

American  
**Cinematographer**

International Journal of Motion Picture Photography and Production Techniques

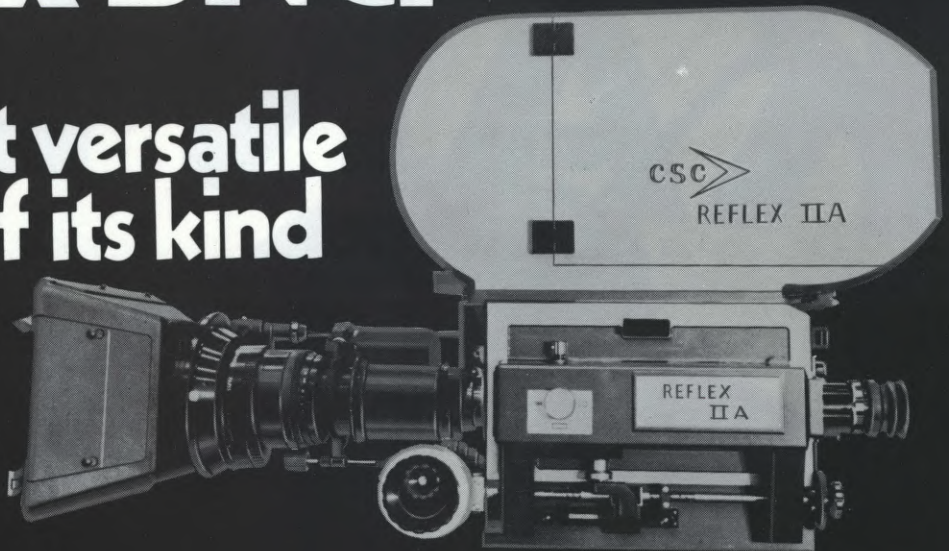
APRIL 1975/ONE DOLLAR

# KANE

**HOLLYWOOD SALUTES ITS "MAVERICK" GENIUS, ORSON WELLES**

# 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 —

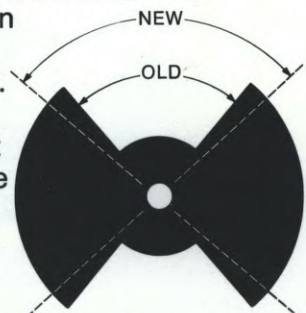
Now you have a choice.											
9.8 mm	14.5 mm	15 mm	18 mm	20 mm	25 mm	32 mm	35 mm	40 mm	50 mm	75 mm	100 & up mm

## 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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# Will Rogers never met Sy Cane.

What's to like?

**Sy Cane is cheap.** In fact, his prices on every conceivable piece of motion picture equipment are as cheap as anybody's.

**Sy Cane is boring.** He knows more about cameras and equipment than Euell Gibbons knows about wild hickory nuts. And he's surrounded by a staff of camera fanatics with a single-minded expertise that borders on tedium. The only other thing Sy knows is the time of day. But he won't give it to anyone.

**Sy Cane is argumentative.** He won't sell you equipment just because you *think* you need it. He thinks it's wrong to sell someone more camera than

the job calls for (a character flaw, we suppose).

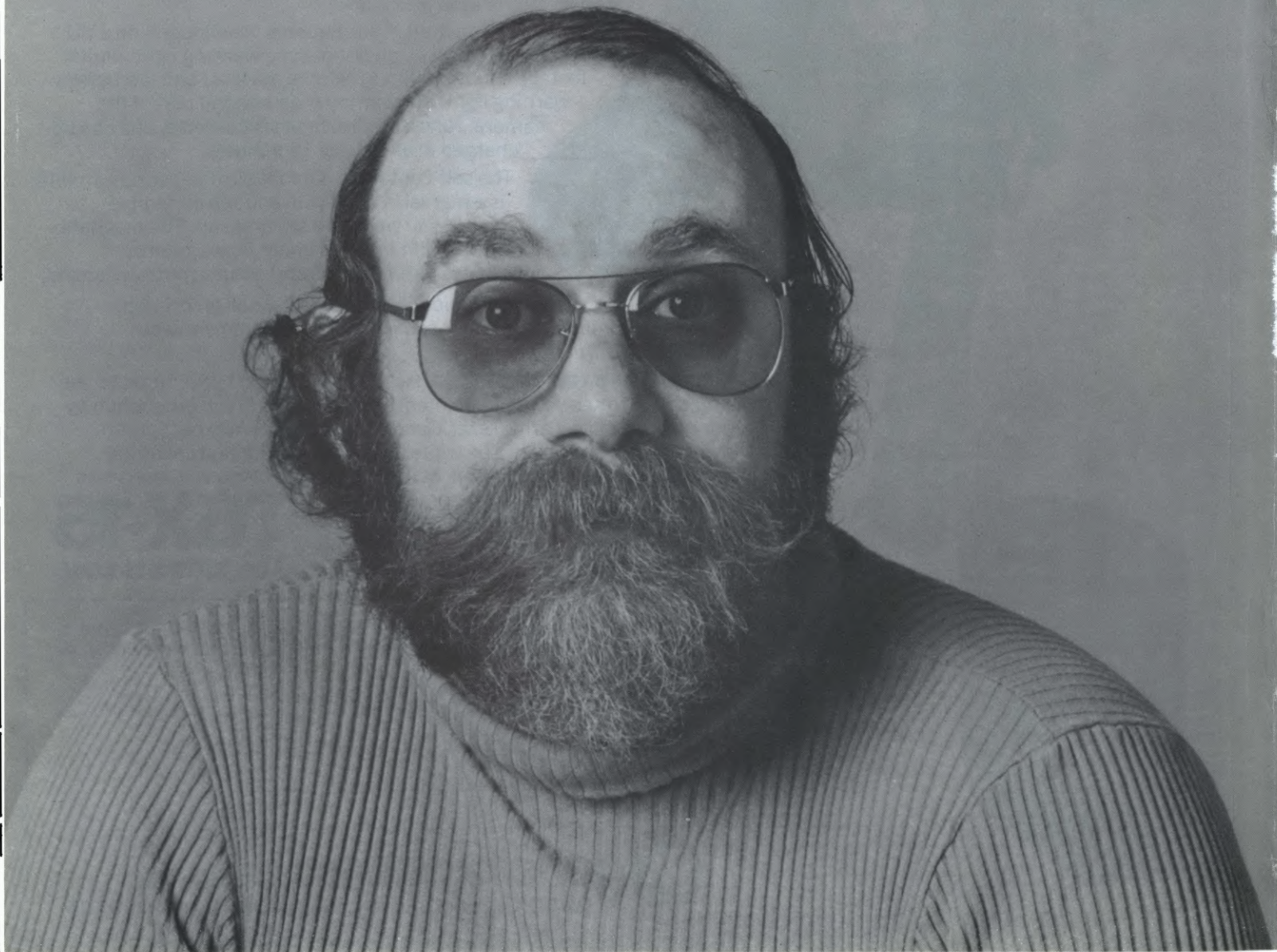
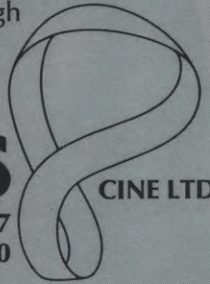
**Sy Cane is fussy.** Fussy enough to hire Eclair's Bernie O'Doherty to head up the Mobius service department. And heartless enough to guarantee 24 hour service in many cases, by threatening Bernie's life.

**Sy Cane is impossible.** Yet, through nobody's fault, a reality. He is, quite frankly, a man that only a customer could love.

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CINE LTD.



# The 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 initials A.S.C. after their names. A.S.C. membership has become one of the highest honors that can be bestowed upon a professional cinematographer, a mark of prestige and distinction.

APRIL, 1975

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#### ● FEATURE ARTICLES

398 Hollywood Salutes Its "Maverick" Genius, Orson Welles

400 The One and Only Orson Welles

401 Realism for "CITIZEN KANE"

402 On Location with "THE RETURN OF THE PINK PANTHER"

406 Shooting a Documentary of the Producer/Director in Action

412 The Panther's Progress

414 Geoffrey Unsworth, BSC, Talks About the "PINK PANTHER"

420 The Eclair Story

424 The New Electronic Composite Photography and Image Modification System (ECP & IM)

449 The Lore of Orson Welles

450 Filming "THE ULTIMATE THRILL"

453 More About "CITIZEN KANE"

458 Orson Welles Filmography

#### ● DEPARTMENTS

372 What's New

376 Questions & Answers

380 Cinema Workshop

384 The Bookshelf

388 The Honor Roll

408 Industry Activities

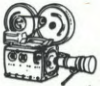
ON THE COVER: A still photograph from Orson Welles' 1941 production of "CITIZEN KANE", the stunning motion picture which has become an American cinema classic. With this cover, *American Cinematographer* joins in the salute to Orson Welles tendered by the American Film Institute when it presented him with its Third Annual Life Achievement Award at the Los Angeles Century Plaza Hotel on the evening of February 9, 1975.

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CAMERAS



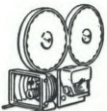
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600 FT. RUNS 16-1/2 MIN.



AURICON "SUPER-1200"  
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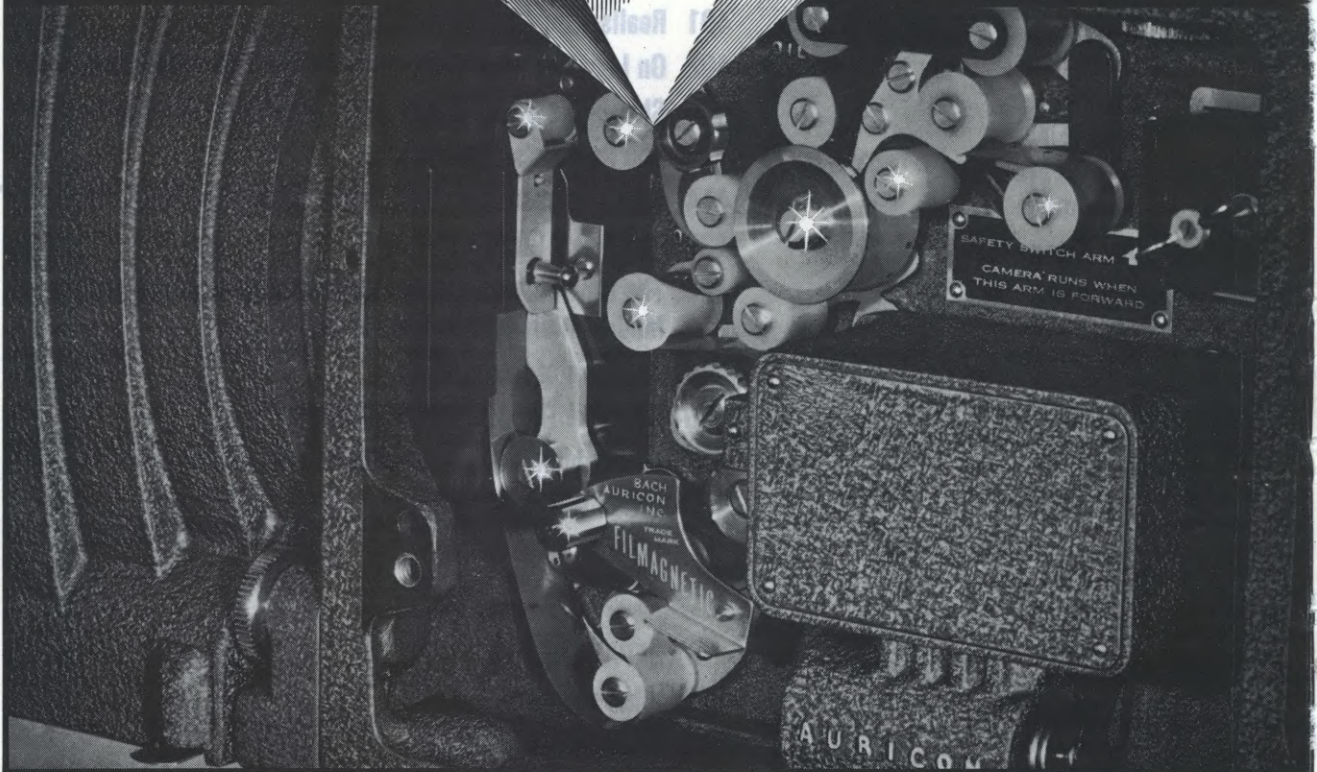
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AURICON  
CATALOG

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AURICON "SUPER-1200" ...  
... and know the real  
satisfaction of filming with  
a truly Professional Camera!

The Auricon Camera is a jewel  
of fine craftsmanship...



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THE AURICON "SUPER-1200"  
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... FOR JEWEL-LIKE PRECISION IN FILMING ROCK-STEADY MOTION PICTURES!

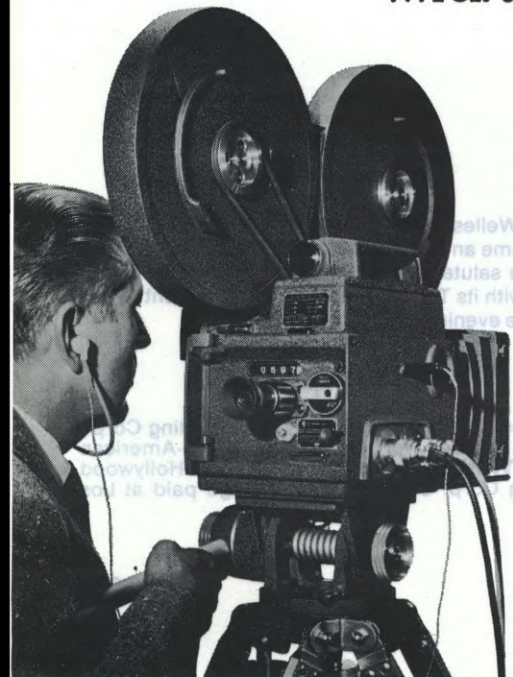
The Auricon "Super-1200", like all Auricon 16mm Professional Cameras, is a superb picture-taking instrument. Every precision-engineered part of this finest of all 16mm Cameras is carefully built and assembled with the rare watch-maker skill of old-world craftsmanship, combined with modern, space-age know-how in optics and electronics. The Auricon "Super-1200" actually contains jewels in the Camera-Gate! This polished Sapphire Film-Gate is guaranteed frictionless and wear-proof for in-focus and scratch-free pictures, regardless of how much film you run through the Camera! Among the many professional features of the "Super-1200" is Reflex Ground-Glass Focusing through the Camera lens. All this, and high-fidelity, optical or magnetic, single-system or double-system sound-recording capabilities which are unmatched by any other camera in the world! Write for free, illustrated Auricon Catalog fully describing this rare jewel of fine craftsmanship.

**BACH AURICON, Inc.**

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WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE

# EDITING PROBLEMS COME IN 3 SIZES.

## NOW THE SOLUTION DOES, TOO.

### SMALL

Moviola M-84 2-Plate Editing Console. 16mm composite optical/magnetic picture head, 0-240 fps forward or reverse, digital counter. Masters to M-85 and M-77 with servo-tach system.



### MEDIUM


Moviola M-85 4-Plate Editing Console. 16mm composite optical/magnetic picture head; interchangeable 16mm and 35mm sound modules for second set of plates; 0-240 fps forward or reverse, digital counter. Multi-track mixing capabilities. Masters to M-84 or M-77 with servo-tach system.



### LARGE

Moviola M-77 6-Plate Editing Console. 16mm composite optical/magnetic picture head; two sets of sound heads (16 or 35mm interchangeable modules). 0-240 fps forward or reverse, digital counter. Extensive mixing capabilities. Masters to M-84 or M-85 with servo-tach system.



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# WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE

## CP-16R REFLEX STUDIO-VERSION NOW AVAILABLE

Cinema Products Corporation announces the availability of a special "Studio Rig" package which converts any CP-16R reflex camera into a *studio-type* production camera capable of meeting the exacting standards of Hollywood-type productions.

Officially introduced at *Photokina 1974*, the studio version of the CP-16R reflex camera has already been successfully used in the filming of quality network-television specials such as Wolper Productions' *SANDBURG'S LINCOLN* and *THE HONORABLE SAM HOUSTON*. When used with Eastman's new 7247 color negative stock, the CP-16R reflex studio-version is ideal for studio-type features, television specials, theatrical documentaries, and TV commercials.

The "Studio Rig" package consists of a riser block, matte box rods, follow-focus mechanism, matte box unit and an assortment of square and round filters. Equipped with the recommended "Studio Rig" package, and measured on the weighted "A" scale at 3 ft. from the front of the optical flat in the matte box, the CP-16R reflex camera is rated at 28 dB ( $\pm 1$  dB) while pulling film!

The "Studio Rig" package (Order Code 1L275) is priced at \$2000.00.

Also available as an option is a special J-4 "Joy Stick" zoom control package (Order Code 2C205) employing a belt-drive mechanism for maximum sound-isolation. It is priced at \$945.00.

For further information, please write to Cinema Products Corporation, 2037 Granville Avenue, Los Angeles, California 90025.

## NEW 1000' MAGAZINE FOR ARRI 35BL

The new 1000' magazine for the Arri 35BL is now available from Birns & Sawyer Rental Department. Available for the first time in the United States, the new magazine is noted for its light weight and super balance. Loaded with film, it's equally as quiet and only seven pounds heavier than the loaded 400' magazine; increased power-drain is said to be only 1/10 of an amp.

Also available through the Birns & Sawyer Rental Department are the new Super Speed Zeiss lenses, according

to B & S vice president Marvin Stern. These lenses are designed for optimum performance at large apertures and low light-levels. They come in 25mm, 35mm, 50mm and 85mm, all T1.4. For additional information, call or write Birns & Sawyer, Inc., 1026 North Highland Avenue, Los Angeles, California 90038, (213) 466-8211.

## SILMA SOUND PROJECTOR AVAILABLE FROM HERVIC

Hervic Corporation proudly announces the availability of the new Silma "Dual 8" SOUND Projector.

Termed the "Bivox D", this new Silma projector is a very handsomely-designed unit which affords the maximum of portability for easy storage, etc. The speaker portion of the projector (which easily detaches from the main body of the unit) is provided with a 25-foot extension cord which allows the speaker to be placed anywhere within the room (but, ideally in front of the screen so that picture and sound are together).

Additional features of the new Silma "Bivox D" SOUND Projector include:

- "Quick Change Knob" . . . Super-8 to Regular 8 (or vice versa).
- *One Touch, Instant Film Threading* (automatic reel-to-reel) . . . and *Rapid Film Rewind*.
- *SOUND Features*: Fade-in and Fade-out Sound Control; sound-on-sound with unique control of sound level of first recording; as well as Public Address (PA) System.
- *12V, 100W Halogen Dichroic Lamp* (with pre-warm-up feature)
- *Electronic Speed Change*

Price of the Silma "Bivox D" Dual 8 SOUND Projector is \$519.50 list.

Silma Projectors are exclusively distributed in the U.S. by Hervic Corporation. For further information, contact the company at 14225 Ventura Boulevard, Sherman Oaks, California 91423.

## TELEVISION RESEARCH INTERNATIONAL INTRODUCES LOW COST ELECTRONIC EDITING SYSTEM FOR HELICAL VTR'S.

Television Research International, Inc., Mountain View-based developer of electronic television devices, has introduced the EA-5 editing control

system for helical scan VTR's. The system features a "hands on" approach to editing videotape that closely resembles a film editing table. Operators can master the EA-5 technique in less than an hour.

"The TRI EA-5 editing system was two years in development under continuous environmental involvement with a major broadcasting facility", reported Bob Cezar, TRI president and founder. "All operational parameters of the system," Mr. Cezar continued, "were designed to simplify the entire videotape editing function without sacrificing the sophisticated needs of the industry."

The EA-5 enables editors, film or video, to still-frame program information and to automatically make precise frame-accurate video and audio edits. Additional features include repeatable preview capability, animation and matched frame editing. The unit interfaces with most helical scan VTR formats and installation requires less than an hour.

The EA-5 sells for \$4,600.00 and is marketed through a domestic and international distributor network.

For additional information contact: Gary Beeson, Marketing Manager, TELEVISION RESEARCH INTERNATIONAL, 1988 Leghorn Street, Mountain View, Calif. 94043. (415) 961-7475.

## NEW IN-LINE SOFT KEYS

Technicolor has announced a completely new in-line soft Chroma-Keyer for use with VTR's and off-the-air signals. This device combines the functions of Technicolor's well-known Chromatech with a decoder. Therefore, the user can still reproduce shadows, look through glass or smoke, and retain all of the benefits of having a linear Chroma-Keyer.

System timing problems are virtually eliminated with this NTSC keyer, which like the original Chromatech, contains its own linear mixer.

The new unit accepts 2 composite or non-composite NTSC signals, and provides a combined composite or non-composite output.

A remote control panel which can be used to operate the unit up to 500 feet away is furnished with the unit.

Price of the new unit, complete with remote-control panel, is under \$4,000.00.

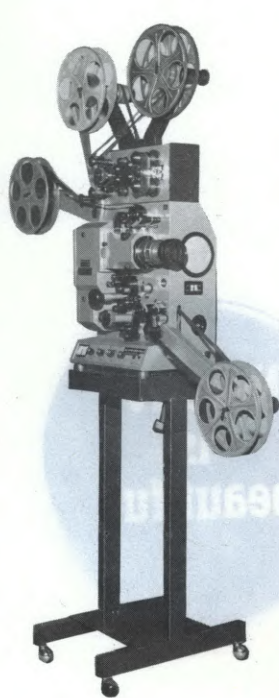
For further information contact Sam Nooriala, Technicolor, 291 Kalmus Drive, Costa Mesa, Ca. 92626. (714) 540-4330. ■



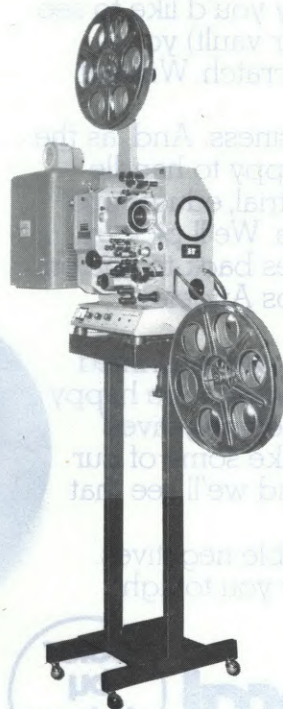
# MP-30

## a lot of projector for the money

When we introduced the MP-30 Portable 35mm Sound Projector just a few months ago, we told you it was a lot of projector for the money. We pointed out its versatility and how it offers top quality professional projection combined with portability for use in almost any type of requirement, from standard theater to screening room. Now, there are even added advantages to owning an MP-30, because in addition to the standard model, the MP-30S, we are offering the MP-30M, with Interlock, and the MP-30X, with Xenon lamphouse, still at prices which are the lowest in the industry. The MP-30 is a precision crafted projector priced to fit your budget. Check with our Projection Department today for details on the MP-30 to fit your specific needs.



**MP-30M . \$3995.00**  
(Includes all standard features plus Magnetic Interlock (track and picture), projection stand and 12" external speaker)



**MP-30X . \$3995.00**  
(Includes standard features plus 500W Xenon lamphouse (in place of quartz halogen lamp), projection stand and 12" external speaker)



### Standard Features for the MP-30S:

- Heavy-duty Geneva star and cam intermittent.
- Interchangeable apertures.
- Constant speed ¼ HP motor, 125V AC, 60 Hz.
- 1000 watt quartz halogen lamp. 3200°K high light transmission efficiency.
- Pre-focus exciter lamp, 6V, 5A.
- Solid state built-in amplifier, 30 watts, with tone controls.
- 8 ohm output.
- Standard 3½" to 5" lens.
- Solar cell.
- Built-in speaker.
- 4000' reel capacity.
- Microphone input.

← **MP-30S . \$2295.00**  
(Includes all standard features)

### Optional Accessories:

- Xenon lamphouse and power supply.
- Magnetic interlock (track and picture).
- Anamorphic and super series lenses.
- Power driven takeup (for 6000' reels).
- Projector stand.
- Automation.
- 12" dynamic external speaker.
- 220 or 115V, 50 Hz motor.
- Automatic changeovers.
- Selsyn interlock.
- External amplifier for dual operation.

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We deliver flawless dailies. Which is to say we develop your negatives and print your rushes just the way you shot them. Just the way you'd like to see them. Overnight. And, we return (or vault) your irreplaceable negatives without a scratch. Without a nick. Without a break.

Simply stated, we'd like your business. And, as the largest lab in the business we're happy to handle feature films, TV, advertising, industrial, educational or student films. Just call us anytime. We'll pick up your negatives and have your dailies back to you on schedule the following morning (Los Angeles or New York).

And to help you keep us in mind, we've printed some 'negative' buttons and stickers we'd be happy to share with you (we have four other 'negatives' besides the four shown). If you'd like some of our 'negatives,' call one of our offices and we'll see that you get them. Fast.

Flawless dailies. From irreplaceable negatives. By DeLuxe. We can be working for you tonight.

In negatives we trust.

Negative is beautiful.

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color  
by  
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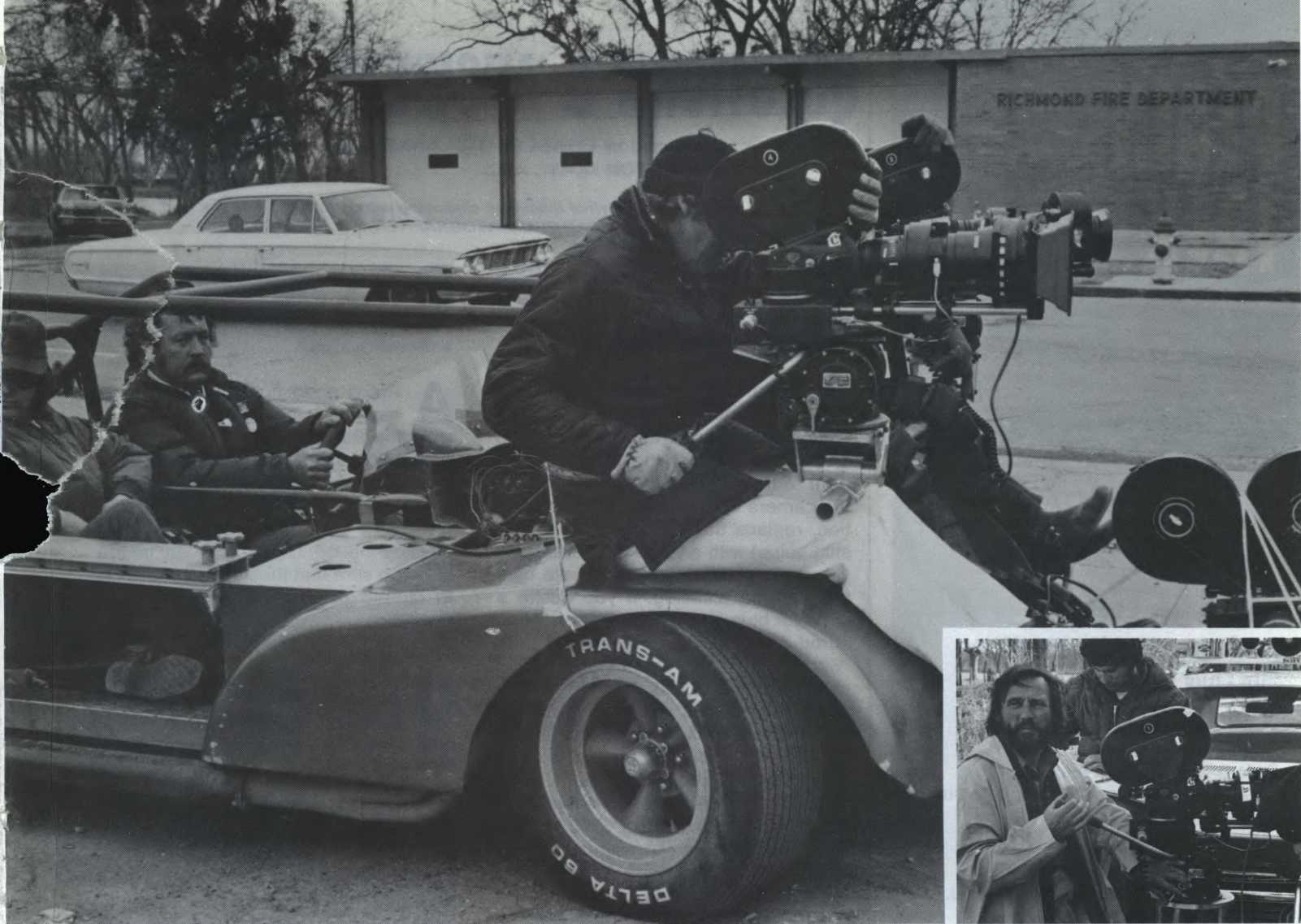
Hollywood, 1546 North Argyle Avenue, Hollywood, Ca. 90028 (213) 462-6171

New York, 630 Ninth Avenue, New York, New York 10036 (212) 489-8800

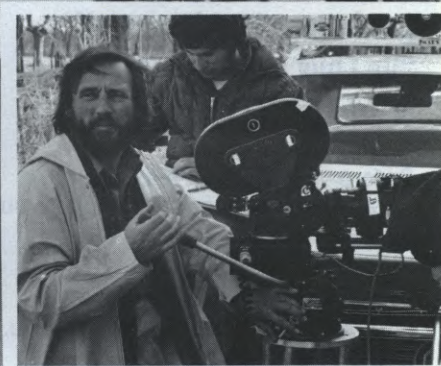
Chicago, 2433 Delta Lane, Elk Grove Village, Ill. 60007 (312) 569-2250

Negative is an eight letter word.

Negative. Negative. Negative.  
Now that's positive thinking.



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."



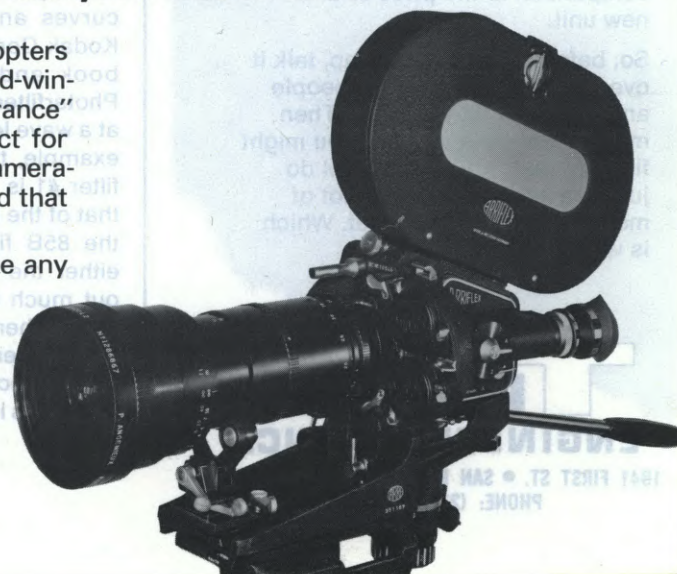
Zsigmond checks out the Arri 35 2C mounted on platform extending from front of police car.

# "lights...camera...action!"

when today's director calls for action, he means it—

Car chases, ski races, gun battles, canoes swamping and helicopters exploding! That's why the Directors of Photography for award-winning action films like "The French Connection" and "Deliverance" specified Arri 35 2C's for the critical action sequences. Perfect for tight places, the small, reliable, light weight 35 2C offers the camera-man reflex viewing, a wide choice of lenses and accessories, and that famous Arri ruggedness. Arri can take the bumps if you can.

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.

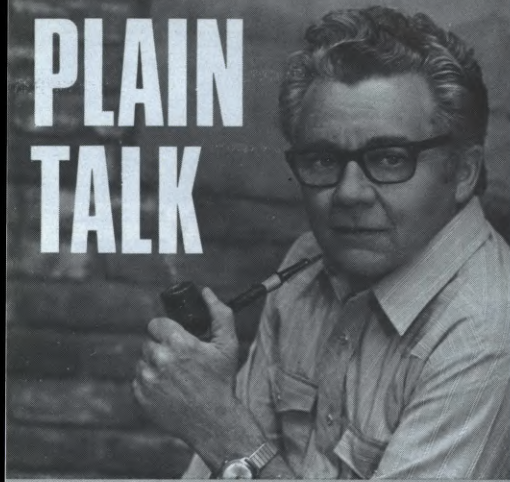


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# PLAIN TALK



by *J. Carl Treise*

## When money's tight, it's good sense to ask yourself "Do I buy a new processor or rebuild the old one?"

Before you shell out a lot of dough for a shiny new model, I suggest you take a fresh look at your old film processor.

You may discover that you've got more going for you than you realize.

In the first place, your present unit might have plenty of good machinery left in it. Many parts in a processor don't usually wear out. Besides, you've got a big bundle of money tied up in it, most of which you aren't going to get back if you sell or trade it in.

It may be possible to modify your old equipment and give you exactly what you're looking for.

Often all it takes are a few new accessories . . . or a new drive system . . . or a change in the tank set-up.

And the cost is peanuts, in comparison to the price of a new unit.

So, before you take the leap, talk it over with your production people and decide what you want. Then make a few calls around. You might find out that "Old Betsy" will do just fine and you'll keep a lot of money in your own pocket. Which is where it should be.

**TREISE**  
ENGINEERING, INC.

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PHONE: (213) 365-3124

# QUESTIONS & ANSWERS

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

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



**Q** To obtain a moonlight effect using Eastman Kodak 7242 film, what method or filter should I add when working outside?

**A** When prints are to be made of the camera original, the simplest technique is to underexpose one or two stops and request the laboratory to print "dark and blue for night effect". If the camera original is used for projection, replace the 85B filter (131 Mired shift value) with an 85C (80 Mired shift value). This will give a moderate blue that can be pleasing. If you desire a stronger blue, use a weaker filter. Tiffen Mired filters can be obtained in both "warm" and "cool" series with Mired shift steps of 15, 30, 60, 120. In the warm series a 60 will give you more blue than an 80, a 30 more blue than a 60, etc. With no filter (except a haze filter) you will probably have a color temperature in Arizona in the middle of the day of approximately 6500°K. This color temperature represents a Mired differential of 160 from 3200°K. The result is a very strong blue effect and has frequently been criticized as being much too blue.

**Q** I have been using Eastman 7242 film for both inside and outside photography by using an 85B filter outside plus a haze filter. Is the haze filter necessary?

**A** The haze filter used in addition to the 85B has a minimal effect, assuming that haze is defined as light of short wave length near the ultraviolet and barely discernible visually. The specific spectral transmission curves and data given by Eastman Kodak Company in their Wratten Filter book and also given in the Tiffen Photarfilter Glass Catalog indicate that at a wave length of 420 millimicrons, for example, the transmission of the haze filter #1 is 77%, of filter #2 is 54% and that of the 85B is 12%. It is obvious that the 85B filter is much stronger than either the #1 or #2 haze filter, cutting out much more haze than either haze filter. When they are used with the 85B, the differential transmission is 8% and 3% respectively at 420 millimicrons, if that 8% is important use a #2 haze filter.

**Q** What is the most practical way to cover the lens hood when reversing (reverse winding) film for a dissolve shot?

**A** Put a good tight lightproof lens cap over the front of the lens, stopping the lens down as an added precaution. If a reflex camera is used look through the viewfinder to verify, being sure to cover the viewing eyepiece after viewing even though it may already be equipped with an inside stop. Be sure that the camera shutter is in closed position when you finish rewinding.

**Q** Is there any additional filter that can be used with the 85B and haze filter to get a good rendition of clouds?

**A** Use a polaroid filter and rotate for maximum cloud contrast, you can visually observe and evaluate the resulting effect. This can be effective on occasion. Don't forget the polaroid filter requires approximately 1½ extra stops for exposure.

**Q** I am a student studying photography and would like to make a career as a cinematographer. Can you recommend a school where such instruction may be obtained?

**A** There are many schools offering courses in motion picture production and cinematography. The American Film Institute publishes a book listing all the schools providing such study. It is called "Guide to College Courses in Film and Television" and can be obtained from Acropolis Books, Ltd., Colortone Building, 2400 17th St., Washington, D.C. 20009. Price \$5.95. ■

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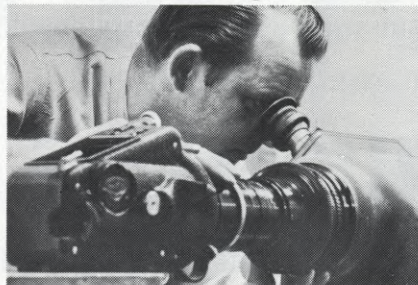
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# CINEMA WORKSHOP



By ANTON WILSON

## Photographic Daylight

What is the color temperature of daylight? The answer would be simple if there was no atmosphere on our planet, but this might make breathing difficult. As the relatively pure and consistent sunlight passes through the atmosphere it undergoes some pretty strange transformations before it eventually reaches the earth's surface. These transformations depend on time of day, month of the year, weather conditions and latitude. Color temperature can vary anywhere from 5000°K to over 25,000°K. At this point the situation may seem mystically complex and totally unpredictable. Fear not. A few basic facts will shed some light on the subject.

The light coming from the sun is almost a perfectly continuous spectrum of about 5500°K to 6000°K color temperature before it reaches our atmosphere. Molecular and dust particles in the atmosphere act like a dichroic filter and scatter the short wavelengths (blues) while letting the longer wavelengths through (reds). Referring to FIGURE 1, this accounts for the direct sunlight appearing slightly red when compared to the blue sky (scattered light). What we call "photographic daylight" is actually a mixture

**FIGURE 1 — White light from the sun (about 6000°K) enters the atmosphere. The short wavelengths are scattered (blues) by particles and molecules in the air. The sunlight emerges minus some blue and, thus, appears slightly red (5500°K). The scattered blue light eventually reflects back to earth as skylight (10,000°K to 20,000°K).**



Direct sunlight and skylight — no clouds	6500	6100	6500	6100
Direct sunlight and hazy skylight	5800	5700	5900	5900
Sunlight and skylight — about 50% overcast	6700	6200	6400	6300
Totally overcast sky	7000	6600	6700	6800
Very hazy or smoky sky	8200	7700	7500	8400
Clear skylight — No direct sunlight	15000	12000	20000	12000
Direct sunlight w/no skylight	5800	5500	5800	5500

SUMMER	WINTER	SPRING	FALL
6500	6100	6500	6100
5800	5700	5900	5900
6700	6200	6400	6300
7000	6600	6700	6800
8200	7700	7500	8400
15000	12000	20000	12000
5800	5500	5800	5500

Note: The above figures are relative. Actual figures will obviously depend on geographic location.

**FIGURE 2 — Typical daylight color temperatures for various seasons and atmospheric conditions.**

of the direct sunlight (reddish) and the skylight (bluish). You can gather that the color quality of "daylight" will depend on the relative proportions of these two ingredients.

The direct sunlight is usually about 5000°K to 5500°K, while light from a clear blue sky (no direct sun) is typically 12,000°K to 15,000°K. The resulting "overall" color temperature will obviously be somewhere between, depending on the ratio of these two elements. On a clear day with no clouds, the skylight will comprise only about 20% of the total illumination. Since the sunlight overpowers the blue sky four-to-one under these conditions, the resulting color temperature of the mixture should not be much greater than that of sunlight alone, and the table of FIGURE 2 bears this out. The color temperature of a clear day is typically 6100°K to 6500°K.

A totally overcast day will reduce direct sunlight by about 75% and cut skylight by only 50%. Under these conditions the skylight accounts for a much greater proportion of the total illumination. As expected, the color temperature will shift upwards (6700-7000°K). The table of FIGURE 2 tells most of the story. In general, conditions with strong direct sunlight and little skylight will go warm. Where the skylight predominates, there will be a cool shift.

In most situations the color temperature will not vary far from the 6000°K mark and will prove fully correctable in the lab. However, there are certain cases that may pose problems. Even on a clear day when the color temperature seems perfect, the key light (sun) will actually be a hair warm, but more important, the shadows may

be very cool because they are receiving fill light (skylight) only. This is why shadows thrown on white snow always appear blue. This situation is aggravated at sunrise and sunset when the sunlight is passing through so much atmosphere that a greater than normal amount of the blue waves are filtered out. This accounts for the very red appearance of the sun when it is low in the sky.

The biggest problem occurs on *partly* cloudy days where the sun passes in and out of clouds. When the sun is hidden, the blue clear sky that is still exposed could raise color temperatures to over 15,000°K. The condition then reverses when the sun comes out. Now there is direct sunlight and the skylight is partially obscured. Temperatures will plummet to below 6000°K. Smoky or very hazy days will also exhibit a very high temperature (blue cast) but the effect will be consistent in contrast to the partly cloudy condition.

The overall visual effect of these shifts in color temperature will depend a great deal on the nature and color of the elements in the scene as well as camera angle and composition. Reflected light from large colored objects and large areas of background color can have a strong influence on the visual color balance. The cinematographer must weigh these factors together with the atmospheric conditions before a final evaluation can be reached.

These problems are minimized in night-for-night scenes where it is safe to assume that atmospheric conditions can be, for the most part, ignored. ■



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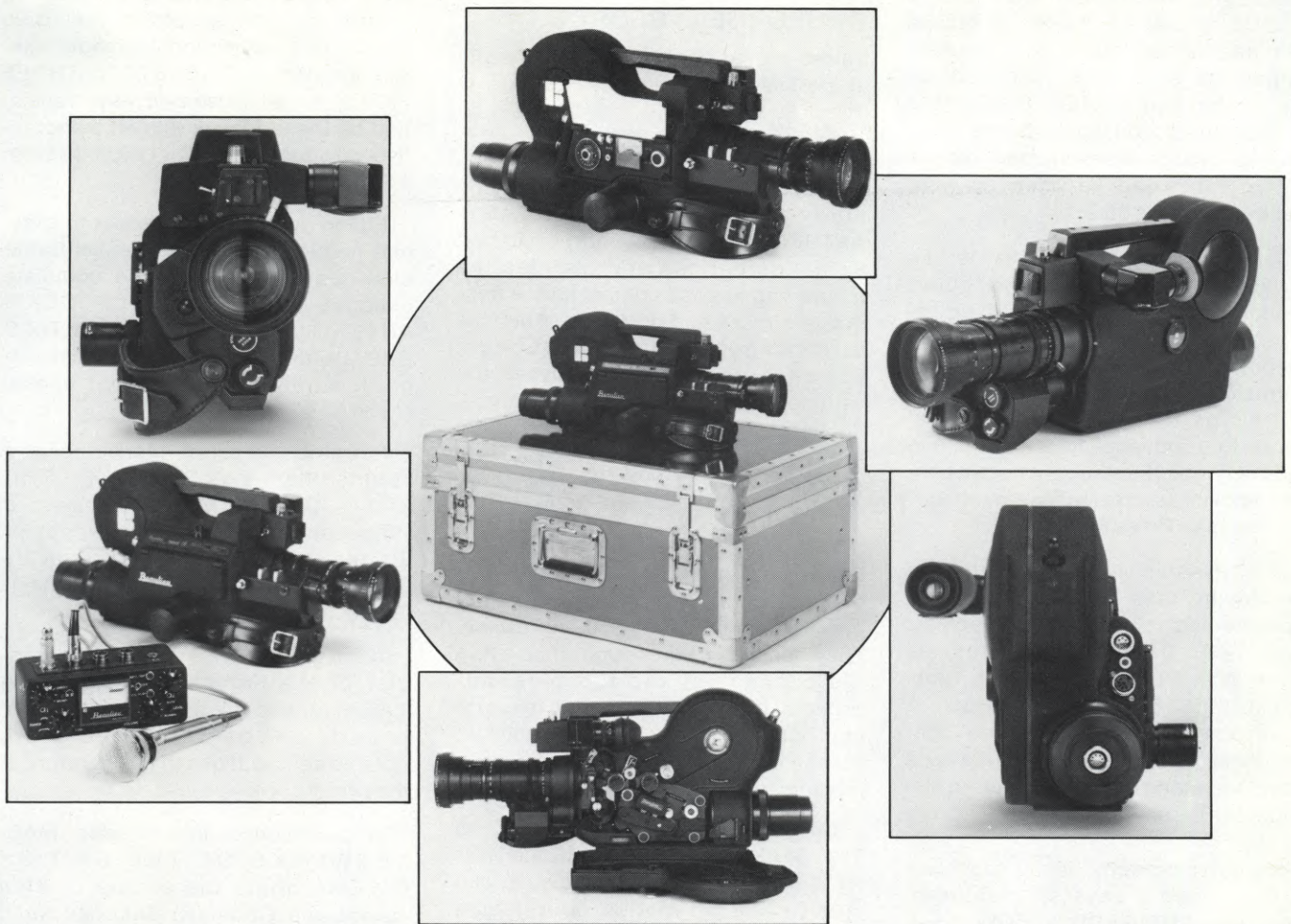
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## PERSONALITIES PLUS

Not merely a rhetorical question, **WHATEVER HAPPENED TO HOLLYWOOD?** by Jesse L. Lasky Jr. recaps with unabashed gusto and marked candor the successive metamorphoses of the film capital. Son of the pioneer film-tycoon, Lasky paints a fascinating though disenchanting picture of the Hollywood he knew so well. (Funk & Wagnalls \$8.95)

Seminal writings by Lev Kuleshov, an early Soviet director and scholar, appear in the polemical and representative **KULESHOV ON FILM**. Theoretical and practical aspects of filmmaking are considered, particularly his pioneering of the "montage" theory that influenced Eisenstein and Pudovkin, and the visual synthesis concept known as the "Kuleshov effect." (California U. Press \$10.)

The "Pyramid Illustrated History of the Movies" has added three highly readable and informative biographies: **MARLENE DIETRICH** by Charles Silver, **W.C. FIELDS** by Nicholas Yanni and **JAMES STEWART** by Howard Thompson. Aply edited by Ted Sennett, these attractive and accurate texts reflect the wide-ranging interests of film students. (Pyramid \$1.75 ea.)

A group biography, linking four stars of Hollywood's days of greatness, **GABLE & LOMBARD & POWELL & HARLOW** by Joe Morella and Edward Z. Epstein presents a lively version of mostly known facts, but holds the reader's interest throughout. (Dell \$1.50)

Hollywood editor of teenagers' magazine *Flip*, Lindy Franklin offers in **HOLLYWOOD STAR REPORTER** her own brand of youthful unsophistication in interviews with such as David Cassidy, Donny Osmond, Ryan O'Neill and daughter Tatum. (Popular Library \$.95)

\* \* \*

## THE CENSOR'S DARK WORLD

A basic text in the study of censorship, **THE FEAR OF THE WORD** by Eli M. Oboler shrewdly evaluates and carefully documents the variously motivated impulses to stop the viewing and reading of matters involving sexual activity. A most timely study in these troubled days. (Scarecrow \$10.)

Socio-philosophical aspects of freedom of expression are considered in **THE PORNOGRAPHY CONTROVERSY**, skillfully edited by education expert Ray C. Rist. It offers a selection of informed opinions about the legal, ethical, cultural and esthetic questions

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By **GEORGE L. GEORGE**

raised by the easy availability of erotic materials to the public. (Rutgers U. Press \$9.95/3.95)

\* \* \*

## CHOICE PERSPECTIVES

A stimulating and knowledgeable study, **ABOUT DOCUMENTARY: ANTHROPOLOGY ON FILM** by Robert Edmonds defines and clarifies the nature and methods of fact film. A filmmaker himself and professor of cinema at Chicago's Columbia College, Edmonds perceptively analyzes the various facets of the documentary — defined as an anthropological study of man — in its social and esthetic aspects, and its furtherance of better citizenship. (Pflaum \$6.95/4.50)

The purpose of Ben Parker and Pat Drabik, in **CREATIVE INTENTION**, is to offer students a detailed course in filmmaking as a means to self-expression. They succeed well enough in covering the conceptual and technical approach, but regrettably fail to communicate the inspirational stimulus so essential to the teaching of a creative medium. (Law-Arts Publ. \$14.50)

Educator Ralph Amelio's **HAL IN THE CLASSROOM: SCIENCE FICTION FILMS** provides an enlightening discussion of sci-fi movies, as well as a practical resource guide to the use of these films in the learning process. (Pflaum \$4.95)

A loving and attractive tribute, Lee Edward Stern's **THE MOVIE MUSICAL** surveys concisely but knowledgeably 45 years of an always popular *genre*, its memorable films and outstanding performers. (Pyramid \$1.75)

Shunning the socio-psychiatric labels usually pinned on science-fantasy films, Calvin Thomas Beck, in **HEROES OF THE HORRORS**, credits imagination for the everlasting popularity of this type film. His well documented survey, enhanced by beautifully reproduced stills, discusses the stars and the movies with fascinating insight and contagious enthusiasm. (MacMillan \$12.95/7.95)

In **BORIS KARLOFF AND HIS FILMS**, Paul M. Jensen draws a definitive portrait of an accomplished actor as well as an informative study of the type of films in which Karloff appeared. Production details of *Frankenstein* and other features are disclosed, including a candid analysis of the performers' evolving screen image. (Barnes \$8.95)

\* \* \*

## WRITE ON!

The popularity of scenarios in print continues to grow, with all tastes being catered to. The scripts of *Battleship Potemkin*, *October* and *Alexander Nevsky* appear in **EISENSTEIN: THREE FILMS**, a well illustrated new translation by Diana Matias with an authoritative introduction by Jay Leyda. (Harper & Row \$7.95/4.95)

Edited by Richard J. Anobile in a format he pioneered — sequential frame blow-ups coupled with the complete dialogue — **ALFRED HITCHCOCK'S PSYCHO** and **MICHAEL CURTIZ'S CASABLANCA** are vividly reconstructed in attractive large-format books. (Avon \$4.95 ea.)

Not strictly a script, Mark Robson's spectacular **EARTHQUAKE: THE STORY OF THE MOVIE** combines a sequence-by-sequence transcript of the film, plus an inside account by George Fox of its research and filming. (Signet \$1.25)

John Steinbeck's original screenplay of Elia Kazan's 1952 film, **VIVA ZAPATA!** and Louis Malle's current import, **LACOMBE, LUCIEN**, are notable contributions to the literature of the screen. (Viking \$2.95 ea.)

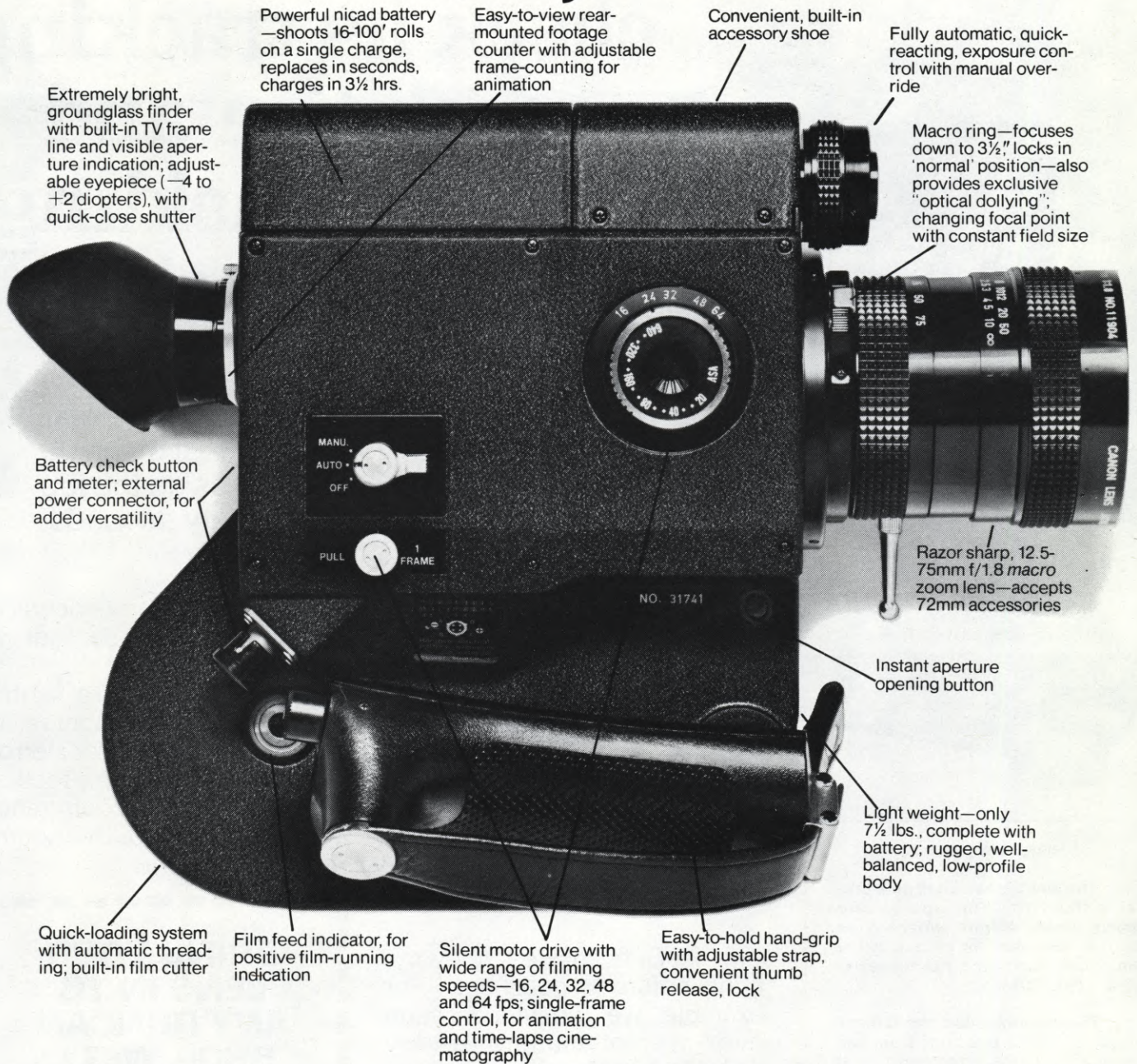
A collection of film classics, **MAS-TERWORKS OF THE BRITISH CINEMA** offers the scripts of *Kind Hearts and Coronets*, *Saturday Night and Sunday Morning*, *Brief Encounter*, and *The Third Man*. John Russell Taylor's introduction, comments by Graham Greene and Roger Manvell, and 32 pages of stills complete the book. (Harper & Row \$10./4.95)

The script of Alexandro Jodorovsky's unusual — some call it far-out — film **EL TOPO**, plus the director's lengthy interview about its meaning and making, constitute an ideal introduction to *avant-garde* cinema. (Links, 33 W. 60 St., NYC 10023 \$3.95)

A collection of scripts by noted playwright Harold Pinter, **FIVE SCREENPLAYS** includes *The Servant*, *The Pumpkin Eater*, *The Quiller Memorandum*, *Accident*, and *The Go-Between*, in which his dramatic gifts and calculated use of words combine for deeply satisfying reading. (Grove \$3.95)

Because of their essentially visual nature, Spike Milligan's **MORE GOON SHOW SCRIPTS**, a zany series of radio programs broadcast by the BBC in the late 50's, warrants mention. Eight scripts from this immensely popular show afford a unique insight into British humor. (Dutton \$6.95) ■

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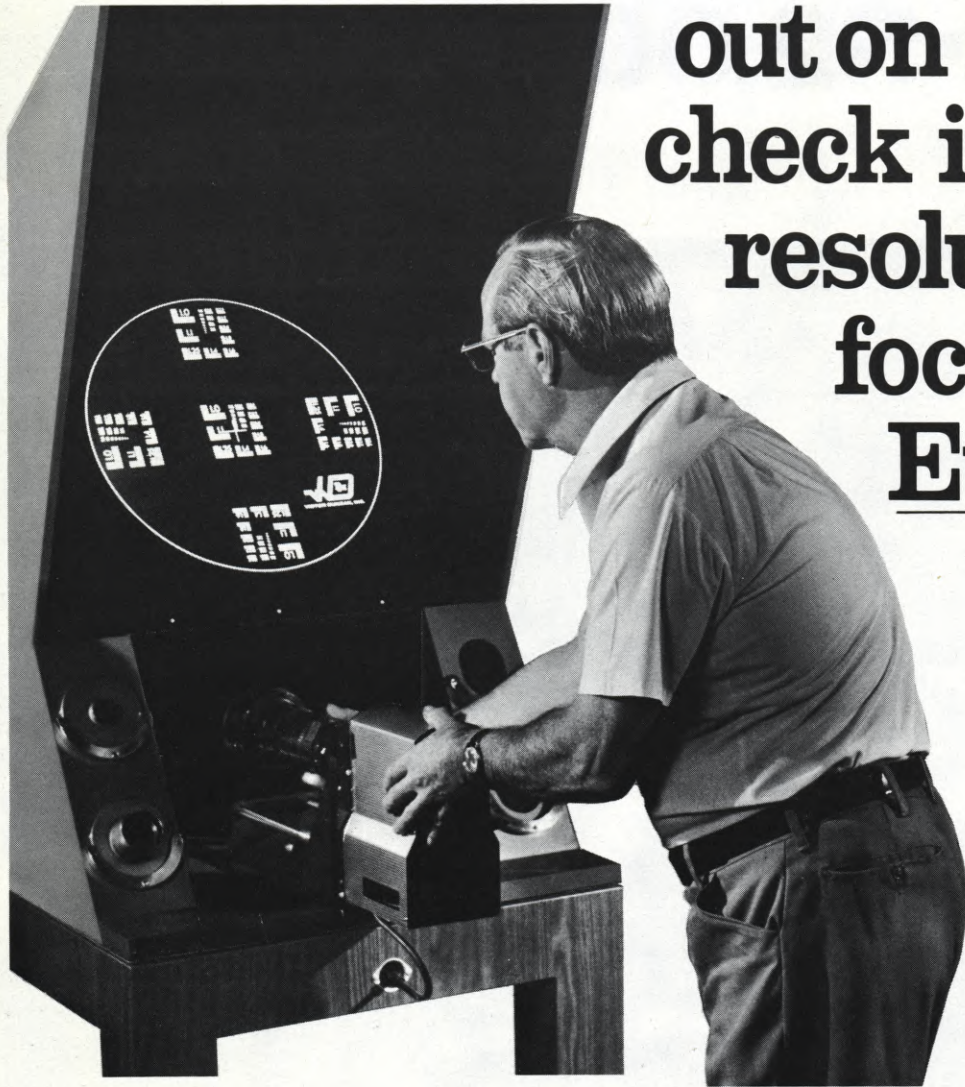
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# THE HONOR ROLL



## Sol Halprin, ASC

Sol Halprin, as any other cinematographer who began his career in the early years of motion picture photography, will answer the question "how did you begin working in the industry?" with the reply, "I started work for the film laboratory . . ."

And, indeed, in March of 1918 he became secretary to Fox Laboratory Superintendent George Schneiderman and, within a few months, was made Assistant Laboratory Superintendent. When George Schneiderman became the cameraman on the Shirley Mason and Al Ray pictures, Sol Halprin worked as his assistant cameraman.

After this he worked with Buck Jones on all of his pictures, first as an operator and then as an Akeley Camera specialist. As an Akeley specialist he also worked on some of the Tom Mix pictures and others at Fox Pictures. The camera was used especially to photograph fast action and was a panoramic type of camera. He also worked on many of the John Ford pictures including "The Iron Horse" and "The Big Trail".

Halprin was given his first opportunity to be a Director of Photography by an old and dear friend, comedian and director, Slim Summerville, on the Sunshine Comedy pictures.

When sound came it was his duty to make photographic tests of many of the new people later used in Fox pictures.

In 1931 he was sent to New York to make photographic tests of new people, many of whom were later put under contract to Fox. The assignment was to be for three months, actually they kept him there for 22 months.

During his spare time, while in New York, he shot background scenes, thus beginning the Fox Film Library and the original material was used for many years thereafter.

During these days he became quite a daredevil cameraman and recalls some of his experiences.

"I got to shoot most of the air footage that we photographed years ago," he recalls. "At that time we received no extra pay for that kind of hazardous duty. We just did it for the love of the art. I can remember going up numerous times in the old Standard

and Jennie two-seater open-cockpit planes. There I was with a naked camera and my eye glued to the viewfinder. In order for me to get shots of parachute jumpers and follow them all the way down, the pilot would have to go into a side-slip and I would stand up in the seat. There was nothing holding me in but a rope tied to the belt that was holding up my pants. Whether or not you fell out depended upon how well you were braced."

In another adventure he states: "One time I went out to get some background shots from the roller coaster at Coney Island. I was roped into the front seat in a sort of half-standing posture. I braced myself with my knees and held on for dear life. It was really a rough ride. What with all the bumping and bouncing my knees were black and blue when we got through — but I got some great shots."

On another occasion when some rear-projection process scenes were needed, Halprin and another operator set up two cameras in a kind of sled which was then hitched to Otto Lang (then a world champion skier), and he took off down the steep slope with the two cameramen riding backward and filming all the way.

In later years as head of the camera department at Fox he said, "One thing I've always prided myself on as a department head is that I would never ask a cameraman to do anything that I wouldn't do myself. If one of them didn't want to shoot the scene, and I thought it was safe, I'd go ahead and shoot it myself. Of course, I wouldn't ask them to do it unless I thought it was safe. But these things are all part of a cameraman's job and if he studies out the problem in advance, just as a stuntman does, he can cut the risk way down."

In 1937, Halprin was sent to Africa to help photograph a second unit exposition with Osa Johnson for 20th Century-Fox for the Stanley and Livingston picture.

Because of his obvious expertise in background work, Halprin was put in charge of the Background Projection Department at Fox in 1938.

As a member of the special Naval Reserve unit under Admiral John Ford, he was called to go to Washington on December 11, 1941 and was assigned

to the Office of War Information. This unit later became part of the OSS and while Halprin was in Washington he designed and built a complete 16mm/35mm film processing laboratory for the OSS in Washington. He was also sent by Admiral Ford to India and Ceylon on military business.

Having entered the service as a Lieutenant, he was finally discharged as a full Commander and returned to work at 20th Century-Fox where Darryl Zanuck put him in charge of the camera department, background projection department, and projection, machine shop for camera repair, film loading room and the film library. He was also the head of Fox Film Laboratory in Hollywood, under Alan Friedman.

In 1953 he received an Academy Award as one of the co-inventors of CinemaScope. He recalls that in an attempt to match the famous Cinerama roller coaster scenes he was back in the front seat of a roller coaster again, this time with an assistant, Scotty McCune. The roller coaster was the one in Long Beach which is noted for its treachery. They hit an extra hard bump and the camera magazine flew off, McCune grabbed for it in mid-air and saved the day.

During his years in his multiple capacities, Halprin has been instrumental in developing many of the innovations in cinematography and background projection which have evolved at 20th Century-Fox.

In April of 1967, Sol Halprin was honored with a party at the studio for 50 years of service to 20th Century-Fox, and in 1970 he retired from 20th Century-Fox after 53½ years in all phases of photography and laboratory work. He now works as a consultant for the Hollywood Film Company.

During his years as a member of the American Society of Cinematographers, he has served eight years as its President and has been on its Board of Directors consistently since the early Forties.

He has also served one year on the main Board of the Academy of Motion Picture Arts and Sciences and for many years on numerous of their technical committees. ■



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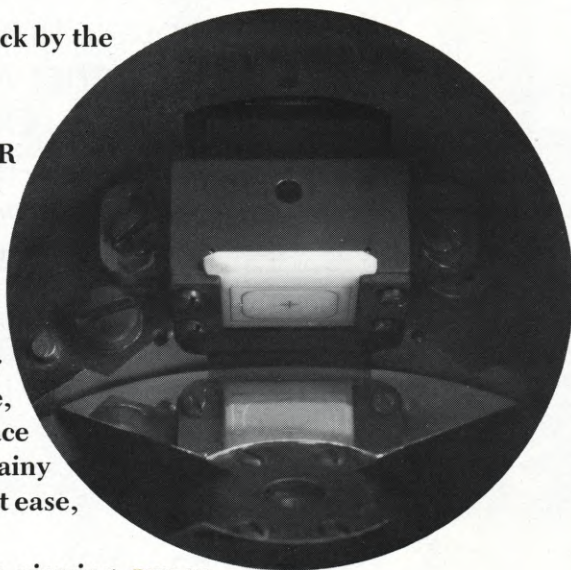
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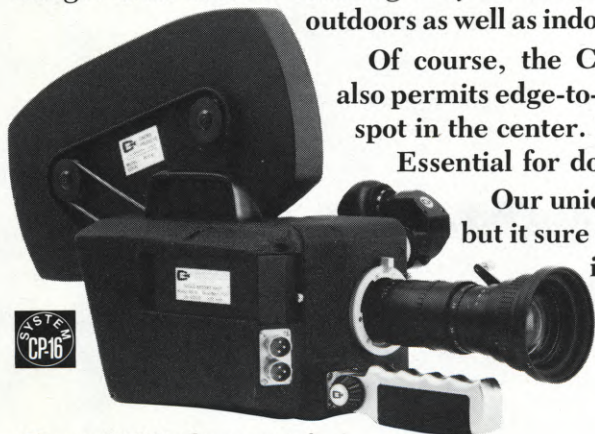
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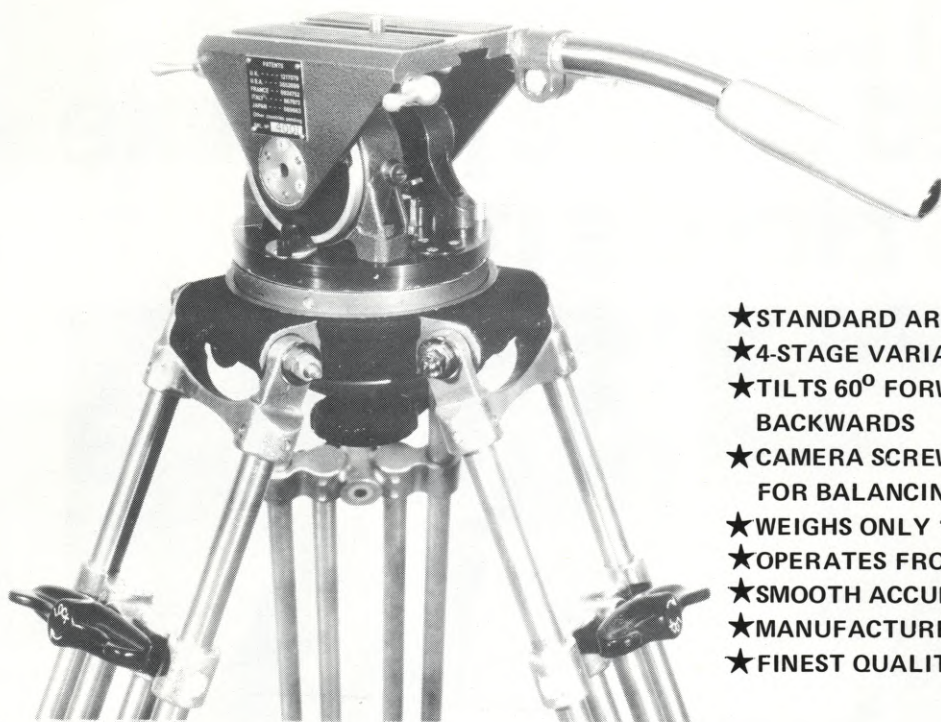


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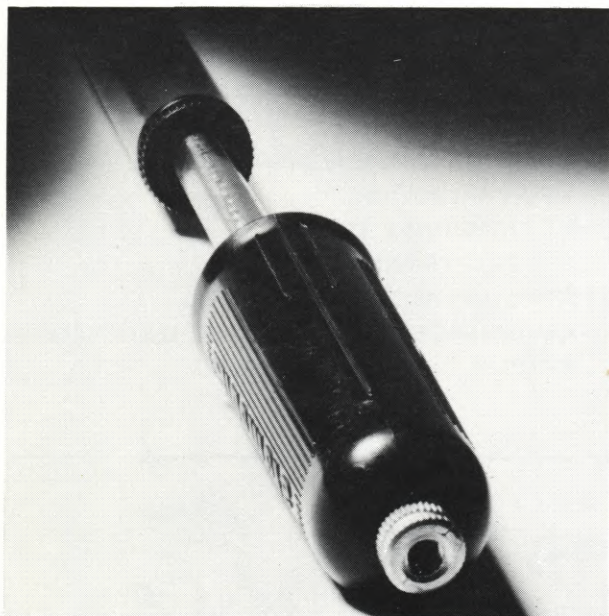


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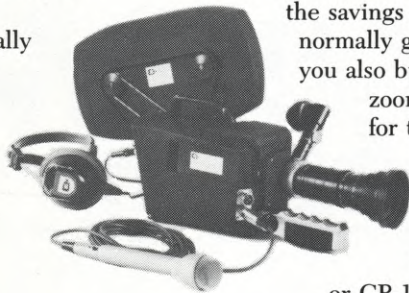
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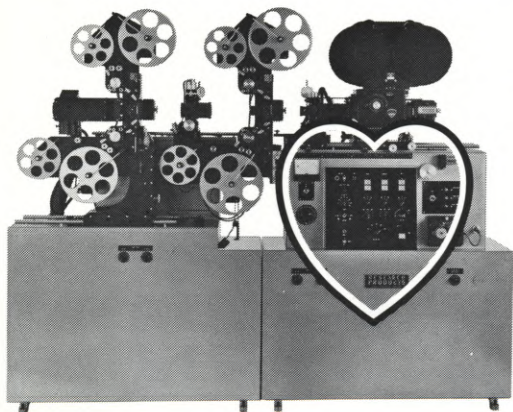
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(LEFT) A segment of the 1200 guests on hand at the Century Plaza Hotel in Los Angeles on the evening of February 9 to pay homage, as Orson Welles received the coveted Life Achievement Award presented by the American Film Institute. (RIGHT) Welles, sincerely touched by this tribute from his peers, gives his acceptance speech to the assembled guests.

## HOLLYWOOD SALUTES ITS "MAVERICK" GENIUS, ORSON WELLES

At a gala affair, honors are heaped on the fabulous Welles by the American Film Institute and more friends than he ever realized he had in Hollywood

More than 1200 notables of motion pictures, television, society, government and industry were in attendance the night of February 9 in the Los Angeles Room of the Century Plaza Hotel when Orson Welles became the third outstanding film personality to be accorded the coveted Life Achievement Award presented annually by the American Film Institute.

The special tribute to "one whose talent has in a fundamental way advanced the film art; whose accomplishments have been acknowledged by scholars, critics, professional peers and the general public; and whose work has stood the test of time" was presented to Welles by George Stevens, Jr., AFI director, to highlight the black-tie affair which was arranged by dinner chairman Howard W. Koch.

At the inaugural award dinner in 1973 the late John Ford was honored. Last year's tribute was for James Cagney.

A brilliant roster of stars participated in the Welles tribute which was hosted by Frank Sinatra with guest appearances by (alphabetically) Edgar Bergen and Charlie McCarthy, Ingrid Bergman, Peter Bogdanovich, Joseph Cotten, Charlton Heston, Janet Leigh, Jeanne Moreau, Dennis Weaver and Natalie Wood.

Welles's single best-known contribution to the industry is a motion picture he helped write, produced,

directed and starred in — "CITIZEN KANE". The revolutionary advances that characterize this film — in the areas of photography, sound, editing, set decoration and construction — have earned it a place as a classic American film, frequently the subject of critical comparisons and closely studied the world over.

According to George Stevens Jr.,

Director and Chief Executive Officer of the AFI, "Orson Welles with one film influenced the film art as much as, or more than, any filmmaker of our time."

In addition to "CITIZEN KANE" Welles is noted for his work on the critically-acclaimed "THE MAGNIFICENT AMBERSONS" and "THE LADY FROM SHANGHAI" and for his interpretations of Shakespeare's "MAC-

Seated on the dais during the Award ceremonies were (left to right): Joseph Cotten and his wife; Orson's wife, Paola; Welles; his daughter, Beatrice; and Mr. and Mrs. Richard Wilson, longtime friend and associate. Like the prophet not often honored in his own country, Welles has worked abroad for many years and was gratified by this "hometown" recognition.



BETH" and "OTHELLO", among other projects.

His best-known acting credits also include his Falstaff in "CHIMES AT MIDNIGHT", his portrayal of Cardinal Wolsey in "A MAN FOR ALL SEASONS" and his role of Harry Lime in the 1949 film classic "THE THIRD MAN".

As a director, his catalogue of credits numbers close to 20 films. His acting credits total over 60.

The recipient of two Academy Awards, one for his writing on "CITIZEN KANE" and an honorary Oscar, Welles has a list of additional accomplishments on the American stage, in radio and on television.

He and John Houseman founded the Mercury Theater in the 1930's and brought a number of interesting productions to its repertoire. The Mercury group took to the air with radio plays, bringing the then-young Welles to national attention and helping propel him to Hollywood, where he completed "CITIZEN KANE" at the age of 26.

At the gala tribute sponsored by the American Film Institute, film-clip highlights from many of the motion pictures that Orson Welles either created or appeared in were interspersed with personal reminiscences and comments by Welles' colleagues and friends.

Among the Welles films spotlighted were "CITIZEN KANE", "THE MAGNIFICENT AMBERSONS", "TOMORROW IS FOREVER", "TOUCH OF EVIL", "THE LADY FROM SHANGHAI", "FALSTAFF: CHIMES AT MIDNIGHT" and Welles' current production, "THE OTHER SIDE OF THE WIND".

(RIGHT) The handsome Life Achievement Award trophy presented by the AFI to Welles, the third luminary to be so honored.



(LEFT) In a jovial mood, a somewhat mellowed (but not too much) Welles graciously accepts the Award. It was his night and he made the most of it.

In honor of Welles, Frank Sinatra sang "The Gentleman is a Champ", a Sammy Cahn parody on "The Lady is a Tramp", accompanied by Nelson Riddle and his orchestra.

With Welles at his table were his wife, Paola Mori, their daughter Beatrice and long-time friends Joseph Cotten and Richard Wilson. A parade of celebrities paid tribute to this one-of-a-kind original of the American cinema.

Johnny Carson recalled how Welles sawed him in half during a magic spectacle, the "Mercury Wonder Show", performed for American troops in 1943 inside a tent erected on Cahuenga

Continued on Page 428



# THE ONE AND ONLY ORSON WELLES

Like a gypsy restlessly wandering the earth, this rare artist moves in his own magnetic field of creative energy, and where he has been things are never quite the same again

Except for a few rare and unexpected visits to New York and Hollywood, he has been catapulting around the rest of the world like a huge grey-black cloud of inspiration and energy buffeted from one place to another by the errant winds of artistic opportunity and demand. The rumors, the gossip, the facts and the fables drift back from unlikely areas, engulfing his Falstaffian figure in the mists of mystery while he

plies his trade as one of the most innovative, most exciting and most controversial filmmakers of the 20th century.

Wherever Orson Welles goes, whatever he does, he inevitably creates interest and excitement.

And now, for a rare moment, Hollywood has brought him back to the scene where his remarkable cinema career began in 1940 with what many

consider the motion picture screen's greatest achievement, "CITIZEN KANE", this time to appear before a star-studded audience of film and television hierarchy to accept the Third Annual Life Achievement Award from the American Film Institute, a distinguished honor previously bestowed on the late John Ford and James Cagney.

The annual award established by the AFI Board of Trustees pays tribute to "one whose talent has in a fundamental way advanced the film art; whose accomplishment has been acknowledged by scholars, critics, professional peers, and the general public; and whose work has stood the test of time . . ."

For such a role, Orson Welles is perfect casting.

George Orson Welles, the second son of Richard Head Welles and the former Beatrice Ives, was born in Kenosha, Wisconsin, on May 6, 1915. His father was a world-traveler, a bon vivant, a manufacturer and inventor of such products as a newfangled plow, an automatic dishwasher, and a collapsible picnic kit that was the forerunner of the Army mess kit. His mother was a concert pianist, a suffragette and a crack rifle-shot. It has been said that his father originated the name, Orson, over a round of drinks in Rio de Janeiro.

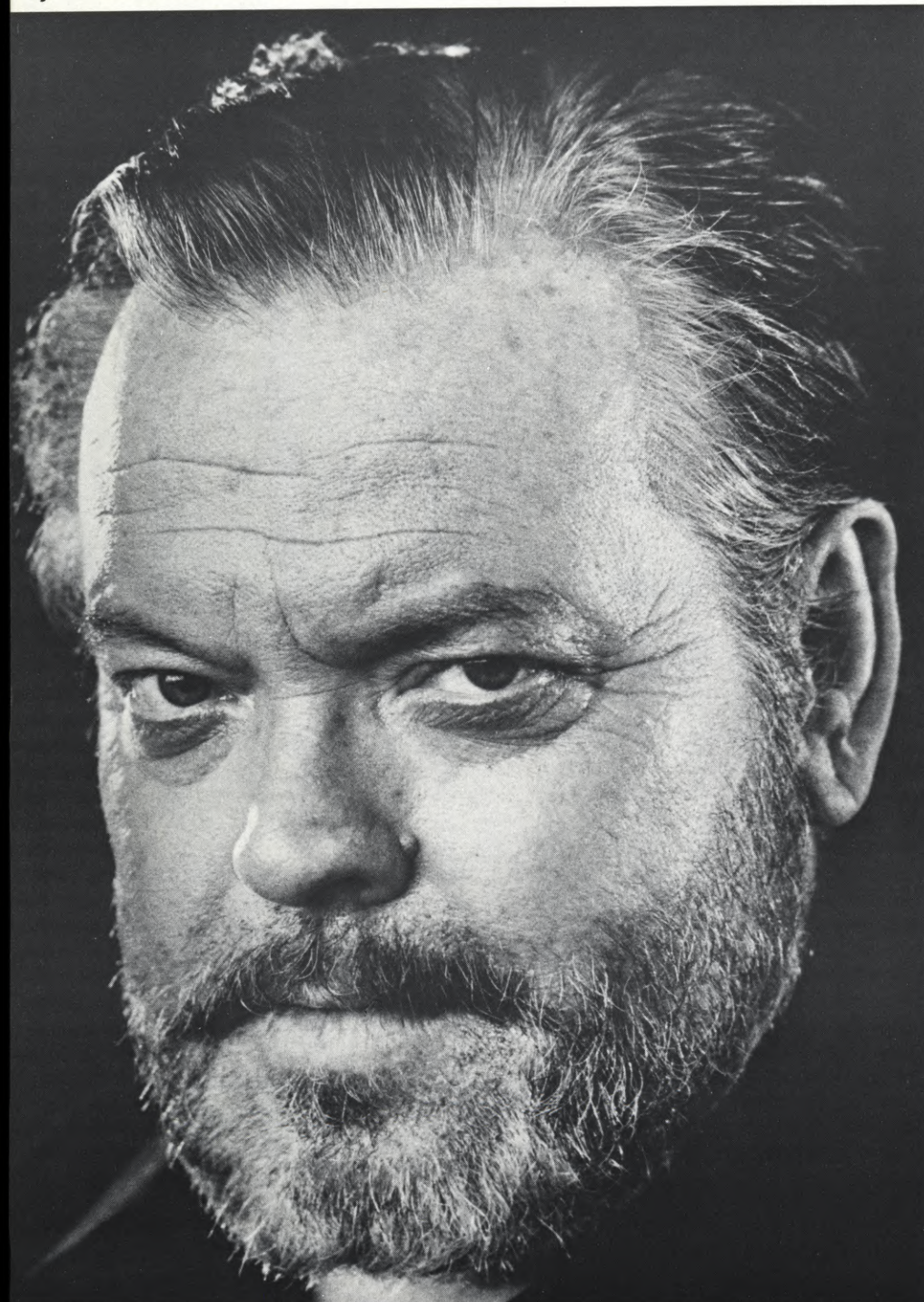
His parents separated when Orson was six and he traveled with his mother for two more years prior to her death. When his dad died seven years later, Dr. Maurice Bernstein became his guardian.

It is doubtful that there was ever another childhood such as the one Orson experienced. At the age of two he was able to read fluently. At seven he could recite every speech in "King Lear". When he reached the fourth grade he had progressed smoothly from child prodigy to boy wonder. At the age of ten he was an actor, producer, painter, magician and dramatist. He had visited most of the corners of the globe and had expressed his preference for Berlin, Chicago, Budapest and Peking. At the age of eleven he made a solo walking tour of Europe.

After brief early schooling in Madison, Wis., Orson was enrolled at the Todd School for Boys in Woodstock, Ill., where he managed to complete

Continued on Page 432

**Orson Welles — one of the most innovative, most exciting and most controversial filmmakers of the 20th Century. He is a one-of-a-kind American original who has changed the art of the cinema forever. He has had the courage to dare and fail, but as one critic put it, "Even an Orson Welles failure is a dozen times more interesting than many a successful work by a less talented director."**



# REALISM FOR "CITIZEN KANE"

Thirty-four years after its release, a look behind the scenes at how the most honored film in the history of the medium was photographed

By GREGG TOLAND, ASC

*(EDITOR'S NOTE): On the night of February 9, 1975 all of Hollywood turned out to honor Orson Welles, as the American Film Institute presented him with its Third Annual Life Achievement Award. Duly praised was Welles' first film, and acknowledged masterpiece, the stunning and audacious "CITIZEN KANE". This film is considered by many to be the greatest motion picture ever made — and well it might be. At the very least, it has remained an inspiration to every serious film-maker since its release. It is in tribute to Orson Welles and to his brilliant cinematographer on "KANE", the late Gregg Toland, ASC, that we reprint the following article which appeared originally in the February 1941 issue of AMERICAN CINEMATOGRAPHER.)*

During recent years a great deal has been said and written about the new technical and artistic possibilities offered by such developments as coated lenses, super-fast films and the use of lower-proportioned and partially ceiled sets. Some cinematographers have had, as I did in one or two productions filmed during the past year, opportunities to make a few cautious, tentative experiments with utilizing these technical innovations to produce improved photodramatic results. Those of us who have, I am sure, have felt as I did that they were on the track of something really significant, and wished that instead of using them conservatively for a scene here or a sequence there, they could experiment free-handedly with them throughout an entire production.

In the course of my last assignment, the photography of Orson Welles' pic-

ture, "Citizen Kane", the opportunity for such large-scale experiment came to me. In fact, it was forced upon me, for in order to bring the picture to the screen as both producer-director Welles and I saw it, we were forced to make radical departures from conventional practice. In doing so, I believe we

have made some interesting contributions to cinematographic methods.

"Citizen Kane" is by no means a conventional, run-of-the-mill movie. Its keynote is realism. As we worked together over the script and the final, pre-production planning, both Welles

Continued on Page 436



(ABOVE RIGHT) Welles and his highly talented Director of Photography, Gregg Toland, ASC, sprawl on the floor to line up a low-angle shot during the filming of "CITIZEN KANE" at the RKO Studios (BELOW) Two scenes from "CITIZEN KANE". The experimental visual style used on this film was revolutionary at the time, with techniques that represented radical departures from conventional practice. "KANE" is regarded as a classic of the cinematic art and is still avidly studied by film students the world over.



ON LOCATION WITH

# The Return of the Pink Panther



Editor visits location site for the filming of a sequel to a famous Blake Edwards comedy in a setting right out of the Arabian nights

By HERB A. LIGHTMAN

## MARRAKECH, MOROCCO

As my plane circles the sun-drenched airport and glides in for a landing, I look out the window and spy what is unmistakably a motion picture crew set up for shooting along the main runway. But by the time I have cleared Immigration and Customs, they have folded their tripods and parallels and all but disappeared. I catch a fleeting glimpse of producer/director Blake Edwards getting into his limousine and driving away.

It is at his invitation that I have journeyed to this off-the-beaten-track part of Morocco. A telex-relayed message said, in essence, "We're at it again. Come see what we're doing." And that's all it took, because, after my visits to the locations of "WILD ROVERS" and "THE TAMARIND SEED" (both fully reported in *American Cinematographer*) I seem to have become a member of the family. I think Blake regards me now as a kind of mascot, or (I hope) good luck charm. At any rate, in his own quiet way, he's always an exciting film-maker to observe in action — and that's why I'm here.

Waiting for me at the airport is Unit Publicist Quinn Donoghue, an old friend and the first of several with whom I am to enjoy reunions here. As we drive toward Marrakech, he fills me in on the project, "THE RETURN OF THE PINK PANTHER".

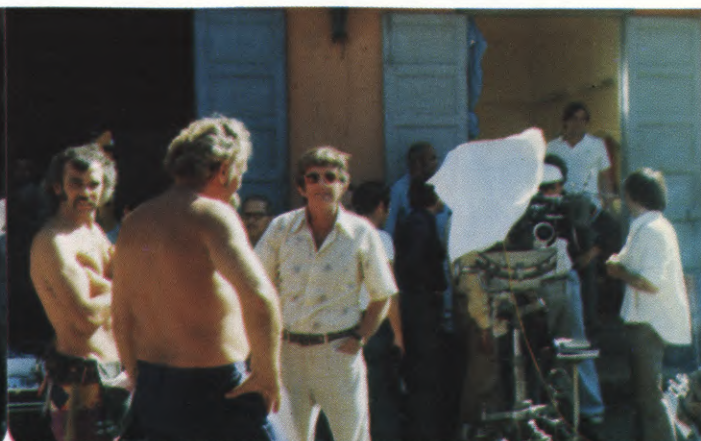
"Twelve years ago Blake conceived and constructed Pink Pantherdom with his highly successful comedy, 'THE PINK PANTHER', introducing Peter Sellers as the bumbling French *flic*,  
Continued overleaf

Crowds gather in the main square of Marrakech Morocco to watch the crazy Americans and Britishers as they go through some wacky maneuvers during location filming for Blake Edwards "THE RETURN OF THE PINK PANTHER". In this zany romp, Peter Sellers re-creates the role of Inspector Clouseau, an "accident-prone" French sleuth, which he had played previously in Edwards' "PINK PANTHER" and "A SHOT IN THE DARK". Other locations included Casablanca, Nice, Gstaad (Switzerland) and London.





The Djemaá el Fna is a vast asphalted plaza in the center of Marrakech, large enough to hold thousands of people. Every day there are hundreds of separate "floor shows" going on simultaneously. (LEFT) A native combo beats out some Moroccan rock. (RIGHT) A snake charmer puts his cobra through its paces. Fangs a lot! One can also count on seeing sword swallowers, storytellers spinning their yarns, acrobats, holy men reading the Koran and strangely-garbed dancers.



(LEFT) As the "PANTHER" company shoots near the entrance to the bazaar, a local gendarme stands by to control the crowds, should they press too close. The local people displayed great curiosity about the strange ritual of the film-makers, but the author was much more fascinated by their native rituals. (RIGHT) Producer/director Blake Edwards (center) stands in the middle of it all, waiting to direct a scene in which Christopher Plummer enters the tiny barber shop at the rear.

(LEFT) Peter Sellers, in a cast from stem to stern and swathed in bandages from head to toe, debarks from the plane on crutches and promptly somersaults down the ramp. His cast actually arrived broken in pieces and had to be laced together with the bandages. (CENTER) The Dark Figure, a cat burglar suspected of being the famous Phantom jewel thief paces the roof of a Marrakech government building doubling as the "Lugash" museum. (RIGHT) Blake Edwards talks with Unit Publicist Quinn Donoghue.



(LEFT) The company prepares to shoot at the Casablanca airport. (CENTER) Edwards waits patiently, as a bank of Brute arcs is set up in the background to fill the brilliant North African sunlight. (RIGHT) Christopher Plummer, in his role of the Phantom, stands next to a truck which, in the script, is supposed to be blown to pieces. During the take it failed to oblige, although all of the bolts had been greatly loosened.





British comedian Peter Sellers in a repeat of his role as Inspector Clouseau, a klutzy French detective who, in the words of Edwards, "makes a wasteland out of everyplace he goes." Sellers helped develop the character during planning of the original "PINK PANTHER" and it was his suggestion to make the detective accident-prone, a situation which has made possible much hilarity.

Inspector Clouseau," he reminds me. "The combination worked so well that he resurrected Clouseau for 'SHOT IN THE DARK' and now he's repeating his triple function as producer/director/co-writer for 'THE RETURN OF ...'"

Peter Sellers is back again as the klutzy Clouseau, he tells me, but the role of the arch-thief known as "The Phantom" (originally played by David Niven) is being essayed this time out by Christopher Plummer.

The term "The Pink Panther" — usually associated by audiences with a certain cerise feline of cartoon fame — actually refers to an illusion that can be observed at the core of a huge diamond, when it is viewed under lights. The plot of the current film revolves about yet another attempt to heist this

gem from its resting place in the museum of a mythical country called "Lugash". Pulled off by a Dark Figure in drag typical of the Phantom, the caper is successful. The local authorities call for outside help — which arrives in the form of the addeplated Clouseau.

And then the fun begins.

#### The Fabled City

In the distance, as we drive, I see the ancient, massive red walls of Marrakech, framed against a spectacular background of the snow-capped High Atlas mountains — an almost heart-stopping sight. These tall and extremely thick walls enclose an enormous rectangle of the city — extending forty or fifty miles in all. They represent an incredible feat of engineering. Rising above them, as tall as Niagara

Falls, is a monolithic square tower with a crenelated top like that of a fortress. This is the *Koutoubia*, built sometime around 1150, and a gem of Muslim architecture.

We approach the grounds of the Hotel Mamounia, where the "PINK PANTHER" company is headquartered. It is like no other hostelry I have seen in all of my far-flung travels. It, too, is surrounded by massive red walls, inside of which are acres of lush gardens and limpid pools — swimming and otherwise. The palatial structure itself is of distinctive design — arched and balconied, but not typically Arabic in style.

I register in and, as I walk down the corridor toward my suite, I pass an impressive pair of doors over which is inscribed "The Churchill Apartment", and I recall having read that Marrakech was one of Winnie's favorite places. I can understand why.



(ABOVE RIGHT) Between set-ups on the Marrakech location, Producer/Director Blake Edwards takes time off to cuddle wife Julie Andrews. (CENTER) The mighty Sam-Mobile, versatile location vehicle shipped over from Samuelson Film Service Limited in London, is a gathering place for the crew when there is any spare time. (RIGHT) At an old "haunted" French Foreign Legion post at Oumnast, outside of Marrakech, the crew prepares to shoot the frustrating truck-blowing-up sequence.







Sequential photographs showing the explosives being set off on the truck scheduled to be blown up before the cameras. All of the bolts had been loosened so thoroughly that the truck nearly fell apart standing still, and there was enough dynamite to blow up the Eiffel Tower, but when the explosion shown here went off, the truck just stood there. The scene was later reshot with special effect techniques in London.

Once I am squared away in my new digs, Quinn Donoghue takes me to the production office which has been set up in the hotel, and it is there that I have my second reunion of the day. It is with young Peter Samuelson, who represents the third generation of a famous British film-making "dynasty". His grandfather was a fabled pioneer producer in England and his father is Managing Director of Samuelson Film Service Limited. Peter has opted for being in the thick of the fray. He is functioning as Production Manager on "THE RETURN OF THE PINK PANTHER".

Riding herd on so expensive a production to be shot in five far-flung foreign locations is a formidable baptism of fire for a 25-year-old (or anybody else, for that matter) but Peter is coping beautifully and apparently thriving on the challenge. He is bright-eyed and bushy-tailed, to employ one of my favorite descriptions, and is possessed of a keen intelligence and most pleasant personality.

I have known Peter's family well for years and have caught glimpses of him intermittently during that time, as he buzz-sawed his way through prep school and then Cambridge, but now I see him in an entirely different *milieu*. I get an impressive demonstration of his prodigious efficiency when I casually mumble about the absence of several necessities of life which I left behind during my last-minute exodus from Hollywood. He takes off like the Roadrunner in the cartoons and comes whooshing back in nothing flat, vibrating in the doorway with the needed items in hand. Incredible!

#### The Bizarre Bazaar

The next order of the day is to hunt down the company, wherever they may be shooting, and join them on the location. Peter, of course, has their latitude and longitude plotted down to the nearest second, so we set off to track them.

The call sheet says that they are shooting in the central square of the city, hard by the bazaar. As we

Continued on Page 446



(ABOVE) The film company's 1000-watt generator stands outside the walls of the old native quarter in Marrakech, a rabbit warren of labyrinthine tunnels. When on the street, all the women of Marrakech dress like the lady in the foreground, swathed from head to toe and veiled. No Women's Lib here, obviously. (BELOW) The covered bazaar is lighted for night shooting. Multi-colored dyed wool yarn hangs from the ceiling.



# SHOOTING A DOCUMENTARY OF THE PRODUCER/DIRECTOR IN ACTION

The major problem in shooting a behind-the-scenes film on the making of "PANTHER" was getting the "star" of the show to hold still long enough

By **ED ANDERSON**

Director, Teamwork Films Limited, London

Last summer out of the blue, as these things usually happen, Geoff Edwards phoned me in London to say that his father, Blake Edwards, was about to begin filming on "THE RETURN OF THE PINK PANTHER". Since Geoff had recently acquired a camera and some sound gear, he planned to join the feature unit on location and shoot some behind-the-scenes footage for a documentary. It was just that vague. He had Bill Gunther, a good friend of his, as his sound assistant, and he wondered if I would like to come along as cameraman and organizer . . .

starting today? As I scratched my head, he went on to reveal that the production would take us to Casablanca, Marrakech, Switzerland, and the South of France. I could hardly refuse. The three of us had two weeks to make all the necessary arrangements.

At first we approached the project rather lightly, as the whole idea was still germinating in our minds. It soon occurred to us that no one had yet produced a documentary about Blake Edwards, and that we could do it if we didn't let the opportunity slip through our fingers. From then on we began to

take the project very seriously; except that now, instead of two weeks, we had only ten days to make all the arrangements.

We knew that a profile of Blake Edwards would be of interest to the feature publicity department, so I approached Quinn Donoghue, the American Unit Publicist, to see if we might get some money for our project from the feature budget, and he said he would see what he could do. Although it was very late in the game by this time, more money was promised, so we began to look a little more critically at

Shooting the Pink Panther diamond itself for a documentary on Blake Edwards in action turned out to be a challenging project. Here Ed Anderson, assisted by focus-puller John Campbell, films the temperamental gem in the Lugash Museum set constructed on the sound stage at Twickenham Studios, London. He is using the Eclair ACL camera equipped with a Canon 12mm-120mm Macrozoom lens.



(LEFT) Ed Anderson holds the Eclair ACL with Canon Macrozoom lens nestled under his arm. In the background is Director of Photography Geoffrey Unsworth, BSC. They are on the set of a Japanese restaurant at Shepperton Studios, London. (CENTER) Soundman Bill Gunther, Geoffrey Edwards and Bill Anderson shooting preparations for a fight sequence in the Japanese restaurant set. Gunther holds short version of the genuine fishing pole bought in a sports shop and used to literally "fishpole" the microphone. (RIGHT) Eclair ACL with homemade reflective cover for 400-foot magazine.



(LEFT) Anderson takes a light reading in preparation for shooting an interview with Blake Edwards on the backlot of Shepperton Studios. So busy was the producer/director behind the camera that it was impossible to get him in front of the camera to film this critical interview until the very last day of shooting at Shepperton Studios and prior to his leaving the next day for his home Switzerland. (CENTER) Geoffrey Edwards sits in his dad's chair, while standing in for him prior to the interview filming. (RIGHT) Dad's chair feels pretty good. Maybe . . . someday . . .





**At night in Marrakech, Ed Anderson, Geoff Edwards, Bill Gunther and Julie Andrews watch some filming going on up high. Because the subject matter ranged from low-light night subject matter like this to blindingly sunlit days, the decision was made to use a single 16mm stock, the then very new Eastman Color Negative Type 7247.**

our equipment.

The camera I was supposed to be using was a Bolex EBM Electric which belonged to Geoff. It was in beautiful condition, but after attempting to hand-hold it and zoom at the same time I decided that it was just too awkward to handle over extended shooting periods. It was also disturbingly noisy for a documentary unit which was supposed to be inconspicuous. After much thought, we decided to hire an Eclair ACL as our first camera, keeping the Bolex for back-up. I was a little worried about the ACL's vulnerability under heavy location use in the hot and dusty Moroccan climate. Accepting the fact that this camera wasn't as rugged as an Arri S, we simply took a little extra care in handling and maintaining it, and we were rewarded by its virtually flawless operation for twelve weeks of continuous shooting. But more about our reaction to the ACL later.

Geoff had a full complement of his own sound gear, including a Nagra IV-L with crystal control, two Sennheiser 415 cardioid mikes, an 815 rifle mike, and three Sony ECM-50 neck mikes. By any standards this was a superb sound kit, but I knew we could make things a lot easier for ourselves if we could afford to hire a radio microphone. After hunting around for a bargain, we finally faced up to the fact that even \$45 per week was beyond our means for such a long shooting period, particularly as we had just committed ourselves to hiring an ACL for the same period. A sound accessory which we could not do without, however, was a portable mike boom or fishpole. Asking around, I dis-

covered that the British fisherman has invented a special fishing pole for catching a fish called a loach (related to the North American carp) which also makes an ideal wobble-free boom for a microphone. The loach pole is a hollow fibreglass rod about fifteen feet long with a 1½" diameter at one end, tapering to a point at the other end. It breaks down into sections, and weighs less than four pounds. We bought one of these at a sporting goods store, glued a metal thread on the small end to receive our shock mount, and our recording kit was complete.

Since "THE RETURN OF THE PINK PANTHER" was being produced from London, we moved our own production into the London offices of Teamwork Films Ltd., where Stein Falchenberg and Stefan Fichert promised to

look after our post-production at this end while we were on location. They would view and sync up our rushes, and cable negative reports as necessary.

Another consideration, as we were having all our post-production work done in London, was our filming speed. The European television standard is 25 frames-per-second, since their mains frequency is 50Hz. If we shot at 24 frames-per-second, which is required for American television transmission, could we expect problems in finding someone to transfer our sound at that speed? We were pleased to discover that our fears were unjustified. Nearly all the transfer facilities in London can transfer at either 24 or 25 frames-per-second, and many of these have resolving equipment to handle both 50Hz and 60Hz signals.

Our next decision was whether to shoot with negative or reversal stock. If we were to shoot reversal, we would need both High Speed Ektachrome for interiors and Ektachrome Commercial for those never-ending Moroccan sunny days. The unhappy prospect of dealing with two stocks (especially as we would have only two 400-foot magazines) led us in the direction of the then-new Eastmancolor Negative Type 7247, which the London labs had just begun to process on a large scale. The other reason for trying negative was that European television had long been sold on the idea of 16mm negative, and the labs, with this great mass of 16mm negative experience, were rumored to have solved many of the negative "contamination" problems which had plagued 16mm negative processing in the States.

The new negative stock had just gone into production at Kodak (U.K.) Ltd., and it was still being rationed to a  
**Continued on Page 456**

**While the 35mm camera crew sets up in the middle of the street to shoot runbys outside the Palace Hotel in Gstaad, Switzerland, the documentary crew sets up their gear on the sidewalk to film both phases of the action. Although the Eclair ACL was used on a tripod as much as possible, it proved a most effective and easy-to-handle hand-held camera when such shooting was called for.**



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Listing as of: Mar. 1, 1975



## COMMITTEE NAMED FOR ASC COLLEGE FILM AWARDS OF 1974

An awards committee of 24 has been selected for the first annual Best Photographed College Film Awards of 1974, to be held May 19 by the American Society of Cinematographers.

Stanley Cortez, ASC awards committee chairman, named cinematographers Lee Garmes and Winton C. Hoch as co-chairmen of the awards dinner, which will be held at the ASC's headquarters building in Hollywood.

Committee members are: Ernest Laszlo, Linwood Dunn, Charles Clarke, Sol Halprin, George Folsey, Joseph Biroc, Milton Krasner, Ray Rennahan, Harry L. Wolf, L.B. Abbott, Philip Lathrop, Sam Leavitt, Ralph Woolsey, Howard Anderson, Leonard South, Herb Lightman, John Ormond, Blaine Nicholson, Sidney Solow, Wilton Holm, David Fleming and Howard Schwartz.

Entries from more than 100 colleges and universities across the U.S. will be screened by the ASC committee. The entry deadline for 35mm and 16mm films is March 31.

The ASC was founded in 1919 by 15 distinguished directors of photography. The organization now has a membership extending to five continents. Since its inception, ASC members have won 78 Academy Awards.

## BKSTS FOURTH INTERNATIONAL TECHNOLOGY CONFERENCE TO BE BIGGER AND BETTER THAN EVER

With still three months to go, interest in FILM 75 is growing daily and, despite the general economic climate, the signs are that this, the 4th International Technology Conference to be organized by the British Kinematograph, Sound and Television Society, will prove the most successful to date. The previous event drew 1,000 delegates from some 35 territories. FILM 75 will take place at London's Royal Lancaster Hotel June 23rd-27th, 1975.

The 1975 Papers Programme will also have a distinct international flavour with over fifty papers being presented from more than a dozen countries.

More exhibitors than ever will participate in the Equipment Exhibition which has been extended over two floors at the Conference Hotel (Royal Lancaster). All stand space was taken some months ago.

Full support for the Conference has

been given by the industry and, for the first time, the Government's British Overseas Trade Board recognises the event and has agreed to support a reception for overseas delegates. A Government representative is also expected to officially open the Exhibition.

The Rank Organisation will host a reception at the Royal Garden Hotel and an Audio Visual evening will demonstrate a variety of AV entertainment devices — some 'live' and some canned. The week's Conference concludes with a Banquet when the Players Theatre will present a programme of entertainment.

AGFA-GEVAERT LTD. will sponsor FILM 75's Coffee Rendezvous at the Royal Lancaster Hotel. Another first will be an exhibition of posters on the subject of visual communications in film and television.

In addition to the papers presented at FILM 75 Conference venues, there will be an Outside Visit Programme for which BKSTS Conferences have become so well-known. These will be

Continued on Page 422

## SHARK FACTS

Most species of sharks do not have a swim bladder. When they stop, they drown. In last month's issue of *AMERICAN CINEMATOGRAPHER* our great white shark "Bruce" was captured in a dozen color and black-and-white shots and he drowned.

Bruce is a shark of action, not liner notes. Robert Matthey, a wizard of special effects, created our look-alike shark to perform before a movie camera at 12.5 to 24 frames-per-second. I feel that Mr. Matthey's supreme talent, along with his crew and mine, were grossly misrepresented by the poor selection of *non-action* stills by the MCA-Universal Publicity Department.

We hope that when you see the motion picture you will immediately agree.

Just the other day Bruce himself saw the way he looked and ate the March issue. He also coughed up a warning to those individuals responsible: "Don't go near the water!"

STEVEN SPIELBERG  
Director, "JAWS"

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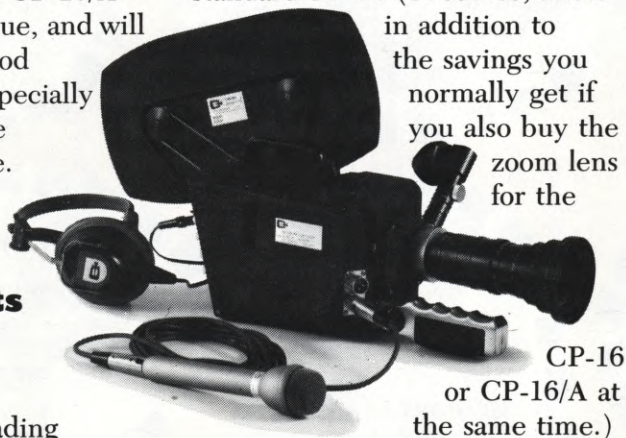
Even though upgrading TV-newsfilm equipment is relatively inexpensive, there are stations that may find it increasingly difficult to do so — what with ever tightening budgets and the shrinking purchasing power of the dollar.

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\*See adjacent page for listing of authorized North American CP-16 Dealers participating in this special offer.

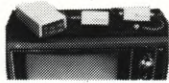
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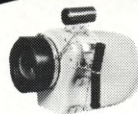
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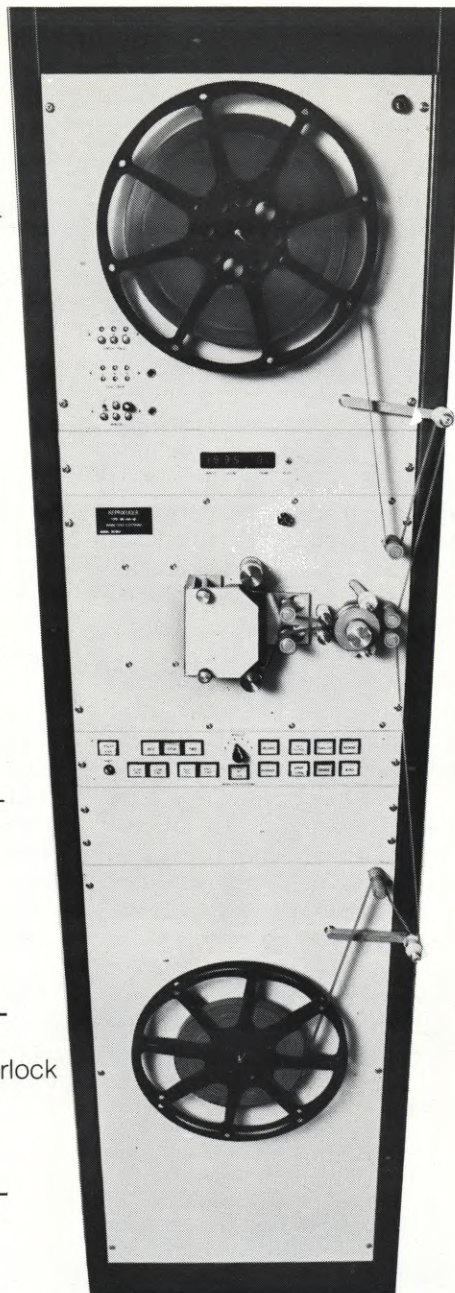
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# THE PANTHER'S PROGRESS

Trucks that fall into swimming pools, cars that refuse to start, explosives that fail to explode and extras who evaporate are all in the day's worry on a comedy about a bumbling French detective

By **PETER SAMUELSON**

*Production Manager*

One of the problems inherent in filming "THE RETURN OF THE PINK PANTHER" has been preventing everyone present on set from spontaneously exploding in laughter at the antics of Peter Sellers, scripted and ad-lib. Determined not to be the first to break down and ruin a shot, I studiously turned my back on the set at the first sign of hilarity. This was probably a good thing, leaving my sense of humour intact to cope with the production problems of taking a very funny film through four countries in eight weeks.

A calm and ordered production office, we were carefully investigating location possibilities in Canada for another Blake Edwards film, when news came that this project would be delayed some time. With the sudden availability of Peter Sellers, Sir Lew Grade of London's A.T.V. Organization would be backing "THE RETURN OF THE PINK PANTHER" to be produced and directed by Blake Edwards. For various reasons beyond anyone's control, the first day's shooting had to be June third, and here we were with

**Clutching his ever-present clipboard, Peter Samuelson, Production Manager on "THE RETURN OF THE PINK PANTHER", takes notes during night shooting in the Marrakech bazaar.**



slightly better than four weeks before the necessary departure of our crew. No locations chosen, no supporting cast, no hotels, bookings, or, for that matter, any crew.

The first priority was obviously to set locations. So while Blake Edwards and Tony Adams, the Associate Producer, began casting, our newly-acquired Art Director, Peter Mullins ("ALFIE", "11 HARROWHOUSE", "THE LAST VALLEY"), and I set out intrepidly to scout.

Blake Edwards' and Frank Waldman's script is widely flung, with Sellers' Inspector Clouseau jetting in from Paris to "Lugash", where he attempts to solve an ingenious jewel robbery. He then amorously follows Catherine Schell, the wife of his suspect, Christopher Plummer, from her luxury Riviera chateau to an isolated distant retreat. Here she keeps him amused until her husband can exonerate himself from the theft.

We pinned down the resort as Nice on the Cote D'Azur, on the basis of its well-developed facilities and "chic" locations. The retreat site began life as Ischia, passed through Rome, Genoa, Gibraltar, Majorca, Venice and Yugoslavia, before being finalized as Gstaad in Switzerland, an enchanting mountain-top ski resort. Although easily accessible, Gstaad would provide us with a complete contrast from the Mediterranean jet-set environment of Nice.

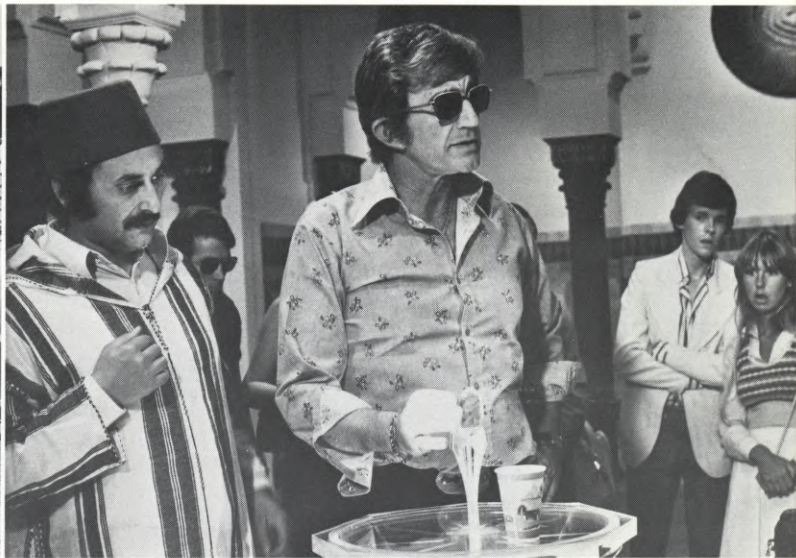
"Lugash" was described in the script in vaguely Arab terms: a stylized military regime run by a Shah by permission of a General. We eventually settled on Casablanca and Marrakech in Morocco, not for any political resemblance, but for the great variety of startlingly different locations available. In trying to make Lugash as distinct as possible from Nice and the Riviera atmosphere, Morocco provided us with the most stable situation in which to find a genuine atmosphere of souks and medinas, minarets, kaftans and mint tea, a gift for comedy under the onslaught of Peter Sellers' bumbling Inspector Clouseau. Although nobody should think that Morocco is underpriced, we hoped also to balance the greater expense of keeping a crew during high season in Nice and Gstaad.

Getting anything done in that area can be difficult at the best of times, and in the moist heat of Casablanca, we

began to understand why "LAWRENCE OF ARABIA" was so long in the making. The "PANTHER" script has the same slick, fast-moving ingenuity of its previous namesake and of "SHOT IN THE DARK". The robbery itself which opens the film has a cat-burglar sliding down a cable he has fired by crossbow from a modern apartment-block to the roof of a "minaret and archway" ancient Arabic museum. Whether by chance, or some curious manifestation of Arab urban planning, there are no old museum-like buildings within sliding range of high-rise blocks in either Marrakech or Rabat. It was with considerable relief and sore necks that we decided on the Casablanca Prefecture as our Lugash museum, a bolt's-throw from the nearest block. As we explained to the head of Police how we intended to burgle his Prefecture, and to an old lady who lived opposite how our scaffolding rig would definitely not leave marks on her walls, we correctly supposed that the worst was yet to come.

Gunfire and explosions form a necessary, if not very serious, part of the slapstick in "PANTHER". Unfortunately, our request to import six Sterling sub-machine guns and two Luger pistols did not elicit much official enthusiasm. Stable political situation or not, the Pasha of Casablanca was not taking any chances. Instead, the Police were authorized to make arms available. Unfortunately, at the eleventh hour their blanks had disappeared, as Joe Dunne, our stuntman, was not terribly keen to add crossfire to his other hazards in the downwards slide, we flew in blanks from London. Unfortunately, the 9mm blanks we had been told were necessary proved not surprisingly difficult to insert in the 7.6mm chambers of the guns actually available. So, after high-level deliberations, the King himself authorized us to bring in from England the guns we originally wanted. Under (7.6mm) armed guard, I collected the weaponry from Nouasseur Airport and, after verification in the bowels of Casablanca Police Station, swore in writing, by the lives of myself and my named parents to take the wretched things out of the country after our mock battle. The guns safely locked up under the hotel bed, I clutched my Arabic permission to me at all times and hoped for the best. We





(LEFT) End slate is exposed during shooting of kidnap sequence on the road south of Marrakech. This area was selected for extensive shooting on the film because of the great variety of startlingly different locations that were available. (RIGHT) On the set representing the Lugash museum, Producer/director Blake Edwards checks the prop representing the huge "Pink Panther" diamond, which is ultimately the object of all the zany skullduggery that transpires in the film.

were allowed to fire not later than 10 p.m. and the Moroccan arms-expert kindly showed us how to convert the guns back to live ammunition, should we ever need to do so "outside my country, please!"

After whistle-stop organization in France and Switzerland, and leaving the locations in the capable hands of Jean-Pierre Avice and Meyer Berreby, we returned to London. Geoffrey Unsworth, BSC ("Cabaret"), was engaged as Director of Photography, and our lighting and camera equipment lists were rapidly established. Shooting 2.35-1 Anamorphic, we decided on the new Panavision Panaflex, with Hard-Front wild Arris as backup, and for multi-camera use. We also took with us the Studio Base for the Panaflex, helping Peter Macdonald, our operator, to give us first-class coverage in the tightest of location interiors, where more conventional machinery might foul a wall or ceiling. Our lens complement was economically based around the 50-95mm T/4 Panafocal and the 50-500mm T/4.5 Auto Panazoom, with extra lenses for wider angles, and the High Speed T/1.4 and T/1.8 glassware to enable us to shoot without vast lighting problems under the exceedingly low-light levels we encountered at night in the alleyways and squares of Marrakech and Casablanca.

The nature of our locations would make lighting difficult, and from the location scouting I knew that long cable-runs would be inevitable in Marrakech where a decent-sized generator cannot penetrate alleyways five-feet across. To cover all eventualities, we took a Sam-Mobile unit to Morocco, with separate truck-mounted silent Scania Vabis/Rolls Royce 1000-

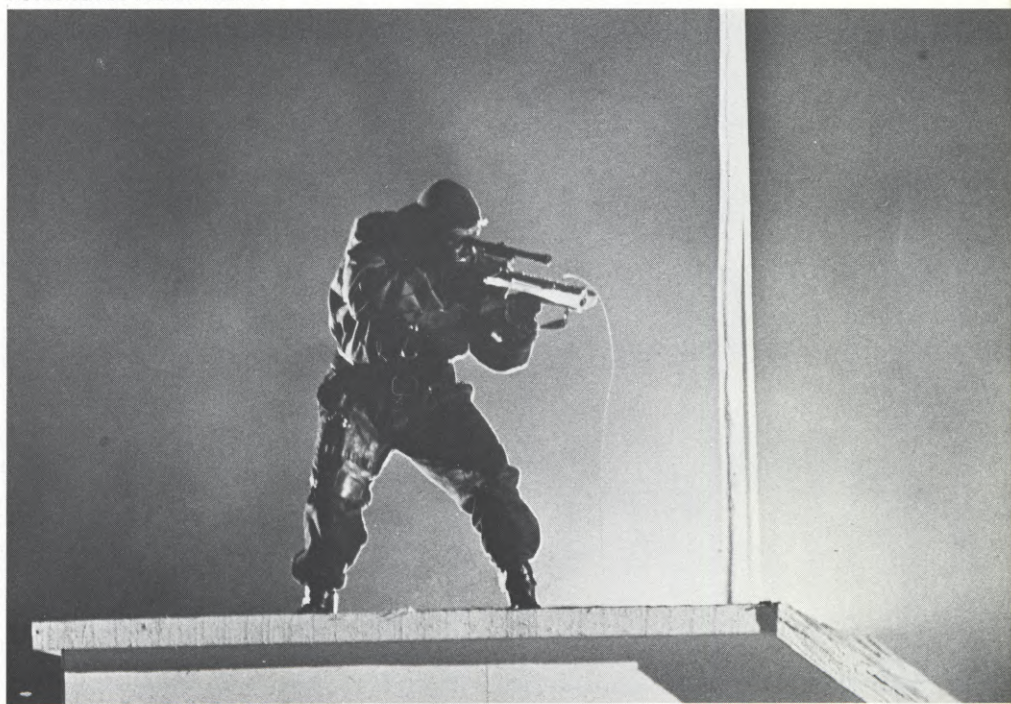
Amp generator. While we were in Switzerland using a second Mobile and second Genny, the two vehicles from the Moroccan locations travelled by sea from Casablanca to Marseilles, arriving in Nice two days before the crew. A neat and economical plan, but one which caused considerable concern when the boats failed to sail on time. Mr. Unsworth adapted the basic vehicle lighting complement in several ways to suit our exact needs, and decided on four of the new lightweight Mole-Richardson 225-Amp Brutes.

In fact Morocco is by no means the

end of the Earth as far as equipment is concerned. The Centre de Cinema Marocain in Rabat, efficiently run by Messrs. Ziani and Bouabid, has available a brand new range of Mole-Richardson lighting equipment from France, and a very good 250-Amp Mercedes truck-mounted generator. Our Moroccan Managers, Mohammed Osfour and Haidar Ziani, were able to find us every prerequisite for filming, from gunpowder to stuntmen, from toffee glass to extra walkie-talkies.

With the vast "MOHAMMED" con-  
Continued on Page 444

Standing astride a Casablanca rooftop, the Phantom (played here by stuntman Joe Dunne) uses a crossbow to fire a cable across to the Museum, so that he can slide down it and gain entrance. The crossbow was listed on the customs roster as an "arrow projector", in order not to cause undue alarm.



# GEOFFREY UNSWORTH, BSC TALKS ABOUT "THE PANTHER"

It's a far cry from "2001" and "CABARET", but this famed Academy Award-winning cinematographer is having fun helping to put the "PINK PANTHER" through his paces in Morocco

When the name of Geoffrey Unsworth, BSC, appears on a film's credits as Director of Photography (or Lighting Cameraman, as they say in England) one can be sure that not only will the film's photography have that technical gloss of perfection that used to be standard during the 1930's and 40's, but that it will have its own special style, a unique and fresh X-quantity that adds up to a high degree of visual excitement.

Consider the chilling beauty of Mr. Unsworth's photography in Stanley Kubrick's "2001: A SPACE ODYSSEY" and contrast this with the misty decadence of "CABARET", for which he won the 1972 Academy Award in cinematography. Looking further, compare these two with the elegantly styled visual treatment of "MURDER ON THE ORIENT EXPRESS". All three films differ in graphic approach. What they share in common is the highest degree of professional finish, plus a pervasively creative imagination.

On location in Marrakech, Morocco, Geoffrey Unsworth was experiencing (and enjoying immensely) something rather out of the mould of his usual type

Director of Photography Geoffrey Unsworth, BSC, looks a bit horrified as he peers through the glass doors on the set of Blake Edwards' "THE RETURN OF THE PINK PANTHER". Perhaps the camera has fallen over or the lights are drooping — or maybe he's just heard that his cricket team lost the match. Besides Edwards, Unsworth has worked with many other American directors, among them Stanley Kubrick ("2001"), Bob Fosse ("CABARET") and Sidney Lumet ("MURDER ON THE ORIENT EXPRESS").

of assignment (if any of his assignments can be said to be "usual"). He was photographing against exotic backgrounds the zany antics of Peter Sellers in his repeat performance as the bumbling Inspector Clouseau in Blake Edwards' "THE RETURN OF THE PINK PANTHER".

In the following interview he discusses his work on that film:

**QUESTION: Prior to arrival on the Marrakech location, the company was shooting in Casablanca. Can you tell me a bit about the shooting which you did there?**

*UNSWORTH: Well, the four sequences we shot in Casablanca were rooftop sequences and enough to drive any cameraman mad, because it was always necessary to get higher than the roof you were working on in order to place your lamps and get your angles. We had one sequence where a stuntman-double slid down a wire from one building to another across a road. It was only about five or six stories high, but I imagine that it was quite terrifying to do. In that case I was lucky in that*

*there was a higher building nearby that I was able to put the lights on. There was quite a big area to cover, but we used the Panavision fast lenses and we had the advantage of street lights below, as well as car headlights and traffic lights. It worked out quite well.*

**QUESTION: Were there any other special problems in Casablanca?**

*UNSWORTH: Only the fact that we did a lot of panning from exteriors into actual interiors. The problem was mainly a matter of finding enough lights to balance and also give the interiors character. It involved a great deal of hiding lamps behind various things.*

**QUESTION: You're battling the extremely bright sunlight of these North African cities, which obviously calls for a great deal of light to fill and balance. I notice you're using Brute arcs for this purpose. Do you find it a drawback to use this large and cumbersome equipment, or do you feel that there is any substitute for them?**

*UNSWORTH: One tries not to use the Brutes because of their heaviness and the difficulties of getting them into position quickly. One can use different types of lights for the purpose, like banks of Mini-Brutes, or "nine-lights", as some call them, and this we try to do when possible. On this particular picture I had to strike a balance of lamps for both exterior and interior shooting, because it's not essentially an interior picture. It's both.*

**QUESTION: Are you using quartz lights very much in your shooting?**

*UNSWORTH: We've got a great many quartz lights with us and I find them very useful for bouncing off of ceilings and white walls, as well as hiding behind brass columns and things where traditional lamps couldn't operate. My only complaint is that I find that the dichroic filters don't compensate fully. They are inclined to burn out, as far as I'm concerned. Unfortunately, because of all this linking up of exteriors and interiors, we're not able to put the compensating filter materials over the windows in order to get a true inky balance. Actually, I can't really tell*



what we're getting because we're not seeing dailies out here. I guess we won't see them until we get to Switzerland, so at least I've got another week on the picture.

**QUESTION: Since, as you've said, you have the feeling that the dichroics are not compensating fully, are you doing anything to cover yourself in this respect?**

**UNSWORTH:** I'm inclined to put a rather faded quarter-blue filter on them, because it looks better to my eye. I also use what I call an "eighth-blue" paper. This is a normal sort of drawing board paper, but it has a blue tinge to it which helps the shadow area when filling faces. It just takes the redness out of the shadows and I find it very useful. Actually, it was something I learned some years ago while working in Jamaica with a full American crew. When they painted the insides of their bashers, they used to put an eggcup full of ultramarine into a pint of white paint — which, again, used to take the redness out of the shadows.

**QUESTION: Those Brutes which I saw you using in the marketplace require quite an enormous amount of electrical current. What power source are you using on this film?**

**UNSWORTH:** Unfortunately, we have only one 1,000-amp generator. The reason I was using the Brutes out there was that there was no way to hide any lamps. It was a kind of local covered marketplace and the artist came walking down what was almost a tunnel. I had one Brute hitting at the very back of this tunnel, full-spotted, with the other three progressively more spread. This helped light the background and the artist, as well, as he came forward. Really, on an exercise like this, the aim is to try to use an economy of lights to fullest advantage. With this in mind, I found it best to use the Brutes, rather than to try to hide Mini-Brutes in odd little openings. One just makes this decision because it's a question of timing, and you go ahead and do it. After that we panned into an interior, where we were using Mini-Brutes and just bouncing them off the white interior walls. This created a very soft effect when we panned into the interior.

**QUESTION: On this film, so far, have you shot any interiors that posed special problems and, if so, how did you solve the problems?**

**UNSWORTH:** I think that the main problem is that, obviously, one has come to a location like this to get the backgrounds, and if the director wants



Unsworth gives instructions, as his assistant treads water in the pool of a Swiss hotel in order to take a meter reading. Filming on "THE RETURN OF THE PINK PANTHER" includes many actual interiors on location, as well as specially constructed sets in the studio. Unsworth has become so used to shooting in actual interiors that he considers studio shooting a luxury and asks for ceilings to be built onto the sets.

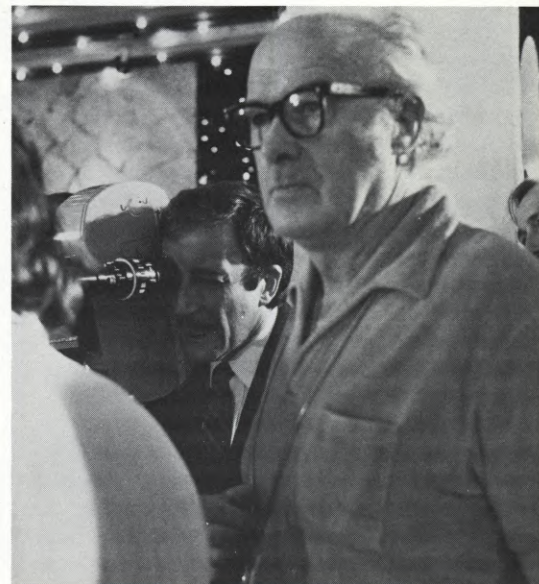
to show the exterior background while shooting an interior scene, one tries to do this to best advantage. There really is a great deal of light outside, especially at midday when it is really hitting back at you. Here in Marrakech we are really lucky, because most of the buildings are painted in the color of the earth, a pale brick-red. In Casablanca it was different, because the buildings are pure white. I think the name Casablanca means "white house", actually. There it was certainly more difficult because it was glaring white, and you can't build up the artificial light to the point where it becomes unbearably uncomfortable for the artist inside. The best thing, if you can pan into the building, is to establish the scene outside and then pan right across a balcony into an interior room of the building, altering your aperture stop or your shutter at the correct time to balance the exposure. If you can alter one or the other, the shooting inside becomes a workable proposition. After all, the actors have to be able to act. Otherwise, the room becomes just a melting pot in this sort of temperature.

**QUESTION: In panning from an exterior into an interior, or vice versa, which do you personally prefer to regulate in order to make the exposure compensation, the shutter or the aperture opening?**

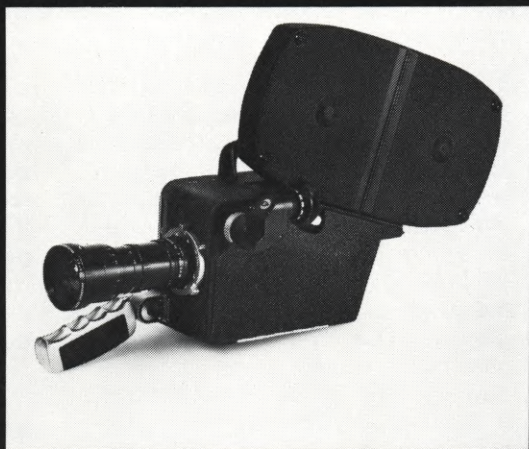
**UNSWORTH:** I prefer the shutter because, first of all, I can do it myself without having to get in the way of the boys in front. They're invariably pulling focus and zooming at the same time, so it would become rather like an Indian dance with all those hands and arms up there. Normally I work the shutter myself from the back.

Continued on Page 430

Unsworth checks the action on the set, while Peter Sellers, who plays the addle-pated Inspector Clouseau, sneaks a peek through the Panaflex.



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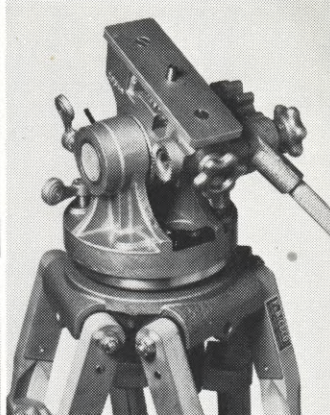
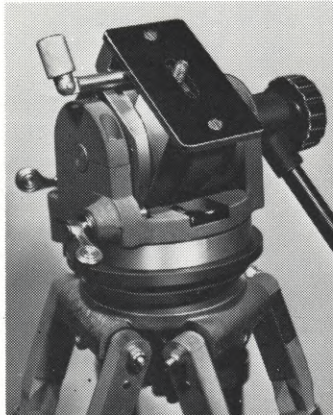
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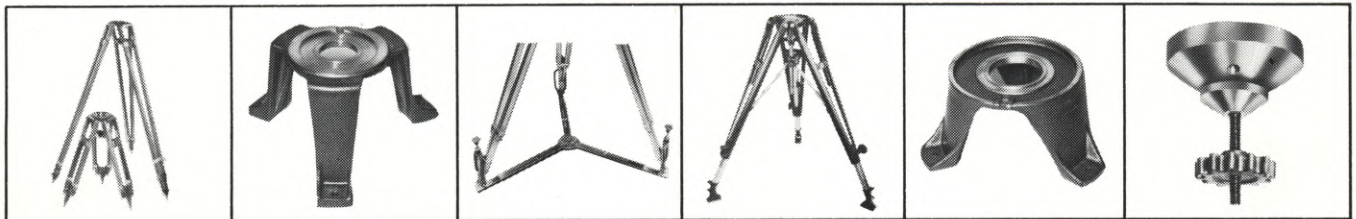
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# THE ECLAIR STORY

This latest in a series of tributes to manufacturers of outstanding motion picture equipment takes a wide-eyed film-maker on a pilgrimage to his "Mecca" — the place where his Eclair NPR camera was born

By M.L. SCHNEIDER

Eclair. To most people an *Eclair* is a fine French pastry. But to people like you and me an Eclair is a fine French motion picture camera. And if you think of Eclair as a sort of "johnny-come-lately" to the film business you've got another think coming. Eclair might have first caught your attention in 1970, with the introduction of the ACL camera. Or, if you're a bit older, you might have come across Eclair when they brought out the NPR in 1964. If you are older still, your first contact with Eclair might have been the Cameflex in 1948. But this little French company goes a bit further back than a quarter of a century. If you had been a cameraman back at the birth of this industry you might well have used an Eclair camera to shoot your one-reelers.

As early as the 1890's motion pictures were being produced at the Eclair Studios outside Paris. And it was 1909 when Eclair first began to manufacture and sell motion picture cameras. Their early hand-crank machines were very popular, especially among American cinematographers. Eclair became such a force in the silent-film industry that they opened up studios in Fort Lee, New Jersey. Unfortunately, the studios

did not last long under the Eclair banner, and the company returned to France. During World War II the Germans seized control of Eclair and its manufacturing facilities. The Germans tried to force the French to design a new studio camera for them, but the French staff refused to cooperate.

When the Germans retreated in 1944 the Eclair company was in shambles, but the French did not let a little thing like a World War impede their progress. Just a couple of years after the end of the War Eclair introduced a 35mm camera of radical design. Called the Cameflex, the new camera featured a mirror-reflex variable shutter, rotatable eyepiece, instant-change magazines, and a design that permitted comfortable handholding. The camera was quick to catch on in Europe, but was slow to develop a following in America. For the next fifteen years Eclair continued to improve the design of the Cameflex, even bringing out a version that accepted both 35mm and 16mm film.

Then, at the 1964 *Photokina* trade fair in Cologne, West Germany, Eclair startled the film world. They exhibited a very radical new design in 16mm

cameras. Known as the NPR — Noiseless Portable Reflex — this new machine was intended especially for double-system sound, location hand-held shooting. You have to remember that location sound-filming in 1962 meant a blimped Arriflex or Mitchell, synchronous motors, and magnetic fullcoat recorders. This new camera was compatible with the very portable compact quarter-inch sync recorders then gaining popularity — the Stellavox, the Perfectone, and the Nagra. Sync was achieved through the use of a 60cps (now 60hz) signal generator that fed a constant pulse to the recorder. The NPR featured instant-change 400-foot coaxial magazines, mirror-reflex shutter (adjustable), rotating eyepiece, a twin-lens turret, and a quiet movement that permitted hand-held shooting without a heavy and cumbersome blimp. The NPR weighed about twenty pounds ready-to-film. And for the first time, 16mm cameramen throughout the world had a production camera that freed them from the hundreds of hassles associated with conventional location sound filming. It has been said that the Eclair NPR/portable sync recorder combination revolutionized the 16mm filming business. The NPR brought about a noticeable change in the techniques used for 16mm documentary, educational, and industrial films. Within a few years after the introduction of the NPR several other "silent" cameras were on the market. But the NPR was the first, and remains, today, more than ten years after its introduction, one of the most popular silent cameras. The technology revolution that the NPR brought to the film world is still shaking the industry today.

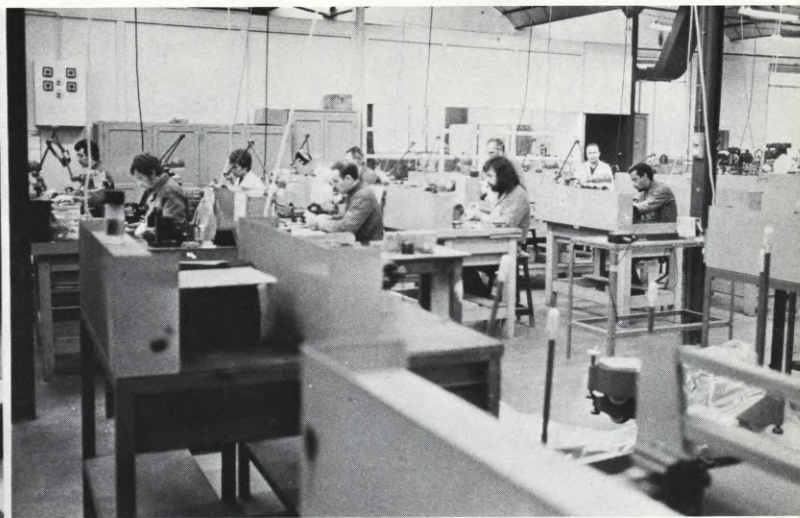
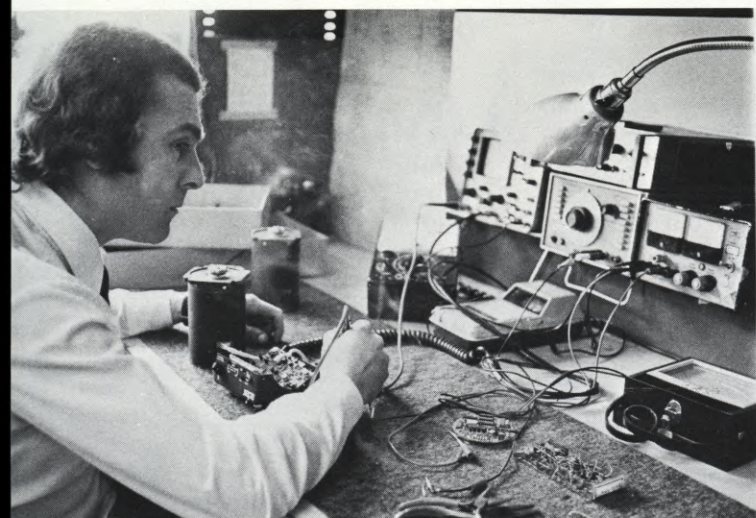
Eclair engineers, however, are not ones to rest on past victories. In 1970, again at *Photokina*, Eclair introduced the ACL. This 16mm silent portable reflex was as earth-shaking as its older and larger cousin. The ACL boasted many of the famous Eclair features — instant-change magazines, orientable viewfinder, and quiet operation — but offered these details in a much more compact and lightweight package. Today the Eclair ACL is one of the most popular of the second-generation production cameras.

Eclair also went off on another tangent. They explored the world of high-

**The main building of Eclair International's Epinay plant, located on the northern fringe of Paris. Off-camera, to the right, are the Eclair Studios and film laboratory. The BEALA crystal-controlled motor is manufactured at another plant in Antony, outside of Paris. The Eclair/Soremec line of very high speed cameras is produced in a third plant in Paris.**







**(LEFT)** A technician at the Soremec/Cehess Antony plant inspects circuits of a BEALA camera motor for the NPR. Eclair is now a subsidiary of Soremec. **(RIGHT)** The main camera assembly room at Epinay. Here more than 30 highly-skilled technicians assemble the Eclair NPR, ACL, Cameflex and high-speed cameras. Quality control at Epinay is very stringent.

speed cameras, and came up with one each for 16mm and 35mm filming. The models GV16 and GV35 are especially compact for high-speed cameras. The GV16 has gained popularity among sports cameramen who needed a very portable and versatile camera capable of filming at speeds of 200fps and higher. The GV16 can be equipped with 20:1 zoom lenses and 400-foot magazines, and makes what many people consider an ideal sports photography package.

As an avowed user of Eclair products, there came a time in my life when I realized that I would have to make a pilgrimage to Paris to visit Eclair. It was something in my blood, I suppose. And the opportunity arose this year during an assignment in Europe.

I was met at Orly Airport by Monsieur Regis LaDerriere, of Eclair International's export-sales office. M. LaDerriere would serve as my host and guide during my stay in the French capital.

Our first stop was Antony, a little town on the road between Orly and Paris. Antony is the home of the huge City University campus. It is also home for the BEALA universal crystal motor. The BEALA was designed in 1968, and introduced in 1970, to meet the growing needs of cameramen. This motor could be used for crystal-controlled shooting, conventional sync-cable shooting, variable speeds, single-frame, external sync, and many other functions. The BEALA was co-designed by an Eclair design group headed by Jean-Pierre Beauviala, and by engineers at Soremec-Cehess. Soremec is one of France's leading electronics manufacturers. They are involved in such things as the on-board computer for the

French Mirage jet fighter and today they are Eclair International's parent company.

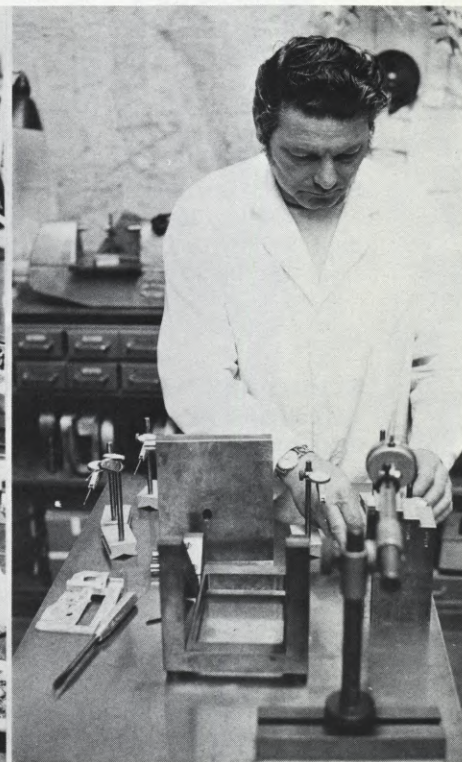
Two dozen people work on BEALA motors at Antony. After assembly of the sophisticated components, the motors go through a rigorous inspection. Each circuit is checked out with tracers, and some tests are run on an oscilloscope. About sixty BEALAs are sent over to Eclair each month for mating to cameras.

LaDerriere took me to the main camera-manufacturing plant in Epinay

next. Epinay is another small suburban town, this time on the northern fringes of Paris. We took the newly completed "Periphique" ring-road around the city. After a drive beneath the famed Bois de Boulogne and down some rather narrow streets we arrived at the Epinay complex.

Epinay is home not only for the Eclair International plant, but for the Eclair motion picture studios and labs. This production center is one of the largest in Europe, as well as one of the busiest. **Continued on Page 440**

**(LEFT)** A 400-foot NPR magazine in the final stage of assembly. The technician shown here is checking the fit of the take-up side door. **(RIGHT)** A quality control expert inspects a camera component for precise tolerances. More than 125,000 individual spares are checked here each month.



**INDUSTRY ACTIVITIES**  
Continued from Page 408

dovetailed into the Papers Programme and will include visits to studios, laboratories, equipment manufacturers and other places of interest to delegates. There will also be an exciting programme for the entertainment of ladies accompanying delegates to FILM 75.

**BERKEY COLORTRAN PLANS FILM SEMINAR**

Joseph N. Tawil, President, Berkey Colortran, has announced a film seminar to be held on May 3 & 4. The seminar is hosted by Berkey Colortran and will be organized by Winston Sharpels Jr. Mr. Sharpels has had extensive experience in the motion picture industry. He owned and managed his own company, called Sincro Sound, in New York City. He is now teaching filmmaking at Temple University in Philadelphia.

Joe Tawil has organized seminars of this type on previous occasions, to orient the Berkey Colortran staff to different aspects of the lighting industry. Herb Lightman, while attending one of these sessions, suggested to Joe that a film seminar would be appropriate and desirable.

Joe Tawil advises that the seminar shall be two full days and that the program will include a general outline of the history and development of filmmaking and how lighting techniques developed during that time. Joe expects to have several guest speakers, including some members of the ASC.

This film seminar is a private function, but there is some space for those who may wish to attend. If you are interested in attending this seminar, you may write to Joseph N. Tawil, President, Berkey Colortran, 1015 Chestnut Street, Burbank, Calif. 91502.

**SCHOLARSHIPS FOR THREE AMERICAN FILM INSTITUTE FELLOWS**

Three first-year Fellows at the American Film Institute's Center for Advanced Film Studies — a Sioux Indian, a 23-year-old Atlantic City girl, and a young Minnesotan — were the winners of special scholarships announced by AFI director George Stevens, Jr., in the name of Orson Welles and presented by Joseph Cotten as one of the highlights of the AFI Life Achievement Award ceremonies honoring Orson

Welles on the night of February 9 at the Century Plaza Hotel.

Receiving the scholarships were Robert J. Schoenhut, a native of Standing Rock Sioux Indian Reservation, Fort Bates, N.D., who studied at the University of Portland, Portland State, Brooks Institute of Photography, and U.S.C.; Kim Friedman, who hails from Atlantic City, N.J., and studied directing while earning a Master's degree in Fine Arts at New York University; and Kenneth B. Belsky, 23, of St. Paul, Minn., who was a film student at the universities of California and Southern California before being accepted as a Fellow at the AFI Center for Advanced Film Studies.

Funds derived from the annual Life Achievement Award dinners and the subsequent telecast of the event as a CBS network special provide for the scholarships as well as helping to support other AFI activities concerning the preservation of motion pictures, developing oral film histories, conducting seminars and providing college cinema classes with educational material.

**UNIQUE CAMERA CRANE TO BE EXHIBITED**

An O.B. camera crane for drama, news and sports coverage and for use in the motion picture industry will be among British products at the National Association of Broadcasters Convention and Exhibition, April 6-9, 1975, where British products will be shown on the stands of associated US companies.

The 2-man-operated Kestrel O.B. crane from W. Vinten Ltd. is designed to be compact, maneuverable and easily transportable. It is available in both manual and powered form. The jib gives an operating height of 23" = 77" and will lift a total load of 500 lb (cameraman, camera and head). The manual version provides the tracker with steering, tracking and job-elevation control. In the powered version, the jib is under the direct control of the cameraman. Operation is by stored hydro-pneumatic pressure. The crane has pivoted wheel assemblies for width reduction to 28", and 360° seat and camera mounting rotation.

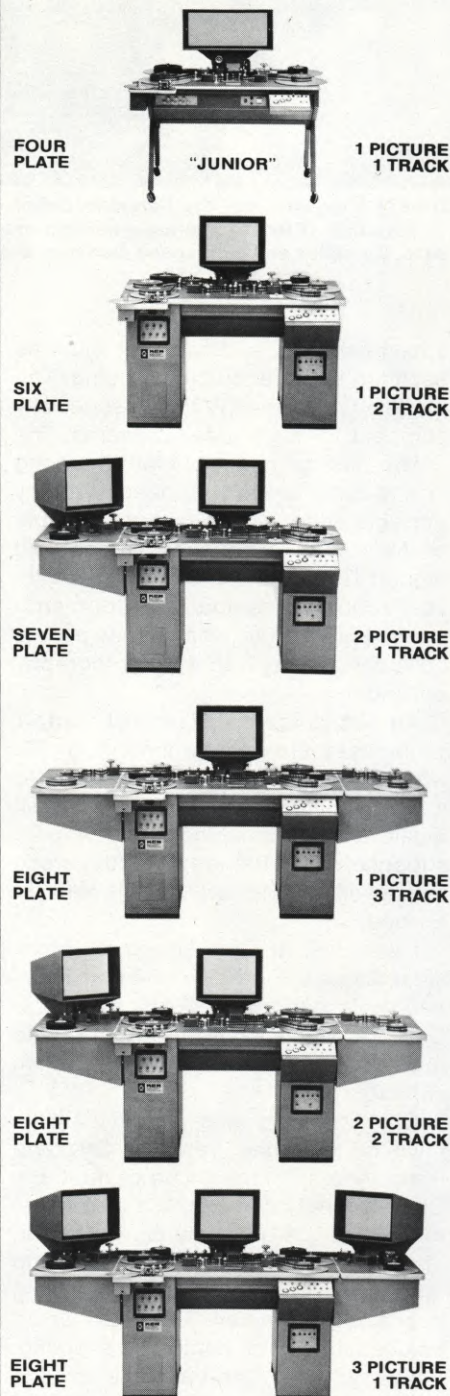
The crane is shown (left) folded with the pivoted wheels in the inside position and (right) in the elevated position.

W. Vinten Ltd., Western Way, Bury St. Edmunds, Suffolk IP 33 3TP. England. US agent: Listec Television Equipment Corp.; 35 Cain Dr.; Plainview, N.Y. 11803; Telephone: 516-694-8963.

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# THE NEW ELECTRONIC COMPOSITE PHOTOGRAPHY AND IMAGE MODIFICATION SYSTEM (ECP & IM)

By **WILTON R. HOLM**

*Executive Director, Research Center of the AMPTP*

The wild west rolling by outside the windows of the stagecoach. King Kong clinging to the top of the Empire State Building. Douglas Fairbanks sailing high above the crowd on a magic carpet.

It was all trick photography, the Hollywood art that proves appearances can be deceiving.

It all started 50 years ago, film lore has it, when Georges Melies' camera jammed as he photographed a bus traveling down the street. By the time he had unjammed the camera a hearse had replaced the bus on the street and the result on film was the transformation of the bus to a hearse.

Now trick photography is entering the computer age.

A new electronic system that marries space-age technique to traditional celluloid trickery promises to open a new vista of creative possibilities.

It is called the Electronic Composite Photography and Image Modification System (ECP & IM), and it was conceived and developed by Chief Scientist Petro Vlahos and Executive Director Wilton R. Holm of the Research Center of the Association of Motion Picture and Television Producers (AMPTP). The sophisticated computer-assisted machinery required will be built by Image Transform, Inc., a company on the leading edge of Hollywood technology.

Early trick photography was relatively simple, making use of fades, dissolves, double exposure, miniature sets and painted backgrounds.

But as movies grew in popularity and sophistication, trick photography became the serious business of special photographic effects. And today, more than ever, in view of constantly increasing production costs, this sort of cinema magic is desperately needed. For not only can it create on-screen action which would otherwise be difficult or impossible, but it can do so more cheaply than the real thing.

## COMPOSITE PHOTOGRAPHY

Much time and money can be saved if large companies of people and equipment are not transported to far-away locations. Instead, a small camera crew and a director can be sent to photograph background scenes, and the actors can be photographed in a

studio sound-stage. Then the action shot at the studio can be combined with the background scenes. If this is done electronically, it can be done so precisely that the resulting composite scene will be indistinguishable from one in which the actors were photographed in the natural environment.

There is a fallacy abroad in the motion picture industry today — an expensive fallacy — which contends that movie viewers no longer want to see pictures that are not shot in real locations. The fact is that people in theatres do not care whether pictures on the screen were shot in real locales or not; they only want them to *look* like they were. It is not necessary to photograph whole motion pictures in remote locations, under difficult, expensive conditions, in order to have the action appear real and life-like on the screen.

It is well-known that a creative selection and arrangement of story elements, when properly done, enhances and intensifies the emotional impact of a motion picture. A creative selection and arrangement of a picture's audio-visual elements also can enhance and intensify emotional impact. And one of the most effective ways of doing this is by means of composite photography — by shooting background and foreground separately and combining them later, so that each may be varied independently. This has been done in the past by means of techniques known as background projection and travelling matte photography. Now there is Electronic Composite Photography (E.C.P.).

## BACKGROUND PROJECTION

For many years, background scenes have been combined with foreground action in a motion picture stage by projecting the background scene onto a screen located behind the actors. The camera then "sees" the actors as though they were in the locale which is being projected onto the screen behind them. This technique made it possible to show actors in the African jungles, in the Casbah, or in the midst of a cattle stampede, even though they were actually being photographed in a Hollywood sound stage. But this technique has many disadvantages. The backgrounds must be photographed prior to shooting on the stage. If anything

**A new electronic system that marries space-age technique to traditional celluloid trickery promises to open a new vista of creative possibilities**

goes wrong, such as the foreground and background not matching for color, lighting, or any reason whatever, the actors must be brought back and the whole operation must be done over. Moreover, there are many kinds of "trick" shots that cannot be done this way.

## TRAVELLING MATTE PHOTOGRAPHY

A more sophisticated technique for combining separate foreground and background scenes is known as Travelling Matte Photography. One way of using this technique, is to photograph the foreground action in a motion picture stage, but with the actors performing in front of a plain, deep-blue background screen. Thus the background scene is not combined with the foreground action on the stage. Instead, the foreground and background images are combined by optical printing, in a laboratory, after each has been photographed on a separate film.

Excellent results can be obtained by the travelling matte technique. When properly done, it is impossible to tell that the composite scene was not actually photographed in a real environment. And if there should be any mismatch of foreground and background when the travelling matte

**Wilton R. Holm, Executive Director of the Research Center of the AMPTP feels that ECP & IM helps trick photography to enter the computer age.**



technique is used, it is only necessary to make another print. It is not necessary to call the actors back and reshoot the scene. Too, many "trick" shots which cannot be accomplished by background projection can be produced by travelling matte photography. And with the travelling matte system, the foreground action is shot on the stage. When using background projection, the background scenes must already have been photographed, and be available prior to photography on the stage.

But with all of its advantages, the blue-screen travelling-matte system of composite photography is not popular. It is extremely costly, difficult, and frequently unpredictable — so much so that its use is avoided except in those situations where no other technique will produce necessary results.

### **ELECTRONIC COMPOSITE PHOTOGRAPHY**

By means of electronic composite photography, all the difficulties inherent in the travelling matte system are avoided, yet all advantages are preserved. In fact, as its name implies, the creative possibilities of the Electronic Composite Photography and Image Modification System include much more than composite photography. Image modification will be discussed in detail later. But first, let us consider a hypothetical scene, and determine how it might be produced:

- (1) On Location
- (2) By a Background Projection System of Composite Photography.
- (3) By a Travelling Matte System of Composite Photography.
- (4) By Electronic Composite Photography.

Let us assume that our story requires scenes in which actors appear in and about India's famous Taj Mahal.

### **ON LOCATION**

To shoot these scenes "on location," a company of perhaps 60 or more people must be sent to India and provided with transportation, lodging, meals, and other necessities. Truckloads of equipment must be transported to the Taj Mahal from available sources. Generators must be brought in to produce electrical power.

It is doubtful whether a large motion picture company would be permitted to work at the Taj Mahal. But if location shooting were to be permitted there, it would be very costly.

### **BY COMPOSITE TECHNIQUES**

To produce the Taj Mahal scenes by a composite technique whether it be by

background projection, travelling matte, or electronic composite photography, a company of three or four men would go to India and photograph the Taj Mahal with no actors in the scenes. Their film would then be returned to Hollywood and used as the background for composite scenes.

### **BY BACKGROUND PROJECTION**

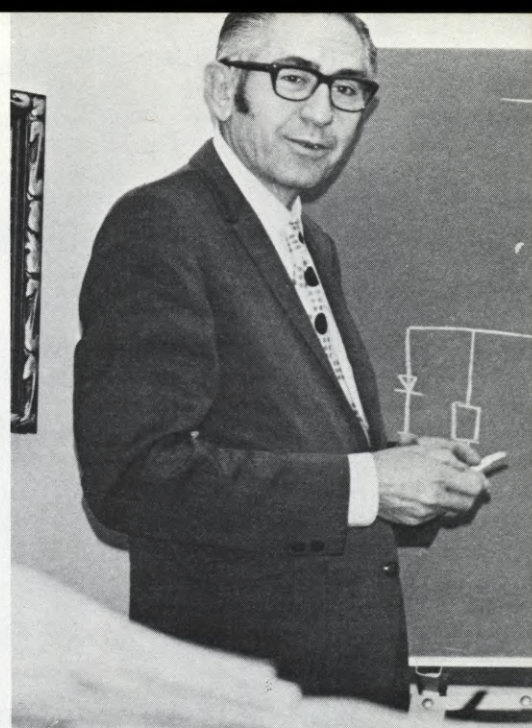
If the composite scene would be made by means of a background projection system, using either front or rear projection, the Taj Mahal background film would be taken to the studio stage in which the actors were to be photographed. There it would be projected onto a translucent screen before which the actors would perform. The camera would then "see" the actors as though they were performing in front of the Taj Mahal, rather than in a motion picture sound stage.

### **BY THE TRAVELLING MATTE SYSTEM**

If the composite scene would be made by the blue-screen travelling matte system, the Taj Mahal background film would be put in storage until the actors had been photographed in front of a plain blue background in a studio sound stage. Then the foreground film (actors against blue background) and the background film (Taj Mahal) would be combined by a series of optical printing and film processing steps. The result would be a single film in which the Taj Mahal replaces the blue background, so that the scene looks just as though the actors had been photographed at the Taj Mahal.

This sounds quite simple. Actually, as pointed out earlier, it is difficult, costly, time-consuming, and often unpredictable. After both the foreground and the background scenes have been photographed, it takes up to 14 different printing and processing operations, many of which are sequential, to produce the composite scene. For optimal results, it takes 900 feet of film to produce a composite scene 100 feet in length. And the time required to produce this composite scene is 10 days to two weeks or more.

Moreover, when the cinematographer photographs actors in front of the blue screen, he has no knowledge at all of how this foreground action will fit with the Taj Mahal background scene. All he sees is people performing before a blue backing. It is impossible to evaluate the finished scene until all 14 operations have been completed, and then if anything is wrong, about half of the 14 operations must be done over.



Research Center Chief Scientist Petro Vlahos conceived and developed the new system in association with Holm to make intricate effects simple.

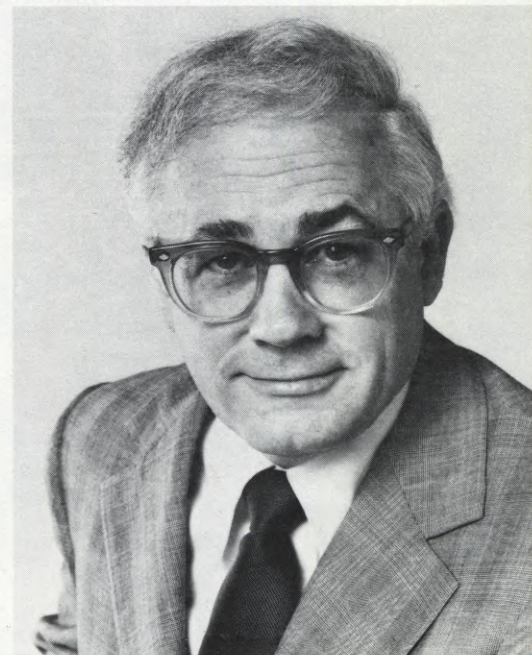
As a result of the difficulty and the unpredictability of this travelling matte process, not only is it avoided whenever possible, but frequently a story will be changed in order to "write out" the necessity of using it.

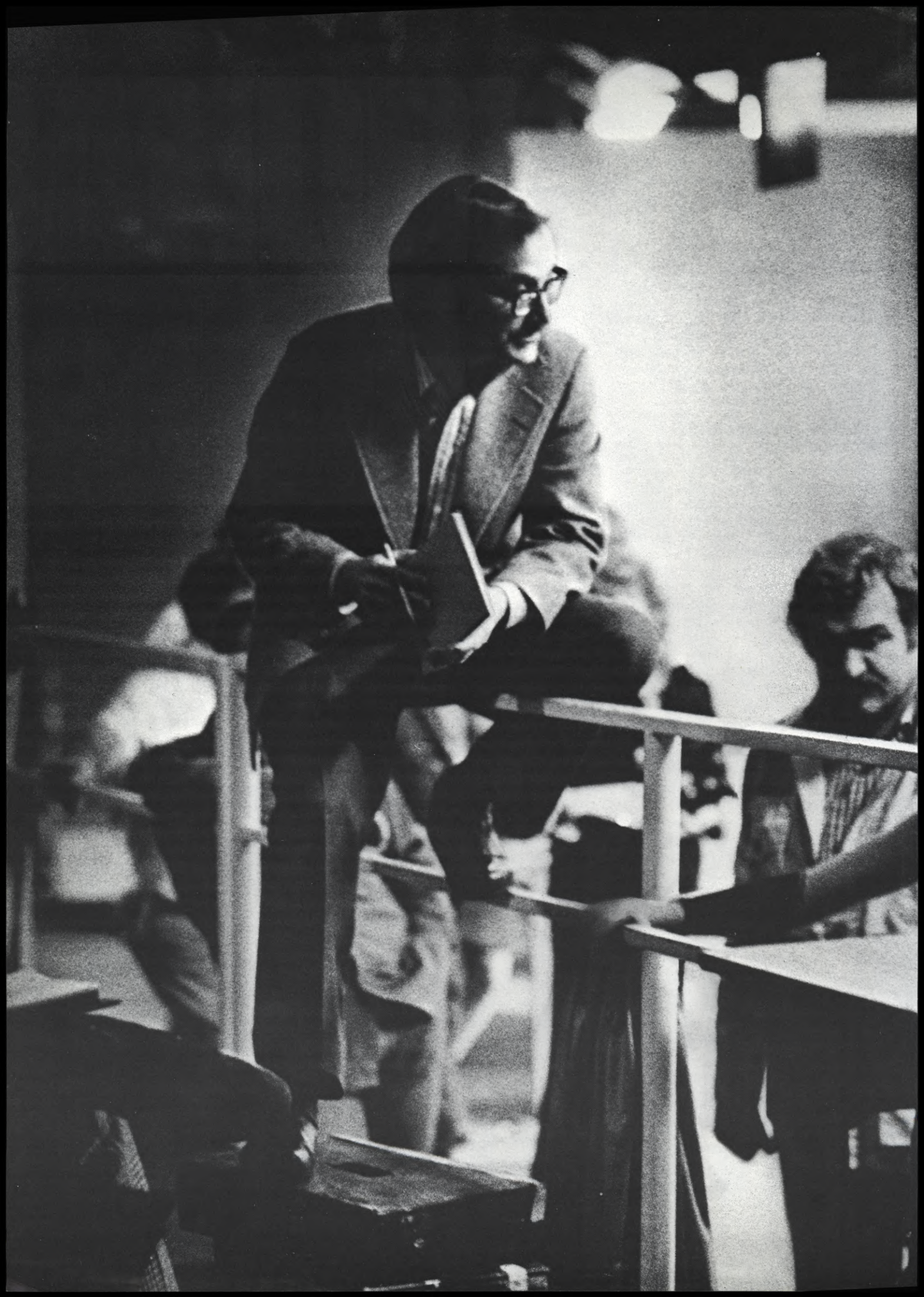
### **ELECTRONIC COMPOSITE PHOTOGRAPHY**

If our composite scene were to be made by electronic composite photography, the 14 operations required by the travelling matte technique are reduced to one operation. All that need be done is to thread the foreground and background films into the elec-

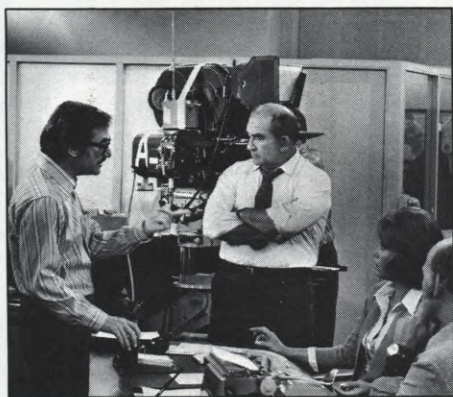
**Continued on Page 438**

Joseph E. Bluth, President of Image Transform, Inc., the company which will build the sophisticated computer-assisted machinery for ECP & IM.





# SANDRICH



"We try never to talk down to an audience.

"If something is done with taste, if it is treated in such a way as not to embarrass, then there is really no subject that can't be discussed. Sex, for instance, is something that was a TV unmentionable for too many years. And discussing it was part of the breakthrough we helped make on 'The Mary Tyler Moore Show'.

"We feel that the audience has as much intelligence as we do, which makes writing for the '12-year-old mentality' definitely out. Besides, you can't do a 1960's comedy in the 1970s and have it believable.

"If we like a joke, if we understand it, we figure most of the audience will understand it. And those who don't—well, hopefully they can still enjoy the show for other reasons.

"We do 'The Mary Tyler Moore Show' on film for two reasons. The editing. And the quality.

"With three cameras recording continuously, we can edit after the fact, we can intercut at will, and a lot of things that need correcting can be done in the lab.

"There's also a kind of quality we've always felt Mary's show, and all the MTM shows, get on film that tape does not deliver. Tape has an exciting immediacy that makes it a little more real, a little more bright, a little more vibrant. But what we're after beyond recording an image, is tone, and mood. On film, you get an impression of the background as you're looking at the actors. On tape, sometimes things are so bright it's hard to find actors on the set.

"There's a softer, more gentle look to film. For example, one problem on three-camera shows has always been shadows, because the cameraman can't light for every individual position. So, rather than try to avoid them, our cameraman, Bill Cline, adds a little fill light, and lets the shadows happen. So he gives the show the natural feeling that light and shadow give in real life.

"One of the most important things about Eastman film is that, in five years on 'The Mary Tyler Moore Show,' we have never lost a single important shot.

There has never been an occasion where we had to go back and do a retake because of bad film. And when you figure we expose anywhere from 15,000 to 18,000 feet every week, that's a record of which Kodak has a right to be proud."

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**AFI SALUTES WELLES**  
Continued from Page 399

Blvd. in Hollywood.

Ingrid Bergman, starring in "The Constant Wife" at the Schubert Theatre opposite the Century Plaza Hotel, saluted Welles for his "courage, tenacity and dazzling talent." She went on to say, with tongue-in-cheek, "Orson and I hardly know each other. We've never worked together. I haven't even been married to him. The real reason why I'm here must be that I work across the street."

Joseph Cotten, who made his film debut with Welles in "CITIZEN KANE", and who was a member of his Mercury Theatre troupe before that, said, "During the early struggling days, there was no such thing as the American Film Institute, but thank goodness there was an Orson Welles."

An especially heartfelt tribute was extended by the brilliant young director, Peter Bogdanovich, who makes no secret of idolizing Welles as a creative artist and who plays a role in his current work-in-progress, "THE OTHER SIDE OF THE WIND". Bogdanovich spoke of the "extraordinary backbreaking loyalty" which Welles inspires in his co-workers and characterized him as "an extraordinary presence behind the camera" who convinces actors they can do the impossible, who "makes you better than you are, or better than you ever could be without him."

**Remarks of George Stevens, Jr. on presenting the American Film Institute Award for Life Achievement to Orson Welles in Los**

**Angeles, February 9, 1975:**

*It was thirty-five years ago when a twenty-four-year-old man came to this town, walked into the RKO Studio, inspected it, and said: "This is the greatest electric train set any boy ever had."*

*We are here to celebrate what that man has done with that toy. We are here to celebrate the enduring value of what he has created and the knowledge that, even though his place in history is secure, he remains in the fray of movie-making.*

*Each year the Trustees of The American Film Institute select one artist who has in a fundamental way advanced the film art and whose work has stood the test of time. Orson Welles has advanced the art of film like few others. He has had a positive and profound influence on international cinema.*

*Too often we measure a film only by its bank account. That is why, in making this award, the Trustees emphasize the test of time. Tonight you have seen inspired films which have met that test, and remembering the stormy seas that Orson Welles has weathered in his career, hear what the writer John Ruskin said, a hundred years ago, in noting that many of the most enduring works in art and literature are never paid for.*

*"How much," he asked, "do you think Homer got for his 'Iliad' or Dante for his 'Paradise'. Only bitter bread and salt, and walking up and down other people's stairs."*

*So tonight we measure Orson Welles by his courage and the intensity of his personal vision. He has combined a mighty will with a child's heart to*

*produce a film legacy. He reminds us that it is better to live one day as a lion than a hundred years as a sheep.*

*Orson Welles has had many days as a lion — as a man of radio, the theatre, as a magician, a painter, a writer, a designer. But, he will be remembered as a creator of films.*

*In presenting this award for life achievement, let us call him forth with the purest definition of a great man.*

*A great man never reminds us of others.*

*Mr. Orson Welles.*

**Acceptance speech of Orson Welles on receipt of the Life Achievement Award of the American Film Institute:**

*My father once told me that the art of receiving a compliment is of all things the sign of a civilized man. And he died soon afterwards, leaving my education in this important matter sadly incomplete. I'm only glad that on this, the occasion of the rarest compliment he ever could have dreamed of, that he isn't here to see his son so publicly at a loss.*

*In receiving a compliment — or trying to — the words are all worn out by now. They're polluted by ham and corn and when you try to scratch around for some new ones, it's just an exercise in empty cleverness. What I feel this evening is not very clever. It's the very opposite of emptiness. The corny old phrase is the only one I know to say it.*

*My heart is full. With a full heart — with all of it — I thank you.*

*This is Samuel Johnson on the subject of what he calls "Contrarities."*

*"There are goods so opposed that we cannot seize both and in*

(LEFT) Close friends and associates through many theatre and film projects, Orson Welles and Joseph Cotten renew their longstanding friendship at AFI's Award gala (RIGHT) Screen Actors Guild President Dennis Weaver roars at a funny remark by Welles in a light moment during the event. Weaver played a role in Welles' 1958 production of "TOUCH OF EVIL".







(LEFT) Welles gets a warm kiss of welcome from Debbie Reynolds, one of the scores of stars who turned out to salute this very special artist. (RIGHT) Welles enjoys a hearty laugh with Dr. Jules Stein, founder of MCA. The American Film Institute Life Achievement Award has been presented twice before — in 1973 to the late John Ford, and in 1974 to James Cagney.

*trying fail to seize either. Flatter not yourself," he says, "with contrarities. Of the blessings set before you, make your choice. No man can at the same time fill his cup from the source and from the mouth of the Nile."*

*Well, this business of contrarities has to do with us. With you who are paying me this compliment and with me who have strayed so far from this home town of ours. Not that I'm alone in this or unique. I am never that. But there are a few of us left in this conglomerated world of ours who still trudge stubbornly along the lonely, rocky road and this is, in fact, our contrarity.*

*We don't move nearly as fast as our cousins on the freeway. We don't even get as much accomplished, just as the family-sized farm can't possibly raise as many crops or get as much profit as the agricultural factory of today.*

*What we do come up with has no special right to call itself better. It's just different. No, if there's any excuse for us at all it's that we're simply following the old American tradition of the maverick. And we are a vanishing breed. This honor I can only accept in the name of all the mavericks. And also as a tribute to the generosity of all the rest of you — to the givers — to the ones with fixed addresses.*

*A maverick may go his own way but he doesn't think that it's the only way or ever claim that it's the best one — except maybe for himself. And don't imagine that this raggle-taggle gypsy is claiming to be free. It's just that some of the necessities to which I am a slave are different from yours.*

*As a director, for instance, I pay*  
Continued on Page 448

**Welles and his daughter (in foreground) listen as another famous and beloved Hollywood rebel, Ingrid Bergman, confesses that she hardly knows Orson and "hasn't even been married to him", but salutes his "courage, tenacity and dazzling talent!". Starring in "The Constant Wife" at the Shubert Theatre just opposite the Century Plaza Hotel, she observed: "The real reason why I am here must be that I work across the street."**



## GEOFFREY UNSWORTH TALKS

Continued from Page 415

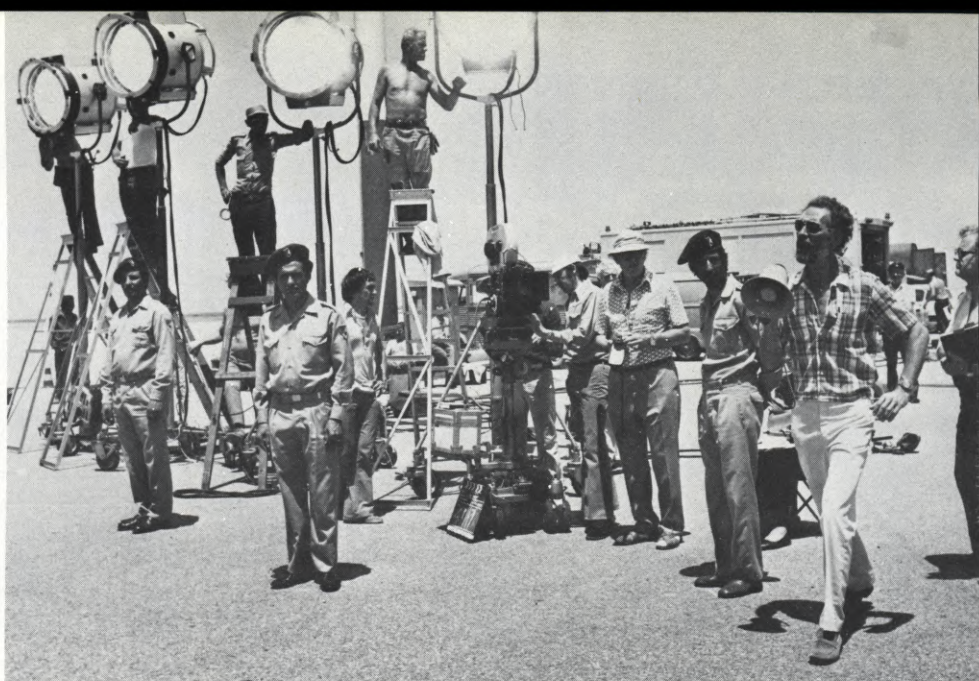
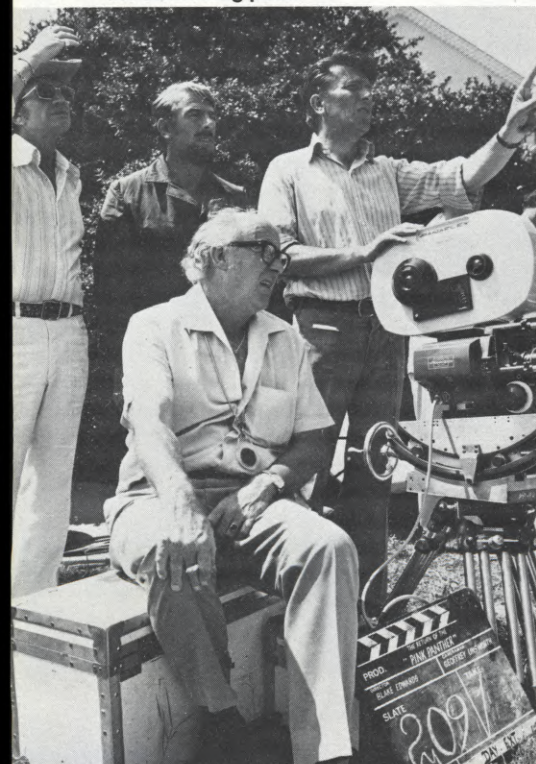
**QUESTION: Have you had some rather interesting interiors to shoot since you've been here?**

**UNSWORTH:** Yes, they keep turning palaces into traditional native restaurants here and, while I think they're mainly tourist attractions, we've been making good use of them. I've been using quite a bit of smoke inside them in order to create atmosphere. Fog is useful if you want a flare effect.

**QUESTION: What would you say are the main limitations within which you find yourself working on this film?**

**UNSWORTH:** The fact, as I've already mentioned, that they sent us a single mobile 1,000-amp generator. If I use the four Brutes, I can use nothing else, unless I can find a house current supply to plug into. Actually, there's not much one can complain about because cameramen, and directors too, are so lucky these days to have fast lenses, faster film stocks and new types of lamps. Because of these things being available, the problems can invariably be worked out. The result may not be the best photography in the world, but if that's what the director wants at a particular moment in a particular sequence, you can make it work and give him the effect. What I'm really saying is that these days I don't think you can be absolutely hidebound about things. You have to go along with what is required and use everything you've got at hand to achieve the effect.

Blake Edwards, Stuntman Joe Dunne, First Assistant Bert Batt and Unsworth discuss best angle to drive a truck backwards into the swimming pool.



Brute arcs are lined up to fill the extremely bright sunlight which is the norm in North Africa. Unsworth prefers not to use the arcs because of their heaviness and the difficulties involved in getting them into position quickly. However, they are the only units that are a match for the bright sunlight. The company had only a single 1,000-amp generator, so that if four arcs were used, nothing else could be lighted, unless a plug-in to house current could be arranged.

**QUESTION: Are you force-developing any of the footage on this picture?**

**UNSWORTH:** Yes. Because we are so short of light on this location, all of the interiors are being forced. I have no objection to that, because they do it so well these days that you can't tell the difference.

**QUESTION: Do you find your experience in working on "THE RETURN OF THE PINK PANTHER" in any way different from that of previous assignments?**

**UNSWORTH:** Yes, in that a great deal of it takes place in full-length or even longer shots. This is the requirement of comedy and it certainly isn't a new technique, but it's something that I haven't been used to. The timing has to be so precise — not just of the spoken word, but of the action, as well. Recently, even in feature films, there has been a tendency to work in very close. This is especially true of directors who are oriented to television. A lot of them shoot a great deal of the film in closeup. We've forgotten the long shot, but I think it's terribly important — probably more so than we realize.

**QUESTION: How do you feel about shooting in actual interiors, as compared to shooting such interior sequences in the studio?**

**UNSWORTH:** Shooting in actual interiors has become a way of life for us, especially in Europe. Whereas there are getting to be fewer and fewer

studios, the producers are more inclined to shoot actual interiors on location. In practically every film we make now there's a minimum of studio work, with more and more location interiors being shot. Certainly in London, during the whole of last year, we were shooting actual interiors most of the time. As I said, it's become such a way of life that it's an absolute luxury when one goes back into the studio. One can't believe it, you know. At the same time, when shooting in the studio I automatically ask for ceilings on the sets, because otherwise, in the studio, one automatically falls back on the old traditional way of lighting from the rigging. This is sometimes required, however, because there is a great upsurge now in wanting to make films that look like the thirties. I must say that this makes me furious, because it's not really period they're after. What they're really asking for is to get back to bloody good photography, which has been forgotten down through the years. There's a lesson to be learned from all those thirties and early forties films, when the photography was perfect — something we've forgotten in the fifties and sixties. I like to think it is coming back again. On the other hand, my argument doesn't hold much water when I tell you that I ask for ceilings to be put on studio sets. What I think I'm trying to say is that this forces me into doing something which I like to think is a bit unusual when I go into a studio, and that's the reason I ask for it. It could be, also, that I'm getting so used to shooting in actual interiors that I don't know what I'm doing when I go back into the studio. ■

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## ONE AND ONLY WELLES

Continued from Page 400

eight years of academic work during five years of study. Through his talented mother he had met Ravel and Stravinsky; through his father, an entourage of actors, magicians and circus performers. He had studied painting with the noted Russian artist, Boris Anisfield. Also, through his parents, Orson had developed a keen sense of original creation and a complete disregard of the established order of things, a trait that has always spotlighted his theatrical career. At Todd School he staged his first production of "Julius Caesar" and played two of the roles. Later, at 17, he was to collaborate with his Todd headmaster, Roger Hill, in writing a book on Shakespeare which sold over 100,000 copies.

But his earliest interests had been art and in 1930, at the age of 15, he began

a walking-and-painting trek through Ireland, eventually arriving in Dublin in a donkey cart which he parked long enough to watch a performance at the Gate Theatre. When the curtain fell he strode backstage, introduced himself as an actor from the New York Theatre Guild, and the cello-like timbre of the famous Welles voice helped him carry the ruse. He was promptly hired and made his debut with the Gate Theatre Players in the role of a 70-year-old duke in "Jew Suss". In addition to performing with the Gate Theatre company for a year, Orson also became the first American actor to appear as a guest star with the celebrated Abbey Players.

But when he transferred his incredible talent, energy and downright nerve to London in a plan to electrify the British stage, his fortunes turned. Unable to circumvent England's stern labor laws, Orson gave up and returned to America. New York was even

tougher than London. His efforts to get leading roles, then supporting roles, finally even walk-on parts were met with diffidence and disinterest. A frustrated Welles took off for Morocco to begin editing Shakespeare's works.

A year later he returned to the United States. In Chicago he met novelist-playwright Thornton Wilder, who had heard of his Dublin exploits and gave him an introductory letter to Alexander Woolcott, who in turn brought Orson to the attention of Katharine Cornell. He was engaged for her touring company and began by portraying Tybalt in "Romeo and Juliet". The year was 1933; Orson was 19.

In 1934 he was appearing in New York in another production of "Romeo and Juliet" when John Houseman, an ex-grain merchant who had helped stage Gertrude Stein's "Four Saints in Three Acts", offered him the lead in Archibald MacLeish's experimental play, "Panic". The play lasted only three performances but it began an association between Welles and Houseman that led to the creation of the famous Mercury Theatre three years later.

Any actor with a voice like Welles' was destined to get involved with radio, and Orson made his air debut on *March of Time*, later as Lamont Cranston in the popular CBS suspense series, "The Shadow", and, incongruously, as the Voice of Chocolate Pudding.

The Depression was in full sway when Welles and Houseman were given a WPA grant to establish a Federal Theatre. Offices were set up in the ladies room of the Maxine Elliott Theatre. Their first play, an all-black cast headed by Canada Lee in "Macbeth" at Harlem's Lafayette Theatre, was a hit. Subsequent plays, "Horse Eats Hat" and "Dr. Faustus", were also successful. However, their next effort, the politically-torrid musical, "The Cradle Will Rock", proved too hot for the Federal Theatre which withdrew its support. Undaunted, Welles and Houseman leased a vacant theatre and opened it on their own without orchestra, costumes or props. New York critics hailed it as a smash hit.

On such a wave of prosperity, Welles and Houseman took over the Comedy Theatre for five years, renaming it the Mercury Theatre after the magazine. In succeeding seasons the Mercury Players, including such performers as Joseph Cotten, Agnes Moorehead and Everett Sloane, emerged as a prominent revolutionary acting-group that electrified audiences and, to some degree, changed the course of the

**Welles was a boyish 24 years old when he first arrived in Hollywood, fresh from having scared the hell out of the nation with his super-realistic radio production of H.G. Wells' "WAR OF THE WORLDS". He was 26 years old when "CITIZEN KANE" was released, and its impact on the technique of film-making has never been equalled. If he had made only that one film, he would still be immortal.**



Broadway theatre. Their first production, a modernized and streamlined version of Shakespeare's "*Julius Caesar*", was an instant hit, as were such offerings as Dekker's "*The Shoemaker's Holiday*", Shaw's "*Heartbreak House*" and Buchner's "*Danton's Death*".

During this period Welles continued his radio work, doing more than a dozen shows weekly and usually spending the \$3000 he received on one *avant garde* theatre project or another. During all the ensuing years, Orson has followed this pattern, performing as an actor to finance his eternal efforts as a producer and director.

In 1938 he introduced to a grateful coast-to-coast radio audience his magnificent Mercury Theatre on the Air which presented innovative radio dramas each week. On Hallowe'en of that year he shocked a nation with his presentation of H. G. Wells' "*The War of the Worlds*", employing a news-bulletin technique concerning the arrival of Martians on earth, with such fervent realism that the entire nation went into panic. New Jersey residents fled their homes. New Yorkers began a mass exodus to Westchester and Connecticut. In Flint, Mich., a church congregation prayed for deliverance from the terrible extraterrestrial menace and recruiting stations were jammed with patriotic volunteers. Chaos truly reigned.

From the sensational program, in addition to police investigations and some FCC involvement, Welles' CBS drama series captured a sponsor (Campbell Soups). Orson, himself, drew a fabulous offer from Hollywood that was much too enticing to ignore. RKO offered the Boy Wonder \$150,000 a year, full and complete autonomy to make whatever film he chose, and creative controls no other Hollywood

film-maker could claim at that time.

In the meantime, the Mercury Players continued to prosper, highlighted by "*The Five Kings*", the Shakespearean chronicle plays Welles offered on a national tour.

Exactly 13 months after "*The War of the Worlds*" had scared the wits out of a nation, Orson Welles arrived in Hollywood. During most of his first year he made his study of the film craft; his teachers were soundmen, cameramen, grips and electricians, editors, prop men and special effects experts. During part of this period he flew back to New York each weekend to produce the Mercury Theatre On the Air. Finally he moved the show's emanation to the West Coast.

On July 30, 1940, Orson Welles, just turned 25, stepped onto the set of "CITIZEN KANE" at RKO and commented: "It's the most beautiful toy train anybody ever gave an adult."

Twelve weeks later "CITIZEN KANE," boasting an entire cast that had never before faced a Hollywood movie camera, was completed. And, in keeping with the Wellesian tradition, its unveiling created a storm of controversy that echoed throughout the world. Even today, 35 years later, Hollywood seismographs still record the tremors left by the impact of "CITIZEN KANE." But out of all the ensuing brouhaha, one unalterable fact was established. "CITIZEN KANE" was, is and will always be acclaimed as one of the greatest films in the history of the cinema.

Six months after "CITIZEN KANE" was launched, Welles wrote, produced, directed and narrated a film adaptation of Booth Tarkington's "THE MAGNIFICENT AMBERSONS", which many respected critics compare favorably with "KANE". However, Welles fought with RKO because they

edited his film while he was in South America on another project, "IT'S ALL TRUE", which RKO abandoned when the advent of World War II cut the world film-market to ribbons.

At the war's outbreak Welles tried to enlist but was turned down because of inverted flat feet, a bad sacroiliac and asthma. He turned down a commission because he felt unworthy of it. For five months he pounded on doors in Washington, D.C., offering his services.

"The incompetents were afraid I'd show them up," Orson said later, "and the good men probably were afraid I'd be too irresponsible."

Finally he erected a tent in Hollywood, opened the Mercury Wonder Show and entertained GI's with such magic tricks as sawing Rita Hayworth in half. Miss Hayworth managed to restore her physical entity to marry Welles and become the mother of a daughter, Rebecca.

With war's end Welles co-wrote, directed and starred in "THE STRANGER" for RKO release, then interrupted his Hollywood sojourn to return East and collaborate with Cole Porter on a musical stage version of "AROUND THE WORLD IN 80 DAYS" for producer Mike Todd. When Todd declared bankruptcy, Welles needed \$50,000 to get the costumes out of hock. He phoned Columbia studios and promised Harry Cohn a contract and a story if he would send the needed money within the hour. As a result, Welles soon found himself in Mexico aboard a schooner being skippered by Errol Flynn, co-starring in "THE LADY FROM SHANGHAI" with ex-wife Rita Hayworth and directing from a script he had penned in a matter of a few weeks.

"THE LADY FROM SHANGHAI" is a good example of the rumors, half-

**Continued on Page 472**

**(LEFT)** Orson Welles' portrayal of Edward Rochester in the 1943 film, "*JANE EYRE*", directed by Robert Stevenson, marked his third screen appearance. **(RIGHT)** Welles as he appeared in his favorite role of all, that of Falstaff for his 1966 production of "*CHIMES AT MIDNIGHT*", also released under the title, "*FALSTAFF*". His current film-in-progress, "*THE OTHER SIDE OF THE WIND*" includes performances by directors John Huston and Peter Bogdanovich.



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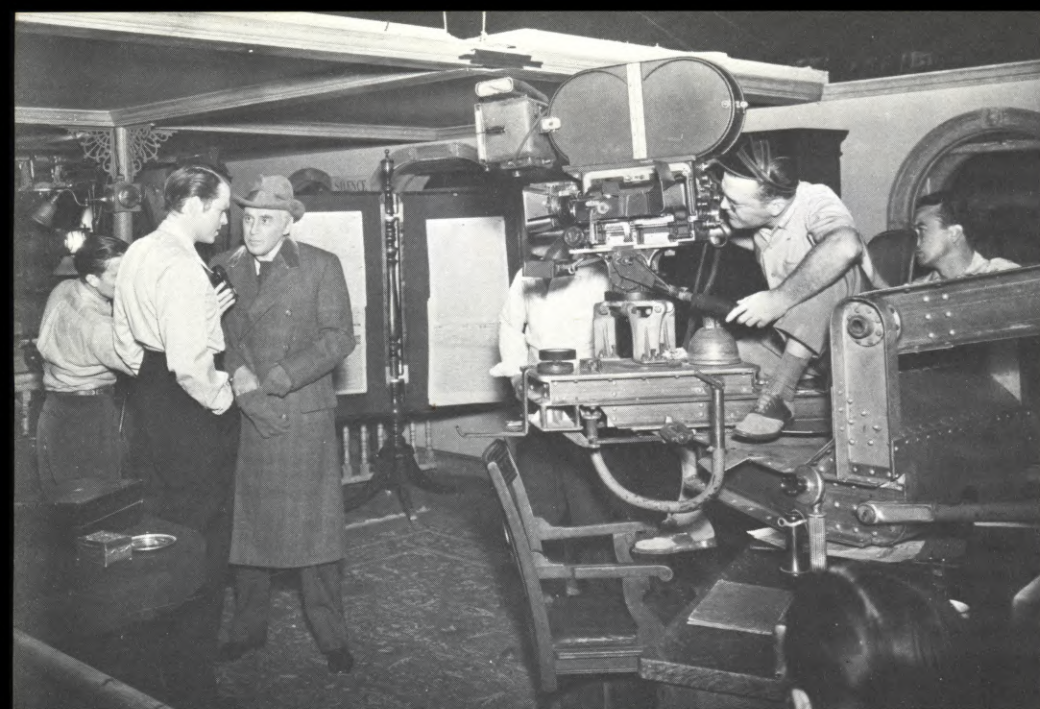
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The camera, mounted on a crane, is lined up for a moving shot. Director and cinematographer both felt that direct cuts should be avoided as much as possible. Therefore, the action was planned so that the camera could pan or dolly from one angle to another whenever that type of treatment was desirable. Welles instinctively grasped the idea that scenes and sequences should flow together so smoothly that the audience would not be conscious of the mechanics of film-making.

### “CITIZEN KANE” REALISM Continued from Page 401

and I felt this, and felt that if it was possible, the picture should be brought to the screen in such a way that the audience would feel it was looking at reality, rather than merely at a movie.

Closely interrelated with this concept were two perplexing cinetech- nical problems. In the first place, the settings for this production were designed to play a definite role in the picture — one as vital as any player’s characterization. They were more than mere backgrounds: they helped trace

the rise and fall of the central character.

Secondly — but by no means of sec- ondary importance — was Welles’ concept of the visual flow of the picture. He instinctively grasped a point which many other far more experienced directors and producers never com- prehend: that the scenes and sequences should flow together so smoothly that the audience would not be conscious of the mechanics of picture-making. And in spite of the fact that his previous experience had been in directing for the stage and for radio, he had a full realization of the great power of the camera in conveying

At the time “KANE” was made lighting, sound and camera equipment were all quite cumber- some, so that scenes shot in the studio were almost never designed with ceilings. Most of the lighting units were mounted overhead on parallels. In a radical departure from conventional practice, most of the “KANE” sets were built with ceilings — very low ones in some cases — which meant that all of the lighting had to be done from the floor.

dramatic ideas without recourse to words.

Therefore from the moment the production began to take shape in script form, everything was planned with reference to what the camera could bring to the eyes of the audience. Direct cuts, we felt, were something that should be avoided wherever possi- ble. Instead, we tried to plan action so that the camera could pan or dolly from one angle to another whenever this type of treatment was desirable. In other scenes, we pre-planned our angles and compositions so that action which ordinarily would be shown in direct cuts would be shown in a single, longer scene — often one in which important action might take place simultaneously in widely-separated points in extreme foreground and



The late Gregg Toland, ASC, one of the great cinematographers of all time, came to “CITIZEN KANE” just after having won an Academy Award for his work on “WUTHERING HEIGHTS”.

background.

These unconventional set-ups, it can readily be seen, impose insur- mountable difficulties in the path of strictly conventional methods of camerawork. To put things with brutal frankness, they simply cannot be done by conventional means. But they were a basic part of “Citizen Kane” and they had to be done!

The first step was in designing sets which would in themselves strike the desired note of reality. In almost any real-life room, we are always to some degree conscious of the ceiling. In most movies, on the other hand, we see the





ceiling only in extreme long-shots — and then it is usually painted in as a matte-shot. In the closer angles, the camera seldom shows the ceiling, or even anything suggesting it. On the contrary, conventional interior lighting-effects, since the light is projected from spot-lighting units perched high on the lamp-rails paralleling the sets, come from angles which would be definitely impossible in an actual, ceiled room.

Therefore the majority of our sets for "Citizen Kane" had actual ceilings. They were low ceilings — in many instances even lower than they would be in a real room of similar style. Furthermore, many of our camera-angles were planned for unusually low camera-setups, so that we could shoot upward and take advantage of the more realistic effects of those ceilings. Several sets were even built on parallels, so that we could take up any desired section of the flooring and place the lens actually at floor level.

This, as may be imagined, immediately created a very interesting problem in lighting. Since the sets were ceiled, not one of the 110 sets were paralleled for overhead lighting. With the exception of a few occasional shots for which we could remove a small section of ceiling to permit using a "Junior" or similar spotlight overhead for really necessary backlighting, everything in the picture was to be lighted from the floor.

With deep sets, this necessitated the use of light which would have great penetrating power. This was found in the twin-arc broadsides developed for use in Technicolor. These lamps formed the backbone of our lighting, supplemented of course with "Juniors," "Seniors," and 170-Amp. arc spots as might be necessary.

In passing, it may be mentioned that this technique of using completely ceiled sets so extensively gave us another advantage: it eliminated that perpetual bane of the cinematographer — microphone shadows! The ceilings were made of muslin, so the sound engineers found no difficulty at all in placing their mikes just above this acoustically-porous roof. In this position, they were always completely out of camera-range, and as there was no overhead lighting, they couldn't cast any shadows. Yet the ceilings were so low that the mike was almost always in a very favorable position for sound pick-up. I must admit, however, that working this way for eighteen or nineteen weeks tends to spoil one for working under more conventional conditions, where one must always be on the lookout lest the mike or its shadow get into the picture!

**Continued on Page 452**



**(ABOVE)** The immense warehouse set in which the last sequence of the film takes place. "KANE" is a classic example of getting tremendous production value onto the screen at very low cost. Although there were 110 sets, some of which appeared most elaborate, the total expenditure was about \$60,000 — very low even in terms of the uninflated dollars of that day. **(BELOW)** Using a Mitchell viewfinder, Welles and Toland line up a camera angle.



## THE NEW ECP & IM SYSTEM Continued from Page 425

tronic printer, and a composite print is produced in one simple, fast operation, using only 100 feet of film to produce a 100-foot composite scene. There is no 10-day to two-week waiting period to see the composite print; it is available in one day. And if a reprint is required for any reason at all, it can also be had in one day, with the desired corrections incorporated.

Furthermore, the electronic composite technique produces a composite film print which has all the sharpness, definition and color quality of a standard optical print. There are no visible scanning lines, and no losses in picture quality such as result from currently-used tape-to-film systems which cannot overcome the relative lack of definition inherent in tape.

### ELECTRONIC PREVIEWER

Today when foreground action is photographed in front of a blue backing, a cinematographer has no choice but to work blind, so to speak. When he photographs actors in front of a plain blue background, that is exactly what he sees — actors performing in front of a plain blue background. He has no way to relate them to the background scene. But with electronic composite photography, he can see them as they will appear in the final composite picture — in our hypothetical case, in front

of the Taj Mahal. He can do this by means of an Electronic Previewer, which is an important component of the Electronic Composite Photography and Image Modification System.

### USING THE ELECTRONIC PREVIEWER

The Electronic Previewer is a device which can look at the background film (Taj Mahal) and at the same time, by means of a small TV camera attached to the film camera, look at the actors performing in front of the blue background. Now when the cinematographer photographs actors on film in front of the blue screen, the electronic previewer photographs those actors electronically, and displays them on a color TV tube. But the previewer displays them with the Taj Mahal in the background instead of the blue backdrop. In this way, the cinematographer sees the composite scene electronically, just as it will appear on film the following day. If he likes, he can record the composite scene on tape right there on the stage, play it back, and make certain of his relationship between foreground and background before finally photographing the actors on film.

There is no guesswork; no costly production time lost measuring sidelines; no chance of costly, time-consuming retakes days later because of foreground-background mismatch. Electronic composite photography is

**Wilton Holm discusses the new system with Frank P. Clark and Petro Vlahos, both of the Research Center. It is claimed to produce a composite film print which has all the sharpness, definition and color quality of a standard optical print. There are no visible scanning lines and no losses in picture quality, as in conventional tape-to-film systems.**

no more difficult than simple photography, but its creative possibilities are infinitely greater.

### FURTHER CAPABILITIES OF THE ELECTRONIC COMPOSITE PHOTOGRAPHY AND IMAGE MODIFICATION SYSTEM

In addition to producing composite scenes from separate foregrounds and backgrounds, the ECP & IM system can produce fades, dissolves, wipes, montages, arrays — everything an optical printer can do.

But the ECP & IM system can do even more. By combining the best aspects of motion picture techniques with the benefits of advanced electronic and computer technology, *it can modify the image of persons and objects within a scene.* For instance, the face of an actress may be diffused, so as to create an ethereal effect, without diffusing anything in the picture but her face. Or her complexion color can be changed without changing the color of anything in the scene but her face. Or, even more remarkable, her facial color may be varied *during* a scene, causing her to blush, or to turn pale, and again without affecting the color of anything in the scene but her face.

Objects such as telephone poles or airplanes in the sky can be removed as if by magic. The sharpness of objects can be enhanced. Objects can be made to change brightness during a scene, or to appear as well as to disappear. Wrinkles may be removed from a face, giving it an old-yet-young look. Shadows can be removed. Shadows can be introduced. Flicker, scratches, even excessive graininess may be removed. Clouds may be introduced into a cloudless sky.

An object may be "frozen" — that is, caused to become motionless within a scene while all other objects continue to move normally. Blur can be introduced to eliminate jerky motion. And the color of any object within a scene may be changed completely without altering the color of any part of the total scene. In fact, a black-and-white scene including a house, lawn, sidewalk and sky, may be converted into a color scene with the house red, the lawn green, the sidewalk gray, and the sky blue with white clouds.

The capabilities of the ECP & IM system which have been described so far may seem incredible, and they are. This is especially true of the system's ability to modify persons and objects within a scene, for such a capability has never before existed. The closest approximation has been hand-painting on a frame-by-frame basis —

**Continued on Page 474**

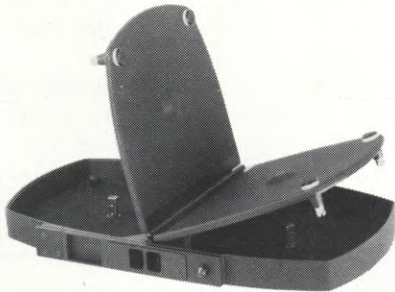
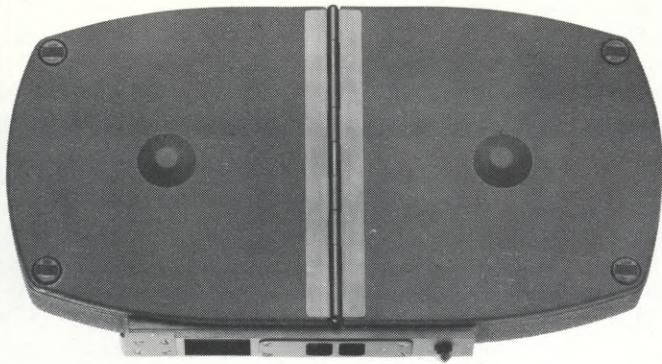


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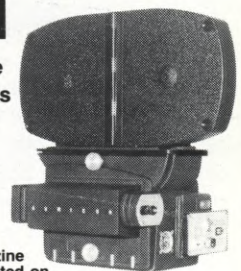
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PLC-4 Magazine shown with CP-16R Reflex Camera.



PLC-4 Magazine shown mounted on Auricon Cine-Voice Camera (400 ft. conversion model).

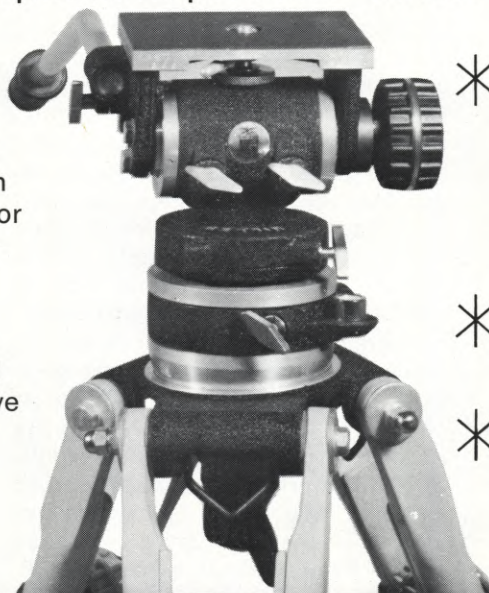
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## THE ECLAIR STORY Continued from Page 421

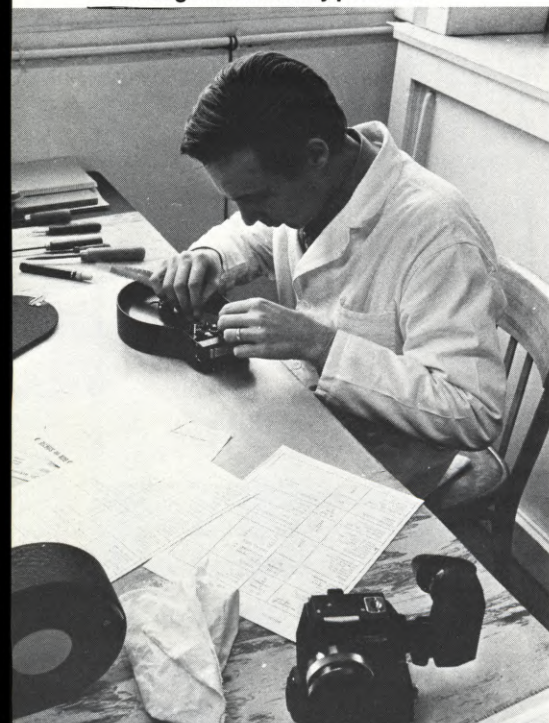
The laboratory is well equipped for both color and black and white, and is also quite busy. At one time, both Eclair International and the studios were owned by the same interests — Monsieur Mathot, but four years ago the camera department was sold to British film-producer Harry Saltzman. This year Soremec-Cehess gained control of Eclair International, but the studios and lab remain under Mathot control.

Before we saw the camera works LaDerriere took me to lunch at the studio commissary, about two hundred meters from the plant. Amid cowboys and dancing girls and knights (errant) we ate French bread and cheese, chased with champagne mixed with cassis (black currant syrup). I was quite surprised to find champagne sold at very reasonable prices, and by the glass. The commissary was less of a cafeteria than a Parisian bistro. It was quite a change from what we have grown used to in the States.

We walked back over to the Eclair works after lunch. There I met Monsieur Guillaume, the director of the plant. An intense, cigar-smoking young man, Guillaume would lead us around his factory, explaining everything in rapid French, which LaDerriere tried desperately to translate simultaneously.

Guillaume told me that, currently, most of the parts for the Eclair cameras are manufactured on a sub-contract basis. Only about twenty percent of the components are manufactured at

**An Eclair ACL camera goes through a final checkout prior to shipment. Papers on the desk are camera assembly and inspection reports that accompany all cameras throughout assembly process.**



Epinau. While most of the machinery in the large machine shop is operated by skilled metal workers, Guillaume explained that Eclair had ordered half a million dollars worth of automated, tape-driven machinery to speed up their shop operations. He hoped the new machines would enable him to have greater control over parts quality, and at the same time, would permit Eclair to produce a greater percentage of its own parts. Castings are sub-contracted, and Guillaume said they will continue to be cast on the outside. However, castings are, for the most part, machined and finished at Epinau. In a small room off to one side of the machine shop a series of production flow-charts indicated the types of spares being produced. Extensive use of such flow-charts, along with a computerized inventory, enables Eclair to keep track of all production and production needs. Runs of various parts are scheduled several weeks in advance, and are all listed on a master production board. I could look up at this chart and see that five thousand of part XYZ was being run this week, and that next week ten thousand of part ABC would be run. In a nearby storage room Guillaume showed me their stock of rough castings. It was strange to look at an unmachined NPR body casting. The familiar shape was there, but so much else was missing. Smaller parts are stored in another room, in trays, or in plastic bags that might hold an entire production run of something like precision screws.

Quality control at Epinau is very stringent. Several technicians spend their days doing nothing but inspecting parts for the critical tolerances necessary to make cameras function properly. Using profile projectors, surface gauges, and other very precise tools, these technicians check over 125,000 individual spares each month. Quality control, too, has its production flow-chart. Each chart is geared to the master program, and lists the spares to be inspected each day. Once spares are checked and approved by the quality control department they are sent over to camera assembly, in the next building.

Camera assembly is a large, well-lit, room where some thirty-one highly-skilled workers build the Eclair cameras. Of the ninety people employed at the Epinau works, fully one-third are here assembling cameras. About seventy cameras, of various types, are produced each month. It breaks down to this: 30 NPR, 25-30 ACL, 5 Cameflex (CM3), and about a dozen of the high speeds. In addition, about 150 film magazines are produced here each month.

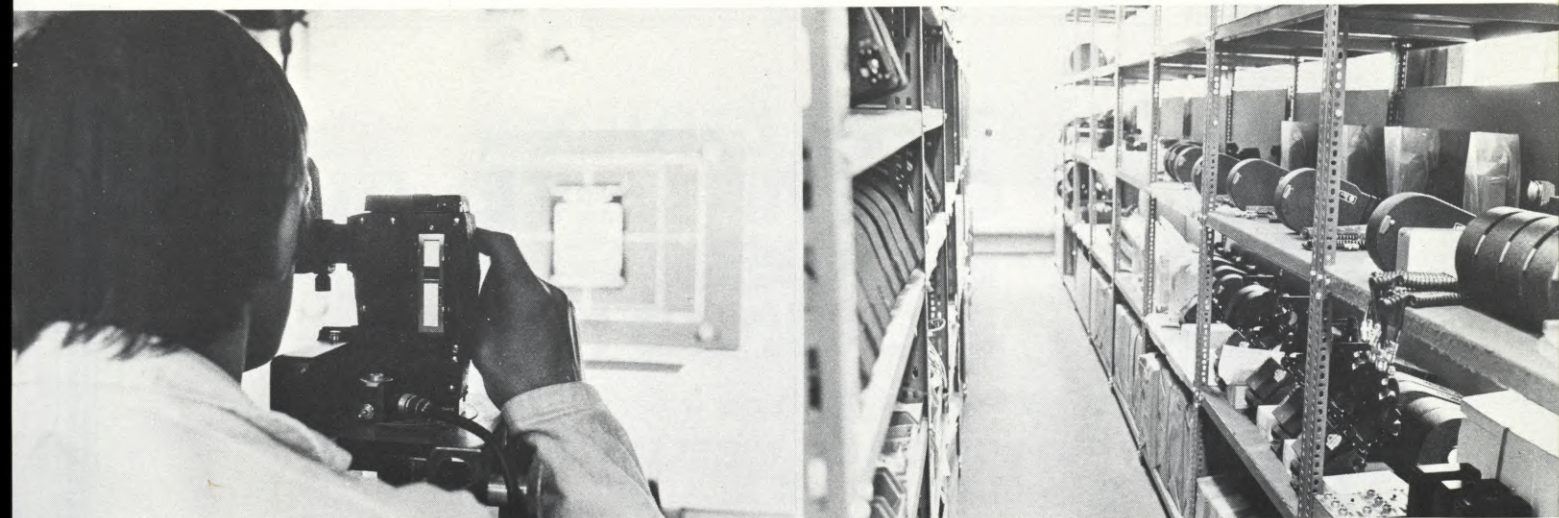
As we pass by the workmen, and peer over their shoulders, they show no distraction, and continue to fully concentrate on their work. Many of the craftsmen are older people, but there is a sprinkling of young faces, indicating that time-honored skills are continuing to be passed down. Most of the people work on general assembly, but several are specialists, and perform very specific tasks, such as building up the delicate movement, or assembling the critical mirror-shutter.

When cameras are assembled they are taken to the adjacent quality-control room for final inspection and fine-tuning. Each camera is given a film steady test (the test results, about ten meters of film, are kept at Epinau for future reference, but the test film is available to owners on request). The NPR and ACL receive special sound-chamber tests, utilizing an oscilloscope to pin-point any sound problems. Technicians go over each camera with a fine-tooth-comb, making sure that the unit meets all factory specifications. Very infrequently a camera fails these inspections, and is sent back out to assembly, where it is taken apart and rebuilt from scratch. Once the cameras have been fine-tuned they are put into another sound-chamber and given standard dB noise level tests (weighted "A" scale, microphone one meter from the camera). If the camera passes all these tests and inspections it goes up to the stock storage room to await shipping.

When Eclair International receives an order, all components listed on the order form are assembled together. Then another quality control technician goes to work to put together a camera package. Magazines are fitted. BEALA motors have their circuits checked once more. The film plane is checked. The ground glass. Power cables and sync cables are traced for continuity. A finder is fitted and checked. A lens, if ordered, is mounted and checked. The camera is operated as a unit, with film, for a final test. And once the technician is sure the package meets the Eclair standards the camera and its accessories are packed and the order is shipped.

The check-out technician fills out a final camera report, and files it for future reference. This report has been with the camera since assembly, and will always be available at Epinau. One of the people dug through an old NPR file and pulled out the factory report on camera number 1653. What a charge it was to see the original specifications on my own NPR.

Eclair International maintains a very large repair shop on the second floor of



**(LEFT) Setting up an Eclair ACL for camera steadiness test. All cameras produced are given such tests and the film records are stored at Epinay for future reference. (RIGHT) Part of the stockroom at Epinay. Finished cameras and accessories are kept here to await order-filling. The four Eclair NPR's in the foreground are awaiting shipment to the United States.**

the office building. Cameras come in from all around the world. Seven service people work on all the various Eclair cameras, with a normal turn-around of four weeks. Repairs can be made much faster in an emergency situation. One advantage of this shop over all others is the unlimited supply of camera spares. A large parts inventory is kept downstairs, all cross- and recross-indexed on a computer print-out. Eclair even stocks a whole, complete, pre-assembled camera movement. These movements are shock-mounted in special cases, and are ready to be shipped anywhere on a moment's notice. If a camera suffers a major trauma and requires extensive repairs, the factory has found it to be more efficient to install the new movement — already assembled, and inspected to Eclair tolerances. It makes for a cheaper repair, and a better, more precise repair.

Eclair also stocks over \$600,000 (French wholesale value) worth of accessories. I saw piles of boxes full of 12-120, 12-240, 25-250 zooms, orientable viewfinders, fixed-focal-length Kinoptik lenses, filters, batteries, cables, film magazines, tripods, and much more. This stock is used primarily to fill camera package orders. But all stock is available separately. Very few cameras were in stock during my visit. I saw half a dozen NPR and about as many ACL cameras, and all were in the final order-filling process. It seems that demand for the Eclair cameras consistently exceeds supply, so cameras do not stay in stock long. Over eighty-percent of their total production is exported. French television (ORTF), however, is the largest owner of Eclair cameras — more than 800. The British armed forces, oddly

enough, are also major owners of Eclairs (mostly the 35mm Cameflex). Australia gets about 60 cameras per year. And the U.S. will receive nearly 250 a year.

Epinay has been the manufacturing and assembly center for Eclair International since 1947, and except for one year, when the plant was shut down for some months (in 1972, due to management problems with the British owners), production has increased substantially each year. Guillaume hopes that once the new computer-driven shop machines are installed production can be increased still more, in order to meet the ever-increasing world-wide demand for the Eclair.

I said goodbye to Monsieur Guillaume and his staff, and LaDerriere and I left to go into Paris itself. There was still one more plant to see, plus the head office. I had heard that Paris traffic was a little crazy. But I was not at all prepared for what I saw. I can only be thankful that I wasn't driving.

We arrived, in due time, at the Rue St. Maur works. This building was at one time the home of André Debrie Cameras. We took a very slow and very old little elevator to an upper floor. Here I was introduced to the Eclair/Soremec line of very high-speed cameras. This line differs substantially from the GV35 and GV16. These high-speed cameras are really VERY high speed, and are intended primarily for jobs like missile tracking. Sitting on a table, gleaming in glossy white, was the Eclair/Soremec VR3000. A huge camera, by anyone's standards, it was designed for 35mm film running at 3000 or more frames per second. One would think the market for such cameras was small, but Eclair does over \$800,000 a year with these monsters. The VR3000 is an

Eclair at heart, one can tell, because it has quick-change magazines. That is about the end of any resemblance to other Eclair products. From the company that brought us the ultimate in "cinema verité" cameras, the VR3000 was quite a surprise.

Leading me into another room, my hosts had still another surprise for me. I was to inspect their new variable-speed motor, and the built-in exposure system, both for the ACL. The variable-speed motor is made by Thompson CSF, a French company, and uses the same Hall Effects motor as the ACL 24fps drive. The variable-speed motor provides speeds from 8-75fps. It also operated at 24/25 fps crystal-controlled. ACL owners will appreciate one new feature in this motor: the shutter always stops with the mirror in the viewing position. There won't be any more inching the viewer open. The variable-speed is only slightly more bulky than the constant-speed motor. LaDerriere said he felt the motor would be ready for sale by the end of this year.

The exposure system was very interesting. It uses through-the-lens metering, with a very unusual viewfinder display. Instead of visible numbers and a mechanical needle, the ACL system employs a Light Emitting Diode (LED) display. Seven LED's are lined up along the left side of the frame. The correct aperture is attained when the center LED is lit, and all the others are dark. Each of the other LED's indicate a half-stop change in the light reading. The ASA index (nominally 12-800) is entered into the system by first taking an exposure reading with a hand meter, and then correlating the ACL. A small dial on the ACL base (designed

**Continued on Page 484**



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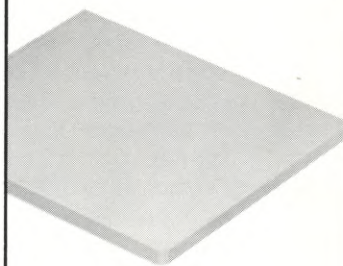
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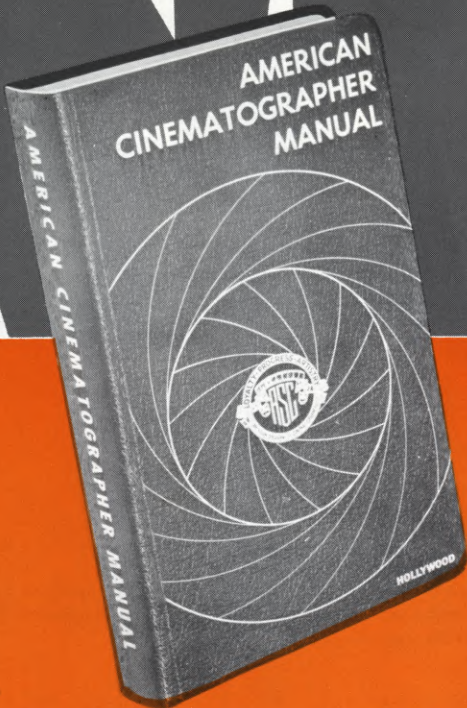
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## THE PANTHER'S PROGRESS Continued from Page 413

tinuing its impressive if sporadic shooting schedule, and the new John Huston film about to begin, Morocco is wide open for filming. One hopes that the inexorable rise of prices will be limited, and that the reasonable suppliers will see that their long-term interest is in holding down the costs of overseas clients to ensure that they return to Morocco.

Unable to obtain supplies of Eastmancolor 5247, we stocked up with dependable 5254, carefully crated for the tropics. The really baffling problem was not the stock itself, but finding the empty cans in which to put short ends. Due to the ubiquitous energy crisis or one of its derivatives, there is a chronic lack of film cans. The necessity of unbending those serving as ashtrays was happily averted at the last moment, when we managed to buy a hundred at great expense.

There are good non-stop flights from Casablanca to London three times a week on British Caledonian, and so we were able to use the excellent service and quality of Rank Laboratories in London. On the one occasion when terribly urgent rushes were sent via Paris, the French shipper swore he had

**A former private princely abode, this ornate building in Marrakech served as the Garnatta night club at night and a set for "PINK PANTHER" during the day. In the film it is characterized as being the base of the Fat Man, one of the weirdest of the characters who romp through this film farce.**



**Setting up at Casablanca Airport to shoot scene of Clousteau's arrival. A crew member stands in for Peter Sellers on the ramp of the plane. Director of Photography Geoffrey Unsworth, BSC, is in the foreground. In this scene, Sellers arrives bandaged from head to toe and, after a suspicious glance at the world, adroitly tumbles down the stairs of the ramp. Mattresses were laid to protect him during this stunt.**

physically transferred the consignment onto a London flight, while the London shipper swore equally that they did not come off the flight in London. Sure enough, considerable Sherlock-Holmes activity next day discovered

that they had been left on the aircraft ever since, endlessly crossing from Orly to Heathrow and back again.

Our Moroccan sequences went smoothly, if only after a great deal of behind-the-scenes organization. There comes, after a few weeks in North Africa, a mental revelation: one realizes that frustration at the slow pace of progress, the cars which do not arrive, the extras who evaporate, only makes things worse, and a kind of sympathetic, crafty cajoling takes the place of angry instructions. It is not so much a case of "If you can't beat them, join them" as of understanding the life-style of a country and finding a subtler way to achieve efficiency.

Working in Morocco, we have come to know some of the Moroccan people very well, and have found with considerable pleasure that we were no longer thought of as being "on tour". Typical was the banquet given in our honour by the transport contractor, Mr. Ben Daoud. After an open-air cabaret by scores of robed dancers and singers, and after considerable quantities of Moroccan liquor, each table of ten unsuspecting crew members was served an entire lamb lying on its back in gravy, to be eaten with one's right hand, followed by a chicken for each person, couscous and pies.

This side of Moroccan life contrasted to the savage poverty that is the lot of most of the people.

A major problem was crowd-control. The almost endlessly colourful permutations of Kaftans and Jellabas, the wizened faces and the wide-eyed





urchins have given "THE RETURN OF THE PINK PANTHER" the extroverted and outlandish background it demands, but crowds of several thousand in the Jema El'Fna marketplace of Marrakech can be difficult. We were very often forced to take the mobile canteen off the street, as well-intentioned handouts of food to a very hungry and vociferous crowd would leave the Unit unfed. The day-to-day moral problems of spending film money in an underprivileged environment apply in many parts of the world, but this did not make matters any easier for us. The Moroccan police force is very cooperative, and effectively made it possible for us to get on with our set-ups, amid the drum-beating, dancing, clapping, laughing phantasmagoria of a packed Moroccan market-place.

Flying in our charter aircraft from the dusty airstrip of Marrakech-Menara to the icy concrete wastes of Geneva-Cointrin, to land amid pouring rain and cheese fondue for lunch, amounted to a species of culture-shock. From a customs clearance arranged out of Morocco on first-name terms in miraculous minutes, we now had to clear efficient, cool, no-nonsense customs into Switzerland. The amazing thing about Swiss Customs is that the duty, and so the temporary importation bond, is calculated not by value but by weight. Cheese bears duty at so many francs per Kilo, and Hard-Front Panavision Arriflexes at another.

After all the weighing and explaining that this involved, the actual filming in Gstaad presented few difficulties. Surrounded by fairytale chalets and snow-capped peaks, Swiss officialdom was either non-existent, or concerned to help us to the fullest extent. With no police to close streets, we simply did it ourselves, in the easiest, free-moving location ever.

Nice is more highly organized, and we were lucky to work with such able and experienced local people. The problem arose, as it sometimes does in finding luxurious locations, that the reasonable money available to rent, for example, a beautiful swimming pool seems less than generous to the man wealthy enough to own and maintain it in the enormously expensive area around Nice. And when we gently suggested that in the course of the filming, two delivery trucks would "accidentally" fall into the pool, thirty-nine of the forty owners instructed the butler to show us the door.

Thinking back over the last hectic weeks, with studio shooting in London now completed, and Tom Priestley ("The Great Gatsby") busily cutting to-



In the Room of Jewels of the Lugash Museum, a Dark Figure evades the electronic eyes and radar shield by sliding across the floor on its back, smoothing the way with common floor wax. Once at the pedestal of the famed "Pink Panther" diamond, it lowers one mechanical claw-device onto the jewel's cushion, while snatching the gem with the other.

gether what we hope will be a very funny film, what sticks out most is the versatility and willingness of our crew. "THE RETURN OF THE PINK PANTHER" is one of the new breed of films that puts production money where it counts, up on the screen. Within a reasonable but limited budget, and to a very tight schedule, Blake Edwards has packed comedy and slickness, images of luxury, sights of incredible places into an opulent, well-photographed, extremely funny motion picture. And he has done this partly due to the kind of technicians working with us, a crew able to achieve exceptional speed without sacrificing the quality of their work.

I think of Eddie Mathews, our Gaffer, and the other sparks scurrying around in the fourth sub-basement of the Palace Hotel, Gstaad. With rapid changes of set, and locations chosen at a moment's notice, these are the gen-

tleman who produce results. I remember Nobby Clark and Tony Graysmark and the rest, working night after day after night on a precarious rooftop in Casablanca, cheerfully fending off small boys, old ladies and policemen while rigging extensive tubing for scenes brought forward, due to the late arrival of an actor. I think back to Peter Sutton and Don Wortham using their best Arabic to quieten the hypnotic drums which might otherwise disturb the continuity of their sound between takes. I think of all those of our crew who placed the film first and their own comfort second on our travelling circus: "If it's Tuesday it must be Gstaad." Rushing but not skimping, beating off flies, heat, cold and rain, they have helped us bring home, and for limited means, this classic buffoonery of Inspector Clouseau and his quest for the elusive Pink Panther. ■

## "PINK PANTHER"

Continued from Page 404

approach this area I can hardly believe the sight I see. The *Djemaá el Fna* is a tremendous paved plaza which could easily swallow up several football fields. It is alive with a kaleidoscopic collage of sight and sound — a churning whirlpool of multi-colored humanity. It is framed on three sides by *souks*, stalls from which all manner of exotic merchandise is sold.

In the center there are hundreds of separate shows going on. There are acrobats, strangely-garbed dancers, bands playing weird instruments, sword swallows, storytellers spinning their yarns, snake charmers, holy men reading from the Koran, clowns doing their zany thing — a Barnum and Bailey world, for sure. Most colorful of all are the brilliantly-dressed water-sellers in their brass-studded jackets, tight green felt knee breeches, beautiful leather boots and pointed hats. Each one carries a goatskin bag from which dangles an array of small brass cups, and each also has a leather purse studded with antique gold and silver coins — a kind of official badge of office, I'm told. The combined effect of this bizarre *melange* of visual and auditory stimuli is almost more than the senses can absorb.

On the perimeter of this undulating sea of humanity I spy Brute arc lights and then the Sam-Mobile, Samuelson's location vehicle, and I know we are getting close to where the shooting is taking place. We pick our way through the crowds of curious onlookers that surround the filmmakers, and I watch as Christopher Plummer strolls down a narrow alleyway flanked with stalls and enters a tiny barber shop. Blake Edwards yells "Cut!". Then he sees me and comes over. There is a happy hand-shaking, back-slapping reunion with him and his lovely wife, Julie Andrews, who is here

(LEFT) During night shooting stint in Marrakech, Academy Award-winning Director of Photography Geoffrey Unsworth, BSC, looks perplexed — but only for a moment, of course. The veteran cinematographer especially enjoyed making this comedy because it gave him a chance to work in a looser style. (RIGHT) Edwards with Camera Operator Peter MacDonald, whom he refers to as "one of the best Operators I've ever worked with."



Producer/Director Blake Edwards talks with American Cinematographer Editor Herb Lightman, who was visiting the Marrakech location at his invitation. The author says that by now Edwards must regard him as a kind of mascot or "good luck charm", since he had previously invited him to visit the locations of "THE WILD ROVERS" and "THE TAMARIND SEED". A widely travelled globetrotter, the Editor regarded Marrakech as one of the most "foreign" places he had ever seen.

not as the star of the film this time, but simply as Mrs. Blake Edwards.

I have one more to go in this day of reunions and that is with Director of Photography (Lighting Cameraman) Geoffrey Unsworth, BSC, whom I haven't seen since a certain memorable evening a couple of years ago when the British Society of Cinematographers paid me the honor of asking me to make the awards presentation at their annual Operators Night Awards Banquet, held at Pine-wood Studios. On that occasion, it was my very great pleasure to present Mr. Unsworth with the top award statuette for his inspired photography of "CABARET".

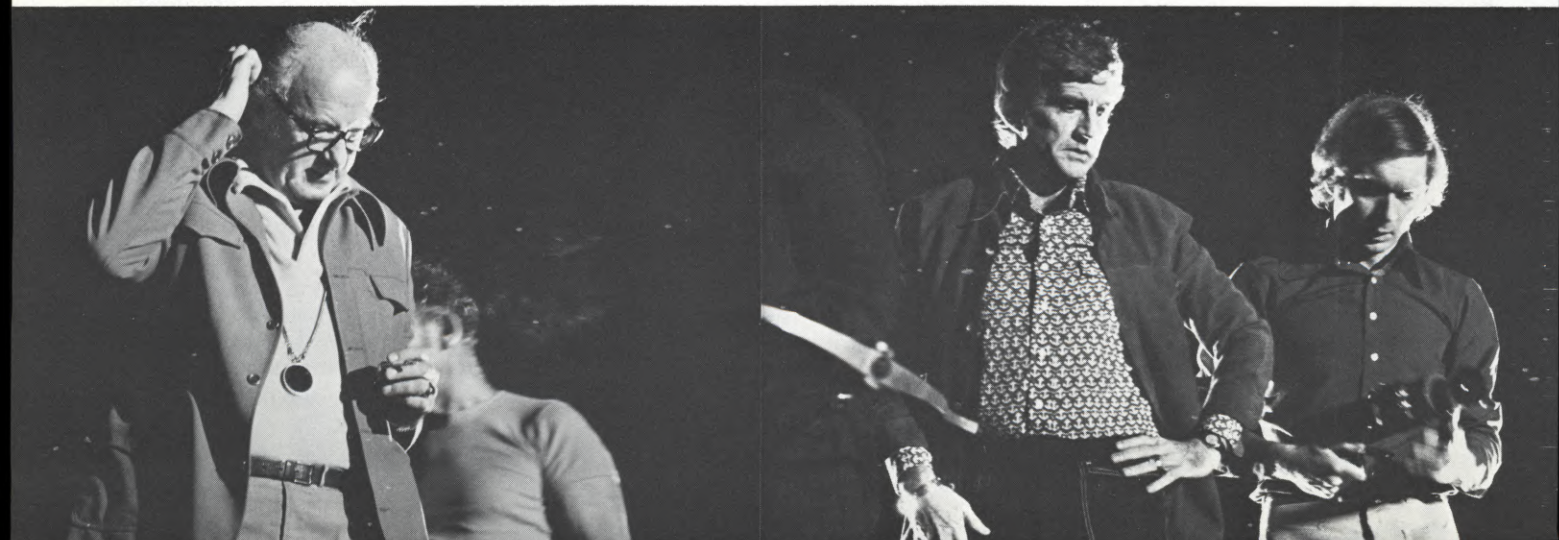
Now it is an equal pleasure to see him again, because Geoffrey Un-

worth is one of the nicest gentlemen one would ever hope to meet. Soft-spoken and possessed of a subtle sense of humor, he could easily be cast in the role of an Oxford don, but he's a quiet dynamo on the set and gets much more onto the screen — it seems to me — than his subject offered to begin with.

### How It All Began

After a hectic day of shooting in the bazaar, Blake and I are having a drink in the lounge of the Hotel Mamounia, and I ask him how this latest "Panther" project originated.

"It's something I've talked about over the years as a *possibility*, but I never entertained the idea as being a realistic





(LEFT) The Panaflex camera is set up for a low-angle shot of the Fat Man, one of a roster of bizarre characters who populate "THE RETURN OF THE PINK PANTHER". (CENTER) A belly dancer undulates her way through a lavish room that is supposed to be the Fat Man's base of operations. Actually, it is a former lush residence that has been turned into a nightclub.



(LEFT) Blake Edwards plots action in one of the colorful actual interiors used as sets. While such locations save thousands of dollars in set construction fees, Edwards feels that there are some scenes which still should be shot in the studio. (CENTER) Christopher Plummer, playing the Phantom, jewel thief extraordinary, makes his way through the Casablanca air terminal. (RIGHT) Geoff Unsworth takes a light reading.

*probability,*" he tells me. "A lot of people had suggested that I do another Panther film, but it was just a series of unique circumstances that led me to decide to go ahead with this one. I was scheduled to do a film in Canada with Julie, when Sir Lew Grade told me that he would like to do an hour-and-a-half or two-hour TV series based on the Clouseau character. Well, I didn't want to go back to the television grind, so I said to him: 'Look, it seems to me that it might be judicious for us to make a feature about Clouseau. Then, afterward, you can do whatever you want with it in regard to television.' He agreed and we were able to postpone our Canadian project and it suddenly all came together. It was one of those

**Continued on Page 475**

**A colorfully-garbed native band plays its insinuating melodies, while squatting on beautiful hand-woven local carpets. It is local color like this that makes location shooting in exotic locales desirable, despite other drawbacks.**



**AFI SALUTES WELLES**  
Continued from Page 429

*myself out of my acting jobs. I use my own work to subsidize my work. In other words, I'm crazy. But not crazy enough to pretend to be free. But it's a fact that many of the films you've seen tonight could never have been made otherwise. Or if otherwise — well, they might have been better. But certainly they wouldn't have been mine. The truth is I don't believe that this great evening would ever have brightened my life if it weren't for this — my own particular contrariness.*

*Let us — Let us raise our cups then standing, as some of us do, on opposite ends of the river and drink together to what really matters to us all — to our crazy and beloved profession. To the movies — to good movies — to every possible kind.*

*I leave you now in default of the eloquence this high occasion deserves with another very short scene from the same film — a piece of which you saw earlier with John Huston and Peter Bogdanovich — just by way of saying good night from one who will remember tonight — not as a sort of gala visit but as a very happy homecoming. And who remains not only your obedient servant, but also in this age of supermarkets your friendly neighbor-*

A scene from the Orson Welles film, "THE LADY FROM SHANGHAI" flashes onto one of the two giant screens installed in the Century Plaza Hotel ballroom. The film tribute also included clips from "CITIZEN KANE", "THE MAGNIFICENT AMBERSONS", "TOMORROW IS FOREVER", "TOUCH OF EVIL", "FALSTAFF: CHIMES AT MIDNIGHT" and Welles current production, "THE OTHER SIDE OF THE WIND".



It was certainly a night for the mavericks. Frank Sinatra, who often casts himself in that role, is warmly greeted by Welles. Sinatra not only hosted the gala affair, but sang "The Gentleman is a Champ", a Sammy Cahn parody on "The Lady is a Tramp", accompanied by Nelson Riddle and his orchestra.

*hood grocery store. Good night. Thank you.*

**Remarks by Charlton Heston, Chairman of the American Film Institute:**

*The basic intention of the American Film Institute's Life Achievement Award was clear from the beginning: to recognize a career in film. As dictated by the Trustees, the primary criteria of the award are specific. The filmmaker chosen must have in some fundamental way advanced the art of film, and his work must be acknowledged alike by the general public, the critical and academic community, and by his professional peers. The careers of the award's first two recipients, John Ford and James Cagney, ideally fulfilled the standards set.*

*Our choice this year is Orson Welles. He is surely qualified to stand with his predecessors on this dais. In that context, it's interesting to note that he claims he prepared for his first film by "studying the work of the masters: John Ford, John Ford, and John Ford." The film was CITIZEN KANE. It's fair to say it has become a benchmark in world cinema, an achievement against which other films are still measured.*

*The first AFI award went to a director, the second to an actor. In Orson*

*Continued on Page 468*

# THE LORE OF ORSON WELLES

**From earliest childhood on, his life story reads like science-fiction, but his dazzling talent and incredible versatility are the stuff that legends are made of**

Official records list Orson Welles' first film as "CITIZEN KANE". Actually, it marked his fourth effort as a filmmaker. In 1934 Welles and Virginia Nicholson (his first wife) filmed a four-minute filmlet, "THE HEARTS OF AGE", during a drama festival at Orson's alma mater, Todd School for Boys. In 1938 Welles, with John Houseman and Richard Wilson, filmed a half-hour movie that served as prologue and interlude for the stage comedy, "Too Much Johnson". And in 1939 Welles filmed an air crash in the Himalayas to introduce "The Green Goddess", a vaudeville presentation.

Most young men of 24 are still seeking goals in life and careers to follow. At that age, Orson Welles had already been a stage star in Ireland and America, an author of pulp magazine thrillers, publisher of a text on Shakespeare, producer of an all-black version of "Macbeth". He had put Caesar on stage in a Fascist uniform, had emerged as a great star of American radio, had scared a nation out of its wits, had put Shakespeare on records and had distinguished himself as a painter and pianist. And, a mere three years past his first chance to cast a vote, he electrified, stunned (and in some cases, angered) Hollywood by signing an RKO contract that gave him complete autonomy to make movies at a guaranteed annual salary of \$150,000.

Through the years many of Orson Welles' closest friends have considered him clairvoyant. "If it exists, I sure as hell have it," Welles has agreed. "If it doesn't, I have the thing that's mistaken for it." At one time in his career Orson worked as a Kansas City fortune-teller at \$2 a reading.

His all-time favorite director was a previous AFI Life Achievement Award winner, John Ford. Once asked to name the screen's three greatest directors, Welles had responded: "Ford, Ford and Ford." However, Welles has admired and respected other directors. Of Fellini, he said: "As gifted as anyone making pictures today." Of Stanley Kubrick, he said: "He appears to me to be a giant." But he was not a booster of Ingmar Bergman, whom he once termed "more foreign than the Japanese" because Orson shared neither his interests nor his obsessions.

Another strong favorite of Orson

Welles was the great cinematographer, Gregg Toland, ASC, who had photographed "CITIZEN KANE". During the filming Toland obviously enjoyed all of the challenges put forward by young Mr. Welles in his first creative efforts on a Hollywood sound stage. Toland once told Orson he could teach him everything he had to know about a movie camera during a single weekend — and he did it.

Orson Welles may have devoted a great deal of his life to Shakespeare and classical theatre, but privately he loves the comic strips. He was a great fan of "Terry and the Pirates" and he always felt that comic strips mirrored contemporary life.

Orson Welles has always been genuinely concerned about the safety of the world but only his close friends have taken him seriously on the subject. In other years he was always active politically in the United States. He was a great admirer of Franklin D. Roosevelt and worked hard to help get FDR

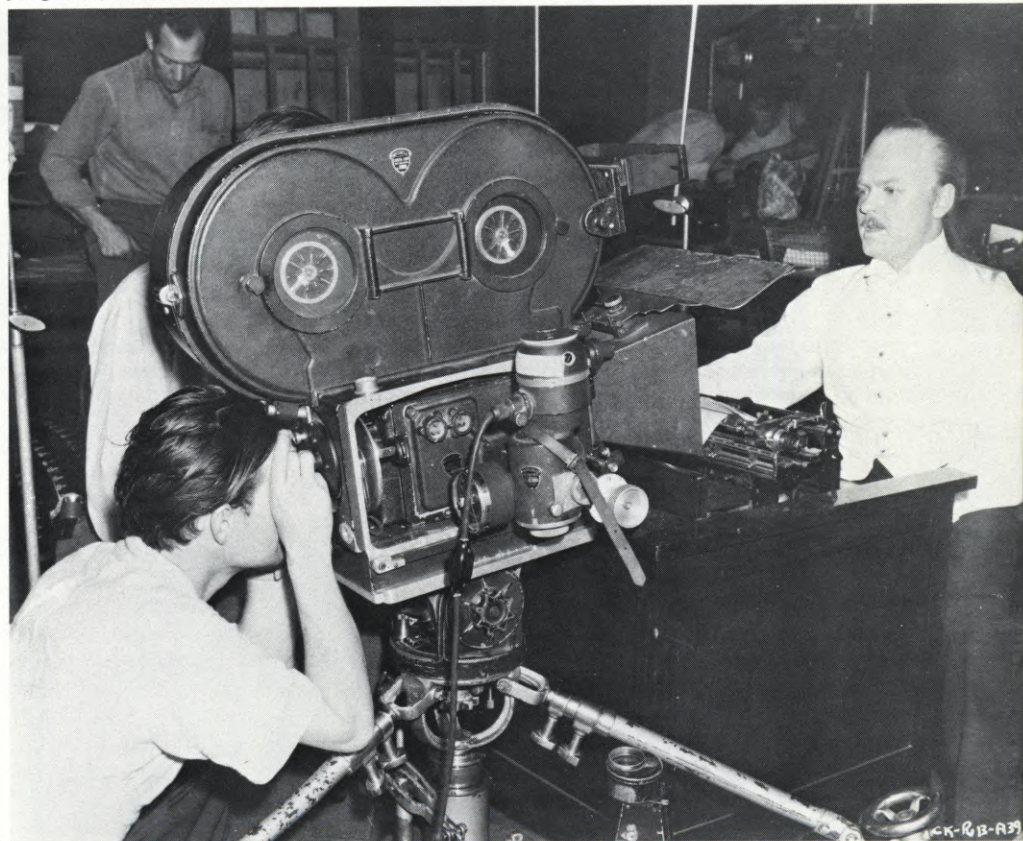
elected president. One of Orson's happiest experiences was when Roosevelt told him he would have made a fine politician. Fact is, at one time Welles seriously considered running as a senator from Wisconsin against Joe McCarthy. Welles often stated that he felt he was a better public speaker than he was an actor.

Contrary to many beliefs, Orson Welles has rarely expressed a fondness for acting. "I do it only when I have to, and to make money," he has been quoted as saying. In recent years his acting assignments have been inspired by his need for capital to finish film projects he was striving to complete at the time. "Few roles tempt me as an actor," he has said. "Falstaff is one."

Orson Welles has always felt that his nose was unsuitable for the roles he played. For that reason he invariably spent many pre-production hours experimenting with false noses to match the character he was portraying.

**Continued on Page 454**

**On the set of "CITIZEN KANE", a 25-year-old Orson Welles, made up to look like fiftyish newspaper tycoon Charles Foster Kane, waits while Director of Photography Gregg Toland, ASC lines up his shot. At that young age, Welles had already lived a dozen lives and distinguished himself in a half-dozen varied fields of the arts. His interests range from the pragmatic to the fantastic.**



# FILMING "THE ULTIMATE THRILL"

A documentary film-maker has his first go at feature production on a story with wild ski, kite and helicopter stunts in the great outdoors

By ROGER C. BROWN

I guess you would call me an old-timer in the documentary, educational, industrial film-making field. I have directed and photographed more of these films than I can remember, in the last fifteen years.

This past winter I took on my first job as a second unit director on a theatrical feature. It has occurred to me that my observations might be useful to others contemplating a similar step.

THE ULTIMATE THRILL is a murder-adventure feature film. The setting is Vail, Colorado, a ski resort in the Colorado Rockies. It also happens to be my home.

I fell into the job a little piece at a time. Peter Traynor, the producer, came into Vail in early Fall on a location scouting trip. The ski area promotional director, Bob Parker, told him about me; called; and I invited him to my home to talk about the project.

The story is fashioned after an old classic called THE MOST DANGEROUS GAME where one man hunts down and kills other men for sport. The script was, and still is, far-fetched. The murderer first runs a skier down with a helicopter, likes the thrill of it, and goes

after his second skier-victim with a bow and arrows, and an 18-foot human kite. Improbable, impossible things happen. Regardless, the story is exciting, so rather than rejecting the whole business outright, I offered suggestions on how to make it appear real on the screen, based on my knowledge of what you can and cannot do on skis. Of course, I offered my advice free.

Traynor came back a month or so later with a writer and I came forth with more free advice. On his third visit we worked out a consultant fee-arrangement, and he introduced me to Bob Butler, the first unit director, and his assistant, Ron Schwary. Then the real work began. Re-scripting meetings went on and on, in Vail, in Los Angeles, and Vail again.

Butler is a meticulous, hardworking director who likes to plan everything out as carefully as possible ahead of time. This is almost antithetical to the approach I have developed to film-making over the years. Documentary work has taught me the value of an open mind. I try to let a sequence happen, before trying to make it happen. If my subjects have an idea I

encourage them to develop it. In this sense I am a non-director, a photographic observer.

Add to this the fact that Butler's background is in television where deadlines and budgets must be very carefully adhered to, and mine is in sponsored films that often have excessive time-allowances. A budget, to me, is a flexible sum of money to be discreetly divided between real production value and the amount of money I want to make. Since I enjoy making films more than money, and value my reputation more than a retirement fund, I usually go over budget and absorb the overage in decreased net income. That's an impossible position to take, however, when you are one in fifty, rather than one in three people on a crew. It would be too easy to make half of a beautiful film and have no funds left to finish the other half.

Butler is also fully aware of the limitations inherent in working with 35mm film. I have shot several 35mm TV commercials, so I knew it was bigger, more expensive, and relatively awkward, but this did not prepare me for what I

Continued on Page 462



"THE ULTIMATE THRILL" is the umpteenth remake of that durable old classic, "THE MOST DANGEROUS GAME", in which a slightly warped character hunts down and kills other men for sport. This all-out version includes a sequence in which the predator hunts his victim from an 18-foot human kite (ABOVE) and drags him all over the landscape dangling from a helicopter (BELOW). It would appear to be sado-masochism expressed in Popsicle terms — very Freudian.





(LEFT) Half the fun of filming in the snow is getting to lug the equipment from one far-flung location to another. This is usually left to “sher-pas”, expert skiers who think it’s a blast. (CENTER) A long telephoto lens is often the only way of filming a sustained shot of someone skiing down the full slope of a mountain. (RIGHT) The stuntmen who work on this kind of film are a bit different from the kind you find tumbling around Hollywood. They have to be game to ski off cliffs like this.



(LEFT) Helicopters accounted for the largest single item in the budget, but were absolutely essential for this kind of filming. Especially valuable is the Bell Jet-Ranger, which can work speedily at high altitudes. (CENTER) In a particularly spectacular sequence, the murderer attempts to run his victim down from a helicopter. (RIGHT) The author, veteran documentary film-maker (Summit Films) Roger C. Brown, mans the helicopter camera. (BELOW RIGHT) In gorgeous country like this, the temptation is to deviate from the script in order to get spectacular footage. Brown says: “Do it!”



In a typical ski filming position, cameraman lies on his back in the snow to film skier jumping overhead.



(LEFT) With a long lens, the camera must be operated from a tripod, obviously, but levelling one in deep snow is not the easiest chore in the world. (CENTER) It takes a special kind of skill — to say the least — to ski at top speed backwards hand-holding a motion picture camera in order to get a shot like this. (RIGHT) Sliding down a snow-covered slope with a tripod is a fast way of getting down, but you can get shishka-bobbed if you fall.



## "CITIZEN KANE" REALISM Continued from Page 437

The next problem was to obtain the definition and depth necessary to Welles' conception of the picture. While the human eye is not literally a universal-focus optical instrument, its depth of field is so great, and its focus-changes so completely automatic that for all practical purposes it is a perfect universal-focus lens.

In a motion picture, on the other hand, especially in interior scenes filmed at the large apertures commonly employed, there are inevitable limitations. Even with the 24mm. lenses used for extreme wide-angle effects, the depth of field — especially at the focal settings most frequently used in studio work (on the average picture, between 8 and 10 feet for the great majority of shots) — is very small. Of course, audiences have become accustomed to seeing things this way on the screen, with a single point of perfect focus, and everything falling off with greater or less rapidity in front of and behind this particular point. But it is a little note of conventionalized artificiality which bespeaks the mechanics and limitations of photography. And we wished to eliminate these suggestions wherever possible.

Now, it is well known that the use of lenses of short focal length tends in itself to increase the depth of field. So, too, does stopping down the lens.

Since the introduction of today's high-speed emulsions, some photographers and some studios make it a practice to take advantage of the film's speed by stopping their lenses down to apertures as low as  $f/3.5$  or thereabouts when filming interiors. In some instances this is done only occasionally, when for some reason added depth may be desired for a scene or sequence; in others, it is a fixed practice.

To solve our problem, we decided to carry this idea a step farther. If using a high-speed film like Plus-X and stopping down to  $f/3.5$  gave a desirable increase in definition, wouldn't it — for our purpose, at least — be a still better idea to employ a super-speed emulsion like Super-XX, and to stop down even further?

Preliminary experiments proved that it was. However, merely stopping down to the extent which would compensate for the higher sensitivity of Super-XX was still not enough, though we were clearly on the right track.

The next step inevitably was to stop down to whatever point might give us the desired depth of field in any given scene, compensating for the decreased



(ABOVE) Gregg Toland lines up a shot with Welles' face filling half of the screen and action far in the background filling the other half. Extreme depth of field was made possible by using a fast film stock (Eastman Super-XX, rather than the standard Plus-X), using a tremendous amount of light and stopping down to  $f/11$  or  $f/16$ . With the 24mm lens, under the right conditions, everything from 18 inches to infinity was in acceptably sharp focus. (BELOW) Even though the lighting was from the floor with very powerful units used in order to stop down the aperture, Toland still maintained extremely delicate gradations of lighting contrast.





exposure-values by increasing the illumination level.

This, especially on deep, roofed-in sets where no overhead lighting could be used, naturally created another lighting problem. Fortunately, two other factors helped to make this less troublesome than might have been expected.

First, we were using, as I have been for some time, lenses treated with the Vard "Opticoat" non-glare coating. In view of the considerable discussion that has arisen since the introduction of these treating methods, I may mention that so far I have found this treatment not only beneficial, but durable. Depending upon the design of the lens to which it is applied, it gives an increase in speed ranging between half a stop and a stop, while at the same time giving a very marked increase in definition, due to the elimination of flare and internal reflections.

Secondly, due to the nature of our sets, and the lighting problems incident to our use of ceilinged sets, we were, even before we changed from Plus-X to Super-XX, making considerable use of



A party sequence from "CITIZEN KANE", filmed in a deep set with a lower than average ceiling. Such set-ups necessitated the use of light with great penetrating power. Pressed into service as the "backbone" of the lighting complement were twin-arc broadsides developed for use in three-strip Technicolor filming, with "Juniors", "Seniors" and 170-amp arc spots used to supplement the lighting when necessary.

## MORE ABOUT "CITIZEN KANE"

By CHARLES CHAMPLIN, *Entertainment Editor, Los Angeles Times*

*CITIZEN KANE is almost certainly the most honored film, in any language, in the history of the medium. It ranks at or near the top of every poll of the all-time best movies. No course in film history or film appreciation is complete without it. Thirty-five years after it was made, it continues to be shown constantly on television and in theatres. It is the inspiration for young filmmakers in every part of the world. (In a dream sequence threaded through his DAY FOR NIGHT, François Truffaut re-lives an unforgettable childhood adventure: swiping the stills for CITIZEN KANE from his neighborhood theatre.)*

*It is possible to discover people who have never seen KANE at all, but it is almost impossible to find anyone who has seen it only once. Its power and interest are so inexhaustible that most of us have seen it again and again and again, beyond counting. One young director, himself now well-established, told me a few years ago that he had studied KANE on a Moviola more than 80 times. In consequence of all the above, KANE is also one of the most dissected and written-about movies of them all, and perhaps the ultimate tribute to it is that it has survived all its autopsies. A man hesitates to add to the comments, yet every year puts CITIZEN KANE in a sharper historical perspective — further from the blurring notoriety which attended its birth and closer to its true place in film history — and there may be another word worth saying.*

*In the end what has mattered most is that KANE can be enjoyed as well as appreciated. It is, with everything else it is, a dazzling and resourceful piece of cinematic story-telling, rich with energy, invention and surprise. If it has something of a magician's theatrical extravagance, it also has the control and discipline which are vital to the magical arts.*

*Filmmakers love CITIZEN KANE because it is such a celebration of the possibilities of cinema, a wide-armed embracing of the whole glossary of sight and sound and montage. Yet it ought also to be noted that watching CITIZEN KANE for the fifth or tenth or twentieth time is still an oddly moving emotional experience. Charles Foster Kane is*

*neither a figure of sentiment nor of tragedy, but there is about him a sense of loss and of waste that is forlorn and unsettling.*

*Its unabashed and uninhibited theatrical flair makes CITIZEN KANE very much a young man's movie, and it treads a delicate line between comedy and farce. But Welles at 25 was firmly in command of the medium, and although Kane is an outrageous figure he is never preposterous and you do not trace his decline and fall indifferently. The movie is more than a glittering ten-finger exercise; if it had not been, if it had been only a display of technical wizardries, I think it would not have kept its hold on our memories or our affections.*

*Given an unprecedentedly free creative hand, Welles had the wit to surround himself with gifted collaborators as eager as he was to use that freedom to produce a unique work.*

*From Herman J. Mankiewicz, the principal author of the script, came not least, I suspect, the real life resonances which for a time made it look as if the film might not outlive its notoriety, but also from Mankiewicz came the characters and their interrelationships which Welles and his Mercury Theatre players could make memorable.*

*To think of KANE is to see light and shadow in the mind's eye, coils of cigarette smoke silhouetted in a projection room, the cavernous dark depths of an immensely dreary mansion, sinister faces half-seen. Gregg Toland's matchlessly suggestive cinematography, deep-focused and intense, is the perfect carrier of a tale of dark power. The equally suggestive art design of Van Nest Polglase, creating Xanadu out of shadowy spaces, making an ornate part imply a baroque whole, is another triumph of art set free.*

*And above them all, impatient, confident, imaginative, ambitious, deep-voiced and boyishly handsome, supremely gifted, ranged Orson Welles, making a masterpiece about money and power and the isolating, corrupting, self-defeating possibilities of both, making a masterpiece that stuns and impresses today as it did in 1941. ■*

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(A) Shot under mixed fluorescents; no camera filters.



(B) Shot with filter pack predicted by SPECTRA<sup>®</sup> TRICOLOR<sup>™</sup> METER.



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## THE LORE OF WELLES Continued from Page 449

ing. "For normal purposes, my nose is pleasant," Orson has said. "For dramatic purposes, I detest it."

What's the best way to conquer the maddening traffic of Manhattan and its insufferable lack of legal parking areas? Orson Welles had no trouble overcoming what has plagued New Yorkers for generations. To move easily through the concrete jungles he hired — an ambulance.

The stories of the egocentricities of Orson Welles are as numerous as they are questionable. Does he demand top billing over his shadow; Does he pause each noon for a minute of silence in his honor? "I've got a good, healthy ego and I like to hear my work praised," he once told Hedda Hopper, "but I'm not interested in anything but experimentation. It doesn't matter to me whether I'm popular in Hollywood or whether or not I'll be written up in the history of the theatre. I'm only interested in opening new fields or leaving old ones better than they were when I entered them." Welles often looked upon life as a succession of failures because his accomplishments always seemed to fall short of his conceptions. "I've set myself against being concerned with any more worldly success than I need to function with," he has remarked. "I think it's corrupting to care about success, and nothing could be more vulgar than to worry about posterity."

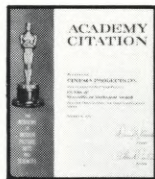
It is common knowledge that during his eventful life, Orson Welles has been a novelist, playwright, scenarist, painter, magician, fortune-teller, columnist, TV pundit, musician and author of ballets, film and television producer, director and actor. But his exploits as a *torero* are not widely heralded. In Spain, Orson, at the tender age of 17, became an amateur bullfighter and faced the horns many times in the arena. On bullfight posters he was billed simply as "The American".

Orson Welles has often supported federal subsidization of a film school in the U.S. "only if they *make* movies instead of *talking* about making movies, and if all classes on theory were religiously forbidden." Orson has always called film the greatest medium for exchanging ideas and information since the invention of movable type. If Welles had his way, there would be a World Congress of the film industries of the United States and abroad to examine the economics of filmmaking and, as Orson put it, "to study the public."



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## PRODUCER/DIRECTOR DOCUMENTARY

Continued from Page 407

deserving few. For some reason, our project struck a chord of interest in Mr. Ken Morgan at Kodak, and he kindly rationed out to us a generous 20,000 feet from a single batch.

Several weeks earlier I had attended a Kodak lecture sponsored by the BKSTS (British Kinematograph Sound and Television Society) where the virtues of the new stock were demonstrated in a side-by-side comparison with its predecessor, 7254. The comparison was very effective, and clearly showed what Kodak has maintained for some time: that neither 16mm negative stock would stand up well to forced development, and that marginally-better results could always be achieved by allowing the negative to be underexposed, then correcting the result in the print. The improvement in grain size of the new negative was particularly striking when viewed next to the same scene shot on Type 7254.

As we were determined not to have to force-develop or unnecessarily underexpose our negative, we hired a super-fast 25mm f/.95 lens made by Angenieux. While this fast prime lens seemed a terrible handicap for a handheld camera after using a zoom, it occasionally retrieved an image from otherwise hopelessly dark subjects. However, focusing this tiny lens under such dark conditions is a near-impossible task, but a crucial one, as the depth of field at f/.95 is virtually nil. But under the right conditions, the lens can be a lifesaver.

**Reflected in Geoffrey Edwards' sunglasses is Ed Anderson with the Eclair ACL camera. Geoff, an ambitious teenager, had the idea to make a documentary of his father at work. He had his own Bolex EBM Electric camera and a Nagra IV-L recorder with crystal control, plus several professional microphones, but little actual technical experience in operating the gear. He wisely brought in professional Ed Anderson to help shoot a professional quality film.**



**Anderson, Edwards and Gunther set up to shoot preparations for a rooftop chase in Casablanca. The film-makers allotted a total of 20,000 feet of 16mm raw stock for the shooting of their film, but found the subject matter so fascinating that they soon had to ration themselves to keep from going beyond the amount of film that the budget would permit.**

Since we would be travelling through several countries in a short space of time, I decided to take all 20,000 feet of film with us, I wasn't at all sure that I could make foolproof arrangements to receive smaller amounts of the stock at regular intervals. While this added weight was an inconvenience, it gave us great peace of mind as we flew off into the unknown.

We left for Casablanca a few days after the feature unit, and as a last-minute source of anxiety we were asked to take along with us several cartons of important props which the main unit needed urgently. Among these was a lethal-looking metal crossbow, which I knew was intended to provide the Phantom with a unique means of escape after stealing the Pink Panther diamond, but I didn't really think that story would convince a Moroccan customs official. So we were a little nervous even though this concealed weapon we were carrying was cleverly labeled: "Arrow Projector."

In a few hours we were safely in Casablanca, where the crew was busily rigging for the night-for-night rooftop sequences, which were beautifully lit by Geoff Unsworth.

Although our plan was to concentrate on Blake Edwards and the comic aspects of the film, the first comic scenes were not to be shot for a few days yet, so we had a chance to make friends with the crew and test our liaison with the labs in London. Everyone was extremely friendly and helpful, and after the first night's shooting we sent our first few feet of exposed neg back to London with the rushes of the feature unit. Within twenty-four hours we had a cable from our production office reporting that the footage was fine. Realizing that our communi-

**Continued on Page 480**



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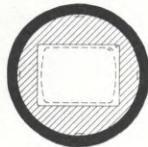
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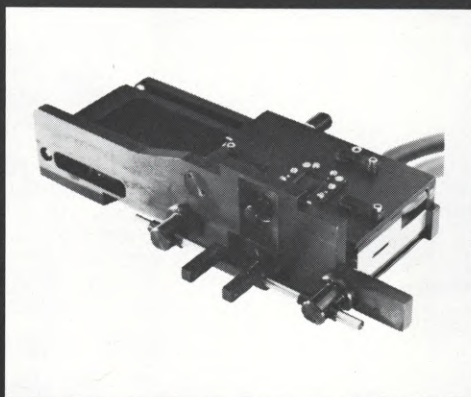
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## "CITIZEN KANE" REALISM Continued from Page 453

arc broadsides. In addition to the greater penetrating power of arc light as compared to incandescent, this gave us a further advantage, for the arc is unexcelled in concentrating the greatest illuminating power into a comparatively small unit.

The use of these lamps made it possible to use considerably smaller lens apertures than would otherwise have been the case, while still keeping to satisfactorily low illumination-levels,

and using surprisingly few lighting units. In many scenes, including even some in the big sets representing Xanadu, "Kane's" exaggeratedly palatial Florida estate, the entire lighting was accomplished using a total of only five or six units, including the arc broads and incandescent spotlights of all sizes.

It was therefore possible to work at apertures infinitely smaller than anything that has been used for conventional interior cinematography in many years. While in conventional practice, even with coated lenses, most normal

interior scenes are filmed at maximum aperture or close to it — say within the range between f/2.3 and f/2.8, with an occasional drop to an aperture of f/3.5 sufficiently out of the ordinary to cause comment — we photographed nearly all of our interior scenes at apertures not greater than f/8 — and often smaller. Some scenes were filmed at f/11, and one even at f/16!

How completely this solved our depth of field problem may easily be imagined. Even the standard 50mm. and 47mm. objectives conventionally used have tremendous depth of field

## FILMOGRAPHY OF ORSON WELLES

### FEATURE FILMS MADE BY WELLES:

CITIZEN KANE (1940) Mercury Production, RKO  
THE MAGNIFICENT AMBERSONS (1942) Mercury Prod., RKO  
THE STRANGER (1946) International Pictures, RKO  
THE LADY FROM SHANGHAI (1946/48) Columbia  
MACBETH (1948) Mercury Production, Republic  
OTHELLO (1951) Mercury Production, United Artists  
MR. ARKADIN (CONFIDENTIAL REPORT) (1955) Mercury Production, Warner Bros.  
TOUCH OF EVIL (1958) Universal-International  
THE TRIAL (1962) Paris Europa Productions  
CHIMES AT MIDNIGHT (FALSTAFF) (1965/66) International Films Espanola  
THE IMMORTAL STORY (1968) Albina Films/O.R.T.F.  
DON QUIXOTE (1955/71) Oscar Dancigers Prod., unreleased  
THE DEEP (DEAD RECKONING) (1967)  
FAKE (1974)  
THE OTHER SIDE OF THE WIND (1971/75) unreleased

### FILM PERFORMANCES BY WELLES:

1940: CITIZEN KANE (Charles Foster Kane)  
1942: JOURNEY INTO FEAR (Col. Haki)  
1943: JANE EYRE (Edward Rochester)  
1944: FOLLOW THE BOYS (In revue with Marlene Dietrich)  
1945: TOMORROW IS FOREVER (John McDonald)  
1946: THE STRANGER (Franz Kindler/Charles Rankin)  
1947: BLACK MAGIC (Cagliostro)  
THE LADY FROM SHANGHAI (Michael O'Hara)  
1948: MACBETH (Macbeth)  
PRINCE OF FOXES (Cesare Borgia)  
1949: THE THIRD MAN (Harry Lime)  
1950: THE BLACK ROSE (Gen. Bayan)  
1951: RETURN TO GLENNASCAUL (Self)  
OTHELLO (Othello)  
1953: TRENT'S LAST CASE (Sigsbee Manderson)  
SI VERSAILLES M'ETAIT CONTE (Benjamin Franklin)  
L'UOMO, LA BESTIA E LA VIRTUE (The Beast)  
1954: NAPOLEON (Hudson Lowe)  
THREE CASES OF MURDER (Lord Mountdrago)  
1955: MR. ARKADIN (CONFIDENTIAL REPORT) (Mr. Arkadin)  
TROUBLE IN THE GLEN (Samin Cejador ye Mengues)  
1956: MOBY DICK (Father Mapple)  
1957: PAY THE DEVIL (Virgil Renckler)  
THE LONG HOT SUMMER (Will Varner)  
1958: TOUCH OF EVIL (Hank Quinlan)  
THE ROOTS OF HEAVEN (Cy Sedgwick)  
COMPULSION (Jonathan Wilk)  
1959: DAVID AND GOLIATH (Saul)  
FERRY TO HONG KONG (Capt. Hart)  
1960: AUSTERLITZ (Fulton)  
CRACK IN THE MIRROR (Hagolin/Lamorciere)  
I TARTARI (Burundai)  
1961: LAFAYETTE (Benjamin Franklin)  
DESORDRE (Self)  
1962: THE TRIAL (Hastler)  
1963: THE VIP'S (Max Buda)  
ROGOPAG (The Film Director)

1964: LE FABULEUSE AVENTURE DE MARCO POLO (Ackerman)  
1965: CHIMES AT MIDNIGHT (Falstaff)  
1965: IS PARIS BURNING? (Consul Nordling)  
1967: THE SAILOR FROM GIBRALTAR (Louis)  
A MAN FOR ALL SEASONS (Cardinal Wolsey)  
1968: I'LL NEVER FORGET WHATSISNAME (Jonathan Lute)  
OEDIPUS THE KING (Tiresias)  
UNE HISTOIRE IMMORTELLE (Mr. Clay)  
HOUSE OF CARDS (Charles Leschenhaut)  
KAMPF UM ROM (Emperor Justinian)  
1969: THE SOUTHERN STAR (Plankett)  
TEPEPA (VIVA LA REVOLUCION) (Gen. Cascorro)  
12 PLUS 1 (Markau)  
BATTLE OF NERETVA (Chetnik Senator)  
1970: CATCH-22 (Gen. Dreedie)  
WATERLOO (Louis XVIII)  
THE KREMLIN LETTER (Aleksei Bresnavich)  
THE DEEP (Russ Brewer)  
1971: TEN DAYS' WONDER (Theo van Horn)  
DON QUIXOTE (Self)  
A SAFE PLACE (Magician)  
THE CANTERBURY TALES (Old January)  
1972: SUTJESKA (Winston Churchill)  
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### FILMS NARRATED BY WELLES: (Incomplete)

THE SWISS FAMILY ROBINSON (1940)  
THE MAGNIFICENT AMBERSONS  
DUEL IN THE SUN (1946)  
RETURN TO GLENNASCAUL (1951)  
LORDS OF THE FOREST (1956/58)  
THE VIKINGS (1958)  
HIGH JOURNEY (1959)  
SOUTH SEAS ADVENTURE (1959)  
KING OF KINGS (1961)  
RIVER OF THE OCEAN (1962)  
THE FINEST HOURS (1963)  
AROUND THE WORLD OF MIKE TODD (1968)  
START THE REVOLUTION WITHOUT ME (1969)  
SENTINELS OF SILENCE (1971)  
DIRECTED BY JOHN FORD (1971)  
THE CRUCIFIXION (1972)

### ORSON WELLES ON TELEVISION:

1953: KING LEAR (Lear), CBS  
1955: THE ORSON WELLES SKETCHBOOK (6 shows) BBC  
MOBY DICK (Never screened)  
AROUND THE WORLD WITH ORSON WELLES  
(13 half-hour shows) Associated Rediffusion  
1956: 20TH CENTURY, CBS  
1957: MERCHANT OF VENICE (Abridged) For CBS, NBC  
MACBETH (Abridged)  
OTHELLO (Abridged)  
THE FALL OF THE CITY (Narrator)  
1958: THE METHOD (Uncompleted film on Gina Lollobrigida)  
THE FOUNTAIN OF YOUTH (for Desilu) Winner of a Peabody Award  
1961: TEMPO (Film on the Bullfight), ABC, London  
Recent: ORSON WELLES MYSTERY THEATRE  
(A series of 26 dramas for BBC)

when stopped down to such apertures. Wide-angle lenses such as the 35mm., 28mm. and 24mm. objectives, when stopped down to f/11 or f/16 become to all intents and purposes universal-focus lenses.

But we needed every bit of depth we could possibly obtain. Some of the larger sets extended the full length of two stages at the RKO-Pathé Studio, and necessitated holding an acceptably sharp focus over a depth of nearly 200 feet. In other shots, the composition might include two people talking in the immediate foreground — say two or three feet from the lens — and framing between them equally important action taking place in the background of the set, thirty or forty feet away. Yet both the people in the immediate foreground and the action in the distance had to be kept sharp!

In still other shots, Welles' technique of visual simplification might combine what would conventionally be made as two separate shots — a close-up and an insert — in a single, non-dollying shot. One such, for instance, was a big-head closeup of a player reading the inscription on a loving-cup. Ordinarily, such a scene would be shown by intercutting the closeup of the man reading the inscription with an insert of the inscription itself, thereafter cutting back again to the close-up. As we shot it, the whole thing was compressed into a single composition. The man's head filled one side of the frame; the loving-cup, the other. In this instance, the head was less than 16 inches from the camera, while the cup was necessarily at arm's length — a distance of several feet. Yet we were able to keep the man's face fully defined, while at the same time the loving-cup was in such sharp focus that the audience was able to read the inscription from it. Also, beyond this foreground were a group of men from 12 to 18 feet focal distance. These men were equally sharp.

This unorthodox technique, as might be expected, brought with it a completely new set of photographic and lighting problems. Solving them taught us a lot. For example, there is the matter of setting focus on scenes like these, where it is necessary to spread the depth of field over an incredibly great area. Any experienced cinematographer or still photographer will automatically reply, "That's easy — just split your focus between the nearest and farthest points you want to keep in focus!" Yes — that's the answer — but just *where* should you focus your lens in order to do this?

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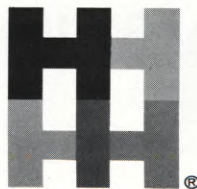
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off more sharply in front of the point of focus than behind it, this effect varies not only according to the focal length of the lens used, but according to the degree to which it is stopped down and the point upon which it is focused. Gaining this experience, one certainly learns surprising things about the behavior of lenses. For example, I discovered that a 24mm. lens, stopped down to f/8 or less, becomes almost literally a universal-focus objective at a certain point. If it is set to focus on a point 4 feet 6 inches in front of the camera, everything from 18 inches to infinity will be in acceptably sharp focus. There are also some lenses which as they are stopped down, suddenly reveal totally unexpected optical characteristics at certain settings, and quite as inexplicably lose them as they are stopped down further. I have known of instances in which lenses were excellent until they were closed down to, say f/6.3, but became distinctly inferior at apertures below this point — only to recover their quality again as the diaphragm passed the f/11 or f/16 mark.

Lighting for this combination of ultrafast film, coated lenses and radically reduced apertures offers its own new problems. One has to learn a completely new system of lighting-balance. The fast film tends to flattened contrasts: but the coated lenses and the reduced apertures both tend to increase contrast. As a result, one must light scenes made in this manner with much less contrast than would be his custom under more normal circumstances.

Again, the precise degree of change depends upon the stop used; but in general, the shadows must be "opened up" with a more general use of filler light, the highlights must be watched, and when optical diffusion is used, diffusers such as the Scheibes, which tend to soften contrasts, are generally preferable. Obviously, too, when you are dealing with film of the extreme sensitivity of Super-XX, you will find that even at reduced apertures, extremely delicate gradations of lighting-contrast pick up, registering far more strongly on the film than they do to even the trained eye. Yet, strangely enough, once a cinematographer has accustomed himself to this type of lighting, it becomes in many ways easier than more conventional lighting, for it is simpler, less artificial, and employs fewer light-sources.

A further innovation in this picture will be seen in the transitions, many of which are lap-dissolves in which the background dissolves from one scene to another a short but measurable interval before the players in the fore-



ground dissolve. This is done quite simply, by having the lighting on set and people rigged through separate dimmers. Then all that is necessary is to commence the dissolve by dimming the background lights, effectually fading out on it, and then dimming the lights on the people, to produce the fade on them. The fade-in is made the same way, fading in the lighting on the set first, and then the lighting on the players.

In closing, I would like to pay high tribute to those who were associated in the making of "Citizen Kane", Producer-director Orson Welles, of course, heads the list; he is not only a very brilliant young man, but also one of the most delightfully understanding and cooperative producers and directors with whom I have ever worked. Art director Perry Ferguson is another whose ability helped make "Citizen Kane" an unusual production. His camera-wise designing of the settings not only made it possible to obtain many of the effects Welles and I sought, but also made possible the truly remarkable achievement of building the production's 110 sets, large and small, for a total expenditure of about \$60,000 — yet gave us sets which look on the screen like a much larger expenditure. RKO special-effects expert Vernon Walker, A.S.C., and his staff handled their part of the production — a by no means inconsiderable assignment — with ability and fine understanding. Finally, the operative crew who have been with me for so many years — Operative Cinematographer Bert Shipham, and Assistant Cameraman Eddie Garvin — played their accustomed parts in helping me to put Orson Welles' initial production on the screen. Experimenting as we were with new ideas and new methods, none of them had an easy time. But thanks to the spirit of understanding and cooperation which prevailed, we emerged with what I think will prove a notable picture, and, I hope, the starting-point of some new ideas in both the technique and the art of cinematography. ■

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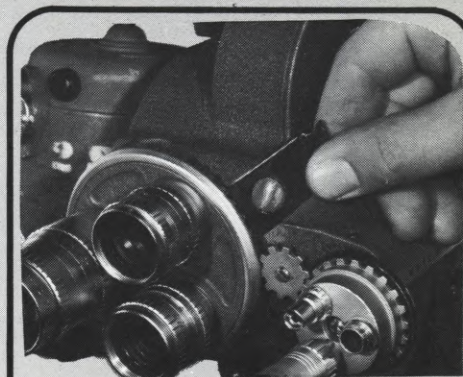
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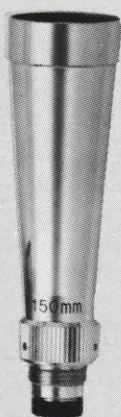
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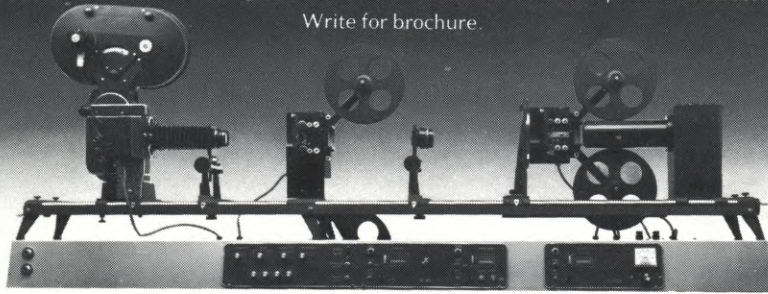
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### "THE ULTIMATE THRILL"

Continued from Page 450

encountered in THE ULTIMATE THRILL.

Let me repeat one point. In documentary filming you often try to let the action happen; in theatrical filming most of the time you make the action happen. The theatrical director, then, has to be a well-organized, positive kind of person who can get things done, on schedule. He may be an introspective artist, as well, but a good director, from my limited observations, knows above all what he wants and goes after it. He does not play a waiting game as a documentary film-maker often does.

It was only a short while after I met Butler that he made the statement, "Everybody is the enemy. You and I are going to make this film." My reaction teetered between suspecting him of paranoia, and the flattery I felt at being a proclaimed co-conspirator. It has occurred to me since then that Butler probably says this to a number of people who work on films with him and that they all feel like members of a special elite working force.

The conspiracy I speak of is not against any individuals, but is a conspiracy against inertia. It is difficult to coordinate a large crew (between 30 and 50 people). The problem is that you only need all of the people some of the time. Meanwhile, a lot of imaginative, eager employees who desperately want to be useful find themselves with nothing to do. This affects their personalities: some are patient, some despondent, and still others create unnecessary work. Tempers flare up the same way they do when there's too much work.

In my opinion, and this is a generality subject to numerous exceptions, smaller crews with a greater variety of individual responsibilities work more harmoniously and efficiently. Certainly, a two- or three-man documentary crew, or an individual director-cameraman, is far more productive in a given time span. The main reason is that less communication is needed among the crew members; therefore, more energy can be directed outward towards the subject matter.

In remote locations a large crew can be an outright disaster. For instance, we (the second unit) shot our part of a skier-helicopter collision in a place that was accessible only by helicopter. Our crew was four people: the skier double, Craig Agneberg; the pilot, Larry Doll; a second cameraman, Dick Durrance; and myself. The first unit decided to use the same location. They tried to pare down their crew, but had difficulty

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getting it below twenty people. This meant a minimum of four round trips for the helicopter at \$225/hour. And that part of the crew that arrived first had to wait for the others, in snow, with no building to get warm in. And as time slipped by the weather began to change, forcing them to shoot in un-matching light. If they had been able to cut the crew in half they would also have cut the helicopter expense almost in half, and they might have added as much as two hours to their shooting time, thereby avoiding the cloudy weather that developed later in the day.

After working with Butler for the better part of six weeks it was obvious that paranoia plays no part in his personality. He is a tireless man, who like the spring on a Bolex camera, runs at 24 frames per second until he stops. He doesn't slow down to 18, and then 12, and to 6 frames before giving up. When he does run out of energy, there is no negative response. He only smiles, comments to the effect that his mind has turned to noodles, and retires. The only recurring negative comment he uttered was, "It's boring." This simply means he felt there was a more exciting way to handle a scene or shot, or that an important discussion had wandered off into irrelevancy.

I never saw Butler get overtly angry. His self-control seems ever present. Part of this coolness, however, has to be credited to his assistant director who is good-humored, but decisive, volatile and capable of losing his temper. Butler readily let him tackle some of the thorny problem areas. The combination of the two was very effective.

Butler's comments about everybody being the "enemy" do bring a point to mind which should be mentioned. In the film industry the labor supply grossly exceeds the number of available positions. Too many people want to be film-makers. There must be ten to one hundred people ready to fill every available job. I'm sure that more aspiring film-makers give up because of a lack of opportunity than from a lack of ability.

An established director like Butler is in a buyer's market when it comes to hiring a crew. He can afford to be very selective. He doesn't have to tolerate prima donna artist acts, moodiness, or over-sensitive egos. Through a process of trial and error he knows he can find people who are not only talented, but are also willing to work fifteen hours a day, seven days a week (thank God the union only allows six), for weeks on end, the way he does.

When Butler does run into hurt feelings, or bruised egos, and it isn't

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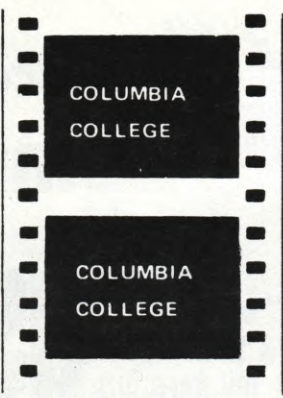
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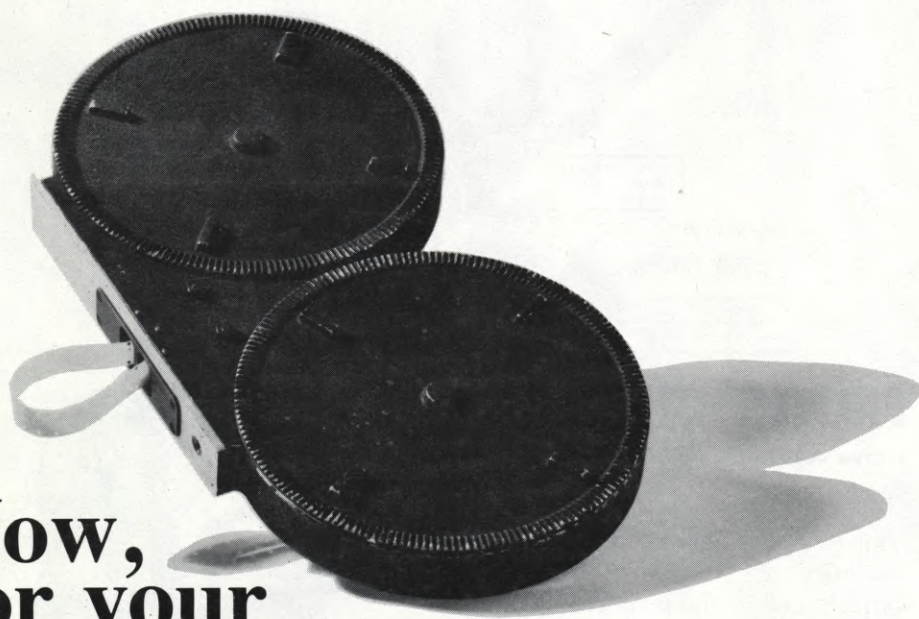
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obviously what the industry terms a "jerk off," he will go out of his way to remedy the situation. In this sense he is simply being a decent human being as well as a good film director.

As money and time began to run out, Butler became less and less selective about locations and matching weather. Here he demonstrated an uncanny ability to select locations where the cameraman could frame out undesirable elements. It was a mind-bender to watch him set up a scene that was supposed to take place in a remote deserted location. In the particular sequence I'm thinking of, the murderer, who is supposed to be flying a hang-glider, hits his victim with his skis. Butler set the scene up on the upper end of a ski lift where dozens of people were getting off, standing around, and watching us. The bullwheel was emitting loud noises, tourists were screaming, "Look at them make the movie, Mabel!" From my point of view everything was wrong, but Butler went blithely on as if the film company had spent a half million building the perfect set. In answer to my feeble protests, the whole crew would chant, almost in chorus, "Don't worry. They'll love it in Des Moines."

Joking aside, Butler knew he had to finish the picture — he knew his budget limitations, the mobility of crew, and he made the best of the circumstances.

Prior to filming, the production manager, Terry Carr, asked me to help him estimate the costs involved in the second-unit work. My estimates were under most of the time. Fortunately, the producer, Peter Traynor, liked the material we were getting so he went along with the new financial requirements.

The biggest single over-budget item was the helicopter. We knew we were going over, but superior locations, untracked snow, and increased mobility outweighed the additional cost.

Other miscalculations came from underestimating the difficulty of working with 35mm film. Just off hand, I would say that 16mm film is about three times as easy to work with in every respect.

Specifically, weight is a problem. We could not get along with less than one "sherpa" (a good skier, in this case, who can haul equipment around the mountain) for each cameraman when we were skiing between locations. Two sherpas per cameraman would have been better. When I shoot 16mm ski shots I often don't use a sherpa at all.

Power: the battery belt just barely drives the Arriflex 35mm camera at 24 fps in cool weather, and often it doesn't when it gets cold (below 10° Fahrenheit). This means hooking up two

belts in a series in order to get enough power. Fortunately, Dick Durrance, who is an experienced 35mm skiing cameraman, was aware of this problem and had the necessary hookup for two belts.

Magazine loops: we were continuously breaking the loops when the weather was cold. A specially-constructed backpack which protects the loops would have avoided this problem.

Lenses: the 25mm-to-250mm zoom was by far the most useful lens we had, but it is big, heavy, motor-driven and requires a tripod. This makes it a real bear to move around in deep snow.

Tripods: both Durrance and I had O'Connor 50 fluid heads, but he had his mounted on an Arriflex ball-socket joint, and legs. His setup was heavier, but much easier and steadier to use.

Helicopter mounts: the cold affected both the Continental and the Tyler mounts, but the Tyler is less exposed, and, therefore, easier to keep warm, particularly the zoom lens which is really out in the air on both mounts, and subject to tremendous chill factors. Jiffy pocket warmers can be taped to the inside on the zoom lens housing on the Tyler, and this helps. We ordered a Continental mount in first, but had to return it in favor of a Tyler.

Helicopters: the additional hourly cost on a Bell Jet Ranger was well worth the investment. We were forced to use the smaller Bell J-2 for the last few weeks of our work, and we found it slow and inefficient. One example: it took the Jet Ranger, with four passengers, less than six minutes to go from 8,000 feet to 11,000 feet in altitude. It took the J-2 with two passengers, almost twenty-five minutes to make the same trip.

I was fortunate in being able to get Dick Durrance to work as a cameraman with me. He has directed and photographed dozens of his own ski films. Most of the time we were both operating cameras, but occasionally, when I wanted to direct a scene without looking through the camera, I knew I could count on Dick to get the shot I wanted. Later on in the shooting, Dick and I divided into what were essentially two second-units. This allowed us to take maximum advantage of time and talent.

A pitfall I should mention which faces any documentary film-maker working on a theatrical feature is this: you'll have a tendency to go for spectacular footage and you'll be tempted to deviate from the script in order to achieve this goal. Do it! This is what a good producer and/or director will want. But don't forget the day of reckoning. You will have to make your

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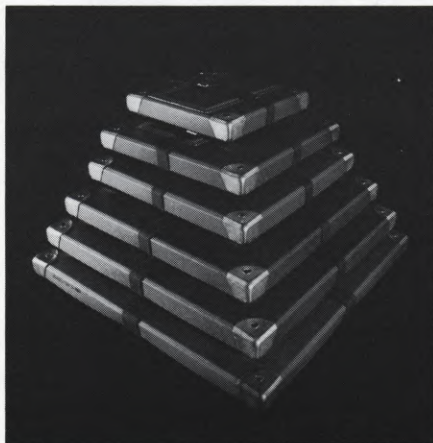
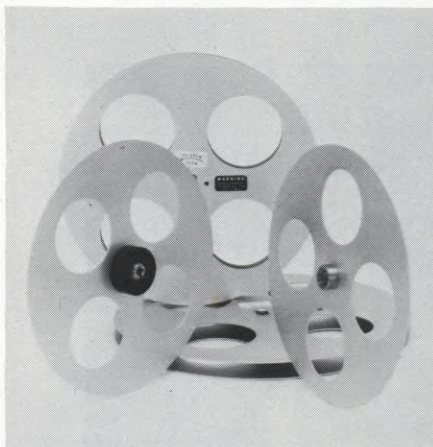
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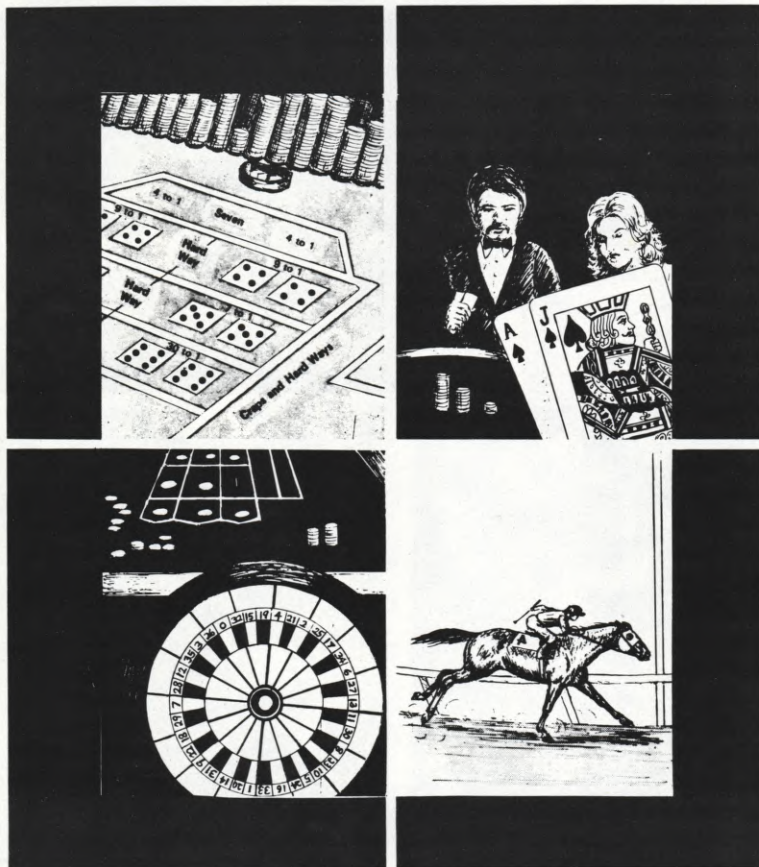
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sequence work in the film. As the production grinds to a finish, you will find yourself spending more and more time doing the boring transitional shots that make the film work. You probably won't leave yourself enough time for this part of the job, but if you don't, the end result will suffer.

As a second unit director, I was faced with one particularly agonizing decision; the selection of the doubles for the actors. I devised what I considered to be a fairly severe test of the doubles' skiing abilities. First, I had them run one of the most difficult mogul faces in Vail called "Look Ma." I asked them to run several times and each time I asked them to increase their speed. At one point, one of the doubles simply shushed (went straight down) the whole slope which, up until then, I thought was an impossibility.

Next I took them to a set of cliffs and asked them to jump both cliffs in a continuous run. I knew that if they were not up to the task they would lose a certain amount of control and either fall, bail out, or make a sloppy second jump.

I came away with five qualifiers for three parts. Two of the qualifiers with lesser skiing ability were much better physical facsimiles of the actors. The better skiers were slightly off in weight and height, and because of their young age moved more nimbly than the actors who were in their 30's. So the choice was between better doubles or better skiers.

I talked with Butler about my quandary and he was sympathetic, but still left the decision with me. I went to bed that night feeling uneasy and undecided.

In the cold, half-light of dawn, still more asleep than awake, I opted in favor of the better skiers. In 15 years of experience, and dozens of accidents, some very serious, it has become clear to me that I shouldn't demand anything beyond the ability of the people I have selected to do a hazardous job. Maximum ability will result in a maximum performance.

I didn't want to hurt anyone and I didn't want to have to change doubles halfway through the show. As it was, we still had a broken ankle and a sprained wrist, but this was connected with the kite flying, not the skiing.

In looking at the rushes, and some of the really incredible cliff-jumps that the doubles, Ed Lincoln and Dean Jones, pulled off, I have become very comfortable with the decision I made to go with maximum skiing ability.

Thinking back to the beginning of my career it occurs to me that I was very fortunate in starting with ski films. Skiing, as a motion picture film subject, is ideal. So much of the excitement of film

is motion, either of the subject, or the camera, or both.

Creative skiers, attempting some kind of rhythmic expression can take advantage of a mountain and the gravity used in descending it. This gives them an advantage over a dancer, for instance, whose moves are carried out on a flat surface.

Because the snow is soft, the cameraman can complement the skiers' action with exceptionally-steady travel shots (provided the cameraman is a good skier). In addition, the simple graphics of colorfully-dressed subjects moving against white snow and a blue sky offers still another plus for the sport as a film subject matter. We missed this opportunity in part in THE ULTIMATE THRILL because two of the lead characters were dressed in dull clothes. The browns and blues almost worked as camouflage in some shots.

In THE ULTIMATE THRILL chase sequences it quickly became apparent that on-the-snow travel shots, which offer limited perspective, should be replaced with helicopter aerals. In this way the overall terrain can be shown. The audience cannot only see where the skier is coming from, but also where he is going. The audience, for instance, knows the skier is approaching a cliff even before the skier knows.

Another excellent (in my opinion), but expensive, idea we followed was to shoot many of the chases in untracked snow. This gave the murderer a clear line to follow, and left the victim at a great disadvantage. In the final chase sequence the victim tries to eliminate the murderer by leading him off bigger and bigger cliffs. The murderer faithfully follows the tracks over each cliff, hardly blinking an eye as he sails thirty or more vertical feet (perhaps a hundred in actual distance) through the air. Here again the overview of the ski tracks, plus the murderer following these tracks, adds greatly to the visual excitement.

The problem with the untracked snow approach, of course, is that you can't do retakes in the same location unless you want to wait for a new snow fall. Vail, however, is not short on new exciting locations to move to.

THE ULTIMATE THRILL was an exciting project for me. It's an ultimate thrill all of its own for a 16mm film-maker to see his stuff in 35mm wide-screen. It was a privilege to work with Bob Butler who has to be one of the great theatrical directors in the business. In fact the whole crew was first-rate. I heartily recommend the change for any documentary film-maker who has an opportunity to work on a theatrical.

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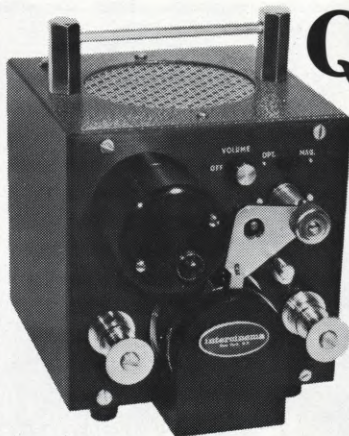
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Continued from Page 448

Welles, we honor both crafts. His phenomenal talent, unquenchable energies and unflagging enthusiasm have served him equally well on both sides of the camera. Indeed, they have now and then impelled him to function as producer, writer, designer, gaffer and make-up man, though to my knowledge he has never fallen off a horse for pay.

His achievements outside the cinema are memorable, as well. On stage, he's done everything from Shakespeare to sawing women in half. Early in his career he assembled an extraordinarily gifted company of actors, the Mercury Players, and featured them in a memorable series of plays.

At the same time he electrified the Golden Age of radio with the same actors in the Mercury Playhouse. He brought most of them with him to Hollywood, planting a whole patch of flourishing talents in film. Throughout his career, his energies, his talents, and the fields they've reached could be described as protean.

Perhaps one of his most significant contributions to film was his pioneering effort as what we now call an independent filmmaker. In the Forties, when almost all production was still studio-based, Welles began making films entirely on location as a maverick independent, putting them together with spit, string, and chutzpah, blazing the trail for many filmmakers to follow. Happily, Orson Welles continues to pioneer.

We must mark the work we value while its makers are still with us, and it's also good to mark the work of a man who is still doing it. Orson Welles came to films young enough to be burdened with that uneasiest of labels, a 'Boy Wonder'. He's no longer a boy, but he's still a wonder!

**Robert Wise on HOW IT WAS**

Over the years when people discover that I was the Film Editor on *CITIZEN KANE* and *MAGNIFICENT AMBERSONS*, I am often asked what it was like working with Orson Welles in those days. My reply always has to be "stimulating, chaotic, exciting, maddening, thrilling, angering." Things were seldom on an even keel. One moment Orson would indulge in some behavior so outrageous that one wanted to tell him to shove it and walk off the picture. Before you could do that, Orson would come up with some idea, some concept, that was so absolutely brilliant it staggered you —



and so you never walked. You stayed and you worked and you created and you learned and it was a marvelous time.

In recent years, when the controversy developed as to who deserved the major share of credit for the screenplay of *CITIZEN KANE*, Herman Mankiewicz or Orson, I have often been asked my opinion on that matter. I'm forced to reply that I have no opinion for I have no specific knowledge in this area of *CITIZEN KANE*. I came on the picture as Film Editor just after it started shooting and there simply was no question of the authorship of the screenplay during the making of the film or for many years after.

I do know, as one who worked closely with Orson on *KANE*, that there is no doubt in my mind, and I'm sure in most others who worked on the picture, whose film it is. It is Orson Welles' film. As the film-maker, he was the creative and driving force behind every frame of the picture and in many frames with his fine portrayal of Charles Foster Kane.

Orson Welles' stamp is indelibly on every aspect of that classic film and this should never be forgotten.

Those years working with Orson on *KANE* and *AMBERSONS* were one of the most stimulating and memorable periods of my, now, many years in the picture business. I want to commend The American Film Institute for extending its Life Achievement Award to Orson Welles.

#### Dennis Weaver on WORKING WITH WELLES

"He's a giant in our industry." That phrase has been used so much that it has almost become meaningless. However, when you're talking about Orson Welles it falls out of the mouth naturally and effortlessly... the truth always comes easy.

Whether he is narrating a documentary, playing Macbeth or directing and starring in *CITIZEN KANE*, his work is at once overwhelming and unobtrusive. He adds a dimension to the material that goes far beyond the printed page. Seldom have we been privileged to witness such an explosive and penetrating talent.

Whenever we watch Orson at work, the work never shows. He never plays safe but makes daring and theatrical selections. Still he performs with such honesty, truthfulness and economy that it appears simple. We are apt to think, "Oh, acting is just being natural, I could do that." We probably thought the same thing when we watched Bill Robinson dance. Every artist with a touch of genius makes us feel his work is effortless.

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We might think that one so blessed might develop disdain for us lesser lights, but Orson's talent glows the brighter because of his warm and loving feeling for his fellow performers.

When he directed *TOUCH OF EVIL*, I accepted a small part described only as the caretaker of a motel. The call for the first day was eight AM and I wasn't used until four PM. Sitting around the set is an important part of the actor's craft. On this day it turned out to be a real blessing. I began to bring ideas for the character to Orson. He always weighed them and usually said something like, "Hey, that's good, but on top of that what if . . . ?" giving me a stimulating thought that spurred me on, making me feel that nothing was being imposed but that I was creating.

I was playing Chester in *GUN-SMOKE* at the time. Orson's first words to me were wonderful. He asked me what were some of the outstanding characteristics of Chester. I mentioned that he was a follower. Whereupon Orson said let's make this character totally different. Never let anyone get in front of you. This made me walk with a quick step always glancing from side to side to see if anyone was making a move beside me.

While most directors would have played safe and asked me to do what they knew I could, Orson's impulses wouldn't allow it. He wanted something fresh and new. We decided that the character should be tremendously attracted to women but at the same time, totally scared of them. I had a scene with Janet Leigh in a motel room. I told Orson I was having trouble staying in the room and still being true to the selection we had agreed upon. I had an impulse to run and he asked what was stopping me. I said according to the script I've got to stay in the room. He told me that the script must yield to the truth . . . so run! The rest of the scene was played peeking at her from behind trees with a good fifty feet between us.

I've never ceased to be surprised and delighted by Orson's adaptability and creativity. *TOUCH OF EVIL* was filmed in 1957 but to this day I cherish the experience as a near-perfect actor-director relationship.

### François Truffaut on *THE WELLES LOOK*

Twenty years ago one talked too much about actors and not enough about directors. Today it is the other way around. Many critics speculate endlessly on what happens behind the camera and forget to describe what's on the screen. As a former critic, I feel partly responsible for this, and since I

am given the opportunity to speak about an actor/director, I choose to describe the actor.

His physical and intellectual precociousness, his portliness, his stature and the depth of his voice, have imposed upon Orson Welles parts of men older than he. Since the inception of his career, he has played kings and men of power, tyrants or monsters, in short, abusive characters.

As he himself is a poet, a humanist, a liberal and an artist primarily conscious of sound (he is the most musical filmmaker), one can see that this good and non-violent man was caught in a contradiction between his own personal feelings and those he has to portray in the parts given him because of his physique.

He has resolved the contradiction by becoming a moralistic director, always showing the angel within the beast, the heart in the monster, the secret of the tyrant. This has led him to invent an acting style revealing the fragility behind power, the sensitivity behind strength. The character created by Welles walks toward the camera but never straight on toward the lens. He must step sideways like a crab, cross the set diagonally with his eyes directed backstage. Orson Welles hardly ever looks into his partner's eyes — or just long enough to exchange glances. His eyes rest on a point above his opponent's head, for the Welles hero, who in reality is almost always a Shakespearian hero, can only have dialogue with the clouds.

What is behind this look? Its particular expression belongs only to Orson Welles. It is altogether distracted and melancholy, painfully preoccupied and suggesting that secret thoughts underlie the speech we hear. His dramatic style, softly hallucinated, is unique in the world in its unequalled poetic strength.

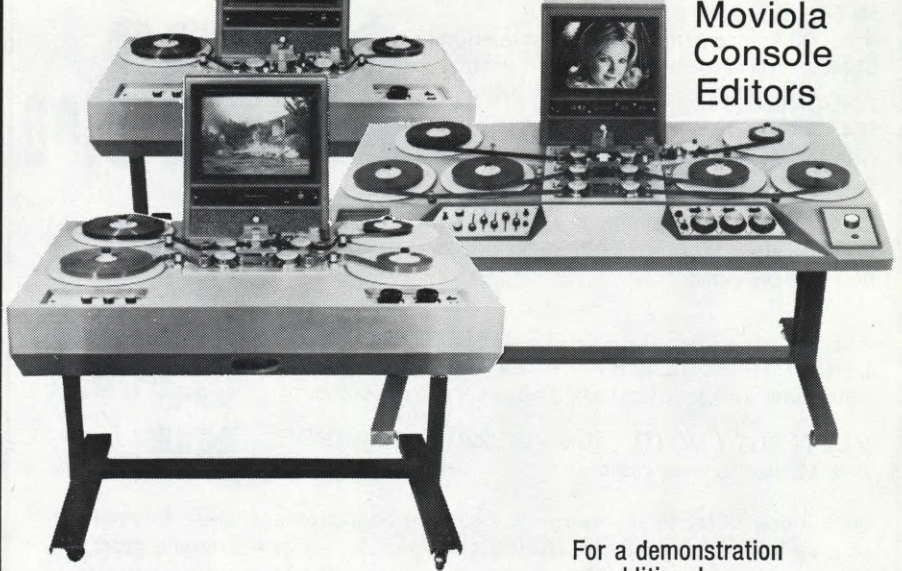
We have become so accustomed over the last thirty five years to consider Orson Welles' powerful personality that we have simply forgotten that Orson Welles is also a prodigious actor.

Let me, add, finally, that Orson Welles, having abandoned too soon, after OTHELLO, the part of the young leading man, has often managed to inject his very style into others: Anthony Perkins in THE TRIAL, Charlton Heston in TOUCH OF EVIL.

The weakness of the strong, this is the subject that all of Orson Welles' films have in common. The fragile giants who are at the center of his cruel fables, discover as the film unfolds its "ribbon of dreams", that we can preserve nothing; not youth, not power, not love, and that life keeps tearing us apart. ■

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**ONE AND ONLY WELLES**

Continued from Page 433

truths and misconceptions that have plagued Welles throughout his career. Welles had been labelled profligate because the film's budget had gone from \$350,000 to \$2-million but few understood that the added cost was caused by two illnesses to Miss Hayworth that delayed filming.

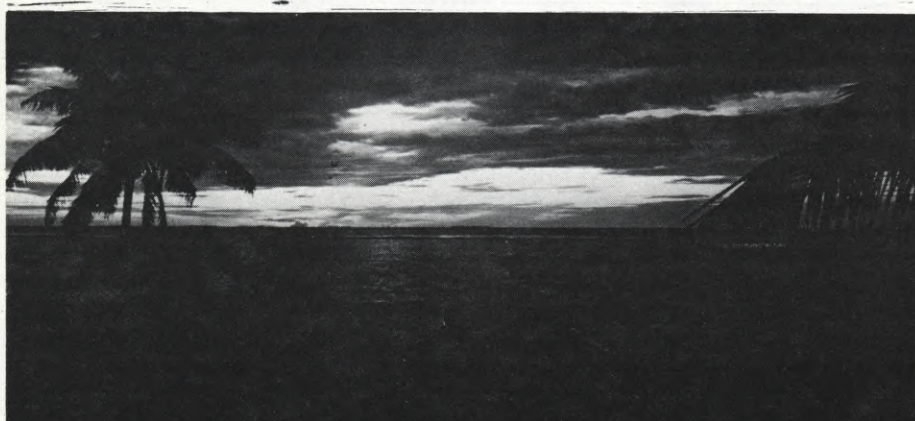
Actually, Welles is an economical and resourceful director and most of his current uncompleted projects are simply victims of financial stresses. For example, after "THE LADY FROM SHANGHAI", Welles scripted, directed and starred in an adaptation of "MACBETH" on a 23-day shooting schedule at Republic Studios. He had made "CITIZEN KANE" for only \$850,000. More recently he had filmed the highly applauded "THE TRIAL" under schedule and budget in spite of the fact that at the last moment before production began, his financiers could not come up with the money for sets and Welles, during a single weekend, converted the film's background to match a deserted Paris railroad station he had gotten permission to use. During filming of a sequence for "OTHELLO", costumes failed to arrive so he switched the scene to a Turkish bath so that the actors could perform in towels.

It was in 1950 that Welles pulled up stakes in the United States and departed for Europe. During the ensuing years he has devoted most of his talents in those areas. He has been termed an expatriate but that is a term he vigorously opposes.

"I am an American who lives all over the place," Welles says. "I'm no longer young enough to bear arms so why shouldn't I live where I like and where I get the most work?"

Orson also has pointed out that he was once recognized as an American emigre in Italy, but when he moved to Madrid he became an Italian emigre in Spain.

It appears obvious that today Welles' interests lie mainly in creating films. He has little or no interest in acting in them, but he continues to perform screen roles in order to help finance his film-making projects. He appeared in "THE LONG HOT SUMMER" to help finance his completion of a modern version of "DON QUIXOTE", which is now finished after 15 years of off-and-on work but is unreleased. He became host of a BBC TV series, *Great Mysteries*, to help defray costs on his current project, "THE OTHER SIDE OF THE WIND". He played roles in three Universal films to help finance his "CHIMES AT MIDNIGHT", based on his favorite character, Falstaff. It is ironic that such



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a man who is so devoted to his craft that financial risks are accepted as personal burdens could ever be dismissed as being "too extravagant."

He makes his home today in a country-house outside Madrid (although he is rarely there) with his third wife, Paola, former Italian actress, and their daughter, Columbina. He was previously married to Virginia Nicholson, from whom he was divorced in 1940, and to Rita Hayworth.

He is a huge man, six-feet-two, and his weight ranges above and below the 300-mark, depending on his dieting habits. A full beard, grey and black, dominates his rotund face but fails to dim the intensity of his piercing brown eyes. He's still the rebel he always was and he lives the life of a man always in a hurry. But he never carries a watch and he has a terrible reputation as a keeper of appointments. He has never been overly-amiable with sponsors or production executives because he believes they prevent him from succeeding with what his imagination conceives. And he falls into a rage if anyone dares to fool around with one of his scripts.

He is a great admirer of the late John Ford; once he ran "STAGECOACH" every night for a month. He thought a great deal of Franklin D. Roosevelt and campaigned vigorously for him during his presidential campaigns. He also admires Jean Renoir, D. W. Griffith and Eisenstein.

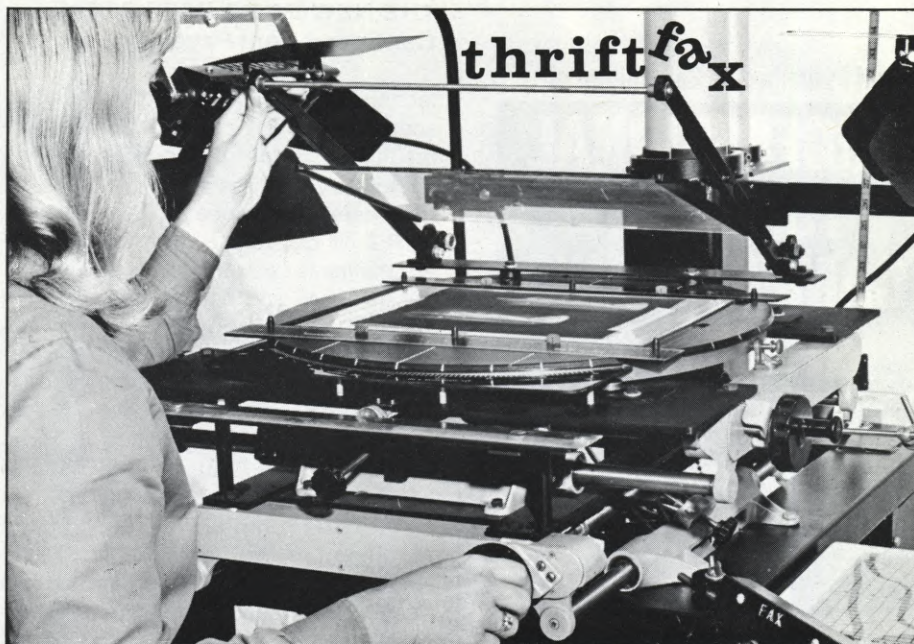
Of himself, he says quite frankly: "I have most of the accepted sins."

He has no pretensions, hates snobbery, racial discrimination and injustice.

His idolaters far outnumber his critics. The years have anointed him with a self-sustaining fame reserved only for such international celebrities as Chaplin, Cocteau, Picasso, Ellington and Hemingway. In 1971 the Academy of Motion Picture Arts and Sciences finally got around to honoring him with a special Oscar, a recognition from Hollywood that many believe was much too long in arriving. Yet the laurels that have begun to be heaped upon his ample shoulders will do little more than stimulate a brief pause in the wild, spirited existence he has designed for himself as he makes his bull-elephant charges wherever he feels there is a story to be told, a film to be made, a challenge to be met.

As one film critic put it so succinctly, echoing the sentiments of many thousands of movie buffs throughout the world:

"Even an Orson Welles failure is a dozen times more interesting than many a successful work by many a less talented director."



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## THE NEW ECP & IM SYSTEM Continued from Page 438

technique that is extremely limited in scope, produces crude, unacceptable results by modern standards, and is completely unfeasible economically. But despite the imposing description of ECP & IM capabilities already presented, the list is far from complete. In fact, the flexibility and sophistication of this system make it impossible to predict all the creative possibilities which will become apparent once it goes into use.

As noted earlier, the ECP & IM system was conceived by Wilton R. Holm and Petro Vlahos at the AMPTP Research Center. They hold patents on electronic compositing and image modification which have been assigned to the AMPTP, and which the Association has licensed exclusively to Image Transform, Inc. The ECP & IM system will be built, and its services marketed, by Image Transform.

AMPTP patents on the electronic compositing and image modification technologies have been granted or are pending in the United States, Canada, Great Britain, France, Germany, Italy, and Japan.

It is estimated that Image Transform will invest more than a half-million dollars in building the system and its production facilities in Hollywood. An estimated six months of planning and an additional year of construction and testing will be required before the ECP & IM system will be available on a commercial basis. The development work at Image Transform is being carried out under the direction of its president, Joseph E. Bluth. James Shepard is project manager.

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Additionally, Image Transform was awarded the much sought-after contracts to do all archival videotape-to-film conversions for the entire Apollo and Skylab programs.

Image Transform plans to create a new division of the company to operate the ECP & IM System, and will add its own proprietary technology to the system. The end result will be a significant advancement in the state of the art of image processing. ■

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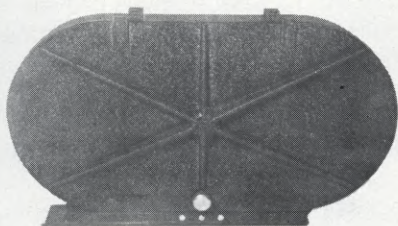
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## "PINK PANTHER" Continued from Page 447

crazy things that just happened."

I tell him how delighted I am to see Geoffrey Unsworth on the film as Director of Photography and I ask him what factors entered into his selection of this quiet artist of the camera.

"The selection of Unsworth was simply pure good luck on my part," he replies. "The timing just happened to be perfect. I've always admired his work and wanted to work with him, and when young Tony Adams, our Associate Producer, said that he understood that Geoff was available, there was just no contest. I was delighted to go after him.

"I have an enormous respect for his talent and, in terms of working with him, I didn't find anything different in terms of establishing rapport. He is a very soft-spoken gentleman with a considerable sense of humor. It's a very quiet, droll sense of humor and I love it. He's fast and effective and he has one of the best Operators that I've ever worked with, Peter MacDonald. It's just a pleasure working with Geoff. He has an enormously *modern* imagination for a guy who has been around as long as he has and done as many things as he's done. Quite often you find that someone with his vast experience has become steeped in some sort of traditional way of doing things, but I point to the lighting of 'CABARET' and the exciting things he did on that picture. Hopefully, he will be doing that for me, too."

I ask Blake to tell me a bit about the shooting that took place in Casablanca, prior to the move to Marrakech, and he says: "In some respects Casablanca was not unlike Marrakech, but in other ways they're quite different. The main contrast between the two is that Marrakech has a more interesting native aspect to it. It's less of a city — more savage, more colorful. To be sure, the problems here are pretty much the same as they were there — and on any foreign location, for that matter. There's the perpetual language problem. But in addition, the Moroccan equivalent of Montezuma's Revenge has been a major problem with this company — trying to keep them together and out of the bathroom. Just about everybody's come down with it (or *up*, as the case may be), including our very rugged French assistant, who had spent a certain amount of time in the Foreign Legion. It's the hardest thing you can imagine to make a comedy under those conditions."

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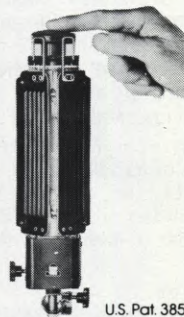
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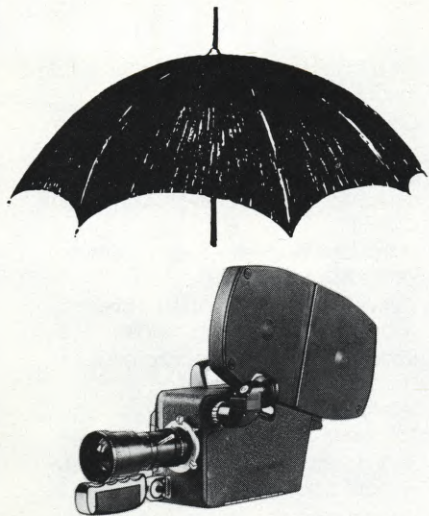


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**The Haunted Legion Post**

That night I have dinner with Geoffrey Unsworth in a native Moroccan restaurant where it's all big soft cushions, couscous and sinuous music. He's delightful company, and he gives me a rundown on the problems peculiar to the shooting of "PANTHER", as well as the photographic style he's using (see Page 414).

The next morning, with the sun gilding the snow-frosted High Atlas mountains that stretch row on row, we set off by limousine for a location some distance out of Marrakech. Considerable jouncing over rutted roads brings us to a place named Oumnast, where an ancient-looking fort rises starkly from the desert. With its thick walls (pierced with firing slots) and high square tower, it is right out of "Beau Geste".

Standing within the courtyard of the fortress is an ancient truck of large proportions and dull red color. Special effects technicians are swarming over it, loosening bolts and placing powder charges. They've got the bolts so loose, I'm told, that when the charge goes off, the whole thing will go up in a shower of shrapnel.

There is at least one skeptic regarding that probability. "This fort is an old French Foreign Legion outpost," says Peter Samuelson, "and it's haunted."

"Haunted?" I chortle, "Whattaya mean by that?"

"Motors won't start; explosives won't explode . . . You'll see," he says mysteriously.

The way Blake has the action plotted in this scene, a large metal drum mounted on the side of the truck (supposedly containing the coiled-up Clou-seau) goes soaring high in the air, as the charge goes off and the rest of the truck gets sprayed clear to Gibraltar.

Multiple cameras have been set up to record this one-time happening. The assistant director screams for us to take cover. I position myself high up so that I can photograph sequential shots of the explosion.

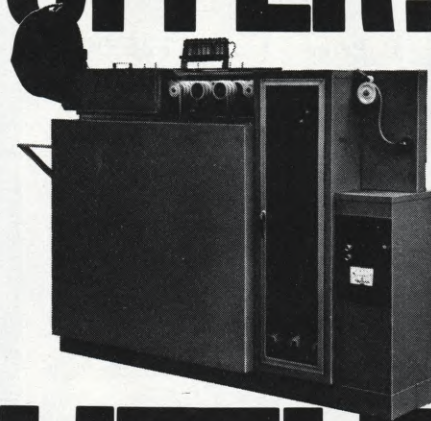
The cameras roll. The signal is given. There is a great belch of smoke. When it clears, the metal drum — far from soaring majestically through the air — has fallen off the truck and plopped disconsolately onto the ground. The truck itself, despite having been rigged with enough dynamite to blow up Boulder Dam, still stands there intact in all its ancient, rusty glory.

No doubt about it . . . the place is haunted!

As I am riding back to the hotel with Blake I ask him whether he plans to re-take the truck scene.

"Apparently they can't get it to work here," he replies "and we can't lose

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time from our schedule by doing it over. The special effects boys will have to rig something when we get back to the studio in London."

On the way in we drive through the oldest native quarter of the city and it strikes me that this place (take away the bicycles and sparse motor vehicles) must look pretty much as it did 800 or 1,000 years ago. Kaftaned Berbers drive their sheep through the streets. All of the women move in their tentlike head-to-toe shrouds, with only their eyes peeking out of the veils. There is not a liberated female in sight. The exotic sights and sounds and smells of Marrakech add up to the most genuinely "foreign" place I have been in the course of my continuous globe-trottings. The city makes a wild background for a movie.

I tell Blake of a conversation I've had with one of his more volatile fellow directors: "Your friend, Otto Preminger, made the statement that he's not shooting backgrounds — he's shooting actors, and that, therefore, he doesn't care too much about what shows up in back of them. How do you feel about that point of view?"

"Yeah, I'd say that's a fair description of Otto . . . shooting actors," Blake chuckles. "Seriously, though, I think your attitude towards backgrounds depends upon what kind of picture you're doing. I never intentionally set out to shoot backgrounds, unless I feel that the backgrounds are important in terms of creating a tapestry in front of which your actors can work. In this film, exotic backgrounds are a terribly important element in establishing the character of an accident-prone detective like Clouseau. That's part of what makes him humorous, the fact that he gets involved in a part of the world that his accidents can really turn into a wasteland. Doing his thing on some little backstreet somewhere isn't nearly as funny as having him ruin a whole fictional land like Lugash — or, in this case, Morocco. If he has to deal with heads of state or commanders of the secret police or people on that level, and wreck their world or their environment, then that's part of the humor. I don't set out to shoot backgrounds. I certainly work with my actors. But, in this case, it's preferable to have my actors in front of an exotic tapestry, if you will. For example, Nice is an exotic background for our international jewel thief, Sir Charles Litton, who lives there retired in his beautiful villa. Well, Clouseau comes into that area and turns it into a wasteland. Of course, we'll have to go back to the studio in London in order to shoot the wrecking of certain sets which have been specially

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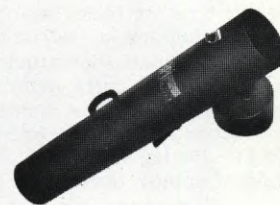
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designed for the comedy sequences."

"When we were together on 'TAMARIND SEED', I remember that you were unhappy to a certain extent about having to shoot everything in actual locations, including the interiors," I remind him. "You felt that it more or less cramped your style, as I recall."

"Yes," he says, "there are certain pictures that can take an entire location interior-exterior type of operation. 'TAMARIND SEED' was not one of those. It limited me. Although I think we did it effectively, I know I could have done it better with a few sequences shot in the studio. Comedy is extremely difficult to do if you have any interior action scenes. By *action*, I don't mean fights or anything like that. I mean comedy situations where people are moving, where there is action comedy-wise. This is enormously difficult to do on the spot. You've got to have a lot of mobility. You've got to be able to get back and see the whole thing. You can't be restricted and you can't put too much restriction on your cameraman, either, in terms of lighting and things like that. In this picture we have the best of both possible worlds. We capture a certain amount of so-called 'glamour' in the backgrounds that Clouseau gets up against, and also a kind of documentary feeling. You need those things and you can get them with interesting set-ups in real locations. But when we shoot scenes in Clouseau's extra-small hotel room in Switzerland (it's only about five-feet-square, with a tiny bathroom), the set has to be designed in the studio. Also, the shootout at the end, where people are running in and out of doors at the hotel and breaking windows, has to be shot in the studio. There are things like that which simply require a studio, and I don't know how we could do them anyplace else."

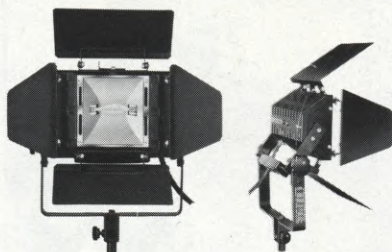
"Then you don't follow the current line of thought that everything will be shot on locations in the future?" I ask him. "In other words, there are films or parts of films which must be made in a studio. Is that correct?"

"Well, I can't say that they *must* be," he replies. "I guess you can limit yourself to nothing but location shooting, but I think you do yourself a great disservice and sometimes create a lot of financial problems, as well. There are certain scenes that you can actually shoot a lot less expensively in the studio. I think there will be a lot more pictures made with interiors shot on location, but I feel that the Hollywood powers-that-be will find themselves in a bind if they don't provide for replacement of the studio facilities that are being sold out from under everybody. I believe that such facilities are very, very

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necessary and will become even more necessary as time goes by and we must face the inevitable cable TV situation. That, in my estimation, will demand so much product that we are just going to be forced to have those major layouts. No doubt about it."

### The Marrakech Windup

The last sequence of "PANTHER" to be shot in Marrakech takes place at night in the very bowels of the oldest section of the city. It is a walled rabbit-warren of labyrinthine tunnels and alleyways lined with tiny stalls and living quarters. At night it takes on an air of exciting mystery. One almost expects a young and dapper Charles Boyer to come slithering out of the shadows to hiss: "Come wiz me to ze Casbah."

Outside one of the archways leading into this maze, the company's 1,000-watt generator is chugging away and I find where the company is shooting simply by following the seeming miles of cable stretched through the winding passageways. The crew is in a tunnel about eight feet wide that is lined with stalls, its ceiling festooned with multi-colored skeins of dyed wool which have been hung there to dry.

The place is alive with people, each of whom would make a stunning shot, if photographed in close-up. Geoffrey Unsworth is busily hiding his tiny 650-watt laniro lights in odd nooks and crannies. Electricians are stringing cable down a considerable length of the tunnel. Inside one of the shops I catch a glimpse of Julie Andrews buying some of the beautiful local carpets.

The set-up, with all of the lights and extra-curricular people involved, is enormously complicated and takes a long time to arrange, but once this is done, the action is simple. A stuntman, doubling for Christopher Plummer, comes crashing through a false ceiling, lands just in front of the camera and goes running down the passageway. It is rehearsed several times. Then three takes are made, the last one being a "Print".

"That's a wrap," Blake Edwards calls out. "We're in the wrong country."

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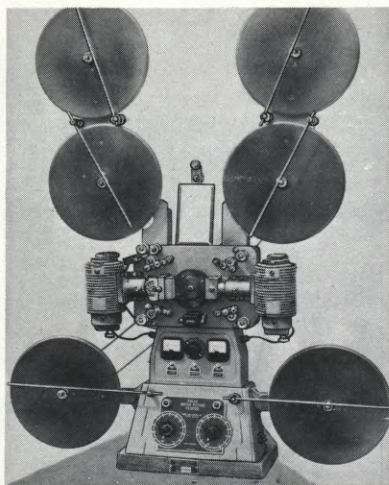
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Continued from Page 456

cation system was working smoothly, we relaxed a little and began to observe what was going on around us.

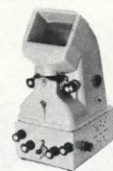
After a series of all-night shooting sessions in Casablanca, I realized I was going through too much footage, considering the weeks of shooting ahead of us. The only thing to do was to slow down, and yet we had to be ready to shoot at any time. There is nothing more exasperating than wandering around the set for ten hours and shooting less than a hundred feet in all that time.

Under these conditions, the lightweight ACL was really the perfect camera, no doubt the only camera with 400-foot magazines that I could have held under my arm for such long periods. The new British-designed 400-foot magazines with peripheral drive draw less current than the French-designed magazines, and the digital footage counter (found only on the British model) was more accurate than any I had seen before. I found that the added weight and length of the 400-foot magazine (compared to the 200 foot magazine) provided a better balance for hand-holding with a zoom lens.

While the camera was quiet enough for us to shoot during exterior takes, Blake's sound mixer would often ask us not to turn over during interior takes. We had anticipated this, and there were not many occasions when we wished we had been able to shoot during the take, as most of the activity we were interested in occurred during rehearsals when Blake and Peter Sellers would work out the comic timing of a scene. Later, at the editing stage, we thought it would be nice to follow one or two scenes from rehearsals to the final take, so we simply arranged to have these takes reduced to a 16mm CRI from the original squeezed 35mm footage.

Unfortunately for Geoff and Bill, the ambient noise during rehearsals was usually high, so whenever possible neck mikes were used. Since we didn't have a radio mike for most of the time, our neck mikes had to be attached directly to the recorder, which was not an ideal arrangement. Occasionally, the situation proved impossible; for example, at the airport near Casablanca. The background noise was unbearable, so a neck mike on Blake was essential, but he was running around so much that we couldn't anchor him to our mike lead. The feature sound crew sympathized with our plight, as they were obviously hav-

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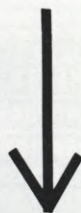
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ing similar problems, and they kindly offered to lend us an Audio radio mike for the remainder of the day.

Tension was slowly beginning to build up, from the moment it was discovered that Inspector Clouseau's plaster casts had arrived from London in several hundred pieces. Blake's frustration grew as he tried unsuccessfully to communicate directions to the extras through his French first-assistant. Most of the Moroccan extras understood French as a second language, but there was always one or two who could not appreciate the dramatic importance of stopping at a specific point or remaining stationary. This frustration finally came to a head when a crowd of children and a donkey were also involved in a complicated transition scene where everyone had to move as a unit in order for the scene to work. After several takes it wasn't working, and it looked like it would never work. Finally, Blake got angry. We saw it coming, so we filmed it, thinking this would be an important aspect of film-making to show. After all, comedies are not any easier to direct just because the end result is funny.

Throughout the remainder of the picture Blake never again lost his temper. We nevertheless decided to incorporate this flare-up in our documentary because it expresses a tension which is usually present in the film-making process in one form or another, but which is rarely shown.

From Casablanca we traveled to Marrakech by bus. In the distance the Atlas mountains looked cool and inviting with their snow-capped peaks, but Marrakech was very hot and dusty. We spent a few days in an abandoned adobe village on the outskirts of the city. It was there that we filmed an exploding truck in the village square, only to discover later that the Bolex, which we used on that occasion, had a serious light leak. Before we left London we had run a film test through the Bolex with perfect results, and we hadn't touched the camera since then. A close examination failed to reveal any irregularities, and as the ACL was still running perfectly, we set the Bolex aside for a rainy day.

Knowing how our black ACL magazine would absorb heat from direct sunlight, my wife had made a tight-fitting reflective cover from a sheet of Roscoflex S backed with heavy linen. The combination was easy to sew together, and it proved much more efficient than the standard white towel for keeping the mags cool.

From Morocco we flew to Geneva with the feature unit, then took a bus to Gstaad. Peter Sellers had been on the

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set in Marrakech, but it was here in Gstaad that he and Blake began seriously to improvise and explore the character of Inspector Clouseau. This was the material we had been waiting for. While in Gstaad, we began to shoot an average of 800 feet a day, so we were thankful that we had restrained ourselves somewhat while we were in Morocco.

As our film was beginning to take form on paper, knowing what we had shot and what kinds of material we were likely to get in the future, we decided we needed an extended interview with Blake Edwards in order to tie it all together. He agreed in principle immediately.

Our first opportunity for an interview occurred just before lunch one day after they had finished shooting in the basement of the Palace Hotel in Gstaad. We had found a beautiful spot on the grounds of the hotel, a place for Blake to sit, the Swiss Alps in the background. We set up the camera, arranged our reflectors to fill in the shadow areas, as it was a sunny day, then Geoff went inside to ask if he was ready. Geoff was told that Blake had been suddenly called away to an important conference. We half-expected this to happen once or twice, and we took it in our stride, but as we approached the end of the shooting schedule at Shepperton Studios in London we began to get worried. We discussed it and all agreed that our film, as it stood, would be too amorphous without comments by Blake to elaborate upon certain points which were only half-stated by the picture alone. So we began to follow Blake around everywhere until finally, on the last day of shooting at Shepperton Studios, just hours before he was to leave for Switzerland, he appeared on the back lot ready to answer our questions. Our film was thereby saved from the clutches of a third-person narration. A miracle, I thought.

A day or two before we had left London for Casablanca, I had tried to hire a Canon 10-to-1 zoom lens without success. I thought it would have been a good chance to use the lens for the first time, as I was hearing so much about it, but none of the London equipment hire companies carried the lens, so I let the idea drop. Then I met Herb Lightman in Marrakech. He suggested I write an article detailing our experiences on our documentary for the *American Cinematographer*, and I thought this was a good excuse to try harder to find a Canon Macro-Zoom. I cabled W. Vinten Ltd., the British importer of the lens, and they didn't sound very keen to ship a lens to Nice, but they did offer to

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let us hire one once we returned to London.

So we had a virtually brand-new Canon Macro-Zoom for ten days at Twickenham Studios, just in time to shoot some big close-ups of the Pink Panther diamond using the Macro facility. The use of the lens for big closeups is very easy—certainly easier than using diopters in front of a lens. Unfortunately, most of the other clever things that the lens can do (for example, changing focal point with constant field size) require a static set-up where the action can be directed. Most of the potential of the Macro facility simply cannot be realized in a hand-held documentary situation, but once the camera is mounted on a tripod some very interesting effects can be achieved.

The zoom mechanics of the new lens we were using were without doubt the best I have experienced. It provided just the right drag for silk-smooth manual zooming. The focus ring was equally smooth in operation, but in order to allow for the special characteristics of the artificial fluorite elements under cold temperatures, Canon has not incorporated a stop at the infinity mark. This allows slight overruns when necessary under cold conditions, but it also means that under normal conditions you cannot turn the focus ring until it stops and expect to have infinity in focus. You must always focus infinity by eye through the viewfinder. But this is a small price to pay for what is obviously a superior lens.

Soon after the "THE RETURN OF THE PINK PANTHER" left Shepperton Studios, an auction was held where they sold all the remaining props, lights, timber, recording equipment, camera equipment, and editing equipment which had made Shepperton a film factory unto itself for so many years. Now it is to join the ranks of the "four-wall" studios where lighting and all the paraphernalia of film-making are brought in from outside.

Another sign of the times on this side of the Atlantic is that Eclair-Debie has just gone into liquidation. This is especially sad as this British company pioneered many of the latest developments for the Eclair ACL, including the peripheral drive of the 400-foot magazine, the digital footage counter, and more recently, a single-system module.

Working alongside Blake Edwards and his all-British crew over the past few weeks has been a great experience for all three of us and I can strongly recommend London as a European production base with some of the best labs in the world. I hope it shows. ■

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**THE ECLAIR STORY**  
Continued from Page 441

into all cameras, since the introduction of the ACL in 1970) is used to actually set the reading. The meter is semi-spot. It reads about one-fourth of the frame. I played with the system for awhile, and I was impressed at how sensitive the metering seemed.

Again it was time to move on. I was pretty well exhausted by this time, but LaDerriere somehow got me into the car and we drove off to the headquarters of Eclair International. The main office was an unassuming little green door, identified only by a plaque. The location was a nice one — about a block off the famous Avenue de L'Opera, right in the center of Paris. The office was full of desks and all the other paraphernalia one associates with offices, and there was a showroom displaying the three prime Eclair products — NPR, ACL, and Cameflex. Hung on the wall were huge transparencies, perhaps two feet by three feet, depicting the Eclair cameras in use. In the back there was a small repair shop and more offices. Busy people hurried around, up and down the stairs, answered the always-busy phone, carrying orders and shipping receipts around. It's quite a place. 14 Rue Gaillon. This is one main office that could never be "told by its cover". Behind that green door is a world-wide organization.

It was now time to go to the hotel. It had been a long, but always interesting, day. I had seen my mecca, the home(s) of the Eclair cameras. The whole thing was quite an experience. And I felt good about what I had seen, because I had been resoundingly reassured that Eclair cameras are produced under the most rigid standards. Each camera coming off the line is every bit as good, and probably even better than, my own five-year-old NPR.

That night I had dinner, Parisian style, with Monsieur LaDerriere and his lovely wife. We ate in a crowded little restaurant near the Sorbonne. And after that LaDerriere took me for a night tour of Paris. Down the Champs-Élysées. Around Notre Dame. I had never been to Paris before, and I was impressed by the absolute beauty of the city.

Driving back across the Seine, into the Place De La Concorde, a very strange thing happened. "Country Joe and the Fish" came blaring across ORTF on the car radio. There I was, in the center of the most French of all French cities, winding up a long and exciting day, and ol' "Country Joe" is shouting — "Give me an F . . . !"

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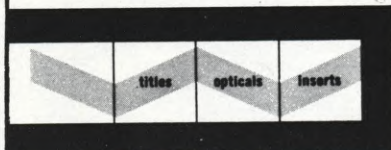
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NEW — Arriflex S/B camera, Zeiss 10-100 zoom lens, variable speed motor & cable, 8 volt Duro-pak battery and charger, sunshade and filter ring, Halliburton case, series IX 85, 85N3, 85N6 filters, \$5500. (213) 986-3699.

BAUER P6 studio interlock sync projector, 16/16 never used, 3 hours total time. 50/1.3 lens sacrament, \$3400. R. PADDOCK, M.D., 881 Fremont, Los Altos, CA

ECLAIR ACL package: 2-400' magazines, battery, case. Perfect! \$6995. IMAGE DEVICES, 811 NW 111 St., Miami, FL (305) 751-1818.

BOLEX REX, 10mm, 25mm and 75mm Switar lenses, Aluminum case and pistol grip, LN, \$500. DENNIS UNGER (216) 234-8847, evenings.

BOLEX-16 PRO & ARRIFLEX-M. Bolex includes crystal sync, two 400' mags, Angenieux 12/120 zoom lens, case, etc. Camera was completely overhauled in Jan. '75. Price \$6,500. Arriflex-M includes Angenieux 12/120 zoom lens, two 400' mags, one 200' mag, one DC variable motor, one DC 24 frame motor, Cine 60 power belt, case, etc. Price \$3,900. Both cameras very clean. Will sell or trade for 35mm equipment. GLENN LAU PRODUCTIONS, 3211 SW 27th Ave., Ocala, FL 32670. (904) 237-3393.

NEW 1/2 parca \$475. Schneider Xenotar f2.8 150mm lens unmounted. W.R.E. PHOTOGRAPHY, 3281 Oakshire Drive, Hollywood, CA 90068 (213) 851-3281.

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CP16 Newsreel package: 12-120 Angenieux, 2-400 mags, 2 batteries, case, \$4900. IMAGE DEVICES, 811 NW 111 St., Miami, Fla. (305) 751-1818.

NAGRA III, crystal, slate lights and other extras, \$1450. Sennheiser MKH 404 condenser mike, \$225. SK1005/T203 wireless mike, \$250. MD214 Lavalier Mikes \$65. Rivas splicers, 35mm straight, 16mm diagonal from \$75. Langevin EQ252A & EQ251A & Lang PEQ2 equalizers from \$100. New crystals for NAGRA III's and IV's. Oscilloscopes, audio generators & meters. ROBERT VAN DYKE INC, New York (212) 741-2989.

COOKE-Kinetals 16mm Arri-mt., matched. Mint cond. 12.5, 17.5, 25, 50mm, \$1000. (213) 274-5772.

BELL & HOWELL Model J 16mm contact printer with Peterson sound head, roller gate, super hi-intensity lamp and rectifier. Excellent condition, \$6500. AUDIO OPTICS INC., 424 Hume Avenue, Alexandria, VA 22301. (703) 683-2520.

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20-120 Angenieux zoom, new, never used, with ARRI & BNC mount, \$7,650. (213) 454-9903.

ACME 35mm Camera, \$2,500. Acme 35mm Matte projector, \$2,750. Custom-built 16mm animation stand with 35mm Bell & Howell camera. Acme pencil animation stand, \$1,750. Reflexed pin registered 16mm animation cameras from \$1,500. 35mm pin registered filmstrip & slide cameras from \$3,000. 35mm Moviola with large picture head, \$1,250. UNIVERSITY SUPPLIERS, 225 W. Ohio St., Chicago, Ill. 60610. (312) 467-6457.

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VICTOR DUNCAN, INC. has opening for camera repair technician. Must have practical background in mechanics, electronics, optics. Call ROBERT BURRELL. (313) 371-4920.

## WANTED

WANTED: Good used, late model, silent Canon-Scoopic. WALLY SLENESS, 410 Cushman St., Fairbanks, Alaska 99701.

MOTION picture lab in South Africa requires the following used equipment: 16mm printers, 16mm-S8 reduction printer, 16mm sound camera, 16mm processing machinery. Please submit all offers to VARI-COLOR 16, Box 17836, Hillbrow, J.H.B. South Africa.

CONDENSER Mics (AKG, Sennheiser etc.) lav. and Cardiod and mixer (cheap). (617) 536-4912.

35/16 reduction printer, sound track reduction printer, spray processor. Must be reasonably priced. BRUCE WEBSTER, 426 NW 20th, Oklahoma City 73103 (405) 524-6251.

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.

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