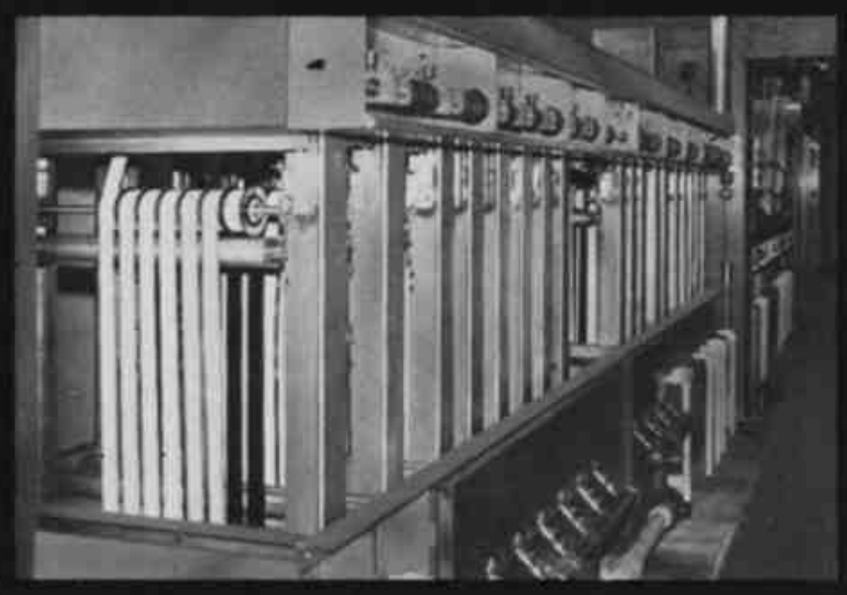


Typical medium size Filmline processor available in speeds from 7-200 f.p.m.



One of five 320 f.p.m. Filmline Color processors installed at Technicolor, Hollywood, California.

Micro-Demand is a patented exclusively different concept in demand drive film transport systems.

Micro-Demand is a dynamically tension-controlled friction film transport system that operates effectively at minimum tension and with complete reliability. When used with Filmline Feather-Touch film spool "tires" it transports 35mm, 16mm and single strand 8mm film interchangeably and without adjustments even when these films are spliced back-to-back.

Once optimum tensions are set there is no need for further adjustments, yet the design allows easy and rapid, dynamic adjustment of film tension while the machine is running.

Micro-Demand has a broad band of self-compensation, is of functional construction and requires minimum maintenance.

There are no fragile, plastic spring bushings, no wobble rollers. No elaborate articulations of any type. Just sound engineering and the highest quality materials and workmanship.

No other competitive processor or film transport system commercially available has ever achieved the operational speeds and proven reliability of Filmline Micro-Demand Processors.

SIGNIFICANT MICRO-DEMAND FEATURES:

Versatility	Any speed, any process.
Reliability	Rugged construction, quality materials and sound engineering. Always ready when you are!
Flexibility	Any format 35mm, 35/32mm (1-3), 35/32mm (1-4), 35mm 5R S8, 16mm — 70MM-105MM etc.
Dependability	Can stand the gaff of long, continuous, top speed runs with "Zero-down-time."
Credibility	Ask the labs who own them. Most of them own not one but several.
Maintenance	Exclusive Maintenance Monitor tells when and where the machine needs attention. Significant savings assured.
Performance	Every Filmline machine is backed by a superb performance record compiled in over 25 years of continuous service to the industry. Twenty five years in the forefront of processing machine design and innovation.

- ☐ Push-Button operation, and reliability allows operator to perform other functions while the machine is running!
- ☐ Automatic compensation for elongation and contraction of film during processing cycle.
- ☐ Virtually eliminates all film breakage, scratches and static marks.
- ☐ All film spools use standard bearings or bushings.
- ☐ Entire upper film shaft/roller assemblies easily removed. No tools needed.
- ☐ Stainless steel construction used throughout.
- ☐ Proper operation can be determined at a glance, while machine is running.
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- ☐ In-line filters on all required systems.
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- ☐ Individual switches for all control functions.

"Filmline Engineering and Consulting Services for Complete Laboratories are Available Worldwide."

Filmline Continuous Film Processors are used throughout the world by: Deluxe-General, Technicolor, Inc., Capital Film Labs, Byron Motion Pictures, TVC Labs., Movielab, Radiant Laboratories, Guffanti Labs, Precision Film Labs, Bellevue-Pathe, ABC, CBS, NBC Network TV, NASA, General Motors, RCA, IBM, AEC...and thousands of others.

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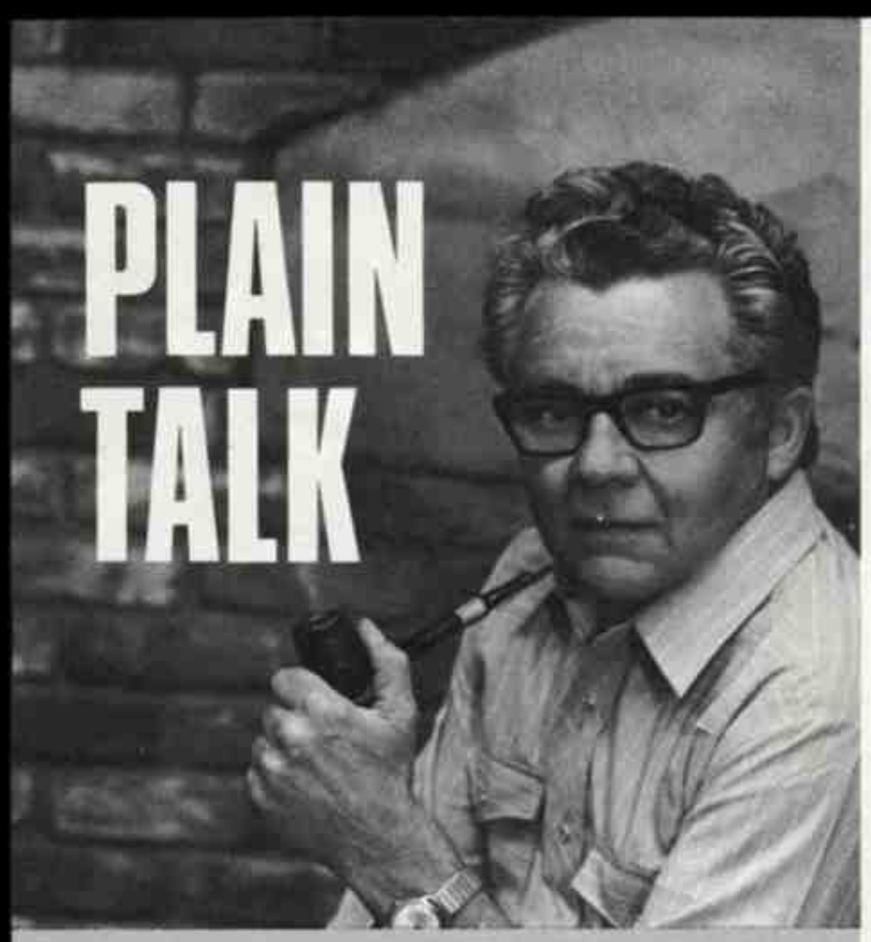

by J. Carl Treise

They'll sell you anything ... except a repair part!

I can't figure out why some firms knock themselves out to sell you equipment, but don't give a damn about supplying a repair part when you need it.

Maybe they think their engineering is so good the processor will never need new parts. (I don't have to tell you how much baloney that is!)

Or maybe they're interested only in selling equipment.

In which case, you can bet their parts inventory is maintained just to keep their production going and not to help out their customers.

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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, Hollywood, Calif. 90028.)

Q What method is used to obtain a steady, level image when photographing subject matter at sound-speed from a small boat on open water?

A The camera should be mounted on what is known as a gimbal tripod. This has a weighted, free-swinging pendulum suspended from the center of the head on which the camera is mounted. As the craft rolls with the sea, the tripod moves with the craft, but the pendulum remains fairly perpendicular. When the pendulum swings too freely, some dampening can be effected by extending heavy rubber bands from the weighted end of the pendulum to each of the tripod legs.

For extremely low camera setups, an inverted gimbal should be used. Here the camera hangs in a cradle suspended from the universal joint at the top of the gimbal tripod. The camera's weight (with added weight, if necessary) keeps the camera level. Also, some manual control is usually necessary to stabilize the pendulum in either type of gimbal use described above.

You might also look into Steadicam featured in articles in our June and July, 1976 issues of *AMERICAN CINEMATOGRAPHER.*

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

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

Q In photographing a boat coming in towards a rocky promontory, I wish to achieve the effect of the craft coming through a fog becoming more clearly defined as it approaches. I have Harrison fog filters Nos. 2 and 4. Are there any special directions, filter factors, etc., to be observed in order to get the effects described? I will be using 16mm Ektachrome.

A Fog filters alone may not give the described effect of increasing clarity as the subject approaches, because fog filters affect both background and foreground to about the same degree. Used with real (or artificial) fog, or white smoke, such filters are useful to enhance the effect of the fog, especially in the foreground where real fog usually thins out. Smoke, which is light in tone, may be used where artificial fog-making facilities are not available; here, fog filters can be useful in blending background with the foreground.

When fog filters are used, the resultant effect is best determined through actual test, if the photographer is not already familiar with it. Usually, the result is much less "foggy" than it appears to the eye through the camera, depending, of course, on the aperture used and the subject contrast. By combining fog filters, additional effect is obtainable. In color photography, bright hues often pick up in the background and even a fairly pale blue sky will come through on film where it was unnoticeable through the camera.

Interesting fog effects can be improvised when time permits, by shooting through parallel glass cells into which small amounts of cigarette smoke are introduced or exhausted. No factors need be considered for fog filters; they lighten the scene enough to make up for any transmission loss; in fact, it is sometimes necessary to stop down the lens.

Owen Roizman talks about these effects in an article in our July, 1976 issue. He encountered these problems in the film he shot in Philadelphia called "INDEPENDENCE". ■

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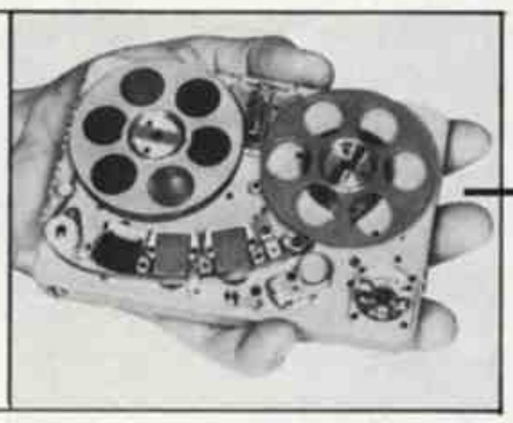

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CINEMA WORKSHOP

By ANTON WILSON

CINEMA WORKSHOP
AUDIO BASICS — II

A good sound recordist knows the basic frequency range of both his subject and any unwanted noises. Armed with this knowledge, the soundperson can usually employ filters to reduce the noise without affecting the subject. Rather than plunging into a theoretical discourse, a common example will probably best explain this principle.

An interview is taking place in an office. The subject is obviously the human voice which has a frequency response of about 150 Hz to 3,000 Hz with the most significant information occurring in the 300 Hz to 2,000 Hz range. Now for a look at the noise in the room. Objectionable noises emanating from within the room can usually be eliminated. Refrigerators, fans, air conditioners, etc. can be temporarily turned off. In most cases, then, the noise is coming from outside the room. Under these circumstances, the noise is almost always comprised of low-frequency components in the subaudible (10 Hz) to 150 Hz range. This is due to the transmission of low frequencies by the walls of a building. Because of the great mass of the walls, the higher frequencies will bounce off and be reflected. Very strong low frequencies, however, can cause the walls to vibrate or resonate, and these low tones or rumbles can be transmitted to the most interior areas of a structure.

Most people who live in an apartment house have experienced this phenomenon when a next-door-neighbor is playing a hi-fi unit loudly. Often the melody, most of the instruments, and vocals are inaudible, and the tune is unrecognizable; however, the rhythm and beat of the bass drum and bass guitar is quite distinguishable. The walls between the apartments will reflect or absorb the higher frequencies, yet the very low frequencies will cause the wall to vibrate, and those low frequencies will be transmitted into the next apartment. In many cases a good neighbor need not lower the overall volume of his hi-fi but merely lower his bass control. This is also why a portable AM radio can usually be cranked up quite loud without offending neighbors. The portable AM radio has virtually no low-frequency components, and assuming windows are closed, most of the AM sound will not leave the room. The conclusion here is that most noises reaching the room from outside will be low frequencies.

Now, back to our interview. The frequency range of speech is about 150 Hz to 3,000 Hz. Human speech has very little content below 150 Hz, yet this range (10 Hz to 150 Hz) is exactly that of the outside noise. It should be obvious that a filter which severely reduces those frequencies below 200 Hz will have little or no effect on speech, yet will drastically reduce low-frequency noise reaching the recording room. Almost all professional recorders, both single- and double-system, employ some form of low-frequency attenuation for exactly this purpose. Sometimes called roll-off or speech-music controls, these switches will provide a flat response in the normal or "music" position, while offering a reasonable amount of low-frequency attenuation in the roll-off or "speech" position.

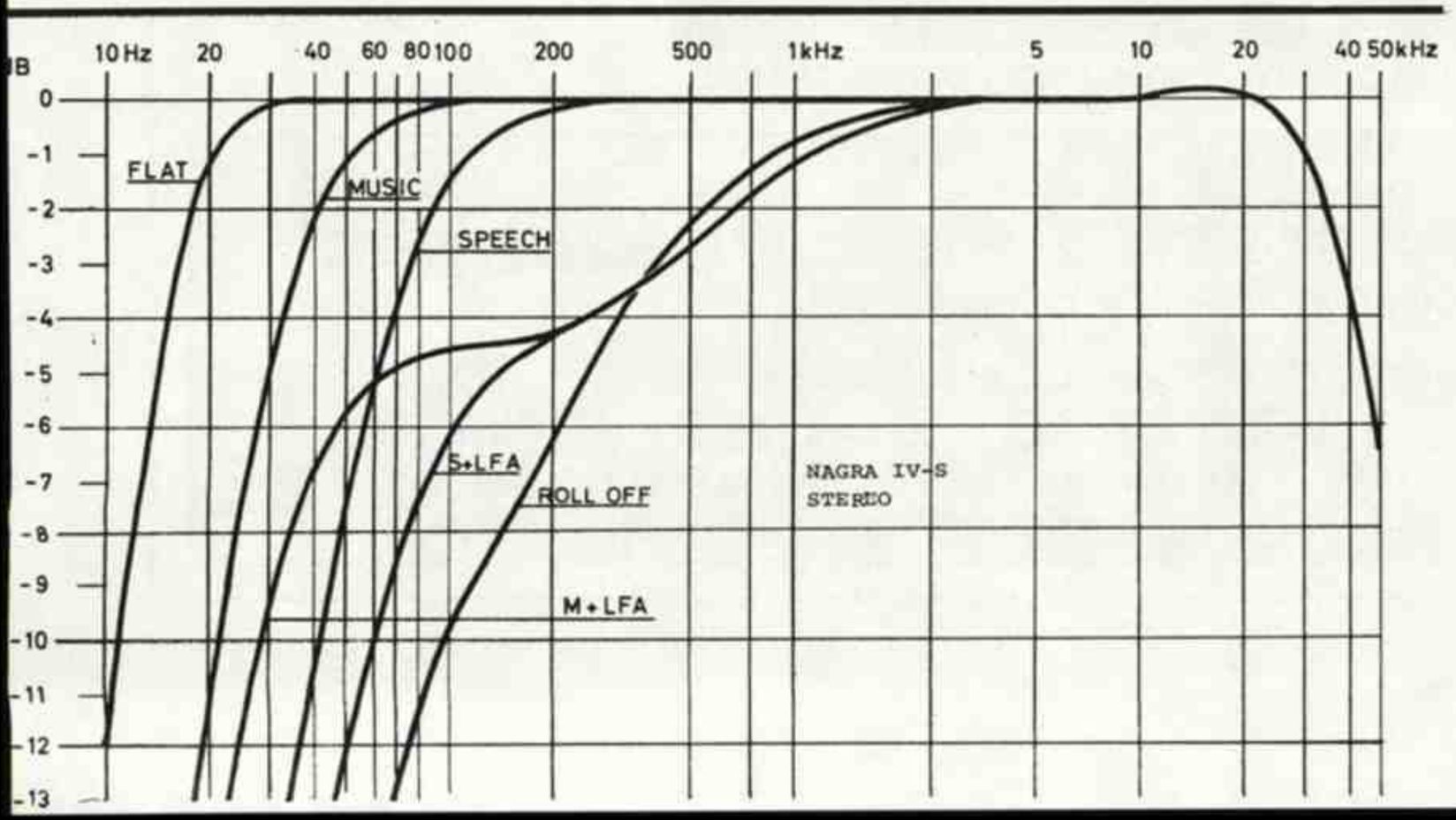
FIGURE I represents the actual group of curves for the NAGRA SL recorder. The "speech" position begins to attenuate at 200 Hz, but is only -2db down at 90 Hz, and will, thus, have virtually no effect on audible speech quality. Yet this curve provides -8db of attenuation at 50 Hz, which should reduce low frequency noises and rumbles quite effectively. The three curves marked "S & LFA" (speech and low-frequency attenuation), "M & LFA" (music and low-frequency attenuation), and "roll off" appear quite severe, but in reality, the effect on speech quality is relatively subtle. In any of those three positions, the quality of speech is only altered by an almost imperceptible loss of the "bassy" aspect of the male voice. A higher female voice is hardly affected at all. While these three filters begin to roll off at 2,000 Hz, they are only 3db down at 350 Hz and do not have a great effect on the major portion of the speech spectrum. However, in the sub-speech area, they provide an enormous amount of low-frequency attenuation. The roll-off position is most effective with almost 10 db of reduction at 100 Hz, and about 20 db at 30 Hz.

A recent assignment included recording inside a house. Outside, a bulldozer was busily at work and although closing all the windows dampened most of the noise, the low-frequency rumbles almost shook the house. Switching in the "roll-off" filter rendered the bulldozer almost inaudible.

In many cases the low-frequency filtering can be done when transferring the tape. However, where the low-frequency noise is quite severe, it could drive the tape into overload and distortion and under these circumstances the filtering should be done before the recording process.

The sound recordist should also be aware of the final format of his sound track, such as optical or magnetic, and the gauge of the print. We will discuss the importance of this next month. ■

FIGURE 1 — Low-frequency filter curves for a two-track Nagra recorder.



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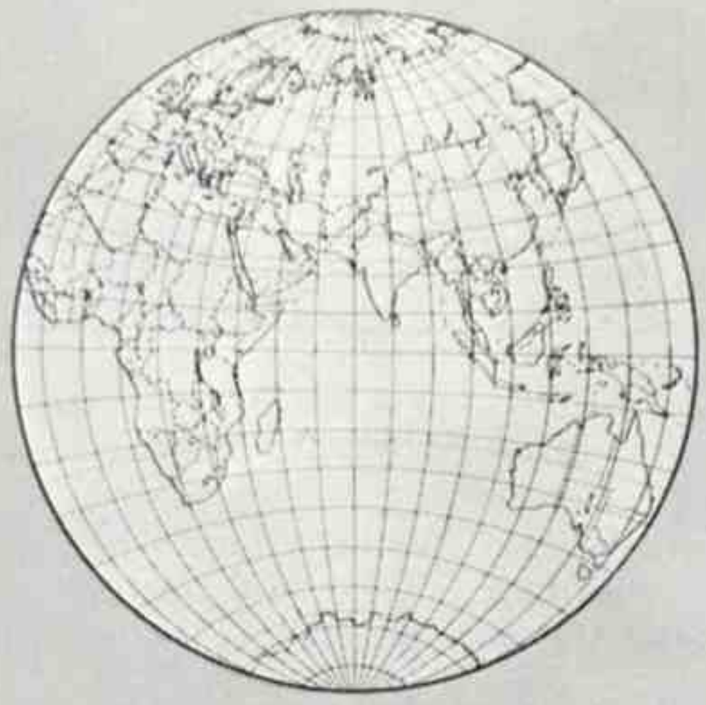

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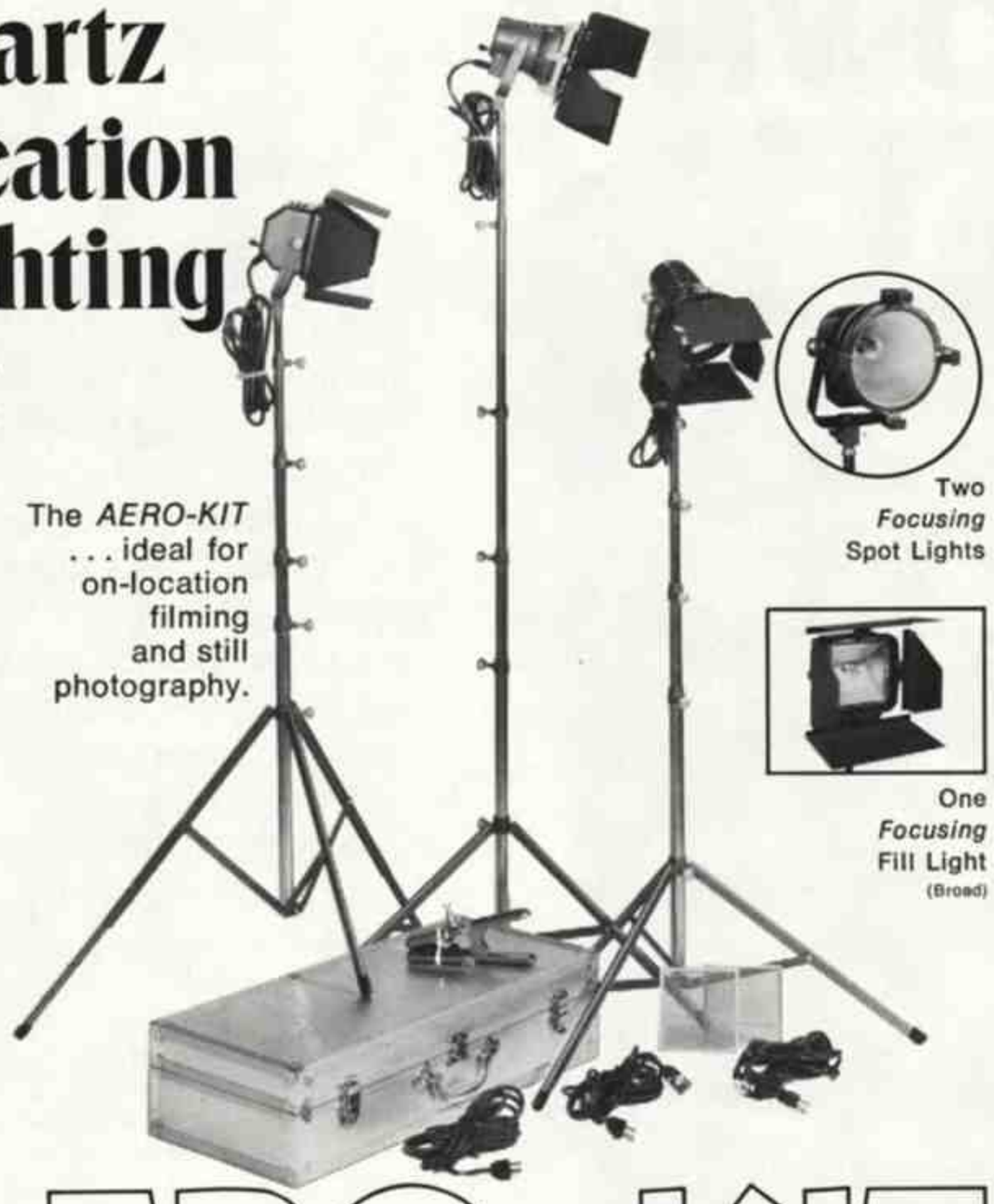

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THE BOOKSHELF

By GEORGE L. GEORGE

FANTASY AND FEAR

The horror thriller is an ever popular genre, based mainly on the premise that people like to be frightened, reassured in the assumption of their own safety.

Ed Naha's HORRORS: FROM SCREEN TO SCREAM is a good example of the versatility of the fear experience. It is an exhaustive listing of hundreds of the most celebrated spine-chilling movies of all times, each aptly summarized and abundantly illustrated. (Avon $4.95)

Exploring the King Kong/Fay Wray syndrome in THE GIRL IN THE HAIRY PAW, editors Ronald Gottesman and Harry M. Geduld have collected an intriguing set of stories — factual, fictional, far-out — that offer a fascinating documentation of the movie and its after-effects. (Avon $5.95)

In THE HORROR PEOPLE, John Brosnan surveys the history and technique of the thriller film with revealing interviews of directors, cameramen, producers, performers, and special effects technicians. Data on oldtime masters of the craft and vivid illustrations round out an entertaining and informative book. (St. Martin's $11.95)

Martin Tropp's general study of the power of the human mind to create its own terrors, MARY SHELLEY'S MONSTER: THE STORY OF FRANKENSTEIN, deals extensively with filmological references to the creature's varied embodiments. (Houghton-Mifflin $7.95)

Testing the memory and wisdom of horror fans, THE WORLD'S GREATEST MONSTER QUIZ, by Dan Carlinsky and Edwin Goodgold, offers many challenging and astute questions, ranging from the obvious to the arcane. (Berkley $1.25)

A unique source of comprehensive information, ENCYCLOPEDIA OF MYSTERY AND DETECTION deals with everyone and everything of significance in this fictional genre. Listing over 600 separate items, Chris Steinbrenner and Otto Penzler include a broad filmology in their effective and knowledgeable reference book. (McGraw-Hill $19.95)

LITERATURE OF THE FILM

Published screenplays of outstanding films make for stimulating and educational reading. The current crop

includes Ingmar Bergman's latest movie, FACE TO FACE, which fares well in print with its engrossing story of a woman psychiatrist considering suicide as a way out of harrowing mental upheavals. (Pantheon $7.95/1.95)

The script of French director Alain Resnais' STAVISKY combines Jorge Semprun's elegantly ironic screenplay with a lengthy interview where Resnais discusses the relationship of historic facts to their cinematic interpretation. (Viking $3.25)

The "auteur" theory of filmmaking, assigning to the director the authorship of the film, passes the acid test with François Truffaut's THE STORY OF ADELE H. and Michelangelo Antonioni's THE PASSENGER. (Grove $2.45 ea.)

Joan Tewkesbury, who collaborated with director Robert Altman on the scripts of *Nashville* and *Thieves Like Us*, discusses with Chicago's Columbia College students her craft and the nature of her professional relationship with Altman in A CONVERSATION ABOUT SCREENWRITING WITH JOAN TEWKESBURY. (Columbia College)

A collection of film reviews by Pauline Kael, REELING, is criticism at its best — fearless, well informed, sensitive, literate and healthily controversial. Included is her celebrated *New Yorker* piece, "On the Future of Movies", where she takes on the Hollywood system with no holds barred. (Little, Brown $12.95)

The inspired lunacy of *Monty Python's Flying Circus,* which kept both film and TV audiences on the brink of hilarious collapse, can be found in THE BRAND NEW MONTY PYTHON BOK, a sampling of new illustrated material where satire, absurdity and zaniness mix in freewheeling humor. (Regnery $10.95)

A bibliographical guide to cinema as art and entertainment, LITERATURE OF THE FILM by Alan R. Dyment covers relevant books in the English language published between 1936 and 1970. Ten categories include over 1300 entries in such areas as history, personalities, techniques, scripts, and industry, further subdivided into specific subjects. Each entry is competently and briefly annotated. (Gale $35.)

Archival film material in the special collection of the University of Southern California is compiled in PRIMARY CINEMA RESOURCES by Christopher Wheaton and Richard Jewell. This scholarly and useful reference work is a detailed index to screenplays, interviews and other documents gathered by USC, and available there for research. (G.K. Hall $21.)

HOLLYWOOD, MY HOLLYWOOD!

Robert Parrish rose from child actor in Chaplin's *City Lights* to Oscar-winning editor for *Body and Soul* and eventually director of such movies as *Casino Royale.* His lively memoir, GROWING UP IN HOLLYWOOD, is an exciting cavalcade told with a fine yarn-spinning gift. (Harcourt Brace Jovanovich $10.)

For 28 years, AP man Jim Bacon covered Film City. His HOLLYWOOD IS A FOUR-LETTER TOWN is a factual, gossipy and often outrageous summing up of his intimacy with the scene. (Regnery $8.95)

FILM AND THE LAW

The legal side of film production can often be more demanding than its artistic aspects. Four recent volumes published by the Practising Law Institute (810 Seventh Ave., NYC 10019) cover many areas where procedural contention has impeded the moviemaking process.

In LEGAL AND BUSINESS PROBLEMS OF THE MOTION PICTURE INDUSTRY, significant materials have been collected concerning literary property, partnership agreements, completion bonds and other pertinent cases. In LEGAL AND BUSINESS PROBLEMS OF FINANCING MOTION PICTURES, tax shelters, copyright mortgages, production agreements and similar items offer independent moviemakers valuable precedents in law. (PLI $20. ea.)

In PACKAGING FOR TELEVISION AND MOTION PICTURES, entertainment industry producers and lawyers will find cases involving ABC, MGM, Universal, Warner Bros. in the procurement of filmed packages for television. The broader field of media is covered in COMMUNICATION LAW 1975, encompassing such related fields as freedom of speech, prior restraint and censorship. (PLI $20. ea.)

A widespread legal problem is discussed in Ken Sutak's THE GREAT MOTION PICTURE SOUNDTRACK ROBBERY. Against a body of opinion holding that such piracy has never been covered by copyright law, Mr. Sutak argues cogently for a Federal statute on a clearly outlined practical basis. (Shoe String Press $10.) ■

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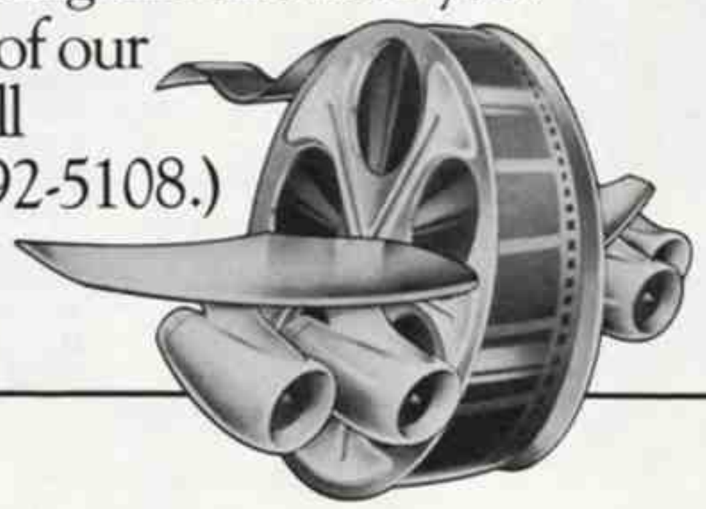

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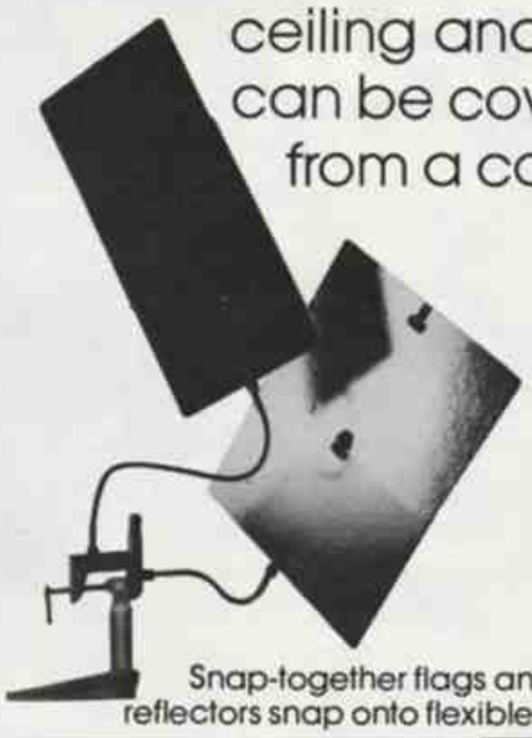

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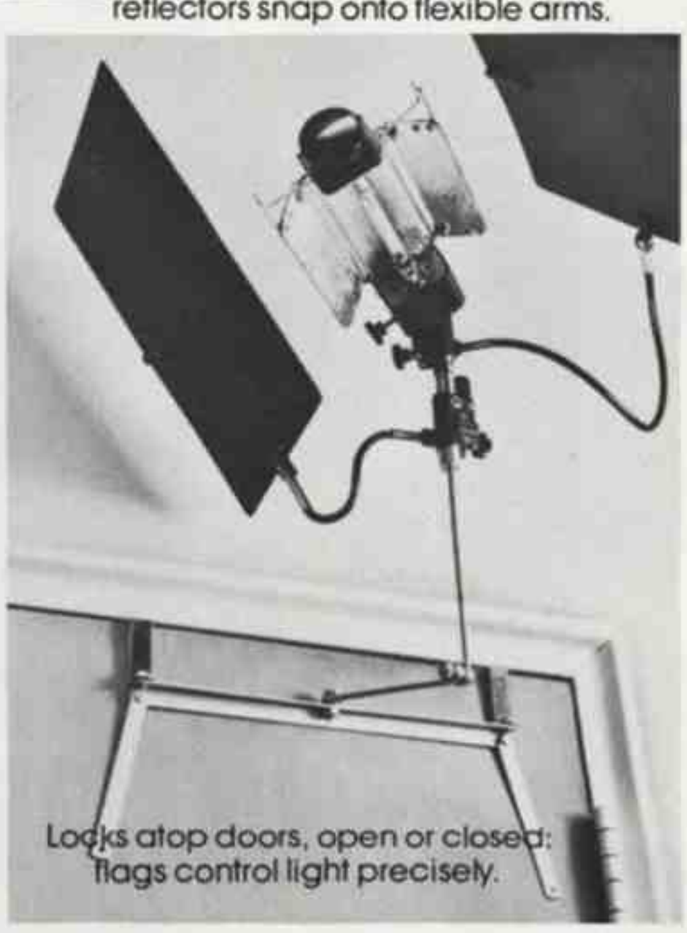

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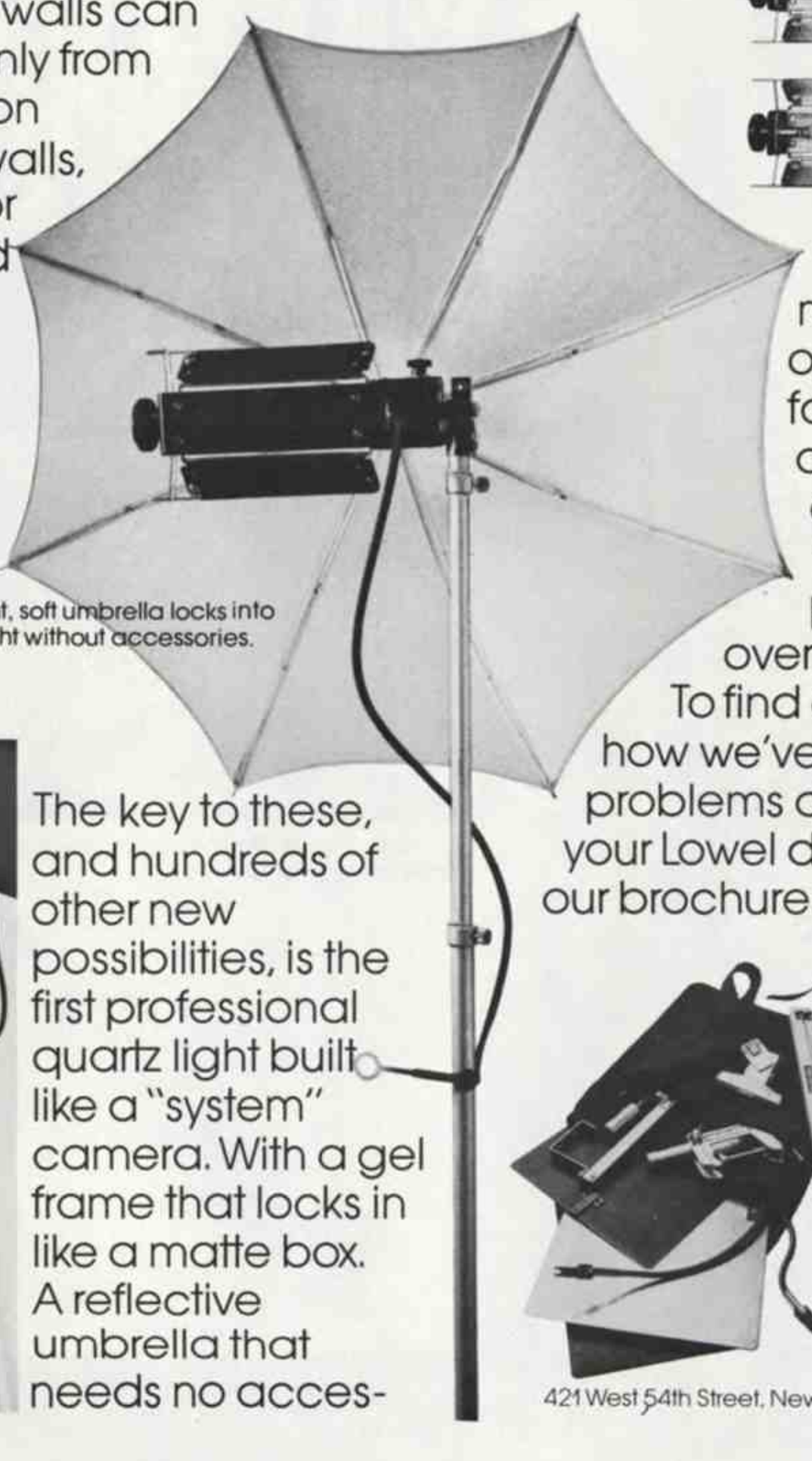

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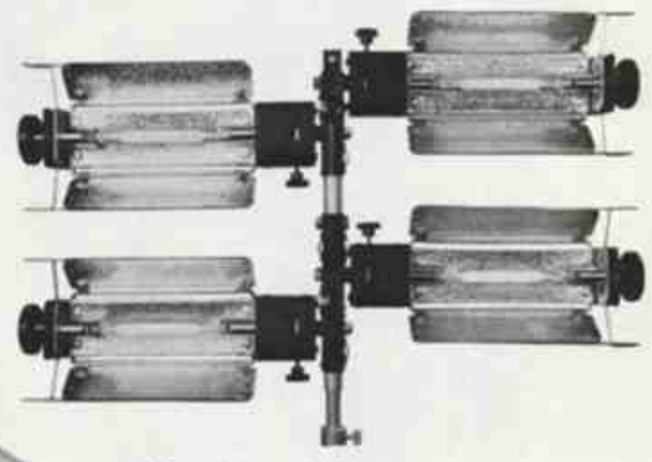

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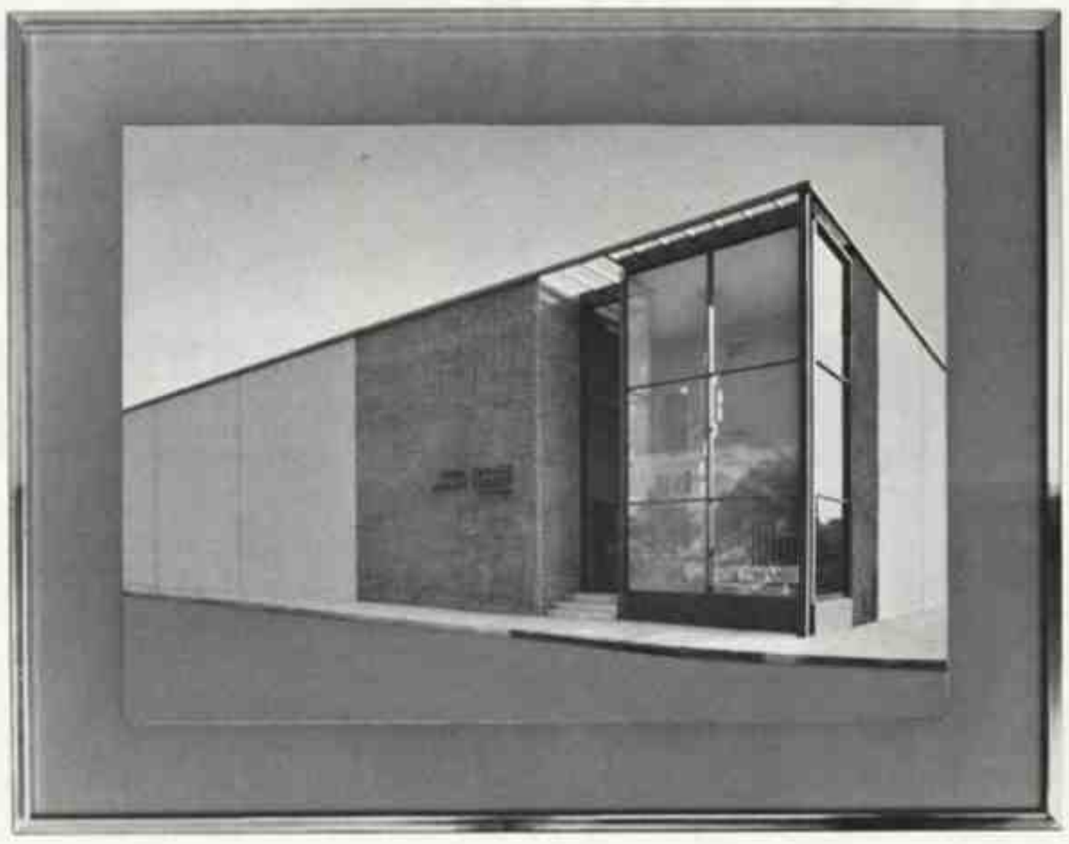

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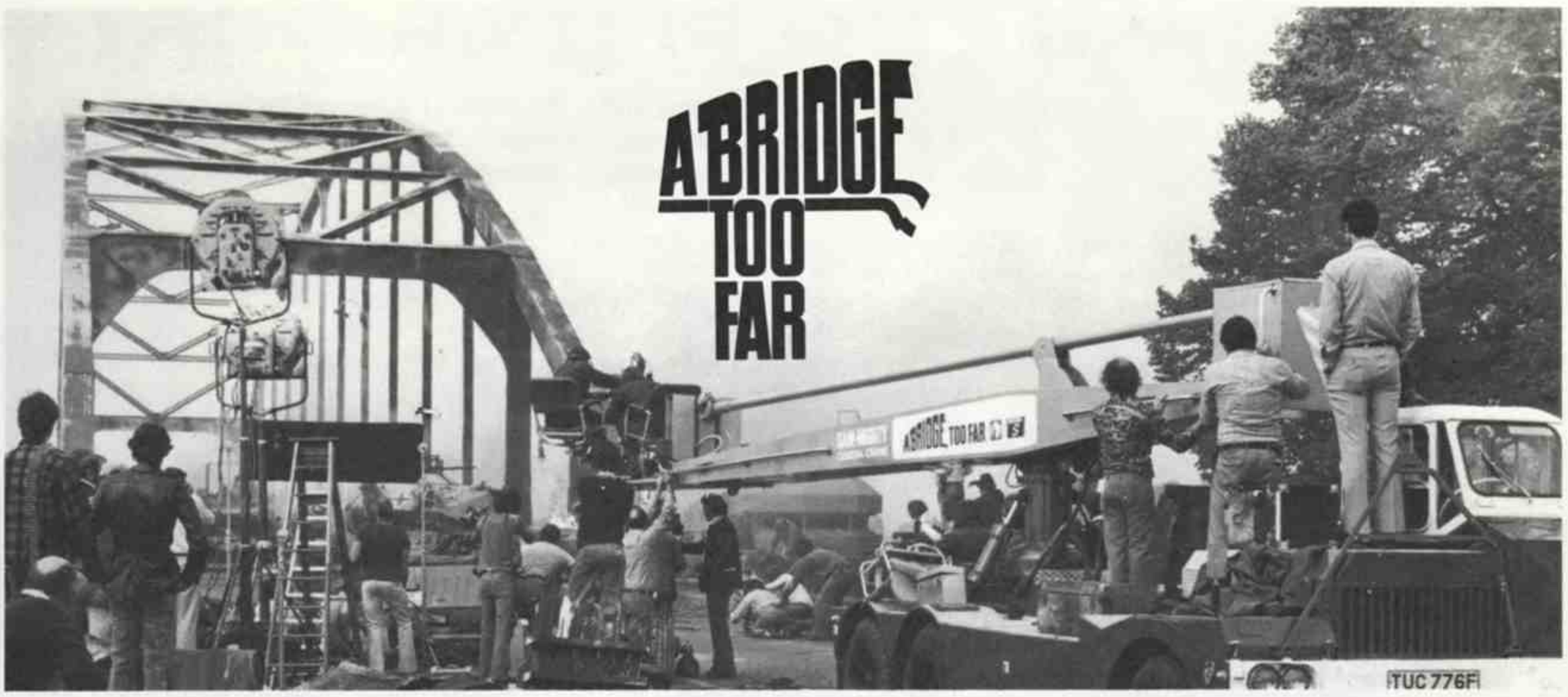

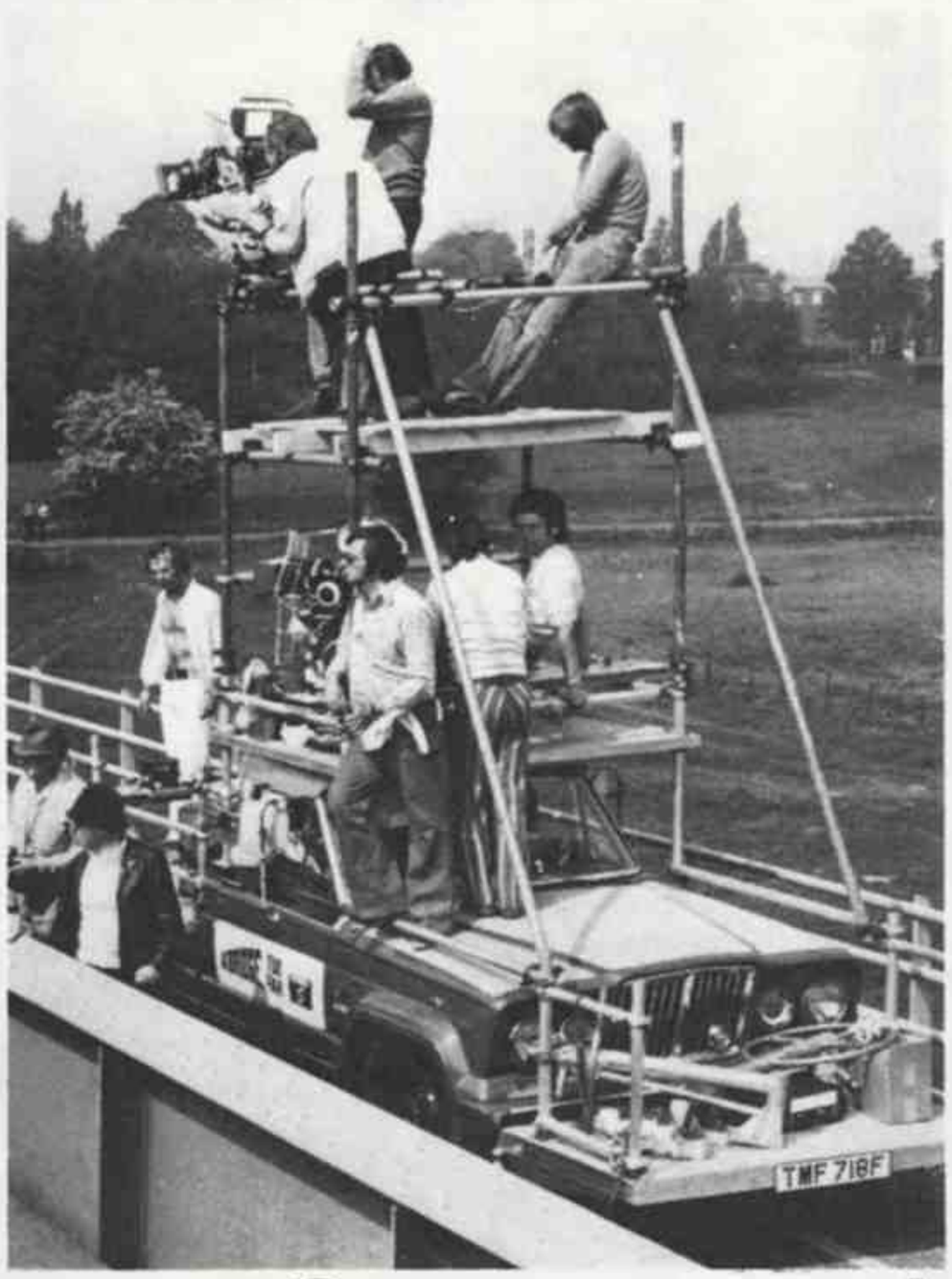

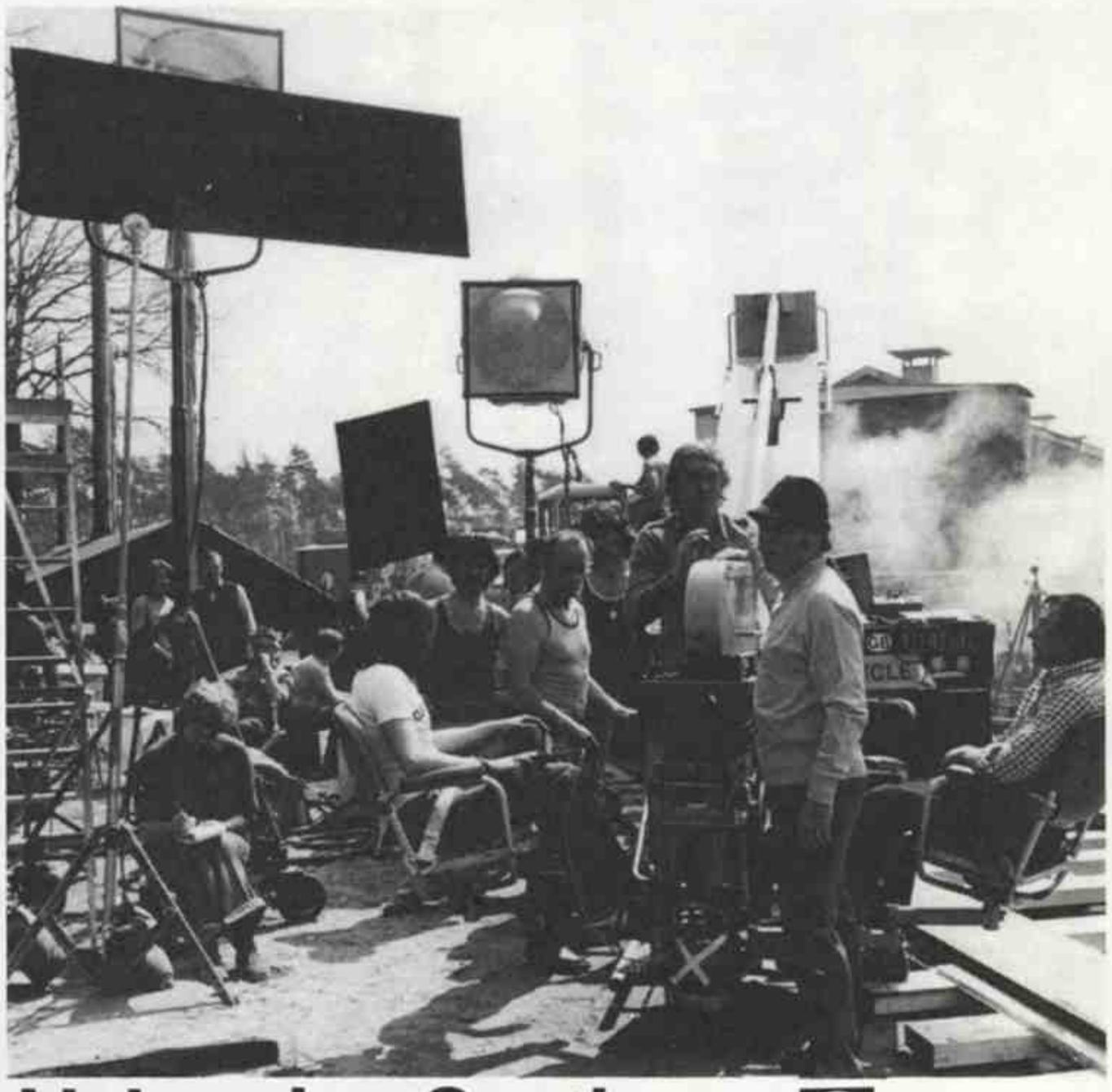

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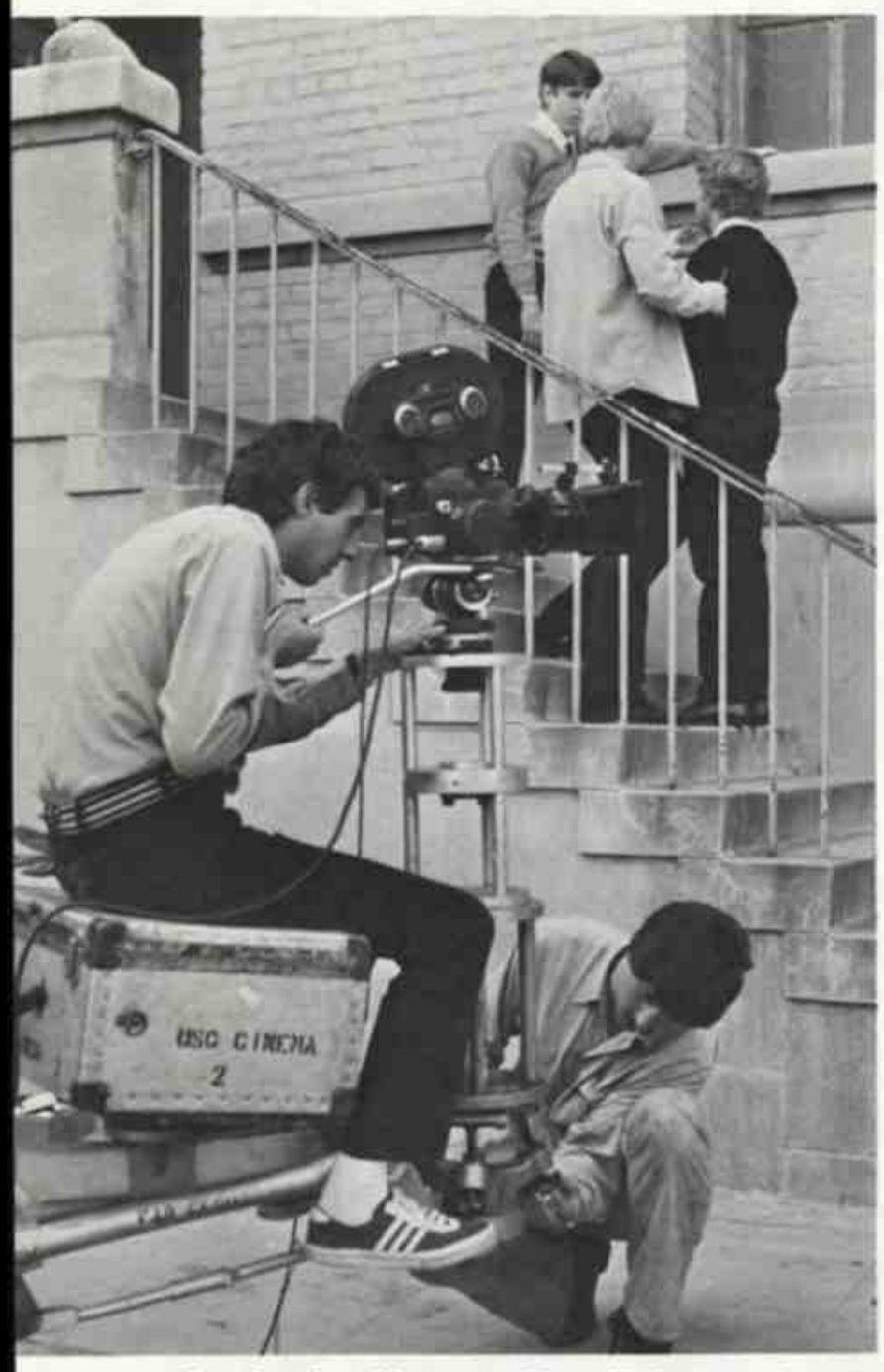
PREPARING "THE PREPARATORY"

The writer/director of the picture that won both the A.S.C. College Cinematography Award and the Academy Award for Best Student Dramatic Film talks about the challenges and creative opportunities it presented

By TERENCE CAHALAN

"THE PREPARATORY" is the story of a young high school boy's first days in a Catholic boarding school and of how he is forced to become hardened to the insensitivity of his fellow students and his teachers. Though most people could identify with the themes of the film, the environment of this



Production Manager Ben Weissman levels the camera for Cinematographer Philip Earl, Jr. in preparation for a crane shot during the filming of "THE PREPARATORY".

particular boarding school was a world that very few people were familiar with. Nothing could be out of place or the unique world of the film would be destroyed. For this reason the crew of the film had to become almost authorities on the subject of Catholic boarding schools in order to re-create the look of the place. Though most people who see the movie think we found a real boarding school like the one in the film, actually we chose to redecorate nearby locations for our specific needs.

Every detail mattered: the institutional architecture, the ever-present crucifixes and statues of Mary, the black and grey dress code, the winter light filtering through the dark corridors and classrooms.

The use of color alone was a challenge. In order to create the colorless world of the school we decided to limit our palette to black, grey and white, except for flesh-tones. For this reason the clothes had to be dyed, and the props and sets carefully chosen. We even painted the outside wall of a building with grey rottenstone, which, incidentally, is very useful for greying-down props and sets, since it washes off easily. The production managers, Pat Tooke and Ben Weissman, were wonderful the way they rounded up all of these things without paying for most of them, since our meager budget could afford practically nothing outside of raw stock and processing.

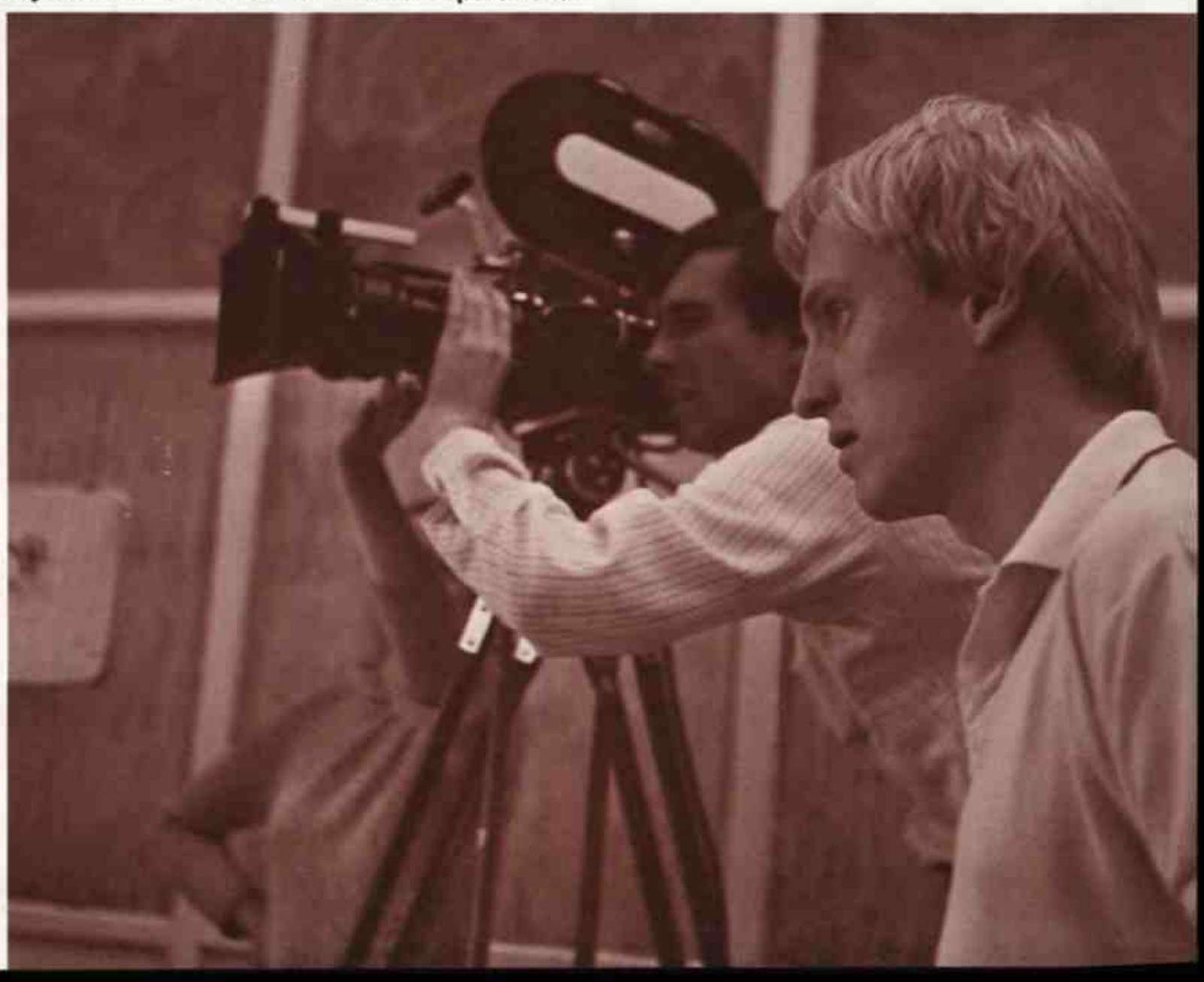
Our most unusual production problem came in a scene where the main character sits in a classroom watching another boy tape one of a moth's wings down to a desk in order to force the insect to beat itself gradually to death in its efforts to escape. Since we didn't want to torture a moth to death, we had to find another way to simulate this scene. We found that, if you take a dead moth and inject it with hot liquid (in our case the coffee on the set), it becomes pliable enough to flap wildly when shot with a jet of air. Of course, then our fine soundperson on the film, Barbara Cohen, had the ridiculous job of trying to find the sound of a moth beating itself against a desk. Believe me, that's a lot more difficult than it sounds.

Our biggest production scene, however, was of the entire student body assembling in the dining hall for breakfast. We had to dress a mob of boys according to the regulation dress code, pin their hair back so that it would look short, stage them in a manner so that no one would get hurt as they scurried to their seats, and then teach them to recite a Latin prayer before they sat down to eat.

The methods I used to stage this scene were ones which I used continually in group scenes throughout the movie and which are used quite often in theater. There were several rather violent group scenes in the film, such as the catching of the moth, the struggle on a staircase, and the most difficult scene of all in the film — the fight in the shower room. In all of these scenes I first blocked in the main characters, having them go through their movements in slow-motion without any feeling at all. Then more and more characters were added, until the entire ensemble was moving in a pattern that

Continued on Page 930

Writer/Director Terence Cahalan (foreground) drew from his own experiences to re-create a completely credible representation of a very specific life situation. He handles the subject matter with incisive insight, profound sensitivity and a high degree of professional skill. The ambitious production was shot over a five-month period by an all-student crew of the University of Southern California Cinema Department.



(LEFT) A light moment during the film's hectic shooting schedule. (CENTER) Director Cahalan does a makeup job on the hand of the main character, Kelly Ward, using stage blood. (RIGHT) The crew prepares for a take. (Left to right:) Terence Cahalan (Director), Philip Earl, Jr. (Cinematographer), Ben Weissman (Production Manager), Barbara Cohen (Sound). (BELOW LEFT) The crew prepares the jib arm with counterweights for a crane shot. (CENTER) Director Cahalan demonstrates the staging of a fight. (RIGHT) The actors perform the fight for a take.

Frame blow-ups from "THE PREPARATORY". (LEFT) Breakfast of the entire student body in the refectory, the most complicated sequence in the film. (CENTER) With great subtlety, Kelly Ward plays a "new boy" in a Catholic boarding school. (RIGHT) The opening sequence takes place in the Sacristy and is one long moving camera shot in which a group of boys try to capture a moth.

(LEFT) Daytime interior of a classroom was lit with bounce light. The windows were covered with shelving paper to create the effect of an overcast day. (CENTER) The same room with low-key lighting for a dusk effect. (RIGHT) The shower sequence climaxes with the main character's last attempt to escape. (BELOW) Night exteriors of the school were shot at the "magic hour".

PHOTOGRAPHING "THE PREPARATORY"

Behind the camera on an outstanding student film, as described by the winner of the coveted A.S.C. Award for Best College Cinematography

By PHILIP EARL, JR.

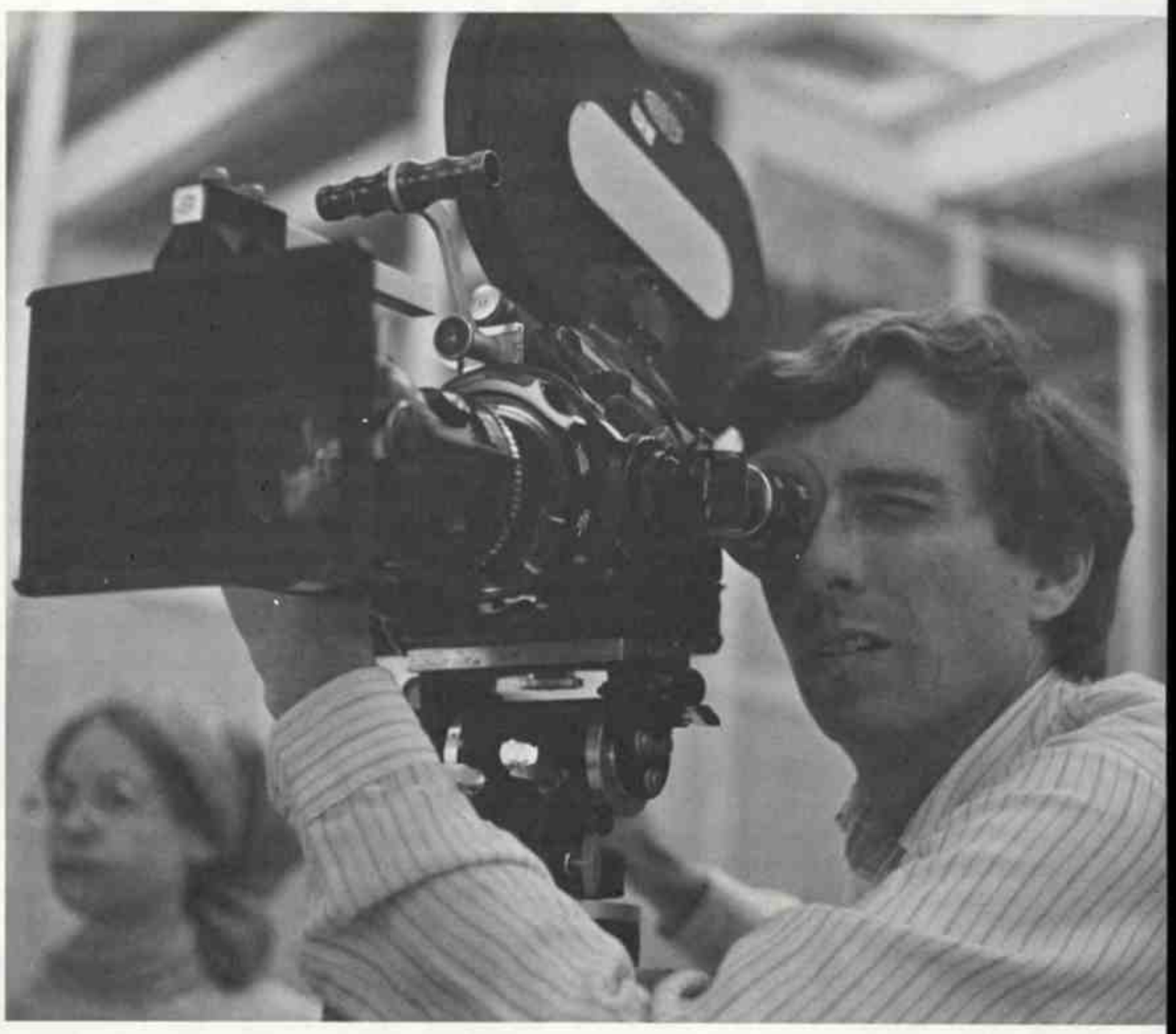
"THE PREPARATORY" was produced at USC as a graduate film project. It was written and directed by fellow student, Terry Cahalan. The film was shot over a five-month period by a crew of six students on a budget of $1,700. All the camera, sound and editing equipment was provided by the school.

The film concerns a sensitive boy and his hardships at a Catholic preparatory school. It was important that the school have a "look" that corresponded directly with the dark theme of the story. Isolated outside the city, the school was to appear prison-like, a colorless claustrophobic environment. The interior was to be comprised of barely lighted rooms and hallways. Outside, it was winter and the sky was a gloomy grey overcast.

Terry and I decided that none of the interiors should have a "lit" look to them. In other words, it should appear as if the main source of light was coming from the windows. A flat lighting style was decided upon and, as a result, bounce light was used for all the day interiors. Generally, 1K's were rigged on polecats and bounced off the ceiling. Most of the time, however, the ceilings were brown or beige in color, so that we usually had to gaffer-tape large white cards to them in order to get a white bounce light. This gave the room a soft fill and, because the lights were all rigged overhead, there was plenty of room to maneuver about for various setups. I also used 4K Mole soft lights for fill from the camera position, which worked very nicely, since the overhead lighting caused a slight eye shadow problem.

Using bounce light exclusively, and the fact that some of the rooms were quite large, I was dealing with rather low lighting intensities most of the time — around 80 footcandles. This meant I had to opt for the faster EF-7242 over ECO-7252. Even so, we were shooting at f/2.8 most of the time. Of course, the lower intensities meant a much more comfortable working environment for the cast and the crew. The film was post-flashed to reduce the contrast of the original and looked nearly like ECO in the final print, as far as graininess and contrast are concerned.

After much scouting, no one on the crew could find a school that fit our requirements. Consequently, most of the locations were judiciously picked from buildings on the USC campus itself. We were forced to cover the



(ABOVE RIGHT) Philip Earl, Jr., Graduate Student of the U.S.C. Cinema Department, shoots a scene for "THE PREPARATORY". (BELOW LEFT) Lining up the camera for the intricate and demanding shower room sequence. (RIGHT) The director explains the complex action pattern, which involves tormenting the main character and finally tripping him so that he sails through the air. The young actors rehearsed the action numerous times in slow-motion in order to perfect the choreography, before attempting it at normal speed.

windows with some kind of diffusion material so that normal student activity wouldn't be seen while we were shooting.

In keeping with the cold winter look, we let the windows "burn" out a little compared to the rest of the interior, giving the impression of an overcast day exterior. We experimented with various materials for diffusion — tissue paper, white shelving paper and rottenstone powder mixed with water.

The first scene with windows that we filmed was the large dining room sequence. In this instance, rottenstone was applied to the glass for diffusion. The south side of the room, however, had tons of direct sunlight pouring through — not the overcast look we wanted. An enormous tarpaulin was obtained and rigged outside the windows which successfully shaded the sun. Unfortunately, a tremendous wind came up as soon as it was rigged and the tarp acted like a giant sail. It took six people to hold it down during takes.

The rottenstone mixture took a very long time to apply, so in the classroom sequence, we decided to use white shelving paper for window diffusion. The windows were completely covered the night before filming. When we arrived the next day, we discovered that since the windows were on the shady side of the building, most of the light was blocked off. We quickly ran over to the Cinema Department's sound stage and brought back two 5K seniors to boost the light from the outside. This did the trick and, from the inside, the windows had the right winter look to them.

For night interiors, when a "no light" effect was required, Rosco Tough Booster Blue was placed on the lights. This gel raised the color temperature 900° and gave the scene a slightly blue cast. An ungelled lamp was also used in order to appear as an off-screen source, such as light from another room or moonlight. Cucalorises were placed in front of the lights to break up and dapple the light. These techniques produced a rather convincing night interior.

In one sequence, the exterior of the school is seen at night. In the scene, students are turning out their bedroom lights, as a bell sounds. I decided to shoot the scene dusk-for-night. The idea was to film at the "magic hour" without an 85 filter. This caused the evening sky to provide a soft blue fill light on the building. Tungsten lights were placed inside the rooms and pointed towards slightly opened Venetian blinds which reflected the light to the camera position on the

Continued on Page 931

Blue gels and cucalorises (to break up the flat expanse of light with mottled shadow patterns) were hung in front of 5K lamps to light the close shots for night exterior sequence. The establishing long shot was filmed at the "magic hour" without an 85 filter. This caused the evening sky to provide a soft blue fill-light on the building. Tungsten lights were placed inside the rooms and pointed towards slightly opened venetian blinds, which reflected the light to the camera position.

Cinematographer Earl operates the Milliken high-speed camera, used in the shower room sequence to make the main character appear to be floating through the air after he has been tripped by the school bully. The slow-motion effect is used legitimately here to emphasize the look of anguish on the boy's face and the impact of his body hitting the hard floor.

THE FILMING OF "DAWN FLIGHT"

Two young film-makers take to the skies with soaring imagination and extraordinary technical ingenuity to produce a stunning short subject that ends up garnering them an Academy Award nomination

By LAWRENCE M. LANSBURGH

It was the first shot of the day, and invisible teeth were gnawing at me, telling me something was going to happen.

"Leave yourself plenty of margin for error," I had told our young pilot. "We can make it look dangerous in the cutting room."

In our story, the main character is on a mountaintop watching the sailplanes soaring and riding the air currents. Then a mysterious red sailplane appears and dives straight at him. The red glider is supposed to come very close, but to pull up just in time.

We split into two crews that day. My crew left early in the morning by four-wheel-drive vehicles. It was a pounding two-hour drive up an old stagecoach road to our location in the craggy palisades above Calistoga, California.

My brother, Brian Lansburgh, was in charge of the crew at the glider port down in the valley. Once we got to the top of the mountain, we planned to hide our crew and equipment until Brian was finished with all the air-to-ground photography in the sequence. Then I'd break out the cameras and shoot the attack from the ground. I was not planning to shoot the first pass because Brian had mounted a remote

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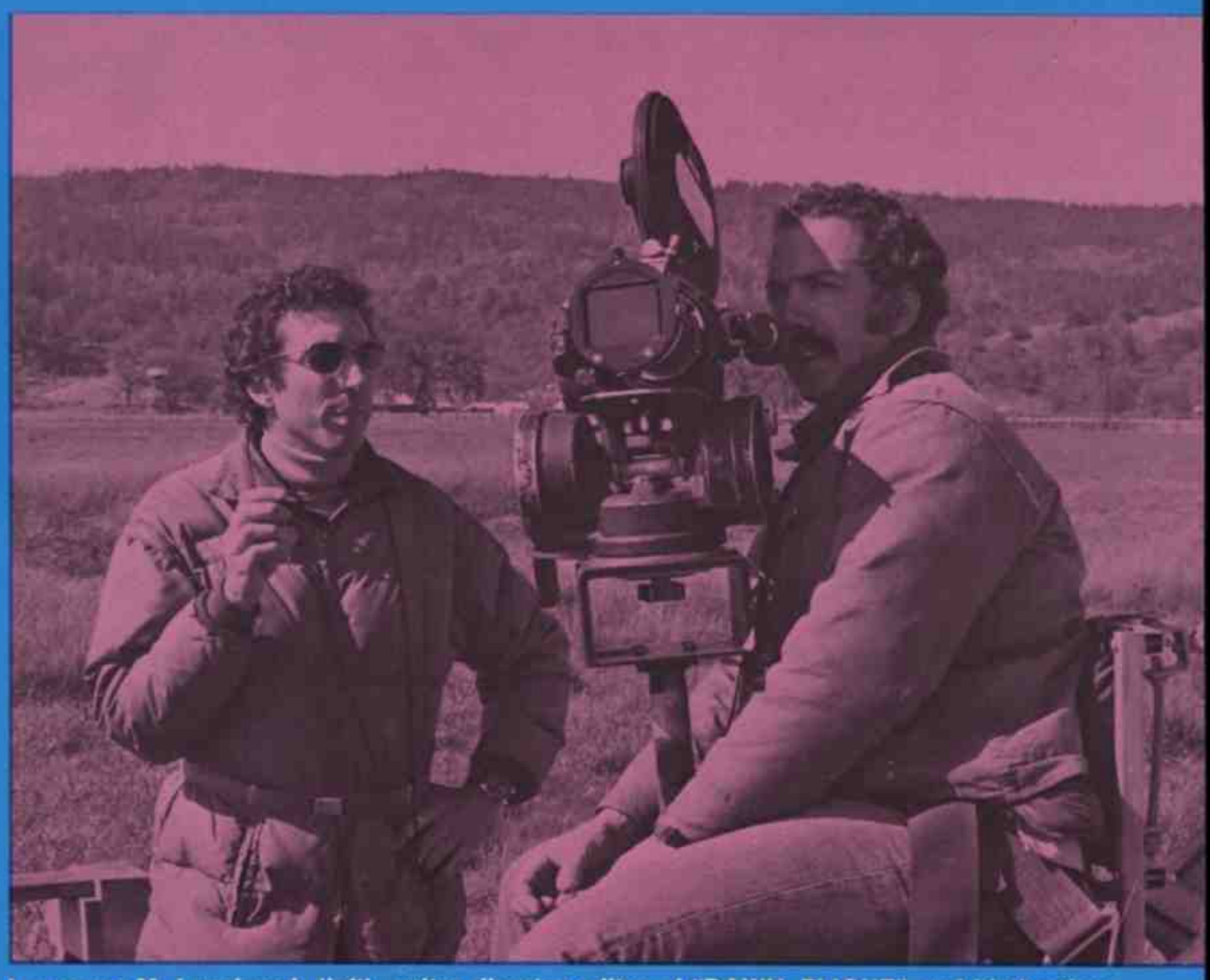
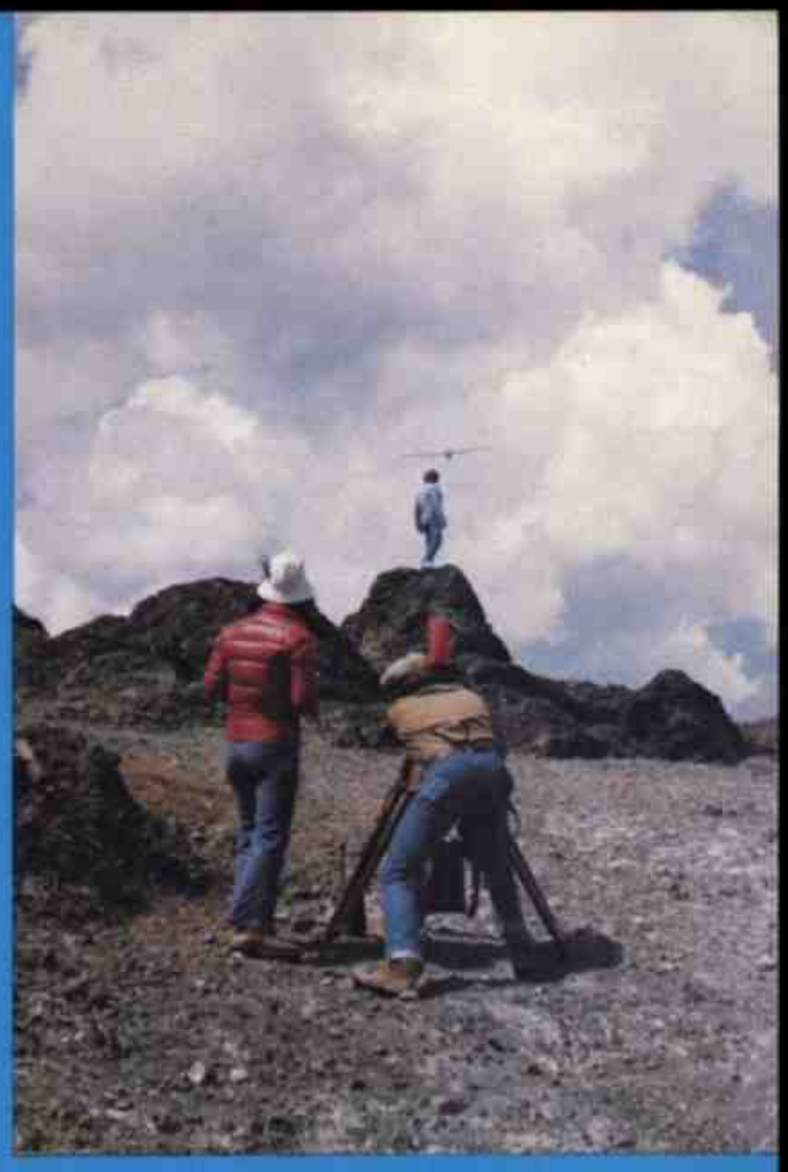


Lawrence M. Lansburgh (left), writer-director-editor of "DAWN FLIGHT" and his brother, Brian Lansburgh, Director of Photography, second unit director and the mechanical genius who devised all sorts of exotic mounts and remote camera controls for the filming. Their father, famed veteran film-maker Larry Lansburgh, has the right to be extremely proud of his sons for their superb achievement in combining dramatic artistry with next-to-impossible technical skill.

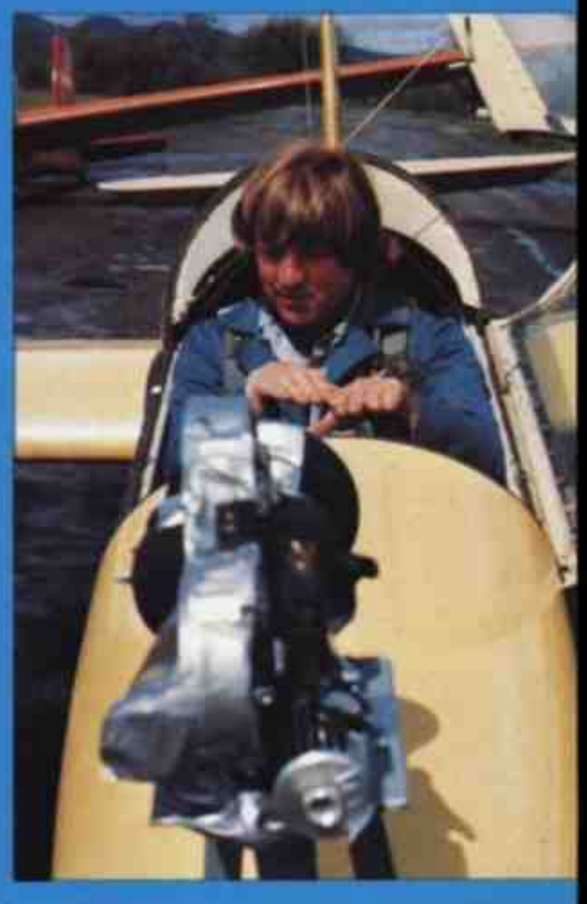
(LEFT) Larry Lansburgh and stunt pilot Barry Jacobsen filming a landing sequence. (CENTER) Cinematographer Brian Lansburgh and stunt pilot Tim O'Neal prepare to film the Phantom's point-of-view during his aerial attack on The Flier. Light skydiver's goggles allow Lansburgh to look through the finder of the Arri-S without causing any light leak. Since the plane is flown without a canopy, goggles are necessary to prevent tears and, worse, bug strikes. (RIGHT) Clowning between takes, star actor Denis Arndt and Larry actually established a close rapport during filming.

(LEFT) Professional actor Denis Arndt, although a highly experienced pilot of conventional aircraft and helicopters, had never flown a sailplane (glider) before the filming of "DAWN FLIGHT", but after only a few hours of instruction, piloted the craft through intricate aerobatics like an old pro. (CENTER) Denis and George Bernstein prepare to take off in their respective sailplanes. Larry will run with Arndt's wing, keeping the plane level for the first few yards of the takeoff roll. (RIGHT) Toward the end of the film, The Flier, for the first time, maneuvers into position behind the red sailplane of The Phantom.

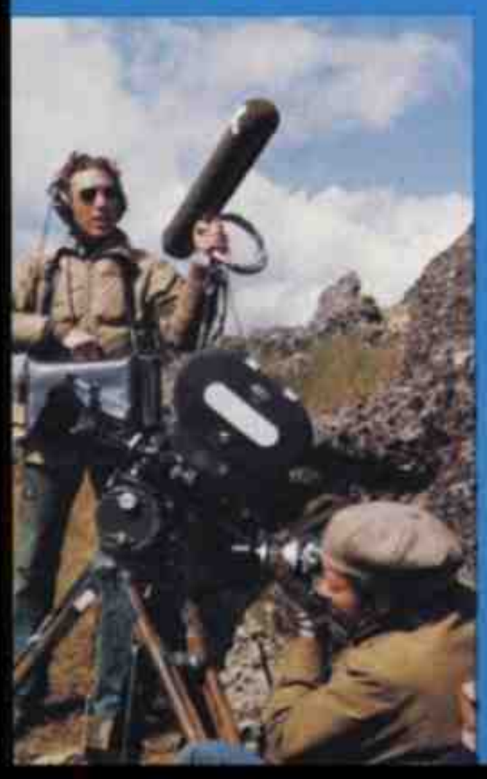


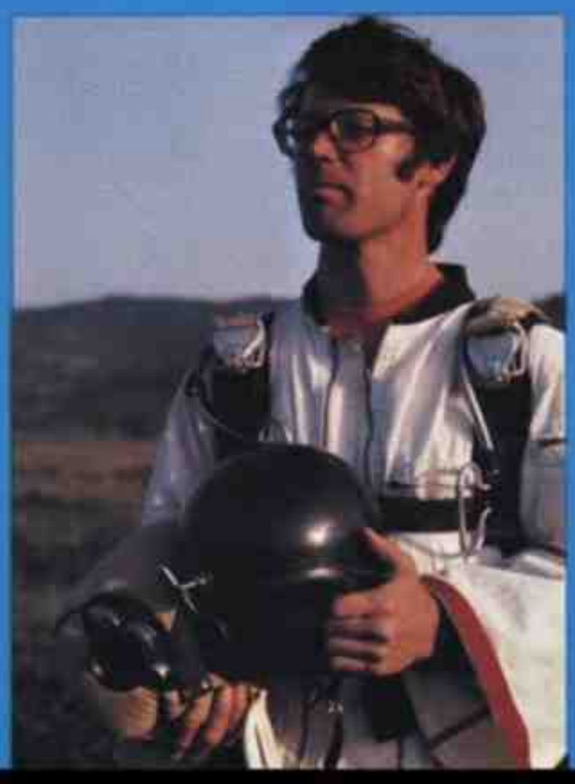
(LEFT) In a daringly provocative one-to-one confrontation, The Flier stands boldly on a mountaintop, defying the Phantom to chop him in half with his red sailplane. Thus challenged, his attacker misses him by a good 15 feet. (RIGHT) As The Flier stand his ground to face The Phantom's strafing pass, Brian Lansburgh films the action with an Arriflex 16BL. Associate producer Claire Wiles stands by to end slate. The magazine of the camera is covered with a red knit cap, so that the pilot can see the camera and line up on it.

(LEFT) Brian poses with chief pilot George Bernstein (wearing blonde wig for doubling purposes), actor/pilot Denis Arndt, and stunt pilot Tim O'Neal (foreground). (CENTER) Larry, Bernstein, Arndt and script supervisor Elaine Hamilton involved in a last-minute briefing before the two pilots take to the air. Bernstein will double for The Phantom, flying the red sailplane in the background. (RIGHT) Arndt, who did all his own flying, prepares to take off with the Arri-S nose-mounted on his sailplane.



(LEFT) Larry readies the Nagra for a sync-sound take, while Brian grabs a quick still before manning the Arri 16BL. (RIGHT) Brian and Larry shown in the atmospheric set they built to serve as the home of The Flier. At top left is the glider fuselage which serves as his bed.





(LEFT) John Randall holds his helmet-mounted K-100 camera in preparation for free-fall filming. (RIGHT) Randall and pilot Tim Saltonstall in the Cessna 180, prior to 6000-foot leap.

(LEFT) A few last-minute adjustments and the Arri-S on the nose-mount is ready to be rolled out for launching. (RIGHT) The Arri-S in the foreground and the Nagra III lashed into place behind the pilot's seat. This was the combination used to shoot a few sync-sound scenes in the air, later looped. Pilot/actor Denis Arndt had his hands full flying, acting, and running camera and sound.

camera on the tail of the red ship.

But thinking it over, I realized that the small, black GSAP gun camera would probably not show up. We stretched a sync cable from the Arri-BL to the Nagra, hid behind a rock, and waited.

Our glider pilot released from the tow plane high above us. Something occasionally happens to fighter pilots called "target fixation." A pilot on a strafing run may concentrate so intently on his target that he flies right into the ground. It does not make any difference if it is a jet fighter or a sailplane.

The pilot was eager to give us a spectacular take. With his adrenalin glands pumping away, he concentrated on his target and went into a steep dive from half-a-mile out.

I fingered the switch on the Arri. I could hear the sailplane slicing through the air, getting closer and picking up speed.

I started to roll, and our actor began to run along the ridge as the sailplane came at him. His performance for the camera quickly turned into a dive for the dirt to save his life. The instant he was flat on the ground, the 100 mph missile aimed at his back roared over him — three feet above the grass.

The pilot pulled out of his dive with so much speed that the engineless aircraft climbed almost three hundred feet on momentum alone. There is no way we could have created that shot in the cutting room.

At dusk we came off the mountain quietly thankful. Another day on the filming of "DAWN FLIGHT" — and no one had been hurt.

Prologue to "Dawn Flight"

Our central problem in "DAWN FLIGHT" was the same one everybody who makes a picture must face. We had to get our ideas clearly and strongly onto the screen.

"DAWN FLIGHT" is a character study. It is a close look at a man who has an obsession with flying sailplanes. His obsession leads him to discover something very basic about himself.

Because our character is a flier, we had to study him in his element, the sky. Even if our budget had allowed us to use sound stages and rear screen projection, we would not have done it. We wanted the crispness and realism of a man sitting in an aluminum and plexiglass cocoon a mile above the earth.

With the prospect of doing an aviation picture on a small budget, we began to plan.

Preparing for Battle

We spent four months in preproduction for a 21½-minute picture. We chose Pope Valley, California, for most of our shooting. Its little airstrip is a long way from everywhere and is nestled in ideal country. You can swing a camera 360 degrees and end up with a fine background.

But getting our idea onto the screen without running out of money depended on a few of the right people and some technological innovation.

We used a tiny crew. I wrote the script and directed and cut the picture. Brian photographed, directed second unit, and handled all the technical and mechanical aspects of the production. The two of us have a lot of overlapping skills, so sometimes the boundaries between jobs were pretty fluid.

One job neither of us did was financing. We left that up to the picture's associate producer, Claire Wiles. Once she got the backing, she did not stop there. Claire has a very fine sense of what contributes to the thrust of a story and what does not. Her suggestions during screenwriting and editing helped to maintain a clear perspective on what we were trying to accomplish. She even found time on location to shoot some production stills.

We also needed an overall production assistant with certain exotic skills. John Randall was our man. He has a unit manager's talent for organization, and can also squeeze his head into a helmet with a camera on it and hurl himself out of an airplane. On the way down, filming other parachutists falling at 120 mph, he gets shots that are more beautifully composed, and a lot steadier, than most of us get on the ground with a tripod under the camera.

Elaine Hamilton, a former airport manager's assistant eager to escape a desk job, signed on as script supervisor. She did a wonderful job her first time out.

Our ideas could not have made it to the screen without sailplanes and superb pilots to fly them. We found everything (except our close-call pilot on the mountaintop) at Bud Murphy's Skysailing Airport in Fremont, California. Bud was a blessing. He understood our logistical and budget problems. Aircraft and pilots were always ready.

Finally, we needed someone for the part of The Flier. We did not want to direct an amateur actor in a complex role, no matter how great a pilot the amateur might be. There was only one man we would settle for, so casting was easy.

Denis Arndt is both a film and a stage actor, skilled in Shakespeare and inventive with O'Neill. He has a voice that can knock hats off in the back of the hall, but he has the wisdom to play it small in a tight closeup. Denis also has five hundred hours in airplanes and six *thousand* hours in helicopters. If he could keep his presence of mind while he was being shot at in Vietnam, perhaps he could act and fly at the same time. Denis worked on the character of The Flier for four months. Just before production started, we gave him a few hours of glider instruction. Almost immediately he was flying formation

aerobatics. We were right. Denis would do.

How To Get All the Coverage You Need, A Mile Above the Ground

As "Dawn Flight" opens, The Flier is the object of a gut-wrenching aerial pursuit. No matter what violent maneuvers he tries, he cannot get rid of a mysterious red sailplane flying right behind him. The Flier has no idea who the other pilot is. Neither does the audience. The opening chase is an emergency, and we needed thorough coverage for plenty of quick cuts.

Brian solved the coverage problem. He covered our sailplanes with remote cameras. Denis turned them on and off with a switch in the cockpit. The all-aluminum construction of Bud Murphy's Schweitzer 1-26 gliders made them perfect for mounting remote cameras. Brian put cameras on the nose, the top of the tail, at the wingtips, and halfway out the right wing. When we see Denis in the cockpit, it is clear he is a real pilot.

We used four types of remotes on "DAWN FLIGHT". We had a Kodak K-100, two N-9 gun cameras, and three GSAP gun cameras. The GSAP's were so old that they had almost turned into fossils. But any gun camera, new or used, is prone to malfunctions.

Brian did not allow them to malfunction. He overhauled and lightened all the gun cameras. They were incredibly reliable. The cameras operate on 24 volts DC and many kinds of batteries can be used. From All-West Battery in Oakland, we got NiCads that were a good balance of size, weight, and ampere-hours.

It is easy to buy nice little 50-foot magazines that fit the gun cameras. You can get them with everything but 7247 inside. We shot the picture on 7247. When Brian said he was going to rewind Eastman's delicate new color negative onto special cores, stuff it into war surplus magazines, then blow it up to 35mm, the experts gave him a long, level look, sighed, and stepped out for an early lunch.

But Brian tested like a man possessed. During testing and on location, he loaded the magazines in a special changing box he had built. Unlike a changing bag, the box did not cover the material with lint and dirt. Every frame of our remote footage was without a scratch or a fleck of dust.

Our fourth type of remote camera was an elderly, and supremely trustworthy, Arriflex-S. Brian built a miniature tripod and attached it to the tip of the glider's nose. The weight of a good tripod head out there would have affected the balance of the glider; a light head would not have been reliable under the g-loads Denis created in his aerobatic maneuvers. So we put the Arri on the tripod, pointed it back at the cockpit, and used shims under the camera to compose the picture.

With a 28mm lens on the Arri, Denis' face filled the frame. A 16mm lens resulted in a loose closeup with a fragment of horizon in the background. A 5.9mm lens gave us some splendid shots. The camera-to-subject distance was almost five feet, enough so that Denis' features were not distorted. On the screen we see The Flier enclosed in his plexiglass bubble. The mystery sailplane is right behind him diving and swooping like an angry red wasp, and the green horizon of Pope Valley tilts wildly in the background. As Denis banks, spins and loops, the changing light and the strain of g-loads on his face give us something that no process shot ever could.

A 120mph Vertical Dolly Shot

At the end of the opening chase, the mysterious pilot in the red sailplane forces The Flier into a spin. For this sequence we also needed a shot of the red ship climbing miraculously away from the camera.

Waiting for an updraft powerful enough to make a sailplane climb as if

The "poor man's Chapman crane", designed and built by Brian Lansburgh onto his 1961 Ford van, because the film's extremely low budget would not stand rental of the real thing.

it had an engine was out of the question. A pullback from the ground with a zoom lens would not have looked right, since we needed a change of perspective, not of focal length. I had always wanted to try something, so I

Continued on Page 898

Wing-mounted in foreground is the remote-controlled panning machine which Brian made out of light aluminum stock and "spare electrical gizmos". Mounted five feet out from the fuselage, it carried an N-9 gun camera, switched on remotely from the cockpit by actor/pilot Arndt, who also activated the switch to start the camera panning on cue. Brian had set the arc and pan speed before flight.

(LEFT) Aerial view of Aspen, Colorado, a former mining town which, in the summertime, is now a renowned arts and cultural center and, in the wintertime, is one of the world's top ski resorts. Aspen was the site of shooting for a recent John Denver TV special, utilizing both film and videotape. (RIGHT) The magnificent Maroon Creek area, where a brook trout life-cycle sequence for the special was filmed. It is typical of the majestic vistas abounding in Colorado, which many consider to be the most scenically beautiful state in America.

(LEFT) Mark and Marty Stouffer, the young film-making team which shot wildlife, scenic and skiing sequences for the John Denver special. The two brothers, formerly of Santa Barbara, California, have lived and filmed in the Aspen area for the past four years, during which time they have become enthusiastic Colorado boosters. (RIGHT) John Denver and Steve Weisberg performing inside the huge transparent plastic "dome" which was erected as a locale for the intimate concert featured in the show. Art Director Ken Johnson and his assistant, Chris Westlund, cleverly decorated the interior to simulate springtime, though winter raged just outside.

(LEFT) Valerie Harper, John Denver, Olivia Newton-John, Steve Martin and John Sommers perform during the show. (RIGHT) Colorful lighting enlivened night sequences shot inside the dome, with videotaping by Compact Video of Hollywood. This musical portion of the show was represented not as a full-scale formal concert, but rather as a casual get-together of Denver with his friends and relatives in the area.

FILM OR VIDEO?...WHY NOT BOTH?

Using film to shoot sequences for a John Denver TV "special" under conditions where videotaping would not have been practical, film-makers learn that the two media can blend smoothly when the execution is correct

By MARK STOUFFER
Stouffer Productions Ltd., Aspen, Colorado

John Denver is an outdoors sort of person. When the theme of a television special is John situated in his home town doing all the things that one does in Aspen, Colorado, it is somewhat hard to visualize a video camera chasing him skiing down the mountain, or shooting an underwater sequence of John observing the spawning behavior of brook trout in the Maroon Creek.

It wasn't long before all those involved accepted the fact that the entire program could not be shot in videotape and, therefore, a film crew would have to assist in shooting the sequences that required a more mobile camera and crew.

Thus, we were contacted. An operation thriving mainly on the distribution of educational films and occasional contract shooting, we accepted the offer to work on the project with overwhelming enthusiasm.

My brother, Marty, and I had worked with John on several occasions in the past, but never had we been asked to deliver such important segments of such a large-scale production. It definitely presented an exciting challenge!

Being somewhat naive to the technical world of videotape production, we were rather surprised to learn of the great concern brewing over the idea of combining our film with the videotape. Having a vested interest, upon hearing these doubts, we naturally began to take a stand in the defense of good old ECO (7252).

Now, I'm not about to testify to the superiority of film over videotape because that would be an inaccurate testimony. Besides, the last thing I want is for all those video experts coming back on me and saying that I'm full of b.s.!

Instead, what I would like to stress is the fact that under certain circumstances, both film and videotape can be successfully mixed with little quality shift evident.

Fortunately, in our first attempt we happened to combine the proper equipment, film stock and expertise to yield a winning combination. Perhaps from reading this story, you can learn of some technique that could very well save you a tremendous headache at some point in the future.

I imagine the most important ingredient to successful shooting is a compatible crew. If everyone is in "sync", it seems that half of the battle is won. In this regard, we have nothing but praise and admiration for all those involved in this project.

Overseeing the entire event was John's agent, Jerry Weintraub. It was a pleasure to meet such a uniquely interesting man. Always a welcome sight were the producers, Al Rogers and Rich Eustis, along with their walking computer and financial wizard, Harry Waterson. Working with Harry was fellow associate producer, Tom Biener. Accomplishing the impossible task of keeping all of their business organized was veteran to many of John's specials in the past, Nancy Heydorn. Perhaps the most important personality of all, the one under whom we were to operate, was the director, Bill Davis. Having never been "directed" before, we could not have chosen a more pleasant man to work with. With many credits to his name ("The Cher Show", "Hee Haw", etc.), it was a tremendous learning experience to work with such a universally-liked man. The same could be said of the assistant director, Lee Bernardi. It should go without saying that working with a person as good-natured and cooperative as John Denver is a director and cameraman's dream.

Though all of this may seem a bit irrelevant to the actual shooting, I cannot stress how important a compatible crew is to the efficient performance of each individual involved.

It was understood that the bulk of the program would be shot in videotape and only when absolutely necessary would they resort to film. It was easy to see why we were gradually developing an inferiority complex. Several film sequences were finally decided upon, due to the demanding nature of the work, and, as it turned out in the end, the time factor forced them to shoot additional sequences in film that they would have otherwise shot in videotape.

Our first project started several months before the major shooting schedule began. We were asked to present a time-lapse transition of the seasons turning from Summer, to Fall, and finally, to Winter. Six carefully selected scenic areas were chosen, each of which would open a new segment of the program. The plan was for the transition to take place through a series of dissolves, and on the last shot, John would enter the shot giving the sequence a somewhat surreal feeling. It sounded good and we were willing to give it our best effort. No hints were given as to how this was to be done. We were only asked to do it. So we did.

Wanting it done in an entirely professional manner, we eliminated the consideration of anything but a per-

Continued on Page 904

Singing star John Denver (center) shown with Marty and Mark Stouffer. The three had worked together before, but never on a project of such ambitious scope. Since Aspen is Denver's hometown, it was wisely decided to intersperse the musical numbers with sequences showing him engaged in a number of colorful activities in his native habitat. Wildlife sequences added both entertainment and educational value to the presentation.

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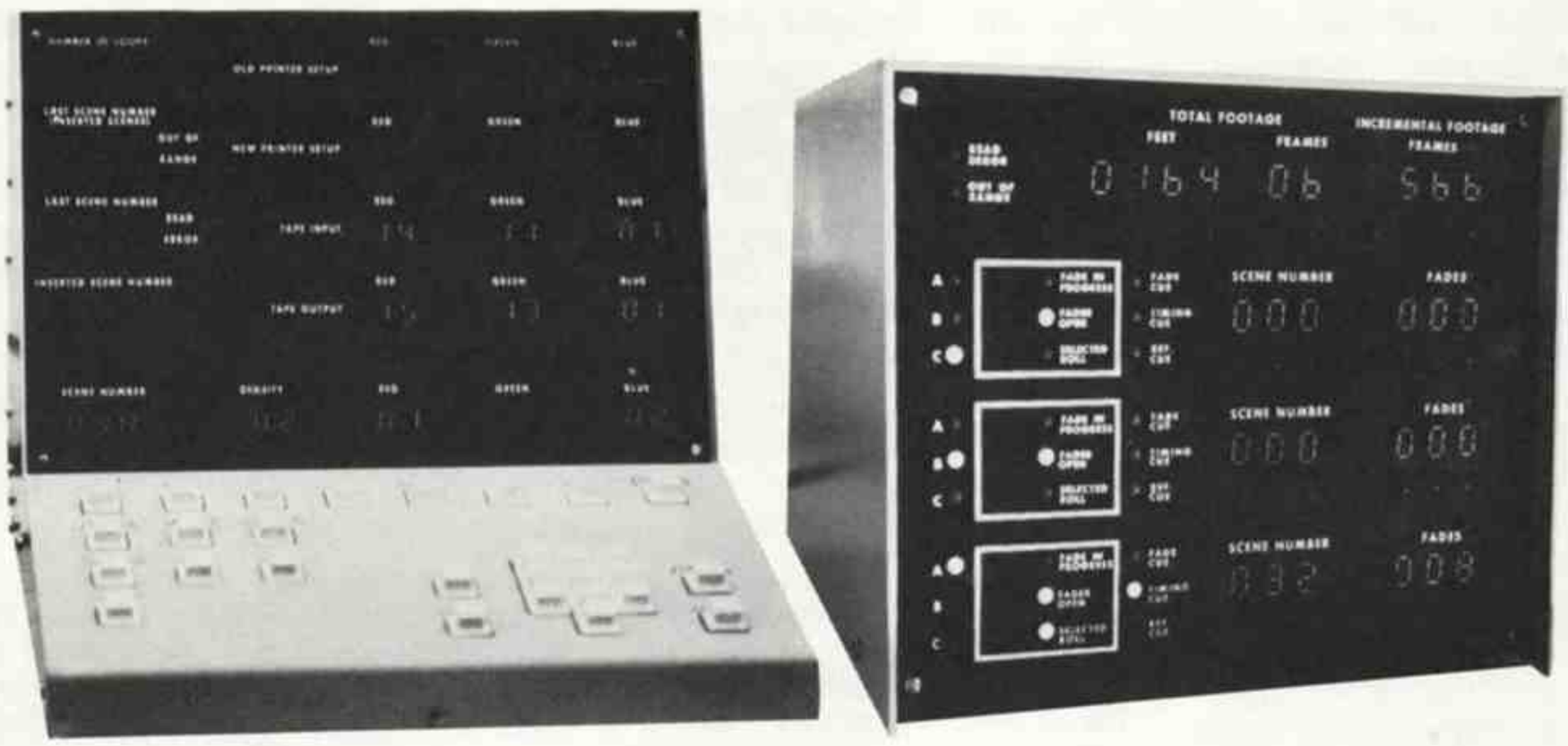

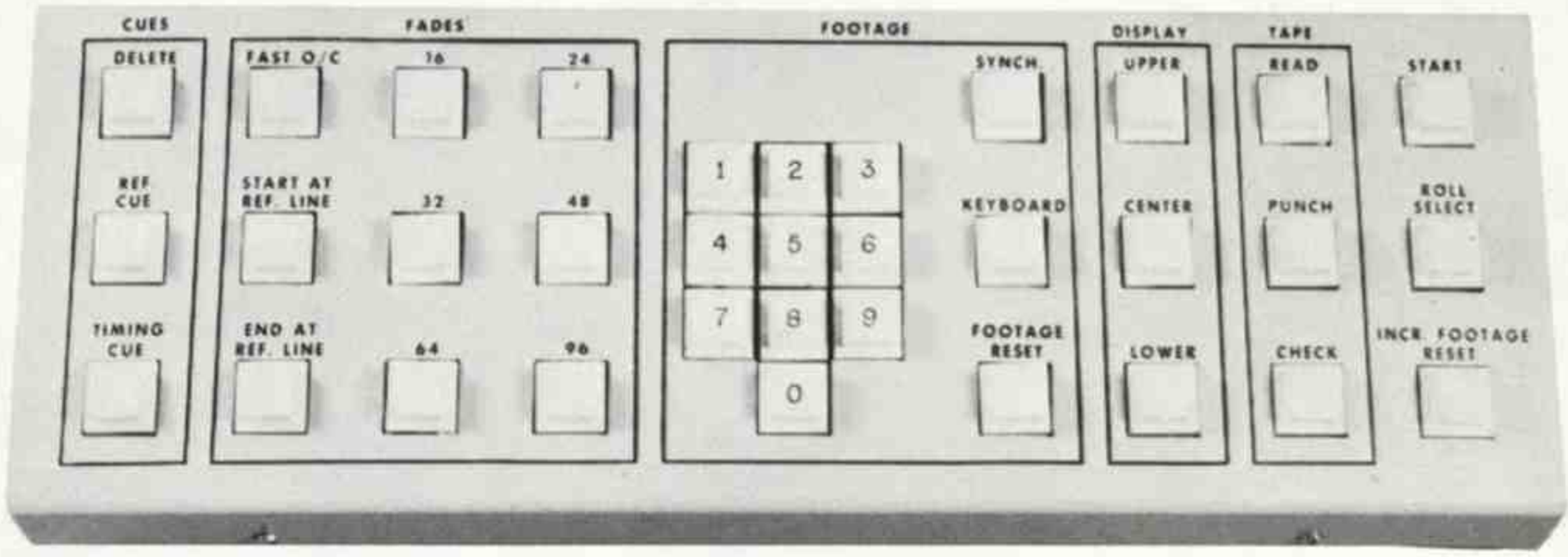

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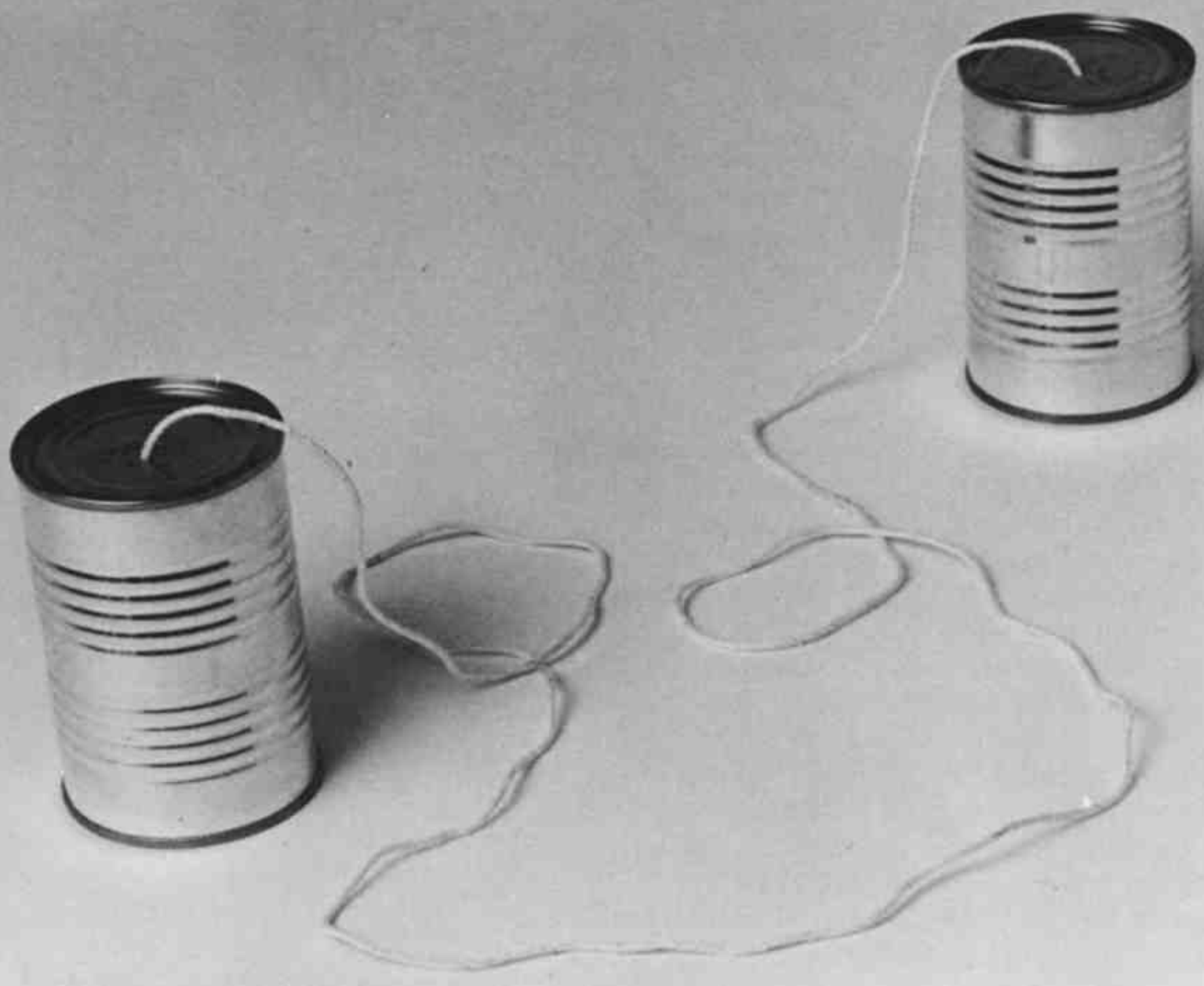

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AN AMERICAN FILM INSTITUTE SEMINAR WITH RICHARD KLINE, ASC

From "CAMELOT" to "KING KONG" — a discussion of the challenges and techniques involved in putting it up there on the silver screen

As perhaps the most important aspect of education for the Fellows in training as film-makers, historians and critics at its Center for Advanced Film Studies, located in Beverly Hills, California, the American Film Institute sponsors conferences and seminars with top technicians and talent of the Hollywood film industry. These men and women, outstanding professionals in their respective arts and crafts of the Cinema, donate generously of their time and expertise in order to pass on to the potential cinema professionals of tomorrow the benefits of their vast and valuable experience.

In keeping with this tradition, Cameraman's Local 659 (IATSE) sponsors a continuing series of seminars with ace cinematographers. These men — both contemporary working Directors of Photography and some of the now-retired "greats" of the past — meet informally with the Fellows at *Greystone,* the magnificent estate which is the headquarters of the AFI (West), to present valuable information on cinematographic techniques and answer questions posed to them. Very efficiently introducing and moderating each of the individual seminars is "Emmy" Award-winning Director of Photography Howard Schwartz, ASC.

Through a special arrangement with The American Film Institute and Local 659, *American Cinematographer* will, from time to time, publish excerpted transcripts from these seminars, so that readers of this publication may also receive the benefits of the information conveyed.

The dialogue which follows represents the essence of the seminar featuring Richard H. Kline, ASC. The seminar followed a screening of "THE TERMINAL MAN", on which he was Director of Photography.

A "second-generation cameraman", son of veteran cinematographer Benjamin Kline, ASC, Richard Kline grew up in the Hollywood film industry and followed the classic progression from slate boy to assistant cameraman to operator to first cameraman (Director of Photography). His feature credits include: "GAILY, GAILY", "CAMELOT" (for which he received an Academy Award nomination), "THE BOSTON STRANGLER", "THE ANDROMEDA STRAIN", "THE MECHANIC", "MR. MAJESTYK", "WHEN LEGENDS DIE", "KOTCH" and "MANDINGO". At this writing he is hard at work as Director of Photography on Dino DeLaurentiis' $22,000,000 remake of "KING KONG".

In the following discourse, excerpted from a transcript of his A.F.I. seminar, he shares some of his considerable expertise with the young cinematographers of tomorrow in residence as Fellows of the American Film Institute:

QUESTION: How would you describe the visual style of the picture we've just seen, "THE TERMINAL MAN"?

KLINE: What we tried to get in this film was a true monochromatic look, with the exception of the last sequence, the cemetery sequence. One reason I selected this particular film to show you is that it was probably my most difficult assignment in terms of color control. We weren't searching for beauty. We were searching for a sterile look, a lack of color. That presented some difficulties, because, first of all, the film stock we use exaggerates color. And in art direction, so often, they'll add color because the producer has a favorite color and he wants to see it. He wants to underline color, color, color . . . We went in the opposite direction on this picture, but it's very difficult to show a lack of color when you have sky, trees and things like that. Then, too, the laboratory sometimes prints color into it, and that's very hard to monitor. So this picture gave me many, many problems.

QUESTION: But can't you control the color in art direction by getting with the designer and gaining his cooperation?

KLINE: Sometimes you can and sometimes not. For example, one of the sequences for this picture was shot at the Arco Tower in the central part of Los Angeles. They had just completed the building and were doing the last-minute touch-up. So on the day before shooting, they brought in a bunch of trees and planters with colored flowers. They thought we would want that when we went in to shoot. We had one hell of a time getting rid of it, and that's where the studio almost didn't back us up. They said, "Oh, the hell with it. Put a little color in. It's all right." They finally did back us up, but they had to be convinced. We were very strict in maintaining our concept and controlling things to achieve a lack of color.

Director of Photography Richard H. Kline, ASC, checks his lighting overhead, while Director Robert Wise lies on the floor to sight a camera angle during the filming of Michael Crichton's "THE ANDROMEDA STRAIN". This science-fiction "mood" film, replete with unusual photographic effects, proved to be a stimulating challenge to the cinematographer.

QUESTION: The only color you were interested in was the skin tone?

KLINE: The skin tone was the only color. Occasionally we would put in an accent of color — such as a red rose or the red tail light of a car.

QUESTION: At what point did you come into the production and start working on the concept of lack of color?

KLINE: I had about four weeks of pre-production, but I was originally brought in two months prior to that for a short period to conceive the overall look with the director and art director. As you know, it takes a long time to draw up the plans and build sets.

QUESTION: In a lot of your closeups, compositionally, it seemed that the actors were framed off-center. Was that part of your visual concept?

KLINE: Yes. Actually, that kind of composition was really inspired by Lelouch. He frames that way. But in the 1.85 aspect ratio or the 2.33 anamorphic ratio it's really awkward if you frame somebody dead center in a closeup. It's really a rarity when I think it's correct. You usually have to put them off-center a little bit. There are some people who say that the cross-hair should be on the right eye — or the left eye. Generally, you lead them the way they're looking. It's just a matter of feel. Composition is largely a matter of personal feeling and taste.

QUESTION: In the operating room sequence of this picture, with so many white surfaces, obviously you must have had some lighting problems. Could you talk about whether you were using bounce light or a lot of cutters or —?

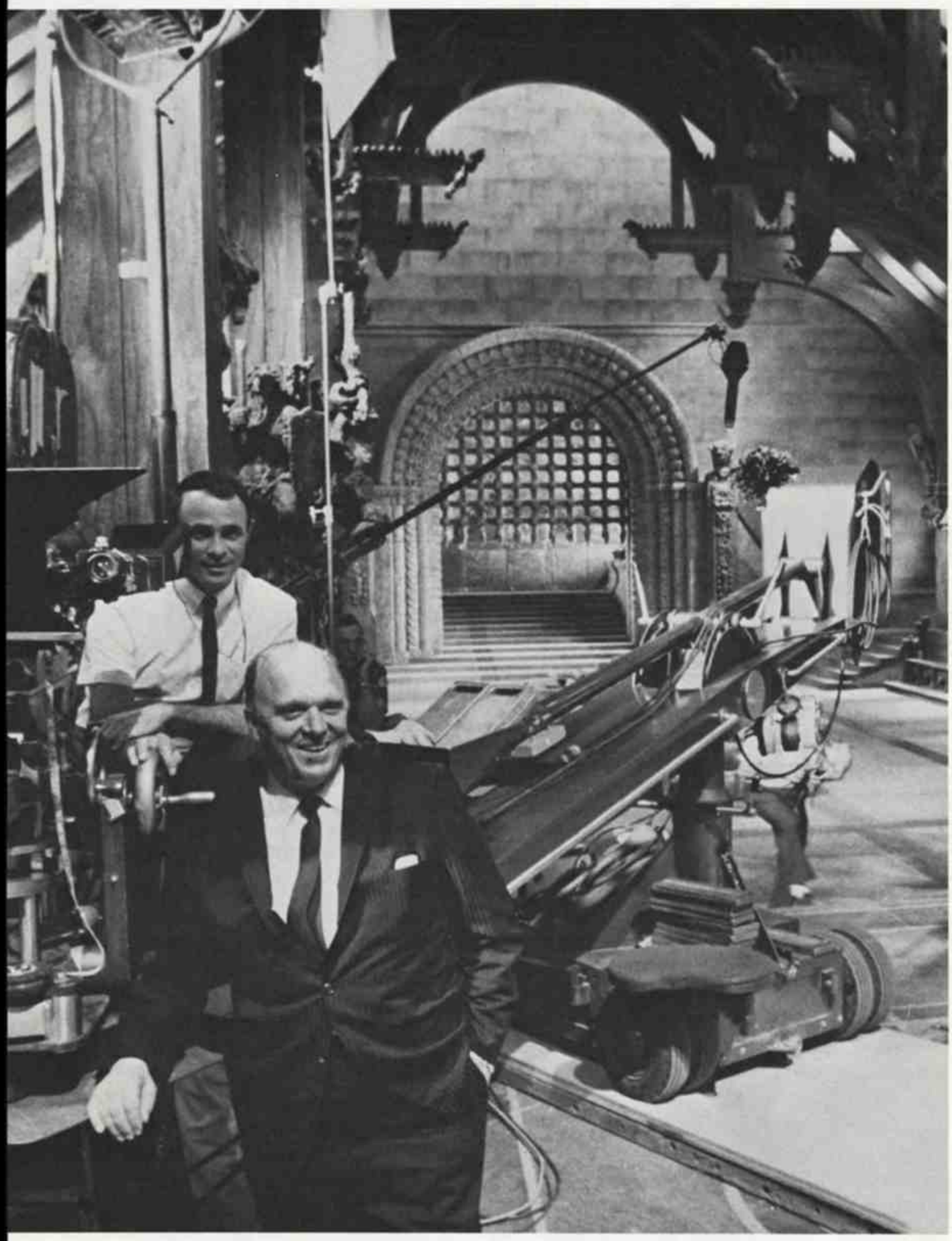
KLINE: Actually, in most cases, the white helped — contrary to what you might think. I did use some bounce light, although not a lot. I tried to keep it as shadowless as possible and the bounce light naturally helped in that respect. But I also used as much cross-light as I could, even though we wanted a sterile look. The white walls helped fill. We worked at a very low light level — we averaged 20 footcandles on the whole picture — and, in that way, we didn't get a lot of flare. It's much easier to control a low level of key lighting.

QUESTION: Did you push the film?

KLINE: Yes — one-and-a-half stops.

QUESTION: When you were shooting

(ABOVE) Wise and Kline on desert location for the opening sequence of "THE ANDROMEDA STRAIN". (BELOW) Dick Kline, a "second generation" cameraman, was, at the start of his career, the youngest assistant and operator in the industry. He became a Director of Photography at the age of 35, at a time when the average age for that category was closer to 60.



Kline with Director Joshua Logan on the set of "CAMELOT", for which he received an Academy Award nomination for his ethereal cinematography. The objective was to translate the famed Broadway musical into motion picture terms — creating cinematic magic, while making the castle look slightly used, a little tired and definitely lived-in. It's a far cry from this to his present assignment: "KING KONG".

with the zoom lens you must have had to use more light, because that's an f/4 lens. Isn't that so?

KLINE: No, the one we were using was f/3 and all you needed was just a little more light. I would work with that at 25 or 30 footcandles. If I could get up to 50 footcandles with the zoom lens I'd be happy, because 50 at f/3 is right on the scale. But if I couldn't do that, then I'd let the laboratory print it up.

QUESTION: Were the hard lenses you used high-speed lenses?

KLINE: Yes, practically all of them were high-speed lenses. I must say that Panavision has very good ones.

QUESTION: You mentioned that the cemetery sequence was the only one with color in it. What was the thought behind that?

KLINE: To kind of make the funeral look garish. It was really a pot-shot at funerals, a comment by the director. That was the reason for it.

QUESTION: You spoke earlier of trying for a shadowless effect, while using as much cross-light as possible. How do you manage that?

KLINE: Well, it's difficult. This is one of the toughest challenges, I think. I guess everybody has his own technique, but I try to cross-light so that the shadow from the main key is thrown out of frame. Now you have to contend with the fill, and for that I generally use a hand-held light — I hold it myself. I just put it in a little container and have a scrim on it of spun-glass. I hold it right in back of the camera, either under the lens or above the lens or just over the operator's head. I drive a lot of operators crazy with it. And I have a little hand flag of solid material that I work myself. As the subject comes closer I diminish the light with this little paddle. Hopefully, the effect ends up shadowless, because the shadow is thrown directly behind the subject. The little light I use is actually an Obie light, but hand-held. When I started in the industry this was the technique they used. And I'll tell you, judging from some of today's techniques, I think we should go back to what they used to do. You look at those marvelous films on television, the early ones, and they're beautiful. Those cameramen knew how to light. They took pride in it, and it wasn't just a lot of flood lighting. I like to model light, and they did it in those days. Yet, it was full light. They didn't go quite as deep as we can go today because they didn't have the technology. They didn't have the instruments that we have. We should take advantage of what we have, but still use their techniques. They were masters.

QUESTION: I'd like to ask about what I thought was a really interesting sequence, the dawn sequence with the helicopter on the roof — the fog effect and all that. How did you do that?

KLINE: The location was selected for that reason. It was the top of the Arco Tower, and it was their air-conditioning units that were creating that vapor. We got there in darkness and waited for dawn to shoot. The idea was to conceal the color of the city. We were still trying to keep it black and white. The most difficult part of the filming was to control those black and white and gray color values — or lack of color values.

QUESTION: Could you say something about what, from your point of view as a cameraman, you want from a director in terms of ideas, direction, collaboration?

KLINE: Well, you just said it — ideas, collaboration. I find that quite often directors succumb to studio pressure. They'll have fantastic ideas going in, and you try to get those ideas on film. Then, all of a sudden, the studio will

say: "That's a little dark, or it's a little this, or the framing is off." As for working together — I like to think of us as a team. The cameraman is there to service a director, and not to restrict a director. If he wants something that really is different, then you've got to find a way of doing it. In the case of Michael Hodges on "THE TERMINAL MAN", I think he's very talented and he has integrity. He's one of the few directors I've worked with who really did stay with his original idea 100% — which made it easy for me and the other people involved. We could go ahead with what we'd originally planned and stay with that, as opposed to deviating and making adjustments to appeal to so-and-so's taste upstairs or someone else. That's one of the dangers of film-making.

QUESTION: As compared to this picture, in which you were trying for a lack of color, what about a film that was just the opposite: "CAMELOT"? Did Jack Warner put any pressure on you to shoot it a certain way?

KLINE: That was a completely different kind of picture, and on a picture like that they don't bother you, as long as they feel that the shots are attractive. "CAMELOT" was supposed to be a very rich-looking picture — at times, even garish. But we didn't go that far. We made it look like an old castle — a used, tired castle. Mr. Warner went along with that. He was quite cooperative, I must say. Usually, castles in movies are so sterile-looking. They don't look lived-in.

QUESTION: You said that on "THE TERMINAL MAN" you consistently pushed the film. Were there any other mechanical techniques that you utilized full time?

KLINE: There were some low contrast filters used on the exteriors.

QUESTION: Consistently?

KLINE: Well, that depends on the lens. Each lens dictates a different low contrast filter — and, also, the stop has a bearing on which filter you use. Since low contrast filters in general have some diffusing effect, they're dangerous to use in combination with diffusion because the effect is compounded.

QUESTION: You said that you used different low contrast filters depending upon the stop of the lens. Could you explain that a little bit?

KLINE: If you're working wide open, for example, you'll have a very shallow depth-of-field, so the lens itself does, perhaps, what a low contrast filter would do if you were stopped to f/5.6 or f/8. It's a compensating balance.

QUESTION: What about the difference in the focal length of your lens — wide angle as opposed to telephoto? How do you shift down in using the different lenses with the different filters?

KLINE: Each lens has a different characteristic, so you have to go by sight. There is no rule that can be put on paper because, in fact, each 50mm lens is different. No two are alike. The best way to tell is to make thorough tests of the various combinations of lenses and low contrast filters. I must say that the viewing systems on present-day cameras are excellent — the Panavision cameras, the XR35, the Arriflex 35BL. You can see exactly what you're getting — whereas, before, when we had to use rack-over cameras, we were really at the mercy of an inferior viewing tube.

QUESTION: Do you shoot extensive film tests if you're going to be filming in unusual locations?

KLINE: Generally, what I do when I'm scouting locations is load my Nikon with whatever film stock we'll be using to shoot the picture — 5254 or 5247 — and have it developed by the lab we'll be using. Then I project my stills and this shows me what I'll be getting. I find that this is very helpful to me, because I usually scout locations during preproduction and then don't go back there to shoot until weeks or months later. The slides give me a chance to review. Also, I project them for the director and art director, and I say, "Is this the effect you're after?" I might try several different things — various exposures, different compositions — but with the Nikon.

QUESTION: How do you feel about flashing film?

KLINE: I didn't flash on "THE TERMINAL MAN". I do flash sometimes, but I don't do it often. I find that I lose control. I'm at the mercy of the lab when I'm flashing. I know there are cameramen who flash every foot of film, but I think it builds up grain — number one — and you lose blacks. Then, again, you often find that you're into some kind of color shift. I think it's dangerous. On the other hand, on the picture that I just finished I did some flashing through a lab that I think is sensational, the Radiant

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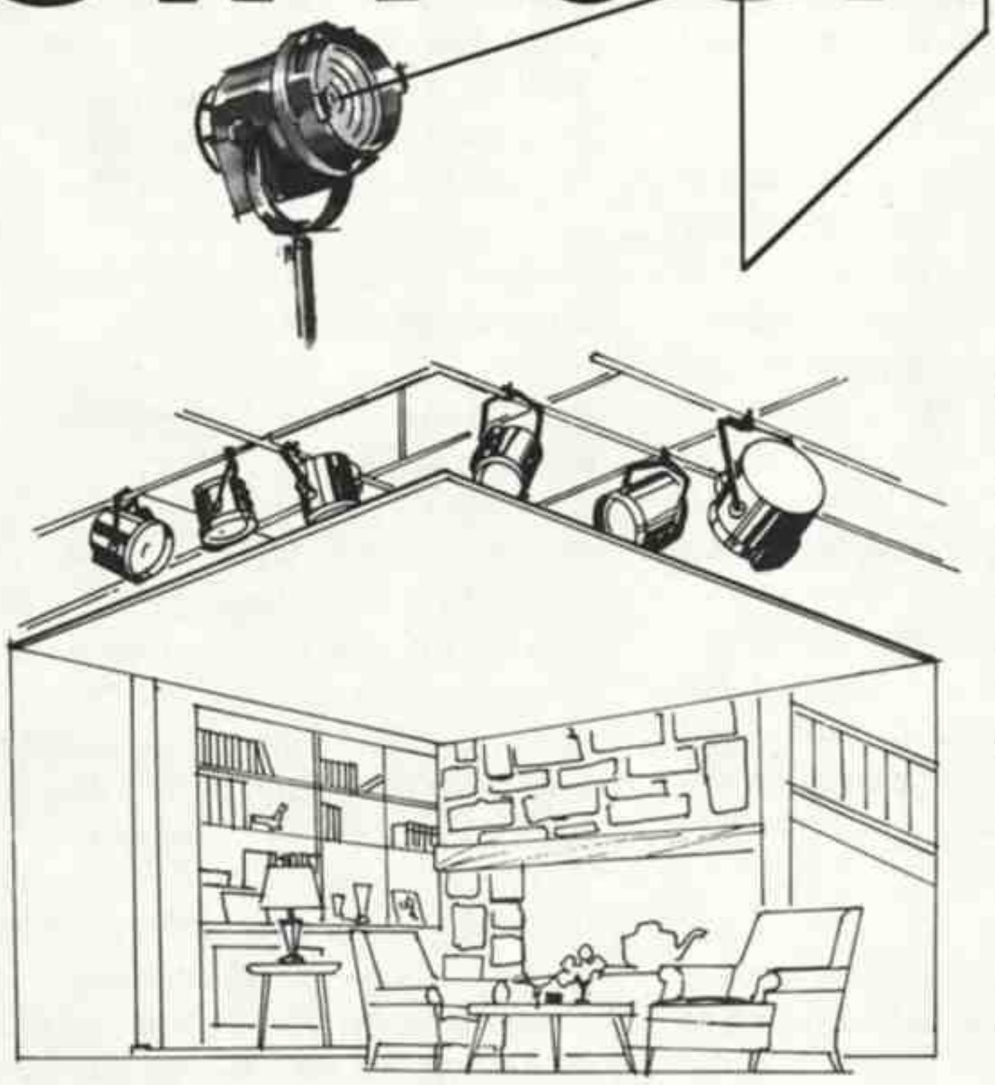
While Robert Wise looks on, Dick Kline lines up an angle for "THE ANDROMEDA STRAIN" from behind the camera on a helicopter mount at the end of a crane boom. Schooled in classic cinematography, Kline likes modeled lighting and refers budding cinematographers to the old movies on television as an example of how the "masters" used to do it.

diffusion media by rosco



The words used to describe the character of a particular lighting look are familiar to all. High and low key, soft, flat, hard, and shadowless are only a few of the more familiar ones. The variety of terms, and the implied gradations inbetween, are the reasons for having fifteen types of diffusion media in the Rosco Cinegel product line.

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Soft Frost is roughly ½ the density of Rolux.

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THE ACADEMY STUDENT FILM AWARDS

The Academy of Motion Picture Arts and Sciences presents its prestigious awards to this year's group of talented young film-makers

Five student films and their makers were honored recently by the Academy of Motion Picture Arts and Sciences as recipients of the third annual Student Film Awards for distinguished achievement in cinema.

The winners were presented Saul Bass-designed trophies and cash grants of $1,000. Runners-up received cash grants of $250 and certificates of merit.

The ceremonies in the Academy's Samuel Goldwyn Theater in Beverly Hills, Calif., featured celebrity presenters. Producer David Wolper presented the Documentary Award. Comedian Groucho Marx, who is an honorary Oscar recipient, gave out the Special Jury Award. Actor George Segal handed out the Dramatic Award. Academy Award-winning film editor Verna Fields presented the Experimental Award. Chuck Jones, an Oscar-winning animator, made the Animation Award presentation.

Academy President Walter Mirisch served as the master of ceremonies. He introduced Tom Bolger, executive vice president of the American Telephone and Telegraph Company. The third annual Student Film Awards were co-sponsored by the Academy Foundation in cooperation with AT&T.

The Animation Award was won by FAME, California Institute of the Arts; Richard Jefferies, Mark Kirkland. FAME is a graphically-animated film made to the song "Fame" by David Bowie. 3½ minutes, 16mm, color.

The Documentary Award winner was WHAT THE NOTES SAY, Adelphi University (N.Y.); Karen Grossman, Richard O'Neill. Through concerts, indi-

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(ABOVE RIGHT) The handsome Academy of Motion Picture Arts and Sciences Student Film Award trophy, designed by Saul Bass. (BELOW LEFT) The impressive Student Film Awards presentation ceremony was held in the Academy's beautiful new Samuel Goldwyn Theater in Beverly Hills, California. (RIGHT) Academy Award-winning Film Editor Verna Fields ("JAWS") presents the Experimental Award to Joan Laine (UCLA) for "AFTER LUMIERE".

The other winners (left to right): Actor George Segal presents the Dramatic Award to Terence Cahalan (USC) for "THE PREPARATORY"; Animation Director Chuck Jones presents the Animation Award to Richard Jeffries and Mark Kirkland (California Institute of the Arts) for "FAME"; Producer David Wolper presents the Documentary Award to Karen Grossman and Richard O'Neill (Adelphi University) for "WHAT THE NOTES SAY"; beloved Comedian Groucho Marx presents the Special Jury Award to Lee M. Rhoads, JR. (USC) for "AMERICAN LOVE AFFAIR".

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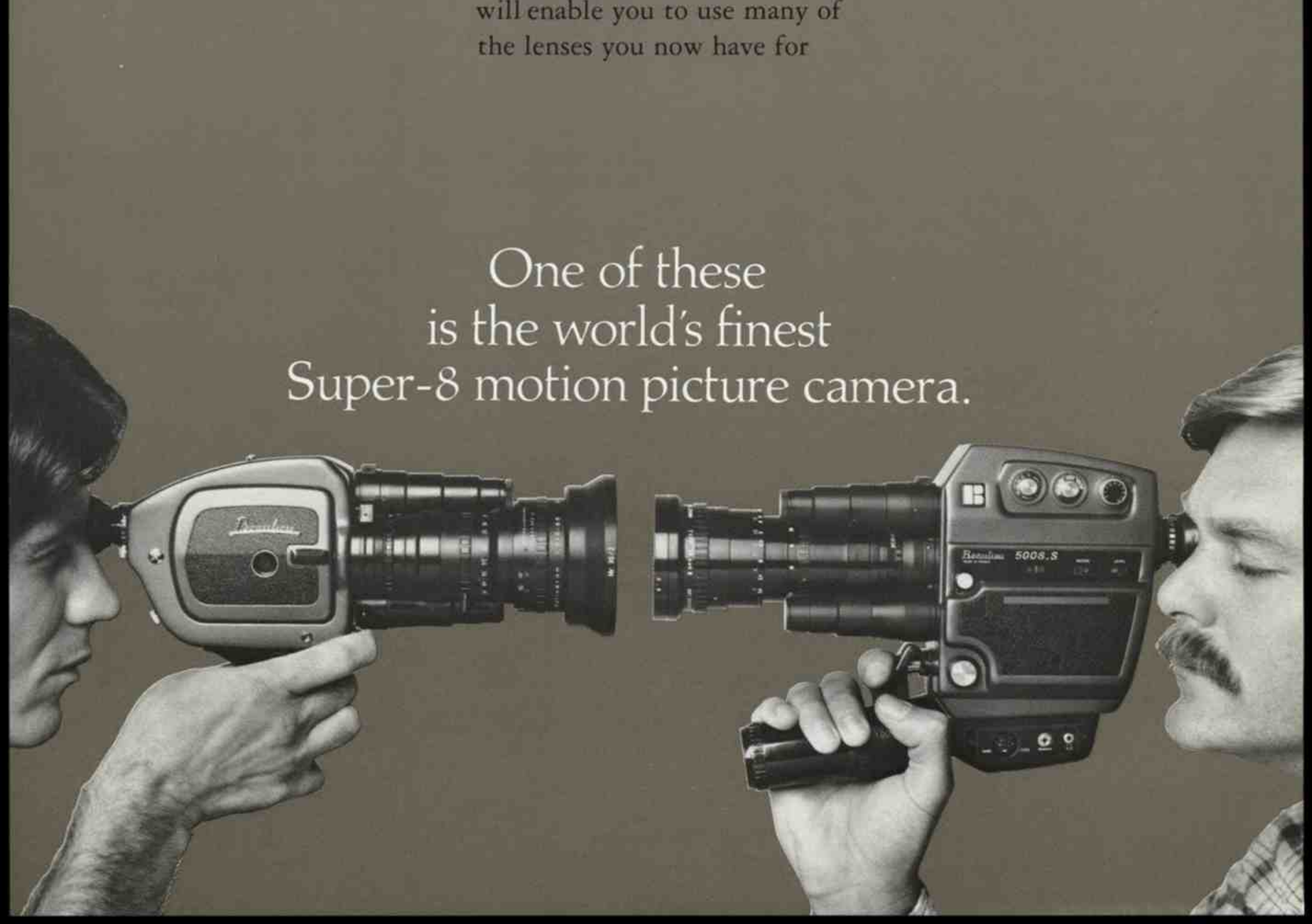

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REGIONAL FILM-MAKING

A plea for films which are not simply produced in distant locations, but which reflect the specific character of those areas and people

By ARTHUR KNIGHT

Some years ago I was up in Ishpeming, Michigan — which is as regional as you can get — and Otto Preminger was making a film there called "ANATOMY OF A MURDER". The picture was being made entirely on location — all filmed up in northern Michigan. Preminger, as usual, had brought along his own Moviolas and crew and the picture was being edited in one of the hotels up there. The film company had almost literally taken over Ishpeming — which is hardly a feat in itself — but could you call "ANATOMY OF A MURDER" a *regional* film? I don't think so.

Today, more than ever before, film companies from Hollywood are moving out all over the place. I saw a film the other night which had been made in Philadelphia. A regional film? I don't think so. Part of the answer, to me, about its lack of regionalism is the number of pictures that have been made recently about the Deep South, filmed up around Stockton, California. If you can film the Deep South in Stockton, that doesn't say much about the regionality of the movie. If you can film — as, Lord knows, they have been doing — Westerns in Spain, in Mexico, in Israel, every place where there is a mountain and some horses, that doesn't make for strong regional film-making. What I'm thinking about when I talk about regional film is not just the fact that a film was made in the Northwest or the Middle West or in the Deep South, but it is about the life that takes place in those areas.

Some few years ago I was in Hawaii for a film festival and it was a very interesting experience because, along with the Festival itself, which had the usual complement of films from all over the world, there was a little workshop session and the people in the workshop — a dozen or maybe twenty — were given an assignment. They were told to take an 8mm or 16mm camera out to the zoo near Waikiki and make a film about it. I don't think they were given any other direction than that — simply: Here's the accepted area. You can approach it any way that you want to.

Well, looking at those dozen or so movies, I was struck by one thing very strongly. Certainly they did represent the personal viewpoints of the people who had the movie cameras, but I think that, because all of them were from Hawaii, they were looking at aspects of the zoo that would not probably be the same as if the film-makers had come onto the Hawaiian shores after just docking from Los Angeles. In Los Angeles, the film-making, as we know it, is very story-oriented. But the people who were making these little films in Hawaii — even if they did put a story wraparound to their visit to the zoo — were looking at scenery, were looking at mountains, cloud formations, flowers in abundance. This was part of the the life that they knew and, even in this very little experiment, it became clear to me that, yes, there *was* such a thing as an "Hawaiian Experience".

I think that the thing that is happening — the thing that I'm so worried about — is that there is a kind of "homogenizing" that is taking place, and has long since taken place, in the movies that come from Los Angeles. Not that I am in any way putting them down, but it is very much like what happened in England when they decided that there was going to be such a thing as a BBC accent. Everybody on the BBC was going to speak the same way. Well, I don't see why everybody in America should be making movies the same way, and it seems to me that, more and more, we are seeing the possibility of an emerging regionalism. Lord knows we've already seen it in Theatre. I think that the most vital aspect of Theatre in this country at this time is what is happening in the so-called "Regional Theatres" that are usually clustered around universities in the various parts of this vast country. I'd like to see the same kind of diversity beginning to come into our movies. And why not? When you come to think of it, this country covers roughly the same land mass as Europe, and if you stop to think of the European films, there is a very distinctive look to the French films, a very distinctive look to the Italian films, a very distinctive look to the German films, the Scandinavian films, the films from Czechoslovakia, the films from Russia. Each of these has its own quality, a quality that I think would correspond to the possibility of a regional film in this country, if only that regionalism could be and were developed.

There are themes that are intrinsic to the Northwest area of the United States. There are themes — and I came across several — that could be developed in Hawaii. There are many, many stories that come out of the Deep South. There are some stories which could take place only in northern Michigan. Why is it left to the film-maker in Hollywood — and, to some extent, in New York — to move into those areas with his predigested scenario that may be based on a couple of quick trips to Ishpeming or Hawaii or someplace in God-forsaken Texas? The whole concept has been tailored to fit *over* what they find down there. The whole crew has been assembled and transported to wherever the shooting is taking place. This is what I question. Oh yes, there might be, as a token, photography of some of the locals, some of the faces that might help provide local color, and they might hire some of the local truckers to appease the union, but that's about the extent of it, and that worries me.

When I speak of regional films, obviously I'm thinking of something much broader than the films that come only from the major studios. I'm thinking about films that will be seen in schools, in film festivals, on television, and purchased by libraries — all sorts of utilizations of film that go far beyond what happens in the motion picture theatre — and I think of the fact that at this moment there are 30,000 students in various film schools around the country wondering what is going to happen to them when they get out of school. It seems to me that regional film-making is going to be able to call upon a great stock of trained young people who will be able to move into this area and make it meaningful.

The University of Southern California, where I teach, has students not only from southern California, but from all around the country, even all around the world. After finishing at U.S.C., some of them stay in Los Angeles, but a good many of them go back to their own areas, their own states, their own cities. For the past year or so I've been doing a lot of lecture work around the country, speaking in various universities, and almost every place I go I find that there is at least one former U.S.C. student who is on the faculty at that university, and also, quite frequently, I find that there is at least one film-maker who has taken the skills that he was taught at U.S.C., such as they are, and gone back with them to Boulder, Colorado, to Gainesville, Florida, to good old Ishpeming in northern Michigan, and begun making films there. For the most part, they are making documentaries. A lot of what they produce are travel films made at the request of the Department of Tourism of that particular state. But they are making

industrials; they are making commercials; they are making *films.* There are skilled film-makers in these various communities.

I think it is important to stress the fact that schools can only teach techniques. They cannot make people think; they cannot really make film-makers. They can really only say to the film-maker: "Here are the tools of your trade that you will need to express yourself. You can't really express yourself fully until you have mastered these elements of film-making."

The vision, however, has to come from the film-maker himself — which raises the question: "Do we have too many students in terms of the availability of audiences for this kind of film-making?" And I find myself feeling, more and more, that this is not the case — that while 30,000 students are not all going to become ardent film-makers, many of them will become ardent audiences for film, which, I think, is useful too. Many of them will become teachers. There are dozens of possibilities for former film history and criticism majors, as well as for former film production students.

There are many new areas for film-makers which lie just ahead — not simply theatrical exhibition, not simply TV transmission, not even simply the use of the cassette and the 16mm reel and all of those elements. Super-8 is something that is going to have a great expansion. The cassette and the video disc will offer the possibility of choosing your own form of transmission — usually through your own television set. Cassettes are already available and MCA is preparing the disc for distribution in the not-too-distant future. I saw a demonstration of the MCA process some time ago and it's very impressive — except for one little thing: The subject they chose for their demonstration reel was "AIRPORT" and I found myself wondering how many people are going to want to buy copies of "AIRPORT" for their very own. It's not quite like having a Mozart opera on a 12-inch LP. Maybe twice is enough to see "AIRPORT".

Eminent film critic-historian-U.S.C. Cinema Professor Arthur Knight addresses the Ninth Motion Picture Seminar of the Northwest.

At the same time, I'm aware that so much information can be stored on a 12-inch video disc; so much can be done with it in terms of the educational field, filmed material in this enormous retrieval package — and that filmed material is going to have to come from somewhere.

What about the possibility of satellite transmission? The fact is, the experts tell me that within five years, possibly ten years, there will be as many as 500 channels available to you in your own home — which is more than I think any of us really need. But again, the material to supply those channels is going to have to come from somewhere.

Even more immediate is the existence of multiple channels available through cable transmission. As a matter of fact, the most standard form now seems to be the kind that you have in your hotel room, where you call down to the desk and tell them you'd like Channel 5 or 7 and you pay them $2.00 and you can get anything from "AIRPORT" to "DEEP THROAT" — if you're staying at the right hotel.

There is this multiplicity of choices that is already available to us and which is going to be multiplied further to an incredible degree as this cable system proliferates throughout the country. And how marvelous! Besides the local football or baseball game coming over your transmitter, the visit of a great symphony orchestra or a famous philosopher speaking at the local University can be recorded and turned on for anyone who wants it. Added to that will be the possibility of filming regional theatre or the making of regional films. The fact is that an expanded audience is going to exist out there for this material through the cable system. They will be actively looking for people to make the films that will be transmitted on this multitude of cables, or the satellite, as that comes along.

I really should stop using the word "film" because, at this point, for want of a better term, "the moving image" seems much more realistic. It may be film; it may be tape; it may be laser; it may be any of a dozen things that lie ahead — but, nevertheless, some utilization of a visual medium to convey information, entertainment. It all comes down to the same thing: getting a picture out there to us.

And when that picture becomes as immediate as a "Seattle Experience", an "Oregon Experience" or a "Northwest Experience" and this is filmed so well that it tells us about the heart of this area, then people elsewhere in this country will want to know about it, and it will be shipped down to Birmingham or to New Orleans and will be exchanged with another film that has been made under the same circumstances by young people down there who want to tell about the "Southern Experience" to the people in the Northwest.

This interchange can be international, ultimately, and so exciting. Stop and think, just for a moment, of the things that we have been seeing from abroad, some of the films that we admire so much. They are not just the story films; the things that we admire tend to be the pictures that tell us about a style of life, something that says it as specifically and immediately as the Apu Trilogy of Satyajit Ray. We understand these people because he has made them so specific. He has filmed them with such humanity that their humanity translates over to us.

One of my favorite examples would be "PASSPORT TO PIMLICO", a tiny English film made 20 years ago — but because it is so delightfully, specifically British it's able to strike a common chord. Think of the films of Ingmar Bergman; think of the films of Kurosawa. The thing that made those pictures last, the thing that made them acceptable, understandable and loved by audiences around the world is the fact that they speak of a very specific humanity which we, as human beings, can all respond to.

And this, for me, is the hope of the future — the media of both film and video emphasizing the diversities of this great land, not just the similarities. The media dramatizing, as only they can, the economic and political problems of the people in the South, the people in the East, the people in the Northwest — their society, their culture, their way of life.

America has often been described as a great melting pot. I'd like to see the media in this country serve as a great "smelting" pot — differentiating, rather than homogenizing. For not until we begin to appreciate and understand these differences can we achieve the harmony, the tolerance, and the humanity that surpasseth understanding. ■

(EDITOR'S NOTE: The foregoing has been excerpted from a talk given by Arthur Knight at the Ninth Motion Picture Seminar of the Northwest, held recently in Seattle, Washington.)

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FIRST ANNUAL WORKING SYMPOSIUM OF THE IMAGEMAKER'S ART

Report on the highly successful "first" of what will, hopefully, continue as yearly forums for the exchange of ideas and techniques relating to film, videotape and, perhaps, media as yet undiscovered

In what was billed as the First Annual Working Symposium of the Imagemakers' Art, Miami's Image Devices Incorporated presented during May a full day's intensive consideration of the hows and whys of several aspects of imagemaking (including film and tape).

The program occupied a Saturday from early morning until well after dark when the nearly 200 registrants had their spirits only slightly dampened by a Floridian downpour that arrived in time to augment an underwater filming demonstration in the Holiday Inn's swimming pool.

The event actually began the evening before with a pleasant cocktail party and preview of displayed equipment from IDI as well as cooperating manufacturers.

Organization of the affair was primarily handled by Bill Reiter, who coordinates customer requirements at IDI. He was introduced by Dave Haylock and, in turn, sketched out the day's features — pointing out that since it was a "Working" Symposium, the audience would be expected to participate in a definite "hands on" style, leaving their seats to come onto the stage area to help push dollies around, peer into viewfinders, and, of course, ask questions to their hearts' content. All of which they did.

The enthusiasm with which this offering was received seems to indicate a widespread thirst for continuing education among young workers in this field, as well as the fact that Miami seems to be gaining ground as a production center. Thus, the IDI intention to regularize this beginning into an annual presentation received considerable local applause, including offers to lend a hand with the future work. As Haylock pointed out in his preliminary remarks, it is the IDI intention to augment the annual affairs with a program of mini-seminars from time to time, covering single subjects in a less elaborate way.

Top billing on the technical program obviously went to *Haskell Wexler,* multi-talented A.S.C. Member and Academy Award winner, who took time out from a busy schedule of shooting in Jamaica to fly in for the day. His part of the program involved working out the lighting and shooting of various scenes with a set provided and involved the assistance of *John Barry,* sound recordist; *J.B. Jones,* lighting grip; *Will Williams* of IDI as first assistant cameraman; various groups of the audience as described above; and even a Shetland sheepdog who dropped in apparently only as an auditor.

Other major participants included during the day: *Garrett Brown,* cinematographer, who demonstrated his new camera stabilizer, the STEADICAM-35, and showed film made with it; *Dick Millais* of Video City who talked about film/tape conversion and special enhancement procedures; *Scott Ransom,* who covered his activities as a TV network documentary filmmaker; *Steve Tello,* news-gathering chief at Miami's WPLG-TV 10, who discussed that station's experiences in moving toward electronic news-gathering; *Nat Tiffen,* who shared his expertise on filters for cinematography; and *Bob Wallace,* underwater cinematographer, who took the day's-end audience out to the pool and demonstrated underwater filming and lighting with a most obliging and nubile young model.

Wexler ranged widely across the cinematographer's spectrum of problems and thoughts but he started with an equipment consideration possibly designed to gladden the hearts of his hosts. He mentioned that at an early time of his life he had been a fairly serious aficionado of race-car driving and went on to say: "Most of you have rented cars. One of the things we used to do is when we'd go to a strange track, we'd rent a Hertz car and take it on the track and get acquainted with the track (groans from the audience).

"A lot of times when we rent equipment from equipment houses there's a different attitude towards the equipment than if it were our own. How you feel about your equipment is very important to what's up on the screen. It doesn't mean you have to baby it. Motion picture cameras are fantastic pieces of equipment. A camera is simple, yet sometimes if you have trouble with it when you're on location, it's baffling and almost human. In sound it's probably even more so. You should respect your equipment and should have an opportunity to check things out. You should be able not to think about it, which seems contradictory. You should be familiar enough with your equipment so that your mind isn't so much on the mechanics of the device as what's happening through the lens. These are attitudes that you can develop over a period of time.

"Again with this idea of community, when you do use equipment from a rental agency, remember that some poor joker is going to pick up the camera you turned in and take the picture of his life. And because you dropped your case, he's going to lose his picture. It's not just respect for the equipment as an inanimate object, but for other filmmakers as well.

"Filmmaking is cooperative. You have a crew making a film. If those men give you a hard time making that film, you're going to suffer. If you communicate to them what you're trying to do and listen to them, you may not always agree with them, but you have to remember that you can learn from them. It is a cooperative thing."

At that point, Wexler began an actual demonstration of how to light a simple scene for motion picture photography, carefully placing each light and explaining its function.

"There are many ways to look at a scene," he said. "There's no *one* way to light a scene or compose a scene — no *right* way. There's a way that pleases you. There's a way that works for the scene. The elements that are involved include composition, lighting, mood, emphasis, camera movement. All these elements enter into how you photograph a scene.

"The light we're using here would be good if it were a little warm. In fact, most rooms would look better if the color temperature was a little warmer than 3200°K. Experiment in the use of different colors, slightly warmer ones. There are no rules at all. It's just a matter of what pleases you.

"You have to keep in mind what the actors are going to do in a scene and where they're going to go. In this scene we're setting up, if the actress were going to get up and go to the door, in all likelihood, we would have a follow-through light, which would be whiter — so that just as she was going out of one light, she would be getting into the other light, which would line her while still preserving the illusion of the room lamp as the basic source. The light should also be on a lower axis and, as she steps forward, you'd get a soft light of lesser intensity, assuming that this is the only light on in the room, so that you'd get some registration on her face.

When people go in and out of light the feeling of movement is enhanced."

QUESTION: Do you believe that the audience should feel or sense a light direction?

WEXLER: I just assume they will. I assume we are trying to re-create the reality of a situation here, although in many films it is the intention to totally disregard that — the implication being that the audience won't know the difference. Of course, they won't know you're using a certain kind of film; they won't know you're filming with a certain kind of camera. It seems that we have rationalized that they won't feel it, but they have eyes, too. The main thing to remember is that you can't lose the lamp (source) just because you have a closeup. It's always good for a photographer to show sources of light in the scene — windows, lamps, etc. It helps the audience understand where the source of light is. In a scene like this you'd be likely to use diffusion. Again, the use of diffusion depends strictly on the style of the film and what you want to do. On my last picture, "BOUND FOR GLORY", which was a period film, I used a lot of diffusion. I shot most of the film through a pair of coffee-colored pantyhose — but the best scene I had was not in the film. It took place in a hosiery store while we were on location in Stockton, California. I told the lady I'd like to see some stockings and some pantyhose. She asked what size I wanted and I said, "I don't care. I just want to look through them." She brought them out to me and it was only after I'd been holding them up and looking through them that I realized what a freak she thought she had on her hands.

Getting back to the matter of diffusion — you can use just about anything. Once I was filming in the rain and we had covered the camera with transparent plastic for protection. When I saw how great the scene looked with the plastic, we just shot it through the transparent plastic. It really helped the scene. You really learn a lot by making mistakes and just by observing. If you do use nets, pantyhose or silk stockings for purposes of diffusion, let me warn you that you have to be careful of working in deep stops or focusing close, because all of a sudden you might see a whole wire mesh fence appear in front of you. Use longer lenses and wider apertures, or you'll photograph your diffusion material.

QUESTION: Which is easier to work with — color or black and white?

WEXLER: Color is much easier to work with — no doubt about it. In black and white you have to depend upon separations and the gray scale, but in color you can be very bad and still be very good.

QUESTION: Do you see a shift back to black and white?

WEXLER: I like black and white, but I don't think the general public likes it. They do prefer color. Also, television doesn't want black and white — and the use of it makes residuals difficult to obtain.

QUESTION: Do you own or rent most of your equipment?

WEXLER: I happen to own a lot of my equipment, but I think that's unusual, because equipment is so expensive and rental is basically more sensible. You can get exactly what you need when you rent and you pay for it only when you're using it, and it's not sitting there while you're paying insurance.

QUESTION: Do you know about holography?

WEXLER: No, I don't know much about it, but Mark does — so let him tell you.

At that point, Mark Diamond of Holografix, Inc., Miami, took center-stage and explained: "The medium that we are talking about is a new visual communication medium and the images that are stored and played back are totally three-dimensional, having total depth and parallax. I'm not talking about stereo pairs — two images slightly out of phase — I mean an image that is a total parallax. You can have the same parallax effect as with real objects. Sometimes it's hard to tell what is real and what is the hologram.

"The actual word 'holography' or 'hologram' comes from *holos,* the Greek word for *whole,* and *gram,* meaning 'message' — so we have a whole or complete message. The main difference is that we are recording a lot more information than video, stills, etc.

"In all these methods we utilize an optic to focus this light wave that is traveling, even if it has three-dimensional information. But we focus this all down and flatten it to two-dimensional film. In the photographic process we are recording two things: varying intensities, light and dark; and their wave length, the color. In holography we record the third vital aspect of the light wave and that is space dimension. What enables us to do this is that lasers are used and the light is phase coherent. It is pure and cannot be filtered. Being familiar with the parameters of the medium, the cost is prohibitive for wide use. Holography can take many different forms and does not have to be

Continued on Page 939

(LEFT) Nearly 200 participants crowd the conference hall during the recent all-day Working Symposium of the Imagemaker's Art, sponsored in Miami, Florida, by Image Devices Incorporated. The session was a practical "hands-on" workshop in film and videotape techniques. (RIGHT) Academy Award-winning cinematographer, Haskell Wexler, ASC, uses one of his favorite devices, an umbrella light, to provide soft fill for a scene he is lighting by way of demonstration. He was one of several top professionals who were present to share their expertise.

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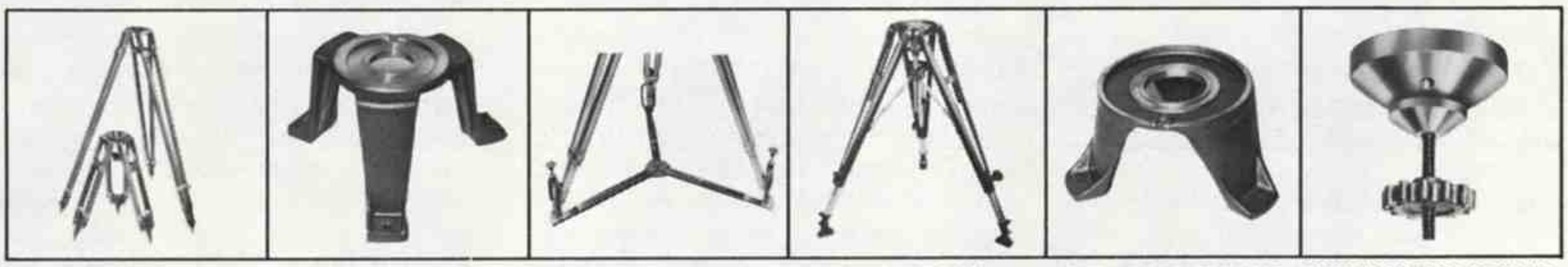

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THE CINEMATOGRAPHER AND THE THEATRICAL FEATURE FILM

A behind-the-scenes view of "Big-league" film-making, presented by one of Hollywood's most skilled and innovative cinematographers

By CONRAD HALL, ASC

(EDITOR'S NOTE: The following is excerpted from a talk given by Mr. Hall at the Ninth Motion Picture Seminar of the Northwest, held recently in Seattle, Washington.)

I got started in my present profession by going to school at the University of Southern California and studying film-making there. I didn't study cinematography specifically. I studied everything, as a matter of fact. When I got out of school I formed a company with several students and we worked in every category, making documentary films, commercials and TV films. Finally we found a story that we decided to make into a theatrical film. We bought it, wrote the screenplay, raised the money and, when it came time to go into production, we decided that we couldn't do it by committee any longer and that we would have to choose jobs. So we wrote "cameraman", "producer" and "director" on three slips of paper and put them into a hat and passed them around. Jack pulled out "producer" and my elder partner, Marv, pulled out "director" and I pulled out "cameraman" — and that's how I became a cameraman.

Once you get started doing something it's hard to go back and take another tack. The important thing is to start young and to want it as much as breathing. If you have those things in mind, you'll make it, I believe.

I wasn't here yesterday, but I understand that you had a demonstration of the STEADICAM. I was one of the first to use it on a feature, along with Haskell Wexler. I'd like to talk a little about that piece of equipment from the viewpoint of the cinematographer and how it will, perhaps, affect film-making in the future.

First of all, it's a marvelous piece of equipment and Garrett Brown has really done a good thing in designing it. Right now he's the only person I know of who knows how to use it, but as soon as there are enough of them for other people to try out and get familiar with, I'm sure that there will be many virtuoso people handling it.

One thing that could happen, as with any new piece of equipment, is that you could abuse it. I remember that when the zoom lens came out people were running it back and forth the full length and everything was zooming in and zooming out to the point where it became a wearisome technique. Soon they learned how to conceal the zoom effect so that the audience wouldn't be aware of it, and to use it as a "rubber" lens, so that just by turning a knob it was possible to slightly enlarge or tighten the composition, without having to move the camera.

The problem with the STEADICAM will be those film directors and cameramen who will want to use it as a virtuoso instrument to make "impossible" shots — equating the quality of a shot with the difficulty in making it. I've found that what usually happens in the making of these extraordinary shots is that the camera will start on an eyelash, draw back and follow somebody out and end up stepping into a helicopter and pulling back to infinity. It turns out to be a shot that will last for a whole reel of film — or five minutes or ten minutes — and when you see it in the projection room you are in awe of it. It's incredible! But it's probably not a good storytelling shot and they won't be able to use it in the film — in its original form, at least. Therefore, it will get chopped up and they will use the beginning of it and the middle (maybe) and the end of it, intercutting it with something else. Meanwhile, the time that it took to make that virtuoso shot will slow production down instead of speeding it up. In the final analysis, it would have been simpler to do it in three cuts, rather than in one impossible shot.

As I evaluate the STEADICAM, it will prove primarily valuable in terms of the stylistic fluidity it provides for following action. I made a picture with John Huston called "FAT CITY" and we discussed the visual approach to it in great detail before we started shooting. He felt that it should have a very real look to it and that we should be as unobtrusive as possible as film-makers. He felt that we should not think about master shots, closeups, corresponding over-the-shoulder angles and the other various techniques of structuring a sequence, but that we should follow the actors around as best we could, pushing in for a closeup as needed and drawing back at another moment to show the whole thing happening, without making any cuts. His theory was that if you did this with each sequence, all you would have to do would be to cut the slates out, put the sequences together, and you would have a completed film.

Naturally, that proved impossible to do, even though we tried our best to do it. Later the plan was aborted by the producer and we went back and shot a lot of closeups and got into an entirely different style of film-making. However, the STEADICAM would have been the ideal piece of equipment to make that technique work — to be unobtrusive, to follow people around without having to lay dolly tracks, to climb stairs with them, instead of having to use a crane. With the STEADICAM you simply walk with people and go wherever you want to. It's going to be marvelous, from that standpoint, and very much of a time-saver.

I'd like to talk a bit about the relationship between actors and cameramen. A film-maker here asked me how I liked working with "Method" actors, and I had to think a while to figure out who is a Method actor. Certainly Marlon Brando is a Method actor — I believe he invented the technique — and I've done several pictures with him and enjoyed working with him very much. However, for the most part, Method actors can present problems for cameramen, because they are often not cognizant of the mechanics of what's going on. They don't realize that there are certain areas where they are lit and certain marks according to which they are framed and positions where they are out of frame. They don't care about technical aspects of this sort. They are into their own thing and they don't pay any attention to these mechanical things, which sometimes are very, very important.

I thought one time of opening an acting school taught by cameramen. It would teach students how to act, while keeping in mind hitting marks and all the other things necessary to getting the best image on the screen. But it doesn't really make any difference whether actors know the technical aspects or not, because the cameraman has to work with what is out in front, and has to make do, and has to use his "rubber lenses" or "rubber lighting" or whatever techniques he can to adapt to whatever the performers are doing — because what they are doing out there is very, very difficult, and what you are doing is accommodating them.

Somebody asked me what my most difficult shot was. It's kind of hard to pick out just one and name it as the most difficult, but what comes to mind

is a shot I made in "MORITURI", which was a film that starred Marlon Brando and Yul Brynner. It was shot aboard a freighter off Catalina Island and in it there was a sequence in which the freighter meets a submarine at sea. We had a helicopter shot that started with people pouring out of the conning tower of the submarine and readying the gun for use. The helicopter then turned around, so that you saw the freighter in the background coming to a stop, with the submarine in the foreground. Then the camera in the helicopter concentrated on the captain of the freighter giving the command to halt all engines, coming up into a close-up at the rail, then dispatching someone to lower a lifeboat. The camera next followed the man who was taking the message to lower the lifeboats down three decks (in closeup) to a group of people standing near the lifeboats. As he gave the order, the camera raced along with another person who was taking information to give to someone else down in the bottom of the engine room. Then the camera swept around over the freighter and onto the submarine, which was flashing a signal in the background.

It was an incredible scene, which took three minutes and, luckily, it all ended up in the picture. One of the difficulties of it, besides working for the smoothness of the helicopter and the coordination of the ships and the zooming and all of that, was the fact that it was a night scene which we shot in the daytime. The way that I lit it was to take every piece of motion picture equipment and put it on the freighter — which was supposed to be ablaze with light — and we had literally 50 to 100 people standing by those lights and aiming them directly at the helicopter. They were all either lined up in the portholes or just standing on deck and by having them aimed directly at the helicopter and stopping down, I was able to produce a marvelous night effect. Those lights became the only thing you saw. You didn't see the stands or the people standing beside them, because they were underexposed so much that they were not visible. All you saw was the bright part of the light and it looked like practical lighting aboard ship.

The last film that I worked on was "THE MARATHON MAN" — a feature directed by John Schlesinger. It's a thriller — but the word "thriller" is an elusive term for a cinematographer. It's thrilling to watch, but not thrilling to shoot. It's very boring to shoot, as a matter of fact, because a thriller is made up of so many pieces. In order to maintain a certain suspense in showing somebody crossing a hallway, let's say, instead of just making a shot of him crossing the hallway, you show him coming out and looking one way — and that's one shot. Then he turns and looks the other way — and that's another shot. What he sees down at one end of the hall is a third shot and what he sees at the other end is a fourth shot. That's four shots so far. Then you have a longer shot of him going across the hallway and when he gets to the other side there is a noise and he has to look back again — and on and on. In the end, you've made eight or ten shots just to get a guy across a hallway, and that's very boring.

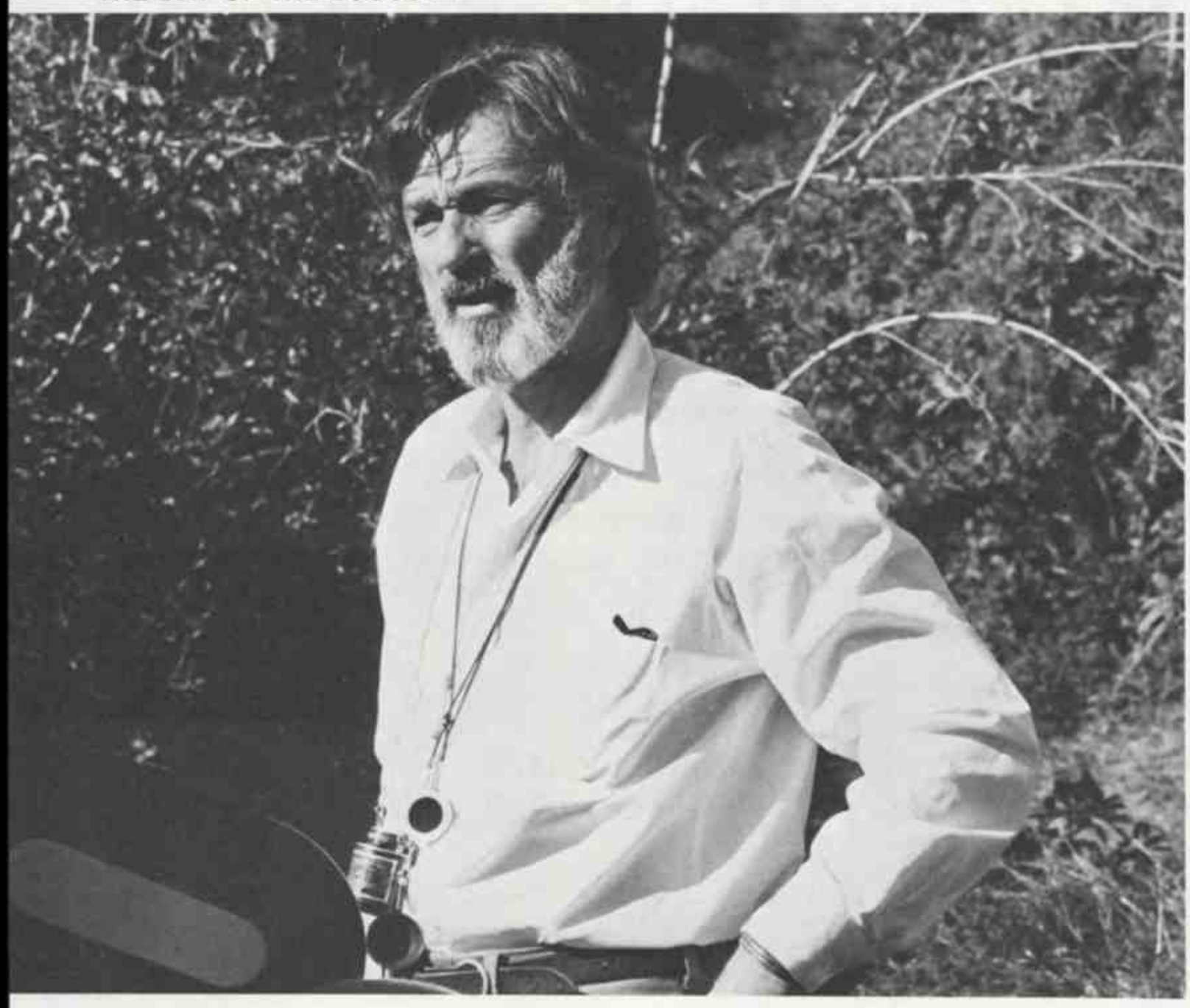
But I think "THE MARATHON MAN" will be a very thrilling picture to watch. John Schlesinger is a marvelous director to work with and a great filmmaker, so I'm sure it will be a very exciting film. I was at a sort of crossroad in my film career while shooting it. I hadn't worked for a while, because I had been trying to get a project going to direct and it hadn't worked out. So I took this assignment, but something on it didn't congeal for me and I'm not sure just exactly what it was. I couldn't get a photographic style pinned down and John and I were both sort of scrounging around, trying to figure out what to do with the picture stylistically. He did have ideas, but he wasn't able to help too much — and I wasn't able to help at all. I think it probably had something to do with the fact that a thriller is not about the truth, but that it's a manufactured kind of film. We were both people who were used to some kind of truth or other to deal with. Even though a picture is meant to be entertainment, if it has truth enough that you can get hold of and care enough about, then you can get the artistic hang of it.

We weren't able to do that throughout the entire filming. I was trying fog filters and low contrast filters and I was flashing and not flashing and using the STEADICAM and doing all kinds of things. It's a hodge-podge of every kind of technique that you can think of, and not a good, solidified stylistic approach at all.

During the shooting of the picture, I don't think I showed a lot of interest in it, somehow or other, and John thought that I should direct a film before I photographed another one. So now I've decided to do that. I've given up cinematography for a year and I'm taking the time to do it. I've formed a company with another cinematographer, Haskell Wexler, and we're doing commercials to kind of keep body and soul together, while trying to get a bunch of projects going that I've been working on for a long time — writing scripts, and that sort of thing.

Continued on Page 900

Winner of the "Best Cinematography" Academy Award for his photography of "BUTCH CASSIDY AND THE SUNDANCE KID", Conrad Hall, ASC, never hesitates to gamble on unusual, and sometimes controversial, techniques. His versatility is reflected in diverse visual styles ranging from the raw realism of "FAT CITY" to the golden-hazed fantasy of "THE DAY OF THE LOCUST".



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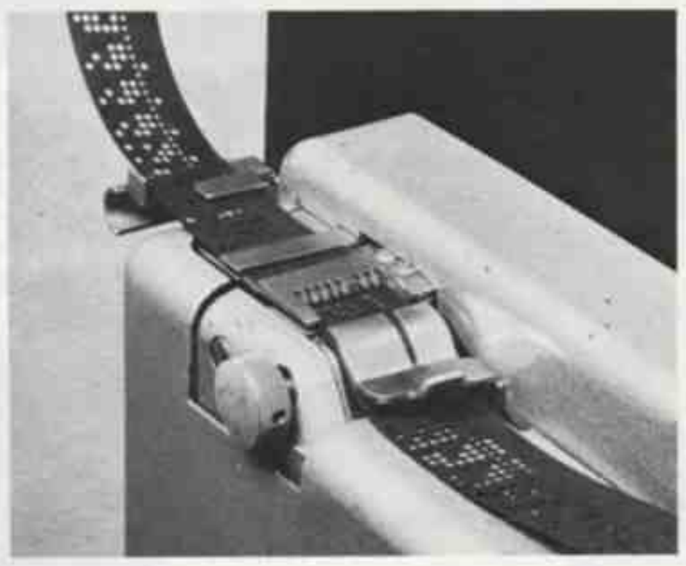

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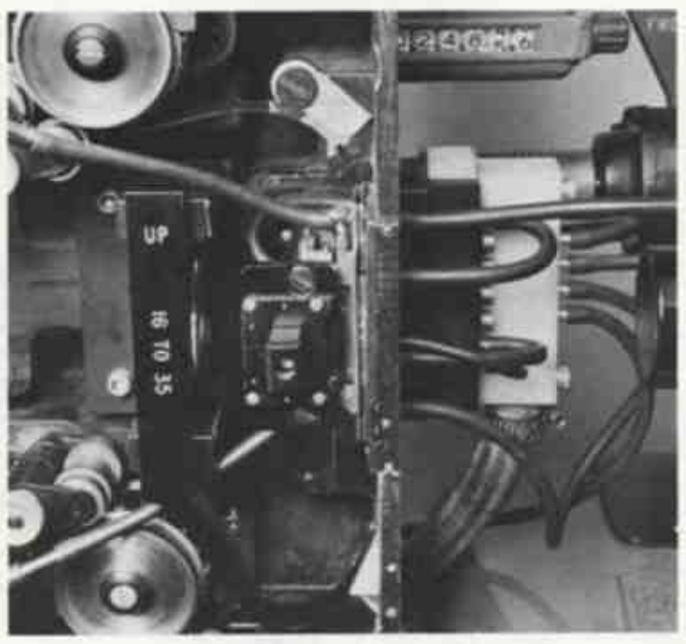
Benefit Two: faster service. Because it's all in-house, we can schedule every step whenever we choose—day or night. And our blowup machines are used *only* for blowups (not for titles, etc.). So they're always set up, ready to go.

Liquid Gate

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



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

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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

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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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FILMING "DAWN FLIGHT"
Continued from Page 871

wrote it into the screenplay months before.

All the freefall photography I had ever seen had skydivers as the subject. Now I wanted to use a stable camera platform named John Randall for a different purpose. John took a break from his duties as soundman and put on his helmet camera and parachute.

He rode up in the Cessna tow plane, and at 5,500 feet the red pilot released his glider from the tow rope. The Cessna circled around behind the glider and came abreast. John turned on his helmet camera and jumped. The towplane pilot immediately made a hard turn to get offstage and away from the glider. As John fell away from the sailplane, he made what was essentially a dolly shot. But the dolly moved straight down at 120mph.

The shot works. On the screen the red ship moves up and away as if invisible wires were pulling it right into orbit.

The Flier on the Ground

The Flier comes out of his spin only ten feet above the ground, or so editing makes it seem. Covered with sweat, he makes the worst landing ever filmed without actually destroying an aircraft. Beaten and furious, The Flier climbs out of the cockpit, hurls his parachute back in, slams the canopy, and stalks into his hangar.

At this point in the story, we wanted to give our audience a look at a side of The Flier they had not seen yet.

We needed a set, a room that The Flier had made for himself right in the hangar. Brian, Claire, and I were the set builders. We constructed a sixteen-foot cube in a corner of the hangar. We put a door in it and went to work inside. Claire swung a paintbrush and courted death high above the floor. I foraged all over Northern California for props. We filled the room with gliders — drawings of gliders, glider parts, pictures of gliders on the walls and on The Flier's refrigerator, glider books, glider plans, glider toys, models of gliders with wingspans from twelve inches to twelve feet.

We constructed the living quarters of a madman.

One entire wall of the cube was removable. In a second wall there were detachable panels to walk through with a camera. We lit the set with Colortran 1K's Mini-Pros, and shower curtain to diffuse the fill. We generally lit to an f/3.5 or f/4.5 stop, making the effective tungsten ASA of the 7247 a half-stop higher than Eastman says it is. With normal development, our skin tones and shadow detail were beautiful.

We hired an actor to play the part of The Flier's friend and tow pilot, a fellow who comes into The Flier's room to find out what the problem is. We rehearsed the actors for days, getting movements and tones of voice down perfect. Our photographic coverage of the dialogue between The Flier and his friend was expensive and thorough.

Months later, after I had cut the dialogue sequence and honed it fine, we all decided that the sequence did not enhance our story. In fact, it detracted from a certain purity that the picture was developing.

We threw the whole dialogue sequence out.

But one shot in the set turned out to be vital.

A 1961 Ford Crane

For this shot, we wanted the camera to have total freedom to move through all three dimensions of The Flier's space. The answer: remove one wall of the cube and use a Chapman Crane. The reality: remove one wall of the cube and build our own crane.

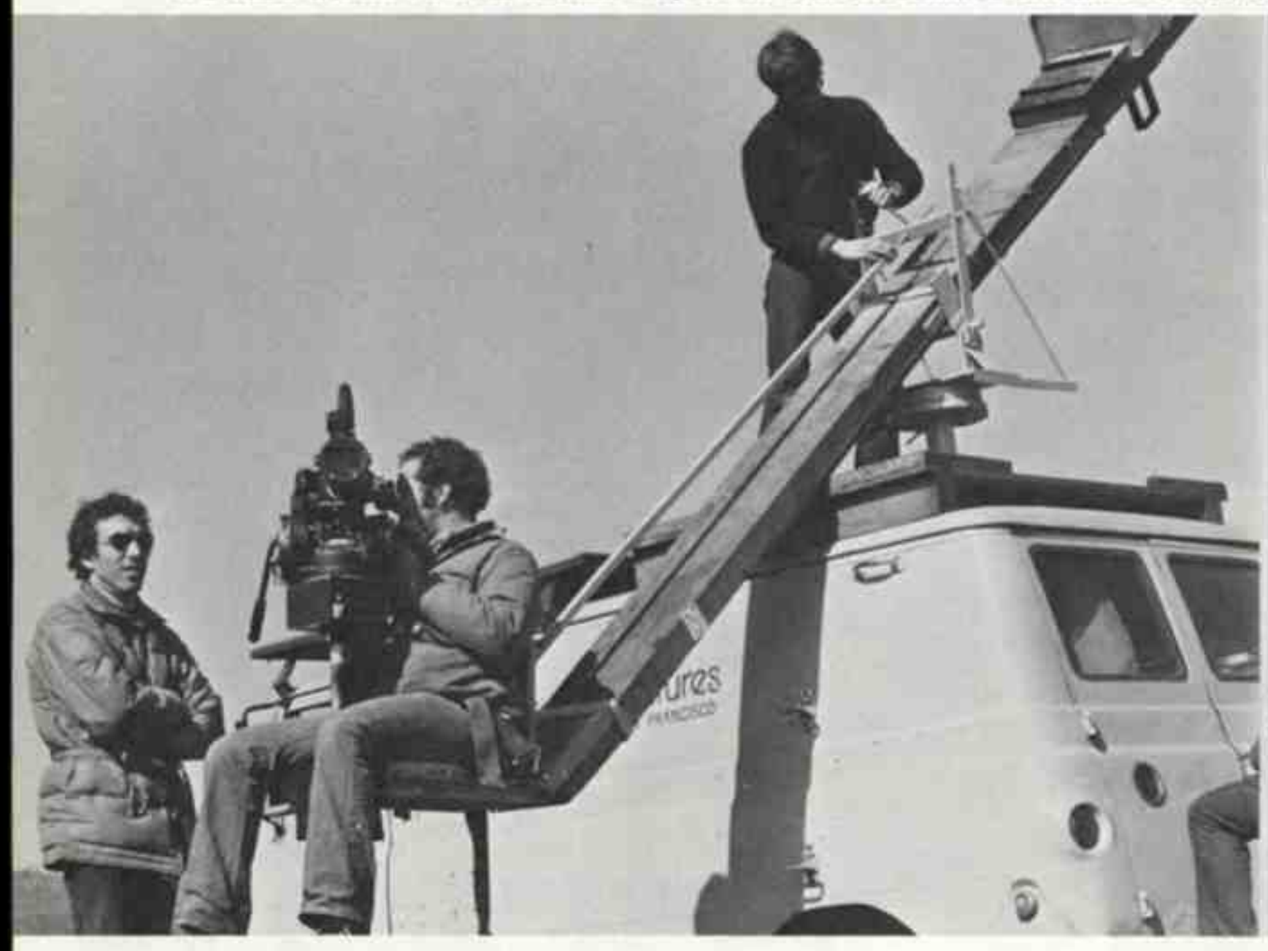
Before production began, Brian built a crane.

He installed a strong steel shaft in his Ford van. It rested on the floor over the rear axle and went up through the roof. On top of the shaft, a foot-and-a-half above the roof, he installed an old Chevy wheel whose axle went down into the shaft and whose lug nuts pointed straight up. On top of the wheel Brian bolted an iron cradle he'd made. Into the cradle fitted a twenty-five-foot, 4 x 12 wooden beam which had been lying behind the hangar. The cradle let the beam act like a teeter-totter, and the wheel made it possible to swing the whole works from side to side. With a chair/unipod combination at one end of the beam and a small barrel of water for ballast at the other end, we were ready to go.

We backed the van with the teeter-totter on its roof into the hangar. The beam was pointed straight back from the van through the missing wall of the set. Brian strapped himself into the chair and put the Arri-BL on the unipod. John manned the other end of the beam. The balance was just right, and John could lift and swing Brian easily. With a few people rolling the van back and forth, John could put Brian and the camera anywhere in the set, at any altitude.

After the terrible landing, The Flier stomps into his hangar. We dissolve to

Detail shots of the substitute for a Chapman crane built by Brian especially for the film. He installed a strong steel shaft in his 1961 Ford van. It rested on the floor over the rear axle and went up through the roof. He also installed an old Chevrolet wheel whose axle went down into the shaft and whose lug nuts pointed straight up. On top of it he bolted an iron cradle he had made, into which fitted a twenty-five-foot 4 x 12 wooden beam. With a chair/unipod at one end and a small barrel of water for ballast, the rig worked perfectly.



a day-for-night exterior of the hangar. With the old dialogue sequence on the cutting room floor, our crane gives the audience its first look at The Flier's living quarters.

The room's lighting results in a night-time effect, but we can clearly see the space an obsession has built. The Flier is nowhere in sight. Then the camera starts to fly slowly and smoothly up through the room. We glide past the huge model sailplane hanging from the ceiling. Now we see something new. A fuselage, twenty-five feet long, is poking through the upper part of one wall. It has no wings, tail or canopy, but it is definitely a real sailplane fuselage. The camera continues to climb, and we start to peek down into the cockpit.

We see The Flier.

The old fuselage is his bed. He has removed the seats in the cockpit and has a light switch and an old-fashioned alarm clock neatly placed in a bulkhead. His blankets are tucked cozily around him. He lies on his back and stares into space as we slowly zoom in to a tight closeup.

One shot on the crane says as much about The Flier as we need to know.

John Randall in the front of the Schweizer 2-33 camera plane swoops over Denis Arndt to photograph The Phantom's point-of-view. Randall's multiple talents were invaluable to the production. He served as production assistant, soundman, crane operator and aerial cameraman, besides taking a 6000-foot free-fall leap with a helmet-mounted K-100 camera in order to photograph a point-of-view shot of a sailplane soaring suddenly upward.

A Challenge to The Flier

We dissolve from the closeup of The Flier to a dawn sequence where he lovingly studies his sailplane as if he is seeing it for the first time. Later, in full daylight, he walks to the mountaintop to watch other sailplanes and sort out his thoughts.

Then the red sailplane attacks him.

I'm glad I covered that first pass for two reasons. The footage has the authority only a two-shot can give. Also, the remote camera on the tail had one of its rare malfunctions. It chewed its film to shreds.

When The Flier picks himself up from the ground, his fury becomes the turning point of the plot. He climbs a pinnacle and stands still as the red sailplane comes at him once more. There is no dialogue here, but through Denis' acting we know The Flier's thoughts: "If I don't run, you can't chase me. Either cut me in half or leave me alone."

On the screen it looks as if the red sailplane *is* going to cut The Flier in half. There is nothing too exotic about the way we got this effect. We simply put the camera fifty feet away from Denis and used a long focal length lens. Denis' back is to the camera, and an imaginary line drawn from the camera through Denis' shoulder and out to the approaching sailplane would have been as straight as a ruler. The foreshortening provided by the long camera-to-subject distance makes the scene look very dangerous as the glider arrows in on Denis. But it was so much safer than the first pass that Denis was not even tempted to flinch. The ship cleared his head by an easy fifteen feet. (See cover photograph.)

The Cameraman Who Wasn't There

The Flier has stood his ground against his adversary. He immediately takes to the air to do battle. Again, the mystery pilot slips up behind him.

Brian and I both believe in the honesty of a two-shot, and we needed a special one to emphasize the reappearance of the red glider. Brian vanished into his shop and came up with a remote-controlled panning machine made out of light aluminum stock and spare electrical gizmos.

Brian mounted the panning machine about five feet out from the fuselage, on top of the right wing of The Flier's yellow ship. He put an N-9 gun camera on his creation and pointed it at the glider's tail.

The two gliders went aloft on a double tow. They released, and the red ship circled around and came up behind the yellow one. The red pilot keyed his mike to signal Denis that he was in position.

Denis flipped a switch and the camera rolled, getting a side shot of the yellow tail with the red sailplane snuggled up on the other side of it. After counting to four, Denis hit another switch and the machine started a smooth pan. Brian had already set the arc and speed of the pan before the flight. The move ended with a nicely composed side shot of Denis in the cockpit and the green earth far below. Denis never had to sneak glances at the camera to see when the pan was finished. Instead, a microswitch lit a red light on the instrument panel which said: "ACT!" Denis then reacted to the red sailplane and put his own ship into a dive. We used the first take.

And the final dogfight had begun.

The Final Dogfight

The approach we used to get good aerial photography turned out to be quite efficient.

First, we knew what we wanted. The script was very specific. Using it as a foundation, we could effectively add improvisation.

We had a deal with our pilots. We told them what we wanted to see, without putting any creative restraints on ourselves. Then they told us if it was possible and if it was reasonably safe. Our pilots were beyond belief. George Bernstein, Barry Jacobsen, and Ken Couche were all Skysailing Airport instructors, pros with thousands of hours in their logbooks. Their flying was calm, precise and immaculate. They all had a fine story sense, and we used a lot of their suggestions.

Continued on Page 924

CONRAD HALL, ASC
Continued from Page 895

QUESTION: What was it like to shoot a film on location before that became the popular thing to do?

HALL: "THE WILD SEED", which I photographed for Universal in 1962, was a feature that was shot entirely on location, except for a couple of boxcar scenes which we shot on a set in the studio. Shooting on location is what I was weaned on. I started as a documentary film-maker and never had a set to work with at all. Something I had to learn how to do was create the illusion of reality on a studio set. It was very simple for me to go out and shoot in a real location, but very difficult to work on a studio set and take out two walls and make the rest of it have a reality. I discovered that's what I had to learn. Shooting on location was easy for me.

QUESTION: I thought "FAT CITY" was a beautiful job of photography. Can you tell me about the lighting you used on it?

HALL: Yes. We wanted a natural light look for "FAT CITY". It was a story about how your life can run down the toilet before you have a chance to plug up the drain, and John Huston wanted it to have a very real look. A lot of it was shot on location and I tried to light it in such a way that it wouldn't look lighted, but rather as if we took advantage of whatever lighted existed there. Oftentimes we did just that. For example, the opening scene in which Stacy Keach wakes up and starts looking for a match to light his cigarette and then decides to put on his clothes and go out and get a match — one of my favorite scenes of all time — that shot was not lighted. It was just pushed one stop. I shot it at f/2.8 and used the natural light coming into the room. We often did that, and where we couldn't shoot that way we augmented the natural light so as to make it photographic. There is a careful balance that you have to hit in order to achieve that natural light effect.

QUESTION: What do you prefer in the way of film stocks?

HALL: I like black and white, but nobody else does. I thought that maybe black and white would have a resurgence as soon as everybody in the world had bought a color TV set, because I believe the main reason that black and white went out of favor was the industry trying to sell color TV sets. The trouble is that it stayed out so long that now, if you bring it back, people think it looks funny. They're not accustomed to it. But to me it's just like reading a book; you provide the color. You read the book and the grass is green and the water is blue, because all of this is being painted in your mind. Black and white photography doesn't bother me cerebrally or at the gut level. But when you do a sea picture in color, for example, the water in one scene will be dark blue, while in the next cut it will be light blue — and that bothers me. It wouldn't be that way in black and white.

QUESTION: Do you have a favorite camera/lens combination that you prefer to use?

HALL: No. Sometimes you find that a zoom lens — 25mm-to-250mm or 20mm-to-100mm — is the only lens you will need for a picture, and I've often made pictures where that was the only lens, because I had no need of anything else. At other times, you find that it's better to work with fixed focal length lenses because of the speed and all that kind of thing. It's all there to be used and you have to know it all and use whatever is best when the time comes. ■

JAMES PAUL FREEMAN

1944 – 1976

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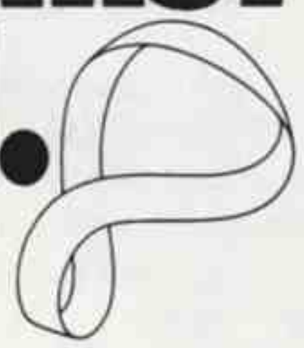

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SUSTAINING SMPTE MEMBER

At the Height of Surf and Sky

By CHARLES CHAMPLIN
Arts Editor, Los Angeles Times

A few weeks ago, early on one of those rare crystal mornings that seem to verify all the promises of California life, I drove down the coast to Laguna Beach to spend the day with a young, gifted, dedicated, successful and hugely likable team of film-makers.

Greg MacGillivray and Jim Freeman had most famously done the aerial photography for "Jonathan Livingston Seagull" — the bird's-eye view of birds on the wing that brought most of us as close as we'll ever get to knowing what it is like to fly.

Their work, the distillation of more than 280 hours in the air in helicopters and of tens of thousands of feet of film, was the heart and soul of the movie, and it caught the author's lyrical intentions perfectly.

A year or so ago, Greg and Jim went to the mountains of Greece and shot the astonishing hang-gliding sequences for "The Skyriders", a fairly routine action adventure starring James Coburn and pleasantly forgettable except for the aerial work, which could be seen to be as unfaked and dangerous and thrilling as it really was.

The two of them began, not really knowing it was a beginning, as high school surfers, members of that uniquely California army of the sun-bronzed and able-bodied. Independently, they started taking movies of surfing, home-made stuff on Super-8 at first and then into 16mm, and they met as film-makers with a common interest.

★

Like the skiers Warren Miller and John Jay and their fellow surfer, Bruce Brown, they took to the lecture circuit, showing their spectacular footages (wipe-outs a specialty) in person, in high school gyms, civic auditoriums and church basements.

Now as then, the monumental waves and the monumental spills are amazing to watch, but from the outset those were not all. Greg and Jim caught as well the humor and the particular camaraderie of the surfer life-style, the freemasonry, so to speak, of a world-ranging quest for adventure.

The film-making itself became the adventure for them, and they received wide attention and acclaim for "Catch the Joy", a brief and rhapsodic celebration of dune-buggying. "Catch the Joy" (the title taken also for a documentary KCET did on Greg and Jim four years ago) carried what were already the hallmarks of their style — a capturing of the poetic and visual beauty inherent in bold and vigorous physical action, and a quickened feeling for the surprise and grandeur of the landscape newly and unfamiliarly seen from the skies or, in rapturous slow-motion, from the earth.

Jean Renoir once said that what made the Impressionists possible was paint in tubes, which freed the artists to take their canvases to the light instead of having to remember it in the studio.

JAMES PAUL FREEMAN
June 10, 1944 — June 22, 1976

The new technologies of faster films, lenses, camera actions, lighter, more sensitive gear and vibrationless helicopter camera mounts have opened comparable vistas for film-makers, and MacGillivray and Freeman, building their own production facility in an ornate old castle-like oceanside mansion, took full advantage. They sang San Francisco and skateboarding with equal eloquence.

On the day I went to chat with them earlier this spring, they had moved their staff, including the young women who have been sharing their lives and their work for years, to a larger house just above the South Coast Highway.

★

The small, personal and prosperous firm is world-famous. They showed me a brilliant, three-screen film, which they made for one performance only, to introduce a new Mazda at a dealers' convention in Las Vegas. The car (which you never really saw) seemed to be taxiing down a runway and soaring off for a sky tour of the West. If Henry Ford himself had been in the audience, he would have rushed to buy.

They were just then finishing the latest project, a film in the large-imaged IMAX system (first used at Expo in Montreal) commissioned for the opening of the Smithsonian's new aviation museum, scheduled by a sad irony for last night.

Greg and some of the MacGillivray-Freeman staff and family went back to Washington earlier in the week for the premiere. Jim Freeman, who had more and more become the aerial expert in the team, went to Bishop with two ad men from New York to scout some mountain-shooting locations for a commercial.

And it was there, in the rugged canyons with their treacherous air currents, that the law of averages in a life lived at the close edge of danger caught up with Jim, who along with one of the ad men died in the crash late Tuesday of a helicopter deep in the wilderness.

He was still only 32 and looked an eager 22, and it is impossible not to feel a terrible dismay at the loss and to speculate on all he had yet to do, not least the feature-length story movies he and Greg had planned as their next venture. By way of consolation, it is possible to say that the amount of time a man has matters less than what he did with it. It is hard to imagine anyone cramming more excitement and achievement into 32 years, and there is much to be said for having had, at the swift and unexpected end, further dreams intact and waiting. ■

(EDITOR'S NOTE: The foregoing has been reprinted by permission from the June 25, 1976 issue of the Los Angeles Times. Copyright, 1976, Los Angeles Times. To Mr. Champlin's beautiful tribute we can add only our own expression of deepest sorrow at the loss of a fabulous film-maker and dear friend. HERB A. LIGHTMAN)

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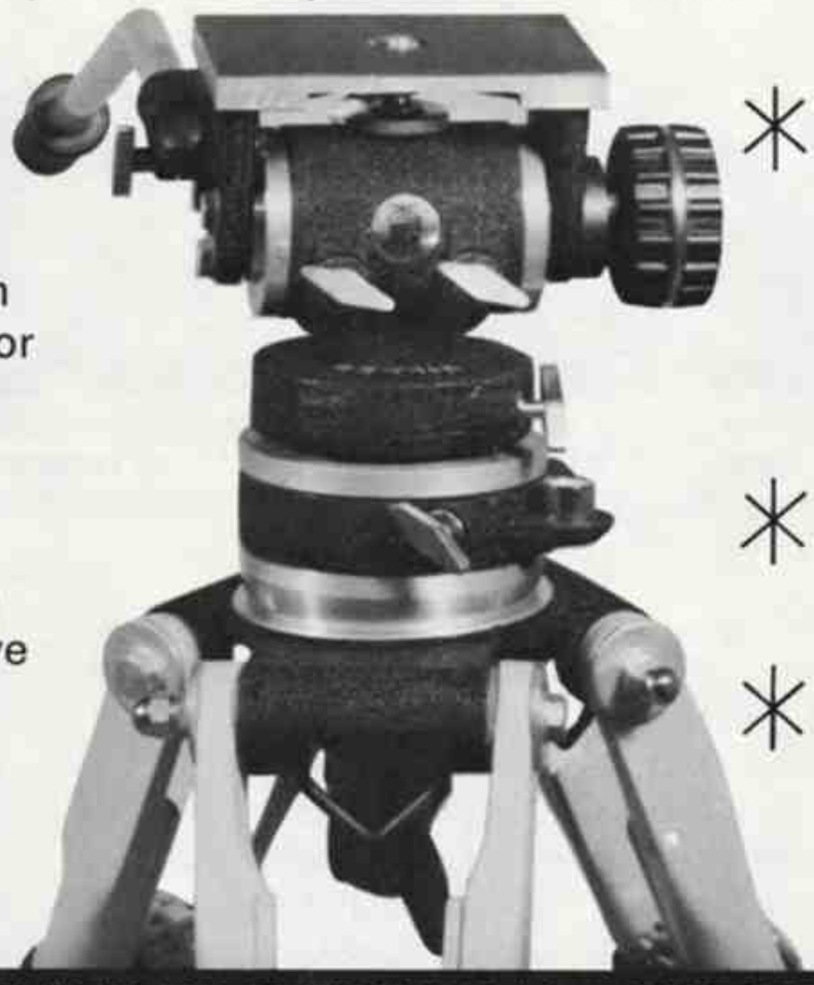

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(LEFT) Marty surveys the terrain in preparation for filming with Photo-Sonics Actionmaster camera (behind which stands Arriflex 16BL camera) with 1000mm lens mounted. The combination of high-speed camera and long telephoto lens is standard equipment for cinematographers who specialize in wildlife subject matter. (RIGHT) Mark shoots with the Photo-Sonics camera, with 385mm lens mounted.

FILM OR VIDEO?
Continued from Page 873

fectly stationary camera recording the exact same shot (focal length, f-stop, film emulsion, etc.) on each occasion. Our goal was a series of shots so well registered that no frame line shift would be noticeable.

As a solution to our problem, we had constructed ½" steel plates upon which the camera would be mounted. For stabilization, the plates were affixed with 4' — 1"x1" steel legs which would be pounded approximately 3½' into the ground. The machined bolt holes and bolts allowed for no "play" in the position of the camera upon the plate. The plates were then carefully positioned in each of the 6 locations to frame a shot that would both stand on its own and also allow for the entrance of John into the last shot. Barring the threat of earth freezing and shifting the position of the mount, or general harassment, we felt confident that we had devised the most efficient means by which to record a time-lapse scenic.

Clocking well over 500 miles on one of our 4-wheel-drive trucks, we shot from each location approximately 25 times, recording all conditions of weather and all degrees of seasonal changes.

The camera used was our 16mm Arriflex "BL", chosen for its flat, rigid base plate. The lens used was an Angenieux 12-120mm. Actually, a "hard" lens would have been more exact; however, due to consistently shooting at 12mm, we felt that the lens would yield a registered image. Our film stock, all of the same emulsion, was Eastman Commercial 7252, chosen for its tight grain pattern and excellent results we have experienced in shooting literally hundreds of thousands of feet in the past on a variety of wildlife and wilderness subjects.

We had filmed in Alaska the previous Summer using 7247 negative experimentally and were pleased with both the quality and exposure latitude of the film. We considered using this film for our shooting of this project also, but ruled out the possibility because we wanted to shoot in reversal so we could preview the original prior to workprinting. Many people will say that this should not be done, but we have been doing it for over five years and, to date, have not scratched one inch of film. The trick is to use a viewing system that is very gentle on film and that has been proven not to scratch film. We have chosen the small Moviscop for this purpose. By previewing our original, we have cut our workprinting cost, which can be phenomenal, by 80%.

A careful log was kept of all the shots recorded and camera settings chosen. Following a great deal of work and patience, the time had come to reveal the finished product.

The results were a perfectly registered series of shots rendered from each location. Thus, we learned how to shoot time lapses. We had only to incorporate John into the final shot of each sequence and our project would be complete.

We were next requested to provide several shots of different animals in the snow. These shots, we were told, would serve as "bumpers" to cushion the transition leading out of the program and into each commercial. In searching for this material, which had been shot previously that year, we came across a sequence that sparked great interest in everyone's mind. It dealt with

Continued on Page 913

Although the Stouffers had filmed in Alaska the previous summer using the then-new Eastman 7247 color negative and had been pleased with both its quality and exposure latitude, they selected the 7252 (ECO) reversal emulsion for filming the John Denver show, so that they could preview the original prior to workprinting and, thus, save considerably on the budget.

(ABOVE) John Denver romps before the camera with half-grown Grizzly bear belonging to the Stouffers. The brothers had acquired the critter two years before when he was only three weeks old, and personally raised him. (BELOW LEFT) Denver "ski-bobbing" with local children. (CENTER) David Huie helps one of the children, as Denver awaits the "go" signal. (RIGHT) Marty fords a stream, while back-packing the camera and trailing the tripod in the water to ease the weight problem.

(LEFT) A bug-eyed little tree squirrel peers cautiously out from his haven in the trunk of a tree. (CENTER) The majestic American Bald Eagle, official symbol of the United States, is now on the endangered species list. (RIGHT) Marty carries the Arriflex at-the-ready, back-packed on one of three rigs he designed involving the Cine 60 Snap-lock quick-release base. (BELOW LEFT) The flying squirrel soars through the air. (CENTER) A Bobcat gets his exercise chasing a Snowshoe Hare. (RIGHT) He gives up on the Hare and decides to fish for trout in the stream.

BEHIND THE SCENES OF "MOHAMMAD - THE MESSENGER OF GOD"

Five years of preparation, two years of filming and a budget exceeding $17,000,000 come together to tell the story of the unseen Moslem Prophet

By DAVID SAMUELSON

If there was ever a case where the British earned their title, "Film-makers to the World", the filming of "MOHAMMAD — THE MESSENGER OF GOD" was a perfect example. Here was a multi-million-dollar project, one of the largest for many years, financed entirely by Arab oil money, filmed in Morocco and Libya and crewed, equipped, processed and post-produced in Britain. In lieu of a prosperous, indigenously financed industry, it is a way of making films for the International Market at which we have become world leaders.

British Cinematographer Jack Hildyard (Academy Award winner for "BRIDGE ON THE RIVER KWAI") was Director of Photography. He had two full camera crews with him and among the many other British technicians was his brother David (Academy Award winner for Sound on "FIDDLER ON THE ROOF") who was the recordist. These two form almost a unique combination, each bending over backwards to give the other the maximum opportunity for optimum quality.

"MOHAMMAD — THE MESSENGER OF GOD" was a vast project. It involved re-creating Mecca as it was in the 6th Century A.D., many battle sequences involving thousands upon thousands of extras, real-life modern politics between nations which did or did not want the film made and religious sensitivities in which all agreed that the central figure of the film, Mohammad, must not be portrayed on the screen.

To photograph a spectacular in the desert has been a long-cherished ambition of Jack Hildyard's. Having photographed "BRIDGE ON THE RIVER KWAI" with great success, he was promised David Lean's next epic "LAWRENCE OF ARABIA", but while that picture was in preparation was offered "CLEOPATRA" when Elizabeth Taylor and "CLEOPATRA" were British-based.

He checked out with Sam Spiegel, the Producer of "LAWRENCE", who assured him that there was time for him to do both pictures. In Jack's own words, "That's where I came unstuck". "CLEOPATRA" dragged on; Elizabeth Taylor got pneumonia; the picture was moved to Italy, many parts were re-cast and the vast sets rebuilt. Finally the Director was changed and Jack was off the picture. Meanwhile "LAWRENCE" had started, with Freddie Young as Director of Photography. The rest of the David Lean-Freddie Young partnership has become cinema history, Jack didn't even get a credit for his contribution to "CLEOPATRA" and the late Leon Shamroy, ASC, picked up the Academy Award.

Upon Jack's return to England after his very lengthy stint of working on "MOHAMMAD", I had the pleasure of interviewing him, as follows:

QUESTION: Jack, for how long was "MOHAMMAD" actually shooting?

HILDYARD: Overall, a year plus — not continuous shooting, but actual time.

QUESTION: Was that longer than the schedule of "BRIDGE ON THE RIVER KWAI"?

HILDYARD: Yes. On "KWAI" I was 11 months in Ceylon, but "MOHAMMAD" took considerably longer, considering the preliminary work, which started in February, 1974. We were in Morocco until August, 1974, when we had to move to another country, Libya, where we arrived in September, '74. We continued in Libya until May of '75 — so it was really 16 months of work.

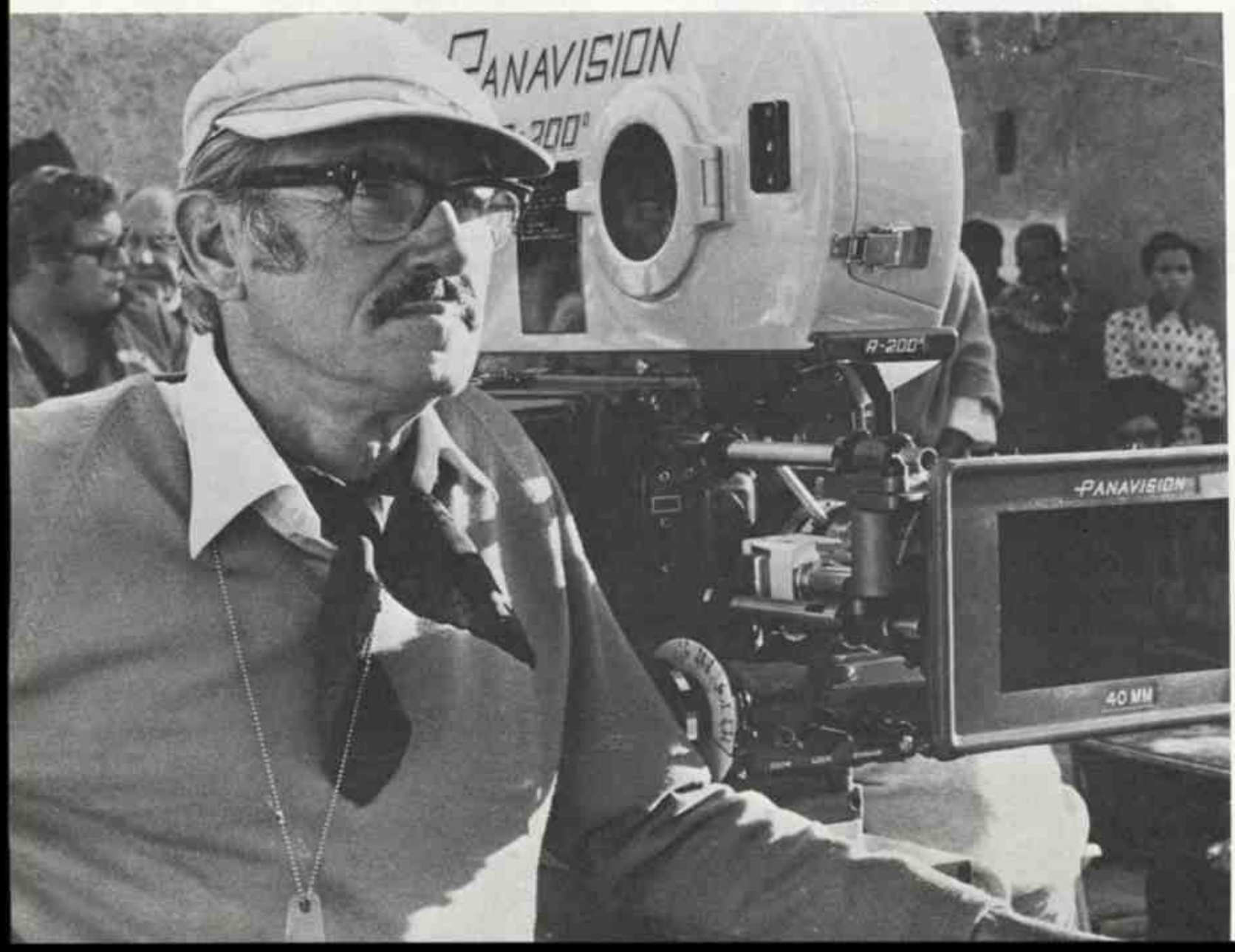
QUESTION: The biggest picture you have ever worked on — and with a cast of thousands?

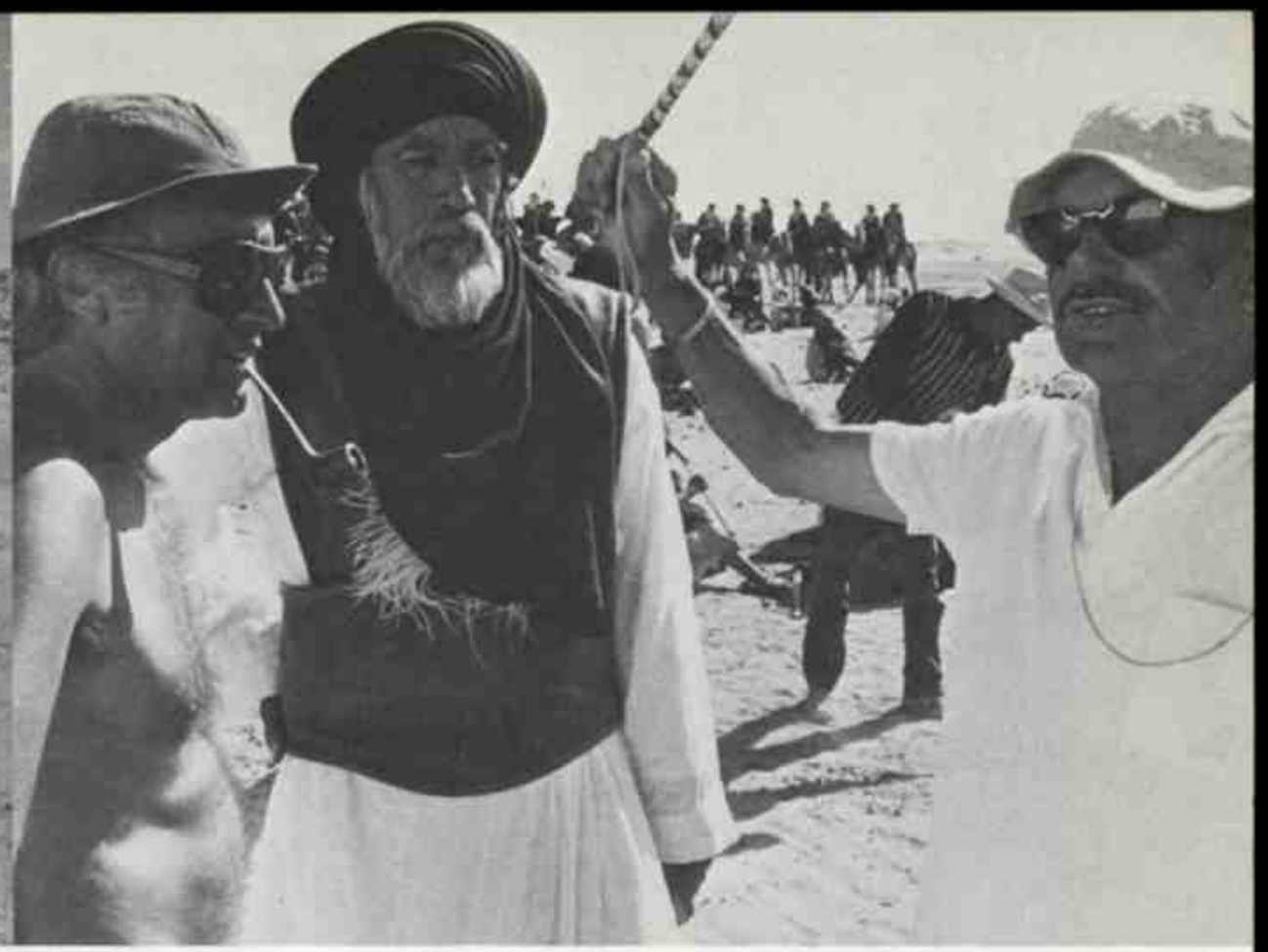
HILDYARD: Of course, "KWAI" was a very big picture, but we had no enormous cast of people, except for the soldiers, who were not as numerous as the people in "MOHAMMAD", where we sometimes had three or four thousand people at one time.

QUESTION: You shot two separate language versions simultaneously, did you not?

HILDYARD: We did an English-speaking version and an Arabic-speaking version with an entirely different cast of actors and actresses. Anthony Quinn, Irene Papas and Michael Ansara were the three leads in the English version. The equivalent Arabic-speaking parts were played by very well-known actors — Egyptians, main-

"MOHAMMAD" Director of Photography Jack Hildyard, BSC, winner of the 1957 "Best Cinematography" Academy Award for David Lean's "BRIDGE ON THE RIVER KWAI", was committed to the film for more than a year in desert areas of Morocco and Libya. The film was originally budgeted at $8,000,000, with a six-month shooting schedule, but both budget and schedule were more than doubled, due to rigors of shooting and political difficulties.





(LEFT) Illuminating the dazzling desert with artificial light would seem like "carrying coals to Newcastle", but the very intensity of the raw sunlight made necessary the use of Brute arcs and multi-lights to provide adequately balanced fill. (RIGHT) Producer/director Moustapha Akkad, star of the film Anthony Quinn and Jack Hildyard discuss an upcoming scene. Contrary to popular supposition, Quinn does not play the title role, but rather, Mohammad's uncle and powerful defender, Hamza, the "Lion of God".

ly — of the same professional stature in the Arab world as the people we were using in the English version.

QUESTION: What camera crews did you have?

HILDYARD: We had two full camera crews and I was occasionally able to use an extra camera if I needed it, by using one or two from each crew to man an Arriflex in some strategic position without impairing the work of the others. For example, it was necessary to use three cameras in the filming of battle sequences, etc.

QUESTION: What was your principle equipment?

HILDYARD: I had two Panavision R-200's, a full range of anamorphic lenses — up to 1000mm, which I used quite often — and 10-to-1 and 6-to-1 zooms. There was a full complement of lenses for all cameras.

QUESTION: Any fast lenses?

HILDYARD: No — none faster than the normal anamorphic lenses, because you must remember that the light was almost always really too much, so that I was invariably using 85N3 or 85N6 filters on the camera to get the stop down to a workable opening. I normally like to work at f/11 or f/12.5, not much more, so I usually had to bring it down with a neutral density combined with the 85 filter. There were also occasions when I used a pola-screen for special effect — day-for-night shooting, for instance — combined with maybe an 81EF or just plain 85. This was really the basis of the type of photography I was doing.

QUESTION: And what lighting did you have?

HILDYARD: My main sources were four Brutes, plus a half-dozen minilights and a number of smaller quartz lights. One of my favorite sources of illumination consisted of plain white-painted reflectors, rather than the silver types one normally uses. I would sometimes have as many as 20 of these surrounding a big scene and they saved me from a lot of problems with Brutes and other lamps. I like the effect of the soft fill from this type of reflector, as opposed to a hard lamp or reflector source.

QUESTION: One of the main problems in shooting the picture was that you could not show Mohammad himself. How did you get around this?

HILDYARD: There was a lot of discussion on that point before we started shooting. You could not, of course, show Mohammad — mainly for religious reasons — and so the Director, Moustapha Akkad, and I talked it over and decided to make the camera Mohammad at all times, with any actor who was addressing Mohammad actually playing to the lens. I did a test with this idea in mind and we found that if the actor looked directly into the lens, this would mean that every person viewing the film would feel that he was Mohammad. This, obviously, we did not want, so I suggested that the eyeline should be just above the lens. I had a little light fitted onto each camera and this was the point that everybody played and looked to when they were addressing Mohammad. He makes a

A furious battle develops at the wells of Badr between the Moslem followers of Mohammad and the armies of Mecca. "MOHAMMAD — THE MESSENGER OF GOD" includes several such battles, involving up to 5,000 extras, all specially costumed for the film. Most of these battle sequences were filmed in the Libyan desert, after political pressures forced withdrawal of the company from Morocco.

lot of movements in the picture — walks about and sits down and stands up — and so we did this with the camera. I think it really did work very well.

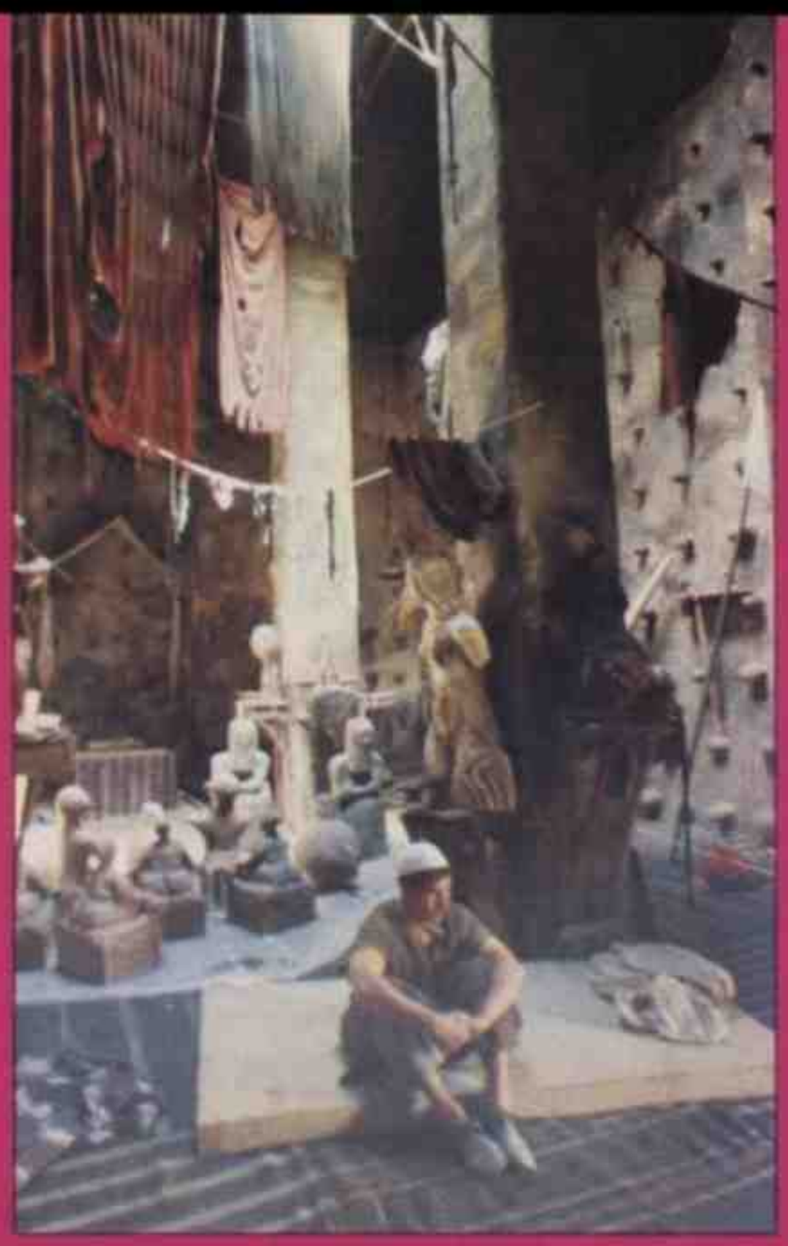
QUESTION: What happens when Mohammad is not there?

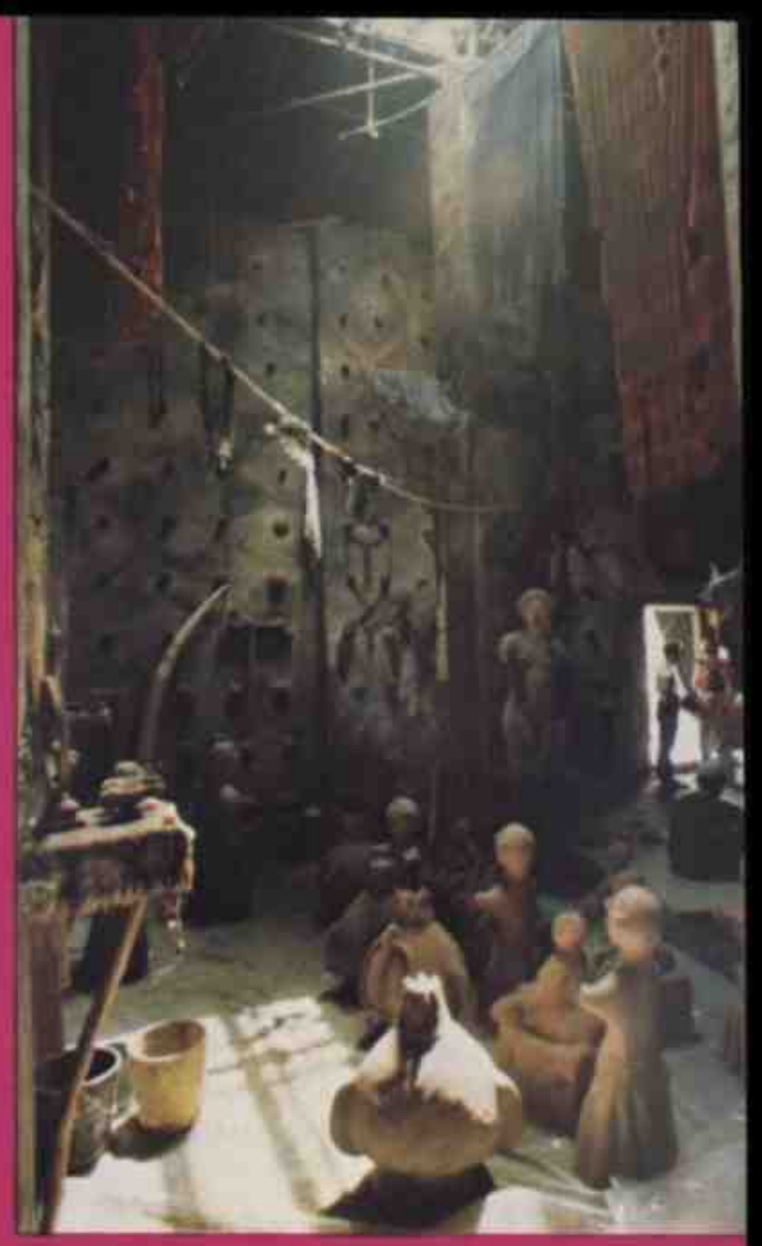
HILDYARD: When Mohammad is not there the camera becomes "normal", but this is very obvious and the audience is never confused.

QUESTION: Do we ever hear Mohammad speak

HILDYARD: No — and for the same reasons, but if he were asked a question, one of his close associates would answer for him. This was written into the dialogue very cleverly and it never appears that you should have heard Mohammad when you didn't.

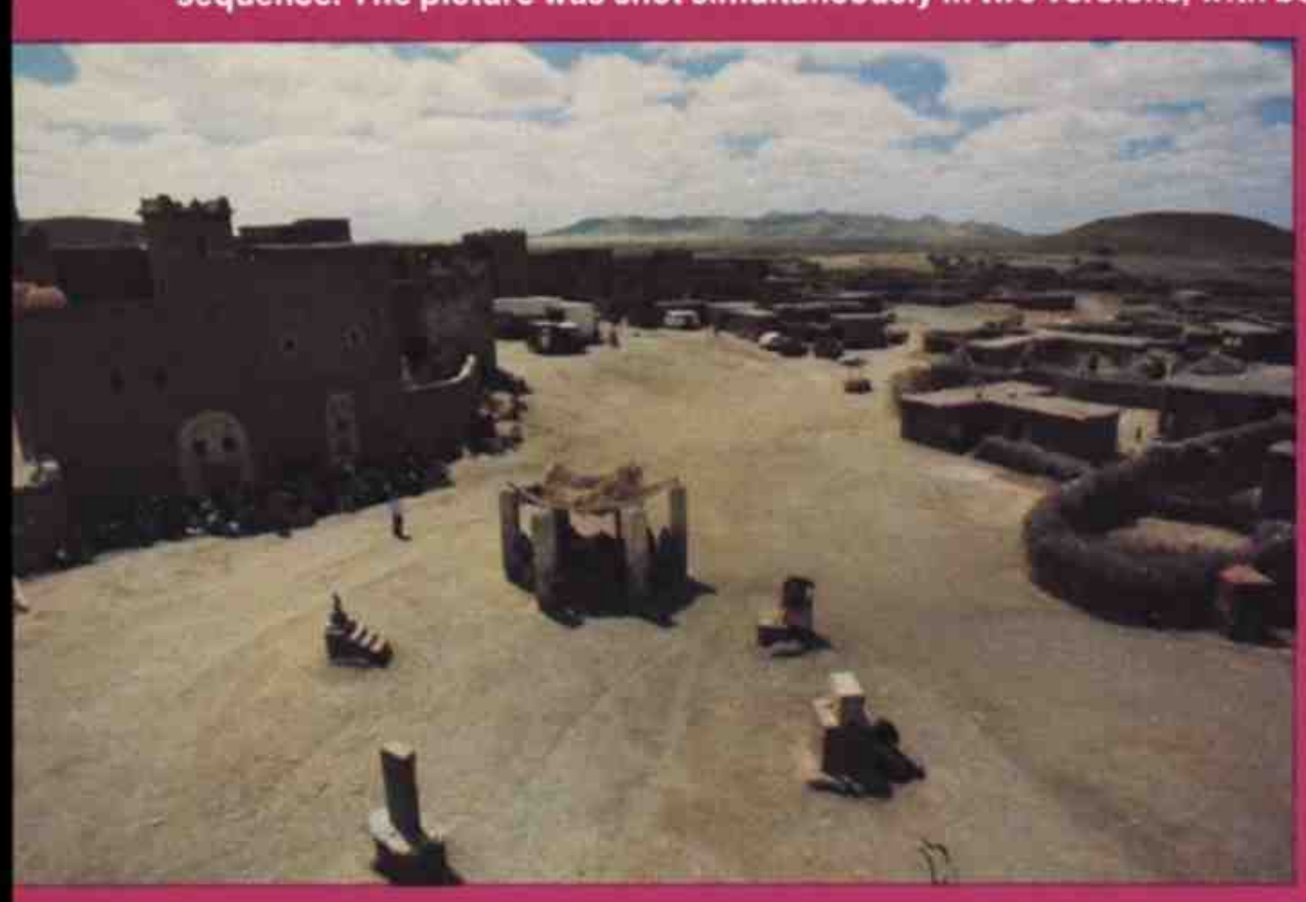
QUESTION: Did Mohammad ever look around, and did you then do a quick pan?

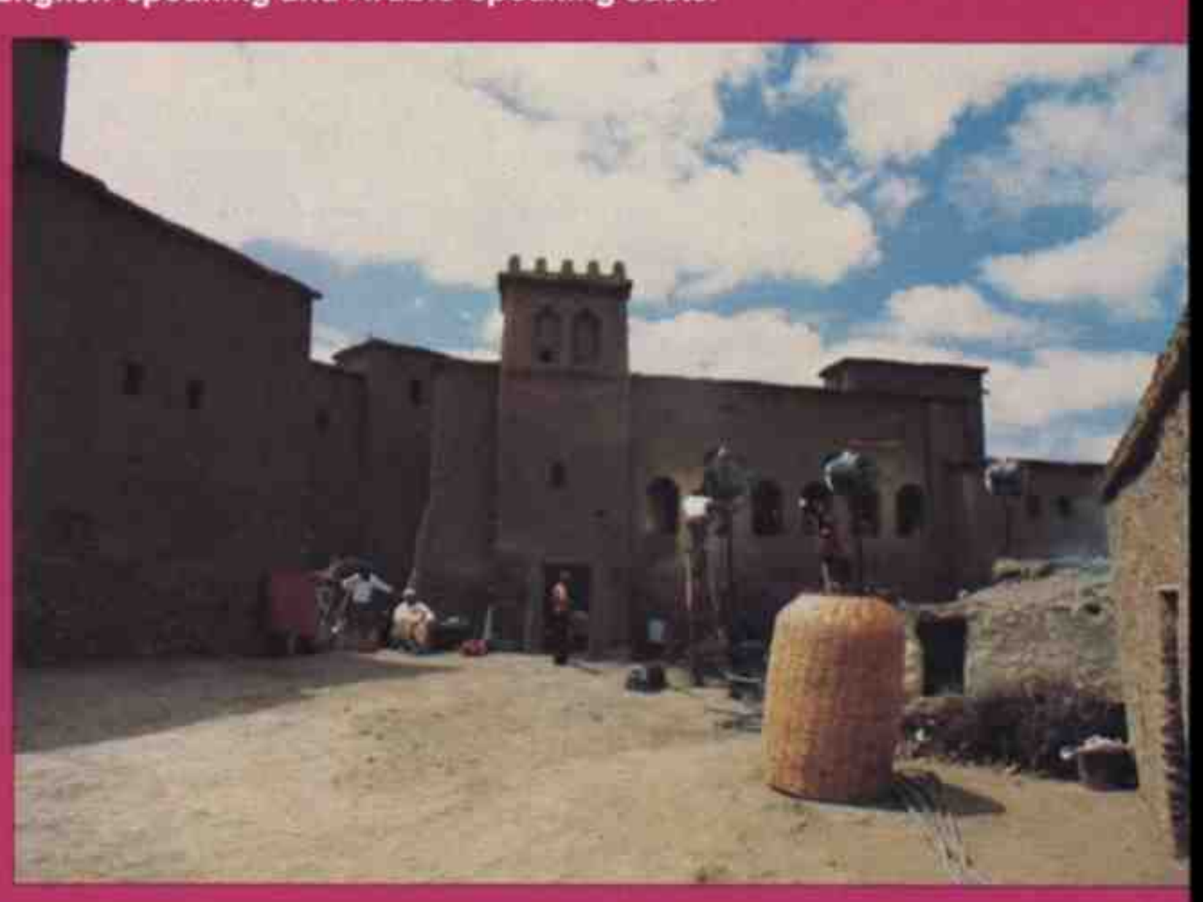




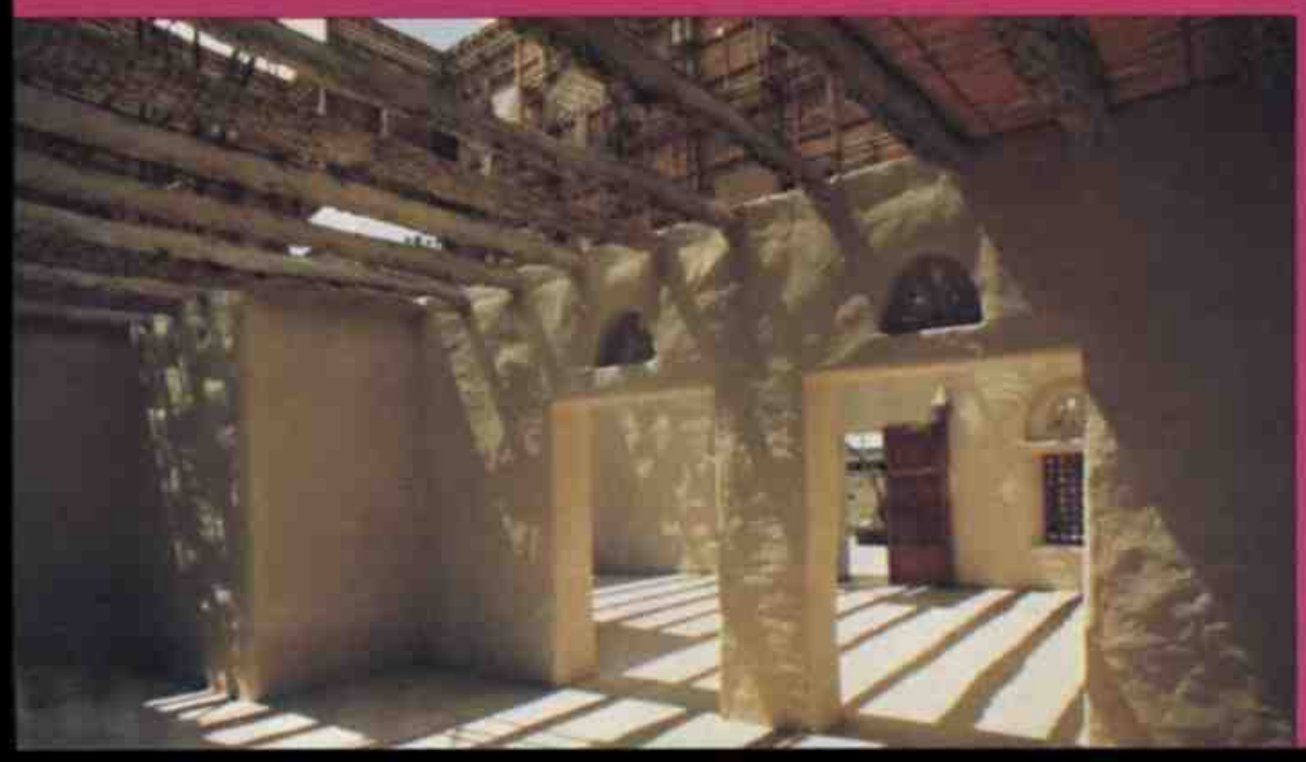
Interior views of the sacred Ka'aba, re-created on location in Morocco. The figures shown represent pagan idols that were worshiped by followers of the religion that prevailed prior to the arrival of Mohammad, with his concept of one God. American Production Designer Tambi Larsen researched this structure most carefully, but had to do it from a distance, since non-Moslems are prohibited from entering the holy city of Mecca.

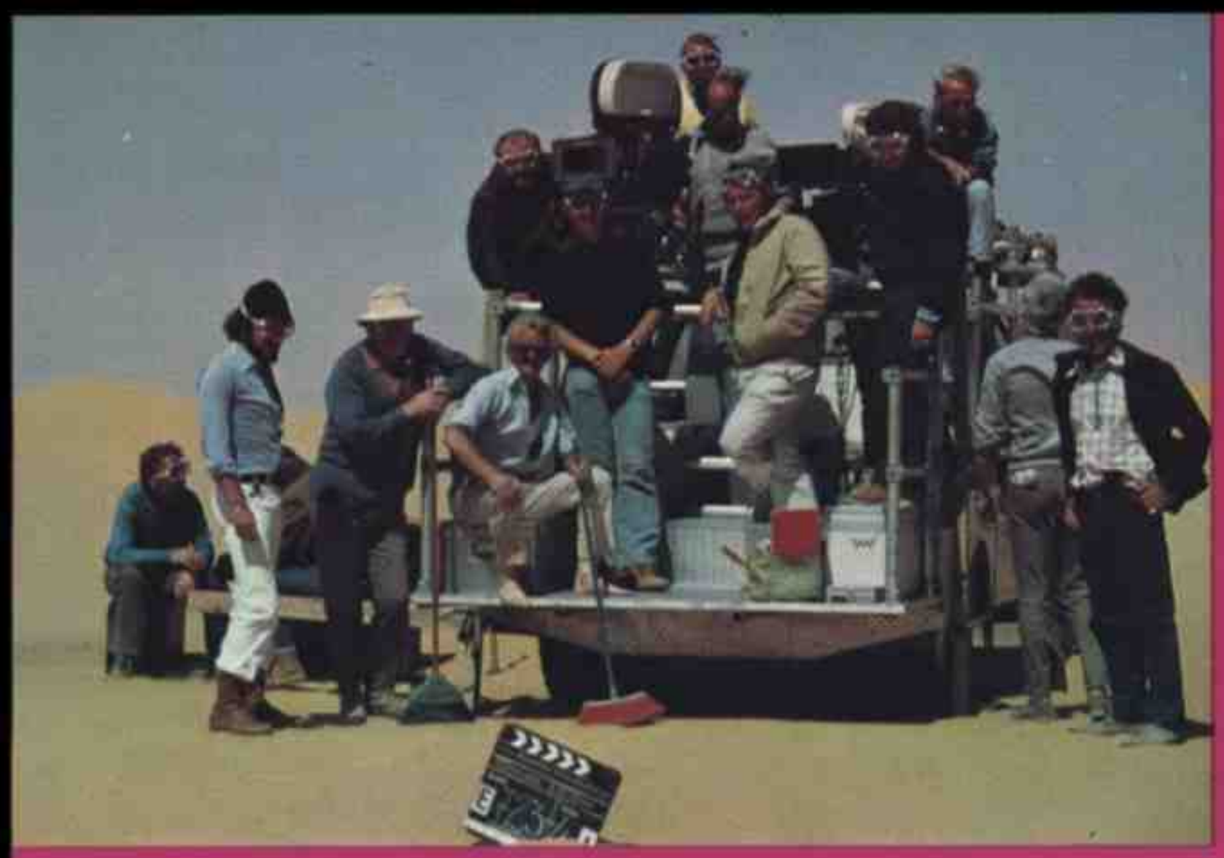
(LEFT) The view from the top of the Ka'aba, showing 6th-Century Mecca, as recreated in the Moroccan desert 15 miles outside of Marrakech. The movie Mecca was built over the substructure of an existing village, where its 600 inhabitants continued to live during the filming. Construction of the 30-acre set took six months. (RIGHT) Brute arcs are beamed into one of the Mecca structures during the filming of a sequence. The picture was shot simultaneously in two versions, with both English-speaking and Arabic-speaking casts.



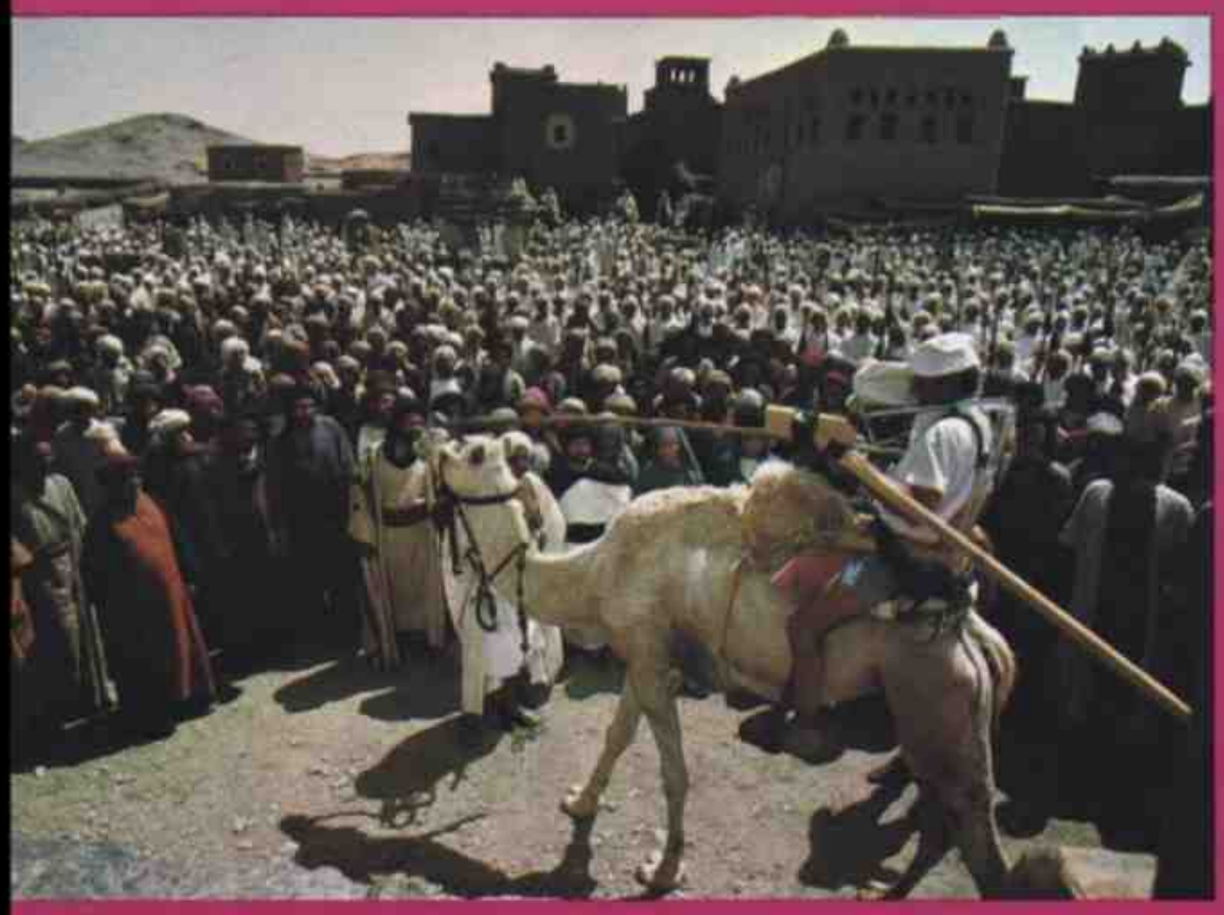


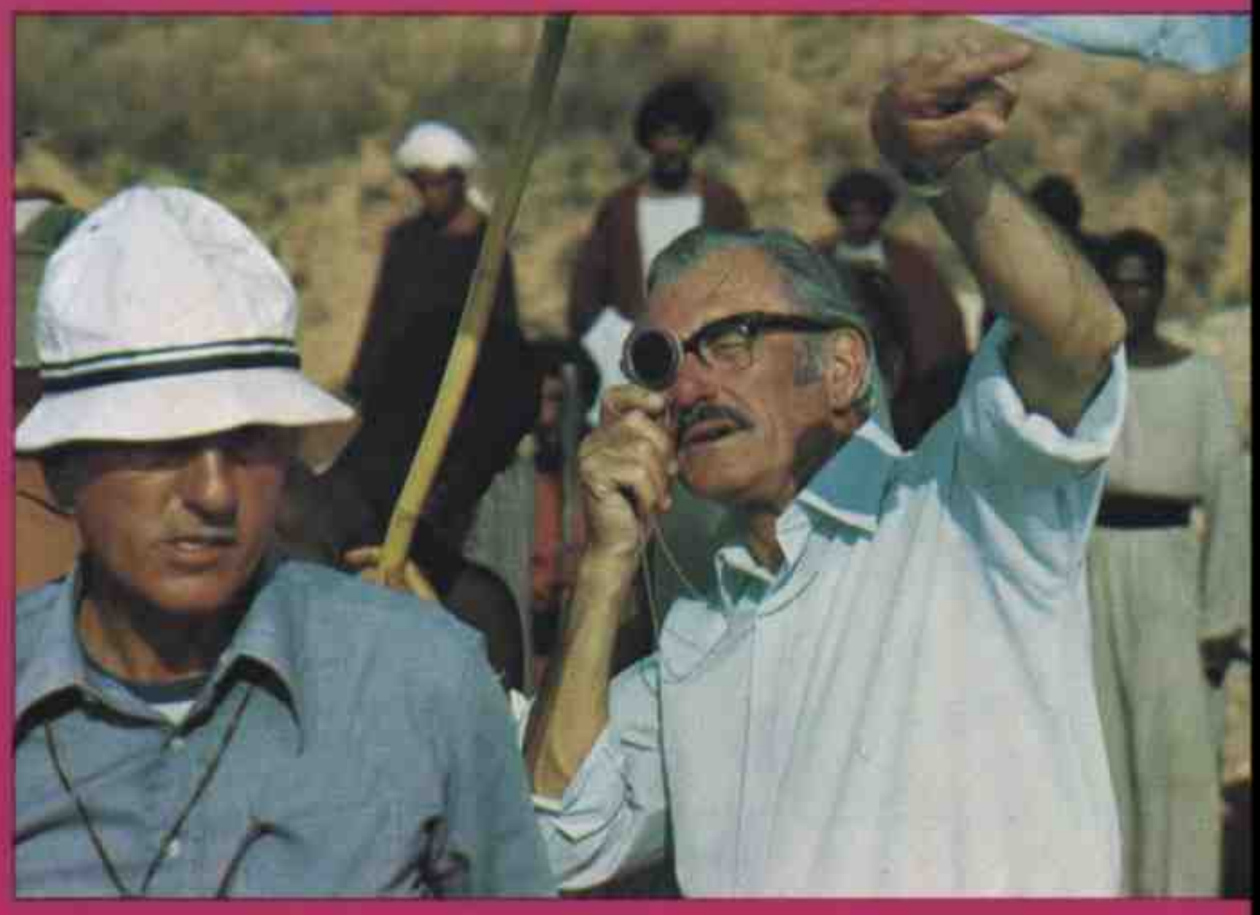
(LEFT) In addition to its vast exterior, the Mecca set also included a dozen interior rooms, courtyards and gardens used for shooting, some of them looking out on the Ka'aba and marketplace, with 4,000 extras in the background. (RIGHT) The reverse side of one of the false Mecca fronts reveals a foundation of tubular steel scaffolding, 250,000 feet of which were rented from all over Europe. A basic cadre of 12 British construction experts trained 308 local workers to build Mecca. It had to be dismantled after the shooting and this chore took nine weeks.

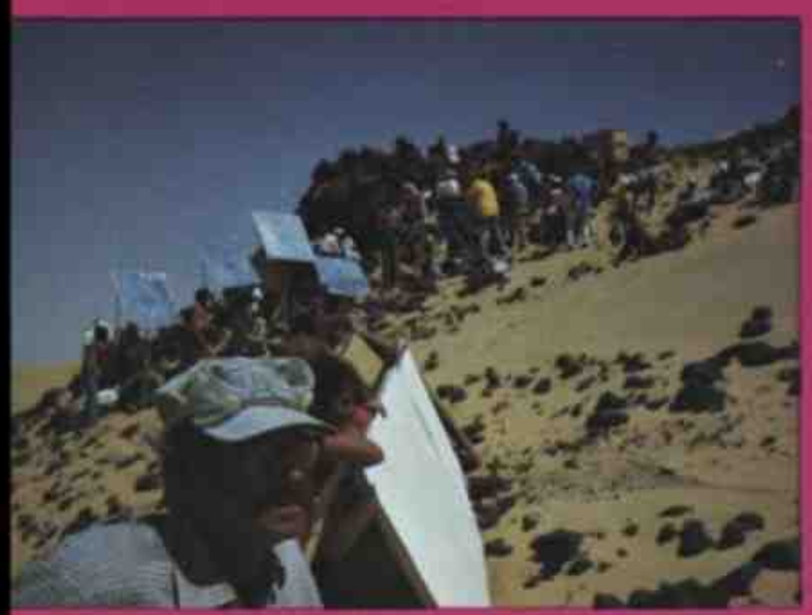




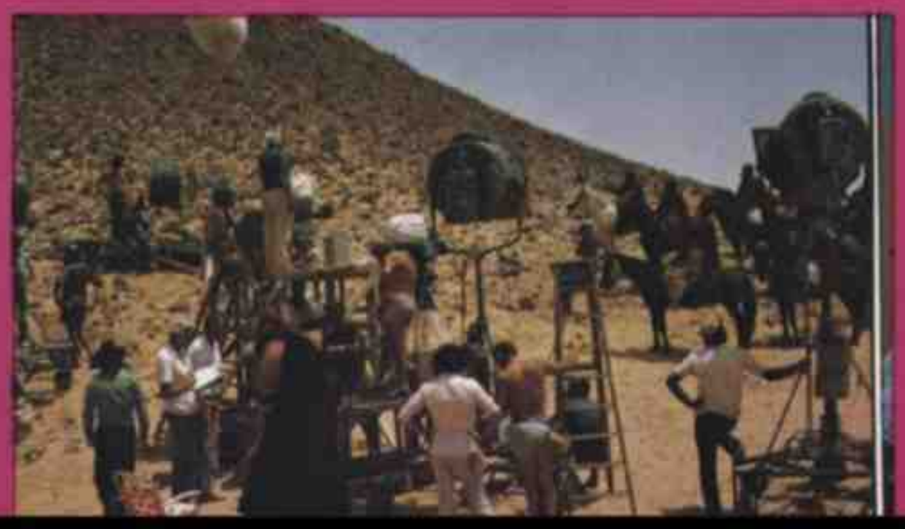
(LEFT) No mad dogs, but a full crew of Englishmen go out in the midday sun to have their picture taken on the Libyan desert during filming. (RIGHT) The proverbial "cast of thousands" gathers for a scene outside the Ka'aba. The structure was 15 meters long, 10 meters wide and 10 meters high and was covered by a tapestry specially woven to ancient designs in Tangier. (BELOW LEFT) Mounted on the oddest dolly in the world, camera operator shots a "camel's eye view" of the crowd. (RIGHT) Akkad waits while Hildyard checks the light.

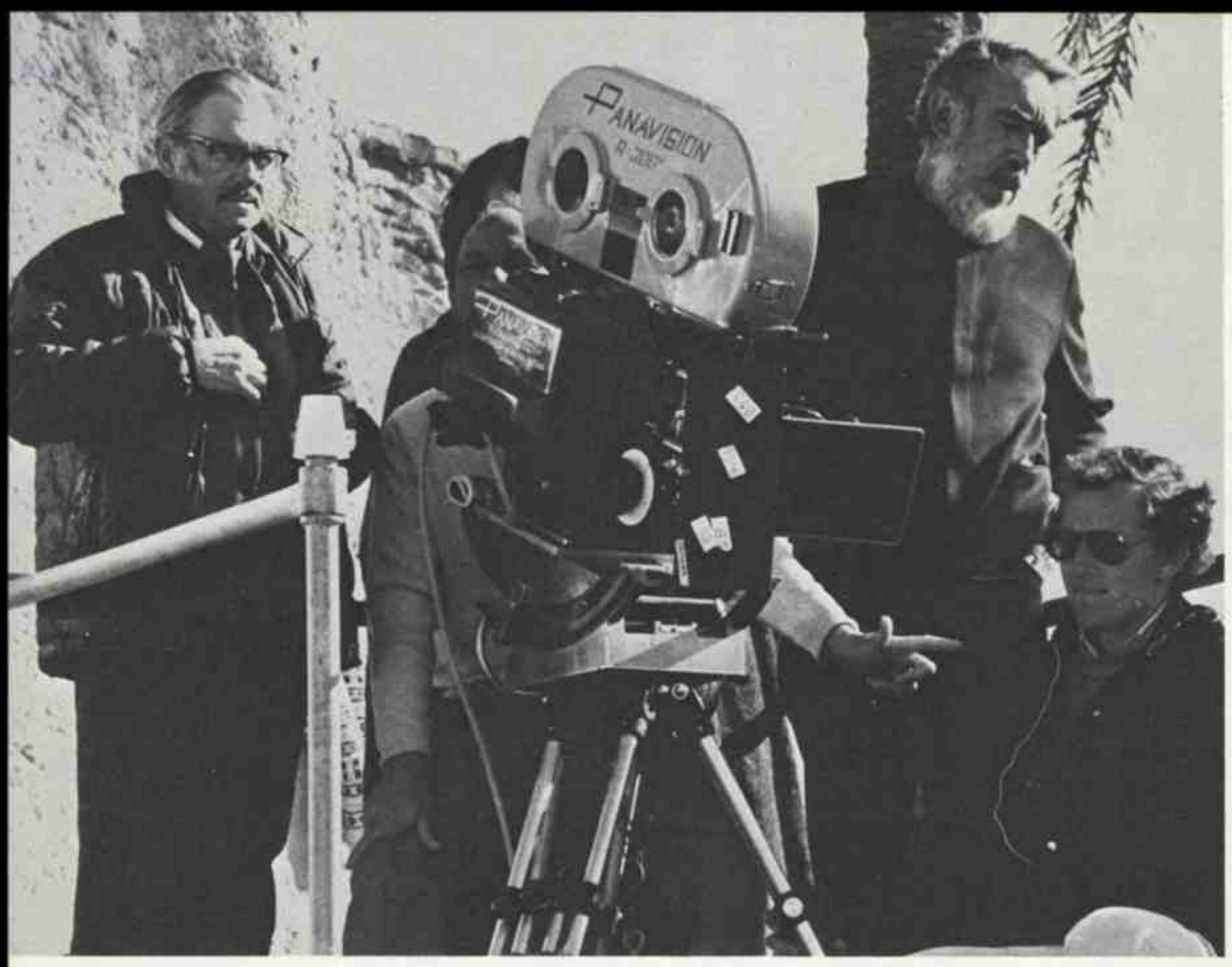






Filming of "MOHAMMAD" involved not only the hardships caused by sun and sand, but religious strictures, as well. At no time could the figure, or even the shadow, of Mohammad be shown. This is in accordance with the strict rules of the Moslem religion forbidding the making of icons or religious images. Neither was the Prophet's cousin and staunch follower, Ali, shown. Instead, only his famed double-bladed sword was seen in closeup, participating in battles and present at important points of the story.





The Panavision R-200 camera was used throughout the filming of "MOHAMMAD" and proved to be amazingly resistant to the powder-fine dust of the desert that filtered into everything else, most annoyingly the pan and tilt heads where it was impossible to keep it out of the gearing, the heads had to be cleaned every night and sometimes, if one seized up, it was necessary to change heads during a day's shooting.

HILDYARD: Yes, there were occasions when this was the case. There was one scene, I remember, in which a character is trying to address Mohammad, who doesn't want to listen. He turns and walks away. This we portrayed by panning the camera and tracking. The man follows after, appealing and trying to talk to him, but he just leaves the man. This was a sort of simulated rebuff, and it worked very well.

QUESTION: Working with two sets of actors, which language version did you shoot first?

HILDYARD: This varied a lot, depending entirely upon the particular scene. For instance, if we had a scene involving just the main characters, it didn't matter a bit which version was shot first. Mind you, they didn't always do exactly the same things, obviously, because the Arabic dialogue runs much longer than the equivalent English. When we had scenes with vast crowds of people, none of whom understood English, we found it better to shoot the Arabic version first, so that they all knew what the scene was about when we came to the English version.

QUESTION: Did the second set of actors watch the action of the first set, so that they could duplicate the movements as nearly as possible?

HILDYARD: Very seldom — unless they just happened to be on the set at the time. The Arabic dialogue needed more movement. Also, one actor might find it impossible to play a scene standing up, so he would want to sit down. All these situations I had to contend with, as did the Director, but basically we tried to keep it more or less the same in order to save time and money.

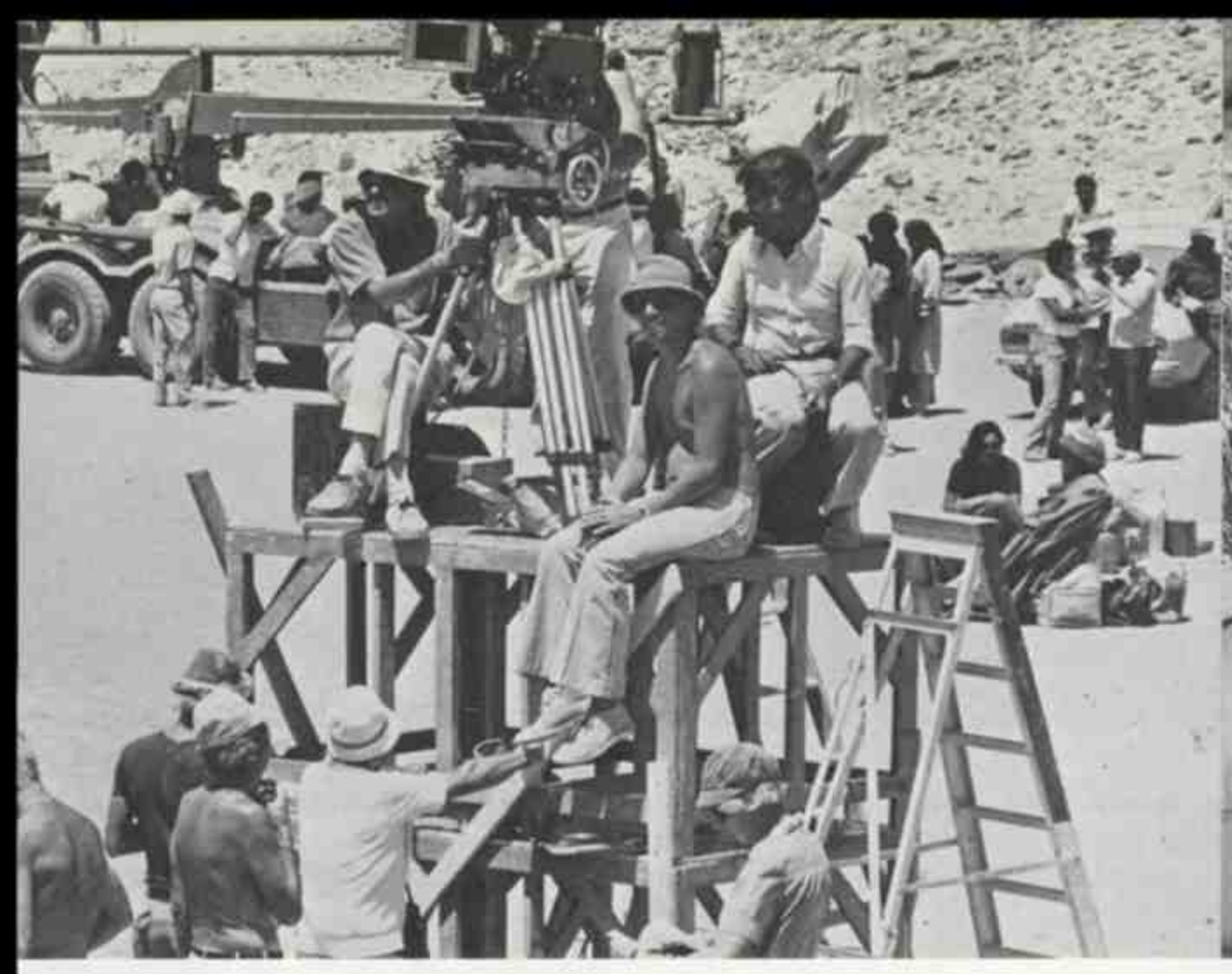
QUESTION: What was the general working language on the unit?

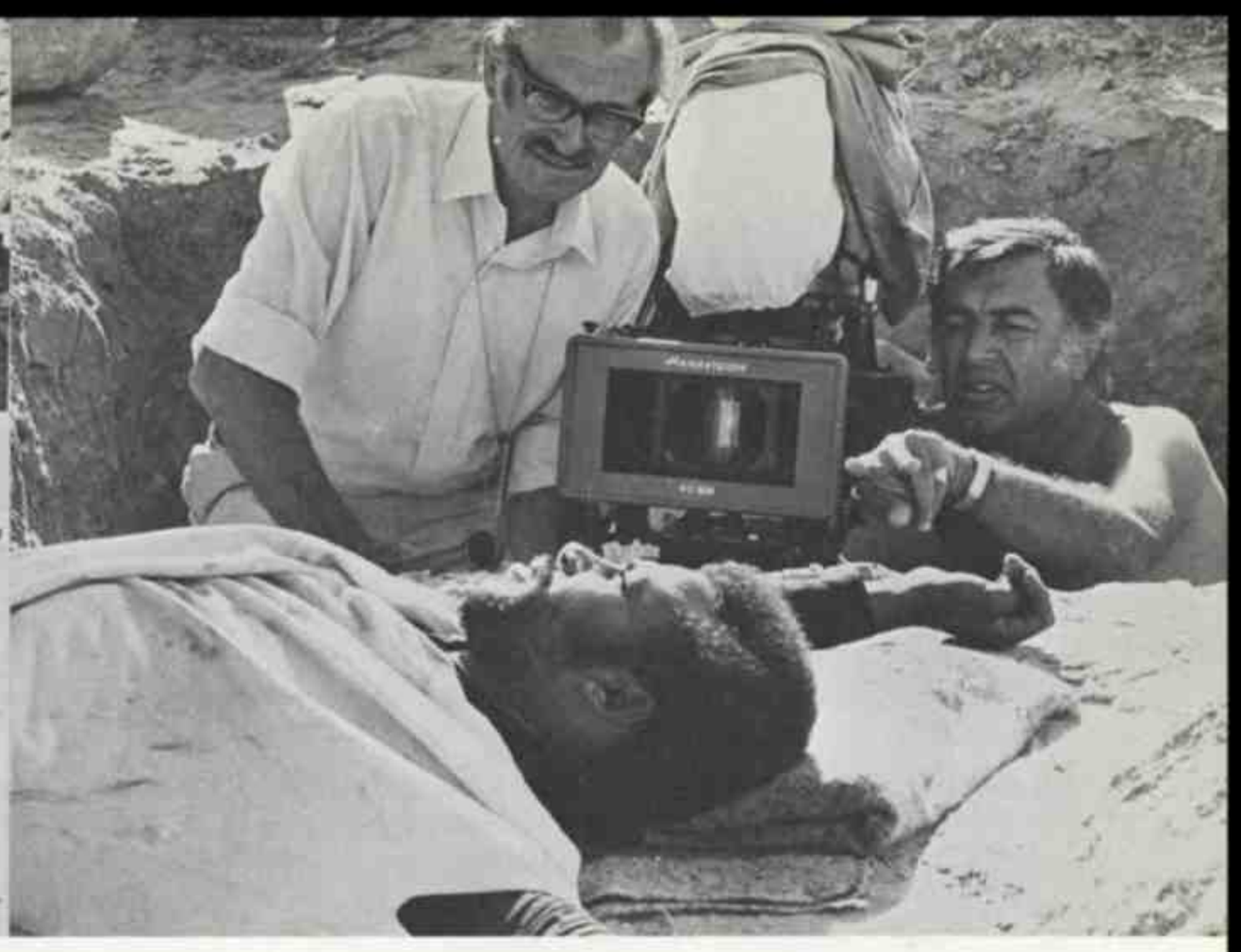
HILDYARD: English was the language we all used. We had a Production Manager who could speak Arabic, and most of the assistants and production personnel from Morocco or Libya, as well as Spain and Italy, could speak English in some way or other. We were a very cosmopolitan lot.

QUESTION: Photographically, were you trying to achieve any particular style or lend a special "look" to the picture?

HILDYARD: I thought about that a lot before we started shooting and came to the conclusion that this was not a film on which I should use heavy diffusion. It is mainly an exterior picture, with vast panoramas, sometimes with thousands of characters, all dressed in white muslin and in brilliant sunlight — so I decided to shoot it pretty straight. The only time I used any diffusion was when I was photographing one of the women, and then I would put just a little diffusion on — but in keeping with the rest of the picture, so that it wouldn't be a sudden shock when you saw it. The degree of diffusion was really very slight. I don't think that the sort of film we were making required any particular desaturation, or any more diffusion than I actually used.

(LEFT) Moustapha Akkad and Jack Hildyard, along with the rest of the crew, wear goggles in order to keep the blowing sand out of their eyes. (RIGHT) For the large-scale mass action sequences, multiple cameras were often used. The story the picture tells takes place from Mohammad's 40th year, when his religious career began, through to his death some 20 years later. During that time he was driven from Mecca, found refuge in Medina, built and extended his faith through hardship and battles until he could peacefully recapture Mecca and destroy the idols of the Ka'aba.





(LEFT) The camera is mounted on a giant crane, ready to soar aloft to capture the full sweep of a battle sequence. (RIGHT) Hildyard and Akkad check out an extremely low angle, with the camera in a trench. Akkad spent the first 20 years of his life in the Middle East, the second 20 years in America, where he graduated from the U.C.L.A. film school. "MOHAMMAD" is his first feature film.

QUESTION: Shooting in the hard sun, which presumably was fairly high most of the time, did you have a problem with dark eye shadows?

HILDYARD: Well, I always endeavoured to shoot at the right time of day for the particular scene I was doing and my Director was very helpful in this respect. The Mecca set, for instance, could be photographed to best advantage only at certain times of day, so I would work out a schedule with the Assistant Director and we would stick to it as closely as possible. I shot a lot of the picture in back-light, or three-quarter-back, which I like, especially when photographing women, because I can then light them in my way, rather than the way God lights them.

QUESTION: In the early stages of filming, when you were in Morocco, they built a large set which depicted Mecca in the 6th Century. Would you like to talk about that set?

HILDYARD: Yes, we had to do a lot of searching to find the right location, because, of course, Mecca in Saudi Arabia stands in an area which is more or less surrounded by mountains. In Morocco there are mountains, but they were either too far away or too far from where we would have to live. We finally found a village which had mountains on one side and which more or less could be modified to look like the real Mecca. We decided that whenever we showed the other side, we would matte in whatever mountains were missing. The Art Department spent months before we ever started the picture in building Mecca onto the existing village. The centerpiece of the real Mecca is a holy edifice called the Ka'aba, a large cube-shaped building which we built almost full-size and draped with a tapestry of the same type that was used in the period when the events in the picture took place, the end of the 6th Century. The real Ka'aba still has a tapestry draped around it, but it has changed slightly; it is now black with a gold motif. Ours was of a bluish-grey striped material which, according to all the available information, was correct for that period. It was a beautiful set which, generally speaking, lent itself better to morning light than afternoon light, depending, of course, on which way we were shooting. When one captured the right light striking the facade of the building it was marvelous, and I used to work out a time schedule with this in mind.

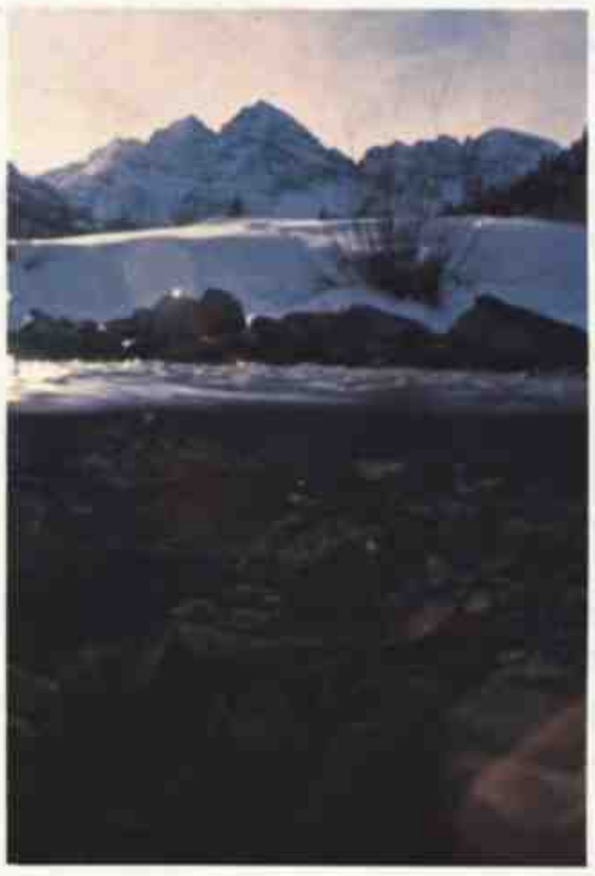
QUESTION: Did the necessity for shooting two versions create any problems in that respect?

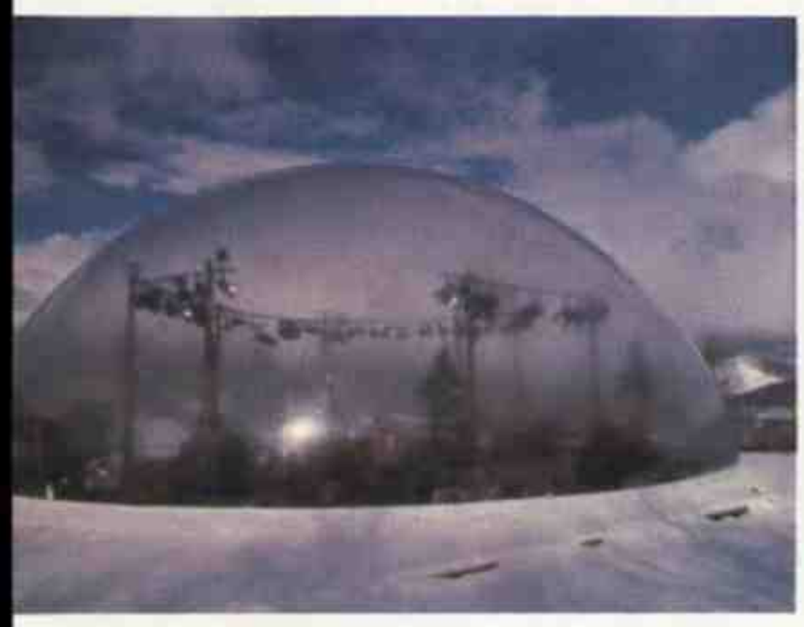
HILDYARD: Yes, there were constant problems. For example, if I said we had to shoot a certain scene at 10:30 a.m., I was then faced with the dilemma of what to do at 12:30, when we would be just about ready to shoot the other version. Very often I would discuss the situation with the Director and most likely we would decide to shoot the other version the next day. This would

Continued on Page 926

Jack Hildyard takes a light reading in one of the practical interiors of the Mecca set. Built in, around and over the village of Ait Bouchant, the movie Mecca cost $400,000 to construct. Some walls were made of stone (300 tons of local shale were dug from nearby fields) and others of mud and straw over split bamboo screens. Some 100 tons of plaster went into textured walls. Wooden doors, gates and arabic windows were built to replace the out-of-epoch tin sheets already in use.

(LEFT) Mark holds Beaulieu camera encased in underwater housing, while Marty prepares the filming area where brook trout will spawn. (CENTER) "Intimate" peek at a brook trout laying eggs. (RIGHT) A brook trout in the "sack fry" stage, after having just emerged from the egg. (BELOW LEFT) Using the Beaulieu camera in underwater housing, Mark shoots scenes of the brook trout swimming. (CENTER) Beaulieu camera in Sea Research Development housing. (RIGHT) Above-and-below-water shot of trout, with mountains in the background.





(ABOVE LEFT) Daytime shot of the transparent plastic dome in which the musical numbers were shot. (CENTER) The dome at night. (RIGHT) Denver performing inside the dome. (BELOW LEFT) Valerie Harper, John Denver, a child and Olivia Newton-John participate in one of the musical numbers for the show. (CENTER) Mark Stouffer editing film sequences on M-77 Moviola 6-plate flatbed console. (RIGHT) Editing videotape for the show at Compact Video in Hollywood. The author, having previously not been exposed to the videotape editing process, was amazed at its speed, but cognizant of its much higher cost, as compared to film editing.

FILM OR VIDEO?
Continued from Page 904

the spawning behavior of brook trout in the Maroon Creek. Introduced as a top-water shot of a mountain scenic, the camera led into the sequence by panning underwater to reveal the brook trout performing their spawning activities. This shot was accomplished through the use of a submerged aquarium with the water line about halfway up on the height of the front glass plate. The cameraman would simply stick his head upside down into the small enclosure, look through the viewfinding system of the camera, and pan down at the appropriate moment. The only problem encountered was the necessity to rack both exposure and focus in the course of the pan. This was very difficult to do because of the space limitation within the aquarium. Following dozens of "dry" runs, the shot was executed and the results were exactly what we wanted.

The spawning sequence was shot entirely underwater and offered a scientific insight into the behavior patterns of brook trout during this period in their life. For the underwater work, we used our 16mm Beaulieu in a plexiglass housing. Because the spawning activity took place in such shallow water, only inches deep, available light was sufficient.

We filmed the actual egg laying, fertilization of the eggs by the male, and a time-lapse development and hatching of the eggs. As the "sack fry", as they are referred to, emerged from the eggs, a series of dissolves revealed their development into the "fry" stage, and finally, into that of an adult.

Carelessly, the adult fish surfaces to feed on an insect, only to be swept from the water by a bald eagle. Thus, we presented the life cycle of this species, following the fish from birth, to the replenishment of its species through the spawning procedure, and finally, to death.

Upon seeing this material, ideas began to develop, and before it was all over, plans were in the making to shoot an introduction and conclusion to the sequence using John as the "observer" watching the phenomena occur. We began immediately to work out some of the bugs we had encountered in shooting the first material.

Soon the day was upon us and all went smoothly. John was introduced into the area by entering one of the time-lapse scenics which was in the immediate vicinity of the trout's spawning grounds. We duplicated the split-level shot, only this time with the addition of John standing on the bank and talking in "sync" about the behavior of the fish and what a fascinating thing it was to watch. Although the trout were spawning on the day we were shooting, the bulk of the underwater work had been shot the previous year.

We were very impressed with the producer's decision to incorporate such an educational sequence into an entertainment-type program.

How can you depict Aspen, Colorado, without somewhere showing a little skiing? You can't, and for that reason, our next project would be a sequence of John skiing. Only one thing held us back. It was November, and the snow was late this year. Everyone knows that shallow snow can be very hazardous with the rocks and stumps, so we could only wait for its arrival.

Like clockwork, it came the following day and as soon as we could load the two snowcats with all of the equipment, we were headed for the top of Elk Camp at Snowmass. We had familiarized ourselves with the area as a result of shooting from our time-lapse platform, which was located where John would begin his run down the mountain. Upon reaching the summit, we found it not so easy to locate the camera plate. Things can become drastically concealed beneath the

Two wild Bighorn Rams butt heads in classic "male supremacy" ritual which takes place especially during the mating season. The Colorado country abounds in a vast variety of wildlife, although some native species, like the Grizzly bear, have been rendered extinct in the area, due to overhunting. There is a concerted drive in progress by conservationists to correct this condition.

Marty makes friends with a Bighorn ram, prior to filming it for a wildlife special entitled, fittingly enough, "BIGHORN". Most animals in the wild state are extremely shy and wary. They can be frightened away by the slightest camera noise, which is one reason so much of the successful wildlife footage is shot with the use of telephoto lenses.

snow. After much guessing and digging, we located the mount under some 4½ feet of snow.

The plan was for John to zip into the scene, say a few words about the thrill of skiing, and then ski down the mountain with the camera in hot pursuit. In essence, we would have a transition from Summer to Winter, John entering the last shot, and finally, the camera lifting off the mount and chasing him down the mountain.

It sounded great, and I must admit that I was as amazed as everyone else when it all worked as planned.

The majority of the ski photography was shot with our Photosonic Actionmaster 500 high-speed camera. The camera has the ability to shoot from 24 frames-per-second to 500 frames-per-second, and with all the fresh powder, we wanted the effect that only slow-motion could offer.

The action was covered from three angles. One at 24 frames-per-second with the Arri "BL", one at 100 frames-per-second with the Photosonic, and one from a POV (point of view) angle of a skier coming down the mountain.

To cover sound, we used our Nagra 4.2 in conjunction with a Vega wireless microphone. We used this microphone set-up for almost every sequence we shot and, contrary to what we were told we should expect, we had no problems whatsoever.

It's one thing watching out for your health while blazing down the slopes, but it's another story entirely when a $12,000.00 camera is involved. Fortunately, we had no casualties, and all bodies, both camera and human, returned home as they had left . . . in one piece.

Being primarily wildlife filmmakers, we could not accept the fact that footage could be accumulated so rapidly. Our normal shooting ratio was about 40 to 1, allowing weeks and sometimes months in the field to gather the material. This planning for a week and shooting for an afternoon was beginning to spoil us.

Our next assignment seemed to be a snap, but turned out to be a bit more than we had bargained for. We were to depict John with about 10 small children in a schoolroom building skibobs, which are one-runner sled-type devices. The interior shooting required some 25,000 watts of light and two microphone locations to cover the scene. We used a combination of Mole-Richardson 1000-watt and 2000-watt quartz lights which were rated at around 3400 degrees Kelvin. On John we had placed a Sony ECM-16 electret condenser microphone, and to cover the children, we had our Sennheiser 805 directional microphone on a fishpole boom.

Trying to keep an eye on a dozen bundles of energy scampering in and out of the equipment was more than I could bear. We had to literally wire all of the lights to the ceiling and tape them to the floor to keep them in an upright position. Aside from the building not being able to handle the load and blowing fuses (always consult an electrician prior to the shoot), we completed the sequence with no major problems.

The follow-up to the interior sequence was an exterior sequence of John and the children sliding down a hill on the contraptions. We used the same equipment as in the downhill ski sequence, and except for a few head-on collisions and crying sessions, all went well.

Dramatic above-and-below-water scenes like this were shot through wall of aquarium placed in the stream with water halfway up the glass.

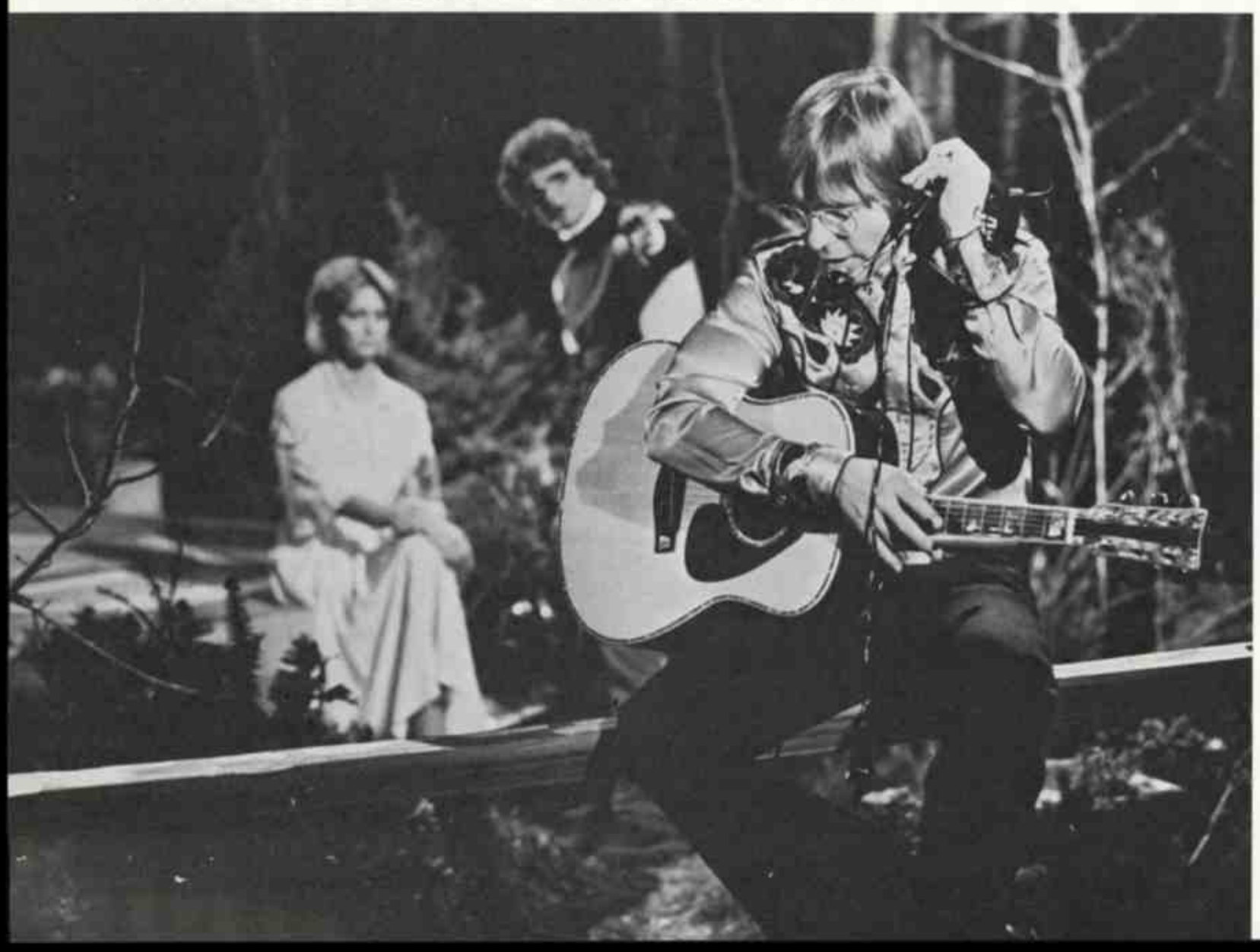
The time had finally come to shoot the sequence that everyone seemed to have mixed emotions about. That was John playing in the snow with our tame grizzly bear. Now, you may want to know just what we're doing with a tame grizzly and I must admit that sometimes I ask myself that same question!

The grizzly is extinct in Colorado due to overhunting in the past. Many people, including ourselves, feel that this is not right and would like to see the grizzly back in Colorado. For this reason, we are supporting the reintroduction of this creature into its native land.

Having a Colorado Wildlife Parks License which allows us to possess animals for the purpose of study and research, we got our bear as a 3-week-old cub two years ago. It's been nothing short of an "experience" to rear such a powerful and potentially dangerous animal. We have learned a great deal about the behavior of this species from "Griz", and hopefully, through such research, those who oppose the reintroduction of the grizzly

Continued on Page 921

During rehearsal for taping of the John Denver special, Olivia Newton-John and Assistant Director Lee Bernardi look on, while the star performs in the foreground. The interspersing of musical numbers with wildlife and skiing sequences made for an unusual and interesting format which was very well received by the TV viewers. The mixture of film and videotape also proved highly successful from the technical standpoint.



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A PREVIEW OF THE Vth TEHRAN INTERNATIONAL FILM FESTIVAL

By BAHRAM REYPOUR
Press Officer

The Tehran International Film Festival, approved by the International Federation of Film Producers' Associations as a competitive manifestation for feature and short films and organized by the Iranian Ministry of Culture and Arts, will be held this year on a larger scale than ever, making it one of the biggest film events in the world.

The Vth edition of this manifestation, for which a budget of one million dollars has been approved, will be inaugurated in the presence of Her Imperial Majesty the Shahbanoo of Iran on Sunday, November 21, and shall close on Sunday, December 5, with the award ceremonies again attended by our Empress.

Although the exact composition of the eleven-member International Jury for the forthcoming event is not yet known, the Festival has traditionally been able to enjoy the collaboration of prestigious judges who, in the past four years, have included personalities such as Sergei Bondarchuk, Frank Capra, Grigori Chukrai, Thorold Dickinson, Gabriel Figueroa, Sergei Gerassimov, Rex Harrison, Miklos Jancso, Jerzy Kowalerowicz, Alberto Lattuada, James Mason, Rouben Mamoulian, Delbert Mann, Gillo Pontecorvo, Alain Robbe-Grillet, Satyajit Ray, Istvan Szabo, Leopoldo Torre-Nilsson and others.

The COMPETITION program comprising new feature and short films running for the now familiar Gold Ibex awards is the nucleus of the event. But other important sections shall also be organized:

FESTIVAL OF FESTIVALS

An annual "tableau d'honneur" of the greatest achievements of the world film industry, each entry hand-picked by our Selection Committee from among films presented in the other international festivals of the year.

CINEMA HAS EYES AND EARS

An international selection of features of a documentary nature or dealing with important contemporary subjects.

FIFTY YEARS OF FILM ACTIVITIES IN IRAN

Commemorating 50 years of the rule of the Pahlavi dynasty, this program will present rare and never-seen samples of film-making in Iran as early as 1926, as well as the latest achievements of the so-called New Iranian Cinema. This chapter will be of special interest to film historians and film archives.

A SALUTE TO THE AMERICAN BICENTENNIAL

A festive and comprehensive study of America and Americans revealed through American movies.

FILM-MAKING IN THE FAR-EAST

Since its inception four years ago, the Tehran Festival has tried to bridge the gap between East and West and to serve as a launching-pad for those countries whose films, despite their obvious merits, have not had the chance to break into worldwide distribution. After Africa, Asia and Latin America, this year we try to focus global attention on the recent achievements of the Far-Eastern national film industries.

THREE RETROSPECTIVE PROGRAMMES

The Festival will pay tribute to three great film-makers of our time, not yet chosen, to mark their efforts for the expansion of the possibilities of the film language and the human values of their works. These tributes usually present the totality of the output of the artists involved.

THE FILM BAZAAR

This business section of the Festival will be held with the purpose of facilitating the exchange and distribution of films in the different territories of the world, again acting as a bridge between East and West. The Bazaar of '76 will be organized, under one roof, the Arya-Sheraton Hotel of Tehran, which will house not only all the participating producers, exporters and importers but also the totality of projection rooms, video equipments, conference rooms, display areas, etc.

It is estimated that total attendance by the general public during the 15-day event will be around 400,000, making Tehran '76 the most popular film event ever held anywhere in the world within a determined period of time.

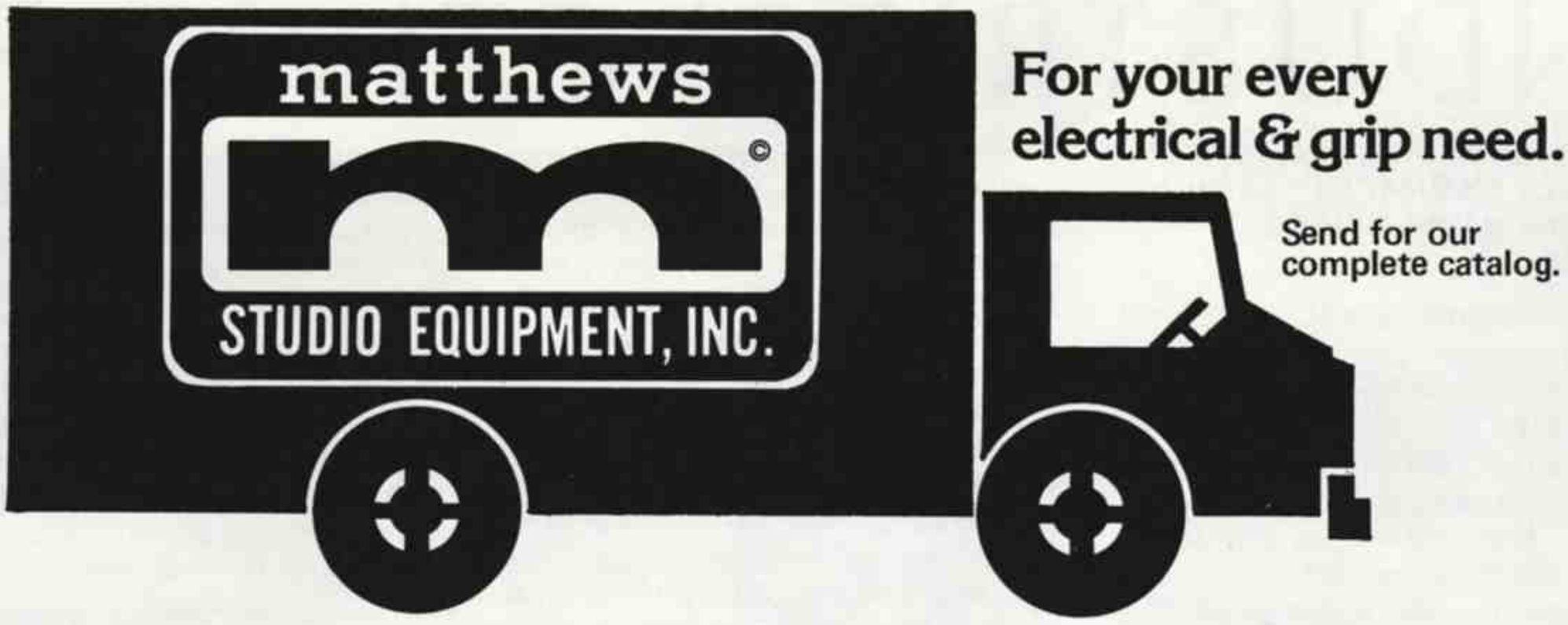
But the general public aside, the Festival will above all be a meeting place for accredited guests, stars, producers, film directors, distributors, technicians, and especially journalists and film critics who will come to Tehran from practically all over the world. Last year, delegations from 54 countries attended. This figure is expected to increase for the Vth Festival.

For these professionals, a host of activities in addition to film screenings is envisaged. They include: 1. a series of social functions and receptions, some of them in the traditional Persian style. 2. sight-seeing excursions to Isfahan, Shiraz, the ancient sites of Persepolis, the Caspian Coast and the Persian Gulf. 3. numerous press conferences, debates and lectures.

The Vth Tehran International Film Festival will be organized under the sign of gaiety. It will be a true celebration of the art of film on a universal scale.

The Persians are coming of age, once again, for the umpteenth time in history. The film community of this country, honouring the idea that cultural richness comes of openness, and rejecting smug culture-boundness, wishes to share its joy with the whole film world on the occasion of the Vth Tehran Festival, presented as a gift of "love", meaning not a nineteenth-century romantic notion, but rather, the miracle of life captured in the discipline of art.

The dynamic Iranian city of Tehran will again play host to film artists and producers from the far corners of the earth when the Vth Tehran International Film Festival takes place November 21 through December 5, 1976. Enjoying the active sponsorship of Empress Farah Diba, Shahbanoo of Iran, the Tehran Festival is fast becoming the most prestigious event of its kind in the world.



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INDUSTRY ACTIVITIES

VILMOS ZSIGMOND, ASC, TO CONDUCT FILMMAKERS' SEMINAR IN SMALL MAINE FISHING VILLAGE

Vilmos Zsigmond, ASC, Director of Photography on such films as DELIVERANCE, SCARECROW, OBSESSION, THE ALL-AMERICAN GIRL, CINDERELLA LIBERTY, and others, will conduct a week-long filmmakers' seminar this summer at the Maine Photographic Workshops in the small fishing village of Rockport, Maine. The Seminar includes daily screenings of Vilmos's many films, critiques of fifteen selected student films, an opportunity to handle new equipment, and new this summer, a lighting workshop all geared for professional cinematographers and cameramen.

The Filmmakers' Seminar, scheduled for September 4 to 11, offers active filmmakers the opportunity to have their films critiqued by a recognized cinematographer, view other films and TV commercials, ask questions on technique and methods, and mix with other filmmakers from around the country. Last summer's Seminar with Conrad Hall, ASC, hosted over fifty filmmakers from as far away as Alaska and Mexico. This summer's Seminar will run along the same lines, with the addition of a two-day indoor and location lighting workshop.

Professional and student filmmakers may participate on two levels; 15 to 20 films and commercial reels are accepted for personal critique by Vilmos; those who do not submit films, or whose films are not accepted, may "audit" the Seminar for a reduced fee. Enrollment is limited (and was full last summer), so early application is recommended.

Vilmos Zsigmond, from Hungary, like many successful filmmakers, began working on low-budget films, became recognized for his own work on television commercials, and is now the photographer on many award-winning films. This summer Vilmos will be shooting THE CLOSE ENCOUNTER OF A THIRD KIND, a si-fi film. His list of films includes (in reverse order of completion): *The All American Girl, Obsession, The Girl from Pedrovka, Cinderella Liberty, Sugarland Express, Scarecrow, The Long Goodby, Images, Deliverance, McCabe and Mrs. Miller,* and *The Hired Hand.* Many of these films will be screened during the Seminar.

The costs for attending are: $250 for a filmmaker submitting a film for critique; $150 for filmmakers auditing. College credit, scholarship aid, and housing are available. The Seminar is organized by the Maine Photographic Workshops of Rockport, Maine; a year-round workshop for visual studies which offers a summer-long series of master classes in all phases of photography. Rockport is a three-hour drive from Boston and is an active summer resort and yachting center. Additional information, a schedule for the week's Seminar, and applications may be obtained by writing: The Director, The Maine Photographic Workshops, Rockport, Maine 04856.

$300,000 IN GRANTS TO INDEPENDENT FILMMAKERS AVAILABLE FROM AFI; APPLICATIONS DUE BY SEPTEMBER 15

The American Film Institute will award $300,000 in grants next year as part of its Independent Filmmaker Program. The grants, ranging from $500 to $10,000 each, will be awarded in January, 1977. Deadline for applications is September 15, 1976.

The Independent Filmmaker Program is funded by the National Endowment for the Arts and administered by AFI. Since the Independent Filmmaker Grants were established in 1967, nearly 200 filmmakers have received awards totalling just under $1.5 million.

Grants are made to individuals for any type of 16mm or 35mm film projects. A review panel of recognized professional filmmakers will evaluate the applications and select the grant recipients.

Student and professional filmmakers who are U.S. citizens or permanent residents may apply. Films of any type may be submitted; in past years grant-winning films have included animated productions, abstract films, documentary films, narrative and dramatic films. Filmmakers may make their own distribution arrangements after projects are completed.

Applications may be obtained from the Independent Filmmaker Program, Section N, The American Film Institute, 501 Doheny Road, Beverly Hills, California 90210.

(LEFT) Former screen star Evelyn Venable Mohr, widow of the late Academy Award-winning cinematographer, Hal Mohr, ASC, holds plaque presented to her on the occasion of a star with her huband's name being installed in the Walk of Fame on Hollywood Blvd. (CENTER) The star covered up prior to the ceremony. (RIGHT) Mrs. Mohr and friends examine the star after "unveiling" ceremony. Hal Mohr, a pioneer innovator in motion picture photography, is one of three cinematographers honored in the Walk of Fame. The others are the late Peverell Marley, ASC, and the late Leon Shamroy, ASC.

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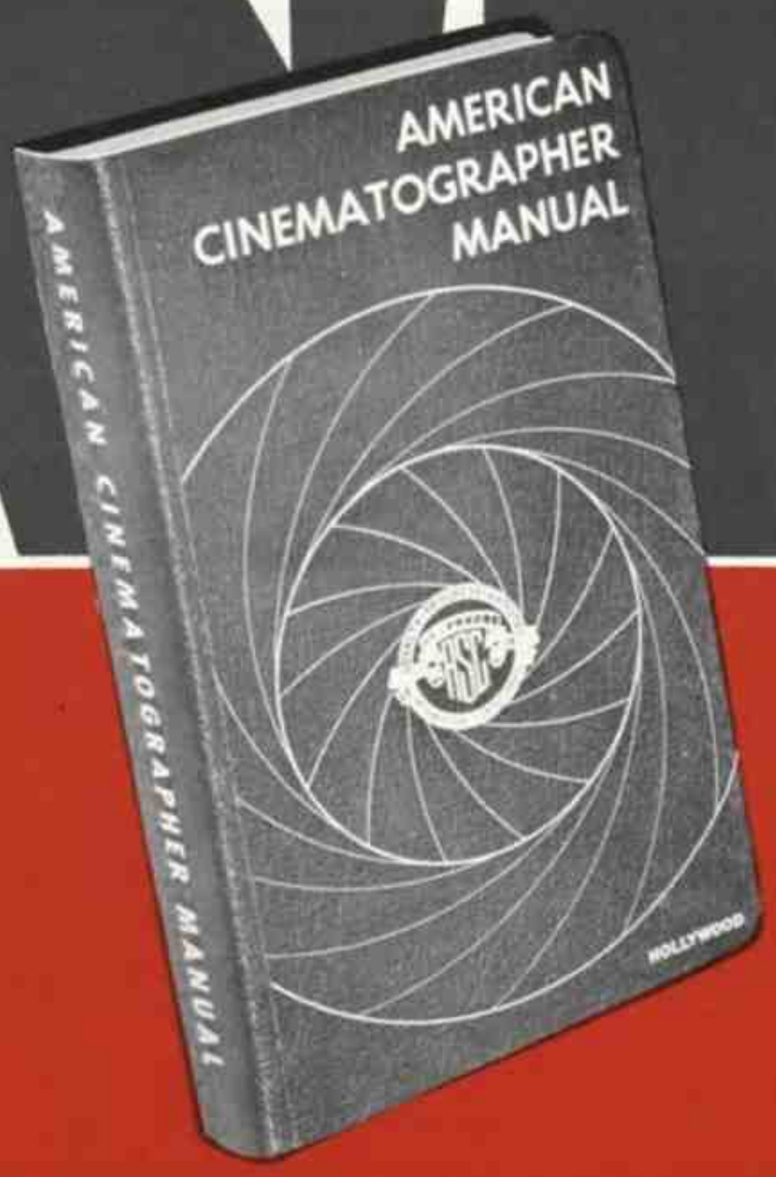

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FILM OR VIDEO?
Continued from Page 914

bear into Colorado will become more understanding of the vital role which the grizzly would play in the wild. Naturally, that role being of the major predator.

John is one person who understands these things and we were pleased to learn of his interest in presenting this problem on his special.

So, after convincing his manager, Jerry Weintraub, that the bear was most fond of fruit, and not flesh, a date was set. Fortunately for John, and everyone, as far as that goes, the bear was in a good mood the morning we shot.

I must admit, though, it was a rather delicate situation to witness John Denver being chased by *our* grizzly bear as his manager watched in obvious disapproval.

Again, I must express my praise for the decision to incorporate such an educational segment into an entertainment special.

Occurring simultaneously, to our work was another, more elaborate, phase of the production . . . the videotaping. Never had we seen more sophisticated equipment in such a remote area. Compact Video, a well-known video production company, had traveled from Los Angeles with a mass of equipment sufficient to cover the shooting.

The setting was the "dome" where a witty art director named Ken Johnson, and his assistant, Chris Westlund had cleverly decorated the interior of a huge transparent, plastic dome to simulate Spring. All the while, Winter howled outside.

Inside, amongst the flowers and butterflies, John sang to a small group of his friends and relatives.

The set was covered by three video camera positions manned by John Stephens, Gary Stanton and Ron Shelton. The cameras being used were Norelco PCP 70s, shooting 2" tape. From inside a truck, parked some distance from the dome, Bill Davis directed the cameramen and monitored their shots on individual screens. A radio communications system served to expedite the shooting.

Perhaps one of the main advantages of videotape is the ability to instantly replay, or even simultaneously screen, what is being shot. Costly reshoots can be avoided with this system and, therefore, both time and money can be saved.

It is true that we were impressed with what we saw. Compared to their operation, our role seemed insignificant. In retrospect, though, it cer-

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tainly was not. We were fulfilling a function that only a film crew could provide. Because our equipment was so compact and independent from the many pieces of equipment to which a video camera must be married, we were able to set up quickly and shoot in the most inconvenient places.

It is easy to see that because film and videotape each provide an individual service that the other cannot, it would be to a director's advantage if he were able to utilize both, rather than having to choose one or the other.

It should be mentioned, however, that this discussion is referring solely to television and small-screen projection, for videotape has not yet been refined to the point where it can successfully be blown up to a theatrical-size format. In attempting to do so, the horizontal lines which comprise the image expand radically, rendering the picture quality unpresentable. It should be stated, though, that research is currently under way to increase the number of these lines, and by doing so, allow for a videotape blow-up by compressing the number of lines which create the problem.

Upon completion of the shooting, we were invited to sit in on the editing of the program in Los Angeles. Thinking of the educational value of such an offer, we accepted. It was there that I was most impressed with the abilities of videotape.

For editing purposes, all of our 16mm material was tranferred to 2" videotape. For the transfer, we used a 5400 degrees Kelvin "air-ready" print which, I might add, was a mistake. If we had it to do over again, I believe we would have transferred the original directly, rather than going an unnecessary generation. The timing and color could have been so easily adjusted in the transfer process that it was superfluous to sacrifice the quality in going to a timed print.

All of the "sync" sequences were transferred in interlock and both the sound and the picture were on one 2" videotape.

The bulk of the material was transferred and all of the editing stages were performed in videotape. One of the most impressive systems used was their "searching" technique, whereby each particular scene corresponded with a code number, and to find that scene, the editor had only to program those code numbers into a computer. In a matter of seconds, the scene would appear. Anyone familiar with editing procedures will realize how much time a system such as this could save.

Finally, they began to select the material. As one "bumper", they chose

to use a shot of a flock of mallard ducks flying in slow motion against a mountain background. This would appropriately conclude the sequence of John and Olivia Newton-John singing the song "Fly Away". It worked well.

To lead out of a comedy skit, they chose a sequence of a clump of snow falling from the top of a spruce tree, and landing on an unsuspecting snowshoe hare. The hare merely brushed off the snow and continued munching on the pine needles as though nothing had happened.

Perhaps the most impressive wildlife "bumper" used was that of a flying squirrel running to the end of a branch and launching itself into flight. Shot at 400 frames-per-second, the flying seemed to last much longer than it actually did. From the response which we received from this shot, I would say that very few people have ever seen this happen before.

In comparison to film, the editing went unbelievably fast, and when it was all over, an 8-plate KEM seemed obsolete. From a financial standpoint, however, it should be pointed out that the cost of both shooting and editing videotape far exceeds those costs involved in working with film. Naturally, it would be somewhat unfair to draw a comparison between our small operation and that of Compact Video. However, it can be stated that, on an equal basis in any location-shooting situation, the cost of videotape would be substantially higher than film.

While no one factor was responsible for the successful incorporation of our material into the program, a few things certainly helped. From a technical standpoint, I would say that in our exterior shooting, the light reflection off of the snow added a certain degree of "fill" which boosted our image quality. In our interior shooting, rather "hot" lighting of one stop difference between the key and fill source helped to compete with the brightness of videotape images. This, in addition to a "catchlight" in the eyes and strong backlighting to pull the subject away from the background, served to create the "light" mood necessary for the scenes with the children.

All this, in addition to shooting a tight-grained film such as ECO, seemed to give us that extra little sparkle that is so important when the film is to be intermixed with videotape.

I could discuss the pros and cons of film and videotape for days, but that is not my intent. Instead, I would like to call a truce by stating that each has its own place, and under certain circumstances, they can successfully be merged and presented as one. ■

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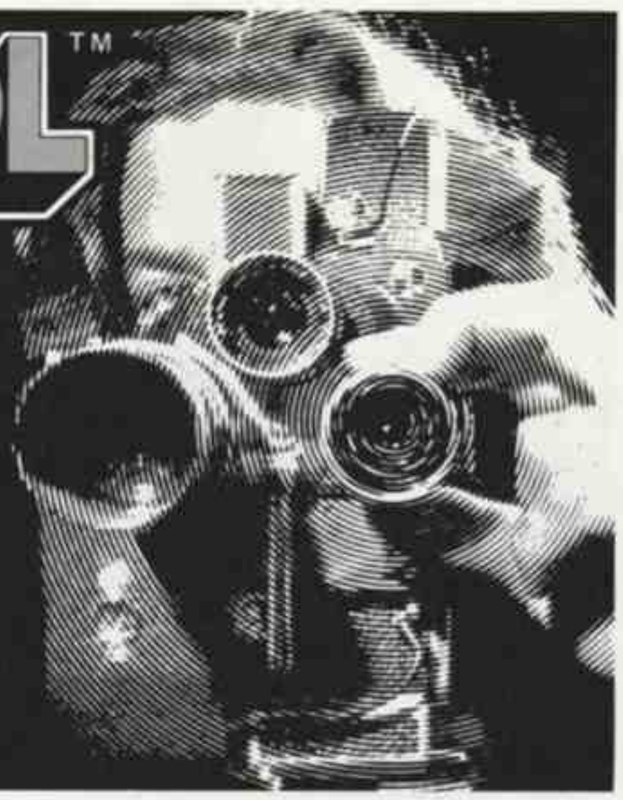

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FILMING "DAWN FLIGHT"

Continued from Page 899

Since we could not afford a helicopter and Tyler mount, we used a two-place glider with the canopy removed. With the pilot in the back seat, either Brian or I sat in front. The old Arri-S sat on a tripod head attached to the ship. The shots were steady enough in straight and level flight, but we soon discovered that high-g maneuvers and turbulence were ruining a lot of footage.

Brian came up with a simple and brilliant solution. We put the tripod-style nose mount on a third single-seat glider. Then, instead of having the Arri face the cockpit, we pointed it straight ahead. Naturally, this arrangement eliminated side shots. But it gave pilot George Bernstein an instrument he was to use with incredible artistry.

With the camera on the mount and the glider on the ground, George looked through the Arri eyepiece. Then he thoughtfully sat in the cockpit. He went back and forth from eyepiece to cockpit, making judgments and seeing spacial relationships in his mind's eye.

In most of our aerial footage, the red glider is right behind The Flier's yellow one. George's job was now to stay behind the two gliders and follow them with his camera running, no matter what they did.

One afternoon all three gliders (lined up single-file, straight as you please) pulled out of a dive and skimmed over the ground at an enormous speed. They flew right between two trees that were closer together than their wingspan. It is all there in George's footage. Each glider casually lifts a wingtip up and over the top of the tree on the left. That shot did not come anywhere near the cutting room floor.

No matter what maneuvers the three sailplanes went through, the image was absolutely steady. And George's judgment was so perfect that the subject aircraft were consistently in the right place on the screen. Not bad for a cameraman concentrating on very difficult flying while shooting with a camera almost five feet away from his eye.

The Flier finally outmaneuvers the red pilot. He gets behind his adversary, then draws abreast. For the first time, The Flier (and the audience) see who the mysterious pilot is.

The recognition sequence is the climax of "DAWN FLIGHT". Direction, acting, and coverage had to be as good as we could make them. We shot inserts of hands, control surfaces, and ultra-tight closeups on the ground. Everything else was done in the air, in several different flights.

On the ground, Denis and I worked on the same things all directors and actors do — subtleties of the character, acting objectives, interpretations, and possibilities. Then Denis climbed into his glider and was towed into the sky. After release, he turned on the remote camera and became The Flier.

We shot our masters from the two-place camera glider, and the remote cameras gave us the coverage we needed — closeups, full shots, reverses, and POV's. They also gave us sound-in-sync.

The Flier talks to himself and shouts at the red pilot while he is flying. With a Nagra III running behind his seat and the Arri-S rolling out on the nose, Denis clapped his hands once for sync. We had no sync cable or crystal sync, but the chunks of dialogue were so short that picture and sound did not have a chance to drift away from each other.

The lavalier mike hidden in Denis' clothing minimized the noise of the slipstream, and the quality of the sound was good enough. But "good enough" is not good enough, so we used our recording as a cue track. The few words The Flier says are very important, and looping made them clearer than they were before.

In the Can

The Flier finds out who the mystery pilot is. Then, alone and finally at peace, he flies away.

We had solved The Flier's problem, but not all of our own. We needed a blowup to 35mm, and we needed music.

Our low budget was an absolute blessing in the music department. Now, I'm thankful we could not afford an original score.

We ended up with the best music tracker in the business. Jack Tillar, of Neiman-Tillar Associates in Los Angeles, took some great music by Johnny Pearson from KPM records. He wove it into a score that was alternately haunting, lush, subdued, and as forceful as a sledge hammer. Jack understands how to use music.

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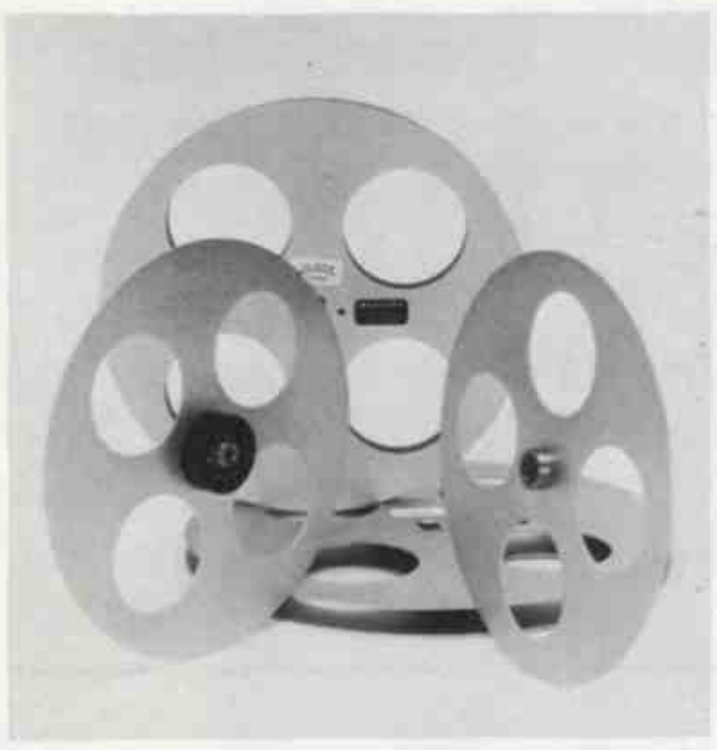

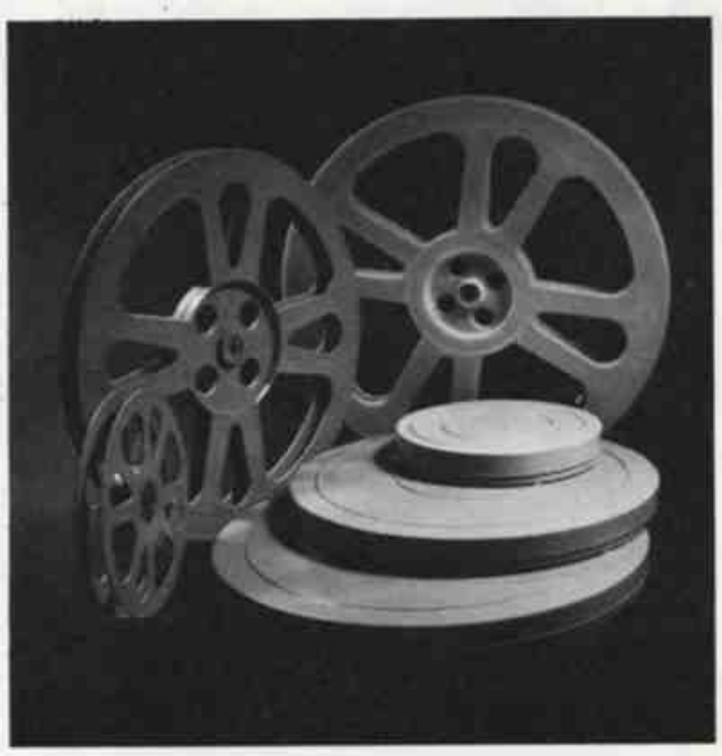

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FILMING "MOHAMMAD — THE MESSENGER OF GOD"
Continued from Page 911

usually apply to the very big shots, rather than to the scenes with actors in an intimate setting.

QUESTION: Since part of the "Mecca" village was real and part was built on, did the matching present any problems?

HILDYARD: Not really. The Art Department had to follow the basic architecture of the existing village — which was a typical Arab village — and graft onto it much bigger buildings, in order to make our set look like the real Mecca. We duplicated the wall texture and the type of stonework of the real village, because that is how they were then and still are today. When it came to building the large or double-story buildings, for instance, the same wall textures and colours were used within reason and in keeping with the design that we needed. It all blended in very well. We also had to be very careful how we laid the buildings out, as far as the sun angles were concerned, as one obviously wants to shoot for as long as possible without getting an undesirable light effect.

QUESTION: I've been told that there was originally an intention to leave the Mecca set standing after completion of the picture, but this didn't happen. Why was this?

HILDYARD: Well, without getting too involved in the politics of the situation, we went to Morocco because that seemed to be a good country to work in for this sort of film, but that choice wasn't made entirely with the blessing of Saudi Arabia, in which country the true Mecca exists. It would appear that the Saudi Arabians didn't like the idea of a second Mecca existing in any way. They went to great lengths to try to stop us. However, we carried on, expecting to make the entire film in Morocco. Eventually the pressures became too great and we had to leave, but before doing so, and through the good offices of the Moroccan government, we were able to finish all our shooting in the Mecca set. By then we had finished only about one-third of the shooting. We still had to do all the battle sequences and vast panoramic desert scenes, but all the locations we had found in Morocco then had to go by the board. The company was not closed down, but "suspended" for eight weeks while another country was found that would welcome us and also, of course,

had the requirements for the desert shooting. This happened to be Libya, so everything was moved there from Morocco — all of our equipment, our generators, our trucks, everything. The Mecca set was pulled down and the village was put back to the way it was before.

QUESTION: You have already said that, in re-creating Mecca, you used matte shots to put in the background mountains. Would you like to speak about that?

HILDYARD: The method we used was not very difficult. More than anything, it was a matter of increasing the height of the mountains above the set we had built, because we were lacking mountains in one direction and, to be authentic, we had to have them. The bottom and centre of a scene would consist of the set we had built and the top would be a painted-in mountain range and houses up on the hillside, which did not interfere with the action down below. All of these matte shots were handled very well for us by Wally Veevers, with whom I have worked a lot in the past.

QUESTION: He used the original negative, didn't he?

HILDYARD: Yes. The matte shots were usually long shots from a fixed camera position. Of course, the camera had to be locked off on a very stationary pedestal. We used a reasonably soft matte line across the top of the picture in order to obscure the part that would eventually become the new background. A black card would be strategically cut out in various places to give us this line. We usually shot three long takes of each scene in order to give Wally Veevers one to play around with and get all his paintings and exposures right, leaving two original negatives for the final matte shot. This gave a better result, I think, than if we'd gone to a dupe negative. There were certain other matte shots where we had to put in campfires and Wally did these in the same way.

QUESTION: How did you protect your film stock from the heat?

HILDYARD: Being very aware of this problem, we got our exposed negative material sent back to England as quickly as possible. By the first available plane, in fact. But I must say I was surprised by the way that present-day negative stands up to the rigours of climate that it is subjected to. On some of the films I've shot it has been freezing cold and on this one it was 110°

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Fahrenheit in the shade. The film seems to stand it perfectly; we had no problem at all.

QUESTION: The other environmental hazard, of course, is sand and dust. How did that affect you?

HILDYARD: The cameras, I thought, were marvelous. I don't think we ever got any sand inside the PSR's. I presume that this is due to the way they are built. Our only problem with sand was having it get into the pan and tilt heads, where it was impossible to keep it out of the gearing. These were cleaned every night, and if one happened to get a bit sticky during the course of the day, we would use another one until that one was fixed. Sand was a problem, but never in the camera. I don't think that we had one scratch that I could have put down to sand — and we had a lot of sand.

QUESTION: Having photographed David Lean's previous picture, you were originally slated to shoot "LAWRENCE OF ARABIA", which you missed because of "CLEOPATRA". Was it some sort of recompense to have the opportunity to shoot such broad desert vistas on this occasion?

HILDYARD: I suppose one could say that, in retrospect. Of course, a lot of the scenes are similar to those in "LAWRENCE", because it's desert — and desert is desert wherever you do it. One sand dune looks the same as another. This, again, was where I had to schedule the time of shooting, because the flat-lit desert doesn't look like anything unless there are big crowds, which present another problem. I would always try to shoot the panoramic desert scenes with low sunlight — either early in the morning or late in the evening — in order to show contrast in the dunes.

QUESTION: Was there any problem in finding "virgin" sand for the two versions?

HILDYARD: Always. One would find the ideal background or foreground, but it would be good for only one take. There is no way you can obliterate horse, camel or human foot marks in sand, so we had to pick an alternative for Take Two of the English version, after which we had maybe two or three takes of the Arabic version to do. This became a bit of a problem. We had a lot of desert and sometimes it meant moving on, but we did overcome the problem and I don't think there is any sand shot in the picture in which people have walked there before. Ever.

QUESTION: And you mean *ever*?

HILDYARD: Yes, I do mean EVER.

QUESTION: You had to wear eye protection. Why was this?

HILDYARD: This was in the desert, where very often it was quite windy and we had a sand problem. The eyes are very vulnerable to this sand, which is very fine, almost as fine as the type of sand one would find in an egg-timer, and if it happens to get into your eyes it is extremely painful and very difficult to get out. So everybody on the unit was issued goggles for protection and this solved the problem. This was very important, especially in my case, as without my eyes I could not have completed the film.

QUESTION: Working with very high sunlight and hard shadows, how did you go about assessing the exposure that was required?

HILDYARD: This depended upon the locale. In the desert, on a true sunny day with blue skies and very light sand, one uses almost the same technique as for shooting snow scenes. If you take a reflected light reading with the meter you get a very false reading, because you are really reading only the amount of light that is bouncing off the sand (or snow). So I would compute between a direct reading and a reflected reading, together with what experience I've had and what my own two eyes told me. In that way I would finally arrive at an aperture which seemed to work.

QUESTION: Jack, what about the personal aspects of a shoot that lasts more than a year?

HILDYARD: Well, this always presents problems on a location shoot of any length, but we had a very good system on this picture. We would have the occasional charter aircraft to move artists, crew, film or equipment, and any spare seats would be available for families. My wife and daughter were able to come out and see me on four different occasions, twice in Morocco and twice in Libya, and they thoroughly enjoyed it, especially in Libya, where the location was an oasis town 600 miles into the deep desert, where we all lived for about 2½ months with our wives and children. We had good accommodations, film shows, a sports room, reading rooms, everything. It was one of the most pleasant films that I have ever worked on. Our Producer went to great lengths to make sure that everybody was comfortable. I don't think anybody could complain about conditions. ■

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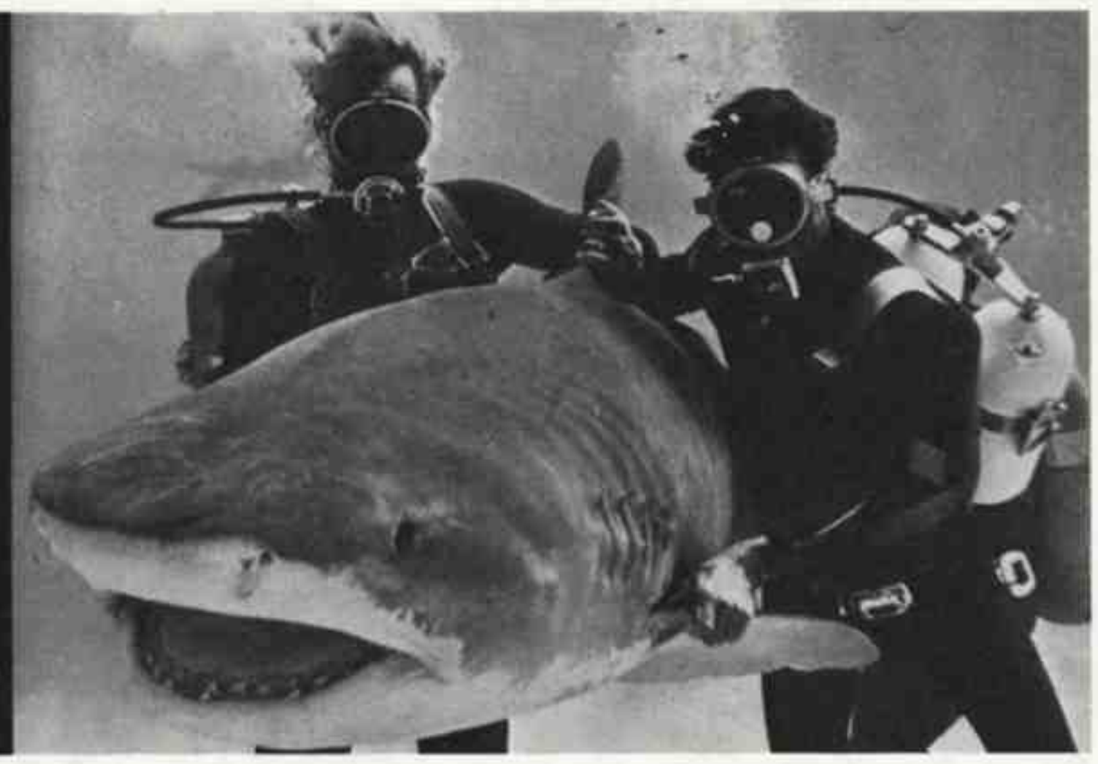

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PREPARING "THE PREPARATORY"
Continued from Page 864

looked right, except that it was still in slow-motion. At this point I checked to see that there were as many contrasting movements as possible, in order to add to the interest and tension of the scene. Then the camera was rehearsed with the actors in slow-motion. When I was sure that the violent movements of the actors were under their control, I had everyone gradually build up speed. Only just before the shot was ready for a take were the actors allowed to play the scene with feeling. In this way the young actors didn't hurt themselves by uncontrolled emotion, and yet their performances were fresh for the final shooting of the scene.

One of my biggest concerns while writing the film was the problems that would arise on the set when dealing with very young actors. My worries quickly ended when I saw how co-operative the young cast was. Many of the actors in smaller roles actually ended up becoming some of our best grips on the set; and the main two actors, Kelly Ward and Andy Tennant, were a pleasure to work with in the way they quickly responded to even the subtlest emotions of the scene. Of course, we had our trying moments, too — like the time we were shooting in the shower room and a bunch of the boys locked another boy in one of the lockers while the crew was having lunch.

However, the biggest difficulty was the budget. We could afford only three takes or less of each shot, and very little coverage. For this reason, and since I wanted to use very different camera and editing styles for the different sequences, I had to plan the shots carefully. Phil Earl's camerawork added a great deal to the final production. I would go over the shots well in advance of the shooting day with him and the editor, Linda Shanklin. Linda was a tremendous help, not only with the editing and the shot-breakdown, but with assisting on almost every aspect of the production.

A great deal of time, energy and feeling went into the making of "THE PREPARATORY"; but now that audiences have seen the film and received it so well, such as with the A.S.C. award, all of us on the crew look back at those sleepless months and feel that they were more than worthwhile. It was a challenge for the six people on the crew (Linda, Pat, Ben, Phil, Barbara and myself) to re-create a small, unique world on film — a world of grey buildings and electric bells, a world of dark corridors and winter light. ■

PHOTOGRAPHING "THE PREPARATORY"
Continued from Page 867

ground. The outside incident reading was 1-1/2-to-2 stops down from exposure at the windows. At a given signal, our crew blinked out the lights in a random sequence. I got this idea from Malkiewicz's *"Cinematography"* and the results were very convincing.

The largest lighting setup was the long shot in the dining hall. A total of 24 lights were rigged from the ceiling to get the room up to exposure. It took an entire day and just about every light available to us from the Cinema Department. The next day when the room was full of actors dressed as students, the priests reciting their Latin prayer and all the lights were turned on, it was a big thrill for the whole crew to see all their effort come to fruition in the big production shot of the film.

One of the rewarding aspects of the experience for me was getting together with the director and storyboarding the shots for the upcoming scenes. We would work on an approach until we were both satisfied that the angles and shots best expressed the sequence to be photographed. Frequently, we would attempt to cover a great deal of action with one take. In most cases, the extra effort for this kind of coverage paid off.

From the standpoint of a cameraman, storyboarding with the director involved me in the decision-making process of how the camera would be used as an expressive tool to advance the story.

When we arrived on the set, we had a clear idea as to how the scene would be covered. Naturally, we would change or introduce shots that the set suggested, but which had not occurred to us while storyboarding.

Everyone on our crew owes a great deal to the several companies who helped and contributed, for no charge, to our efforts. F & B/Ceco and Cinemobile continually loaned our production a wealth of equipment, from 5K lights to Elemack dollies. The D. B. Milliken Co. kindly loaned us one of their high-speed cameras for our slow-motion sequence. In post-production, CFI donated a whole morning with a timer, so that we obtained a print with just the look that we wanted. Their help and generosity were an encouragement to the entire crew. ■

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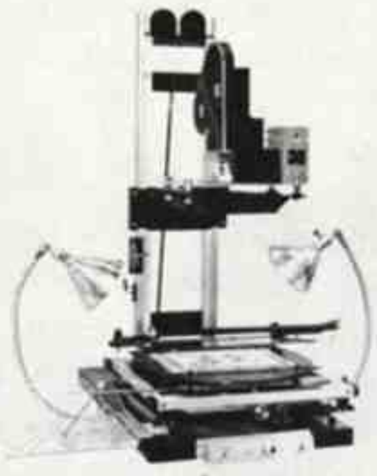

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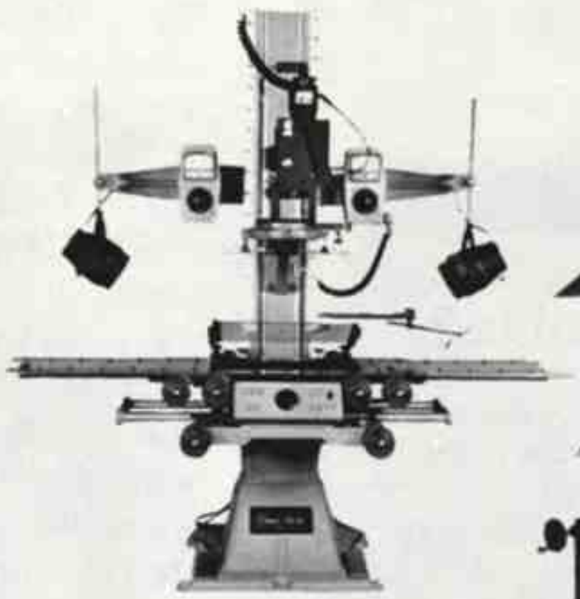

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ACADEMY STUDENT FILM AWARDS PRESENTATION

Continued from Page 882

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The Experimental Award was given to AFTER LUMIERE, University of California, Los Angeles; Joan Laine. AFTER LUMIERE is a statement about movies and culture today and the responsibility of the industry and the audience. 17 minutes, 16mm, color.

The Special Jury Award was presented to AMERICAN LOVE AFFAIR, University of Southern California; Lee M. Rhoads, Jr. (Originally submitted in the Documentary Category.) Traces the growth of Los Angeles from a dirt street pueblo into today's metropolis by the innovations and displacements of various systems of transportation. Documents the trolley's tribulations and Pacific Electric's struggle to retain its right of way. 16 minutes, 16mm, color.

Runners-up were TUBE TALES, Syracuse University (N.Y.); C. Henry Selick, KOLINS: NOTES OF TESTIMONY, Temple University (Pa.); Thomas J. Petner, AND YOU ACT LIKE ONE TOO, New York University; Susan Seidelman, EXPERIMENTU TUO, University of Bridgeport (Conn.); John McCally, and TIME AND DREAMS, Temple University (Pa.); Mort Jordan.

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A.F.I. SEMINAR
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Lab in New York. I really felt very comfortable flashing with them, and I could pinpoint the degree. They have a different nomenclature. It's not done in percentages; it's done on lights. Flash on light nine, light eleven, and so forth. On the basis of tests, I know what each one represents. Other labs use percentages — ten percent, twenty percent, five percent, whatever. I haven't found this to be consistent, frankly, and the fact remains that, to me, flashing is a form of degrading the film.

QUESTION: Isn't it true that flashing evens out light changes, particularly in shooting exteriors, where you get big changes in light during a day's shooting?

KLINE: That's where I use it, on exteriors. Quite often you'll do part of a sequence on a certain day, and then you'll come back the next day to finish that sequence, only to find that the light, instead of being what it was, is something entirely different. In that case, you might have to flash it in order to match the previous day's lighting. Actually, I prefer to solve that problem by using low contrast filters. I'd rather have the control. I like control, but I think you lose control if you give the lab too much to do.

QUESTION: Would you care to talk specifically, technically, about the types of lights you use when you go in to light a subject?

KLINE: Well, I never use soft lights. I think they're good lights, but for my purpose I don't find them versatile enough. Frankly, I take white showcards or white layout boards — they have some reflecttive value — and I cut them to various sizes and mount them on gobo stands. Then I bounce nine-lights into them. I find that I have better control by just adding a globe or turning one off or twisting the light a little bit onto the card or off of the card. If I want the light to hit in a slightly different direction, I just change the angle of the card and it bounces in. If I want it higher or softer, I just hit the switch. I don't put any diffusion on. I've gotten away from using that type of light, mainly because it's easier on the crew. If you want to put a single scrim on, for example, the guy has to go get the diffusion, first of all, and it's usually not in the box; it's somewhere else. Then he has to get a ladder, spread it, clunk it down and climb it. Then he has to put on the gloves, because the lamp is hot. It takes forever to put on a single scrim,

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and it's so frustrating to wait for him to do it when the actors are ready to go. So I've gotten away from that. The key lights I use are hard lights — a Senior or a Junior. But for the overall, in order to handle the shadows, I use bounce light. I find it very easy and, for me, it's accommodating. I've learned how to use it that way.

QUESTION: Do you find that it works better than using velveteen and nylon?

KLINE: Yes, because you're continually hanging velveteen, and it's blowing all over and ripping. I also find that it changes color, unless you use it consistently in a sequence. If you use it in closeups it makes the face look yellow-red. That can be adjusted in the printing, of course, but with today's usage of one-light prints, I like to see a perfect print come through. And that's another way of controlling a perfect print — by having pure, uncontaminated light.

QUESTION: Do you kind of overexpose and print down to cut contrast, let's say, when you're shooting on location in the desert?

KLINE: No, I generally use a low contrast filter for that. Again, that would be giving the lab an extra responsibility, and I'd lose control.

QUESTION: That's Connie Hall's technique and he says he saves on fill light, because the overexposure puts some light into the shadows and, by printing it down, he still gets what he wants. What do you think of that?

KLINE: Connie has worked a great deal with light. I must say he's a very bold and daring and gutsy guy, but everybody's got a different favorite technique. I just don't want to be at the mercy of the lab.

QUESTION: Speaking of control, how do you feel about videotape?

KLINE: Well, I'm a believer in it. I think that's the coming thing. It's just a question of being able to transfer it to release prints for theaters. But I think one of the problems with tape today is the people who are using it. They consider it a second-rate medium. They don't know what it can do. But I think it can do marvelous things. I think it can do exactly what we do on film. It's just that there are still some technological developments that have to be accomplished — but I think it'll be here.

QUESTION: Speaking of shifts in tech-

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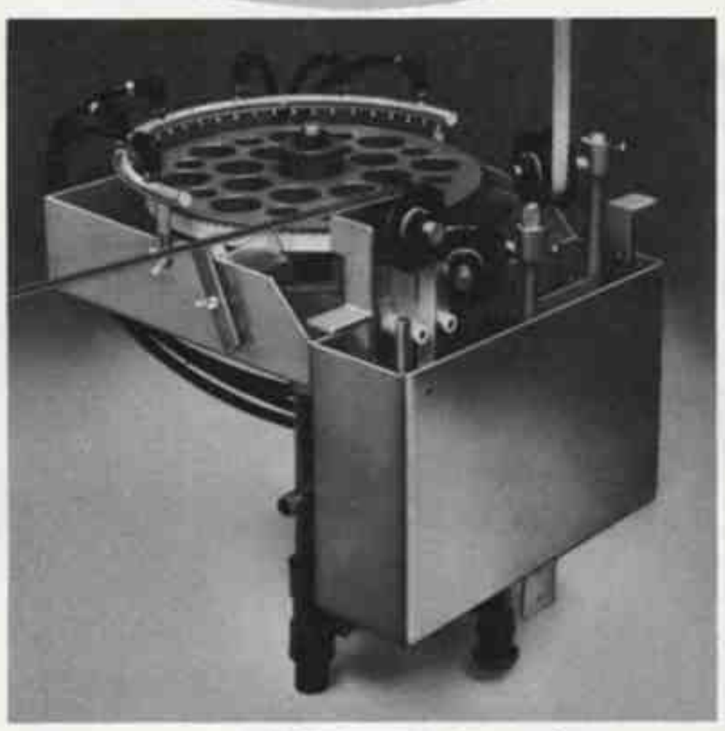

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nology — how do you feel about the phasing out of the imbibition process at Technicolor?

KLINE: I personally don't like I-B printing, so I'm happy they're phasing it out. I think that at one time it was sensational, but with contact printing and the CRI development, it's a thing of the past. And the people who were using it so effectively years ago are no longer with Technicolor. It's a lost art.

QUESTION: I gather that on this picture, "THE TERMINAL MAN", you were shooting down around wide-open. Do you prefer this generally, or is it just a one-time thing? You know, some cameramen are always wide-open.

KLINE: I always shoot wide-open — or as close to wide-open as possible. I find it's easier to light, number one, and I like the look of it better.

QUESTION: Do you think it affects the color, the way things are out of focus in the background?

KLINE: Not necessarily the color so much as eye selectivity. It makes the eye go to what you want the audience to see.

QUESTION: I'd like to ask about the history of your development in the industry. Where did you start? How did you get involved? What do you think was your first break in terms of being able to do what you wanted to do?

KLINE: Well, I'm a second-generation cameraman, and I got in during World War II because I was just out of high school. They needed people; everybody was at war. So I started as a slate boy, and I worked for a year. Then I went into the service. When I came out I continued as an assistant cameraman for eight years. I was an operator for ten years. I've been a first cameraman for about 12 years. I started in 1943 and my first picture was "COVER GIRL". I was what they called the "lily boy" in those days. You held up not only the slate, but the color charts, as well. Technicolor had a marvelous thing going. Their technicians were the best actors in the industry. I couldn't wear a white shirt because it flared in their eyes. That's when they worked at 600 footcandles, with about an f/2 stop.

QUESTION: Was your progression about typical of the time span it took to become a first cameraman in those days?

Continued on Page 944

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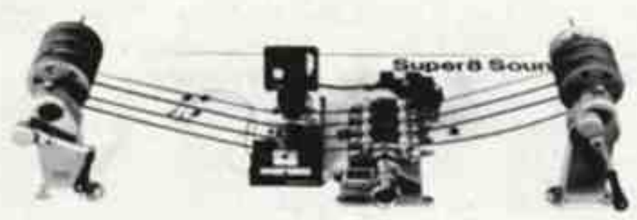

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Continued from Page 891

used in one format."

Next up on the symposium program was cinematographer Garrett Brown, inventor of the amazing new hand-held camera stabilization device, STEADICAM-35 (See *American Cinematographer,* July 1976). Before physically demonstrating his invention, Brown showed film clips from three recent feature films on which it had been used: "BOUND FOR GLORY", "THE MARATHON MAN" and "ROCKY". The demo reel was greeted with wonder and enthusiastic applause on the part of the audience.

Commenting on STEADICAM-35, Brown said: "I started working on this a long time ago, when there was some unusual shot or other I needed to make. We made a lot of very silly-looking gadgets — some of them six feet long, weighing 50 pounds and needing a rented gorilla to carry them. Gradually the thing got refined. Then I got the patent and sold the license to Cinema Products to manufacture, which they are doing. It's been a long haul.

"The virtues of STEADICAM are that you can slide through some very narrow spaces without thinking about it. You're on your feet just as if you were a spectator. You move where it feels best. You find yourself being very, sort of unconscious about filming with it. It isn't so much calculation as just planting yourself where you've got the best-looking composition of what's going on. If you drew lines on the floor of your movements in making some of these shots, it would be a very peculiar-looking path, and it wouldn't be one that would occur to people who are, let us say, laying rails for dolly shots. But, generally, it works.

"The intention is to give you a tool that you can just take places where you wouldn't consider going otherwise. You are able to shoot in any direction — left or right, with the camera in either hand, running forward and shooting backwards, or running backwards and shooting forward. You have a variation of lens heights from about waist level to somewhat over your head, and you can 'boom up' in between. You couldn't keep your eye on the camera during all that, so one of the early jobs I had was to figure out a way to see the image without having your eye stuck in the camera — which is a very arbitrary convention, when you get right down to it. The fact that your eye has to be planted on this machine isn't written in the clouds anywhere; it just happened to work out that way.

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"Several parameters are required in designing a device like this. First of all, you've got to relieve your arm of the weight of the camera, because you lose all your fine sensitivity if you're bearing a load on your arm. Secondly, you've got to be able to see what you're shooting; you've got to have a reflex finder of some sort. Third, you have to stabilize the camera so that it tends to cleave in one direction or another — whatever direction it's pointing to. It tends to stick there unless, with a light touch, you move it in some other direction. And, finally, you've got to isolate all these motions from the body movement of the operator himself. The human body moves in a funny kind of elliptical pattern — up and down, and forward.

"You have one hand free with this thing, but the question is: 'How much practice does it take to operate?' Surprisingly enough, it's fairly easy to run with, but it's pretty tough to walk. It takes some practice; it's an acquired skill. It's as though somebody came up with a 10-speed bike and nobody had ever seen a bicycle before. I've been messing around with different devices like this for a long time, so I have a head start on everyone and I can call myself a good operator with the thing. But, as in any athletic endeavor, there will be people coming along who will be incredible with it. I have watched downhill ski racing, and what those guys do compared to what I could do on skis is appalling, so I hope there will develop terrific operators for the STEADICAM who will be able to do anything with it.

"We've found that you can walk or run with an 85mm lens. You can walk with the equivalent of a 250mm, if you're real cozy about it, and you can sit still, of course, with long lenses. From looking at footage like you've seen today, you may get the idea that this is a stunt device. But my view of the matter is that it's just a camera and some of the best stuff will be where the guy stands still for a while and then shifts three or four feet to change the perspective. He stays with somebody and he backs out the door with it, where the thing disappears — not where it calls attention to itself, as in this sort of stunt.

"The weight of the camera is 30 pounds and the weight of the brace is 10 or 12, but what you feel in your hand is about a pound-and-a-half of weight."

Scott Ransom came on late in the program and said: "I've been sitting here all day with you and I consider myself a film student — and I will probably always be one. I am most frequently sitting where you are sitting and rarely do I try to put into words what I do. But I'd like to tell you a little about

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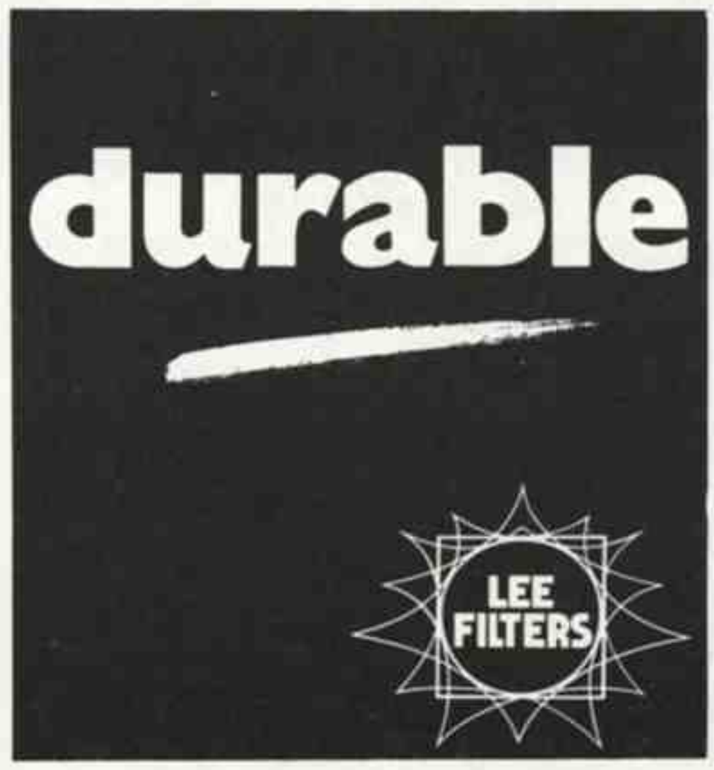

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my experiences and background in coming to grips with the realities of earning a living in documentary films. I'll try to communicate to you the kinds of things that might be slightly special. Then I'll look to you for some interaction and allow you to use me as a sounding board, because my understanding of the reason we are here is to gain some knowledge."

After a brief outline of his working background, leading up to his present activities with ABC and CBS Sports, Time-Life, National Geographic, and NET, Ransom did develop a colloquy from which a few typical interchanges were as follows:

QUESTION: Do you get an idea and then go out and try to sell it?

RANSOM: Initially, you will find that the burden is on you and that, unless you are someone like Garrett Brown, who has something that people want and will come to you for — or you're a man like Mike Hoover, who was a mountain climber and complete neophyte to film, but who made a short called "SOLO" on a $17,000 budget, which got an Academy Award nomination his first time out — unless you are a man like that, the burden will be upon you to seek projects, which is what I do. I am coming to a stage now where I get calls, because I do action documentaries, wildlife, climbing, underwater, skiing, and certain kinds of sporting specialties which not everyone does. I am becoming a little better known and things are coming to me now, but it never was that way in the past and I do not feel comfortable with that. I try to sell myself.

QUESTION: How do you do that?

RANSOM: What I do is have a group of people I call my "clients" who control television shows that utilize people like myself and I try in my everyday life to develop an open mind to ideas that I think will interest them. I keep my contacts with these people current and try to maintain an interaction that allows them to come to me and, more importantly, for me to get my ideas to them. Out of all the ideas that I get from magazines, or talks with people like you, or just my own imagination, maybe one of them will get done. Actually, it's more like one in ten. It is a constant process of pursuing the market and trying to convince people that not only is this an idea that is worthy of interest, but I am the man who should be doing it.

QUESTION: With the pressure in documentary filming of having to get

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the shot the first time, has this led you to use any certain procedures with lighting, lenses, etc.?

RANSOM: Yes, the first thing you begin to develop is a frame of mind that will carry you through in your choice of equipment and choice of the associates you work with. The most important thing to me is an awareness, a consciousness of the fact that in a documentary situation you have to do your unpacking and loading way ahead of the event. You are not afforded the luxury of standing, as Haskell Wexler did, and trying something and, if it doesn't work, doing it over again. Now, that means that you have to leave your options as open as possible, which, in some ways, decreases your creative ability. You can't use as highly directional a lighting as he was able to demonstrate to us. You have to use a soft light on the camera. You have to be able to move in a crowd quickly and sometimes in situations with which you are not familiar, or that are frightening. You have to force yourself to go in and keep your camera running.

QUESTION: How does one go about getting financial assistance to produce a documentary when one is fairly unknown?

RANSOM: This is a problem that is not peculiar to documentary, but to all types of filming. Film is a very insecure medium from a business standpoint. There is a high percentage of failures — and they are usually very expensive failures. If you fail on a $250,000 one-hour project, like a National Geographic special, that is a big failure with all kinds of heavy repercussions. You may never work again. Dealing with an insecure medium, you have to present a secure front. If you have confidence, you must convey it. The better you are at that, the more successful you're likely to be. ■

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A.F.I. SEMINAR
Continued from Page 935

KLINE: In comparison to the way it is today, it took quite a long time. There were few first cameramen under the age of 40 in those days. For a long while I was the youngest assistant and then the youngest operator. I became a first cameraman at the age of 35 and I was considered very young for the job. I was at MGM when it happened and they had a cameraman's table to sit at in the commissary — a very closed group. I was almost embarrassed to sit there because I really wasn't old enough. The average age of our cameramen in those days was about 60. But today it's different. I think one can advance much more rapidly now.

HOWARD SCHWARTZ; One of the reasons you can advance more rapidly today is that the business has become so much more wide open because of television and the independent field. That's the main reason. But another important reason why you can mature so much earlier as a cameraman now is because people like Dick here will get up and tell you what they've been doing. In the old days, your cameraman and your gaffer would whisper to each other, so that the operator and the assistant wouldn't know what was going on.

KLINE: Everything was secret. In my case, I learned a lot under pressure during the six years I worked as an operator for producer Sam Katzman. We did 106 features in six years, working six days a week — an average of 20 to 22 features a year. Those were "B" pictures like "ROCK AROUND THE CLOCK". There was a clever writer in the unit. Sam would pick up a newspaper and say, "Oh, here's a story." He'd give it to the writer and the writer would turn out a script. We'd go all over. We were actually a traveling unit, a very cohesive unit, and I really learned my trade from that experience.

QUESTION: But now, with a lack of those "B" pictures being made, and more of a shift toward television, the young cinematographer is sort of being pushed out. Isn't that so?

KLINE: No. It's the other way around.

SCHWARTZ: Sure. Where did Dick come from? He did "MR. NOVAK" for two years as a Director of Photography and then progressed to features. Fred Koenekamp got his start doing "THE LIEUTENANT" series. Harry Stradling, Jr. also started in television.

KLINE: We started in features as assistants and operators, but got our breaks in television as cinematographers. In those days when we were making the "B" pictures we didn't have television. The "B" pictures were for double bills and they were pre-sold — in other words, block-booking. When a theater owner wanted a certain big feature from, let's say, Columbia, he had to buy ten Katzman pictures to get that one feature.

QUESTION: One more question about the monochromatic effect you were trying for in "THE TERMINAL MAN". Was this more or less a step toward reviving black and white for features?

KLINE: First of all, I like black and white very much. I don't say it should come back, but I do think we should find — either through art direction or other techniques such as we used on this picture — a way to make things look more natural on the screen, more compatible to the eye — because, on television particularly, films pick up color so vividly that they become too garish, in my opinion. Also, as we discussed before, the labs sometimes add color in printing. But I do think some films are interesting in black and white and I don't mind looking at black and white because I interpret the tones in color. We have a way of unscrambling them, I guess. I like an honest look. I don't think you have to look like Johnny Carson does every night in a plaid outfit. I think very few people dress that way, and I'm certain that when Johnny Carson goes home, he puts on blue jeans. I believe in honest films that have an honest look. ■

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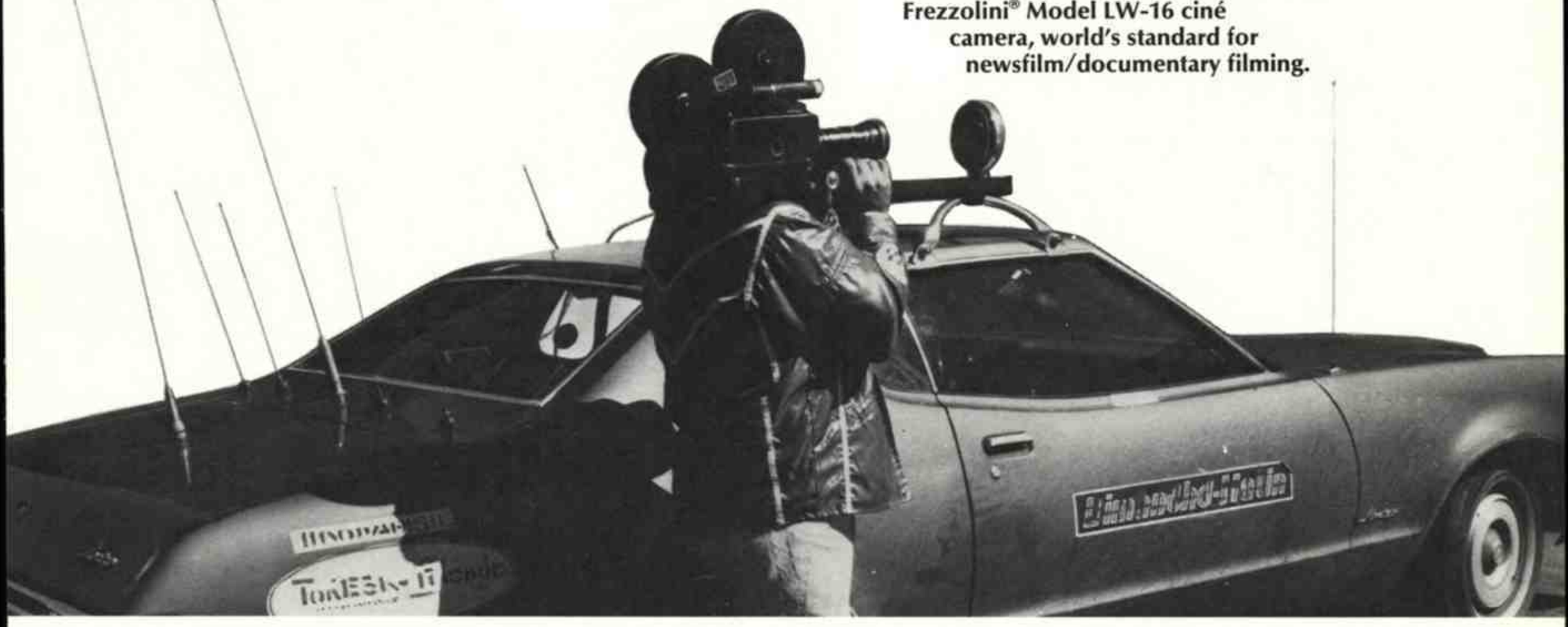

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