

# American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

NOVEMBER 1973/75 CENTS



BEHIND THE SCENES OF

# WESTWORLD



Mr. Carl Porcello, President  
F. & B. Ceco  
7051 Santa Monica Boulevard  
Hollywood, California 90038

Dear Carl:

It is with a great deal of pleasure that we can acquaint you with the results of using your new T1.1 - 55mm, T1.3 - 35mm, T1.8 - 28mm and T1.7 - 85mm lenses on the Miller-Milkis 90-minute TV feature for Paramount and ABC entitled NIGHT OF TERROR.

We were amazed at the depth and quality of these lenses at such an open aperture. We used them on night exteriors outside the bus terminal in downtown Los Angeles at Sixth and Maple, using between 10 and 16 foot candles of light on our subject matter to balance the backgrounds, the available light on the streets.

The results were great, in that background as much as three blocks away picked up and blended with our foreground lighting, creating a really natural illusion in great depth. We did not have to force-develop so we had nice, rich blacks.

We used your same lenses with the reflex B.N.C. and also on your hard front Arriflex, which gave us great flexibility.

Thank you for a great set of lenses for low light level situations.

Sincerely,

*Edward K. Milkis*

Edward K. Milkis

*Thomas L. Miller*

Thomas L. Miller

*Howard Schwartz*

Howard Schwartz, A.S.C.

MILLER · MILKIS  
PRODUCTIONS INC.  
5451 MARATHON ST.  
HOLLYWOOD, CALIF.  
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T1.8-28mm



T1.3-35mm



T1.1-55mm



T1.7-85mm



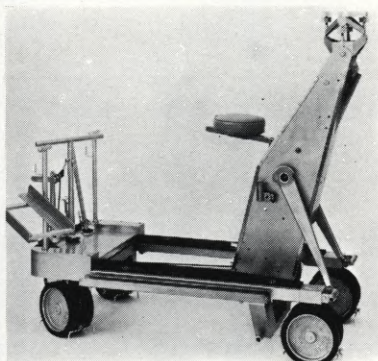
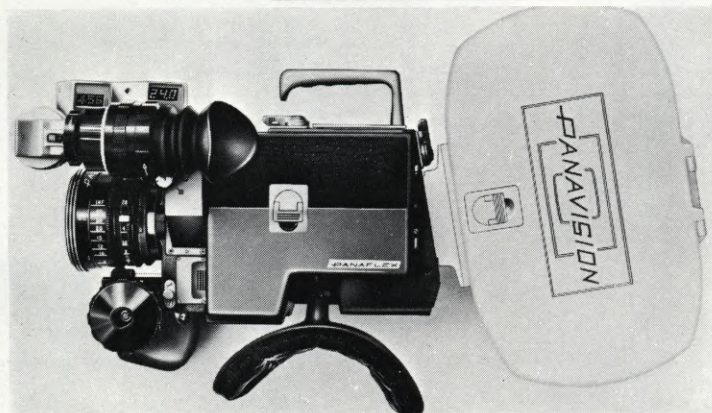
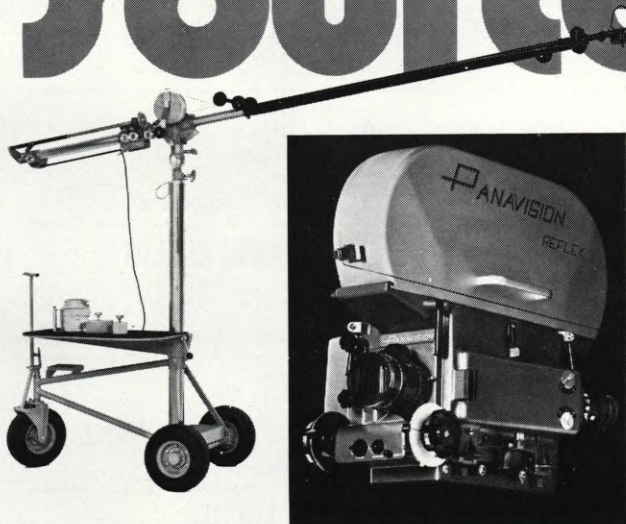
**P.S.** Howard Schwartz won an Emmy for his outstanding cinematography in "NIGHT OF TERROR."

These exceptional lenses are available NOW for sale or rental and we welcome any questions you may have regarding them.

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# 30

# Cine mobiles

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# American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

NOVEMBER 1973

VOL. 54, NO. 11

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## • FEATURE ARTICLES

- 1390 The Sixth Annual Atlanta International Film Festival
- 1394 Behind the Scenes of "WESTWORLD"
- 1398 "LET THE GOOD TIMES ROLL" – Wall-to-wall Optical Effects
- 1404 The Production of "CYCLE OF LIFE"
- 1405 Photographing "CYCLE OF LIFE"
- 1406 Making "NO PLACE TO HIDE" in Super-16
- 1410 Directing and Filming "FOUR CHILDREN"
- 1416 Academy Breaks Ground for New Headquarters Building
- 1424 Awards of the Sixth Atlanta International Film Festival
- 1437 "WESTWORLD": A State of Mind?
- 1446 Filming "DEADLY FATHOMS"
- 1446 The Topside Photography of "DEADLY FATHOMS"
- 1449 The Underwater Photography of "DEADLY FATHOMS"
- 1450 "COMIC BOOK" – Overcoming Obstacles to Independent Film-making
- 1464 Filming the Atomic Graveyard
- 1477 Creating Special Effects for "WESTWORLD"

## • DEPARTMENTS

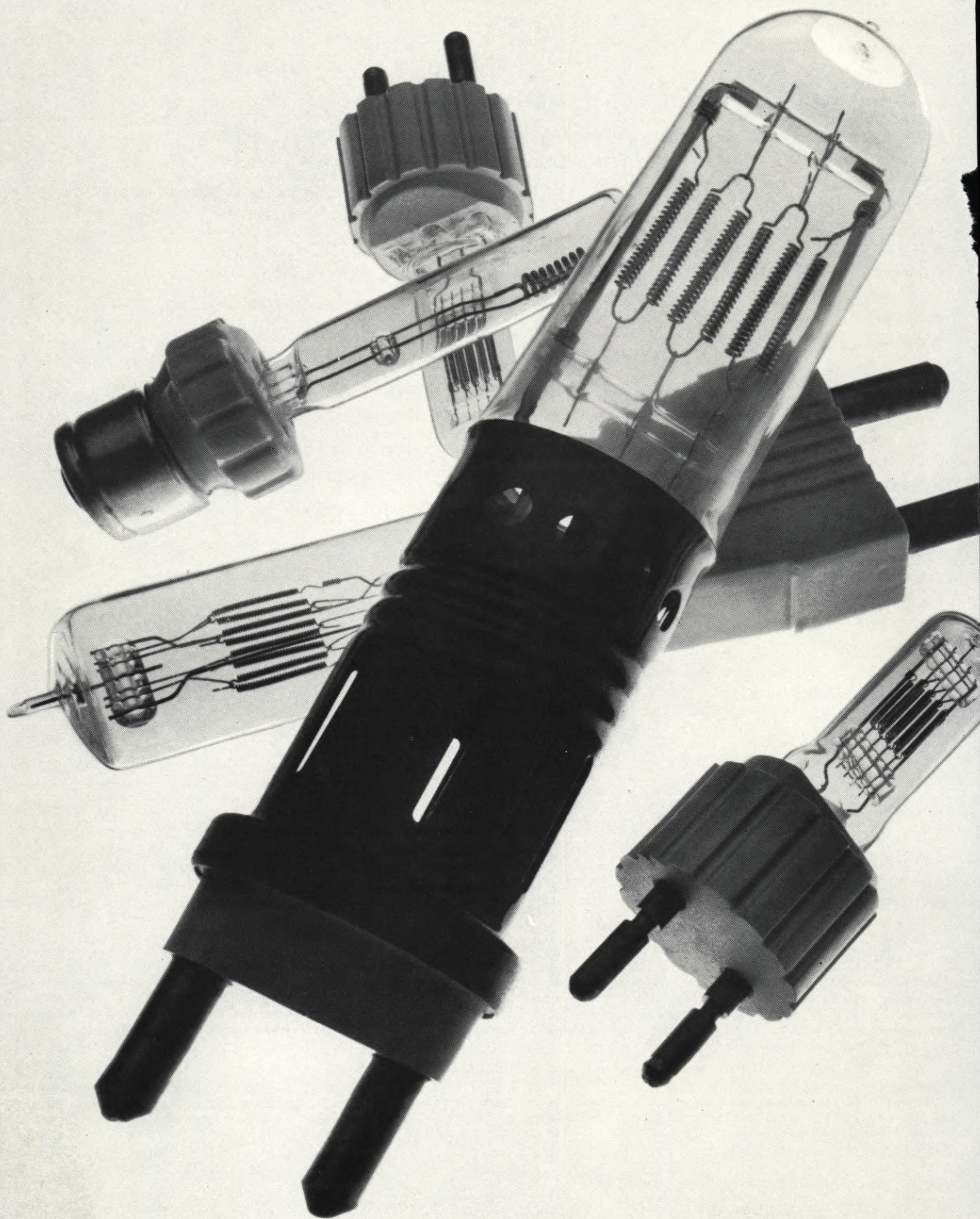
- 1364 What's New
- 1368 Questions & Answers
- 1372 Cinema Workshop
- 1376 The Bookshelf
- 1380 The Honor Roll

ON THE COVER: A stylized collage to represent the fascinating action of MGM's "WESTWORLD", with Yul Brynner as a robot gunslinger dominating the scene. Graphic art courtesy of Metro-Goldwyn-Mayer.

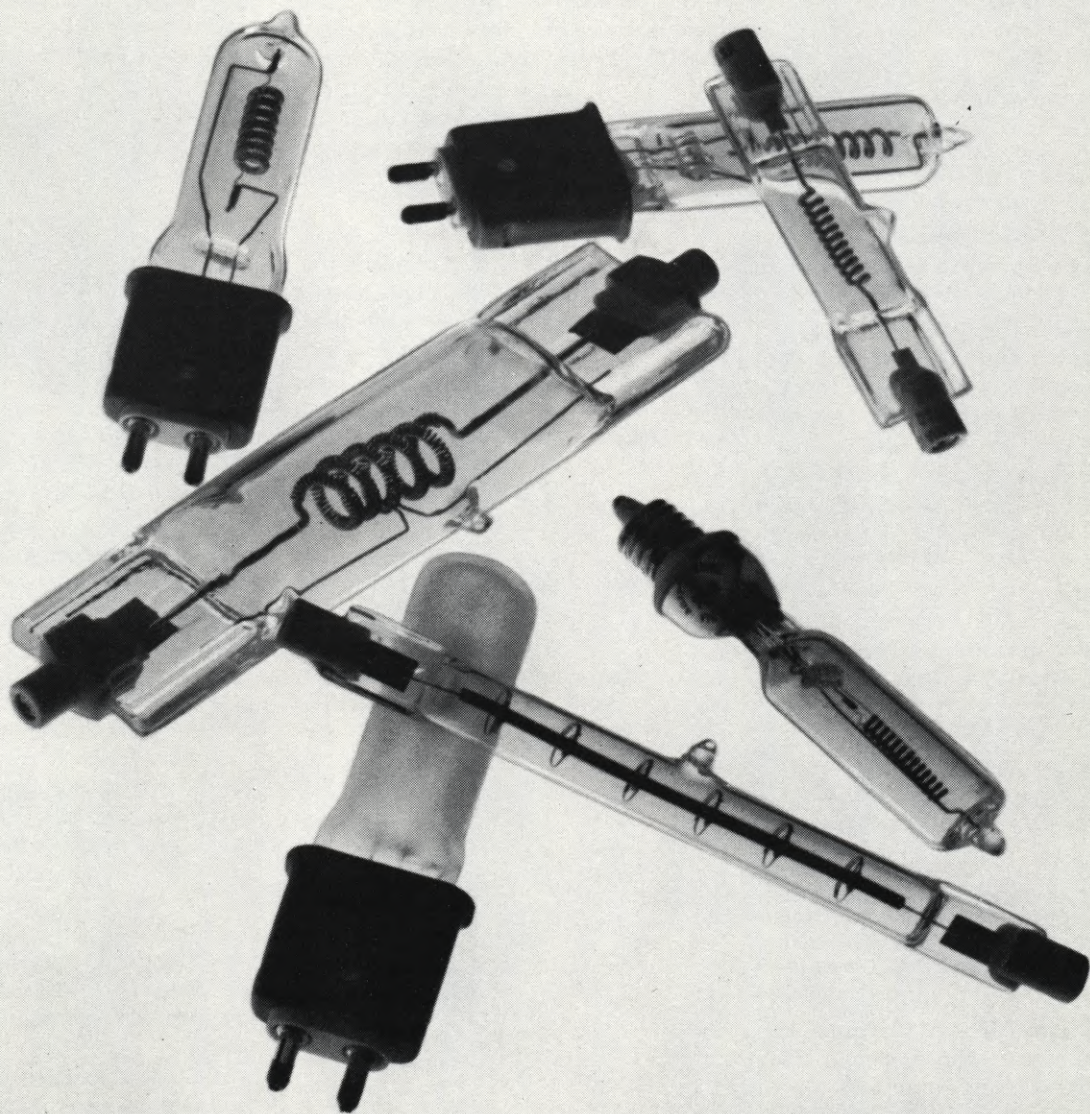
*The A.S.C. is not a labor union or a guild, but an educational, cultural and professional organization. Membership is by invitation only to those who are actively engaged as Directors of Photography and have demonstrated outstanding ability. Not all Hollywood cinematographers can place the now familiar initials A.S.C. after their names. In a sense, the A.S.C. membership roster is as exclusive as the legendary London Club for it has become one of the highest honors that can be bestowed upon a professional cinematographer, a mark of distinction and prestige.*

**AMERICAN CINEMATOGRAPHER**, established 1920, in 54th year of publication, is published monthly in Hollywood by ASC Holding Corp., 1782 North Orange Drive, Hollywood, California 90028, U.S.A. **SUBSCRIPTIONS:** U.S. \$8.00; Canada, foreign, including Pan-American Union, \$9.00 a year (remit International Money Order or other exchange payable in U.S.) **ADVERTISING:** rate card on request to Hollywood or New York office. **CHANGE OF ADDRESS:** notify Hollywood office promptly. Copyright 1973 ASC Holding Corp. Second-class postage paid at Los Angeles, California.

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



# Some of our substitutes for our substitutes.



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

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

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

But soon new fixtures arrived on the

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

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

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

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

our new lamps for our Substitutes.

Which is OK with us.

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

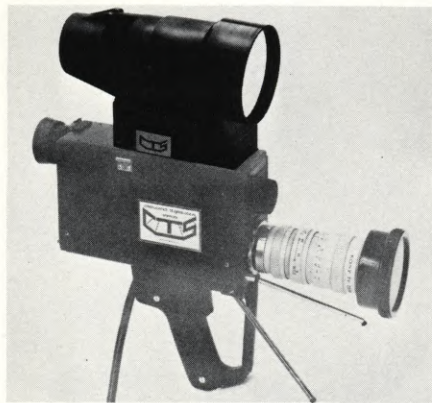
And there's just no substitute for that.

*We have a brochure on each line. For your copies, write to: Sylvania Lighting Center, Danvers, Massachusetts 01923.*

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# WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



## NEW PORTABLE HIGH-INTENSITY INFRARED LIGHT SOURCE ENHANCES SILICON DIODE ARRAY VIDICON TV CAMERAS FOR USE IN LOW LIGHT LEVEL APPLICATIONS

A new High-Intensity Infrared Light Source, featuring an infrared filter and 12 VDC 85 watt tungsten halogen light source, is now available from Moxon Inc./CTS Division for night-time use on silicon diode array vidicon TV cameras.

Designated the Model CTSB-100, the lightweight unit is designated for easy mounting on any portable TV camera.

The compact light source, designed for 12 VDC operation from car battery or battery pack, provides 40,000 candlepower at 12.8 VDC or 20,000 C.P. at 10.5 VDC. The optional battery pack may be recharged in one hour from 12 VDC auto systems or from a 115 or 220 VAC battery charger. It is capable of operating up to 100 hours between recharging.

In operation the unit produces less than 0.001% visible light, so it offers almost complete security. The passband of operation is 800-950 nanometers with greater than 85% transmission.

Physically the night light source has a matte black finish with a weight of 2-3/4 pounds, including power cord.

DIRECT INQUIRIES TO Mr. Marshall Wise, Gen. Mgr., MOXON INC./CTS DIVISION, 2222 Michelson Drive, Irvine, California 92664, Phone: (714) 833-2000.

## CFI HIGH-SPEED VIDEOTAPE DUPLICATOR IN OPERATION

CFI has announced that its new Ampex ADR-150 high-speed videotape duplicator, the first on the west coast, has passed its tests and is now in full

operation. With the ADR-150, three copies of an hour-long color videotape can be made in as little as six minutes. It gives CFI's videotape syndication department greatly increased capacity and speed to meet the needs of its clients and with no additional cost to them.

"The high-speed duplicator now gives us the equivalent of high-speed release printing in film" said Mel Sawelson, CFI Executive Vice President. "We no longer have to tie up six to ten videotape machines when large quantities are needed in a short time. Also, by using a high-energy, mirror-image master, we eliminate additional wear on the edited master."

The ADR-150 utilizes an R. F. radiation transfer system which reorients the iron-oxide particles on unrecorded videotapes during contact with the high-energy master tape. In effect, it "prints" television signals directly onto videotape copies similar to negative-to-positive technique used in film.



## AUXILIARY FRONT-MOUNTED VU METER FOR CP-16/A CAMERAS NOW AVAILABLE FROM CINEMA PRODUCTS CORPORATION

Cinema Products Corporation announces that a new *Auxiliary Front-Mounted VU Meter* is now available for CP-16/A 16mm motion picture cameras.

The new Auxiliary VU Meter provides the TV-newsfilm/documentary cameraman (working an assignment on his own) with an added important control. The Auxiliary VU Meter is mounted in front of the camera, direct-

ly across from the lens eyepiece, permitting the cameraman to make swift periodic checks on the recording level by simply glancing sideways for a split second. The Auxiliary VU Meter's dial illumination light also serves as a pilot light to indicate that the amplifier system is on. The standard VU Meter, located at the rear of the built-in Crystasound Amplifier control panel, continues to operate even with the front-mounted Auxiliary VU Meter in use. The new Auxiliary VU Meter is easily mounted and removed from the CP-16/A camera body. It is priced at \$125.00.

For further information, please write to Cinema Products Corporation, 2044 Cotner Avenue, Los Angeles, California 90025.

## RANK FILM LABORATORIES INSTALLS HIGH SPEED 35mm PANEL PRINTER

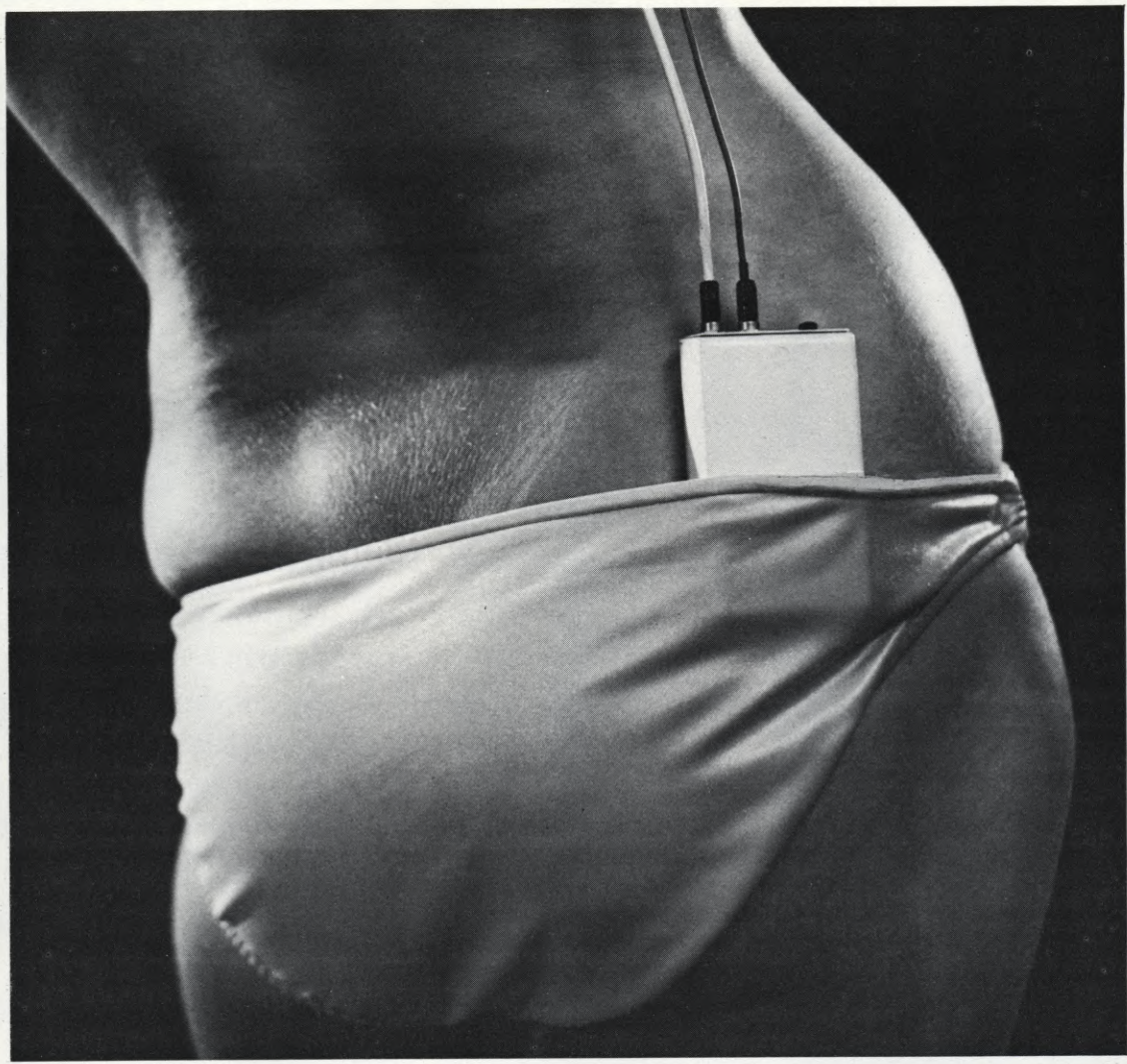
Rank Film Laboratories has installed a further high-speed continuous contact printer at Denham to meet the bulk demands of cinema distributors for 35mm feature films. The Hollywood (HFC) Panel Printer is the first of its advanced type to be introduced in Europe and is capable of printing both picture and optical sound simultaneously with scene-to-scene colour corrections automatically controlled by punch tape.

The chief advantage of the panel printer is its ability to print in a forward or reverse direction without changing the colour control bands during operation and its careful handling of negatives and C.R.I.'s (Colour Reversal Internegatives). The machine can also be pre-set to print automatically any section of a reel in bulk. It can print 3000 ft. of film per run at a speed of 240 ft. per minute, when scene-to-scene colour corrections are needed, or at 480 ft. per minute when colour balanced internegatives are used.

To uphold picture quality, individual feed and take-up paths are designed to make negative and positive films meet only at the optical slit printing gate. During printing all negative and positive stocks pass through air-vacuum cleaners to remove possible foreign particles before the critical moment of exposure.

In addition to this development, modern processing lines have been installed to handle the new Eastman Kodak colour negative 7247 (16mm) and 5247 (35mm) film stocks. Capable of producing finer grain and higher resolution, these facilities will be available at Denham late in 1973.





# Swintek

... the wireless microphone system small enough to be hidden anywhere

The sensational new Swintek Mark IV Wireless Microphone System features a mini-sized transmitter that is small enough to be hidden anywhere, yet it provides quality sound recording that meets the demands of even the most exacting professional filmmaker. The transmitter weighs only five ounces, will accept any type microphone and can easily be hidden in costumes, even a brief bikini. The receiver is fully portable and operates on either AC or DC. The entire system comes with a smart-looking custom carrying case and here's the best news of all — Swintek Mark IV is only \$960.00 complete, with a guarantee that it will equal or outperform Vega, Sennheiser, Audio or any other competitive brand. Come in today for a free demonstration or write for our free specification and comparison sheets.



Swintek Mark IV, complete with transmitter, receiver, AC charging cable and carrying case.



Swintek Mark V with transmitter built into microphone. Ideal for on-stage performers or lecturers.

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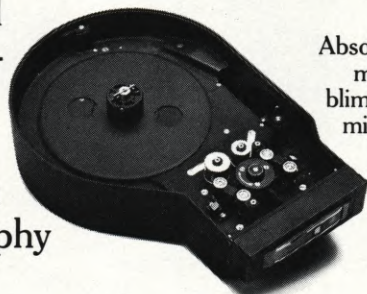


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# An engineer's camera.

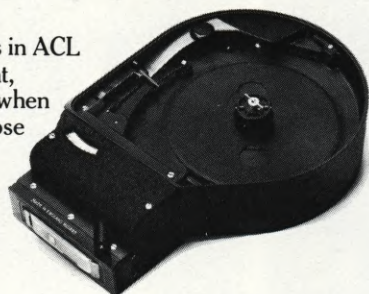
"You don't have to be an engineer to understand the basic engineering concepts behind the ACL." The speaker is Eric Falkenberg, Technical Executive, Eclair Corporation of America.

"Take simplicity. More than any single principle, it typifies the design philosophy of the Eclair ACL.



camera, simplicity yields many more benefits. A simpler camera is a more rugged camera. Fewer parts to

Absolute minimum of parts in ACL magazine provides silent, blimpless operation, even when microphone is placed close to camera.



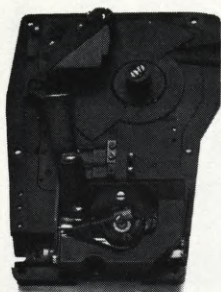
wear, fewer parts to cause trouble. "In theory, a simpler design means less noise. Fewer parts mean fewer noise sources. Using modern noise-suppressing materials and techniques, ACL has bridged the gap between theory and practice! Simplicity even affects power consumption. With a film path that produces less friction—requiring less power to drive a length of film. "There are many more advantages ACL's simplicity provides. But the best way to evaluate them is to try one. Then, you'll simply sell yourself!"

Crystal-controlled Hall-effect brushless motor requires only 0.8 amperes.

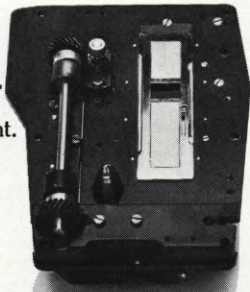


"From your first impression of the camera, you understand, almost instinctively, a simpler design means a more compact design. Lighter weight. Faster shooting.

For the name of your nearest Eclair dealer, or a copy of our fact-filled brochure, write or call Eclair Corporation of America, 62 West 45th Street, New York 10036 (212) 869-0490 or 7262 Melrose Avenue, Los Angeles, California 90046 (213) 933-7182.



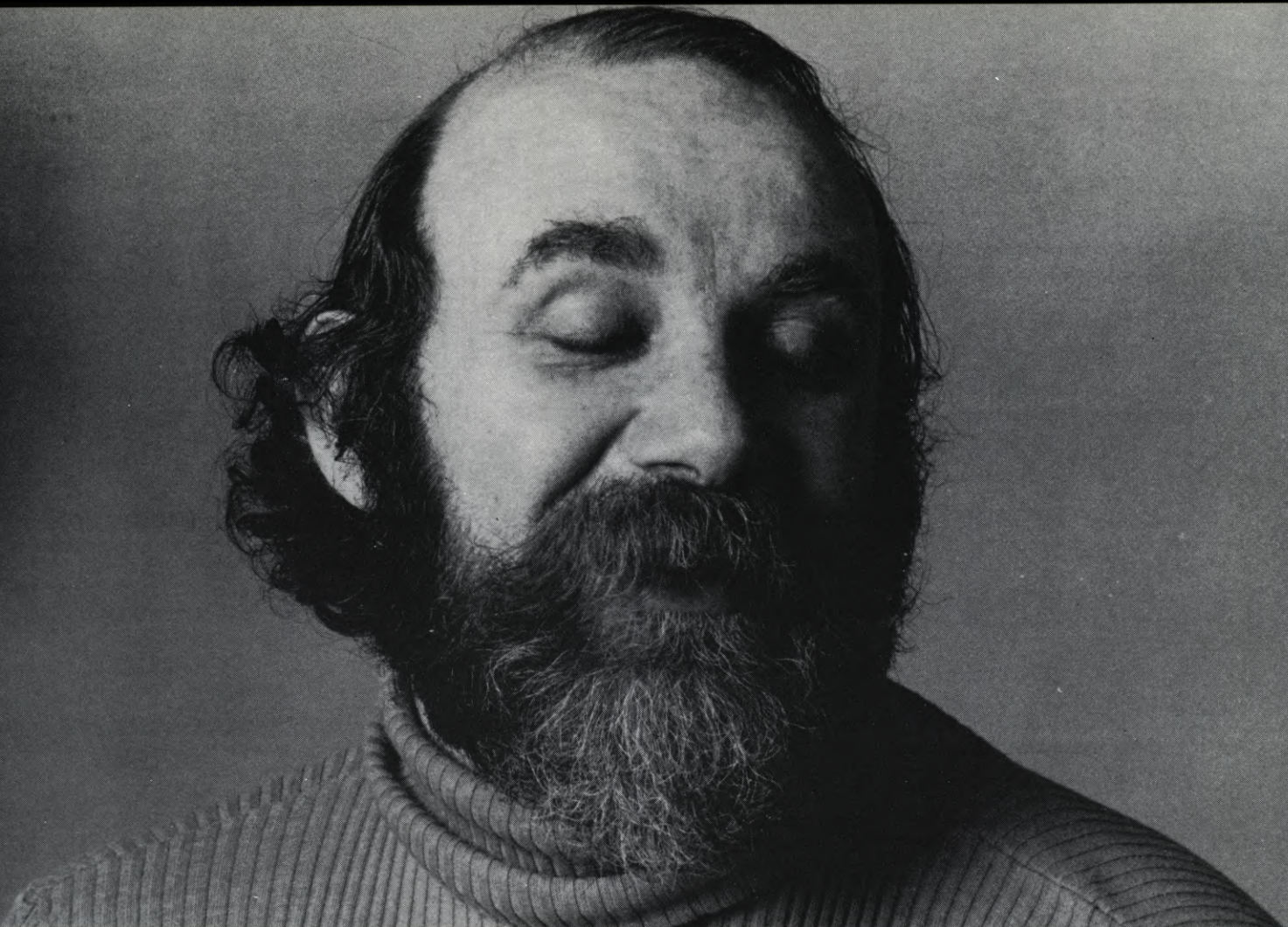
Front and rear of ACL aperture plate, with entire camera movement. Extreme simplicity provides maximum efficiency, quiet and reliability.



"But that's just the start. Inside the ACL

**eclair corporation of america**

# A cameraman's camera.



# "Sometimes I wish I wasn't Sy Cane, 'cause I'd love to have me as a friend."

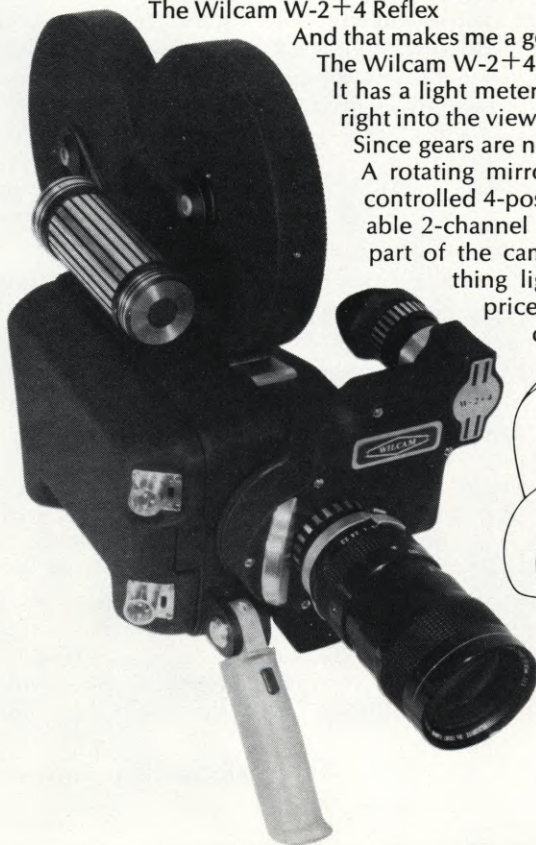
Especially now. I've just become the exclusive East Coast Distributor for the most innovative 16mm single/double system sound camera on the market. The Wilcam W-2+4 Reflex

And that makes me a good guy to know.

The Wilcam W-2+4 is the only pure reflex camera in its class. It has a light meter, VU meter and footage counter all built right into the viewfinder.

Since gears are noisy, the Wilcam has a belt drive instead. A rotating mirror that always stops closed. A fingertip controlled 4-position internal filter wheel. And a detachable 2-channel AGC amplifier that becomes an integral part of the camera, making cables obsolete. The only thing lighter than the magnesium body is the price; just about what you'd pay for a lot less camera.

If you'd like some literature on the new Wilcam just call and ask for Sy Cane, your friendly East Coast monopoly.



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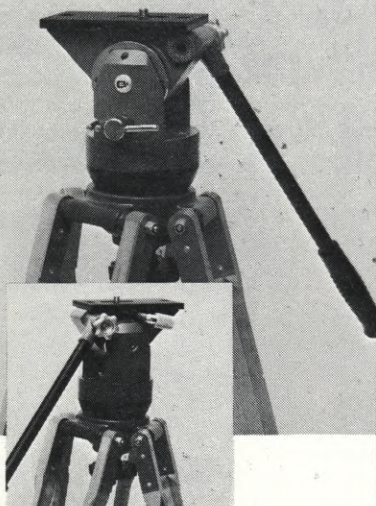
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**Features:**

- Quick leveling ball-and-cavity system.
- Accommodates cameras weighing up to 24 lbs.
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- Efficient operation in temperatures from 20°F below zero to 120° above.
- Hardwood V-grooved legs extend from 40" to 66".
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# QUESTIONS & ANSWERS

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



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

**Q** Where a protective coating is to be applied to a motion picture film that will also have a laminated magnetic track applied for post-recorded sound, should the sound track be applied before or after the protective coating is applied? If the laminated track is applied first, and then the entire film coated for protection, can sound be recorded satisfactorily on the track?

**A** The track lamination should be applied before the protective coating. If the latter is well applied and very thin, it will not adversely affect either the magnetic recording or reproduction.

In general, protective coatings are applied to motion picture film to prevent damage by scratches and abrasion of the photographic image. Application is usually beaded on with a roller, or applied with a wick by mechanical equipment. Another treatment often given film is waxing of the sprocket hole area to insure better movement of the film through the projector shoes, thus increasing film life. It is advisable, where possible, to keep both the protective coating material and the wax away from the magnetic stripe area so as not to add to the dirt problem of the magnetic heads.

**Q** I have used some 800 feet of 16mm film in trial-and-error efforts to produce titles superimposed over a color still. I would like to achieve clear-cut title text over art work without one bleeding into the other. How can I do this?

**A** The best method for superimposing white title text over a 35mm color still is by double (successive) exposure. If your camera provides visual focusing and alignment and your lens can be set further out by means of spacer-adaptors of the correct size to accommodate the field of the small still, you should be able to obtain good quality reproduction of the still. If your equipment will not permit following this method, then the still for your title background can be copied by background projection, using a back-projection screen of fine texture.

Probably the best way to handle the lettering is to make a litho film negative of the text. This negative should be

touched up with black opaque to avoid pinholes, fastened to a piece of glass and lighted from behind—preferably with bounce light reflected from a large white card. Exposure should be on the full side to "knock out" any image from the scene, but not so full as to create a halo around the letters. The result will be white lettering on the scenic background.

Another way is to place white block letters on a piece of glass with a dead matte background behind the glass. You may need polarizing filters over the lights used to illuminate the white letters and over the lens to kill reflections from the glass, and turn out all the other lights in the room during exposure. Exposure of the background still should be held down to balance properly with that of the title lettering, which will allow the title text to stand out. The correct exposure for this step can best be determined by first running a series of density tests.

**Q** When shooting outdoors in sunlight and using an incident light meter, is this meter ever pointed directly at the sun?

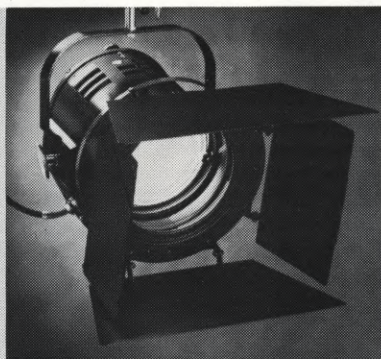
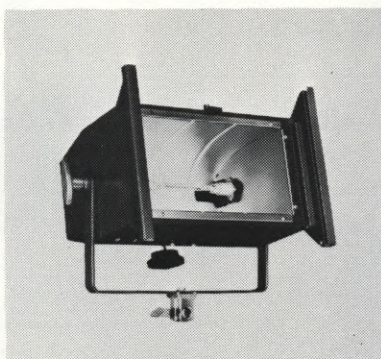
**A** When shooting outdoors in sunlight, the geometry of a scene may sometimes be such that a hemisphere meter used at subject location and pointed at the camera, might also be pointed at the sun at the same time. Where a flat-cell incident light meter is used, the normal procedure is to point meter at the sun, since in this case the sun is the key light.

**Q** Some professional cameramen use an amber viewing glass, while others use a blue one when shooting black-and-white film. What is the function of each and which is the best to use?

**A** They are both useful, and each is used for a different purpose. The amber glass is used to determine the densities of the various colors in a scene with relation to each other. The blue glass is used principally when arc lamps are used for set illumination, and a green glass is used to check density of scene on background screen when shooting process shots.

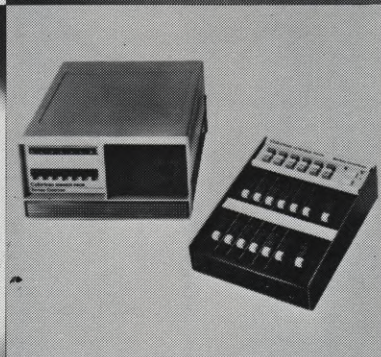
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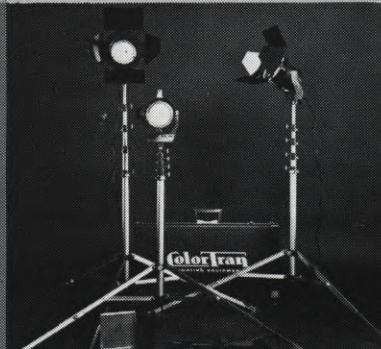
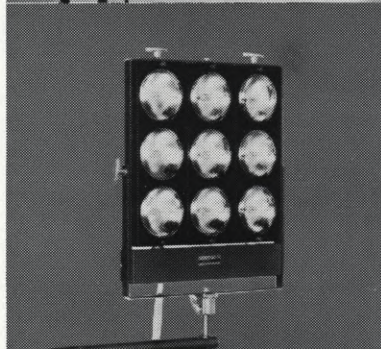
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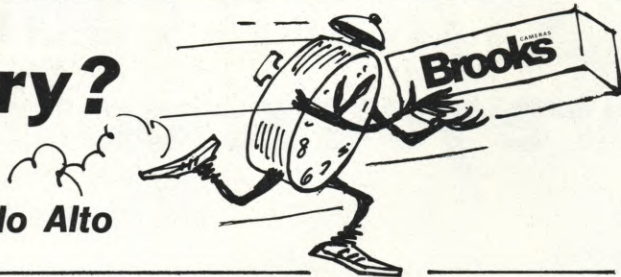
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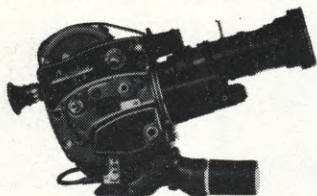


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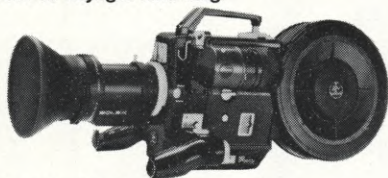


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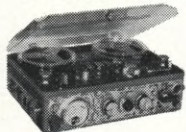
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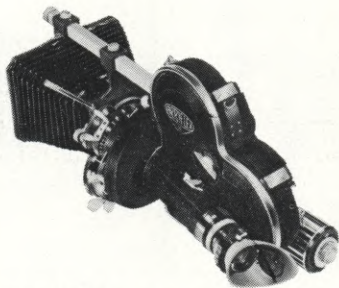


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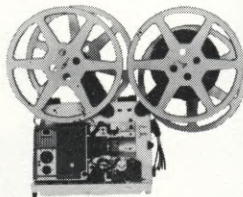
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### ECLAIR ACL

with 2 200' mags., NiCad battery & charger, power cable, handle, TV glass, \$5800<sup>00</sup>

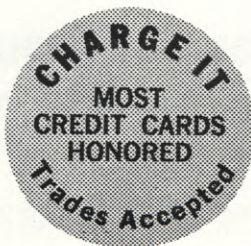
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# CINEMA WORKSHOP



By ANTON WILSON

## D.C. SERVO MOTORS

The D.C. servo motor is rapidly becoming the standard drive unit of modern motion picture cameras. Virtually every professional camera designed in the last ten years has incorporated a D.C. servo motor. In addition, after-market D.C. servo crystals are available for all professional motion picture cameras, including Arriflex (16S, M, BL and 35 II C), Eclair (NPR, CM-3), Mitchell, etc. Exactly what is a D.C. servo drive, and why have they become so popular?

The technical nomenclature for these motors is actually "closed-loop, phase-locked, pulse-width-modulated D.C. servo-controlled motor, with crystal reference". You would probably get some strange looks if you actually called one of these motors by that name. Most cameramen refer to these motors as simply "Crystal Motors" or "D.C. Servo Crystal Motors". Some cameras have D.C. servo drives that are not crystal-referenced (i.e. Beaulieu). Our discussion here will deal with the crystal type, as these are used almost exclusively in professional applications.

Why crystal; why servo? First we should briefly review sync-sound requirements. The longest scene one could possibly shoot would be an entire roll of 1200' 16mm. At 40 frames per foot, that would be 48,000 frames. If we define sync as  $\pm\frac{1}{2}$  frame, then we would need an accuracy of one in 96,000 or approximately one part per 100,000. This is usually expressed as 10 parts per million (10 ppm) or .001%. Simply, then, if we wanted to shoot a 1200' roll of film and have it in perfect sync with

a recorder, using no cables or other sync devices, the motor must run the camera with an accuracy of 10 ppm or .001%.

As we saw, the standard governor motor runs with an accuracy of  $\pm 1\%$ . Thus, a motor necessary to run cordless sync would have to operate with an accuracy *1000 times greater* than that of a governor motor. This is why a camera run with a governor motor needs a sync cable. The pilotone cable system records the inaccuracies of the governor motor which are later compensated in the transfer process. If, however, a motor were designed to run with an accuracy of .001%, then the sync cable would serve no function and could be eliminated, as there would be no irregularities to record or compensate. This is precisely the function of the D.C. servo crystal motor.

A crystal is merely a source of extremely accurate high-frequency signals. The crystals employed for camera drives usually have an accuracy of 10ppm or .001%. The crystal is the reference for the required accuracy. The trick is to get the motor to run with the same precision as the crystal.

In practice, the circuitry for a crystal servo motor is as complex as the wiring of a Boeing 747, but the theory is quite simple. A "tach head" is placed on the motor. This is usually a magnetic pulser or a photo-electric device that generates a precise frequency at a specific motor speed (e.g. An Arri 16Bl will put out exactly 6000 Hz. at exactly 24 fps). This tach signal (see FIGURE 1) is fed to the crystal unit, where it is compared with the signal coming from the crystal. The two signals must match exactly. If there is even a minute trace of a drift

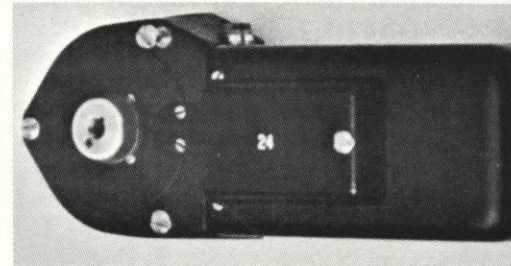


FIGURE 2—The latest type of crystal motor is this Hall Effect motor, found on the Eclair ACL. It is very quiet and draws only 0.8 amps of current.

between the two signals, a correction pulse is sent up to the motor *before* it can deviate from the crystal signal. Thus the camera motor is "locked onto" the crystal signal. If the crystal has an accuracy of 10ppm, then the camera must be running with the same precise accuracy. Our original definition of cordless sync is, thus, satisfied.

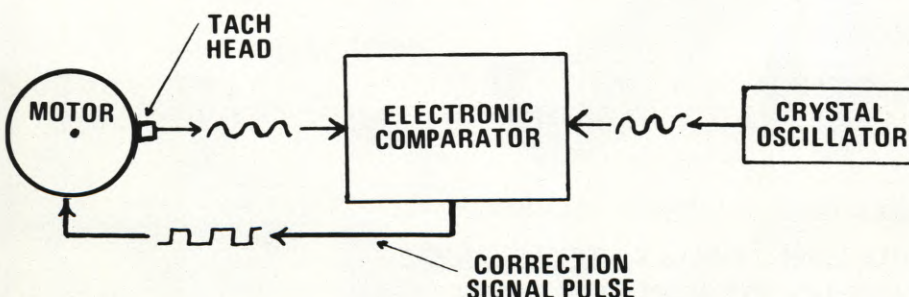
In summary, the crystal servo motor is a precision clock, running the camera at exactly sound speed; 24fps,  $\pm .001\%$ . There are no speed irregularities and, thus, no necessity for any sync cable. Any number of cameras equipped with such motors will be in absolute sync with each other.

Some crystal motors provide additional functions. By unswitching the crystal reference frequency and substituting a variable frequency source, the motor can become a variable speed motor. This is somewhat more sophisticated than the conventional "wild" motor. Once a specific speed is selected, the servo circuitry will maintain that speed over a wide range of voltages and loads. Thus, it is more like a governor motor with adjustable speeds.

Some crystal motors can be "slaved" to an external source. The crystal frequency is disconnected and an external frequency can be made to control the camera speed. For example, a 60Hz signal from the mains can be fed into the servo system. The camera motor will lock onto this frequency and thus function as a synchronous motor.

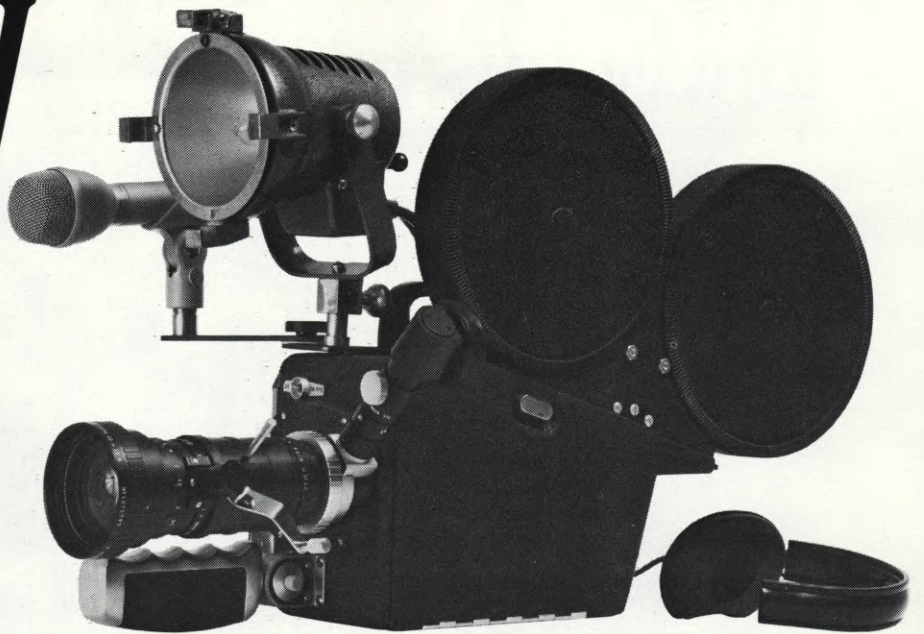
Next we will look at some of the practical aspects of crystal motors: selection, maintenance, and relationship to recorder. ■

FIGURE 1





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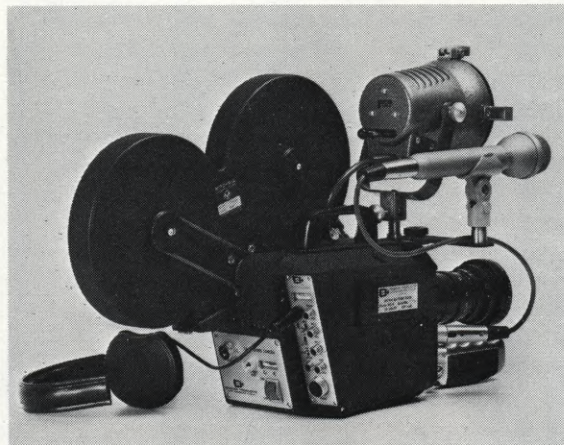
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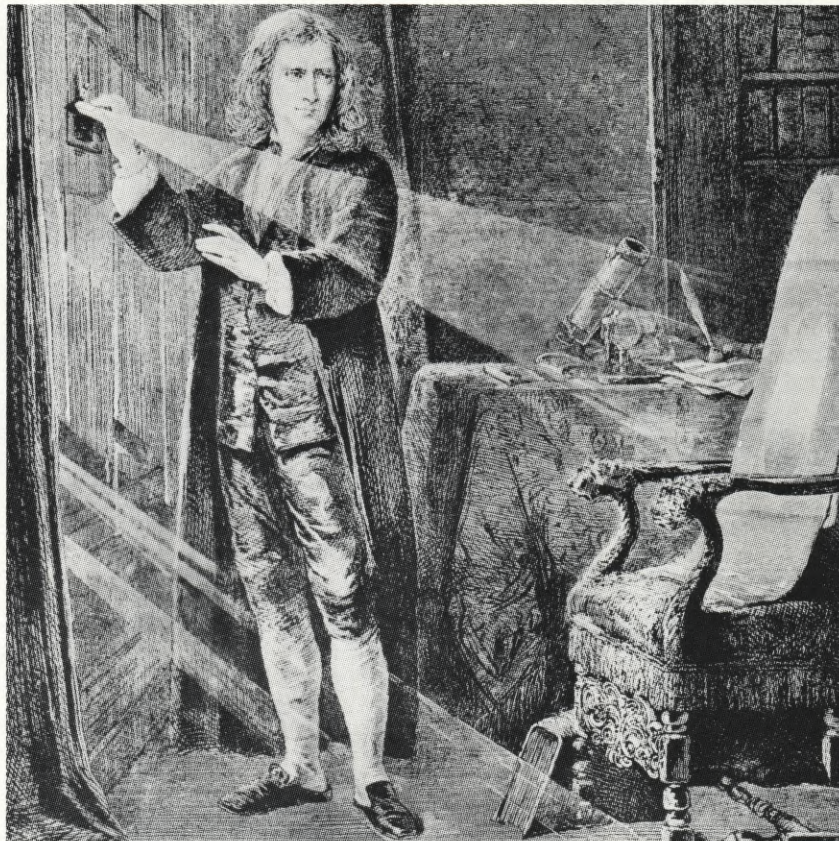
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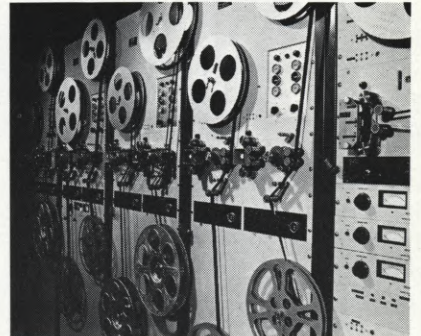
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## HOW MOVIES ARE MADE

Interest has always run high about what happens during the shooting of a film. Two such books are on hand, Bruce Bahrenburg's *FILMING "THE CANDIDATE"* (Paperback Library \$1.25) and *JAMES BOND DIARY* about *Live and Let Die* by that film's star, Roger Moore (Fawcett 95¢). Both these behind-the-scenes accounts document the complexities of production, the physical and emotional toll on every participant, the tenseness while at work and the hi-jinks that usually follow, the relief laced with anxiety on the final day of shooting.

\* \* \*

The show "the network couldn't kill", *Star Trek*, is the subject of two new books by David Gerrold, *THE WORLD OF "STAR TREK"* and *"THE TROUBLE WITH TRIBBLES"*, plus a re-issue of the classical *THE MAKING OF "STAR TREK"* by Stephen E. Whitfield and Gene Roddenberry (Ballantine \$1.50 ea.). A must for all sci-fi film fans.

\* \* \*

Circumstances surrounding the production and subsequent fate of a "classical" skinflick are extensively reported in *GETTING INTO "DEEP THROAT"* (Berkley \$1.50) by Richard N. Smith. Interviews with performers Linda Lovelace and Harry Reems, and writer-director Gerard Damiani, the courtroom testimony of U.S.C. Prof. Arthur Knight and other experts, and Judge Tyler's verdict give the book documentary status in the current censorship controversy.

\* \* \*

## THE NEW FACE OF THE ACTOR

Personalities have always loomed large in the public's choice of entertainment, a fact of which purveyors of entertainment are acutely conscious. But in this era of anti-heroes and non-stars, a new selling technique had to be found. A crop of books has emerged, carefully tailored to fit this need. Their noticeably "with it" style warrants our bringing them to your attention.

Norman Mailer's *MARILYN* (Grosset & Dunlap \$19.95) is a fascinating "novel biography", high in literary value and sumptuously illustrated. Whether some of it was "borrowed" from other writers is irrelevant, Mailer's use of his material showing solid workmanship and talent. In a different vein, poet Norman Rosten's *MARILYN: AN UNTOLD STORY* (NAL \$1.25) is a tender homage to a lost friend, moody, naive and warm.

\* \* \*

Joe Adamson's *GROUCHO, HARPO, CHICO AND SOMETIMES ZEPPO* (Simon & Schuster \$10.) is a veritable

# THE BOOKSHELF

By GEORGE L. GEORGE

encyclopaedia of Hollywood-style Marxism, circa 1929-39. It is loaded with studio shoptalk, zany anecdotes, large chunks of side-splitting film dialogue, candid comments by friends and associates, production statistics and movie reviews.

\* \* \*

Another comedian's "intended autobiography", *W. C. FIELDS BY HIMSELF* (Prentice Hall \$10.) edited with loving care by grandson Ronald J. Fields, is a rich collection of letters, scenarios, rare family photographs and the actor's own drawings. A grabbag of exciting memories, through which Fields' unique personality emerges in sharp outline.

\* \* \*

Joe Morella, Edward Z. Epstein and Eleanor Clark have compiled in *THE AMAZING CAREERS OF BOB HOPE* (Arlington \$8.95) the well-publicized highlights of a conventionally successful 40-year career in vaudeville, radio, film, and television.

\* \* \*

Four new volumes extend the Pyramid Illustrated History of the Movies: *JAMES CAGNEY* by Andrew Bergman, *MARILYN MONROE* by Joan Mellen, *MARLON BRANDO* by René Jordan, and *INGRID BERGMAN* by Curtis F. Brown (\$1.45 ea.). Edited by Ted Sennett with a shrewd appraisal of current tastes, these volumes are more than a notch above standard popular biographies. They offer factual information and bibliographies to students of cinema and nostalgic memories to movie buffs.

\* \* \*

Marlon Brando is obviously hot copy, with three additional biographies currently in bookstores. The "unauthorized" version by Joe Morella and Edward Z. Epstein (Crown \$6.95) is often critical of the actor, but rich in intriguingly spectacular interpretations. Ron Offen's book (Regnery \$6.95) carries revealing interviews with Brando's co-workers and extensive data on his boyhood years. Gary Carey's essentially factual text (Pocket Books \$1.50) offers a well-rounded montage of available information.

\* \* \*

The juicy gossip about the not-so-private life of *la belle Brigitte* cannot be dismissed as trivial in *BARDOT: ETERNAL SEX GODDESS* by Peter Evans (Drake \$6.95). These inside tidbits are essential to the understanding not only of BB's career, but of the whole fabric

of the women's lib movement.

Another breed of performers, typical products of society's subculture, tell of their work in *GIRLS WHO DO STAG MOVIES* (Holloway \$2.). Their surprisingly articulate views of problems peculiar to these films reveal unsuspected professionalism and a grasp of the socio-ethical issues involved.

\* \* \*

## THEORY AND PRACTICE

The fusion of cinema and television into a new integrated communications medium is the premise of *THE IMPACT OF FILM* (Macmillan \$12.50), a thoughtful and challenging book by Paul Ray Madsen. His research into this contemporary phenomenon covers all of its facets: its technical basis, substantive contents and effect on the audience. The organization of this new medium into a powerful force for the dissemination of ideas, as well as how it is used to achieve specific purposes in entertainment, teaching and advocacy are discussed with understanding and perception by a well-qualified scholar.

Ralph Stephenson has thoroughly updated his excellent book *THE ANIMATED FILM* (Barnes \$2.95), extensively revising earlier material and adding a substantial section on computer and abstract animation. The new edition of this study by a top expert is thoroughgoing and knowledgeable.

\* \* \*


The heroic era of the Soviet cinema is brilliantly evoked by L. & J. Schnitzer and Marcel Martin in *CINEMA IN REVOLUTION* (Hill & Wang \$8.95/3.95). This historic study re-creates the post-revolutionary mood of esthetic excitement and visionary experimentation by Eisenstein (*Potemkin*), Dovzhenko (*Mother*), Yutkevitch (*Bed and Sofa*), Kuleshov (*Dura Lex*) and other creative artists who gave new meaning to the art of the film.

\* \* \*

An exhaustive reference guide compiled by Denis Gifford, *THE BRITISH FILM CATALOGUE 1895-1970* (McGraw-Hill \$44.50) lists over 14,000 films produced for public entertainment since the advent of cinema. This monumental record is arranged chronologically and by film title, with full credits and a cross-index. It will prove an indispensable source of reliable data to researchers, scholars and movie buffs.

\* \* \*

In *THE THRILLER* (Dutton \$2.75), Brian Davis discusses the suspense film genre, expertly analyzing its evolution since 1946 and finding a deterioration in its moral code by a deliberate confusion of hero and villain.



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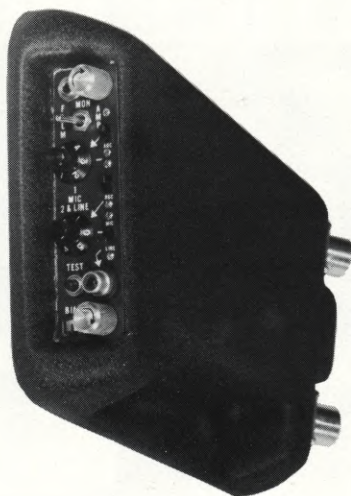
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# THE HONOR ROLL



## George J. Folsey, A.S.C.

George Folsey finds a great deal of humor in the way he started into the business. "Believe it or not," he says, "I'd been working in the studio for fully half a day before I knew what kind of a business I was in! That sounds as though I was the original Joe Dope, but it really wasn't quite as bad as all that.

"Here's how it happened. I'd been working as an office-boy for a New York magazine publishing firm, but somehow the work didn't suit me. I wasn't afraid of hard work—but nothing about the publishing business managed to capture my imagination. Finally one morning I just decided there wasn't any future for me in that work. So I quit. Just like that.

"I went back to the Y.M.C.A. Bureau, through which I had gotten the job, and told them I didn't like it, that they should send me out on something else. They dug into their files and told me they'd just had a call for an office-boy from the Lasky Feature Play Company. That didn't mean anything to me but it sounded like a job, so off I went to the address they gave me."

He began work that afternoon, but it wasn't until the next morning that he found out what type of work the company was engaged in. As Marguerite Clarke, Carlyle Blackwell, Mary Pickford, Louise Huff, John Barrymore, and Harold Lockwood strolled through the outer office, he began to become curious about the type of work he was doing.

While the primary function of his job was to run errands—pick up sandwiches for Jesse Lasky's lunch or cocktails for John Barrymore—he was sometimes called upon by a harassed assistant director to fill in when a troupe needed a kid to play an office-boy, a bellhop, or an elevator operator.

In about 1916 he was offered the position of assistant cameraman and his duties had nothing to do with the camera. They gave him a rope, hammer, nails and some chalk with which to mark off, at the suggestion of the cameraman and director, the foreground and the sidelines, so that if the actor went out of these lines they would know to stop the scene because nobody knew about panning the camera to get them in.

Another task was to count the turns that the cameraman made so at number 41 the shutter could be put down, later, providing George counted correctly, a dissolve or double-exposure could be put in.

In the early days an assistant cameraman worked right with the cameraman, very often not being allowed to touch the camera, there was no operator. In approximately six months you knew as much as your cameraman did.

At the age of 19, Folsey was asked by Kenneth Webb to finish shooting a picture starring Alice Brady called "Her Bridal Night". In that first picture he did more lap dissolves and split screens than at any other time in his career.

"Probably because I didn't know any better, I worked out a comparatively simple method of doing these scenes. Instead of using elaborate mattes, I used lighting: I did many of the takes on a set completely upholstered in black velvet, and kept this from photographing by simply keeping all light away from it, and concentrated solely on my actors. Using this for some takes, and an identical, normal set for the others, I managed to get what the script called for.

"For the rest, I guess I was lucky. I'd learned pretty well what was then known about photographing sets and people—and I was particularly in luck with my star, for Miss Brady was in love, and I don't think anyone could have made her photograph badly, she was so radiantly happy. At any rate, she was pleased with what I did, and so were the director and producer. I was a full-fledged First Cameraman from that day on."

One of the things Mr. Folsey claims has helped, in particular, is the study of the technique of the great masters of painting. "Although in motion pictures, you're working in a different medium, of course; you can call it an art, or not, as you prefer, but it's still visual storytelling, with the great addition of visual motion, both of viewpoint and of action. You can still learn immensely by studying the lightings and compositions of the various great names of painting. Most of them, too, were trying to tell stories visually; and they had the time and the patience to analyze what they were doing more closely than most of us do today."

In 1927 George joined the ASC as an out-of-town member and during that period he worked at the Paramount Studio in New York.

He filmed many of the Coleen Moore films such as "Orchids & Ermines", "Naughty But Nice" and "Her Wild Oats". And he spent many years at Metro-Goldwyn-Mayer doing "Dr. Kildare" and "Andy Hardy" movies along with Judy Garland's exciting musicals.

George received Academy Award Nominations for "All the Brothers Were Valiant", "Executive Suite", "Seven Brides for Seven Brothers" and "The Balcony".

He received an Emmy for the NBC-TV show "Here's Peggy Fleming".

In 1957 George Folsey was honored for his distinguished photography of one of the first outstanding early dialogue films, "The Letter" starring Jeanne Eagles. This presentation was the "George" award from Eastman House in Rochester, New York.

Recently George has acted as an advisor to a group of young filmmakers with varying ethnic backgrounds in the production of the feature film "The Glass Houses".

Through the years he has served as President of the A.S.C. and Vice-President and given long service on the Board of Directors. ■

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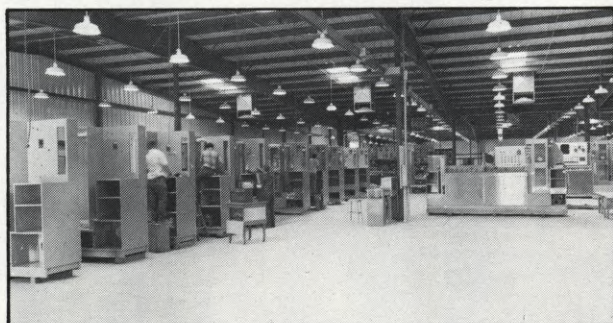
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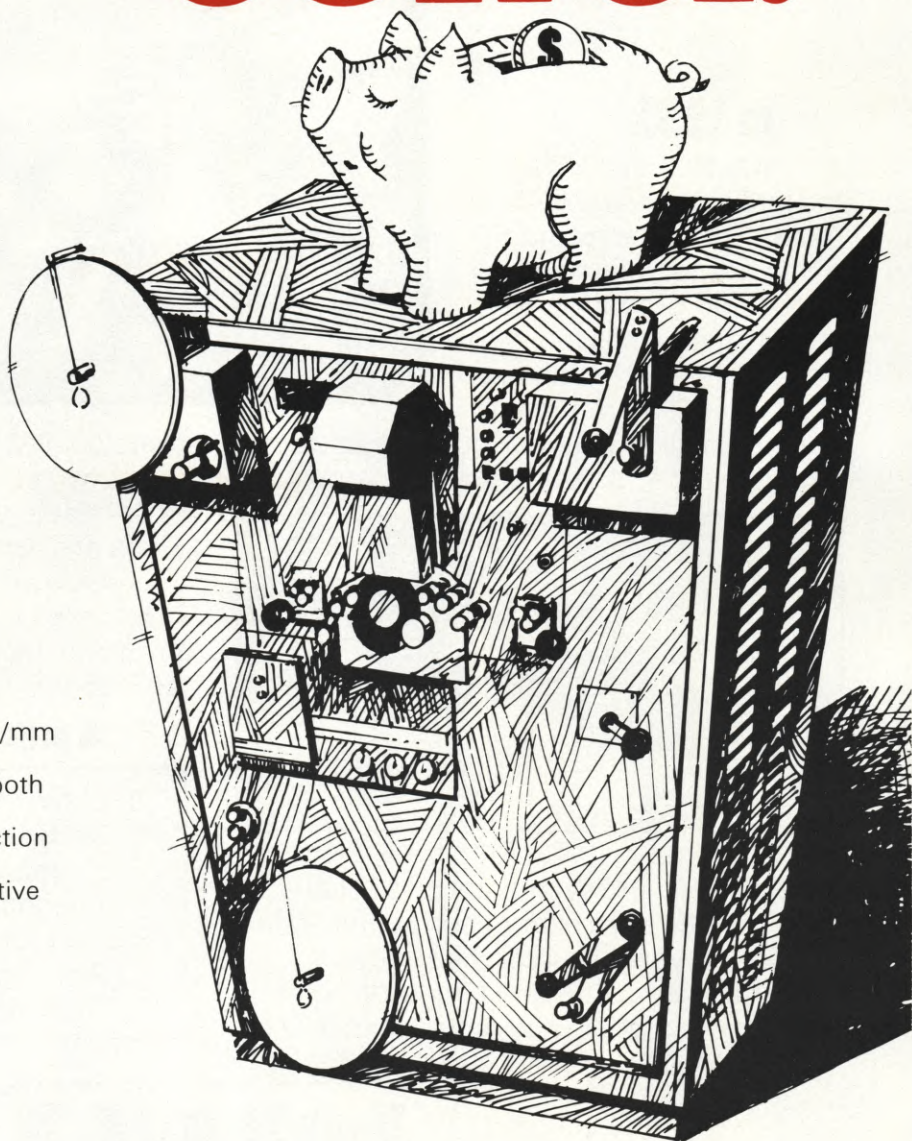
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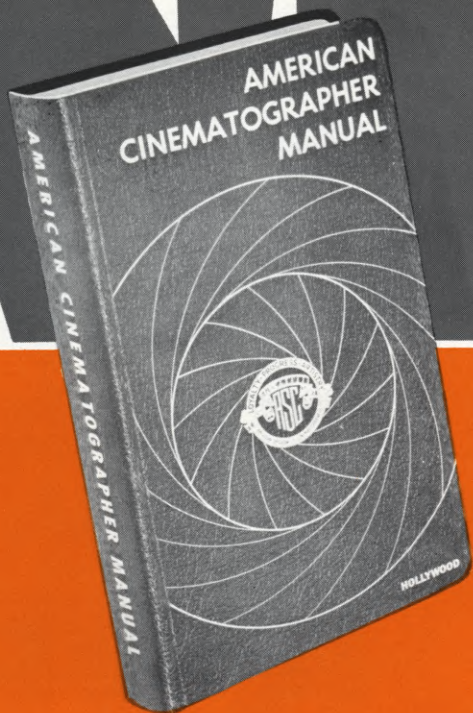
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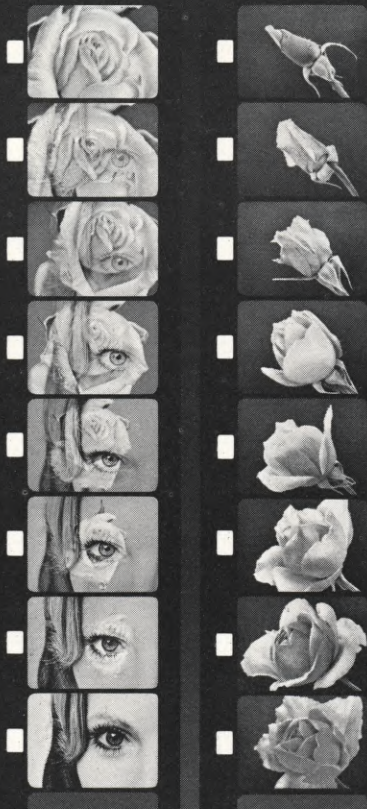
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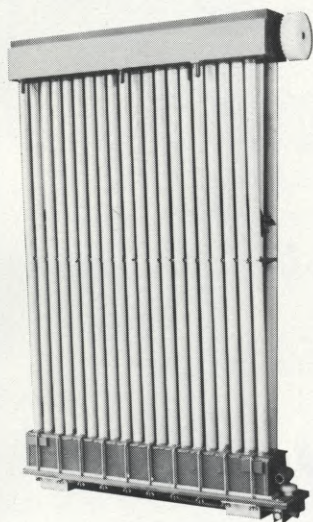
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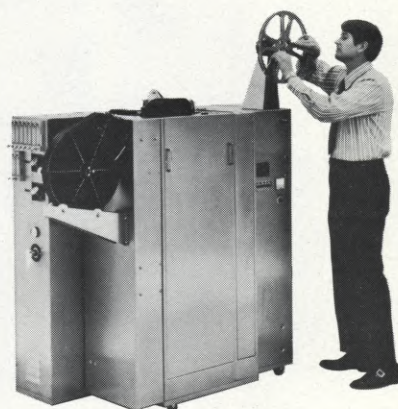
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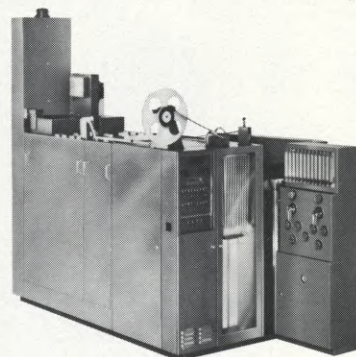
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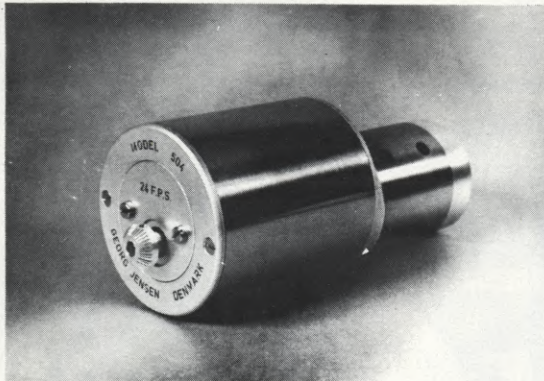
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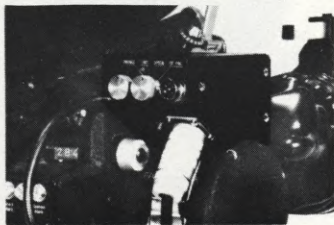
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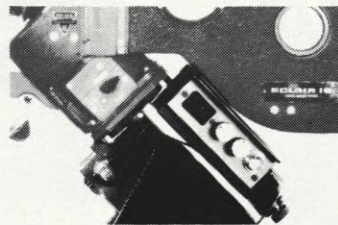
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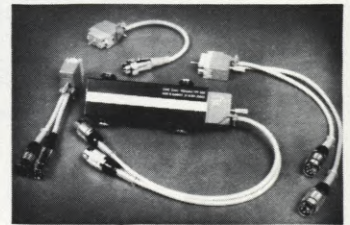
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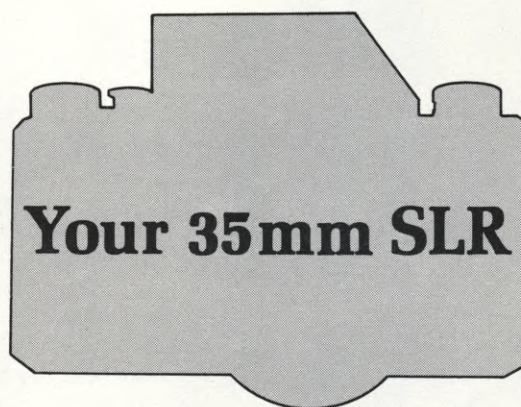
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# Atlanta International Film Festival

In its sixth year, the Atlanta film event attracts more than 2,000 entries from 32 countries and adds a highly successful Film Market

By HERB A. LIGHTMAN



Stouffer's Atlanta Inn, a new 25-story, 500-room hostelry served as official Festival headquarters. Its close proximity to the Fox Theatre, where major screenings were held, made it a handy choice of location.

## ATLANTA, GEORGIA

With more than 2,000 films entered from 32 countries, the Atlanta International Film Festival, in its sixth year, becomes the largest event of its kind in the world.

Once more I have journeyed to this gracious Southern city (as I have during the past five years) to engage in a daily morning-to-night orgy of film-viewing and to participate in the final judging for awards.

On arrival I receive a cheery greeting from the Festival's ebullient Director and Founder, J. Hunter Todd, and a warm welcoming hug and kiss (would that she really meant it!) from the blonde and beautiful Rikki Knipple, the Festival's super-efficient Assistant Director/Director of Operations. (Freud might have said that my real reason for attending the Festival is Rikki's steamy annual "Georgia Hello".)

My immediate impression is that while the Festival, with its coming of age, may have lost a touch of the intimacy that has prevailed in past years, there is a new air of heightened excitement, of dedication to film and film-makers—and that's very good.

The Festival is headquartered at

Stouffer's Atlanta Inn, a new 500-room hostelry of elegant decor and (in my opinion) indifferent service. At the moment it is crammed to its 25-story rafters with film-makers, producers, distributors and honored guests of the Festival—with more due to arrive for the final weekend and Awards Banquet. God only knows where the management will stash them.

The Festival's Hospitality Suite on the 21st floor quickly becomes a salon where film-makers meet between screenings and after the day's program to get to know each other, exchange ideas and talk about their respective films. With drinks "on the house", it serves as a very popular rendezvous throughout the running of the Festival.

One of the most important elements contributing to the particularly festive spirit that pervades this year's event is the fact that all of the major screenings are being held at Atlanta's "fabulous" Fox Theatre. Its selection for this purpose is a dazzling inspiration. Not only is it located within easy walking distance (two blocks) of Festival Headquarters, but it is one of those grand old movie "palaces" (and that is almost literally the word to describe it), of which very few remain in America.

The Fox is a genuine "movie-movie" theatre and, while its lushly rococo grandeur might be regarded in more jaded circles as a classic example of high camp, to me it provokes a nostalgic excursion back to my childhood, when going to the movies in just such a lavish showplace never failed to be a magic experience. Since I've never quite outgrown that dreamy childhood, it still is.

The Fox was built in 1929 at the then-staggering cost of four-and-a-half million dollars. It has 5,000 seats, which makes it one of the largest film theatres in the world and the one having the largest indoor curved screen. Its elaborate "movie palace Moorish" decor contains more than \$70,000 in 14-carat gold.

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

At kick-off screening of the event, Festival founder and director J. Hunter Todd, introduces celebrities connected with the filming of 20th Century-Fox's "THE PAPER CHASE". (Left to right) Stars Timothy Bottoms and John Houseman, writer/director James Bridges, and Co-producers Rodrick Paul and Robert C. Thompson.





(TOP OF THE PAGE) Water-color illustration for official theme poster of the Sixth Atlanta International Film Festival, executed by artist Peter Max. (ABOVE) Exterior views of Atlanta's venerable Fox Theatre, scene of the major screenings of the Festival. The Fox, a classic "movie palace", was an inspired choice for the screenings. (BELOW LEFT) Enthusiastic audience crowds the Fox lobby during intermission. (CENTER) Festival founder and director, J. Hunter Todd, welcomes audience from Fox stage. Famed New York organist Lee Erwin, prepares to play original score from "SON OF THE SHEIK", during screening of the Valentino silent epic.





Georgia Governor Jimmy Carter greets the opening-night crowd, welcoming them to the Festival and to the State of Georgia.

Overhead, stars twinkle in an everlasting blue sky and fluffy clouds float wistfully by. A canopy, woven to imitate a Moorish tent, covers the balcony area.

The Fox Theatre possesses the largest Moller organ ever built. An amazingly complex instrument, it contains over 376 stops and a variety of special effects through which it can simulate everything from exotic animal sounds to the blaring horns of a traffic jam. Its 45 ranks of pipes were designed into special lofts at each side of the auditorium and over the stage.

The predominantly young audiences

which crowd the screenings (in far greater numbers than ever before) obviously love the idea of viewing films at the Fox Theatre. With the wave of nostalgia that is currently sweeping our country, it's not really surprising. To those of us who remember the Golden Age of the movies, there is a warm sensation of *déjà vu*. We've been here before.

The Festival kicks off with a special "20th Century-Fox Evening" featuring the world premiere of that studio's "THE PAPER CHASE". The screening is preceded by a gala champagne reception in Stouffer's Grand Ballroom, which is hosted by Georgia Gov. Jimmy Carter. On hand for the festivities are the film's star, Timothy Bottoms, and its writer/director, James Bridges. The Festival is off to flying start.

An important innovation this year is the Film Market, a trade fair, designed after the one at Cannes, to create a direct link between film-makers and distributors. More than 400 films of all kinds are entered in the Market and there are an encouraging number of distributor representatives on hand to view them. Screenings of the Market films are held in the hotel's Piedmont Room (for 16mm) and in the Coronet, Baronet and Atlanta Theatres (for 35mm), all within a short distance from the Fox.

There is a great deal of interest in the Market screenings, with the film-makers diligently promoting their wares. In addition to the Festival's daily bulletin announcing films to be screened that day, there are notices on the walls of the Hospitality Suite and some have even been taped up inside the hotel's elevators. During the course of the Festival, word filters back to me that the Market is scoring a great success. Many firm distribution deals, and a lot

of tentative ones, have been made, I'm told.

The main program of daily screenings at the Fox begins, on Saturdays and Sundays, at 10 a.m. and runs through continuously until about 2 a.m. On weekdays the screenings begin at 5 p.m., ending at the same early morning hour as on weekends. The 12 p.m. screenings are known, for some fey reason, as "Midnight Madness", the implication being, I would assume, that you'd have to be mad to stay up that late just to see a movie. If so, there's a lot of mad creatures in these woods, because the midnight screenings are invariably thronged with bright-eyed, bushy-tailed, popcorn-munching fans.

The Festival has a distinctly international flavor, what with films entered from 32 countries. Among these are features from eight foreign lands: South Africa, Canada, France, the Philippines, Israel, Belgium, Bulgaria and Hungary.

The social side of the Festival is busy, indeed. The French Film Office hosts a reception and cocktail party in honor of the chilling Alain Delon feature, "SHOCK TREATMENT", and there are other receptions hosted by the Israeli and Belgian consuls. Millstone Productions, whose feature, "COUNTRY BLUE" is being world premiered at the Festival, also hosts a special reception prior to the screening.

Despite all the good will and social activity that prevails, there is a certain thunder over Paradise, as disaster strikes the honored guests who are scheduled to appear. First comes the news that Groucho Marx, slated to be present for the screening of "A NIGHT AT THE OPERA", has been hospitalized. Then we hear that famed cinematographer, James Wong Howe, ASC, scheduled to conduct a special seminar, has been felled by illness and will be unable to

Crowds consisting mainly of young film buffs thronged the screenings, adding up to a record audience. Aside from "THE PAPER CHASE", the event which turned them on the most was screening of the Rudolph Valentino classic, "SON OF THE SHEIK", which was presented with accompaniment of its original score, played on the Fox Theatre's mighty organ by Lee Erwin.



attend. The final blow is the word from Dick Cavett, who is to be Master of Ceremonies at the Grand Awards Banquet, to the effect that he is unavoidably detained on a project in London and will not be able to attend. Anyone but the unflappable J. Hunter Todd would, by now, be a basket case of hysterics, but the amiable gentleman simply squares his shoulders, stiffens his upper lip and presses on to make sure the Festival is a rousing success.

There are many features included in the programming at the Fox, and these include: "THE PAPER CHASE" (20th-Fox), "BOESMAN AND LENA" (South Africa), "HEX" (20th-Fox), "WEDDING IN WHITE" (Canadian, Avco Embassy), "WRESTLING QUEEN", "THE REBEL JESUS", "SHOCK TREATMENT" (France), "COUNTRY BLUE", "HEAVY TRAFFIC", (AIP), "THE RAINBOW BOYS" (Canada), "A TIME FOR DYING" (Philippines), "HOW TO SEDUCE A WOMAN", "A NIGHT AT THE OPERA", "PAPA LES PETITS BATEAUX" (France), "F. SCOTT FITZGERALD AND THE LAST OF THE BELLES", "THE HOUSE ON CHELOUCHE STREET" (Israel), "LE FAR WEST" (Belgium), "THE GOAT'S HORN" (Bulgaria), "VISIONS OF EIGHT" (Wolper Productions), "SON OF THE SHEIK", "SISTERS" (AIP), "LA RAISON DU PLUS FOU" (France), "U-TURN" (Canada), "KAMOURASKA" (Canada), "THE HUNT" (Canada), "THE SAVAGE PLANET" (France, New World Pictures), "SUMMER RUN", "THE LAST AMERICAN HERO" (20th-Fox), "ZINBAD" (Hungary), "CHARIOTS OF THE GODS", "THE FILMS THAT MADE US" (Warner Bros. 50th Anniversary), "LET THE GOOD TIMES ROLL" (Metromedia), "THRESHOLD: THE BLUE ANGELS EXPERIENCE",

"ASTERIX AND CLEOPATRA" (France), "WHO IS GURU MAHARAJI?", and "OIL LAMPS" (Czechoslovakia).

In addition, there are special programs devoted exclusively to children's films, documentaries and experimental films.

Concurrently, there are seminars scheduled by those responsible for many of the films. These include seminars by James Bridges, writer/director of "THE PAPER CHASE" and by Roger Corman of New World Pictures.

On the hotel's lower level, a "mini-photokina" is in progress, with displays and demonstrations by the leading distributors of motion picture equipment.

Keeping up with everything that is happening provides me with a hyperthyroid schedule. I usually start with a 9 a.m. screening at either the Coronet or Baronet, lope back to the hotel to cover a seminar, then ricochet to the Fox for the 5 p.m. program. Subsisting on popcorn and candy bars, I stay rooted to my seat until "Midnight Madness" has gasped its last around about 2 a.m. Then it's back to the Hospitality Suite for a nightcap with the gang. By then the place is crowded to the gunwales and I'm surprised at the number of young film-makers (all readers of *American Cinematographer*, they tell me) who come up to me, introduce themselves and want to talk film. Since this is my favorite subject, I'm all for it. The bull session usually winds up at about 5 a.m., at which time I stagger back to my room for a couple of hours' sleep before starting the whole hectic whirl all over again.

I take time off, at the request of TV producer Danny Royal, to tape a half-hour interview with Jim Whaley for "Cinema Showcase", a television series produced at Atlanta's educational out-



Adding a touch of glamor and considerable efficiency to the proceedings was beautiful Rikki Knipple, the Festival's Assistant Director/Director of Operations.

let, WETV (Channel 30) for syndication on the Southern Educational Communications Network's 80 stations. I'm talking film again, so I'm in my element and everything goes fine.

The Canadian film industry is especially honored by the Festival and an entire evening of screenings is devoted to its product. The gem of the program is the exquisite slow-motion one-reel  
Continued on Page 1455

(LEFT) Todd with Alexandra Hay, star of "HOW TO SEDUCE A WOMAN". (RIGHT) Dub Taylor, star of "COUNTRY BLUE", enjoys a light moment with Mr. & Mrs. John Mansfield. Festival officials (as well as the audience) were disappointed that scheduled Honored Guests Groucho Marx and famed cinematographer James Wong Howe, ASC, were unable to attend, due to illness.



# BEHIND THE SCENES OF

# WESTWORLD

A strange trip through a fantasyland of the future, where, for a price, each person's secret dream can come true—unless it turns into an eerie nightmare

In these latter days, when the name of the game in feature film production is to create an entertainment that is unique and exciting enough to drag the viewers away from the "freebies" of television and into the theatres, a film like MGM's "WESTWORLD" could serve as an example of what it takes. Completely "different" in its premise, and wildly imaginative in its execution, the film combines the highest degree of technical artistry with the salient dramatic elements that add up to sheer entertainment.

The very name "WESTWORLD" conjures up images of action sequences from movies of the American West. But writer Michael Crichton has not simply told a western tale for his feature directorial debut, but provided Metro-Goldwyn-Mayer with one of the most novel action-adventure movies ever filmed.

Crichton has set his intriguing story in the world's greatest adult playland, Delos, a sophisticated amusement park that is a fantasy world utilizing space-age technology to recreate periods of the past in lifelike detail. Those who go there may actually immerse themselves in the life of a prior period in time. At Delos the periods include Medieval Europe, Imperial Rome and the American West as it was in frontier times—the latter is "WESTWORLD".

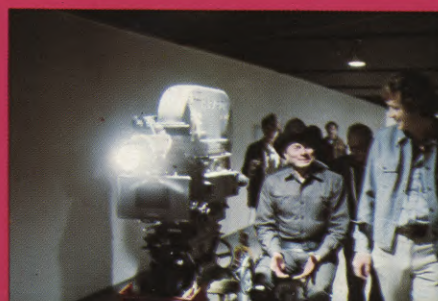
Paul N. Lazarus III produced this highly visual adventure which stars Yul Brynner, Richard Benjamin and James Brolin.

Continued overleaf

(ABOVE LEFT) An impressionistic study of the face of Yul Brynner (who plays the well-worn robot gunslinger in "WESTWORLD"), with an intimation of the electronic circuitry that makes him go. (BELOW LEFT) The nerve center of the fantastic adult playland Delos, where technicians observe the robots on monitors and remotely control their behavior. (CENTER) Richard Benjamin walks through the "surgery", where robots are repaired nightly, following the damage inflicted upon them each day by clients. (RIGHT) Brilliant young writer/director Michael Crichton makes his theatrical feature directional debut with "WESTWORLD".



(LEFT) Preparing the banquet hall set for shooting of a sequence in Medieval World. (CENTER) The vast Western Street set on the backlot of Warner Bros. (now Burbank) Studios is "propped" with corpses and lighted for filming of a night-for-night exterior sequence. (RIGHT) Yul Brynner and Michael Crichton talk between set-ups. Brynner was fascinated by the script's far-out premise, which resulted from Crichton's observation of astronauts trained to function like machines, and machines programmed to function like humans.





(LEFT) The imposing castle banquet hall of Medieval World, one of the three fantasy "worlds" of Delos, where clients pay \$1,000 a day to act out their most bizarre fantasies with humanoid robots that cater to their every desire. (CENTER) In true Robin Hood fashion, a sword fight breaks out between two robot knights. (RIGHT) The banquet hall becomes a battleground, as the knights engage in wild swordplay derring-do, in the manner of the late Errol Flynn when he swashbuckled across the screen.

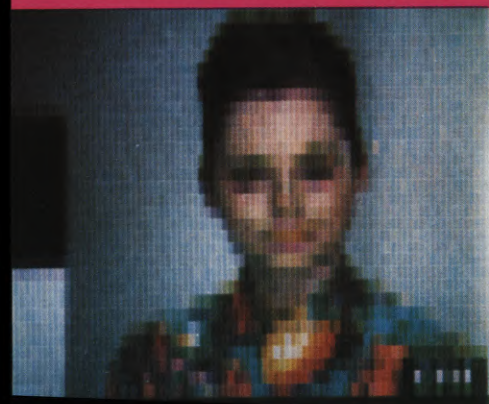


(LEFT) The saloon set in "WESTWORLD", where clients mingle with cowboy-garbed robots and await their turns to shoot it out with the black-clad gunslinger. (CENTER) Moving a crane into the banquet hall set for a boom shot. Crichton purposely employed the conventions of the movies of the Forties, which often included crane shots injected for no particular reason. (RIGHT) Low-key mood lighting and the forced perspectives of wide-angle lenses add visual drama to "WESTWORLD".



(LEFT) Will the real Yul Brynner please stand up? The actor is shown with the head of the robot, life-modeled in plaster cast form from his own face. Brynner wore silver-metallic contact lenses throughout the filming in order to attain the effect of a steely robot-like gaze. (CENTER) Brynner adopts his best bedside manner, as his sits beside his robot alter ego, which is about to undergo surgery of the circuitry. (RIGHT) When the robot's face is removed, the electronic brain is revealed in all of its computerized glory.

Tests for a unique method worked out by special effects expert John Whitney, Jr. to simulate the point-of-view of a robot. The method selected was basically a mosaic made up of 3600 color rectangles per anamorphic frame of film. It involved the electronic breakdown of an image into a series of points, each of which was given a numerical gray-scale value and then run through a computer that translated the digital information into squares with various color tones. (LEFT) A flat frame of a woman's head, with color scale. (CENTER) Squeezed anamorphic frame from one of the Western street scenes out of the picture, as it looks when interpreted in color mosaic terms. (RIGHT) Squeezed anamorphic frame from test in which the scene is rendered in squares of monochrome blue.



"WESTWORLD" is a story of people in jeopardy. Two young Chicago businessmen, Peter Martin (Richard Benjamin) and John Blane (James Brolin) choose to vacation in "WESTWORLD", whose inhabitants are human-looking robots of the period. Malfunctions in the robots cause them to deviate from their programmed roles. The robot gunslinger (Yul Brynner) in "WESTWORLD" becomes the deadliest menace. He kills Blane in a gunfight and stalks Martin through the other worlds of Delos.

Guests pay \$1,000 a day to relive the excitement of the Old West, including the opportunity to engage the gunslinger in a showdown gunfight in which they are guaranteed to outdraw it and "kill" it. Each night technicians repair the gunslinger and other damaged or malfunctioning robots, returning them to WESTWORLD the following morning to repeat their roles as residents of a frontier town.

The electronic impulses which control the gunslinger are so sophisticated, however, that it begins to react to the pleasure which the guests experience through the simulated killings. It gradually emerges from its programmed pattern, stimulated by an electronic urge to shoot back at the guests.

It no longer is willing to be a target, shot at over and over. It wants to do what its enemy does—a super-human reaction to a human act. And the closer it comes to killing, the more the robot experiences a satisfying warmth and becomes more of a human being.

After the gunslinger undergoes its electronic metamorphosis, "WESTWORLD" speeds to a gun duel between Brynner and Brolin, and Brynner's horseback pursuit of Benjamin through WESTWORLD and the two other areas which comprise this vacationland of the future—Medieval World and Roman World. The climax comes in the computer control center where Benjamin tries to match his knowledge of elec-

tronic machinery against the programmed "brain" of the robot.

The various backgrounds needed were provided by desert landscapes in the Mojave Desert, the gardens of the Harold Lloyd Estate and the variety of re-creations performed on several MGM sound stages. Special contact lenses were designed to distinguish the robots from the humans and computer filmmaking was utilized to give an accurate display of the robot's vision.

Writer/Director Michael Crichton is one of the most successful young authors in the United States. Soon after entering Harvard Medical school in 1965, he completed his first novel, "Easy Go", under the pseudonym, John Lange.

Altogether he has written 15 books under four different names. During his third year in medical school he completed a novel on abortion, "A Case of Need" which not only won the Mystery Writers of America Edgar Allan Poe Award in 1968 but was recently made into the successful MGM thriller, "THE CAREY TREATMENT".

Crichton has decided never to practice medicine but has written a non-fiction account of patient care, "Five Patients", based on his experiences at Massachusetts General Hospital.

"The Andromeda Strain" was the first book to appear under Michael's own name. During his post-graduate year at the Salk Institute in La Jolla, the book became a best seller and stayed on the list for six months. Producer-director Robert Wise bought the book and made the film into his greatest success since "THE SOUND OF MUSIC". Soon afterward, Michael and his brother completed a novel about marijuana, "Dealing", which was made into a film by Paul Williams.

Last fall Michael got his first chance to direct for television. Robert Dozier scripted his book "Binary" which Michael directed as a Movie of the Week "PURSUIT". Another book, "The

Terminal Man"; was sold for a large advance and is presently being filmed.

Crichton's latest project "WESTWORLD" is an original for the screen and represents his feature film directorial debut.

Crichton is fascinated by film and wanted a certain visual style for his film. Cinematographer Gene Polito achieves the style perfectly. Best remembered for his camera work in "COLOSSUS: THE FORBIN PROJECT" and "PRIME CUT", Polito has been receiving well-deserved critical accolades for his bright colorful style.

In the following interview for AMERICAN CINEMATOGRAPHER, Michael Crichton goes behind the scenes of "WESTWORLD" to talk about his conception of the basic idea, his writing of the screenplay and his experiences in translating the script into his first theatrical feature, as director:

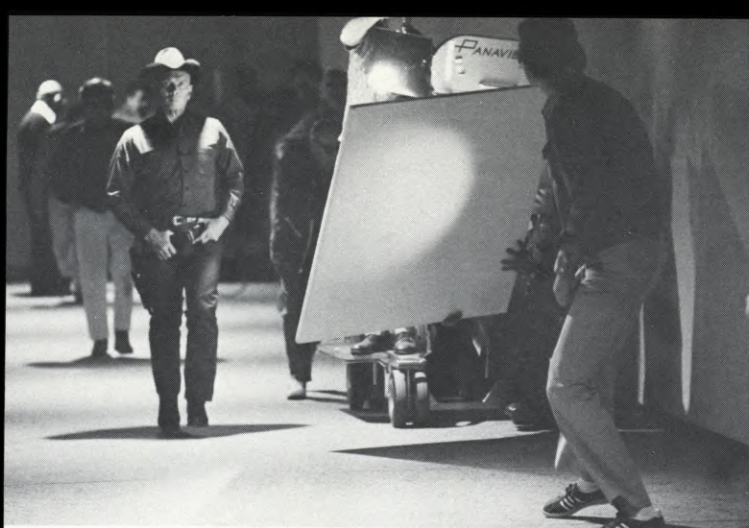
**QUESTION:** The basic premise of "WESTWORLD" is extremely imaginative. Can you tell me what inspired you to approach such a subject and, subsequently, to make it into a film?

**CRICHTON:** I'd visited Kennedy Space Center and seen how astronauts were being trained—and I realized that they were really being trained to be machines. Those guys were working very hard to make their responses, and even their heartbeats, as machine-like and predictable as possible. At the other extreme, one can go to Disneyland and see Abraham Lincoln standing up every 15 minutes to deliver the Gettysburg Address. That's the case of a machine that has been made to look, talk and act like a person. I think it was that sort of a notion that got the picture started. It was the idea of playing with a situation in which the usual distinctions between person and machine—between a car and the driver of the car—become blurred, and then trying to see if there was something in the situation that would

(LEFT) "WESTWORLD" writer/director Michael Crichton looks at a setup through the viewfinder, while Director of Photography Gene Polito (at right) checks the lighting. (RIGHT) A "wounded" robot is wheeled into the repair facility of Delos, the mythical-multiple playland for adults. The room resembles a surgery, with the technicians garbed as surgeons. Despite the fact that the intricate production ran two days over schedule because of an eye injury to Yul Brynner, it was brought in for \$60,000 under budget.







(LEFT) For a follow shot of Brynnner walking down a corridor, fill illumination was provided by bounce light from a one-inch-thick sheet of styrofoam measuring 48 x 48 inches. A PAR-64 "six-lite" lamp was used as the light source. (RIGHT) Three cameras are set up for a multiple-camera shot. Despite increased expense of additional cameras and operators, considerable money was saved by this method, because costly and time-consuming stunts did not have to be repeated to achieve a variety of angles.

lead to other ways of looking at what's human and what's mechanical.

**QUESTION:** I understand that you originally tried to write it as a novel and then abandoned that tack in favor of writing it directly as a screenplay. Why was that?

**CRICHTON:** Well, it didn't work as a novel, and I think the reason for that is the rather special structure of this particular story. It's about an amusement park built to represent three different sorts of worlds: a Western world, a Medieval world and a Roman world. The actual detailing of these three worlds—and also the kinds of fantasies that people experienced in them—were movie fantasies, and because they were movie fantasies, they got to be very strange-looking on the written page. They weren't things that had literal antecedents, literary antecedents. They were things that had antecedents in John Ford and John Wayne and Errol Flynn—that sort of thing. In some ways, it's a lot cleaner as a movie, because it's a movie about people acting out movie fantasies. As a result, the film is intentionally structured around old movie cliché situations—the shoot-out in the saloon, the sword fight in the castle banquet hall—and we very much tried to plan on an audience's vague memory of having seen it before and, in a way, wondering what it would be like to be an actor in an old movie.

**QUESTION:** Is this the first time you've written a screenplay directly, instead of adapting it from one of your novels? If so, what differences do you find in the two methods?

**CRICHTON:** No, it's not the first time. I've done some other original screenplays, most of which have never been

made, but I've written them directly as screenplays. I've also adapted my own books, and I think that the two methods are really very different—more different than most people ever realize. The Hollywood tradition has been to purchase books and stage plays and short stories and then hire a group of screenwriters to adapt them. But the screenwriters, in most cases, were not people who wrote books and stage plays and short stories themselves—so there were very few people who found themselves in the position of writing a book and then adapting it into a screenplay. I think the differences in the two forms are incredibly great, and they go beyond those platitudes that everybody hears about—telling the story in visual terms, and so on. In fact, it often becomes a question of what kind of story you're telling. That's why I feel that, of the books that have been successfully adapted, there often isn't a great deal of the book that is retained in going to the screen. What is retained is a certain feeling, some essential quality that was in the book and that also appears in the film. That's also why I think that you can have a really slavish adaptation that follows the original scene-by-scene, with all of the characters remaining unchanged and everything exactly the same as it was in the book—but it's no good as a movie. Some kind of emotional quality has been lost. I don't think there's any way to get around the fact that to create that emotional quality on paper is very different from creating it in terms of images.

**QUESTION:** Obviously, in writing a novel, you can get inside the heads of the characters. You can tell what they're thinking. Have you found that a difficult thing to translate into visual terms, without falling back on long subjective speeches?

**CRICHTON:** I just think of it as something that you can do well in one medium and not in another. All internal states of mind are very hard to film, because either you have the character say something (which is almost always phony), or you have the character do something to tie in with his emotional state. That's often rather clumsy and awkward and certainly time-consuming. It may take you quite a long time to convincingly show that the character is depressed, in terms of our almost cliché conventions with the audience. The audience will say to itself: "I know what that gesture is. I've seen it a thousand times. That means he's depressed." It's like the convention of having wavy lines on the screen to indicate the start of a dream sequence. There's nothing inherent in that sudden sort of water image that means "dream", except that the audience has been conditioned to interpret it that way. Internal states are awfully hard to portray visually, whereas, in books, they're very easy. All it takes is a line of dialogue: "I came home and I was very depressed." That's it. You've done it—and you don't have to justify it, somehow.

**QUESTION:** Do you think that there are some things that are easier to portray on the screen than in a book?

**CRICHTON:** Yes. At the other extreme, any kind of description in writing is lengthy, whereas, on film, it's instantaneous. Exactly the reverse situation applies. You can spend a page describing how somebody looks, the way he acts, the way his surroundings are, what kind of house he lives in. In film, all of that is immediate. You show it—and that's it. Certain traditions have sprung up to try

Continued on Page 1420

ATLANTA FILM FESTIVAL AWARD


# "LET THE GOOD TIMES ROLL"

Special Jury Award—GOLD MEDAL

By WINIFRED HARRIS

The "How-we-did-it" story behind the film, LET THE GOOD TIMES ROLL, is as difficult to pinpoint as the movie itself. Called, for want of a more explicit classification, a documentary feature, the movie records two rock-and-roll revival concerts from Detroit and Long Island, plus a segment of Fats Domino from Las Vegas. Though it skillfully combines on-stage appearances with audience reactions with back-stage characterizations of its various performers, it is not merely another concert film. At the same time, it re-creates the '50's hey-day of its stars in what has been called "an almost unbelievably moving and exciting" way, yet it is not simply a nostalgia trip. What is it, then?

A reporter trying to document the experiences and opinions of some of the many key people involved with LET THE GOOD TIMES ROLL is reminded of the familiar East Indian fable about the six blind men who tried to describe an elephant. The one who felt the animal's side reported, "An elephant is like a wall," while the one who grabbed the tail replied, "Oh, no, an elephant is like a rope." The blind man whose arms encircled a leg was convinced that the elephant was like a tree, while the one who felt an ear was equally insistent that the beast resembled a fan. The man



At one of several concerts filmed, crowds react to onstage musicians in "LET THE GOOD TIMES ROLL", Columbia Pictures presentation of a Metromedia Producers Corporation Production, starring Chuck Berry, Little Richard, Fats Domino, Chubby Checker, Bo Diddley, 5 Satins, The Shirelles, The Coasters, Danny and the Juniors, and special guest stars, Bill Haley and the Comets.

Sample frames from the 70mm blow-up of "LET THE GOOD TIMES ROLL" showing a few of the many format configurations featured in this nostalgia rock 'n' roll film. The picture consists literally of wall-to-wall optical effects, expertly executed by Cinema Research, which make the presentation an exciting visual, as well as musical, experience.



who encountered a tusk believed that elephants were like spears, which was disputed by the one who, holding the trunk, knew that they were like snakes.

Asking the participants in *LET THE GOOD TIMES ROLL*, "What was the most important ingredient of this picture?" produces as many divergent views. Listen:

Charles Fries, Metromedia Producer's Corp. executive producer: "Let's face it, the most important thing in *any* picture is money. No matter how much talent is available, without adequate financing, no film gets off the ground."

Gerald Isenberg, producer for Metromedia: "The concept, the idea, and following it through to reality is the vital thing."

Pierre Adidge, president of Cinema Associates, the firm with the production assignment: "You have to capture the visual images on film, the sound on tape. Without experienced production people, you have nothing."

Hal Scheib, president of Cinema Research: "LET THE GOOD TIMES ROLL is 99 minutes of optical effects. It is the combination of scenes in multiple panels and the quality blow-up which distinguishes this picture."

Bob Abel, Cinema Associates, director: "The material from the '50's is the factor making the picture unique. Without the incredible work of the research team, there would have been no depth to the film."

Jim Webb, Cinema Associates, sound supervisor: "LET THE GOOD TIMES ROLL is about music! The stereo sound is all-important."

Glen Farr, Cinema Associates, post-production: "Can you imagine the chaos without people to see that the right segments of material were in the right hands at the right time? Or the disaster if some irreplaceable old films had been lost?"

Sid Levin, director and editor: "Emotion is the prime ingredient. The elements must be combined in such a way that the viewer will have a subjective experience, a strong emotional response."

We could go on and on. Cameramen, negative cutters, title designers, the legal staff, the releasing people, all feel their particular contributions were essential to making *LET THE GOOD TIMES ROLL* into what *Variety* predicts may be the blockbuster sleeper of 1973. In the Indian fable, however, there is a wise old Rajah who says, "You must put all the parts together to find out what an elephant is like." Following his counsel, perhaps we can learn lessons from some of the people involved with this production and discover the true



anatomy of *LET THE GOOD TIMES ROLL*, to the benefit of all who are interested in the making of films.

First, credit must go to Richard Nader, who assembled a concert tour featuring memorable rock and roll artists of the '50's. These included Chuck Berry, Chubby Checker, Bo Diddley, Fats Domino, Bill Haley and the Comets, Little Richard, The Coasters, The Shirelles, The Five Satins, Danny and the Juniors, backed up by the Bobby Comstock Rock and Roll Band. Though some of these performers had maintained star status through the years, others had virtually disappeared from the music scene, except for the influence they had exerted upon current pop musicians. Nader's concerts proved that the old magic was not lost and that a whole new generation could be moved

by rock and roll, along with that part of the audience which re-lived its own teen-age experience in the warmth of interaction between performers and their listeners.

Among the latter was Jerry Isenberg, producer at Metromedia. Attending a concert with Peter Guber of Columbia Pictures, Jerry had found the experience exciting, and both he and Peter saw the possibilities in filming a concert. Essential to the concept, however, was the necessity of integrating into the concert footage the feeling of nostalgia the music evoked.

"After all," Jerry says, "many pop concerts had been filmed, some so miserably they gave the whole *genre* a bad name. I had to convince my superiors that we had a new idea in the '50's  
Continued on Page 1434



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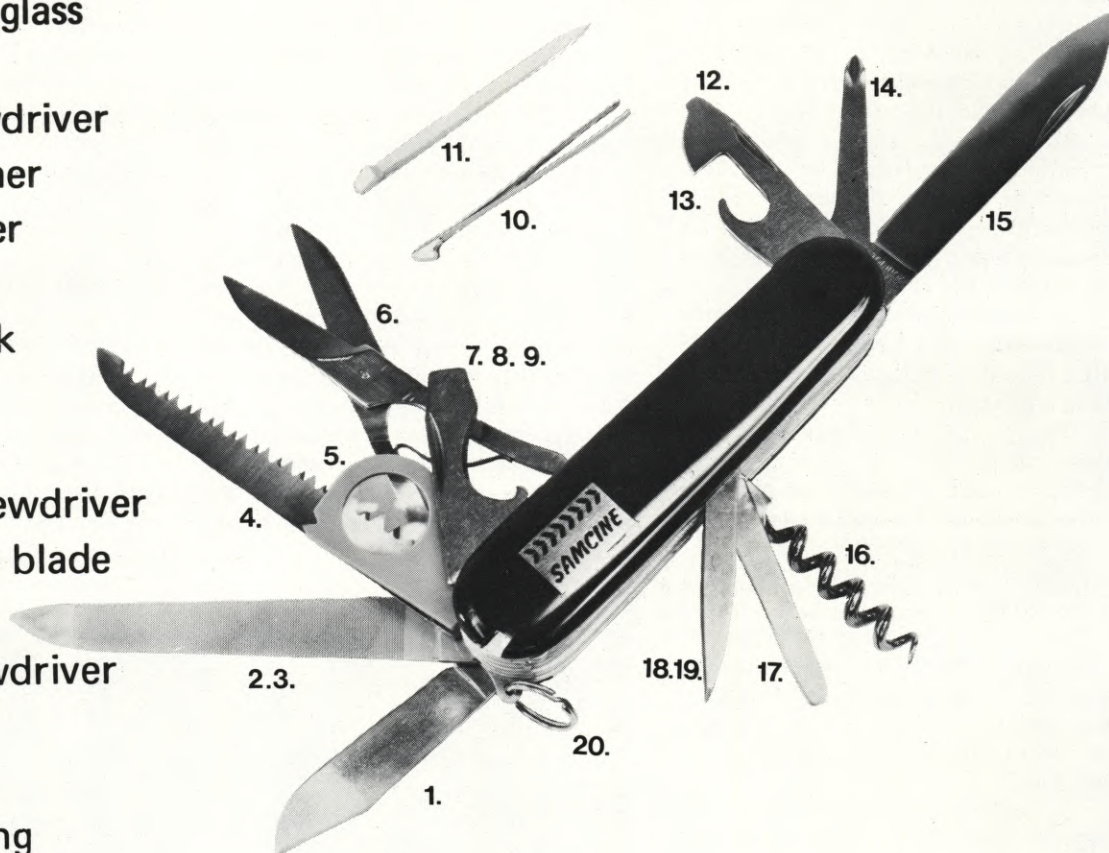
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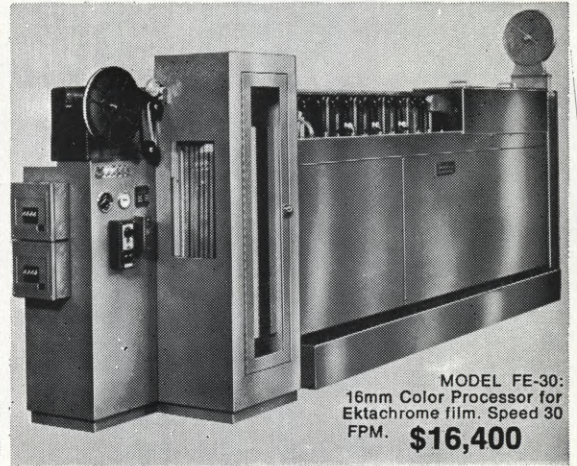
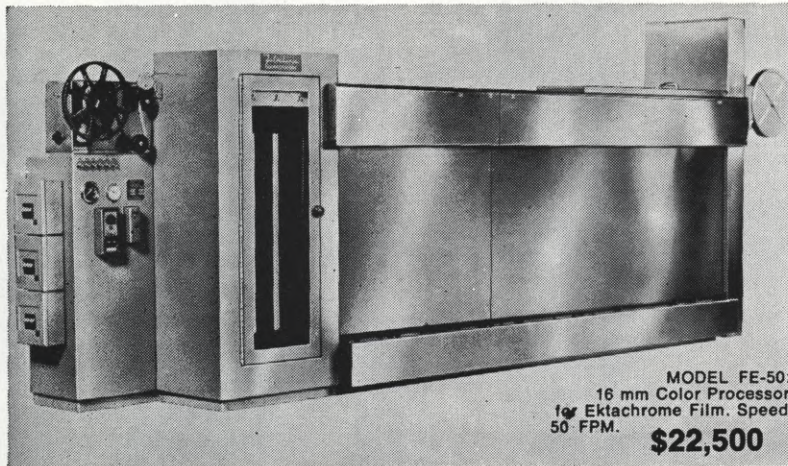
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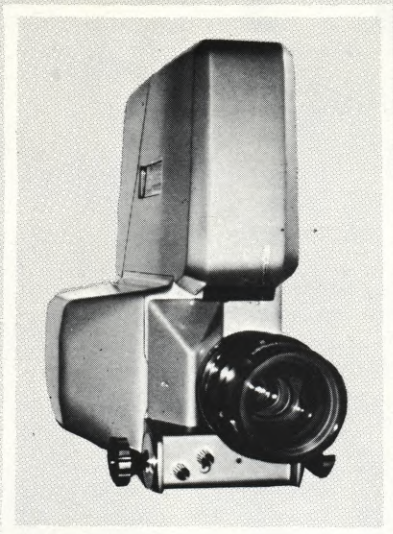


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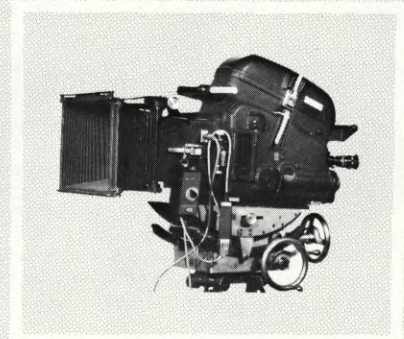
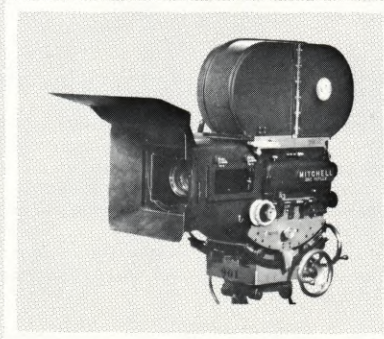
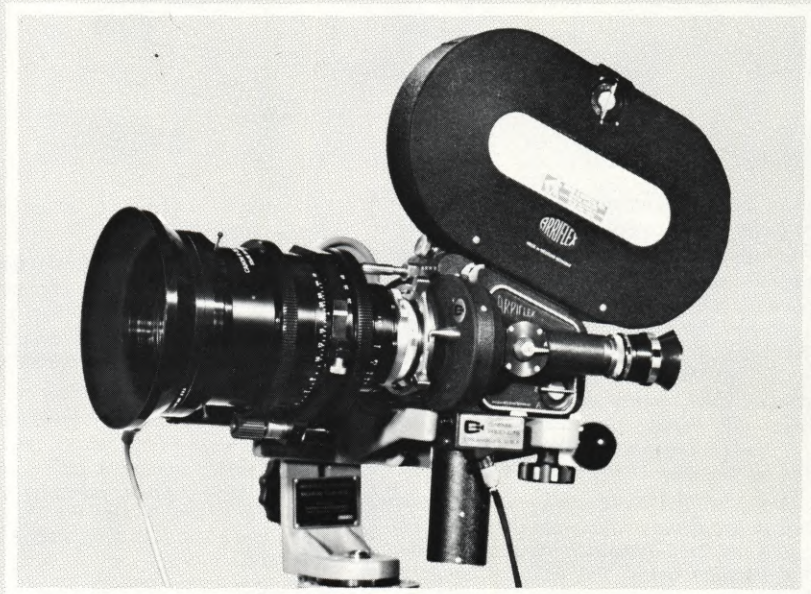
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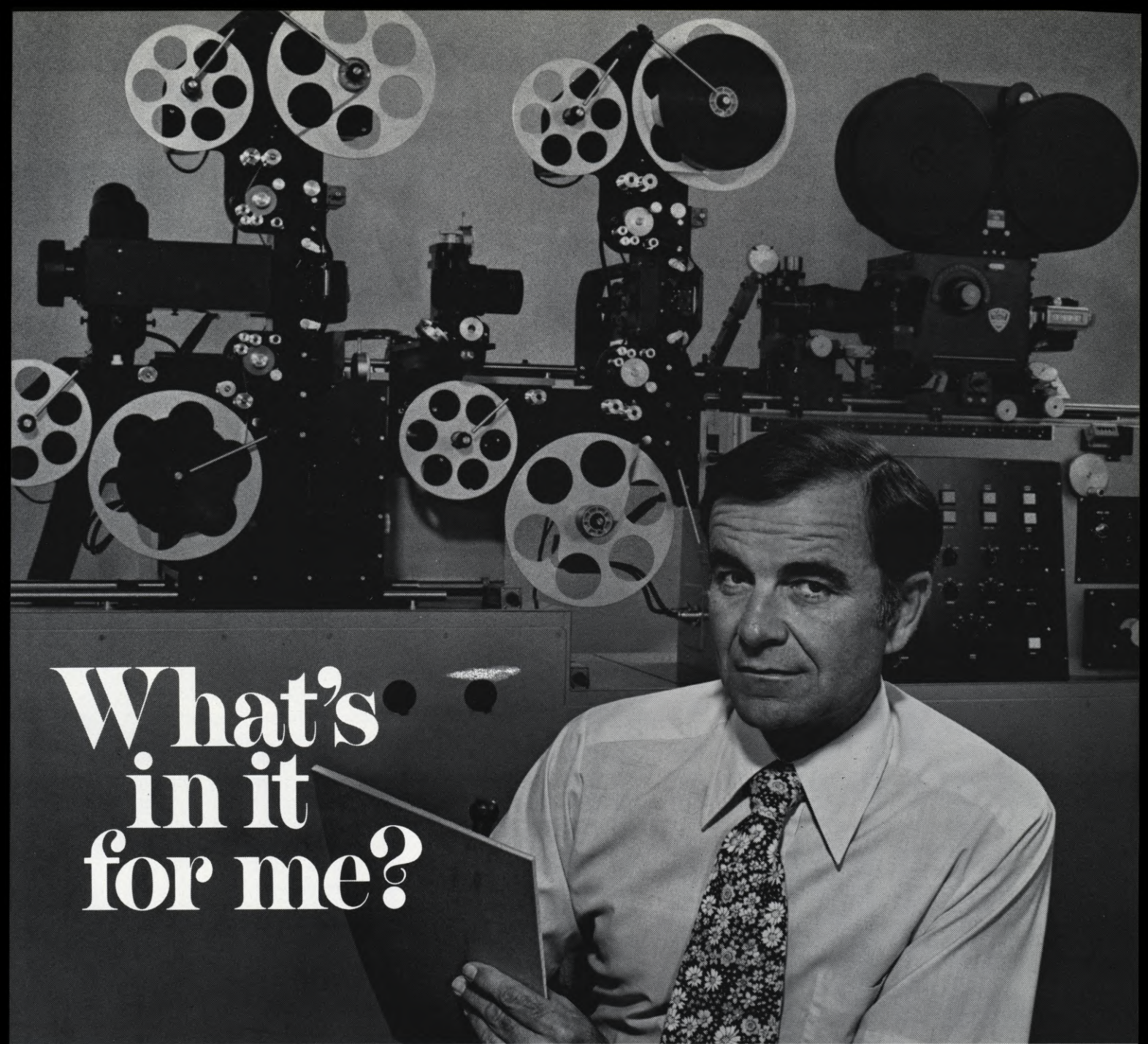
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To be exact, we left out mechanical gear trains, levers, one horsepower motors, shafts, stop-motion clutches, solenoids, relays, knuckle joints and a lot of other things like that. We thought of it as leaving out trouble. After all, if mechanical drive systems are going to wear, vibrate, backlash, gum up, drag or stick, you know when they are going to do it. Right in the middle of your rush job. When else?

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# "CYCLE OF LIFE"

By MARK SADAN

Director/President, Kiva Films Inc.

I first became aware of Gustav Vigeland when I came across the book, *"Embrace of Life"*, which was a photographic presentation of this Norwegian sculptor's work. I was amazed to discover that in his lifetime he had created hundreds of wonderful sculptures, and yet the outside world had not heard of him.

Since I was convinced that the ideal way to share Vigeland's great work with the world would be through film, I

figures rising to the heavens, sculpted from a solid block of granite over a period of thirteen years.

On returning to my home in South Hadley, Massachusetts, I locked myself in my room for three days with piles of photographs, extensive notes, and my typewriter. What resulted was a complete script with photographs to illustrate each section, the title of the proposed film was *CYCLE OF LIFE*.

The basic concept was to use the

## The Arts—BRONZE MEDAL

track was to be music only, our entire crew consisted of myself and cinematographer/vice-president of Kiva Films, Kirk Smallman.

My approach to the shooting was to film the sculptures in March, study those rushes, then return again in June for the main session. Early in our filming, we decided to avoid unnecessary camera movement, and instead, to let the sculptures create their own sense of movement, through the implied motion of their composition, and in their edited sequence.

During filming, after Kirk would complete total exploration of a sculpture with the camera, I had the option of doing additional filming with the camera myself, if I felt the need. Vigeland's work looks good from a great variety of angles, and often says something different, depending on where your vantage point is.

After making a rough assembly of the footage, we took Norwegian classical and folk music we had carefully chosen while in Oslo, and cut music for each picture section. We then fine-cut the picture to match the music.

Personally, I found this one of the most enjoyable films we've made since we formed Kiva Films four years ago. My background was in the experimental film area, in which the film-maker pretty much handles everything all by himself. But in working with a company, one has to deal with time schedules, client objectives, and differing personalities of the production team. In *CYCLE OF LIFE*, the talents of all three of us—myself as director, Kirk Smallman on camera, and David Walker at the editing console—fused beautifully, so that the film has the wholeness of an individual film, but with the advantages of the best ideas and skills of three craftsmen working together.

Since the completion of the film, it has been greeted with great enthusiasm, (often to the point of tears) and sometimes open hostility, towards the massive, highly-charged emotionalism of Vigeland's work. In the process of making the film, I came to feel that Vigeland's restless, troubled spirit was close by us and very happy with the result.

*CYCLE OF LIFE* is distributed by Radim Films, Inc., 1034 Lake Street, Oak Park, Ill. 60301 ■



A magnificent group of sculptures by Gustav Vigeland, located in a park in Oslo, Norway, served as "subjects" for the film, "CYCLE OF LIFE". The author first saw pictures of these works in a book, felt that they and their creator would form the basis of a fine film, and used his initiative to make the project become a reality.

wrote to Jon Embretsen, the Norwegian Information Director at that time. He agreed with the film idea, but although he himself could not fund the film, he could arrange a free trip to Norway via SAS, where I would be able to see Vigeland's great sculpture park in Oslo, and meet with the people whom I had to convince in order to get the film funded.

Soon I was in Norway, where I took several hundred slides of the sculptures, ranging in size from small clay models to a five-story-tall monolith of human

sculptures as actors in the film, since they depict almost the total range of human life and emotional development, from birth and right on through childhood, adolescence, parent-child relationships, sexual and mythical fantasies, love, conflict, old age, death, and rebirth.

The script was well received and the project approved. We worked on an extremely low budget, but this was partially offset by their providing all flights to Norway, living costs while there, and a per diem. Since the sound



## PHOTOGRAPHING "CYCLE OF LIFE"

By KIRK SMALLMAN

Cinematographer/Vice President,  
Kiva Films Inc.

Statues don't move, so the temptation in filming them is to keep the camera moving and the zoom lens going. But I rejected that approach for this film, and director Mark Sadan agreed. Our intent was that the primary motion of the film would be *editorial*, moving from image to image quickly, building its effects out of selected details. This was highly appropriate, because the sculptures are representational of humans and animals in emotionally charged situations, which lend themselves to being filmically handled as though they were in live drama. In addition, good sculpture contains implied motion in its forms, which we didn't want to negate with camera ballet.

We made two shooting trips to Norway. The first was in March, when we expected harsh cold light and textured story skies, appropriate for the scenes of battles between man and his demons. But what our first rushes showed was cheery blue skies, and warm "skin" tones on the granite statues, produced by the early morning and late afternoon sunshine, which gave us our best modeling. (The stormy skies obliged us by appearing in June.)

For filming some of the marble sculptures indoors, we had intended to use quartz lights loaned to us by an Oslo production company, but we got far superior results by using large sheets of white cardboard to bounce diffused sunlight into the shadow areas.

We would shoot all the angles, close-ups, reactions, long shots, etc. of a sculptural group just as though they were actors in a story film. All the reverse angles would be done at another time when the changing angle of the light favored them.

Filming those statues which are wrestling with giant dragons posed a problem. They stand on thirty-foot-tall pedestals, and our Pro-Jr. tripod only extends to six feet. The Oslo Electrical Dept. volunteered their hydraulic lift platform, and it was only when we were airborne that we realized the lift truck crew didn't know what we were saying in English, nor did we know Norwegian. During our efforts to quickly develop a workable sign language for directing our "boom shots" we were for some time flung in random directions through the Norwegian sky.

Since we were handling the sculptures as though they were live people,



Cinematographer Kirk Smallman and Director Mark Sadan on location in Norway. They made two trips to that country for filming of "CYCLE OF LIFE". Unpredictably, they had sunny skies in March and cloudy skies in June for their exterior shooting. Close and cordial cooperation on the part of Norwegian officials made the project possible.

we took great care to frame out the supports on which the statues rest. This required extreme accuracy of our Eclair ACL viewfinder. I used the Angenieux 12-120 zoom lens for most of the filming, and treated it largely as a lens of many focal lengths, rather than a zooming device. Since any irregularity of panning would be grossly distracting while shooting at 120mm, the use of our fluid pan head was mandatory. The other very useful lens was a Switar 10mm which will do most of what a 12-120 won't.

The preliminary editing was done by Mark and myself taking turns, each doing a rough sequencing of the material all the way through, then the other revising and improving on it. We left all the shots much overlength, knowing that they would be cut precisely when we matched picture to music.

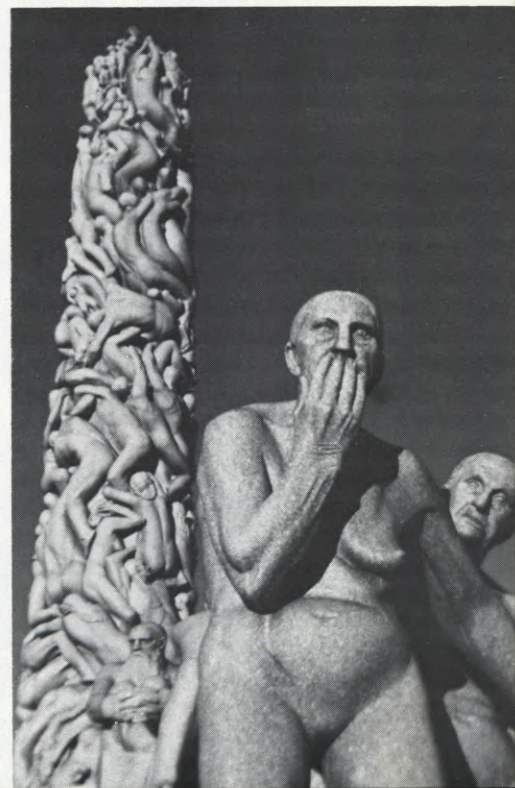
While in Oslo we had listened to a large number of Norwegian classical and folk music records. We selected about five. Back in Massachusetts, we made a tape copy of them, and played the tapes over and over again, each time finding at least one section of music ideal for some part of the film.

At last we were ready for a cut, and our third partner in Kiva Films, David Walker, put the first picture and first music into the Moviola and began cutting the picture down drastically to match the tempo of the music. To bridge one piece of music, which had been abruptly cut, to a cut-in on an-

other part of the same piece was often required by the story line, and it called for great ingenuity on David's part to find musically acceptable ways of accomplishing this.

What we finally produced was a film we like very much, and which we feel is unique among films about the work of artists. ■

Sculpture group shown in front of five-story-tall monolith of human figures rising to the heavens, sculpted from a solid block of granite over a period of thirteen years.



# THE MAKING OF "NO PLACE TO HIDE"

By ROBERT ALLEN SCHNITZER

Director/Co-producer, President,  
Galaxy Enterprises, Inc., NYC

In a frank post-mortem of his first feature, film-maker tallies  
the pros and cons of low-budget production in the Super-16 format

It was as if they had *dared* me. My friends, the motion picture industry, the world! They all stood *en masse* before me with arms folded across their chests, daring me to produce—let alone direct!—a full-length feature film on a budget which would just about cover the cost of camera tape and lens cleaner on a more conventional budget.

Beside the small amount of money and a somewhat maniacal determination, I had the property, "NO PLACE TO HIDE", a script which I had co-authored with Larry Beinhart. The film documents, by way of a dramatic feature format, the period in recent American history involving the FBI infiltration of an underground subversive group planning to blow up the Park Avenue offices of a metal corporation that had contracts with the federal government. The script espoused no political ideology, except perhaps that both sides were equally insane. The drama grew out of the elements of fear, anger, and love—and it needed no political "lessons" to sustain itself.

I knew that a highly dedicated cast and crew alone wouldn't be enough to pull off such a grand production on so small a budget. After careful research, Director of Photography Marty Knopf and I decided to shoot the feature in Super-16.

Yes, Super-16: that little understood bastard-child of a format. At the time (a little over 18 months ago) just three or four features had been shot in this format in the United States, although it was gaining widespread popularity in Europe, particularly in Sweden.

The few existing cameras available for shooting Super-16 were adapted from standard 16mm Arriflexes, Eclairs, and Auricons. It wasn't until this year that the factory-modified Eclair Super-16 NPR became available.

The Eclair NPR we rented from CDP (in NYC) for production had the minimal, basic modifications: only the pressure plate, aperture, and magazine rollers had been adapted for the wider aspect ratio. Because of this, assistant cameraman C.H. Douglas would check the film gate every hundred feet or so for scratches on the film. One complete day of shooting was cut short because a scratch appeared on the original. It ran down the right side of the frame where the standard 16mm edge used to be. Nothing could be done with the camera to rectify it in the short time we had. To avoid a recurrence of the problem, we had to begin shooting exclusively with 7252 (single-perf, of course) instead of a combination of 7252 and 7242. Because this latter emulsion is faster and, therefore, slightly thicker, the pressure plate was better adapted for the thinner and slower 7252. This resulted in a need for much heavier lighting to achieve the perfect exposures necessary to avoid a grainy blow up.

DuArt Color Laboratories modified the rollers of their developing and printing machines and were able to handle our dailies.

After thirty-five consecutive 18-hour days of shooting, Marty Knopf and I were ready to begin editing the film. Since none of the flatbed editing consoles were adaptable to the wider Super-

16 format, we cut the film on a Steenbeck with the standard 16mm picture head. Editing lasted more than seven months. Since most of the critical action was framed within the TV format, the 15-20% of the area concealed from us didn't matter much. When it was necessary for us to see the extreme right portion of the frame, we would eyeball those sections under a magnifier.

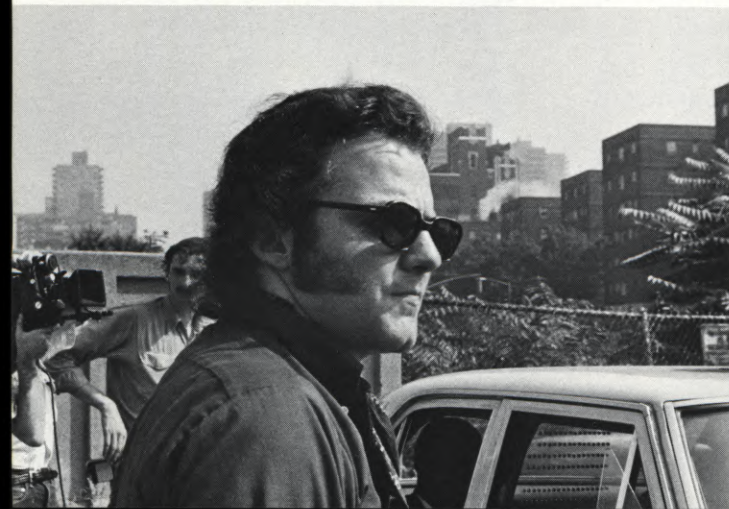
In this way, we also cut the music and effects. And when mixing our tracks, Manhattan Sound (now called the Sound Shop) was unable to modify its 16mm projector in time for us to see the full picture.

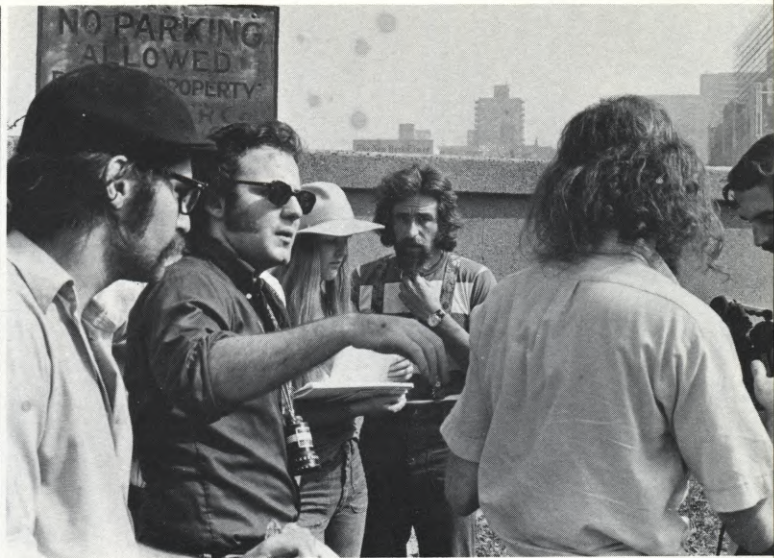
It was now almost a year since pre-production had begun; and the Mayles Brothers were letting it be known that they had the only Steenbeck with a Super-16 picture head in New York. A bit late for us, but not too late for us to run the Super-16 workprint and 16mm mixed mag track on this machine before going ahead with the negative matching and blow-up. We rented the machine for one day, sat back, and for the very first time, we watched "NO PLACE TO HIDE" play before our eyes the way it was composed to appear.

To our delighted amazement, there were only two cuts we had to correct. For the most part, everything flowed perfectly, and I was ready to move on to the blow-up.

I knew that of all the post-production decisions that had to be made, the choice of the best optical house ranked as the most critical. After careful investigation, I decided to go with EFX Unlimited. Although they had very little

(LEFT) The author and crew on location for filming of "NO PLACE TO HIDE". Director of Photography Marty Knopf (in background) is able to hand-hold Eclair NPR adapted for Super-16 with greater ease than almost any 35mm camera. (RIGHT) Assistant Cameraman C.H. Douglas looks on, while Knopf checks meter reading and Script Supervisor Wendy Ferrior records exposures on her camera chart.





(LEFT) Shooting exteriors on Park Avenue in New York. Douglas and Knopf stand by, while Schnitzer coordinates last-minute instructions. (RIGHT) At a midtown Manhattan taxi garage, Schnitzer works with Key Grip Larry Beinhart (back to camera), Knopf and Douglas. Co-producer David Appleton and Script Girl Ferrior in the background. (Photographs by J.L. Wright.)

experience with Super-16, Mo Weitzman impressed me with his neurotic lust for perfection and his personal involvement with every job.

After eyeballing the workprint, he determined that there would be no problem and assured us of a perfect blow-up. Our most time-consuming snags developed during the negative matching. When editing the film, I neglected to allow an extra frame or two on both sides of each cut. As with any blow-up to 35mm, this margin is necessary for wet-splicing the original footage before it goes to the liquid-gate optical printer. These two or four frames, therefore, could not be used in another scene. Fortunately, most of these areas were confined to non-sync sequences so that the one-or-two-frame "floating sync" is never apparent.

After timing and color-correcting the Super-16 reversal original on the Hazeltine analyzer, it was blown up to a 35mm internegative. After timing and color-correcting the 35mm interneg, we were ready for our 35mm answer print. This was done downstairs at Technicolor or Radiant Laboratories.

On the second answer print we achieved that quality we had been dreaming of for so long—perfect color, clarity, and no grain! In fact, people viewing the print find it difficult to believe that it wasn't shot in 35mm.

Because of the budget, I had no choice but to shoot the film in Super-16. The cost of stock, developing, printing and camera rentals is much less than 35mm. And by maintaining high technical standards through shooting, the right optical house can deliver a perfect blow-up. And unlike shooting regular 16mm,

there is no north and south cut-off of the picture area. Our 35mm aspect ratio is 1:1.85. This is nearly identical to the Super-16 aspect ratio.

Will I ever shoot in Super-16 again? Hopefully not. Although Super-16 has since become better known to the film industry and to those who serve it, the position standard 35mm holds is much more secure. ("Super-16? Oh, you mean Super-8!" is something I never want to hear again.) And, of course, the optical house becomes one less laboratory in which to aggravate your ulcer.

In terms of release prints, shooting in 35mm becomes less costly on large orders. We shot reversal original, since we felt we would get higher quality than shooting negative. This proved correct. But since each 35mm interneg is good for only twenty prints or so, it becomes necessary either to blow-up the Super-16 again to produce a new 35mm interneg or to strike a dupe 35mm positive and get your 35mm internegs from that. This, of course, produces a new generation; and I have yet to see how it will affect the quality of the release prints.

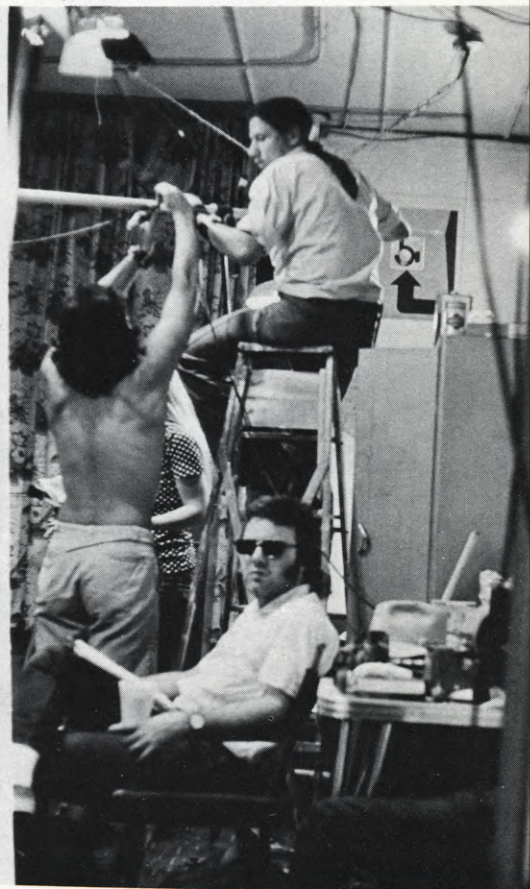
In terms of shooting, it would be nice to feel that when you push 35mm negative (5254) a stop or two, you won't necessarily get a lot of ping-pong balls jumping around your screen, as you would if you pushed your Super-16 stock and blew it up to 35mm.

And when editing your 35mm workprint, there is no need to allow splicing margins as you do when conforming your Super-16 original.

But today we have a perfect 35mm feature, a gripping document on the social and political turmoil in recent

American history. "NO PLACE TO HIDE" had its world premiere at the 1973 Atlanta Film Festival. And now the greatest challenge for a producer-director begins: selling the film to a distributor. ■

An important location was an abandoned art warehouse in Greenwich Village. Because shooting was restricted to 7252 film, heavy lighting was required even to achieve a "dingy" effect.



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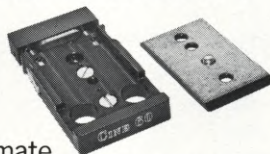
camera platform, and a multitude of interesting possibilities.

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## DIRECTING AND FILMING "FOUR CHILDREN"

Ethnic and Cultural—GOLD MEDAL

By JOHN GUNSELMAN

*Alliance Pictures Corporation*

A year and one-half ago, amid national clamor over the quality and content of children's television programming, Avco Broadcasting Corporation decided to take some very positive steps. Their concept was to form a production division which would deal exclusively in creating high-quality prime-time specials for children. Such specials would in no way pander or talk down to young people. Rather, they were envisioned as being serious documentary or dramatic productions which would take hard looks at specific areas and events of contemporary or period life.

Avco was joined in this endeavor by Meredith Broadcasting and the two corporations agreed to split costs down the middle. The pictures would be run initially on the Avco and Meredith stations around the country, and then syndicated nationally.

Tom Robertson was named as executive producer and placed in charge of the division. He called me and asked if I would be interested in directing and shooting the first two shows in the series. Tom and I had not worked together in a couple of years, since completing *WHOSE HOME THIS HOLY LAND* (an hour film on the Arab/Israeli situation shot on location in the Mid-East), and the Emmy award-winning *APPALACHIAN HERITAGE*. (See *American Cinematographer*, July 1969.) I was delighted at the prospect of working with Tom again, the two shows sounded challenging, and the budgets on the first two were somewhat higher than the following shows, so I agreed to take on the assignment.

The idea behind *FOUR CHILDREN* was to sample the life styles of four kids, each from a vastly different geographic, sociologic, and ethnic background. As such, the hour-show was to be divided into four equal, but totally separate, segments. The four kids chosen were: Eleven-year-old Chris Twyman, a Black youth from a crowded urban ghetto of the inner city; Vicky June Morgan, a twelve-year-old girl from the Appalachian Mountains of Kentucky; Gus Quintero, an eleven-year-old Apache Indian living on a reservation in White River, Arizona, and eleven-year-old Maria Berta Rodriguez, the child of Mexican/American migrant

farm workers. These diverse and varied situations, I felt, offered a great opportunity of handling each segment in a very different filmic style.

The overall approach was to be basically the same as Robertson and I had used on *WHOSE HOME*, and *APPALACHIAN HERITAGE*... that is, a very refined and controlled "documentary" style. Documentary in the sense that we would utilize actual people, locations and situations, but refined by the use of fill-light, very controlled interior lighting, camera placement, frame devices, optical effects, composition, slow motion, duplicated action, and to some degree, staged situations. By this I don't want to suggest that we forced the kids into a bunch of hyped-up token situations. Quite the contrary! During pre-production, Robertson spent a good deal of time at each location talking with the children at length. These conversations were taped and eventually became a major part of the narrative track, only in places being tied together by a professional voice. From this pre-production work something of a basic concept was formed for each segment, but this was always open to any changes encountered during shooting. The final degree of refinement was to occur during post-production by very detailed editing, the addition of an original music score, and a thoroughly polished sound track.

The more I thought about the four

situations we would be shooting in, the clearer my thoughts became on the specific styles I wanted to employ for each segment. A very important and powerful underlying theme, I felt, was the land and how it differed in the four environs. One country, but four vastly different areas, each with its own feel and mood. Four children, each an individual, but with certain similarities, too. The differences in mood of the land seemed almost to be a theme in counterpoint to the very story of the children themselves: The vast and spectacular beauty of Arizona canyons, cliffs, and open sky compared to the lush Appalachian Mountains as old as time, covered with wild flowers of muted colors and bathed in shadow patterns. Flat Midwestern farm land stretching to infinity under lead-grey skies, and man-made canyons of cement and steel, where the only glimpse of sky is straight up.

True enough, such mood devices only serve as background to the story at hand, but by skillful use of the camera it is possible to convey a great deal. In our case, with the four segments running back to back, the differences were beautifully evident.

In Arizona the camera was rock-steady. I primarily used wide lenses, and low camera angles. Camera moves were precise. Fill-light was harsh and I always tried to set things up so my fill-light was a cross light with the sun, rather than head-on. I also used a lot of stark

Director/Cinematographer John Gunselman lines up a shot for "FOUR CHILDREN", while Executive Producer Tom Robertson looks on. Bringing a high degree of production value and polish to a subject that is basically documentary is a style Gunselman and Robertson have made use of before with much success.





Guselman lines up the Arriflex for a low-angle scene in mid-stream, while filming in the White River in Arizona.

composition and obvious frame devices, such as rocks, spectacular trees, cacti, etc. On vista shots I always kept something in the foreground.

In the mountains I resorted to longer lenses. The camera was mostly on a tripod and movements were silky smooth. I made much use of flowers and leaves out of focus in the foreground so they became mere blotches of color and form. The depth of field, even outdoors, was kept shallow. Light that filtered through the trees was diffuse and we were very lucky that the days we shot in the mountains were mostly a bit hazy. This, of course, softened the sun and gave us a very nice image. Fill-light was head-on, but kept very soft. Three lighting set-ups for this segment were rather interesting.

The first was an interior scene where Vicky June and her Mother were canning tomatoes. The kitchen itself was just perfect and would have cost a fortune to duplicate on the stage. I took three 1000-watt lights with no barn doors, aimed them upwards, and raised them on their stands to within close proximity of the ceiling. The ceiling was off-white and gave the light a parchment-like color when it bounced back. By panning or tilting the head a bit and also varying the beam from spot to flood, the light could be controlled, even though it was totally soft. Thus, I was able to get a subtle degree of variance in certain areas. To this I added

one 650-watt broad as a slight kicker from the rear, and the results looked absolutely "correct" and very pretty at the same time.

Needless to say, in such a location available power is always minimal. In this case we had to resort to a penny in the fuse box just to hold the few lights I indicated. Since the light was bounced, the level was very low; in fact, what I considered my "key light level" was ½-stop underexposed. However, I personally prefer to shoot this way in 16mm with the ECO stock for any sort of mood lighting. I have found that I get excellent results at such a light level. I can control it better, it is less harsh on the players, and the range seems to reproduce better on the stock. In short by lighting at the bottom end of the film's exposure curve I get results that don't have that 16mm feel to them. That may seem like a rather vague thing to say, but I am sure those readers who have done any sort of quality lighting in 16mm will know what I am talking about.

Another setup that looked very nice on screen was shot night-for-night on the front porch where Vicky June sat in a swing and sang while her sister played the guitar. We aimed a couple of deuces at the front of the house from a high enough angle so that the porch roof cast a harsh shadow on the front of the house. Dichroics were put on these and a tree branch was taped to a century stand and placed in front of each light. It looked just like moonlight, and when the branches were moved slightly during a take, the illusion of a soft evening breeze was complete. Inside the house we tacked Rosco diffusion material to the window that looked out onto the porch. A 1000-watt light with a light amber gel was aimed at the window. Outside on the porch a 650-watt broad with the same gel was placed so that it gave a noticeable rim light to Vicky and her sister. The suggestion of course, was that light from inside was spilling out onto the porch, and it looked just beautiful.

We used the diffusion material once again for the same purpose. We needed a supposed night view of the house. I set up the camera with no filter at a spot looking past a very pretty tree in the foreground so I had a nice composition of the house. All visible windows were covered inside by the diffusion material and lighted as before with slightly amber light. We shot the scene at magic hour, and by very careful checking with the contrast glass, got a beautiful image of amber light spilling out of the windows, and just enough detail in the

Continued on Page 1444



The "FOUR CHILDREN" featured in the film of the same name. From the top: Gus Quintero, Vicky June Morgan, Chris Twyman and Maria Berta Rodriguez.



# NEW from cinema products



## AERO-KIT The All Focusing Quartz Location Lighting Kit

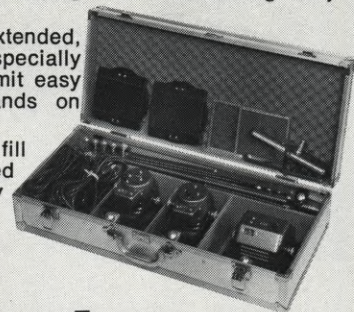
The Aero-Kit  
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The compact Aero-Kit, which weighs less than 31 lbs., includes: two focusing spot lights with two detachable rotating four-way barndoors; one focusing fill light with integral four-way barndoors; three 10 ft. long three-wire cables (with in-line switches); three 15 ft. long three-wire extension cables; one gator grip; three professional-type stainless steel light stands; and a sturdy aluminum carrying case, measuring only 6½"x12"x26½".

The light stands (10 ft. high when fully extended, and 24" high when telescoped) are specially designed with adjustable legs which permit easy and stable placement of the light stands on uneven ground surfaces.

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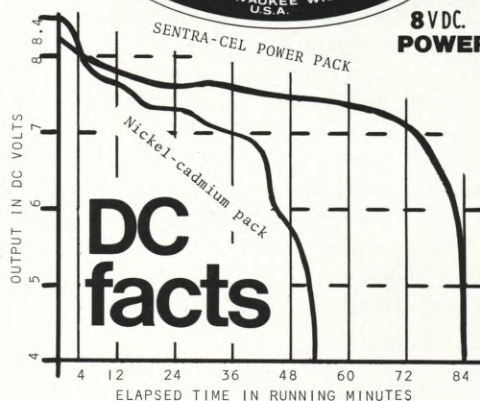
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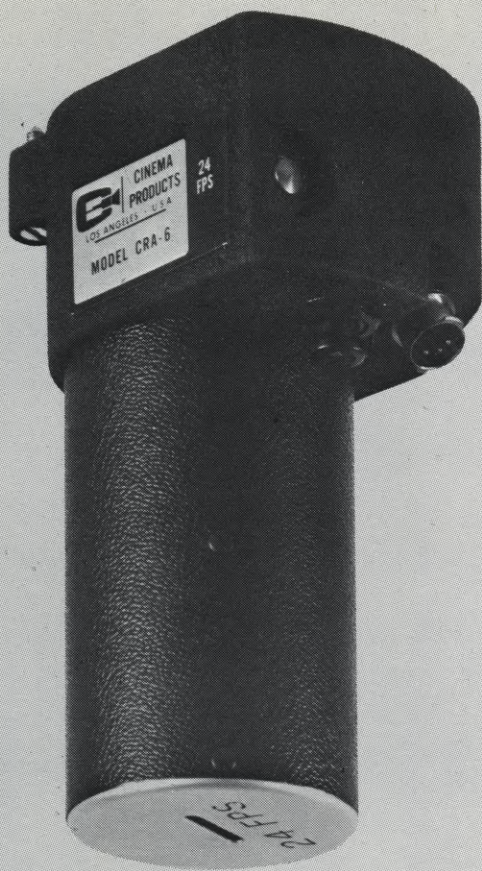
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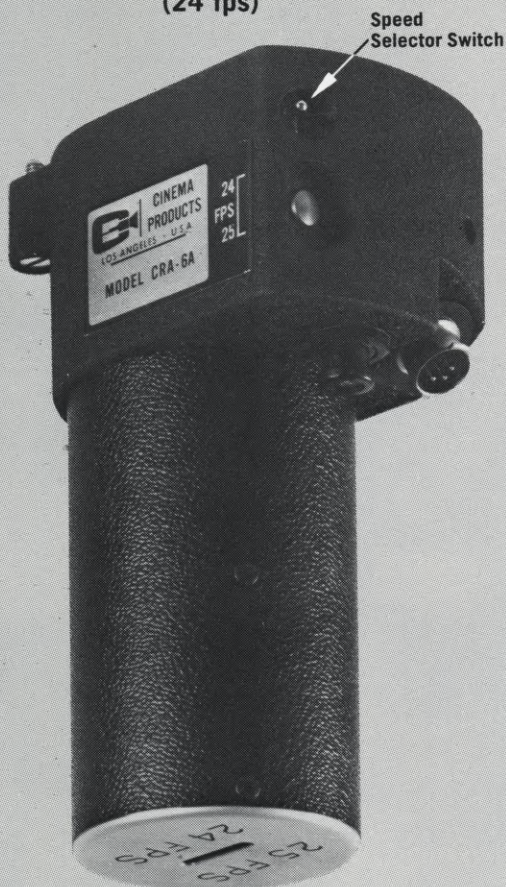
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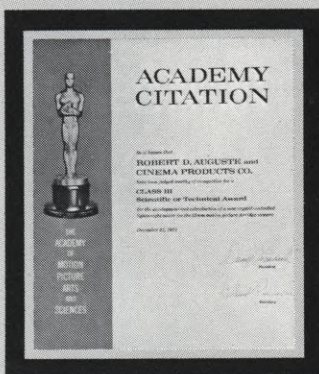
# CRA-6 and CRA-6/A Crystal Controlled Motors for Arriflex 35mm Cameras



**MODEL CRA-6  
(24 fps)**



**MODEL CRA-6/A  
(24 fps / 25 fps)**



Cinema Products' Academy Award winning crystal controlled motor—designed for Arriflex 35mm cameras—is now available in two new models: the CRA-6, which runs at 24 fps; and the CRA-6/A, which runs at 24 fps or 25 fps (controlled by a selector switch). All the electronics are contained within the motor housing—making the CRA-6 and CRA-6/A crystal controlled motors the lightest and most compact motors available for the Arriflex 35mm camera. CRA-6 and CRA-6/A motors are ideally suited for normal hand-held sync shooting from any standard Arri battery pack.

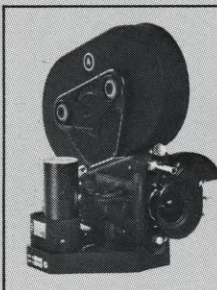
CRA-6 and CRA-6/A motors utilize the very latest COS/MOS integrated circuitry for extremely compact, efficient operation. These motors contain the same advanced crystal oscillators as in all of our previous motors, with an accuracy of  $\pm 15$  parts per million over a temperature range of 0° to 140°F.

Complete CRA-6 and CRA-6/A motor packages are 1/4-lb. lighter than the existing constant speed motor, and are smaller in diameter, providing a much more convenient handgrip.

CRA-6 and CRA-6/A crystal motor housings are designed for use with standard Arriflex 35 tripod heads, including Ronford, Sachtler & Wolf, and other similar heads.

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- Power Consumption: 1.5 amps maximum full load current.
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Optional Flat Base includes digital foot-age counter and fits in "Cine 60" blimp or Arri 120 S blimp. (Note: Adapter bracket is available for Arri 120 S blimp.)

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# Eat your heart out.

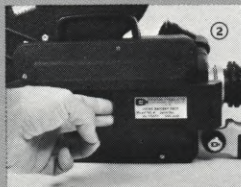
If you're not using the CP-16 or CP-16/A for your TV news or documentary filmmaking, you have every reason to feel sorry for yourself.

A look at just some of the outstanding features of the CP-16 16mm camera system will show you why:



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③ Cameras are lightweight even when fully equipped with battery pack, loaded 400' magazine, 12-120mm Angenieux zoom lens: CP-16, 15 lbs. 13 oz.; CP-16/A (with Crystasound record/playback head and built-in amplifier), 16 lbs. 13 oz.

④ Despite light weight, cameras are extremely rugged and completely reliable.

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⑥ No need for a tripod when speed and camera angle make the difference in getting a shot.

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⑧ Cameras perform equally well in all types of weather, from extreme heat to extreme cold.



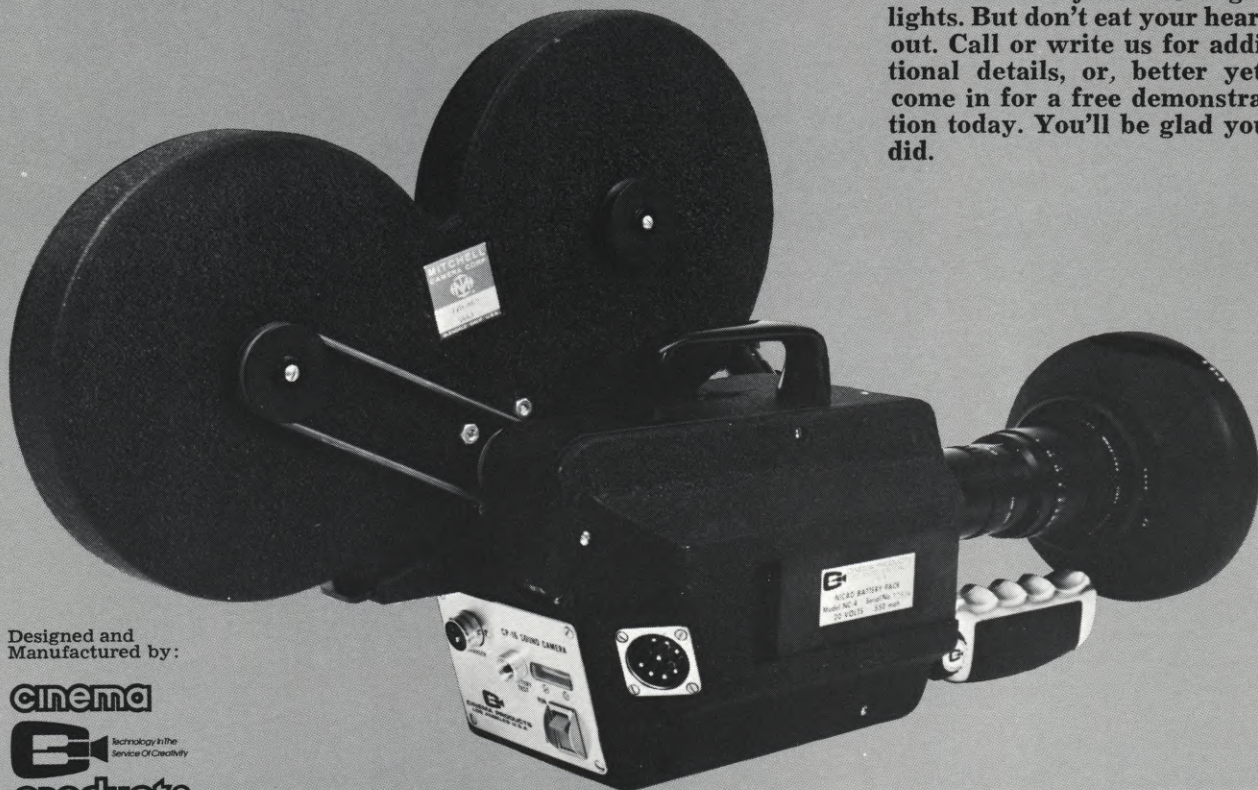
⑨ Standard Mitchell-type 400' or 1200' magazines can instantly be snapped on or off camera with unique quick-release button.

⑩ CP-16/A features built-in Crystasound amplifier which draws its power from the same battery pack that drives the camera.



⑪ CP-16 camera system is all-American made.

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# MAKING IT IN FILM

"We originally wanted to title our movie 'I Was an Infant Con Man' or 'I Was an Adult Con Man Who Ought to Have Known Better.' It ended up 'Marjoe.'

"Marjoe' is a documentary about a man who repented and exposed an evangelist racket. And he did it right in front of our cameras.

"Our contract with the distributor required us to deliver a 35mm picture 'first-class in artistic, pictorial and dramatic quality... of such exhibition, entertainment and amusement value as shall make it suitable and desirable for presentation to the public in the highest class motion picture theatres in the United States of America and elsewhere.'

"Verbatim. To us that meant a 16 to 35mm blowup without grain the size of grapefruit and a distorted, incoherent sound track.

"We chose 16mm because it's certainly not an 'underground,' 'educational' or 'senior thesis' film anymore.

"In fact, we couldn't have done it without 16mm. We chronicled Marjoe's last months as a boogie-woogie evangelist in churches and tents all over America. We recorded the private, intense, bizarre and beautiful spectacle of human faith. We had to be practically invisible so as not to disrupt this ritual. No towering cranes, tracks, dollies; no slates, no bullhorns, booms or second takes.

"The types of Eastman film stock available in 16mm are better quality, and the ongoing improvement has given rise to a breed of cameramen highly skilled in cinema verite work. We chose cameramen by checking their unedited sample footage for smooth movement and quick, accurate response to significant images in a charged crowd situation, and who could slide through a throng of people as if their cameras were a natural part of their anatomy.



Howard Smith and Sarah Kernochan. Producers/Directors of "Marjoe."

"The presence of cameras, microphones and spots made no change in the proceedings, because of the size and mobility of 16mm equipment. Most of our sound track was mixed on the spot into a single recorder from mikes near the audience and the preacher's mikes onstage.

"We chose Eastman color negative film 7254 because it best suited our needs since we were headed for a blowup to 35mm. After shooting, we went to TVC, a lab in New York that takes unusual care in processing 7254, to develop our negative. EUE/Screen Gems blew it up to a 35mm CRI (Color Reversal Intermediate). Release prints were made from this CRI and the 16mm negative was stored as our protection.

"All of us, together with TVC and EUE, were knocked out when we saw our first answer print. What we saw was not a blizzard of grain, but a sharp 'first-class' image, and above all, living color as deep as real.

"At a college campus screening, most of the audience thought they were watching a studio-produced, scripted dramatic film with professional actors. We had avoided the primary stigmata of cinema verite films: jerky, grainy, lurching contrasty images with an indistinct location track.

"Prospects for quality blowup

are even better now for 16mm filmmakers; we've seen tests for the new fine-grain Eastman color negative II film 7247. The image is superb.

"We want to credit everyone involved. Now that 'Marjoe' has been a critical success, has had its first run in domestic distributions, is opening all over the world and has won an Oscar, we as the producers can at last write our own ticket to direct scripted dramatic films with actors, top production value and comfortable budgets.

"We hope that in reading this, other people starting out as we did, having to make low-budget films in difficult conditions for quality theatrical distribution, will be encouraged."



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(Be sure to watch "The Men Who Made the Movies," an eight-part series made possible by a Kodak grant and scheduled for PBS broadcasting in November and December.)

# ACADEMY OF MOTION PICTURE ARTS AND SCIENCES BREAKS GROUND FOR NEW HEADQUARTERS BUILDING

After many years of planning, construction is formally started on a beautiful modern structure to house all Academy facilities

While a crowd of Hollywood motion picture celebrities looked on, the Academy of Motion Picture Arts and Sciences broke ground on September 18 for its new seven-story headquarters in Beverly Hills, California. The cost of the new building will be in excess of \$3 million, and completion is scheduled for Fall, 1974.

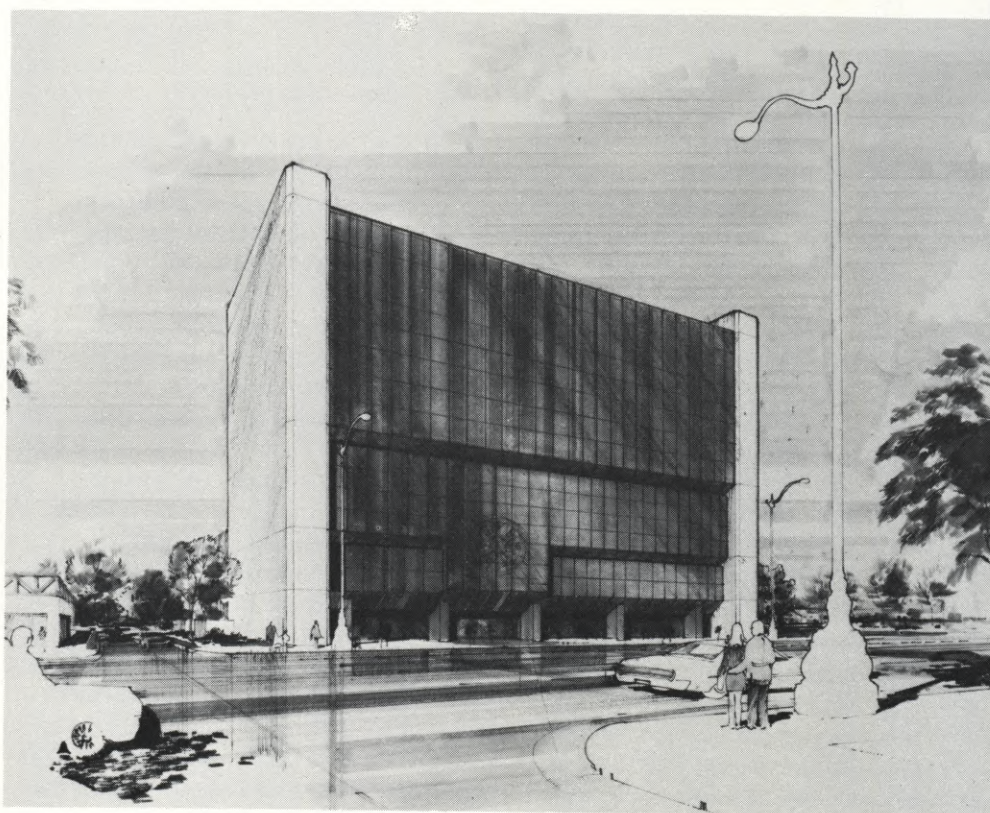
Site of the glass-facade structure is the northeast corner of Wilshire Blvd. and Almont Drive, with 150-foot frontage on both streets.

The new facility will include a 1,100-seat theater, 85-seat projection room and four floors of office space. One full floor will be devoted to the Margaret Herrick Library. There also will be one level of parking under the building.

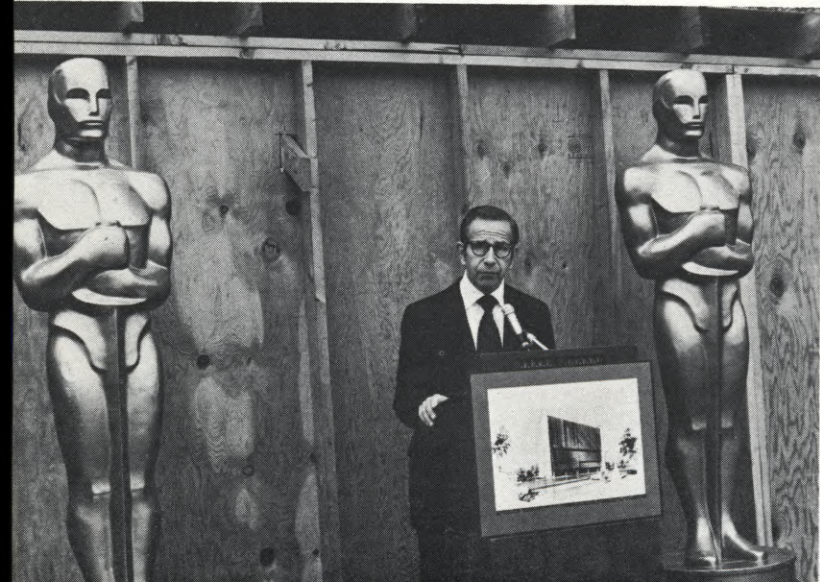
According to Academy President Walter Mirisch, the new building is a reflection of the broadening scope of the Academy's activities: "Although the Academy Awards presentation continues to be the single most visible aspect of our organization, our new facility will enable us to continue making significant advances in our cultural activities and services to our members and the film community at large. We are also pleased that our library, considered by many to be the finest collection of its kind in the world, will now have adequate space and equipment to serve our members, film researchers and the public."

Mirisch pointed out that many of the Academy's 3,800 members, who are among the world's leaders in film science and technology, have played an active consulting role in the facilities planned for the new building. He also

paid special tribute to Daniel Taradash, who, as president of the Academy for the past three years, "turned this building from a ten-year dream into the reality we are beginning to realize at today's groundbreaking ceremony."



(ABOVE) Architect's rendering of the Academy's \$3 million headquarters, now under construction in Beverly Hills. (BELOW LEFT) Flanked by two huge gold replicas of the famed "Oscar" Academy Award statuette, Academy President Walter Mirisch addresses those gathered for the ground-breaking ceremony. (RIGHT) Three of Hollywood's foremost directors, Robert Wise, Frank Capra and George Seaton (the latter two past presidents of the Academy), were among those present to launch construction of the new building.



In his remarks to those gathered for the ceremony, Mirisch said:

*"A long time ago the philosopher Plato met with his followers in a grove of trees outside of Athens. That grove was known as the Academy and ever since then, a society of learned men and women united to advance an art or science has been known as an academy. And so the craftsmen of this nation's only native art form, the motion picture, have also united; united to elevate the stature of their profession, to recognize noteworthy achievements, and to encourage the scientific, technical and artistic advancement of their calling.*

*"Today the Academy of Motion Picture Arts & Sciences closes the book on one chapter of its history, and opens the covers of another. Since its founding in 1927, the Academy has carried on its activities in four separate facilities. We have been in our present location since 1946 and the years since then have seen major growth and change in our industry. During these years the Academy has played a leading role in advancing the art and science of the motion picture. But inevitably our present physical facilities have neither matched the strides of our industry nor of the Academy.*

*"For the past decade, in appreciation of the need for suitable facilities to match its functions and its ambitions, the Academy has sought a new home. Under the presidencies of Gregory Peck and Dan Taradash, that search accelerated until today when we mark the end of that quest.*

*"There is a deeper significance to this new building for which we are breaking ground today. It is not just another seven-story insurance building or bank building on Wilshire Boulevard. It is rather a symbol of the viability and future of the motion picture as both an industry and as an art form. It is also symbolic of the Academy's commitment to expand its cultural and educational activities. This building is representative not only of our desire to increase our services to the Academy's 3,800 members, but in a wider sense to the film community and the public at large.*

*"In this new building we will be coordinating the many elements which go into the world famous annual Academy Awards presentation. From its Margaret Herrick Library will emanate information that will be used in the pursuit of knowledge of motion pictures. It will serve as the headquarters for such programs as student film achievement awards, stipends for young film makers learning from the masters, as well as funds for other scholarships.*

*"Our new building will contain an*



(ABOVE) Phyllis (Mrs. George) Seaton, charming Mayor of Beverly Hills, expresses her delight in having the Academy become part of the community which she administrates. (BELOW RIGHT) With the help of Academy past president Dan Taradash, Walter Mirisch and a three-handled shovel, Mrs. Seaton turns the first shovelful of dirt to break ground for the new building.

*1100-seat theater, a smaller 82-seat screening room, expanded facilities and room for our library, and—for the first time in many years—adequate office space for our staff.*

*"The list of people who have labored to see the arrival of this day is long and distinguished. They are names of stature not only within the Academy but in the world at large. Many of them are with us today: past presidents Frank Capra, George Seaton and Dan Taradash; past executive directors Margaret Herrick and Sam Brown and the current director, Jim Roberts; as well as members of our Board of Governors and Building Committees.*

*"This building will be completed within one year and it will represent an investment in excess of three million dollars. It is an investment though not merely in a new building, but in the future of motion pictures and of the Academy which was founded to advance its arts and its sciences.*

*"It is also particularly appropriate that our new building be located here.*

Continued on Page 1443



Famed Directors of Photography Hal Mohr, ASC and Charles G. Clarke, ASC, Members of the Academy Board, share a joke with George Seaton following the ceremony. The new seven-story facility will include a 1,100-seat theater, 85-seat projection room and four floors of office space. One entire floor will be devoted to the Margaret Herrick Library.



# THE TIME MACHINES



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## Have you got a better name for the fastest handling news cameras in the world?

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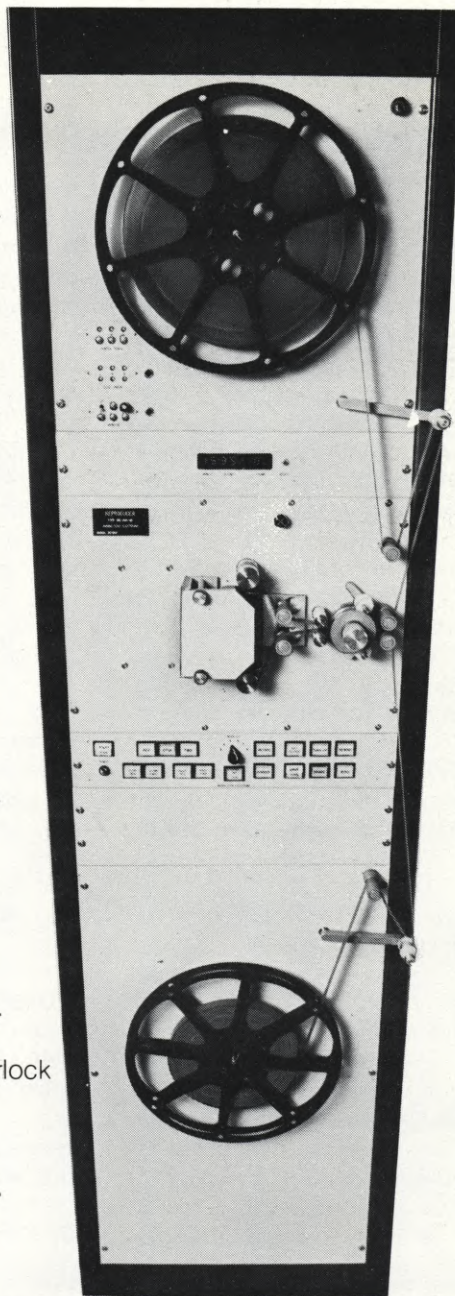
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## FILMING "WESTWORLD"

Continued from Page 1397

to get around limitations of the medium and one of them is what I call the "verbal flashback", in which a character who finds a moment of repose tells an anecdote or incident out of his life which reveals his character. It's the kind of thing that almost never happens in real life, but it's been a sort of movie trick to define character for a very long time. One of the things we tried to do in "WESTWORLD" was to let the audience find out about a character through what he does, instead of having him sit back and tell a little story about himself or his past. I think of this as using the unique qualities of the medium.

**QUESTION:** In translating "WESTWORLD" from the script onto the screen, you adopted a certain visual style, in terms of photography and action. Can you tell me something about that style and why you chose it?

**CRICHTON:** The style, I think, is very straightforward—very conventional and very traditional. In many ways, it's the way the film would have been shot, sequence-by-sequence, had the sequences appeared in a 40's Western or a 40's version of Robin Hood. We had very little hand-held work—almost none. We had, to the extent that it was possible, unobtrusive camera moves. It was designed to be a picture that didn't shriek: "Director of Photography"—but, rather, it kept those qualities in the background and tried to push the story up front. We had two specific reasons for doing the story in that way. One was that, because we were trying to suggest that the

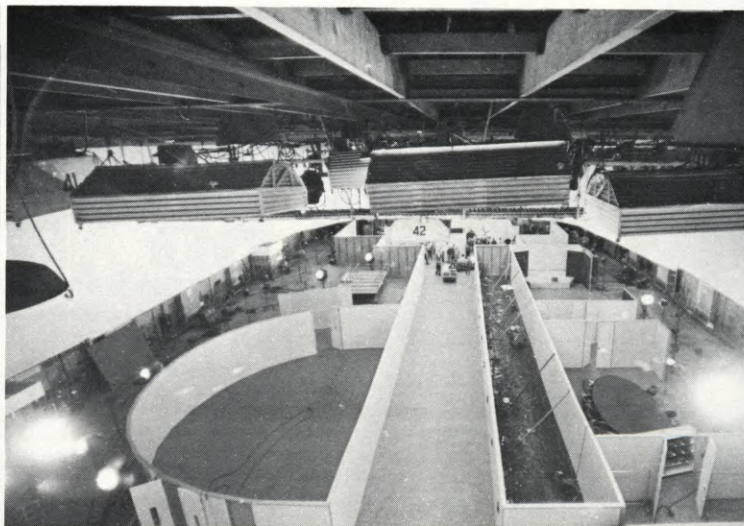
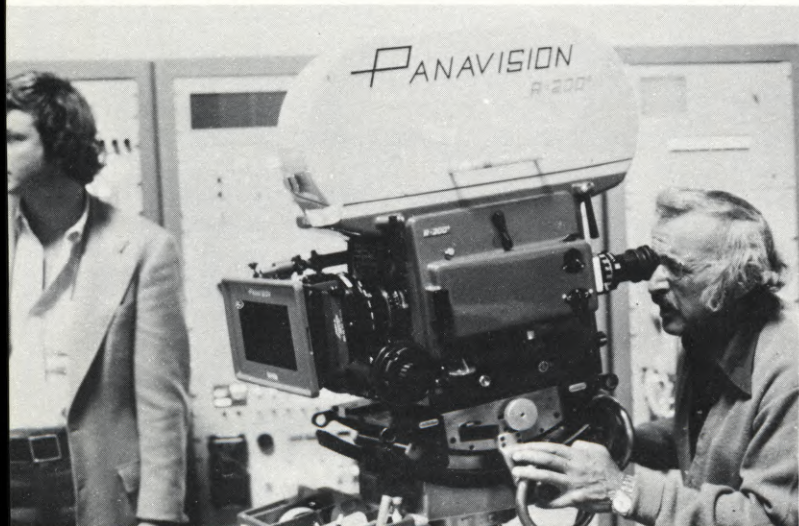
characters were trying to live out old movie fantasies, we attempted to shoot those fantasies as they used to be shot, at one time, even though those conventions are not used so often any more. For example, there was one instance in which we broke away from our desire for unobtrusive camerawork, just for this reason. That was in our exterior Western street sequences. Everything was a crane shot because, as far as I can tell, all the old Western movies had crane shots. The camera went up or down every time the good guys rode into town or the bad guys rode out of town. There was always a vertical camera move, for reasons which I never really understood—but we did it, too. The other reason for shooting in that sort of conservative way is that the story itself is very strange and, in such a case, I think that there is always an enormous temptation to shoot it strangely, to have bizarre combinations in very odd framings and to cut people's faces in half in order to use extreme closeups. My feeling was that the strangeness of the story would, in fact, be emphasized by conventional shooting, rather than by a photographic style which kept saying to the viewer: "Isn't this odd? Isn't this odd? Look how odd it is. We're even going to shoot it odd."

**QUESTION:** In regard to Gene Polito, your Director of Photography on "WESTWORLD", can you tell me something about your method of working together, the rapport established between you, and his ability to translate into visual terms what you had in mind?

**CRICHTON:** I'd known about Gene's

abilities because of the work he'd done with Michael Ritchie, whom I admire, and I felt that he would be able to handle the very special problems we would encounter on this film. We wanted the picture to have a kind of "classic" look to it—but we were given a very, very short shooting schedule and we had an enormous range of technical problems. The picture would have been miserably difficult to do even with a long schedule, but we had a 30-day schedule and getting it all on film the right way seemed close to impossible. Gene is terrifically well-organized and tremendously competent in technical areas, which, for this picture, was enormously important. We had a wide range of special effect situations and technically challenging problems—which certainly frightened me because of what I didn't know about such things. We were shooting rear-screen and front-projection and blue screen and color video re-photography, and we were shooting certain of the actors wearing mirrored contact lenses. We filmed a lot of the picture at very low light levels and we were moving incredibly fast, so that we were forced into multiple-camera situations more than any of us would have liked—especially with Panavision, because it gets hard to squeeze those cameras around when the picture is so wide. Gene is just terrific for all of that. We moved so fast that nobody could believe it, and we couldn't believe it ourselves while we were doing it. We made 52 set-ups one day and 47 the next day, while we were at Warner Bros. shooting exteriors on the Western street—and we'd sit around at the end of the day and marvel at how we'd gotten through it.

(LEFT) Gene Polito sets a composition with the Panavision R-200 camera. (RIGHT) A huge set, representing a NASA-type complex housing the control center and "robot repair" was constructed on MGM's Stage 25, which measures approximately 117 feet by 195 feet, with a 360-degree cyclorama backdrop 40 feet high. Overhead can be seen the "chicken coops", large soft-light units, each of which contains ten 1000-watt silver-bowled globes. These units provided a general light of 125 foot-candles over the entire set, making possible 360-degree pan shots and countless camera set-ups per day.







(LEFT) Crichton checks a set-up through the viewfinder of Panavision-modified Arriflex camera in special Panavision blimp. (RIGHT) Lining up for a high-angle shot. Despite the fact that the subject matter of the film is very bizarre, Crichton resisted the temptation to implement a bizarre photographic style, opting, instead, for a straightforward "very conventional and very traditional" style. It was his feeling that the strangeness of the story would, in fact, actually be emphasized by conventional shooting.

**QUESTION:** You mentioned the use of multiple cameras. Would you like to elaborate a bit more on how and why you used them?

**CRICHTON:** It was strictly in the interest of efficiency and being able to save a lot of time, with no sacrifice to the kind of picture I was after. We had a lot of complicated action and there were a lot of things we couldn't afford to do twice. If there was a large piece of breakaway glass or a specially equipped suit that was destroyed, we used multiple cameras because we couldn't repeat it. We didn't have the budget for another piece of glass or whatever. The production people were very much opposed to our use of multiple cameras, arguing that it would be cheaper to stage the stunt again, but I think we demonstrated convincingly that this was not true. There were several situations where we were using normal speed and high speed in the same set, and Gene suggested that if he put the ultra-high-speed Panavision lens on the Mark II camera, he would not have to relight. The only question was whether I could live with the 55mm lens—which I was very happy to do. It kept the actors a bit cooler, also. A lot of the time we were shooting at 5 foot-candles. By the time we hit 12 or 15, everybody began to relax and say: "This is no big problem." When it got up to 30, nobody had any sympathy for Gene at all. After all, it was 30 foot-candles. Anybody could shoot with that. He demonstrated early on that he was fine working at those levels, so that's what he did.

**QUESTION:** Even though you've spok-

en of a "straightforward" photographic style, it would seem to me that the very nature of the story would demand techniques that were somewhat less than conventional; isn't that so?

**CRICHTON:** Actually, yes. For example, Gene shot many of the exteriors without the 85 filter, and we tried a lot of other things, little tricks and innovations that came to mind, but we ultimately abandoned most of them. Some of our sets were entirely white and Gene tried various combinations of under-exposing and forcing development to see what would happen to the contrast. The MGM lab had been alerted to this, but the guys down there were terrified all the time. Also, we were doing a lot of sort of smart-guy, first-time-director stuff. For example, we had a couple of 360-degree and 720-degree shots and Gene, to my astonishment, never batted an eye. I really expected to hear him say something like: "You can't do that." or "It will take a day to light it."—but that never happened. I'd say: "Now, we're going to do a 360 here." and he'd say: "Yep. All right." There was no sort of reaction at all. It was a very strange experience.

**QUESTION:** What about the special footage that had to be shot for the video monitors and also to provide John Whitney, Jr. with what he would need to make the computerized robot point-of-view shots?

**CRICHTON:** Along with our regular production footage, we were shooting two other kinds of special footage. We were shooting flat film for transfer to video tape, so that we could later

re-photograph it off of video monitors. We were also shooting footage that was going to be processed by computer to represent the robot point-of-view. This was a kind of hazardous situation and we were a little bit concerned about it. The computer program that was going to generate the final footage had been worked out by the time we started shooting, but the tests were disturbing because of the variety of options they offered us. It wasn't clear exactly what the computer required, except that it wanted a lot of contrast. We shot it that way and later discovered that it was easy to increase contrast within the computer itself. We finally began to pull other footage that we hadn't expected to give the computer and fed it less contrasty stuff. Color contrasts were important. As a result, for our exterior sequences, a poor fellow who was to double for Dick Benjamin was done up entirely in red. His hands and his face and his clothing were all bright red, because, when he was standing against a blue sky, we didn't want to lose him. Then we had another sequence where Benjamin was in totally white makeup.

**QUESTION:** I'm sure you've been asked this question a million times, but I know that our readers will be interested to learn how and why, having gotten your degree as a medical doctor, you ended up writing and directing films. It seems like quite a switch.

**CRICHTON:** Well, it does seem strange, but I think it's what I always wanted to do. The only other doctor I know of who's done the same thing, Jonathon Miller, has said something which I think

Continued on Page 1436

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### **Aberdeen Proving Ground, A-V Div.** "GAMES"

*Producer* — Larry Ross  
*Director* — Philip L. Schuyler, Jr.  
*Cinematographer* — Jerry J. Nugent

### **Film & TV Comm.** "NOW . . . WEST AFRICA"

*Director/Cinematographer* — John S. Nash

### **The Franklin Mint** "THE ENCHANTED ISLES"

*Producer* — Barry R. Nemcoff  
*Director/Cinematographer* — Philip Galligan

### **General Dynamics** "ALL SYSTEMS GO"

*Producer* — R. B. Montague  
*Director* — Bill Woods  
*Cinematographers* — William Carter, C. N. Demund

### **IBM Canada Ltd.** "129 CLOSE-UP"

*Producer* — Eric Jordan  
*Cinematographer* — George Dunbar

### **Illinois Central Gulf R.R.** "WE'RE THAT KIND OF A DEPARTMENT"

*Producer/Director* — T. Allen Southall  
*Cinematographer* — T. Allen Southall

### **Los Alamos Scientific Laboratory** "THE FIRST 25 YEARS"

*Head Librarian* — J. Arthur Freed  
*Cinematographers* — Billy R. Claybrook, Robert A. Gordon

### **Martin Marietta Corp.** "HICAP PAGER"

*Producer/Director* — Ralph Bevins  
*Cinematographers* — Al LeBoeuf, Dave Fitz-Randolph

### **McDonnell Douglas Corp.** "VITAL 11"

*Writer/Producer* — Daniel Grice

### **NASA Lewis Research Center** "PROTECTIVE CLOTHING IN HANDLING XENON LAMPS"

*Head, M.P. Sec.* — Arthur L. Laufman  
*Cinematographer* — Clifford Brooks

### **Naval Missile Center** "SOMEONE SPECIAL"

*Photo/Graphics Department*

### **Russell Research Center** "INSECTS VS. ALLIGATORWEED"

*Producer* — Lloyd A. Andres  
*Director* — William G. Murray  
*Cinematographer* — William G. Murray

### **Sikorsky Aircraft** "HOLLAND HEARTBEAT"

*P.R. Manager* — Frank J. Dealer

### **Southern Pacific Transportation** "THE PIPE LINE OF BLACK MESA"

*Producer/Director* — Edward L. Carroll  
*Cinematographer* — Almonte Bailey

### **The Upjohn Co.** "UPJOHN TODAY"

*Producer/Director* — Don Braymer, George Disborough

# AWARDS OF THE SIXTH ANNUAL ATLANTA INTERNATIONAL FILM FESTIVAL

**Golden Phoenix**  
**Best of Festival**  
 "THE PAPER CHASE"  
 20th Century-Fox

**Silver Phoenix**  
**Best Feature**  
 "HEAVY TRAFFIC"  
 American International Pictures

**Silver Phoenix**  
**Best Short Subject**  
 "ANOTHER SATURDAY NIGHT"  
 Poster Pictures

**Silver Phoenix**  
**Best Experimental Film**  
 "FRANK FILM"  
 Pyramid Films

**Silver Phoenix**  
**Best Television Film**  
 "F. SCOTT FITZGERALD AND THE LAST OF THE BELLES"  
 Titus Productions

**Silver Phoenix**  
**Best Documentary Film**  
 "NORMAN ROCKWELL'S WORLD, AN AMERICAN DREAM"  
 Concepts Unlimited, Inc.

**Silver Phoenix**  
**Best Television Commercial**  
 "BONOMO KID"  
 Garfield-Linn Co.

**Best Director**  
**Jim Bridges**  
 "THE PAPER CHASE"  
 20th Century-Fox

**Best Actor**  
**Jeff Bridges**  
 "THE LAST AMERICAN HERO"  
 20th Century-Fox

**Best Actress**  
**Margot Kidder**  
 "SISTERS"  
 American International Pictures  
 A Pressman-William Enterprise

**Best Supporting Actor**  
**John Houseman**  
 "THE PAPER CHASE"  
 20th Century-Fox

**Best Supporting Actress**  
**Tina Lund**  
 "SUMMER RUN"

**Best Cinematographer**  
**Gordon Willis**  
 "THE PAPER CHASE"  
 20th Century-Fox

**Best Screenplay**  
**James Bridges**  
 "THE PAPER CHASE"  
 20th Century-Fox

**Best Editor**  
**Tom Rolf**  
 "THE LAST AMERICAN HERO"  
 20th Century-Fox

**Best Musical Score**  
**Bernard Herrmann**  
 "SISTERS"  
 American International Pictures

**Foreign Feature**  
**Gold Medal**  
 "LA RAISON DU PLUS FOU"  
 Alain Poire-Jacques Portet

**Silver Medal**  
 "THE GOAT HORN"  
 Filmbulgaria

**Bronze Medal**  
 "THE RAINBOW BOYS"  
 Potterton Productions

**Animated Feature**  
**Gold Medal**  
 "LA PLANETTE SAUVAGE"  
 New World Pictures

**Silver Medal**  
 "ASTERIX AND CLEOPATRA"  
 Dargaud Productions

**Low Budget Feature**  
**Gold Medal**  
 "SUMMER RUN"  
 Patric Ferrell, Steven Graham

**Silver Medal**  
 "BOESMAN AND LENA"  
 Blue Water Productions

**Bronze Medal**  
 "THE REBEL JESUS"  
 Garner-Houston Productions

**Documentary Feature**  
**Gold Medal**  
 "VISIONS OF EIGHT"  
 Wolper Productions

**Silver Medal**  
 "THRESHOLD"  
 Gardner/Marlow/Mays

**Bronze Medal**  
 "CHARIOTS OF THE GODS"  
 Sun International

**Feature Made for TV**  
**Gold Medal**  
 "TROUBLE COMES TO TOWN"  
 Chambers and Associates

**Special Jury Award**  
**Gold Medal**  
 "OIL LAMPS"  
 Czechoslovak Film Studios

"SHOCK TREATMENT"  
 Alain Jessua

"HEX"  
 20th Century-Fox

"LE FAR WEST"  
 Claude Lelouch, Films 13

"KAMOURASKA"  
 Les Productions Carle-Lamy Ltée.

"SINBAD"  
 Zoltan Huszarik

**Silver Medal**  
 "DEADLY FATHOMS"  
 HMS Film Corporation

"WRESTLING QUEEN"  
 Snowman Productions

**Forward Atlanta Award**  
**Best Atlanta Production**  
 "QUICKDRAW"  
 Shelton Productions

**TARA Award**  
**Best Southern Production**  
 "COUNTRY BLUE"  
 Millstone Productions

**Interfilm Award**  
**Best Student Production**  
 "THE GUITARIST"  
 Jamil Delhavi

**Special Student Awards**  
**Gold Medal**  
 "GREATER EXPECTATIONS"  
 University of Southern Calif.  
 University Park, L.A., CA

**Silver Medal**  
 "PEEGE"  
 Kleiser-Knapp Productions  
 Santa Monica, CA

**Bronze Medal**  
 "THE BOARDED WINDOW"  
 Alan Beattie  
 Brookline, Mass.

**Special Jury Awards**  
 "CONDENSED CREAM OF BEATLES"  
 Braverman Productions, Inc.  
 Los Angeles, CA

"THE HAUNTED WEST"  
 Wolper Productions, Inc.  
 Los Angeles, CA

"THE AGE OF BALLYHOO"  
 Post-Newsweek Productions  
 Washington, D.C.

"FOOT FETISH"  
 Kleiser-Knapp  
 Santa Monica, CA

"NO LIES"  
 Mitchell Block  
 New York, NY

"JOEY'S WORLD"  
 Filmline/Computer Image Corp.  
 Hollywood, CA

"CATTLE"  
 Arthur Hoyle  
 Malibu, CA

"AKKI . . . THE BLACK POET"  
 WKYC-TV  
 Cleveland, Ohio

"WHO IS GURU MAHARAJ-JI?"  
 Shri Hans Productions  
 Los Angeles, CA

"K-2 SHORT FILM"  
 The Van Ackeren Co.  
 Seattle, WN.

"WAYS TO QUIT"  
 Ted Milan  
 New York, NY

"A CHRISTMAS CAROL"  
 Richard Williams Animation Ltd.  
 London, England

"ALICE'S TEA PARTY"  
 Richard Williams Animation Ltd.  
 London, England

"A JOURNEY"  
 Wombat Productions, Inc.  
 White Plains, NY

"MOTOCROSS"  
 Standard, Ogilvy & Mather  
 Sao Paulo, Brazil

"STRANGE CREATURES OF THE NIGHT"  
 Wolper Productions  
 Los Angeles, CA

"ALL YOU NEED IS MONEY"  
 All You Need is Money, Inc.  
 Los Angeles, CA

"WHERE DEAD MEN LIE"  
 Australian Commonwealth Film Unit  
 New York, NY

"THE GIVING TREE"  
 Stephen Bosustow Productions  
 Santa Monica, CA

"YOUNG GOODMAN BROWN"  
 Pyramid Films  
 Santa Monica, CA

"WIND RADIO #1"  
 WIND  
 Chicago, Ill.

## Television Films

**Public Affairs Program**  
**Gold Medal**  
 "SATURDAY NIGHT AT FORT APACHE"  
 WNBC-TV  
 New York, NY

**Silver Medal**  
 "HELP ME MAKE IT THROUGH THE NIGHT"  
 WMAL-TV  
 Washington, D.C.

**Bronze Medal**  
 "MESSAGES IN CLAY"  
 KCET CHANNEL 28  
 Los Angeles, CA

**Public Affairs Series**  
**Gold Medal**  
 "THE HESSIAN"  
 American Revolution Films Co.  
 Media, PA

**Silver Medal**  
"SIN CITY"  
WMAL-TV  
Washington, D.C.

**Bronze Medal**  
"OUTSIDE THE GOLDEN RING"  
WRC-TV  
Washington, D.C.

**Public Affairs Spot**  
**Gold Medal**  
"MAKE THE SYSTEM WORK"  
KING-TV  
Seattle, Wash.

**Documentary**  
**Gold Medal**  
"CHILDREN OF TROUBLE"  
WNBC-TV  
New York, NY

**Silver Medal**  
"WILD DOGS OF AFRICA"  
Metromedia Producers Corp.  
Los Angeles, CA

**Bronze Medal**  
"THE MAKING OF 'SILENT RUNNING'"  
Chuck Barbee Productions  
Sausalito, CA

**TV Series**  
**Gold Medal**  
"CANADA: 5 PORTRAITS—THE SHIELD"  
CTV Television Network Ltd.

**Silver Medal**  
"AN AMERICAN FAMILY"  
WNET/13  
New York, NY

**Bronze Medal**  
"AMERICA—GONE WEST"  
Time-Life Films Multimedia  
New York, NY

**Specials, Local**  
**Gold Medal**  
"NEW TOWNS"  
KERA-TV  
Dallas, Tex.

**Silver Medal**  
"MORE POWER TO YOU"  
WMAQ-TV  
Chicago, Ill.

**Bronze Medal**  
"THE CITY CLOSEST TO HEAVEN"  
WNAC-TV  
Boston, Mass.

**Film Specials—Network**  
**Gold Medal**  
"PROPHECY"  
Ontario Educational Comm. Auth.  
Toronto, Canada

**Silver Medal**  
"VD BLUES"  
WNET/13  
New York, NY

**Bronze Medal**  
"THE SMILE OF THE WALRUS"  
Metromedia Producers Corp.  
Los Angeles, CA

**The Arts**  
**Gold Medal**  
"WHO BUILT THIS PLACE"  
KERA-TV  
Dallas, Tex.

**Silver Medal**  
"STAFFORDSHIRE DEJA VU"  
Rainbow Productions  
Chicago, Ill.

**Bronze Medal**  
"CYCLE OF LIFE"  
Kiva Films, Inc.  
South Hadley, Mass.

#### Documentary Films

**Biographical**  
**Gold Medal**  
"MR. SHEPARD AND MR. MILNE"  
Weston Woods Studios, Inc.  
Weston, Conn.

**Silver Medal**  
"MIMI"  
Billy Budd Films  
New York, NY

**Bronze Medal**  
"MAPLE SUGAR FARMER"  
W. Craig Hinde  
Carbondale, Ill.

**Business & Industry**  
**Gold Medal**  
"SX-70"  
Polaroid Corp.  
Cambridge, Mass.

**Silver Medal**  
"PAPER: THE PROLOGUE"  
Goldsholl Associates, Inc.  
Northfield, Ill.

**Bronze Medal**  
"UP THE ORGANIZATION"  
Time-Life Films Multimedia Div.  
New York, NY

**Children's Films**  
**Gold Medal**  
"PATRICK"  
Weston Woods Studios, Inc.  
Weston, Conn.

**Silver Medal**  
"LICKETY SPLIT LICORICE"  
Moreland-Latchford Prod.  
Toronto, Canada

**Bronze Medal**  
"FACES"  
Schloat Productions  
Pleasantville, NY

**Drug Education**  
**Gold Medal**  
"THE MAGGOTT"  
Topper Carew  
Boston, Mass.

**Silver Medal**  
"LOUIE GETS HIS LICKS"  
McGraw Hill Films  
New York, NY

**Bronze Medal**  
"ALCOHOLISM: A MODEL OF DRUG DEPENDENCY"  
CRM Productions  
Beverly Hills, CA

**Ecology & Conservation**  
**Gold Medal**  
"THE EMPTY NEST"  
Learning Corp. of America  
New York, NY

**Silver Medal**  
"WATCH OUT FOR MY PLANT"  
Barr Films  
Pasadena, CA

**Bronze Medal**  
"BAOBAOB: PORTRAIT OF A TREE"  
McGraw Hill Films  
New York, NY

**Educational-Adult**  
**Gold Medal**  
"HISTORY OF THE MOTOR CAR"  
British Petroleum

**Silver Medal**  
"MORAL DEVELOPMENT"  
CRM Productions  
Beverly Hills, CA

**Bronze Medal**  
"MESSAGE"  
Bill Cote & Gordon Inkeles  
Berkeley, CA

**Educational—Children**  
**Gold Medal**  
"WHAT IS NOTHING?"  
Barr Films  
Pasadena, CA

**Silver Medal**  
"HOW LONG IS A MINUTE"  
Malibu Films, Inc.  
Malibu, CA

**Bronze Medal**  
"THE BIG RED BARN"  
Moreland-Latchford Productions  
Toronto, Canada

**Ethnic & Cultural**  
**Gold Medal**  
"FOUR CHILDREN"  
AVCO Broadcasting Corp.  
Cincinnati, Ohio

**Silver Medal**  
"TWO FACES OF THE SEA"  
The Film Group, Inc.  
Cambridge, Mass.

**Bronze Medal**  
"NAVAJO: THE LAST RED INDIANS"  
Time-Life Films Multimedia Div.  
New York, NY 10020

**Fund Raising**  
**Gold Medal**  
"JULIE . . . AND TOMORROW"  
Vision Associates  
New York, NY

**Silver Medal**  
"THE TURNING POINT"  
United Way of America  
Alexandria, VA

**Bronze Medal**  
"DIAL SWITCHER IN A VIDEO WASTELAND"  
KERA TV 13  
Dallas, Tex.

**Harmony of Man**  
**Gold Medal**  
"6344"  
Joseph Pipher  
Hollywood, CA

**Silver Medal**  
"THE PREJUDICE FILM"  
Motivational Media  
Los Angeles, CA

**Bronze Medal**  
"OLIVIA: MEXICAN OR AMERICAN"  
Dimension Films  
Los Angeles, CA 90038

**History**  
**Gold Medal**  
"THE SEARCH FOR THE NILE"  
Time-Life Films Multimedia Div.  
New York, NY

**Silver Medal**  
"THE MYTH"  
Ontario Education Comm. Auth.  
Toronto, Canada

**Bronze Medal**  
"AN ESSAY ON WAR"  
Encyclopaedia Britannica  
Chicago, Ill.

**Medical & Health**  
**Gold Medal**  
"TEETH . . . ARE GOOD THINGS TO HAVE"  
Association Sterling Films  
New York, NY

**Silver Medal**  
"SOMEBODY WAITING"  
Univ. of California  
Berkeley, CA

**Bronze Medal**  
"AMERICA ON THE ROCKS"  
Airlie Productions  
Airlie, VA

**Political**  
**Gold Medal**  
"FORTY-SEVEN CENTS"  
University of Calif.  
Berkeley, CA

**Silver Medal**  
"CHRISTIANS AT WAR"  
Time-Life Films Multimedia Div.  
New York, NY

**Bronze Medal**  
"JOSEPH SCHULTZ"  
Wombat Productions, Inc.  
White Plains, NY

**Public Relations**  
**Gold Medal**  
"UP HERE LOOKING DOWN"  
Sandra Northrop  
Los Angeles, CA

**Silver Medal**  
"USA ADVENTURE"  
Universal Commercial Industrial Films  
Universal City, CA

Continued on Page 1428

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**Bronze Medal**  
"THE FAMILY OF MUSIC"  
Gary Youngman Co., Inc.  
New York, NY

**Public Service**  
**Gold Medal**  
"GIVE US THIS DAY OUR  
DAILY BREAD"  
CTV Television Network  
Toronto, Canada

**Silver Medal**  
"HOT CARDS—A SHORT  
LESSON IN FRAUD"  
Muyskens/Madison, Inc.  
New York, NY

**Bronze Medal**  
"THEIR SPECIAL NEEDS"  
Medion, Inc.  
San Francisco, CA

**Recruiting**  
**Gold Medal**  
"THE OLD RELIABLES/9th  
INFANTRY DIVISION"  
Peckham Productions, Inc.  
New York, NY

**Silver Medal**  
"FASTEST 6 WEEKS OF YOUR  
LIFE"  
D'Arcy MacManus & Masius  
New York, NY

**Bronze Medal**  
"TROPIC LIGHTNING/25TH  
INFANTRY DIVISION"  
Peckham Productions, Inc.  
New York, NY

**Religion and Ethics**  
**Gold Medal**  
"BUDDHISM IN CHINA"  
Pictura Films Distribution Corp.  
New York, NY

**Silver Medal**  
"THOUGH I WALK THROUGH  
THE VALLEY"  
Pyramid Films  
Santa Monica, CA

**Bronze Medal**  
"YOUNG LIFE: A  
COMMITMENT"  
Vic-Winkle Productions, Inc.  
Studio City, CA

**Safety**  
**Gold Medal**  
"WATER: FRIEND OR FOE"  
Pyramid Films  
Santa Monica, CA

**Silver Medal**  
"VEHICLE UNDER ATTACK"  
William Brose Productions, Inc.  
Hollywood, CA

**Bronze Medal**  
"RIDE ON"  
McGraw Hill Films  
New York, NY

**Sales & Marketing**  
**Gold Medal**  
"SOUNDROUNDUS"  
Film Planning Assoc.

**Silver Medal**  
"HISTORY OF ATLANTIC  
RECORDS"  
Braverman Productions, Inc.  
Los Angeles, CA

**Bronze Medal**  
"MOVIN' ON"  
Handley & Miller, Inc.  
Indianapolis, Ind.

**Scientific & Research**  
**Gold Medal**  
"ART OF ORGANIC FORMS"  
Exhibits Motion Picture Unit  
Smithsonian Institution

**Silver Medal**  
"THE STATES OF MATTER"  
CRM Productions, Inc.  
Beverly Hills, CA

**Bronze Medal**  
"ERTS—EARTH RESOURCES  
TECHNOLOGY  
SATELLITE"  
NASA Headquarters  
Washington, D.C.

**Social Welfare**  
**Gold Medal**  
"TO BE GROWING OLDER"  
Billy Budd Films  
New York, NY

**Silver Medal**  
"REACHING OUT"  
Paramount Pictures Corp.  
Hollywood, CA

**Bronze Medal**  
"MONTAGE: THE RIGHT TO  
LIVE: THE FREEDOM TO  
CHOOSE"  
WKYC-TV  
Cleveland, Ohio

**Sports**  
**Gold Medal**  
"HOT DOG SKIING"  
Trans World International, Inc.  
Los Angeles, CA

**Silver Medal**  
"PELE, THE MASTER AND HIS  
METHOD"  
Pepsico, Inc.  
Purchase, NY

**Bronze Medal**  
"NORTH COUNTRY LADY"  
Bob Perry  
New York, NY

**Travelogue**  
**Gold Medal**  
"CANADA: 5  
PORTRAITS—THE  
PRAIRIES"  
CTV Television Network Ltd.  
Toronto, Canada

**Silver Medal**  
"ISRAEL . . . NATION OF  
DESTINY"  
Atlantis Productions, Inc.  
Thousand Oaks, CA

**Bronze Medal**  
"CANADA: 5  
PORTRAITS—THE  
ATLANTIC"  
CTV Television Network Ltd.  
Toronto, Canada

**Short Subjects**

**Animated**  
**Gold Medal**  
"ASTRALIS"  
Wombat Productions, Inc.  
White Plains, NY

**Silver Medal**  
"INVASION"  
McGraw Hill Films  
New York, NY

**Bronze Medal**  
"THE LEGEND OF SLEEPY  
HOLLOW"  
S. Bosustow Productions  
Santa Monica, CA

**Dramatic Fictional**  
**Gold Medal**  
"THE COMFORTS OF HOME"  
Sholip Productions, Inc.  
New York, NY

**Silver Medal**  
"BLOOD'S WAY"  
American Film Institute  
Beverly Hills, CA

**Bronze Medal**  
"LOVE IS HARD TO GET"  
Consolidated Vision Cinema  
Studios  
Hollywood, CA

**Lead-Ins & Trailers**  
**Gold Medal**  
"PAPER MOON"  
Rosebud Advertising Corp.  
New York, NY

**Silver Medal**  
"OF MEN & WOMEN"  
Elinor Bunin Productions  
New York, NY

**Bronze Medal**  
"THE FRIENDS OF EDDIE  
COYLE"  
Papp Film Services, Inc.  
New York, NY

**Live Action**  
**Gold Medal**  
"THE BOLERO"  
Pyramid Films  
Santa Monica, CA

**Silver Medal**  
"BALLET ADAGIO"  
Pyramid Films  
Santa Monica, CA

**Bronze Medal**  
"THE CITY"  
Monroe-Williams Productions  
Miami, FLA

**Mixed Media**  
**Gold Medal**  
"COMIC BOOK"  
Augustus Borghese  
River Vale, NJ

**Silver Medal**  
"RADIO ROCKET BOY"  
Robert Swarthe  
Beverly Hills, CA

**Bronze Medal**  
"CLAY NAM"  
McGraw-Hill Films  
New York, NY

**TV COMMERCIALS**

**Animated**  
**Gold Medal**  
"JUNGLE"  
Van Brunt & Company  
Chicago, Ill.

**Silver Medal**  
"PLUGFOOT"  
Snazelle Films, Inc.  
San Francisco, CA

**Bronze Medal**  
"PYRAMID CRASH"  
Meyers & Muldoon, Inc.  
San Francisco, CA

**International**  
**Gold Medal**  
"TWO COUPLES ON THE  
RIVER"  
Dimar Cinematografica S.A.  
Buenos Aires, Argentina

**Silver Medal**  
"THE WEDDING PIE"  
Carvis Publicidad, S.A.  
Barcelona, Spain

**Bronze Medal**  
"SMARTIES—SLALOM"  
Richard Williams Animation Ltd.  
London, England

**Local—Live Action, 30 Seconds**  
**Gold Medal**  
"WEATHERMAN AUDITION"  
WJZ-TV  
Baltimore, MD

**Silver Medal**  
"THE CHASE"  
Westinghouse Broadcasting Co.  
New York, NY

**Bronze Medal**  
"FUNNY FLICK"  
Asch & Assoc.  
Chicago, Ill.

**Local—Live Action, 60 Seconds**  
**Gold Medal**  
"QUICKDRAW"  
Shelton Productions  
Atlanta, GA

**Silver Medal**  
"NICE BOYS"  
WQXI-TV  
Atlanta, GA

**Bronze Medal**  
"STORING UP"  
Pearlman-McNee Productions,  
Inc.  
Houston, Tex.

**Local—Series**  
**Gold Medal**  
"WRC-TV SERIES"  
Eli Productions  
Washington, D.C.

**Silver Medal**  
"SPIES/IMITATORS"  
WLS-TV  
Chicago, Ill.



**Bronze Medal**  
"PORTLAND TRAFFIC SAFETY"

Northwestern, Inc.  
Portland, Ore.

**Mixed Media**  
**Gold Medal**  
"SKYWRITER"  
Chiaromonte Films  
Hollywood, CA

**Silver Medal**  
"THE HUMAN RACE"  
Jewish Chautauqua Society  
New York, NY

**Bronze Medal**  
"THE HARD HATS"  
William F. Finn & Assoc.  
Tyler, Tex.

**National, Live Action 30 Seconds**  
**Gold Medal**  
"KID"  
Garfield-Lynn & Co.  
Chicago, Ill.

**Silver Medal**  
"TERRIBLE DAY"  
McCann Erickson, Inc.  
Chicago, Ill.

**Bronze Medal**  
"MASTERPIECE"  
Chiaromonte Films  
Hollywood, CA

**National, Live Action 60 Seconds**  
**Gold Medal**  
"CALL ME"  
AT&T Long Lines  
New York, NY

**Silver Medal**  
"OLD MAN"  
Sunlight Pictures Corp.  
New York, NY

**National-Series**  
**Gold Medal**  
"SISTERS"  
AT&T Long Lines  
New York, NY

**Silver Medal**  
"BROTHERS"  
AT&T Long Lines  
New York, NY

**Bronze Medal**  
"MUSTARD SAUCE  
QUICK LOUIS DRESSING  
SHERBET DRESSING"  
Asch & Associates  
Chicago, Ill.

**Political**  
**Gold Medal**  
"UNCLE SAM"  
American Zoetrope  
San Francisco, CA

**Silver Medal**  
"VETERANS"  
Guggenheim Productions, Inc.  
Washington, D.C.

**Bronze Medal**  
"ELDERLY"  
Van Brunt & Co.  
Chicago, Ill.

**Public Service**  
**Gold Medal**  
"STATEWIDE DRUG ABUSE  
PREVENTION"  
Joyous Lake, Inc.  
Jacksonville Beach, FLA

**Silver Medal**  
"I DON'T CARE"  
Doe-Anderson Adver. Agency  
Louisville, KY

**Bronze Medal**  
"FAR OUT"  
University of Wisconsin  
Mazomanie, WI

**Regional-Live Action, 30  
Seconds**  
**Gold Medal**  
"VISION CARE"  
Centrex Productions  
New York, NY

**Silver Medal**  
"ORIGAMI"  
Centrex Productions  
New York, NY

**Bronze Medal**  
"POWER LINES"  
Allmand-Newby Productions  
Miami, Fla

**Regional-Live Action, 60  
Seconds**  
**Gold Medal**  
"AGRIBUSINESS ABANDONED  
FARM"  
Webb & Co.

**Silver Medal**  
"BIRTHDAY CAKE"  
Handley & Miller  
Indianapolis, Ind.

**Bronze Medal**  
"CHASE MANHATTAN HOUSE  
& HOME"  
George Gage Productions

**Regional-Series**  
**Gold Medal**  
"FORTUNE TELLER  
GLASS & STRAW  
GARBAGE"  
Centrex Productions, Inc.  
New York, NY

**Silver Medal**  
"DENTAL PROGRAM  
\$3.50 BODY  
VISION CARE"  
Centrex Productions  
New York, NY

**Bronze Medal**  
"THE JOB AT HAND"  
William Miller Assoc.  
Atlanta, GA

**Regional/National Campaign**  
**Gold Medal**  
"OUT OF THE OLD WEST"  
KMPH-TV  
Visalia, CA

**Silver Medal**  
"FLOWERS"  
Doremus & Co.  
New York, NY

**Bronze Medal**  
"WE'RE ALL OUT HERE  
TOGETHER"  
Colony Productions  
Colonial Heights, VA

**Experimental**  
**Animated**  
**Gold Medal**  
"SECRETS"  
Pyramid Films  
Santa Monica, CA

**Silver Medal**  
"ACROSS THE UNIVERSE"  
Frank Weiss  
West Nyack, NY

**Bronze Medal**  
"DRUG ABUSE"  
Pat Lehman  
Denver, Colo.

**Dramatic, Fictional**  
**Gold Medal**  
"DISORDER"  
Barbara Noble  
New York, NY

**Silver Medal**  
"AFTERNOONS AND ALICE  
MCCLURE"  
William J. Schwartz  
St. Louis, MO

**Bronze Medal**  
"HOT DOGS FOR GAUGUIN"  
Martin Brest  
Bronx, NY

**Live Action**  
**Gold Medal**  
"ALL'S QUIET IN SPARKLE  
CITY"  
Ross Albert  
Inglewood, CA

**Silver Medal**  
"FOUR LADIES ON STAGE"  
Tom Houghton  
New York, NY

**Bronze Medal**  
"THE LAST KISS"  
Nick Blake  
Laguna Beach, CA

**Mixed Media**  
**Gold Medal**  
"LEGEND DAYS ARE OVER"  
Pyramid Films  
Santa Monica, CA

**Silver Medal**  
"SPACECRAFT AMERICA"  
Michael Lawrence  
Baltimore, MD

**Bronze Medal**  
"108 MOVEMENTS"  
Wolff Productions  
Los Angeles, CA

**Filmstrips**

**Art**  
**Gold Medal**  
"ART AND THE MASTERS"  
Doubleday Multimedia  
Santa Ana, CA

**Silver Medal**  
"PICASSO; THE ETERNAL  
CLOWN"  
Scholastic Magazines, Inc.  
New York, NY

**Bronze Medal**  
"HUMANITIES: THE  
RENAISSANCE IN  
FLORENCE"  
Guidance Associates  
Pleasantville, NY

**Critical Thinking**  
**Gold Medal**  
"FREE WILL AND UTOPIAS"  
Warren Schloat Productions, Inc.  
Pleasantville, NY

**Cultural Relations**  
**Gold Medal**  
"WORLD'S GREAT  
RELIGIONS"  
Time-Life Films Multimedia  
New York, NY

**Silver Medal**  
"THE POWER IN FOUR  
MILLION WOMEN"  
Cinemakers, Inc.  
New York, NY

**Drug Education**  
**Gold Medal**  
"DRUGS: A TRICK—A TRAP"  
Encyclopaedia Britannica  
Chicago, Ill.

**Silver Medal**  
"DRUGS: FRIEND OR FOE?"  
Marshfilm Enterprises  
Shawnee Mission, KS

**Bronze Medal**  
"NO, NO, PINOCCHIO!"  
Miller-Brody Productions  
New York, NY

**Exemplary Values**  
**Gold Medal**  
"UNDERSTANDING CHANGES  
IN THE FAMILY"  
Guidance Assoc.  
Pleasantville, NY

**Silver Medal**  
"THERE'S A NEW YOU COMIN'"  
Marshfilm Enterprises  
Shawnee Mission, KA

**Bronze Medal**  
"AESOP'S FABLES"  
Milliken Publishing Co.  
St. Louis, MO

**Language Arts**  
**Gold Medal**  
"HAIKU' THE HIDDEN  
GLIMMERING"  
Lyceum Productions  
Laguna Beach, CA

**Silver Medal**  
"FRANZ KAFKA"  
Warren Schloat Productions  
Pleasantville, NY

**Bronze Medal**  
"ENCYCLOPAEDIAS: BASIC  
KNOWLEDGE"  
Library Filmstrip Center  
Wichita, KS

Continued on Page 1430

Science

**Gold Medal**  
"CONTROL OF LIFE"  
Time-Life Multimedia  
New York, NY

**Silver Medal**  
"UNDERSTANDING EARLY  
CHILDHOOD"  
Parents Magazine Films  
New York, NY

**Bronze Medal**  
"THE WEB OF LIVING  
THINGS"  
Doubleday Multimedia  
Santa Ana, CA

**Social Studies**  
**Gold Medal**  
"YOUTH AND THE LAW"  
Doubleday Multimedia  
Santa Ana, CA

**Silver Medal**  
"THE POLITICAL STAGE"  
Scholastic Magazines  
New York, NY

**Bronze Medal**  
"MONEY TALKS"  
Money Management Institute  
Household Finance Corp.  
Chicago, Ill.

Documentary Films

**Wildlife and Nature**  
**Gold Medal**  
"DAYS OF DESTRUCTION"  
Asgeir Long  
Gardahreppi, Iceland

**Silver Medal**  
"YELLOWSTONE"  
Norm Kohn Studio  
Atlanta, GA

**Bronze Medal**  
"GEORGIA'S OKEFENOKEE  
SWAMP"  
Georgia Dept. of Community  
Development  
Atlanta, GA

**Undersea**  
**Gold Medal**  
"UNDERCURRENTS"  
R A Films  
New York, NY

**Silver Medal**  
"DEEP BLUE WORLD"  
Pyramid Films  
Santa Monica, CA

**Bronze Medal**  
"OCTOPUS: THE UNIQUE  
MOLLUSK"  
Whitecap Productions  
Seattle, WN

**Surgical**  
**Gold Medal**  
"LAPAROSCOPY: THE VIEW  
WITHIN"  
Merrell-National Labs  
Cincinnati, Ohio

**Silver Medal**  
"RADIOGRAPHY OF THE  
MANDIBULAR RAMUS  
WITH THE PANOREX  
UNIT"  
Dental Training Center  
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"SURGICAL REMOVAL OF  
THE BLADDER  
CALCULUS"  
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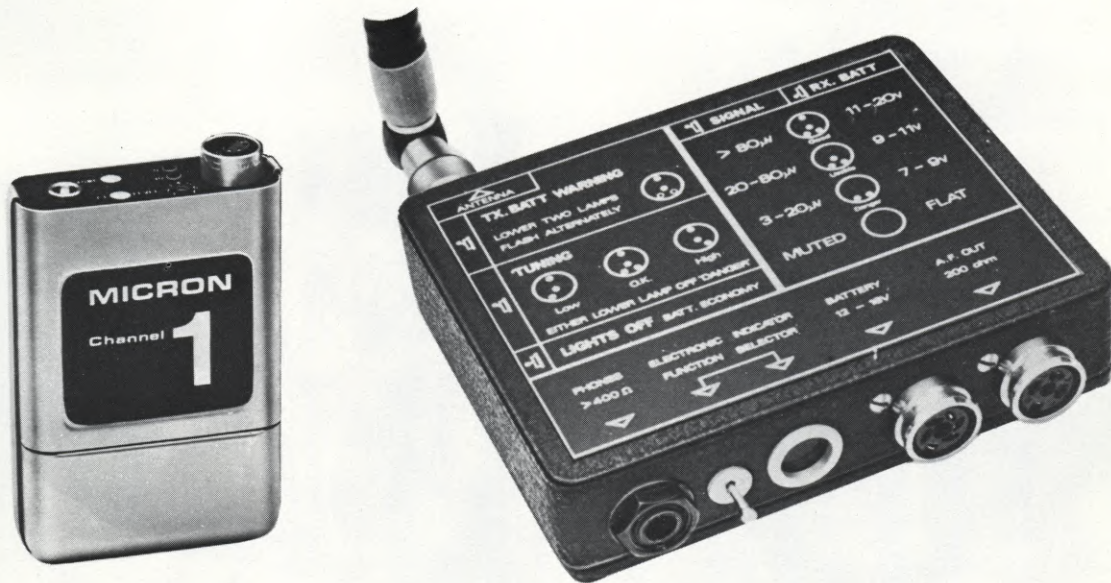


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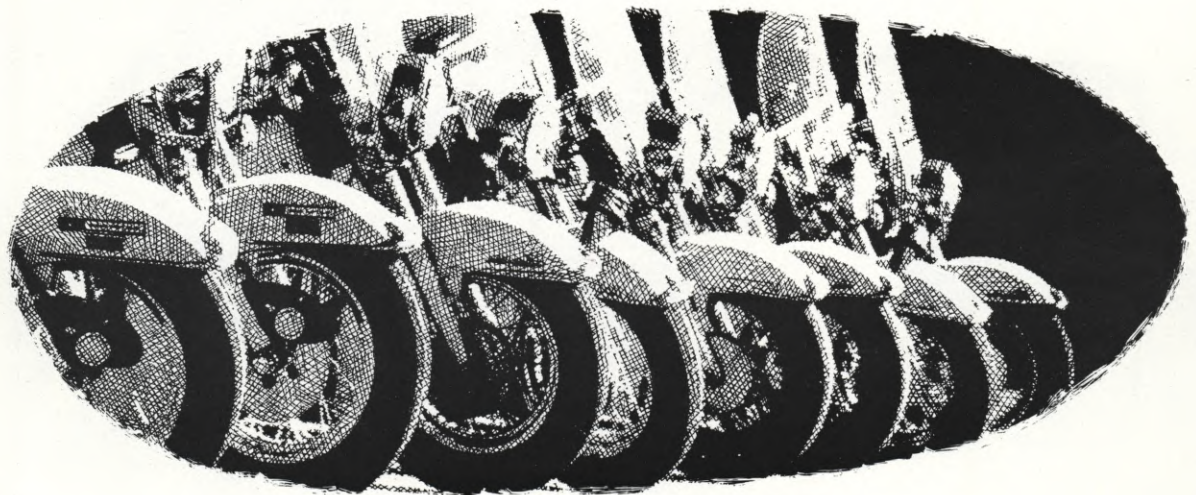
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- Wireless synch sound shooting with accuracy  $\pm 1$  frame per 1,000 feet
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- Single system sound model available

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- Wide range of zoom lenses
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## "LET THE GOOD TIMES ROLL"

Continued from Page 1399

flashbacks, a vastly more sophisticated approach in general."

There were some fortunate circumstances favoring the project. Chuck Fries, who had been a vice president at Columbia had already put together a deal whereby Metromedia and Columbia would co-produce and finance suitable properties. Their lawyers met with Nader's legal representative and secured the rights to film the concerts. A budget was worked out, and what was originally conceived as a television special became the go-ahead for a full-fledged feature, Gerald I. Isenberg, producer.

Next came the problem of assembling a production team. Although other groups were interviewed, the assignment went to Cinema Associates, who had demonstrated their expertise in a number of successful music films, including Joe Cocker's *MAD DOGS AND ENGLISHMEN* and *ELVIS ON TOUR*. They were, in fact, a bit reluctant to do another music film, feeling they were becoming stereotyped with this type of picture, but the nostalgic idea advanced by Jerry Isenberg appealed to them. Bob Abel recalls one of their conversations with the Metromedia/Columbia brass:

"What we think you want," he proposed, "is a sort of *LAST PICTURE SHOW* with music."

Upon this rather vague outline, preparations for filming concerts at Detroit's Cobo Hall and at the Nassau Coliseum on Long Island were launched.

Upon Pierre Adidge of Cinema Associates fell the responsibility of securing the necessary personnel and equipment. With the logistical problems of moving cameras, sound equipment, and a great number of people from city to city he had the invaluable assistance of Red Schaeffer as production manager; of all his production team he says:

"We try to get the best cameramen, the best sound people, the best editorial and post-production staff, the best optical house available. We like to use people with whom we have worked before and on whom we can rely. Everyone working with us loves film and knows the job of every other man. For example, the lighting supervisor knows what the cameraman's problem is, what the sound man's problem is. There's no substitute for experience."

The experience of Cinema Associates dictated that the film be shot in 16mm for eventual blow-up, both because of the circumstances of concert filming and from the standpoint of budgetary limitations. Thirteen cameras were used,

mostly hand-held Eclair NPR's, adaptable to instant re-loading. Three cameras were positioned on tripods, and two 35mm Arriflex Techniscope cameras were operated by remote control to secure long shots of the audience in Eastman Color Negative. As the light level for obtaining audience shots in a concert hall setting tends to be inadequate, it was felt that the 35mm footage would serve as a back-up to that obtained by three cameramen stationed in the audience with hand-held Eclairs if their footage proved unsuitable for blow-up.

Lenses used were 9.5-95mm Angenieux zoom lenses, though one cameraman, Dave Myers, used a 5.9mm lens which enabled him to get extreme close-up shots on stage. It was necessary to use high-speed Ektachrome film, Emulsion 7242, again because of light limitations.

Nagra recorders were used to record the sound. A standard 16-track sound recorder, such as is used in the making of records, was placed on stage to record the program. Fifteen separate channels were assigned to the musical instruments, with one track reserved for the cue system. A separate Nagra simultaneously recorded a sync track, and a third was employed as a spare. The people working backstage and in the audience also had their separate Nagra recorders. In addition, a mobile sound truck was positioned behind the stadium with its sound recorder and a video camera to monitor what was happening on stage.

All this equipment and personnel could have led to a communications nightmare, and the question of control immediately arose. Because the Nagras and the Eclairs are both equipped with Perfectone crystal motors, interlocked into an exact 60-cycle speed, it was possible to keep them in perfect sync and to achieve complete freedom from wires and cables.

"You could be miles away, using a thousand cameras, and still be in perfect sync," Pierre Adidge claims.

Still, editing the concert track would provide a mammoth headache without the cue system devised by Jim Webb of Cinema Associates. As head soundman, he operated the on-stage recorder providing the sync track. When he would press a button on his Nagra, it would put a tone on the Nagra and would also flash to strategically placed lights on the stage. As each cameraman started to roll his film, he would motion to Jim to let him know the start. Jim would then voice slate, "Cameraman A—rolling." The bloop tone on the track, the light which the cameraman would photo-

graph, and the voice slate combined into a system which made it possible to edit the dailies from all eleven cameras in days rather than in weeks.

Another communications problem arose in directing the shooting. When the concert music was going full-blast, it would be impossible for directors Sid Levin and Bob Abel to speak to each other. After much trial and error on previous films, they worked out an efficient head-set system with Swanson Sound which enabled them to communicate with each other and with the various cameramen.

There is no rehearsal for either cameramen or soundmen when shooting a concert, and this presents more problems to be solved. The crew would arrive at an auditorium where last night an ice show might have been presented. Amidst the confusion of carpenters erecting a stage and the assembling of all the concert equipment, they would have to work out their assignments. Also, it would be necessary to supplement the stage lighting and that of backstage areas where documentary footage would be shot. With such lighting problems, Cinema Associates considers itself fortunate to have the services of Director of Photography Bob Thomas, who brought to this production many years of big studio experience which proved invaluable.

With ten acts and more than thirty musical numbers to film, a great deal of pre-concert homework had to be done in order to cover the concerts efficiently and, at the same time, secure the documentary material which adds depth to the on-stage performances. Bob Abel outlines the necessities when he says:

"You face the same situation in this type of picture as you do in a dramatic film which you shoot from a script. That is, you have to introduce people about whom the audience may know little or nothing, develop their characters, and make the audience care about them."

Jerry Isenberg recalls a prolonged meeting of the directors and producers at which Richard Nader went over the program in infinite detail, discussing each number and filling in information on each performer—his history, personality traits, what he had been doing during the past 15 years or so, and the potential areas of conflict which might lend themselves to dramatic coverage.

In addition, Directors Levin and Abel, along with the individual cameramen, had to obtain a more than superficial knowledge of their subjects. The case of Little Richard, whose act evokes near-riot hysteria in the audience, perhaps best illustrates how much pre-

concert probing is required for a characterization. When Sid and Bob met Little Richard on a plane, they immediately introduced themselves and set about gaining the confidence of this flamboyant character. When they had convinced him that they empathized with him and his music, they could then prepare him for having a documentary cameraman with him in his dressing room. Knowing that Little Richard would be tense before performing, the directors could anticipate how this tenseness would erupt at the concert. Also, they had the dual know-how of cameraman Steve Lerner working for them. Because Steve is a former musician as well as a cameraman, the rapport he was able to establish with Little Richard contributed to the honesty of the sequences, as Steve was able to interview as he photographed. Steve also filmed the Bo Diddley documentary footage, helping to achieve the Then/Now memories which add so much emotional impact to the picture.

Phase One of *LET THE GOOD TIMES ROLL* ended when the 16mm concert film was cut and edited and the preliminary dubbing of the sound track was accomplished in a record-recording studio. Phase Two became the harrowing responsibility of Sid Levin, who, as supervising editor, had the job of integrating many diverse elements into a mosaic of visual and auditory experience.

Although most current film-makers insist upon making a "statement", this was not Sid Levin's approach.

"I did not want to tell anybody anything; I didn't care about any messages. I just wanted to touch people. At the same time, I wanted to broaden the base of response, so that the film would appeal to anyone of any age and of any musical background."

In a picture with Sid's objective of "controlled madness", the selection of materials is purely subjective. Levin compares it to picking up pebbles on a beach; no two individuals will select the same ones. Yet he did arrive at certain methods.

The first step was to look at all the concert film from the aspect of what was emotionally moving. This procedure alone required two or three months. Meanwhile, Bob Abel had been directing the research and culling out material which would make up the nostalgia portions of the film. As Sid received these pre-selected stills, or TV or newsreel footage, he would look at them, again from an emotional standpoint, letting associations suggest themselves. For example, Sid would see some newsreel footage of Khrushchev and associ-

ated him with a particular moment in time in the concert film. When seven or eight such points of contact between old and new had been established, he would blend them together. The same procedure was followed in looking at old feature movies of the concert performers; old and new footage of the same star would come together at emotionally the right moment.

"Slowly," Sid recalls, "the film took on a logic of its own by going through these small increments."

From the beginning, the picture was visualized in multiple-panel treatment so that complementary images could be juxtaposed on the huge Cinemascope screen. In one segment, we see and hear the Five Satins singing "*I'll be Seeing You*", while celebrities from the '50's, none of whom we'll be seeing again, make their appearance. Marilyn Monroe and James Dean, Judy Garland and Gary Cooper, Eisenhower and Spencer Tracy, Adlai Stevenson and Jayne Mansfield haunt the old familiar places of the song. But again, the editor had to be provided with the raw material for his weaving of memories.

Cut to the research team, headed by Andy Solt and Sylvia Mulconery, searching through almost defunct newsreel film vaults, commercial and private libraries, video clips from TV, features from all the major studios. Bob Abel

looked at thousands of still pictures, selecting almost the same pebbles from the beach as would have Sid Levin. Sid describes their communication as being similar to that of a long-married couple who do not need to verbalize to understand what the other is thinking. Bob calls it a "Yin and Yang sort of thing." At any rate, Bob pre-selected the stills from which Sid chose the few hundred used, and Bob designed the sequence of old cars which accompany the song, "*Maybelline*".

It sounds simple, reduced to these few words, but it led Bob Abel and his research army into detective pursuits rivaling those of the most mysterious whodunit. For instance, in the picture's beginning we listen to a '50's preacher decrying the evil inherent in rock and roll, but the research staff had to identify this minister to secure the necessary legal releases for the use of the old film. Someone came up with the information that his name was Jimmy Snow. A call to the ministerial association provided seven Preacher Snows—no first names available. One by one the wrong Snows had to be tracked down and eliminated until the correct one was discovered on tour with the Grand Old Opry. In another instance, the editors wanted to use footage from the movie, *THE WILD ONE*. Though it was hard

Continued on Page 1469

Concert producer Richard Nader discusses concert with Bumps Blackwell, Little Richard's conductor, as cameraman in foreground shoots a scene for "*LET THE GOOD TIMES ROLL*", a Metromedia Producers Corporation production for Columbia release. A Richard Nader production, it was directed by Sid Levin and Bob Abel.



## FILMING "WESTWORLD"

Continued from Page 1421

is true—namely, that being a doctor is good preparation for this, because it teaches you to deal with the kind of life that you will inevitably have. It teaches you to work well when you haven't had enough sleep. It teaches you to work well when you're on your feet a lot. It teaches you to work well with technical problems and it teaches you to make decisions and then live by them. I think it also has advantages in working with actors, because one of the things a doctor has to learn is to be able to meet a patient whom he has never seen before and rapidly assess him in terms of what kind of person he is, and not merely whether he's perforated his ulcer. You've got to be able to analyze just what kind of person you're dealing with. Are you dealing with someone who will take medicines if you prescribe them—or is he the kind of person who says he will, but won't? Those decisions get to be very important and training to be a doctor builds up that capability for assessing people rapidly which is necessary when it comes to working with actors. I'm not quite sure just how the transition from medicine to movies came about, except, as I've said, that I think I've always wanted to make movies. When I got into medicine I was disappointed in a lot of ways, so it was a pull from one direction and a push from the other.

**QUESTION:** As we all know, you went through an intermediate stage of being a novelist, but making a film is quite different from writing a novel. How were you able, in such a relatively short

time, to learn the methods and mechanics of something as enormously technical as film production?

**CRICHTON:** I'd had one previous experience in film directing before "WESTWORLD" and that was the television movie, "PURSUIT", which I did for ABC. That was also a very difficult production situation—one of those situations where you were glad to have gotten it finished at all. The cameraman on the project was Bob Morrison, who really just took care of me. In fact, a lot of people took care of me, including the actors. I learned very fast because I had to learn fast. There were thousands of things to learn, all kinds of details which I'd had no idea about. But I just did it because I had to. It was a very fast course.

**QUESTION:** Were you able to augment your technical knowledge by means of any extracurricular study—books on the subject, and so forth?

**CRICHTON:** For someone who was not brought up in film, it's very hard to get any kind of specific technical information about film-making—I mean, the sort of "case history" information that tells precisely how certain things were done. The two ways that I know of to learn such things are: (1) a sort of general explanation from someone who sits you down and says: "If you want to diffuse a lens, you can do this or that..." and (2) what I call the "case history", which is someone telling about what happened on a certain project—what problems there were and how they were dealt with in a specific way. The stuff that's in print in books is pretty

awful. At least, that's been my experience and I gather it was Mike Nichols', as well, when he did "VIRGINIA WOOLF" as his first picture. The books just don't tell you very much, except for things like: if you choose a low angle it's more dramatic. That's not terribly valuable. But for the "case history" sort of thing, I found that the American Cinematographer is terrific. It was a kind of gold mine for me because it's full of articles telling in precise detail how, on specific projects, certain techniques were used and problems solved. It was difficult for me at first, because I didn't have the background to understand it, but then, after I'd become more comfortable with the medium, it was really terrifically valuable.

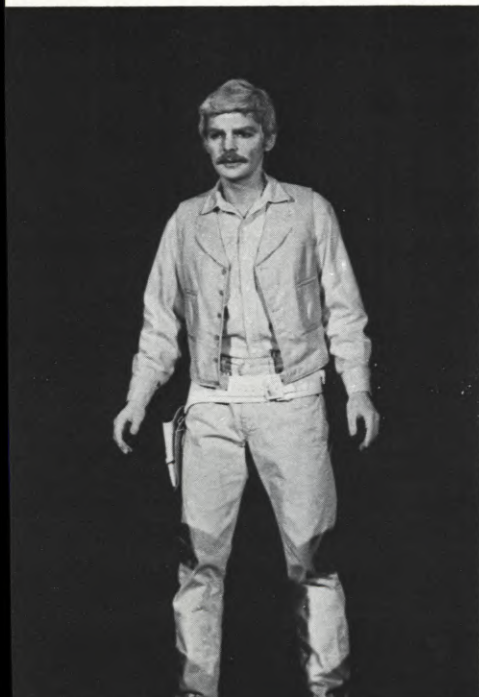
**QUESTION:** I understand that you spent quite a bit of time on the set of "THE ANDROMEDA STRAIN" when it was being filmed. Did you find that experience helpful to you later when you started directing?

**CRICHTON:** Bob Wise was really very nice about letting people watch and learn from what he was doing. I was just the writer of the book hanging around the set—which was a totally non-existent function. But he had, as I recall, an AFI intern and a Director's Guild trainee on the project, mostly just watching. I had never seen any kind of a film made before, except during brief visits to stages for a few minutes. Bob was the first director I'd ever had a chance to observe at work and, in an awful lot of ways, he's the model I've retained. Bob dealt with all of the problems very smoothly. His particular style of directing is very relaxed, very easygoing, very personal and very well-organized, but without a lot of histrionics and temper flares. That impressed me a lot and I've tried very hard to be that way, too.

**QUESTION:** Without getting into one of those ivory-tower, esoteric discussions, may I ask what you would like to accomplish with film. In other words, what is your objective in making pictures?

**CRICHTON:** The first thing I'd like to say about film is that, because it's so expensive, it has to be supported by a very large audience. That's a really significant difference between a film and, let's say, a book. A publisher can sell 4,000 copies of a book and still come out all right financially, but a film that is seen by only 4,000 people is a disaster of almost unheard-of proportions. A much larger audience is necessary to make film-making commerci-

(LEFT) Richard Benjamin is dressed in white wardrobe, with a white makeup and white hair spray for shooting of high-contrast scene to be electronically processed for robot POV shot. (RIGHT) A Ferco monorail is pressed into service for simulated dolly shot over rugged terrain.





ally viable. I'm not talking about an enormous commercial success, but rather a sort of break-even situation that will allow you to continue to engage in the activity. Therefore, the potential audience exerts an unmistakable pressure on what you do and how you do it. With "WESTWORLD", I chose to do what I regarded as a blatantly commercial film, and I don't think there's any harm in that. I believe it's possible to make less commercial films—films that are more idiosyncratic in terms of what the film-maker wants to say—without nullifying the possibility of the film's breaking even or becoming moderately successful. Television is really the mass audience medium, whereas, feature films are inching more toward specialized audiences. My approach to licking the problem is that I try to do things that can be taken in different ways. If you want to look at "WESTWORLD" as a kind of science-fiction shoot-'em-up, that's fine. If you want to look at it as a sort of bemused allegory, you can do that, too. One interpretation does not make the other impossible. In that sense, my model is something like "LORD OF THE FLIES", which is a very good story on one level and a very profound story on the other. But it doesn't insist that you recognize it as profound. That's the sort of thing I want to do.

**QUESTION:** Do you have any film plans for the future that you'd care to talk about?

**CRICHTON:** Well, I'm having trouble going back to writing now. It's hard to sit there alone. I've been trying for about a month now and I'm only just beginning to enjoy the fact that people aren't walking into my office and saying: "Would you please make a decision about the color of the floors?" There's a lot of excitement in making movies. I think I've learned two things from the experience. One thing is that the people who gripe about the whole movie-making situation and claim that there isn't enough money, and so on, are the people who sabotage projects. It's really a phony thing, and they ought not to be allowed to get away with it. I think it's necessary to be able to work within your strictures, even when those strictures are so impossible that you're ranting and raving and screaming about the studio executives, like everybody else. Once you settle down, those strictures provide a certain sort of creative impetus and the result is something better than if you'd been given all the money and all the time you wanted and that guy in the front office had said

"yes" every time. That kind of discipline produces a tighter, more inventive kind of film. The other thing I've found is that it's really fun to make movies. It's so much fun! It's really awful to be paid for doing it. I really miss that excitement now that I'm writing again. I don't find the writing so much fun anymore.

**QUESTION:** If you had "WESTWORLD" to do over again, is there anything you would do differently?

**CRICHTON:** I really feel that this experience has convinced me more than ever that pre-production is the key to it all—especially with a tight shooting schedule. We had no rehearsal time—which is bad—and we could have used more test time. All of that I log under pre-production, and I will never do another picture without adequate preparation in that area. To the extent that studio executives do not understand this fact, they're just fools. Pre-production saves them money. It may cost them \$2,000 a day, but it will save time on the set that often runs to more than \$2,000 an hour. ■

## "WESTWORLD": A STATE OF MIND? By GENE POLITO

Director of Photography

You will find a small sign posted above the starter's window at Los Robles golf course which reads: "Good golf is a state of mind—Arnold Palmer." As a confessed "golf nut", I have reached the conclusion that Palmer's observation could apply equally to professional cinematographers. As a matter

of fact, Directors of Photography have a lot in common with today's touring pros: the field is overcrowded, the competition is keen, the pressure is ever-present, the financial stakes are high, and the odds of coming up with a winner—consistently—are staggering. And—oh yes!—When the chips are down nobody is going to make that tough shot for you! Herein lies the daily challenge which faces touring pros and D.P.'s alike. In retrospect I have come to realize that good photography—like good golf—is truly a state of mind.

The reader might well ask, "What constitutes an ideal state of mind for the Director of Photography?" Perhaps a glimpse of "WESTWORLD" through the eyes of a cameraman will provide the answer. To begin with, "the chemistry was good" between the director, Michael Crichton, and myself. It is this particular ingredient that is most essential in the initial stages of achieving "a good state of mind" for the Director of Photography. Very often the initial stage involves an interview between the director and the cameraman, who are total strangers to one another, on a personal basis. This can be a devastating experience for the new Director of Photography who is short of material (credits) to talk about. (Most cameramen—including myself—have been down this road before. There is no shortcut, other than a smash-hit on your first trip to the plate—and the odds against doing this are pretty high.) Michael Crichton and I were total strangers when we first met. But neither of us lacked material by way of our respective backgrounds to provide the basis for a lively and interesting interview. The "chemistry was good" and Michael hired me to do

(LEFT) Crichton and Polito excitedly discuss a camera angle. "The chemistry was good" between them, which resulted in an excellent working rapport. (RIGHT) To achieve an eerie type of light for night shooting, mercury vapor lamps, high in the green spectrum, were utilized. They are normally used for repairing freeways at night.



"WESTWORLD". Thus, the first crucial element necessary to achieve a "good state of mind" was behind me. Moreover, I could hardly wait to get into the script once Michael gave me a clue as to what "WESTWORLD" was all about.

After reading the script for "WESTWORLD", my first reaction was that I had stumbled onto a gold mine—in the sense that it promised to be a rich experience for a cameraman. As it turns out, "WESTWORLD" is the type of story cameramen dream about, but rarely—if ever—run into. "WESTWORLD" offered four distinctly different visual backgrounds within the time frame of a single story. I thought to myself, "Imagine . . . an action 'western', decadent Rome, the Medieval era, and a NASA-type space-age complex . . . all in one film!" But that is what "WESTWORLD" offered me: four "photographic worlds" to work in.

#### PHOTOGRAPHIC HIGHLIGHTS

"WESTWORLD" opens with a prologue (ahead of the credits) which has a rather unique format in itself. We wanted this portion of the picture to hit the screen in an aspect ratio similar to the old Movietone News ratio (about 3 to 4). Since the picture was shot entirely anamorphic Panavision, I had Panavision

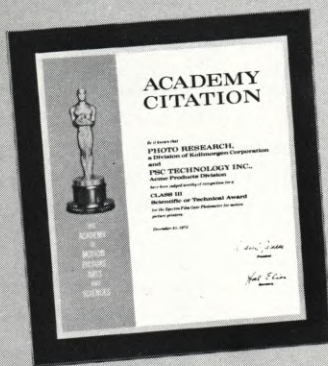
inscribe special lines on the ground glass in order to shoot the prologue with an anamorphic lens, and yet allow us to compose for the Movietone format. In the release prints the unused portion of the anamorphic screen was simply blacked out in printing.

Following the screen credits, "WESTWORLD" opens with a rather bizarre shot designed to "set up the audience" for the hovercraft sequence. In this instance, the hovercraft is an airborne vehicle (for the purposes of the story) that transports people to and from "WESTWORLD"; it scoots very low off the ground at speeds of about 300 mph. The sequence opens on a close shot of one of the lenses on the pilot's colored glasses. At this point the audience has no way of knowing what they are looking at, other than the ground whizzing by at tremendous speeds. We hold on this for a beat and then zoom back to a full shot of the pilot's face where we see what he sees—namely, the desert whizzing underneath him. To accomplish this shot, we used front projection onto the pilot's glasses by cementing front projection screen material to the actual wearing glasses themselves. The only difficulty here lies in the balance; it's tricky, because the front projection image on the glasses becomes "very hot,

very quick" and the balance between what you see visually projected on the lenses of the glasses, as opposed to the overall key light falling onto the pilot's face, becomes deceiving. There is no formula for this and I must confess that the results were based on an educated "guess" exposure-wise. It turned out great!

One of the main characters of "WESTWORLD" happens to be a gunslinger who, in turn, happens to be a robot. The part is played excellently by Yul Brynner. Michael Crichton wanted the gunslinger's eyes "to look like electronic eyes" at a certain point in the film. Michael and I discussed various possibilities to achieve this effect. Tests were made using a variety of contact lenses which were silver-coated to produce varying amounts of reflectivity: 50% transmission, 50% reflectance; 80% transmission, 20% reflectance; 20% transmission, 80% reflectance, and so on. At first I was certain that by using a front projection configuration I could achieve the best results simply by shooting through a 50-50 mirror and projecting a light beam directly into Yul Brynner's eyes on the same optical axis as the camera (using the mirror). I was wrong; it does not work that way. Then

*Continued on Page 1474*



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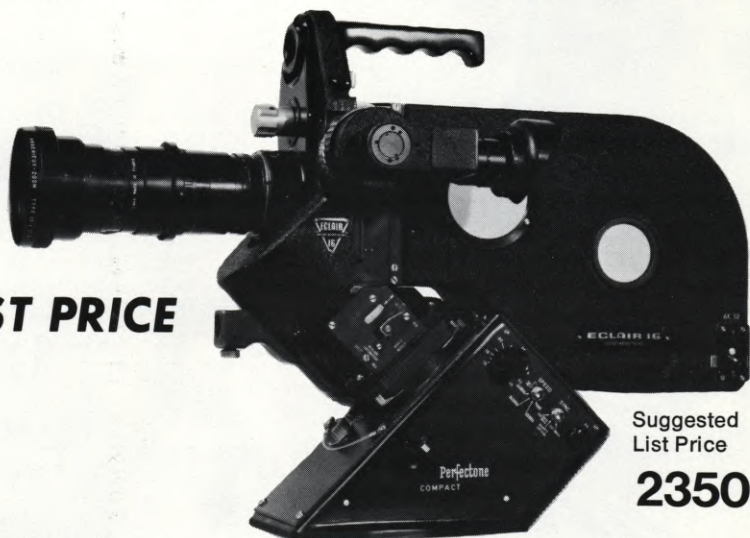
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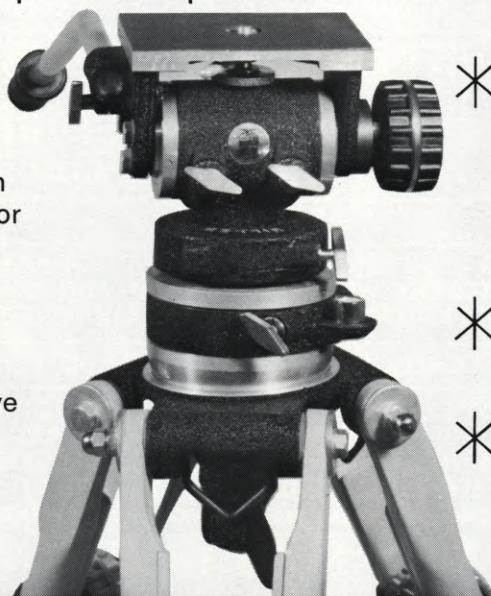
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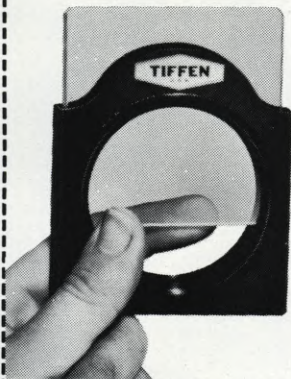
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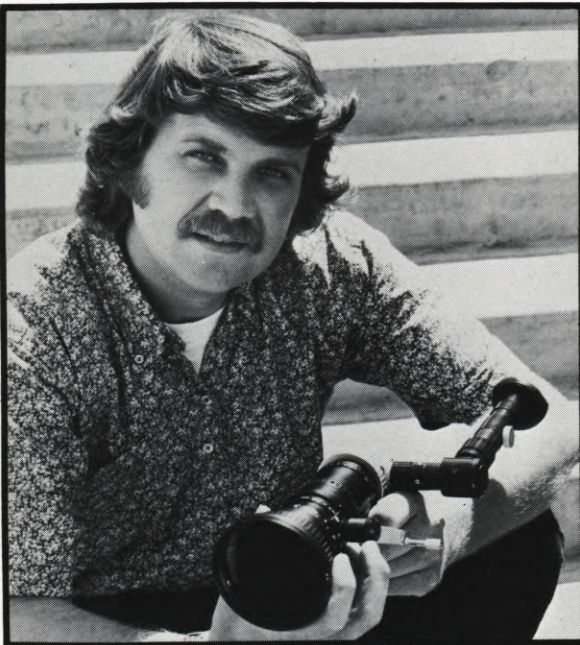


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## ACADEMY GROUND-BREAKING

Continued from Page 1417

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General contractor for the new building is Buckeye Construction Co. Architect is Maxwell Starkman, A.I.A. ■

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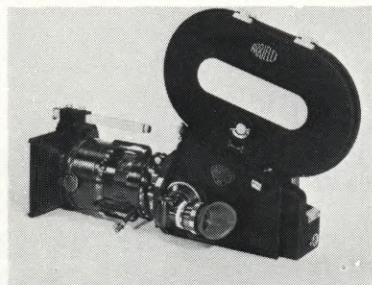
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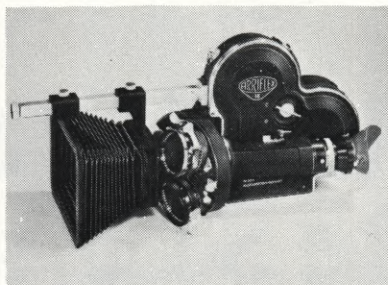
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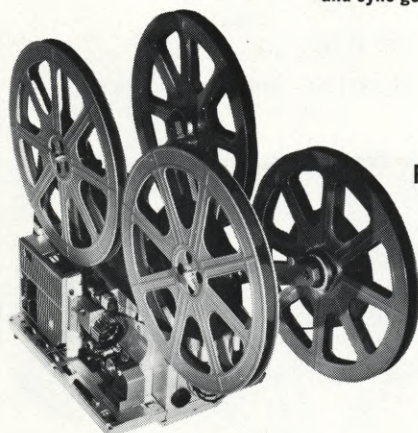
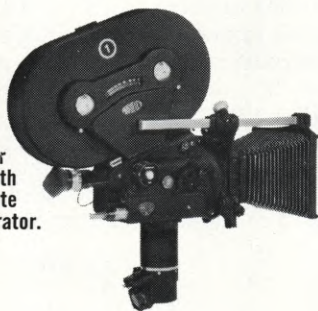
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## FILMING "FOUR CHILDREN"

Continued from Page 1411

rest of the scene to make it work.

The segment on Chris Twyman, the boy who lives in the inner city, was handled in a completely different style. Every scene for this segment was hand-held, and no fill light at all was used. The resultant image, of course, is very harsh and looks just as I hoped it would. I tried to make use of a lot of down angles with longer lenses to pile things up. Hand-held scenes with long lenses are usually bad news, of course, but here they worked quite well. In one scene we placed the camera right on the sidewalk and racked to the 120mm end of the lens to get a view of Chris as he appeared to walk right up out of the sidewalk, due to the compression of the long lens. Since the camera was sitting on the sidewalk, this scene was too steady and we had to introduce a bit of shake so it would match with the rest of the sequence.

In another sequence we watched Chris box with his brother as a group of neighborhood kids cheered them on. After getting enough angles and cut material with the zoom, I changed to the 5.7mm lens. This was the only time I used it in this segment. I made sure the closure was shut on the eyepiece and just held the camera in my hands waist high and had both boys box with it. The lens almost got KO'd, but when the footage was intercut with the other material and sounded, that angle made the sequence.

The final segment was on a young Mexican/American migrant farm worker. It was to be filmed on a farm in the central region of Ohio where thousands of migrant workers come each year at harvest time. Arrangements had been made for us to film on a certain farm. The migrant situation, of course, is notorious for the poor working and housing conditions afforded the laborers by some farmers. Shortly after we began filming a truck pulled up driven by the rather red-neck brother of the farmer who had given us permission to film. I guess the man was not aware of our arrangements because he attacked us with a hammer! When he was done he had hit Robertson in the stomach twice, driven the hammer through a four-foot reflector held by my assistant cameraman, Ilie Agopian, and smashed the Arriflex I had on a shoulder pod at the time. It seemed the man, a Marvin Detling by name, liked film crews even less than he did migrant workers.

At any rate, a week later, with new arrangements and a rented camera we



headed for another farm. This time things went much smoother. For this segment I wanted to play up the flat sameness of the land, and I used a 25mm lens for the majority of scenes. I composed exteriors low in the frame, giving about two-thirds to sky and one-third or less to the ground line. I never used frame devices for any vista shots either. I tried to capture a sameness to the scenes in this segment. The fact that cloudy weather prevailed for most of this part of our schedule helped a lot too.

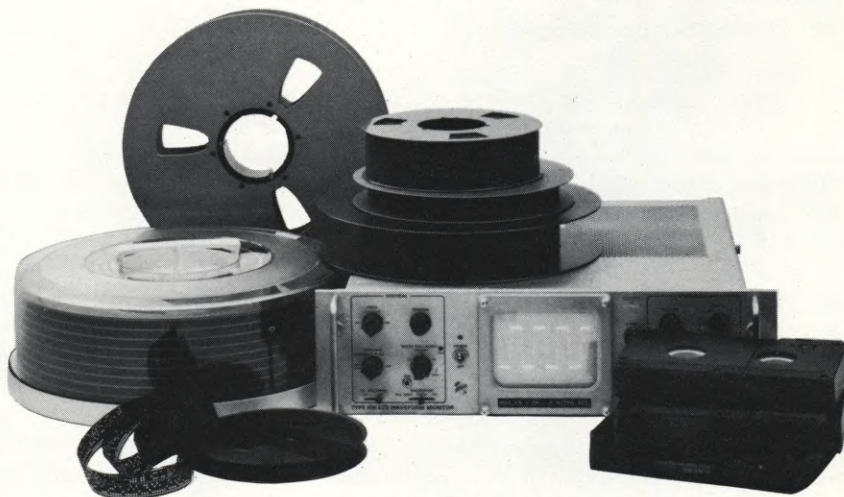
FOUR CHILDREN was shot in 16mm on type 7252 stock. I used an Arriflex BL, but with a 1200' magazine in most cases. This is my personal preference. Production on a film of this type moves rather fast and I feel the slight extra weight is more than offset by fewer reloads and less chance of running out of film in mid-scene. Our lens complement consisted of an Angenieux 12-120mm zoom, and a Tegea 5.7mm super-wide lens. We took along a complement of Mole-Richardson quartz lighting equipment and, of course, a Nagra with various mikes for sound recording. The entire picture was shot with a small crew out of preference rather than necessity, due to the subject matter. We felt that the less disturbance we made, the better. In addition to Tom Robertson and myself, we had an assistant cameraman, and a soundman.

When I heard that FOUR CHILDREN had won the first place gold medal in the Ethnic and Cultural Documentary category at Atlanta, I was very pleased, but not overly surprised. It's a very good film! But, of course, it was worked on by a number of very talented people. Tom Robertson produced it, made an excellent choice of the four kids, and wrote a beautiful script. Ilie Agopian was my capable assistant cameraman, and Don Regensburger handled both location recording, and all post-production sound work. Incidentally, the only original tracks used in the final mix involved dialog. All other tracks were post-dubbed. Over 50 loops were pulled to "Foley" sound effects, and the end result is the smoothest sounding job I have ever heard for a television production of this type.

Narration is by Jack Gwyn. An original score and songs were composed and performed by Rob Reider, a most talented singer and musician. Negative cutting was done by Daniel Louis. Cinema Research handled the main title optical work.

In retrospect, FOUR CHILDREN was an interesting and exciting project to direct, shoot, and edit. ■

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ATLANTA FILM FESTIVAL AWARD

# FILMING "DEADLY FATHOMS"

Special Jury Award—SILVER MEDAL

By MICHAEL HARRIS

*Producer/Director,*

*HMS FILM CORPORATION, Tampa, Florida*

For twenty-six years the nuclear-ravaged Bikini Atoll in the South Pacific has remained undisturbed, unexplored, and unphotographed. When I finally obtained permission from the Federal Government to lead a civilian motion picture expedition into the historic area, I knew I would need the best people available.

The dangers would be extreme: infestation of man-eating sharks was reportedly the highest in the world, hazardous radiation still lingered on in many places, and the sunken wrecks were filled with live explosives.

The challenges would also be magnificent: filming in the darkened depths, 200 feet below the surface, to record the colorful spectrum of light and eerie shadows amid monstrous warships.

The result would be an exciting cinematic adventure titled "DEADLY FATHOMS", with dramatic narration by Rod Serling, and a totally original music score by Paul Lavalle, conductor of the Radio City Music Hall Symphony Orchestra.

We would be giving the world its first glimpse of the infamous atomic graveyard at Bikini and a close-up view of what man and his more than twenty nuclear bombs had done to Mother Earth.

Flexibility was a key factor in deciding which film gauge to use. The decision to go with 16mm, and eventual blow-up to 35mm for theatrical release meant that members of the film crew had to be tops in their respective fields. We couldn't afford to play games with poor exposure, careless camera work and sloppy sound recording. Everything recorded on film would be greatly exaggerated when blown up, and had to be as slick as possible.

Fortunately, the crew members turned out to be the very best. They were not only highly professional, but tremendously innovative, a quality that is essential in a spontaneous and unpredictable production like this one.

Another aspect that challenged our imaginations and creativity was the use of World War II stock footage. Months were spent gathering film from the National Archives, Navy Department and Air Force, to precisely match several sequences of ships and planes found on the floor of Bikini Lagoon. But, it was all worth the time and effort. Juxtaposition of stock shots and new footage has created a ghostly trip through time and space.

We selected Technicolor to handle our enormous deluge of lab work, Adrian Mosser's Cineservice, Inc. to tackle

the challenge of blowing our film up to a high-quality theatrical print, and Modern Film Effects to do opticals and titles.

"DEADLY FATHOMS" will go into national release very soon. ■

## TOPSIDE PHOTOGRAPHY OF "DEADLY FATHOMS" By NORMAN J. VIRAG

*Topside Cinematographer*

"How would you like to go to the South Pacific to shoot a documentary film?"

That was the question put to me one day over the phone by Mike Harris, Producer and Director of "DEADLY FATHOMS".

It didn't take me long to make up my mind. I answered with a question. "When do we leave?"

In less than six weeks, I was loading up the essential equipment to cover all topside requirements, including an Auricon Cine-voice 16mm camera with F&B Ceco conversion to double-system sound, a Bolex REX 5 with a 10mm lens, and a 12-120 Angenieux lens.

I decided to shoot ECO 7252 for all daytime sequences and EF 7242 at night. Both film stocks worked 100% of the time, and luckily, I went through the entire expedition without one film jam in the cameras.

My assignment began in Honolulu, where we shot initial boarding and preparation sequences. I decided to shoot as much film as necessary to capture the flavor of each sequence, and to give the editor ample footage for cutting.

We had made arrangements with Technicolor for processing and workprinting before our departure. A courier would fly back with each week's shooting, wait for the original to be processed, and return with the color workprint. A very old, silent 16mm projector was taken along for us to screen the workprint.

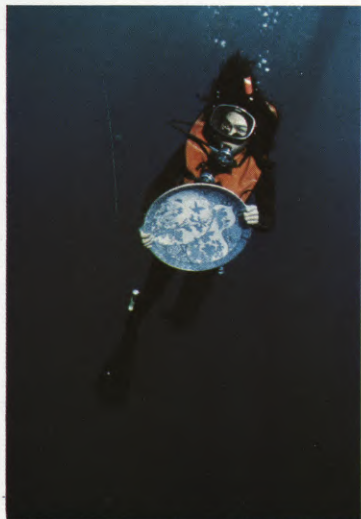
I cataloged every roll of film shot, sequence by sequence, a precaution that proved to be invaluable when the film

Underwater filming crew for the HMS Film Corporation production of "DEADLY FATHOMS", winner of Special Jury Award—Silver Medal at the Sixth Atlanta International Film Festival. (Front left) Rick Frehsee, (Front right) Bruce Mounier, (Back left) Van Smith, (Back right) Bob Cheffer.





(LEFT) Filming 200 feet beneath the sea for "DEADLY FATHOMS". (CENTER) Expedition mini-sub prepares to "land" on deck of aircraft carrier U.S.S. Saratoga. (RIGHT) Deep inside the hangar deck of the Saratoga, divers discover U.S. Hellcats, dive bombers and torpedo bombers in good condition, after 26 years underwater.



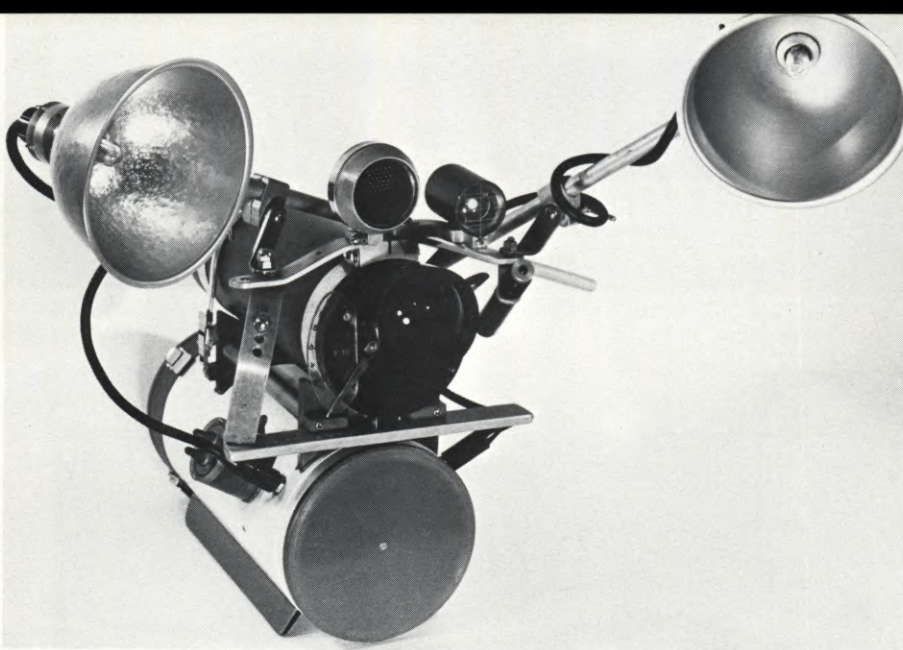
(LEFT) Cal Hayashikawa recovers ornate plate from sunken Japanese ship. (CENTER) Film crew, with camera and battery pack, return to the decompression line after deep dive. (RIGHT) Mounier, with camera and 1000-watt battery pack, filming on superstructure of Saratoga.

(LEFT) Diver Van Smith peers into barrel of one of the big 12-inch guns on the battleship U.S.S. Arkansas, at a depth of 150 feet. (CENTER) Diver with live torpedos inside hangar deck of the Saratoga. (RIGHT) Diver examines fighter and bomber planes inside hangar deck of the Saratoga.



(LEFT) Overcome by curiosity, one of the divers "tries out" the cockpit of a Hellcat. (CENTER) Film crew descends from the support ship, trailing their light cables behind them. (RIGHT) Filming the sharks that abound in the seas surrounding Bikini atoll.





The new camera-mounted underwater lighting system developed by Cinematographer Bruce Mounier, as a result of his filming experiences in the production of "DEADLY FATHOMS". The compact battery pack which powers the rig is mounted under French-made Spirotechnique 16mm camera.

went into editing. I exposed more than 11,400 feet of film over a six-week period at many Marshall Island locations.

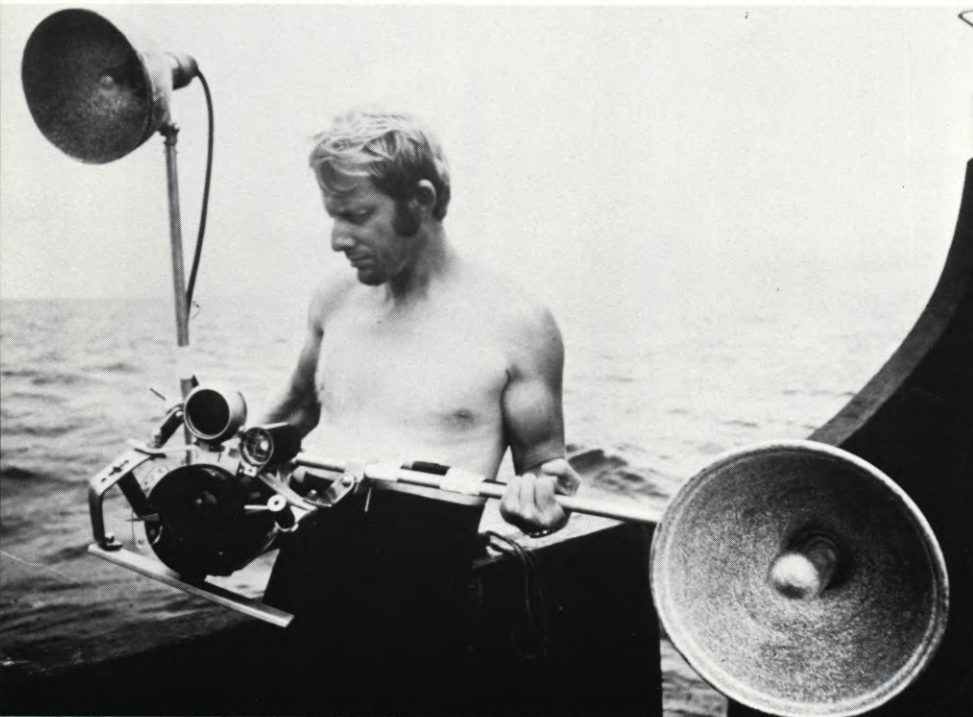
Fletcher (Scoop) Smith was my sound man. He also served as a grip for the divers—a job that everybody handled at one time or another in the course of filming.

Our biggest problem with sync shooting was the umbilical cord which attaches the camera to the Nagra tape recorder. There is only a limited amount of

space on a ship, which made moving around very difficult. The microphone had to be wrapped with a 2" thick styrofoam pad to cut the wind noise. However, this did not seem to affect any of our recordings. We also used an inline bass filter to help reduce wind noise.

All the photography on board the ship was hand-held. I carried the Auricon loaded with a 400' magazine with the aid of a body-brace on one shoulder and the Frezzolini 100D power-pack on

Bruce Mounier shown with light package and camera combination used for underwater filming. It consists of one self-contained battery pack and cable lights connected to a surface power supply. The system could either be camera-mounted or hand-held by the diver/cinematographer.



the other shoulder for balance. I estimated the combined weight of the equipment being carried at around 42 pounds.

Most of the photography was done during very high light conditions, which meant shooting mostly between F/11 and F/8. The high light condition posed the problem of dark eye sockets. But, we had to live with it, since it was impossible to light each subject during shooting. Only a few of the sequences had to be re-staged. Other than those obvious spots in the film, the complete production was shot as it all happened, when it happened.

I concentrated primarily on the divers preparing for each dive and their eventual return to the surface. Sound man Fletcher Smith and I had to be ready at all times to capture the action on the spot. Since there was no real indication what they would find below the sea, or what unexpected situation might develop, this *cinema verité* style of shooting really kept us on our toes.

When stopped down to F/8 or F/11, the Angenieux lens is very hard to focus while shooting. To counter this difficulty, I mounted date rings on my lens for both F-stop and focus control. These helped immensely when filming hand-held sequences. Seeing the first work-printed rushes, I was very pleased to see how well this technique worked. Out of the 11,400 feet of film I exposed, only 200 feet was overexposed, out of focus, or unusable.

Each evening, I cleaned and loaded all my equipment, so that it would be ready for the next day's shooting. One day, Director Mike Harris and I headed for an island to shoot footage on the beach. It happened to be a fairly rough-water day, and our 16' runabout bounced all over before we reached shore. We finally made it, set up the camera on the tripod to shoot, and I noticed that my viewfinder was completely fogged. Apparently, some water had gotten into my camera case during our rough ride to shore. We hadn't carried any tools to the island, for repairing the lens, so Mike and I decided to return to the ship. We loaded the equipment back into the runabout and started to shove off, but couldn't get the motor started. We had left word on the ship that we would be back in a few hours, so nobody got very excited when we didn't return. I decided to get my equipment out of the runabout and back on shore.

The afternoon sun was disappearing and the ship had still not noticed our overdue absence, so I decided to walk the length of the island for help. It was well past dark before I arrived at the

construction site on the other end of the island. A foreman radioed the ship, explaining our situation and asking that we be picked up.

Next morning, I got out my accessory tool bag, which includes a wild assortment collected over the years, and proceeded to take apart my Angenieux zoom lens. I had never taken a zoom lens apart before, let alone in the middle of the Pacific, thousands of miles away from Precision Optics.

I discovered several droplets of water near the rear of the lens. Not wanting to disturb the elements, I decided to leave the lens out, under shade, for the water to dry. This worked . . . but left several water spots on the elements. I very carefully cleaned the lens with the lens cleaner and reassembled it. I hoped that all my efforts had not damaged the lens.

I mounted the zoom back on the camera, tested it with a short piece of film and souped it on the island. I found everything to be functioning properly. My makeshift optical workshop in mid-Pacific had been a success. But, I wouldn't recommend it as a normal procedure.

Another problem during our filming was rough seas. Having to shoulder-carry the camera while shooting sync sound ended up being quite a challenge. Since I knew the film was going to be blown up to 35mm for theatrical release, it was even more important to have a steady camera, as all movement is accentuated during this step-up.

I had taken forty-eight 5" rolls of Scotch 111 1/4" tape to use on the Nagra recorder. I have used this stock for years without any problems of stretch, and this trip was one of the toughest assignments on men and equipment. We experienced no problems at all with this tape and every scene was in sync all the way through every take. The Nagra performed as expected . . . a fantastically reliable machine!

The Auricon is not equipped with an internal slate system, so we had to use a clapboard. I was very particular that each scene be recorded correctly on each slate, and again, this information proved invaluable during editing. I know, because I also edited the film.

This was a grueling assignment for both men and machines, testing their strength, courage and reliability. ■

## UNDERWATER PHOTOGRAPHY FOR "DEADLY FATHOMS"

By BRUCE MOUNIER

*Cinematographer and Underwater Lighting Director*

When HMS Film Corporation of



The DC-6 used on the expedition unloads submarines, decompression chambers, diving and filming equipment in Majuro, the political and population center of the Marshall Islands.

Tampa, Florida asked me to handle underwater filming and lighting on their feature film, "DEADLY FATHOMS", I quickly accepted, not realizing the challenges and hazards we would be facing.

Luckily, I had been unknowingly preparing for the problems of the Bikini expedition for a long time. Two years had been spent working on my own documentary film, "SEARCH FOR THE BLUE HOLES", concerning the discovery and exploration of uncharted, shark-infested depressions in remote areas of the Great Bahama Bank. It was this unique experience, filming at great depths in dark, dangerous waters, that provided me with an extensive background in tough lighting situations.

But, even with that experience behind me, there would be a whole slate of new problems on the expedition to Bikini. For the past twenty-six years, no one had successfully filmed the ghostly wrecks at the infamous atoll test range. Besides the threat of dangerous radiation levels, filming had been prevented by deep water, poor lighting conditions, and extremely heavy shark infestation. The area is also rather inaccessible to most divers, being situated more than 500 nautical miles from Majuro, the capital of the Marshall Islands in the South Pacific. In addition, until 1968 the U.S. Government had prohibited all civilians from entering the area.

To obtain the high-quality image necessary for a theatrical feature of this magnitude, a superior lighting system was essential. It would be required to do

things that no other underwater movie lighting system had ever been required to do. I selected a system that I had developed and constructed while filming the documentary on "blue holes".

It consisted of one self-contained battery pack and cable lights connected to a surface power source. The system could either be camera-mounted or hand-held by the diver/cinematographer.

The battery pack was constructed of a polyvinyl chloride tube, 10" in diameter and 22" long, with 25 high-discharge NiCad 24 amp-hour cells weighing 80 pounds. Under water, the unit weighed in at 20 pounds.

The light head and reflector were machined from an 8"-diameter bar of aluminum and contained three 350-watt, 30-volt, Sylvania quartz lamps with a dry reflector covered by a 6" glass dome, with a flood beam of 65° to 90°, operating at 1,050 watts for a continuous time of 25 minutes.

The cable system was made up of 450 feet of 10-2, polyvinyl chloride-covered electrical cable, with flotation buoys every fifteen feet making the cable slightly positive. A special "Y" connection with two 100-foot lengths of 12-2 cable was added with Electro Oceanic connectors at each end for underwater plugging/unplugging of the two light fixtures. This gave us a total cable length of 550 feet.

The light fixtures of the cable system are the "in-water" reflector type, utilized  
Continued on Page 1462

# COMIC BOOK



## ATLANTA FILM FESTIVAL OVERCOMING THE OBSTACLES TO INDEPENDENT FILM-MAKING

Mixed Media—GOLD MEDAL

By RICHARD TAYLOR  
with AUGUSTUS BORGHESE

There are three big strikes against every independent film-maker, especially those outside the major film-making centers. There's the old "Catch-22" of the film business, "We'll let you make a film, if you show us an example of your work, to prove you can make a film."

"But this is my first attempt at this type of film."

"We'll just have to see an example of your work."

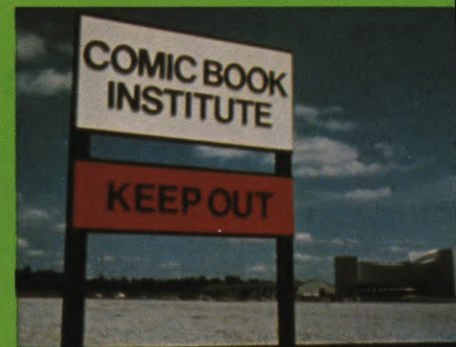
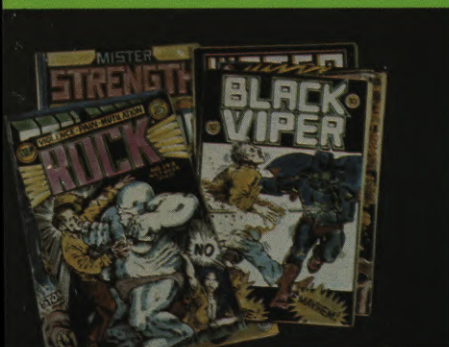
"But this is my first attempt...!" Most of us have heard it before—strike one.

The second problem is purely physical. Films cannot be made without equipment, and you have to know how to use the equipment.

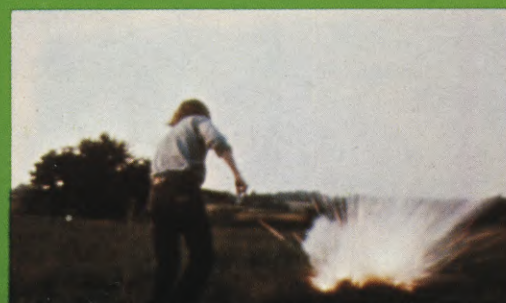
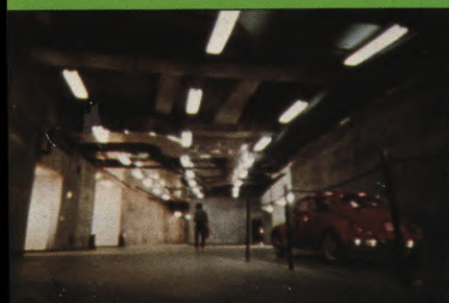
"You want to make a dramatic film? All sync sound! Where are you going to find the sound equipment, enough lights, the actors; who is going to write the script?"

Sound familiar? Strike two.

Last problem, and certainly the biggest—films cost money. Lots of money. Very few film-makers are independently

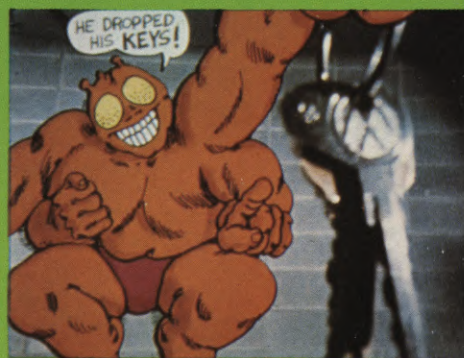


(ABOVE LEFT) Comic book covers, designed by Steve Snyder, used as props in the film. (CENTER) Actor/artist Steve Snyder with Director Richard Taylor. (RIGHT) Exterior of the Comic Book Institute. (BELOW LEFT) Frame blow-up: Interior of Comic Book Institute. This scene was shot with the 5.7mm lens. (CENTER) Snyder is bombarded by one of the many black powder "ray blasts" used in the film. (RIGHT) "The Rock" drags Snyder. This effect was created by having someone drag Snyder along, and then covering the person with "The Rock" by means of the bi-pack process.





(LEFT) Snyder threatened by "The Black Viper". The viper is an animation cel bi-packed with the live-action scene. (CENTER) A scene showing "The Viper" firing a ray blast at Snyder. The ray itself is an animated dot of light that travels from the gun barrel to the target. (RIGHT) The blast itself, actually a black powder charge, explodes next to the terrified Snyder.



(LEFT) Animation combined with live-action, showing "Mr. Strength" stalking the hero. (CENTER) "The Cockroach", clinging to a corridor wall of the Comic Book Institute, gives the hapless Snyder a swift kick. Precisely timed co-ordination of animated and live action was necessary to make this effect believable. (Right) "The Cockroach" discovers that Steve has dropped his keys. Dialogue of animated characters was expressed by means of typical comic strip "bubbles".



(LEFT) "The Volt", a walking electrical charge, approaches Snyder. (CENTER) "The Volt" blasts Snyder with a healthy electrical shock. (RIGHT) Snyder, having been dumped into a water-filled quarry, swims to what he thinks is safety, only to be confronted by "The Rock", who is waiting on the bank to give him a bad time. Extremely precise balancing of color tones and exposures was necessary in order to make these combined animation and live-action scenes credible.

wealthy. Very few people give poverty-stricken film-makers money to make films. Strike three—you're out!

To anyone who has tried to put a film together, none of this is new. This is the story of our struggle to overcome these obstacles. It's not any real answer to the problem; luck had a lot to do with it.

Strike one was the easiest. I was lucky enough to get a job making films right after I graduated from college. Through a general lack of interest in film by the station's management, I had almost complete control over these films. One of my efforts won the Special Jury Award at the Atlanta Film Festival. We had the "ace in the hole," a film to show. But it was a documentary,

and I was talking about a drama. Thinking ahead, I'd put as much drama in my documentary as possible. I went as far as adding a duel between two gladiators. How that ever got into a film about an artist is worth another article, but I could get around the first problem. I had proof I could make a film.

Strike two wasn't bad either. Equipment? Well, I was located in southern Indiana, not exactly the film capital of the world, but, I was also located in the middle of Indiana University. With a little begging and borrowing we had access to an Eclair NPR, Nagra IV and some lighting equipment. There was also an Oxberry animation stand on campus.

Did I know how to use this great selection of film gear? Well I had an

award-winning picture that I had filmed, written and edited.

So much for strike two. I could get equipment and use it. What more could you ask for?

Money! And I did ask—with little success. Plenty of ambition, lots of ideas, experience to carry them out—and nothing. Nothing at all. I spent a year entertaining my friends with all my script ideas. Their general reaction was, "Gee, that would make a great film!" I thought so too; why didn't anybody else?

Then in June 1972 I said goodbye to strike three. I found a folder in my mailbox. It had floated from department to department until, since nobody knew what else to do with it, it ended



(LEFT) Director/cinematographer Richard Taylor takes a meter reading before shooting scene with Steve Snyder. (RIGHT) Taylor at the Oxberry animation stand carefully brushes dust from one of the cels. The production of this intricate mixed-media animated/live-action film was enormously complicated and required the utmost precision at every stage.

up in my box. Station KRLN in Austin, Texas, was setting up the Southwestern Creative Film Center on a \$200,000 grant from the Corporation for Public Broadcasting. They were giving grants up to \$5000 to independent filmmakers, and there were no restrictions on subject matter! Drama was in! Believe me, this is very unusual in public television. But who cared? MONEY!

I pulled out about ten scripts I felt I had to shoot immediately. The other fifty could wait. I chose the most complicated of the ten, entitled "COMIC BOOK". I cleaned it up a bit and sent it off with a copy of my other film. Three weeks later I had the grant.

I had two problems right away. In desperation to get the money I had pruned the budget down to the bone. I promised a thirty-minute film, thirty percent of which was to be full-scale animation combined with live action, that would cost \$2100. That was my first lesson: Have some self-confidence

in your work. I could have gone for the full \$5000, but I chickened out. I was to learn later that this was a big mistake. Problem number two: it couldn't be "I" anymore, it had to be "we". I was going to need help—lots of it.

I went over my script again, it went like this: College student Ralph Baggit drives up to a huge vault-like building. Outside is a giant sign reading "Comic Book Institute." Baggit drives down a long underground ramp and through an enormous metal door that raises to admit his car. The inside of the Institute is a huge concrete tomb. Baggit meets the librarian, a severe woman about a foot taller than himself. He tells her he is writing a thesis on the evils of comic books. They are destroying the moral fiber of America's youth. The librarian leads Baggit through winding tunnels to a vault full of old comic books. Here, alone, he continues his tirade against comics, speaking into a tape recorder.

*"The darkest blot on this thoroughly*

*decadent industry was Mighty Fine Comix Group, published from May of 1949 to January 1952. These criminals were responsible for publishing such garbage as Mister Strength, The Volt (an electric man), The Cockroach (a six-limbed, orange-costumed maniac who delights in stomping his victims senseless); The American (who would rather not get involved); Waterman; and the gigantic stone man, The Rock." (A comic book is shown for each character.)*

But all these characters (satires on familiar comic heroes) pale next to the supreme villain, The Black Viper.

After a verbal attack on all these "super-heroes", Baggit looks up and finds himself face to face with The Black Viper, in animated form!

The rest of the film was to be an exciting chase, the Viper after Baggit, with the Viper harassing his victim with a ray-gun. During the chase Baggit meets all the comic characters he has denounced. They are also in animated form. None of them will help him. In fact all express extreme displeasure at his very presence. The chase leads to a spectacular finale and a twist ending.

One look at that script and I knew I was in trouble. All that in six months for \$2100!

My first job was to get my crew. My film assistant, Augie Borghese would act as soundman and producer. Two friends interested in film, Paul Brown and Mike Orloff, would work as assistants and grips. Steve Snyder, one of the best natural cartoonists I've ever known, had the tough job—the graphics. It was Steve's job to draw all six covers of the "comics" in full color, and they had to be totally realistic. He also had to draw three full inside pages of these comics,

As "The Black Viper" zaps Snyder, black powder blast rigged by special effects expert Roy Weddle is exploded. Cinematographer Taylor hand-holds the Eclair NPR to shoot the scene.







(LEFT) In this gag shot, "The Rock" terrifies Snyder by lifting him high overhead. (RIGHT) During a break between scenes, all is forgiven. Snyder cozies up to "The Rock" by offering him a cold drink (which he can't swallow because of his gravel throat). "The Black Viper" sits sulking nearby, while Taylor discusses set-up for the next scene with producer/soundman Augustus Borghese.

all the signs in the institute, the opening and closing titles, and the biggest job of all, the animation. He did it all beautifully.

The crew assembled (and let me state here that all of us did a little of everything. There were no single jobs. We all handled equipment, set up lights, etc.). Now we had to scout locations. For the Institute we finally chose the University's new basketball stadium. We wanted the building to be desolate and alone, surrounded by rolling fields. Although the stadium was surrounded by the university on three sides, it was built on a slight hill. With the camera set low and the empty parking lot stretching out before us, the proper bleak atmosphere was obtained.

The concrete basement of the stadium served as the Institute's interior. It was full of long corridors and huge rooms, and there was a long underground ramp leading to a huge metal door. "Baggit" could drive his car right into the Institute. The exteriors were filmed within a thirty-mile radius of the university. The largest limestone quarry in the world is nearby, and we used its deep pools and unusual rock formations for the Waterman and the Rock sequences. There was a convenient woods next to the university swimming pool. The pool was loaded with outdoor A.C. outlets and we were able to shoot all our night scenes night-for-night, thanks to the nearby power source for our lights. Baggit meets the Volt in these woods. Finally, a strip mining area provided a desolate hilly location for the climax of the film.

These locations proved far more important than one might think. The physical surroundings set a mood, created a feeling that really helped the film

along. Often the scenery will inspire ad-lib ideas that prove better than those of the script. This happened several times, as you'll see later.

With our locations found and film tests completed, we started casting. Luckily there were only three parts, Ralph Baggit, the Librarian and the Black Viper. The Viper was originally going to be all animated, but when we realized that he appears in more than half of the film, we had to give that idea up. Instead, he first appears animated then changes into a real character. The transformation scene turned out to be one of the most impressive scenes in the film. In another economy move, Mike Orloff would play the Viper (a non-speaking part since all the comic characters speak with comic style "voice bubbles").

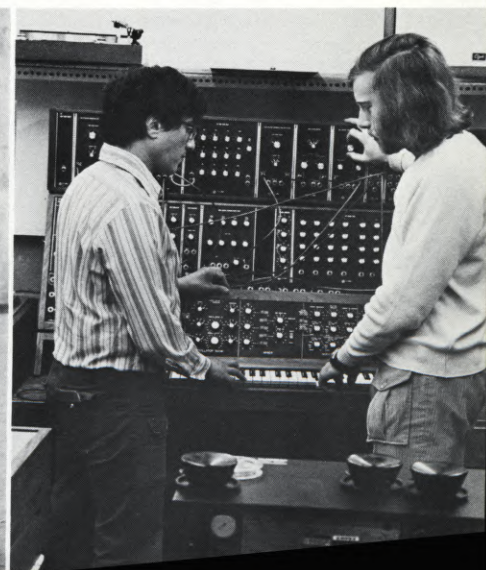
We now had the problem of creating an outfit for the Viper. My wife, Kathy, sewed up a black body suit and a flowing red-lined cape. The red stock-

ing-like boots and briefs were purchased at a lingerie counter. We got some pretty weird looks! "I'd like the largest pair of red panties you have please!" A huge black hat and an army surplus gas mask completed the costume. Total cost—about \$15.

Tall, attractive Anita Pedersen, a student, would play the Librarian. I had spotted her in the hall one day and she looked the part, so I asked her to read for it. She was perfect. That left us with Ralph Baggit. We tried actor after actor, professional and amateur—none worked. I was getting desperate! Then I saw our artist, Steve, joking with the script and delivering some of the lines. Fantastic! There was Ralph Baggit right under our noses. The cameras were ready to roll.

The photography was going to be difficult because we were lacking a good supply of a very important item—lights. For the most part we used two Colortran Mini-Pro kits, consisting of six  
Continued on Page 1456

(LEFT) The crew sets up for low-angle close shot of "The Black Viper", chief villain of the piece. Note Eclair NPR on homemade low-boy. (RIGHT) Doug Babb, composer of the electronic musical score, works at the Moog Synthesizer with Producer Borghese to create special sound effects.





In this fanciful illustration for an article on the Atlanta Film Festival, which appeared in the August 1973 issue of PLAYBOY Magazine, Scarlett O'Hara and Rhett Butler (as played by Vivien Leigh and Clark Gable in the film version of "GONE WITH THE WIND") return to their hometown, Atlanta, to sip a julep and watch the Festival screenings. Reproduced courtesy of PLAYBOY Magazine. Copyright © 1973 by PLAYBOY.

(LEFT) Formally attired crowd packs the Grand Ballroom of Atlanta's Stouffers Inn for Awards Banquet. (CENTER) Members of Board of Advisors and honored guests join J. Hunter Todd at main banquet table. (RIGHT) Producer John Peckham alternates with Todd in announcing the awards.



(LEFT) Jamil Delhavi accepts Interfilm Award medal for Best Student Film, "THE GUITARIST". In addition to cash award from Interfilm Productions, he received Mini-Pro Lighting Kit, courtesy of Berkey/Colortran. (CENTER) Hollywood Producer Roger Corman accepts Gold Medal for "LA PLANETE SAUVAGE", Best Animated Feature. (RIGHT) Mik Derks gleefully holds coveted Silver Phoenix statuette, while co-director Steve Poster makes acceptance speech in acknowledgement of Best Short Subject award for "ANOTHER SATURDAY NIGHT".



## ATLANTA FILM FESTIVAL

Continued from Page 1393

short, "BALLET ADAGIO" by that inspired film artist, Norman McLaren of the National Film Board of Canada. The Canadian features include "U-TURN", "KAMOURASKA" and "ONCE UPON A HUNT".

The "biggie" of the group is "KAMOURASKA", an ambitious period melodrama that features impeccable performances by Genevieve Bujold and a strong supporting cast, superb photography by Michel Brault, and very solid production values. Despite all of these plus elements and the fact that the script was adapted from a best-selling novel, I find the film's content to be disappointing. In my opinion it is little more than a glorified soap opera concerning a group of people toward whom it is impossible to feel the slightest sympathy, let alone empathy. The jazzy flashback editing is also out of key with the film's mood and does little to clarify the coherence of the story line. I regret to say that, to me, the vehicle seems like a great waste of a lot of very fine talent.

"THE PAPER CHASE", a finely wrought film that manages to be both intelligent and entertaining, rates high with the audience, as does "THE LAST AMERICAN HERO". The latter, having to do with the son of a moonshiner who becomes a drag-race champion, is a solidly authentic slice of Americana, with a sharply drawn characterization by Jeff Bridges and excellent performances by Art Lund, Geraldine Fitzgerald and Valerie Perrine.

Two animated features score heavily with the audience. The first, American International's "HEAVY TRAFFIC", was created by Ralph Bakshi (who also gave us "FRITZ THE CAT") and it is a dazzling satirical send-up of all the standard mores of modern society. The second, "THE SAVAGE PLANET", is a stunning French-Czechoslovakian co-production with an allegorical theme. It features an intricately shaded style of animation that is totally unique.

I am happy to note that "VISIONS OF EIGHT", Wolper Productions' film of the Munich Olympic Games, as seen through the eyes of eight internationally famous directors, is very well received by the audience. Knowing that I was one of the many cameramen involved in the shooting of the picture, Hunter Todd, in a sudden inspiration, asks me to tell the audience a bit about the making of the film, prior to its screening. What can I really say about a project of such sweeping magnitude, without going on for hours? I cite a few basic facts about the production, and

then tell the audience: "Confucius said that one picture is worth 10,000 words. So, with that in mind, I'll turn 'VISIONS OF EIGHT' over to the tender mercies of the projectionist—and I hope you'll enjoy watching it as much as I enjoyed working on it."

And I think they did.

I must say that I found the Bulgarian film, "THE GOAT HORN" to be absolutely fascinating. The period is the 17th Century and the action takes place in a small highland village of Bulgaria, then suffering under Ottoman rule. It is a quite unusual and highly dramatic story, extremely well acted and beautifully photographed in a stark black and white style. I find the medieval customs portrayed in the film to be most exotic and interesting.

"CHARIOTS OF THE GODS", though a touch too long, is another feature that holds me and the rest of the audience practically spellbound. It is an expertly made in-depth documentary based on the book of the same name by Erich Von Daniken and deals with the many tangible evidences on Earth suggesting that this planet was visited by extraterrestrial beings centuries ago. One doesn't have to be a space-freak to find this film excitingly provocative.

It has been my experience that, during the course of each Festival, there is one particular program that completely captivates the audience, creating an atmosphere of pure magic. This year, surprisingly enough, that program turns out to be the one featuring a screening of Valentino's "SON OF THE SHEIK".

The evening begins with Hunter Todd's introduction of famed New York organist Lee Erwin, who will play the original score accompanying the silent Valentino film. The theatre is packed with people, most of whom were not born until at least a quarter of a century after Valentino's death. Erwin, caressing the mighty non-Wurlitzer organ, swings into an overture which turns into a mystifying duet when a playerless gold grand piano (complete with Liberace candelabra) rises out of the orchestra pit and tinkles out the tune along with him. The crowd goes wild.

But there is yet another surprise in store. Todd announces that an unprogrammed two-reel Charlie Chaplin comedy titled "BEHIND THE SCREEN" will now be shown. And so it is, to the accompaniment of a witty score by Erwin. The young viewers in the audience  
Continued on Page 1481

American Cinematographer Editor Herb Lightman takes time off from judging chores on the Final Grand Awards Jury to tape a half-hour interview with Jim Whaley for "CINEMA SHOWCASE", television series produced by Danny Royal at Atlanta's WETV (Channel 30). The same station carried a 12-hour Festival program on the last day, including "Best of the Festival" screenings and live coverage of the Awards Banquet.



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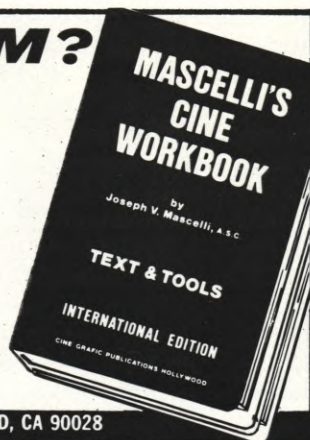
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### FILMING "COMIC BOOK"

Continued from Page 1453

small lights. We also used several 1000-watt quartz lights for the big rooms.

The main entrance room in the Institute measured about 200' by 100', with a 30' ceiling. For this shot we used the natural fluorescent lights and filled with our quartz. We had the six 650's and four 1000's. We used EF 7241 film for most of the shots with fluorescents, since this film gave us the best color rendition under these lights and its ASA of 160 gave us the fastest emulsion available.

We used no filters. Of course, the quartz lights are balanced for 3200K and 7241 is a daylight film. We had four dichroic filters for the Colortrans and we used these units to key the actors. The 1000's were left unfiltered out of necessity, and the strange color effects actually helped establish the weird mood we tried to create for the place.

To emphasize the "bigness" of the Institute we used a 5.7mm lens shooting from a low angle. This lens can really be abused, so we tried to keep its use to a minimum. It also presented a problem in light placement. The large entrance room was really just a flat-sided concrete box. There were a few corridors leading off to the sides and we "hid" the lights in these. But the ultra-wide-angle 5.7mm lens can literally see around corners! We ended up with lights under the car, behind pillars and even behind the actors.

Because of the vast areas of our "sets" and the lack of lights, I would often let areas go dark. This helped break up the dull gray concrete walls and, combined with our "color" effects, gave otherwise dismal settings a little life. These dark areas would normally have been a problem, since reversal film tends to accentuate the contrast, wiping out any subtlety in the shaded portion of the scene. This is especially true of EF film.

We eliminated most of the problem by post-fogging the film. This tended to bring out much of the detail that would normally have been lost. We generally fogged to a base density of about 2.6. The fogging was done with our Eclair NPR. The shutter was set to 90 degrees and the lens was removed. The light source was a 650-watt quartz lamp. To get the correct base density, .25 foot-candles of light were needed. To get this low a level we taped a 2.0 ND Filter over the lens mount and focused the light source through frosted glass. It is always dangerous to handle your original more than necessary, in this case



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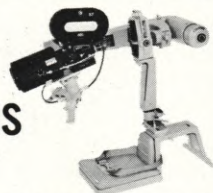
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running it through the camera twice, but we felt the control we had in the fogging was worth the risk.

All outside locations were filmed with ECO 7252. For night scenes we used EF 7242. I used the dichroic filters on the Colortrans and obtained a bluish cast that simulated moonlight nicely. Shooting at night is tricky. I'm afraid I used a little too much light, a very easy thing to do. It's hard to set a low light level and then underexpose by one or two stops, especially for a cameraman used to working in documentaries. Our night scenes look a little too "lit" to be totally convincing.

One of the things that to me always separates an amateur film from a professional-looking product is camera movement. A simple dolly at the right time can add immeasurably to your film. Unfortunately we had no budget for any type of dolly. Augie turned inventor and built several wooden platforms onto which we could attach the head of our NCE tripod. This platform was then placed on an ordinary garbage cart and held down with 20-pound stage weights. These carts can be located in almost any large building and, if you can find one with good wheels, they make a very smooth dolly. We used sheets of plywood to smooth out any rough floors or ground.

I learned a lot as director and cameraman on this film. The most important thing was to keep things simple. Simplicity in your direction and camerawork. For example, we had a scene where Steve is searching his car for his keys. He can't find them and slams the car door in disgust. He looks up and there is the Viper standing twenty feet from the car. A simple scene, the first one we shot—and shot, and shot! I took the sequence from every angle I could think of. Close-up, medium shot, long shot, dollies, we did them all. When I got the film back and started to edit it, I discovered there was no way it would fit together! Each shot was fine, but they didn't work as a group. We went back and shot the whole sequence in two shots, one from the inside of the car as Steve rummages through it, then cutting outside, with the car in the distance. The Viper's feet step into the foreground of the scene as Steve slams the car door. He looks up and reacts. It worked beautifully, and the camera placement and lighting greatly enhanced the drama of the situation.

To a director-cameraman used to working in documentaries, this simple, basic film rule can be amazingly hard to grasp. He is used to shooting many scenes, often disjointed and incomplete, and then piecing them together at the

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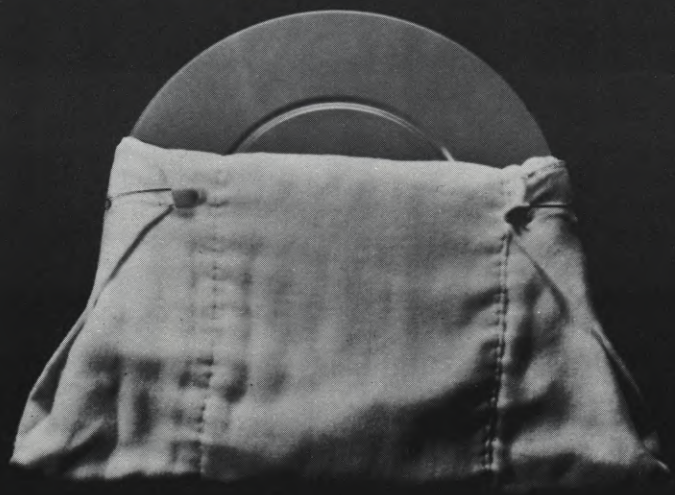


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editing table. The documentary film tends to be a collection of short "events" held together by the fact that the viewer knows the subject matter of the film. In a film using dramatic narrative the director must "flow" his scenes together. Tiny details necessary to tell the story must fit into the film naturally. Each scene must fit together to form a coherent sequence. You can't use the filmic "shorthand" employed in documentaries. Each shot must be thought out and planned. To the documentary director used to shooting now and planning later, his usual approach can be a disaster in a dramatic film. It took a week of shooting before I really obtained satisfactory footage.

We found that, as the shooting progressed, our scenes became longer. We tended to use camera movement, lighting and the actors moving within the frame to make the sequence work. This method worked better than the massive editing of many tiny shots. These long takes gave us more time to set our lighting and rehearse camera movements. It also helped our actors stay in their characters. Nothing is more frustrating for an actor than to do a long dramatic scene in twenty, ten-second shots. Of course you also often need short shots and quick cutting to enhance an action sequence or create a dramatic effect. We used this system to pace the film. Long scenes with slow dolly shots were used during the slower-paced dialogue scenes, while the action and chase sequences were made up of shorter, quicker shots. A simple basic method used since film began. It is amazing how you can forget these basics when you have a crew and actors waiting on your every word, rented equipment using up your budget and you're trying to get the exposure for the scene and set up the camera movements for the next shot. That was my big lesson: plan ahead. If you know what you want to do when you get there you don't waste time on location. It can save days of frustrating reshooting.

The animation turned out to be a bigger job than we thought. First, Steve acted out each shot in pantomime. Those shots had to be as steady as possible or the animated characters would "cycle" or move slightly within the frame. Our Eclair had a single registration pin and it kept the film steady enough. It wasn't perfect, but I doubt that it could be done any better in 16mm. After we had our master shots done, I took them over to the Oxberry and roto-scoped each frame. The frame is projected down onto the compound table and I simply hand-traced each frame. It was an incredibly time-

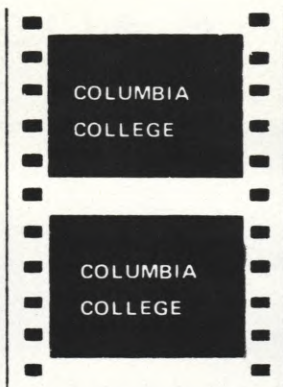
consuming job, but necessary. We had scenes like the Cockroach kicking Steve in the stomach. I traced Steve's exact body position at the time of the kick and the number of the frame where the kick occurred. I took all these tracings back to Steve who then drew the characters in the correct position. Steve had never done animation before, so I showed him the basics of movements, the number of cells necessary to move a character's arm from one position to another, etc., but once he got into it he picked it up on his own. Steve drew and inked each cell and my wife and I spent several months painting them in. This was a real job, since most of the characters have highly complex and colorful costumes.

The finished cells and the master shots were then taken back to the Oxberry and were combined by means of the bipack process.

This is a simple (but again time-consuming) process, and it is very hard to explain. Basically the master film and raw stock are placed in the Oxberry camera so that it acts as a simple printer. The underlight of the animation stand acts as the "printer" light. Each cell is opaqued black on the back. When the cell is placed on the stand it blocks out part of the light; it becomes, in effect, a matte. You run through each frame this way. If you processed the film now, you would have a print of your original with a black space the shape of the character on each frame. But instead of processing it, you wind the film back to the beginning, take out your original master, and reshoot the sequence, using the same cells, with the top lights and a black background. Now the color figure is inserted into your black space. If your top lighting and print light are balanced and you make each run exactly the same it all works fine. After much trial and error we got it to work.

An animation scene that always draws comment is one in which Steve grabs the Rock and is dragged along by the character! People are always looking for wires or some other method of pulling Steve along. Actually it was far more simple. Steve grabbed me, and I pulled him along. We just superimposed the Rock over my figure. I literally hid behind him!

To make the Viper's gun more impressive I wanted it to shoot out a ray. We used black powder charges, set off electrically, to provide the explosions of the raygun's "hit". The ray itself was to appear as a dot of light that would travel from the gun barrel to the target. We again rotoscoped each of these scenes to get the correct position of the



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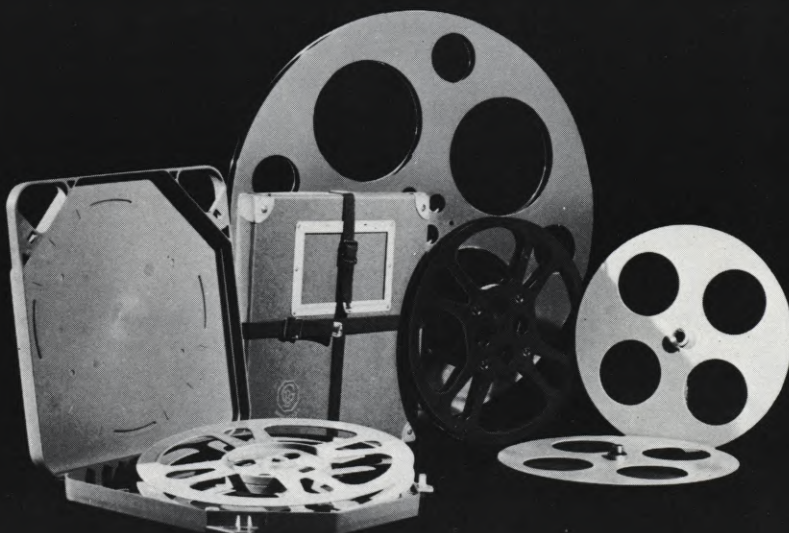
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gun and target. I then drew the "pellets" of light, in sequence from the gun to the explosion, on clear acetates. The background was opaqued. This series of dots was then photographed on the Oxberry on high-contrast film. Depending on the distance and perspective, these ray blasts usually lasted five to twenty frames. To complete the effect, I simply cut the ray effect into the B roll and they printed over the scene as a superimposure in the final print.

Steve turned out to be as good an actor as he was an artist. It was a very physical role. All the stunts in the film are for real. The most dangerous one we called the "slide for life". As I said before, the location setting will often suggest ideas to be used in the film. In this case I thought it would be great if Steve escaped from the Institute by sliding under the huge metal door just as it closed. Steve practiced until he could slide under with inches to spare. We then filmed it about ten times and the last take was great. Slowly the door is coming down. When it is only about a foot from the ground, Steve slides under and the door slams shut missing his head by an inch! We weren't too worried, since the door had a stop button in case Steve got in trouble. Then, right after the last slide, the building superintendent came running out and informed us that the door weighed 2½ tons and that it had fallen three times in the last week! Steve was rather pale for several days.

The only stunt Steve couldn't handle was a fall off of a forty-foot cliff into a lake. He can't swim. I hesitated to use a double but I couldn't see drowning our star. Paul Brown looked something like Steve with his long hair and beard, so we used him and did the sequence with long shots. No one seemed to notice and, in fact, at the premiere, Steve's parents asked him if he had learned to swim for the film.

One evening we had a little run-in with the local police. Our lights attracted their attention and as they pulled into the woods to check things out the Black Viper stalked from the bushes, ray gun raised high, eyes glowing green. Needless to say we got a write-up in next morning's paper. About the only other mishap occurred during the filming of one of the many explosion scenes. Steve had all the hair on his chest burned off when we used a little too much powder. About that time he decided to give up acting and devote his life totally to art.

We tried to do as much location sound recording as possible. Often things that sounded terrible on location could be saved back in the studio. If



you can, record everything. You never can tell when you might be able to use the sound.

Sound is often almost forgotten. It tends to be treated as a necessary inconvenience by many young film-makers. To make a film work you often have to put as much work into your sound track as you do into your photography. Again, it is the little, subtle things that make it stand out. After an explosion just misses Steve in a large open field, I put in the distant barking of a dog, as if the sound awakened him. The scene takes place at sunset and the barking creates just the right mood as Steve runs away from the camera. Although the photography is effective in the scene, that one little sound effect makes it work twice as well.

I could go on and on about our problems, but if you get the chance to do this type of film you'll make most of the same mistakes we did and work out your own solutions. I'd just keep it simple, plan ahead and find a good crew and you'll make it.

We finished six months behind schedule, over a year after we started. Luckily I had a good crew. They all stuck around, they all put one hundred percent of their time and effort into this project. Without people like that you'll have a tough time getting your film done. The budget? Forget it. I was at least a thousand over. We had to make the film the way we wanted it; we had to do it right. This often meant reshooting scenes, changing the script, renting the right equipment, anything expensive—we did it. It all added up, but it was worth it. We ended up with a polished, professional-looking film. It was a lot more work than any of us ever imagined, but we are all ready to try another film anytime. There's just one problem, we need to find the money to make it. You see, if we could just locate someone who would be willing to put up enough . . .

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**AUGUSTUS BORGHESE**—Producer,  
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**STEVE SNYDER**—Actor, Graphic Artist

**MIKE ORLOFF**—Actor, Assistant Soundman,

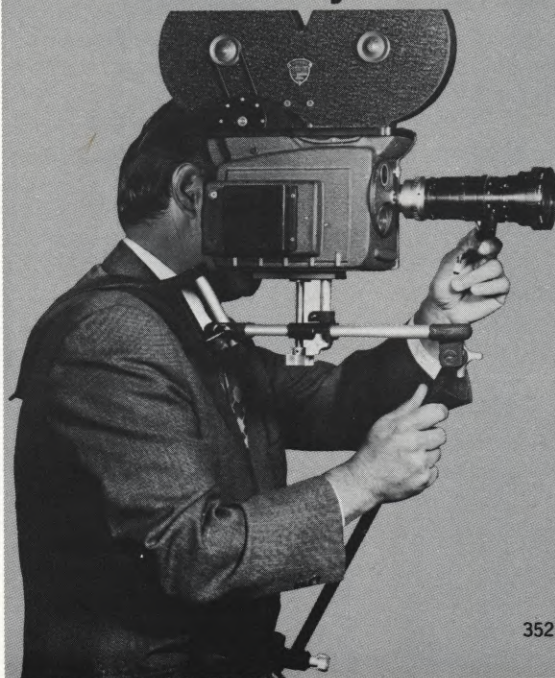
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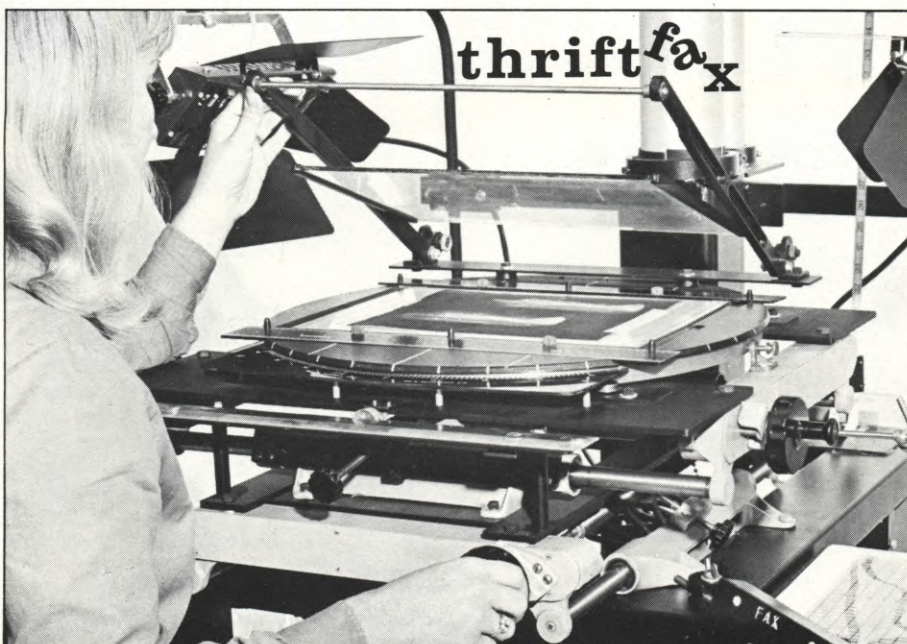
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## FILMING "DEADLY FATHOMS"

Continued from Page 1449

ing 1,000 and 2,000 watts in a compact design. The reflectors slide up and down on aluminum tubes for beam adjustment. A custom designed O-ring sealed quartz tube, which can stand a thermo shock of 800° Fahrenheit, covers the lamp. This protects the lamp and the diver, if the lights are on when entering the water.

The lamps were Sylvania 1,000-watt and G.E. 2,000-watt, 3400K. There was only one lamp failure on the expedition, which occurred when a 1,000-watt lamp exploded violently. The custom quartz tube withstood the force of the explosion, with no damage apparent.

All cabled lights were operated on the ship's D.C. power, regulating voltage to receive 125 to 130 volts.

Tube cameras, manufactured in France by La Spirotechnique, were used for most underwater filming. The cameras had Beaulieu movements, which operated with perfect registration at 24 fps under the most severe climatic conditions. They were equipped with 9.5mm fixed-focus Angenieux lenses, with an Ivanoff underwater correction system allowing 60° coverage. For framing, I used a Seacor optical viewfinder, which worked especially well on tight shots. A thorough familiarity with the system was required for moving shots, fast action and shooting in close quarters.

I used a Weston direct reading light meter enclosed in a housing of my own design mounted next to the viewfinder. This allowed me to follow the reading as the scene changed, while simultaneously framing the subject.

The only other special diving equipment used for filming was a Scubapro buoyancy compensator to achieve neutral buoyancy when shooting with heavy battery packs at various depths.

One of the most important aspects of filming the ships at Bikini was physical conditioning. All the diver/cinematographers had to be in top shape. Almost all of the descents were decompression dives requiring double air tanks, protective wet suits and complete gear. Heavy lighting equipment was used on all dives and a great amount of stamina was needed to swim to a depth of 180 feet, and then a distance of 600 feet along the side of a wreck.

One major problem we encountered was having the support divers in the right place at the right time to light the subjects being shot. Nitrogen narcosis caused serious disorientation at great depths, affecting coordination and judgment. To complicate matters, the flota-

tion buoys on the power cables were compressed by the extreme water pressure, making the cables very difficult to handle. They would easily become tangled in the wreckage, slowing the underwater lighting operation.

With time for only two decompression dives a day, we couldn't afford for our efforts to be wasted. To speed things up, I began using camera-mounted lights, considered by many to be an impossible apparatus. However, the results can be excellent if the equipment is handled right and if the support divers are in top physical condition and know their business.

The total weight of the electrical cord was well over 250 pounds. At times it was necessary for the entire crew to lend a hand. Even Producer/Director Mike Harris donned mask, fins and snorkel to keep the cable from getting tangled near the surface. The two primary support divers, Bob Cheffer and Van Smith, were extraordinarily competent at 180 feet—well into the narcosis zone—fighting to keep the cords clear of obstructions.

Danger was always imminent and on one dive, we had a very close call. I felt a jerk on my cable, looked back and saw Dr. Norman Ahl, support diver and expedition physician, signaling frantically. He was out of air and on the verge of panic. My first thought was of my own safety, but I quickly gained presence of mind and handed Dr. Ahl my extra "octopus" regulator. Holding him by the shoulders, I escorted him up to support diver Calvin Hayashikawa at 100 feet. Cal continued working to keep the doctor from panicking while guiding him to the decompression station, and safety.

Inside the U.S. Aircraft carrier *Saratoga*, at a depth of 130 feet, and 200 feet back inside the flight deck, total darkness enveloped our cameras. I used the two camera-mounted lights totaling 3,000 watts, plus the diver-held battery pack with 1,050 watts, which also served as a safety light in case of power failure on our support ship above.

It was an eerie experience, swimming through a darkened tomb laden with aircraft, live bombs and deadly torpedoes—all in battle-ready condition.

We had to film quickly, letting the cameras roll as we swam, because our air bubbles loosened the rust and silt from the bulkheads, making the water turbid. Framing and metering had to be done instantly while moving through the wreckage and support divers had a difficult time keeping the cables clear.

For one sequence of the film, we moved into shallow waters to cover the unusual and strangely abundant fish life

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present in the atomic test range area. Our large support vessel could not move close to the diving area because of reefs. In this situation, I used the 1,050-watt camera-mounted battery pack, a setup which I also used extensively for freedom of movement in obstructed areas.

The unit produced a great deal of water resistance on a 500-600-foot swim along the side of a wreck. I never made it back to the decompression station with very much air and always had to go to a spare tank. The results we got on film, however, made the discomfort and trouble worthwhile.

The only film stock utilized was 7252 and 7242. I used an 85 Wratten filter with artificial lighting because the underwater picture tends to be cool. The warmer spectrum achieved with this light and filter combination has considerably more eye appeal.

In reviewing the results, it became obvious that 7242 gives much more depth of field and sees more picture underwater in very poor lighting conditions. I only wish I had used 7241 for these situations and said to hell with concern over grain. Even a grainy picture with good depth and color has more audience appeal than a fine grain picture with a flat or hazy subject. Fortunately, all the footage in "DEADLY FATHOMS" is both sharp and colorful. It turned out that grain was nearly non-existent.

The many unique filming situations experienced on the "DEADLY FATHOMS" project taught us a lot. I have since developed a more compact housing for a Bolex Pro camera with a 400-foot magazine and an extremely wide-angle 8mm fixed-focus lens which has been dome-corrected. The reflex automatic metering system has also proved to be a plus, especially for deep water filming using artificial light.

For underwater lighting, I have developed a smaller and lighter battery pack weighing only 36 pounds. It produces a continuous 700 watts for 40 minutes or 1400 watts for 15 minutes. The smaller pack gives a diver more freedom with less exertion when using a camera-mounted system. ■

## FILMING THE ATOMIC GRAVEYARD By RICK FREHSEE

*Underwater Cinematographer*

It's difficult to comprehend the photographic problems in filming shipwrecks, many of them over 600 feet long in 180-200 feet of water. There are photographic problems, logistical prob-

lems, problems in communicating with models and light men, diving and environmental problems, not to mention limited bottom time and decompression. Fortunately, we have been able to find at least partial solutions to many of these problems.

Our underwater cameras are LaSpirotechnique Film 60 models, inspired by the Cousteau integral designs and made in France. The basic mechanism is a Beaulieu with 200-foot spools and a water-corrected 9.8mm, F/1.8 Angenieux lens.

The outer body of the camera is a PVC tube, O-ring sealed at both ends and can be checked for air tightness with a bicycle pump through a valve on the camera. The fact that the camera requires no bulky external housing is almost fundamental to the design for a good underwater movie camera and its tube-shape is much easier to move through the water and to properly frame the subject.

A brief explanation of the water-corrector in front of the lens is necessary in order to fully appreciate the optical capabilities of the system underwater. The corrector is an invention of A. Evanoff, a French optical designer and the patent is held in the U.S. by D. Rebikoff. The front port, that is the part touching water, is flat. However, the opposite side is concave, which acts in kind of a reverse telephoto effect. Besides correcting for magnification distortion underwater (and in the process restoring the original focal length of the lens), the Evanoff corrector reportedly doubles the depth of field of the lens at any given F/stop. This seems to be so, as the Angenieux lens is fixed-focus and there are plenty of shots that I made at Bikini with the lens wide open and you can see sea whips and other soft corals bouncing off the lens protector, inches away from the lens, in pretty good focus.

A lens of 9.8 millimeters underwater (about 90-degree acceptance) is just barely wide enough for shooting subjects like the monumental shipwrecks of the atomic graveyard. We could have used 5.7 millimeters on many occasions. Just to get the big guns on the U.S. battleship Arkansas in frame, for example, you had to be at least ten feet from your subject. Ten feet might be a short camera-to-subject topside but underwater it's just about maximum distance possible to get any color saturation and detail in your images.

It is also a hell of a long distance to throw artificial illumination. Underwater, light is attenuated—that is, absorbed and scattered significantly in short distances. As a rule of thumb on

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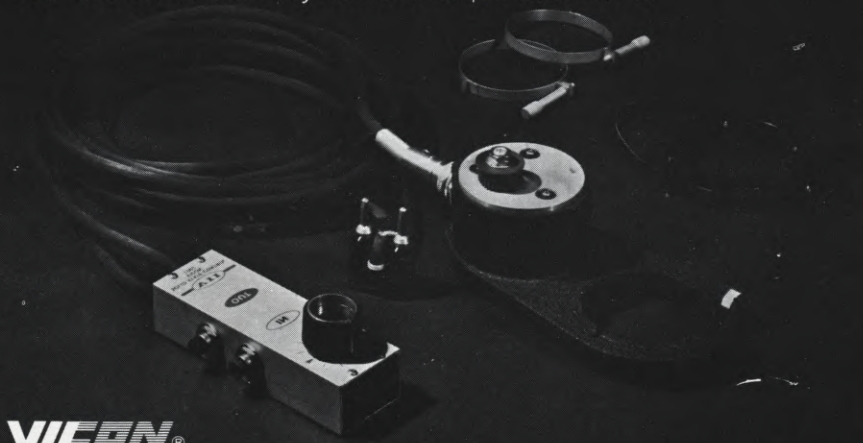
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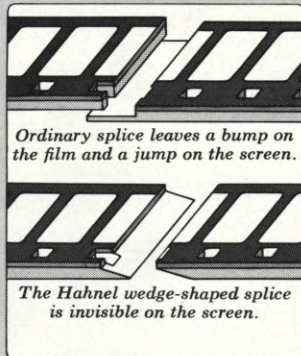
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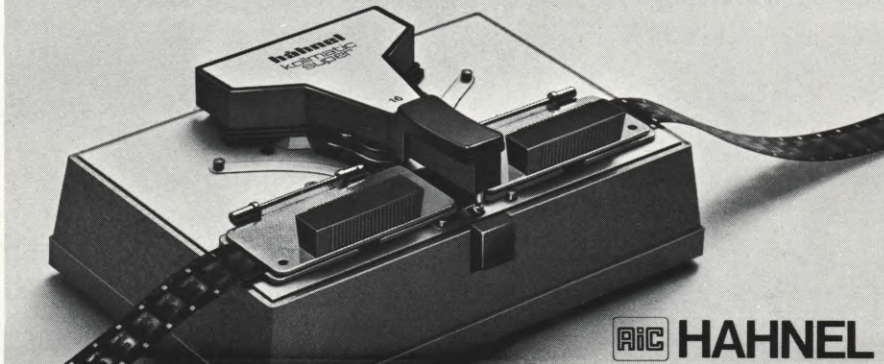


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the amount of light needed for underwater filming, it is always at least four times what is needed topside for a comparable scene. This is based on the idea that 50 percent of the light is absorbed from the light source to the subject, and 50 percent of the remaining light is absorbed from the subject to the lens. These figures are average for clear water and are over and above the normal inverse square law of light fall-off that is used topside. This is why Bruce's 4000-plus watts of light were nothing more than minimal for shooting everything but closeups on the atomic shipwrecks. We had a half-dozen commercially manufactured 350-watt underwater lights on hand. Besides the problem of their being constantly flooded, 350-watts underwater 200 feet deep won't light up the inside of your ear.

Also, because of the fantastic problem of lighting, a fast lens is essential. F/1.8 was again minimal lens speed. We couldn't have shot "DEADLY FATHOMS" if our lenses had been a stop slower. I don't think I am exaggerating when I say that half our underwater footage was shot at F/1.8.

How do you show an entire 800-foot shipwreck in 200 feet of water? Well it is real simple. You don't. And anyone who thinks he can doesn't understand underwater shooting. On extremely good days in the clearest water in the world you might be blessed with 200 feet of lateral visibility. That's like trying to shoot in a rain storm on land. I don't care how clear the water is, your eye can't see a whole battleship underwater and neither can the camera.

To help establish the mammoth size of the shipwrecks and to help give them continuity we panned, followed divers while they swam, filmed as we swam, and shot the shipwrecks in sections. Shooting dramatic silhouettes whenever possible also helped us to establish large subjects in frame.

Fortunately, with our fixed-focus lens and water-corrector we have no focus problem. For framing and composition we rely on an accessory optical viewfinder mounted externally on the top of our cameras. It is made by Seacor in San Diego and is intended as a viewfinder for the Nikonos 35mm underwater still camera fitted with a special 21mm lens. A 9.8mm lens on a 16mm camera is so close to a 21mm lens on a 35mm camera that we can use them very nicely for our cine-cameras. To be quite truthful, though, I rarely use my viewfinder at all anymore, except perhaps to establish the boundaries of a scene before I start filming. It is easier to just look over the tube and visualize the field angle. This sounds

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difficult, but really, we don't lose many scenes at all because of poor framing. In addition, I like to see what's to either side of my composition; to see what might be swimming in and out of the frame. I suppose there is no substitute for through-the-lens viewing, but I have yet to see an underwater system with a good through-the-lens viewer.

We rely heavily on our light meters, which are Weston Pixie meters—direct reading, naturally, and sealed in an underwater housing. The Weston Pixie is a selenium rather than a CDS cell, which I prefer because of the slight "memory" or retention of the light reading by the CDS cell. The meter is mounted on top of the camera and we have to look almost through it to look at our subject.

With a little practice you can change aperture as fast as it occurs on the meter (our cameras are set up so that we can change aperture easily while we film). There is one scene where I filmed Cal Hayashikawa swimming from the bottom up to me in mid-water and then on towards the surface, carrying an ornate Japanese dish he has recovered from one of the ships. We used artificial lighting up until he reaches mid-water and then he becomes a dramatic silhouette the rest of the way towards the surface. The scene takes less than half a minute and runs the gamut from F/1.8 to F/16.

My choice in film for underwater work is 7252. However, more often than not, I don't get my choice. 7242 is a blessing, and again, without it half our underwater footage at Bikini would not have been possible. There are some who say 7242 is too contrasty, but much of the time underwater we are looking for ways to improve contrast anyway.

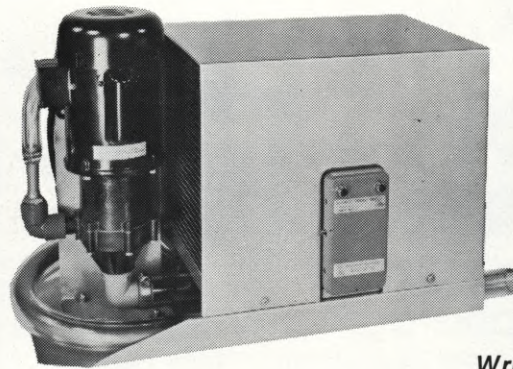
Bruce and I both have a free-moving style in filming underwater. We like to move, swim around and film. But this has to be done very tastefully and very carefully, so as not to get your audience seasick. We take great pride in being able to keep our cameras steady while swimming. It is very easy to get camera "shimmy" while trying to film and kick with fins. It takes a lot of practice to be smooth. A pair of relatively soft flippers and the basic tube shape of the Spiro camera are great aids here.

Two pieces of diving equipment, besides the obvious, that we couldn't do without in underwater filming are a wet suit and a buoyancy compensator. An underwater cameraman cannot function if he is cold and as long as the water temperature is anything less than body temperature, he is fast losing body heat and energy. The necessary protection is a wet suit and that goes for filming under tropic seas, as well.

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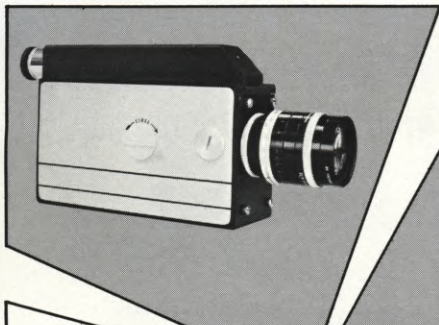
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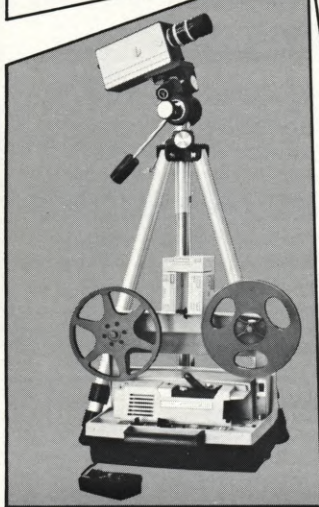
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Filming "DEADLY FATHOMS" was a real test of the diving capabilities of our crew. A good cinematographer can take scuba lessons and, if he's got the camera and lighting equipment, he might get some damn good footage in 30 feet of water. But put him in a full wet suit with 85 lbs of double tanks on his back, two regulators, strap on safety lights, a buoyancy compensator, assorted gauges, decompression meters and plastic slates, tell him to keep track of his own bottom time, calculate his decompression, carry a camera and battery pack or lights and drag cables through 200 feet of water to the bottom—and see what happens.

God bless our Bikini crew. They did this and more, day after day and night after night (that's right, night dives too). The topside crew ran generators and compressors nearly around the clock and our underwater crew kept dragging those cables down to us.

We pretty much stuck with the same crew for each dive. After we had worked together for a week or so, we fell into a successful pattern or routine that spelled success. Bruce Mounier and myself would carry cameras and lights. Bob Cheffer and Van Smith would pick up cables directly behind us so that there would be no problems with cables snagging that might interrupt a scene. Two others, usually Cal Hayashikawa and Norman Ahl tended cables in mid-water (that mid-water cable job was a beaut when there were sharks around).

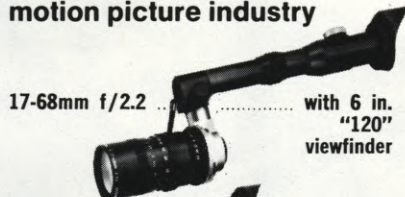
The cables were a necessary nuisance. On one dive they became badly fouled and we were running short of time. We had to leave them for our next dive.

A big limitation in filming deep under the sea is safe bottom time. A diver can only remain underwater ten minutes at 150 feet before stage decompression, stopping at shallow depths underwater to breathe off saturated nitrogen, is necessary. According to the dive tables, a 200-foot dive is not possible without decompressing. We often made 30-minute dives to 200 feet and then paid for them dearly by having to undergo more than an hour of decompression. By the end of six weeks we had actually spent more time decompressing than we had filming, the average depths of our dives being more than 150 feet. But, we also had more than 30,000 feet of film in the can. ■

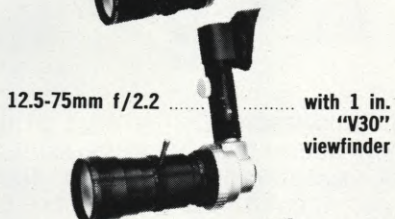


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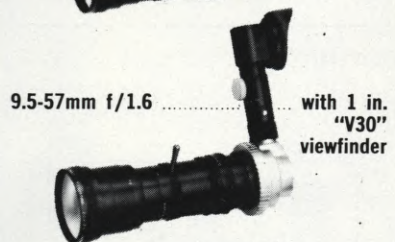
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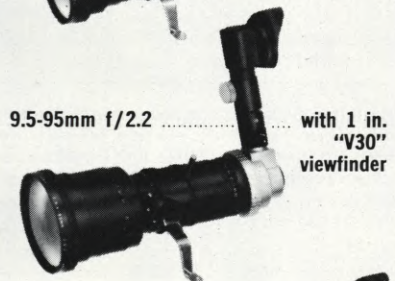
12.5-75mm f/2.2 ..... with 1 in. "V30" viewfinder



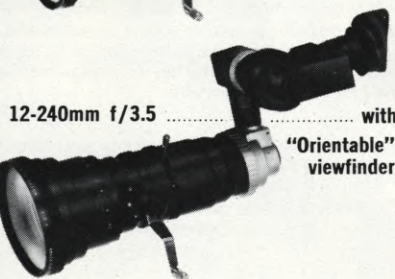
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## "LET THE GOOD TIMES ROLL"

Continued from Page 1435

enough to catch its star, Marlon Brando, and secure his release, there were eight other people on motorcycles in the scene. Who are they? Where do you find them? Are they members of the Screen Actors Guild? Extras? Day players? Problems multiply.

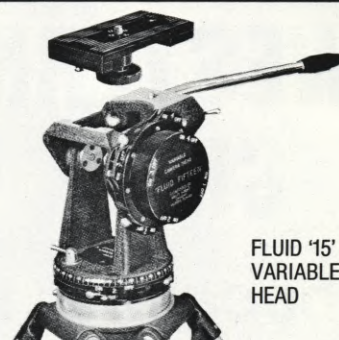
The legal staff for Metromedia/Columbia took a negative view of the use of old material. In their clients' best interests, they advised using only film to which they had legal access, namely the concert film. However, Producer Isenberg authorized the editors to use anything they wished, hoping that somehow the legal problems could be resolved. When old footage of Chuck Berry was unobtainable for legal reasons, a crew spent a week in St. Louis getting the sequence of Chuck Berry reminiscing about his old bus, probably a more effective contrast than the old film would have been. Everyone agrees that while the legal problems were enormous, some trails have been blazed through the legal jungles so that future film-makers will benefit from the precedents established with this picture.

While the time-consuming process of research and editing was taking place, back in the executive offices the natives were growing restless. Deadlines for the picture's completion had come and gone. A great deal of money, many thousands more than had been projected originally, had been spent for material and services, yet no completed film was available for viewing. Unlike the usual film, there were no daily rushes, no pages from a script accomplished, and this situation makes very nervous the people whose money is on the line. While Sid Levin was somewhat protected from executive impatience in his fragile creative endeavors, Producer Jerry Isenberg's responsibilities increased. He was exhorted to exert more control over the frenetic activities at Cinema Associates, and to see that Pierre Adidge kept the picture rolling efficiently.

At the peak of activity, Cinema Associates had in operation three KEM editing tables, one Steenbeck editing table, one Moviola flat bench, five 16mm Moviolas and two 35mm Moviolas, along with the army of people to man them. The post-production department, presided over by Glen Farr and Bert Lovitt, was required to account for the vast amount of material, old and new, and to keep the flow going technically.

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the room, each relating to a specific subject. On every piece of paper was recorded the subject, its source, its intended use, its backing (i.e., 35mm, 16mm, positive, negative), key numbers, and where it was at the moment. In addition, there was kept a flow chart of 4 x 5 cards recording the stages of progression: Was the sequence cut? Approved? At blow-up? In sound editing? Music cutting? Requiring re-shooting? Glen and Bert handled arrangements for sound re-recording at Todd-AO. They secured the old studio footage used, but because these were fragments of an entire picture, they lacked key numbers for transferring syncing information.

"It was like working on an animated cartoon," Glen Farr says, "because matching negative for old footage had to be done by eye-matching, frame by frame."

At this period, the over-all view at Cinema Associates was similar to a military headquarters when an invasion is in preparation. Jerry Isenberg recalls these days of controlled chaos by quoting Richard Nixon, who has a bit part in LET THE GOOD TIMES ROLL.

"I was just there when the bombs were falling."

Another function of the post-production department was supervising the blow-up at Cinema Research. Communication with the optical house was facilitated by the experience the two firms had had in working together on previous blow-up features, including ELVIS ON TOUR, which was released while work on LET THE GOOD TIMES ROLL was progressing and which employed similar blow-up formats. The mode sheets used were a valuable tool, and the complex multi-panel effects could be ordered simply by number rather than by detailed description. Included in the specifications, along with mode changes, were detailed count sheets itemizing changes in density, color balancing, filtering, differing image sizes.

Hal Scheib at Cinema Research feels that too few clients are aware of the complexity of producing a quality blow-up, particularly when multi-panels are utilized and when techniques have progressed in sophistication far beyond mere enlargement from 16mm to 35mm. He says,

"The audience watching LET THE GOOD TIMES ROLL does not see one frame of original material; the entire show is from the dupe negative we manufactured, yet this must not be apparent to the viewer. The picture contains 1805 scenes, which is 2½ to 3 times the number usual in one film, and 384 format changes."

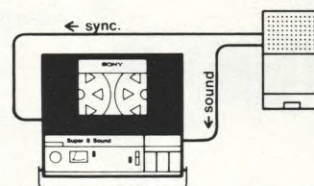
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In order to understand the innovative blow-up methods used on this picture, it is necessary to give some historical background. The wide-screen projection of a finished blow-up feature has increased in popularity because it lends itself to multiple images in simultaneous appearance. However, the standard 35mm frame with its 1-1.33 ratio does not conform to the wide screen with a ratio of perhaps 1-2.30. If the 35mm frame was cropped to the proper proportion, this magnified fraction of perhaps one-third tended to appear excessively grainy. By squeezing the selected portion of the frame by means of an anamorphic lens, the image was compressed to improve the definition and the squeezed 35mm frame could be unsqueezed in wide-screen projection, as in the Cinemascope and Panavision processes.

On such blow-ups as the historic WOODSTOCK, Cinema Research duped the 16mm original onto 35mm Techniscope, as this two-perf stock, approximately half the normal 35mm frame, approximates the wide screen proportions. A second dupe negative was made from this at Technicolor, in which the Techniscope frame was squeezed to standard 35mm proportions. This, then, could be unsqueezed for wide-screen projection, but involved an extra optical generation and a resultant loss of quality.

The seemingly impossible dream of Cinema Associates, both for ELVIS and LET THE GOOD TIMES ROLL, was a one-step blow-up, eliminating one generation, and one which could be processed in any laboratory in the country. Cinema Research accepted the challenge and acquired a Panavision anamorphic lens, but for it to be used on the optical printer, the optics had to be modified. Through Research Products, the associate company of Cinema Research, the necessary engineering was done. For the first time, the 16mm images could be duped in squeezed or compressed form directly onto the 35mm stock, and the one-generation blow-up had a quality improvement of at least 50%. This was particularly important when the 70mm blow-up was made for both domestic and foreign release.

Before the film ever gets to the optical printer for blow-up, however, very painstaking preparations must be made in the line-up department. Every piece of film was checked via the color analyzer for color balance, as there is little opportunity for making corrections at the lab. Scanning the film must be meticulous so that the particular portion of the frame selected for use will be visually harmonious with the

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others used.

As this picture employed such a wide variety of old stock—35mm black and white newsreel prints, 35mm black and white film incorporating stills, 35mm black and white kinescope, 35mm flat and anamorphic color negative, 16mm black and white and Ektachrome—unusual care had to be taken in relating scenes from these various materials so they would be compatible with others on a multiple panel. For example, it is difficult to maintain on color film a good neutral black and white which does not lean towards the blue or the sepia. The scenes must be checked and double-checked so that their length conforms to the exact frame. Extremely accurate timing was especially important because most of the scenes were done to music or with lip-sync; if the scene were even 2 or 3 frames out, the whole thing would have to be re-made. If the mode specifies a six-panel scene, a mistake on any one of them means a complete re-make. The fact that so few re-makes were required is a testimony to both the pre-optical and camera departments at Cinema Research.

Reviewers of **LET THE GOOD TIMES ROLL** are unanimous in praising the effectiveness of the picture's mirror images. When we see Chubby Checker doing the twist in duplicate or watch Bo Diddley's two feet in a six-panel chorus line as they tap out the rock-and-roll beat, the impact is enormously magnified. The absence of frame lines in the multiple panels is another "first" Cinema Research agonized to achieve. Extremely exacting film mattes had to be accomplished to eliminate the separating bars between panels, but securing this effect has opened up a new and exciting option to film producers of the future.

Other problems faced the optical printer operator. The use of Ektachrome 7242 is not the shooting medium Cinema Research recommends for blow-up, as 7252 emulsion gives better quality, but the high-speed emulsion was required because of the light limitations of concert-hall filming. The zoom lenses, also necessary in concert conditions, do not provide as sharp an original as might be obtained in conventional filming. Of course, all film required Cinema Research's exclusive liquid gate in the optical printer to eliminate scratches.

On a six-panel sequence, the film must travel through the printer twelve times, once forward and once back for each panel. The possibilities for error are enormous, particularly with the pressures inherent at this stage of production. The painstaking blow-up

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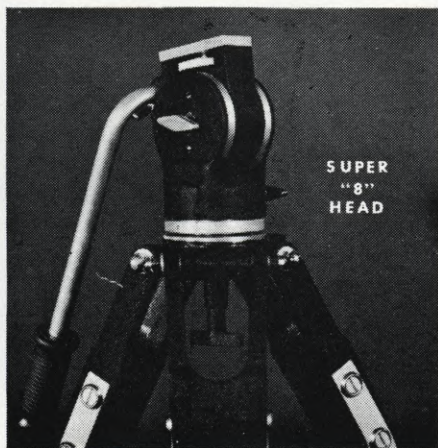
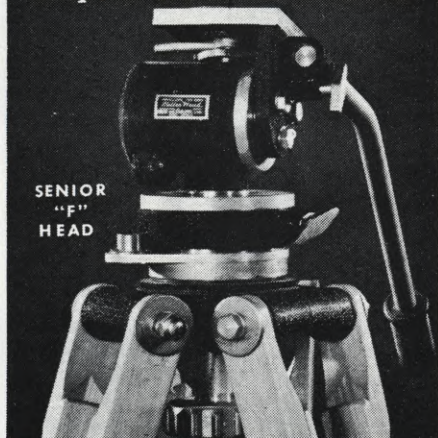
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process unfortunately comes toward the end of the schedule when patience is wearing thin and money is running out. Even with time pressures, however, this blow-up was done in about 2½ months, and the effects were accomplished at a cost which would have been prohibitive with a 35mm original.

Almost a year after the original concert filming, the picture, completed section by section, was eventually ready for theatre showings. It had been like giving birth to the elephant which the blind men found very difficult to describe. Jerry Isenberg insists they employed the LeMaze childbirth method of breathing deeply to minimize the pain of production, but still the pain was acute. Like childbirth, though, the agony is only dimly remembered in the joy of creation.

Sid Levin feels that the synthesis of ideas and techniques from this picture have added to the vocabulary of filmmaking, much as new words enter a language to make it more expressive. He hopes to use hand-held Eclairs and Nagra recorders in making dramatic scripted pictures both more believable and more economical to film. Jerry Isenberg believes he can make wider use in future films of the type of format changes used in LET THE GOOD TIMES ROLL by not employing the entire wide screen for intimate close-up scenes. Pierre Adidge hopes to put his production know-how to work on an "easy" kind of picture, one made from a good old-fashioned script. Hal Scheib is grateful for exciting new effects techniques to offer to the customers of Cinema Research. Chuck Fries is exploring the possibilities of other 16mm blow-ups now that he is convinced the quality can be so good.

If all those involved in the production of LET THE GOOD TIMES ROLL still find it hard to agree on the importance of their various contributions, they are unanimous about one thing. To a man, they say:

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## FILMING "WESTWORLD"

Continued from Page 1438

we tried various ways to light the eyes by resorting to some of the techniques used in commercials vis-a-vis a huge white surface with a small hole cut out for the camera lens. This proved to be too time-consuming and was discarded in favor of conventional lighting. Which brings up this point: when the chips are down, and the time is fast running out, some of the best answers to the worst problems seem to emerge almost by sheer magic. I am sure there are those who will agree that some of the best work done in motion pictures is done under the pressure of time . . . and lack of funds. At any rate, we found that contact lenses with 20% transmission and 80% reflectance served our purpose the best without resorting to "exotic lighting techniques".

More about the gunslinger (Yul Brynner): There is a point in the story where the gunslinger (a robot, remember) is sent in for "repair". The trick here was to put the "real" Yul Brynner on an operating table for "inspection of malfunctioning circuitry". Then, by camera magic, we show the gunslinger's face being lifted off, revealing all of the electronic circuit boards in his skull. During the pre-production stages of "WESTWORLD" a make-up man was flown to Paris to meet Yul Brynner for the purpose of casting his face. Therefore, when we got to this sequence, a plaster replica of Yul's face had been prepared in such a manner as to allow the facial portion to be removed to reveal all the "electronic guts" which were supposed to make him function as a robot. Needless to say, plaster and human skin do not have anywhere near the same characteristics. In order to "match" the "live" Yul Brynner to his plaster reproduction, I worked for almost two hours (on production time!) with the aid of two make-up men and a Polaroid camera until the Polaroid stills of the plaster replica matched closely enough to the "real" Yul Brynner in texture and color. The results were so close that it even gave the guys in the lab a "shock" when his face was removed! (The audience responded right on cue, too.)

The gunslinger was "repaired" in "Robot Repair"—a NASA-type complex complete with all sorts of exotic equipment, including a laser machine. This set was enormous and occupied the entire Stage 25 at MGM studios in Culver City; a stage measuring approximately 117 feet by 195 feet. It was encompassed for 360 degrees by a white cyclorama backdrop, 40 feet high, from the stage



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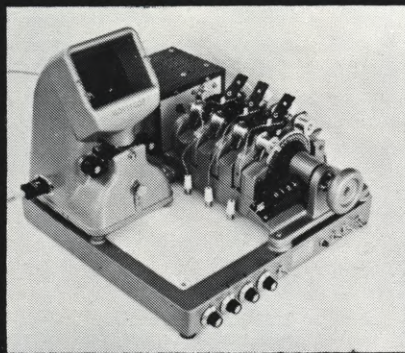
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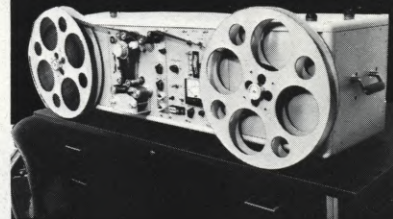
floor to the rafters. Some of the shots we had planned required the use of the Panavision wide-angle 30mm and 40mm lenses. This, in turn, meant that any thought of conventional lighting decks would be out of the question; the lights themselves would be in the picture, since we would be shooting to the very top of the cyclorama. Therefore, I decided to light this entire set with a soft-type of general overhead illumination. For this purpose we scrounged all over the MGM lot for all of the "chicken coops" we could find. Most of them had not been used for years. We gathered them all up and had them repainted, reswitched, and re-globed. Each "coop" contained ten 1000-watt silver-bowled globes; each coop was arranged to switch on 2, 4, and 4 globes (total 10,000 watts) to give us complete control. Naturally, on certain scenes, we used floor lighting equipment to supplement the general overhead lighting—where possible. The "chicken coop" arrangement produced about 125 foot-candles evenly distributed over the entire set. This entire lighting scheme not only provided a "natural look", but enabled us to make 360-degree pan shots and countless camera set-ups per day.

In the Control Room of "WEST-WORLD" we utilized a number of "live TV monitors". Original footage that we had shot was transferred to 1/2" tape for this purpose and the photography was done with Panavision's special "old Bell & Howell threshing machine" which has been equipped with a shutter that eliminates "roll bars". Our shots were arranged in such a manner as to avoid any "looping" of dialogue due to the use of such a noisy camera; for dialogue scenes we simply switched to the Panavision PSR Reflex sound camera and avoided the TV monitors. Since I had photographed a picture called "COLOSSUS" for Universal using 17 "live TV monitors" (in color), the problem of setting up the color bars and selecting the proper exposure was really drawn from that prior experience; I did it as before—namely, exposed for 75 foot-candles at a stop of T/3.2, forcing the development one full stop.

The remaining interior sets on this production posed no particular problems in terms of lighting, with the exception of one set in the castle. Here I had to use three Titan arc lamps because of the tremendous throw involved. On most of my sets, my fill light consisted of "bounce light". The method employed here is quite simple and very effective. I used styrofoam boards (pure white) about one-inch thick. The size of these styrofoam boards varied depending

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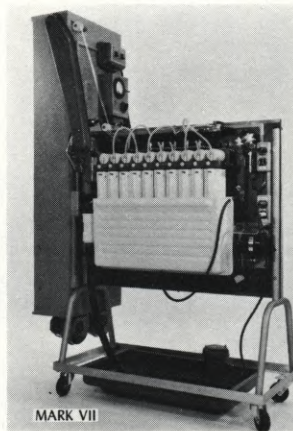
on the usage. For example, I had some boards that measured 48" x 48" and others that were 8 feet x 8 feet. These styrofoam sheets can be obtained in 4-x-8 feet sizes. Since they are feather-weight, it is an easy material to use for bounce light. I found that PAR-64 "six-lites" were the most practical light to use for this purpose and they provide maximum control through individual switches in increments of 1000-watts.

A word about the "Whitney footage". Some of the scenes in "WESTWORLD" required the gunslinger's P.O.V., as seen through his "electronic eyes". A chap by the name of John Whitney, Jr. has devised an ingenious method of taking original camera footage and converting the image into a fascinating mosaic pattern of varying shapes and colors. The trick here is to provide original camera footage which contains sufficient "contrast" to produce a good computer facsimile. We made tests of certain key sequences to arrive at a contrast that would be suitable. For example, we had Richard Benjamin made up completely in white: white make-up, a white western wardrobe, complete with white gloves, and white hair spray. He looked as though he had fallen into a barrel of flour! But that is the kind of contrast that seemed to work best for us on this particular sequence. Other shots (exteriors) were put through the computer to achieve a similar effect. The visual effect really "set up the audience" for a believable robot gunslinger P.O.V.

On some of my exterior shots I deliberately left the 85 filter off the camera. This is interesting; for years I have heard that you should never shoot "day exterior" without the 85 filter. Well, on "WESTWORLD"—through sheer necessity—I learned something; you can do it—and successfully. The problem was as follows: We had shot a major sequence (the "shoot-out" reminiscent of "High Noon") on an overcast day. The sequence could not be completed on that particular day. The following day turned out to be beautiful—a bright sunshiny day. How do we "match" the missing cuts? I talked the situation over with Michael Crichton and explained that I had learned from Stanley Kubrick that he had shot "A CLOCKWORK ORANGE" entirely without the 85 filter. Moreover, I explained to Michael that if we could shoot our missing cuts after the sun went down—in the flat, shadowless type of light one gets at twilight—we could "match" our overcast day's footage. To do this meant shooting a little footage each day over a period of a couple of days since the "magic hour" does not

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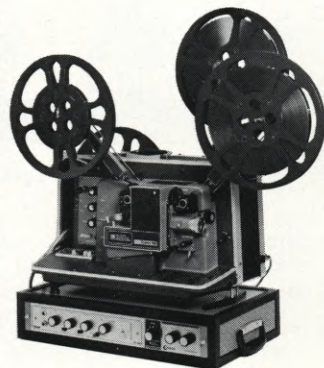


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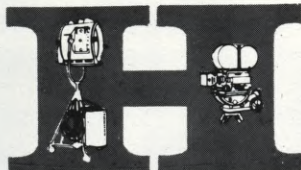


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last long. However, we were able to "extend the magic hour" by eliminating the 85 filter; we picked up additional exposure in doing so. The MGM lab even gave us "color-corrected dailies" on the scenes that were shot without the 85 filter and I doubt that even the trained camera eye could detect the difference between those scenes shot "with" the 85 filter and those shot "without the 85". Interesting? I thought so at the time and I have since employed this technique on other assignments where daylight scenes normally would be out of the question.

A word about the production staff on "WESTWORLD". The rapport between a cameraman and the production staff is no small matter when it comes to creating a "good state of mind". I cannot remember any prior assignment where there was a better rapport between the production staff and myself. The assistant director and unit manager were one and the same person: Claude Binyon, Jr. Although we had never worked together before, it became apparent that Claude was a very knowledgeable person in many areas—particularly, in relating to the needs of the cameraman. He was instrumental in setting up a line of communication—on a day-to-day basis—between the director, the cameraman, and the production staff that I have never experienced before. We all worked as a team which, in turn, created a wonderful feeling that eventually rubbed off on everybody. Part of this was due in no small measure to Michael Crichton himself, who seemed to bring out the best in everybody from the floor-sweeper on up! He is the type of director who gets the creative juices flowing. In my case, all of these factors contributed to a "good state of mind".

Aside from being a beautiful example of teamwork at all levels, "WESTWORLD"—considering its scope—was brought in at the modest cost of \$1.25 million in 32 shooting days. A great deal of credit should go to the Production Designer, Herman Blumenthal for his ingenuity in constructing some enormously gorgeous sets on a shoe-string budget. We had fun making this picture and everybody connected with it felt that it showed up on the screen. Could it be that "WESTWORLD" is a state of mind for the beholder? ■

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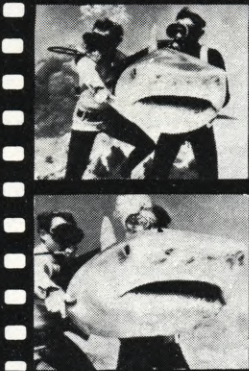
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WORLD", he had a problem: to find a technique to represent, on film, the point of view of a machine. The script called for the audience to see the world as a robot gunfighter, played by Yul Brynner, saw it. This "robot POV" was supposed to consist of a series of animated colored rectangles. It could not be done by any known special effects technique. Something new was required.

It occurred to me that the scanning-digitizing methods employed by Jet Propulsion Laboratory on their Mariner Mars flybys could be used here. Basically, in this system, an image is broken down into a series of points, and the gray-scale value for each point determined. A numerical value can then be assigned to each point, and a new image reconstituted electronically. Similar techniques have been devised in computer science to enable computers to "read" handwriting, X-rays, seismic data, and so on. It is the kind of technology that allows a computer to tell the difference between a "P" and an "R".

Once the computer has "read" the image and converted it to a series of numbers, there is tremendous flexibility in what the computer can then do with this numerical information. The image can be reconstituted with different contrasts, different resolutions, different colors. We can enlarge, stretch, squeeze, twist, rotate it, position it in space in any way. In fact, the only limitations are imposed by the creative talents of the person operating the machine.

That is, if such a machine is available at all. This was my first problem: tracking down scanning and playback hardware. At first it appeared that I would have to do all the scanning on a machine in Houston, and all the playback at the Jet Propulsion Laboratory in Pasadena. That was an inconvenient solution, and also expensive: JPL estimated that machine time for playback would cost \$100,000—for two and a half minutes of motion picture film!

In any case, that was five times my total budget, so another approach was required. Quite by chance, while doing some other work at Information International, Inc., in Los Angeles, I discovered that they had developed, over the last four years, a prototype image-processing system suitable for my needs. Critical was the fact that their hardware could handle sprocketed 35mm film with the necessary registration.

That was a lucky break. After making financial arrangements with the Information International management, I began work on the programs with Russ Ham and Dean Anschutz of that company. To their credit, they

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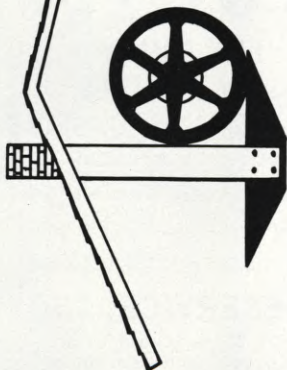
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I then entered a crucial phase of testing. Although we knew, in principle, that the system would work, there were major questions about how best to achieve the desired effect. An early consideration was how large to make our rectangles—in other words, the resolution of the image. We wanted coarse resolution, but obviously the perceived resolution in a theater depends on the size of the projected image and the viewer's distance from the screen. I made several projection tests in different-sized theaters, and from this determined the best resolution for our purposes. That turned out to be an image composed of 3600 rectangles.

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These considerations led us to make up special costumes for our principals—all-white costumes for dark backgrounds; black costumes for light backgrounds; and red costumes for exterior shots. Production footage intended for the computer would be shot with actors wearing these costumes.

This testing phase ran for two months, and then the first scenes began to arrive from the film. As they came in, I had the MGM optical department make black and white color separations from the camera negative. Each separation was individually scanned, data-processed, and stored on tape. The next stage was tape playback on a high-resolution oscilloscope, and the resulting image rephotographed. This process was done frame-by-frame, for each color separation, for each scene.

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the lights off and all this equipment around you, and there would be several monitors—graphics display terminals—all showing the newly digitized image at the same time so wherever you looked you would see the image. It was quite amazing, going from the analog world of 35mm to this digital, electronic world.

We had our usual share of foul-ups and mishaps. Contrast control was very delicate, because it had two phases—contrast was partially determined in scanning, and partially in rephotography of the digitized image. Because we were working with color separations, a shift in contrast altered our final colors. This made it very tricky.

Once I had the rephotographed color separations, I took them to my own optical printer to recombine them. Here I had more testing, and further discussions with the director on how they should be recombined. After a great deal of testing with different filters, and printing the records different colors, we settled on an approach that would give the most natural colors.

Even so, I was making adjustments in each sequence, right up to the time of negative cutting. There are fourteen computer sequences in the final film, and each was really treated individually. On some, contrast had to be changed; on some, we zoomed electronically; on some, we increased resolution; and on four sequences we printed only the red record.

Toward the end, we were operating under terrible time pressures, and from my standpoint some of that is reflected in the color quality of the final prints. However, audiences seem to respond enthusiastically and well.

As time goes on, and the computer systems which do this work become faster and cheaper and smaller, it should be possible to think of an "electronic optical printer" with broad applications in feature films, commercials—in fact, any visual area. Actually, my work on "WESTWORLD" suggested many more possibilities than we were able to explore, and there are certainly many others yet to be imagined. ■

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**ATLANTA FILM FESTIVAL**

Continued from Page 1455

ence laugh themselves silly at the zany antics on the screen, proving once again that Chaplin's superb pantomime is timeless in its comedic impact.

Next to appear on the screen is Steve Poster's hilarious short, "ANOTHER SATURDAY NIGHT" (see *American Cinematographer*, Sept. 1973). It is an outlandish modern-day spoof on "SON OF THE SHEIK" and serves as a perfect appetizer for the main event.

When the real "SON OF THE SHEIK" finally fills the screen, it turns out to be a beautiful print, with scenes tinted in gold, blue, green, sepia and red to match the changing moods of the action. As Lee Erwin plays the melodic original score on the mighty organ, the young audience quickly suspends disbelief and sits enthralled as Valentino, a larger-than-life romantic figure, swash-buckles across the screen, making passionate desert love to Vilma Banky and vanquishing scores of "bad guys" in fine pre-Errol Flynn style.

It is absolutely amazing how well this film, made in 1926, holds up with a contemporary audience. Valentino, a truly charismatic presence, gives an excellent performance (and one that doesn't spark any laughs in the wrong places). George Fitzmaurice's direction is strong and sure. The photography, by the late George Barnes, ASC, is beautifully lighted and appropriately dreamy.

When it's over, we all stumble out of the theatre in a golden haze. It has, indeed, been a magic evening.

I am invited to see a screening of a picture entered in the Film Market. It is a low-budget feature called "NO PLACE TO HIDE" and adds up to 86 minutes of well-made action-suspense melodrama. The most interesting thing about it, technically, is that it was filmed in Super-16.

Except for a very few scenes that were obviously soft in the original, it is perfectly sharp and clear. Several of the others attending the screening are amazed when I tell them that it is a blow-up from 16mm.

The film's producer, Robert Schnitzer, tells me that the available budget would not have permitted shooting in 35mm, but that—the final excellent result notwithstanding—he had a very rough time persuading technicians in New York that there was such a thing as Super-16. According to what he tells me, they preferred to believe that it didn't exist.

I find it hard to understand why this format (which could prove to be such a boon to low-low-budget production) has

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been so totally ignored in America—especially since it has been used successfully for the production of more than 50 features in Scandinavia during the past few years.

On the last day of the Festival, WETV Television (Channel 30) goes on the air at 2 p.m. with what will be a 12-hour marathon Atlanta Film Festival telecast. All during the afternoon and early evening it will show films comprising "The Best of the Festival". Then, at 10 p.m., it will join the network and switch its live cameras to the Grand Ballroom of Stouffer's Inn to telecast the Awards Banquet until midnight—then, back to the movies.

In the meantime, all afternoon, the Final Grand Awards Jury has been meeting to complete the judging for the top awards. This year the Jury consists of critics Liz Smith (*Cosmopolitan*) and Charles Champlin (*Los Angeles Times*), Stanley Paley of *Playboy Productions* and myself—with J. Hunter Todd sitting in as "tie-breaker".

Gold, silver and bronze medals in the 75 film, tape and film strip categories have already been voted by the hard-working "Committee of 100", made up of that many local experts in media and communications, whose names are kept secret so that they cannot possibly be pressured by vested interests bucking for awards.

Now it's time for the Final Grand Awards Jury to decide on the "biggies": the Golden Phoenix (Best of Festival), Silver Phoenixes (best in each of six major divisions), the Special Jury Awards and best individual achievements in such fields as direction, acting, cinematography, etc.

We approach the task diligently and there is much discussion, but our actual individual choices are made with a surprising degree of unanimity.

At 7 p.m. a smartly attired crowd of approximately 600 people gathers in the hotel's reception hall for cocktails prior to the Awards Banquet. The banquet is held in the elegant Grand Ballroom, which serves as a fine setting for it.

Undaunted by the fact that Dick Cavett could not be present to announce the awards, as promised, Hunter Todd takes on the chore himself, helped out by producer John Peckham and yours truly. Despite the fact that there are almost 300 separate awards to be made, the presentation moves briskly along. As each award is announced, a stunning young lady presents the medal to the winner and escorts him to the photographic facility to have his picture taken.

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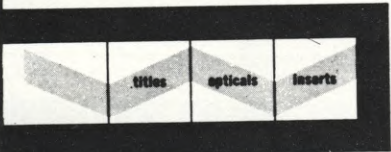
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At the close of the banquet, I am approached by three distinguished gentlemen, one of whom is carrying an exotic-looking object. They introduce themselves as Asgeir Long, Pall Steingrimsen and Ernst Kettler. They are three Icelandic film-makers who have just won a Gold Medal for their film, "DAYS OF DESTRUCTION", a stunning 27-minute documentary record of the volcanic eruption on Heimaey, an island just off the south coast of Iceland. I recall listening to news reports of how the 5,000 inhabitants of the island were evacuated in four hours, with nobody killed or injured.

The three gentlemen very kindly tell me that *American Cinematographer* is their "Bible" and they present me with their "exotic object", which turns out to be a chunk of lava from the scene of the eruption. Curiously sculptured by cataclysmic forces, and richly colored in tones of red, brown and gray, the piece of lava is an incongruously beautiful memento of a very tragic experience. I am deeply touched by the thoughtfulness of these men in bringing me this unique souvenir all the way from Iceland.

And so, the Sixth Annual Atlanta International Film Festival comes to a close.

This has been a banner year. The Festival has broken all past records for the number of entries (more than 2,000) and categories (75). It has launched the very important Film Market, which has been highly successful in bringing film-makers into direct contact with buyers and distributors of film. It has presented an exhibition of the latest production equipment and a series of interesting seminars. It has managed all this with taste, style, showmanship and a refreshing informality.

It is, in my opinion, one of the most important film forums in the world, because it cuts across the entire spectrum of production—from TV commercials to features, and including everything in between. This year it has presented 170 superlatively good films in an atmosphere that epitomizes the magic of the motion picture.

Where does the Atlanta Film Festival go from here? The people responsible are already working on that.

Just wait until *next* year!

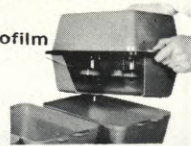
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2. Date of Filing, September 26, 1973.  
3. Frequency of issue: 12 Times a Year.  
4. Location of known Office of Publication: 1782 North Orange Drive, Hollywood, California 90028.  
5. Location of the Headquarters or General Business Offices of the Publishers: Same as 4.  
6. Names and addresses of Publisher, Editor, and Managing Editor, Publisher: A.S.C. Holding Corporation, 1782 North Orange Drive, Hollywood, California 90028; Editor: Herb A. Lightman, Same as above.  
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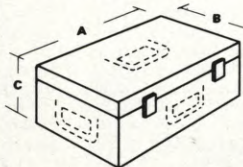
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