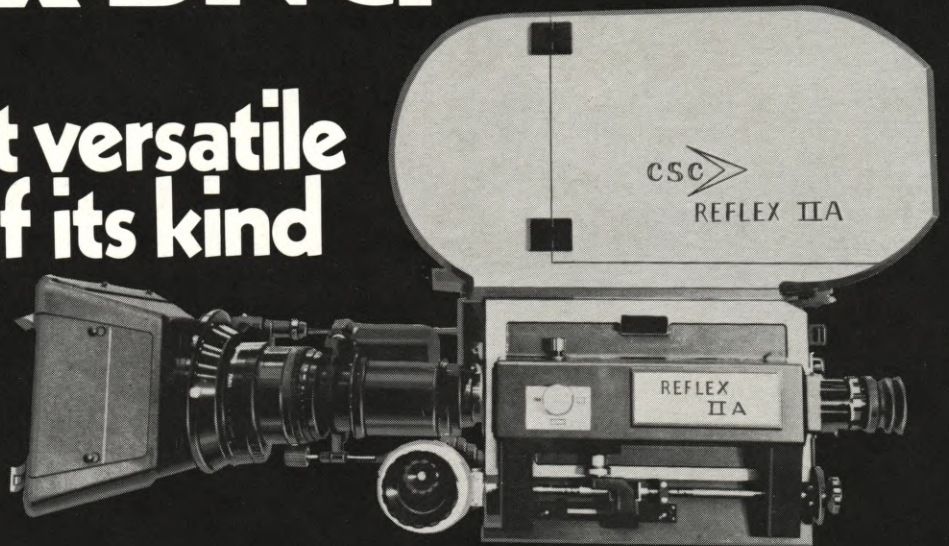


Now! The ultimate reflex BNC.

The most versatile camera of its kind available today.



Light weight:

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

Cooke lenses:

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

Ultra wide angle:

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

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

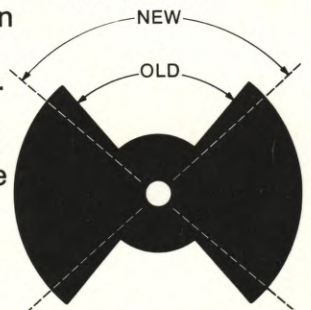
Super speed Zeiss lenses:

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

New shutter:

To further boost lens performance, we've made an ingenious design change that permits the use of a new 200° shutter.

The big advantage, of course, is the raised light transmission factor. More light means smaller apertures for increased overall sharpness, depth of field and brilliance.



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



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Programmed blowups at CFI

State-of-the-art techniques, fast service and consistent quality, because *every step* is under one roof.

Every step in the making of a blowup affects, or is affected by, every other step.

Fine Tuning

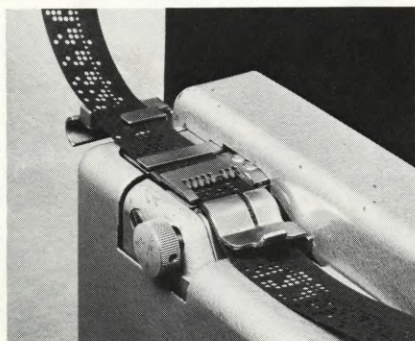
Every function—sensitometric, chemical, chromatic, mechanical, electronic and optical—must be fine-tuned to work best with the others. At CFI, there's a department that does nothing but monitor the whole system, *continually*.

Consistency

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

One Light

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



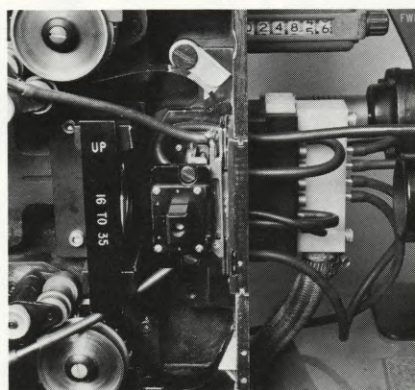
Computer punched tape automatically controls lamphouse timing settings during blowup.

Save Time

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

Liquid Gate

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



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

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

Programmed

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

Academy Award

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

Subtle Control

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

More Awards

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

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

Deadline

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

Next Day

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

One Roof

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

Service

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

Madman

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

CFI

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American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

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

OCTOBER 1976

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VOL. 57, NO. 10

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ON THE COVER: A montage of action from the 1976 Games of the XXI Olympiad held in Montreal, representing 21 different sporting disciplines. Photographs courtesy of the Olympic Radio and Television Organization. Cover design by HERB A. LIGHTMAN

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



ROGER CORMAN



Coppola, Nicholson and Bogdanovich—these are among the major talents that you helped get started. How about your own career? How did you start?

After graduating from Stanford, I got a job as an engineer. After four days I knew it was a total mistake. What I really wanted was to make movies. So I went to work at Fox as a messenger. It wasn't too long before I was writing screenplays and directing. Then I became an independent producer. And then I opened my own company, New World Pictures.

What do you look for in a new director or writer?

Intelligence. The people I am dealing with must be intelligent. They must also have more than just an interest in films. It's more like a vocation. The best filmmakers have a need to make films.

How about the new young cinematographers?

Because of our budget restrictions, we want cinematographers who can work rapidly and still give us quality. We've had some outstanding cameramen start with us. Several have gone on to win Oscars. I've always liked to experiment with new types of film. I remember using different emulsions for different psychological effects. If I have any questions about film, I just call your local Kodak office. I'm generally the first in Hollywood to work with each successive generation of Eastman film. The Kodak people have always been very helpful,

Les Baker in particular. He also keeps me up to date on Eastman release print stock. This is important because when we distribute foreign films, we make all our release prints here. This way, I can be sure I'm getting the best quality.

How would you describe your company?

New World Pictures, now five years old, has become, somewhat to my surprise, the largest independent producing and distributing company in the country. We've produced and distributed fifty-three pictures. Films that range from "Death Race 2000" to "Cries And Whispers" and "Amarcord." We've won Academy Awards in each of the past two years. Because we distribute fewer films than the majors, we feel we can give each one specialized handling. My lawyer, who is a woman, describes us as a boutique as opposed to a department store.

Is it true you made a bid for "Cries And Whispers" without having seen it?

Yes. When it was first offered, all the major companies passed it up.

I've always admired Ingmar Bergman's work, so when I heard it was available, I made a bid. The film was brilliant and went on to win many awards. Bergman was delighted with our distribution pattern. After the art theaters and regular hard-tops, we put it into drive-ins, bringing his work to audiences that had never seen it before. Incidentally, it went on to become the highest grossing film he's had in this country.

How many projects are on this year's schedule?

I like to give each picture personal attention, so New World will handle no more than ten to fifteen pictures. Again, they're going to be either very commercial or pure art films ranging from a youth-oriented film starring Ron Howard called "The Car," to the new Francois Truffaut film, "The Story Of Adele H." The average run-of-the-mill film is something I'm definitely not interested in. As for the future—we're working with some extremely talented young people, and feel that our best films are still to come.

If you have any questions about film, do what Roger Corman does, call your local Kodak Sales and Engineering representative.

The people who staff the Kodak regional offices are all exceedingly knowledgeable, involved men and women who are constantly aware of the needs and activities of the industry. They are there to assist in every way they can; to provide information, solve problems, or serve as technical consultants.

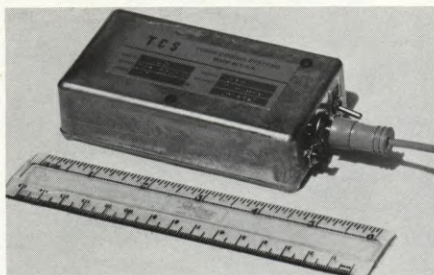
And for a free copy of this and other interviews, send for our booklet. Write Eastman Kodak Company, Dept. 640-D, Rochester, N.Y. 14650.



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WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



TCS ANNOUNCES UNIQUE "CRYSTAL CLAPPER"

Tobin Cinema Systems has just introduced a dual-purpose device known as the TX5-C "Crystal Clapper."

The TX5-C is basically a high-grade crystal sync generator with 60-Hz 1-volt low harmonic output, having a room-temperature accuracy of $\pm 0.0003\%$ (3 parts per million, or 1 frame in 8,000' (2.4 kilometers) of 16mm film).

In addition, a silent startmark is included, consisting of a brilliant light, together with a 10-volt DC output, to energize the bloop oscillator of a professional recorder. Alternatively, on special order the DC output can be replaced by an interruption of the pilot signal, for use where a marker can be automatically introduced during resolving to magnetic film. Either option is energized by a positive, snap-action miniature pushbutton.

Rugged, compact and lightweight, the TX5-C is internally powered by two 9-volt alkaline batteries with an average life of 160 hours. The unit is priced at \$99.44 postpaid, less cable. Available factory-direct from Tobin Cinema Systems, 3227 49th Ave. SW., Seattle, WA 98116.

FILM ILLUSTRATING THE USES OF SPECIAL EFFECTS FILTERS WITH KODAK'S NEWEST COLOR NEGATIVE

Richard Sassone, of Richard Sassone, Inc., in association with Ira Tiffen of Tiffen Mfg. Corp., Cal Hotchkiss and Rodney Jones of Eastman Kodak, and Irwin Young of Du-Art Laboratories, is filming a demonstration of on-camera filters for producing creative effects with the new, modified 7247 film stock.

Effects to be shown include fog, diffusion, low contrast, star, and multi-images individually and in combination.

The film will initially be shown at the SMPTE National Conference in New

York on October 17 to 22. The film will subsequently be made available as a reference source to cinematographers, film schools, and the film-making industry in hopes of serving as a visual foundation for those who have not had the opportunity to involve themselves with time-consuming experimentation necessary in deriving the components for producing desired effects.



SPECIALTIES ANNOUNCES THEIR K-B EDITOR

Specialties K-B Editor offers the features of the very popular Specialties Editor, plus the very important ability to mix up to three sound tracks into your sync recorder or projector. Specialties' exclusive transport mechanism plus electronics makes this sound mixing possible.

Specialties K-B Editor features include a four-gang synchronizer powered at sync-sound speed, three magnetic heads with individual Vu meters and control knobs for each magnetic head and a separate volume control knob, solid-state integrated circuitry amplifier, with electronic indexing for frame and footage counter, plus built-in lightwell.

The technical specifications for both K-B Editor 16mm and S-8 are: Output Power for the Monitor Speaker is 1 Watt; Output Power to Recorder is .5 to 1 Volt.

Specialties K-B Editor 16mm has Frequency Response of 50-15000 Hz ± 3 db; Signal to Noise Ratio of -36 db at 24 fps; and Harmonic Distortion of 0.70% at 24 fps with Wow and Flutter of 0.15% at 24 fps. Specialties K-B Editor S-8 has Frequency Response of 70-12000 Hz ± 3 db; Signal to Noise Ratio of -31 db at 24 fps; and Harmonic Distortion 0.70% at 24 fps with Wow and Flutter of 0.20 at 24 fps. A dubbing

theatre on the editing bench represents a remarkable savings in time and sheer cost by enormously increasing editorial productivity. Quality sound can be enjoyed right in the editing room without the usual huge expense. For further information contact: Specialties Design & Mfg. Co.; 3429 Encina Drive; Las Vegas, Nevada 89121; Phone (702) 451-5290



AUDIO-TECHNICA OFFERS NEW CONDENSER HEADPHONES

A second electret condenser headphone is being introduced by Audio-Technica U.S., Inc.

Called the AT705, the unit sells for less than \$90 and features permanently polarized diaphragms that need no external source of power. The headphones plug into a small adapter that matches impedance circuits and contains a speaker/headphone switch.

"A-T's electret condenser system offers the advantages of condenser technology without the complexity and high voltage requirements of conventional electrostatics," says Jon Kelly, vice president and general manager of Audio-Technica, U. S., Inc.

The lightweight AT705 covers a frequency response range of 20-22,000 Hz. Its comfortable, openback A-T ear cups also prevent the resonance effects found in most closedback headphones.

Audio-Technica U. S., Inc., headquartered in Fairlawn, Ohio, markets dual magnet phonograph cartridges, stereo headphones and record care products.

700mm f/8 QUESTAR HAND-HELD MIRROR TELEPHOTO LENS GUARANTEES OPTICAL PERFECTION

Theoretical optical perfection and flatness of field from edge to edge with no linear distortion are guaranteed for the new 700mm f/8 hand-held mirror telephoto lens manufactured by Questar Corporation, New Hope, Pa.

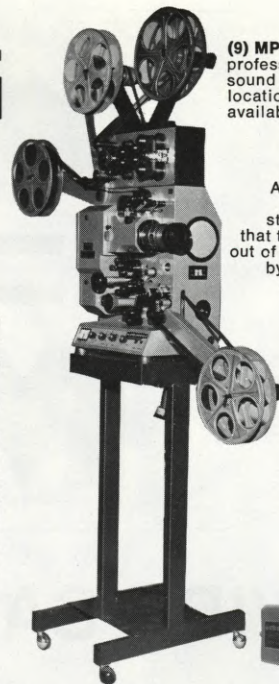
Continued on Page 1138

For that something special... RENT IT

Any major motion picture equipment rental house should be able to supply you with the standard items you need for film production, such as Arris, Eclairs, Mitchells, Nagras, Angenieux and the like. But Alan Gordon Enterprises Inc., in addition, offers you that something extra you are not likely to find elsewhere — specialized equipment that most rental houses just do not carry in their rental inventory. Here are just a few examples:

Item:	Daily Rental Rate:
(1) 25-500 Tamaha Zoom Lens, T6.3	\$100.00
(2) Helmet and Camera, 16mm or 35mm	\$20.00/\$30.00
(3) Hycam 16mm High Speed Camera	\$50.00
(4) Mini-Cam 16 Camera Kit	\$20.00
(5) LEX 64 Explosion-Proof Lights	\$20.00
(6) Swintek Cordless Microphone Systems	\$35.00 and up
(7) Super Grip Camera Mount	\$5.00
(8) Dynalens Image Motion Stabilizer	\$125.00
(9) MP-30M Portable Sound Projector, Interlock	\$50.00
(10) MP-30S Portable Sound Projector, Standard	\$40.00
(11) Underwater Housing with Milliken 16mm camera and lens	\$100.00
(12) Underwater Housing for 35mm Panavision, less camera and lens	\$50.00
(13) Underwater Housing for 35mm Eyemo camera and lens	\$35.00
(14) Lowel Quartz Location Total-Light Kit, Model T-194	\$25.00
(15) Photosonics Action-Master High Speed Camera	\$75.00
(16) Gordon Super Speed Lenses for BNCR	\$100 per set
(17) 24V DC High Speed Motor for Mitchell R-35	\$20.00
(18) 25-250 Lens Blimp with Lens for 35 Arri BL	\$60.00

Next time you're looking for any motion picture equipment, standard or special, check with AGE Inc. first. Most pros do.

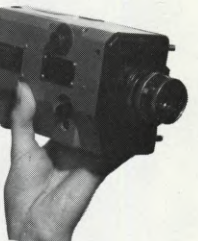
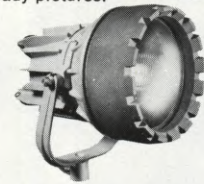


(9) MP-30M — Portable 35mm professional double-band sound projector. Ideal location projector. Also available in Standard model.

(8) Dynalens Academy Award-winning image stabilizing system that takes the shakes out of cinematography by providing rock-steady pictures.

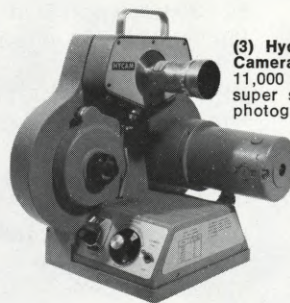


(5) LEX 64 Lights Explosion proof, for use in hazardous environments. Use 500W, PAR 64 lamps. Certified rain-tight.



(2) Helmet and Camera Famous point-of-view Gordon/Bell camera helmet available with either 16mm or 35mm cameras.

(4) Mini-Cam 16 Also known as "GSAP." Ideal for filming unusual angles, especially during sporting events.



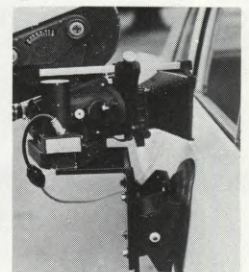
(3) Hycam High-Speed Camera — Films up to 11,000 fps in 16mm for super slow-motion photography.



(1) 25-500 Tamaha lens — T6.3, extremely fast 20-1 zoom ratio for 35mm formats. BNCR, Arri, S-35R and Eclair mounts.



(6) Swintek — The ultimate in professional cordless microphone systems. Fully portable with optimum quality sound.



(7) Super Grip — The ideal camera mount for difficult situations. Secures to almost any surface, supports up to 700 pounds.

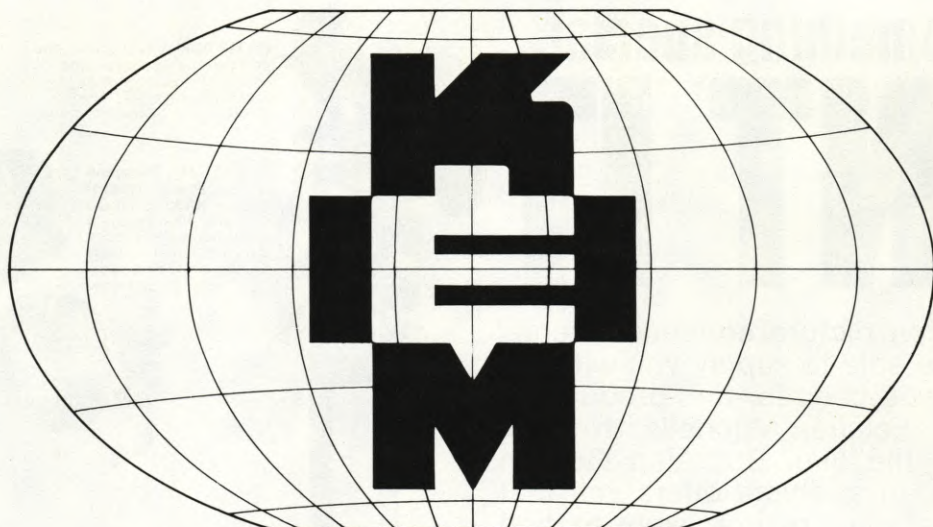
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Comments on KEM by people in various kinds of film production:

The consensus: practical post-production tools for TV commercials, documentaries, industrials and feature films.

Hy Goldman:

Mr. Goldman is President of Forum III Films in New York. They've owned three KEM Universals for seven years-on which they've edited nearly 2,000 TV commercials.

Committee

"I'm usually editing by committee," says Mr. Goldman. "Very often, I'll have the agency copywriter, the producer, the art director and the account man in the room. With the KEM, they can all see the screens, *sitting down.*"

3 A.M.

"Sitting down suits *me*, too - especially at, say, 3 A.M. after working around the clock. I can scan 1,000 feet in less than a minute. And I can keep the interlock material in front of me and put up the out takes for comparison - all without standing up."

35mm and 16 mm

"My KEMS have proved themselves over and over," says Mr. Goldman. "Recently, a client came in with 35mm original, 16mm stock footage, 16mm mag voice and 35mm music tracks. We cut it all on *one* KEM."



RS-SUPER SIX PLATE

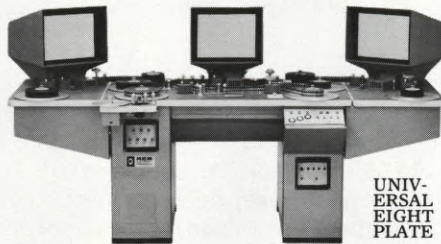
Frank Minerva:

Mr. Minerva is Vice-President of Editors' Hideaway in New York. They edit commercials and documentaries; and they own four RS Super six-plates.

Scratch Mixes

"The sound quality is superb on the RS," says Mr. Minerva. "We've made 1/4 inch to 16 and 35 mag transfers on our KEMs; and we make scratch mixes all the time."

"About half our business is 35mm, half 16mm. The KEMs let us change from one to the other fast. What else? The RS is compact... and the backup service is excellent."



UNIVERSAL EIGHT PLATE

James Smyth:

Mr. Smyth is President of Optimus, Inc. in Chicago. They own five KEM Universals, all eight-plate. Their business: 90% TV commercials in 35mm, 10% documentaries, usually 16mm.

Better Take?

"You have 3,000 feet of sync, and the client asks: 'Isn't there a better take of Scene Six?' On the upright, you know it'll take an hour..."

Dailies 100%

"But with the KEM," says Mr. Smyth, "You don't hesitate to go back and look. That's important creatively: You get 100% out of your dailies."

Maintenance 0.3%

"Last year, our accountant called to ask whether we'd made an error in our tax return. We'd claimed maintenance costs of 0.3% of gross sales."

Donn Cambern:

Mr. Cambern edited *Blume In Love*, *Cinderella Liberty*, *Hindenburg* and *Alex & The Gypsy*, on KEMs, in Hollywood.

First Cut

"Nowadays, the cast and crew tend to disperse as soon as shooting stops," says Mr. Cambern. "So the studio wants a first cut in two or three weeks, in case pickup shots are needed."

One Roll

"For this the KEM is *vital*, because I can explore the footage fast. With four or five takes on *one* 1,000 foot roll, I can compare them immediately. The high-speed forward/reverse gets me where I want to be in seconds."

"The image is big, the sound good and the machine quiet - so it's easy to imagine how the scene will work in the theater, and to pace my cuts accordingly. I can sit back eight feet from the KEM and watch a sequence play. Directors like that, too."

Smooth

"With the old upright," says Mr. Cambern, "I worked with the machine. With the KEM, I'm working with the *material* - the film."

Edna Paul:

Ms. Paul is President of Edna & Friends, Inc. in New York. They work on features, industrials, documentaries and TV specials.

Investment

"We used to rent uprights," says Ms. Paul, "But after trying the KEM, we bought one. It's an investment. The first time I used a KEM, I said: *Where has this been all my life?*"

Verna Fields:

Ms. Fields is a Vice-President of Universal Studios. A member of the editors' union since its founding in 1942, she won the Best Editing Academy Award for *Jaws*.

Black Uprights

"I grew up with the uprights - the *black* ones!" says Ms. Fields, "And I still use an upright as well as the KEM. But when something new comes along that offers a definite advantage... I wouldn't think of *not* using the KEM."

Why Resist?

"I recommend the KEM to everyone. To sceptical old-school editors, I say: 'Did you resist the butt-splicer when *that* was new?'"

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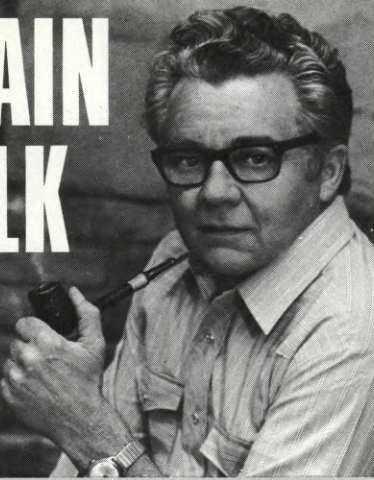
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PLAIN TALK



by *J. Carl Treise*

Why am I writing this column? If you don't know by now, I'll tell you.

In many ways I'm an old-fashioned square. And I probably shoot off my mouth too often. But very few will deny that I'm a "square shooter".

I've been in this business a helluva long time and I damn well know what makes it tick (— and what doesn't).

I feel you should know what's going on. Both the good and the bad. After all, the more you know, the better you'll be able to buy.

You should know the limitations of a processor as well as its capabilities.

You should know that money stretches only so far. If a firm is offering you more than you have a right to expect at the price, the chances are likely that you're getting screwed.

I find it amazing that a buyer will accept a lousy unit just because it has a shiny exterior. Or that he will let himself be sold something that isn't right for him.

A long time ago, I discovered that very few buyers really know what they need. Often what they want is not what they need.

If I can help you come to the right decision and save you from a few pitfalls . . .

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Even if you buy from someone else.

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QUESTIONS & ANSWERS

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

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



Q We plan to film our forthcoming production in 35mm and blow it up to 70mm for the release prints. Could you advise us of the details, such as the format we should use — anamorphic (squeezed image) or spherical image and other details. Also please advise us of the costs for laboratory work, raw stock, etc., that would be incurred to execute this job.

A When considering original photography in 35mm for release in 70mm, the original should be 2.35:1 Anamorphic, squeezed 2:1. This format is usually referred to as CinemaScope, Panavision or Anamorphic. When other formats (flat) are used with an aspect ratio of 1.33, 1.66 or 1.85:1, vertical scanning must be used. This sacrifices a good deal of the available picture in the vertical direction — so when planning for 70mm release, one should only consider 35mm CinemaScope photography.

CinemaScope has an aspect ratio of 2.35:1. The 70mm print has an aspect ratio of 2.20:1. This represents no vertical loss and only a 3% loss on each right and left edge.

At DeLuxe we do our 35mm to 70mm printing from a Color Reversal Intermediate (CRI) EK type 5247. The original negative protects itself and beyond the Answer Print and subsequent CRI, the original negative remains in the vault. In a release that involves 70mm release as well as 35mm, the order will usually be 25 70mm prints and 400 35mm prints. The 70mm sound is 6 channels right, right center, center, left center, left and surround tracks. In 35mm the sound is 4 channels: right, center, left and surround. At present the costs are:

1. 70mm raw stock, EK type 5381 @ \$.0735 per foot.
2. 35mm CRI EK type 5249 @ \$.9638 per foot.
3. 35mm Answer Print EK type 5383 @ \$.9003 per foot.
4. 70mm Release Print EK type 5381 @ \$.4744 per foot.
5. 70mm Release Print EK type 5381 (Over 10 each) \$.4099 per ft.

—Fred J. Scobey, DeLuxe Laboratory, Hollywood.

Q I have a Beaulieu R16PZ with a 12-120mm Angenieux lens marked in f stops. The Gossen TTL meter in the camera does not give the same reading as my Weston V meter when used under identical conditions on a Kodak 18% gray card. I know my Weston meter is accurate. The manufacturer's instruction book indicates an exposure of 1/62 at 24 fps. Does this mean that the shutter is other than 180° or is the value deliberately overstated so that the cameraman will use a wider aperture to allow for the transmission properties of the lens? In other words, is the Gossen meter calibrated to allow for idiosyncratic lens properties and should I, therefore, adapt my Weston readings, or, should I regard the Gossen meter as out of calibration and use the indicated Weston stop based on an exposure of 1/62 second?

A The 12-120 Angenieux lens marked in f stops is slower. That is, transmits less light than a normal prime lens because of the additional optical elements needed in a zoom lens even though both lenses have anti-reflection coatings. The exposure of 1/62 at 24 fps indicates a shutter opening of approximately 140°. This is 40° less than 180° or 22% less exposure. The zoom lens' extra elements should explain the difference in f readings between the Gossen TTL meter in the camera and your Weston meter set for 1/62 second. If you replace your zoom lens with a normal prime lens, your Weston meter at 1/62 exposure should agree with the Gossen meter. If it does not, have it checked. To be very accurate you should check the response of the two meters to daylight and incandescent light of 3200°K. The different spectral sensitivity responses of these meters could be a factor unless compensating filters are used.

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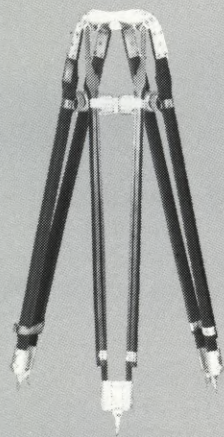
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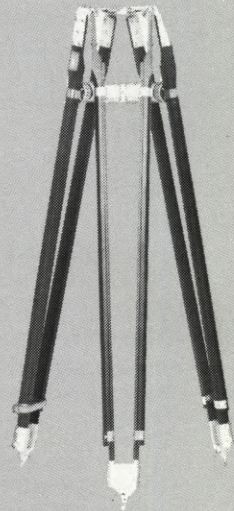
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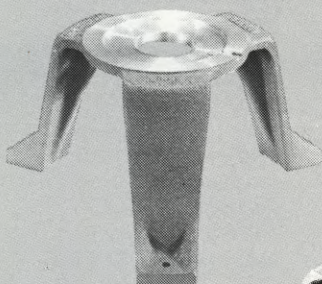
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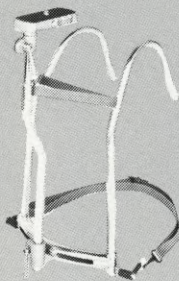
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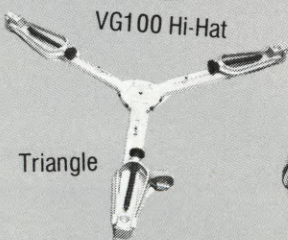
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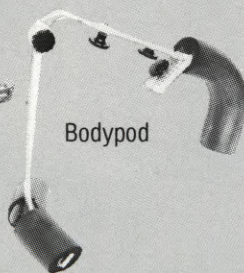
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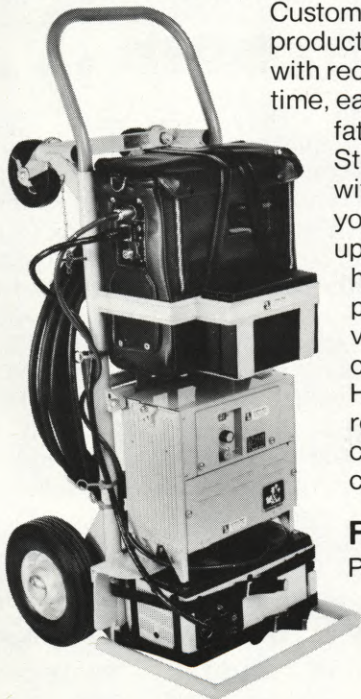
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CINEMA WORKSHOP



By ANTON WILSON

AUDIO BASICS — IV

We have been discussing the quality and accuracy of various types of audio equipment from microphones to speakers. Regardless of the amount of effort spent in selecting the best audio components, there is always one device in the audio chain that exhibits specifications far below all others — the listener's ear.

The human ear does not perceive all frequencies with equal loudness. Moreover, the magnitude of this inaccuracy

is dependent on the loudness level of the sound.

A series of curves expressing the relationship between frequency and loudness was first published in 1933 by Fletcher and Munson, and this loudness/frequency dependency is most often called the Fletcher/Munson effect. The revised curves in FIGURE 1 best explain the Fletcher/Munson phenomenon.

Most obvious from these curves is the ear's relative lack of sensitivity at

lower frequencies. For example, a tone of 1,000 Hz at a loudness level of 40 phons requires a 40 dB sound pressure level (sound energy or power). However, for the human ear to perceive a 20 Hz tone with the identical loudness (40 phons), a sound pressure level of almost 88 dB is required. It takes over 65,000 times more energy to make a 20 Hz signal sound as loud as a 1,000 Hz signal at 40 phons. The human ear is far less responsive to low frequencies, especially at low sound levels.

It is ironic to consider equipment specifications on the order of ± 1 dB when the human ear can vary over 60 dB, depending on frequency and level. However, the important point on these curves is not so much the lack of linearity in the response of the human ear but the inconsistency of these inaccuracies with respect to playback volume.

For example, if a track is mixed and equalized at a fairly low volume, it will sound "bassy" and exhibit a slight upper midrange dip if it is played back at a loud level. Likewise, a track that is mixed with a high monitor loudness will be significantly lacking in bass when reproduced at a more quiet level.

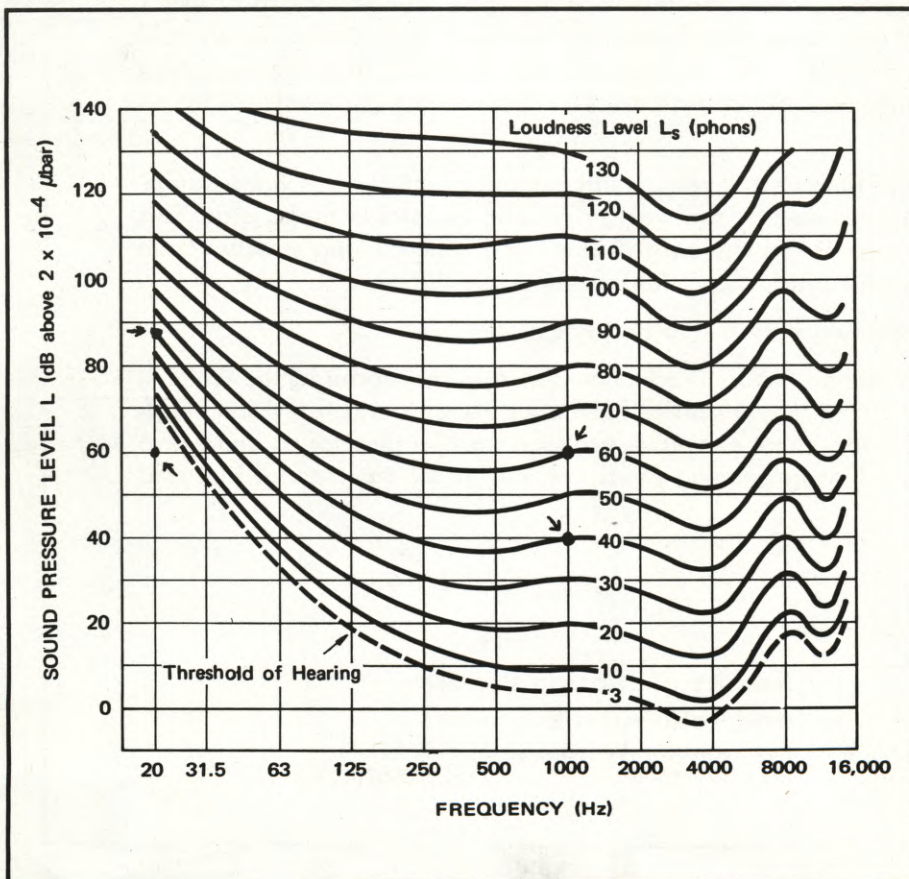
Some models of reproduction equipment employ "loudness contour" circuits that are linked to the volume control. These circuits attempt to alter the frequency response with respect to volume according to the Fletcher/Munson curves. However, most of these circuits are approximations at best.

In terms of practical sound recording, this Fletcher/Munson effect is only noticeable when the playback volume differs significantly from the original, usually a matter beyond the control of the sound recordist. However, I believe that an understanding of our hearing mechanisms is interesting, and one never knows when the information may prove helpful. (Especially for crossword fans.)

I hate to criticize Mother Nature, but when it comes to ears she has been less than perfect. The human ear exhibits many other idiosyncrasies and if there is interest, we may discuss them in the future. ■

FIGURE 1 — Loudness Contour Curves of the Human Ear. These curves exhibit the so-called "Fletcher/Munson Effect". The numbers on the left are Sound Pressure Levels in decibels (dB). This is the actual energy reaching the ear. The numbers on the curves themselves are "phons" or the perceived loudness, the sensation of loudness that registers with the brain. Note that at 1,000 Hz the S.P.L. in dB is equal to the Loudness Level in phons for any value of loudness. However, as the frequency varies from 1,000 Hz, the ear and reality are definitely on different paths.

Most obvious is the ear's lack of sensitivity at low frequencies. More important, however, is the fact that this lack of sensitivity becomes more acute as the loudness is reduced. As an extreme example, a 1,000 Hz signal at 60 dB will be quite audible at 60 phons (normal conversation level). Yet a 20 Hz signal at the same 60 dB will be totally inaudible to the human ear, being below the threshold of hearing.



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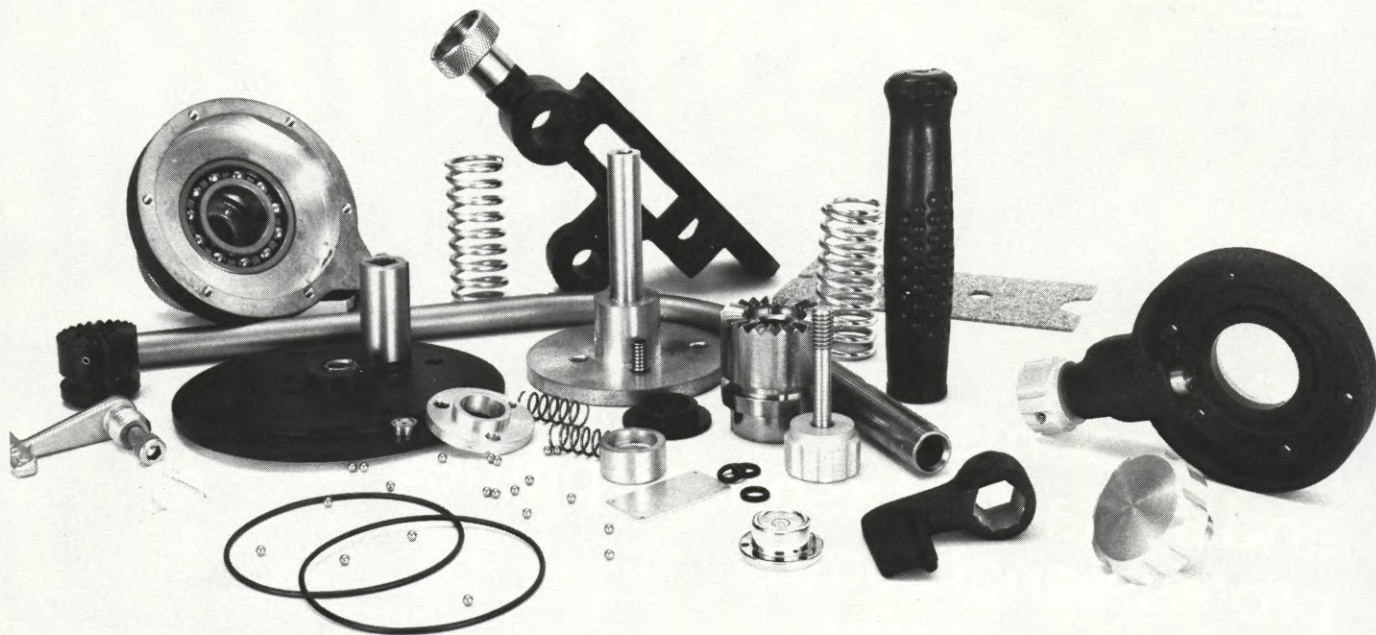
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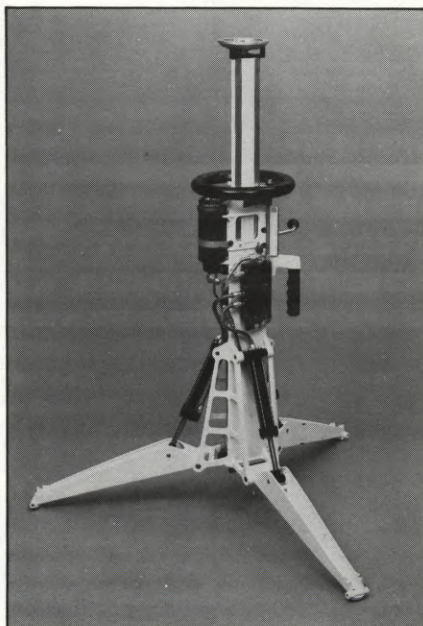
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In *THE HOLLYWOOD EXILES*, John Baxter considers the tragic cultural phenomenon of gifted creative minds from European studios seeking a fresh career in the film capital. For one Ernst Lubitsch, how many Max Reinhardts were unable to accommodate to new work methods in an alien milieu? A sobering, perceptive book. (Taplinger \$14.95)

The astonishing career of Fanny Holtzmann, the attorney who won the *Rasputin* libel case over a covey of MGM's legal eagles and thereafter kept an active Hollywood practice, is told by Ted Berkman in *THE LADY AND THE LAW*, a stimulating biography of an unusual woman. (Little, Brown \$12.50)

THE MANY FACES OF HOLLYWOOD

More often than not, movie history has been made in Hollywood, and the main product of its activities has been dreams, as Leonard Maltin shows in *HOLLYWOOD: THE MOVIE FACTORY*. His upbeat survey of the 30's and 40's vividly describes a fondly remembered era of rising expectations. (Popular Library \$1.50)

The making of *The Wizard of Oz*, the film and the legend it created, are perceptively depicted in an abundantly illustrated volume, *DOWN THE YELLOW BRICK ROAD* by Doug McClelland. (Pyramid \$4.95)

David Jacobs' *DISNEY'S AMERICA ON PARADE* is a delightful large-format album that features the popular cartoon characters as they appear in Bicentennial musical pageants staged at the Disney amusement parks. (NAL/Abrams \$7.95)

The film capital has had its fair share of scandals and Jeffrey Feinman's *HOLLYWOOD CONFIDENTIAL* recounts those by-now-historic cases with a verbal moderation that lets the lurid facts speak for themselves. His point is that the new morality has affected Dubuque far more than Tinseltown. (Playboy Press \$1.50)

THE BOOKSHELF

By GEORGE L. GEORGE

A documented survey of sagebrush sagas that made movie history, Don Miller's *HOLLYWOOD CORRAL*, rounds up such famous heroes as William S. Hart, Tom Mix, Gene Autrey, their equally famous horses and their less famous leading ladies. (Popular Library \$3.95)

From comic books to radio, film and television, the career of *SUPERMAN* is told in extensive and exciting detail by Gary Grossman, with summaries of plots, production data, casts and staff. (Popular Library \$3.95)

Tom Burke's irreverent portraits of moviedom's great and near-great in *BURKE'S STEERAGE* is, in reality, more intense burnt under their icons. His interviews with directors Schlesinger and Polansky, performers Mia Farrow, Robert Redford, Jane Fonda, Liza Minnelli and others are refreshing, no-holds-barred verbal exchanges. (Putnam \$10.)

The life and career of 17 stars who shone in movies mainly between World Wars I and II pertinently illustrate, in DeWitt Bodeen's *FROM HOLLYWOOD*, the emerging pattern of success in a new medium. Theda Bara, Bebe Daniels, Lon Chaney, Douglas Fairbanks are some of the performers discussed. (Barnes \$15.)

In *THE LAUREL AND HARDY SCRAPBOOK*, Jack Scagnetti revives the happy memories of their contribution to screen comedy. The uniqueness of their style is skillfully brought out in this brightly written study which includes well researched biographies, annotated film lists and superb stills. (Jonathan David \$12.95)

A rousing study of sword-and-costume epics, *THE SWASHBUCKLERS* by James Robert Parish and Don E. Stanke, salutes this flamboyant genre and its romantic stars. Extended biographies of outstanding performers and lists of their films add up to a big, entertaining and abundantly-illustrated volume. (Arlington \$19.95)

Dubbed "the Stalwarts of the Cinema," the reliable and ubiquitous *CHARACTER PEOPLE* are singled out by Ken D. Jones, Arthur F. McClure and Alfred E. Twomey for their invaluable contribution, often in small parts, to the

overall smooth unfolding of the movie. A significant historic survey, with numerous stills. (Barnes \$17.50)

* * *

MOTION PICTURES ABROAD

The 1975 edition of *INDIAN* films, expertly edited by B.V. Dharap, provides a rich lore of information on that nation's film industry, now the most prolific in the world. It includes data on production, distribution, exhibition and a full, annotated list of the 470 features in 12 languages released last year. (Motion Picture Enterprises, Alaka Talkies, Poona 411-030, India, Rs. 35/)

A survey of film censorship in Sweden, assorted industry statistics, a forecast of new movies and articles by directors Jörn Donner and Vilgot Sjöman, and Swedish Film Institute chief Harry Schein, appear in the 1976 edition of *SWEDISH FILMS*, an eloquent brochure that affords an informative look into that country's policies and aims. (Svenska Filminstitutet, 126 S-102 Stockholm, Sweden)

A useful and extensive English-French and French-English lexicon for the A-V industry has been compiled by Guitta Pessis-Pasternak, *DICTIONNAIRE DE L'AUDIO-VISUAL*. It includes over 6000 terms and is notable for its scope and accuracy. (Flammarion, Paris, FF30.)

The effects of the confiscatory tax imposed in France on films classified "X" for their alleged eroticism or violence are described in *HISTOIRE D'X* by Yves Rousset-Rouard, producer of *Emmanuelle 2*. The book is a searing exposé of the government's machinations and of pressures on the film industry. (Lattès, Paris, FF30.)

A pioneering French publisher has been successfully issuing a bimonthly series of paperbacks dealing with in-depth analyses of significant aspects of film art, starting with personalities like Jean Renoir and Marilyn Monroe and with genres like the fantastic, sci-fi, erotic and revolutionary films. Its latest edition is *L'AMERIQUE DES STARS* which examines intimately the confusion between reality and fiction created during 50 years of Hollywood supremacy. (Filméditations, Paris, FF15. ea.) ■

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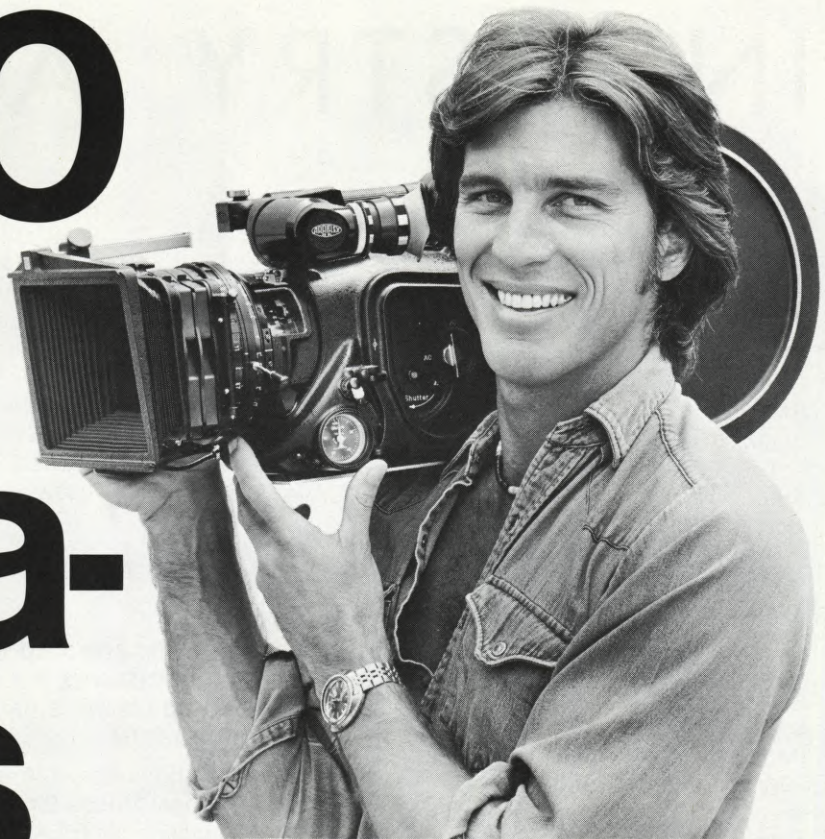
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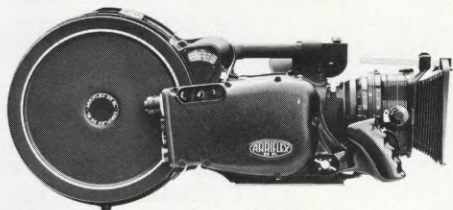
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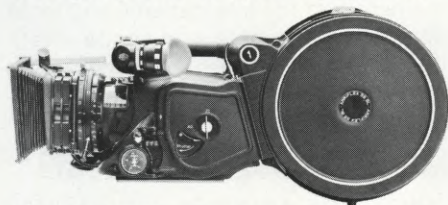


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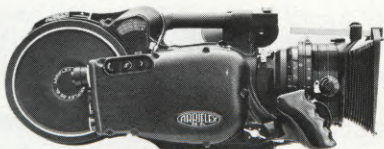
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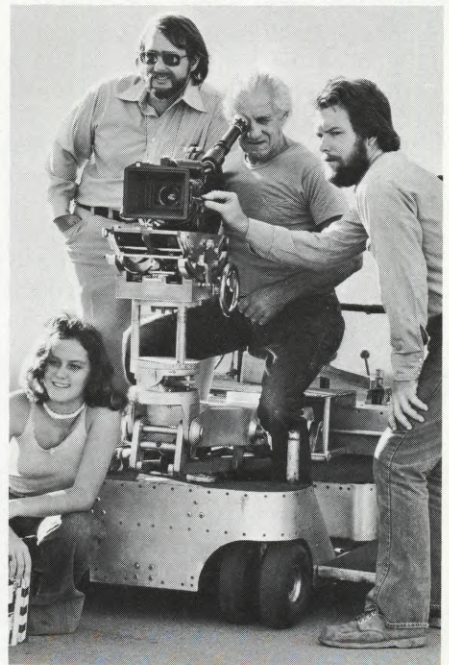


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INDUSTRY ACTIVITIES

SMPTE SETS PROGRAM FOR FALL NEW YORK CONFERENCE

The program for the 118th Technical Conference of the Society of Motion Picture and Television Engineers (SMPTE) has been announced by SMPTE Program Chairman Paul Wittlig, CBS, Inc.

The Conference is scheduled for the Americana Hotel in New York City, October 17-22, 1976.

According to Wittlig, the program will feature five days of technical sessions. The major subjects to be discussed are television and motion picture production, post production, distribution and exhibition. These subjects will take up the first three days of the meeting (Monday through Wednesday, Oct. 18-20). The final two days will zero in on such specific topics as New Products in Motion Pictures and Television, Labor in a Changing Technology, Motion Picture Landmarks and Future Trends, and Computer Control and Signal Distribution in TV Broadcasting Centers.

In addition to the technical sessions, an extensive exhibition of professional motion picture and television equipment will run concurrent to the technical sessions Monday through Thursday, Conference week. More than 140 booths have been taken so far by most of the leading manufacturers and suppliers of professional film and video equipment.

Conference registration opens Sunday noon, October 17. The Technical Sessions begin on Monday, October 18 with papers on Production. Kicking off the first session will be a keynote address by famed producer George Schlatter.

The program schedule breaks down as follows: Monday, all day, Film and Television Production; Tuesday, all day, Film and Television Post Production; Wednesday, all day, Film and Television Distribution and Exhibition; Thursday morning, New Products in Motion Pictures and Television; Thursday afternoon, Labor in a Changing Technology, and the Olympic Games Reports; Friday morning, Computer Control and Signal Distribution in Television Broadcasting Centers, and Friday afternoon, Motion Pictures: Landmarks and Future Trends.

In addition to the technical sessions and the equipment exhibition, several social events are planned, including the

SMPTE Get-Together Luncheon on Monday, October 18, where SMPTE awards will be presented. The guest speaker at the luncheon will be John A. Schneider, President, CBS Broadcast Group.

For additional information on the SMPTE Conference and Exhibit, write to SMPTE Conference, 862 Scarsdale Ave., Scarsdale, NY 10583.

NOTED PRODUCERS AND MOTION PICTURE EXECUTIVES TO SPEAK AT THE PMPEA/SMPTE PRODUCTION SYMPOSIUM

Volker W. Bahnmann, President of the Professional Motion Picture Equipment Association (PMPEA) is pleased to announce that Mr. Walter J. Wood, Director of the New York City Office for Motion Pictures & Television, will be the moderator for a Motion Picture Production Symposium at the 118th SMPTE conference.

Mr. Wood will be joined by such notables as producer Martin Bregman (*Dog Day Afternoon*, *Serpico*), producer/director Phil D'Antoni (*Bullitt*, *French Connection*), and Mr. Morton Dubin, producer/director and member of the executive committee of the Mayor's Advisory Council on Motion Pictures & Television. Other panelists will be announced as soon as their participation can be confirmed.

The symposium will address itself to the current state of the motion picture industry and analyze trends and developments. Jointly planned and organized by the PMPEA and Mr. Walter J. Wood, the symposium promises to be one of the highlights of this year's SMPTE conference. It will be held 7 to 10 p.m. on Monday, October 18th at the Grand Ballroom of the Americana Hotel in New York.

For information and advance registration, contact: Mr. Jeff Friedman, SMPTE, Telephone 914/472-6606.

CANON SERVICE CLINIC AT SMPTE

The Scoopic Division of Canon

U.S.A. has just announced its plans for a service clinic during the upcoming SMPTE Conference at the Americana Hotel in New York City.

On Wednesday, October 20, in the exhibit area, several technicians from Bush and Millimaki and Canon will be on hand with various pieces of test equipment. They are inviting the owners of Canon Scoopic cameras, Canon Cine or ENG lenses to bring any of those items in for a free check, preventive maintenance or minor repair.

In addition to the actual service aspects, a slide illustrated course in preventive maintenance will be shown throughout the day. A copy of the proposed program may be obtained at the Canon Booth during the show or you may write in advance to the Scoopic Division, Canon USA, Inc., 10 Nevada Drive, Lake Success, New York 11040 or call (516) 488-6700.

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The first ANNUAL "FESTIVAL OF FESTIVALS" will take place in Toronto, Canada from October 18-24, 1976.

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The FESTIVAL OF FESTIVALS means the "Best of the Best", the top 100 features from the top festivals around the world. Not only does the FESTIVAL OF FESTIVALS offer this but it also provides a venue for the gathering of top international and local film industry people — a venue where business, art, ideas and enthusiasm can rub shoulders as they never have before in Canada.

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Continued on Page 1134

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RACK FOCUSING FROM EXTRA CLOSE-UP TO NORMAL OR DISTANT SUBJECT.



Set zoom lever at wide-angle position, and focus on nearest location of subject with macro ring. Keeping in this position. Rotate zoom to maximum telephoto and focus normally on most distant location subject. Use zoom control to "follow focus" subject, which will remain constant in size.

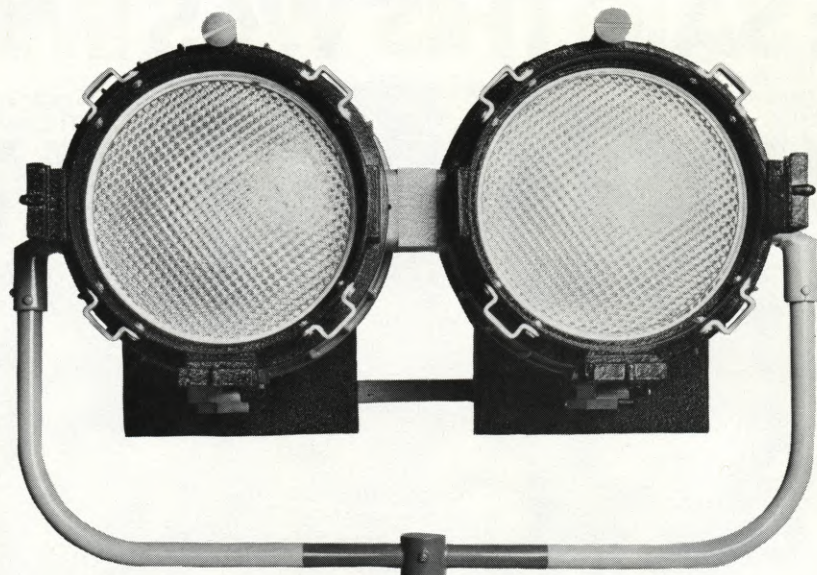
Focus normally on most distant subject (man in doorway) and zoom to desired focal length. Leaving controls in this position, rotate macro ring so closest subject (man on phone) is in focus. Shift focus from near to intermediate to far subjects by rotating macro ring to full off.

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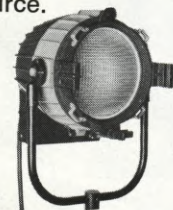
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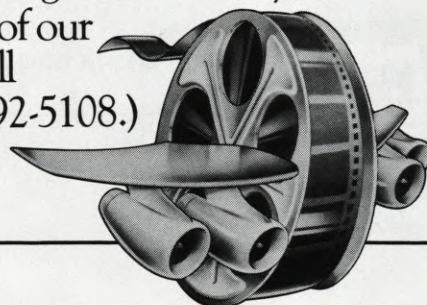


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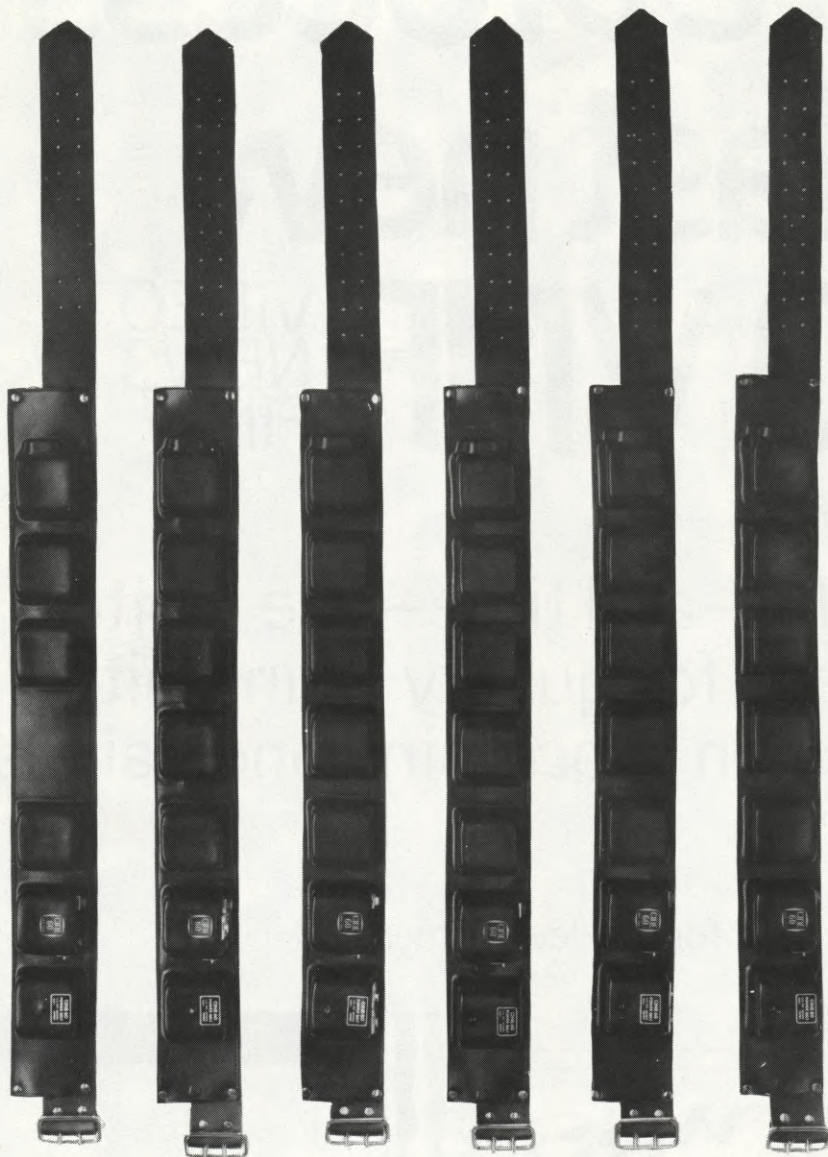
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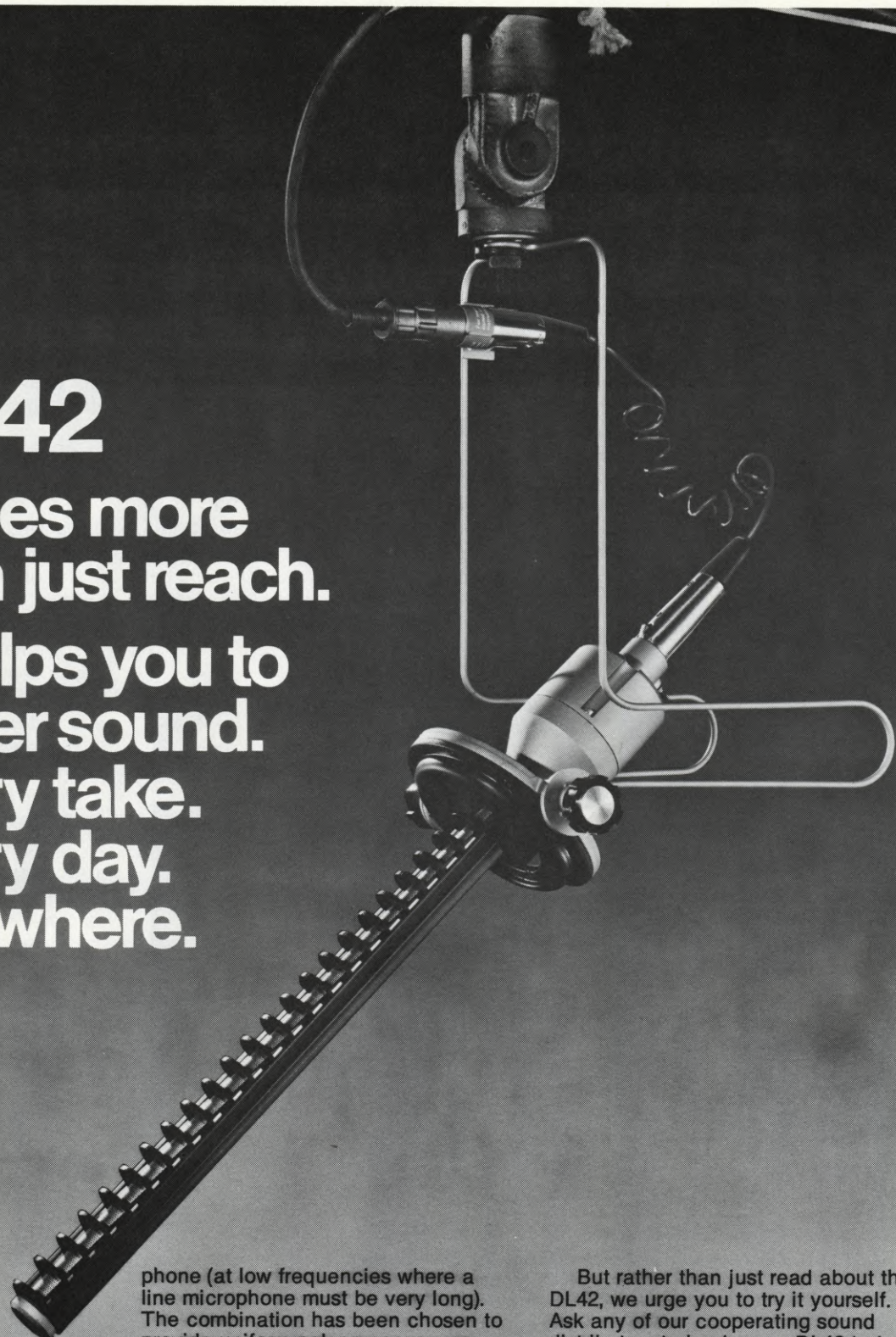
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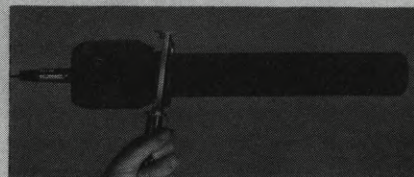
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FILMING THE XXI OLYMPIAD IN MONTREAL



By HERB A. LIGHTMAN

MONTREAL

To be honest about it, I hadn't really planned to be here. The weight of multiple professional responsibilities, the pressure of too many deadlines, the gnawing, almost sub-conscious, dread that something like the tragedy of Munich might happen again here — all of these considerations had impelled me to decline the several kind invitations I had received to attend the XXI Olympiad and report on it for *American Cinematographer*.

There had been temptations. For

tomed normalcy collapsed when, finally, I received a phone call from Karel Ludvik, CSC, Film Production Coordinator for ORTO (Olympics Radio and Television Organization), who, in his own quietly persuasive way, wouldn't take no for an answer. He promised me that I would be accredited, not as "Press", but as a member of the filming crew, that I would wear the official uniform of the ORTO cameramen and that I would get to film at least the Opening Ceremony.

It was that last item that constituted

wrong time of arrival for the man he sent to pick me up — three hours later). Wearing my bright red jacket (donned for easy-spotting purposes), I am standing in the Montreal Air Terminal, a madhouse of inefficiency, with visions of spending the night there (because no one has told me what hotel they've booked me into), when I hear someone calling my name.

To backtrack a bit at this point, at the close of my reportage of the 1976 Winter Olympics at Innsbruck (see *American Cinematographer*, April, 1976), I had expressed my sadness at taking leave of Michael Samuelson's rollicking crew of mad film-makers, and had written:

When will we all be together again?

Who knows?

Maybe sooner than we think.

Maybe next summer — in Montreal.

At the time, that was strictly a wishful prophecy, since no such arrangements had yet been made, but now the prophecy comes suddenly true, for the "someone" calling my name in the Montreal Air Terminal is Mike Shackleton, one of Samuelson's Finest. How happy I am to see his freshly-scrubbed, smiling face gleaming through the mass of milling humanity.

I explain my dilemma. "Don't fret, Mate," say Mike, clapping me on the back. "We'll take care of you. Come have a drink." He leads me to the bar, where several others of the lusty crew are tipping a brew. Then they take me with them to "Auberge le Vicomte de Laval", the hostelry in the boonies where the crew is quartered.

There, just about all of Michael's Merry Men from the Innsbruck shoot are on hand, ready for work and fun, and it's a joyous reunion. Michael himself, whom I'd left only a few weeks before in Australia, gives me a happy hello, as does Tony Maylam (director of the Innsbruck Official Film, "WHITE ROCK") and "WHITE ROCK" Associate Producer Drummond Challis, who is directing the film of Olympic equestrian events that the crew is shooting here. Michael promptly invites me to man one of his cameras on the day of the Cross-country Endurance Competition, one of the most colorful of the horse numbers, and I'm most happy to accept.



An aerial view of the fantastic sports complex at Olympic Park in Montreal, shot on May 6, 1976, scarcely more than two months before the start of the Games. The upper structure of the tower and the amazing retractable "lid" did not get finished in time, but a final super-human effort completed the really necessary facilities. Montrealers, highly critical of the huge cost overrun before the Games, loved their magnificent Stadium once it became a reality.

example, I had heard that there would be at least four separate organizations doing filming of widely varying types at the Games, that several innovative techniques would be employed, that my "Old Gang" (Michael Samuelson's jolly crew from London, who had filmed the Mexico City, Munich and Innsbruck Games) would be on hand doing their thing. All very tempting — but I had still decided to sit this one out and watch it on television like "normal" people would be doing.

However, my attempt at unaccus-

the offer I couldn't refuse.

But my troubles were just beginning. Due to a foul-up in reservations by Air Canada (in my widely-traveled opinion, one of the world's most un-together airlines), I arrive a day later than planned — and just 18 hours before the Opening Ceremony.

Snafu Number Two occurs when, despite fervent assurances from ORTO that someone would be at the airport to meet me, no one shows up. (I am to find out later that the man who made the fervent assurances jotted down the



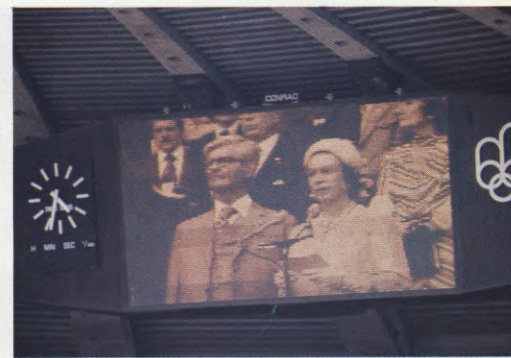
Jeux de la
XXIe Olympiade
Montréal
1976

Games of the
XXI Olympiad
Montréal
1976

Panorama
Cérémonie
d'ouverture
17 Juillet 1976

Panorama
Opening Ceremo
17 July, 1976

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The colorful Opening Ceremony, with strikingly garbed athletic teams from all over the world massed on the field, was highlighted by the arrival of the Olympic Torch and lighting of the Flame (later to be extinguished temporarily by the rain) and colorful routines by Austrian and Quebec folk dancers. Queen Elizabeth II formally opened the Games, and an image of her doing so can be seen on the illuminated scoreboard ABOVE RIGHT. Taiwan, plus 30 African nations withdrew their teams for political reasons.





Speaking of "WHITE ROCK", the group is all aglow over the enthusiastic reception accorded the film at its "World Premiere" held the night before at headquarters of the National Film Board of Canada and sponsored by the Canadian Society of Cinematographers. I'm told that a capacity crowd of 300 showed up, with quite a few more having to be turned away because of lack of seating. In a flood of good sportsmanship, the local Kodak people had picked up the considerable tab for the lavish refreshments — even though "WHITE ROCK" had been photographed in *Fujicolor*.

Through the grace of Air Canada's bungling, I had, of course, missed this happy event, but Michael promises me

a private screening later in the week.

Kick-off of the XXI Olympiad

I spend that night at the Auberge — an orphan in out of the storm — rehashing Innsbruck and Munich and Mexico City larks with these great guys who have become a kind of rough-and-ready auxiliary family to me over the years. "*Remember that time at the Tangente when . . . ?*"

The next morning I make phone contact with an understandably bewildered Karel Ludvik and he comes by to collect me. As yet, I had met him only over the telephone, and from his calm, slightly hesitant voice with its scholarly Czech accent I had derived a mental image of a middle-aged, pipe-puffing,

philosophical type. In rather striking contrast, he turns out to be a tall, rugged, young Sean Connery type — very amiable and, at the moment, apologetic about the trials and tribulations that have bedevilled my trip thus far.

After check-in at the hotel, I have a couple of free hours in which to reacquaint myself with Montreal. This is my first visit since EXPO 67 and the city has changed considerably in the nine years that have elapsed. There is a spate of new and modern skyscrapers serrating the skyline. They lend the city a "progressive" look, but some of the faintly Old World charm of the place is gone — though the buildings in the preserved enclave of touristy Old Montreal retain their architectural "French accent".

It is the *ambiance* of the city that has changed the most. Whereas, during EXPO, it was carefree and festive — now, despite the trappings of the Olympics, it is strained, full of tension — and understandably so. The Taiwan thing has rocked the city and now 30 African nations are withdrawing their athletes from the Games in protest against New Zealand's having sent a team to play rugby (not an Olympic sport) in *apartheid* South Africa. Moreover, with the memory of Munich all too fresh after four years, Montreal is an armed camp. Security guards are everywhere, not storm trooper types, but mostly fresh-faced young men (and a few pretty girls) wearing berets and quite non-military-looking uniforms. Nevertheless, the very necessity of their presence casts a somber pall over the city.

At ORTO Headquarters (formerly the nerve center of the Canadian Broadcasting Corporation, before it moved into new, very posh premises), the machinery is put into motion to get me accreditation, a working permit (necessary should I do any filming) and a complete ORTO uniform.

The latter item, a "creation" in every sense of the word, would probably send Yves St. Laurent screaming into the night. It is based upon the CBC logo, a bold design of orange-to-yellow semi-circles radiating outward from a central vermilion full-circle, the whole emblazoned on a background of royal blue. The ingenious designers of the uniform have taken this logo and repeated it — but BIG — as an overall textile design. The result is positively pulsating.

I am issued three shirts and a wind-breaker (all with the eye-popping design), plus harmonizing blue trousers, a belt, blue Adidas shoes and a rain cape with a single large rendition of the logo



centered on the back. Most of those wearing this uniform claim that they hate it, and they refer to it as "the clown suit", "the pizza suit" and by a third hilarious appellation not suitable for mention in a family publication like *American Cinematographer*.

Frankly, I *like* it. The total effect is just bizarre enough to appeal to my somewhat flamboyant tastes. And there's much to be said for the fact that these wild threads certainly make it easy to spot ORTO crews on the field — *any* field.

The security check for full accreditation is such an in-depth process that it's not possible for my card to be ready in time for the Opening Ceremony that afternoon. This means that, with only my temporary credentials, I won't be able to film the event. However, I have the equestrian thing with Michael Samuelson's crew to look forward to. Meanwhile, I am presented with a \$40.00 ticket to the Opening Ceremony and I am given to understand that scalpers outside the Stadium are selling the same ticket for up to ten times that amount, so great is the demand.

This is my fourth Olympic Games Opening Ceremony, and by now I should be *blasé* to the whole idea, but I can't help but be stirred by the pageantry of colorfully garbed athletes from all over the world marching in to match their skills against those of one another in this very top echelon of sports competition. Nor am I able to remain unmoved when the United States team enters the Stadium to a tremendous ovation. I have always disdained overt demonstrations of national chauvinism, but I find myself cheering along with the rest. On that score, the ABC television team, which otherwise does an extraordinary job of video documentation of the Games, picks this moment to commit its worst *faux pas*. As I am to learn later, they cut to a two-minute commercial just as the U.S.A. team enters the arena, thus depriving 150,000,000 American TV viewers of that little surge of national pride I have just experienced.

The Olympic flame is lighted, with proper ceremony; Queen Elizabeth II formally declares the XXI Olympiad open, and the 1976 Summer Olympic Games (minus 31 previously scheduled teams) are off and running.

At Long Last . . . "WHITE ROCK"

Michael Samuelson calls to invite me to a screening of "WHITE ROCK" that has been set up at one of the large downtown theatres. When I arrive I am surprised to see Leni Riefenstahl, who directed the classic 1936 Berlin Olym-



piad film, the granddaddy of *all* Olympic Games films. The last time I had seen her was in Munich when we were filming "VISIONS OF EIGHT", and she hasn't changed a bit in the interim.

Tony Maylam, the director of "WHITE ROCK", is also on hand and he is very enthusiastic about the film he is working on in Montreal. "Arthur Wooster has designed and built some incredible rigs for our cameras here," he tells me. "He's put GSAP cameras just everywhere you can imagine."

I had heard rumors about Arthur's almost "mad scientist" virtuosity in that respect. "I understand he's hung a

GSAP from a horse's testicles," I observe.

"Well, not quite literally," says Tony, "in view of the fact that the horse was a mare — but he did sling one from its underbelly. Amazing effect!"

My overactive imagination plays with this mind-boggling prospect. I can't wait to see a horse-navel's view of going over the jumps.

When the opening scene of "WHITE ROCK" flashes on the screen, I make a conscious effort to curb my expectations, because I'm afraid that if they build too high I'm bound to be disappointed.

Before I know it, I'm caught up in a





(LEFT) A view of the quaint and colorful French-Canadian city of Montreal from a vantage point across the St. Lawrence River. (CENTER) Sidewalk cafes are in character with the heavy "French accent" that exemplifies Montreal. (RIGHT) At night Old Montreal becomes a "City of Light". (BELOW LEFT) The familiar five-ringed symbol of the Olympics was augmented for Summer 1976 by arches symbolizing the mountains of Canada. (CENTER) International symbols of the Olympic events. (RIGHT) Amik, the Beaver, official symbol of the XXI Olympiad.



(LEFT and CENTER) Three-dimensional architectural models of the Olympic Park sports complex as it will look when completed. The rakish Tower will support, by means of cables, a retractable "lid" that will protect the field in inclement weather, but leave it open to the sky when the weather is fair. (RIGHT) The Olympic Stadium under construction. (BELOW) A three-dimensional model (LEFT) and two actual views of the Olympic village with its striking "half-pyramid" structures.





heart-racing, pulse-pounding experience. Never before (with the possible exception of the famous Cinerama roller-coaster shot) have I seen anything that so deeply and subjectively involves the audience. *YOU* are flying down the Downhill ski run! *YOU* are hurtling around the bobsled ice tunnel. *YOU* are (thanks to GSAP cameras mounted on the skis) soaring off the 90-meter jump. It is a trip and a half!

Add to that the superb 35mm Panavision anamorphic photography, provocative sound and a magnificent score by Rick Wakeman. I'm amazed at Wakeman's range in writing and performing this score. Taking a cue from the film's title, I had expected a solid rock beat throughout, but there is great variety and a wide range of musical expression. There are weirdly haunt-

ing electronic themes for the slow-motion ski jumping, backed up with otherworldly choral effects. On the other hand, there is a sensual samba beat for the ladies swerving down their slalom course. It's great music.

I'm not the only one who is excited about the film. After the screening everyone expresses genuinely enthusiastic praise — with Leni Riefenstahl being one of the most vociferous.

As for me — I admit to a certain bias, but for my money it has to be *the* most exciting sports film ever made — and the one against which all future sports films will have to be measured. •

I'm extremely proud to have my credit on "WHITE ROCK", even though my contribution to it was a relatively small one.

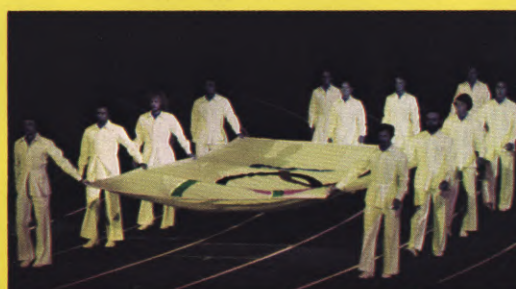
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(TOP OF PAGE) Flags of many nations fly, symbolizing the harmony that existed among the athletes themselves inside the Olympic Village. (BELOW) Athletes relax near a swimming pool in the Village plaza when not participating in events.



Various views inside the Stadium during the Closing Ceremony, with colorfully garbed Indians leading the parade. Young girls, wearing costumes of five different colors, formed the intertwining Olympic Rings on the field, were undismayed when a nude stalker popped up in the middle of one of them. The lowering of the Olympic Flag (BELOW CENTER) and the extinguishing of the Olympic Flame marked the formal end of the XXI Olympiad in Montreal, but athletes and spectators alike frolicked on the field for hours afterward in a ferment of mixed delight and relief.



THE OFFICIAL FILM OF THE XXI OLYMPIAD



Coordinating the full force of its facilities and expertise, the prestigious National Film Board of Canada dedicates itself to the "cinema direct" production of a humanistic Olympic Games film

On the basis of its most impressive "track record", its impeccable facilities and its top-flight roster of technical personnel, the prestigious National Film Board of Canada was selected as the organization to produce the obligatory Official Film for the 1976 Summer Olympic Games in Montreal.

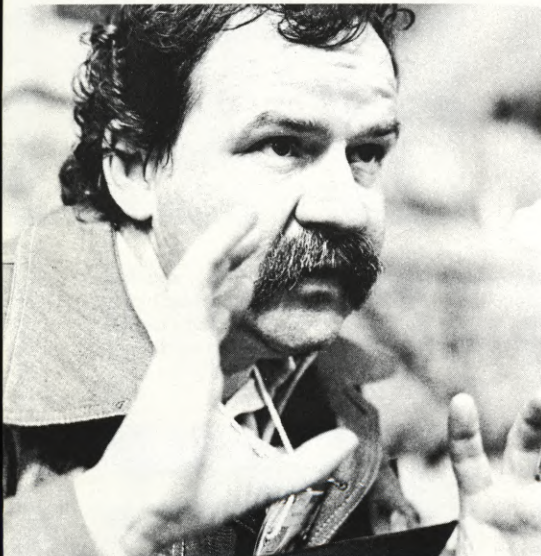
Having accepted the assignment, formulated a stylistic slant for the cinematic presentation of the subject matter and selected the technical methods for accomplishing its objective, the NFB issued in advance of the start of the Games the following outline of its artistic, logistic and technical approaches to the production of the Official Film of the XXI Olympiad:

THE MANDATE: AN OLYMPIC FILM FOR THE WORLD

In accordance with Article 49 of the International Olympic Committee regulations, every Olympic Games must be marked by a commemorative film. Thus, COJO, the organizing committee for the Olympic Games, has designated the National Film Board of Canada official filmmaker for the XXI Olympiad.

In accepting the title and responsibility as producer of the official film of the 1976 Olympic Games in Montreal, the NFB undertakes to follow the technical guidelines and general objectives as defined by the IOC and COJO.

Jean-Claude Labrecque Director



The finished film must be of feature length (between 90 and 120 minutes), filmed in colour and capable of being presented in 35mm on a normal screen. As well as sound tracks in English and French, other foreign-language versions will be made available as needed for international distribution.

Apart from being a souvenir and record of the Games, the official film must be more than a simple report. It must promote the Olympic ideals of community and brotherhood; it must record the achievements of the XXI Olympiad and the contribution of the host city as well as reflect the special flavour of the Canadian cultural environment.

The National Film Board has sole responsibility for all planning and production of the official film. Besides providing the necessary administrative and technical organization and assuring the services of the best creative and technical personnel in the Canadian film industry, the NFB will direct the progress of the film at every stage: from scenario to shooting to editing of the final print.

The Film Board has also been accorded exclusive distribution rights for the official film for a period of four years, after which these rights revert to the IOC. All aspects of distribution, promotion, publicity and administrative services, will be furnished by the Board.

Included in its role as producer and distributor of the official film, the NFB will also organize special screenings in Montreal, Ottawa, and all the provincial capitals of Canada in conjunction with the Canadian Olympic community and associated amateur sports organizations. An official premiere for the film is also planned for the United Nations headquarters in New York in 1977, to be followed by world-wide television release and commercial cinema bookings to ensure that the official film of the XXI Olympiad will have the largest viewing audience possible.

THE SCENARIO: HUMANITY OF THE OLYMPIC EXPERIENCE ON FILM

The intention is to make a very human film of the XXI Olympiad, to shoot "at eye level", to penetrate the pageantry and present the humanity of

the Olympic Games. The National Film Board of Canada, with its technical resources and pool of creative talent, is in an exceptional position to make this possible.

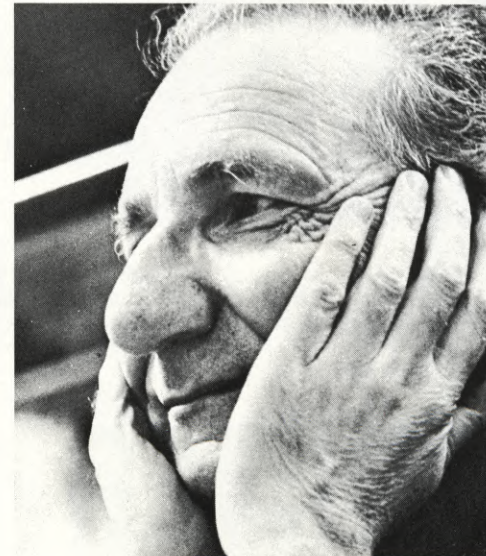
Executive Producer, Jacques Bobet and Director Jean-Claude Labrecque head a crew of over one hundred and fifty people, including thirty cameramen. Unique in this arrangement is the addition of three associate directors, each heading his own camera crew, each concentrating on a different facet of the Olympic Games. This team approach to the film will allow intensive coverage of the Olympiad's most dramatic moments while not neglecting the broader aspects of the two-week event.

Chief film editor for the film is Werner Nold, whose job will begin at the same time as the cameras start turning. By the close of the Games, as much as half a million feet of film may have been used. As the crews are shooting, Nold will be viewing the rushes, roughing out the plan for the film's final form.

The Marathon will serve as the theme, the gruelling 40-kilometre foot race providing the final print with its natural leitmotiv.

The race itself takes about the same time to run as a feature-length movie (approximately two hours) and is an event with excitement building

Jacques Bobet Executive Producer



constantly as it nears its climax. The pace, the rhythm, the changing scenery of the course — these are all elements that together form an excellent backdrop for a film that will accurately reflect the Olympic experience.

As well, because the route for the Marathon leads beyond the walls of the Stadium and into the streets of Montreal, close coverage will connect the Olympic Games to their surroundings, relating the world of global championships to the lives of ordinary spectators.

And as the Marathon unfolds, bringing the contestants closer to the Stadium, the film will be interspersed by miniature cinematic essays by the three associate directors, each one highlighting some of the Olympiad's most outstanding participants and performances.

Associate Director, Marcel Carrière, for instance, will be following Canadian high jumper Debbie Brill, the cycling team from the Federal Republic of Germany, and Kancsal, the outstanding Hungarian pentathlete.

Associate Director, George Dufaux, will have his cameras trained on Cuban sprinter Sylvio Leonard, decathlon star Bruce Jenner of the United States and either one or both female gymnastic stars Nelli Kim of the USSR and Nadia Comaneci of Rumania.

Meanwhile, the overwhelming coverage by the world's electronic news media will not be overlooked. Associate Director Jean Beaudin and his crew will view the Games through the eyes of the hundreds of television cameras and monitors that will be covering the action from every possible angle.

Because there is now so much coverage of the Games by radio, television and newspapers, the official film no longer needs to be a "family album" or visual ledger of medal winners. It is free to explore the Games more deeply, bringing into sharper focus aspects of the competitions that heretofore were avoided or overlooked.

The Decathlon and Modern Pentathlon, are two events where the peculiar demands placed on the athletes often are not readily apparent to the spectator. Individual competitions in each of these events are spaced over several days in different locations, making it difficult to follow them in person or through the normal daily media coverage. The official Olympic film, however, will be able to reunite the various elements of these events, thus conveying the full force of their excitement to the viewer.

All major events will be covered in the NFB's production of the official



The almost legendary Leni Reifenshtal, director of the classic 1936 Berlin Olympic Games film, chats in Montreal with Jacques Bobet and Jean-Claude Labrecque, Executive Producer and Director, respectively, of the Official Film of the Games and the XXI Olympiad. Her film utilized many techniques which were considered revolutionary at the time.

1976 Olympic film, evoking the emotions and human dimension of the athlete and his sport, recording the pageantry of the official ceremonies and the climate of celebration at the XXI Olympiad in Montreal.

INNOVATIVE FILMING TECHNIQUE FOR OLYMPICS

Making a movie about the Olympic Games calls for shooting in a wide variety of unusual camera situations. In the National Film Board's official film of the 1976 Olympic Games in Montreal one way of assuring camera work of the highest possible technical standards will be to use a recent industry development known as Wesscam.

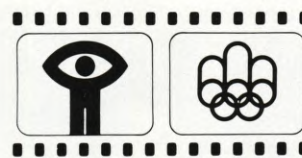
Wesscam is a camera mount system for stable shooting from moving platforms. It employs a gyro-stabilised camera module connected to a remote control console and power supply. All of which together permit the filming of action sequences under the most difficult conditions. This is especially important during the filming of the 1976 Olympics because the National Film Board is aiming for the best possible coverage of such events as yachting, cycling, rowing and the marathon — all of which involve continuous action over difficult courses.

Wesscam's camera module is a four-foot diameter fiberglass ball containing a Photo-Sonics 16mm camera, a motorized zoom lens, plus related monitor and remote-control systems. The unit permits 360-degree continuous panning with tilting from 30 degrees above horizontal to 90 degrees below horizontal.

The control console can be placed as much as 300 feet from the camera module. Viewfinding is done via closed-circuit television, coupled to the reflex viewing system of the film camera. A nine-inch monitor on the console gives the operator an exact picture of what is being filmed, while controls are provided for pan, tilt and zoom, as well as for camera speed.

Power for the Hesscam, unit comes from two rechargeable twelve-volt batteries. This freedom makes the entire system completely portable. Thus far, plans for using the Wesscam during the Olympic Games include placing it on a boat for the filming of yachting events in Kingston, mounting it on an electric car for the journey of the Olympic flame and the running of the marathon through the streets of Montreal and suspending it from a crane to give an overhead view of the

Continued on Page 1108



Official film Games of the XXI Olympiad Montréal 1976

DIRECTING A FILM OF THE GREATEST SPORTING EVENT ON EARTH



An interview with Jean-Claude Labrecque, Director of the Official Film of the XXI Olympiad, who, in spite of the awesome responsibility, welcomes this one-of-a-kind challenge

QUESTION: Can you tell me a bit about your background, leading up to your present assignment?

LABRECQUE: I started as a still photographer in Quebec — taking pictures of weddings, babies crying and all that. But I learned to make films through the National Film Board of Canada. I started there as an assistant cameraman and, in 1965, with Jacques Bobet as producer, I directed, photographed and edited a film about a bicycle race, "60 CYCLES". After that I shot a feature. From the beginning I wanted to become a director, but in the meantime, I worked as Director of Photography and editor. I like to work on every level of the cinema.

QUESTION: How did you happen to be assigned to direct the Official Film for the Montreal Olympics?

LABRECQUE: When Jacques Bobet was named as the producer, I told him that I would be interested in working on the film. Since he has known me for about 12 years, he offered me the chance to direct it. At first I was a little bit afraid to take the responsibility, but I realized that it would be an important event in Montreal and I didn't want to miss it.

QUESTION: What did you do by way of preparation for the assignment?

LABRECQUE: I screened several of the

Olympic Games films, starting with the one made in Berlin by Leni Riefenstahl. I also saw the one from Tokyo and the one from Mexico City, but I was especially impressed by "VISIONS OF EIGHT", which Michael Samuelson made in Munich for Wolper. I found that one to be fantastic, because it was the first to change the point of view and the way of making an Olympic film.

QUESTION: How did you arrive at the basic concept for your film of the Montreal Olympics?

LABRECQUE: After seeing all those other films, I found it difficult to write a script, because everything about the Montreal Olympics was already scheduled — like a railroad train that arrives on time and departs on time. But I finally decided to make the film in such a way that, at the end of the two hours, you will have met some people and grown to like them. With that in mind, I asked three other directors (Jean Beaudin, Marcel Carriere and Georges Dufaux) to concentrate on certain individual athletes and follow them very, very closely — outside the competition, as well as in the sporting events. For example, we are doing a sequence on Bruce Jenner. At the beginning of the film we will feel his nervousness, watch him working with the coach, realize his problems, so that by the time he is shown in the Decathlon sporting events, we will know him very well. The same is true of Nelli Kim,

Nadia Comaneci and the others. We are following six athletes in all. The leit-motif of the film is the Marathon, and I asked the composer to write a theme especially for the Marathon. At the beginning we will see the Opening Ceremony. Then the first gun that we hear will be the starting gun for the Marathon. All the way through the film we will keep cutting back to the Marathon, until, at the end, we will see the Marathon runners coming back into the stadium. That's the general idea.

QUESTION: At the time of this interview, there are four more days of the Olympics left to go. Are you getting what you want so far?

LABRECQUE: I have seen most of the rushes and they are fantastic — very different. Dufaux and Carriere have shot a lot of footage outside the Stadium — out in the waiting room before the competition. The athletes are nervous and you can feel this atmosphere. We pushed very, very hard for permission to shoot these sequences.

QUESTION: How did you decide in advance which athletes to concentrate on?

LABRECQUE: I spent a year and a half doing research on the athletes I thought might be coming to Montreal. I had seen Nelli Kim two years before in Israel and Comaneci a year before, and

(LEFT) High up in a control booth close to the roof of the Olympic Stadium, Associate Directors from the National Film Board of Canada direct multiple camera crews in shooting the Official Film. (CENTER) Director Jean-Claude Labrecque (at rear) observes while Associate Director Marcel Carriere gives instructions by radio to crews on the field. (RIGHT) Camera crews of the National Film Board and ORTO cluster about the high-jump site in the Stadium.



I felt that they both had very great potential. Other than that, we made guesses and we gambled a lot. Like Bruce Jenner, for example. I only met him a week before the Games, but I had read in the newspaper that he really wants to win because afterward he wants to make a lot of money from commercial things. Winning is really important to him. Most of the people we have gambled on have won medals. But we don't have only winners; some win, some lose.

QUESTION: Are you using any unusual or exotic techniques in your filming?

LABRECQUE: We won't be using slow-motion, except for a little bit in the Marathon. Slow-motion is interesting, but I feel that it can be overdone in Olympic films and, because we decided to concentrate on the human aspect, we decided to shoot the sporting events straight. We made the decision to shoot in 16mm because we are very good at this kind of film, this "cinema direct" reportage. I have worked in it for more than 12 years, and so have Dufaux and Carriere. We were born to it and are skillful at it. So when we decided to do the Olympic film, we agreed not to change the way that we usually work. It was originally proposed that we shoot the film in 35mm, but 35mm results in a completely different style of film. We decided to stay with 16mm because we can use very lightweight cameras and still carry 10-minute magazines.

QUESTION: Are you shooting much sync-sound?

LABRECQUE: Yes. We have 20 crews and 20 sound engineers. Nearly everything is being shot with sync-sound. But, with the sound editor, for three weeks before the Games began, we pre-recorded sound effects of all of the sporting events. We hired athletes to do some swimming, some boating, some jumping with the horses. One of the riders even offered to crash his horse for our soundtrack. We have a lot of sound like this recorded very close to the action, closer than we can get during the actual events. We will use these effects to enhance the sync-sound in the final editing and mixing.

QUESTION: Are you framing strictly for the 16mm aspect ratio, or is there a chance that there will be a 35mm blow-up of the film?

LABRECQUE: Even though we are

filming in 16mm, we are framing to the wide-screen ratio, because we will want to make some 35mm prints. I have been pushing the Film Board to do that and I'm sure that they will. We will also want our 35mm prints to have Dolby optical stereo sound and, with that in mind, we have already recorded much of our sound in stereo. I'm not very familiar with the Dolby system and it's a bit of a mystery to me, but I've read all about it in American Cinematographer and it sounds fantastic. It seems that they have done a lot of research into improving the quality of sound in theatres. Most of the sound in theatres is terrible! I believe that the Dolby system will be the sound of the future. There is no theatre in Montreal that is equipped with it right now, but I get the impression that within three years many theatres will have it.

QUESTION: From what I've seen of your rushes, I'd say that your camera approach is very direct, very honest, without affectation and without tricks. Is that correct?

LABRECQUE: That is correct. We are trying to shoot very, very simply. We have pre-lit some halls and corridors and other places where we can stay for two hours waiting for something to happen. Carriere and Beaudin are like watchdogs. They stay there for a long, long time and wait. They are getting a lot of emotion on film, like people crying when they lose. Also, when they work with Nelli Kim and Bruce Jenner day after day they become friends. For example, Jenner has seen Georges Dufaux constantly for a month and they have become friends, so that now Jenner can forget that Georges is there. This is fantastic for an Olympic film, because it results in a great intimacy.

QUESTION: I'd like to ask about your selection of crew members. Had you worked with most of them before?

LABRECQUE: I have worked with all the key crew members before — the directors and assistants. Of the 25 cameramen, I had worked with around 15 or 16 before. The rest are cameramen whom I had not worked with, but I had seen the work they'd done and it was very good. They are all skilled cameramen, very good technicians, and they like working on the film. They have such enthusiasm that even if they aren't working on a certain day, they will still come in at 8:00 a.m. to see the rushes. Sometimes we have 50 or 60 people at those screenings. The rushes are open to everybody on the crew,

because that is the only way that they will be able to make corrections.

QUESTION: What about your use of the Wesscam on this film?

LABRECQUE: It's a fantastic gadget. I had read about the Wesscam and I went to watch the shooting of a commercial with it. I was very astonished at the quality of it — very stable at 250mm on the running of a horse. When I decided to rent one for the Olympics, they built one especially for us. We used it on the Opening Ceremony to follow the Olympic Torch, and we hung it from the Swiss Timing clock in the Velodrome to do a 360-degree pan. We've used it to follow the canoeing and we will shoot the Marathon with it. Ernest McNabb, the cameraman who operates it, and Doug Bradley have formed a fine team for its operation. I'm very proud of them.

QUESTION: You've been using the new 7247 Eastman color negative on this film. Are you happy with the result?

LABRECQUE: For the moment, yes, because the Film Board has been developing the original and the quality is very good. We have not had the problems with scratches and dust that we expected, because 7247 is such a delicate film. You just look at the roll and it scratches itself. It took us about two months to decide whether to go negative or go positive, but we decided to go ahead with the 7247 because the color is so good.

QUESTION: How long do you estimate it will take to cut the film?

LABRECQUE: The chief editor and five other editors have already started to separate material and we intend to get the complete cutting job done in seven months. The Film Board has prepared very well for that; they've just stopped work on everything else. Their laboratory has been extremely efficient. Yesterday we shot 15,000 feet and we had the rushes this morning. It has been going on like that from the beginning. They have a full crew working two shifts, day and night, syncing the rushes. When the Games are over I will begin the actual editing and I don't want to slight it. I think that would be terrible. Even though I am supposed to start on a feature in seven months, if it takes an extra month to do the editing, I will do it — because it's very important. I'm very proud and pleased with the whole project so far. ■

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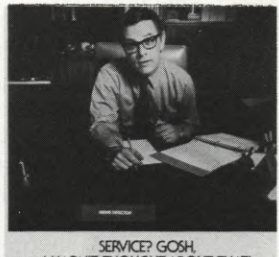
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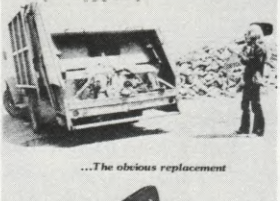
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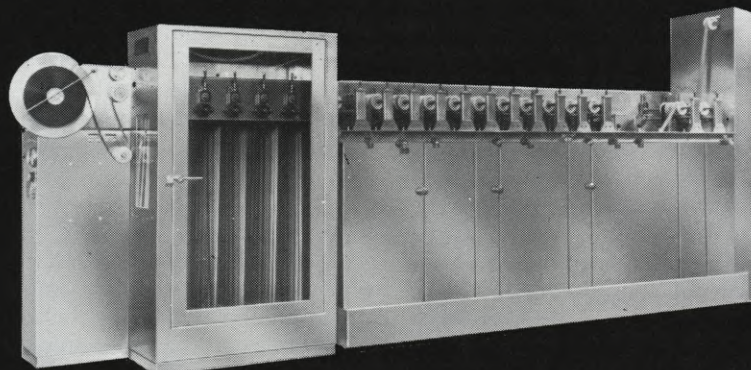


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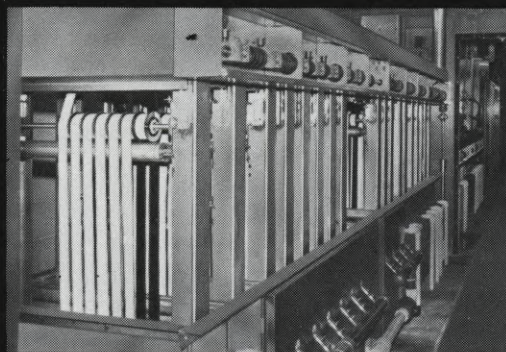
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THE OFFICIAL FILM Continued from Page 1103

cycling road race across Mount Royal. For the rowing and canoeing events at the Olympic Basin, the Wesscam unit will be rear-mounted on the coaches' truck that follows alongside the competitors. At the Olympic Park, it will be hung from the clock at the Velodrome cycling events and suspended from the technical ring during the closing ceremonies in the main stadium.

THE SOUND OF THE OFFICIAL OLYMPIC FILM

With a view to the future, the National Film Board's official film of the 1976 Olympic Games in Montreal will have a stereo sound-track in its final version.

During the film's two-week shooting schedule, approximately one-fifth of the total footage will be accompanied by synchronized stereo sound-recording. Such events as the opening and closing ceremonies, Athletics, Basketball, Boxing, Cycling, Fencing, Hockey, the Pentathlon, Swimming, Waterpolo, Weightlifting and Wrestling will be enhanced in their coverage by the presence of stereo microphones, helping to make the finished film as accurate a representation of the reality as possible.

A team of four National Film Board stereo sound engineers will be assigned to one or another of the thirty camera crews during the course of the Games, while monaural recording will accompany the remaining camera units. Those events not actually recorded in stereo sound will later be re-channelled so that the film's entire

sound track will have a stereo effect.

At present, stereo speaker systems are not in general use in commercial cinemas. However, in the same way that stereo recordings can be played on monaural phonographs, even cinemas with conventional sound equipment will be able to exhibit the Olympic film in its original form.

But stereo sound on film is a feature that will soon be common in theatres around the world and, according to NFB stereo sound engineer Jacques Drouin, equipping the official film of the 1976 Olympic Games with a stereo sound track will give it a "second life" long after other films have begun to sound "passé".

It might have been easier to record the entire sound track in the usual monaural sound, but the decision to use stereo to accompany the 16mm colour film was made so that the final product will give the viewer every opportunity to recreate the sounds and the spectacle of the 1976 Olympic Games in Montreal.

TECHNICAL NOTES

One hundred and sixty-eight people are at work on the official film of the 1976 Olympic Games covering everything from working the cameras to supplying food to the crew members. There are four directors, seventeen location managers, thirty-one cameramen and twenty-six sound engineers. The crews have been divided into nine teams and will range over nearly thirty different Olympic installations as well as throughout the cities of Montreal, Kingston and Bromont.

To date, one hundred and eighteen camera positions have been established for the two-week shooting schedule of the official film of the 1976 Olympic Games, not including filming the journey of the Olympic Flame and the yachting events in Kingston.

As much as 100 miles of film could be shot in the National Film Board's official film of the 1976 Olympic Games. The movie is being filmed in 16mm colour with stereo and synchronized sound.

One of the thirty cameras to be used in filming the 1976 Olympic Games official movie will be used in conjunction with the Wesscam camera mount system, which permits absolutely stable shooting from moving platforms. The locations include mounting the Wesscam on a boat, the back of a truck and on the side of an electric car. It will also be suspended from a portable crane and hung from the roof of the Olympic Park.

Because direct sound is being used extensively in the making of the official

Olympic movie, synchronizing the audio and visual tracks for the thirty different cameras is of the utmost importance. To do this, an innovative process called Chronocode is currently being tested by National Film Board sound engineers. It consists of a master timepiece to which all cameras and sound recording equipment are connected. The master clock provides an electronic impulse that will imprint itself onto the film or sound tape, signalling the start of each sequence, thereby doing away with the old clap board technique of chalking the date and scene on a wooden board and filming it at the same time as a sound cue is recorded.

With the thirty National Film Board cameramen who will be covering the 1976 Olympic Games often stationed miles apart, an involved system of communications has been established. All location managers, camera crews, as well as the film's directors will be able to stay in constant communication with one another throughout the two-week shooting schedule using short-wave radios and telephonic paging systems. Operations Headquarters have been set up at the National Film Board offices under the direction of Production Manager Ashley Murray. ■

KEY PERSONNEL OF THE OFFICIAL FILM

JACQUES BOBET, EXECUTIVE PRODUCER

At the age of 28, Jacques Bobet arrived in Canada in 1947 to begin a new career as filmmaker with the National Film Board of Canada.

Already a professor of literature and philosophy, Bobet had pursued a variety of interests as a student in his native France. Alongside his regular studies, he had earned his diploma in music from the Ecole Marguerite Long, at the same time maintaining an active interest in the world of sports.

It was an interest that followed him into his new career. As well as serving as editor, director, adaptor or producer on hundreds of National Film Board productions, Bobet held the position of president of the Table Tennis Federation for six years, from 1969 to 1975.

Bobet's love for sports is also apparent in his many prize-winning films that have had sports as their theme:

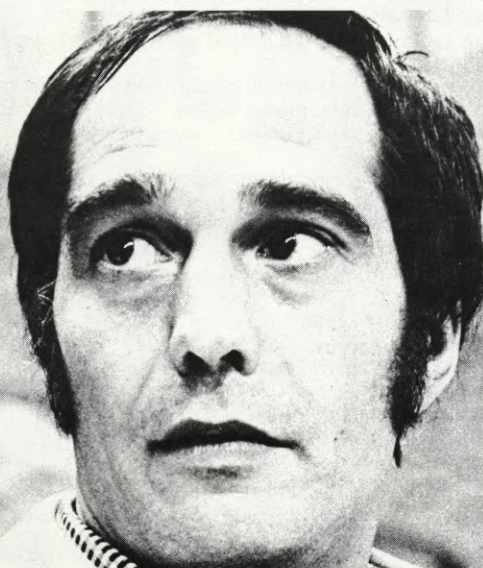
In 1965, he produced *UN JEU SI SIMPLE*, a film about hockey directed by Gilles Groulx that received honorable mention from the Canadian Film Festival and a special jury prize from the Semaine internationale du film sportif in Paris.

That same year, Bobet produced *60 CYCLES*, a lyrical study of bicycle racing. Directed by Olympic film colleague Jean-Claude Labrecque, the film has won many prestigious awards including a silver medal at the Moscow Film Festival, first prize for general interest films at the Cork International Film Festival, and the prize for best short subject at the British Film Awards.

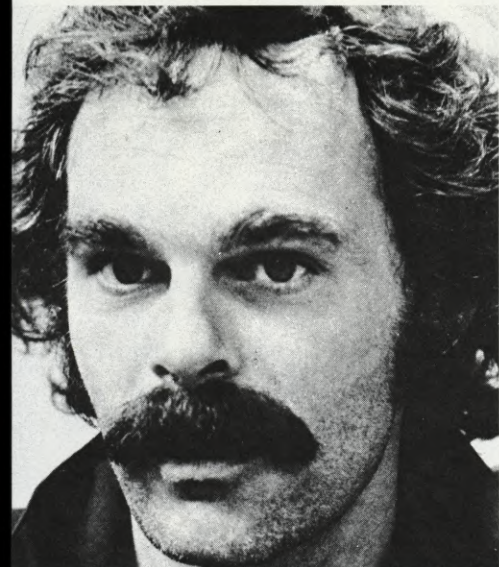
In 1968, there was *ETUDE EN 21 POINTS*, an experimental film on the subject of table tennis that Bobet directed himself. It won a silver medal at the twenty-fifth Festival of Sports Films in Cortina, as well as the Panathlon Club Trophy at the third Festival of Sports Films in Biella.

Other of Bobet's films with a sports theme include *PREMIERS JEUX D'HIVER DU CANADA*, 1967, a film about Quebec's winter games

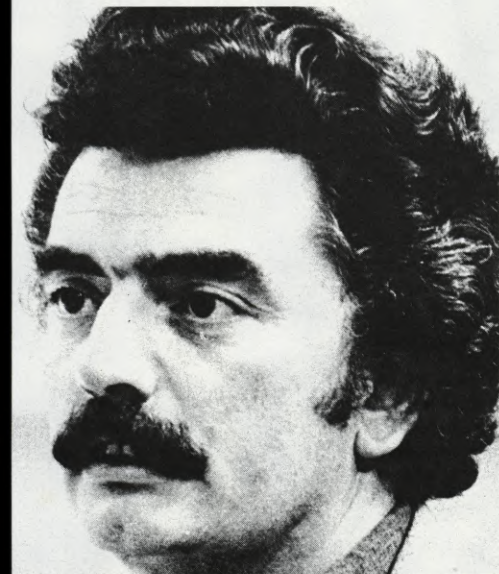
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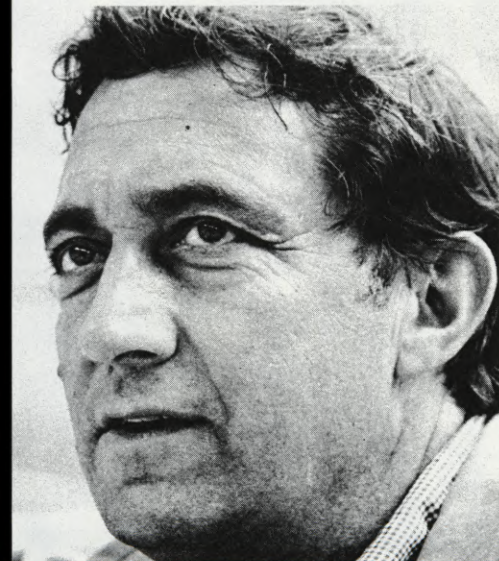
Jean Beaudin
Associate Director



Marcel Carrière
Associate Director



Georges Dufaux
Associate Director



competition, *OUSQUE TU VAS DE MEME*, a film on marathon running directed by Bobet in 1973, and *ON S'PRATIQUE ... C'EST POUR LES OLYMPIQUES*, produced in 1975 and directed by Jean-Claude Labrecque, which shows the different aspects of training undergone by Quebec athletes in preparation for the XXI Olympiad in Montreal.

Jacques Bobet's work on the official film for the XXI Olympiad began as early as 1972 when he was an official observer at the Munich Games. Today, the team he heads numbers more than 100 people.

JEAN-CLAUDE LABRECQUE, DIRECTOR

Jean-Claude Labrecque was born June 19, 1938 at Quebec City, Quebec.

At the age of 20, he had already directed, shot and edited his first professional film, a 30-minute colour documentary commissioned by a Canadian insurance company.

Four years later, after working as an assistant cameraman both at the National Film Board and elsewhere, Labrecque went to work with director Claude Jutra as chief operator on *A TOUT PRENDRE*, a dramatic feature that was a landmark in the development of the Canadian film industry and went on to win the Grand Prix at the Montreal International Film Festival.

Also in 1961, Labrecque became the founding president of Société Jeune Cinéma.

In 1964, Labrecque went to Europe, meeting with some of the world's top directors, including Jean-Luc Godard and Federico Fellini. At the same time, he participated in a technical exchange program between the National Film Board and IDI Cinematographica of Italy as well as working as director of photography and chief operator for the film *MICHELANGELO ANTONIONI*, directed by Gian Franco Mingozzi.

Back in Canada in 1965, Jean-Claude Labrecque directed his first solo film for the National Film Board, *60 CYCLES*, a documentary study of the 1,500 mile St. Laurent bicycle race, a film that has since become one of the most honoured productions in recent NFB history.

Since 1965, Labrecque has participated in the making of a great number and variety of films, some for the National Film Board, the Office du Film du Québec, some under the aegis of his own production company, founded in 1967.

Many of the films with which Labrecque has been associated have won major international awards. To name just a few: *UN JEU SI SIMPLE* (1963); *LE CHAT DANS LE SAC* (1964); *NOTES FOR A FILM ABOUT DONNA AND GAIL* (1965); *VERTIGE* (1969); *LES CANOTS DE GLACE* (1969).

A chief director for the official film of the XXI Olympiad, Jean-Claude Labrecque will be working with three major camera crews and more than thirty cameramen. His scenario for the project calls for an "eye-level" view of the Montreal Games, a goal his decision to shoot in 16mm "cinéma direct" style will certainly help to achieve — that and Labrecque's already demonstrated sympathy for the poetry and drama of sports on film.

JEAN BEAUDIN, ASSOCIATE DIRECTOR

Jean Beaudin was born February 6, 1939, in Montreal. His formal education includes a diploma from the Ecole des Beaux-Arts in Quebec as well as a year and a half of specialization at the Zurich School of Design in Switzerland.

In 1966, Beaudin directed a series of six films on the subject of geometry for the National Film Board. He followed that in 1967 with two more series on mathematics, for some of which he wrote the scenarios himself.

In 1968, Jean Beaudin directed *VERTIGE*, a cinematic study of the human mind under stress, a movie that won first prize that year at the Canadian Film Awards.

Beaudin's first dramatic feature was *STOP*, filmed in 35mm colour in 1970.

From 1972 to 1974, Beaudin directed a great number of short subjects, including three very personal statements, *TROIS FOIS PASSERA*, *PAR UNE BELLE NUIT D'HIVER* and *CHER THEO*.

In 1975, Beaudin collaborated with Marcel Sabourin on the scenario for *J.A. MARTIN, PHOTOGRAPHE*, a dramatic feature that Beaudin directed with a cast headed by Sabourin and Monique Mercure.

Jean Beaudin's participation in the making of the official film of the XXI Olympiad centres on the coverage of the Montreal Games by the world Press and Television, an aspect of ever-increasing importance in the international diffusion of the Olympic message.

The individual athletes, who fellow directors Marcel Carrière and Georges Dufaux will be filming live in action, Jean Beaudin will follow through the eyes of the hundreds of television monitors that will be in use at the Games.

As well, Beaudin will film the opening and closing ceremonies of the XXI Olympiad together with covering part of the progress of the marathon through the streets of Montreal.

MARCEL CARRIERE, ASSOCIATE DIRECTOR

Marcel Carrière was born in the village of Bouchette (Gatineau), Quebec, in 1935.

Upon completing his secondary education, he spent four years at the Hull Institute of Technology and entered the National Film Board in 1956 as a sound engineer. Since then, he has been involved in the production of more than 100 films.

In 1958, Carrière served as sound engineer for *LES RAQUETTEURS*, a film on snow-shoeing, which was awarded the Silver Plaque at Florence in 1961. That same year, Carrière worked with Claude Jutra, Michel Brault and Claude Fournier as sound engineer on *LONELY BOY*, an intimate look at the life of popular Canadian singer Paul Anka, a film that has received numerous awards since its first appearance.

Marcel Carrière's first solo effort as director was the short subject *ARTHUR VILLENEUVE, PEINTRE-BARBIER* in 1964. Also in 1962, he was co-director with Pierre Perrault on *POUR LA SUITE DU MONDE*. The following year, he was sound engineer on Jean-Claude Labrecque's *60 CYCLES*, one of the National Film Board's most honoured movies. Carrière also directed a film on automobile racing for Bob Drew Associates (Time-Life) of New York.

Since 1966, Carrière has concentrated his film work almost exclusively on direction. In 1972, he made *CHEZ NOUS, C'EST CHEZ NOUS*, a feature-length documentary. In 1973, he directed *O.K. ... LALIBERTE*, a scripted feature that won the Sirène d'Argent in Sorrento the following year.

More recently, Carrière has directed two films on China, *IMAGES DE CHINE* and *PING-PONG*. His last project, *TI-MINE, BERNIE PIS LA GANG*, another scripted feature, was completed at the NFB in 1975 and is scheduled for release in Quebec in September, 1976.

Marcel Carrière's special interest in the official film of the XXI Olympiad is the human aspect of the competitions. In taking a "candid" approach toward several of the leading participants, he hopes "to capture the athlete in close-up, to create an interest in the person who is the athlete more than in the spectacle he is part of".

GEORGES DUFAUX, ASSOCIATE DIRECTOR

Georges Dufaux was born in Lille, France on March 17, 1927. After completing his secondary education there, he enrolled in the National School of Photography and Cinematography in Paris and graduated in 1947.

From 1953 to 1956, Dufaux held the position of laboratory chief at the Companhia Industrial Cinematographica de Rio in Brazil, leaving South America in 1956 to come to Canada and the National Film Board as a cameraman. In 1962, he was naturalized a Canadian citizen.

At first, Dufaux worked almost exclusively for television, involved with the half-hour dramatic series being produced by the French production section of the NFB which at that time had just moved to Montreal from Ottawa.

Then, in 1958 came the event that marked an important stage both for the cinematic arts and the career of Georges Dufaux: the *CANDID EYE* series. Dufaux worked on most of this series, an NFB English production project, with Wolf Koenig, Tom Daly, Terry Filgate, as well as several Quebec camera masters such as Michel Brault and Gilles Gascon.

In *CANDID EYE*, the camera for the first time became a faithful, accurate witness to the events it was recording. It was there when it was needed.

Using synchronized sound and hand-held
Continued on Page 1162

THE WESSCAM REMOTE-CONTROL GYRO-STABILIZED CAMERA MOUNT



By **ERNEST McNABB**

Wesscam Operator

In the Wesscam configuration, the camera is isolation-mounted. The suspension system isolates it from external vibration and the gyros stabilize it. The dome, which provides wind-proofing for the camera, is primarily designed for helicopter work. It serves as a windshield, so that the aircraft can fly at speeds up to 90 or 100 miles an hour without the wind affecting the camera.

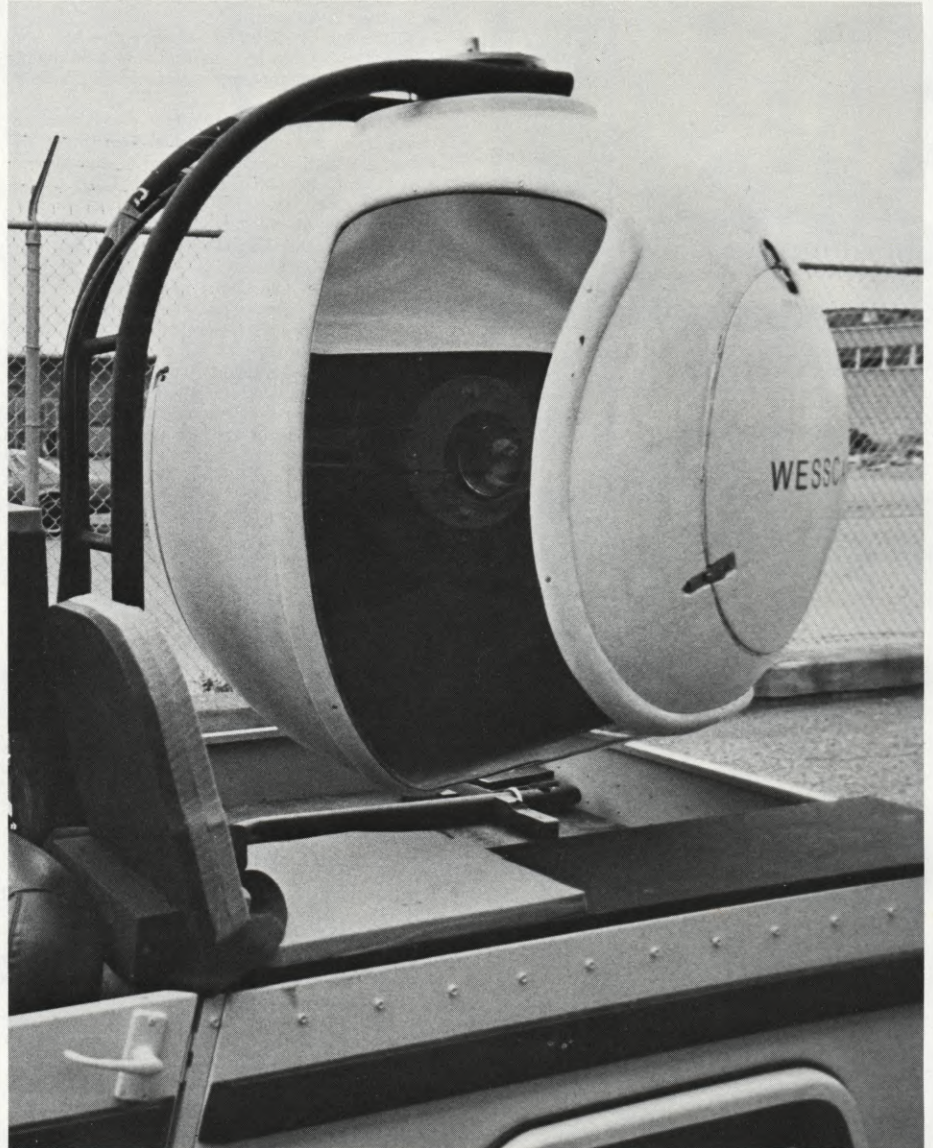
The dome is free to move and is slaved to the camera. When the operator aims the camera itself, the dome will slave and follow — which keeps the optical window in front of the camera lens at all times. While in flight, the camera can tilt from a straight 90 degrees down to 30 degrees above the horizon. Even though the aircraft may be pitching and rolling and whatever, you still have this freedom of latitude.

When the Wesscam is mounted under a helicopter, it provides 360-degree visibility. Here in Canada it is quite common to side-mount the Wesscam, however, so that the helicopter can land more readily. This type of mounting provides about 210 degrees of horizontal visibility, which is not all that limiting when you consider the demands that are put upon most aerial photography.

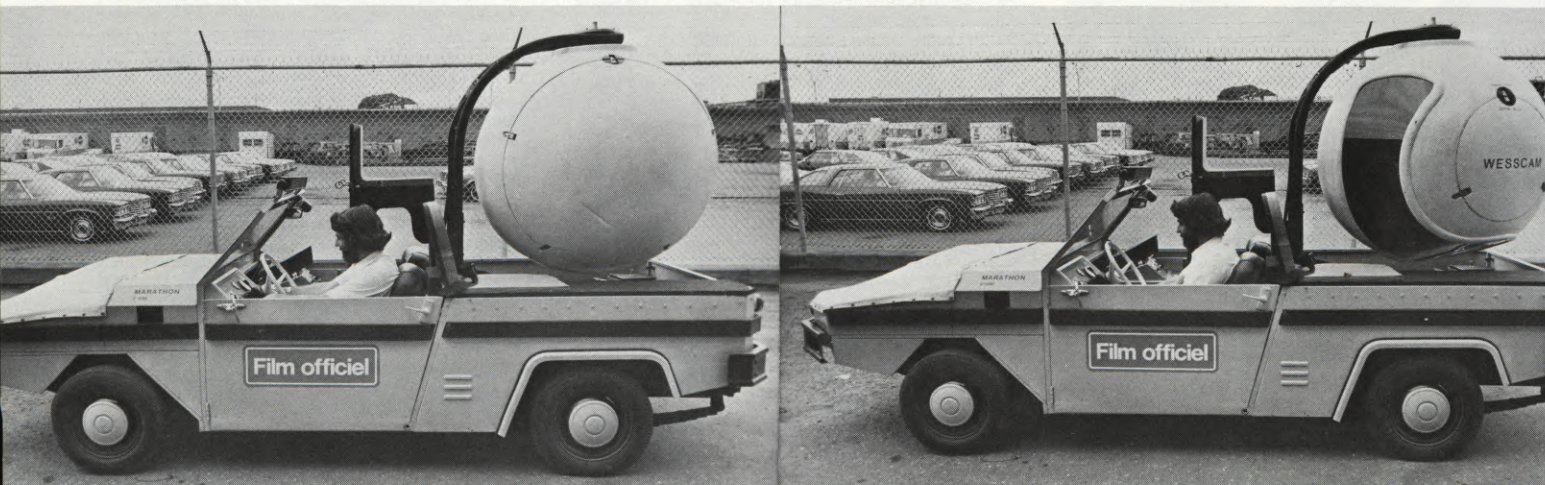
The suspension system is quite simple. It has a pin on top which makes it quite easy to attach. At the moment, we have it mounted on a small electric car to film the running of the Marathon race. Because the electric car gives off no air pollutants that might affect the

Continued on Page 1152

Enclosed in a sphere that can be hung from a helicopter, mounted on a vehicle or suspended from a cable, this remotely-controlled gyro-stabilized camera proves ideal for filming the Olympic Games



(ABOVE RIGHT) The Photo-Sonics camera, specially modified for filming the Olympic Games, can be seen through the optical "windshield" of the Wesscam spherical mount which protects camera when flown at speeds of 100 miles per hour. The mount is gyro-stabilized to be vibrationless and all camera functions are remotely controlled. (BELOW LEFT) The mount, operated by the driver in this case, is turned to the right. (RIGHT) The mount in the process of revolving to the left.



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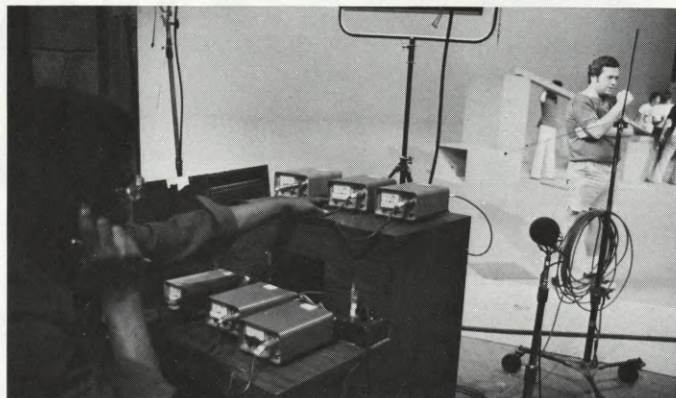
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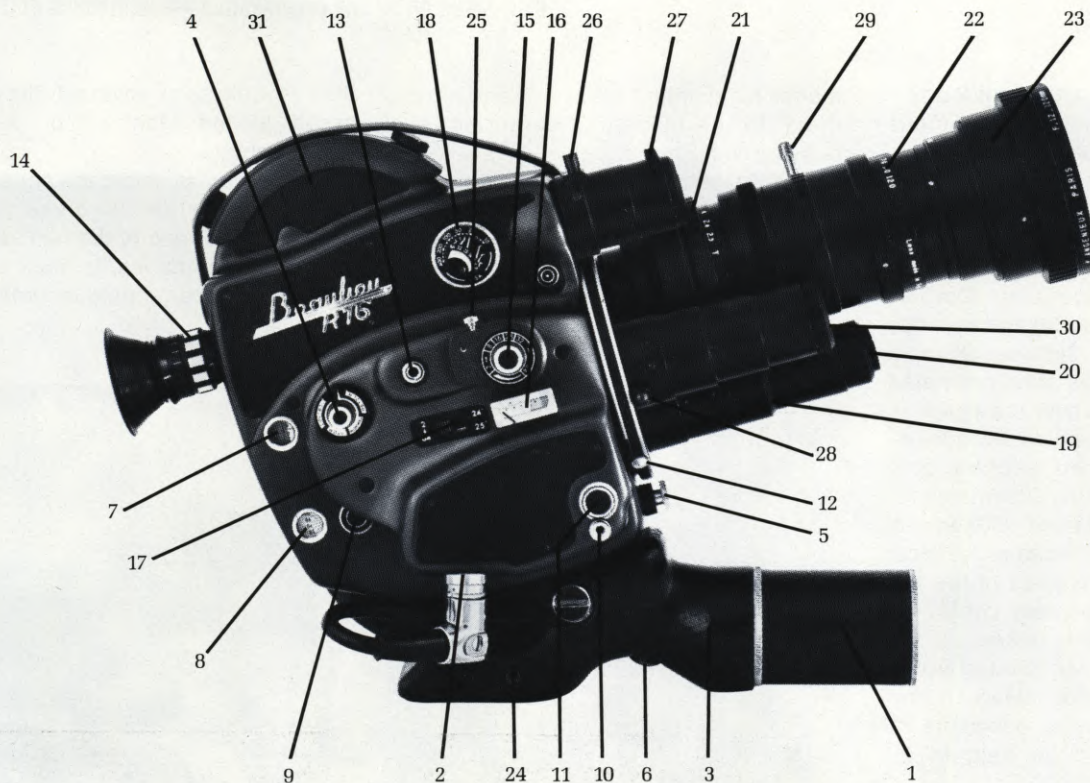
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- 16. Fine adjustment tachometer for exact speed setting. 17. Speed range changeover switch (24-25 f.p.s. 2-64 f.p.s.) 18. Film sensitivity and filming speed adjustment for light meter. 19. Automatic diaphragm control (Reglomatic). 20. Automatic or semi-automatic selector switch.
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*Body with lens.

BRINGING THE OLYMPIES TO ONE BILLION TELEVISION VIEWERS



The Canadian Broadcasting Corporation creates a special division, ORTO, to handle the biggest broadcasting challenge ever taken on by any organization — with much of it on film

What is ORTO and what does it do?

A fair question, since the mysterious acronym offers no clue.

ORTO stands for Olympics Radio and Television Organization (or *Organisme de radio-télévision des Olympiques*, in French) and it is a division of the Canadian Broadcasting Corporation specially created for the purpose of bringing the 1976 Summer Olympic Games into the homes of an estimated one billion viewers all over the world.

Last year the Canadian Broadcasting Corporation signed a formal contract with the Organizing Committee for the 1976 Olympic Games in Montreal (COJO), whereby it became the Host Broadcaster for the Games of the XXI Olympiad. That agreement confirmed previous arrangements made by the CBC which, in 1973, had created ORTO to set up all the radio, television and film services required to cover the 21 sports disciplines to be held in 27 competition venues.

For readers of *American Cinematographer*, ORTO's film functions are obviously the most interesting, and these were to be divided into three service categories:

a) Regular coverage: Many events were to be filmed, such as yachting at Kingston, shooting, cross-country, modern pentathlon and several other competitions at Montreal, since it would be neither practical nor economical to cover them electronically.

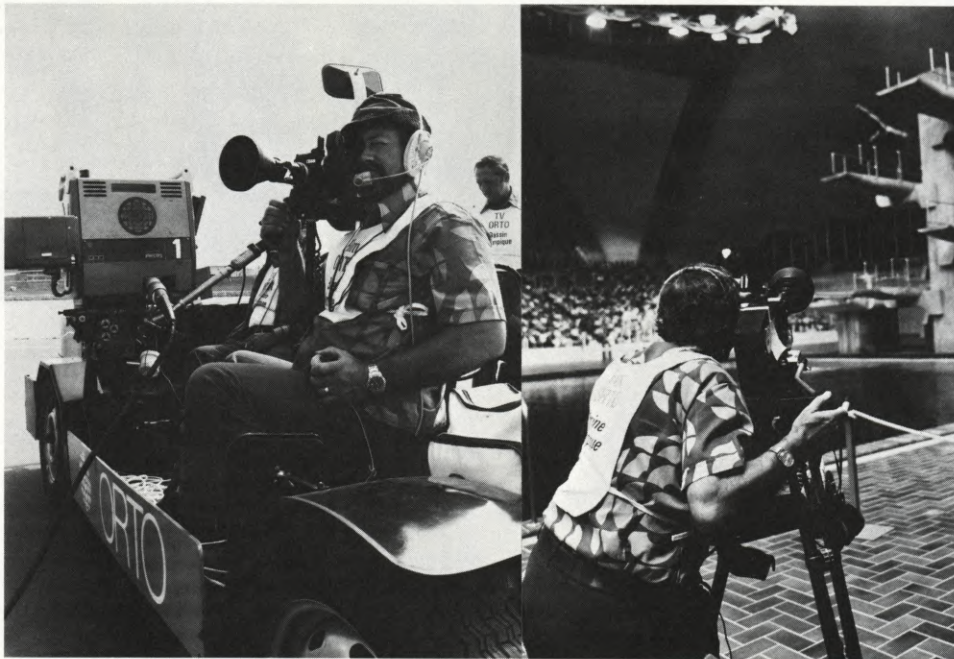
b) Daily summaries: ORTO would produce 20-minute daily film sum-

maries highlighting the events and offer them to participating countries at copying cost.

c) Private coverage: Several countries, having the intention of utilizing their own film personnel and equipment during the Olympics, would be provided with the service of having

their Kodak color reversal films processed at the Montreal or Kingston ORTO centers.

All electronics aside, the sheer enormity of logistics involved in coordinating just one of the film services, the Daily Summaries, is illustrated by the following communique sent out by



(LEFT) Cameraman Jean-Louis Chevrefils rides an electric car while filming with the Eclair ACL camera (which was standard equipment for all ORTO film cameramen covering the Olympic Games.) Very often a film camera shared space with an ORTO video camera, such as the one in the background. (RIGHT) Roger Racine films a Platform Diving event in the Swimming Stadium.

(LEFT) Jim Grattan gets right down on the track to get an extreme low angle shot of one of the Track events in the Olympic Stadium. (RIGHT) ORTO Chief Cameraman Roger Moride gets a shot of the crowd in the Stadium. Behind him are cameramen from the National Film Board of Canada shooting scenes for the Official Film of the XXI Olympiad. Camera positions sometimes coincided, as in this case, but mostly the two filming organizations had entirely different objectives.



Manager of Film Services Yvon Jean to ORTO motion picture personnel in 1975:

REPORT ON THE FILM SERVICE-PROGRAMS AND PRODUCTION—XXIst OLYMPIAD

Concept

For the XXIst Olympiad in Montreal from July 17 to August 1, 1976 inclusive, ORTO's primary role is to use all the facilities and operational techniques put at its disposal to adequately satisfy the broadcasters' needs.

Quite obviously, film has an important part to play, and will have to aim for professional quality while, at the same time, taking into account the "modest" characteristic of the Games.

Besides offering filmed material (taken from a neutral standpoint) to countries throughout the world, our objective is even more relevant to the developing nations.

In shooting film, the accent will be placed on the human aspect and on covering the highlights of the main events as fruitfully as possible.

We shall also bear continuity in mind; i.e., we shall avoid disjointed items presented as news events. Thanks to our operational flexibility, and in view of our rather restricted facilities, our efforts will be concentrated so as to present film coverage of a quality comparable to that of electronic coverage.

Plan

Producer Henri Pariseau is in charge of filming at sites not covered electronically, such as Joliette, L'Acadie, Fairview and Bromont. This is an essential component of our task. In this respect, special montages will be put together either for immediate release or for inclusion in the daily 20-minute summary.

Film coverage of football in Ottawa, handball in Quebec City and that of both these disciplines in Sherbrooke, will be determined according to the broadcasters' requests. With the exception of the opening and closing ceremonies, coverage of the yachting events at Kingston will be exclusively on film. Five cameramen and four editors of the Programs and Production Film Service will be specially assigned there, under the control of Mr. Pierre Normandin, Kingston Manager, and with Mr. Gary Brown as producer.

A daily summary of the highlights of the previous 24 hours on 16mm double-system film with edge or central track (international sound) will be produced by the Programs and Production Film Service. The summary,



The "Nerve Center" of ORTO, located in a building that used to be the headquarters of the Canadian Broadcasting Corporation, before it moved to its plush new tower complex. This building was set up to house all facilities for ORTO, including offices, cutting rooms, color negative processing laboratory, sound and mixing facilities and camera maintenance.

lasting for about 20 minutes, will be distributed with explanatory notes in French and English, and will be the responsibility of producer Jean-Claude Houde.

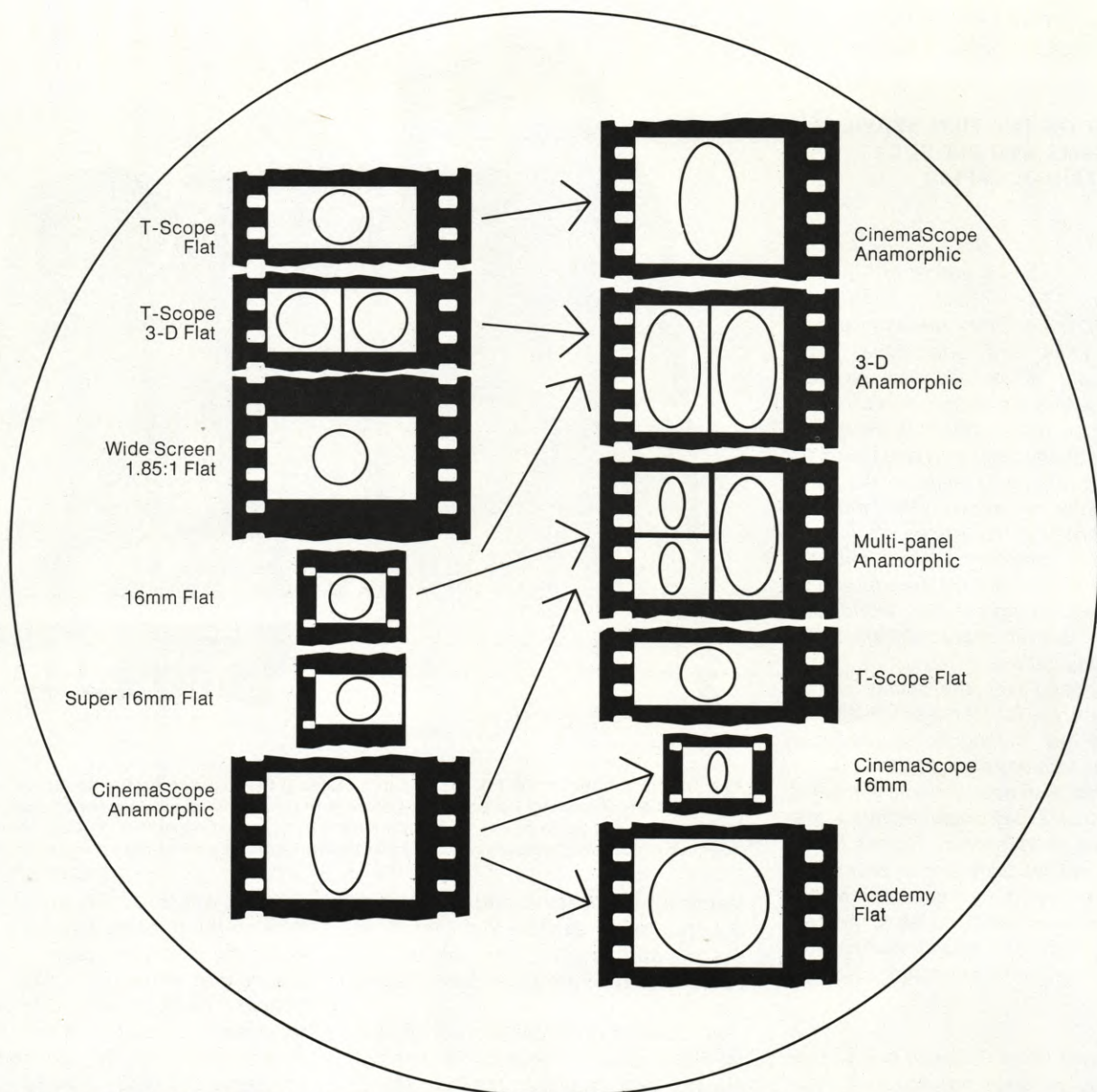
Accredited broadcasters will be able to make specific requests for filming, editing, and technical facilities (film), which we shall meet to the best of our ability and bearing in mind our priorities. For this reason, broad-

casters will channel their requests through the Booking Service which will follow the directives issued by the Programs and Production Film Service. Should it be impossible to answer their requirements using our own staff, the broadcasters will be directed to the Programs and Production Film Service, which will refer them to private companies outside ORTO.

Continued on Page 1148

This vast ultra-moderne Swimming Stadium is part of the imposing new sports complex built especially for the XXI Olympiad at Olympic Park, one of the few such complexes in the world actually located inside the central city. Like all of the other venues, it was illuminated by metal-halogen (HMI) lighting, which provided a lot of daylight-quality light, but sometimes caused strobing at high filming speeds.





ANAMORPHIC!

an-a-mor-pho-sis (än'ə-môr'fə-sis, -môr-fô'sis) *n.*, *pl.* -ses (-sēz'). *Optics.* An image distorted so that it can be viewed without distortion only from a special angle or with a special instrument. [Medieval Greek *anamorphōsis*, "a forming anew," from Late Greek *anamorphōō* to transform + *ana-* again +

Anamorphic film format conversion is one of our specialties. The formats shown above are a few of the many we can supply, adding titles, color correction and effects in the same step for a one-generation negative. Pan and Scan available of course.

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Since 1957, Bill Bacon has run 1,352,000 feet of film through it. "It's never once quit on me," he says.

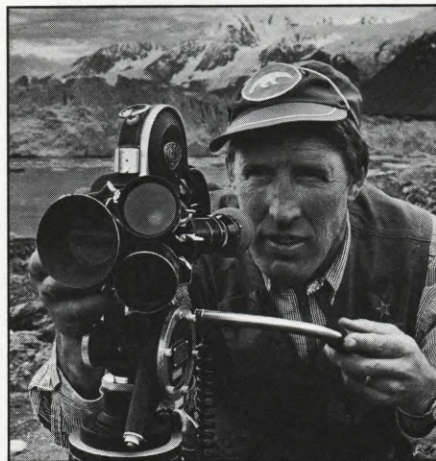
"I bought that Arri, used, in 1957," says Mr. Bacon. "And I've kept detailed records on it ever since."

Rough Going

"I've used it in airplanes, gliders, dunebuggies, submarines, canoes, snowmobiles, racing yachts, ice-breakers, bulldozers and sleds. In dust and sand storms, and once in a forest fire."

Serviced

"It's been serviced every year by Arriflex; and I've had to have it overhauled after some of our accidents. Several lenses



BILL BACON LIVES IN SEQUIM, WASHINGTON.

have been damaged or ruined. I've had some minor problems with electrical connections after

two dunkings and drenching in seawater spray. And I carry a spare motor."

Amazing

"But the camera itself has never *once* quit on me in the field," says Mr. Bacon. "I've run 1,352,000 feet of film through it so far. That camera just keeps on going. It amazes me."



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FILM FROM THE HOST BROADCASTER TO THE WORLD



By **BARRY D. McCORQUODALE**
ORTO Assistant General Manager

Far from being upstaged by the electronic medium, film plays important roles in at least four separate and distinct areas of communicating information on events of the XXI Olympiad

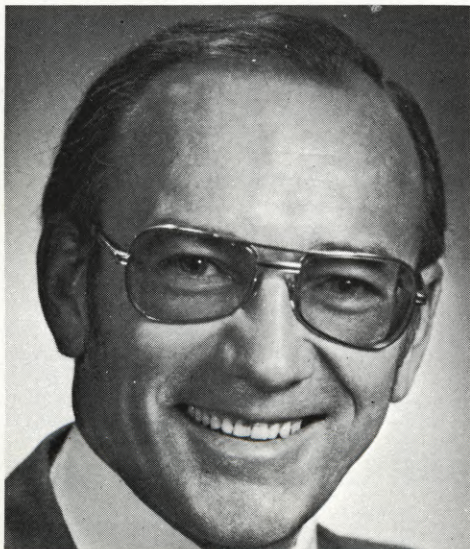
A project of this size — the telecasting of the Olympic Games — is something which takes a long time to develop, and some of us have been involved in this situation since 1971. As a matter of fact, the amount of studying and work we have been doing between then and now has led to our nickname: "The Munich Mafia".

To begin with, I would like to acknowledge the very great degree of cooperation and assistance extended to us by the group known as the Deutsche Olympia Zentrum, which was the equivalent of ORTO working in Munich in 1972 as host broadcaster to the world on the occasion of the XX Olympiad.

There is a common feeling that the same problems exist now that existed then, and that only time has passed. One of the earliest things we discovered was that Munich had problems which were characteristic of the fact that the Games were occurring in Europe in 1972. They were occurring in a specific European country and within a special set of circumstances, none of which, in a sense, apply to Montreal in 1976.

To begin with, the decisions to hold the XX Olympiad in Munich were made in 1966-1967, which consequently

Barry McCorquodale and his staff became known as "The Munich Mafia" because of extensive research of 1972 Olympic Games Broadcasting.



meant that, in Munich, construction, engineering and electronic technology could be based on only what was known at that particular time. By the time the Games occurred, in 1972, the technology which was applied was already three years old. Similarly, knowing that the host broadcast of the XXI Olympiad would occur here in Montreal in 1976, we could draw upon the progress made up until 1973 — the exponential explosion of technology which had occurred between the years of 1967 and 1973.

One of the most significant differences between Munich and Montreal is, obviously, the fact of time, based on location. The European nations could send more people shorter distances at less cost and could share in the expense of electronic and film coverage in a way which was to their advantage without too much increase in cost. If one jumps from Munich to Montreal, one is immediately faced with the fact that the time zone is different. An 8 p.m. event in Montreal is very good for broadcast to Montreal, to Canada, or even to the entire Western Hemisphere, but it is already 2 o'clock the following morning in Europe. In terms of audience, this is a very important factor. We estimate for the XXI Olympiad one billion viewers around the world.

Now, let's take the example of an 8 p.m. football game. If viewers in Europe — or, more particularly, Eastern Europe — want to view that football game live, we are talking of a time slot between 2 and 4 o'clock in the morning for them. This is a factor which obviously has an influence on the scheduling of events, encompassing 21 sports held in 21 locations in and around the city of Montreal, as well as other Canadian cities: Toronto, Kingston (for yachting), Bromont, Sherbrooke, Quebec City and the Federal Capital, Ottawa, where football is also being played.

There are several other important differences between the problems of staging the Olympic Games in Munich and in Montreal, and we have been able to profit by the Munich experience — but only up to a certain point. To put it another way, a rear-vision

mirror is extremely useful when you are driving, but one does not drive through the rear-vision mirror exclusively.

The host broadcaster function for the XXI Olympiad, as undertaken by the Canadian Broadcasting Corporation, is the largest single broadcasting event ever tackled by a single broadcasting group, and we take a great deal of pride in our people, who have measured up very professionally to the unique demands resulting from this kind of challenge. We are happy to acknowledge the fact that it is a combination of the public and private sectors of broadcasting in Canada which, uniting together under the Canadian Broadcasting Corporation, have established the organization known as ORTO (the Olympic Radio and Television Organization).

However, ORTO, as a division of the Corporation, has an entirely different role to play. It is, in fact, the international agency which is responsible, under the Organizing Committee, for meeting the needs of the approximately 110 participating countries.

Basically, the host broadcaster has three tasks. The first of these is to provide international coverage in terms of program services, rather than packaged programs. The second role was to serve as consultant or advisor to the Organizing Committee during the four years of frantic preparation before the event. That, of course, is now over, but two, three and four years ago it was an extremely important function.

The third role, during the course of the Olympics themselves, is to act on behalf of the visiting foreign world broadcasters in terms of meeting their needs for specific studio operations — plus assisting them, while they are here, in dealing with strange time, strange culture, strange language and a strange city.

In terms of our second function, that of advisor and consultant to the Organizing Committee, the combination of new structures and old buildings in Montreal to be used as sites for the various events raised questions (whether in regard to electronics or film) about light levels in the various arenas. The Organizing Committee

Continued on Page 1166

AT THE NERVE CENTER OF ORTO



By **KAREL LUDVIK, CSC**

ORTO Film Production coordinator

I had been working at Radio-Quebec, first as a cameraman and later as a member of the Film Services Management team when, shortly before Christmas, 1975, I received a phone call from Yvon Jean, Manager of Film Services for ORTO (Olympic Radio and Television Organization), the division of the Canadian Broadcasting Corporation that had been created to provide film and electronic coverage of the 1976 Summer Olympic Games for world television. On March 1, 1976, I was assigned to ORTO.

I started my new assignment by reading reports on the filming of the Tokyo, Mexico City and Munich Olympic Games. There was much that I had to learn about the various sports disciplines, as well as the rules and results from previous Olympic years. The calendar of sports events for the XXI Olympiad, when issued, included 21 different sports to take place over 16 days in 29 venues.

Our mandates at ORTO were:

(1) To provide film coverage at the Olympic sites of sports events not

The office of ORTO Film Production Coordinator Karel Ludvik, CSC, is a constant crisis center, as he copes with scheduling and rescheduling the filming of the various events. For example, the last-minute withdrawal of Taiwan and 30 African nations created massive problems.

Fitting the right film crew into the right place at exactly the right time is something like working a giant jigsaw puzzle. The next step is to take that and multiply it by thirty



Far in advance of the Opening Ceremony, Ludvik went around to each site in turn and used an Eclair NPR camera with 12mm-240mm lens to establish the best angles for filming the various sports. This information, with photographs, was passed on to the camera crews.

covered electronically (archery, shooting, part of the cycling, cross-country equestrian events, yachting, etc.).

(2) To produce a daily summary of the highlights of the previous 24 hours. — 16mm color film (approximately 20 minutes in length), with international double-system sound.

(3) To provide such services as shooting, editing, film-processing, sound-mixing, etc., to all accredited broadcasters.

Thirty five film crews were formed. Cameramen came from the east coast and the west coast of Canada to participate. There were also C.S.C. members involved, some of whom I already knew. A resumé does not always give a true picture of a person, but at least I was made aware of what kind of sports experience and preferences each of them had.

When I received my first version of the scenario, detailing the series of 20-minute summaries and requests for film coverage of venues not covered electronically, I did a preliminary "blocking". My main objective was to give assignments to cameramen who

Continued on Page 1163





“TVC’s role in ‘American Enterprise’ didn’t end with dailies... TVC is now making thousands of release prints...”

“Once in a while, an idea taps unexpected enthusiasm. *AMERICAN ENTERPRISE* is one of those ideas. Turns out there’s a great hunger in schools across the country, as well as public television, for films on the nation’s economic history.

“*AMERICAN ENTERPRISE*, with Star Trek’s William Shatner as host/narrator illustrates America’s economic history through five half-hour films plus a ten-minute introduction to the series.

“A national subject must have nation-wide coverage. Stock footage was a ‘no-no’. For *AMERICAN ENTERPRISE* that meant a shooting schedule through thirty states — in four months.

“Scripts required on-the-run candid one day and carefully staged and lighted historic reenactments the next. And always fast, fast, fast.

“As cameraman I knew I could rely on ECN 7247 and TVC’s amazing ability to get



the most out of the stock.

“But it was during post-production that TVC really came through. As producer, I faced the toughest editing schedule I’ve seen in 15 years of film making. And Dan Sandberg and his crew delivered beautiful answer prints *fast*.

“TVC’s role in *AMERICAN ENTERPRISE* didn’t end with dailies and answer prints. TVC is now making thousands of release prints for distribution by the Phillips Petroleum Company to most of the nation’s high schools and to public television.

“Deliver six demanding films in seven months from ‘Go!’ It was my toughest film assignment to date! I couldn’t have met the schedule without TVC.”

Mike Jackson
Independent Producer-Cameraman
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THE MANY FACETS OF ORTO FILMING



Donating three advanced film processing machines to the cause, plus providing chemistry, advice and quality-control personnel, Eastman Kodak becomes an unofficial working partner to ORTO

The ORTO film operation at Montreal and Kingston is exceedingly complex, providing, as it does, at least three separate and varying film services to meet the needs of worldwide units desiring to bring the Olympic Games to their people in a vital visual form.

To provide a more clear-cut overall view of the many facets of ORTO, as it is involved in this endeavor, the following "mosaic" of comments by some of those directly concerned in key positions may be helpful:

YVON JEAN, Manager of Film Services (Program and Production), ORTO

The history of ORTO began in the early 1970's, when the government approached the Canadian Broadcasting Corporation with discussions about facilities for broadcasting the Olympic Games. Through its head office, the CBC organized a complete unit (known as ORTO), mandated to respond to the needs of COJO.

Marcel Deschamps, a former television employee of the CBC, was appointed as General Manager of ORTO and he began immediately to fit the right people to the right jobs, dividing the organization into five direc-

torships. I was made responsible for film programming and production.

We divided our film operation into two groups — the main one in Montreal and another at Kingston, where the yachting events take place. At Kingston there are five cameramen and four film editors, plus a film processing and sound mixing capability.

In Montreal we have 30 cameramen, 20 film editors, 20 soundmen, 17 production assistants and three producers.

Five years ago, ORTO, through the CBC, received a mandate from COJO which required complete film coverage of those events which were not to be covered electronically. These include sailing at Kingston, archery at Joliette and the Cross-country Equestrian events at Bromont. We have been doing this throughout the running of the Games and the footage has been tremendous.

We also produce Daily Summaries, which crystallize the highlights of each day's events for distribution around the world. We select six or seven different disciplines to highlight each day, including the presentations of medals, and these are shipped nightly to 40 different countries.

The shooting of these 20-minute

Summaries (which sometimes run a little longer than that) is split between 15 or 20 cameramen, while 10 to 12 film editors are required to put it all together.

The dedication of these people is fantastic. We have some cameramen who start at 7 o'clock in the morning and shoot straight through until 2 o'clock the next morning. More than half of our editors work around the clock — 24 hours a day — catching little naps on a couch. I would also like to give credit to the support personnel who work directly for me. I don't want to slight any of them, because each position is so important to the successful filming of the Olympic Games. For example, the men who take care of shipping and receiving work 18, 19 and 20 hours a day. They, too, catch a little sleep on a couch now and then. They have to do this in order to make sure that every broadcaster will get his prints on time.

Both Kodak and Ampex were designated to supply their own raw stock to the broadcasters, and it was established long ago that whenever a broadcaster bought raw stock from Kodak the processing would be free. It's unbelievable how many forms are needed to keep control of all this footage and verify it — not only for ORTO, but for the broadcasters themselves, just to be sure they will get the material they need at the right time and in the right place. I would say that up until now [three days before the close of the Games] we have only three cases pending relating to misplaced film, and that's nothing when you consider the tremendous volume of footage involved. I'm confident that these cases will be settled soon and I am very proud of the tremendous effort made by my staff in this pursuit.

I chose my personnel very carefully — first, from the CBC and Radio Canada (the French and English networks), and this had to be done without being detrimental to the continuing operation of the networks. What we have ended up with is a real mixture of people from the English and French networks, CBC and the private sector. They have all given me a tremendous effort, and I am very, very proud of them.

While the futuristic new Olympic Stadium in Montreal was still under construction, ORTO Manager of Film Services (Program and Production) Yvon Jean, and Producer Jean-Claude Houde visited the site in order to select the best camera positions for their filming crews. With only a limited number of positions available, competition between film and video groups was keen.



GUY DUROCHER, Manager of Cinematography, Technical Services, ORTO

At the very beginning, we were interested in finding out how much film would be required to provide the necessary film services for the Olympic Games. As far as ORTO was concerned, our needs were quite easy to estimate, compared to those of the "unilaterals", individual countries requesting special film coverage.

I went to Munich to try to find out how much film they had processed there during the 1972 Games, but I received widely differing reports from the various officials. So, in the end, we sort of picked a figure out of the sky, you might say.

A related problem was that of trying to estimate how much film would be received by the lab for processing. In that respect, we thought that sending questionnaires to the different broadcasters might be helpful, but unfortunately we never received any clear answers. Many of the people didn't even return the questionnaires to us. The question was how much film these people might use, as compared to electronic cartridges. Due to the difference in time zones, the experience in Munich was not reliable for us as a reference. So, again, we had to guess.

All of the ORTO cameramen are using Eclair ACL cameras and, in that sense, one might say that it is the official camera of the Olympic Games in Montreal. One of the main reasons that we chose the ACL, aside from the quality of the machine itself, is that you can switch from one magazine to another in something less than five seconds, which is very convenient when you're filming sports action.

As far as editing facilities are concerned, we have 20 cutting rooms. Four of them are equipped with double-screen, 8-plate Steenbeck machines and 16 of the rooms have single-screen 6-plate machines. In addition, we have viewers, winders, hot-splicers . . . all of the normal equipment you might find in a well-equipped cutting room.

In the beginning, we were expecting to make 60 prints of our Daily Summary, but that number has changed since all those African countries withdrew from the Games. Right now we are producing 38 copies daily and those prints are made from reversal original material. We make reversal positive masters and print from those masters. Five masters are sent to three private labs and they, in turn, produce the copies. The cut original leaves ORTO around 5:00 p.m. and by 8:00 p.m. we start receiving the final prints.



When construction crews failed to complete the tower of the Olympic Stadium in time for the Games, it was considered a calamity. But the giant crane was left in place and ORTO video crews were able to set up in the "basket" to get a magnificent long shot of the stadium. The video people relinquished the basket for 15 minutes so an ORTO film cameraman could get a few shots.

ANASTASE MAZIS, Film Technical Services Supervisor, ORTO

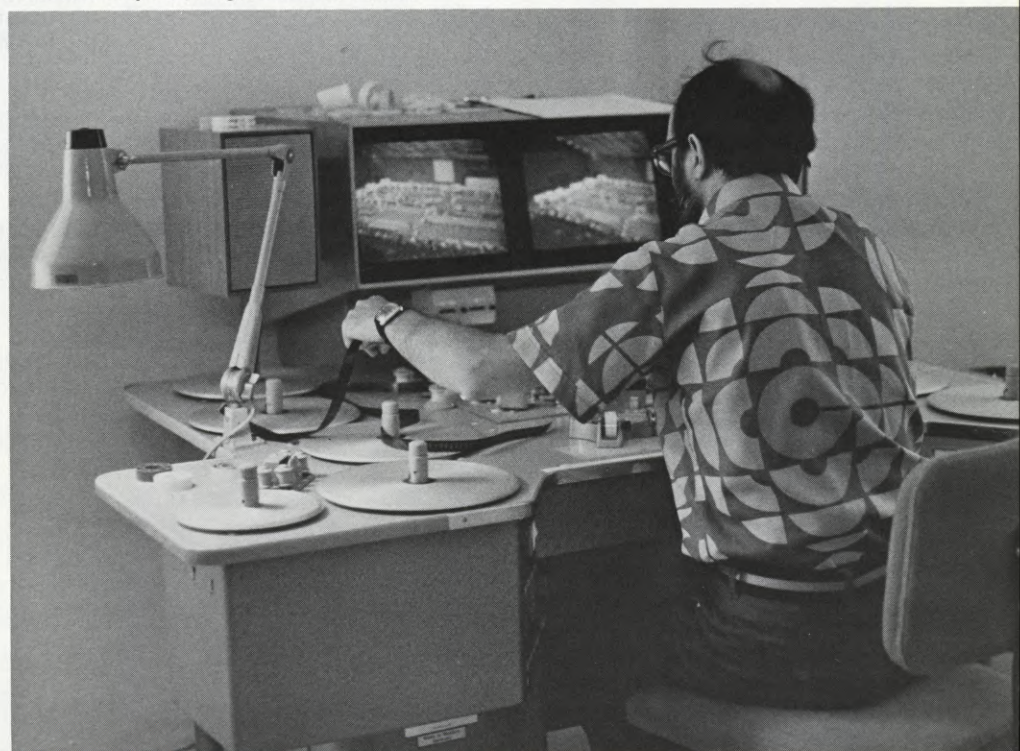
In terms of priority, ORTO's primary filming concern was its obligation to the International Olympic Committee to provide film coverage of those events which, for various reasons, were not going to be covered electronically.

The second priority is the 20-minute Daily Summaries contracted for by roughly 40 countries around the world.

The third priority is the supplying of film services to the "unilaterals" — individual countries desiring special coverage. This includes providing film

Continued on Page 1156

In four of the 20 cutting room set up in-house at ORTO Centre, 8-plate, double-screen Steenbeck editing consoles, such as the one shown above, were used and proved most valuable in the editing of the daily 20-minute summary. The other sixteen rooms were equipped with Steenbeck 6-plate, single-screen models.



eclair



Which ever one you choose, you've made the right decision.

It probably isn't possible to single out one 16mm motion picture camera and say for certain that it's the best in the world. For one thing, Eclair International of France makes more than one 16mm camera.

NPR

First there's the French Eclair NPR. It set the standard for all modern, professional 16mm cameras. Its innovative design features and precision craftsmanship resulted in the first camera compact and light enough to allow real spontaneity in photography without sacrificing picture quality or reliability.

Part of this is the result of its low, unobtrusive profile that can be attributed to the snap-on, co-axial magazine that can be changed in less than five seconds without touching the film.

And to the NPR's famous twin-lens turret that allows you to switch from one lens to another in a matter of seconds.

Part of the NPR's versatility comes from the rugged BEALA motor that's really three motors in one. It's a crystal control motor at 24 or 25 fps. It's a constant speed motor with a built-in sync-pulse generator. And it's a variable-speed motor with rheostat control for continual variance from 4 to 40 fps. This motor was also the first one designed so it would always stop with the mirror shutter in the viewing position.

The NPR also features a precisely accurate registration pin and pull-down claw mechanism to assure maximum steadiness. Also standard with the NPR is the Angenieux "dove prism" orientable viewfinder that maintains an erect image, while rotating a full 360°. This viewfinder not only delivers a brilliant, sharp image, but it also provides a clearly-marked extra viewing area beyond the standard 1:1.33 16mm aperture and TV safe cutoff.

The NPR was truly an advance in the state of the art of camera design when it was introduced. And by constant refinement, it has maintained its position as the finest 16mm camera of its kind.

ACL

Eclair International also makes the French Eclair ACL. It was designed to incorporate many of the most successful features of the NPR. Features such as the instant-snap-on co-axial magazine, which is available in both a 200 ft. and a 400 ft. version.

But the ACL was designed to be even lighter and more compact. In fact, it is the smallest, lightest self-blipped camera made.

It features its own patented interchangeable lens mount system that allows you to use lenses with any of the well-known professional mounts. And there is the added versatility of a "C" mount.

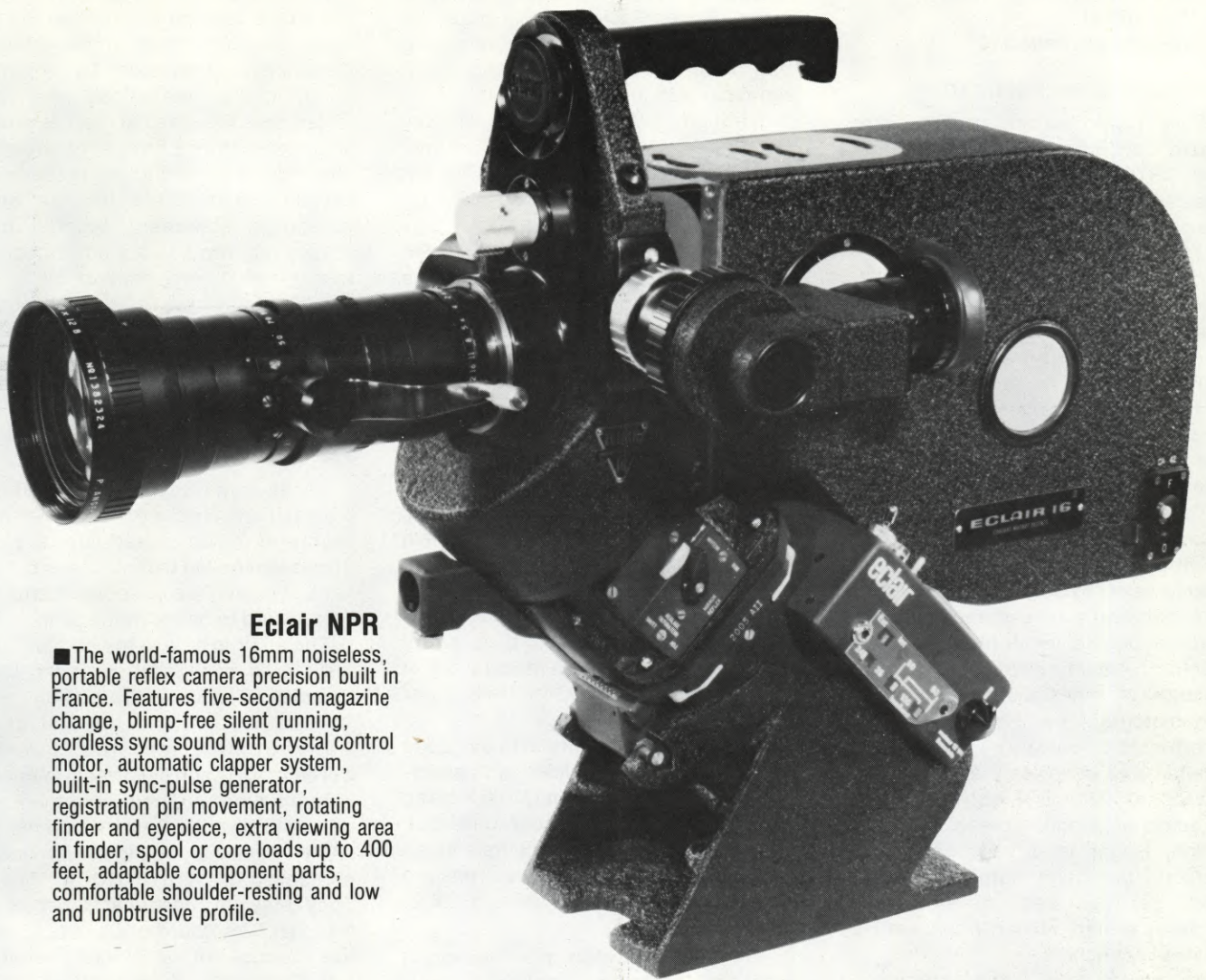
The ACL has a heavy-duty variable speed, crystal controlled motor with speeds of 8, 12, 24/25, 50 or 75 fps. The new "auto-reflex" function always stops the mirror in the viewing position.

And the ACL's "HC Self-Orientable Viewfinder" lets you see things exactly the way the camera sees them, maintaining an erect image through a full 360° rotation.

In addition, the French Eclair ACL features an exclusive new through-the-lens light exposure monitoring device called LED 7. The LED 7 system incorporates seven light emitting diodes in the viewfinder which light up to alert you instantly to any deviation in exposure level from a given setting. So you can adjust the aperture setting to compensate for changes without your eyes ever leaving the viewfinder.

Like the NPR, the ACL is a precision, hand-crafted professional camera built to be rugged and dependable as well as silent and portable.

If there's anything about these cameras we haven't told you, contact us or your nearest Eclair dealer and we'll be happy to answer your questions. But please don't ask us which camera is better, because we just don't have an answer to that.



Eclair NPR

■ The world-famous 16mm noiseless, portable reflex camera precision built in France. Features five-second magazine change, blimp-free silent running, cordless sync sound with crystal control motor, automatic clapper system, built-in sync-pulse generator, registration pin movement, rotating finder and eyepiece, extra viewing area in finder, spool or core loads up to 400 feet, adaptable component parts, comfortable shoulder-resting and low and unobtrusive profile.



Eclair ACL

■ Newest member of the Eclair line. Light weight, self-blimped, silent professional 16mm camera with intermittent pull down claw mechanism, hard chrome plated stainless steel gate, 175° focal plane shutter, oscillating reflex mirror, engraved TV ground glass with extra field of view around the image, built-in gelatin filter holder and many other features.

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FILMING THE XXI OLYMPIAD IN MONTREAL

Continued from Page 1101

Meanwhile . . . back at ORTO

Fully accredited and dressed in my "pizza suit", I could almost pass for a real ORTO man. I take advantage of this camouflage to get to know some of the people on the ORTO team.

At the top, as far as film is concerned, is Yvon Jean, Manager of Film Services (Program and Production). Aptly described by one of his staff as "not simply a personality, but a *personage*", he is, at once, a tough professional and a very jolly man. Full of good humor, he is extremely likable, but obviously a dynamo at getting things done.

Chief Cameraman Roger Moride is a transplanted Breton who runs a tight, no-nonsense ship while on the job, but who turns out to be great fun at parties.

A man who soon becomes one of my favorite people in Montreal is Roger Racine, President of the Montreal chapter of the Canadian Society of Cinematographers. Heading his own production company (Cinéfilms Limited), he is not only a top cinematographer, but a highly respected director of stage, screen and television. Roger is a very warm, kind person, brimming with enthusiasm, and, perhaps because our backgrounds are so similar, I sense a true kindred spirit there.

Among the other highly experienced cameramen on the ORTO staff are Alan Grayston, Jim Grattan and Jacques Collins. All of the aforementioned and several others constitute a kind of cadre of top professionals who've done it all before, and they provide an even keel for the younger eager-beavers who are long on enthusiasm, but somewhat shorter on experience.

I see this demonstrated quite graphically one night at the Swimming Stadium. One of the younger cameramen has an Eclair ACL magazine jam on him at a crucial moment and it

Sponsored by the Canadian Society of Cinematographers and held at the CBC, a bilingual panel discussion on the challenges and techniques of filming major sporting events (such as the Olympics) included (left to right) Innsbruck Official Film Director Tony Maylam, Montreal Official Film Executive Producer Jacques Bobet, ORTO Manager of Film Services Yvon Jean, Moderator Herb Lightman, Special Effects expert Wally Gentleman, veteran newsreel cameraman Roy Tash, and producer of four Olympics films Michael Samuelson.

throws him into a minor panic. Not to worry. Roger Racine simply pops the offending magazine into a changing bag, fiddles it about a bit, and has it righted in nothing flat.

Through the kind offices of Guy Durocher, Manager of Cinematography Technical Services, I am given a tour of ORTO's in-house film facilities.

In the laboratory (located in the basement) there is brand new Treise processing equipment which, I am told, has been donated to the cause by Eastman Kodak and which is being used to process the thousands of feet of 7239 and 7240 Ektachrome video news film that is being shot each day by ORTO cameramen.

There are 20 cutting rooms provided with 6-plate and 8-plate Steenbeck editing consoles, four of which have double screens. There is a sound transfer set-up (featuring a new machine built especially for ORTO by Moviola/Magnasync) and a small dubbing studio, where a mixed track of background sound for the Daily Summaries is produced.

In short, it is a compact, but quite complete chain of facilities, with everything needed to perform ORTO's basic film mission located under one roof. Only at the stage where multiple printing masters and final release prints are required must anything be sent out of the building.

I am told that, after much testing, it was decided to use reversal positive film all the way through the chain for producing the Daily Summaries. 7239 (Daylight) is the basic stock used even inside the various venues (which are lighted with daylight-balanced metal-halogen lamps) for original photography. Then, in a somewhat unorthodox move, the same stock is being used (instead of internegative) for the printing masters. The final release prints are being made on a new stock, 7399, imported from Kodak Pathé in France and not yet available in North America.

I have a chance to see the result of this exotic printing chain when the first Daily Summary (that of the Opening Ceremony) is projected. To be truthful about it, the final effect, when projected on a fair-sized screen, is not the *sharpest* picture I have ever seen, but the color is excellent, the resolution is certainly acceptable for the small screen (a statement which I have always regarded as a kind of cop-out) and — most important of all — the combination allows for the maximum of speed in getting prints of the Daily Summaries out of ORTO headquarters and onto the jets that will take them to the four corners of the world.

The Official Film

Karel Ludvik tells me that the Canadian Society of Cinematographers has scheduled a panel discussion on the techniques and problems of filming major sports events and I am invited to be the moderator.

The affair is held in the auditorium of the CBC's posh new, futuristic tower complex. First there are screenings of "WHITE ROCK" and the first of the Daily Summaries (the Opening Ceremony), which illustrate two entirely different types of film requirement pertaining to Olympic Games shooting.

The panel, a distinguished one, is composed of "WHITE ROCK" director Tony Maylam, Jacques Bobet of the National Film Board of Canada (Executive Producer of the Official Film of the XXI Olympiad), Yvon Jean of ORTO, Special Effects expert Wally Gentleman, veteran expatriate-American newsreel cameraman Roy Tash and Michael Samuelson.

Since both the panel and the audience are bilingual, I introduce the session and the subject in French (much to Michael's astonishment) and then say: "I think I'll quit while I'm ahead and conduct the rest of this in English."

What follows (unfortunately too lengthy to report here) is fascinating in that it clearly indicates that the panelists represent at least four different philosophies of film-making. Tony and Michael, basking in the glow of "WHITE ROCK", are dedicated to the idea that one must now show in an Olympics film that which cannot be shown at all (or nearly as well) by means of the electronic medium.

Yvon Jean speaks of ORTO's dedication toward producing each day 20 minutes of final cut film that is both comprehensive and fast.

Roy Tash speaks mainly of the past, recounting some very amusing anecdotes from his long career as a newsreel cameraman during a period when the basic function of newsfilm (for



theatres) was quite different from what it is today (for television).

Jacques Bobet (whom I had met briefly in Munich when he was an observer there for the NFB) speaks eloquently in French of what he calls "cinema direct", the technique being applied to the production of the Official Film of the Games. From what I can tell, *cinema direct* has many of the characteristics of what the New Wave used to call *cinema verité* — a very honest, straightforward representation of reality, "undistorted" by such "WHITE ROCK" effects as ultra-high-speed photography and extreme telephoto shots.

There is no implied rivalry in the panel discussion (although each advocate pleads eloquently in favor of his approach for his particular project), but it is a lively session.

Although I had been most anxious to find out what was being done on the Official Film and had already been contacted by a Public Relations representative of the National Film Board, my encounter with Jacques Bobet at the panel discussion is also my first contact with the philosophy being applied to the production of the Official Film. He very kindly invites me to view rushes at the National Film Board the next day.

The screening of rushes for the Official Film is quite different from anything I have experienced before and constitutes a trip in itself. On the huge screen of the NFB main auditorium no less than six different images are being projected simultaneously (since this is the only practical way of getting through the 15,000 feet of film being shot daily). The effect is that of a dazzling multi-screen presentation and it occurs to me that a multi-image format all on one anamorphic frame (something like the technique used for "A PLACE TO STAND") might be a far-out way of presenting the essence of the Olympic Games. This, of course, is not at all what the NFB has in mind.

The images I view during screening of rushes have been photographed on the new 7247 color negative and are ultra-sharp and almost grainless — beautiful picture quality. The approach, as expected, is very straightforward. No slow-motion, no super-telephoto shots, no electrifying subjective points of view — simply straightforward, honest documentation: "cinema direct". It is, however, obvious that the crews have zeroed in on certain selected athletes in a very personal way.

During the chaos of the screening, I am introduced to the director of the Official Film, Jean-Claude Labrecque,

and we make plans to meet privately for in-depth discussions later.

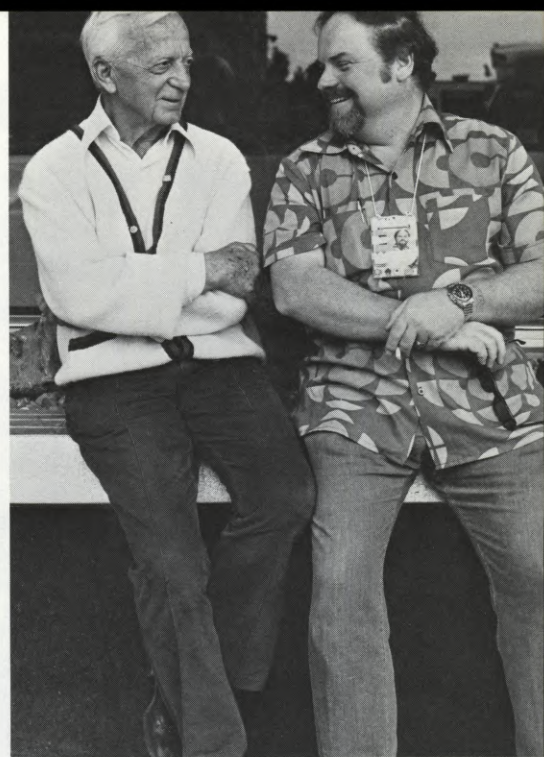
In the meantime, Ernest McNabb and Doug Bradley show me what is being done with Wesscam, the huge sphere containing an ingenious remote-control, gyro-stabilized camera system. I had been familiar with the rig in its basic helicopter configuration, but it is being used in several more exotic ways for the shooting of the Official Film — such as being mounted on vans and electric cars and suspended from cables in the various venues.

Just now it is mounted on the flatbed of a cheerful little yellow electric car in the rig that will be used for shooting the Marathon. I am invited to have a go at operating it and I'm delighted to do so. As the little car tools around the immediate neighborhood, I operate the controls, viewing the results on a small video monitor screen.

At first I find the basic joystick control quite awkward to manage, but I soon get onto it and am even able to achieve over-the-shoulder shots of the driver and the road ahead, as the curious rig is driven about. I can see where it would be great fun to operate — and a most versatile tool in the hands of a skilled operator.

I am invited to observe a National Film Board shoot in the Olympic stadium and I climb up to a control booth located just under the roof of the impressive structure. There, Associate Director Marcel Carriere is controlling, by means of radio, at least a dozen NFB camera crews which are filming the high-jump and discus-throw events on the field below. As I observe, Jean-Claude Labrecque calls to make sure that I am there, because, as he explains, he has something that he wants to bring me. That "something", when he arrives, turns out to be a copy of the magnificent volume called: *BETWEEN FRIENDS (ENTRE AMIS)*.

Produced entirely in color by still photographers of the National Film Board of Canada, it is a superb collection of photographs depicting life along the thousands of miles of peaceful border that the United States and Canada share in common. It has been created as a gift from the Canadian people to the American people in celebration of the American Bicentennial, and a copy of it has been officially presented to President Ford. I am very deeply touched by Mr. Labrecque's thoughtfulness in presenting me with this absolutely marvelous gift. We make plans to meet at his hotel a few evenings hence for an in-depth interview about the shooting of the Official Film (see Page 1104).



A former competition soccer player himself, famed Hollywood cinematographer Ernest Laszlo, ASC, is an avid sports fan who never misses attending the Olympic Games. He is present at events from morning till night and thoroughly enjoys it. He is shown here discussing the games with ORTO cameraman Jim Grattan.

Horses in the Rain

The morning of the day on which I am supposed to help film the Cross-country Endurance Equestrian event is raw and rainy. Michael Samuelson picks me up at my hotel at 4:15 a.m. and we then collect my camera equipment, an Eclair very kindly loaned by Roger Racine. His young son, Christian, is to be my assistant for the shoot.

We drive out to Bromont, which is an ordinarily quite magnificent resort area about an hour by car from Montreal, but today it is the backdrop for some very spooky weather. I can't help but be a bit disappointed that on my big day behind the camera the weather is somewhat less than cooperative, to put it kindly.

We arrive at the headquarters which Drummond Challis, director of the film for the equestrian federation, and his key personnel have been using as home base all week. It is, indeed, a private home and, when we arrive, Drummond's attractive wife and assistant, Shawna, is bustling about the kitchen cheerfully making breakfast for the crew.

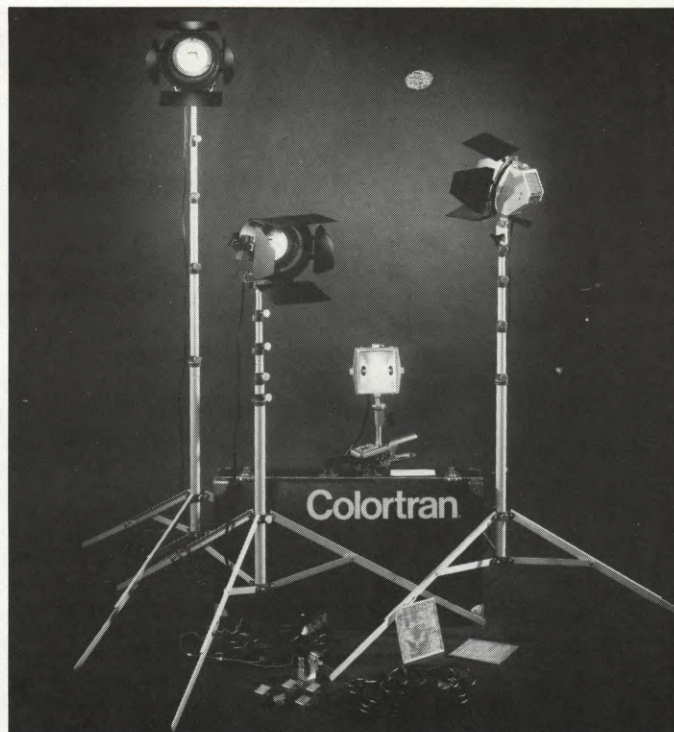
Just to be with these blokes on a shoot again is enough to perk up my spirits, despite the nasty weather. It's like old times — old times in Mexico City, Munich and Innsbruck. There is that special kind of excitement that prevails before an unusual and chal-

Continued on Page 1174



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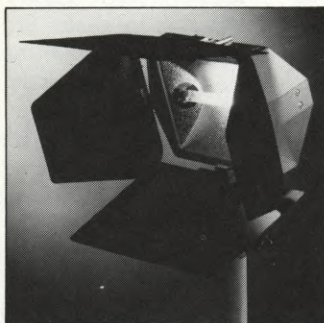
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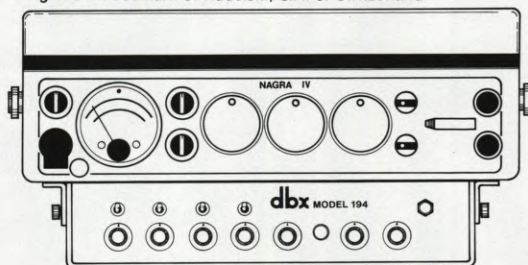
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THE ROLE OF KODAK AT THE OLYMPIC GAMES



Created solely to service the gigantic broadcasting effort of the Montreal Olympic Games, this organization performed at least three major functions in the motion picture area

At the 1976 Winter Olympics in Innsbruck, the Agfa-Gevaert film stocks were used almost exclusively by not only the Austrian and German filming groups, but by the ABC film units, as well. The compelling reason for this was that ARRI had set up an on-site film processing lab for the stock at the Television Center, so Gevachrome was the only type of film that could be processed within an hour.

By contrast, in Montreal, Eastman Kodak reigns supreme, for they are the ones who have set up the quick-processing facilities, mainly at ORTO. Moreover, this processing is free to those who use their stock.

The following interview with Paul Martel, Kodak Coordinator for the 1976 Olympic Games, provides definitive information about the service provided to ORTO and other telecasters:

QUESTION: Can you tell me about the motion picture services you have been providing to ORTO?

MARTEL: What we did for ORTO mainly was to provide them with three motion picture processors, the proper

chemistry, technical assistance, quality control, and a few operators to work the processing machines.

QUESTION: Can you tell me a bit more about the processing machines which your company provided?

MARTEL: We started negotiating with ORTO on the subject of equipment back in May of 1974, after a proposal from them to us. A decision was made to use equipment from Treise Engineering. After that, we worked with them on the design of the area layout and the machines were installed in September, 1975. They were tested with water around the end of the year and in early March we tested the machine with the proper chemistry. All of this was done in conjunction with the ORTO people. Our technical assistance applies mainly to quality control. Since we put the chemistry in, we've had people there on a full-time basis to make sure that the film would be processed according to our recommendations — both for normal processing and 2-stop forced development.

QUESTION: What about the types of film that they are using and the formulas required for processing them?

MARTEL: They are using the 7239 and 7240 VNF film stocks, developed by means of the new VNF-1 process. They use the Kodak VNF-1 chemistry that comes in kits. This means that all they have to do is dilute them with water. We make specific gravity and ph tests on each mix in order to maintain quality control.

QUESTION: What about the availability of stock for such a massive operation. Can you tell me what special measures were taken to make sure that there would be enough when needed?

MARTEL: We made an evaluation last November of the different specs in the 7239 and 7240 formats. We had found out that in previous games there were 13 specs for each of the products and we made our evaluation accordingly. We have set up two main storage areas
Continued on Page 1177

These two of the three film processors manufactured by Treise Engineering and provided to ORTO by Eastman Kodak were set up in the basement of the ORTO Centre in Montreal. A third was installed at Kingston, Ontario, site of the Olympic Yachting events. Using the VNF-1 process and chemicals in kits, the machines developed Eastman Ektachrome video news film 7239 (daylight) and 7240 (tungsten) for ORTO and accredited visiting broadcasters.



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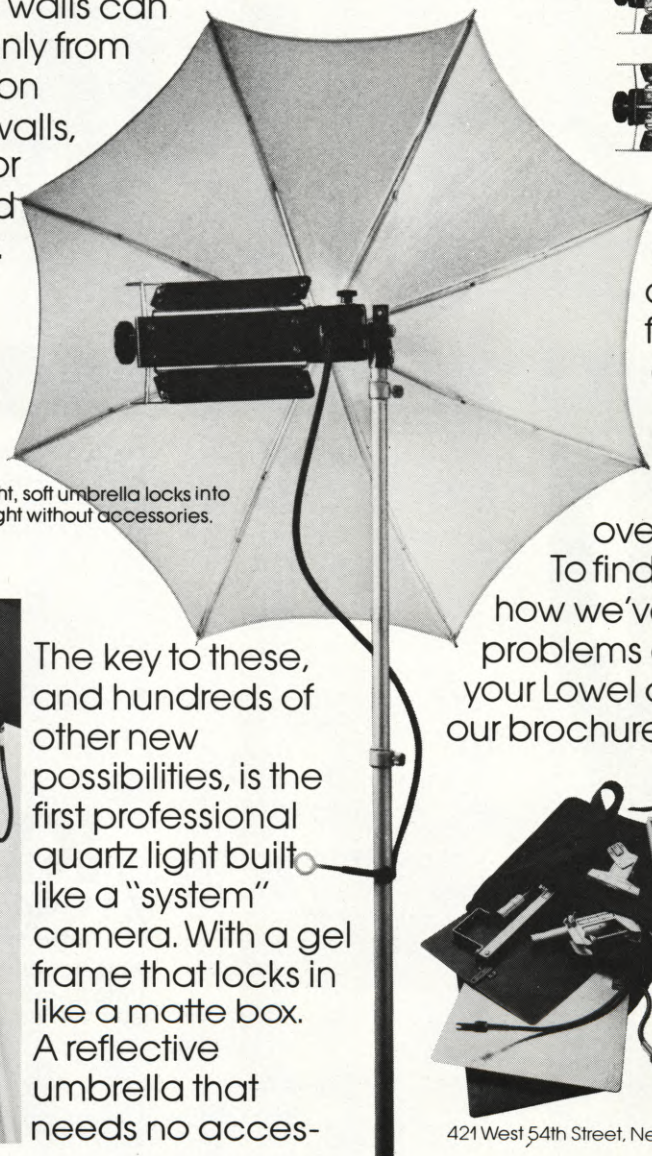


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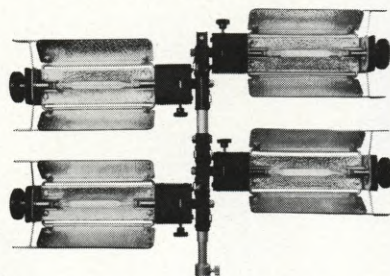


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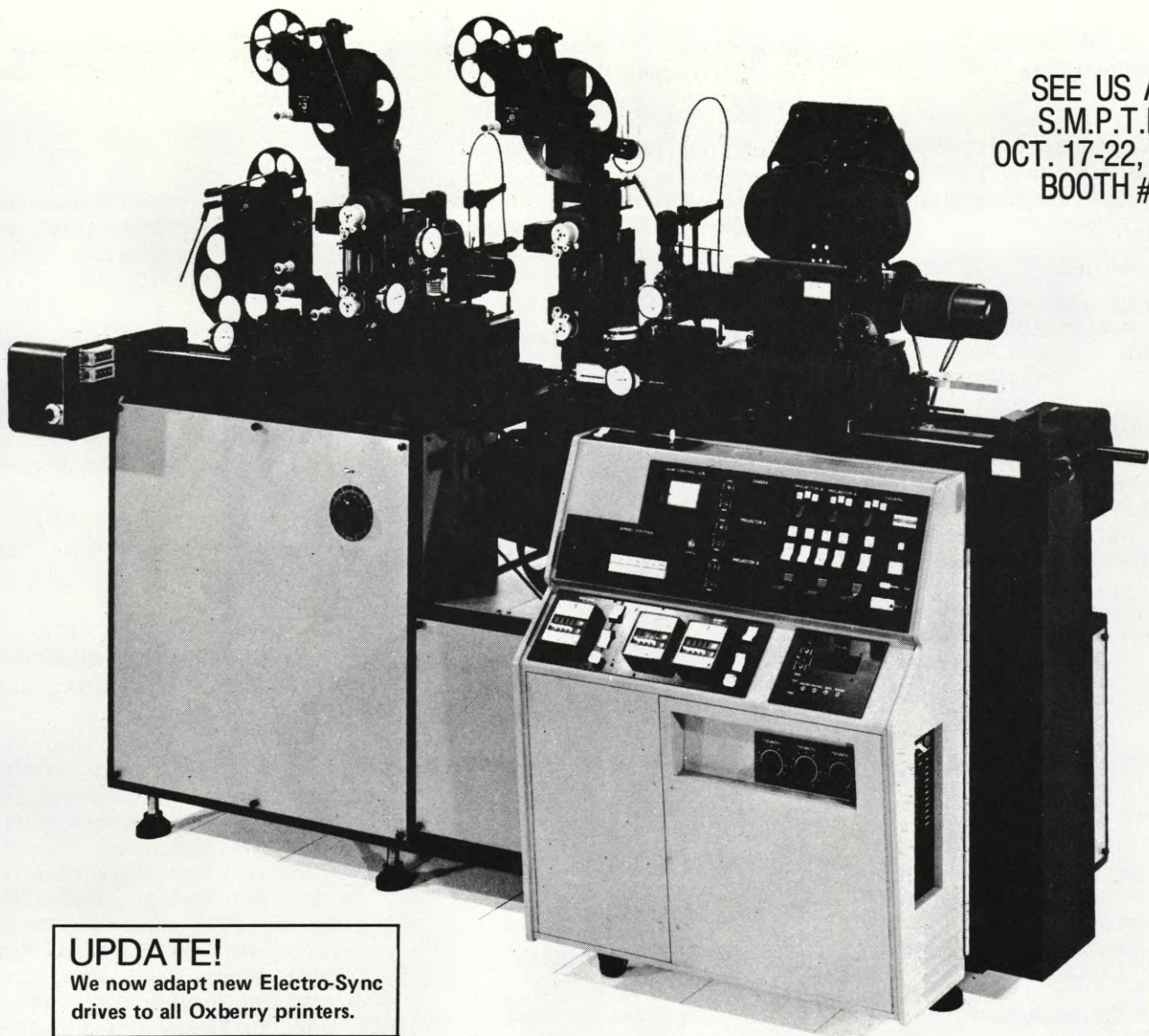
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INDUSTRY ACTIVITIES

Continued from Page 1086

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Monday	Los Angeles International Film Exposition
Tuesday	Taormina International Film Festival
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Six super sessions with masters of the various crafts that make up films, e.g., Verna Fields (editor of *JAWS*). And see how Martin Scorsese directs films like *TAXI DRIVER*.

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Six sessions dissecting the making, selling, promoting and producing of feature films. The world's best-known directors will be taking part — Dino de Laurentiis, George Barrie and others.

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This is a collection of the current work by the major new young German directors, including some of the most outstanding works of Fassbinder, the first North American retrospective of the works of Wim Wender with Wender in attendance.

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An all night review of the greatest hits from Samuel Z. Arkoff, the master of the movies you hate to love: *LITTLE SHOP OF HORRORS*, *THE RAVEN*, *THE PIT AND THE PENDULUM*, and many others.

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Films by women about women. A collection of features and shorts in concert with personal appearances — attending will be Claudia Weill (director *THE OTHER HALF OF THE SKY*), Freude Bartlett ("*Freude Presents*"),

Vicki Polon (Director *PLEASANTVILLE*) and others.

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Italy's top producers have put together a dozen of the biggest hits produced in Italy this year, including a great comedy that outgrossed *JAWS* in Italy — *DEAR MICHELE* by Francesco Rossi.

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A unique preview of tomorrow's big names in filmdom. Directors will be in attendance, including Paul Bartel (Director *DEATH RACE 2000*) and Don Owen (Director *PARTNERS* — Canada).

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Six hours of film to be held at Cinesphere on Saturday morning. A special event honouring the Tenth Anniversary of the Tehran Children's Film Festival, showing their biggest hits from over the years.

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Six exciting sessions by critic, teacher and author William Wolfe. Featuring Saul Turell and his definitive study of film craft, *THE ART OF FILM*, and a superb series of shorts on the making of big-name movies.

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FOR INFORMATION: FESTIVAL OF FESTIVALS, TORONTO (416) 367-9599.

U.S. AMATEUR FILMS WIN HIGH HONORS IN INTERNATIONAL FILM FESTIVALS

Washington, D.C. — Amateur films entered by CINE (Council on International Nontheatrical Events) at international amateur film festivals on three continents won high honors.

At the 1976 Canadian International Amateur Film Festival, *FOOTNOTES*, produced by pre-teens Ramon Cordero, Annette Quintero, Ossie DiPablo, Janine Cash, and Michael Heinrichs of Glendale, California, was awarded the Trophy for the Best Film by Youth Under 16. The Trophy for the Most Original Theme or Treatment of Subject was won by the University of Southern California film *SUBWAY*.

The Melbourne International Amateur Film Festival awarded the Cineman Trophies to *CROSBY STREET* by Jody Soslow, *RECORDED ALIVE* by University of Southern California, and *THE SPIDER WILL KILL YOU* by David Schmoeller.

At the Festival of the Nations at Velden in Austria, *FIELD OF HONOR* from the University of Southern California won a Silver Medal, the Prize of the Austrian Amateur Film Club and the French Ambassador's Prize.

CINE is the voluntary, non-profit organization which enters the best U.S. short films in international film festivals abroad.

The deadline dates for submitting entry forms for CINE competitions are August 15 and March 15. For further information, contact the CINE Office at 1201 Sixteenth Street, N.W., Washington, D.C. 20036. Telephone: (202) 785-1136. ■



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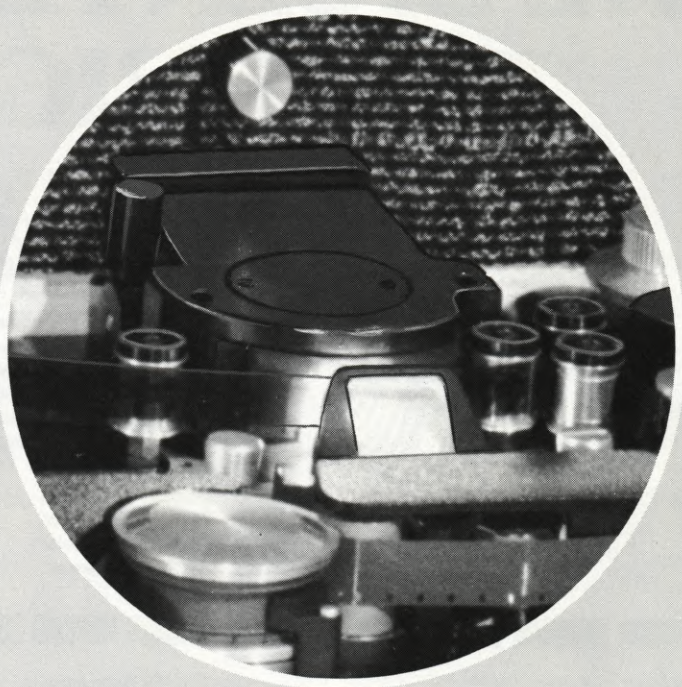
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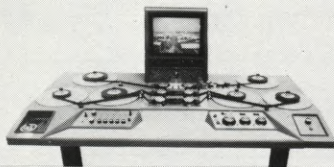
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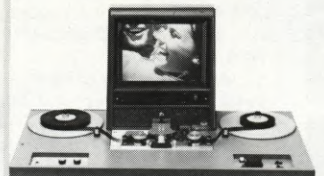
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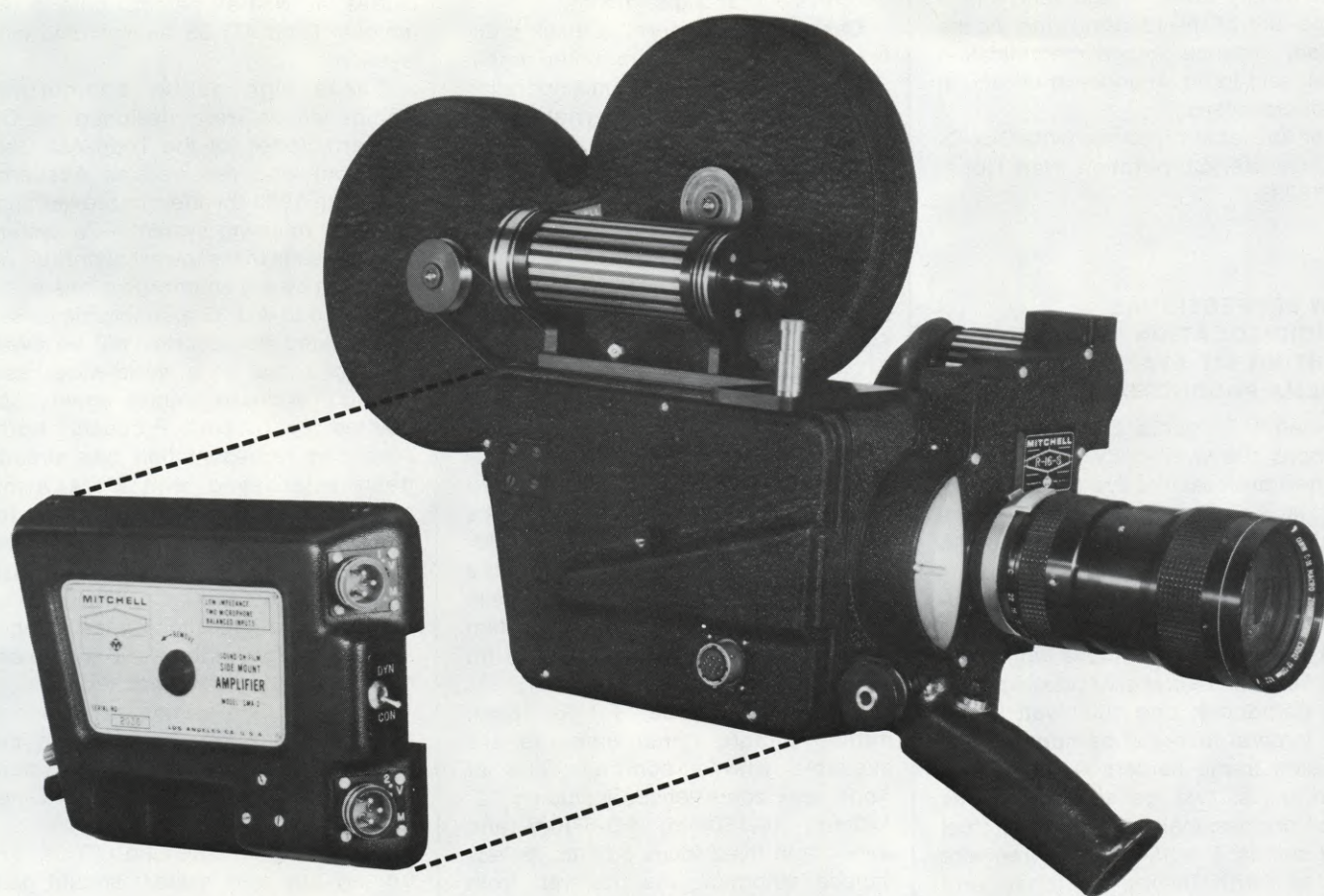
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WHAT'S NEW

Continued from Page 1070

The Questar 700 focuses precisely from infinity down to ten feet with a single turn of the focusing ring. At the 10-foot distance, image magnification is 1:4, said to be an unheard-of ratio in telephoto lenses.

For further information, write Box C-700, Questar Corporation, New Hope, Pa. 18938.

NEW PROFESSIONAL STUDIO/LOCATION "QUARTZ" LIGHTING KIT AVAILABLE FROM CINEMA PRODUCTS

Cinema Products Corporation announces the availability of PRO-KIT, the new professional five-light "quartz" lighting kit. The new Pro-Kit offers maximum versatility for both *studio and location operation*.

Pro-Kit includes: two *focusing* 1000-watt spot lights; two *focusing* 650-watt spot lights — all four above luminaires supplied with *detachable* rotating four-way barndoors; one 1000-watt broad with *integral* four-way barndoors; four diffusion frame holders with diffusion spun glass; two gaffer grips; three "Pro" professional-type stainless steel light stands; five 15-ft.-long three-wire cables (with in-line switches and parallel blade U-ground plugs); and a sturdy aluminum carrying case, measuring only 26" X 20" X 9¾".

The Pro-Kit operates at 120-volts AC/DC with 1000-watt single-ended and double-ended lamps, and 650-watt double-ended lamps.

The new Pro-Kit is priced at \$895.00 (lamps not included).

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

FREZZI-FLEX MODEL FR-16 NOW IN PRODUCTION

Introduced to the industry late in 1975 at the SMPTE Conference, the new Frezzi-Flex™ Model FR-16 professional 16mm motion picture (ciné) camera, for single- or double-system sound, is now in full manufacturing production by FREZZOLINI ELECTRONICS INC. at its plant in Hawthorne, New Jersey USA.

The Frezzi-Flex™ camera body weighs only 8 lbs., 7 oz. (3.8kg.). Including camera body and finder, Angénieux 12-120mm zoom lens, 400

ft. Frezzi/Mitchell magazine, film load, quick-change reliable internal nickel-cadmium battery, Frezzi MCA-16 two-channel side-mounted amplifier, sound head, its "ready-to-roll" ("street") weight is only 16½ lbs. (7.5 kg.).

Camera design permits quick plug-in installation of a side-mounted amplifier for single-system sound operation without external or internal modification or re-assembly of camera, and vice-versa for double-system sound filming. All FREZZOLINI® cameras are crystal-controlled and multi-speed, 12, 18, 24, 30, 36 and 44 fps.

An OPTIONAL external Battery Eliminator/Charger which can be operated from either 120 volts or 240 volts AC, 50/60hz. is available for Frezzi-Flex™ Model FR-16 cameras. Designed and produced by FREZZOLINI ELECTRONICS INC., it features exceptional reliability and stability. The Frezzi-Flex™ Model FR-16 continues in the long tradition of producing the world-famed rugged construction of the thousands of FREZZOLINI® cameras in daily regular operation in TV newsfilm and in 16mm documentary film production throughout the world.

Frezzi-Flex™ Model FR-16 16mm motion picture (ciné) cameras are available with a complete line of Angénieux zoom lenses including 12-120mm, 10-150mm, 9.5-57mm and wide-angle fixed-focus 5.9mm. An advanced automatic iris powered from the camera is also available on the 12-120mm zoom lens only.

The Frezzi-Flex™ Model FR-16, as with all other FREZZOLINI® motion picture camera models, can be "customized" to particular specifications from a complete choice of camera accessories and systems available from stock at FREZZOLINI ELECTRONICS INC.

Basic list price is \$6450.00 for camera body. For detailed information, dealer addresses, other applications write FREZZOLINI ELECTRONICS INC., 7 Valley Street, Hawthorne, New Jersey 07506 U.S.A., or phone (New Jersey 201) 427-1160 or (New York City 212) 594-2294.

FREZZOLINI ELECTRONICS INC. is a manufacturer of 16mm motion picture (ciné) cameras and E.N.G. support equipment. The company also designs and produces for O.E.M. applications.

CINEMA PRODUCTS ACQUIRES TODD-AO 35 ANAMORPHIC LENS SYSTEM

Ed DiGiulio, President of Cinema Products Corporation, proudly an-

nounces the acquisition by Cinema Products of the Todd-AO 35 *anamorphic lens system*. Included in the acquisition are all of the anamorphic lenses, related cameras and accessories, as well as patent rights to the unique Todd-AO 35 anamorphic lens system.

These high quality anamorphic 35mm lenses were designed by Dr. Richard Vetter (of the Todd-AO Corporation) who received an Academy Award in 1973 for their improved anamorphic focusing system — a system which results in the lowest distortion yet achieved by any anamorphic lenses.

The Todd-AO 35 anamorphic lenses and related accessories will be available for rental on a world-wide basis through exclusive rental agents appointed by Cinema Products. North American representation has already been established with Mark Armistead, Inc. as the exclusive agent for the West Coast; Camera Mart, Inc. as the exclusive agent for the East Coast, and William F. White Co. (Toronto) as the exclusive agent for Canada. Other agents throughout the world will be announced as they are appointed.

Todd-AO Corporation will continue to service film productions with the Todd-AO 35 anamorphic lens system under special arrangement with Cinema Products.

According to DiGiulio, "This extremely fine lens system should gain increasing acceptance among filmmakers now that it has the full support and backup of a network of the finest rental companies in the world, as well as that of Cinema Products, which has specialized over the years in providing unique equipment for such productions as THE TOWERING INFERNO, BARRY LYNDON, and LUCKY LADY."

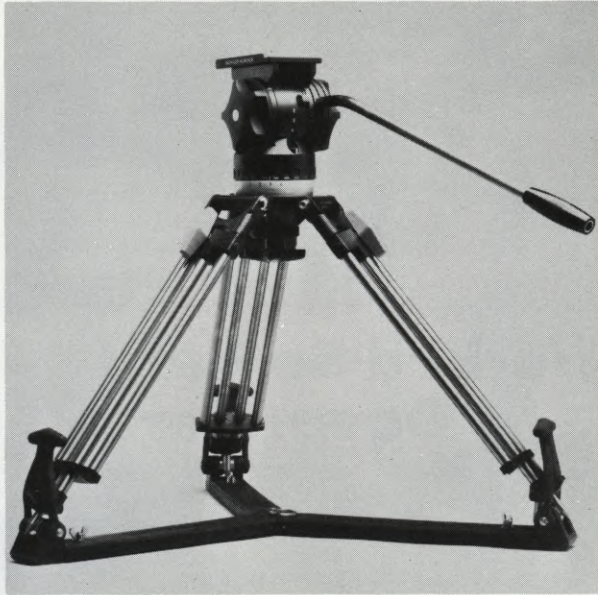
As backup for the Todd-AO 35 anamorphic lens system, Cinema Products will also make available its own video-assisted filming systems for Arriflex, Mitchell, and CP's XR35 cameras; a pin-registered high-speed Photo-sonics camera (especially modified to accept Todd-AO anamorphic lenses) capable of reaching speeds of 360 fps, and, of course, Cinema Products' new and revolutionary STEADICAM-35 system that permits a hand-held camera to deliver rock-steady, dolly-quality shots while the operator is running, walking, or riding on a vehicle.

For additional information, please contact Ed Clare, Assistant-to-the-President, Cinema Products Corporation, 2037 Granville Avenue, Los Angeles, CA 90025. Tel: (213) 478-0711.

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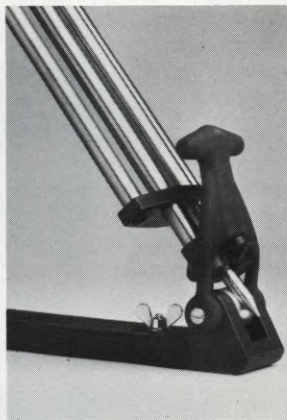
design manufactured with the latest space-age lightweight metal combination of aluminium and titanium steel easy to make adjustments with extra large hard rubber butterfly lock knobs.



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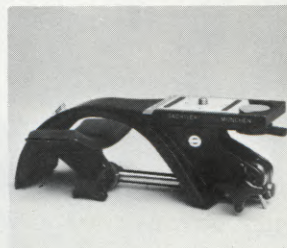
Made of unbreakable hard rubber that will not slip on or scratch the smoothest surface. It is quick and easy to fold without removing from tripod, however, a very slight pull on the rubber locking

handgrips will separate the triangle from the tripod legs.

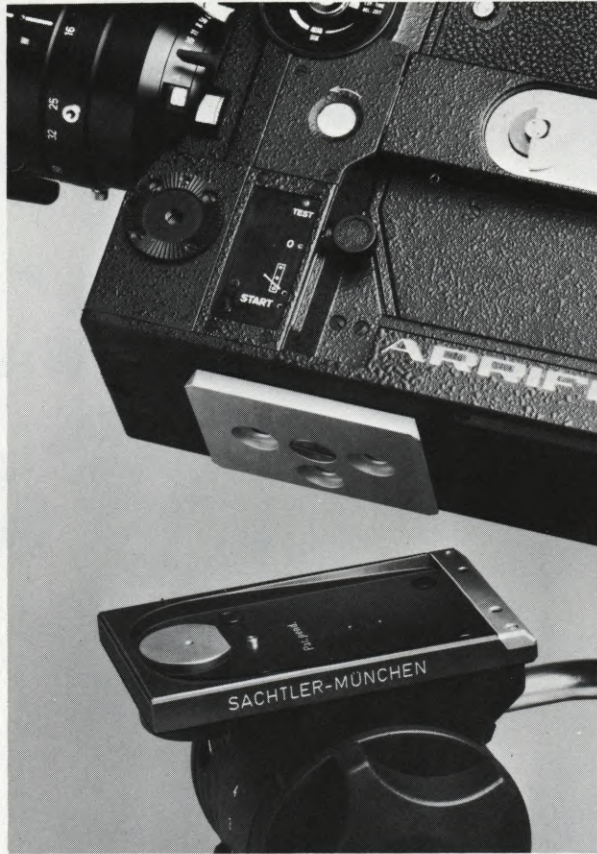


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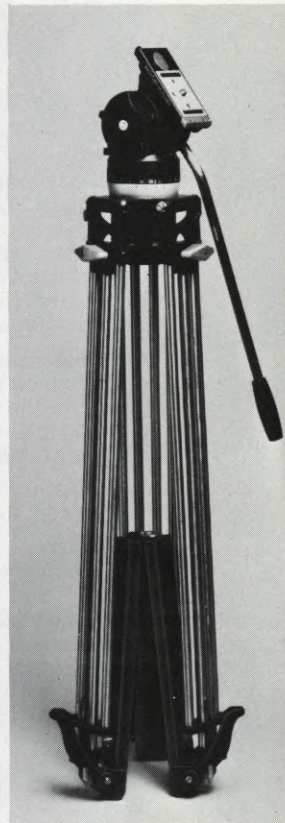
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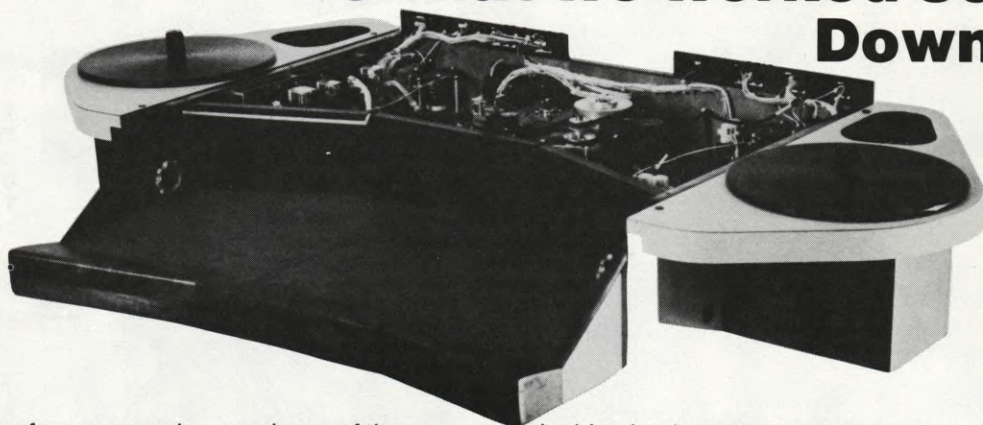
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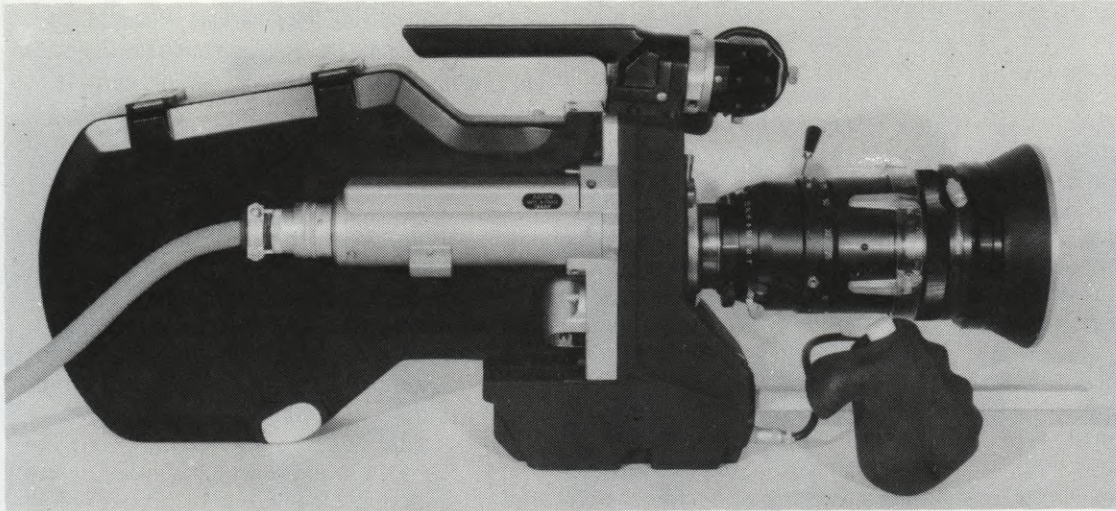
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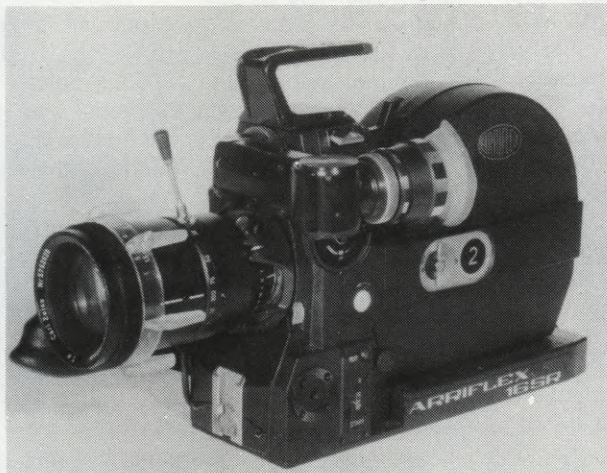
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An A to Z of New 16mm Goodies



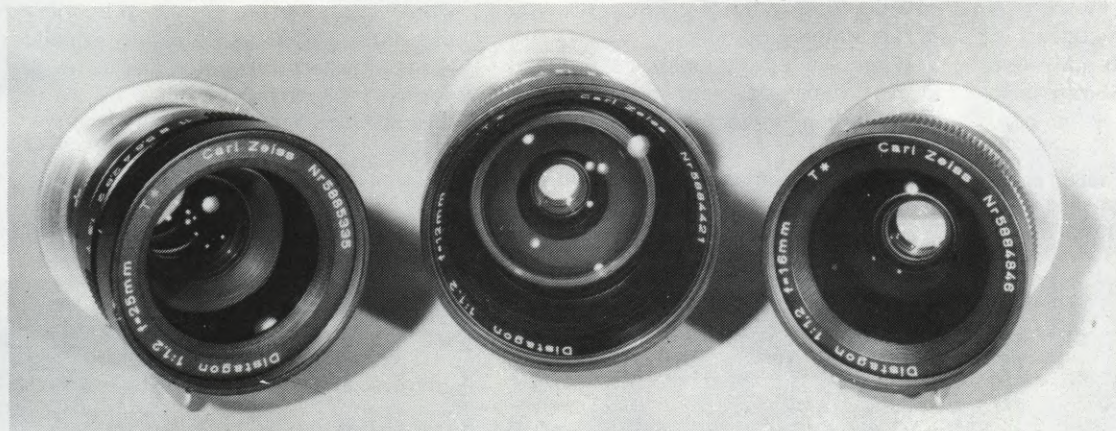
The Aaton showing the TV viewfinder and Zeiss 10:100mm zoom



The Arriflex 16SR camera



The Angenieux 10:150mm zoom



The Zeiss Distagon T1.3 ultra wide aperture lenses — 12mm, 16mm and 25mm

A is for Aaton, the camera that fits snugly on the cameraman's shoulder, makes less noise than any other 16mm camera we've tested and has a built-in TV viewfinder system.

A is for Arriflex 16SR, rapidly becoming the 16mm camera most in demand.

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Z is for Zeiss zoom lenses for 16mm cameras. We supply both the Aaton and the Arri 16SR with Zeiss 10:100mm T2.3 zoom lenses as standard equipment.

Z is also for Zeiss Distagon, the new T1.3 ultra wide aperture fixed focal length lenses for 16mm cameras. We supply them in sets of three comprising 12mm, 16mm and 25mm to go on any 16mm camera fitted with an Arri steel bayonet mount or, by use of an adaptor, any 16mm camera with an Eclair mount.

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SHOOTING "SLOW-MOTION" IN MONTREAL



By **ROBERT RIGER**

ABC Sports, Inc., New York, N.Y.

Coverage of events as they happened was the paramount consideration for ABC Sports in its presentation of the 1976 Summer Olympics. TV cameras captured the events as they took place, either for live broadcast or recorded on videotape for later airing. There was enough ABC electronic equipment there to equip three or four television stations, and it was used effectively.

But that still left a lot of work for the ABC Film Unit, headed by Brice Weisman and John Wilcox, to which I was assigned. Between us, we shot some 100,000 feet of 16mm film.

We were told before we went to Montreal that film would be used where it was most effective and that would be for the background pieces, such as "Up Close and Personal", personality profiles which Brice and co-producer Eleanor Riger had traveled the globe so extensively to produce. My job was essentially to isolate specific athletes and to use the ultra-slow-motion techniques I'd developed as sports technique pieces.

To tell the why of a sport, I work anywhere from 48 frames per second to 500 frames per second with a Milliken camera and, usually, a 385mm lens. High-speed photography is a con-

ceptual approach to sports that offers viewers something different, slow-motion visuals. The slow-motion techniques are only part of the difference, though.

For example, before I got to Montreal, I worked with the U.S. Track Team as they practiced at Plattsburg, N.Y. I shot two segments devoted to the baton pass. They became background pieces explaining how a proper baton pass is made in relay racing. It was a technique piece — a "why" of relay racing — and its best explanation visually was in ultra-slow motion.

The techniques we used in Montreal were developed more than 10 years ago. I joined ABC Sports in 1963 as an on-camera performer. Later, I began covering an event for analysis the following Saturday. I took a Hulcher high-speed still camera with me, which took 20 pictures per second on 70mm film. We made enlargements of the pictures and put them on videotape with my narration of how, for instance, a horse did or did not make a hedge, or a car did or did not take a corner. That was the forerunner of the analysis type of reporting we do today.

When we added color coverage, I started working with slow-motion, using 16mm reversal color film for

An ultra-high-speed specialist of the American Broadcasting Corporation discusses techniques used in filming the Olympics and points out how film excels electronics for this purpose

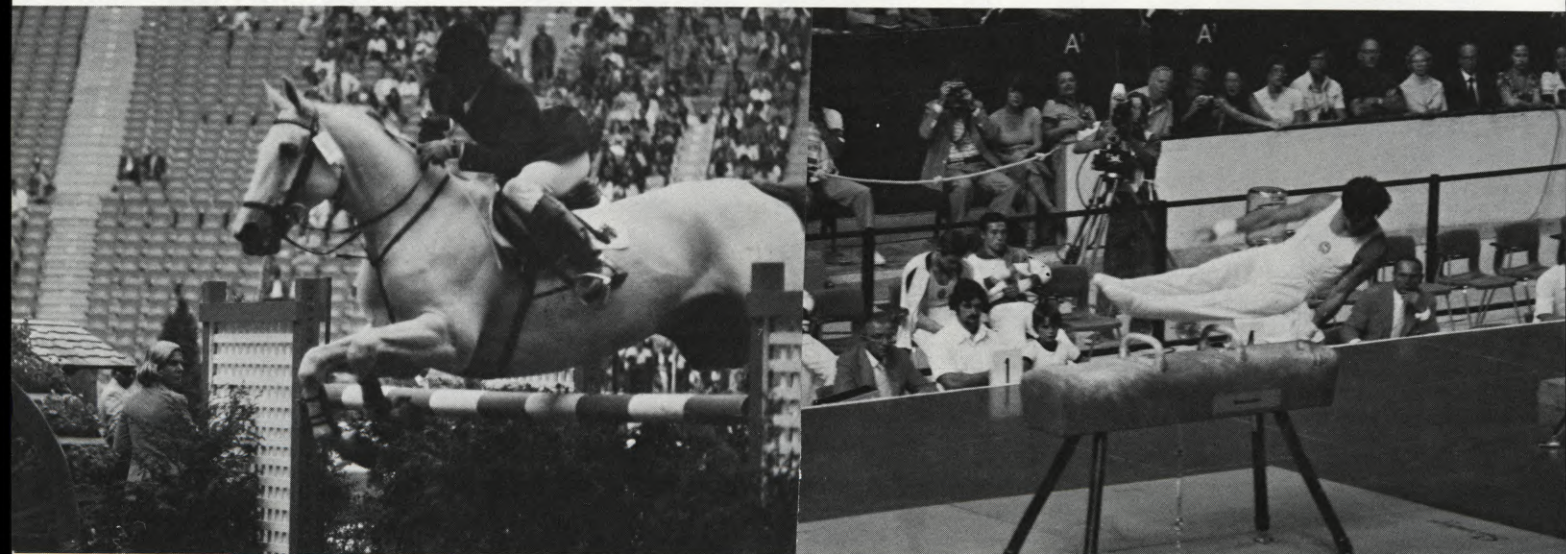
"Wide World of Sports." In 1967, John Peterson, who now is supervising film editor at ABC Sports, and I did profiles, including slow-motion film of Peggy Fleming in Colorado, Jean-Claude Killy in France and the Protopopoffs in Moscow.

After heading up the slow-motion in the 1972 Winter Olympics in Sapporo, I went into other areas of programming and was invited back to help create the high-speed material in Montreal for ABC Sports.

My motivation at the 1968 Olympics was the same as it was this year — to do with film what tape could not do. By then, ABC had pioneered the underwater tape camera for the swimming events, but about all they got was a brief picture of the turn and a lot of normal speed videotape coverage of bubbles. We knew we could do it better with a film camera at 400 frames per second, and we did. It was slow-motion, but it wasn't excessive and, at 400 frames, I had just about reached the exposure limits of the film in those lighting conditions. I exposed for the white water, and we ended up pushing this film *five* stops, building special lights into the printing box and using all sorts of tricks to get a print.

Continued on Page 1168

Sports with graceful, rhythmic action patterns, such as the Equestrian and Gymnastics events, take on an entirely different, poetic character when filmed in slow-motion. For such work, the author shoots anywhere from 48 frames per second to 500 frames per second with a Milliken camera and, usually, a 385mm lens. At the Montreal Games all the venues were equipped with metal-halogen lamps, which created some problems beyond 100 frames per second because of a strobing effect visible on the film.



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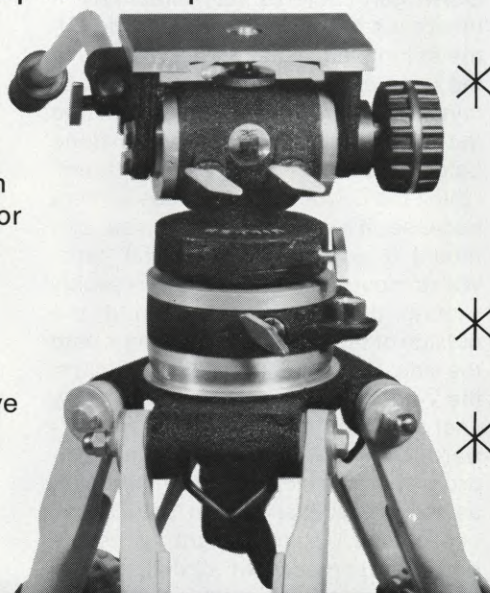
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FROM MEXICO CITY TO MUNICH TO INNSBRUCK TO MONTREAL



By MICHAEL SAMUELSON

We are making two small 16mm films at the Montreal Olympic Games. One of them is for the Federation of International Equestrian Associations. Each federation is entitled to have a technical film made, and the FEI, as it is known here in Montreal, has asked us to make their film. I feel that technical films need not be merely training films for training purposes. There is no reason why they should not be entertaining and good to look at, as well. So we are trying to do this on the equestrian events, which I don't think have ever before really been adequately covered in an Olympics film.

The main equestrian spectacle is the Cross-country Endurance Event, a three-day affair, and we are happy to have Herb Lightman with us again as one of our cameramen on that one. An Olympics wouldn't be the same without Herb behind the camera. The grueling Cross-country challenge is probably the most exhilarating event on the entire Olympics calendar and some of the fences that the horses have to jump are quite unbelievable. Adding to the challenge is the fact that it is the one event for which there is no possibility to train or practice beforehand. Whereas a gymnast can spend as long as he likes practicing how to vault over a horse, or working on the beam or the rings, the horses have never seen the fences before and the riders are only allowed to look at the fences 24 hours beforehand on foot and decide how they will tackle each individual fence. So it's a very exciting event.

Then you have the beauty of the Dressage, which, in a way, is very like gymnastics. I feel that if they put it to music it would become just as popular as gymnastics, because it is absolutely a thing of great beauty to see those lovely horses working without any apparent instructions from the rider.

Then, finally, you have the Show Jumping section, with bigger fences than horses meet at any other time during their careers. Once every four years they are presented with a series of fences which are so high that, during the Individual Medal competition, only one horse (and one rider) had two clear rounds, and no other horse and rider had even one clear round. That indi-

cates the difficulty of the course.

Our second project in Montreal is a film we are doing for Coca Cola. It's a 16mm half-hour documentary which will compare the Winter and Summer Olympics — although I don't think "compare" is really the right word. What it will actually do is select action patterns that are similar in the Summer and Winter events and intercut them to give an impression of the Olympic Movement, using only effects and music as a sound background. For example, figure skating and gymnasts will be cut together; ice hockey and field hockey will be intercut, as will ski jumping and pole vaulting, cross-country skiing and long-distance running, bob-sledding and canoeing. It should be something of great beauty and feeling. It's an exciting film to make because we have very little responsibility except to produce something of beauty. Although Coca Cola is sponsoring it, the picture will have no Coca Cola promotion in it. It is a film which I think the Olympic Committee will love.

As for our photographic techniques in the making of these two films, I believe this is "The Year of the GSAP" — which sounds like a good title for a movie — and I suppose you can spray to get rid of them. We used the tiny GSAP gun cameras very effectively in Innsbruck to mount on skis for the 90-meter jump and what we got was one of the most exciting shots we've ever obtained. It's always been my ambition to get shots that nobody else has done before and that certainly is one of them. I think the GSAP is a marvelous camera because it's so small and you can mount it anywhere with gaffer tape. We've mounted it on a canoe by simply putting gaffer tape all around the outside of the canoe and sticking it onto the side. We've put them on a bicycle in the Velodrome, so that you get a lovely shot from the handlebars pointing forward. During a race you see the Velodrome and the clouds spinning around, as the cyclist tears about and, at the end of one lap, goes right up on the bank and comes down directly behind three other cyclists who are pedaling away like mad.

Arthur Wooster, our Director of Photography for the Equestrian event,

A veteran of four Olympic Games and two World Cup shoots discusses his two films in progress at Montreal and announces that "The Year of the GSAP" has arrived

has mounted a GSAP camera underneath a horse's belly and then had the horse ridden by a Gold Medal-winner around the Cross-country Endurance course (the day after the three-day event was all over, in order not to break the rules). It really captures the feeling of what the horse and rider see as they go towards some of those very big fences.

Arthur, who has gotten to be one of the great rig men, has also made a gauntlet rig for the GSAP. The camera literally fits onto the back of a hand, so that you can see the fingers holding the reins of the horse as, again, the horse is ridden over the Cross-country course. It's also possible to put a GSAP camera on a pole vaulter's pole. There is a whole series of shots that have just never been done before and which the GSAP cameras have suddenly made possible.

The cameramen we have here are the same that were with us in Mexico City, Munich and Innsbruck. It's great to have the likes of Harvey Harrison, Eric Van Haren Noman, Arthur Wooster, Tony Coggans and Mike Davis with me on an Olympics shoot. I don't think it would be the same without them. Along with the people, we've got our 1000mm and 600mm lenses and Photo-Sonics cameras and all the usual equipment we've used now over the last four Olympic Games.

Our latest Olympics film, "WHITE ROCK", was photographed in the 35mm Panavision anamorphic format, and we are shooting both films this time in 16mm. I must confess that I'd rather be shooting in Panavision anamorphic, because I feel that format and the quality built into it makes the shooting of sports films much easier. The pictures stand up on their own without your having to worry too much about the content, and you can shoot to a much lower ratio. If you are shooting 16mm, you've got to go for content. Strangely enough, in the three Olympics films and three World Cup soccer films that I've done, I believe I've now shot in every format, including Techniscope, 1.85, 16mm blown up, Panavision anamorphic, and now, 16mm to stay 16mm. For my money, I'd like to go Panavision on everything.

We are shooting the 16mm 7247 negative stock without the 85 filter in order to get maximum definition. It's a fact that 16mm lenses generally just do not have the clarity that 35mm sphericals and anamorphics have, and there is no reason why, with 7247, which is such a sharp stock, you shouldn't go for the best possible definition. There's no doubt in my mind that filters, especially gelatines used behind the lens, cause a tremendous lack of definition in 16mm shooting. I find that half the problems we get at the rental house having to do with lack of definition are caused by that terrible gelatine behind the lens.

At the Munich Olympic Games we shot 5254 in Techniscope without the 85 filter and had no problems whatsoever. We shot preliminary tests and sent them to several laboratories. The tests coming back from Humphries Lab, London, and Bavaria Studios, Munich, were so good without the 85 filter that there was no reason to use it. That, I think, is the bravest decision that I've ever been forced into making, but it certainly paid off. What with the long lenses we were using and the high-speed cameras, we needed every bit of stop we could get. For example, the 100-meter event was shot very late in the afternoon with extremely long lenses at 96 frames-per-second and on that day we made the decision to rate the film stock at ASA 400, going two stops underexposed at that rating. Omitting the 85 filter gave us just the edge we needed to be able to get a good result on the screen, and I feel that with the Hazeltine and the new film stocks that are available, there is no problem at all in doing without the 85 filter.

With "WHITE ROCK" we set out to

make a purely theatrical film — the kind of film that television hadn't done or couldn't do. We had to come to terms with television and admit that on the Olympic Games their people do a fantastic job of documentary reporting. That being the case, we then had to make something different if we were to expect people to go to the cinema to see our film. I feel that the route we've taken with "WHITE ROCK", using an actor like James Coburn and music by Rick Wakeman, makes it an *entertainment*, and I believe that that's the way sports films need to go in the future. There is no point in doing what television has already done well — and there is a large audience out there eager to enjoy an "experience" if you provide one.

Rick Wakeman's music in "WHITE ROCK" complements the picture — although I'm not sure it isn't the other way around, and that's how I see the future going. The Russian representatives to the Olympic Games came to see "WHITE ROCK" in Montreal and I got lovely kudos from them at the time because they liked it very much. I think it's very interesting that the International Olympics Committee people also liked it. I was afraid that it might be too much of a young persons' film for their tastes but, in fact, every member of the IOC who has seen it simply adores it — especially the member from Austria.

The next summer Olympics will be held in Moscow and I believe that the Russian officials in charge of the filming will have to consider both their own local audiences and those of the Western world, and I would like to think that they will make a film that will appeal to both markets.

There is no reason why the film rights

should be quite so jealously guarded. There is no reason why there shouldn't be a dozen films made of the Olympic Games. Olympics films are not necessarily moneymakers — they certainly have not been in the past — but there is no reason why anybody who has a creative idea shouldn't be invited to make a film using the Olympics as a background. Of course, they must restrict the people who simply want to criticize the Olympics or who want to emphasize the political side of it, because that's not what the Olympics is about.

At Innsbruck, where we had the exclusive filming rights, we welcomed every film-maker who wanted to come, because we knew we were making a film that would be different. I don't think you can keep them out anyhow. You've only got to look around the stadium at Montreal to see the numbers of cameras that are in every seat and every television position. Everybody is making films. I think you are better off to welcome them — and to be seen to be welcoming them — then to let them do it through the backdoor.

Give them the facilities to make good films, and it can only do the Olympic Movement good. ■

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(LEFT) In the Olympic Stadium at Montreal, Director of Photography Arthur Wooster gets briefed on an upcoming shot by director Drummond Challis. Wooster, whose Olympic Games filming "career" began in Mexico City, devised many ingenious camera rigs for the Montreal project. (CENTER) Producer Michael Samuelson looks a bit perplexed, as he listens to Challis describe a new setup. (LEFT) "Swimming" in his ORTO-issue rain cape, but with spirits undampened by the drizzle, *American Cinematographer* Editor Herb Lightman films the grueling Cross-country Endurance Equestrian Event. The slippery rain-soaked terrain caused many falls — spectacular for the cameras, but hard on the riders.



AFTER "WHITE ROCK" WHAT DO YOU DO FOR AN ENCORE?



By **TONY MAYLAM**
Director

Our project at the 1976 Montreal Olympic Games is a very interesting one. It's a film that we are doing for the world-wide Coca Cola organization and it combines elements of both the Winter and Summer Olympics held this year. That's a pretty tall order when you consider how many separate events there are in these combined Games, and the fact is that you could make a complete film out of any one of the individual events.

My main problem, then, was to adopt a selective slant that would make possible an exciting film which would be, at the same time, manageable in terms of running time. Having just filmed "WHITE ROCK", which, I believe, took the Winter Olympics a stage further than television had, I thought it would be fun to extract certain elements out of specific sports — such as the "gravity" sports or "jump" sports (pole vaulting, ski jumping, high jumping, diving) — and find a way of combining them visually.

It was decided, also, that the film would have no narration, no commentary, no sync dialogue. I would go for the visual thing and try to find an element in one sport that I could tie up with an element of another sport. I regarded this as an opportunity to take 30-odd sports and make them work together visually. It was no good doing what television had done, a straight documentary record of athletes competing, because, for one thing, I wouldn't have the time and, for another, it would be just a repetition of the TV coverage. But the idea of finding like elements in totally unlike sports and juxtaposing them on the screen appealed to me. For example, I'm going to use film of Dorothy Hamill figure skating and find in it action patterns compatible with those of a woman gymnast on the floor. It's going to be a very big job in the cutting room, just as it was in editing "WHITE ROCK". We found, in working on that film, that certain things happen in the cutting room that weren't even conceived when one was writing the script. I feel that this is going to be one of those films that will either work in a very big way, or will be the all-time bomb. I won't know until I start cutting it. I've certainly shot every-

thing with the editing very firmly in mind, but it's one of those situations that you can visualize clearly, but which might not work simply because the diverse elements won't "marry" well in the cutting. It's not any sort of two-hour feature, so it's going to be cut very much like a long commercial.

The Coca Cola people aren't looking for the kind of film that will plug their product. As far as they are concerned, there needn't be any Coca Cola identification at all. What they do want is a film that can be shown to people of any nationality, any age group, and get an instant reaction. They want something that can be put onto a projector anywhere in the world and have somebody sit back and react to it. With that in mind, I've done a lot of subjective filming for this project. I've put cameras on canoes, cameras on rowboats, cameras on vaulting poles — you name it. Literally anywhere that I could put a GSAP camera I've put it.

Our Director of Photography, Arthur Wooster, devised a lot of very, very clever camera mounts when we made the Innsbruck film — putting them on bobsleds and jumpers' skis — and they worked very effectively. For this new film he designed a mount that can be slung under a horse; it can be slung outside the rider; it can be slung over the rider's shoulders. I haven't actually seen the rushes, but I understand from the editor that they are superb, very exciting, very dramatic. This is the sort of thing that gives one a different insight into a sport, and I think that this is what film can always do better than television.

As a film-maker, I always hate seeing electronic slow-motion, not because I'm concentrating on what's happening and don't want to see how it's done, but because of the sheer technical imperfection of electronic slow-motion. This is what upsets me. By way of contrast, genuine *filmed* slow-motion, where you've got a camera specially set up to do that job, is aesthetically more interesting and tells you so much more. The element of high-speed presentation is another of the things that I think film can do so much better than television.

We've been able to do some very interesting things with the GSAP

because it is such a small and intimate camera — and the athlete isn't aware of it. When you use something like an ordinary Arriflex ST, even without the 400-foot magazine, it's a pretty big camera (including battery) and it's quite weighty. But the GSAP is tiny, weighs only a few pounds, and can be mounted almost anywhere. For example, when filming the Canadian four-man pursuit team in training, we were able to mount one on the handlebars looking at the rider. If we had used a different, larger camera, he would have noticed it, but he didn't mind the GSAP. As it was, the cyclists would simply go out and do their training things and, thanks to the GSAP, one could really get the feeling in that velodrome of what it was like to be in amongst it. We will intercut those scenes with subjective footage shot from the bobsleds in Innsbruck.

For the rowing, we had two GSAP cameras on one particular boat at the same time — one on the coxswain up front, and another at the rear of the boat looking at the stroke. We rigged that in a full training session and the small cameras, combined with high-speed filming, helped to really penetrate the sport. In this film we haven't gone for coverage of the sports; we've gone for isolating the element that makes the Olympic athlete what he is, the element that makes him a champion.

In regard to the parallel intercutting of visually related elements in the winter and summer sports, there are some in which the relationships are very obvious — ice hockey and field hockey, for example. But there are others in which the establishment of the visual relationship will be very tricky, especially when filming in slow-motion. The frame rates of the two scenes to be intercut should obviously be the same, or nearly so. In using the Photo-Sonics camera, I've tried to find the sort of optimum speed for filming that will get the effect that I want, but there are so many possible variations, depending upon the individual sport and the effect desired. For example, I've found that for filming figure skating 48 frames-per-second is a very effective speed. It doesn't come through as obvious slow-

motion, but just takes the edge off the normal speed of the action and gives the viewer the opportunity to see more of what the skaters are doing. Here, again, you are not trying to record what actually happened; you're going for certain elements. How the same filming speed will work for gymnastics on the floor I don't know, so I've shot it at 48 frames and then gone up in increments of 24 frames until I finally hit 120 frames. It's a matter of selecting whatever frame rate works effectively for a particular sport, as well as for the sport with which you are going to intercut the footage. In any event, the high-speed camera is going to be very important in executing this particular concept.

Our film is being shot in 16mm, using the new 7247 negative. As a result of this experience, I can say honestly that, given a choice, I'd always shoot 16mm in negative because it's got so much more going for it than reversal. I started my career shooting all 16mm reversal and I thought that I would never use negative, but when I did start using negative I could immediately see the advantages. It's particularly valuable for shooting situations that are uncontrolled. You just have that much more latitude; you can push the film so much further. In the United Kingdom we are geared towards 16mm negative; we are not geared towards reversal. I know that it's just the opposite in the United States, but I certainly would go with negative every time.

In view of the fact that "WHITE ROCK" was photographed in 35mm Panavision anamorphic, I've been asked if it isn't some sort of come down to now shoot a film in the smaller 16mm format. The fact is that my last four pictures in a row have all been filmed in 35mm Panavision anamorphic. I did a film on Prince Charles, then a film for Sidney Pollack and, after "WHITE ROCK", another stereophonic sound picture, "GENESIS" (which will be shown on a double bill with "WHITE ROCK") — all in 35mm Panavision anamorphic.

The answer to the question is that while, in a certain sense, one has less scope in 16mm than in 35mm anamorphic, this picture simply didn't warrant shooting in Panavision anamorphic. It wasn't a matter of economics that decided the format, but rather the fact that this picture is obviously going to be shown all over the world in 16mm. Therefore, that's the way one shoots it — and I don't consider that I'm taking a step backwards.

I wanted very much to make this film; otherwise, I wouldn't have done it. I went into the project saying to myself: "I'm excited about this project. I'm as

excited about it as I was when doing 'WHITE ROCK', and I'm going to do the very best job I can. I'm going to get totally involved and make the elements work for me."

And let's face it — there's a lot more you can do with a GSAP camera than you can with a Panaflex in terms of subjective filming. You can't mount a Panaflex on handlebars to shoot a cyclist actually racing — so, if you think like that, I believe you can make it work for you. I certainly *don't* consider it a step backwards. It's a big-budget picture, made for the world-wide Coca Cola organization, and I consider it an exciting challenge to combine winter and summer sports in one film.

I didn't direct the Winter Olympics sequences for this picture because I was busy doing "WHITE ROCK" at the time, but I had a superb director by the name of Tom Clegg. He's directed our top film on television in England, "THE SWEENEY", plus many others. At the moment he's doing "UFO", as part of the "SPACE: 1999" series for Lew Grade. He's had tremendous experience and I held very close liaison with him in Innsbruck. Tom shot very much to a script and very closely to our overall concept, so the two aspects of the film should work very well together.

While, as I've said, there will be no narration or direct dialogue in this film, we did shoot some sequences with sync-sound — but only to record certain background effects. For example, at the start of the 100-meter event you might pick up one of the athletes saying what to him was a throw-away line, but a gem to us — like a four-

letter word because he can't get his block in the right position, or whatever. But this film is not going to work because of any sync-sound. We are not looking for interviews. We are looking for a total, mainly *visual*, experience.

The trouble with television is that it must concern itself with who is going to win — or, in the case of the pole vault, for example, how high each athlete is going to jump. The video medium very often misses showing the tremendous energy that it takes to jump more than 17 feet in the pole vault, or to run 100 meters. You don't really see the muscles strain or sense the sheer physical effort it takes to do these things. For some reason, it all looks so easy when you're watching it on television. You can tell that the athletes are tired, because you see them flopping around and guys holding them up, but you don't smell the sweat and you don't see the utter fatigue in their eyes and the greyness in their skin. You just don't see what the athlete's really been through. He's worked for four years and at the end of the race that guy's shattered, he's exhausted, he's completely out — but television just sees him as a guy who came in fifth or who didn't have it together that day. But with a *film* camera, if you use it in the subjective way that we are, you can get all of that across.

Music is going to play a very important part in the finished film, but I'm not going to stick to one composer necessarily. I'm going to use all kinds of music — perhaps 20 different kinds. At the moment I've got somebody working

Continued on Page 1161

In the Swimming Stadium in Montreal, during the filming of sequences for his new film project, "WHITE ROCK" director Tony Maylam stands between cameramen Tony Coggans and Eric Van Haren Noman, both of whom are by now scarred veterans of four Olympic Games and two World Cup shoots. These experiences have made them two of the top sports cinematographers in the world.





BRINGING THE OLYMPICS TO ONE BILLION TV VIEWERS
Continued from Page 1115
Programs and Production

A request has already been made to the Radio-Canada Graphic Arts Department for animation work using the different Olympic sports symbols. Each transitional sequence will last three seconds and will be included in the 20-minute summary of the various events selected. Two other projects are under study: the opening or introductory sequences of the summary, which will have to last about 10 seconds and which will be based on the official COJO and ORTO logos, and several sequences, also lasting about 10 seconds, which can be used as a closing for the summary. The latter will show various scenes or happenings in Montreal.

At the end of March, as the result of broadcasters' replies to two questionnaires and to the telex sent out, we shall be able to establish a more accurate evaluation of the required number of copies of the film summary. To date, we have received 26 requests from foreign broadcasters:

In regard to newsreel agencies, we have received a request from the International Newsreel Association for three to four series of the summaries, and we are awaiting a reply to the telex sent to UPITN and Visnews about their needs or this resume in order to extract their three daily reports of three minutes each.

Personnel:

To attain our objectives, we need management staff to supervise the different stages of production of the film. Under the heading of program content, producers and 15 production and/or script assistants will be assigned to our Service on a permanent basis.

Added to these are technical crews for filming, sound recording, or editing, and support personnel working on associated tasks.

Seminars, study sessions and visits will be organized for the training of the staff. It would be advisable to hold the first seminar in May, with the option of a second in June. These briefing sessions could be arranged as follows:

- report on the different sports disciplines, as well as distribution of documents to those concerned;
- films, slides, graphics or diagrams on the Olympic sports, with animation by one or more experts;
- conferences on subjects of special interest, such as film coverage of the sports disciplines by CBC or other producers, etc.
- visits to the different competition sites.

A more detailed plan will be submitted on this shortly.

SPACE

Attached are layouts of the spaces for Programs and Production Film personnel at the Broadcasting Centre.

The choice of technical equipment

has been made by the Film Service of Technical Services in accordance with the needs of Programs and Production Film Services.

Regarding the competition sites, the camera positions were established jointly with COJO. With a few rare exceptions, these positions are final. All these plans have already been given to you by the Competition Site Co-ordinator. Early in April, we shall draw up a preliminary program grid, taking account of the assignments of production personnel.

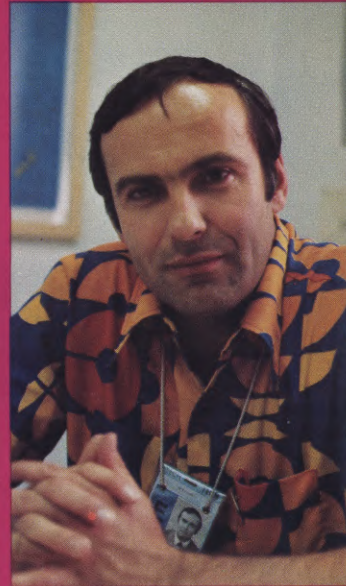
PROCEDURES AND CONTROL:

Every morning, the film cameramen will have to report to the Broadcasting Centre (room 745) where they will pick up their cue sheets and discuss them with the chief cameraman from the technical or other points of view. Then, they will go to the technical store to collect their equipment before going to their film sites. Vehicles will be provided to transport the film crews.

It has been established with Mr. Dan Pierce that, when parked, these vehicles will be under close surveillance, since some very heavy pieces of equipment will have to remain in them during the night.

As at the Broadcasting Centre, specific parking spaces are planned at the different competition sites and they too, will be under the surveillance of security guards. Rooms for storing spare equipment for our film crews have been obtained at each compe-





(LEFT) Yvon Jean, Manager of Film Services (Program and Production) for ORTO, is a tough professional with a jolly sense of humor. He set up and supervised the ambitious ORTO film program, operating on three separate levels. (CENTER) President of the Montreal chapter of the Canadian Society of Cinematographers, Roger Racine, who heads his own film company, was one of several veteran cinematographers to lend their expertise to ORTO filming. (RIGHT) Film Production Coordinator for ORTO, Karel Ludvik, CSC, rode herd on the many units shooting daily in scattered venues.

tion site and furnished by COJO with a locked cupboard, tables and chairs, these rooms will always be locked when not in use. A second room is planned for the unilaterals so that they can rest there between filming, or for other purposes.

We shall restrict the daily deadline for filming to 2:00 pm in order to meet

the editing requirements. All material shot after that time will appear in the next day's summary. A "Camera Report" form will give the information necessary for editing. This form will have to be filled in by the production and script assistants at the actual competition sites, and returned with the film and the sound tape to the Broad-

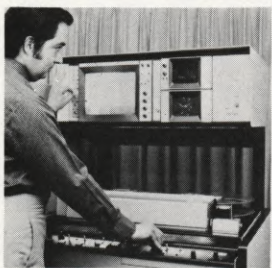
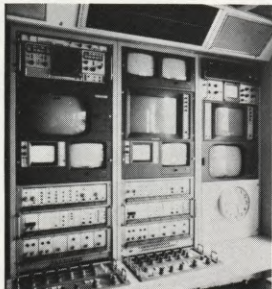


casting Centre. It is vital for the cameraman to be accompanied by a production or script assistant at each fixed position in the competition sites, since we cannot rely on the cameraman being able to supply this information while he devotes his attention to the filming. However, each cameraman assigned will have to correctly complete the stickers or identification

tabs already stuck on the film containers with all the relevant technical information in order to avoid any possible error at the film reception-dispatch office, in the laboratory and in the sound department.

At certain times in the day, an outside messenger service using radio-equipped motorcycles will have the
Continued on Page 1170





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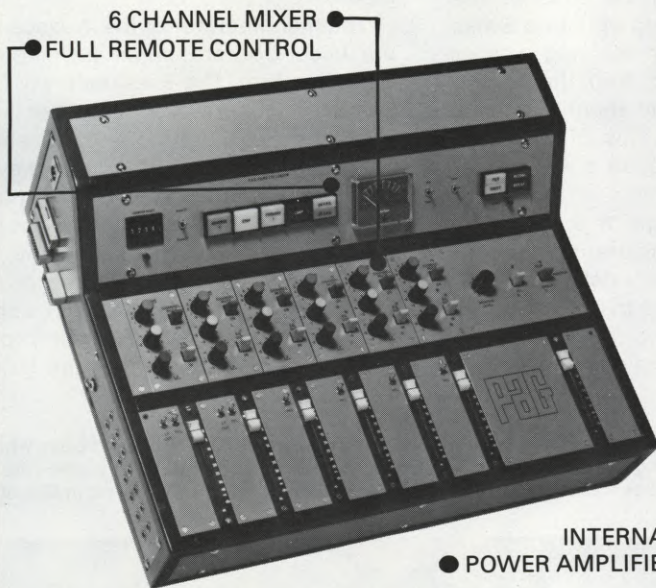
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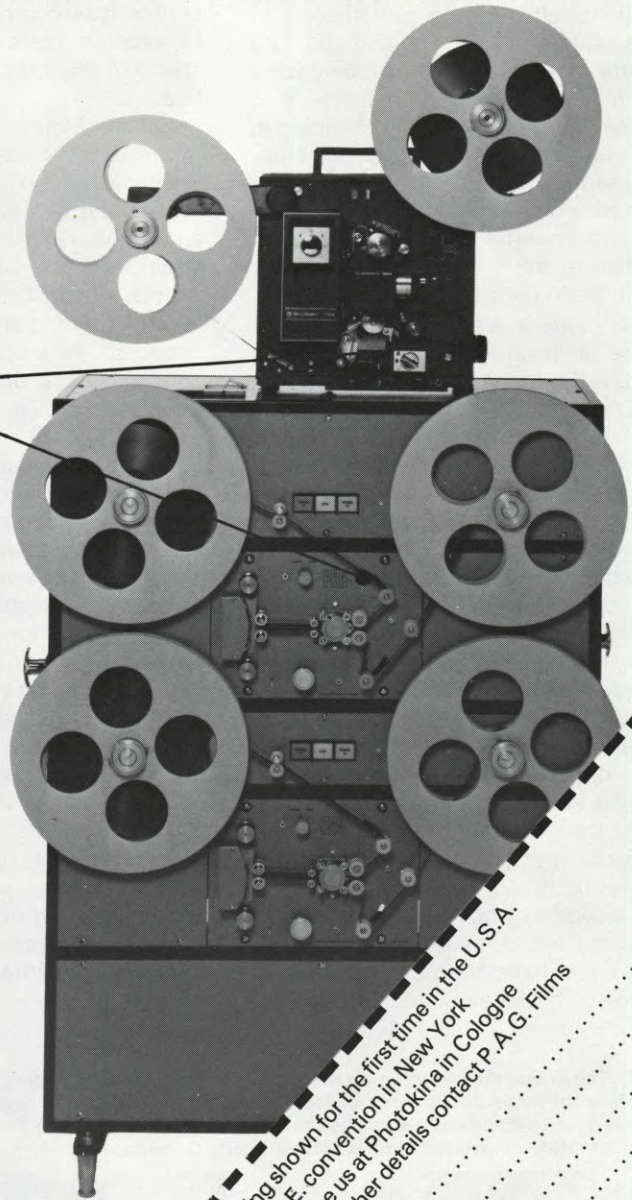
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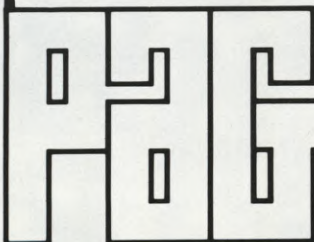
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WESSCAM CAMERA MOUNT

Continued from Page 1110

athletes, it is permitted to follow the runners. Since the camera itself is battery-powered, the electric car functions as a self-contained mobile filming unit. The operator sits in front next to the driver.

The camera controls, grouped on a small console, are the standard controls available on any conventional camera: pan, tilt, zoom, focus, iris and frame-rate. With this camera, we can go up to 200 frames per second in increments of 24, 48, 100 and 200. The camera mounts a 1,200-foot magazine for this application and there is a remote readout of the film remaining in the magazine. There is also a frame-rate readout. The sensitivity of the joystick control is adjustable on the console and a number of other special features have been included specifically for the filming of the Olympic Games.

The camera we're using is rather unique (at least in this mount). It was conceived less than two months before the Olympics started and actual construction was begun less than a month before the Games opened. We asked the manufacturer to mount a modified Photo-Sonics camera, but at the time we didn't even have the 1,200-foot magazine that would be required. He was obliged to work with the camera itself and some engineering drawings of the magazine, simply assuming what its actual construction would be like and how it should be balanced. He had to work out the center of gravity and ultimately had to make a number of design changes, but he was able to do this within the required time frame. He came out with a unique package that enables us to film at up to 200 frames per second, using 1,000-foot magazines, and with complete flexibility. This could never have been attained except for the ability of the manufacturer.

We've had the Wesscam mount redesigned and modified in a number of ways in order to meet the special requirements of filming the Olympic Games. For example, we suspended it from a cable mount underneath the Swiss Timing clock in the Velodrome, so that we could remotely follow the cyclists as they were running a continuous circuit of the track. An additional control allowed for remote focus by an assistant and, at the same time, permitted us to dial in a constant rate of rotation of the mount. The operator had only to make corrections in that speed to accommodate the rather complex shape of the track, which simplified his task.

For the filming of the Closing Ceremony it will be suspended from the technical ring of the Stadium. It was suspended behind our van for driving along the Olympic Basin during the filming of the canoeing and rowing events, where it rode almost as low as safety would permit. It gave us the capability of tracking along with the canoeists in order to get some very close shots. To meet the flexibility requirement of filming the Olympic Games, the Wesscam can be switched from the electric car mount to the van mount to the cable mount in an hour or so. It is completely interchangeable and we can switch it around very quickly. The suspension from a cable takes a little longer because of the complexity of climbing up into a Swiss Timing clock or a technical ring in order to do it, but the switch from the electric car mount to the van mount is quick and relatively easy. This quick-switch characteristic puts quite a number of options at our disposal.

The versatile range of the joystick control makes possible very rapid travel of the rig or very delicate movement, as slow as one might wish. The operator monitors the movement and composition by means of a small video

tube mounted on the console. The specially sensitive tube in the viewfinder that relays the video image to the monitor is actually the prototype unit for a new television camera that Sony will have on the market soon. It is about three times more sensitive than most cameras now in use.

The Wesscam has amazing stabilization characteristics. Even when traveling over the roughest road the suspension is not altered at all. We keep a 25mm-to-250mm zoom lens mounted on it, but we use it primarily at the long end of the lens in order to get really intimate closeups and establish a kind of close feeling with the athletes. The only problem when shooting at the 250mm end of the lens is a slight lateral parallax movement, which has nothing to do with camera movement. It's not an image instability and it's not objectionable.

This particular model of the Wesscam is AC-operated, but it has the capability of being DC-operated (servo-controlled), which would make it virtually a sync-sound unit. Once the casing is buttoned up, it could be very readily blimped. There are only electrical connections coming out of it. There are no mechanical linkages between the interior and the exterior, so the noise could be cut down to make it a virtually silent camera with very little difficulty — and that's in progress at the moment.

The manufacturer of the Wesscam is the Istec Corporation of Hamilton, a Canadian firm. The President is J. Nox Leavitt. I believe he's the man who wrote the specifications when Westinghouse originally built this unit. They've since sold the design to his company. The model he's currently manufacturing is called HC-32, but he will soon be coming out with a new model called HC-33. The unit we are using is the Model HC-32, with some improvements in the direction that the HC-33

(LEFT) The Wesscam mounted on electrical car approved for filming of the Olympic Marathon. Here the mount rests on plywood base which floats free on three thicknesses of foam. (CENTER) Console in passenger seat of vehicle controls pan, tilt, iris, zoom, and frame-rate of camera. Small video tube serves as monitor-viewfinder. (RIGHT) The Wesscam suspended from the technical ring of the Olympic Stadium during remotely-controlled filming of the Closing Ceremony.



will go. What we have done to this model is increase its gyro strength and stability. We've increased the capability of the yaw motor, so that the unit has a much greater lateral acceleration facility than the Model HC-32, and there have been a number of other improvements. There will be even more in the Model HC-33 — including the capability of the unit to "self-cage" for shipping. It will simply limit itself internally, so that it will be capable of being transported by any common carrier. This will make it very convenient to move from one location to another. ■

MORE ABOUT WESSCAM

By DOUGLAS BRADLEY

We used the Wesscam for the first time during the Opening Ceremony, in order to hold a shot of the Olympic Torch being carried into the Stadium by the runners. We utilized it after that on the rowing at the Olympic Basin and in the Velodrome to follow cyclists. We also used it in the road-cycling race, hanging from a hydraulic crane suspended out over the street, with the cyclists actually running underneath the ball. We will be using it again in the basin for canoeing, for shooting the Marathon and for the Closing Ceremony.

The Marathon, of course, will offer an opportunity for the most important use of the device, because we will be tracking with the athletes as they run this 26-mile race. The Wesscam will be mounted on our electrically-powered car. The plywood base on which it is set when mounted on the car rests on three layers of foam material, which provides what is actually a floating floor. We used to put our batteries on the plywood base and we would have a soundman sitting on one side, but when testing for the Marathon, we found that we really had to let it float free, so nothing can touch it now.

In other words, the camera in its sphere is really not bolted down to anything other than the plywood base, which is not attached to the car. It's simply floating on three layers of 2-inch foam with the center cut out to give it more tilt. It finds its own level and takes all the big bumps and jars.

When we want to change the location of the Wesscam, we have a crane which simply reaches out its arm, picks it up off the electric car and sets it onto the gasoline van.

Even though the Photo-Sonics camera inside the Wesscam is technically a high-speed camera, we use it most of the time at normal speed. The 24-frame-per-second mode on the camera is quite precise and it will



The Wesscam can be mounted under a helicopter, making possible a 360-degree pan, or side-mounted for easier landing (as shown here), in which case it permits a 210-degree horizontal pan. It can also tilt down 90 degrees and up 30 degrees above the horizon.

actually synchronize with sound for some period. I wouldn't count on it for quartz-control, but it's quite stable and we have, in the past, used it for post-sync.

In testing the Wesscam for the Olympic Games shoot, we found that because we would be using the relatively fast 7247 negative stock, the normal video viewfinding system was not responsive enough to low-light levels to be effective. Since we had some low-light-level situations to shoot (particularly the Marathon, which is an evening race), we were afraid we would be up against some difficult problems. So we approached the Sony people, who were kind enough to lend us the prototype of a new video camera which is due on the market in a few months. It is a low-light-level camera which is quite a bit more sensitive than most cameras now available, and it allows us to have a viewfinder which is adequately bright to film in low-light levels with a sensitivity comparable to that of

our 7247 film.

We have our own little crew that operates the Wesscam and we've developed a degree of teamwork that really pays off. We find that we can work as quite an efficient unit within the larger unit, but our crew has a great little team spirit of its own and we have a sort of internal competition, if you will, with the other crews. There's quite a good feeling of camaraderie. ■

MANUFACTURER'S NOTES ON THE WESSCAM MODEL HC-32 MOUNT

Camera Cars

On camera cars the use of a WESSCAM Mount enables smoother shots to be taken and hence more close-ups during the filming sequence.

Studios

In small studios where massive camera cranes are a nuisance, the cable supported WESSCAM Mount can produce soaring shots.

Boom Cars

With the WESSCAM Mount it is now possible to shoot from a boom car with a smoothness and

Continued on Page 1151

TECHNICAL SPECIFICATIONS OF THE WESSCAM MODEL HC-32

	Camera Unit	Console	Power Supply
Size	117 cm (46") dia.	50 x 75 x 38 cm (20 x 30 x 15 inches)	38 x 25 x 28 cm (15 x 10 x 11 inches)
Weight	81 Kg (180 lbs) (with camera)	27 Kg (60 lbs)	14 Kg (30 lbs)
Power			24V Dc 500 W
Permissible angular freedom of vehicle			
	Pitch and Roll	± 20°	
	Yaw	Continuous 360°	
Line of Sight Steering			
	Pan (in true horizontal)		Tilt (in true vertical)
Excursion	360° continuous		+ 15°, -90°
Rates	0° — 30° per sec		0° — 30° per sec

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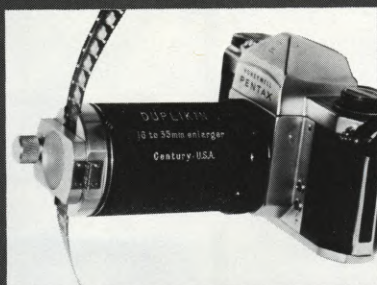
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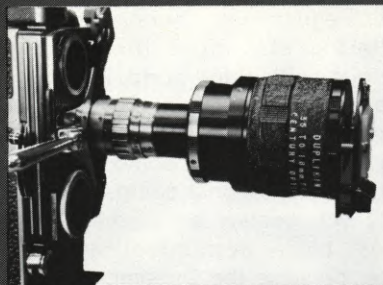
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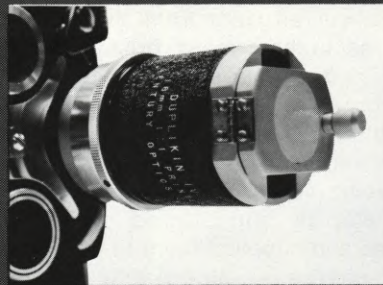
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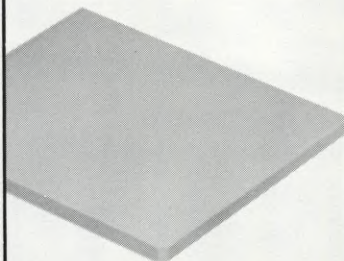
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MANY FACETS OF ORTO Continued from Page 1123

crews (or elements of film crews), lab services and sound services. From the beginning we have not been able to get any clear-cut answers from the unilaterals as to how many prints they want — and that is still our biggest problem.

Treise manufactures a film processing machine which we recognized early on as being very desirable for us to have. Kodak purchased these machines and supplied them to ORTO free of charge — along with film, chemicals, technical advice and quality-control personnel — all of which are greatly appreciated by us.

The rest of the equipment we had to obtain ourselves and the major source, of course, was the facilities of the CBC across the country. These facilities have been taxed to the limit because, aside from the requirements of the Olympics, the Corporation and both networks have had to keep up their regular programming, while working ahead to implement new schedules that will begin the first part of September.

In the beginning, we felt that we would need 56 cameras for our film crews, but we finally came down to a compromise of 30 brand new Eclair ACL cameras from France for Montreal and seven for Kingston.

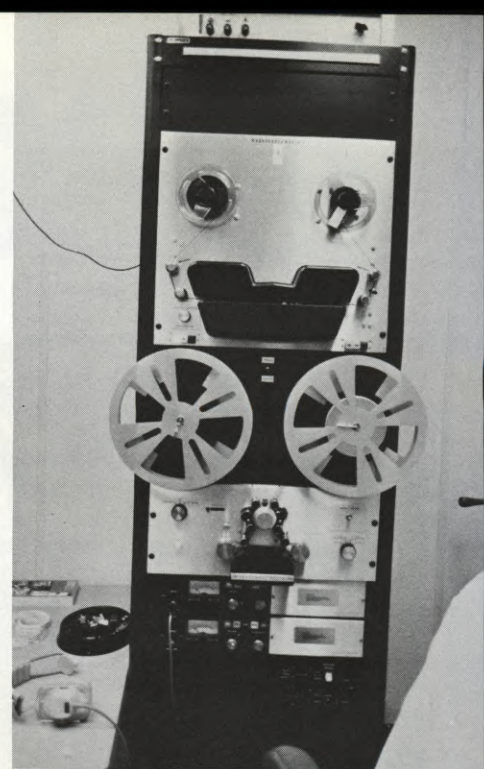
Another major aspect of our appropriation right from the start was that set

This modest, but adequate, sound mixing set-up, installed in-house at ORTO Centre was used to mix background sound and effects tracks for the daily 20-minute summary sent to 40 countries. There was no spoken dialogue or narration in the mix, each country presumably adding voice-over commentary in its own local language.

aside for procuring special sound-transfer, recording, and mixing equipment that would be truly compatible with international requirements. Unfortunately, there is no such thing as a single international standard relative to such equipment; there are several differing standards that apply in various parts of the world. Even so, we scanned the equipment offered by suppliers in Canada and Europe, searching for devices that would have some sort of international compatibility. Not only was money an element in this quest, but — even more important — time, because the Opening Ceremony was approaching very fast.

Finally we contacted the Canadian representative of Moviola/Magnasync and he came up with a favorable response from Los Angeles to satisfy our needs. As a result, what we have obtained is something that doesn't yet exist on the general market. It was put together exclusively for us, but I understand that it will now be made available on the market. Briefly described, it is a sound-transferring machine which, at the same time and on demand, can do a 25-frame/50-cycle transfer, plus transfers of 24 frames/60 cycles, 25 frames/60 cycles and 24 frames/50 cycles.

This machine doesn't take a reference out of the sector like other machines; it takes a reference from the quarter-inch tape itself. When you simply switch on the automatic reference incorporated into the machine,



This machine did not exist until the 1976 Montreal Olympics. It was built especially for ORTO by Moviola/Magnasync to handle 25-frame/50-cycle transfers, plus transfers of 24 frames/60 cycles, 25 frames/60 cycles and 24 frames/50 cycles.

you can take a tape that has been shot at 24/60 and make a transfer to 25/50 very easily. That same machine can be used in a different mode for the production of final prints. This means that all of our machines — and there are eight of them — can do either transferring or dubbing on demand, and some of them can do 3-to-1 mixing. All the machines, of course, are capable of playback/record — and they can playback and record *simultaneously*. This means that, during distribution, we don't have to concern ourselves about which copy goes to which country, and this saves a lot of time.

The Eclair ACL cameras which we are using are provided with 24/25-frame crystal sync, and there has been built into them a metering device which, however, affords the cameraman a certain flexibility. It's not actually a meter, but a light reference which he can see in his viewfinder, with the aid of light-emitting diodes and which is calibrated in increments of 1/2 stop.

The laboratory processing which we have in-house develops about 65 feet a minute of VNF film, either 7239 or 7240. The Kingston operation is similar to that of Montreal, but on a smaller scale. We have only one machine developing film there, and we have only four Steenbeck 6-plate editing machines, instead of the 20 in Montreal. At Kingston we also have a sound mixing unit which comes very close to what we have in Montreal. It's a little machine made in

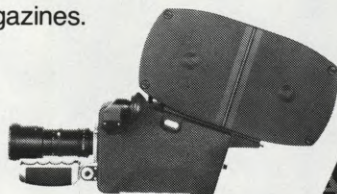
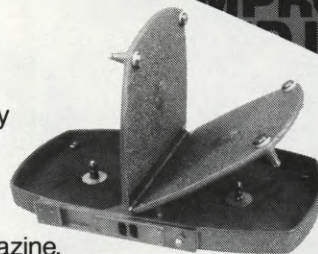
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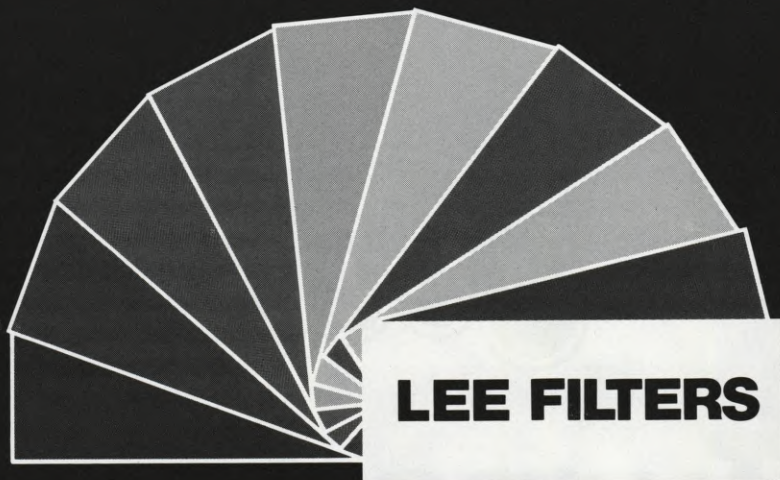
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WESSCAM CAMERA MOUNT

Continued from Page 1153

steadiness never before possible. Your script can call for a close-up of a tire to a wide-shot of the whole car in one continuous sequence. The camera remains as steady as if it were on a tripod on the ground.

Boats

The WESSCAM Mount can also be mounted on a boat. You do not have to wait for a flat calm for a steady shot. The horizon remains level; the pitch and roll of the boat is eliminated from the film.

Cranes

Normally the largest motion picture cranes can only go as high as 40 feet. The WESSCAM Mount can be fitted to readily available commercial cranes that go as high as 300 feet. This remarkable use of a crane allows you to go from an extreme close-up of a subject on the ground to a long-shot from 300 feet in the air in one smooth continuous shot.

Aerial Photography

There is absolutely no question that the smoothest helicopter shots ever filmed have been shot using the WESSCAM Mount. It gives a perfect steadiness that permits use of the zoom lens to its longest focal length.

Conventions

In the filming or televising of a convention, a WESSCAM Mount suspended by cables can take up positions hitherto impossible.

Operation

The WESSCAM stabilizer can be mounted to any form of mobile base such as helicopter, boat, auto or crane. The camera is completely isolated from vehicle vibration and produces rock-steady pictures in spite of vehicle rolling, pitching and yawing motions.

In addition to the superior images it produces, the WESSCAM stabilizer offers the important advantages of complete remote control of the camera system.

This is accomplished by integrating the camera's reflex viewfinder with a closed circuit television system that relays a picture of the shooting area to a video monitor on the cameraman's console. The console can be located either in the vehicle or, in the case of a crane mount for example, on the ground.

The WESSCAM system consists of three units: a camera mount; operator's console; and a power supply.

The camera mount is enclosed in a fibreglass reinforced plastic sphere, 46 inches in diameter, fitted with a transparent plastic window.

The camera can be tilted to any angle between 90 degrees down and 15 degrees up. Slip rings are provided to allow continuous pan movement.

A closed circuit television viewfinder together with zoom focus and iris lens drives allows remote control of the film camera.

The camera operator, looking at the closed circuit monitor is able to frame, zoom and focus as though he were looking through the eyepiece of the normal viewfinder.

The operator's console includes the closed circuit television monitor and all the controls necessary to operate the film and television cameras. ■

IN MEMORY OF JAMES WONG HOWE

*A cool wind
leaves bright water
and finds another place*

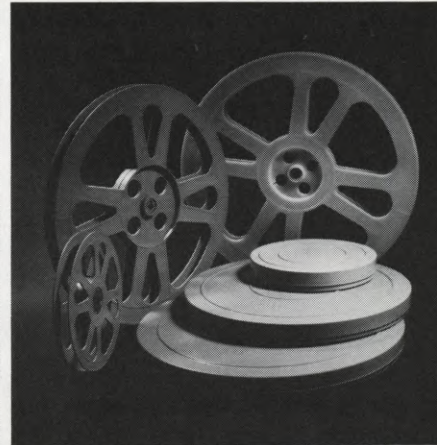
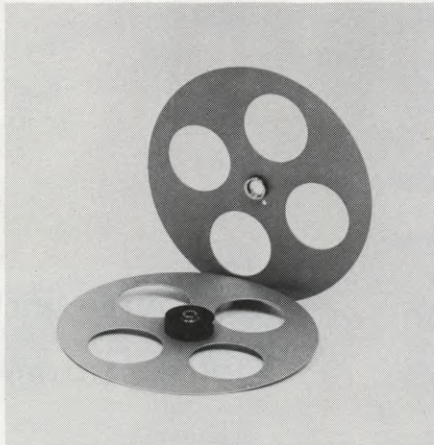
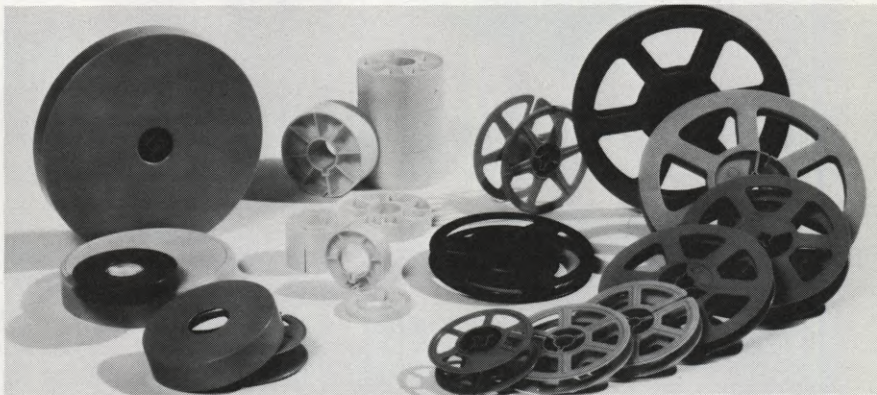
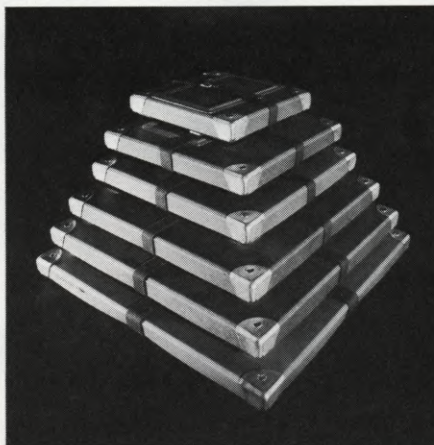
*A bird too lovely
for the dark world
flies to a white branch*

*There can be no mourning
for those who leave themselves
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—Charles Higham

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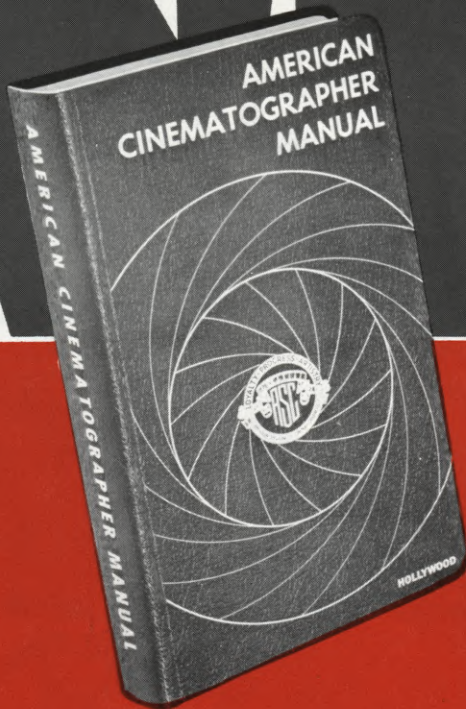


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AFTER "WHITE ROCK" WHAT?

Continued from Page 1147

on the music in England, the man who's going to be cutting the picture with me.

I want this picture to be like the most explosive commercial that's ever been made, but one that runs 30, 40 or 50 minutes — however long it turns out to be. I want it to be an integrated *experience* — far more than just a record of sports events. I want the audience to see a human being working as a machine and then suffering. I don't think people realize what is involved in vaulting 17 feet when all you've got is a fiberglass pole. I don't think they realize what it takes in terms of courage to do that. I've seen guys at the Olympics psyched out; they just couldn't do it, because they had lost their courage; for some reason, everything just went out of them that day. It takes sheer and utter guts to be able to do some of these things and to drive yourself beyond a certain point. There you are in front of television cameras, with everybody wanting to throw things at you basically, all wanting you to achieve something that you've never achieved before.

It's a very lonely place — and I hope that in our film some of that element will come through without our actually having to say it to anybody. ■

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THE OFFICIAL FILM

Continued from Page 1109

cameras, cinema was put at the service of people and became a participant in the discovery of the realities of life in Quebec. This was the era of "cinéma direct" in the French production section of the NFB.

Cameramen were becoming directors of their own films and in 1960-61, Georges Dufaux began more and more to both shoot and direct his films. He was co-director on *BIENTOT NOEL* and *I WAS A 90-LB. WEAKLING*, and director of *36,000 BRASSES, POUR QUELQUES ARPENTS DE NEIGE*, *RENCONTRES A MITZIC* and *LES DEPARTS NECESSAIRES*.

In 1963, with *FESTIN DES MORTS* by Fernand Dansereau, Dufaux also began to work as director of photography, a career he has since pursued at regular intervals on such films as *YUL 871*, *ISABEL*, *FORTUNE AND MEN'S EYES*, *TAUREAU* and *PARTIS POUR LA GLOIRE*.

At the same time, he was collaborating with Clément Perron, co-directing *C'EST PAS LA FAUTE A JACQUES CARTIER*, *CAROLINE* and *CINEMA ET REALITE*.

In 1967-68, Dufaux created a multiple-image film on the theme of Expo 67 called *L'HOMME MULTIPLIE* and participated in an identical project for a giant screen (the IMAX process) at Expo 70 in Osaka.

Always interested in "cinéma direct", which he sees as a tool for arriving at truth, Georges Dufaux has turned most recently to a more intimate documentary style. In 1971, he made *A CRIS PERDUS* followed by *A VOTRE SANTE* in 1974. His latest film, *AU BOUT DE MON AGE*, is a powerful reminder of the sad lot that awaits the aged in our society.

WERNER NOLD, FILM EDITOR

Werner Nold started out as a photographer, studying for three years in his native Switzerland, where he was born in 1933.

Upon his arrival in Montreal in 1955, he began work at the Service de Cinématographie du Québec (now called the Office du film du Québec), and eventually was employed as a cameraman on two consecutive series for television.

There then followed a period when Nold alternated between stints as cameraman and film editor, working at Nova Films, Québec, until, in 1960, he entered the National Film Board.

Since 1960, Nold has edited over forty-five feature-length and short subjects, many of which have been international prize-winners. Included in this list are *PATINOIRE*, directed by Gilles Carle, *60 CYCLES*, directed by Jean-Claude Labrecque, and *FLIGHT*, directed by Joseph Reeves.

In 1971, Nold also edited the comic spy-thriller *IXE-13*, a film by Jacques Godbout and François Domperre. In 1972, there was the feature-length *LE TEMPS D'UNE CHASSE*, by Francis Man-kiewicz, and in 1973, Marcel Carrière's feature *O.K. . . . LALIBERTE*.

In the two weeks of shooting the official film of the 1976 Olympics, as much as half a million feet of film could be used. It will be the task of Werner Nold to assemble this footage into what will become the finished product, the feature-length movie that will be shown around the world.

PRODUCTION STAFF OF THE OFFICIAL FILM

Executive Producer: BOBET, Jacques
Director: LABRECQUE, Jean-Claude
Associate Directors: BEAUDIN, Jean; CARRIERE, Marcel; DUFAUX, Georges
Film Editor: NOLD, Werner
Second Unit Directors: BELANGER, André; CHARTRAND, Alain; COWAN, Paul
1st Assistant Director: POTHIER, René
Production Manager: MURRAY, Ashley
Production Administrator: CARRE, Louise
Technical Directors — Camera: LACHAPPELLE, Jean-Pierre; ROY, Jean
Technical Directors — Sound: BEAUCHEMIN, Serge; DROUIN, Jacques; PELLETIER, Claude
Location Managers: ABASTADO, Lise; BROUILLARD, Marie-Andrée; DANDAVINO, Michel; LALIBERTE, Jacques; MALACKET, Marcel; MARCHAND, Jacques; MAROIS, Louise; RANGER, Louise; SAVARD, Jean; ZEBROWSKI, Eva.

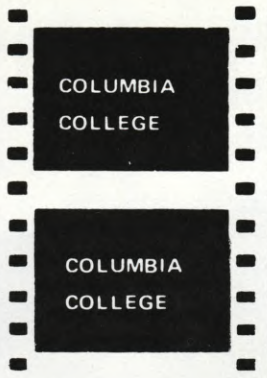
AT THE NERVE CENTER
Continued from Page 1119

knew about specific sports, and to keep the same crew on the same discipline from the beginning to the end. From the management point of view, I had to follow the union rules, eliminating stand-bys, overtime, etc., as much as possible. It took me almost a week to do all of this.

As soon as the Olympic sites were completed, we started to make our on-the-spot surveys. I carried with me an Eclair NPR camera with a 12mm-240mm zoom lens and my still camera for making slides. We had to verify the camera positions, the rules applying to camera crews and parking facilities on each site. We had to determine the type of lens that would provide optimum coverage in each place. In one case, the producer asked for frontal close-ups of swimmers on the course. We started with a 300mm lens for this purpose, but shortly afterwards changed to a 500mm. There was a young cameraman from St. John's, Newfoundland, assigned to this position, Derek Kennedy. He was a nice fellow, but he had not had enough experience with telephoto lenses and needed more self-confidence. Each day we spent a few minutes working together, and when I changed his 300mm to a 500mm, we shot some footage. The film stock was immediately processed and screened — and we were pleasantly surprised. After that I didn't have to worry too much about Derek. Just before the end of the Olympics we needed extreme closeups of the archery competition, but were unable to get close enough. Derek took care of the situation with his "baby", the 500mm Kinoptic, converted into a 1000mm lens by means of a 2X focal length multiplier.

General rehearsals were organized for June 26 and 27 — at which time I had only 11 cameramen. Almost none of them had ever seen the Eclair ACL camera before, the very camera they would be using throughout the Games. The first day of shooting was a real fiasco. The security guards were more than efficient; our film crews were thrown out of the majority of venues. There was a terrible meeting afterwards, but on the next day everything worked out just perfectly.

When the entire staff had arrived at ORTO, we had briefing and training sessions. My dioramas, showing plans of each venue, plus actual views from each camera position, were presented. For all of these people, it was an initiation for the upcoming events. A "hands-on" seminar was conducted by



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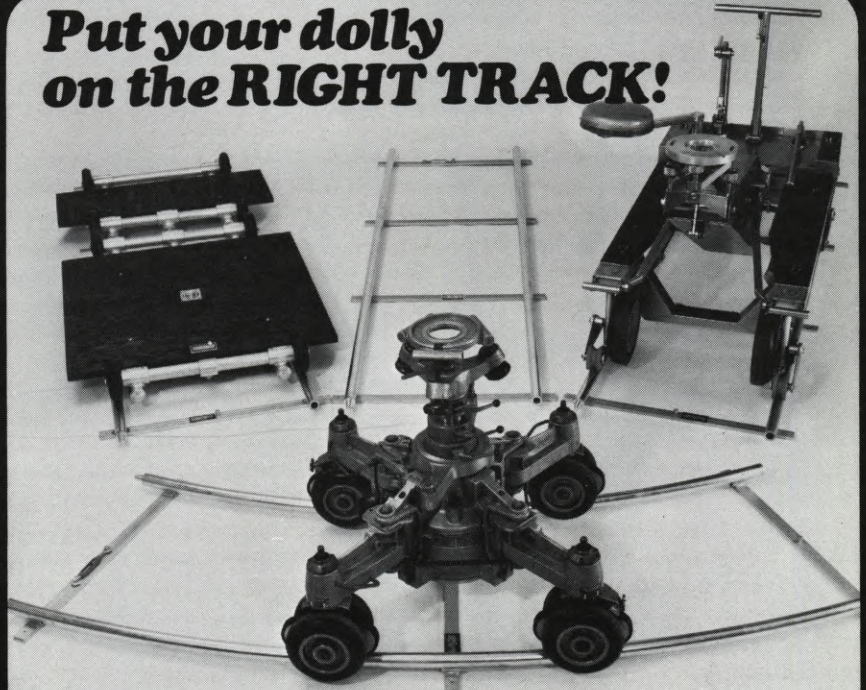
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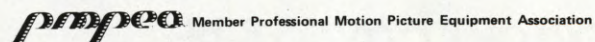
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my Chief Cameraman, Roger Moride, CSC, and Regis Laderriere from Eclair-International, Paris. It was nice to see 15 tripods with 15 ACL cameras on them and more than 30 cameramen crowding around them.

The Opening Ceremony, held in the Olympic Stadium, was our big kick-off. Two days before, producer Jean-Claude Houde took a group of C.S.C. people to make a last survey during the dry-run of the Ceremony. On the actual day, July 17, at 15:00, the camera crews were all in position. Everybody had a walkie-talkie, and producer Houde personally directed the first operation. 15,750 feet of film were processed during the night. At 8:30 a.m., editors C. Savard, C. Alain, R. Larouche, C. Bétournay, N. Chevalier, D. Marcotte, G. Pagé and A. Long, with Chief Editor Bernard Lamarche, started to prepare themselves for a screening of the first summary at 16:00. After that, it would be sent to the Mont-Royal Laboratories for the making of three masters and release prints (release prints would also be made at Les Laboratoires de Film Quebec and at Sonolab).

At 16:00 on July 18, Yvon Jean, Jean-Claude Houde and the rest of us were clustered in the cutting rooms. Supervisor Reginald Lussier was really flying around. But we were late with that first one. The summary did not run 20 minutes, as required, but 26 minutes, and everything was delayed. At 21:00 the first release prints came from the outside labs. There was another screening at midnight. It wasn't so bad, somebody said.

One of our biggest challenges was the coverage for producer Henri Parizeau of the Grand Prix, Equestrian Sports, Cross-country on July 21. The nine cameramen involved included: M. Kupchuk, CSC, D. Hunter, P.A. Lévesque, G. Dupuis, R. Moride, CSC, J. Grattan, A. De Tonnancour, H. Michel and E. Michel. The call was scheduled for 4:30 a.m., since all roads leading into the Bromont site (45 miles away) would be closed by 8:00 a.m. It started out very rainy and foggy, with the sun continuing to peek in and out of rain clouds all day long — a very tricky assignment for our cameramen, but the footage looked fine later on.

We were providing several services for the "unilaterals", those agencies of foreign countries requiring specific coverage of their countries' teams or athletes in action. These were the really international assignments for our cameramen. Frequent requests for cameramen speaking Hungarian, German or Italian were all in the day's work. In the majority of cases, we succeeded. Everybody on our staff was at

least bilingual.

Our system was much improved by the second week of the Olympics and everything ran smoothly. As everyone knows, the tower of the Olympic Stadium was not completed on time, which meant that the lucky electronic people got a special position for one camera in the basket of the construction crane. At the end of the Equestrian Sports-Jumping Grand Prix, and just before the Closing Ceremony, we were given permission to enjoy this privilege for 15 minutes in order to get some establishing shots. Roger Moride was "in the basket". The shots he got were at the end of the day, with blue night settling over Montreal in the background, but with the concrete of the Olympic Stadium painted red by the sunset. With the colorful Equestrian event going on in the foreground, they were fantastic shots.

The Closing Ceremony, of course, signalled the end of the 1976 Summer Olympics. At ORTO we had our last editing day, our last midnight screening of the release prints. And what else? Only strange feelings. Why stop now when everything is finally under control? A vacuum. But it was a nice time — something to remember forever.

When I recall some of the people who were there — A.R. Lewis from New Zealand, Klaus R. Schulz from East Germany, Hugo Marty from Switzerland, Mario Romannini from Italy, Herb Lightman from California, A. Colson from Toronto, Yvon Jean and all our staff — it will remind me of the glorious, unforgettable experience of the XXI Olympiad in Montreal. ■

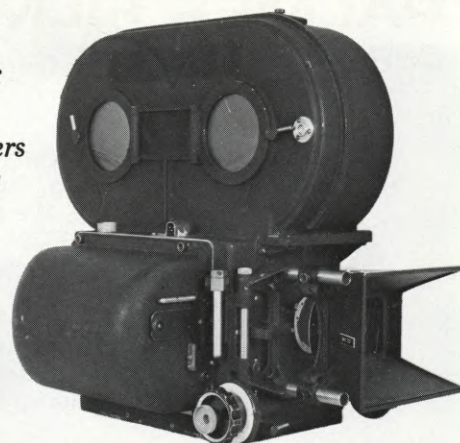
(ABOUT THE AUTHOR: KAREL LUDVIK, CSC, was born in Prague, Czechoslovakia in 1937. His university studies started with chemistry, followed by nuclear physics and agriculture. After two years spent in military service, he passed the entrance examination for the Film Faculty. He began his career as a free-lance assistant cameraman and sometime TV cameraman. His first major professional assignment was as assistant to Director of Photography Jan Curik on the feature film "FINSKY NUZ" ("KNIFE OF FINLAND"). After that he worked on several features as assistant cameraman until becoming operator to Director of Photography Jaroslav Kucera on "DOBRE PLACENA PROCHAZKA" ("WELL PAID WALK"), directed by Milos Forman. He emigrated to Canada in 1968 and, during the following year, made a 30-minute documentary, "STORY OF NATURAL CASING". He became a cameraman for Radio-Quebec and ultimately a member of that organization's Film Services Management team. Meanwhile, for the National Film Board of Canada, he worked on "TY PEOPLE" and "OCTOBER CRISIS". In 1974 he climbed Mount Kilimanjaro to produce a documentary on the Canadian Mountain Climbing Expedition.)

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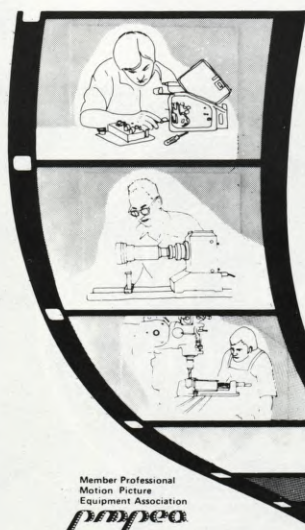
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**FILM FROM HOST BROADCASTER
Continued from Page 1118**

does not, of course, own these structures; it only rents them for a short period of time. The people who do own them were not necessarily willing to spend large amounts of money to install lighting that would be required for only two or three weeks. So a great deal of our time, during the early years, was spent in working with the planning, development, engineering and construction groups to ensure that an environment conducive to good film and electronics coverage would result.

Film serves several functions at the XXI Olympiad in Montreal, and our initial task was to identify what its role should be in relation to each sport, as compared with the role that the electronic medium might assume in portraying that sport. Specifically, many sports lend themselves to, or demand, *instant* coverage. In such sports as Track and Field in which a record is set in 10 seconds and, through the facility of modern communications, that fact is known around the world in 1/80th of a second, and where the visual aspect is immediately appealing, electronic activity can be the most applicable.

This is not always the case. There are some sports — archery is a good example; shooting is a good example — in which the fact of time and the fact of action are not as important as the fact of information, and in these areas film has done an extremely good job of providing such information about the sport.

There are other sports in which the dictates of sheer geography or the spread-out nature of the course indicate that film is the more effective way to go. Let's take yachting, for example, where three courses five miles out in Lake Ontario are being used for racing six or seven classes of vessels. Geography obviously dictates against the use of electronics. Film, in this case, provides a more flexible medium — plus the fact that the time element is not as important as it is in, let's say, the 100-meter dash. In yachting, the race is not officially over until approximately one-half-hour after the *last* contestant has crossed the Finish line, and there may be a wait of one to several hours, depending upon wind and weather. So through the flexibility and selectivity of film, one is able to prepare the information for the potential viewer in a way which denies the passage of time, rather than forcing him to live out the total experience. That is one function of film in the XXI Olympiad.

There is a second function that is

equally important. Because most team sports are compressed into a period of four or five days, more than one game of that sport may occur in each day. Football is a good example. If the games are being held in two or more locations in the same day, it would be physically impossible to carry all of the electronic equipment to provide that massive kind of coverage. Consequently, we would cover the first location electronically and the second and third locations on film.

There's a third function which film performs. Not all the countries of the world are equipped for, ready for, or have a sufficiently large audience to warrant a purely electronic coverage. Moreover, not all nations which are equipped with electronic systems necessarily subscribe to the same electronic system, and conversion of picture material electronically from one system to another is a very costly business. Film is an excellent means of bridging this gap.

For these reasons, we have undertaken to produce a daily 20-minute film highlights summary of events. Within each summary we try to achieve a balance to present a proper reflection of all the sports which have occurred on that day. The film for this summary is shot by our cameramen, who cover all of the active venues. It's edited by ORTO, printed by labs in Montreal, and distributed by plane the following night. The viewers receive a 20-minute resume of the preceding 24 hours of Olympic activity. We have a subscription list of 40 countries, or groups of countries which make use of this service, and it has proved to be very popular.

Which brings me to the fourth important role for film at the XXI Olympiad. According to the International Olympic Charter, accredited newsgathering agencies of the world have the privilege of using up to three minutes of events up to three times a day, with no less than three hours of elapsed time between one and the other. In 1972 the Deutsche Olympia Zentrum found a way to reduce their workload, while still making this material available. They produced a daily summary and made it available to the newsgathering agencies, who could then take up to three minutes from it three times daily. Profiting from their experience, we make these materials available under the International Olympic Charter, but without causing a massive workload which would require additional cameramen to provide coverage to the international news agencies, separate and apart from the other three needs I have described. ■

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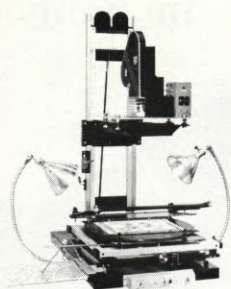
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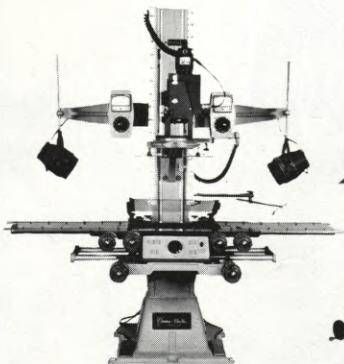
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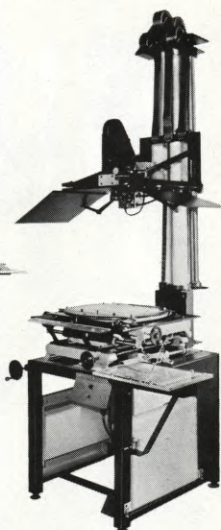
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"SLOW-MOTION" IN MONTREAL Continued from Page 1142

I developed the techniques using Eastman Ektachrome commercial film 7252. Though a faster film could have been used, I liked this film's contrast and color balance. At 400 fps, however, I needed to increase exposure at least three stops over normal because of the film's speed. As a result, I was backing off to $f/2.2$ or $f/2$ on my lens, with the consequent depth of field and focusing problems. In more than a few cases I was also "pushing" the film.

I was something of a skeptic when I was told that we would be using Eastman Ektachrome video news films 7239 (daylight) and 7240 (tungsten) in Montreal. I had never shot any of the new films before, so I went to Plattsburg to test them. The daylight balanced film is rated for an exposure index of 160, and I found that the three f /stops I had been giving away on my aperture I was now getting back in the film. I could shoot at $f/4.5$ or $f/5.6$, which was almost unheard of before. But more than that, I could use longer, slower lenses, because I could pick up the three stops in the film instead of the lens opening.

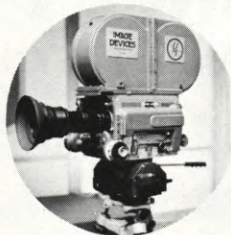
On viewing the rushes in New York I saw that the contrast was good and that the film produced warm flesh tones, which is good for athletic coverage. It also handled the blue sky and brilliant sun very well. The rushes went with me to Montreal for editing.

The film also is pushable. The ORTO laboratory in Montreal, set up by the Olympic Organizing Committee, recommended either shooting at normal speed or force processing two stops. They said the film had enough latitude that we would gain a lot more at two stops than one, so they only processed normal and two stops.

The two-stop push was helpful when we were shooting indoors at high speeds. All of the venues were equipped with metal-halogen lights which were balanced for daylight. But these lights created some problems for us. Above 100 frames per second, we picked up a pulsation — a strobing effect. We couldn't find any pulse points that would work.

For one shot of gymnast Nadia Comaneci, I tried to shoot wide — to get the whole forum, all five stages and the flags — and zoom across to key in on her just as she mounted the beam. I was sick when the film came back. When I was at 12mm, there were rivers of strobing all across the arena. But, when the camera was zoomed in, all we picked up was part of one band of the strobing. We could live with that. The action we got was historic, so we

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framed tightly when we were indoors.

In addition to ultra-slow-motion, we used the film cameras to isolate athletes. That's something the TV cameras can't do. For example, in a long race the video lenses were too long to track a runner and keep him in the frame from head to toe without the shot falling apart. In one race our isolation on one runner paid off.

Hazley Crafford, of Trinidad, was a surprise winner of the 100-meter men's race. Usually the winner of the 100-meter runs either first or second in the 200-meter. So we decided to isolate on him in the 200. This was the race where he fell down.

The TV cameras were tracking on the pack and the leaders and didn't get his fall. But we did. We took our overall film coverage of the race and superimposed his fall. It turned out to be a beautiful piece. It ran on the late night show that day, at 11:30 p.m.

Editing, of course, was done on the spot. Some was done in-camera when I carried two cameras to A roll on one and B roll on the other. We also had four film editors and four assistants in Montreal and five Steenbeck eight-plate tables.

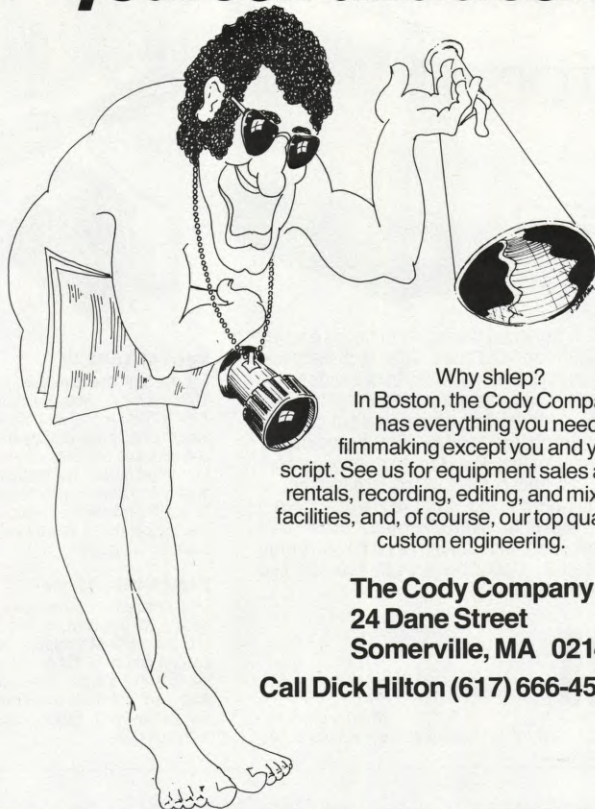
Editing techniques for ultra-high-speed footage aren't much different from those for film exposed at 24 fps. Naturally, there is no lip-sync sound to worry about. We recorded some of the normal background sounds, but music to set the mood was the key for the primetime audience.

In editing high-speed material, however, it's especially difficult to cut from one scene to another. I like to use a nice long dissolve of perhaps one or even two seconds as the transition.

After the film was cut into A and B rolls, it was transferred to tape and electronically completed with all effects. I feel that the best compatibility of film and videotape is achieved when you use all of the electronic devices at your disposal to get the film on the air in the most enhanced state. I wanted to use double images, dissolves and stop-action wherever appropriate. We used the Ampex HS-100 slow-motion videodisc to provide stop-action, and achieved other optical effects through the Grass Valley Group switchers available in our control rooms.

We used the effects, plus the beauty of ultra-slow-motion in our tribute to Bruce Jenner, the American winner of the Decathlon. The show aired on the last Saturday night of the Games. We decided to take the 1500-meter race — the tenth and key event of the Decathlon — and prepare it as a short report.

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task of collecting the material according to needs. In this respect, two clerks assigned to communications will oversee these outside messengers very closely.

All material given to the reception-dispatch office on the 1st floor will be checked by way of the forms already received and sent to the places indicated, e.g., the laboratory, the sound department, etc. Once the technical work has been done, the material will be returned to the point of departure, i.e., to the reception-dispatch office on the 1st floor where those in charge will send out the material only and keep the service requisition.

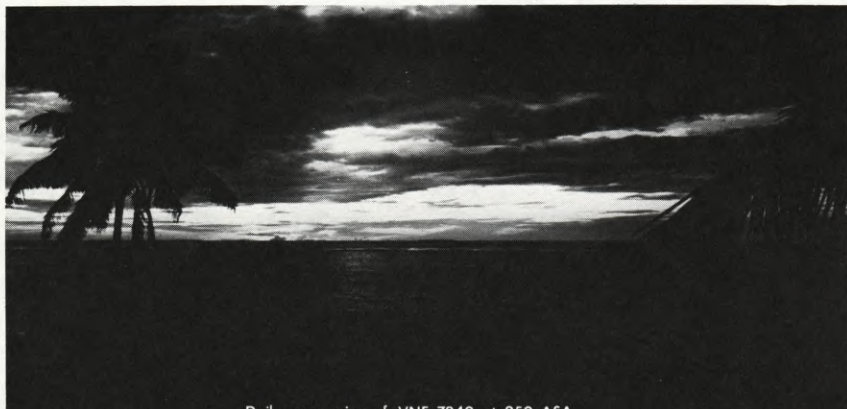
To distribute the material to the different departments concerned, four internal messengers will share the task. Their main delivery pick-up points will be the reception-dispatch areas on the 1st and 7th floors.

The "Film service requisition" form, duly completed by the reception-dispatch clerk on the 1st floor, will be sent with the material to the main reception-dispatch office on the 7th floor. From there, all material will be sent to the editing rooms where the work will be carried out. The service requisitions will be kept in the main reception-shipping office on the 7th floor until the work has been completed. In order not to delay the starting time for jobs sent to outside laboratories, the official deadline for the editing jobs will be fixed at 5:00 pm.

When the daily summary has been finished and checked by those responsible, the chief editor will himself take all the material used to produce the summary, correctly labelled, to the main reception-dispatch office on the 7th floor.

The clerk there will immediately send out the original to the laboratory chosen to make master copies, inter-negatives and finals, by way of an outside messenger; at the same time, the sound tapes will be delivered to the sound department to make the same number of final copies.

Everything left from the material which has not been used for the summary ("outs"), whether it be picture or sound tape, will be returned to the film library, correctly identified. In the case of the unilaterals, the above procedure will vary a little. The clerks at reception-dispatch on the 7th floor will gather all the details required for accounting purposes, e.g., when jobs requested by the unilaterals involve recoverable overtime, etc. These details will be sup-



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plied by the editor himself who will give the finished material to the reception-dispatch office on the 7th floor in the presence of the broadcaster. Having noted the details, the reception-dispatch clerk on the 7th floor will immediately advise the Booking Service of the extra charges and ask the broadcaster to go to the booking counter to settle his bill.

On his return to the clerk at the reception-dispatch office on the 7th floor, the broadcaster will present his receipt, and the clerk, after checking and taking note of this, will give him back his material.

At the end of each day, the 7th floor reception-dispatch office will give the Booking and Financial Services Xerox copies of the day's assignments showing all the necessary information; in this way, control will be maintained by both sides. When unilaterals go to the reception-dispatch on the 1st floor only to have their film processed only the part of the form for the laboratory will be completed by the clerk. In this way, we shall have at hand the necessary information to retrace the material.

KINGSTON

As in Montreal, the Booking Service will prepare the necessary forms advising the cameramen and the editors of the tasks they have to do, using an assignment grid set up beforehand by G. Brown and P. Normandin.

If everything proceeds as planned, the competitions will end, in theory, at about 3:00 pm. An outside messenger will pick up the film by boat and take it to the Harold Harvey Centre for processing, after which the editors can begin their work.

At the end of the races the cameramen will also return to the Harold Harvey Centre to give the rest of their filmed material to the laboratory for immediate processing and incorporation into the final edited version. The international sound track will be prepared with sound tapes recorded and selected in advance.

We have estimated at about 10 minutes the daily coverage of the yachting events. It will be transmitted by feed from Kingston to Montreal the same evening between 7:00 and 8:00 pm.

This material will be made available to broadcasters on request and sequences will be used the next day for the 20-minute film summary.

As in Montreal, broadcasters interested in using our services for interviews or other unilateral coverage can channel their requests through the Booking Service. It is understood that



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priority will always be given to ORTO needs and that the broadcasters' needs will come second to ORTO's. If special cases occur with the Booking Service, the Kingston Manager, Mr. Pierre Normandin, will decide on the solution.

AUXILIARY SERVICES

Booking Service

We shall supply the Booking Service with an initial draft of the assignments, using the program grid, at least one month in advance. In addition, on the eve of each filming day, a production meeting will take place with those involved in order to establish the final assignments of the cameramen, audio technicians, production assistants, script assistants, editors, etc.

Using this information, the Booking Service will complete the "Film services requisition" form and will subsequently send copies of that form to the reception-dispatch office on the 7th floor, or someone in charge will have them distributed to the people involved, keeping one copy for his own use. Those receiving copies may be:

- the Film Production Coordinator (K. Ludvik)
- the Film Operations Supervisor (R. Lussier)
- Program Information Officer (M. Lafrance)
- producer(s)
- production or script assistants
- cameraman (chief cameraman)
- audio technicians
- laboratory
- sound department
- technical store
- editor (chief editor)
- 1st floor reception
- accounting

Besides the personnel assignment forms (ref. "Film services requisition"), the Booking Service will give those listed below a certified copy of the general schedule ("blocking") they need in the course of their work:

- Manager of Program and Production Film Services
- Asst. Manager of Program and Production Film Services
- Film Production Coordinator
- Film Operations Supervisor
- 7th Floor reception-dispatch
- 1st floor reception-dispatch

Outside Laboratories

After joint evaluation with the Technical Services Film Department, and bearing in mind the probable arrival time of the material at the outside laboratories (5:15 pm), the first final copies should be ready between 8:00 and 8:30 pm every evening.

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and Production Film Service will establish, in a few weeks, the final number of copies we shall require for world distribution.

Distribution Company

Once the final choice of the distribution company has been made, I shall discuss the operation procedures with them.

It is sure that once the complete list of broadcasters is given to that company, we shall require official confirmation daily that the material has reached its destination. As soon as the distribution company starts work, we shall be able to find out the airline schedules for the different points across the world. I shall return to this subject after negotiating and discussing it with the distribution company selected.

CONCLUSION

I trust that this report meets with your requirements. If, however, something is missing, I shall be happy to answer your questions.

Yvon Jean

**Manager of Film Services
Program and Production Services**

ORTO MODUS OPERANDI FOR FILM COVERAGE

The main task of ORTO's Film Service is to record on film the sports events which are not covered electronically.

The primary objective is to produce a daily twenty-minute summary of the highlights of the Games, using competent personnel and suitable equipment. The Technical Sector of the Film Service will also handle a range of services, from simple film processing to the provision of technical film crews.

This demands close planning and the establishment of lines of communication between those required to work in the department itself and those at different points along the film's route in order to provide a quality product for the broadcasters.

Coverage Sites

Montreal and Kingston are the two operating sites for the Technical Film Service. In Montreal, film coverage will require the use of about thirty 16mm sound cameras coupled with 20 synchronised tape recorders and spare equipment. Seven film cameras, including two with sound, and two tape recorders will be adequate for all coverage of the yachting competitions at Kingston.

Part of the basement of the ORTO
Continued on Page 1180

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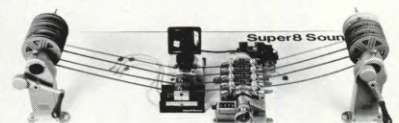
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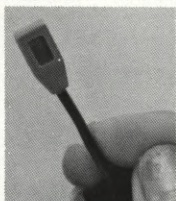
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FILMING THE XXI OLYMPIAD Continued from Page 1127

lenging shoot — and this one, in the mud and rain, is obviously going to be challenging.

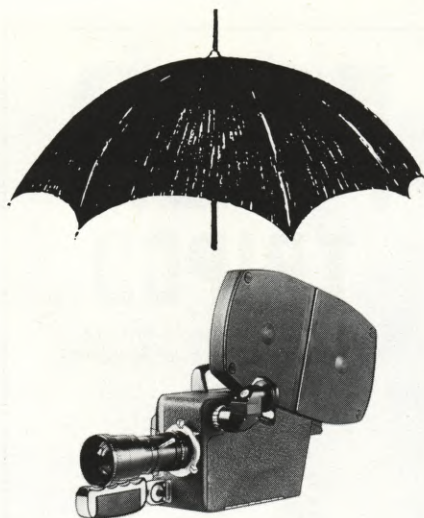
My old friend Arthur Wooster, the Director of Photography, has everything meticulously worked out on paper, as is his usual method, and he shows me a diagram of the course, with the various camera positions indicated.

It is a course to test the mettle of the hardest rider — eight miles long and with 36 of the most difficult-looking obstacles to jump that I've ever seen. Today, with rain and mud to add to the difficulty and danger, I really don't envy the riders.

Arthur, as usual, has given me an assignment tricky enough to test whatever skills I may have as a cameraman. I am to pick up the rider as he clears Jump #14, which is far to the right and actually in back of my camera position, and then I must pan him all the way around, zooming as I go, until he takes Jumps #15 and #16. It is quite a panning movement — about 170 degrees, I should estimate — and it requires winding myself about the tripod like a snake at the start of the movement. Then, as I run out of wind, I must do a funny little ballet — a kind of "Tip-toe Through the Tripod Legs" in order to get around to take the rider over Jumps 15 and 16 (one of which is under fairly dense trees, with the other out in the open). All this, of course, must be executed very smoothly — no jerks or bobbles in the panning movement, a smoothly unobtrusive manual zoom, which I can only do myself, and a composition that leads the rider ever so slightly.

The camera is set up by Christian (whose last assignment took him to the jungles of Africa as assistant to his father on a feature) and the trick is to keep the camera dry at least long enough to get it assembled. I donate to the cause the big plastic bag which has been issued me this morning to serve as a rain protector (you're supposed to cut your own holes for head and arms). Luckily, ORTO had given me a very chic, if four-sizes-too-big, rain cape with the CBC logo-symbol on the back, so I am happy to donate the plastic bag for swaddling the camera.

I have been given a list of all of the riders in the Event and have checked off those that I am to film, about 20 in all. Included on the list is one name that has a certain glamor to it: Her Royal Highness Princess Anne (or simply "HRH", as she is designated by the crew). It is my understanding that the



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entire Royal Family will be at Bromont to cheer her on today.

The Event begins. And it's hell on both horses and riders, as they slip and slide — and fall — on the slick terrain. There are several spectacular (but fortunately non-injurious) falls on the two jumps I am covering, and they are duly recorded on film. At one point, I turn to Christian and say: "The Guatemala rider is up next. She's not on our list, but I have a strong hunch that she's going to fall — so we'll film her." My ESP proves accurate — she falls dramatically right in front of my camera, just as though we'd rehearsed it.

Which leads me to ruminate on the particular ghouliness that news, documentary and sports photographers inevitably develop in the course of their careers. Without actually wishing anybody ill, they long for dramatic catastrophe to occur in front of the lens; it simply makes for a more exciting picture. Obviously, I'm no exception.

Now my list (and the announcer over the p.a. system) tells me that "HRH" is the next rider up. I'm braced for this one, determined to execute the smoothest 170-degree, manually zoomed pan ever recorded on film. As a horsewoman, Princess Anne is an unknown quantity to me. The Press, of course, gleefully reports every time she falls off a horse, just as they chronicle every bump on the head and fall on the ski slope that President Ford endures — but I'm not impressed by such journalistic sensationalism.

I pick the princess up in my viewfinder as she comes off of Jump #14 in the distance and follow her in a pan — very smoothly indeed, if I say so myself. She takes Jumps 15 and 16 beautifully, showing fantastic grace and style. No matter that she falls on Jump #19, further up the line — in my book she's quite a gal!

The rest of the day is spent playing hide and seek with the sun. My exposure ranges all the way from f/2.8 to f/22 — occasionally making that kind of change in the middle of a shot. Nevertheless, it's an exhilarating challenge.

God in his mercy has caused Man to locate a pub at Bromont, and it is to this hospitable precinct that the entire crew repairs when the shoot is over. Canadians are polite drinkers, but when "Dad's Army" (as Michael Samuelson calls his raucous group) takes over the pub, no one has to tell them: "The British are coming!" It's a great way to wind up a great day.

On Toward the Finale

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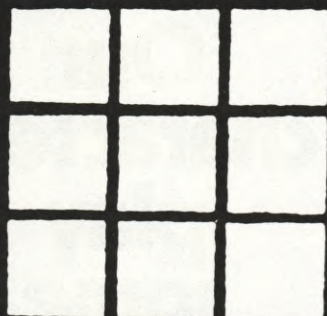
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tremely busy accompanying ORTO and NFB crews to the various venues — observing their techniques, taking pictures, conducting taped interviews. It is a hectic, but productive interlude. When I have anything that can be construed as "free time" in the evenings, I am invited to partake of the extremely warm and cordial hospitality offered by my French-Canadian friends — encounters which I shall always remember with the greatest affection.

The Games proceed with no further untoward political incidents to mar them — the only evidences of violence being the more than 250 accidents, which the drivers of the official cars manage to have while piloting VIP's around town in their vehicles.

In the Olympic Village, with its architecturally stunning half-pyramid quarters for the athletes, the true spirit of international brotherhood which is supposed to constitute the very core of the Olympic Games is very much in evidence. I watch with a certain warm glow as young male athletes from dozens of different countries play a spirited, and completely friendly, game of touch football — and it occurs to me that this is what the Olympic spirit is supposed to be all about, if only the politicians would keep their grimy hands off of it.

Up until the end, the tension which has characterized this event persists in the city. But at the Closing Ceremony, marred only by the appearance of a nude streaker in the midst of a circle composed of unflappable adolescent girls, the tension erupts into a wildly colorful visual and audible sigh of relief that nothing terrible has happened. It takes the slow-reaction-time police several minutes to realize that the nude intruder is not part of the planned choreography and they hustle him off the field.

The stands of the Stadium glow with thousands of little chemical light wands provided to the spectators, as the Olympic flag is lowered, the Flame is extinguished, and another Olympiad passes into history. Athletes and spectators mingle on the field in a kind of happy hysteria — singing, dancing and embracing long after the event is officially over.

The next day, even the incredible chaos at the airport cannot dampen my memories of Montreal and the XXI Olympiad.

Mostly, I shall remember the tremendous dedication and skill of the Olympic film-makers. And I shall remember the extraordinary warmth and kindness extended to me by such people as Yvon Jean, Karel Ludvik, Jean-Claude Labrecque and Roger Racine and their wonderful families. ■

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KODAK AT THE OLYMPICS

Continued from Page 1130

at ORTO — one at the sales counter itself, and another at a special storage room on the second floor where our bulk inventory is stored at a constant 35 degrees.

QUESTION: I understand that you are using an unusual Kodak stock for ORTO's masters and release prints — a stock of foreign manufacture that isn't available in the United States. Could you tell me about it?

MARTEL: Yes, it's the 7399 stock, a print stock, and the technology is similar to that of the 7239 and 7240. We got the 7399 from Kodak Pathé, but we expect it to be available in the States the middle part of next year. The reason that ORTO decided to go with this stock was that, after making tests by going through an interneg onto positive stock, they were unsatisfied with the results. They used 7389 and 7390 and made about 15 different tests using different printing systems. After making this evaluation, they found that the 7399 would give them the highest quality and this is the reason we provided it.

QUESTION: Was it strictly a matter of the quality that made them decide on the 7399 route?

MARTEL: That, plus the fact that the ORTO lab is geared for processing the original only and, after evaluating the capacities of the other labs for making masters and prints, they made the decision that it would be easier to go to master reversal and print reversal. The labs were given only four hours to do both in order to get the final prints to the airport in time for shipping.

QUESTION: What about facilities, services and advice in the making of the Official Film by the National Film Board? Is there any direct Kodak involvement there?

MARTEL: There is no direct involvement with the National Film Board. They made their arrangements directly through COJO and decided, since they were going to a 16mm format, to use the 7247 negative stock and they have their own laboratory for processing that stock.

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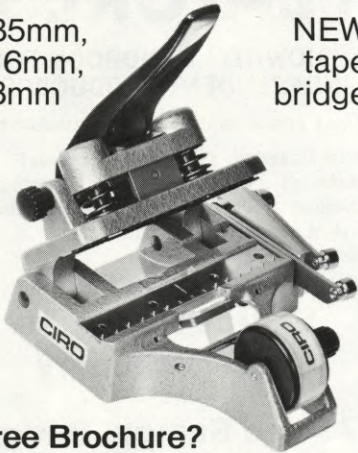
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MANY FACETS OF ORTO Continued from Page 1156

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Before the Games began, tests were run to select the lab to make the masters and provide them to other labs. It would sound conceited to say that our lab is very good, but if it was selected to make the masters, there must have been a reason.

All of the prints have to be shipped to CBC by 10 o'clock each night, as I said, but if it looks as though there will be a delay, we will call them and ask them to ship out the prints that come off the

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machine first, even though the rest will be delayed.

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In our early optimism we hoped that the cameramen's exposures would be so accurate and uniform that we wouldn't even have to time the original in order to make the masters, but after a few days it became evident that there was a wide range of variation. Our timing went from light 6 through light 50, which is a big spread. If we could have omitted the timing, it would have saved at least an hour in the schedule, but we just couldn't get away from having to time it.

ORTO is using 7239 and 7240 as original and we are using 7399 for masters and release prints. This is a new film stock which nobody here ever saw before. We were able to make tests only a few days before our operation was to begin and the quality surprised everybody. If we had followed the normal procedure — using 7252 for the master and 7389 for the release printing — the quality would have been very poor and no one would have been happy with it. I must admit that the 7399 is a very good film for this kind of work. It is a French film and neither America nor Canada knew anything about it.

There were three batches of the 7399 available, and after we made the tests, Kodak asked us to use number so-and-so for the masters and another number for the prints, because there was a difference in contrast between the batches. The batch we use for the masters is perfect for that purpose, because it has a very low contrast. It was really hard to know where we were going with this new stock and we found out only at the last minute.

This whole operation was a change from our usual procedure, because the CBC uses 7247 for all its other work. We find that the 7247 is technically a very easy film to develop. The one problem is caused by the fact that it is developed without any hardener, so the emulsion is very soft. You just can't treat it like reversal film. You've got to take every possible precaution, because all you have to do is look at it and it gets scratched. It's a very sensitive emulsion in that respect, but the quality of the film is marvelous. ■

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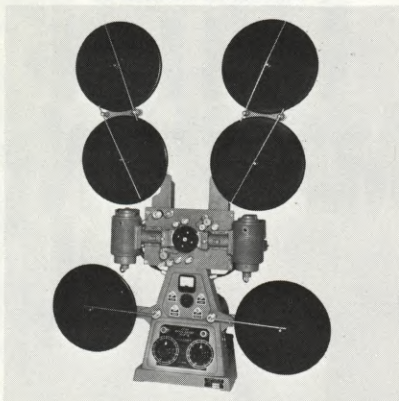
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BRINGING THE OLYMPICS TO ONE BILLION TV VIEWERS Continued from Page 1173

Broadcasting Center in Montreal will be used as a Film Processing Area, and the Sound Processing Area will be on the Sixth floor.

The 20 Editing Rooms and the three Viewing Rooms for production staff will be located on the sixth, seventh and tenth floors. The Film Processing Laboratory will include two units with a total capacity of 40 meters of film per minute, as well as accessories used for mixing and for quality control. The Sound Laboratory will have four sound-transfer machines and one mixing system with three-to-one capability. The Editing Rooms will be furnished with six-plate horizontal tables.

Kingston.

The production established for coverage at Kingston is somewhat different from that for Montreal.

Thus, the technical installations will be reduced in number but just as adequate. The film processing machine will have a capacity of 14 meters of film per minute.

There will be four Editing Rooms in Kingston, similar to those in Montreal. A multiple-purpose machine will handle the mixing and sound transfer with interlocked, separate mag. projection.

Film Pick-up

This will be done daily at each competition site by messengers especially assigned to this task. They will be dispatched by the PROGRAM SERVICE and not by our department. This responsibility for sending out the film also applies to the transfer of film leaving the laboratory for the Editing Room.

The Cameraman

Each roll of film which has been used up must be placed in a container on which the cameraman must carefully indicate ALL THE TECHNICAL DETAILS as they appear on the assignment sheet. Once in the Laboratory, the film's "in" and "out" time will be stamped on the same sheet.

The Film Processing Area

Here, the film is developed and there will be a strict procedure followed to ensure uniform quality. It has been decided that, all film used by ORTO and all chemicals will be supplied by Kodak Canada and bear the same batch number for all ORTO film operations. This method thus ensures the uniformity of the emulsions, and also guarantees the same quality of processing for the some 400,000 metres of film

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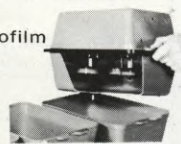
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involved.

The Film Service has seen that all technical equipment installed in the Processing Areas meets the highest technical standards. Besides that, the Quality Control Sector of each Processing Area will periodically carry out a sensitometry check (test strip). The time and date of each control process will be recorded in detail in order to keep track of the condition of the great amount of processing carried out during the Games.

Sound Processing Area

The Montreal Sound Processing Area is of special interest. Several technical approaches were submitted to the builders so that they could expand.

The flexibility of the equipment. In fact, the equipment can deal equally well with European requirements as with North American.

The quarter-inch sound tapes will be sent to the Processing Area by the same messenger service transporting the film.

The equipment used for sound transfer has been designed so as to accommodate four production systems. Thus, the sound transfer of the quarter-inch sound tape to 24 or 25 frames 16mm magnetic film will be carried out from a 50 or 60 Hz pilotone signal.

Adjacent to the Sound Processing Area is a Mixing Booth, one function of which is to combine the contents of three sound tracks onto a single 16mm magnetic film. The Sound Processing Area will also be equipped with seven recording decks which can all function simultaneously or separately according to requirements. This, therefore, means that it will be possible to produce seven sound copies of the summary each half-hour, if necessary.

The Twenty-minute Summary

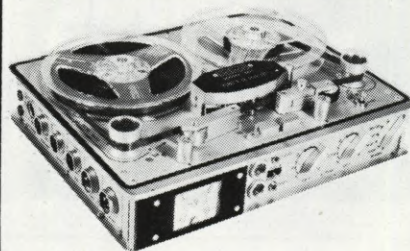
The copies of the summary will be produced from the original reversal. The main problem will be the time factor vis-à-vis the clients' delivery requirements. Several private film processors will, therefore, have to produce these copies.

The Program and Production Service.

As mentioned above, this department is responsible for picking up the film and sound tapes at the competition sites, and it will have to inform the laboratories of its priorities every day. The technicians will thereby know which film to process first. If no priorities are established, processing will be on a first-come, first-served basis. The same principle will apply to unilateral services. ■

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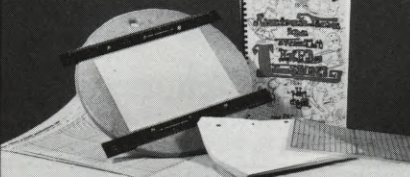
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"SLOW-MOTION" IN MONTREAL

Continued from Page 1169

Although parts of the race had been on the air already, we wanted to report it in an original, emotional way.

As the B roll, I used the last half of the last lap, where Jenner was running alone and then superimposed various high points from the start of the race from the A roll until he crossed the Finish line. The Gold Medal was superimposed over Jenner for the final 20 meters.

We edited it electronically on two film chains, A and B rolling the film to a tape machine, and using "The Impossible Dream" on the sound track. It worked very well.

Two key cameramen on the high-speed unit in Montreal were Darcy Marsh and Peter Henning. Their footage of the 4 x 100 Relay was equal at least to the famous film of Jesse Owens in the 1936 Olympics. Marsh and Henning, along with Joe Valentine, Don Shoemaker (who did a brilliant piece on the Marathon) and Don Shapiro, did an outstanding job under some very trying and occasionally even forbidding circumstances.

I'm neither a film nor an electronics advocate. I'm a picture man. But there are things that film can do that still can't be done with videotape in sports coverage. You can shoot ultra-slow-motion. You can isolate one athlete a great distance away and keep him or her on camera, while the long television lenses won't allow it. And you can get those angles that a TV camera can't be maneuvered into.

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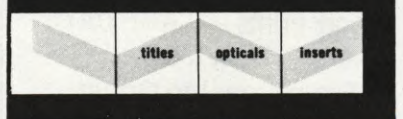
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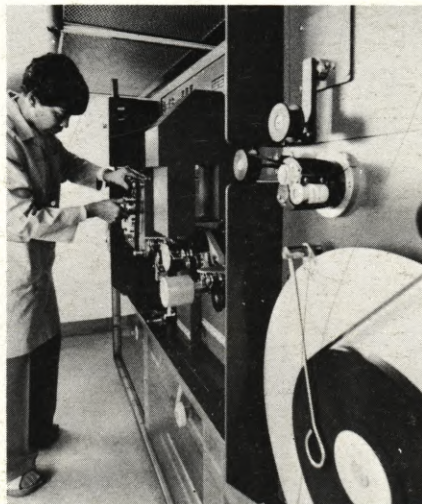
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