

# American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

DECEMBER 1975/ONE DOLLAR

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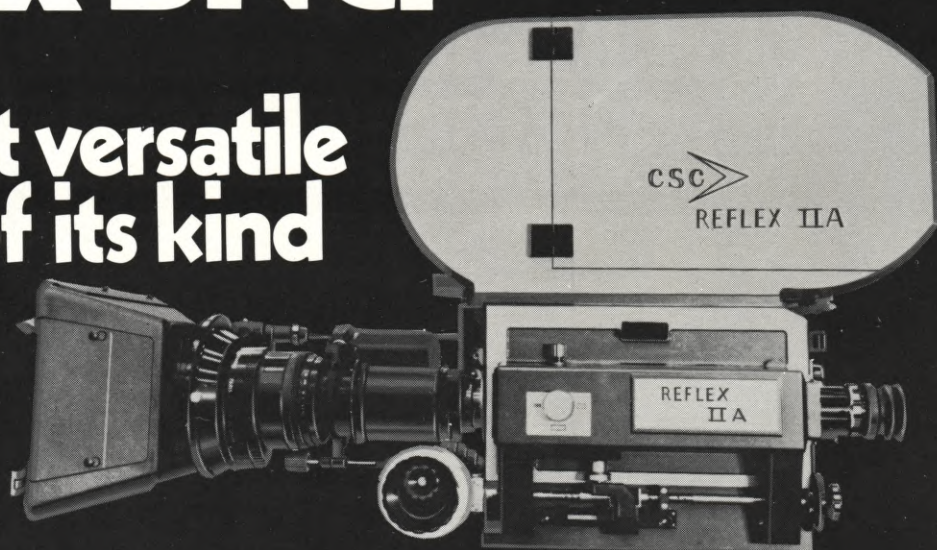


FREDDIE YOUNG, BSC PHOTOGRAPHS "THE BLUE BIRD" IN LENINGRAD



# 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.

## Cooke lenses:

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.

## Ultra wide angle:

Do you use a second camera for your dramatic wide angle shots? No need to now. The Reflex IIA will accept lenses as short as 9.8mm—Yes—9.8mm! Look at the exclusive creative edge you get with the Reflex IIA—

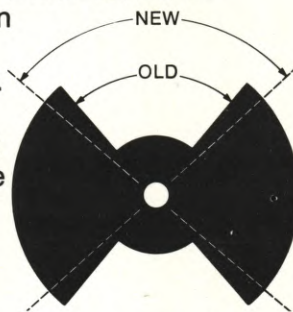
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9.8 mm	14.5 mm	15 mm	18 mm	20 mm	25 mm	32 mm	35 mm	40 mm	50 mm	75 mm	100 & up mm

## Super speed Zeiss lenses:

Another exclusive—you can specify aspheric ground floating element Zeiss Distagons. Scalpel-sharp images at a true T:1.4! 25mm/35mm/50mm/85mm focal lengths are available.

## New shutter:

To further boost lens performance, we've made an ingenious design change that permits the use of a new 200° shutter. The big advantage, of course, is the raised light transmission factor. More light means smaller apertures for increased overall sharpness, depth of field and brilliance.



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



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# If you want a piece of the future, you'll have to get in line.

There is a certain responsibility that comes with creating a product that will change the course of filmmaking. Particularly when it is available in limited numbers to a vast market that will be stunned by the product's appearance and capabilities.

That product is the TGX-16, a 16mm single system/double system film camera that advances filmmaking into the 21st century.

**The Camera.** We could fill four pages of this magazine with the uniqueness of its features. But we'll let our free brochure, which you'll be sending for today, tell the whole story.

However, to whet your appetite, imagine a package of scarcely 8 lbs. on your shoulder (less than 15 lbs., loaded and lensed to the gills). A

Hi Rez body that ignores extremes in temperature, outside sound, scuffs, scrapes and scratches.

A body that's virtually indestructible. It has a half-heart cam movement for fast pulldown and high-speed capability. It offers quiet and efficient straight engagement. It forms loop automatically.

A 400' coaxial cassette mag is encased in the TGX-16 as part of the configuration of the camera. But you can top-load a 1200' Mitchell mag. A heavy-duty flange mount

accepts all 16mm format lenses. There's a constant and variable speed crystal motor. Positive locking of speed. And an illuminated frame line.

The TGX-16 has a multi-informational viewfinder with a VU meter for sound level, an out-of-sync warning light, digital footage counter (with a memory, no less) and low battery warning light. The battery is an integral part of the camera, runs a minimum of six cassettes and can be charged in as little as 15 minutes.

The self-contained detachable one-pound amplifier is a marvel in itself with enough incredible features to warrant a separate ad. The magnetic head, which features linear flow systems, eliminates film flectures and assures purity of sound.

The electronics of the TGX-16 are all on printed circuits, so 24-hour service becomes commonplace instead of wishful thinking.

**You must be on our Option List.** Now that we've whet your appetite, we would hate to see you disappointed. The TGX-16 is in full production by our manufacturing arm, Texas General Cine Corp. We expect orders over the next two years to be triple that of our production capability. By filling out the coupon at the bottom of this page, you will reserve an option for yourself and at the same time request a more comprehensive brochure. You will, in the near future, have the opportunity to exercise your option or be dropped from the list.

## TGX-16

**The future is now.**

**Gentlemen:** Please place me on your option list for the TGX-16 camera, and forward a brochure immediately. I understand that I am under no obligation to buy.

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I'm Sy Cane and for those of you who might not have noticed, I am upside down. This causes the blood to rush to my head, giving me an excuse to act irrationally. I'll sell motion picture equipment while on my head at prices that would make me sick if I was upright. And I'm talking about CP-16s and Nagra's. Angenieux lenses and Sennheiser mikes. We carry the leading names in professional equipment. And we back up our sales with professional servicing. Call me right now for a price quote. But hurry. Only a maniac would stay this way forever.



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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 nor 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 initial 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.

DECEMBER, 1975

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**Herb A. Lightman**  
editor

**Three Tyler**  
editorial assistant

**Barry Day**  
production control

**Pat Black**  
advertising

**Barbara Prevedel**  
accounting

**Gabrielle de Ganges**  
layout assembly

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research

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Sidney P. Solow

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#### Editorial—Advertising—

#### Business Offices

1782 North Orange Drive

Hollywood, Calif. 90028

(213) 876-5080

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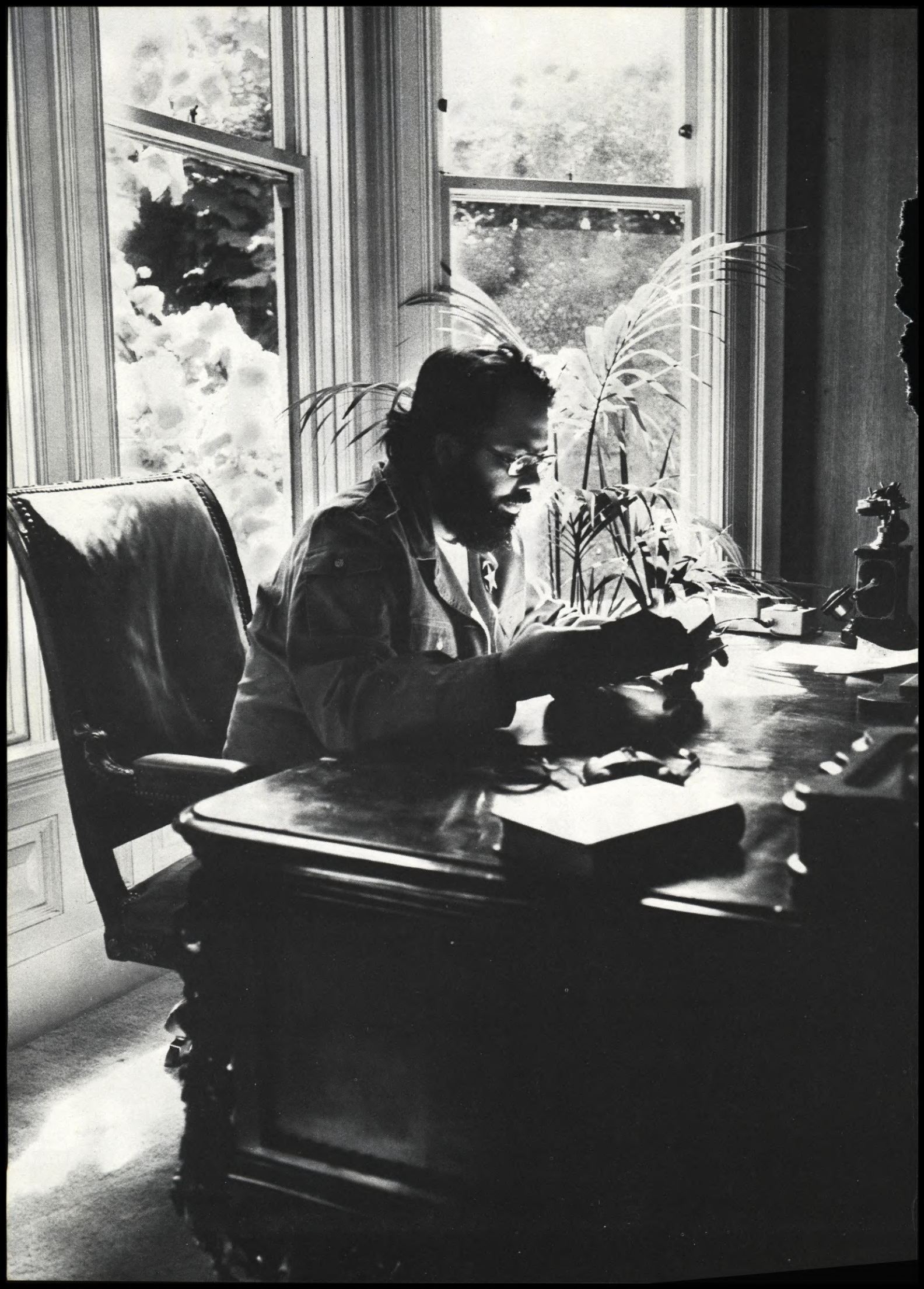
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ON THE COVER: Three-time Academy Award-winning Director of Photography, Freddie Young, BSC, poses with the star playing the title role in his latest film assignment, "THE BLUE BIRD", adapted from Maurice Maeterlinck's immortal fairy tale and filmed in Leningrad as the first ever Soviet-American motion picture co-production. It will be released by 20th Century-Fox for Easter, 1976. Cover design by DAN PERRI. Illustration by DEBORAH ROSS. Cover photograph and photographs on Pages 1394-97 and 1398-1401 by SYDNEY SAMUELSON.

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# COPPOLA



"To me, the true miracle of motion pictures is that a piece of 35 mm film with four sprocket holes per frame can be threaded up on any 35 mm projector in the world, and people will crowd together to watch it.

"But that is also a very sobering responsibility, and why, above all, I am interested in the *content* of the films that I make.

"We are based in San Francisco, but, of course, work everywhere.

"A small company, hoping to make entertaining, interesting and innovative films. But since it is the content of the films which is all-important, the company is involved in all areas of communicative and dramatic arts: live theatre, recording, radio and even publishing.

"We own *City Magazine* in San Francisco, and soon FM station KMPX; as well as *The Little Fox*, an experimental 300-seat live theatre.

"I feel that these varied media are all interrelated, and that by working in them, we will bring a richer, healthier, constantly changing input to the motion pictures that we make and that are shown throughout the world.

"So obviously, format is not as important to me as the ideas. I'm looking forward to the further improvement of film stocks mainly because I'm

interested in going in simpler directions.

"So when Eastman makes an improvement, a technical innovation, something that makes the technical process simpler, I'm very pleased. It means we can shift the priority from the technology and move it to the ideas and acting in the film.

"I don't want to have 10 guys tell me I can't do this or I can't do that for technical reasons. I want my nonsense from actors, not technicians.

"I want the difficult problems to be solved, to be problems of content and acting, not of the machinery we have to deal with.

"In a lot of the films I plan to do, I hope to work on 16 mm. It's simpler and the technology associated with it is lighter and more mobile.

"I am looking to improvement and development not only in the technical and artistic areas, but the commercial and business areas as well.

"We are now about to self-finance our next films, and supervise their distribution in association with Cinema Five, an affiliated company which distributes high-quality films, and which owns some of the best theatres in New York.

"One of these films will make the feature-film debut of director Carroll Ballard, *'The Black Stallion Returns'* from the best-selling novel by Walter Farley.

"Another is *'Apocalypse Now,'* by John Milius; and *'Tucker'* which I plan to write and direct myself.

"The point of all this is that we want the same expertise and artistry and enthusiasm that goes into making a piece of film stock or into making a motion picture to go into the distribution and marketing of that film.

"I am not always convinced that the men who are entrusted with the distribution and merchandising of our films actually 'like' movies. Maybe this can change, maybe not; but we are going to try."

*For a revealing look at people and ideas in the moving visuals industry, Kodak has combined this and other interviews into a fascinating and informative booklet. For a free copy write: Eastman Kodak Company, Dept. 640-D, Rochester, New York 14650.*

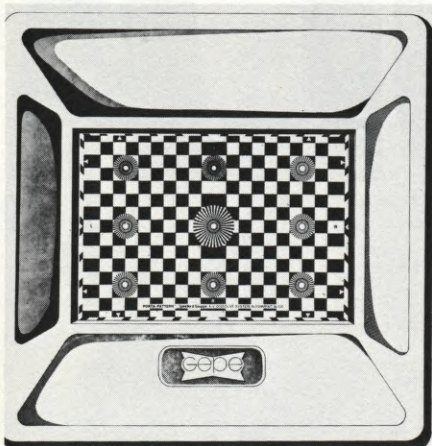


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# WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



## DISSOLVE SYSTEM ALIGNMENT SLIDES INTRODUCED

The precision alignment of projectors in a slide dissolve system becomes easy with an announcement by Spindler & Sauppe of a new Dissolve System Alignment Slides Set, now available everywhere from authorized S&S dealers.

Each pair of slides consists of two checkerboard patterns, one green and one red, reversed from each other, and photographed in precise registration. When superimposed over each other on a screen, the two slides form a perfect red and green checkerboard pattern with misalignments showing up as yellow areas.

Arrowheads along the edges of each slide also make it simple to align adjacent images in a multi-image presentation. "Test patterns" at the center and corner of each slide may also be used in making lens resolution comparisons.

The new S&S alignment slides are each individually photographed on an Oxberry animation stand and are hand-mounted in pin-registered, glass slide mounts. They are available as a single pair or in a set of three pairs for multi-image applications. Contact your local S&S dealer, or obtain his name from Spindler & Sauppe, Inc., 13034 Saticoy Street, North Hollywood, Calif. 91605.

## USIA ANNOUNCES BICENTENNIAL FILM GRANT PROGRAM EXTENSION

The U.S. Information Agency has announced the extension of the nationwide Bicentennial Student Filmmaking

and Television Grant program for another year.

The program begun in 1974 provides individual grants up to \$3,000 for accepted production of sound films or videotapes related to the Bicentennial Year.

Robert S. Scott, USIA Assistant Director for Motion Pictures and Television, said that films or videotapes funded under the grant program would be shown to foreign audiences by 187 U.S. Information Service posts in 110 countries as part of the overall celebration of the 200th anniversary of the United States.

USIA has the responsibility for the conduct of all U.S. Government information and cultural programs abroad.

"Hopefully," Scott said, "these second-year grants will encourage young American artists to communicate their unique heritage, their diverse culture and their hopes and aspirations for the future through the visual power of film and television."

In preparation for the Bicentennial, Congress established three theme titles to give emphasis to the rich diversity of commemorative activities as follows:

1. Through *Heritage '76* we seek to remember our form of government, our Founding Fathers, our forgotten people, the places, things and events of our past. Our heritage includes not just the classic birth of American democracy, but also the contributions made to our way of life by those who came before, the explorers, the Indians, and those people of many lands who chose the United States as their foster home.

2. Through *Festival USA* we celebrate the richness of our diversity and the vitality of our culture. We celebrate the political dynamics, the social innovation and the scientific and technological achievements which underlie the democratic experience in present-day America.

3. Through *Horizons '76* we plan to shape a better tomorrow, by beginning with individual initiative and setting our Century III goals. We recognize the American commitment to the interdependence of people everywhere and the challenges we face together to build a better peace and to enhance the quality of life on planet earth.

During the 1974-75 Bicentennial Filmmaking grant program, 15 actual grant awards were made on the basis

of 320 grant applications from students representing 45 states.

USIA encourages the submission of proposals for films and videotapes costing \$3,000 or less. Films and videotapes produced under the grant program should not exceed 30 minutes in duration and may be documentary, dramatization, animated, verbal or non-verbal.

Persons requesting a Bicentennial Student Filmmaking and TV application for a grant should contact:

Mr. Wilbur T. Blume  
Manager, Educational Programs  
Motion Picture and Television Service

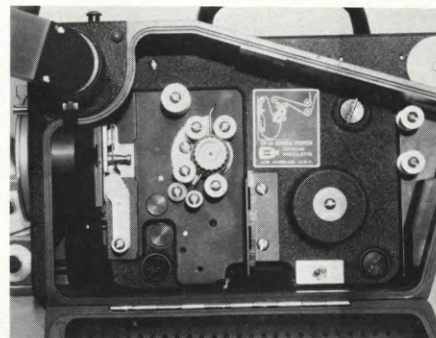
U.S. Information Agency  
1776 Pennsylvania Avenue NW  
Washington, D.C. 20547  
Office Phone: 202/376-7738

Applicants are asked to submit a sample film (16mm or 35mm), or videotape 2" or 3/4" cassettes, a story proposal of 500 words or less typed doublespaced, outlining the scope and content of the project and its relationship to one or more of the three areas of the Bicentennial themes, an estimate of the cost of the proposed film or videotape, and the Bicentennial grant application.

Applications and materials must be postmarked not later than December 15, 1975.

Recommendations for the awarding of Bicentennial Student Filmmaking and TV grants will be made to the Agency by an independent panel of distinguished film and television experts.

Applicants must be full-time or part-time graduate or under-graduate students in a recognized degree program.



## NEW CP-16R CAMERA MODEL AVAILABLE FOR DOUBLE SYSTEM SOUND ONLY

Cinema Products Corporation announces the availability of a new double-system sound reflex camera  
Continued on Page 1440





**“A year and 70,000 feet of exposed film later, plus a lot of sand, snow, dust, cold and heat, and it’s still running beautifully.”**

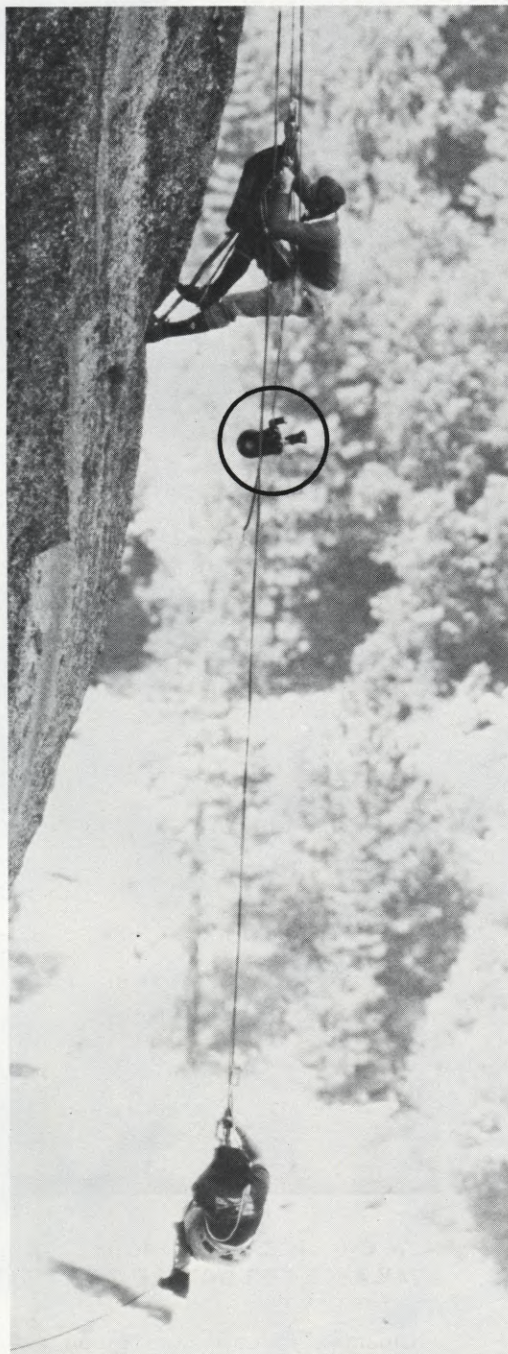
**Producer-director-cinematographer Roger C. Brown**, president of Summit Films Inc., has been using Eclairs since 1968, so when he began shooting his feature film, “The Edge,” his first choice for a camera was the ACL.

*“The original reason I had for wanting an ACL was its weight, or lack of it, I should say. Every extra ounce really hurts when you’re climbing mountains or hiking down canyons. The ACL, with a 200 ft. magazine, is the lightest professional sync sound camera unit available. On top of this, it’s compact. I can put the whole thing plus extra rolls of film, an extra magazine, batteries, a light bag, and cables in one backpack and I still have a reasonable load.”*

Brown’s film, “The Edge,” is no ordinary feature. It took him and his ACL on some of the most rugged film-making assignments ever faced by a cameraman and his equipment. In Yosemite Valley the camera went up and down vertical rock faces. In Aspen, Colorado, the ACL filmed all day at 20°F below zero with winds pushing the chill factor down another 10 to 20 degrees. Socorro, an island in the middle of the Pacific, is a birthplace of cyclones, and salt water and sand, blown by the high winds, penetrated the ACL but did not prevent it from running. The camera went up to 16,000 ft. on Mt. Kenya in Africa, facing everything from snow to hot equatorial sun. And a trip down the Grand Canyon produced more wind, sand, water and intense heat. Brown says he filmed several thousand feet at 75 fps in addition to the usual 24 fps, all with no problems.

If ruggedness isn’t enough, Brown adds that the lightweight ACL was so comfortable to hold that he would seldom put it down, even during rehearsals. “My arms never felt shaky even after holding the camera for an hour or more.”

Seventy thousand feet of film is a lot of film to put through a camera even under ideal conditions. For “The Edge,” the ACL was given the supreme test. As Brown comments, “I suppose the ACL isn’t perfect, but, as much as I have thought about it, I can’t suggest any improvements.”



**A remarkable camera and a remarkable cameraman — the Eclair ACL and Roger Brown.**

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It's our revolutionary "two-way" cardioid dynamic microphone. Only AKG has it.

Before our refoow dna reteewt development, whenever one end of the frequency range was expanded, the other end lost. And there was often trouble in-between.

The solution our people came up with was so simple it was beautiful. And patentable. U.S. Patent #3,204,031 to be exact. Build two microphone elements in the same housing. One for highs. One for lows. Phase them together

with an integral crossover network and you've expanded your range without any strain anywhere. Sound familiar? It's the same principle of a modern

speaker system. A "tweeter and woofer"—only backwards.

In the studio, on stage or on location, you have the range you need. Plus a completely flat response over the entire audio spectrum and natural reproduction up to 90° off the microphone axis. Plus no "booming" proximity effect and virtually no feedback problems.

There are AKG "two-way" microphones available for all professional purposes. See the AKG D-224E. The studio version of the "two-way" principle that duplicates the more desirable characteristics of condenser microphones. Or the highly versatile AKG D-202E that works wonders on live and cinema sound stages. And the all-purpose AKG D-200E "two-way" microphone that adds new dimension to P.A., radio-journalism and recording. Speak to your professional equipment supplier. Or write for details.

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# THE END OF HALF OF YOUR CAMERA PROBLEMS

No two motion picture assignments are exactly alike. So it follows that no one camera or lens is right for every assignment. Which in part explains the enormous proliferation of cameras and lenses that has taken place over the last several years. Well, whatever the format,

whatever the camera, whatever the lens, whatever the accessory, you can be sure of one thing—Camera Mart's got it. In stock and in depth. And whether you buy it from us or rent it from us, chances are it'll cost you a lot less than you thought.



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But getting the right gear is only half the answer. The other half is *where* you get it. In effect, the *people* you get it from. Does the place maintain a full staff of factory-trained technicians? Are they fanatic about checking and re-checking every piece of gear—however small—before it leaves the premises? Are they familiar enough with motion picture problems to suggest another, even more suitable piece of equipment than

you originally specified? And, if by some remote possibility the equipment should fail, do they stand ready to rush out, day or night, rain or shine, with a replacement? If you're dealing with Camera Mart, the answer to all the above is an emphatic *yes*. But why take our word for it? Everybody's making claims these days. Check for yourself. Just ask someone—anyone—who's ever dealt with us.

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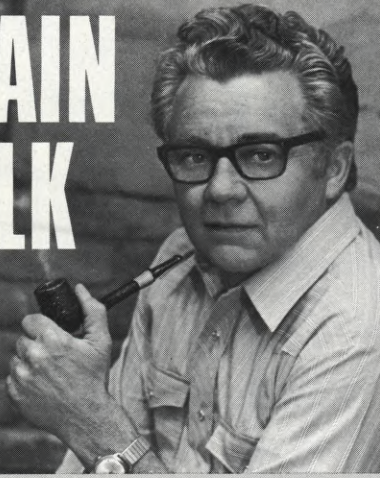


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# PLAIN TALK



by *J. Carl Treise*

**Don't be fooled just  
because a manufacturer says  
his film processor is  
made of stainless steel.**

Some people think that "stainless steel" is a magic ingredient.

They don't realize that it comes in many grades and thicknesses, and is often used improperly in a processor.

For example, some manufacturers like to make the front panel out of 20-gauge stainless steel. Although it looks solid, the metal is actually so thin that any sharp object can penetrate it and thus damage the tanks and spill their contents.

Under some conditions, lesser grades of the #300 Series will often rust.

In other words, stainless steel is only as good as the manufacturer wants it to be.

The only kind of stainless steel you should find in a quality processor is Type 316. It's rustproof, corrosion-resistant, and passivated to remove contamination.

Type 316 is more expensive than ordinary stainless steel, but it's your assurance of long life and trouble-free maintenance.

The next time someone makes a sales pitch to you, ask him what kind of stainless steel he uses in his film processor.

And then listen to his alibis!

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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, Holly-  
wood, Calif. 90028.)



**Q** I am interested in a film career and would appreciate a list of books that would give me a good introduction to the basics.

**A** Editor's Note: We receive many requests for a list of books on the cinema. To have the latest data, we have asked three former cinema-school students, who are now successful cinematographers, to compile a bibliography of works they found valuable. Every reader will probably have his favorites, so no one's list could be considered final. Any omission does not mean that the work is unworthy. At our request, Mr. Mike Lonzo kindly conferred with two others and they suggest the following works they found helpful to their careers:

There are so many movie books around these days, it's hard to choose a few. But, after talking with Steve Burum and Bob Dickson, this is a list we came up with — books which are interesting and readable *and have been most valuable to us.*

#### EARLY FILM ATMOSPHERE:

"The Parade's Gone By" ... Kevin Brownlow (New York: Knopf)

#### HISTORY:

"Behind the Screen" ... Kenneth Macgowan (New York: Delacorte Press)

#### GENERAL FILM-MAKING:

"Film and Its Techniques" ... Raymond Spottiswoode (Berkeley: Univ. of Calif. Press)

"A Primer for Film-Making" ... Roberts and Sharples, Jr. (New York: Bobbs-Merrill)

#### FILM PRODUCTION AS IT HAPPENS

... *THEORY ASIDE* ... *THE REAL NUTS-AND-BOLTS BUSINESS:*

"The World of Entertainment: The Freed Unit at M-G-M" ... Hugh Fordin (Garden City, N.Y.: Doubleday)

"Memo from David O. Selznick" ... ed. by Rudy Behlmer (New York: Viking Press)

"The Magic Factory" ... Donald Knox (New York: Praeger)

*ESOTERIC VIEW OF THE ESSENCE OF CINEMA* (Steve Burum highly recommends this to advanced filmmakers.):

"The Cinema As a Graphic Art" ... Vladimir Nielsen (New York: Hill and Wang)

*THE TANTIVY PRESS* (London) has an excellent series of paperbacks on

various aspects of film-making that are both interesting and detailed, including:

"Film Design"

"Photographic Theory for the Motion Picture Cameraman"

"Practical Motion Picture Photography"

*THE FOCAL PRESS* (London) also has an excellent and valuable series of books, "The Technique of ... Film Editing ... Film Animation ... Film Music ...

Documentary Film Production ... Special Effects Cinematography, etc. ...

#### CINEMATOGRAPHY ... A BASIC BACKGROUND MANUAL:

"The A.S.C. Manual" ... (Hollywood: A. S. C.)

#### CINEMATOGRAPHY ... STEP-BY-STEP:

"Cinematography: A Guide for Filmmakers and Film Teachers" ... J. Kris Malkiewicz (New York: Reinhold)

"Motion Picture and Television Lighting" ... Millerson (London: Focal Press)

#### CINEMATOGRAPHY ... FROM THE CAMERAMAN'S POINT OF VIEW:

"Professional Cinematography" ... Charles G. Clarke (Hollywood: A. S. C.) (out of print)

"Hollywood Cameramen: Sources of Light" ... Charles Higham (London: Thames and Hudson)

"Behind the Camera: The Cinematographer's Art" ... Leonard Maltin (N.Y.: Signet Books)

The following two items are picture books — collections of still-portraits of the stars over the years — photographed by Bull, Hurrell, Engstead, Six, Powlony, etc. — and scene-stills taken on the sets.

"The Image Makers" (New York: McGraw-Hill)

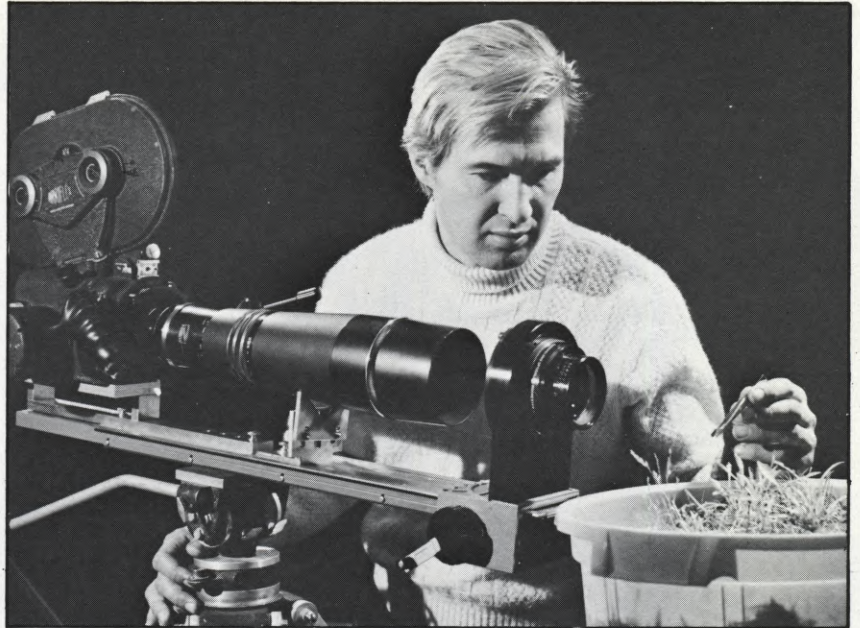
"Grand Illusions" (New York: McGraw-Hill)

Art books are a great source of inspiration and ideas to the cameraman. Steve and I both feel that books on Rembrandt, Vermeer, and Giotto, among others, are great for lighting ... and books on Constable, Canaletto, Fragonard, etc., might be additionally helpful for perspectives, compositions, and moods.





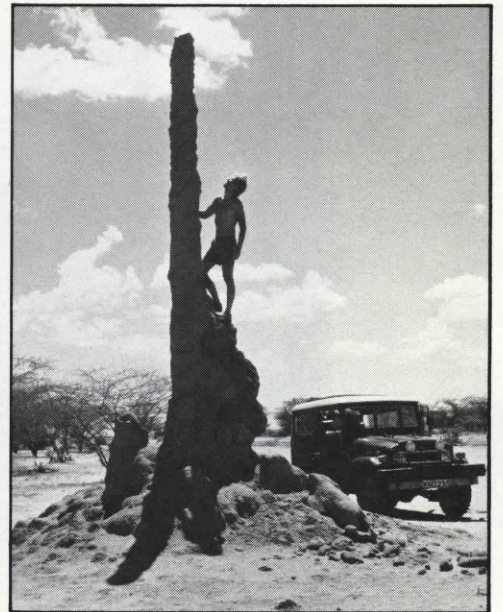
On location for National Geographic in the raw Wyoming winter.



In the lab, ultra-macro cinematography of baby spiders for Time-Life TV series.



Filming the family life of elephants in Africa's Tsavo National Park.



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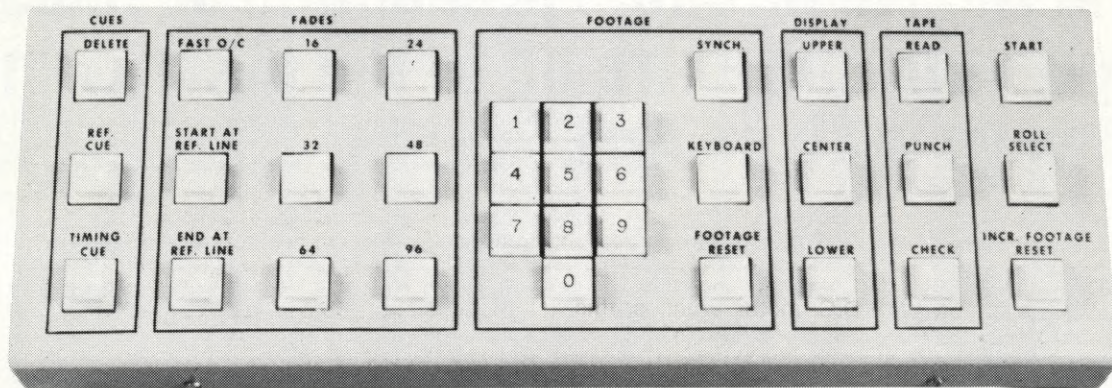
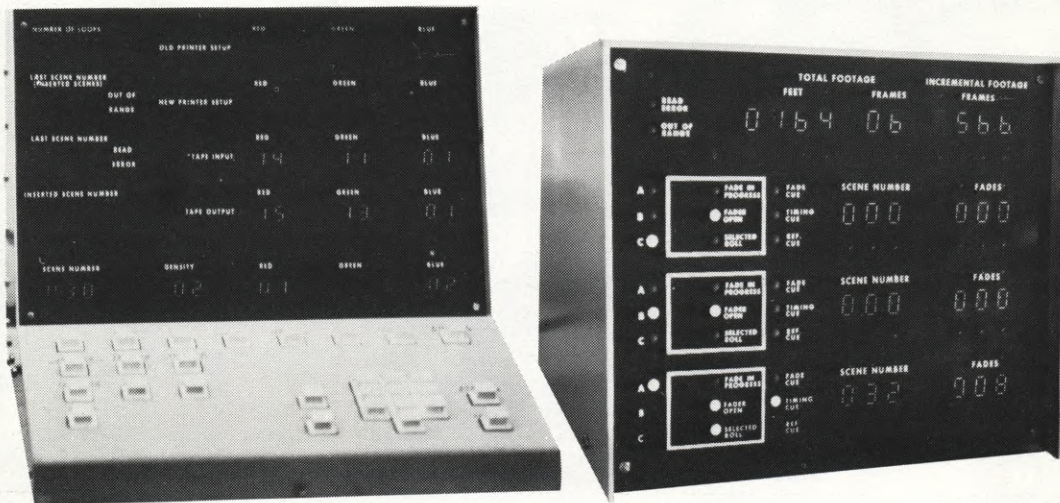
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# CINEMA WORKSHOP



By ANTON WILSON

## WIDE-SCREEN FORMATS

One of the more controversial subjects is wide-screen systems for 35mm release. Through the years there have been a myriad of special wide-screen techniques, each with its advantages and drawbacks. Only a handful of systems are still in active use, yet the arguments are still heard as to the relative merits of each.

Wide-screen 35mm release systems can be broken down into two basic categories: anamorphic and flat. Flat wide-screen systems use standard lenses on the camera, and achieve the greater horizontal dimension by cropping the height of the frame and projecting with a shorter focal-length lens.

	APERTURE DIMENSIONS	IMAGE AREA	WASTED AREA	% OF FULL APERTURE	% OF TOTAL AREA WASTED
Full (Silent)	.735 x .980	.720	0	100	0
Academy (1.33:1)	.631 x .868	.548	.090	76%	14%
1.66:1	.523 x .868	.454	.184	63%	29%
1.75:1	.496 x .868	.430	.207	60%	33%
1.85:1	.469 x .868	.407	.231	57%	36%

## THEORETICAL 3-PERFORATION PULLDOWN 25% LESS FILM STOCK FOR ALL FORMATS

	APERTURE DIMENSIONS	IMAGE AREA	WASTED AREA	% OF TOTAL AREA WASTED
1.58:1 (minimum)	.550 x .868	.477	0	0
1.66:1	.523 x .868	.454	.023	5%
1.75:1	.496 x .868	.430	.047	10%
1.85:1	.469 x .868	.407	.070	15%

FIGURE 3

This system is inherently very simple, but it is extremely wasteful of film. In addition, projected image quality suffers, since a much larger screen area must be filled by a smaller negative area.

The unused image area of this wide-screen system is in addition to the already existing waste inherent in the standard Academy Aperture. To understand the magnitude of this waste, it is necessary to step back to the year 1932 when standards for the sound motion picture format were first established. Before this time, the full available negative area was used as in FIGURE 1. This was from frameline to frameline, and sprocket hole to sprocket hole, with obvious clearances. The actual dimensions were .735" x .980", which is an area of .720 sq. in. The aspect ratio or ratio of width to height was 4 to 3 or 1.33:1. With the introduction of sound, a portion of the negative area was allocated for the soundtrack as shown in FIGURE 2. Of course this soundtrack area was created at the expense of the picture area. As a result, the width of the image area was reduced to .868" from the full .980". But to maintain the original 1.33:1 aspect ratio, the height of the camera aperture had to be proportionately reduced from .735" to .631". This is what is known as the Academy Aperture, and has an actual aspect ratio of 1.37:1, and a negative area of .548 sq. inches. By this one step, the negative area was reduced by 24%. Stated conversely, the Silent or Full Aperture had over 31% more negative

area than the present Academy Aperture.

Not all of this difference can be considered "waste", since a portion of the unused area is reserved for the sound track. However, the reduction of frame height to maintain the 1.33:1 aspect ratio results in pure unadulterated waste. This waste takes the form of a thick black frame line in lieu of the hair-thin line associated with silent films and 16mm. This large frame line amounts to about 16% of the image area and represents about 1/7 of the total negative area. That's about 14% of the film that is wasted.

Now enter flat wide-screen. By cropping the height of the aperture and maintaining the .868" width, the aspect ratio can be increased to any desired figure. In practice, there are three ratios that are most often employed: 1.66:1, 1.75:1, 1.85:1. The 1.66:1 ratio is most popular in Europe, while the 1.85:1 format is almost exclusively employed in the U.S.

The 1.85:1 ratio is achieved by chopping the frame height to 0.469", which yields an effective negative area of 0.407 sq. inches.

For those keeping score, the picture looks something like this: (See FIGURE 3). The negative area of the 1.85:1 wide-screen is only 0.407 sq. in. The wasted negative area is 0.231 sq. in. or over 56% of the area actually being used for the image. Thus, over 36% of the available negative area is wasted. To see where we have progressed in 45 years, the cinematographer in 1930

Continued on Page 1459

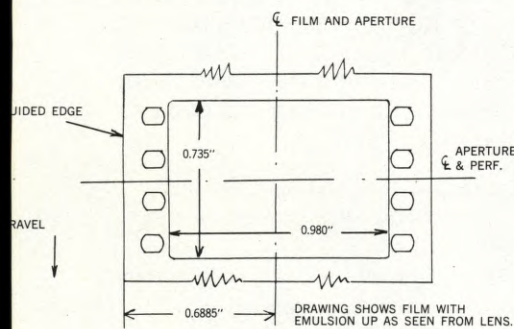
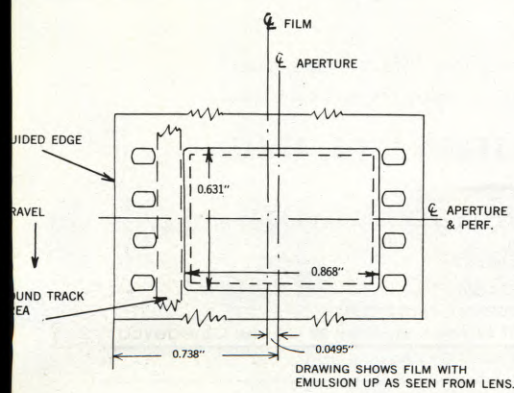


FIGURE 1 — Full or silent aperture, which utilized the total available negative area.

FIGURE 2 — The Academy Aperture. Note the area reserved for sound track and the reduced height (.631", as compared to .735" in FIGURE 1.)





# INTRODUCING THE CANON ULTRA-FAST ASPHERIC PRIME LENSES FOR 35MM CINEMATOGRAPHY

Specifically designed for professional cinematography, these exciting new lenses are the result of an extensive and painstaking research program jointly undertaken by Canon Inc. and Cinema Products Corporation, in cooperation with the Research Center of the Association of Motion Picture and Television Producers.

Naturally, these lenses incorporate all the latest advances in modern lens technology, including multiple anti-reflective coatings on all elements, floating elements wherever required, etc.

But it is the *aspheric* property of these lenses that makes them so extraordinary — because aspheric lens design is inherently superior to conventional lens design since it permits the best possible use of all available light.

**And, unlike any other series of high speed lenses currently available for motion picture use, every lens in the Canon series is aspheric.**

## The technological breakthrough

While the theory for the design of aspheric lenses has been known for quite some time<sup>†</sup>, it was not until the advent of modern computer technology and the development of computer-controlled automated machinery that it became possible to design and grind aspheric lenses in such a way as to permit *consistent high quality manufacture at a reasonable cost.*

Which is what prompted Canon and Cinema Products to launch a development program for a series of ultra-high-speed aspheric prime lenses, all supplied with BNCR-type mounts, and covering the range of focal lengths most used in professional cinematography: 24mm, 35mm, 55mm and 85mm.

A great deal of money, time and effort went into this program. The final results are more than well worth it.

## Aspherics — ideal for filming at all light levels

By causing the marginal rays to be in sharp focus, and, at the same time, rejecting random or spurious rays, the Canon aspheric lenses improve definition and sharpness at the edges and reduce flare when the lens is *wide open.*

Shooting night-for-night with available light — the aspheric lens wide open — at 25 footcandles and even



24mm (T1.6)

35mm (T1.4)

55mm (T1.4)

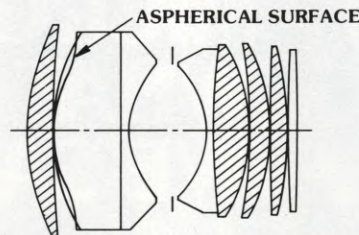
85mm (T1.4)

lower, with nothing but neon signs and street lamps for illumination, there's virtually no halation. The Canon aspherics just take the light in: penetrating the scene, holding all the detail.

The Canon aspheric lenses minimize uncontrollable flare (with its concomitant loss in contrast and resolution) and improve the definition and contrast of the scene *regardless of variation of light levels within the scene.* Even at the highest levels of illumination.

The result on film is photography that is remarkably clear and sharp, well defined and well balanced, with good color rendition and saturation, especially with regard to flesh tones.

Which makes the Canon aspheric lenses ideal for filming under any and all light conditions. Night-for-night with available light, as well as in broad daylight, or on a well lit sound stage.



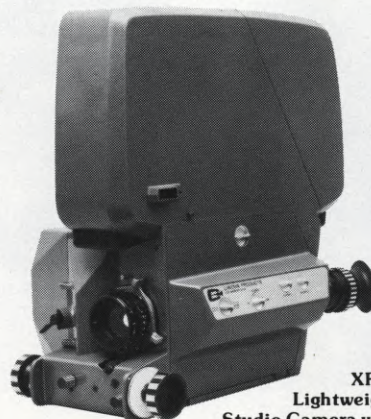
Arrow points to aspherical surface. The deviation from the normal spherical curve is exaggerated for illustrative purposes.

## Let your eyes convince you

Ask your dealer (or call Cinema Products) to arrange for a screening of our dramatic 35mm test reel comparing the Canon aspherics with other high speed lenses for motion picture use.

Before you start on your next film project, shoot some test film of your own.

Your eyes will convince you. The Canon aspheric prime lenses are superior to any other high speed lenses currently available for 35mm cinematography.



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<sup>†</sup>Descartes, the French philosopher and mathematician, had already suggested that the use of non-spherical surfaces might reduce optical aberration. That was way back in 1638.

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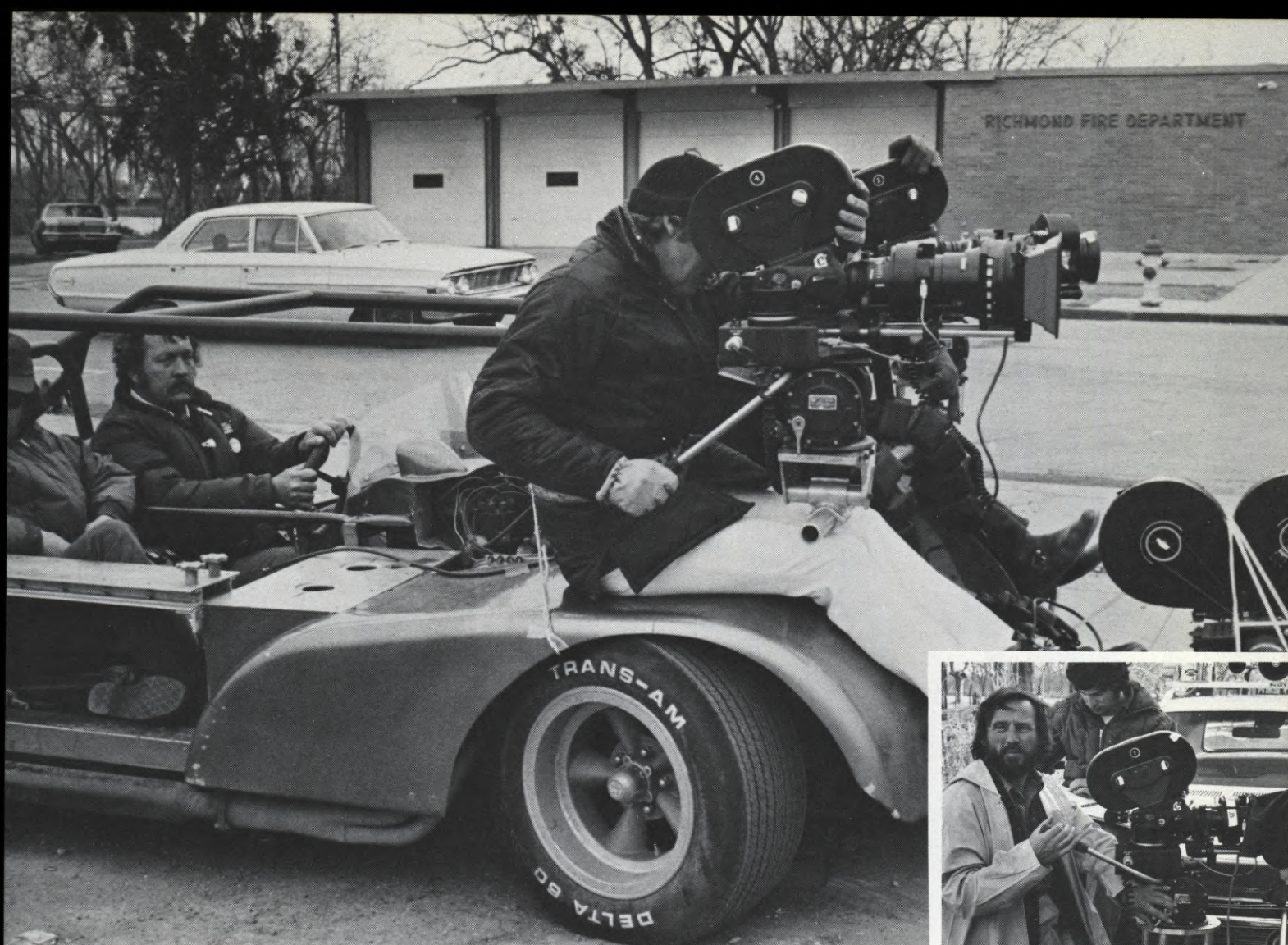
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Operator Jack Richards (forefront) and Director of Photography, Vilmos Zsigmond behind the two fender-mounted Arri 35 2C's, prepare for a wild-run sequence in Universal's "The Sugarland Express."



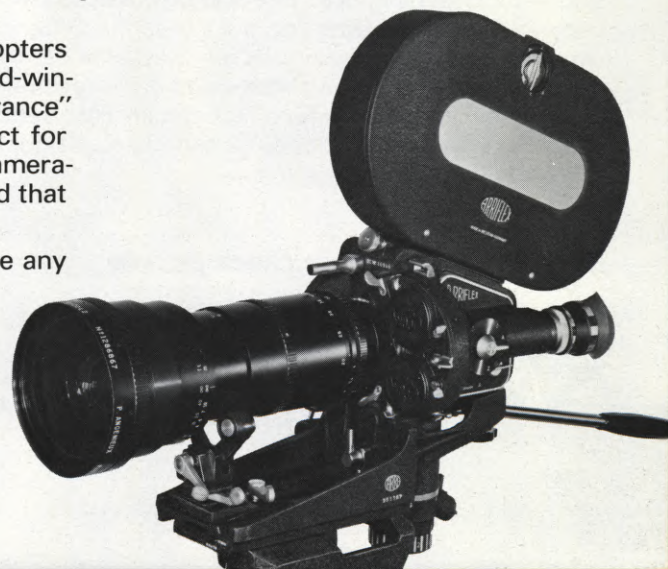
Zsigmond checks out the Arri 35 2C mounted on platform extending from front of police car.

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That's why, if it may only happen once, you can't afford to take any chances. You don't with the Arri 35 2C.



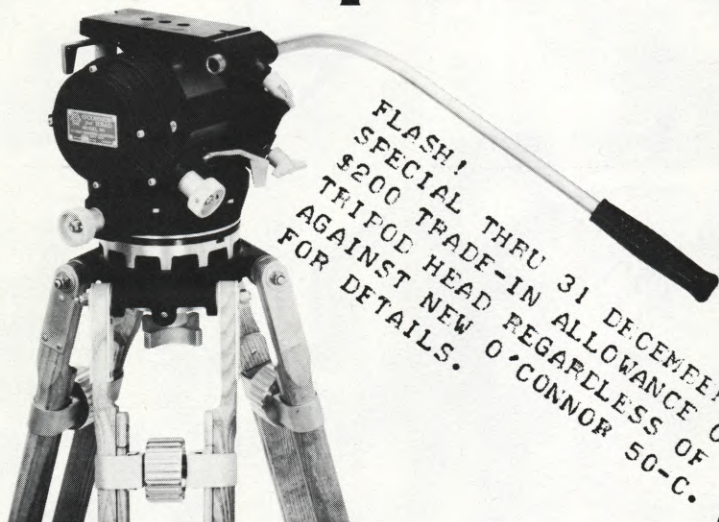
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## THE BOOKSHELF

By GEORGE L. GEORGE

### FOR YOUR HOLIDAY STOCKING

The time of year is upon us again when the season's festivities herald thoughtful gift-giving. Publishers are not unmindful of this, as manifested by an appealing selection of worthwhile new books attractively presented.

In *LIFE GOES TO THE MOVIES*, over 750 exceptional photographs recapture scintillating aspects of Hollywood, films, personalities, industry milestones, as they were featured in the pages of *Life*. (Time-Life \$19.95)

From *Greed* (1924) to *That's Entertainment* (1974), *THE MGM STORY* is an appropriately grandiose survey by John Douglas Eames of 1,700 MGM-produced films, a richly illustrated record of a notable achievement. (Dutton \$19.95; \$25, after 12/31/75).

The multiple talents of Gordon Parks — photographer, director and poet — are displayed in *MOMENTS WITHOUT PROPER NAMES*, an informal autobiography in the form of breathtakingly beautiful stills and movingly personal poems. (Viking \$22.50)

A panoramic view of Charlie Chaplin's career, *MY LIFE IN PICTURES*, offers a montage of the comedian's life and career from his boyhood to his recent Academy Awards appearance. Chaplin provides an informal, colorful running commentary to this priceless collection of stills. (Grosset & Dunlap \$19.95)

While on Chaplin, let us note David Jacobs' *CHAPLIN, THE MOVIES AND CHARLIE*, an evaluation, aimed at today's youthful audience, of the comedian's life, career, and contribution to screen art. (Harper & Row \$6.95)

In *LAUREL & HARDY*, John McCabe comments with knowledgeable authority and humor on the comedians' career in an attractive tome illustrated with some 1,500 stills from their 105 movies. (Dutton \$19.95; \$25, after 12/31/75)

More on the L&H team, *A FINE MESS!* is an hilarious compilation by Richard A. Anobile of verbal and visual gems from Laurel and Hardy films, with over 1,000 frame-by-frame blow-ups with the original dialogue. (Crown \$9.95)

Lorraine Burdick recalls, in *THE SHIRLEY TEMPLE SCRAPBOOK*, the youthful career of our current Ambas-



sadress to Ghana, the Honorable Shirley T. Black, when she save her studio from financial disaster while capturing the hearts of the world. (Jonathan David \$12.95)

A new addition to the Judy Garland lore: Christopher Finch's RAINBOW, a breezy, well researched memoir, as melodramatic as most of its predecessors but with great empathy for its sad subject. (Grosset & Dunlap \$14.95/6.95)

In YOUNG JUDY, David Dahl and Barry Kehoe reconstruct the performer's life from her Frances Gumm days to her 1935 emergence as Judy Garland, when MGM signed her to a seven-year contract. (Mason/Charter \$9.95)

Not as silly as it sounds, MOVIE STARS IN BATHTUBS by Jack Scagnatti testifies to the photographic ingenuity of cameramen in not quite revealing what used to be the censors' bugaboo. (Jonathan David \$12.95)

\* \* \*

#### THE MULTIFACETED MEDIUM

A thoroughgoing survey by composer/conductor Mark Evans, SOUND TRACK: THE MUSIC OF THE MOVIES examines with professional competence the techniques of scoring and the proficiency of colleagues, past and present. (Hopkinson & Blake \$10./6.50)

Documenting with insight the subject of Black experience in films, Prof. Daniel J. Loeb's FROM SAMBO TO SUPERSPADE assesses the evolution of a movie stereotype, from the fawning servant of the silents to the oversexed hero of blaxploitation films. (Houghton Mifflin \$15.)

In his perceptive sociological study, MOVIE-MADE AMERICA: A CULTURAL HISTORY OF AMERICAN MOVIES, Robert Sklar discusses the significant impact of films on popular behavioral patterns. (Random House \$12.95)

The new edition of the American Film Institute's GUIDE TO COLLEGE COURSES IN FILM AND TELEVISION lists 791 institutions offering 1,225 courses. Edited by Sam Grogg, Jr., this useful and exhaustive manual gives detailed information on curricular philosophy and aims. (AFI/Acropolis \$6.95)

John Willis' SCREEN WORLD 1975, now in its 26th year, is an authoritative pictorial and statistical record of all films shown last year in the U.S., with over 1,000 stills, fully cross-indexed

cast-&-credits, and other relevant data. (Crown \$9.95)

An attractive and detailed recap of last year's Oscar ceremony, the 1975 ACADEMY AWARDS OSCAR ANNUAL, diligently edited by Robert Osborne, lists winners and nominees, plus a lively report on attendant festivities. (ESE California, 509 N. Harbor Blvd., La Habra, CA 90631; \$7.95)

Miles Kreuger's THE MOVIE MUSICAL traces the momentous birth and rapid growth of this popular genre, a gossipy and documented survey culled from illustrated articles and reviews originally published in Photoplay. (Dover \$6.95)

In a 3rd revised edition, Paul Michael updates his standard work, THE ACADEMY AWARDS: A PICTORIAL HISTORY. This authoritative survey is a meticulous photo-and-text record of the yearly event, from 1927 when Wings was honored through 1974 and Godfather II. (Crown \$9.95)

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An old Hollywood hand, Walter Wagner has taped for YOU MUST REMEMBER THIS candid and penetrating interviews with 24 personalities ranging from Mary Pickford to UA's present chief, young Mike Medavoy. Ex-Paramount head Martin Rackin's searing comments alone are worth the price of the book. (Putnam \$8.95)

Life with newspaper tycoon William Randolph Hearst is narrated with wit and charm by his late "protegee," actress Marion Davies, in THE TIMES WE HAD, a candid memoir of a flamboyant era. (Bobbs-Merrill \$12.50)

Oscar-winning scriptwriter Donald Ogden Stewart, in his captivating autobiography, BY A STROKE OF LUCK!, recalls warm-heartedly his successful Hollywood career and the political involvements that led to his self-imposed London exile. (Two Continents \$10.95)

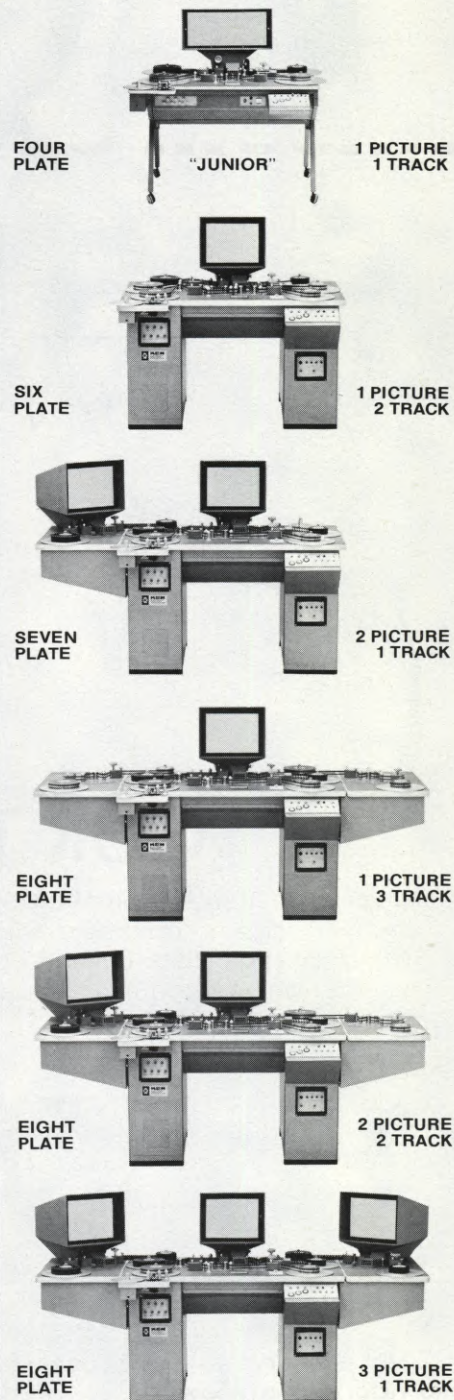
Alex Barris' HOLLYWOOD'S OTHER WOMEN treats with appealing humor various categories of female roles, from "The Classic Bitch" to "Bette: The All-around Broad," not forgetting "Mother and Other Estrangers," "Hired Help," and many in-between. (Barnes \$15.)

A classical text, Richard Griffith and Arthur Mayer's monumental THE MOVIES, now appears in a large format paperback, its 500 pages interspersed with 1,300 historic stills. (Simon & Schuster \$7.95)

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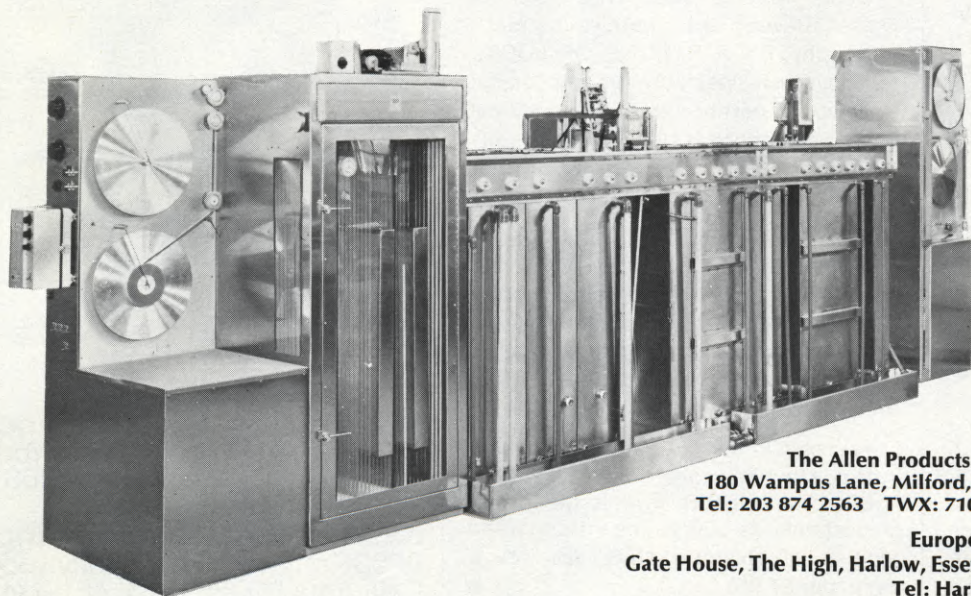
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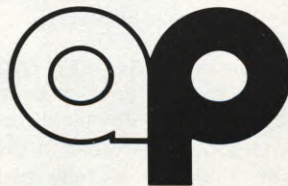
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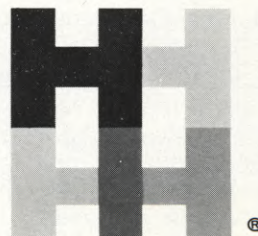
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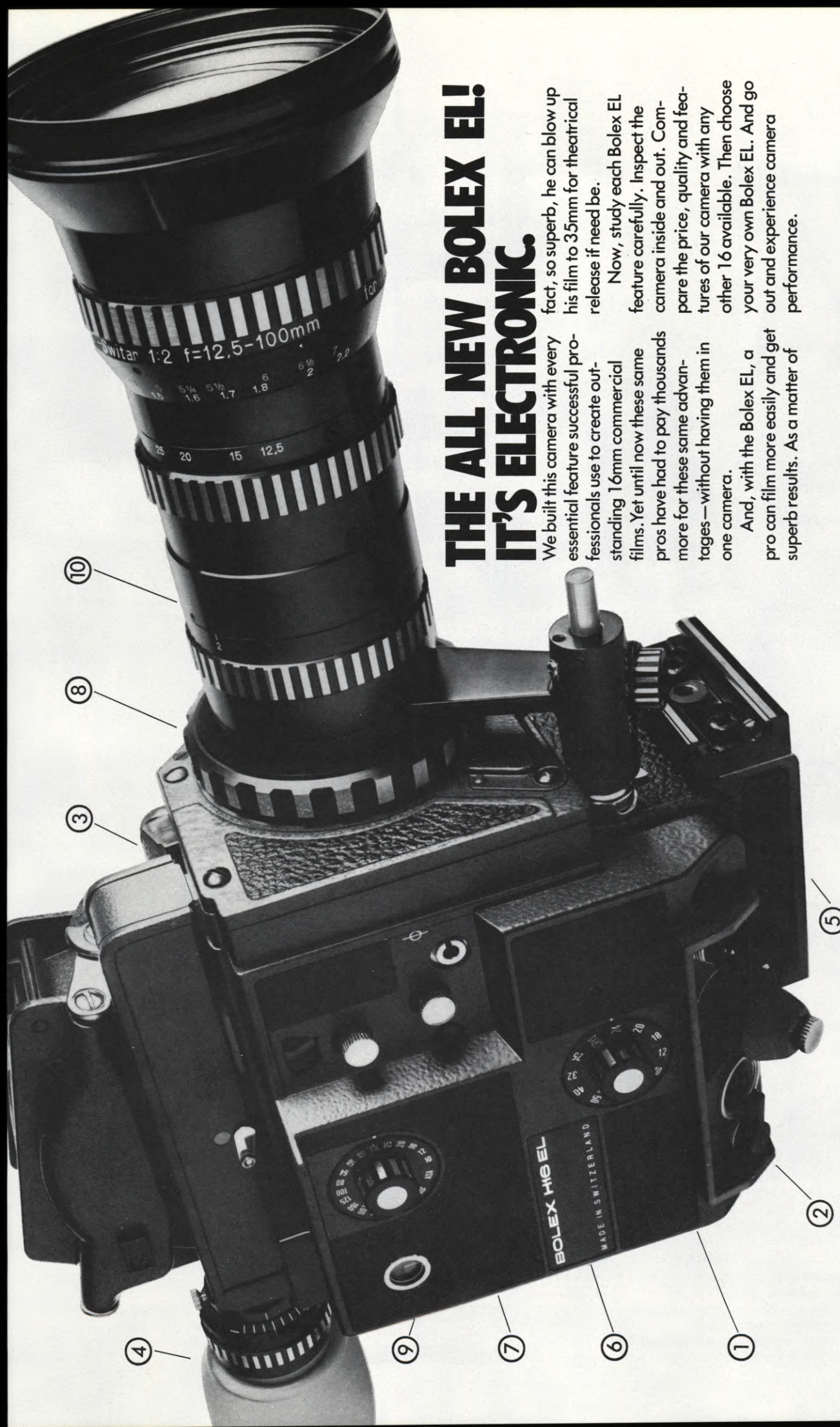
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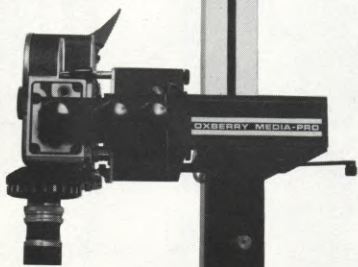
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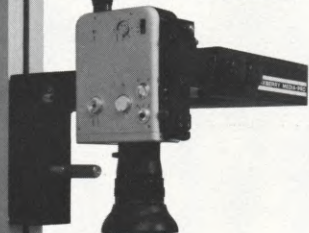
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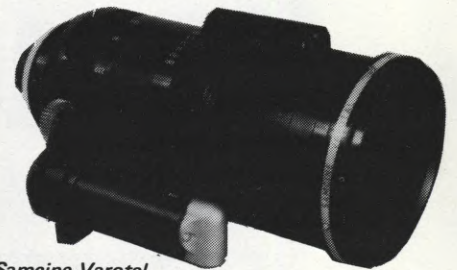
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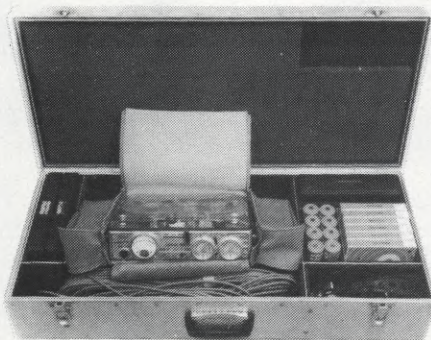


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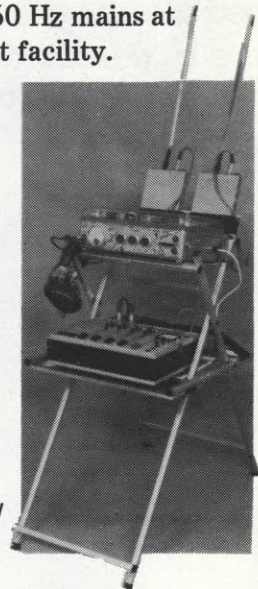


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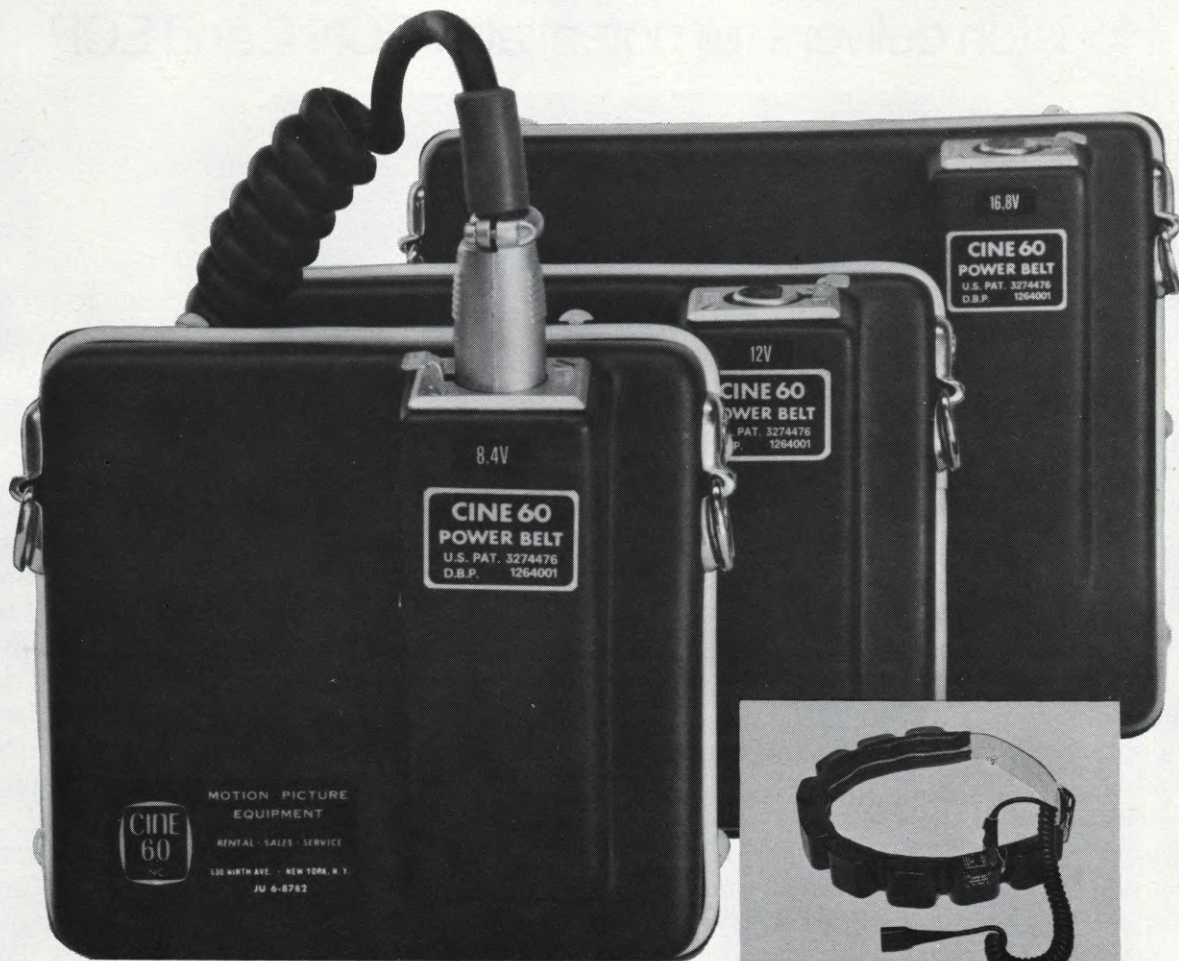


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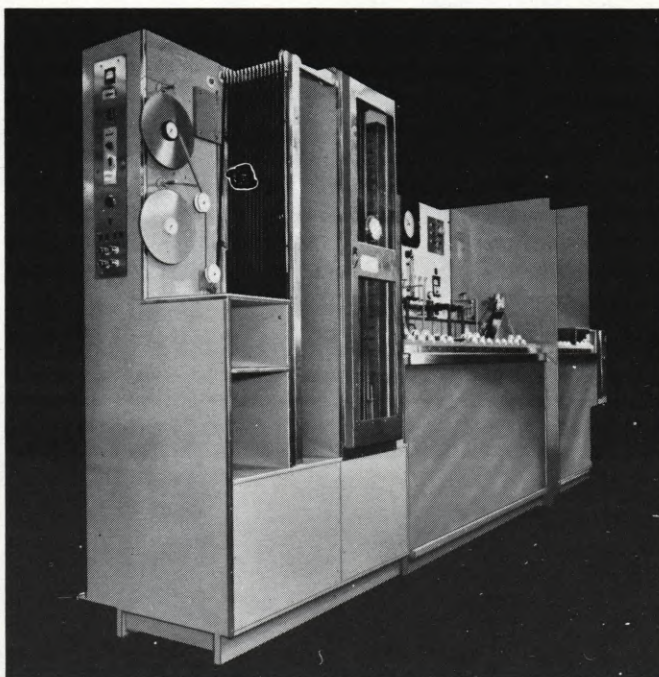
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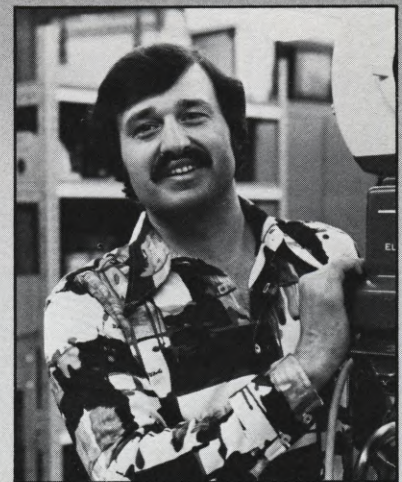
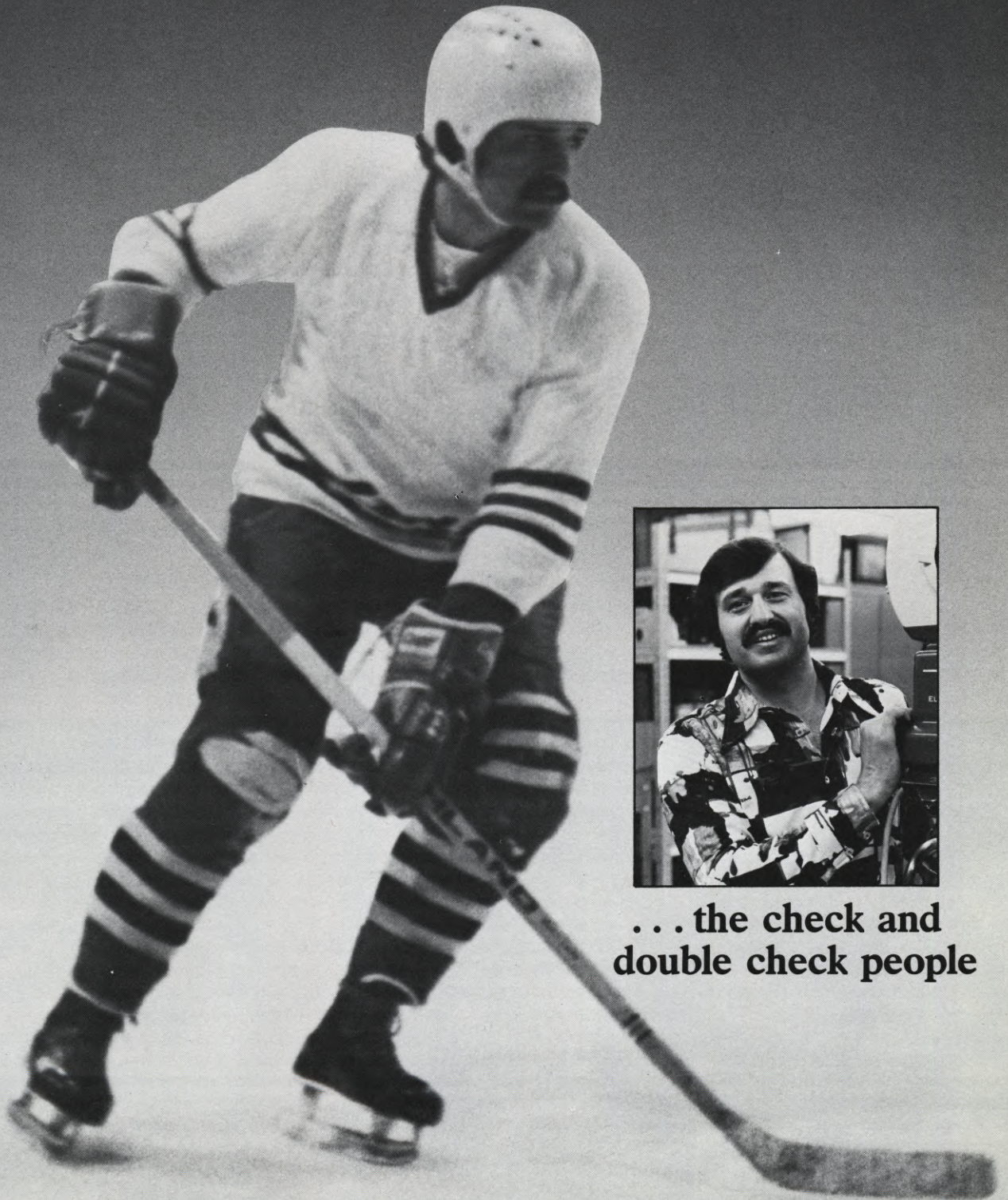
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# BEHIND THE SCENES OF "THE BLUE BIRD" IN LENINGRAD

Stars and technicians of the American, British and Soviet film industries pool their considerable talents to film Maeterlinck's classic fairy tale

By **SIDNEY SAMUELSON**

After my visit to Leningrad I considered what form my report to *American Cinematographer* might take and, after some thought, I have decided it should not be too technical, for two reasons. First, because there is nothing about the technological side of the production of "THE BLUE BIRD OF HAPPINESS" which is unique and, second, because there are authors of technical reports who are more able to write them than I am. So I shall try to relate what working life is like, for the people concerned, who are busily making a film in the U.S.S.R.

Much has been written about the problems that have beset the production since its first day of photography, which was as long ago as January 20th, this year. Some of it has been true, some half-true and quite a lot nothing more than imaginative journalism. I am not sufficiently informed to talk about the front office politics and "above the line" difficulties which have generated much gossip over the months and all I shall do is comment on the way this particular film is being shot, from a technician's point of view and try to explain what it means to film people who are used to working and living conditions in the West, who find themselves on location in the Soviet Union.

By the time this article appears in print filming will be completed; possibly the longest shooting schedule (32 weeks) for a studio picture in modern times will have ended. People in the film business, those with knowledge

and those without, may expound on the reason why the film went so far over schedule, over budget and overboard on aggravation but, in my opinion, the major cause of the misery has been the lack of communication, at all levels, and at all stages of production and pre-production. The English-to-Russian and Russian-to-English language thing is more than a barrier; it is a great big 12x12-foot granite wall through which even the most efficient interpreter can only partially penetrate. This is the crux of the problem as I see it, for correctly translating *words* is only part of what is needed; the intended *feeling* behind words and their technical accuracy are equally important, yet are immensely difficult to get across. Because of this, I believe there have been misunderstandings, on both sides, from day one of the planning of this remarkable project, the first U.S.A.-U.S.S.R. co-production of a major motion picture in history. I think the dialogue barrier caused each party to not properly understand what was expected of them with a bit of "up-tight" feeling being generated as a result.

Certainly the pairing of the distinguished director George Cukor with a non-English-speaking cameraman worked out less than brilliantly which was why, after ten weeks, three-time Oscar winner Freddie Young was hot-footed out to Leningrad to take over. Jonas Gritzus is an experienced and enthusiastic 1st Cameraman who holds a senior staff position at Lenfilm Studios, but one must remember that

Cukor works in a rather unconventional way and this, coupled with having to discuss every set-up, every timing, every camera movement, back and forth via a third person (an interpreter) was bound to produce an awkwardness which, inevitably, had to be remedied.

The new teaming of Cukor and Young had the built-in advantage of the pair having worked together on two previous occasions (EDWARD, MY SON — 1949, BHOWANI JUNCTION — 1965) so Freddie needed no formal introduction to how the veteran director likes to do his directing. The rapport between them has to be witnessed to be appreciated. There is no doubt that Cukor desires, needs and gets to be surrounded by technicians not only of high calibre and long experience, but who also understand the man. While there are very good technical people to be found in all the major film-making countries of the world, equally there are many who are not used, or able, to work in a Cukor-type way. For starters, he seldom, if ever, looks through the camera which means that his cameraman has to be a bit more than a photographer and it is an education to see how George and Freddie go about the business of putting what is written in the script onto film, in the way they know best. Cukor is the perfect dialogue man, Young and his camera operator, Freddie Cooper, look after all the visuals — set-up, action, camera movement, desirability of zooming and/or tracking, etc., etc. Freddie and

**(LEFT)** On the set of the Soviet-American co-production, "THE BLUE BIRD" filming in Leningrad, Camera Operator Freddie Cooper lines up the Panaflex for a shot. In foreground is American film star Cicely Tyson dressed for her role as "The Cat". **(RIGHT)** Veteran American director George Cukor gives instructions to the two talented children who have leading roles in the film, Patsy Kensit from Britain and Todd Lookinland from America.





his able team work it all out between them and look after every detail.

The two voices one mainly hears on the set belong to Cukor and Young. It is intriguing to see how these two senior citizens of cinema, pooling their more than one hundred years of experience, get the desired result. They argue and cuddle each other alternately but the mutual respect is there, which they colour by good-humoured verbal insult. On one occasion while I was observing, Freddie was being particularly vocal to all within earshot,

including the director, and Cukor shouted across the set to me: "You hear that, Sydney, isn't that a disgraceful exhibition?" And, with a hang-dog expression, went on: "Since he arrived he has dominated the shooting, insulted me, taken over my job, I'm a broken man . . ." I replied that I believed that was probably how Freddie must have achieved his success over the years! To which Cukor replied: "I know it, I once met a thoroughly broken-down David Lean!"

Always the language problem makes

its frustrating presence felt. The Russians have provided expert interpreters but those ladies and gentlemen are skilled in interpreting textbook Russian into textbook English and vice-versa and they have had to try to adapt themselves to the methods, apparatus and comic terms used by Western film-makers. "Get me a cuckaloris," appears in few Russian/English phrase books, so even quite ordinary technical instructions seem to take forever to carry out. A simple question from one person to



(LEFT) In addition to two Ianiro Brutes, elevator stands had to be shipped by air freight to Leningrad in order to, as Freddie Young put it, "get the lamps high enough to help the ladies look right." No high stands seem to be used in Russian film-making. (RIGHT) A surplus of backlight gives Director of Photography Freddie Young an angelic halo as he lines up the Panaflex camera, observed by his Russian crew.

(LEFT) The chemistry of efficient film-making (left to right): Focus Puller Trevor Coop, Camera Operator Freddie Cooper, Director of Photography Freddie Young, BSC, the Panaflex camera and a Lowel Soft-light. (RIGHT) Russian gaffer Fima Zarhk finds that he can communicate some fairly complex ideas to Freddie Young by using sign language. The communication barrier was formidable on this picture.







**George Cukor directs, aided, as always, by his amazing interpreter, Aaron Haikin, who speaks perfect English without a trace of accent, despite the fact that he has never travelled outside the U.S.S.R. Each senior non-Russian member of the filming crew was assigned his own interpreter, and they were top bracket.**

another needs four mouthings to get the answer back, a misunderstanding or wrong emphasis *en route* can cause the time taken to be doubled, and all this can drive you mad. Any little bit of temperament (not an unheard of thing on a studio stage) gets magnified out of all proportion because it's one thing to be shouted at, but if you don't know the meaning of what the shouting is about it can be devastating. I must say again, however, that the calibre of interpreters I met was absolutely top bracket. Each senior non-Russian member of the crew seems to have his own translator. George Cukor has one (Arron Haikin who, incidentally, speaks perfect English without a trace of an accent, yet has never travelled outside the U.S.S.R.), Freddie Young has another (a super young lady — Veronica Sharnova), and Production Supervisor Teddy Joseph has, and needs, one also, to look after all his scheduling and logistical problems.

When Freddie Young took over the photography he quickly summed up what was needed, equipment-wise, if

the shooting was to be speeded up. As my pictures show, while some of the equipment changes he asked for were understandable and predictable (notably the introduction of the Panaflex camera for its lightweight versatility), others were unexpected. I suppose one must say that, in our terms, the studio in Leningrad is equipped with adequate but old-fashioned and heavy equipment, not the kind of gear needed to really get things moving.

Again, we must understand that time, as such, is not of such concern in Russia as it is for us and there is plenty of unskilled and semi-skilled labour available. These two factors mean that, as an example, a regular 10kw bulb housed in a huge, cast iron ex-carbon arc lamp-housing is quite acceptable to Russian film-makers. I think the 1975-type gear introduced for the first time on this film has been an exciting experience for the local technicians. Freddie sent for the Panaflex and all its goodies . . . interest and acceptance by the Russian crew — sensational. He

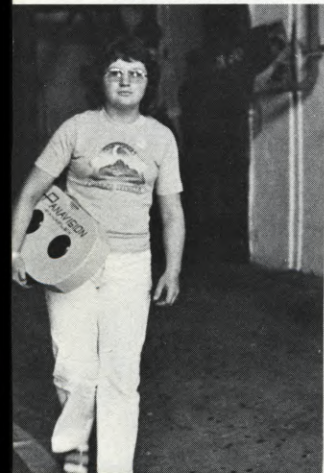
brought with him a number of Lowell, featherweight, folding soft lights . . . "unbelievable", they said. Since then he has introduced such (to us) normal items as 1, 2 and 5kw inky lamps in the new lightweight housings, a couple of regular brutes with electric elevating stands (all made by Ianiro, Rome), a Fisher dolly and a Mitchell S/35 MKII camera for high speed. Everything that has come in has been enthusiastically received and carefully evaluated by the Russians and so, in a kind of way, "BLUE BIRD" has done some technical pioneering which will undoubtedly lead to future trading arrangements for the supply of equipment from Western manufacturers.

In most technical respects the film is entirely conventional. It is being shot on Eastmancolor 5247 supplied from Rochester as part of the U.S.A. contribution to the co-production. The only real difference in the film stock is that the negative has positive-size perforations because in Russia negative and positive both have the same perforations — a technical standard originally agreed to by an international conference of filmmakers just after the war, but subsequently put into effect only by the Russians. Another example of the communication problem that exists between East and West?

Negative processing and printing of dailies is done in Leningrad — part of the Russian participation in the production — in a very satisfactory manner. The laboratory chief, Matvei Shatz, made a point of asking me (through an interpreter, of course) if I had heard anything about the quality of his lab work. I told him that I knew Freddie Young was extremely happy with the dailies he was getting, to which Shatz replied (again through an interpreter), "If Mr. Young is pleased, then I know my processing could satisfy anybody in the world."

The negative perforation of positive size did mean, obviously, that the sudden change to the Panaflex

**(LEFT) Loader Tania Plusnina with a new toy — a Panaflex magazine. (CENTER) Female labor is more often used in Russian studios than it is elsewhere. The author comments: "We saw women doing all manner of jobs we normally reserve for men — driving trams, buses and every type of heavy vehicle, focus-pulling, scene-shifting, operating studio and stage lights, and so on." (RIGHT) Tamata Agadjanjan states a scene.**



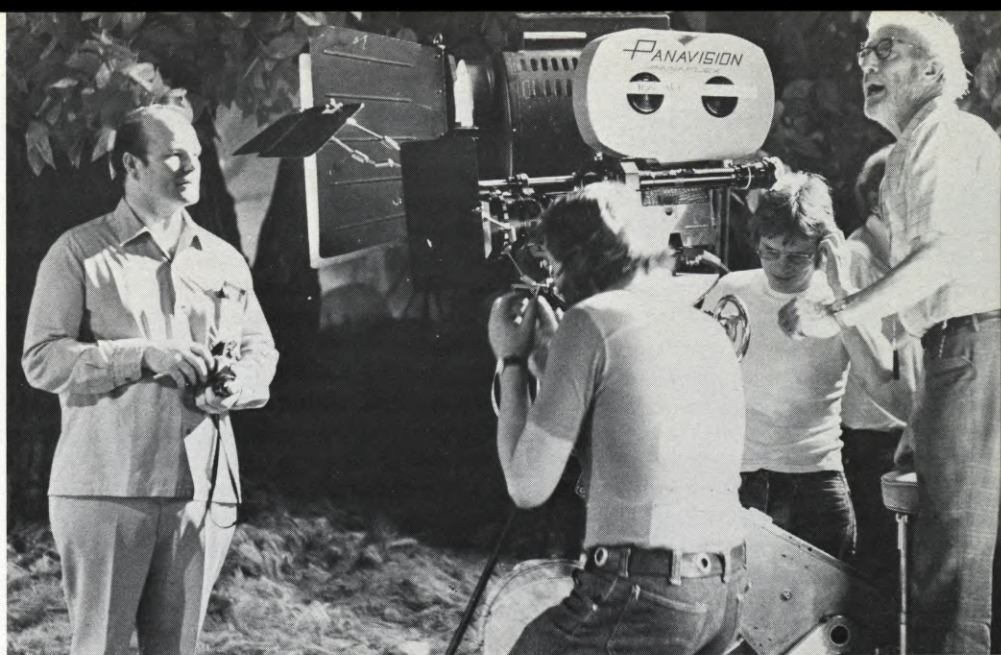


necessitated a specially-modified movement to be prepared, fitted and tested in double-quick time. The engineering for this was accomplished by Panavision in Tarzana, California, in three days; air shipment to London took one day and fitting and film testing in the camera there, another. So the British-based Panaflex, with its positive-sized pins and claws was able to go to Russia within a week of the order being placed — not bad Anglo-American service, I think.

Urgent requests for equipment that came through from Leningrad were quickly dealt with by Peter Beale, who is the production chief at the London office of 20th Century-Fox, but local needs are something else . . . a different ball game, as they say. I think bureaucracy may have been invented in Leningrad, for even the most simple requirements, in the Western manner of thinking, involve mind-busting, time-consuming discussion and form-filling. An example of this was the rostrums (parallels) that Freddie Young wanted. He found it difficult to accept that regular wooden rostrums (1-foot, 2-foot, 3-foot, 4-foot, etc.), on which one stands, cameras and lamps at times, were not available, or known about at the studio. In simple fashion, but with some vehemence, Freddie said: "You'd better get some made up then!" But this is easier said than done and, at one point, it was thought these rather ordinary wooden platforms would have to be air-freighted all the way from London to Leningrad. Eventually Freddie did get his rostrums, custom-made, beautifully, to his exact requirements by the studio carpenters. It's just that it took time, that's all.

The will to please and the required skills certainly exist. It is the firmly entrenched system of paperwork which is frustrating. It was put to me by one of the local production people that, in a peculiar kind of way, it is as well that shooting progress is a bit slow, so that it can keep in sync with the way in which the studio has to operate.

The attitude to labour, as one would expect in a socialist country, is somewhat alien to our thinking. Differences are noticeable both inside and outside the studio, especially as far as women are concerned. We saw women doing all manner of jobs we normally reserve for men — driving trams, buses and every type of heavy vehicle, focus-pulling, scene-shifting, operating studio and stage lights, and so on. (Yet, among all the military personnel thronging the streets of Leningrad, never did we see any women in uniform.) There is no unemployment in



Freddie Young's voice, unamplified, will carry to the farthest spot rail. He shouts orders, while Alan Annan covers his ears, Trevor Coop busies himself with his focusing, and the author, Sydney Samuelson (left), observes, looking a bit unnerved. Nothing underplayed about Freddie!



(ABOVE) An intricately choreographed number is rehearsed for "THE BLUE BIRD" on Leningrad sound stage. Sets had long been built when Freddie Young arrived and there was no possibility of making changes. (BELOW RIGHT) Cicely meets Cicely — Miss Tyson and Mrs. Sydney Samuelson chat on the set.

Russia and I ask myself how many Western countries can say they enjoy that same happy situation in these times.

However, in my view, extraordinary lengths are gone to in order to ensure full employment, especially in the making of jobs for people of middle and advanced age. There does not seem to be a public doorway in Russia that does not have a man or woman sitting beside it. I am not sure just why they sit there or for what they are waiting, but it's a job, and that's what counts, I suppose. Every morning at the

Continued on Page 1466





# FREDDIE YOUNG, BSC TALKS ABOUT PHOTOGRAPHING "THE BLUE BIRD"

Famed three-time Academy Award-winning cinematographer sets a lively pace on the set, as he photographs "THE BLUE BIRD" in Leningrad

By DAVID W. SAMUELSON

My friend Freddie Young, BSC, is fond of referring to himself as "the oldest cameraman in captivity." That may well be true, among cinematographers *still actively working* in the film industry — but only in terms of sheer chronology. Technicians who have worked with him in these latter years readily attest to the fact that he is the "youngest" man on the set — no pun intended. In fact, he has been known to exhaust many a crew member with his seemingly endless supply of dynamic, creative energy.

Freddie has served as Director of Photography (or Lighting Cameraman, as we say in Britain) on more than 100 feature films, but at his Roehampton home the cup he won as an Amateur Lightweight still gets equal billing with his three subsequent Academy Awards, and on that subject, Freddie says: "Before the war I don't think any British film won an Oscar. It wasn't done."

Freddie did his bit to fill that vacuum, winning the coveted "Best Achievement in Cinematography" Academy

statuette for "LAWRENCE OF ARABIA", "DOCTOR ZHIVAGO" and "RYAN'S DAUGHTER" — all directed by David Lean.

Freddie Young has devoted fifty-eight continuous years of his life to working in the motion picture industry — including stints as stillsman, projectionist and assistant editor — and fifteen of them as chief cameraman at MGM's Borehamwood Studios in England.

Always willing to experiment with new ideas and techniques for telling a



(LEFT) The biggest 10K in the world? This Russian lamp looks like it might be. Freddie Young stands in front of a converted 150-amp arc housing. (RIGHT) A bird's eye view of the crew shooting one of the many fantasy sequences on a sound stage at Lenfilm Studios in Leningrad. "THE BLUE BIRD" was filmed years ago by Fox with Shirley Temple starring.

(LEFT) Watching a rehearsal, George Cukor relays instructions through his interpreter, Aaron Haikin, who was constantly at his side. (RIGHT) The ubiquitous Freddie Young, always willing to lend a helping hand, does a bit of on-the-spot maintenance for the working (practical) lamp hidden in Todd Lookinland's hat.





story on film, Freddie has no patience with those "creative artists" of the industry who attempt to shroud their work in some sort of mystique. "There is an awful lot of rubbish talked about making films," says he. "As a matter of fact, it's very, very simple. There are no rules . . . rules are for amateurs."

A sprightly 73 years young (there's that pun again), Freddie is the grandfather of five. He also has a nine-year-old son, David.

He has been awarded the OBE (Order of the British Empire) for his services to the Cinema.

I wasn't fortunate enough to be able to go to Leningrad to watch Freddie in action during the shooting of "THE BLUE BIRD". Someone had to stay in London and mind the shop. But my brother Sydney went over there to make sure there was a Samuelson about and he wrote the interesting article which precedes this one.

However, I couldn't wait to talk to Freddie about his work on the picture. So, the moment he set foot in London I collared him and what came out of our conversation is detailed in the following interview:

**QUESTION: Many journalists have returned from Leningrad with stories about the location which are derogatory. Did you find that these are fair reports?**

*YOUNG: No, I think they just picked on the worst possible things they saw around and exaggerated them. I think it's disgusting that they should do such a thing, for, after all, the whole idea of making a picture in Russia with American/Russian cooperation was to try to create some friendly atmosphere between the two nations; and on the face of it, that is an extremely good idea, isn't it? Some journalists would come out there for three or four days and go back and write a lot of rotten things about what they saw, which I think is a bloody shame. One article I saw about Elizabeth Taylor in Leningrad was really scurrilous.*

**QUESTION: Was it friendly out there?**

*YOUNG: As far as I was concerned, very friendly, yes. People were extremely nice. Obviously, there were things that were not right; for instance, to me, they had old-fashioned equipment — but they didn't make any objection to our bringing out a Panaflex camera, or my bringing out an English crew. In fact, as far as I was concerned, they did everything they could to cooperate. But it couldn't pos-*



Director of Photography Freddie Young, BSC sits for a "formal portrait" of the binational crew filming "THE BLUE BIRD" in Leningrad. The British are to the right of the camera, the Russians to the left (no political significance intended, however). Although there was the inevitable language barrier, Young found his Russian coworkers "very friendly . . . extremely nice."

*sibly be like making a picture in England or America — no question about that — and I used to say to them, "You can send a spacecraft to the moon, yet you don't seem to spend any money on your studio or on equipment." It was a very old-fashioned studio with no air-conditioning, but they didn't seem to mind it. They were used to that way of working. Their great thing, if I criticized them in any way, was to say, "Well, we're never out of work, anyway." It's a completely different system. They said, "Well, you know, we've got a system that's different from your system. Perhaps some of your ways are better than ours; in fact, some of our ways are better than yours."*

*They'd smile — they weren't ashamed of themselves.*

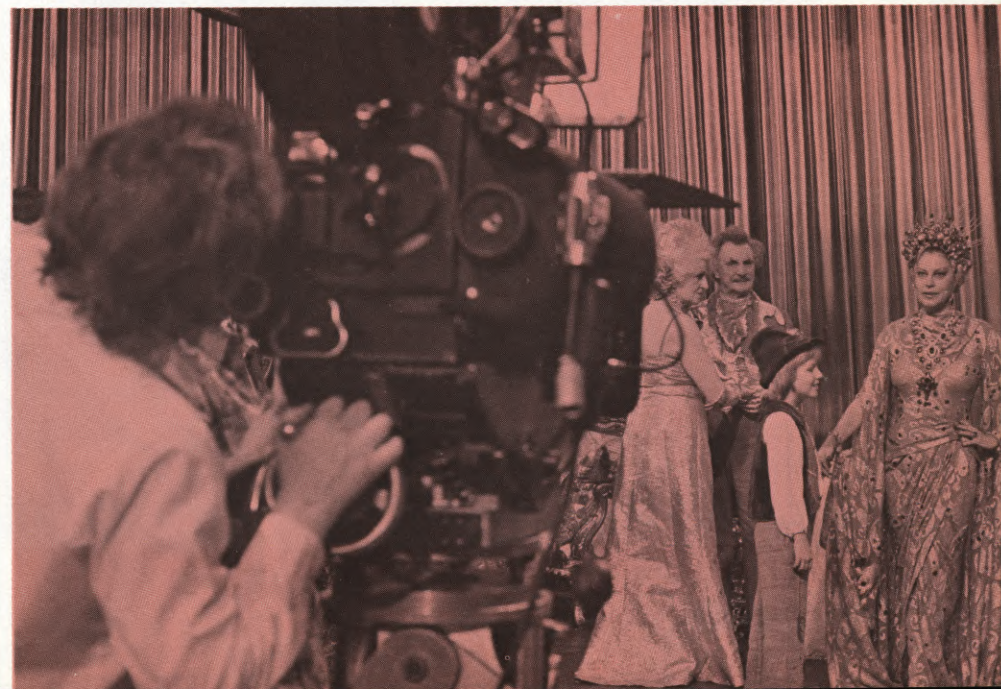
**QUESTION: How was the Panaflex received?**

*YOUNG: They buzzed around it like bees around a honeypot. They were frightfully interested.*

**QUESTION: You took some Lowel Soft-lights with your hand-baggage when you went out. Why was it that you knew you needed these particularly?**

*YOUNG: I went out on twenty-four-hour notice and before I went I was told by Peter Beale that they were very short of*

Russian cinematographer Jonas Gritzus lines up a second camera for a scene involving Todd Lookinland and Ava Gardner. "THE BLUE BIRD OF HAPPINESS" (to use the full title of Maeterlinck's work) was shot almost entirely in the studio. However, Freddie Young felt that even the few scenes actually shot outdoors should also have been filmed on the sound stage, since they were "too realistic" for a fairy story.





equipment. So, I thought, "Well, I'll take what I can." And those four Lowel Soft-lights were very light in weight. When I got out there I saw their old camera, it was a BNC reflex. It was old-fashioned. We wouldn't be satisfied with it in England now, so why should we put up with it on a major picture in Russia? So I insisted on the Panaflex and I insisted on some lights and a new dolly and my own crew. All these things I got in a few weeks. The Russians were delighted. Everything I ordered they were interested in. They looked at them and weren't sorry that I brought them out.

**QUESTION: What lights did you take out?**

*YOUNG: I sent out half-a-dozen 1000-watt pups (babies) — they only had 500-watt lamps, together with stands which you could raise to a jolly good height. Their stands were very short, so you couldn't always put a light up high. Another problem was that the rails (cat-walks) overhung each side of the set, so that the overhead lamps were almost shooting down vertically. In fact, you couldn't always tip the lamp down enough because it would burn the edge of the rail. Also they had no hanging brackets, so I made some sketches and got some blueprints sent out from England, so that they made them locally, and some rostrums (parallels). Altogether, in a few weeks we improved the situation. We were able to work faster. The major problem, really, was the fact that I couldn't speak Russian. They couldn't speak English, so everything had to be done through interpreters, which slowed everything down.*

**QUESTION: Did you have Brutes?**

*YOUNG: I had a couple of Brutes sent out. I asked for three but Fox argued and only let me have two, with Molevators. The Russians were very*

*impressed with these. I used them right away through the picture.*

**QUESTION: And a dolly?**

*YOUNG: I got a Fisher dolly sent out and the English soundman cashed in and got a Fisher boom at the same time.*

**QUESTION: So you were well set up with equipment?**

*YOUNG: I wouldn't say that! I had the minimum requirements, but it made a lot of difference.*

**QUESTION: Were you using a second camera?**

*YOUNG: I used the BNC Reflex as the second camera.*

**QUESTION: Did you have a hand-camera?**

*YOUNG: No, we didn't. They had a Russian hand-held camera which was a bit like an Arriflex, but very noisy, so you couldn't use it if you were recording.*

**QUESTION: Having made two classic films that were pseudo-Russian, "DR. ZHIVAGO" and "NICHOLAS AND ALEXANDRA", was Russia at all as you portrayed it or expected it to be? I know they were a different period, but if you were to do these pictures now, would you have done them in any different way, now that you've actually seen Russia as it is?**

*YOUNG: "ZHIVAGO" was shot in Spain and it worked out very well, because Spain has every kind of scenery that you could wish to have. In Russia it would have meant going to the Caucasus or to Siberia and that would have meant very long journeys and probably very bitter conditions.*

*Certainly we had to add to the snow in Spain; it wasn't deep enough — but I think that anybody who sees "ZHIVAGO" has a very good feeling that they are in Russia. In fact, a lot of people are absolutely amazed that it wasn't done in Russia — and we did it much more comfortably than if we'd gone there to shoot it.*

**QUESTION: Do you think it looked like Russia really is?**

*YOUNG: Yes. Several Russians on the unit had seen "ZHIVAGO" and loved it and were full of praise.*

**QUESTION: "THE BLUEBIRD OF HAPPINESS" is quite different, a fairy story and very unreal, isn't it?**

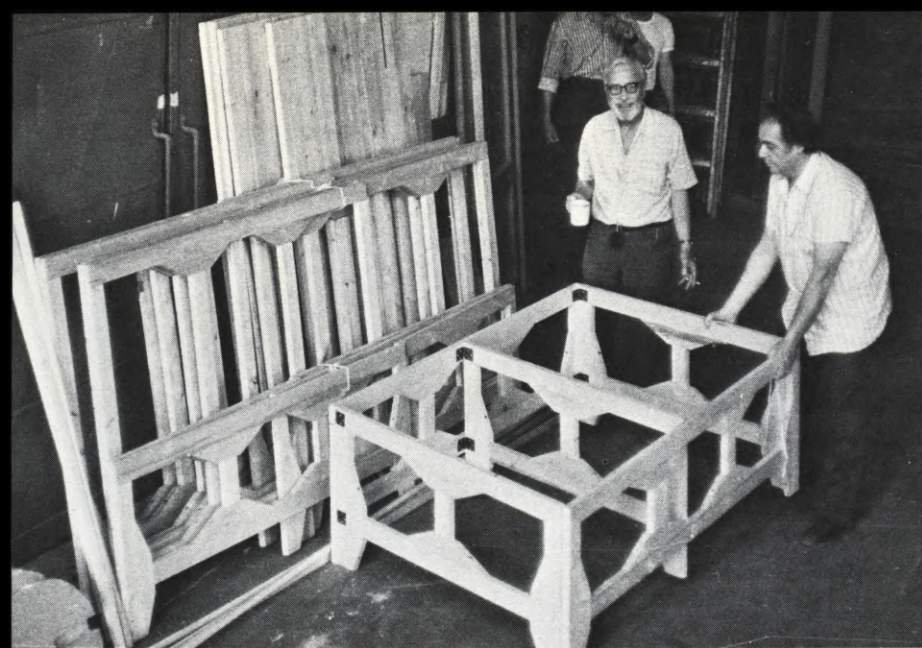
*YOUNG: Eighty-five to ninety percent of the picture was shot in the studio, but when you went outside it was very difficult to do a real exterior and make it look like a fairy story — to fit in with the studio footage — because as soon as you go outside, it becomes realistic. I think it should have been all shot in the studio, even the exteriors — with beautiful painted backgrounds and things like that, because a fairy story, after all, doesn't have to look realistic, does it? I think it could have been done much more comfortably in the studio, but as there was limited floor space, the art director would have had quite a problem to have built sets large enough and good enough to represent the exteriors, because you would have needed super backgrounds. Anyway, by the time I got out there, the picture had been going for months, so how it was going to be shot was all settled. One couldn't change things in midstream.*

**QUESTION: This fairy-like quality that you were going for, what did that involve, as far as you were concerned, in terms of the lighting?**

(LEFT) Freddie with his gaffer, Fima Zarhk, and interpreter, Veronica Sharov. (CENTER) First assistant cameraman Trevor Coop checks to see that the flap of the matte box is safely out of shot. Trevor, son of eminent cinematographer Denys Coop, BSC, works on all of Freddie Young's pictures. (RIGHT) Jonas Gritzus and Tania Plusnina operated the Mitchell BNCR whenever a second camera was needed. The introduction of the Panaflex camera into the production created considerable excitement among Russian crew members.







**(LEFT)** Freddie beams triumphantly as the rostrums (parallels) made to his specifications in Leningrad, take shape. He also had hanging brackets for lamps made according to sketches and blueprints sent out from England. **(RIGHT)** Freddie looks on approvingly as studio workers lovingly hand-sew lighting diffusers for him. Once he was able to get the type of equipment he was accustomed to using, the filming proceeded at a faster pace.

*YOUNG: I used quite a lot of colored gelatines on the lamps, but it wasn't done the way I would like to have done it. I would like to have met the art director and talked with him before we had even started the picture so we'd have gotten some understanding between the art department and the camera department as to how the sets were going to be. It was a fait accompli when I got there. We had to carry on with the thing set up as it was, but we did retake everything that they'd shot.*

**QUESTION: Why was this?**

*YOUNG: Because they weren't satisfied with the picture. I think that George Cukor is used to having American or British crews around him and when he got there he thought he was going to get the same sort of backing from the cameraman and the art department that he'd been used to all his life. With the language barrier I don't think George knew what he was up against at all. It went on for some weeks, which then turned out to be some months before everybody got completely dissatisfied and, in the end, they had to make the great big decision to send for another cameraman. It's not only that — when you are working with David Lean, you work out each shot and come to some understanding between the director and the cameraman as to exactly how the scene is going to be shot. Whereas with George Cukor, he's not terribly interested in the camera at all, he's mainly interested in the actors, talking to the actors; he's not a technical director, he's an actor's director. So that I always felt right from the beginning that I'd have to retake the*

*whole picture that they'd shot. An awful lot of time had been wasted and I had to do everything I could to try to push the picture along.*

**QUESTION: Did it follow that you were shooting very long takes?**

*YOUNG: Well, let us say that we shot long takes knowing that they were going to be cut up afterwards because, since we had children and animals and Russian actors all in the same shot, it was rather necessary to do a complete scene. Everybody could understand a complete scene more than if you cut the thing up into bits. All the Russian actors in the cast had to learn their few*

*words in English. Although it is very difficult to understand them, at least they got their lip movements roughly right. They'll all have to be revoiced in America.*

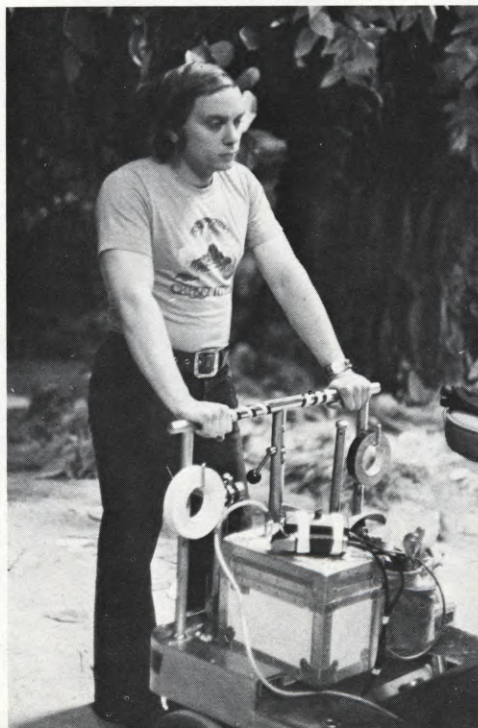
**QUESTION: And presumably the American artists will have to be revoiced into Russian.**

*YOUNG: Yes. The whole thing will have to be revoiced for the Russian market.*

**QUESTION: Was Elizabeth Taylor using Russian lip movements?**

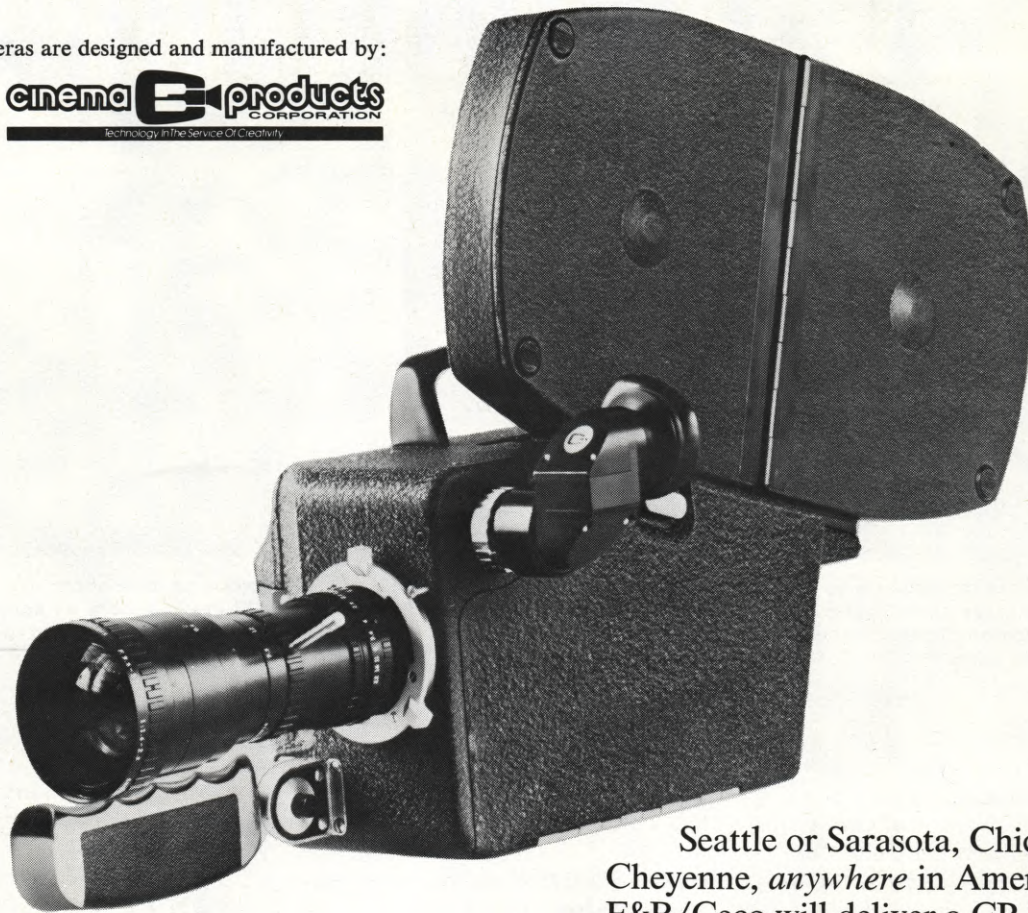
*YOUNG: Oh no, no, no. I don't think*  
Continued on Page 1460

**(LEFT)** Camera grip Igor Bibeev mans the dolly. **(RIGHT)** Extremely lightweight and efficient Lowel Soft-Lights were used continuously once Freddie Young became Director of Photography on "THE BLUE BIRD". Of these and other lights, the Panaflex camera and additional equipment brought from England he says: "The Russians were delighted. Everything I ordered they were interested in."





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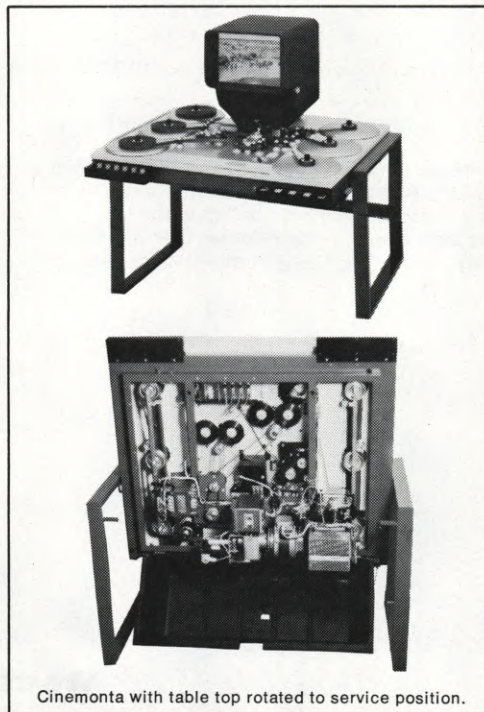
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# FOOTNOTES TO THE FILMING OF "THE BLUE BIRD"



Right in the heart of Leningrad, the sound stages of Lenfilm Studios were a-buzz for almost nine months with peaceful, if somewhat noisy, co-existence. "THE BLUE BIRD", the first Soviet-American motion picture coproduction, has, as we go to press, just completed its long shooting schedule, with Elizabeth Taylor heading an all-star international cast.

In active preparation for the past two years and in embryo form for two more before that, "THE BLUE BIRD" is a unique amalgam of Western drive-cum-expertise and the artistic en-

deavour and vast resources of the U.S.S.R.

Many hours at the negotiating table produced a contract between Lenfilm of the U.S.S.R. and Edward Lewis Productions of Hollywood, California, that contains as many carefully dotted I's and crossed T's as any Peace Pact. The catalyst in this — Cyrus J. Eaton Jr.'s Tower International Corporation — easily the most experienced and acceptable handshake in Soviet-American trade deals since World War II.

To add the necessary distribution

**A scene from one of the elaborately choreographed fantasy sequences for the new film version of Maurice Maeterlinck's "THE BLUE BIRD", which recently completed shooting in Leningrad. The feature is being produced under a contract between Lenfilm of the U.S.S.R. and Edward Lewis Productions of Hollywood, for 20th Century-Fox release. Starring Elizabeth Taylor, Ava Gardner, Jane Fonda and Cicely Tyson, the film was directed by George Cukor and photographed by Freddie Young, BSC.**



**The first Soviet-American motion picture co-production features the talents of an all-star international cast and a crack crew of British and Russian film technicians**

muscle and marketing know-how, Twentieth Century-Fox for its part will release the finished picture throughout most of the world.

Artistically the piece cannot fail to intrigue.

Maurice Maeterlinck's ageless stage play, first directed at the Theatre des Arts by Stanislavski himself in 1908, was soon playing at 59 Russian provincial centres simultaneously, and in 1975 an evening seldom passes without "THE BLUE BIRD" flexing its wings somewhere in the Soviet Union.

A footnote to the 1910 English ninth edition — the eight previous all sold out within the first year — suggested: "Maeterlinck has put a whole philosophy into a gay fairy tale that may be understood, enacted and laughed over by a child. It will have no less charm for the wise and the mature."

The same holds true to this very day.

From the West:

Director George Cukor, stylist and acknowledged master of high comedy, and director of the hit musical "MY FAIR LADY". Now in his mid-seventies, but still very much the innovator and pioneering spirit.

The very top available acting talent: Elizabeth Taylor, Jane Fonda, Ava Gardner, Cicely Tyson. Plus some well-beloved character players from both sides of the Atlantic. Will Geer represents the United States. From Britain, Robert Morley, Mona Washbourne, George Cole and Richard Pearson.

Ten-year-old Todd Lookinland from San Pedro, California, and Londoner Patsy Kensit (7) played the pivotal roles of "Tyltyl" and "Mytyl".

The Western technical contingent was small, tri-national and thoroughly case-hardened. Producer Paul Maslansky, music man Irwin Kostal and costume designer Edith Head (U.S.A.). Director of Photography Freddie Young, BSC, his operator Freddie Cooper, screenwriter Hugh Whitmore, lyricist Tony Harrison, editor Ernest Walter, assistant director Mike Gowans, make-up artist John O'Gorman, sound mixers Gordon Everett and John Bramall, special effects chief Roy Field (Great Britain). Sole rep from France — script supervisor Lucie Lichtig.





Looking luxurious indeed, Ava Gardner as "Luxury" in "THE BLUE BIRD" plays a scene with American child actor, Todd Lookinland.

As a group their Oscars and other awards can be computed, not singly but in handfuls.

From the Soviet side: A massive investment, almost open-house at the Lenfilm Studio city complex and its out-of-town Pinelawn shooting stages. And a crew headed by Jonas Gritsus, Lithuanian-born cinematographer of "HAMLET" and "KING LEAR", both of which, like truly fine wine, travelled well worldwide.

So far as performers are concerned: The new nineteen-year-old dancing sensation from Perm in the Ural Mountains, Nadia Pavlova. Natural successor (but no kin) to the original Pavlova, Ulanova, Plisetskaya and the recently-emigrated Makarova. During the filming, she was tapped to join the Bolshoi Ballet in the Fall. By common consent a rising star whose possibilities are infinite.

Stir in Oleg Popov, who if the Academy of Motion Picture Arts and Sciences had such a category, would be a shoo-in for best clown, in any language, from any source.

And a trio of popular and talented Soviet performers, the glamorous Margarita Terekhova, comedic actor Georgy Vitzin and Leonid Nevedomsky.

Add Valentina Ganibalova and Eugene Tscherbakov, exciting young duo from the Kirov Ballet Company.

Finally suffuse the whole concoction with the Leningrad-based company of choreographer and ballet master Leonid Jacobson.

A formidable cocktail.

"THE BLUE BIRD" shooting

schedule included 10 songs, several large scale production numbers and a short period of filming on scenic outdoor locations in the Leningrad environs. Post production work is being carried out both in the United States and the Soviet Union.

Projected release date — Easter of 1976.

### THE STORY

*A tale of Mytyl and Tytyl, the children of a simple woodcutter.*

*And their search for The Blue Bird. Not for themselves. For a small sick girl who just wants to be happy.*

*They have for their journey: Light to guide them on their way. Bread, man's oldest friend. And Dog, his most faithful companion. The Conniving Cat. Sugar, who sees good in everyman. The silky soul of spilt Milk — she doesn't travel well, poor thing. Fire's spinning flame; and soft-voiced Water — gentle as a rivulet.*

*They re-visit their Grandparents in the timeless limbo of life after death.*

*Brave nature's darker mysteries with Night and her Hall of Secrets. All the evils and all the terrors are locked within the basalt caves of that palace. All plagues, all sicknesses, all catastrophes and all the wars that have afflicted life since the beginning of the world. Night has the most terrible job of keeping them in order!*

*.... Pass through the deceptive Garden of Dreams whose flocking Bluebirds mockingly die at a touch.*

*.... To Luxury's glittering encampment where enjoyment, pleasure, frivolity and youth hold sway. Where the Luxury of Being Rich vies with the Luxury of Doing Nothing except enjoying the Luxury of Loving Oneself which only leads to the Luxury of Understanding Nothing.*

*Here they are already onto their twelfth big banquet of the morning!*

*.... A brief respite in the Meadow of Happiness among the joys of Being Well, of Sunny Hours and Winter Fires, of Pure Air and Falling Rain. Of Home and Spring and Loving One's Parents.*

*.... Before the Forest. Dark, brooding, vengeful.*

*Your lovers carve names on our faces,*

*Your woodmen destroy over half of our race,*

*You've cleared us from valley and mountain and hill.*

*You're all the same, murderers all!*

*.... And a narrow escape to a place of new hope. The Kingdom of the Future — where whole generations are waiting to be born. Each child with his gift for the world. Thirty-three fresh*

*remedies for prolonging life. A new fire to warm the earth when the sun finally grows pale. Farmers and Politicians galore. And Father Time looking hard for what the earth needs most. That phenomenon, an honest man.*

*.... And so full circle, only to find the Blue Bird of Happiness where it had always been — in their own backyard. But in the excitement of giving him to that girl next door, the elusive fellow flutters free again.*



(ABOVE) This ugly old witch is none other than Elizabeth Taylor in one of her four "BLUE BIRD" roles. (BELOW) As "Light", she is magically transformed into the beautiful Liz her audiences know and love.





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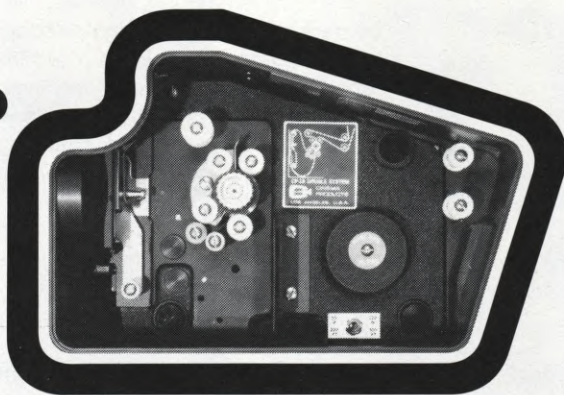
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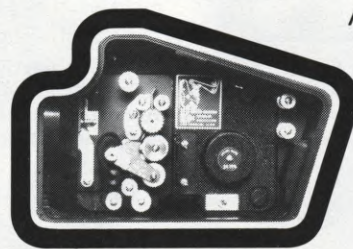
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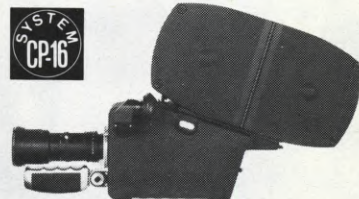
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# THE 117th SMPTE TECHNICAL CONFERENCE AND EQUIPMENT EXHIBIT

In its first time out as an "annual" rather than "semi-annual" event, the 117th SMPTE Technical Conference in Los Angeles is the best yet

The Society of Motion Picture and Television Engineers 117th Technical Conference and Equipment Exhibit, held Sept. 28 to Oct. 3 at the Century Plaza Hotel in Los Angeles, was the occasion for a certain justified elation, as well as the breathing of a collective sigh of relief. It marked the first time that this important conference was held on its new "annual", rather than former "semi-annual" schedule, and there had been a certain amount of apprehension as to whether the event would fall short of serving its significant purposes, now that it was being held only once a year.

As it turned out, there was no reason at all for trepidation, because the 117th SMPTE Conference turned out to be, in every respect, the most successful affair of its kind in the history of the organization. Approximately 125 technical papers were presented — far more than usual — and the number of registered delegates, as well as visitors, broke all previous records. In addition, the Equipment Exhibit, which heretofore had just comfortably filled the area of the hotel known as the California Drive, overflowed this location to pack two additional large exhibit halls, the Santa Monica Room and the Beverly Hills Room.

But the smashing success of this conference cannot be measured simply in terms of logistics. Even more important, in this writer's opinion, was the lively spirit that prevailed. There was a special air of excitement definitely not noted at past conferences of the SMPTE. Those responsible for the change to annual status are to be congratulated upon what has proved to be a very wise decision.

As Guest Speaker at the Get-together Luncheon, MPAA President Jack Valenti got the Conference off to a rousing start (see Page 1412) and the affair continued to gain momentum straight through to the finish.

Papers sessions dealt with the following categories: Laboratory Practices, Projection and Theatre Practice, Holography and Unconventional Imaging Systems, Pollution Control, Print and Tape Piracy, Motion Picture Technology and Photoscience, Plant and Industrial Engineering, Sound Sys-

tems, Newsgathering for Television, Photoinstrumentation Technology, Lighting for Television and Motion Pictures, and Television I, II and III. In addition to these daytime programs, two evening "Mini-Conference" sessions were held. The papers sessions took place, not only in the customary Los Angeles Room, but also in Century Plaza Theatres I and II. The latter two locations, richly appointed and offering the finest projection facilities, are located directly across from the hotel.

A unique and very well accepted innovation this year was the Hands-on Equipment Demonstration held the final day on a sound stage of the 20th Century-Fox Studios, adjacent to the Century Plaza Hotel. Sponsored by the Professional Motion Picture Equipment Association, the session featured the demonstration of various motion picture techniques and equipment by top professional technicians of the motion picture industry. An attendance of 300 or so was expected, but a capacity crowd more in the neighborhood of 500 packed the sound stage and, while the demonstrations were somewhat simplistic judged by professional standards, they were very well received by the young audience, which obviously included many film students. Anton Wilson provides a more detailed analysis of this session on Page 1416.

Of special fascination to those attending the 117th SMPTE Conference was the papers session devoted to "Holography and Unconventional Imaging Systems". To the average layman, the subject of holo-



(ABOVE LEFT) The Century Plaza Hotel in Los Angeles was the site of the recent 117th SMPTE Technical Conference and Equipment Exhibit, which drew the largest number of registered attendees and featured the most extensive range of technical papers in the organization's history. (BELOW) The area of the hotel known as "the California Drive" has traditionally been sufficient to contain all of the booths of the equipment exhibit, but this year the exhibit overflowed into two large banquet halls, as well: the Santa Monica Room and the Beverly Hills Room.





raphy borders on science-fiction and, while some of the papers presented were extremely technical, there was just enough showmanship manifested to boggle the average mind. Particularly exciting were the several "animated", multi-colored holograms displayed by technicians of Multiplex, Inc., San Francisco.

The individual papers session which elicited the most interest — and the most controversy — was that devoted to "Newsgathering for Television". The main question boiled down to whether film cameras would continue to dominate the TV newsgathering field, or whether electronic cameras would take over. While the debate was reminiscent of the familiar — and perennial — Film vs. Tape squabble which has been raging for these several years, there was certainly more immediacy and relevancy to this discussion.

The several excellent speakers of the session quite fairly presented the advantages and disadvantages of both systems and attention was focussed on the new generation of tiny electronic cameras available in prototype form, first generation models or simply on the drawing boards. The panel discussion which wound up the session made the point that for sheer real-time, "see it now" immediacy, electronic cameras would (theoretically, at least) have the edge, but it was conceded by even the most enthusiastic supporters of E.N.G. that there would be no sudden stampede toward the purchase of electronic cameras by the industry. Rather, a more gradual changeover would occur — if, indeed, a changeover is to occur on a large scale at all. Meanwhile, as one speaker put it, most people engaged in this area of activity are continuing to lay in their stocks of film for upcoming newsgathering assignments.

The Equipment Exhibition, although much larger than ever before, presented few if any major new items which had not already been featured at *Photokina 1974* and/or *FILM '75* in London, but for those who had not attended either of those events, the exhibit presented an interesting *smorgasbord* of equipment.

All in all, the 117th SMPTE Technical Conference and Equipment Exhibit was a rousing success and all those who worked so hard to make it so are to be soundly congratulated.

The 118th SMPTE Technical Conference and Equipment Exhibit will be held in New York at the Americana Hotel October 24-29, 1976. ■

HERB A. LIGHTMAN



At the 117th SMPTE Conference Get-together Luncheon, Hollywood Film Company President Harry Teitelbaum receives Outstanding Service Award from SMPTE President Ken Mason. Mr. Teitelbaum was one of many SMPTE members honored with awards and fellowships at the presentation. Heretofore an event held every six months, the SMPTE Conference has recently been designated an annual affair.

An innovative feature of the 117th SMPTE Conference was the "hands-on" motion picture equipment demonstration and seminar co-sponsored with the Professional Motion Picture Equipment Association. Here, on Stage 21 of the 20th Century-Fox Studios, Richard Sassone demonstrates new HMI (metal-halogen) lighting equipment. The seminar, held for the first time, played to overflow crowds.





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# THE CURRENT STATE OF THE AMERICAN FILM INDUSTRY

Guest Speaker at the 117th SMPTE Technical Conference takes a hard look at current problems but reaffirms faith in the U.S. film industry

By JACK VALENTI

President, Motion Picture Association of America

Those of us in the film industry are quite aware that we live and work in the most dazzling of occupations, bizarre, frenetic, and even contradictory, but never boring. It may even be important.

Daniel O'Connell, the celebrated Irish politician and patriot, entered immortality with his oft-quoted line: "I care not who makes the laws of a nation if I can write its songs."

Today, O'Connell would have added, "and make its movies."

The fact is that movies are a mixture of many things: the splendor of great visual literature, the passion of the young and the escapist pleasure of the not-so-young; a melange of imaginative and creative craftsmen as well as some rose-garden quackery. But that is why the American movie is so endlessly fascinating, for in many ways it is a large mirror of the society from which it springs. The attraction of movies beckons both to geniuses and romantics to whom the creation of a movie is something more than a humdrum profession.

When I speak of creative men and women who populate this glittering world of moviemaking, I include a good many of you in the audience today. Scientific and technical minds are indispensable to the reach for the superior in our business. The technology of film is linked to the creativity of moviemaking. Neither can exist without the other. My old friend Bill Holm, your past president, said on the occasion of last year's presentation of the Academy's Scientific and Technical Awards: "We are here today not because we are glamorous, but because we are important." How right Mr. Holm is, and how very important you men and women surely are to the long-range best interests of our business.

When I became president of the Association of Motion Picture and Television Producers, the research arm of that Association had been disbanded for almost six years. So it is that Lew Wasserman, chairman of the Association then, and I can look back on our advocacy of a new Motion Picture Research Center in 1968 and its subsequent organization and funding as one of these high moments in which we can take our own small pleasure and modest pride.

When millions of people each evening sit in darkened theaters and emotionally collide with the energy and enthrallment that pours forth from a 65-foot screen they don't know it, but in part they are paying tribute to the scientists and technicians who helped to fuel their excitement. Films such as *THE POSEIDON ADVENTURE*, *EARTHQUAKE*, *THE TOWERING INFERNO*, *JAWS*, are durable testaments to gifted men and women whose names may be unknown to the public but whose craftsmanship was the rostrum from which these films were launched.

Under Bill Holm's guidance, the Research Center has each year broken new ground in bringing to the technology of our business wider knowledge and larger gains.

Let me single out only three accomplishments typical of the many that have spread benefits for the industry.

## 1. THE CRYSTAL-CONTROLLED CORDLESS MOTOR FOR CAMERAS.

*This development has eliminated the need for three to four different kinds of motors to power Mitchell NC and BNC cameras in varying conditions of use. The camera can now be powered with a single motor in perfect sync with a sound recorder, without requiring connecting cables. The single motor was developed by the Cinema Products Company with assistance from the Research Center and is in universal use in the United States.*

*Old-fashioned cables snaking studio floors or location sites were a frequent cause of costly retakes. Their elimination has been a significant dollar-saver in these times of soaring costs.*

## 2. THE FLEXIBLE MACRO ZOOM LENS.

*There was long a need for a zoom lens that would provide greater definition and less distortion while at the same time offering more flexibility than fixed-focus lenses. The Research Center set out to solve the problem in cooperation with Canon, Inc., the renowned Japanese company.*

*This cooperation resulted in producing the Canon K-35 Macro Zoom lens, which is capable of focusing on an object as close as two to three inches, and can also function as an insert lens as well as a lens for prime photography. Those of you who saw the movie "BEN" will know how clearly*

*photographed was the rat star in extreme closeup. The lens won an Academy Award for Canon and for the Association of Motion Picture and Television Producers.*

## 3. A SAFE CABLE-SPLICING BLOCK FOR LIGHTING.

*The recent introduction of safety standards under the Federal Occupation Safety and Health Act called for replacement of "Spider Boxes" used for years for stringing lamp cables from power sources to sets.*

*Given the task of resolving this problem, the Research Center designed and developed new units that would meet the safety standards. This development avoided a drastic curtailment of the areas where films could be shot. Westinghouse developed commercial models of the Research Center's prototypes for industry use.*

The Center's research and development results bring questions that I believe we should all keep constantly in mind.

Would we even have a motion picture industry without the genius of an Edison or an Eastman? Where would this creative art form be going without the men of science and technology? It can and will go as far as inventive minds pioneer and lead the way.

Movies are more than stars and stardom, more than fire and fever, more than the interior speculations of thousands of young people who dream about the day they will be Paul Newman or Kirk Douglas or Barbra Streisand or Steve Spielberg.

The American movie industry is part of the underbracing fiscal strength of the United States.

The industry returns more than \$450 million every year to the United States as surplus balance of payments, which is the bone and blood of the American dollar, giving it the sturdiness it needs in the counting houses and banking centers of the world.

The American movie is among the most wanted exports of the United States, lighting up the screens of more than 70 countries. Some 50¢ out of every dollar spent for the production of films by American companies comes from audiences around the world.

While the news daily is full of crisis, political skirmishing and the possibilities of global ruin, the American film



industry fights its own battles, most of which are obscured by more dramatic front-page events.

Our aim is to make certain the American film can move freely and unhobbled on every continent. We live in a fragile world, its edges porcelain thin, its outer webbing frayed by nationalism fed by pride and even anger, by the notion that America is the giant to wound and bring down. The result of this in the film industry overseas is a governmental hand wrapped around our economic windpipe; in too many places where we do business we can feel the political fingers squeeze and tighten. Abroad there is a lively and totally spurious theory that if a country can suffocate the American film there will leap up like Aphrodite, foam-risen from the sea, a native motion picture industry ready for international success and acclaim.

The theory is spurious because, unlike F-5's, Chieftain tanks or heat-seeking missiles, movies are not made each one alike on the assembly line, or even through transferable patents. Movies are born of talent; of inspired skills whose equations are neither predictable nor persistent; of mysterious instincts that reside in actors, actresses, producers, writers, directors, technicians. The secret of great movies attracting large international audiences is to be found not in a political chancellery but in the special people who give each movie a magical life.

Therefore I have said and continue to say to high-stationed government officials of dozens of countries: put your faith in talent, not in legislation;

encourage the mingling of skills, not schisms. American film companies are neither insular nor provincial. They look for talent wherever it is, eager to enlist whoever has that talent no matter his or her origins, color, political ideology or religious dogma. No audience goes to see a film because it is government-sponsored or endorsed by the party in power. Spared the prick of a bayonet in their back, audiences will freely choose films they think they will enjoy. Competition, not coercion, is the spur to moviegoing.

And there is competition. In 1974, some 51 countries produced 3,500 feature films.

In many of these countries, government-ordered trade barriers spike and mine the competitive marketplace. Only because the American film industry is united through the Motion Picture Export Association are we able to survive and try to search out pathways to compete for the public's favor. It may be that the American market is the only true free film arena left in the world. Here, foreign films, compete with American films on an equal basis, and each one is treated just as any U.S.-produced movie is treated. The public, not the government, decides the fate of a movie.

The future of American films abroad is bound up in the struggle to overcome these restrictive trade barriers which, like Gothic gargoyles, take many shapes and many forms, such as limiting the number of films we can take in, shrinking the remittance of our earnings, applying to our films uneconomic or discriminatory commercial

practices, draining off our earnings through excessive taxation or other levies. The ingenuity of government bureaucrats is infinite — and deadly. So the battle goes on.

Here in this country the future crisis will be costs.

The average negative cost of a theatrical film in 1972 was \$1,890,000. In 1974 it was more than \$2.5 million. In 1975 and 1976 it will be higher.

In television, average costs of series segments are mounting rapidly — approximately \$170,000 for half-hour segments and \$350,000 for hour segments — and still rising. In this area, the networks must re-shape their own thinking to become more realistic in their pricing and option strategies. The TV production companies can little endure or long survive the malignancies of deficit financing.

The financial movie debacle of the sixties was caused by the viral contagion of costs. In the sixties average negative cost soared to more than \$3 million, and we know that between 1967 and 1971, the major film companies lost collectively some \$400 million.

There is an outer limit to how much can be spent on a movie and recoup investment. Of course, there are EXORCISTS, GODFATHERS, JAMES BONDS, TOWERING INFERNOS, and JAWS. But they are the splendid few. How many other films clamor to go to market and once there die the squalid death of the unwanted, the unattended, the unremembered? Investing in movies is a risky, dicey forum.

While 1974 was a good boxoffice year for theatrical films and 1975 promises to be equally good, will it be ever so?

Where and how do we pass on higher costs? We estimate the average boxoffice ticket to be about \$2.04, and rising at a current rate of 10% per year. Boxoffice prices are set by theater owners. How high can they raise prices before business falls off?

Can we predict the future?

Unlike motor cars, dog food, and denture cleansers, each movie is a separate investment and a separate marketing adventure. Each movie goes forth alone to face its public. Who can foretell 1976 or 1977, unless one, with prescience, peers into a shrouded next spring and fall and divines the public reaction to individual films, each one eager to engage in a love affair with audiences. Even the most experienced film executives admit prophesying grosses is, at best, an imprecise art. Anyone who declares himself an infallible expert in that kind of prophecy is

Continued on Page 1465

**A brilliant and articulate spokesman for the American film industry, Jack Valenti, President of the Motion Picture Association of America, was the Guest Speaker at the Get-together Luncheon kicking off the 117th SMPTE Technical Conference held at the Century Plaza Hotel in Los Angeles. He lauded U.S. film and TV scientists and technicians, deplored restrictive sanctions against American films abroad, but expressed bright faith for the future.**

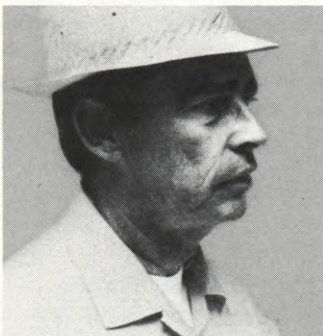




# Film speed enhancement at CFI

Comments by cameramen on CFI's AL200 and AL400 system with EK 5247 negative:

**“W**e wanted to create a documentary look for *Streets of San Francisco*,” says Director of Photography Jacques Marquette A.S.C., in the August *American Cinematographer*.



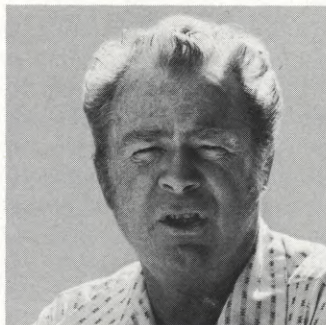
Jacques Marquette A.S.C.

## 200 or 400 ASA

“Our tests with CFI showed that 5247 could be rated at 200 or 400 ASA, using their AL200 and AL400 process. So we went with that for some location interiors and night scenes.”

## 5 foot candles!

“On some problem locations, we were able to light as low as *five* foot candles,” says Mr. Marquette. “In general, minimal lighting gave us the realistic look, *and* it let us make faster setups.”



Jack Swain A.S.C.

Jack Swain A.S.C. says: “Using AL200 saves time and energy. Shooting *Cannon*, I use it all the time for ‘live’ interiors. It looks as good as footage shot at ASA 100.”



Robert Hauser A.S.C.

“On one feature that I shot, I had some 5247 forced at another lab — and there was grain running all over the place,” says Robert Hauser A.S.C.

## Choose the lab

“The producers had a deal with that lab. But after I protested, they told me to send the footage for forcing wherever I chose.”

## Night at 3 PM

“On another show,” says Mr. Hauser, “We suddenly got a hailstorm at 3 PM. The sky had to be in the background — and it was literally like *night*.”

## Off the meter

“I had *one* light, pulled way back to balance the actor’s face against this black sky. I decided to go to AL400 — and even then... the reading was f/1.2.”

## ASA 400 day ext

“So once again, I told the producers: If you want this shot, it has to go to CFI. It looked fine.”

# CFI

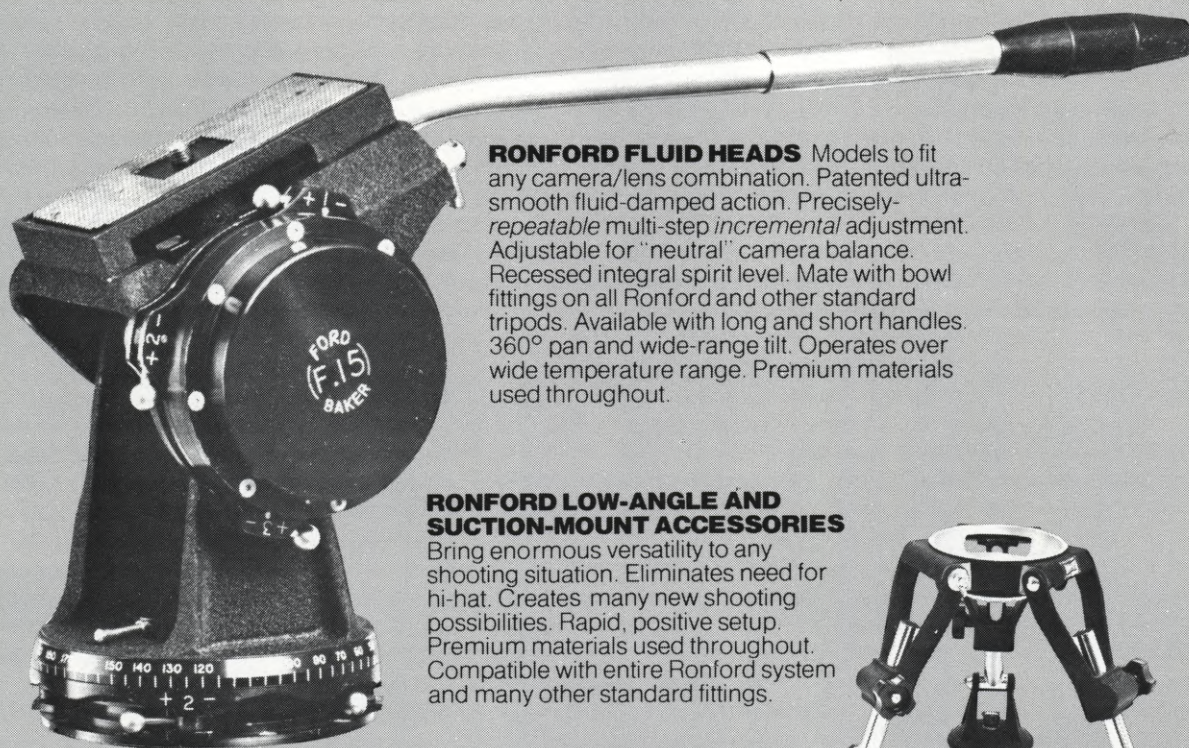
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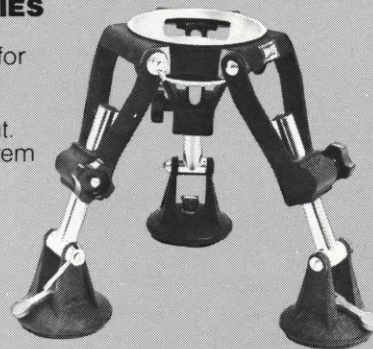
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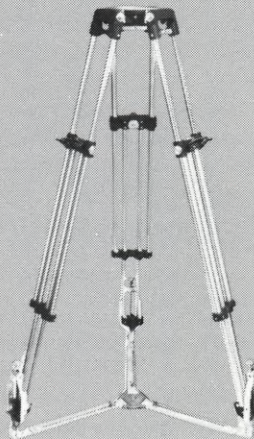
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# "HANDS-ON" EQUIPMENT DEMONSTRATION AT SMPTE

An innovative seminar featuring cinematographers and other technicians of the Hollywood film industry in demonstrations of production equipment and techniques draws overflow crowds

By ANTON WILSON

Friday, October 3, was a special day at the SMPTE convention. The PMPEA was holding its first annual Motion Picture Production and Equipment Seminar in conjunction with the SMPTE. Twentieth Century-Fox Studios provided their Stage #21 as the setting, and the line-up of speakers read like a who's who of cinematography. A special committee of the PMPEA headed by Ed Clare of Cinema Products Corp. and Cary Clayton of O'Connor Engineering had worked for

months to assure that the seminar would be exciting and informative. The seminar was sponsored by the Professional Motion Picture Equipment Association (PMPEA) which is an international organization of the leading companies that manufacture, sell, and rent professional motion picture equipment. This seminar was just one part of the PMPEA's program to promote state-of-the-art film production by familiarizing the film community with the latest equipment and techniques. The

PMPEA had expected about 300 participants but was pleasantly surprised when over 500 people turned out to hear the pros.

Ralph Woolsey, ASC started the program off with a demonstration called "The Moving Camera". Most of the audience was familiar with the results of Mr. Woolsey's technique from his hit films such as the recent "RAFFERTY AND THE GOLD DUST TWINS", so it was now most interesting to see how he achieved those visual effects.

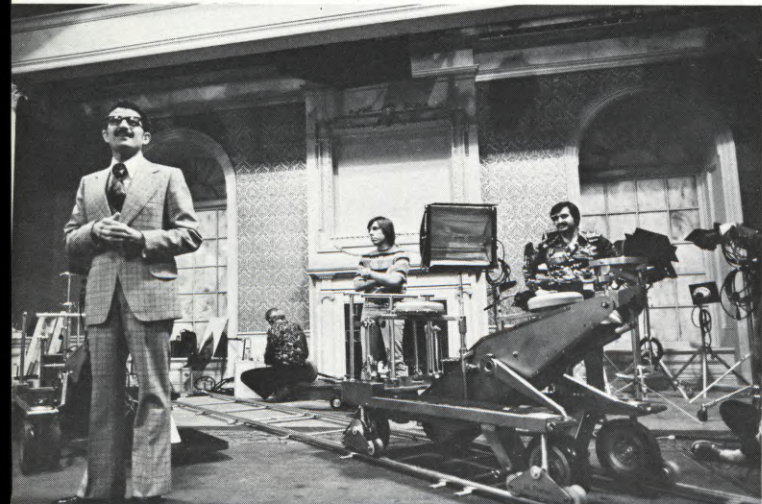
Mr. Woolsey explained in detail the mechanics of the moving camera, stressing the psychological or emotional qualities of the movement, as well as the aesthetic and visual effects. As a practical demonstration he planned a very complex dolly and zoom maneuver, and then with the help of Roy Isaia and Mike Margoles the shot was carefully laid out. As a finale, the grip crew and operator simulated the actual shooting of the maneuver. Mr. Woolsey's discussion not only explained the technical nuances of the moving camera, but also revealed the close rapport that must exist between the cinematographer and grips if these shots are to be successful.

There is no doubt that lighting is one of the most important aspects of cinematography, and Jerry Hirschfeld's (ASC) discussion touched on some of the most esoteric and interesting lighting techniques I have seen. Mr. Hirschfeld began his discussion, which was aptly titled "Special Effects in Lighting", with a simulation of a lightning storm such as he used most recently on "YOUNG FRANKEN-



Sponsored by the Professional Motion Picture Equipment Association, in conjunction with the SMPTE, the first annual Motion Picture Production and Equipment Seminar, was designed as a practical or "hands-on" demonstration of professional equipment and production techniques by some of the top technicians in the industry. It succeeded far beyond anyone's expectations.

(LEFT) PMPEA President Joe Tawil welcomes those attending the seminar and introduces the program. (RIGHT) A portion of the overflow crowd which packed every available inch of space on Stage 21 of the 20th Century-Fox Studios, the demonstration area generously lent by the studio. A crowd of approximately 300 had been expected, but more than 500 actually crowded onto the stage, with many more unable to be accommodated. So large was the crowd that PMPEA members were finally requested to leave in order to make additional room for their guests.





STEIN". With the help of gaffers Lou Tobin and Jim Plannette the interior of Stage #21 was instantly transformed into the eerie atmosphere of a haunted castle.

Mr. Hirschfeld continued to delight the audience with his simple but effective "firelight" effect and moonlight technique. For the *piece de resistance*, Mr. Hirschfeld lit an entire scene with a kerosene lantern held by an actor. All agreed Mr. Hirschfeld's demonstration was most "illuminating."

Director of Photography John Alonzo, ASC, and his gaffer, Earl Gilbert, and grip, Gary Dodd, took over the stage like the Three Musketeers, "all for one, and one for all." The demonstration was appropriately titled "*Grip and Gaffer Preparations for the Cameraman*", and explained how grip, gaffer, and cinematographer work as a team to achieve the visual effects called for in the script. These three experts revealed a multitude of very interesting grip and gaffer techniques. During the discussion each member of this triumvirate stressed the importance of teamwork, and throughout their demonstration this close rapport was pointedly evident. Apparently these three gentlemen work as well professionally as they did at the PMPEA seminar, with such hits as "CHINATOWN", "THE FORTUNE", and "FAREWELL, MY LOVELY", which is a *tour de force* of period cinematography.

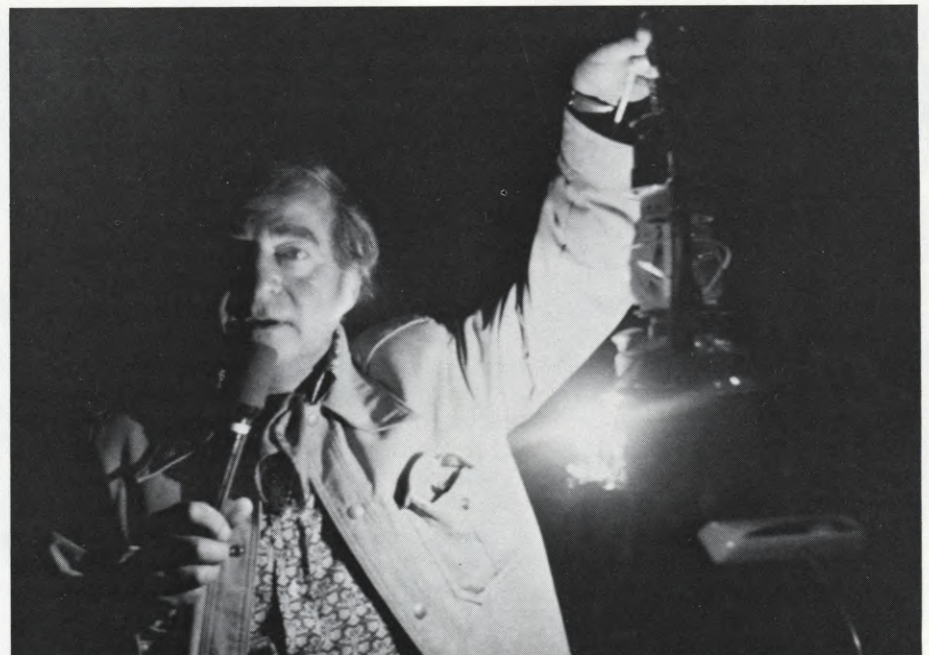
For a change of pace, the set was turned into a hospital operating room for Ms. Brienne Murphy's demonstration entitled "*Take Once*". Ms. Murphy is an accomplished Director of Photography of such hits shows as "COLUMBO", but this demonstration focussed on the particular aspects of filming documentary-style in very close quarters. Filming intricate operations in a hospital poses some unique problems and a "take two" is impossible. Ms. Murphy and her adept crew, cameraman Robert Touyarot, gaffer Celeste Gainey, and soundman Ernie Chacon, simulated an actual shoot inside a hospital operating room. One of the highlights was veteran cameraman Robert Touyarot's narrative of an encounter with one of the very first zoom lenses back in the 1940's. The demonstration was both entertaining and informative.

The seminar was rounded out with a technical discussion of the new HMI lights by Mr. Richard Sassone.

The seminar was quite a success. The audience was so pleased with the program that there is no doubt that the PMPEA Production and Equipment Seminar will become an annual adjunct to future SMPTE conferences. ■



Director of Photography Ralph Woolsey, ASC ("*RAFFERTY AND THE GOLD DUST TWINS*") presents an interesting seminar on "The Moving Camera", while his crew stands by to illustrate the subject with an intricate dolly shot. The professional technicians involved in the seminar gave generously of their time to appear, in some cases arranging time off from working assignments in order to do so.



(ABOVE) Bearing a startling resemblance to Diogenes searching for an honest man, Director of Photography Jerry Hirschfeld, ASC ("*YOUNG FRANKENSTEIN*") demonstrates a lantern with concealed lamp during "Special Effects in Lighting" seminar. (BELOW) Director of Photography Brienne Murphy offers a comforting word and warm hand to "patient" in simulated hospital operating room scene she set up to demonstrate documentary filming techniques.

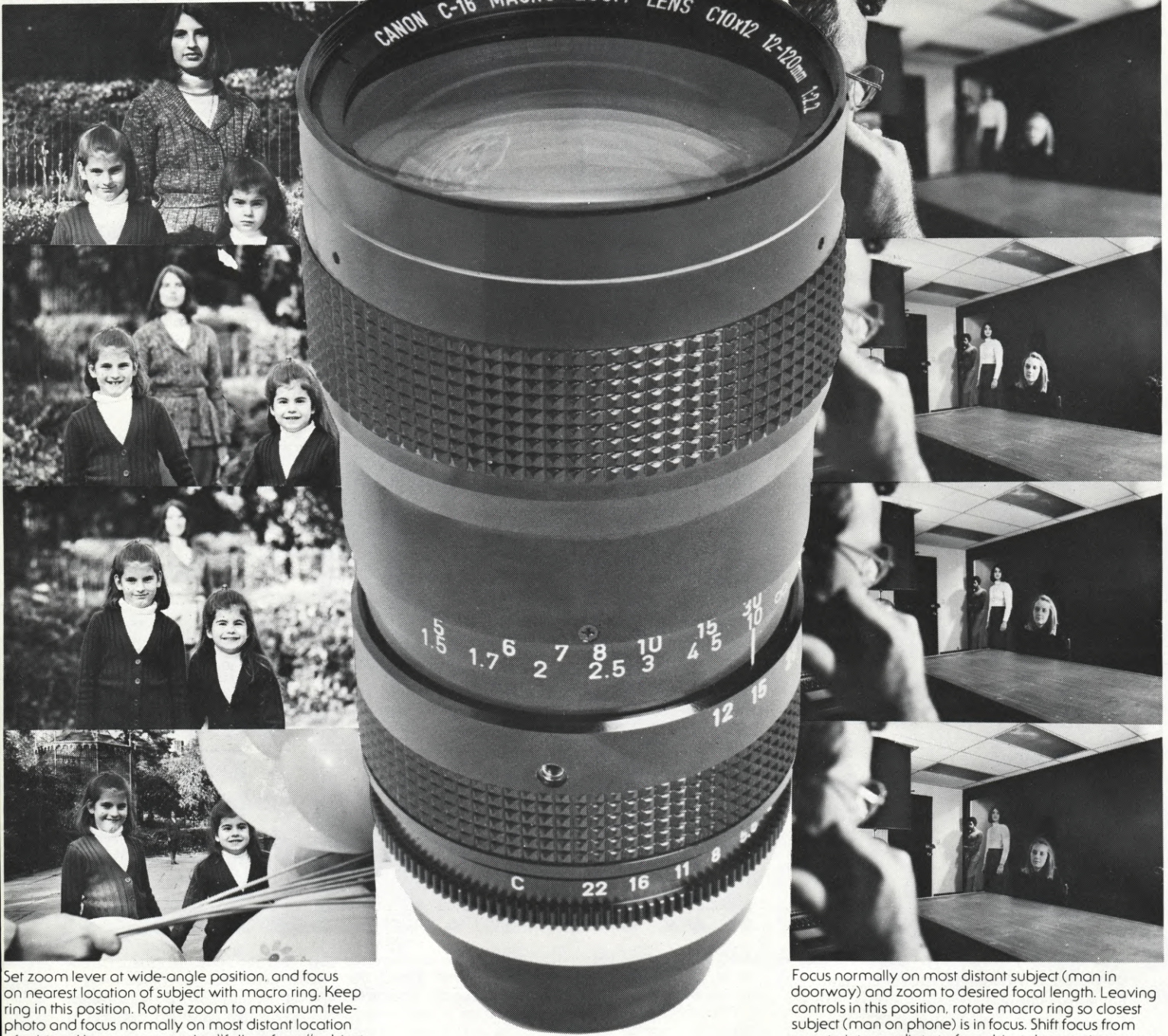




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# **YOUNG FILMMAKERS EXPLORE THE POSSIBILITIES OF SUPER-8**

**In addition to being a simple-to-operate, inexpensive format, Super-8 may well give rise to a totally new cinematic structure and vocabulary**

**By BESTOR CRAM**

Since the recent development of the Super-8 sync-sound format, many people have used it to explore cinematic ideas that previously would have been produced in 16mm or 35mm. However, there have been many more people who, in making films for the first time and utilizing the sophisticated technologies of double-system Super-8 as beginning filmmakers, are developing fresh approaches to making film, possibly in forms unique even to Super-8. As a result, discourse on the quality of Super-8 has itself evolved and some filmmakers and scholars have seriously turned their attention to the aesthetics of Super-8 and, consequently, are posing new questions about the nature of filmmaking in general.

Many films have been made in Super-8 sync, but few have been seen extensively. Yet, there is a sense that we are on the verge of seeing a new type of film arising from a home-movie folk-art tradition, one that is characterized by personally evocative, sensitive treatments, expressive of the intimacy shared between the filmmaker and the film subject. We are also on the verge of seeing many more films that explore new cinematic vocabularies and structures because the risk of experiment is not inhibited by the economic and technological burdens of the other formats.

In December, 1974, four young filmmakers met in the studios of WCVB-Channel 5 Boston to tape a 30-minute program "Filmmaking in Super-8 — the New Frontier". The show opened with a series of film clips depicting the varied subjects that students had recently shot in Super-8 sync: a hang glider landing at a mountain rally, halloween-costumed kids parading before

admiring parents, a black dog searching for an appropriate tree, and a young woman demonstrating breathing exercises to a theater class. These short scenes were followed by a film of a talk by Richard Leacock. Standing in a film equipment room holding an Eclair ACL, one of the lightest and most portable 16mm cameras, he explained the recent history in the development of Super-8 sync-sound, concluding with why he was motivated in the direction of Super-8 himself: "It allows me to make the movies I want to make. Personal films, not necessarily thought of in terms of large audiences, but ones I want and can afford to make for myself and my friends."

The panel then embarked on a difficult discussion, attempting to identify certain characteristics of Super-8 sync filmmaking. The discussion centered on the portability and mobility the equipment offers, the opportunity to easily follow a film through its entire production cycle, and the sense of personal contact and responsibility the filmmaker could feel towards the film subject during the process of shooting, a virtue usually inhibited by the heavy presence of professional equipment. It was agreed that shooting in Super-8 is almost devoid of oppressive intrusion by technology and with Super-8 the filmmaker enjoys a new proximity to the film subject and is able to develop a deeper and more spontaneous personal response to what is in front of the lens. "There is tremendous room to roam, to explore visually through movement; the filmmaker is as much a part of the motion of motion pictures as is the subject."

Perhaps the most significant part of this program was the showing of Sandy

D'Annunzio's Super-8 film, "The Graduation of Rafal Zilinsky". This humorous diary describes the event its title implies. After the opening scene of Rafal awakening in his VW home that is parked in a cluttered junkyard, the film traces Rafal's journey to the airport to pick up his mother. He reminds her that they must talk in English because a film is being made. Then they pile into the VW van, light a stick of incense, and drive off to the graduation exercises. Throughout the film, there is not only an amusing acknowledgment of a film being made, there is also a continuing revelation of the friendship that exists between the film subject and the filmmaker.

During the graduation exercise, Rafal appears on stage with a camera and a wireless microphone system and begins recording the "momentous event". He then turns the camera on the audience and finally, with glee, he points the camera towards himself. The film concludes with a scene at the graduation reception — the proud mother fussing over her son, the institute president posing for snapshots, and Rafal seemingly orchestrating the whole affair. The film has succeeded brilliantly in conveying the light-heartedness of Rafal while at the same time allowing for a few glimpses of traditional family moments during a typical graduation event.

"The Graduation of Rafal Zilinsky" has its roots in home movies — people recording themselves in familiar situations and celebrations. But this film indicates a growth from the days of baby pictures and birthday parties. It has "graduated" into a film form that is responsive to the people and events that are being filmed. The use of Super-8 sync has matured with a compre-

**(LEFT) Elliot Twery, a high school teacher from Virginia, uses the sound editing bench. The number of trims hanging on the wall should somewhat dispell the notion that Super-8 is less editable because one works directly with original. (RIGHT) During the U.F.S.C. Summer Institute Filmmaking Workshop, students worked "around the clock" cutting their films. Cai Emmons, in the foreground, is using a prototype for the Hamton editing table, which is no longer in production. However, the MKM horizontal editing table and the Super8 Sound vertical motorized synchronizer bench, both readily obtainable, were also used extensively during the course.**







**Rebecca Parfait records location sync sound, illustrating the type and range of film subjects that might be deemed too unimportant for production in any film gauge but Super-8. The relatively low cost of this format makes possible a wide range of experimentation in the learning process.**

hension of its background.

Numerous other films exemplify some of the characteristics of Super-8 sync. Betsy Connors documented a "ritual" of a mother piercing her young daughter's ears. What begins as a view into a very private family moment ultimately develops to a point where the viewer is faced with the problem of judging the mother and considering some of the dilemmas regarding the choices that parents make for children.

Robert Berquist and Steve Morris made a film that brims over with human vitality. Set in an Amherst, Mass., blacksmith shop, the film reflects that sense of discovery and playfulness that one feels when exploring the boundaries of human interaction. Ralph, the welder, drops a hood onto a truck body as he tells you it's the second most dear thing to him — Ralph being the first. He then talks about "getting by," working one day a week "just being humble" and moves on to his other truck where he points to his air horn — "makes people fall down dead on the street — really cracks me up." Throughout this conversation the camera is continuously moving with Ralph and around him, responding to the different glimpses of Ralph in his environment. It is a continuous scene; the camera movement is as lively as Ralph.

Sonya Sones, an animator who participated in the NEA Filmmaker in Residence — Super-8 program, shot over 400 cartridges for her hour-long documentary, "Mad Mountain Mime". In order to proceed with editing, the dialogue was transcribed and the filmmaker utilized a color-coding system to sort through the enormous volume of film. In this film, members of the mime troupe talk about their feelings about one another, which develops into an intense study of the interpersonal dynamics of the troupe. The sequences are constructed with reference to an individual member of

the troupe or to their consideration of particular ideas such as the craft of mime, their life-styles, or the fact that one member of the troupe is terminally ill. The film is shot almost entirely in extreme closeup. But, it is within this limited visual range that the film is strongest. The concentration on the mimes' faces, combined with their articulateness and willingness to communicate, causes the viewer to forget they are speaking to a camera. It is as if you are sitting across from one another.

It is argued that Super-8 hardware permits a low profile for the filmmaker, and consequently enhances the ability to film compassionately and yet unnoticed. However, Ken Harrison, another NEA Filmmaker-in-Residence, has observed otherwise in a recent Filmmakers Newsletter article about his Super-8 film entitled "Memories of Prince Albert Hunt".

"I have mixed feelings about the celebrated unobtrusiveness of Super-8 production gear. The people in 'Memories of Prince Albert Hunt' didn't know the difference between 8mm and 70mm, between a poor little Nizo and a BNC — they just knew they were being filmed, which can be a scary sensation under the best circumstances, especially if the content is sensitive, personal subject matter . . . The advantages of this light, small equipment in direct-cinema filming can only be realized if the filmmaker puts his ego second to the person on the other side of the lens." But Harrison's observation obviously pertains to all cinema formats.

There is a large volume of work in Super-8 sync that deserves an audience. However, no distribution network exists and, consequently, there is little known about many films that have been made. Furthermore, neither M.I.T. nor any other institution maintains a functioning Super-8 archive. With the

introduction of the Kodak Videoplayer, it is possible to envision an easy and economical exchange of Super-8 sync work via 1/2-inch and 3/4-inch video tape. But, to date, this is done in a very haphazard manner and certainly without regard for the exhibition of work to an audience.

The films mentioned in this article all fall into the direct-cinema documentary range. This is not because there are no other kinds of films made in Super-8. Quite the contrary is true. There have been many directed and scripted films made in the format. The films reviewed have been chosen because of the qualities achieved in them that appear to have important implications for the future of filmmaking in Super-8 sync.

Probably the most significant influence on the nature of film via Super-8 sync is the great number of people making them, people who otherwise would not have made films at all because of the cost. Not only does this mean that now a wider variety of subjects are being dealt with cinematically, but also that a wider variety of people are exploring ways to communicate in film. In the same way that 16mm cableless sync allowed filmmakers to film new realities and audiences to see them, Super-8 sync may allow an equally important new level of access to perceptions of the world. ■

*(ABOUT THE AUTHOR: BESTOR CRAM is an independent filmmaker on the staff of the MIT Film Section. He has instructed students in Super-8 sync courses for several summers at the University Film Study Center Summer Institutes, where he has probably screened as many Super-8 films as anyone in the world.)*

**Professor Richard Leacock explains the Super-8 double-system projection procedure to Ursa Muellen, a U.F.S.C. Workshop student from Holland.**





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Maurer 05 400'	\$ 155.00

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B&H 400' fiber	\$ 19.50
B&H 400' metal	\$ 55.00
B&H 400' bipack	\$ 145.00
B&H 1000'	\$ 95.00
Eclair Camerette 400'	\$ 245.00
Mitchell 400' std.	\$ 85.00
Mitchell 1000' std.	\$ 125.00

## MOTORS

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Bell & Howell Filmo 12 and 24 DC	\$ 95.00
Mitchell 16 24V variable speed	\$3375.00
Mitchell 16 24V highspeed (96 fps)	\$ 375.00
Mitchell 16 110V highspeed (48-128 fps)	\$ 420.00
Mitchell R35 12V variable speed	\$ 285.00
Mitchell 35 BNC 220-V 3-hp multi-duty	\$ 995.00
Mitchell 35 BNC, phase synchronous	\$ 595.00
Mitchell 35 NC 110V sync.	\$ 395.00
Mitchell 35 NC 110V variable speed	\$ 495.00
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Arriflex 16 110V/42V AC synchronous complete with power supply	\$ 295.00
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## LIGHTING AND GRIP EQUIPMENT

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Mole Richardson 2KW	\$ 85.00
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Colortran Scoop 1000W LQK15	\$ 37.50
Vari-Beam 1000W	\$ 40.00
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Master Stand Castered 44"-139", New	\$ 89.00
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50mm Schneider Xenon F2	\$ 199.00
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C-Mt. Ang. 17-68 w/VF	\$ 595.00
C-Mt. Vario Switar 17-85, RX New	\$ 365.00
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B&H 16mm (JAN)	\$ 425.00
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Victor Mdl. 60-B Optical Sound Projector, less lens and speaker. Needs cleanup. As Is	\$ 99.00
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Moviola Editing Machine, "Preview" model, 35mm, complete with base and foot switch	\$ 750.00
Morgan Fairest Robot II, fully automatic splicing machine, pos-neg pins. 35mm	\$ 299.50
Moviola Multiple Rewinds BL, 35mm	\$ 25.00
N.C.E. 65mm 3-gang sync w/counter ASA II	\$ 300.00
Richards Hot Splicer 70mm	\$ 295.00
Moviola 16mm Mdl. UL20S console w/picture head and separate sound head, footage counter, lightwell tray. Used, excellent	\$2595.00
R2, Griswold 35mm splicer	\$ 49.00
Rewind Bench Clamps	\$ 15.00

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Houston-Fearless Mdl. 22-B 16mm neg/pos	\$3495.00
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Film Dryer Mdl. C2 16/35 200' capacity. Drying speed, 8 fpm	\$ 235.00
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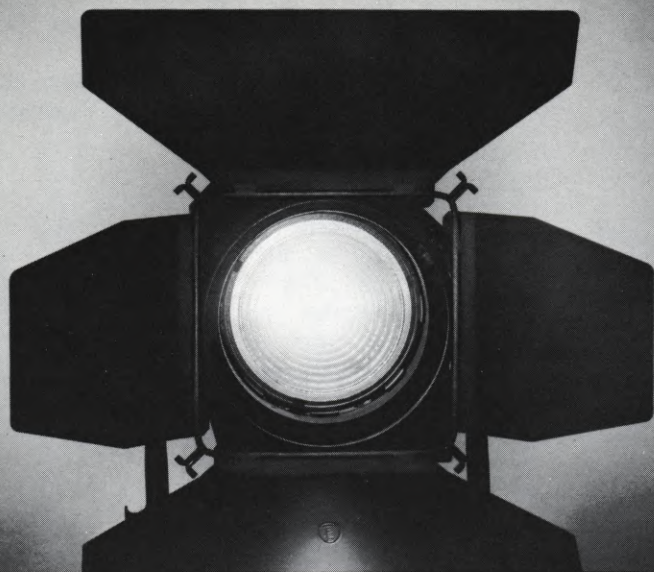




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# WHY ONE COMPANY ADOPTED SUPER-8 FILMING FOR COST-EFFECTIVE TELEVISION PRODUCTION

**It is discovered that new developments in Super-8 sound film equipment offer a means of generating short color television programs at low cost**

By **BOB FISHER**

For years, people in the audiovisual industry have been pondering the prospects of a happy marriage between the video and film media. Everyone agrees that each format has its own advantages for originating, producing, and distributing information. However, because of the relatively high cost of equipment and trained personnel required for each medium, the producer of industrial and educational audiovisual materials is often forced to choose and live with the advantages, and limitations, of only one format.

At Hewlett-Packard Company's Automatic Measurement Division, in Sunnyvale, Calif., Television Production Manager Ron Murdock reports that new developments in Super-8 sound film equipment have opened the way for effective use of film in quality educational and industrial television productions. Furthermore, the new developments offer a means of generating short, color television programs at a cost significantly below that presently realizable with an all-electronic television production system.

Murdock is originating sales programs at customer locations using two Super-8 cameras, one equipped for recording single-system lip-sync sound. Then, using a Kodak Supermatic film videoplayer VP-1, he transfers the raw film footage to video-tape, using the editing and special effects capabilities of the television equipment to produce an edited, finished videotape for duplication and distribution.

According to Murdock, the direct cost for producing a fully-scripted television program on location using

Super-8 film and then editing onto videotape is typically less than \$6,000, including travel for script research and location shooting within the continental United States. That's a goal they couldn't hope to approach if they were originating similar programs on tape, Murdock states. Furthermore, all of the work, from script writing through final editing, is being done by himself and one production assistant. Together, they spend about two months to bring a project to fruition.

The Automatic Measurement Division is part of the Data Systems Group at Hewlett-Packard. The division produces minicomputer-based measurement and control systems for a variety of laboratory and industrial applications.

A number of years ago, the corporation, faced with choosing between the film and videotape mediums, opted for television as the standard audiovisual format and rapidly established a position of leadership in industrial television programming. Initially, programming was originated in studios established at the company's corporate offices in Palo Alto, Calif., but as use of the medium grew, other production facilities were established at key Hewlett-Packard plants. More than 130 video playback systems are currently in use at the company's worldwide sales offices.

Management at the Automatic Measurement Division decided to establish their own television facility in 1972, and a studio was designed and construction begun. Murdock, who has a background in management, broadcast,

advertising copy writing, and industrial film production, was hired in April, 1973, and assigned the responsibility of applying the new facility to meet the division's needs.

"We have what is probably a pretty typical industrial television studio," Murdock relates. "It includes a well-lit sound stage with cyclorama, three Telemation black-and-white cameras, Dage/IVC switching equipment, and Sony one-inch, black-and-white video recorders in the control room."

The studio serves a multipurpose function. For example, many "live" training programs for salesmen, engineers, and customers are originated there. The initial concept was to also use the studio to produce demonstration tapes for the sales force. The idea was that as new equipment was introduced, an early production model could be set up in the studio where a demonstration program showing the new system in operation could be made.

That concept, however, was quickly rejected. Besides delaying the delivery of costly equipment, the studio-produced demonstrations lacked reality and believability. Murdock wanted real customers using real equipment to tell prospects how it got the job done.

"The problem of shooting videotape on location wasn't new to Hewlett-Packard," Murdock recalls. "The company has regularly used film-type production techniques with videotape, in which rough footage is first shot, and then a finished program is produced by playing back the rough footage scene

**(LEFT)** At Hewlett-Packard Company's Automatic Measurement Division in Sunnyvale, California, Television Production Manager Ron Murdock and Production Assistant Diane Gonzales assemble a finished videotape program from Super-8 film shot on location. Murdock operates the videotape console, while Gonzales takes care of the film videoplayer and audio equipment. **(RIGHT)** A simple stopwatch was used to help manually synchronize the film videoplayer and videotape recorder during the film-to-tape transfer.





by scene in the correct sequence and rerecording it onto master tape, using the editing and special effects capabilities of the video equipment. The difficulty with this approach is that, with industrial-type helical videotape recorders, the image quality suffers with each rerecording, and the quality of the release copy is highly dependent upon the recorder used to shoot the original footage.

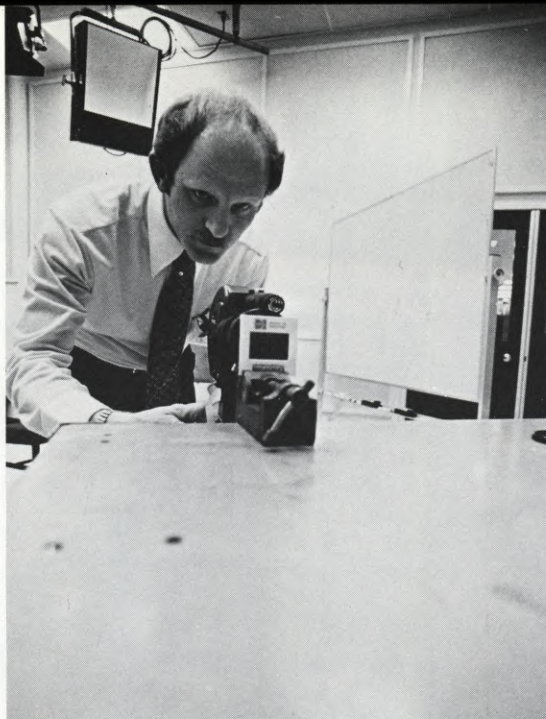
"Unfortunately, all of the truly portable videotape equipment used either 1/2-inch or 1/4-inch formats. We quickly ruled out these machines because, by the time we had edited the rough footage onto a one-inch master tape and then made release copies, the end result was unacceptable. The stability of the small-format tapes was so poor that the studio system was frequently unable to lock up on the signal to permit editing the material."

Equipment was available that could be added to the television system in the studio to work with some of the small-format tapes, Murdock notes. Time-base correctors, image enhancers, and processing amplifiers were being announced that promised to bring the quality of the images up to that of studio-originated work, but the cost of this additional equipment would have been between \$5,000 and \$15,000, plus the cost of the portable shooting equipment, he says. "And the end result would still be black-and-white programs with a major investment required to eventually go to color."

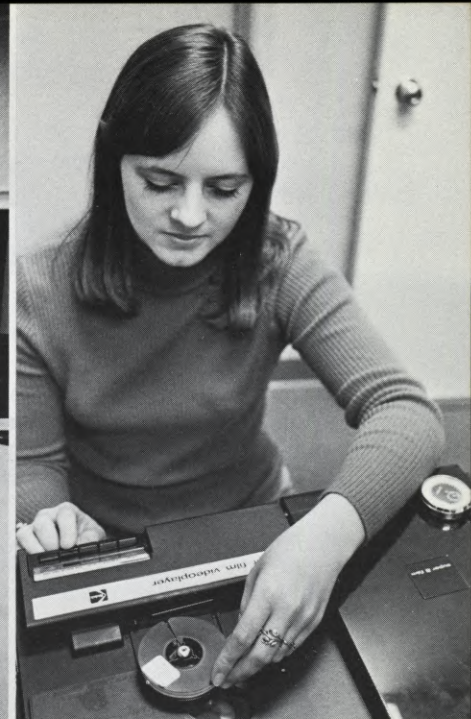
Although Murdock was convinced that the sales programs should be originated and distributed in color, he wasn't ready to suggest that Automatic Measurement Division invest in color cameras and videotape recorders.

"By then, they were convinced that, to be fully effective, our sales tapes had to be shown in color whenever possible," Murdock relates. "The fact is that most people are used to viewing color, and a black-and-white picture lacks the impact and may even distract the viewer from the message. But the company had just invested in a new black-and-white television studio system," he says, "and before doing anything further, we carefully evaluated our needs.

"First, of course, was portability. Other Hewlett-Packard operations doing location work were using lights, an industrial-type television camera, and a one-inch videotape recorder. They were traveling with a crew of up to five people and nearly 600 pounds of equipment to shoot a black-and-white program. One program we shot 'on location' at a nearby HP division



(LEFT) Ron Murdock uses the Beaulieu camera to integrate slides with motion picture film. (RIGHT) Diane Gonzales loads a 50-foot reel of film onto the Kodak Supermatic VP-1 film videoplayer. The extremely practical film videoplayer accepts up to 400 feet of Super-8 film either on reels or loaded in Supermatic cassettes.



verified this figure, and pointed out that one of these people should be a qualified video engineer. Our goal was to go into the field with two people, less than 100 pounds of equipment, and to shoot material in color, even though we may initially release the programs in black-and-white using our existing video production equipment. Color was definitely coming, and we didn't want to get caught with a large stock library of unusable black-and-white footage.

"Secondly, we wanted a system that could be expanded and updated modularly, in a controlled, logical manner. The rapidly changing state-of-the-art in industrial television and electronic journalism often completely obsolesces the newest products within a year or two. Any investment had to be made with the assurance that we could get a reasonable lifetime from the equipment before it became obsolete. This meant equipment that could be cost-effectively used in secondary tasks if newer techniques replaced it too quickly, and a system that could be updated piece by piece as more advanced production capabilities were justified."

Because he was already familiar with 16 mm film production techniques, the possibility of shooting film on location seemed like an attractive solution.

"It isn't a new idea," Murdock says. "We were simply following the lead of commercial broadcasters who needed low-cost portable shooting capabilities for news coverage. Our intention wasn't to produce finished motion pictures, but to shoot the raw footage on

location, and then use a film chain and do our editing with the existing television production system.

"I had noticed a quantity of Super-8 equipment mentioned in literature and turning up at trade shows," Murdock recalls, "and the medium seemed worth investigating because highly automated cameras were on the market that might be operated by personnel used to television cameras."

Murdock conferred with Ray Grant, a specialist at Eastman Kodak Company's Motion Picture and Audiovisual Markets Division office in San Francisco. Grant invited Murdock to a demonstration of the Kodak Supermatic film videoplayer VP-1 and the Kodak Supermatic 200 sound camera.

"I'd seen early versions of the videoplayer before but was impressed with the quality of the pictures Ray showed me with their new models," Murdock said. "It obviously was an attractive alternative to purchasing a film chain with a Super-8 projector at considerably higher cost, and the fact that it produces color video eliminated the need to consider eventually purchasing a color television camera for a film chain to be able to produce color videotapes. All together, the videoplayer, then at a little more than \$1,000, could replace between \$10,000 and \$30,000 of conventional color film chain equipment. Also, the ease of operation appealed to me because it permitted more flexible utilization of our personnel."

The new camera also provided some definite advantages. The most impor-



tant is the ability to originate up to 200 feet of lip-synched sound film without changing cartridges, at either 18 or 24 frames per second.

"Conducting interviews on film, especially prescribed interviews, can be difficult," Murdock noted. "And with the short 50-foot cartridges running only 2 or 3 minutes, changing film creates unwanted interruptions."

Murdock also found the Supermatic 200 camera's existing-light capability an advantage, allowing the use of relatively fine-grain color film with existing light when circumstances necessitate.

Murdock's first project using the Super-8 film equipment was a documentary program shot at the Bureau of Reclamation's Division of General Research in Denver, Colo.

Starting work, he visited Denver and conferred with key personnel at the Division of General Research to collect information to write a script and to survey the laboratories where the program would be shot. Returning to Sunnyvale, Murdock wrote the script and storyboard for the program and, after securing final approval from both Hewlett-Packard and Bureau of Reclamation management, prepared to return to Denver to shoot the program.

Preparation included organizing a shooting script that would take him through the laboratories in the most efficient manner and coordinating the shooting dates with Division of General Research personnel.

Before leaving for Denver with one production assistant, Murdock shipped a 90-pound case containing two 2000-watt Colortran miniature softlights, a 600-watt Colortran mini-spotlight, camera tripod and light mounts, and power cables. The remaining equipment was carried with them in three padded cases, small enough to easily fit under the seat of the airplane. One case contained all of the accessory equipment: microphones, camera battery chargers, a small cassette audio recorder, and accessory cables; this case was checked as luggage. The remaining two cases contained the Beaulieu 4008ZM2 Super-8 camera, a Pentax 35mm still camera, the Supermatic 200 sound camera, extra lenses, and a generous supply of film.

Shooting required two days, with about 1,200 feet of color film being exposed in seven different locations within the large laboratory complex, including two lip-sync interviews. Murdock's production assistant, Diane Gonzales, set up the lights, recorded "wild sound" with the audio recorder, checked continuity, and handled cue cards for the interviewees, while



Ron Murdock shows all of the equipment he takes on location. The large case, containing the lighting equipment and tripod, weighs 90 pounds and was shipped as luggage. Three smaller cases, containing everything else needed, were designed to fit under airplane seats.

Murdock operated the cameras. He used the Beaulieu for all general silent shooting and special effects. The Supermatic 200 sound camera filmed the interviews with lip-sync sound and was used where long shots requiring existing light were needed. In addition, more than 100 35mm slides were taken, some of which were later integrated into the final program.

The 600-watt spotlight was used for a small-diameter light source when shooting extreme closeups with the Beaulieu camera, and the two 2000-watt softlights were used for general area lighting on medium shots.

"We chose the Colortran mini-softlights for their small size and efficiency," Murdock said. "I wanted as much light as possible, while staying within the limitations of a standard 115V, 30A circuit to avoid special power problems on site. The soft-lights each use two 1000-watt lamps that are individually selectable, so we could use three lamps, drawing about 26 amps. By placing the lights approximately equidistant from the main subject, and then turning on two lamps in one and one lamp in the other, we obtained a 2:1 lighting ratio without extra light meter measurements. The reason for all the light was twofold. First, we wanted to use a relatively slow, fine-grain color film to produce the best possible image sharpness when transferred to videotape, particularly when

viewed on a black-and-white monitor. For this reason we selected Kodachrome II film (type A), even though it has rather high contrast. We get an increase in contrast when transferring to videotape. That's why we used a rather flat 2:1 lighting ratio. The Beaulieu 4008ZM2 has a rather high shutter speed, about 1/87 second at 24 frames per second, so we want at least 250 footcandles to work at comfortable f-stops with this film. The second reason was to swamp out the available light whenever possible to preserve color balance. In this environment, the available light consisted of some daylight, fluorescents of unknown types, and even sodium vapor lamps. Remember that we planned to use the camera original film to transfer to videotape; we wouldn't have the opportunity to get colors corrected in printing like you can when assembling a show on film. However, the videoplayer does have a red/blue balance control that allows us to warm up or cool down scenes a bit for good matches."

While production was taking place in Denver, artists at the Sunnyvale Plant were preparing artwork for titles and simple animations that would be used to show the operation of complex equipment in the laboratories.

Postproduction work began with Murdock reviewing the processed film and selecting the "takes" to be used in

Continued on Page 1478



# We're Ready

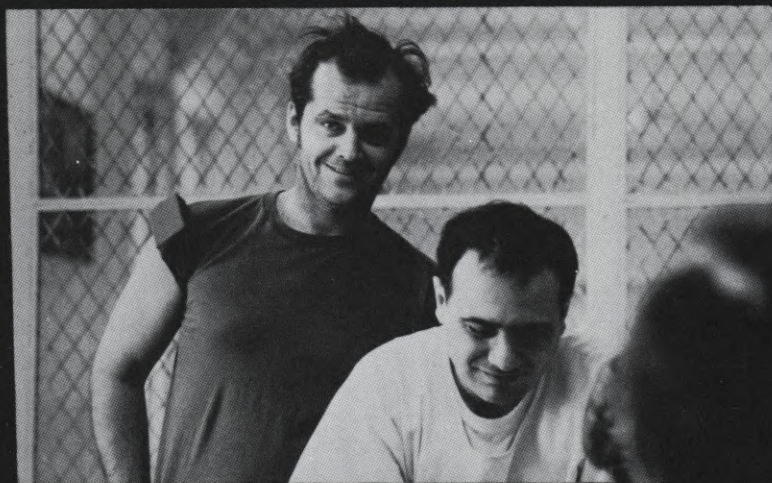
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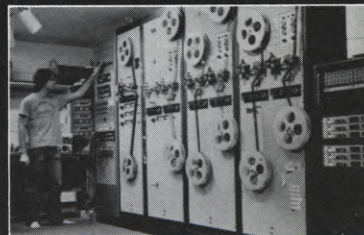
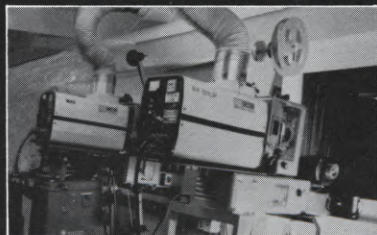
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# SHOOTING 16mm COLOR NEGATIVE FOR SUPER-8 RELEASE

Original filming in the new 7247 16mm Eastman color negative, with reduction to Super-8, produces high-quality, low-cost release prints

By MURRAY WORONER

Shooting film for Super-8 sound release is now out of the "chicken or egg" stage. For years, the question has been: which comes first, the software or the availability of hardware to show it with?

Until recently, our experience has been that the availability of equipment was the determining factor. Let's face it, 16mm has been the dominant medium used by schools, business and industry and government agencies since the early 1930s. There are literally hundreds of thousands of 16mm film projectors in use, and plenty of people who know how to use them.

On the other hand, Super-8 sound film as a release medium offers tremendous possibilities for mass distribution because the equipment for showing it is especially portable and easy to use. It can be more easily used, for example, for making presentations to smaller groups. Some of the available equipment is also ideal for one-on-one presentations or even for individualized instruction.

Because of this, a growing number of companies, as well as educational and governmental institutions, have been using the smaller format, although this apparently hasn't led to a decrease in 16mm origination and distribution.

For example, we are currently working on a project for the National District Attorneys Association (NDAA) and Motorola Teleprograms, Inc., which will be released in both the 16mm and Super-8 formats. We are starting with a series of eight 15- to 20-minute films designed to help train prosecuting attorneys in proper procedures for entering evidence.

Each film is a dramatization of an actual situation. We simulate the crime being committed, and then show how the prosecuting attorney handles the introduction of evidence for that particular type of case. Real judges, prosecutors and attorneys are used, with professional actors playing the roles of witnesses and the accused.

The ultimate objective is to create an entire film library that prosecutors can refer to and study at their own convenience. NDAA decided to offer this series in the Super-8 sound format as well as 16mm because they feel it is ideal for individualized study. A tabletop Super-8 sound projector can be conveniently tucked away in a

corner of any office for prosecuting attorneys to use prior to handling an unfamiliar type of case.

The series marks several changes for us. The first is that there are no plans for release in videocassette format, so we can shoot to full projection aperture. This means that we will have more screen room to work with, and we don't have to confine all our action to the center of the screen. And, because 16mm and Super-8 frame proportions are so similar, we don't have to compensate for release in either medium.

The only instance where we do mix original stocks is with some of the action sequences that were originally shot with reversal film. These are heavy action sequences — for example, a sniper sequence with a SWAT team working — that we originally made for the police training series. They fit into the flow of the new film series perfectly. The mixing of stocks is evident to the trained eye, but it's acceptable because such sequences are set apart by the subject matter. They look like news film.

The courtroom scenes presented us some lighting problems. The jury box is about 30 feet from the witness box — two critical locations in the story. So we took an unusual approach. Four 4,000-watt softlights were set in a semicircle behind the attorneys' tables and directed at the witness box, jury box and the judge's bench. These became the area lights. Then we took a pair of deuces and threw one from the judge's left down toward the witness box. Another 2K was slanted across to the jury box. And, from the judge's left, we front-lit the attorneys' tables and used eyelights for the witnesses.

This gave us a nice, balanced light with a minimum of movement. The only time we had to make any light moves was when we came around for shots of the attorneys' tables. We swung the softlights out of the way to light the back wall of the courtroom. The film speed helped us tremendously in the courtroom because the area we were lighting was so large.

The film's versatility also helped us recently when we shot another law enforcement training film on the subject of auto theft. It was shot under almost every conceivable lighting condition. A car was "stolen" from the

parking lot at Miami Jai Alai Fronton, where we shot footage of the games, the audience area and the back-grounds around the pari-mutuel windows. Scenes also were shot in the Public Safety Building, the Auto Theft Bureau and the Auto Pound.

One scene takes place in a body shop, where cars are supposedly disassembled and sold for parts. This was a mix of daylight and tungsten because one side of the body shop was open. We balanced for daylight and used dichroics on our lights. But the most interesting scene to light was in an adult bookstore. We lit that "tawdry," stringing in four bare sockets and putting photofloods in them. We softened it just a little with one softlight to get a touch of fill. It came off beautifully.

Everything we've asked of the film, it's delivered.

Before we tried 7247, we heard a lot about dirt and scratching problems. With a negative, of course, any dirt shows up as white specks on the projection print, so dust is more critical—more noticeable.

We've found that reducing 16mm to Super-8 yields a sharp release film with virtually no loss of detail. And, if projected within the limits of the smaller frame size, we get a good picture on the screen.

The biggest departure from our previous practice that we made with the filming of the NDAA series is that we are working with 16mm color negative film. Just about the time that we were ready to begin production, Eastman color negative II film 7247 became available. We tested it and liked what we saw. From the industrial filmmaker's viewpoint, I feel that the film has a lot to offer.

Prior to this, most of our experience was with color reversal films of the Eastman Ektachrome film type. There were some obvious limitations. For example, much of the filming for the NDAA series is done in the courtroom. If we filmed a judge in his heavy black robe, it would show up as a black mass on reversal stock. Even with careful lighting, it would be difficult to distinguish the folds of the robe.

By way of comparison, the color negative film opens up the shadows and lets us show detail without the use of special lighting equipment.





The author, producer Murray Woroner, plants a fake bomb for a sequence in a law enforcement educational film. Not long ago exclusively dedicated to 16mm release of his films, he now favors Super-8 because of the tremendous possibilities for mass distribution it offers, due to the extremely portable and easy-to-use Super-8 projection equipment currently available.

Another place the negative is helpful is for location exteriors when we're shooting a person in a car. We used to carry portable equipment to light car interiors to balance them with the sunlight. The negative film has enough latitude, however, to expose for the driver and frequently we let the background go. No fighting portable lights in cramped quarters and we still obtain very acceptable results.

The structure of the NDAA films will remain standard throughout the series. Incidents that lead to each situation are shot on location, and then courtroom proceedings show how the information in the incident becomes evidence in the trial. Using reversal film, our technique would have been to work with two different stocks — one tungsten-balanced and the other balanced for daylight — and then intercut them. No matter how carefully you do this, the experienced eye can still tell the difference. With the color negative, we have sufficient film speed to shoot interiors and exteriors without changing stocks.

Most of our shooting is done with Eclair NPR cameras, but occasionally we use an Arriflex 352C. For example, we shot scenes of a series of explosions, which we plan to use as stock footage for several sequences. In this case, we wanted a master negative that we could go back to time after time. So, we shot the scene with Eastman color negative II film 5247. The

original was reduction printed to a B-wind internegative for intercutting with original 7247 footage. We haven't changed our basic emulsion, and everything matches.

Following advice we'd read in *AMERICAN CINEMATOGRAPHER*, we thoroughly cleaned our magazines and loading bags and preloaded seven 400-foot magazines before the shooting day started. No loading was done on location. Cameras received standard, between magazine cleanings. That was all we had to do, and we just didn't have any dirt problem. With just a modicum of care in cleanliness, the film handles like a dream.

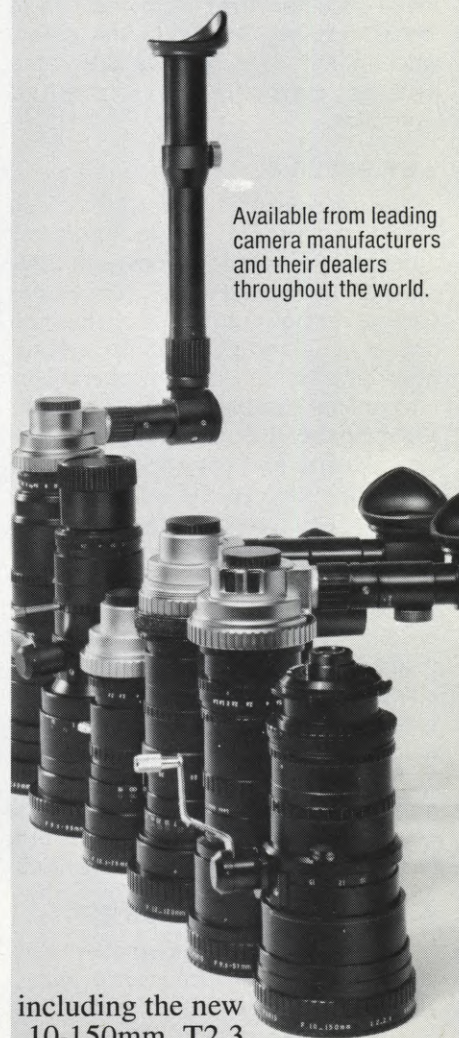
Postproduction for 16mm and Super-8 release is almost exactly the same as if we were only working in the larger format. Our 7247 camera original is processed at Capital Film Labs, across the street from our offices in Miami, and Eastman color release prints are made from Eastman color reversal intermediates.

For Super-8 release, we make a balanced, single-strand negative and a magnetic track and have the prints made at Super-8 City, a Capital lab in Washington, D.C.

There is no longer any doubt in our minds. We can see the market for Super-8 release prints growing enormously. And we know that by using a 16mm color negative camera original, we can deliver quality prints in both 16mm and Super 8 sound formats. ■

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# USING SUPER-8 IN THE SOCIAL SCIENCES

**The simplicity of Super-8, its small size and portability provide a most valuable tool for social science researchers**

By **ROBERT and EILEEN ZALISK**

Film can perform at least three kinds of functions in the social sciences: it can record certain kinds of data at the "pure research" level of inquiry; it can be used as an "archival resource", a use which combines both data storage and the display or "show" aspect of a documentary; and it can be used to make documentaries, a cinematic form which may be likened to the essay, wherein an "argument" is presented and is supported by *selected* examples.

## **WHY SUPER-8**

The relevance of Super-8 to these functions should be immediately apparent. For reasons of cost and complexity, filmmaking has been essentially a special prerogative of the rich and of large and powerful institutions: governments, business corporations, educational establishments. The *relative* simplicity of Super-8, together with its small size and portability, allow the researcher to use the equipment to observe and record *directly*, without first having to become an expert in cinematographic techniques. At the same time, this can be done at a cost usually accessible to the individual researcher. Some of the newer Super-8 equipment allows film to be used as an extension of the pen in gathering data or in note-taking.

Furthermore, "using Super-8" simply means using a smaller-sized film gauge while taking advantage of several recent technological advances.

## **SUPER-8 AS A RESEARCH TOOL**

The word "film" immediately conjures up the image of a cinema hall — ye olde "Palace Theater", with lights, star performers, and large sitting audiences. However, when film is used for "pure research" purposes it may never be projected to any "audience" at all. At most, it may be studied and analyzed by several people from a viewer, or, perhaps projected a short distance from a table or desk-top projector.

For research purposes film images can be taken in a variety of ways. Single or multiple cameras can record phenomena being studied from different perspectives simultaneously. Time-lapse and slow-motion techniques capture variations in behavior over precise intervals of time. A particular kind of behavior by one

individual may be recorded each time it is performed, or, ostensibly similar behavior exhibited by many subjects can be compared.

Since in this kind of use the actual filming is usually of "controlled" situations, the automatic features of Super-8 can be entirely adequate for the kind of non-Academy Award result that is all that is required. Aside from the much lower capital costs of camera and equipment, the Super-8 format also has as much as a 3:1 or 4:1 cost advantage on film. Since so much footage is taken in this research use of film, such a cost advantage alone makes Super-8 attractive.

## **SUPER-8 AS AN ARCHIVAL RESOURCE**

Super-8 is particularly appropriate for encouraging the use of film to accumulate raw visual data as a kind of "archival resource". This use lies somewhere between the strictly data-oriented use of film as a research tool and the more didactic purposes of a documentary production.

E. Richard Sorenson, Director of the National Anthropological Film Center, and Allison Jablonko have described three approaches to recording visual information: "opportunistic sampling"

("... seize opportunities ... pick up your camera and shoot ..."); "programmed sampling" ("... filming according to a predetermined plan ..."); and "digressive search" ("... deliberately intruding into 'blank areas'...").

Super-8 might be especially useful with the first and third of these "strategies" (while it might certainly be useful with the second as well). The resultant footage may well look "uninteresting" or "unexciting", and initially may seem to be unproductive and of no research or documentary usefulness. But such footage could be kept "on file" as a resource for continuing study. Later, when more footage has accumulated or new knowledge has been developed, comparative analyses using the earlier footage might prove fruitful, while selected sequences could be brought together for classroom display or for incorporation into documentaries.

The situation we see is that of a field worker — whether anthropologist, sociologist, political scientist, psychologist — who uses a Super-8 camera as a kind of notebook (a single cartridge of Super-8 film can take 3,600 individual pictures — the equivalent of 100 rolls of standard 35mm "still" film).

**John Bishop spent a year studying and filming the behavior of langur monkeys in Nepal. He chose Super-8 because of the lightness, portability and straightforward operation of the equipment. Here John prepares to shoot a sequence with his Nikon Super-8 camera, high in the Himalayas.**





"Making a film" may not be *the* reason for the field worker being in a specific place; nevertheless, valuable resource material can be "easily" recorded for later use by the researcher or by others.

Similarly, the kind of film use described by Adair and Worth, in which Navaho Indians filmed themselves, also might be placed in this category of film usage. The point is that a medium which is both expensive and complex to use does not readily lend itself to experimentation. Super-8 can help make such experimentation more feasible.

Super-8 again has an immediate attraction with respect to cost, since much footage would be shot in accumulating such raw archival resource material. In addition, the portability and simplicity of Super-8 can facilitate trying to record the "... unanticipated event" or what has been thought to be the "... incoherent and insignificant."

#### **SUPER-8 AND THE DOCUMENTARY**

It is with respect to the more traditional use of filmmaking in the social sciences, the documentary, that the expectation seems to be especially strong that the film that is produced must be in a format worthy of the huge cinema hall. In actual fact, such documentaries are seen most often in the classroom — where the big clacking 16mm projector is greatly annoying — or, perhaps in a medium-sized high school or university auditorium. Both of these are projecting situations in which the latest generation of Super-8 projectors are entirely adequate and compare acceptably with 16mm equipment.

The special attraction of Super-8 for the documentary is that it may encourage more individual researchers and scholars to produce serious works that exploit the advantages of film (and video) for certain kinds of explanation and understanding. To give what might seem like an extreme example outside the social sciences, there is no reason why a Shakespearean scholar could not make a documentary film out of materials — portraits, lithographs, architecture, actual locations, together with contemporary music, speech patterns of the time, etc. — gathered and recorded by the scholar on Super-8 in the course of researching a subject. And certainly this would be no less true for a political scientist explaining election procedures or a sociologist describing certain kinds of patterned behavior.

The really large audience, such as it



**Melemdi villagers in Nepal erect prayer flags against a background of mists rising in the Himalayas. The Bishops recorded many feet of Super-8 film showing village life. The result will soon be a ten-minute videotaped program, thus providing access of a much larger audience to their work.**

might be, for such documentaries, is more probably reached through the use of television, and Super-8 can be transferred to videotape just as easily as 16mm — *more* easily, in fact, with the new Kodak Videoplayer. For that matter, Super-8 film *can* be enlarged to the 16mm format and still maintain a small cost advantage over a film shot originally in 16mm. Some image and color quality may thereby be sacrificed, but using Super-8 as the medium of original acquisition retains the in-the-field advantages of working with small, lightweight equipment and small crew. For these reasons also, the funding which is now needed for a single project may well support several projects in the Super-8 medium.

#### **RESEARCH IN MANHATTAN**

Super-8 already has been used successfully in each of these three broad areas of possible film use in the social sciences. The sociologist William H. Whyte has been using it as a data-gathering tool in his "Street Life Project" since 1971. The Project, which focuses on how people use the streets and spaces of New York, has been studying various aspects of urban behavior, often for the New York City Planning Commission.

Most of Mr. Whyte's Super-8 work consists of time-lapse studies, although some real-time filming is also done. He uses Kodachrome II film because of its fine grain, and usually two Super-8 cameras with built-in intervalometers. His method is simple: the cameras are mounted by the window of a building and aimed at the street to be studied below. A digital clock included in the

viewing area acts as a frame counter as well as it records elapsed time. After a cartridge is exposed (time-intervals vary according to subject), the film is viewed on a table-top viewer and the work of analyzing it — counting and identifying subjects, charting their movements, etc. — begins.

In this way the Street Life Project has studied such things as New Yorkers' "schmoozing" patterns, children's behavior in playgrounds, field reactions to a prototype public bench, and the behavioral implications, particularly of traffic flow, of turning Times Square and Broadway into a pedestrian mall. One study on plaza use, undertaken for the Office of Midtown Planning, resulted in changes being made in New York City's construction regulations for

**During their stay in Nepal, the Bishops lived in a Sherpa village, where many of the townspeople were very interested in their work and equipment.**





plazas. (Similar kinds of traffic-flow studies using time-lapse Super-8 as a data source have been reported by Dr. Ira S. Kuperstein of the Newark College of Engineering.)

### ARCHIVAL RESOURCE IN NEPAL

An example of the second kind of function Super-8 may help film perform in the social sciences, that of an archival resource, may be found by jumping from Manhattan's concrete cliffs to the slopes of the Himalayas. John and Naomi Bishop spent a year (1971) studying the behavior of langur monkeys in Nepal. The langurs ranged over a 2,000-foot sweep of mountain-side two miles wide — and in an area reached only by hiking three to five days out of Katmandu to a height of about 10,000 feet.

Part of the Bishops' study consisted of collecting plants, making weather observations, and plotting the ranging patterns of the langurs. A second part consisted of recording the activities of the monkeys after hours of observation: by writing notes, dictating into a tape-recorder — and filming with Super-8. This filming was done with the object of "simply" gathering research footage to be analyzed later on a stop-frame projector.

Throughout the period of their study the Bishops lived in a Sherpa village. John also did some filming of work and dance sequences in the village, and this he sent to Columbia University for study by the choreometrics project there. Although this footage was not included in the 40-minute "Dance and Human History" documentary by Lomax and Paulay that was later produced, it was used in the computer studies that analyzed the original

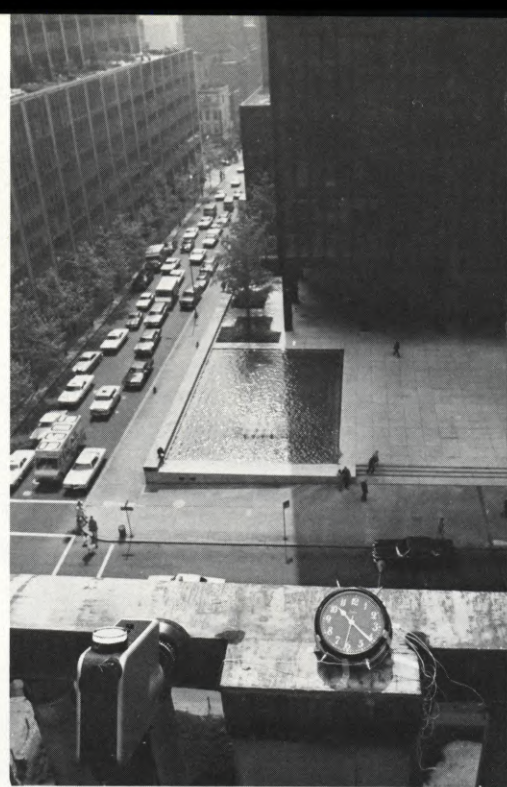
research footage from all over the world.

The Bishops had used Super-8 because the remoteness of their location meant everything had to be back-carried, because of their lack of electricity, and because of their need to be able to be as "automatic" as possible. Their one "mistake", they say, was to not treat Super-8 seriously enough. Only when they returned and were pleasantly surprised by the quality of their original footage, did they think to make a short documentary out of it — but it had been shot at 18fps.

Naomi continues to use the langur footage in her (anthropology) classes both for purposes of illustration and as raw data for teaching observation techniques. At this writing, however, the Bishops are in the process of transferring relevant film sequences to 1" videotape, not only of the langur footage, but also of the Sherpa village footage. Thus, they expect that by the end of the year they will have two ten-minute programs finally available for a wider audience.

Perhaps this example helps to more concretely illustrate our attempt to describe the possibilities Super-8 makes feasible for the use of film as an "archival resource". In this instance, the original research project was able to be augmented by valuable filmed research material at no great additional expense and without the need for creating a special film crew. But further, material for an entirely different project could *also* be gathered. And finally, both the originally desired material and the "additional" material subsequently have been able to be put to uses other than originally envisioned.

**Langur monkeys in Nepal, the subjects of a Super-8 filming project by John and Naomi Bishop, who spent a year (1971) studying their behavior. The langurs ranged over a 2,000-foot sweep of mountainside two miles wide, and in an area reached only by hiking three to five days at an altitude of 10,000 feet.**



**Super-8 camera with built-in intervalometer was mounted in the window of Manhattan building to shoot time-lapse studies of street action below.**

### DOCUMENTARIES: IN INDIA

Our own experience can serve as an example of filming in Super-8 for documentary purposes. In 1973 we spent six months travelling and filming throughout India. Almost all of our filming was done with a Nizo S800 using EF7242. The film we immediately airmailed to the States in four-roll packets for processing.

We filmed both with and without sync sound. For sync we used a cable connected to the flash socket of the camera and a "Scipio"-modified Phillips N2204 cassette tape recorder. (This is a one pulse-per-frame system which we later resolved using the Super8 Sound Recorder in order to transfer to Super-8 fullcoat for editing.) We also used the Sony TC55 and both of these were used together with Sony ECM 18 and ECM 19B cardioid microphones.

The recorders have an upper limit of about 10,000Hz, which is the maximum playback range of Super-8 projectors, although it is slightly greater than most 16mm projectors and quite a bit more than television sets. Our over-riding concern, however, was size and weight (and also cost). We had no problems recording in sync, although ideally we would have preferred crystal sync; similarly, we would prefer to use the Uher 134 (unavailable at the time), which has a much greater recording range, a stereo capacity, greater

**Continued on Page 1443**





"Owen Roizman's superb camerawork lends gritty authenticity to New York's streets, alleys and threatening parks... a slick piece of moviemaking."

The Hollywood Reporter,  
September 17, 1975  
Review of "Three Days of the Condor"  
Paramount release of a  
Dino Di Laurentiis Production

"Victor J. Kemper's superb Technicolor cinematography and Charles Bailey's great production design... highlight the technical achievement which gives the film the look and feel of the title, time and place."

Variety, Wednesday, August 27, 1975  
Review of "Dog Day Afternoon"  
Warner Bros. release of an Artists  
Entertainment Complex Production

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# SUPER-8 FILM GROUP FINDS THE SMALL FORMAT A COMMERCIAL SUCCESS

Like the bumblebee, which, aerodynamically speaking, can be proved to be incapable of flight, Super-8, despite the many serious strikes against it, is, nevertheless, being used professionally for commercial production

By MARK MIKOLAS

*There is a clearcut case against using Super-8 in professional commercial production.*

The most significant single factor militating against such applications is simply the image size. It is virtually impossible to identify a frame by looking at it with the naked eye. The lack of legible, closely-spaced, edge-numbers requires eyeball conforming, if that can be imagined.

Projected prints cannot duplicate the quality of 16mm projected to the same image size. In the commercial world, Super-8 reel-to-reel projectors are not common. Rear-screen projectors, which are common, require B-wind prints, necessitating some form of internegative or interpositive, degrading the image further.

There are no negative stocks and therefore sharp original must be shot on slow reversal emulsions, requiring two or three times the amount of light as 7247.

A straight develop and print takes about a week at most labs.

Frameline varies from camera to camera, making intercutting difficult.

Head azimuth varies from projector to projector, eliminating the potential of the sound stripe for good clear sound.

**By using inexpensive and versatile Super-8 production equipment, the commercial producer can now offer film programming where this would not have been economically possible before. Here three Super-8 fullcoat tracks are cut against picture, prior to a mix and double-system interlock screening.**

Color correction is unavailable in contact printing.

There are no self-blipped cameras and no barneys which eliminate all camera noise for sync shooting.

Filmmakers working in Super-8 are generally looked upon as non-professionals and it is not expected that they can be tuned to the subtle needs of a working relationship between a client and a producer.

Digressing for a moment, let us discuss the bumblebee.

The ratio of its wing area to its body is such that, using the laws of aerodynamics, it can be demonstrated mathematically beyond a doubt that *the bumblebee cannot fly*. The equations expressing this truth of physical law that the bumblebee cannot fly can be found hanging on the wall of nearly every flight control center in the country. Any aerodynamic engineer would agree — the bumblebee cannot fly.

But the bumblebee *does* fly, and likewise for commercial Super-8. The primary proof is simply that thousands of filmmakers have produced professional commercial Super-8 films, and literally tens of thousands more persons are actively experimenting

with Super-8 for commercial film applications.

Super-8 filmmakers, not finding the objections listed above insurmountable, have developed an approach to commercial production and a market uniquely their own. The entrepreneurial years of Super-8 have resulted in some conclusions about Super-8 production which, although still open to question and exploration, seem to indicate the directions of Super-8's fullest potential.

One of these conclusions is that Super-8 is *not* 16mm — only smaller and cheaper. Every attempt to compare Super-8 and 16mm on a one-to-one basis becomes embroiled in both qualitative differences and basic disparities in thinking. The Super-8 filmmaker, for instance, now has access to 6-plate horizontal editing consoles, as well as extremely versatile 4-gang vertical editing arrangements which eliminate most of the long-held objections filmmakers have had to editing sync material on a synchronizer.

There is no real reason why an inexpensive vertical arrangement like the Super-8 Sound 4-gang Editing Bench could not have been produced in 16mm years ago, bringing three-track sound editing capability within the budget of scores of more filmmakers. In 16mm, it was not done. In Super-8, it was.

Even when strapped by budgets, 16mm producers normally go to a titling house to have their titles set and then to an animator to have them shot, often involving several hundreds of dollars. They could, like Super-8 producers, set their own titles and shoot them in camera. But they do not.

These two examples involve no real film quality differences. They do demonstrate a *different thinking* by Super-8 filmmakers and Super-8 manufacturers.

This thinking is innovative, approaching old problems with a new perspective. It is individualistic. It is productive, motivated to complete films to the highest standards possible on whatever budget is available. It is, thus far, non-competitive, seeking neither to replace 16mm nor video, nor to build large enterprises. It is charged with enthusiasm that is undaunted. "It





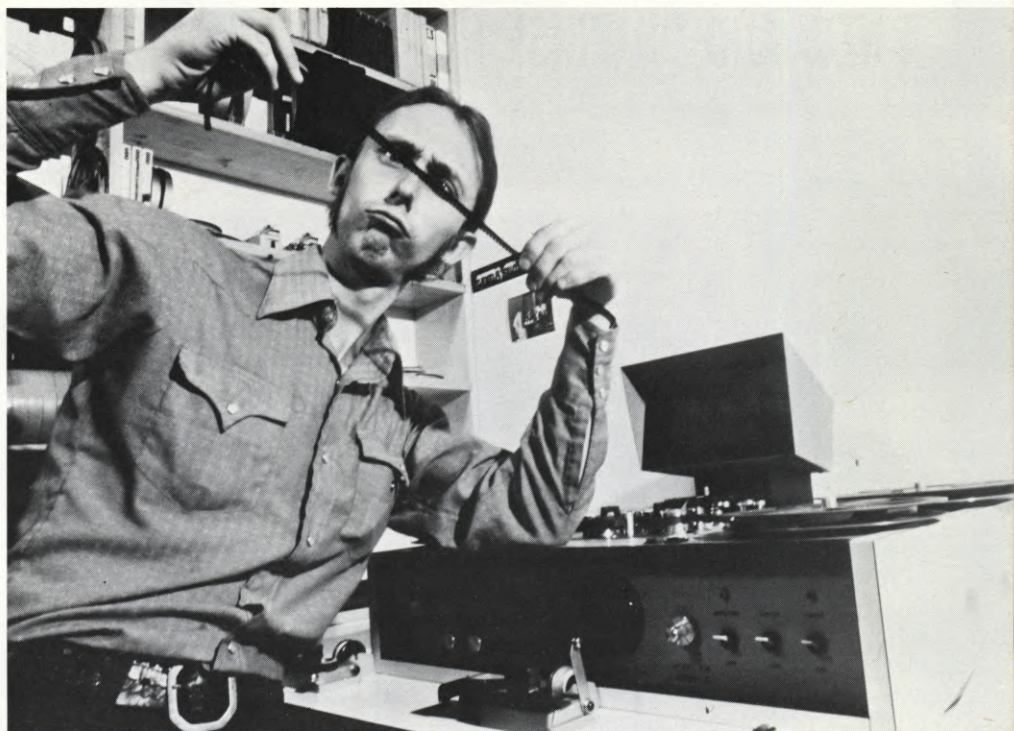
cannot be done" will not be found in the vocabulary of a Super-8 filmmaker. It is the challenger, the rebel, the explorer and the pioneer. No assumption about filmmaking, commercial or otherwise, is going unexamined. In short, it is in its adolescence and rapidly coming of age.

Whatever the definition of "commercial" and "professional" elsewhere, the Super-8 filmmaker has defined them for himself: "commercial" means making money, either to provide the filmmaker with a living making films, or to provide the part-time filmmaker with the funds to support his film habit; "professional" means doing one's best and successfully creating a film which accomplishes its objective. It is not defined by the tools the filmmaker uses, nor the rates he charges.

Finding himself generally barred from movie theaters, network television and established commercial film clients, he has had to define his market elsewhere. He has realized that by applying his ingenuity and taking advantage of the areas of Super-8 which can save money, he can bring his budgets considerably lower than was ever before possible. He has discovered that by knocking on a few doors and claiming, "I can now do the same film in Super-8 that you have been doing in 16mm, only at half the price," he spent a lot of unnecessary time defending his claim, and he found that sometimes he was wrong.

The next step was to take a good long look at his filmmaking tools and to figure out what jobs they are best suited for. As we have discovered, many of those jobs are applications for which, until Super-8, film had not been considered because of its complexity and costs. In fact, the Super-8 producer has come to look at the *entire* world of people, institutions and companies who have had *no access to film* as his potential market. The process of demonstration and education to present new film applications as well as technical possibilities has fallen to the Super-8 filmmaker's lot. The process of deducing uses of film from Super-8 technology and the world's media needs challenges the Super-8 producer's imagination and resourcefulness.

Super-8 Film Group formed as this process began in earnest about five years ago. Not only have we explored and developed a Super-8 commercial basis for ourselves, but our editorial services, screenings, equipment demonstrations, writing, consulting and



At the MKM Super-8 editing table, author Mark Mikolas examines a strip of film in the offices of Super-8 Film Group in New York. Mikolas and his partner, Gunther Hoos, produce commercially and exclusively in Super-8, utilizing various formats for release.

workshops have provided contact for us with literally thousands of Super-8 users. We have listened to them: their plans and concepts, their problems and discoveries, their successes and their failures. The following areas have emerged as the parameters of developing Super-8 production commercially.

**QUALITY** The question, "What is the state-of-the-art of Super-8 quality?" has become less and less important.

It has been convincingly demonstrated that anything done in film, can be done in Super-8. It has been demonstrated that high-quality original can be blown up to 16mm within acceptable limits, or that one can achieve mass release print capability through an internegative. Super-8 has been utilized in a variety of broadcast situations. Full sync editability has been around a long time and the options for mixing multiple sync tracks and doing studio sound are increasing.

But in the process of attempting to duplicate the expected standards of larger formats in commercial work (which in many cases eliminated the savings advantage and ended up costing as much as thrifty 16mm production), new standards of quality were discovered to make far more sense. Namely, making quality a function of applications and budgets.

For instance, a full-blown national television commercial *could* be done in Super-8, and by transferring the

original to 2" Quad videotape and enhanced for release, it would not even look much different from 35mm when it was broadcast. However, Super-8 introduces many production disadvantages without offering a single advantage (it would not significantly save money). If, however, the same commercial were shot with a minimum of lights on high-speed stock, single or double-system, effects done in camera (automatic dissolves, etc.), edited, tracks mixed and then transferred to videocassette via a Super-8 video-player, a *test* commercial can be produced for about the same budget as animating a storyboard. Quality is a relative consideration. Compared with the final commercial it is inferior in many respects. But in going to his clients, the Super-8 producer can offer to produce a *live-action* test commercial for the *same* budget as animated storyboards. He is offering a better product for the same money. His "quality" is better than what has come to be expected for a certain budget.

In an unlimited range of possibilities, Super-8 can provide a film, rather than there being no film at all. Here the competition is essentially print media, slide presentations, or nothing at all. For example, a highly effective fundraising film may be made for a child care agency at a budget they can afford. The strength of the camerawork, the editing, the subject matter

Continued on Page 1470



# A NEW ADD-ON NOISE REDUCTION UNIT FOR THE NAGRA IV-S RECORDER

**A compact, sturdy, bolt-on device designed to make the quality of sound track for field or location footage as good as that of tracks recorded in the studio under optimum conditions**

A traditional problem in film or TV production is how to make the sound track for field or location footage as good as the tracks recorded in the studio under optimum conditions. This is particularly important for the TV news-gatherer, documentary or industrial filmmaker, where a high percentage of the running time consists of location footage.

With the dbx 192 add-on noise reduction unit used in conjunction with a Nagra tape recorder, it is possible to eliminate the audible shift in tape hiss and usual degradation in program quality which often accompanies the change from studio recordings to those made in the field.

The ability of the dbx-equipped Nagra to surpass the signal-to-noise performance of studio recorders makes possible an improvement in program quality which would be of interest to all who have occasion to record sound tracks other than in the studio.

The direct bolt-on professional noise reduction package designed by dbx for the Nagra\* IV-S portable stereo tape recorder permits the already excellent Nagra unit to produce master tapes on location which have a signal-to-noise ratio surpassing that of the most expensive studio recorders using other noise reduction systems.

The dbx 192 is a two-channel switchable record or playback system identical in performance to dbx studio noise reduction systems. It combines 30 dB of broadband noise reduction with a 10 dB increase in tape recorder headroom, requires no level matching, and contains only one control, a record/play switch.

The accessory package is slightly over one inch thick and bolts directly to existing tapped holes in the Nagra case using hardware supplied. The dbx 192 is designed without an independent power supply to keep weight to a minimum. Its one-third-watt power requirement is taken from the Nagra supply. A

single seven-pin DIN conductor and cable is supplied to mate with the Nagra noise reduction connector.

The dbx 192 is built to survive the rigors of location recording, including one-eighth-inch-thick anodized aluminum case, computer-grade glass epoxy circuit boards, metal cased, hermetically sealed semiconductors and integrated circuits. The unit is available from dbx dealers or the factory for \$600.

For further information and list of stocking dealers, please contact: dbx, Incorporated, 296 Newton Street, Waltham, Massachusetts 02154, (617) 899-8090. ■

## CONDENSED SPECIFICATIONS dbx 192 Tape Noise Reduction System

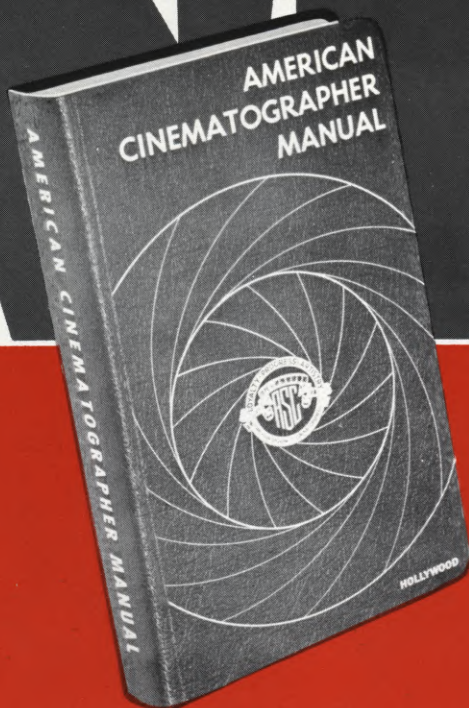
Input impedance	50 kohms
Output impedance	500 ohms
Maximum input level	+13 dB re: 560 mV=0 dB
Maximum output voltage	2.5 V rms at 1 kHz into 5 kohms
Current requirement	33 mA
Dynamic range	120 dB unweighted
Effective noise reduction	30 dB
Tracking	± 1 dB maximum for full encode/decode cycle
Encode/decode distortion	Less than 0.1% 2nd harmonic at 1 kHz, 0 vu Less than 0.05% 3rd harmonic at 1 kHz, 0 vu
Encode/decode frequency response	+0 dB, -1 dB; 40 Hz to 20 kHz +0 dB, -3 dB; 25 Hz to 27 kHz
Operation temperature range	-32°F to +140°F (0°C to 60°C)
Dimensions	9" x 7-1/8" x 1-1/4" (22 x 18 x 3 cm)
Weight	2.56 lbs. (1.16 kg)

**The dbx 192 Tape Noise Reduction System is a direct bolt-on professional noise reduction package specifically designed for use with the Nagra IV-S portable stereo tape recorder. The dbx 192 is a two-channel switchable record or playback system identical in performance to dbx studio noise reduction systems. It combines 30 db of broadband noise reduction with a 10 db increase in tape recorder headroom, requires no matching level, and contains only one control: a record/play switch. The device should prove most valuable to the TV news-gatherer, documentary or industrial filmmaker.**





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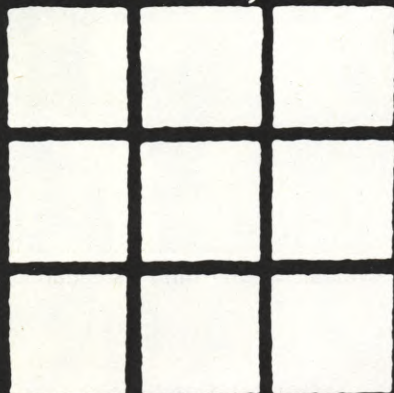
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## WHAT'S NEW

Continued from Page 1368

model, the CP-16R/DS.

The new camera model is identical to the standard CP-16R reflex camera in every respect, with the same accurate crystal-controlled motor and all the many features that have made the CP-16R the best selling single/double system sound camera of its kind. The only difference in the new CP-16R/DS model is in the fact that the flywheel and film threading rollers needed for single system sound recording have been removed. As a consequence, the new CP-16R/DS is simpler and considerably faster to thread, and is almost three-quarters of a pound lighter than the already extremely lightweight standard CP-16R.

The CP-16R/DS is ideally suited for the cinematographer who shoots double system sound only, whether filming documentaries, newfilm, TV commercials, etc. And, should the owner's filming requirements ever change, the new CP-16R/DS can be easily converted to single/double system sound capability.

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

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For additional information from manufacturer, write Norval F. Smith, The Communicators, Inc., Pomfret Center, Conn. 06259, or telephone 203/928-7766.

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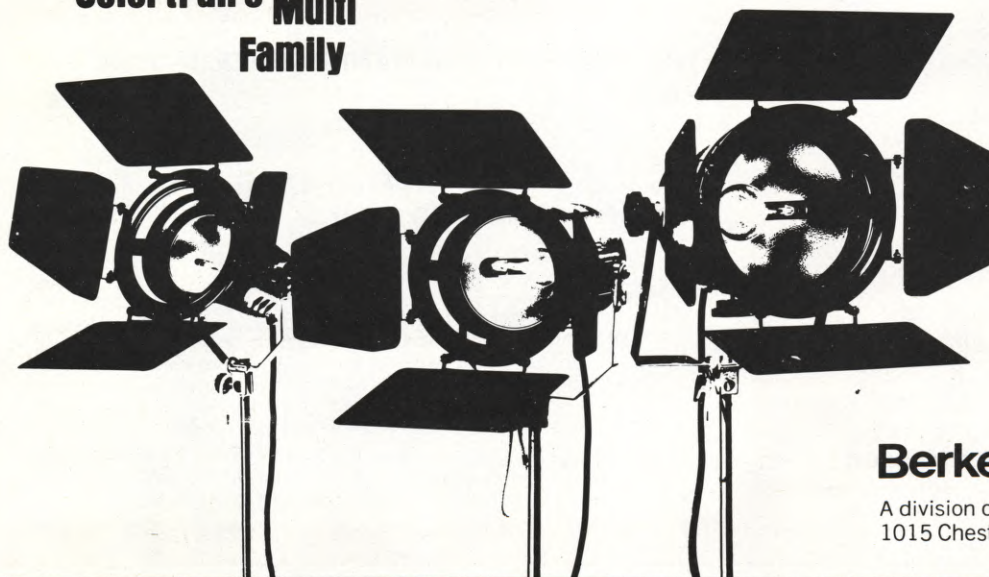
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The August 1975 issue of American Cinematographer published a feature article entitled **MAN-AGAINST-MOUNTAIN AND VICE VERSA DURING THE FILMING OF "THE EIGER SANCTION"** by Mike Hoover.

In the context of that article, the statement was made: "Then Frank Stanley (Director of Photography) had a stroke . . ."

American Cinematographer has been informed that the aforementioned statement describing Mr. Stanley's illness was inaccurate. Mr. Stanley responds: "By way of clarification, I suffered a blood-clot, resulting from a combination of a bruise sustained while on the mountain and the effects of the altitude upon the injury. This accident occurred after approximately one week on the mountain and I later returned to shoot all remaining locations including Monument Valley, Zion and Carmel. I have made a full recovery from the injury."

As credited in the article, Frank Stanley, ASC, was Director of Photography on "THE EIGER

**SANCTION"** and, in that capacity, was fully responsible for principal photography of the dramatic story, the latter comprising the majority of the footage shot for the picture.

Mike Hoover, a recognized mountain climbing expert, was credited as a member of a five-man team photographing mountain sequences on the feature.

#### **KODAK ANNOUNCES RECHARGEABLE POWER PACK FOR KODAK SUPERMATIC 200, EKTASOUND CAMERAS**

A compact, rechargeable power pack and power pack charger for use with both the Kodak Supermatic 200 sound camera and the Kodak Ektasound movie cameras is now available from Eastman Kodak Company.

Called the Kodak power-charger unit, the Kodak rechargeable power pack and Kodak power pack charger

are designed to provide a reliable, economical source of extended battery power for the two lines of sound-movie cameras.

The power pack has an attached four-foot cord which plugs into the external power jack on Kodak sound-movie cameras. When not in use, the cord can be conveniently wrapped around the power pack in a special storage groove. A permanently attached pocket clip is also provided for easy carrying.

Utilizing six nickel-cadmium cells, the Kodak rechargeable power pack is capable of a minimum of 500 recharging cycles. Recharging is accomplished by simply plugging the charger into a 120 volt, 60 Hz wall power outlet and then inserting the power pack plug into the jack provided on the charger.

A 14-hour charge is required to bring the power pack up to its full operating capacity. Shorter charge time is possible when only a brief time has elapsed since a previous charging. The fully charged power pack will extend filming capability to between 2,000 and 3,000 feet of film.

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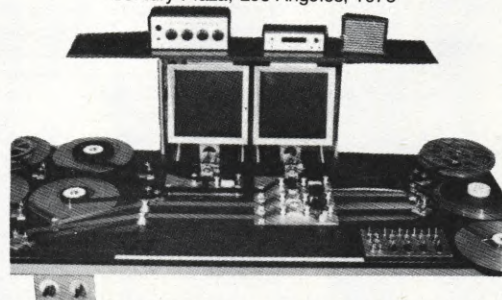
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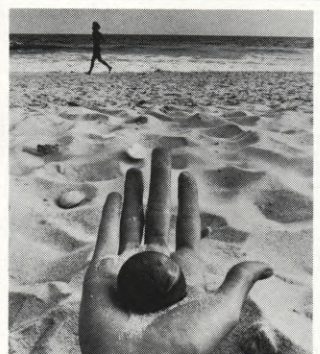
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**SUPER-8 IN SOCIAL SCIENCES**  
Continued from Page 1434

control, and is only slightly heavier and larger than the Philips.

Our procedure when filming was for one of us to carry a tape recorder in a small shoulder bag lined with foam rubber. We often started the recorder and then left it in the bag, leaving only the microphone head poking out from under the flap. The other of us carried the camera in a large open-topped canvas bag, similarly lined, and having on its outside several pockets. The pockets held additional rolls of film, tape cassettes, spare batteries, our folded shoulder-brace, etc. It would take only seconds, when necessary, to get the camera in hand, ready to shoot — although somewhat longer, of course, to set up for sync. In this manner we usually were able to be about as unobtrusive as we could be.

Although the ruggedness of Super-8 equipment is often disparaged, we did not have any problems with ours. And this notwithstanding the fact that we carried everything ourselves (in two backpacks and two shoulder bags) during both the hot season and the monsoon, in over-100°F and very humid conditions in the South, to below freezing and over-10,000 foot conditions in the Himalayas in the north; crowded into third-class compartments in trains, and in impossibly packed buses. In Addition, when leaving, we carried everything overland through Pakistan, Afghanistan, Iran and Turkey.

While the 7242 film stock produces an image softer than we would like, we felt it would be more effective over a wider range of lighting conditions. It also is somewhat better-suited for making prints, which was our intention. (We are also enlarging to 16mm and transferring to 3/4" videocassettes.) We always filmed in available light; our "one" problem came when we asked to have some indoor footage "pushed" — and, inexplicably, it wasn't. Today we would take along one of the new "XL" cameras (which were not then available) for our back-up camera.

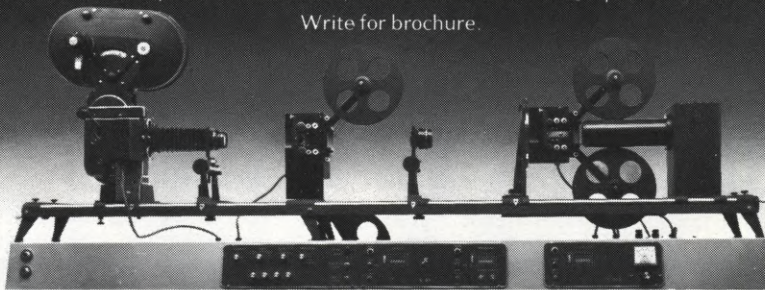
At present we are completing three films. "PIYARE" is a ten-minute documentary of a 12-year old boy who sells flutes to tourists in Benares. "BAPAT WADA" is a 20-minute glimpse into what we had originally hoped to be our project: the flow of life in a middle-class housing compound in Poona, Maharashtra, concentrating on one family; while "Temple of Cities" will be a 40-minute documentary on the city of Benares which will include additional

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**DOCUMENTARIES: IN ARKANSAS**

A similar use of Super-8 in documentary filming was made by Mark Mikolas and Gunther Hoos and their wives, Judy and Barbara. While our India experience was a "bare bones" situation, they were able to take along more equipment. For two weeks they traveled the back roads of rural Tennessee around Memphis and across the Mississippi in Arkansas, filming local singers and musicians well known to a folklorist friend of theirs, Bill Barth.

Most of their filming was done with a Canon "Scoopic", using 100-ft. rolls of "double Super-8" EF7242, and also a Nizo S800. They used the Super8 Sound Recorder for sync and also the Dolbyized Sony TC152SD, recording in stereo. The one time they used lights for an indoor shot, they almost set fire to the cardboard ceiling of the house. Yet all of their equipment — and all of them — fitted into a single car during the filming, and it was only the equipment's small size and easy handling that enabled them to virtually overnight drop everything and leave New York City ready to begin filming immediately. To date, they've completed one 20-minute film, "TELL THE ANGELS".

**WHY NOT SUPER-8**

Using Super-8 in the social sciences does still present a number of problems, chief among which is probably that of distribution. Most universities and schools continue to use 16mm projectors and simply do not yet have adequate Super-8 projecting equipment. William H. Whyte, for example, often makes short documentaries based on his research findings, but he shoots these in 16mm — using the original Super-8 as a guide — because of the difficulty he has experienced with inadequate Super-8 facilities.

The quality of Super-8 prints has improved as more labs have begun to take Super-8 seriously, but the fact remains that there are very few film stocks from which to choose.

While the size and weight of Super-8 equipment are definite advantages, these also may have a tendency to contribute toward an attitude of casualness or even sloppiness in the filmmaker. Similarly, certain kinds of research endeavors, the study of "microcultural" incidents or of "kinesics", may require more detailed information or more data (frames per

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second) than Super-8 film stocks or cameras can presently provide. The filming "strategies" we mentioned earlier, for example, were suggested by Sorenson and Jablonko specifically in a *research* context, which would include the study of such microcultural incidents for which Super-8 may not yet be entirely suited.

Also, for individual researchers or scholars to be able to make their own independent documentaries, they need extensive editing facilities. Although, again, these are much less expensive for Super-8, few facilities are presently available. University film departments seldom have more than rudimentary equipment, even though such departments would seem to be the natural place to provide these facilities and cooperation.

### CONCLUSION

Consider for a moment documentary films — anthropological or ethnographic or "instructional" — that have been made over the last few decades, as well as research films, and consider further whether they could be made now in Super-8 with its recent technical improvements. We feel that in most cases the answer would be yes.

In reviewing a retrospective of anthropological films shown at the Museum of Modern Art, Arthur Paul stressed the "... necessity of sound recordings, and light, unobtrusive equipment." Sorenson has emphasized similar considerations in the development of research filming. To the extent that Super-8 is even quieter, lighter in weight, less obtrusive, more portable, and now capable of high quality sync sound, it is better suited to research and documentary filming than 16mm.

It is important, and ever increasingly so, that social scientists and scholars become as familiar with the techniques of film and video — and indeed, produce works in these media — as it has been important for them to become proficient in the use of the written word. At the least, it is incumbent upon them to understand how film (or video) may be used as a data source, may complement or augment research, as well as how film may be a medium more suited than the written word for communicating certain kinds of understanding or knowledge. ■

(ABOUT THE AUTHORS: ROBERT AND EILEEN ZALISK are writers and filmmakers whose academic and professional training is in the natural and social sciences. Their special interest is in the culture of India, about which they are presently completing three documentaries. They are also contributing editors of Super 8 Filmmaker magazine.)

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# ON LOCATION WITH "THE MAN OF THE MUSHROOMS"

South of the Border to a land of lush gardens, beautiful *señoritas*, black panthers, hallucinogenic mushrooms and upside-down waterfalls

By HERB A. LIGHTMAN

## GUANAJUATO, MEXICO

I have been here before.

This classic Spanish colonial town, in times past the site of the richest silver mine in the world, served as the location for MGM's "THE WRATH OF GOD" a few years ago, and I journeyed here to write a story about its production (See *American Cinematographer*, March, 1972). Directed by Ralph Nelson and starring Robert Mitchum and Rita Hayworth, "THE WRATH OF GOD", despite its multinational crew, was essentially an American production. By way of contrast, the film that brings me here this time is a Mexican project (or, to be completely accurate, a Mexican-Spanish co-production) titled "EL HOMBRE DE LOS HONGOS". Translated into English, it sounds slightly less romantic: "THE MAN OF THE MUSHROOMS".

I was first told about the picture — with its mushroom-induced psychedelic sequences — by Tom Carter, a young American entrepreneur whose activities have him frequently commuting between Hollywood and Mexico City. Next came a telephone call from

the film's producer/director, Roberto Gavaldón, and a personal invitation to visit the company on location in Guanajuato, where final sequences of the film were being shot.

What induced me to accept the invitation was the fact that it came from Señor Gavaldón, a legendary figure of the Mexican cinema. Years ago, when I was directing films in Mexico City, we had been introduced at a gala fiesta staged (and that's exactly the word) on the lush estate of producer Raul de Anda — but it had been a very brief encounter and we hadn't had a chance to talk. Now I welcomed the opportunity to make up for that lapse.

When I arrived in Mexico City on the weekend, Señor Gavaldón welcomed me into his home, a stately mansion which, although located on one of the city's busiest boulevards, exists in its own quiet enclave of tranquility behind a towering facade.

A word about my host. Roberto Gavaldón spent seven of his formative years going to school in Los Angeles — which accounts for his eloquent command of English. While there, he dabbled about the fringes of the film

industry, appearing as an "extra" in the Hollywood production of "WHAT PRICE GLORY". Upon his return to Mexico in 1932, he appeared as an actor in such films as "CIELITO LINDO" and "CHUCHO, EL ROTO" — but he was far more interested in what was going on behind the camera.

For the next twelve years he functioned as prop boy, assistant editor, script clerk, assistant director and co-director. Along the way he was offered several opportunities to direct, but preferred to bide his time. In 1944 he made his directorial debut with "LA BARRANCA", which went on to win every award in sight and firmly established him in the top rank of Mexican directors — where he has remained ever since.

Gavaldón is best known to American audiences for his charming film, "THE LITTLEST OUTLAW", which he made for Walt Disney in 1952. In 1963, his "MACARIO" was nominated for an Academy Award as "Best Foreign Film".

In addition to his work in Mexico, he has produced and directed in Argentina and in Spain, his most recent projects in the latter country being "THE STEPMOTHER" and "DON QUIXOTE", starring Cantinflas as Sancho Panza.

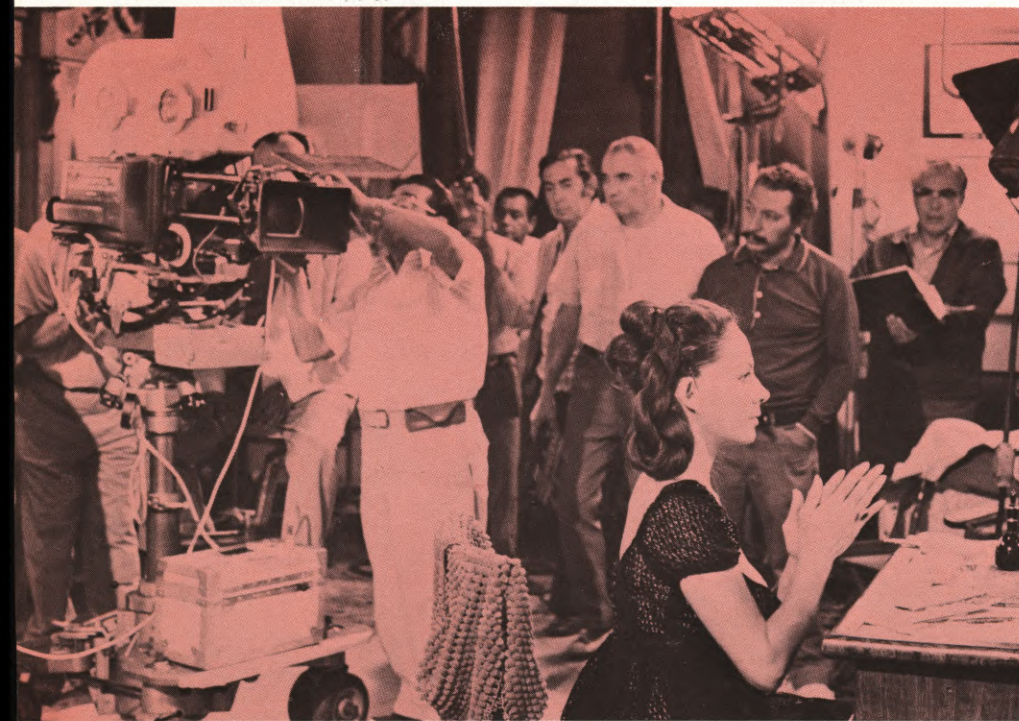
He tells me that "THE MAN OF THE MUSHROOMS" has been adapted from an unpublished novella and is set in the feudal Mexico of the 1830's. He proceeds to give me a verbal synopsis of the story, and I sit spellbound as he spins a yarn of intrafamilial intrigue. The tale boils and bubbles around a proud landowner, his nymphomaniac wife and their three variously turned-on grown children. The plot erupts with raging passions, incest, murder (by poisonous mushrooms and black panther), miscegenation and a veritable catalogue of "PEYTON PLACE" Freudian aberrations.

Taking note of my soaring eyebrows, my host says, "But it's all being filmed in the best of taste."

To what does the title refer? Well, the *pater familias* of this menagerie, as it turns out, is a mushroom freak. He has an insatiable taste for mushrooms — all varieties of mushrooms (and I'm sure there's something Freudian in that, too). In the course of his sampling, he

Continued overleaf

Filming crew of "EL HOMBRE DE LOS HONGOS", working inside one of the ornate interiors of Hacienda San Gabriel de Barrera, lines up the Panavision R-200 camera to photograph an over-the-shoulder mirror shot of Mexican film star Isela Vega, who plays the nymphomaniac mother of a bizarre brood in this tale of rampant passions in Old Mexico. The film is a lush period piece, done with great style, taste and attention to authentic detail.









inevitably encounters mushrooms with hallucinogenic characteristics — and that's when the psychedelic fun begins.

"How is that being handled on film?" I ask.

"We're using prism lenses on the Panavision and Arriflex cameras, together with zoom lenses, in order to get the psychedelic effects. There are two sequences which have such effects. One is a love sequence involving the boy and the girl who want to get married. I play the effect with a waterfall, one we've shown in an earlier sequence. But this time, instead of running down in a natural way, it runs *up*. It reverses and flows in the opposite direction. Superimposed on the waterfall will be a kind of "dream wedding", with everyone dressed in pink and everything decorated in pink. The wedding gown and veil are pink and the bridegroom is also dressed in pink. It all represents the suppressed desire of these two who want to get married, but are forbidden to do so by her family — and it expresses itself in this way after they have eaten the hallucinogenic mushrooms. I think it will be beautiful, but I don't want to overdo the effects. I want to keep it clean, and poetic in a way.

"The second psychedelic sequence takes place at the end of the picture when more than 100 guests at a big fiesta die horrible deaths after being fed hallucinogenic, but poisonous mushrooms. This time, instead of having pleasant hallucinations, they are haunted by hideous images. For example, we flashback to the funeral of the mother, whose death was caused by the father. I found a very beautiful

funeral carriage — really a masterpiece of its type — and it comes into the hall at the last fiesta with the mother inside it, looking as she did when she was going to be buried. She points at her husband, accusing him. This image expresses the guilty conscience of the husband, just before he dies."

It sounds like a very bad trip, indeed, I observe — which simply proves that you can't always trust a mushroom.

We leave for the Guanajuato location, which is northwest of Mexico City, a pleasant four-hour drive away. En route I ask how the production has been going thus far.

"It's been a very difficult picture to do in several respects," says Roberto. "For one thing, it's a period story, and we're not too well prepared to do a story of that period. Also, it's being filmed entirely on location. I haven't shot a single scene in the studio, including the interiors. Part of it is being shot outside of Guanajuato in a huge hacienda, a beautiful place with wonderful gardens. Before that we shot in Vera Cruz, a rich and attractive part of Mexico, with lush jungles. We shot the waterfall sequences there. We also did some shooting in the state of Morelos."

I ask him how he feels about shooting on location, as opposed to shooting in the studio.

"It's hard to move all the equipment and the whole crew from one distant location to another. You always lose a day," he tells me. "It's expensive and you waste a certain amount of time moving from one place to the other. On top of that, there are special problems to shooting outside the studio. It's more complicated, and, of course, the studio is more comfortable. But in spite of all that, I prefer to shoot everything on location. I don't like to work in studios. I hate sets, because sets always look like sets, no matter how well they're done.

"Before I made the picture 'THE LITTLEST OUTLAW' for Walt Disney, I told Walt, 'I don't want to have anything to do with the studio. Let me shoot it all on location.' I shot the picture in a very nice part of Mexico, San Miguel de Allende, and Walt liked it. He checked the rushes every day and he was happy with the things we did — using actual interiors and all that."

With all the problems of working in several distant locations, will he be able to maintain his shooting schedule?

"It was originally planned for seven weeks, but we may run over one week," he tells me. Part of this is due to the fact that we had to give preferences to an actress who had to leave to rehearse for another show. I was jumping from one place to another in order to get all

the work done with her and that threw me off schedule. We've had some bad weather, too. This is a very risky time of the year to shoot outside in Mexico, because it's the rainy season. But, on the other hand, I have a lot of good elements to work with and I'm taking advantage of them — the unusual theme itself and the background of the old days in Mexico. I believe it will be quite an interesting film, and we are planning, also, to dub it into English."

We arrive in Guanajuato, a picturesque university town with attractive colonial architecture and unique underground streets, former subterranean waterways that snake their way beneath the civic center.

The cast and crew are ensconced at the Hotel Real de Minas, where all of us stayed during the filming of "THE WRATH OF GOD", and which has a plaque in the lobby commemorating the event, complete with bronze autographs of Bob Mitchum, Rita Hayworth, Ralph Nelson, *et al.*

Roberto Galvaldón and I check into a large suite at the Parador San Javier, a magnificent hostelry which obviously was a great hacienda in former days. I'd had dinner here during my previous visit and was impressed by the fact that it's the only hotel I've ever seen with an elaborate chapel adjoining the dining room. With its picturesque structure and gardens overflowing with colorful flowers, it looks, to my cinematic eye, like one great big movie set.

"Funny you should say that," remarks Roberto. "As a matter of fact, we used the great hall as the location for shooting our big fiesta sequences."

Production Supervisor Anuar Badin tells me, "This picture is a co-production between Mexico and Spain. It's 30% Spanish and 70% Mexican. A very well-known Spanish actor was brought over to play the role of the father, as well as a young actress who plays the ingenue lead. The cameraman was also brought from Spain. That is part of the co-production arrangement between Mexico and Spain."

Badin goes on to tell me that all film production in Mexico is under the supervision of a government bureau called Conacine (Corporacion Nacional Cinematografica, S.A. de C.V.). Separate government bureaus handle film distribution and exhibition. The Mexican government, he tells me, is very favorably disposed toward arranging co-productions with other countries.

Shooting resumes the next morning at the principal location just outside Guanajuato. It is the fabulous Hacienda San Gabriel de Barrera. The

**Veteran producer/director Roberto Galvaldón, a cordial and courtly gentleman, is one of Mexico's most honored and respected filmmakers.**





luxurious villa was built in the early 1800's and is surrounded by acres of formal gardens, a kind of miniature Versailles. Just about every room and corridor of the spacious structure has been, or is being, used as a set for the film, and this adds up to a tremendous amount of production value. The very high ceilings permit the convenient hanging of lights well above floor level and the large chambers afford plenty of room for cast, crew, lights and the Panavision R-200 camera. The "sets" have been beautifully dressed with elaborate French and Spanish antique furniture and props. Gavaldón tells me that, perhaps as a carryover from his early days as a prop boy, he likes to keep his hand in by taking an active part in the set dressing. The furnishings reflect his excellent taste and attention to detail.

I am introduced to the Director of Photography, Raul Perez Cubero, a very pleasant, quiet Spanish gentleman, who goes about lighting his set-ups with the sureness of the highly-trained professional. He works easily and well with the very efficient Mexican crew. During the days that I observe him at work I am to marvel at the artistry and precision of his lighting, a degree of control one would ordinarily expect only under studio conditions.

His job is not an easy one, because the action patterns are staged to take full advantage of the sweep of the hacienda's classic architecture. In a single set-up, actors may move through three or four adjoining rooms and down a long corridor, which means that all of those areas must be lighted and balanced simultaneously.

I note that Señor Cubero uses a combination of direct light and bounce light in order to achieve lush mood lighting. He often bounces light from flexible reflectors covered with a dull silver finish and bent into corners. The resultant delicately modeled effect is very flattering to the actresses. The popular Mexican star Isela Vega, who plays the role of the mother, is a mature beauty who is required to look twelve years younger in the opening sequences of the film. The bounce light erases twelve years from her classic features with no difficulty.

Playing her younger daughter is a ravishing rising star of the Spanish cinema, Sandra Muzarousky, who tells me that she is of Spanish-Russian parentage and a native of Tangier. She is the loveliest Tangerine I've ever seen.

Acting as her love interest in the film is the one American in the cast, young Philip M. Thomas, who won the role over scores of other actors auditioned



Beautiful French and Spanish antique furniture, props and chandelier grace this "set", an actual interior of the Hacienda San Gabriel de Barrera, dressed from the bare walls out to represent an elaborate boudoir. Señor Gavaldón (right), perhaps harking back to his early days as a prop boy, still likes to take an active hand in the set decoration on his pictures.

in Hollywood. Amiable, intense and exuding a kind of animal energy, he is very high on Roberto Gavaldón, whom he obviously regards as a kind of *guru*. "I can't tell you what a fantastic experience it has been for me to work with this man," he tells me. "He's helped me to grow so much — not only as an actor, but as a person. I think of him as someone like the Don Juan character in Carlos Castaneda's writings."

Young Thomas had to learn all of his Spanish dialogue phonetically for the role, but now he is spouting it like a Berlitz prodigy, with not a bad accent at all — for a *gringo*.

Easily the most exotic member of the cast (with all due respect to the lovely ladies) is a black panther who plays the role of a family pet-turned-killer.

Actually, there are two black panthers, a magnificent male named "Cassius" and a somewhat smaller female, "Zafiro". The male is used in the scenes where the panther appears with people. The female doubles for him in solo scenes where scale is not important. The reason for this is that the male is described as "pretty vicious" and they don't want to irritate him any more than is necessary. Riding herd on these two jet-colored, green-eyed felines are two brothers, Humberto and Miguel Gurza. Humberto, a husky clown, informs me that, in addition to being an animal trainer, he plays Tarzan-type roles in Mexican movies.

Having an affinity for cats of all types and sizes, I am fascinated by these two beautiful beasts. Humberto offers to take my picture with them. I sit down next to the "pretty vicious" male rather

gingerly, fully expecting to get clawed to ribbons at any moment, but Cassius responds by promptly licking my face like a giant black pussycat.

Roberto Gavaldón informs me that a batch of dailies has arrived from Mexico City and will be shown that night. Actually, since the Churubusco laboratory is about two weeks late with these, they are more like "bi-weeklies" than dailies. I try to picture an American producer "flying blind" for two weeks between shipments of dailies, even on a far-flung location.

We climb the hill to the cinema in beautiful downtown Guanajuato and wait until the moviegoers have filed out after the last show. Then the dailies are flashed onto the screen — some in black and white and others in color. The footage we see is from the final sequence in which the guests at the fiesta go berserk after having eaten the poisonous hallucinogenic mushrooms. The sequence was shot in the great hall at Parador San Javier and there is some pretty convulsive action in gorgeous color. The "actors" in these scenes are mostly Americans recruited from a kind of bohemian retirement colony just outside Guanajuato — real characters. Roberto tells me that the psychedelic effects for this sequence will be added later.

Before I take leave of my genial host and the pleasant crew working on "THE MAN OF THE MUSHROOMS", I have a chance for a quiet talk with Director of Photography Raul Perez Cubero, and the following is the gist of that interview:

**QUESTION: First I'd like to ask about**  
Continued on Page 1455



# FILMING "THE WORLD OF SPIDERS"

A famed wildlife cameraman, accustomed to much larger prey for his lens, launches a cinema safari into the fascinating realm of creepy-crawlies

By WOLFGANG BAYER

A year ago, I didn't know what an *arachnologist* was, today I am one! That's how I could sum up my sudden interest in spider behavior. Even though I have been producing wildlife films for the past twelve years, I somehow never thought much about spiders. As far as I was concerned, they could occupy a dark corner in my basement and nothing else. Now, I have pet spiders crawling around my living room.

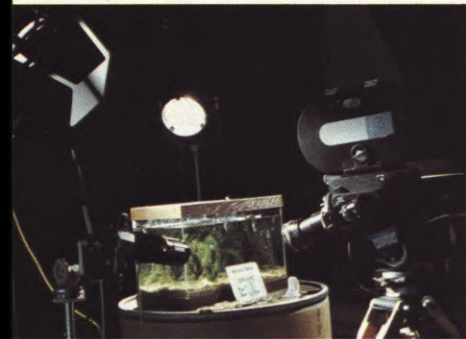
It all began last September. I was on my way to Kenya to do a film on the African termites that build and live in giant mounds. I left Los Angeles and planned a short stopover in New York for some last minute business discussions. When I met with Jonathan Donald, executive producer for the Time-Life series, "Wild, Wild World of Animals", he told me about a film project they wanted to do for that season: Spiders! Would I want to produce it? I mumbled that I really was on my way to Africa, all my equipment was sitting at JFK Airport and the subject "spiders" wouldn't really make an exciting half-

hour show. Well, an hour later and after a brief introduction into the spider world, I was convinced and excited about spiders. I cancelled my flight and hotel reservations, retrieved my equipment from JFK, and, loaded down with books and research material on spiders, was on my way to "spider country".

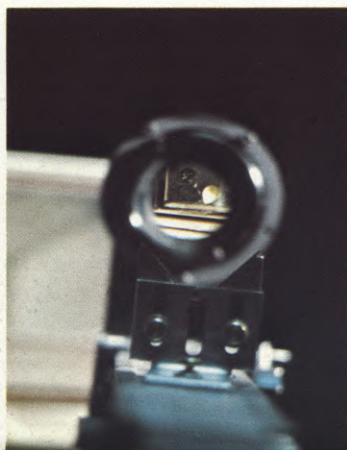
Upon my return to Los Angeles, I looked around for some ultra-closeup lenses. I had a 90mm Macro Kilar which would give me a 1:1 magnification, but for that particular film, I wanted to show head shots of the "stars", not just full body, and since baby spiders were in the script, a 1:1 magnification wasn't good enough. Besides, the heat of the additional lights necessary to compensate for the light-loss at a 1:1 extension (four times more light needed) would literally barbecue the spiderlings. Since I was pushing 7252 two stops already and didn't want to go to 7242, the possibilities became fewer and fewer. Someone at Gordon Enterprises even suggested stacking a few diopters together for greater magni-

fication. I tried that with terrible results. Everything looked like it was filmed through a Coke bottle. At Birns & Sawyer I experimented with the new Canon macrozoom lens. But that lens turned out to be not quite what was needed for this purpose. Sure, you can literally place some object on the lens surface and it will be in focus, but only at the wide-angle setting, and a small object looks like a dust particle in the viewfinder. Lighting a spider sitting on the lens surface would really be a trick.

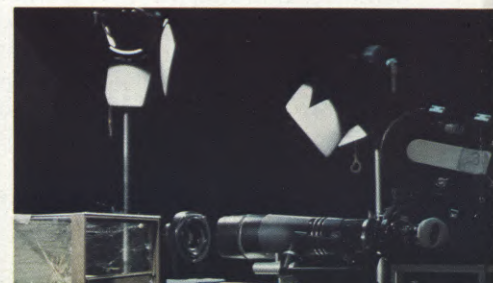
Back to the drawing board. Finally, someone at Moody Scientific Films suggested a tandem lens arrangement. They had tried it and it worked. The idea is simple. Take a large-diameter, long focal length lens, mount it in reverse in front of the camera lens and, thus, film an aerial image with a magnification, depending on the lens combination, of 2:1 and even 4:1. The most impressive advantage was hardly any light-loss. Also, the subject is much further away from the front element of the lens, thus making lighting easier. With an extension tube, one is literally



(LEFT) The "set" for the filming of the spiders was a 5-gallon aquarium turned sideways and dressed up with old pieces of wood, some gravel and dry plants. (CENTER) The author positions one of his arachnid actors in front of the lens. He used four 650-watt Colortran lights and a 1000-watt Colortran Fresnel lamp placed around the set for illumination. (RIGHT) 152mm Ektar lens mounted on bench in reverse. Crank handle is for focusing. In background is black widow spider in egg sac.



(LEFT) Aerial image in 152mm Aero Ektar lens of Black Widow Spider. (CENTER) Enlarged aerial image of the Black Widow Spider on its egg sac. (RIGHT) The complex set-up of lights, lenses and cameras needed to photograph the spiders. The author had had no previous experience in this type of macro-cinematography and arrived at this arrangement after a lengthy process of trial-and-error elimination.







**(LEFT)** A female Jumping Spider performing its mating dance for the camera. **(CENTER)** A closeup of the female Jumping Spider, a real charmer. Jumping Spiders were selected for filming because of their unusual mating ritual. **(RIGHT)** Like something out of a bad dream is this closeup of a Wolf Spider. Wolf Spiders are solitary hunters with excellent eyesight.



**(LEFT)** A Garden Spider dangles its dinner, a wrapped grasshopper. **(CENTER)** A male Jumping Spider, with glowing green eyes, stares down the lens. **(RIGHT)** The unusual web of the Doyle Spider, sprinkled with dew drops. The wonderful world of spiders contains a myriad of species, each with its own peculiar characteristics and customs.

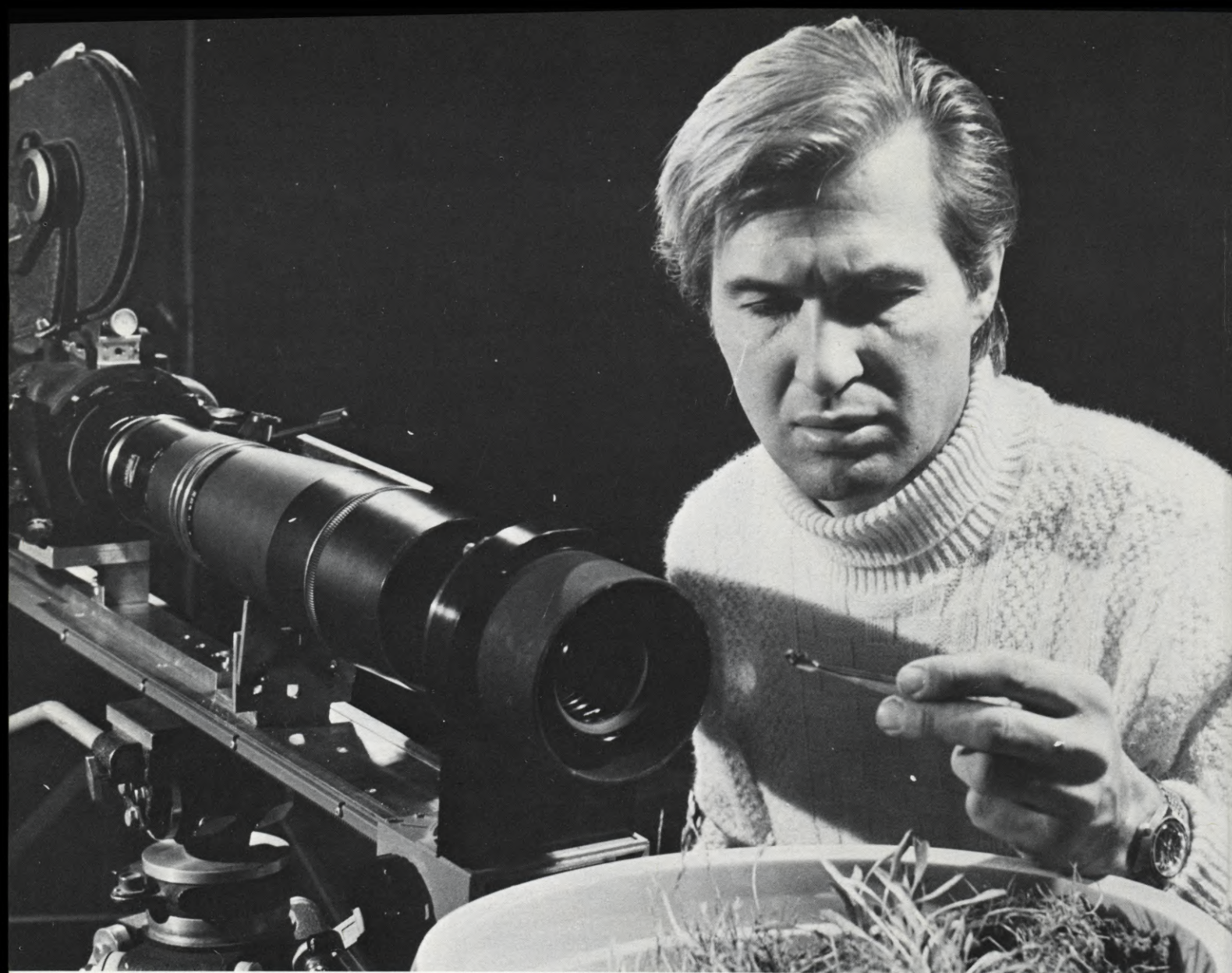
**(LEFT)** With geometric precision, this spider painstakingly spins a beautiful web. **(CENTER)** A Diving Spider stages his Aquacade in a tank with ice cubes floating on top to cool the water down, an occupational hazard under the hot photographic lights. **(RIGHT)** The Argyroneta Aquatica (European Diving Spider) with abdomen in an air bubble.



**(LEFT)** A Wolf Spider gloats over a grasshopper it has just killed. **(CENTER)** A female Black Widow Spider. **(RIGHT)** Black Widow Spiders, male and female, perform their mating ritual for the camera. Black Widows were selected for filming because of their reputation as killers of humans. Contrary to popular belief, the male doesn't always get eaten after mating.







Famed wildlife cinematographer Wolfgang Bayer was on his way to Kenya to film African termites, when he was asked to produce a film on spiders for the Time-Life "WILD, WILD WORLD OF ANIMALS" series. He cancelled his flight and turned his attention to spiders for the first time, finding that it was a completely new and fascinating filming experience. Now he is on his way to becoming a "spider freak".

on top of the subject and lighting becomes a problem.

I found an ideal lens at a surplus store, a 152mm Kodak Aero Ektar lens. This lens had to be mounted on a common bench with the camera, but the Aero Ektar lens needed to be movable. Since that lens is to be mounted in reverse position, everything in front of it at its focal point (152mm) is in focus. If the subject moves, the entire lens has to follow, with the camera and the camera lens stationary. A custom-made optical bench would have been the answer, but the cost would have been prohibitive.

I finally found the solution — the column of a Durst enlarger with a geared carrier. If I mounted the Aero Ektar lens on the carrier, and the camera (an Arri BL with a 400mm Zoomar lens) fixed to the end of the column, I could very nicely focus with

the geared crank that used to move the enlarger up and down the column. I took all these pieces to Herman Galli Camera Services and Herman did a great machine and aligning job.

The ultimate close-up contraption was ready for action. The magnification, using a 400mm on the Arri, was 2.6:1 (focal length of the Aero Ektar divided into the Arri lens). By going to a 600mm lens, the magnification would be 4:1. Light-loss was less than ½ stop.

Now I was prepared for the world of spiders. With 25,000 known species of spiders crawling around, I obviously had to narrow the subject down. After studying the research material and making numerous telephone calls around the country as well as Europe, I decided to limit myself to the following species:

1. Black Widows: because of their reputation as a human killer.

2. Tarantulas: for being a monster of a spider.
3. European Diving Spiders: a spider with a very unusual underwater habitat.
4. Wolf Spiders: solitary hunters with excellent eyesight.
5. Jumping Spiders: their unusual mating ritual.
6. Orb Web Spiders: for web shots.

Los Angeles is as good a place as any for the black widows. There are supposedly as many black widow spiders in L.A. as there are people and it didn't take me long to collect 30 widows as well as two males for my first sequence. Using numbered specimen jars, my small studio looked more like a lab.

I wanted to film mating behavior of the black widow. Since the males are quite rare and the reputation of the



females is deadly, I didn't want to lose my male stars for the widow's dinner. I tried different combinations. Some females acted too hostile, some too ignorant towards the male.

I finally decided on female #19 with male #2; they seemed to make quite a nice couple. I gave them lots of room to roam around, on the "set", a 5-gallon aquarium turned sideways which I dressed up with old pieces of wood, some gravel, and dry plants. I gave the female a few days' head start to spin a web and then I was ready. Lights! Camera! Action! — but where the hell was the male! There is an old Chinese saying, 'You can lead a male to a black widow but you can't make him ... bloop' (censored).

Becoming active at night (the spiders, that is) I spent the following six nights behind the camera. Looking through the viewfinder felt sort of like peeking through a keyhole into a bridal suite! Finally after six nights, the action started.

Although I had four 650-watt Colortran lights as well as a 1000-watt Colortran Fresnel light placed around the "set", only one or two (depending on the position of the "actors") were on at a time, since I wanted to have a dark and moody atmosphere. The secret was to backlight the web, so that the silk strands looked like silver strings

framing the spiders' silhouette. Since black widows live in dark corners, I also had to keep the background light down.

Not knowing what the black widow mating behavior consisted of, I started to film as the male, ever so cautiously, approached the female. With the slightest movement by the female, the male scrambled to safety. Four hours and 2,000 feet later, the female was beginning to calm down. Finally, the tiny male (only 1/4 her size) tied up her legs with silk and mated. Contrary to popular belief, the male doesn't always get eaten after mating — and my male star, after the action was over, knowing that "he who mates and runs away, lives to mate another day ..." made a mad dash to safety.

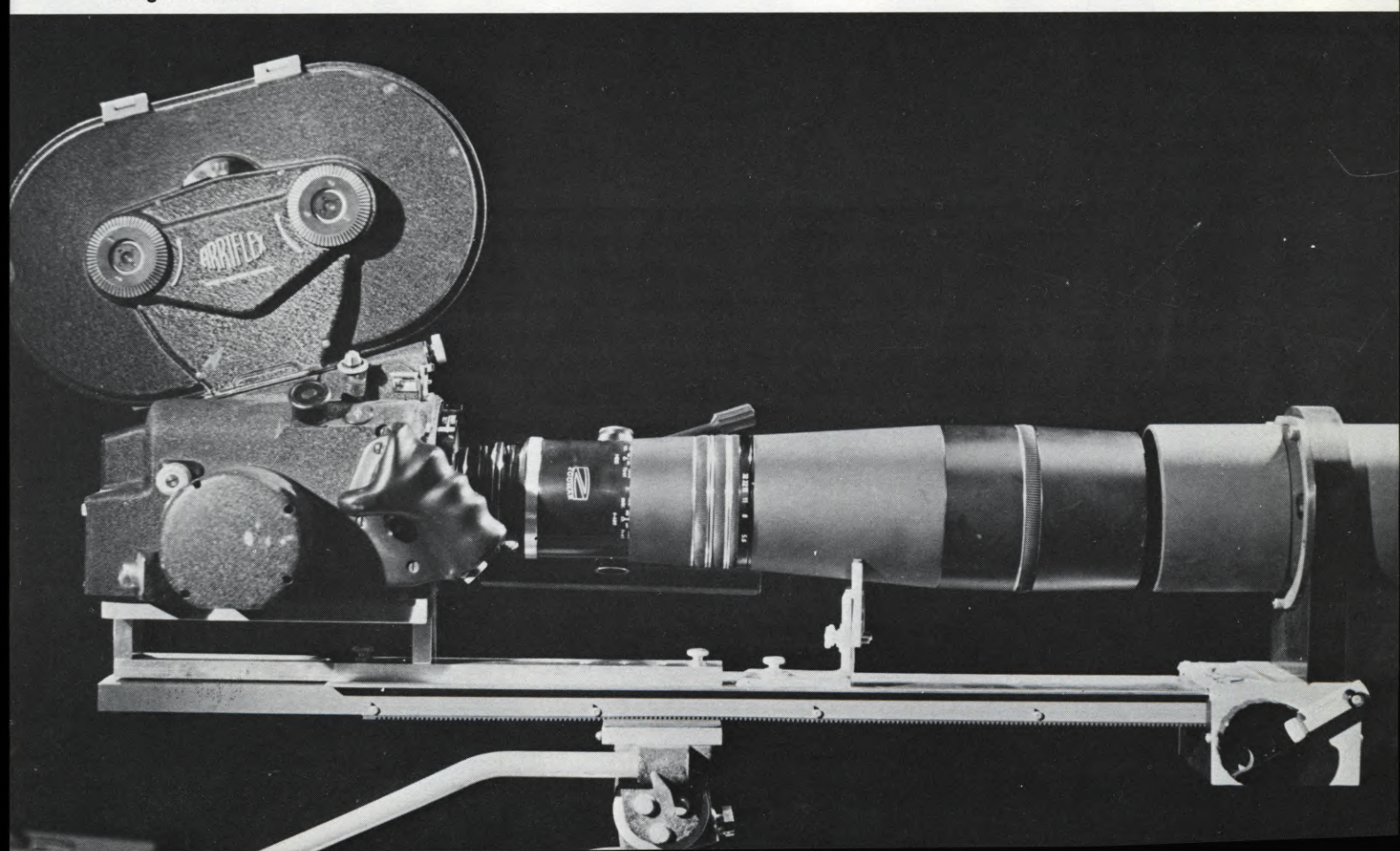
In the meantime, my new production facilities in Jackson Hole, Wyoming, just outside Teton National Park, were completed and we moved our operation. This included bringing the black widows to Wyoming where we filmed additional sequences, including the black widow spinning her egg sac and ultimately the emergence of the tiny spiderlings.

By that time, my new set of actors arrived in Los Angeles from England, a shipment of 24 European diving spiders. Since I had completed the black widow sequence, I also wanted to

release my, by now, quite impressive assortment of black widows. With temperatures below freezing up in Wyoming, I didn't want to just dump the spiders into the snow; besides, they are not native to this part of the country. So I packed them in small vials and put them into my carry-on luggage for my flight to Los Angeles. The excitement began at the baggage security check. Never realizing the lethal power of a handbag full of black widows, I casually opened my bag. The reaction of the security personnel was as though they had discovered a bomb, everything short of evacuating the terminal. I never thought of the possibility of hijacking a plane with black widows, but in any case, the spiders had to remain. They weren't even allowed to board as check-in luggage.

I returned from Los Angeles with my shipment of European diving spiders. The studio took on a different look, with bubbling aquariums on shelves and one large aquarium on center stage. The water and green plants required a lot more light, so I switched to four 1000-watt Colortrons, plus pushing the 7252 two stops. I used all lights only when actually filming, since the heat made the tank temperature rise too fast. Again, back-lighting proved to be the answer, with some fill-light. I also  
**Continued on Page 1469**

**The set-up used for filming the spiders, suggested by a technician at Moody Scientific Films, involved a large-diameter, long focal length lens mounted in reverse in front of the camera lens. The author used an Arriflex 16BL camera with 400mm Zoomar lens and a 152mm Kodak Aero Ektar lens mounted in reverse position on a common bench with the camera. The Ektar lens was mounted on the column of a Durst enlarger with a geared carrier.**







**(LEFT)** In the prologue of the film, a little boy is discovered running naked near a jungle waterfall in Vera Cruz and is taken to a large hacienda to be a companion to the family's younger daughter. **(CENTER)** When they grow up, he is still her companion, but now they are star-crossed lovers, forbidden to marry and doomed to tragedy. Here they frolic in a woodland pool, unaware of their fate. **(RIGHT)** A black panther, who is a family pet, stalks the night, becoming an instrument of murder.



**(LEFT)** The ravishing Sandra Muzarousky, a rising young star of the Spanish cinema, plays the doomed younger daughter in this Mexican-Spanish co-production. **(RIGHT)** After a long, hard day of shooting on location, Spanish Director of Photography Raul Perez Cubero and Mexican Producer/director Roberto Gavaldón manage to share a joke.

**(BELOW LEFT)** The feline star of the show, male black panther "Cassius", and his female stand-in, "Zafiro" pose languidly with their trainers, Humberto and Miguel Gurza. **(RIGHT)** Cassius decides to make an hors d'oeuvre out of Humberto's arm. Described as "pretty vicious" on occasion, the male panther behaved like a pussy-cat with the author.





## "MAN OF THE MUSHROOMS"

Continued from Page 1449

the style of photography you have selected for this film, how it was arrived at in collaboration with the director and how you are proceeding to execute it?

**CUBERO:** You might say that the photographic style we have selected is one which relates to the story and its situations. It's a matter of creating the proper visual atmosphere for each sequence, as the director envisions it. You can't say that it's "commercial" photography, nor is it "art" photography — but rather photography that is meant to be faithful to the mood and period of the story. Before we started shooting, the director and I got together and analyzed the story. We discussed the style of photography that should be used and came to the conclusion that each sequence should have a visual style that is right for it, and I have tried to give each sequence its proper photographic treatment.

**QUESTION:** I'd like to ask about the lighting that you're using. For example, in watching you work, I've noticed that you used bounce light a great deal for fill, rather than direct soft light or light filtered through plastic screens. Can you tell me why you prefer bounce light for this purpose?

**CUBERO:** I don't use bounce light all the time — as a general technique, that is. I often use the soft lights and other lighting units, but in this case, I am photographing a beautiful actress, Isela Vega, who plays the role of the mother, and who, in the opening sequences of the picture, is supposed to look 10 or 12 years younger — so, in those sequences, I use bounce light instead of direct light because it softens the features, making them look younger and sweeter.

**QUESTION:** I've noticed, also, that you use quite a bit of back-light and top-light, which are quite out of fashion in Hollywood at the moment. In fact, it has become something of a fetish not to use this kind of lighting at all anymore, on the theory that the colors provide their own separation. How do you feel about this?

**CUBERO:** I ordinarily don't use back-light or top-light unless I have to, but I do use them when it is necessary to do so. In this picture, aside from the rather "romantic" demands of the story and period, there is the problem of using so

much camera movement that it is often impossible to light from the floor, even though I might prefer to do that, so I have no choice but to mount the lights up high.

**QUESTION:** Since this picture is being shot totally on location, how do you feel about shooting in actual interiors, such as the Hacienda San Gabriel de Barrera, as compared to shooting on a studio sound stage?

**CUBERO:** There is no question that working in a studio offers better facilities in every respect. It is much more comfortable and easier to achieve good sound and photography — but, at the same time, I value the experience of working in actual interiors, such as those of the Hacienda, because they offer great artistic advantages. We can shoot from the inside toward the outside and see real scenery, rather than a painted backdrop. Also, being able to move from one actual room to another makes the action flow in a more complete way.

**QUESTION:** In the dailies which I have seen, the fiesta sequence shot in the banquet hall at Parador San Javier appeared to be very elaborate. Would you say that it was one of the more challenging sequences, from the standpoint of photography?

**CUBERO:** It was not really so difficult, because it was shot in a very large hall and we had much more space in which to work. Being that it was a fiesta sequence, I tried to give it a brighter style of photography, so it is a bit more brilliantly lit than most of the other sequences. I would say that the night exteriors were more challenging, speaking photographically.

**QUESTION:** On that score, did you shoot the night exteriors day-for-night or night-for-night?

**CUBERO:** There was only one sequence, outside in the Vera Cruz jungle, that was shot day-for-night (or "American night", as we say in Spain) and that was only because we did not have enough lighting equipment to light the whole jungle. It would have been impossible. But I try always to avoid shooting night scenes in daylight, because I dislike the effect. I much prefer to shoot night-for-night, which is the real thing and looks like it. The most important thing in shooting day-for-night, however, is choosing the best time of day, so that the lighting and background will look right.

**QUESTION:** Can you tell me something about the camera effects used in the so-called "psychedelic" sequences — those representing the mushroom-induced hallucinations, and also the fantasy wedding sequence?

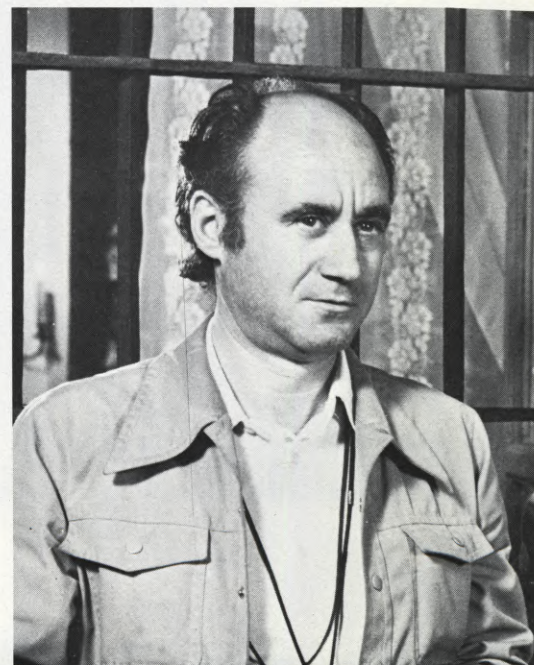
**CUBERO:** In photographing the mushroom hallucination sequence we used a combination of the zoom lens and prisms. We haven't seen the complete rushes on that footage yet, but when it is approved it might be possible to enhance the unreal effect through color tinting of the film or some other optical technique. As for the fantasy wedding, we haven't shot that yet, but everything will be pink — the costumes and as much of the background as can be painted pink, like the long stairway in the garden. We will also use prisms. Because this footage will be superimposed on the waterfall, which is flowing in reverse (that is, from bottom to top), we will have to make sure that there is sufficient contrast in color and lighting to make it stand out from the superimposed background.

**QUESTION:** When you speak of prisms, what kind do you mean? Are they multiplying prisms, or what?

**CUBERO:** Some are multiplying prisms and others make figures like a kaleidoscope. We are using three or four different kinds of prisms.

**QUESTION:** You are using the relatively new 5247 Eastman color negative on this picture. What are your reactions to this new film and in what ways, if any, does it differ from the 5254 negative  
Continued on Page 1458

Eminent Spanish cinematographer Raul Perez Cubero served as Director of Photography on the picture, a Mexican-Spanish co-production.





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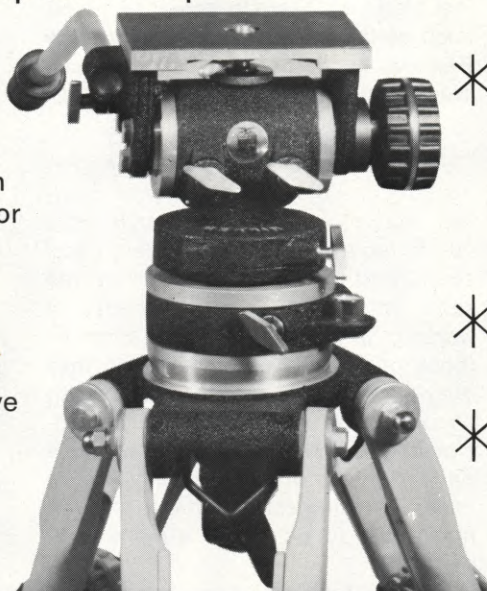
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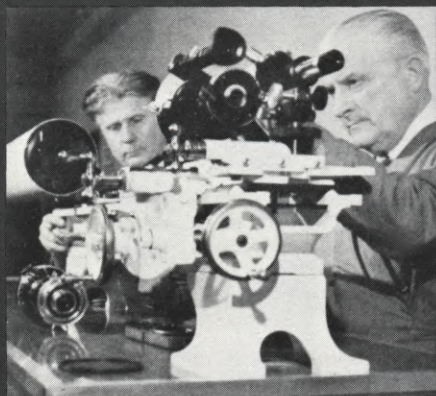
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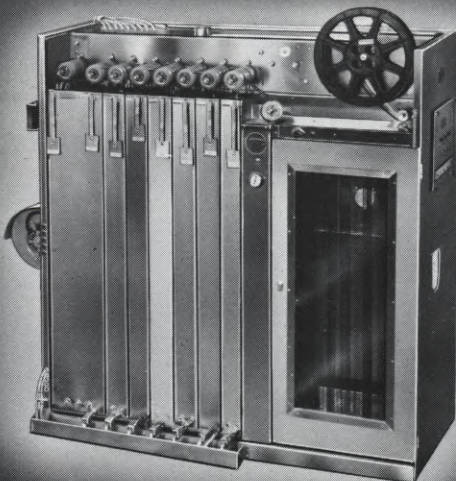
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"MAN OF THE MUSHROOMS"  
Continued from Page 1455

that you've been used to?

**CUBERO:** We are using the 5247 in Spain now. In fact, there is no other film that we can use, but we are still searching for the right way to handle it, especially in relation to the laboratories. It is something new and both the cameramen and the laboratories are frantic to find the right thing to do with it. It's the only thing we have now; the old negative isn't available anymore.

**QUESTION:** In what ways do you find that it's different from the 5254?

**CUBERO:** In Spain we find that it has a tendency to go red, instead of having a normal tone, and it has more contrast. Here in Mexico I find that there is less red and a slightly softer contrast. It would seem that they have found the right formula for developing and printing it here. I have heard that also, in the beginning, they had similar problems in Hollywood with the new film. Does that still happen, or is it under control now?

**QUESTION:** Most of the Hollywood cameramen I've talked to say that the red can be pretty well controlled in the lab during the timing process, but the extra contrast requires either slightly flatter lighting or treatment by flashing to cut down the contrast. Do you use flashing for that purpose in Spain?

**CUBERO:** In searching for the right way to control the new film, some of the laboratories in Spain have tried flashing it, but they find this risky, so they avoid it as much as possible.

**QUESTION:** Whenever one is working in a foreign country there are always some differences in working methods — especially in making films. Having come from Spain and being used to a certain way of working, what are the differences you find in working with a Mexican crew?

**CUBERO:** The only real difference is that in Spain I always work with the same people and we team up very nicely because we have worked together for such a long time and know each other so well. In Mexico I have found a new crew and a whole new atmosphere, but now that we have grown to know each other and have gotten used to each other, I find that the result is the same that it was in Spain. We are working together very easily and very nicely. ■





**CINEMA WORKSHOP**

Continued from Page 1376

was using 77% more negative area than a modern cameraman shooting 1.85:1.

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In a nutshell, flat wide-screen systems are simple, but wasteful, and employ reduced negative area in proportion to an increased screen image, resulting in a loss of image quality. There are some good alternatives to flat systems. One of these is the anamorphic process, which will be our next topic. ■


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## FREDDIE YOUNG IN RUSSIA

Continued from Page 1401

*they worry about lip movements very much in Russia. I think many Russian films are shot wild, so they don't seem to mind about a noisy camera and all that sort of thing. Their films are all re-voiced anyway, because they've got so many different dialects there.*

**QUESTION: Because they are used to working with noisy cameras, was it difficult to get everybody to remain quiet?**

*YOUNG: Absolutely impossible; everybody was laughing and talking all the time — George Cukor used to go absolutely raving mad, although he talked all the way through scenes himself, so the whole thing has got to be re-dubbed anyway to get George Cukor's voice out. It's absolutely laughable.*

**QUESTION: It's a shame, when you think of all the work that's gone into making that camera as quiet as it is and then people talk over it!**

*YOUNG: Yes, but you see, when George was with the children, he'd be talking to them all the time.*

**QUESTION: It's very often necessary with children, isn't it?**

*YOUNG: Necessary sometimes, but I wish to God he'd just give them a chance to get through a scene, even if they made a mistake. I used to say to him, "George, for God's sake, you know you are talking all the time." So he said, "Well, I have to!"*

**QUESTION: You were using an all English crew. Does that include the clapper-loader?**

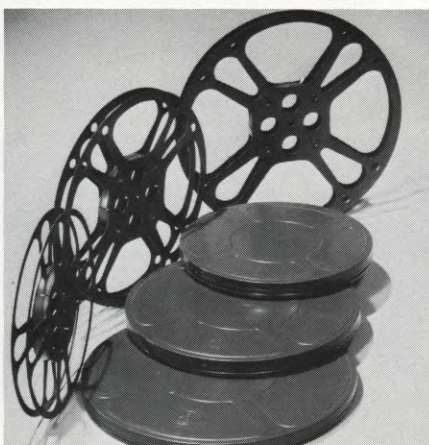
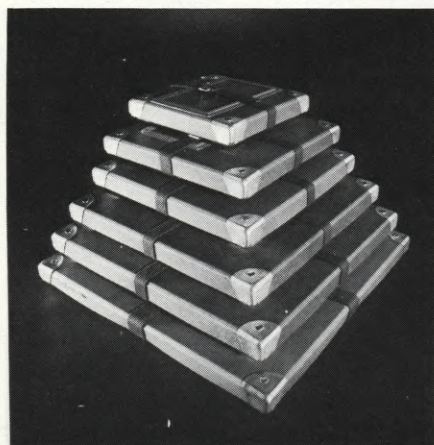
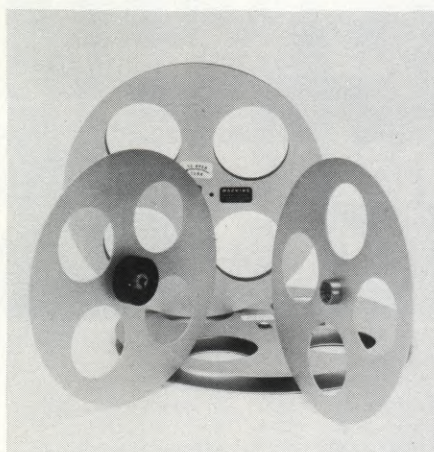
*YOUNG: Yes.*

**QUESTION: And how was he managing with the announcement on the clapper board? Or did he have a Russian stand in?**

*YOUNG: Oh no, a Russian girl put the clappers on and an announcement on the scene. The writing was in Russian for the benefit of the laboratory, but the numbers are the same in all languages.*

**QUESTION: Who else was on the unit?**

*YOUNG: We had a new American producer — a very good man named Paul Maslansky — and an English editor, Ernie Walter, who came out to replace an American. I had an entire British*



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camera crew. Teddy Joseph was the production manager; he came out and took over from John Palmer who had to return home for personal reasons. They were both English, as was the assistant director, the special effects man, the sound recordist and the still photographer. The continuity girl, a lovely person called Lucy Lichtig, came from Paris. She has Russian ancestry and speaks that language, as well as many others.

**QUESTION: You were mentioning special effects — to what extent were there special effects in the picture?**

*YOUNG: Well, obviously, in a fairy story you need quite a bit of special effects and that was a problem, because again, there was this language barrier. It was very difficult to make yourself understood.*

**QUESTION: What effects were you doing?**

*YOUNG: Dissolves and things — they had talked about front projection, back projection, matte shots, and all that sort of thing before I got there, but in the end it was really some dissolves and miniatures that were most important. You couldn't do the others without the cameraman having done the initial job of work. For months they were trying to do special effects without having the major shooting to continue with. In fact, I did quite a few dissolves in the camera, which at least pleased George Cukor because he could actually see a dissolve on the screen. And you know what it's like when you're waiting for special effects — you don't see them until months after the picture is finished.*

**QUESTION: It must be a very long time since you've done fades and dissolves in the camera.**

*YOUNG: Yes, George Cukor was delighted to see Elizabeth Taylor, as the witch, dissolve to Elizabeth Taylor as — you know — sort of beautiful. I rather liked doing it, but, of course, the reason why it came about that you did dissolves in the optical printer was because, inevitably, if you did them in the camera, afterwards the director would say, "Oh, I'd like to have the dissolve a bit earlier, or a bit later." But I always find it a bit frustrating to wait months to see your effects actually on the screen. It's lovely to see them the next day in rushes.*

Continued overleaf

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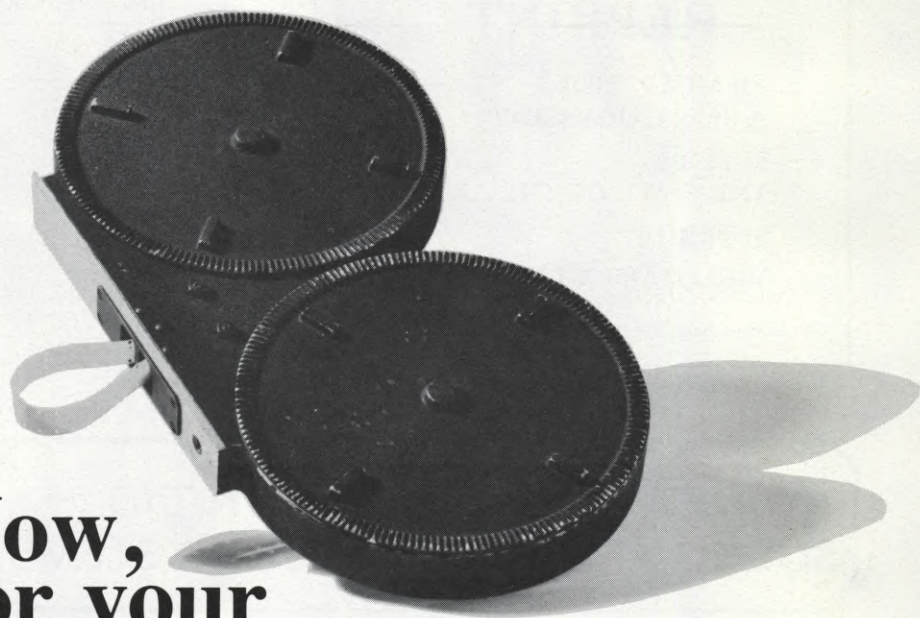
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**QUESTION:** Am I right in saying, though, that you had to go back to the Mitchell for that — you can't do that in the Panaflex?

*YOUNG:* That's right, but I did do one in the Panaflex. I dissolved down to 40 degrees, I brought my hand across with a black velvet glove on and then just continued the fade-out. It was very enjoyable.

**QUESTION:** Were you using lots of filters — more than you would usually use for effects?

*YOUNG:* No, not really. I used a lot of filters on the lamps.

**QUESTION:** Such as?

*YOUNG:* Well, I used blues and reds and greens and purples — all kinds of filters on the lamps. This is different, actually creating a color effect on the screen from the lamp, but I don't believe in putting color-effect filters on the camera because it is much easier to do that in the printing.

**QUESTION:** Was it all local processing?

*YOUNG:* Yes, that was another problem. They work a five-day week out there, but Americans on location do a six-day week. The Russians didn't like this at all. We couldn't get the labs to work Saturdays, although we worked Saturdays. And if they made their baths up on Monday we were jolly lucky to see Friday's rushes the following Tuesday or Wednesday, which was a bit annoying if you wanted to strike a set or release an actor.

**QUESTION:** Were the rushes that you had, color-corrected and timed?

*YOUNG:* Some of them were extremely good. One day's rushes would be good; the next day they'd be up the spout. It was very difficult to find out the reason why until finally, when I had found an interpreter who was very good, I got the lab manager to come over to the studio and have a talk. We saw some stuff on the screen and I said, "Look, you can see that the faces are all bleached out. It's about five or six points too light on the print — or the faces are a bit red or a bit blue or something." And through the interpreter he agreed, and things were much better after this talk. Again, it was completely due to the language barrier. If I could have spoken Russian, I could have cleared up a lot of things

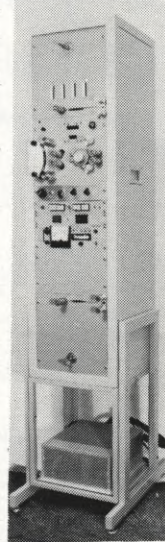
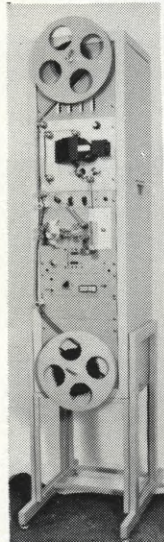
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much quicker.

**QUESTION: Which film stock were you using, 5247 or 5254?**

*YOUNG: The old Eastman 5254 color negative stock. They couldn't process 5247 out there. Because they use positive perforations, we had to order a batch especially perforated for shooting in Russia. It was a shame that we couldn't have had the new Eastman 5247 stock with the fine grain. It didn't help on the opticals either.*

**QUESTION: Did you have a contact man from the lab available while you were shooting?**

*YOUNG: No, the lab was over an hour's journey from the studios, so it wasn't easy to keep contact. I asked them if they would send me out a contact man and they said, "Impossible. We don't do that." So I said, "Well, I think it is very important. You should send out a contact man." He said, "Well, we are servicing ninety films per year and we'd have to have ninety contact men." So I said, "Well, I don't think so. Even if you had four or five they'd be able to visit the cameraman once a week or something." But anyway, that wasn't their system, and I couldn't budge them on that point.*

**QUESTION: But you won a number of battles, though?**

*YOUNG: Oh, I did. I think that although I had quite considerable battles, we ended up great friends and I found that they were very sweet, kind people.*

**QUESTION: Were you printing on Eastman stock?**

*YOUNG: No. Some days' rushes would be excellent. But I think they would join a lot of lengths of positives together so you've got joins of fluctuation in the middle of a shot. You know, from one batch to another. They are very economy-minded in Russia; they don't waste short ends.*

**QUESTION: Were you working toward a particular stylized look in the picture?**

*YOUNG: Well yes, because it was a fairy story.*

**QUESTION: Could you describe it?**

*YOUNG: Well, it's a difficult thing to describe Maeterlinck's "BLUE BIRD". The film starts off in a little cottage with a*



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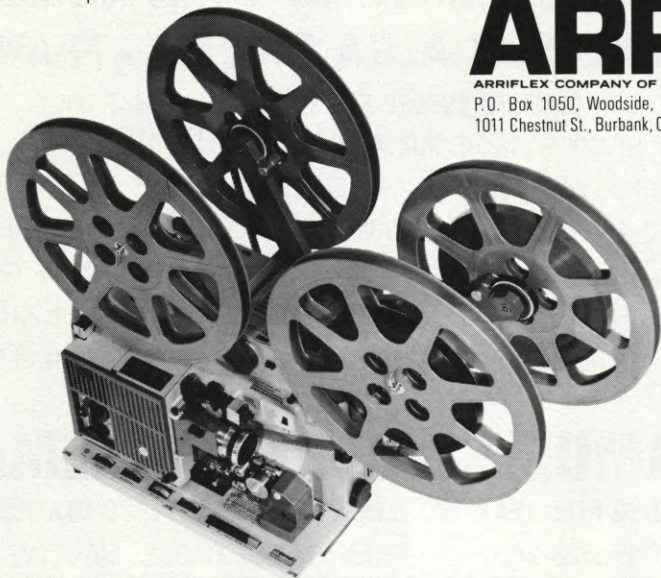
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woodcutter and his wife and two children. The two children go to sleep and they dream, so most of the film is their dream. They go on fantastic journeys and they see all these things in their dreams. So I thought that it would be possible to do all kinds of things. I didn't have to be realistic. But owing to the shortcomings of the facilities of the studio, I was limited. This is what I meant when I said early on that I wish that I'd had conversations with the art director before we started shooting, so that we could have formulated some ideas between ourselves. By the time I got out there they had been shooting for about three months, so the whole thing was set. Sets had been built and we had to keep on using the existing sets. They built them like battleships. It was very difficult to float a wall because a log cabin was solid logs. You really needed a load of dynamite to move a wall.

**QUESTION: Did you have a full wide-angle lens complement to help you with this problem? What lenses were you using?**

*YOUNG: I did have a wide-angle. But we mostly shot with the new 20mm-to-100mm and 25mm-to-250mm Panavision zoom lenses, which are marvelous lenses. When doing tracking shots, it was very difficult to get smooth tracks, so I was able, with a minimum of track and the use of the zoom, to get the same effect. We did a very short track and a lot of zoom.*

**QUESTION: Freddie, just for the record, who was on the crew that you had out there with you?**

*YOUNG: Freddie Cooper was my operator, Trevor Coop the focus puller and Alan Annand the clapper-loader. I've had them all on several pictures before, so we were a very happy little crew. Soon after I got there, I found that I'd got tummy upset — the food didn't agree with me. So I got an electric cooker up in my room, and one or both of the mothers of the two children (American and English), who went to the market to get food because they cooked it in their rooms for the children, would get me vegetables — potatoes, squashes and things like that. My wife, Joan, started sending me out parcels of food from Fortnum and Mason — like chicken and ham and briskets and beans and peas. All sorts of things would come out, and I would invite the camera crew in every now and again and we'd have a lovely lunch or dinner. I also had several of the actors in at various times.*



**QUESTION: Did you do all the cooking yourself?**

*YOUNG: Yes, except when Joan was visiting me, which she did three times, together with our son David.*

**QUESTION: Do you rate yourself a chef?**

*YOUNG: Well, it's pretty easy really, you know; it's just common sense, isn't it? You put some new potatoes in a pot — I used to scrub them with the nail brush — put in some water, put in a pinch of salt, and they were absolutely beautiful! And, of course, it goes without saying that all the Fortnum and Mason grub was very good, with some white or red wine — the Georgian red wine was awfully good, as was the Russian dry champagne, and we used to get some Czechoslovakian or Finnish beer; and I also enjoyed the vodka, of course. Your brother Sydney sent me out a stereo tape recorder, so we had music. We had a marvelous view from the hotel window, looking across the Niva river. It was a most beautiful view, and Leningrad is a beautiful city. And so we had a most enjoyable time. I was there five months and I wouldn't have missed the experience for anything. ■*

#### AMERICAN FILM INDUSTRY

Continued from Page 1413

of a piece with a certain M. Savoye, French ambassador to a German court in 1848. Heinrich Heine said of M. Savoye: "Ordinarily he is insane, but he has lucid moments when he is only stupid."

My own judgment spiced with a modest amount of sanity, I hope, is that given sensible tax treatment and reasonable and rational control of costs, the forecast for the future is fair. There are new markets to be explored, the possibility of new and larger audiences through pay cable (we in the movie industry choose to call it Family Choice Cable) and through discs, with amazing fidelity to sight and sound.

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I am bullish on movies. Though this industry will have confrontations with crises here and abroad and will continue to wrestle with desperate problems, I truly think the best days of film are yet to be lived. ■

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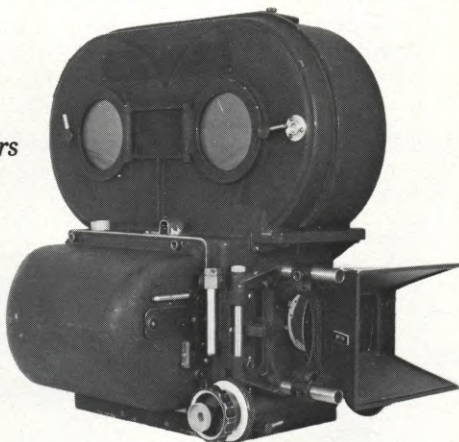


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### "BLUE BIRD" IN LENINGRAD Continued from Page 1397

studio, five people carefully place the  
half dozen boxes that comprise the  
Panaflex camera and its accessories  
onto a trolley which they then sur-  
round and propel 50 yards to the  
shooting stage. This seems to be the  
task of the day for these folk until it is  
time to wrap, when they reappear, all  
five, to go through the same proce-  
dure in the opposite direction.

In a Russian studio one seems to  
work with a very high percentage of  
females, and the crew has no com-  
plaint about that! I would estimate the  
unit is not more than 50% male but it  
can vary from day to day. Freddie told  
me what happened with his electric  
gang. After having carefully learned the  
names of the crew working the lights on  
the floor and up on the spot rails when  
he first joined the production, later he  
found he had two strangers, un-  
announced, attending to the brutes on  
the high stands. It was a little frus-  
trating to have to start a new line of  
Russian-English communication with  
two new electricians working with him  
for the first time, but his annoyance was  
lessened a little by the fact that the two  
tough male sparks he was used to had  
been replaced by two mini-skirted girls.

But what is it like to be living in  
Russia, albeit temporarily, in hotel res-  
idence in Leningrad? Well, it is quite  
different to what we have become used  
to; one can certainly say that. The  
Russian life style is less sophisticated  
and less complicated (not a bad thing),  
but, at the same time, is somewhat dull.  
This does not mean the people are at  
all unhappy; far from it. Their demands  
and standards — especially in terms of  
consumer goods and services — are  
lower. They will, without complaint,  
stand in line at a shoe store, do battle  
with the other shoppers to try to get a  
little of an almost non-existent service,  
try on a pair of lace-ups in a standing  
position, unaided by the staff assist-  
ant, and then pay quite a lot of money  
for a rather poor plastic product. It is  
amazing to see this, but quite normal to  
the average citizen of Leningrad, it  
seems.

That thing we know as "service" is  
not very apparent in Russia. Again it is,  
in my view, merely a difference in  
priorities. In the luxury-class Lenin-  
grad Hotel where I stayed, there is no  
room service at all, no porters around  
to help with luggage, windows do not  
get cleaned and there is a faint odour of  
disinfected drains in the bathroom. But,  
who can say any of these deficiencies  
severely affect one's day-to-day happi-  
ness?



On the plus side, it would appear that crime is far less of a problem and there is a happy atmosphere of security. As it is written in the Leningrad Hotel lobby, "DO NOT BE AFRAID TO WALK OUTSIDE AT NIGHT. YOU ARE COMPLETELY SAFE IN EVERY CITY IN THE U.S.S.R."

In Leningrad, Russia's second city, they seem to manage very well with only half-a-dozen petrol stations. This unimportant but interesting statistic is another example of the difference in thinking that exists between East and West, but which, if nothing else, does a lot to help a beautiful city to remain that way.

As I have already said, one notices quite large numbers of military personnel around the town, though this may not be the same everywhere, as Leningrad is an important naval base. The young people you see are good-looking and smart in their well-made uniforms. Undoubtedly the best-dressed people my wife and I saw were the soldiers and sailors.

Meals are adequate but unexciting. (I know Freddie Young eats precisely the same meal each evening which, after more than twenty weeks, may become a little boring.) Fresh fruit and green vegetables are difficult, but not impossible, to find. But there is enough food, it is not too expensive — even taking into account the poor ruble exchange rate for hard currencies — and the Russian black bread is delicious!

And the ordinary people? One meets very few, hardly ever in their own homes, and this is a pity; perhaps it's the language problem again. The Russians who are involved with our language try very hard to communicate ("You must please be waiting five or four minutes for your dinner", said our helpful and friendly waiter) and, as time goes on, it will undoubtedly become easier, especially as English is now the first foreign language taught in schools.

If Leningrad is desert-like in gastro-nomic and shopping terms, equally one must say that culturally it is a great and gorgeous oasis. There is so much to see and do that it is difficult to know where to start, so I shall not even attempt a survey of the various attractions, but I must say a little about some of them.

The Hermitage, a former Czarist Palace, is crammed full of priceless art treasures from every country of the world. For example, in one hall are hanging more than twenty Rembrandts . . . how about that for starters? Suffice it to say that it has been worked out that one would need three months

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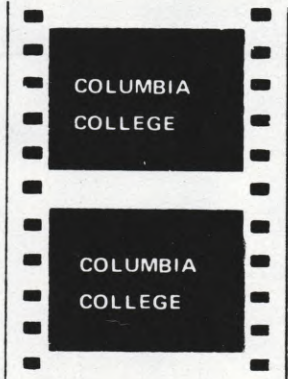
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to glance for a few seconds at each exhibit the Hermitage has on show. Then there are, of course, the Russian Ballet and Opera. Leningrad is the home of the Kirov, but that is only one of several ballet companies which perform in what is, arguably, the world's most beautiful and perfectly preserved 19th Century theatre. Also the city has recently built a 5000-seat auditorium which boasts every kind of theatrical equipment that electronic and mechanical science can provide. These are joyous experiences not to be missed by anybody.

All that I have said is a personal impression of a great city where, as it happens, a unique film project is underway. My visit lasted less than a week and I am very aware that an article about the human, ideological and technical differences that exist between East and West would need a lot more than a few days of experience to be in any way meaningful.

In conclusion I would like to say what I think about the future, as far as cooperation with the film industry of the U.S.S.R. is concerned. I believe it is of inestimable importance that co-production should happen more and more often, so I posed a question to Paul Maslansky, the American Executive Producer of "BLUE BIRD". With all the problems he has to contend with, I said, did he feel that there was a future in co-production with Russia and, if so, what would need to be done to avoid repeating the problems experienced on this picture? Paul was quite adamant that co-productions can and should be made, and the more the merrier. But, he said, written into the pre-production budget must be sufficient cash to pay for at least six key personnel — producer, director, cameraman, production manager, sound recordist, script girl — to study Russian in order to have a reasonable working knowledge of the language. It is not necessary for these people to be able to write it or read it but they *must* be able to talk to their Russian colleagues. Equally, six or so of the senior Russian technicians must be able to speak English reasonably fluently so they, too, do not have to rely on interpreters. This is not as difficult as it sounds; it is merely a question of allocating some money to be paid to Berlitz who operate a "total immersion" course in Russian, taking eight weeks. The expenditure would pay for itself over and over again in speeding up the schedule and avoiding misunderstandings. I hope "THE BLUE BIRD OF HAPPINESS" will not turn out to be the first, and last, big co-production with Russia. I hope it will be the first of many. ■



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## "THE WORLD OF SPIDERS" Continued from Page 1453

placed a black felt curtain between the aquarium and the camera with just the lens sticking through, thus avoiding my reflection in the glass. Frequently, I had to drop ice cubes into the tank to cool the water down. The diving spiders performed well, building underwater webs and filling them with air. I filmed life in the bubble, their hunting trips underwater, and the females raising tiny babies in this unusual environment, without ever coming out on land. They made a very exciting sequence in the film.

To film the more exotic spiders, we went on location to Florida for the wolf spider, jumping spiders, and green lynx. Later, a trip to Arizona for the tarantula.

My very first opinion of spiders has changed completely. Not only is there too much exciting material for a half-hour show, but I am ready to do an entire television series on the subject. My personal life has changed a bit too. Now, a year after the filming of the spider show, there are still creepy, crawly things around the house, but all are invited guests. There is even a beautifully-spun web anchored to the wood beam above the living room couch with a small sign: "Do not disturb the star!"

I hate to think what I will bring back from my next location which just happens to be filming Army Ants in Panama. Let's see, if I move the bookshelf out of the study I could find room for a whole army of ants, well, perhaps a division, or maybe one platoon — would you believe just one ant? Dead! ■

## BOLEX REPORTER BACK ISSUES NOW AVAILABLE

The prestigious Bolex Reporter magazine for moviemakers is celebrating its 25th year of publishing and is offering 14 of its back issues in a package. This combines over 450 pages of color illustrations and movie-making advice covering such subjects as the filming of travelogues, sports, wildlife, nature, underwater, television, titling, adventure, and documentaries, and discusses techniques ranging from animation to time-lapse, sound production, educational concepts, art subjects, biographies of filmmakers and many more.

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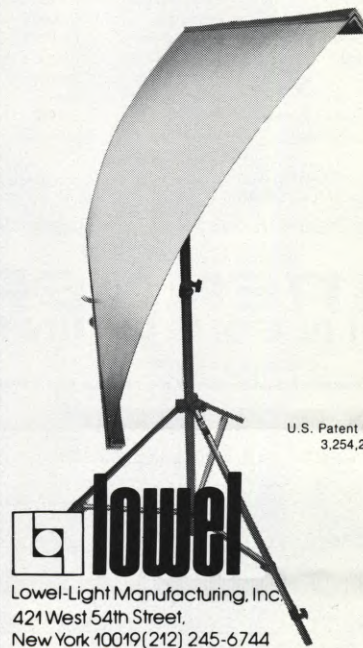
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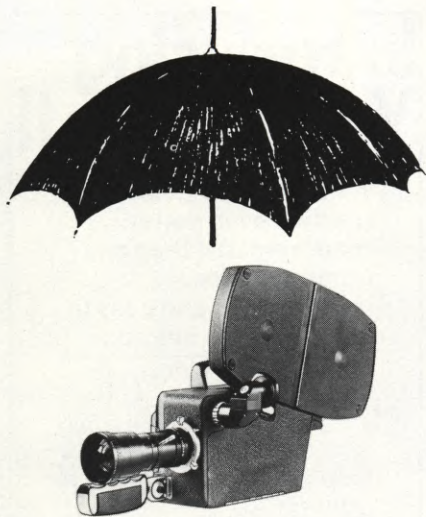


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### SUPER-8 A COMMERCIAL SUCCESS

Continued from Page 1437

and the fact that it can indeed raise funds far outweigh the fact that it might be grainy or that some splices are visible.

When quality is seen not as technical standards of contrast, acutence and so on, but in terms of real needs for communicative films, and coupled with the lower prices of production, Super-8's potential expands to meet a plethora of commercial assignments of varying ambition out of which larger formats have long ago priced themselves.

**FILMIC FREEDOM** Super-8 technology has been developed with the individual in mind. A range of outside film services and technical resources is not necessary for production. The producer can shoot, record, resolve, edit, mix, title, animate, do special effects, and transfer to stripe. Even Super-8 processing and printing are coming within his reach. He has almost complete control over every aspect of his production. He is not tied to a corporate role — an optical man, a cameraman, an animator . . . he can *make films*.

In addition, his greatest savings is his stock and processing. His camerawork is not limited to tight ratios. He is free to explore shooting, to test ideas, to work spontaneously. He can acquire many hours of time and experience behind a camera without going to the poorhouse.

By keeping most functions in-house and lab expenses down, the Super-8 filmmaker maintains a large flexibility in his budgeting. He has very few fixed costs. When he wants to do a film on spec or just for fun, he has to invest little more than his time.

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No one denies that professional filmmaking requires learning the craft of film. Super-8 can enable far more people to learn that craft. A university teaching film can actually provide hands-on experience to five times more students with the same capital investment in equipment. Tens of thousands more are learning film by making films. All the hardware is available to bring anyone's vision to their own silver screen. The software is developing. Recognizing the need for an understanding of the filmmaker's craft. *The Handbook of Super-8 Production* is being prepared by Gunther Hoos and myself for early publication by United Business Publications Inc.

The sense of energy and possibility that has been communicated to the Super-8 Film Group has convinced us that there is room for all of these eventualities — and more. ■

(ABOUT THE AUTHOR: MARK MIKOLAS is the co-founder of New York's Super-8 Film Group, a commercial production house that works entirely with Super-8 as the original medium. He and his partner, Gunther Hoos, have written numerous articles on Super-8 and a text, *Handbook of Super-8 Production*, which will appear this fall.)

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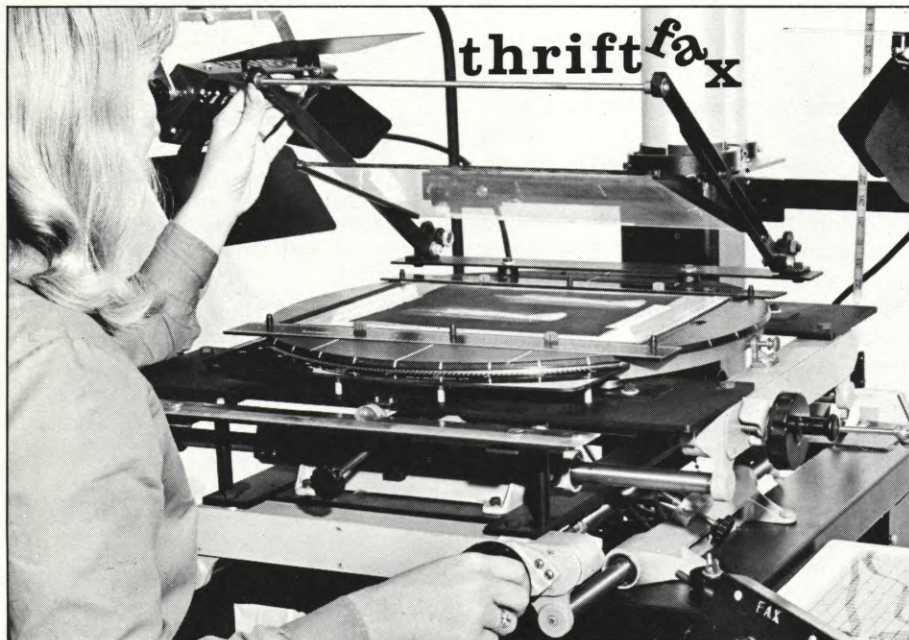
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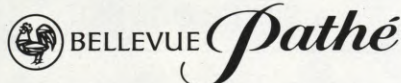
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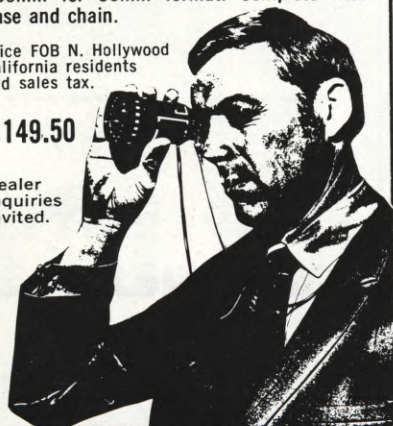
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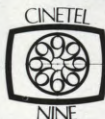
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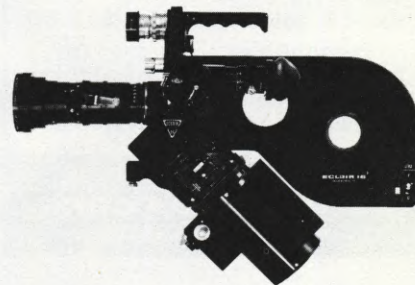
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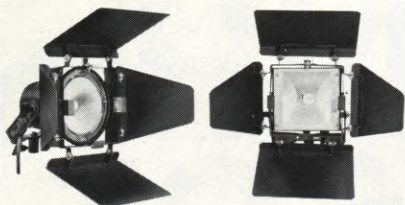
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### WHY ONE COMPANY ADOPTED SUPER-8 FOR TV PRODUCTION Continued from Page 1428

the final show. At the same time Gonzales shot the titles and animated sequences with the Beaulieu camera, and edited and transferred the "wild sounds" from cassette to 1/4-inch tape.

The 35mm slides selected for use in the show were transferred to Super-8 using the Beaulieu camera. Since the film videoplayer has single-frame capability, only a few frames of Super-8 film — enough to easily locate the "slide" and stop on one frame — are required.

"Slides are primarily used where we need a broad shot of the entire laboratory taken with weak available light," Murdock notes. "We use Kodak high-speed Ektachrome film (daylight) and special ESP-1 processing to rate the film at a speed of 400. I use an FL-D filter on the camera to warm up fluorescent lighting, and, if another color predominates, we can place filters between the slide and light source to help correct it when we transfer it to film."

In addition to the footage shot, some short segments of 16mm film were provided by the Division of General Research. To integrate it into the program, Murdock had a Super-8 reduction copy made by Leo Diner Labs in San Francisco for use on the film videoplayer.

After the narration for the show was recorded in an audio booth at the studio facility, all of the "takes" selected for use in the program were assembled in the correct order — along with the slides, reduced 16mm footage, and animated sequences shot in the studio — and the program was ready for final assembly on videotape.

Gonzales operated the videoplayer and the audio tape deck containing the "wild sounds" she had recorded on location, and Murdock operated the tape deck containing the narration, the video switching equipment, audio mixer, and the master videotape recorder.

To produce a clean "cut" between scenes, the videotape recorder requires at least 10 seconds of run-up time while the tape is moving in order for its servos to stabilize. The film videoplayer requires less than two seconds to start up and stabilize.

Murdock and Gonzales used stop watches to find start-up points for each machine so that, when the videotape recorder was started up and stabilized, the correct scene would appear from the videoplayer just as the videotape reached the point where Murdock

wanted to make the "cut." When a scene was to start at the beginning of a film segment, he inserted 48 frames of black leader to provide a 2-second (at 24 frames per second) timed leader to use. Most scenes were left overlenth, however, so they could be used in future productions, and the proper segment was transferred to videotape by starting the two machines and recording only the desired portion onto the videotape.

The videotape recorder also permits recording video only, audio only, or both audio and video simultaneously. Using this capability, Murdock and Gonzales could mix and record the "wild sound" and narration either before or after recording each scene. In addition, they could record both the audio and video portions of the interviews on film simultaneously and in sync onto the videotape.

The entire show was assembled, scene-by-scene in this manner, in two-and-a-half days. Since the existing television studio has black-and-white videotape recorders, the initial editing was in black-and-white. After checking the finished program, and getting the necessary approvals for its release, Murdock rented a color videotape recorder for the final edit.

"At this point we have a complete program correctly timed, and with a finished audio track mixed and synchronized. If we had no lip-sync scenes, we would have simply dubbed the audio track from the black-and-white machine to the color machine. As it was, we transferred the audio up to the first lip-sync sequence, and then added the video from the videoplayer just as we did on the black-and-white tape, scene by scene, but this time we knew exactly what we wanted. The show was already timed and all the audio mixing and dubbing were done, so the work went much faster. When we came to the first lip-sync sequence, it was transferred from the videoplayer, audio and video in sync, and then we dubbed the next segment of mixed audio from the black-and-white videotape audio track. In all, the complete color master was assembled in less than two additional days.

"Even though the editing system, operating the equipment manually with two people using stopwatches, is very crude, a comparable show mastered entirely on videotape normally takes from five to fifteen days for two people to edit. That's the time it would have required to do the more than 200 cuts in this 14-minute program and to set up and record "live" the animation we easily shot on film using the single-



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framing capabilities of the Beaulieu movie camera.

"So we have a dramatic decrease in the editing time required, in addition to the savings in location costs, by using film. Enough that we can now release color programs at a cost much less than what the company expected to pay for a similar black-and-white program. And we can see further improvements in the near future. By reconfiguring the equipment, we can reduce the editing to a one-person operation, halving the man-hours required, and the all-electronic controls on the videoplayer suggest the future possibility of integrating it into a semiautomatic videotape editing system," Murdock observed.

Looking to future improvements, Murdock said, "The next obvious step is the addition of a second film videoplayer that can be driven or synchronized to the video system. That would give us an editing capability not normally available with helical video, the ability to mix two scenes shot on location, to do dissolves, split screens, and similar effects with the video switcher. Titles and other graphics can also be shot on film in color and used in place of cards in front of a TV camera, eliminating the need for a television camera altogether, and giving us the ability to use color titles and graphics."

Having completed and released his first project, Murdock feels they have met or exceeded all of their original objectives. "We have a truly portable shooting system and have produced and released a program in color well within the normal budget for a much simpler show done in black-and-white," he commented. "Furthermore, we see room for further cost reductions. With a total investment of less than \$3,000 for the lights, cameras, portable cases, and the film videoplayer, we have a modular system that

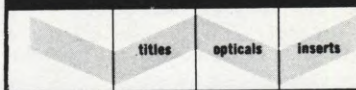
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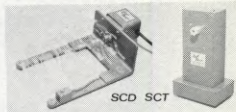
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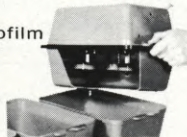
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"Other applications also suggest themselves," said Murdock. "At a cost of \$425, the Supermatic 200 sound camera, with its fully automatic exposure system, and 200-foot film cartridges can be an excellent machine for sales personnel to carry to the field to shoot material for internal use.

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FILM. Unexposed, ends or new rolls 16 or 35mm. Please contact for prices, Renee Ross, STUDIO FILM EXCHANGE, 6424 Santa Monica Blvd., L.A., CA 90038 (213) 466-8101.

RAW STOCK FILM NEEDED. Highest cash paid for 16 or 35mm color negative or reversal film, including any EF (7242) mag. stripe. B&W reversal also wanted. FILMEX, (Filmbrokers) (416) 964-7415 collect.

WANTED Nagra or other sync recorders plus accessories, immediate cash, no hassle. RICHIE (212) RA6-6832.

WANTED: Professional Motion Picture Equipment, 16mm and 35mm. Cameras, lenses, lights, sound, editing, projection, lab. For outright purchase or consignment. Supply complete technical description and price for immediate reply. Ted Lane, ALAN GORDON ENTERPRISES INC., 1430 Cahuenga, Hollywood, CA 90028, (213) 466-3561.

BECKMAN & WHITLEY CM16 wanted. Please describe exact condition and price. H. MCMULLAN, Rt. 5, Box 394, Washington, NC 27889.

WANTED: Mole Richardson 103B booms with or without perambulator. Good condition. Cash. KENT (213) 776-2148, P.O. Box 6006, Inglewood, CA 90301.

FILM STOCK, 16/35mm will consider all types. Sealed, opened & ends. RAFIQUE, 814 Broadway, NYC 10003. (212) 228-2757.

WANTED: Complete tripod, or tripod-head only; for a Bell & Howell 2709 studio-camera. Also, hi-speed movement and other accessories. Send description and price to: D. GIORDANO, Rd 4, Box 308-A, Lake Ariel, PA 18436

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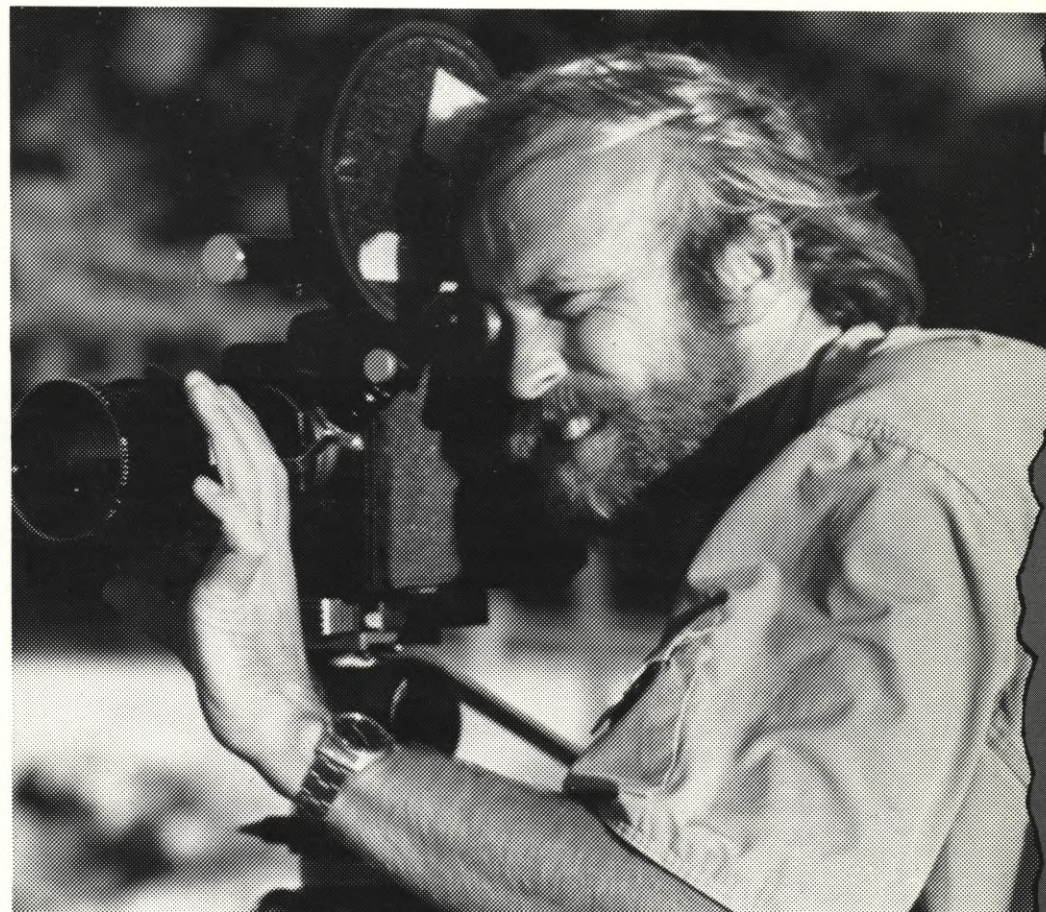
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showing on TV


by JIM CRAWFORD

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on assignment for a TV documentary  
film. Reliable sources claim that  
Elfstrom used a "Re-manufactured"  
LW-16 Frezzolini® professional  
16mm sound-on-film ciné camera  
throughout the filming, a report  
the cinematographer confirmed as  
we go to press. When asked what  
was meant by the cryptic word  
"Re-manufactured" Elfstrom  
explained that Frezzolini Electronics  
Inc., the manufacturer of the  
cameras, can and will "re-manu-  
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Auricon & Frezzolini® or similar  
types of 16mm ciné cameras into  
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there, is lighter in weight than any  
other in the field of news/documentary  
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