

Exhibit Directory

Animation Equipment Corp. Booth 65
38 Hudson St., New Rochelle, N.Y.

Exhibiting: New electronic-controlled compound. Features extreme, continuous accuracy achieved by joystick control of the directional movement of the compound.

Personnel: Ed Willette, Gregory Bell.

AnSCO Division, General Aniline & Film Corp. Booths 59, 60

Vestal Parkway East, Binghamton, N. Y.

Exhibiting: Military cameras and rapid process equipment; industrial camera; 16mm suitcase type rapid processor; AnSCO Automatic Recording Microdensitometer. Equipment, in so far as practicable, will be demonstrated.

Personnel: A. L. Derr, H. Kirby, Arthur Nields, E. G. Stambouljian, C. W. Seager.

Arriflex Corp. of America Booths 1, 2
257 Park Ave. South, New York 10
7303 Melrose Ave., Los Angeles 46

Exhibiting: Arriflex 16 with buckle switch and buckle switch over-ride, signal generator and automatic slate; new Arriflex 35 special high-speed model; Arriflex 35 model II BV with variable shutter; varifocal lenses, 140mm Angenieux

for Arriflex 35 and Arriflex 16, 85 Pan Cinor for Arriflex 16; Auxiliary Target Finder; nickel cadmium batteries, models for both Arriflex 16 and Arriflex 35, hermetically sealed new improved cells, built-in Mini Charger. The 17.5 to 70mm Angenieux in Arriflex mount will be shown with a new motor-driven zoom movement.

Personnel: Erich Kestner (Arnold & Richter), Paul Klingenstein, Victor James.

Avco Corp., Research & Advanced Development Div. Booth 41
201 Lowell St., Wilmington, Mass.

Exhibiting: Rotating Mirror Camera (writing rate: 3.9mm/ μ sec); Rotating Drum Camera (writing rate: 0.19mm/ μ sec); Kerr Cell Shutter (exposure times from 0.005 to 0.1 μ sec); Shadowgraph Photograph System to photograph projectiles moving in the 14,000 ft/sec range, and high-intensity spark light sources.

Personnel: Richard J. Burns, Bernard Slavin.

Beckman & Whitley, Inc. Booths 29, 30
973 San Carlos Ave., San Carlos, Calif.

Exhibiting: Ultra-High-Speed Framing and Streak Cameras covering the range in framing rates from 200 to 4.3 million pictures/sec and covering the range in streak rates from 60 in./sec to one million in./sec.

Personnel: Robert D. Shoberg, Jack Patterson, Frank Provost.

Bell & Howell Co. Booths 7, 8
7100 McCormick Rd., Chicago 45, Ill.

Benson-Lehner Corp. Booths 55, 56, 57
11930 W. Olympic Blvd., Los Angeles 64

Exhibiting: HS 16, a 16mm instrument with intermittent movement, speed to 400 frames/sec, designed to withstand severe environmental conditions; HS 35, instrumentation camera, intermittent motion, register pin movement, 300 frames/sec; HS 70, 70mm instrumentation camera, intermittent movement, gear shift speeds to 80 pin registered frames/sec; UHS 35, Ellis Ultra-High-Speed Framing Camera, 500 frames/sec to 1.6 million frames/sec, total frames to 960, electronically controlled kerr cell shutter; Puppet, timing and correlation system for instrumentation cameras.

Personnel: Dave Webster, Len Reed, Guy Hearon, Robert Saunders.

Camera Equipment Co. Booth 42
315 West 43 St., New York 36
1335 East 10 Ave., Hialeah, Fla.

Exhibiting: Waddell High-Speed Camera, disc shutter governor-controlled model and double and single-motor models; Weinberg-Watson Model

Equipment Papers and Demonstrations

Wednesday morning, October 19, from 9:30 to 12:00, exhibitors will present the following equipment papers and demonstrations. A complete list will be published in the 5th Congress Program

Beckman & Whitley, Inc.: Model 339 Continuous Writing Streak Camera.

Benson-Lehner, Inc.: Puppet Timing System and Ultra-High-Speed Framing Camera.

Camera Equipment Co.: Waddell High-Speed Camera, Weinberg-Watson Model B 16mm Projector and CECO Red Lake Stop-Motion 35mm Projector.

Eastman Kodak Co.: New Color Films for High-Speed Motion-Picture Photography.

Florman & Babb, Inc.: Acmade Mark II Editor.

L-W Photo Products, Inc.: L-W Industrialist 16mm Stop-Motion Instrumentation Projector.

Prestoseal Mfg. Corp.: 16-35-70mm Butt-Weld Splicer for intermixed material.

Traid Corp.: Traid 180° Lens for 35mm Cameras and Photo-Sonics 16mm High-Speed Prism Camera.

Carl Zeiss, Inc.: Zeiss Interferometer.

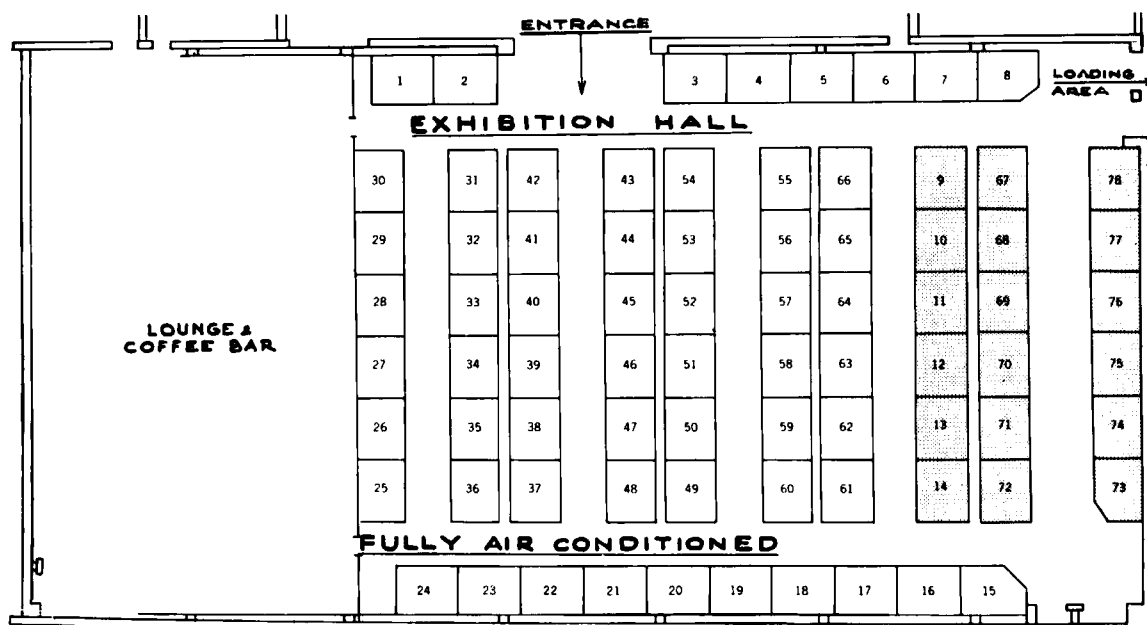
Exhibit



Fifth International Congress on High-Speed Photography

Displays and demonstrations of instrumentation and high-speed photographic equipment from manufacturers all over the world. See the newest developments in specialized electronic, optical and mechanical photographic instrumentation devices for all applications.

Government and Industry Exhibits will be featured.



FOR RESERVATIONS

contact the Exhibit Chairman:
 Keith B. Lewis, Eastman Kodak Co.,
 1000 Connecticut Ave., N.W.
 Suite 1101, Washington 6, D.C.

EXHIBIT SPACE RENTAL RATES

Booths 1-2-3-4-30-31-42-43-54-55	\$350
Booths 15 to 19 incl. and 61 to 66 incl.	250
All other booths	300

Booths 9 to 14 and 67 to 78 inclusive are being reserved for military and institutional exhibits.
 All booths are 8 x 10 ft in size.

October 17-21, 1960

SHERATON-PARK HOTEL, WASHINGTON, D.C.

B 16mm Projector; CECO Red Lake Stop-Motion 35mm Projector; CECO accessories for high-speed and normal photography.

Personnel: Frank C. Zucker, Burton N. Zucker, John H. Waddell, Eugene H. Levy, Allen Green.

Canadian Applied Research Ltd. Booth 47
750 Lawrence Ave., W., Toronto 19, Ont., Canada

Exhibiting: The CARL Automatic Tri-Film Processor. Transportable processor develops and dries black-and-white negative or positive film at speeds up to 6 ft/min; 400-ft magazine; accommodates 4 16mm films simultaneously, 2 35mm or 1 70mm film; processes lengths 10 ft to 400 ft.

Personnel: W. V. O'Leary.

Computer Measurements Co. Booths 15, 16,
12970 Bradley, Sylmar, Calif. 17

Exhibiting: Automatic cleaner for 70mm instrumentation film; automatic 70mm film splicer for continuous processing; Printer Robot, programming tape-operated system for Bell & Howell continuous printers; keyboard-perforator for preparing tapes for automatic printer operation; automatic light-intensity controller for step printers; air-vacuum squeegee kit for film printers; color timer for improved printing color balance.

Personnel: J. L. Cassingham, George W. Greenville, T. Connors.

E. I. du Pont de Nemours & Co., Inc. Booth 48
1007 Market St., Wilmington 98, Del.

Exhibiting: High-speed CRONAR*-based (*Du Pont's trademark for its polyester photographic film base) motion-picture films. The films will be demonstrated to show the dimensional stability of CRONAR when subjected to extreme temperatures.

Personnel: F. Gerretson, D. Peak, R. Perrine, T. Harding, W. Lockwood, P. Porter, Jr., J. Vokoun.

Eastman Kodak Co. Booths 33, 34
Rochester, N.Y.

Edgerton, Germeshausen & Grier, Inc. Booth 21
160 Brookline Ave., Boston 15

Exhibiting: Mark VI Sensitometer; No. 501 Stroboscope; No. 2307 Double Flash Light Source for silhouette photography; Microscope Illuminator for macro- and microphotography; Type 2208 Rapatronic Camera; underwater photographic equipment; oceanographic cameras, light sources, sonar pingers which can be used for underwater photography up to the ultimate depth of 37,500 ft; XLS-10 Multiflash Unit; XLS-1 Electronic Flash Unit for night aerial photography; Micro

Flash Unit for stopping motion of rapidly moving objects.

Personnel: M. D. Altfillisch, B. F. Roberts, C. W. Wyckoff, J. Treadwell, S. O. Raymond, H. E. Edgerton, A. C. Johnson.

Fairchild Camera & Instrument Corp. Booth 66
580 Midland Ave., Yonkers, N.Y.

Exhibiting: Fairchild HS-401, 400-ft model, range of 10 to 8000 frames/sec; HS-100 Airborne Model, range of 32 to 2400 frames/sec; HS-101, range of 32 to 8000 frames/sec; HS-1101 Lens Kit; HS-2551 Tripod; Camera and Event Synchronizer; HS-401-C1 motor kit; HS-10500 Timing Light Generator; HS-5101B Full Wave Rectified Power Unit; HS-5004B Rechargeable Battery Pack; motors for high-speed cameras.

Personnel: Gerard J. Morio, Peter N. Payne, Herbert M. Oshan.

Field Emission Corp. Booth 22
210 N. Ford St., McMinnville, Oregon

Filmline Corp. Booth 35
43 Erna St., Milford, Conn.

Exhibiting: Model RT-S Processor for 16mm reversal and negative/positive film, dry to dry in 1 min, wash tank after each chemical solution, film squeegee on each tank, temperature control system, stainless steel Type 316 tanks, 1200-ft magazine for daylight operation, variable speed transmission, tachometer, new impingement-type film drying cabinet and related equipment.

Personnel: Edward B. Krause, John Jiruska.

Oscar Fisher Co. Booth 58
Newburgh, N.Y.

Exhibiting: Autotrac Processall—no-thread automatic processing machine for motion-picture, roll and sheet film and paper photographic materials up to 12-in. width and 1000-ft length, at operating speeds of 50 ft/min for motion-picture film and 9 ft/min for roll and sheet films and papers.

Personnel: Oscar Fisher, Stephen Fisher, Milton Kinsler.

Flight Research, Inc. Booths 39, 40
P.O. Box 1F, Richmond 1, Va.

Exhibiting: MULTIDATA cameras: 16mm Model III Series; 35mm Model IV Series and 70mm Model V Series; New Model VI-4 AUTEX, automatic exposure control; Model A-32 Series Intervalometer; Model 122 STROBEX Electronic Flash Unit; 35mm AUTOMAX Series Data Recording Camera; PROTECT-A-PRINT; Model A-50 Pulse Time Synchronizer.

Personnel: Wm. T. Curdts, III, John C. Pennock, Donald Bass, William K. Glave.

Kino-Technik vol. 14, May 1960
 Hochfrequenzkinematographie mit Fastax-Zeitdehnerkamas im Millesekunden-Bereich (p. 137) *F. Kolb*
 Die Impulsampe SPP 800 W in der Kinoprojektion (p. 141) *R. Doeckel*
 Neue Kopier- und Entwicklungsmaschinen für 8-mm-Film (p. 147)

Proc. Inst. Electrical Engineers
 vol. 107 Pt. B No. 32, Mar. 1960
 High-Power Transmitting Valves With Thoriated Filaments for Use in Broadcasting (p. 172) *H. S. Walker, W. H. Aldous, R. G. Roach, J. B. Webb and F. D. Goodchild*

RCA Review vol. 21, Mar. 1960
 Simultaneous Signal Separation in the Tricolor Vidicon (p. 8) *H. Borkan*
 Ringing in Horizontal-Deflection and High-Voltage Television Circuits (p. 17) *T. Murakami*
 The Influence of Magnetic Tape on the Field of a Recording Head (p. 45) *D. Della Torre*
 Theoretical and Experimental Study of Wide-Band Paraboloid Antenna With Central-Reflector Feed (p. 94) *P. Foldes and S. G. Komlos*
 Measurement of Semiconductor Properties Through Microwave Absorption (p. 124) *R. D. Larrabee*

Research Film vol. 3, No. 5, 1960
 Time-Lapse Cinematography With the Interference Microscope (p. 267) *G. G. Rose*
 Filming Light-Emitting Particles in Motion (Metal Drops in Vacuum Steel-casting) (p. 297) *D. Elle*

Abstracts

Abstracts from other Journals, chosen for importance and timeliness, are published in the *Journal* from time to time. The greater number of these abstracts are translations, chiefly from the U.S.S.R., and made available by the *Kodak Monthly Abstract Bulletin*.

These subject areas are grouped below:
 Cameras and Equipment
 Film and Its Properties
 Color Photography and Color Development
 Film Processing (Apparatus and Chemistry)
 Printing and Optics
 Sensitometry and Image Structure
 Projection

CAMERAS AND EQUIPMENT (except High-Speed)

Camera Shutter With a System of Complete Internal Reflection

The action of the patented shutter is based on the complete internal reflection of the light rays. The shutter consists of two 90-degree, glass prisms, joined together along the hypotenuse faces, between which a small interval is left. In the latter is a transparent film. The space between the film and one of the prisms is filled with a transparent liquid, the pressure of which can be controlled. On increasing the pressure, the film is pressed against the hypotenuse face of the second prism, and both prisms form a transparent cube, transmitting the light rays. On lowering the pressure, the film comes away from the second prism, and the light rays cannot pass through the cube, since they experience complete internal reflection at the

hypotenuse face. S. C. G.—[Translated from *Referativnyi Zhur., Fiz.*] Japanese 7872. B. Takao. Filed Sept. 11, 1956.

For the Future Development of the Material and Technological Basis of Cinematography

At present the projected extension of the motion-picture network in the Soviet Union is hampered by insufficient output of apparatus and motion-picture film of the required quality. Plans for the next two or three years envisage the reconstruction of a number of apparatus factories in order to provide a sufficient number of projectors for the new cinemas, and also an increase in the number of processing laboratories, together with the improvement of those

already in existence. Similar reconstructions and extensions are planned for the manufacture of motion-picture film, particularly color stock, and, if the plans for the manufacture of nonflammable base are fulfilled by 1962, the transition to safety base should be practically complete. A feature of the plans is the development of the industry in provincial centers. (S. C. G.) —*Tekh. Kino i Televideniya, 4:1-4, Jan., 1960, (in Russian).*

Motion-Picture Apparatus Factories in 1960. (I) Moscow "Kinap." (II) Odessa "Kinap." (III) Samarkand "Kinap."

Descriptions are given of apparatus being made by the three main Soviet

PRECISION® FILM EDITING EQUIPMENT

Precision Unitized Film Synchronizer



Pat. Appd. For
 Model S635-1
 Single Sprocket 35mm
 Synchronizer \$95.00
 Single Sprocket 16mm
 Synchronizer \$95.00
 (not shown)



Model S616-3
 Three sprocket
 16mm Synchronizer with
 Spacer and Magnetic head.
 \$215.75

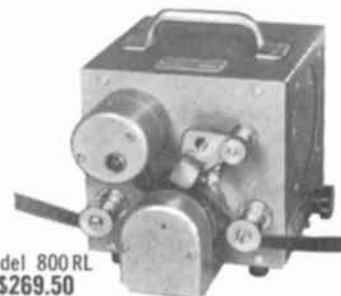


Sprocket Assemblies
 16 or 35mm \$32.50 ea.

optical-magnetic sound readers

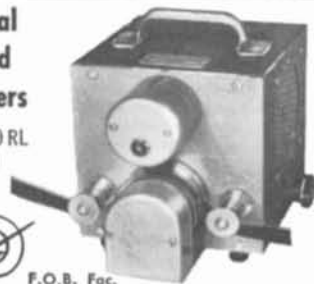


Model 800
 \$259.50



Model 800RL
 \$269.50

optical sound readers



Model 600RL
 \$195.00



F.O.B. Fac.

magnetic film and tape sound reader



Model 700
 \$198.00

Send For Free Literature

PRECISION LABORATORIES
 DIVISION OF PRECISION CINE EQUIPMENT CORPORATION
 1037 UTICA AVENUE
 BROOKLYN 3, N. Y.

"Come and see us at Booth 20"

Florman & Babb, Inc. Booth 62
68 West 45th St., New York 36

Exhibiting: Acmade Mark II Film Editor; Aiglonne "America" 16 and 35mm Film Processor; F&B Triplex Animation Stand; New F&B 16 and 35mm motorized film viewers; F&B nickel cadmium batteries and power supplies; Miller fluid drive heads; telescopic tracking camera viewfinder; new F&B magnetic film splicer; other new items.

Personnel: Arthur Florman, Charles Lipow, Leonard Hollander, Ted Viilu, John Babb, Don Notto.

Dr.-Ing. Frank Früngel GmbH Booth 27
Hamburg-Rissen, Germany

Exhibiting: The Strobokin—a high-speed pulsed light capable of up to 50,000 flashes/sec; duration of each flash 1 μ sec; by addition of auxiliary power pack frequency may be extended to 300,000 flashes/sec, random burst. Also—Kerr-cell type shutter and pulsed x-ray device.

Personnel: Dr.-Ing. Frank Früngel, Dr. Walter Thorwart, H. G. Patzke, Otto Dietrich, Frank Kelly (J. A. Maurer, Inc.).

Heico, Inc. Booths 37, 38
25-27 North 6 St., Stroudsburg, Pa.

Exhibiting: Heico Resinator Mark IV. Purifies water physically and chemically through the use of Heico resins, removing such contaminants as iron, copper, algae, bacteria and sediment.

Personnel: W. J. Kellow, Jr., H. E. Ingraham, T. E. Ingraham, John H. Davis.

Karl Heitz, Inc. Booth 49
480 Lexington Ave., New York 17

Exhibiting: Kinoptik series of more than 20 high-speed color matched Achromats in mounts for 16mm, 35mm and TV cameras, ranging from extreme wide angle (1.9mm f/1.9) to telephoto (500mm f/5.6); Alpa 35mm all-in-one single lens reflex camera with automatic lenses, including 4 Achromats; Robot 35mm automatic cameras with electro-magnetic photo-recording system; Sinar interchangeable view camera; Lindia snap-in mounts; Camex 8mm single lens reflex camera.

Personnel: Karl Heitz, Rick Hershberger, Yvonne Brandes.

Hi-Speed Equipment, Inc. Booth 4
73 Pond St., Waltham, Mass.

Exhibiting: Hi-Speed Model FA-50 Spray Processor. This machine requires only two gallons of solution and processes 16/35 perforated or unperforated film at speeds up to 50 ft/min.

Personnel: Nicholas Cedrone, Richard Reedy.

Philip A. Hunt Co. Booth 36
Palisades Park, N. J.

Exhibiting: Photographic chemicals of black-and-white and color processing. Demonstration of electrostatic prints in black-and-white and color made with Hunt toning powders.

Personnel: Charles LoBalbo, Charles Belmont, R. A. Root.

Kenyon Products, Inc. Booth 53
Chester Airport, Deep River, Conn.

Exhibiting: Kenyon Stabilizer gyroscopic device, small, lightweight (24 oz.), used to stabilize hand-held cameras (and other optical instruments) against vibrations of aircraft, boats and land vehicles. Attached to camera by tripod mounting.

Personnel: T. W. Kenyon, E. H. Pallme, H. D. Riley, E. J. Conlin, Jr., J. H. McElroy, J. Newberry.

L. W. Photo Products Co. Booth 19
P.O. Box 147, 18220 Parthenia St., Northridge, Calif.

Exhibiting: Instrumentation cameras, projectors and accessories.

Personnel: Robert H. Lawrence.

D. B. Milliken Co. Booth 28
131 N. Fifth Ave., Arcadia, Calif.

Exhibiting: Milliken 16mm High-Speed Motion-Picture Cameras; speeds from 4 to 400 frames/sec.; intermittent movement with register pin: DBM 3-100 ft, DBM 4-200 ft, DBM 5-400 ft, DBM 9-400 ft (waterproof).

Personnel: Donald B. Milliken, T. W. Truesdell, R. L. Rodgers.

Motion Picture Enterprises, Inc. Booth 44
Tarrytown, N.Y.

Exhibiting: Film reels, cans and shipping cases; video tape reels; professional editing and laboratory equipment; Marguet splicers; Motion Picture and TV Service Directory.

Personnel: Herbert R. Pilzer, Victor Thomas.

Neumade Products Corp. Booth 43
250 W. 57 St., New York 19

Exhibiting: Video tape cabinets; audio tape cabinets; 70mm, 35mm and 16mm film cabinets; synchronizers, splicers and rewinds for 16mm, 35mm and 70mm; filmstrip and slide storage; film cleaner; editing tables.

Personnel: Lee E. Jones, Lew Grofsik, Robert E. Hempel, Warren W. Clements.

Nissei Sangyo Co., Ltd. Booth 18
501 Fifth Ave., New York 17

Exhibiting: High-speed camera with specifications of 16H camera body, camera speed 500 to 10,000 frames/sec., standard lens, single reflex type; timing light pulse generator, 100 to 1000 pulses, lens kit and accessories; Mitchell type tripod.

Personnel: K. Okamoto

O'Connor Engineering Laboratories Booth 63
9862 Highland Ave., Alta Loma, Calif.

Exhibiting: O'Connor Engineering Fluid Pan and Tilt Heads. Model C carries 20 lb; Model 100, 100 lb; Model 200A, 200 lb-suitable for TV; Model 200X, 150 lb-designed for missile tracking.

Personnel: J. T. Brodie, C. O'Connor.

Photo-Sonics, Inc. Booth 54
820 South Mariposa St., Burbank, Calif.

Exhibiting: 70mm Full-Frame (2.25 in. × 2.25 in.) Camera—180–360 frames/sec; 70mm Full-Frame Camera, high-speed intermittent—10 to 80 frames/sec; 70mm Ballistic Synchro Camera; 35mm High-Speed Rotary Prism Camera; 16mm High-Speed Rotary Prism Camera (3 models); 16mm Thin Line, Underwater High-Speed Camera.

Personnel: John Kiel, Darrell Lassiter.

Photo Animation, Inc. Booth 61
34 West St., So., Mount Vernon, N.Y.

Exhibiting: Portman Animation Stand and complete line of accessories.

Personnel: Warren Portman.

**Precision Laboratories Div.,
Precision Cine Equipment Corp.** Booth 20
1037 Utica Ave., Brooklyn 3, N.Y.

Exhibiting: Precision Sound Readers for editing optical or magnetic soundtracks; unitized synchronizers; magnetic attachments for synchronizers; film slitters; editing devices for picture and sound; Noris 8mm Projector for synchronization with tape recorder.

Personnel: Irwin R. Sheldon.

Prestoseal Manufacturing Corp. Booth 5
37-27 33rd St., Long Island City 1, N.Y.

Exhibiting: Prestoseal equipment for splicing dissimilar materials with a thermal setting reinforcing agent, used with Presto Butt weld Splicer to heat-seal similar or dissimilar materials; 16mm, 35mm and 70mm butt weld splicers; digital paper tape splicer.

Personnel: Leonard A. Herzig.

Polaroid Corp. Booth 6
730 Main St., Cambridge 39, Mass.

Exhibiting: New Model 900 Camera; new Model 110B Camera and other film products. The demonstration will include the photographing of oscilloscope traces, using the Polaroid Land Roll Film Back and Polaroid Land Projection Film. These slides will be used to demonstrate the Pola-Land Optical Picture Comparator.

Personnel: R. Thomas B. Peirce, Jr., Rolf M. Augustin, Jr., Robert S. Quackenbush, Jr., Joan H. Smith.

Traid Corp. Booths 23, 24
17136 Ventura Blvd., Encino, Calif.

Exhibiting: Intermediate and high-speed cameras, including 16mm-1B Photosonics Camera, speed to 1000 frames/sec; miniature Traid 15, operating speed, 100 frames/sec; accessories.

Personnel: R. F. Peterson, Fred G. Roberts, Jr., Carlos Elmer, Al Uremovich.

**Westinghouse Electric Corp.,
Lamp Division** Booth 25
1 MacArthur Ave., Bloomfield, N.J.

Exhibiting: Small, compact light sources for high-speed photography; high wattage and sealed-beam lamps.

Personnel: W. R. Wilson, F. H. Rixton and R. J. Stefany.

Wollensak Optical Co. Booth 3
850 Hudson Ave., Rochester 21, N.Y.

Exhibiting: Wollensak Optical 28 Models of Fastax-Fastair High-Speed Motion-Picture Cameras; accessory equipment; new reversal-negative 16mm portable film processor; Mirrotel lenses and boresights; Pro-Raptar lenses, series covering 35mm and 70mm formats; various photographic instrumentation products.

Personnel: Fred M. Emens, Charles B. Wade, Richard R. Youso, David C. Gilkeson, George K. Czarnikow, Robert B. Herden, Richard J. Wollensak.

Carl Zeiss, Inc. Booths 31, 32
485 Fifth Ave., New York 17

Exhibiting: Mach-Zehnder Interferometer, an instrument used for measurement of density changes in transparent media by means of light interferences. Applications include measurements of fluid flow (particularly in wind tunnels and shock-wave tubes), sound phenomena in liquids and gases, temperature distribution in the environs of heated substances, and measurements in flames.

Personnel: Dr. Walter Kinder, Karl Windel.

Zoomar, Inc. Booths 45, 46
55 Sea Cliff Ave., Glen Cove, N.Y.
