

New Sustaining Members of the Society

The SMPTE welcomes the companies described below as new SMPTE Sustaining Members. Companies that have joined the SMPTE but whose paragraphs were unavailable for inclusion in this issue will appear in a future Journal issue.

Bosch-Fernseh, 279 Midland Ave., Saddle Brook, NJ 07662 (201) 797-7400

The following is a brief history of the company. 1929, founded in Berlin under participation of Robert Bosch GmbH. 1934, first OB van with built-in film camera, fast-acting film developing device and film scanner (intermediate film techniques). 1937, iconoscope camera operating on the 441 line standard. 1938, large-screen projector with 80 kV projector tube; 1940, supericonoscope as camera tube. 1949, transfer to Darmstadt. 1950, television camera with supericonoscope operating on the 625-line standard; flying-spot film scanner for 35mm film with twin-optics and continuous film-running. 1953, superorthicon camera with electronic viewfinder. 1955, OB van with electronic television cameras. 1957, advanced superorthicon camera KOD, more than 1000 units delivered until now. 1958, standards converter with vidicon. 1960, flying-spot film scanner for 16mm film with pneumatic fast pull-down mechanism. 1966, first color television camera; color-adapted videotape recorder (2-in, 4-head quadruplex). 1967, delivery of complete color-adapted studio equipment operating on PAL standard, 4-tube Plumbicon color camera; delivery of the 100th OB van, and completion of first color OB, van. 1969, KCU 3-tube Plumbicon color camera; storage tube color film scanner; programmable color film corrector; electro-optical color standards converter. 1971, design and construction of automated studios; transfer to new and larger buildings. 1972, KCR-handheld reporter color camera; KCP-low-priced, broadcast-quality color camera with smallest dimensions; supply of the whole video equipment for the XX Olympic Games in Munich. 1973, "Electronic Journalism": equipment concept for fully electronic production of the up-to-the-minute, on-the-spot news reporting; 500th Universal color television camera KCU. 1974, KCN-battery-operated automatic handheld reporter color camera. 1975, KCK-automated color camera with multi-wire or coaxial camera cable; BCN system: broadcast studio quality videotape recorder with new tape format (1-in, 2-head helical scan) in 3 versions, BCN 20 portable version, BCN 40 mobile version, standard recorder BCN 50 stationary version for recording and playback.

Address inquiries to: Karl B. Kinast, Staff Engineer at the address above.

Century Precision Cine/Optics, 10661 Burbank Blvd., No. Hollywood, CA 91601

Century Precision Cine/Optics has been serving the motion-picture industry for over 30 years in a dual capacity: the manufacture and servicing of motion-picture optics. We manufacture a line of products and accessories primarily for 16mm and 35mm motion-picture use which includes lenses from a 3.5mm wide angle to a 1200mm telephoto and the Duplikin series of copy devices. Our service department specializes in the repair of all types and makes of zoom and prime optics for motion-picture and television cameras. The emphasis is on fast, efficient, accurate work.

Address inquiries to: William J. Turner, Director, Sales/Service at the address above.

Commercial Electronics, Inc., 880 Maude Ave., Mt. View, CA 94043.

An eight-year old corporation, CEI manufactures professional broadcast color television cameras and quality television monitors. Additionally, designed and manufactured a number of "special purpose" television cameras and was the first to introduce the low-light color television camera to the industry.

Address inquiries to: Mr. W. H. Butler, President at the address above.

Elgen Video, P.O. Box 1027, Grass Valley, CA 95945.

Slow motion, instant replay, videodisc color recorder, in 10-sec and 20-sec capacity.

Direct inquiries to: Dolores Hebb, Secretary at the address above.

Farinon Electric, 1691 Bayport Ave., San Carlos, CA 94070.

Farinon develops and manufactures microwave equipment for point-to-point relay of video, voice, data, and message signals. Products for television broadcasting include fixed and portable systems operating in the 2 Ghz, 6-7 GHz, and 12-13 GHz bands for studio transmitter links, inter-city relay, and temporary networks; and frequency agile portable and "mini-portable" equipment for ENG remote pick-up and relay systems and emergency service. Accessory equipment includes video input and output units, AM and FM channel transmitters and receivers, 4.5 MHz aural carrier generators, other sub-carrier generators, clamper amplifiers, pilot and noise monitors, 70 MHz demodulators, message input units and amplifiers, alarm units, separators, combiners, power supplies, regulators, and test sets. Farinon also provides EF&I and consulting services.

Direct inquiries to: David A. Northen, Advertising Assistant at the address above.

Adolph Gasser, Inc., 181 Second St., San Francisco, CA 94105.

Company in business for 27 years under present ownership as a retail, commercial, and professional camera and photo supply operation. Entered the professional movie field about 6 years ago, setting up a rental division as well. In 1975, purchased a building at present address with 15,000² ft and set up Professional Motion Picture Rental Division, Industrial Division, and a second retail store. In 1976, moved Rental into a separate location at 168 Second St.

Direct inquiries to: Adolph Gasser, President, at the address above.

Hitachi Denshi America, Ltd., 58-25 Brooklyn-Queens Expressway, Woodside, NY 11377 (212) 898-1261.

Hitachi Denshi America, Ltd., is a division of Hitachi Ltd., the largest manufacturer of electrical and electronic products in Japan. Hitachi Denshi America markets a full line of color and monochrome television cameras for broadcast, industrial, and security applications. The color television cameras include three Saticons, self-contained, battery- or ac-operated, handheld cameras for EFP (Electronic Field Production),

the SK-80 and FP-1020 which have all the automatic features necessary for one-man operation. The SK-70, three-Saticon convertible color camera can be used for studio, handheld, or field production work. A Digital Control Unit option extends the operating range of 4000 ft on coaxial. The inexpensive FP-3030 handheld camera uses a tri-electrode vidicon and weighs just 8 lb including battery. Studio color cameras with CCU are the FP-1212B with three 1-in Plumbicons and the 1007 with three 2/3-in Plumbicons. The FP-1010 uses 2/3-in Saticons and is self-contained. The HV-9015 single FIC Vidicon camera head weighs 4 lb and is used extensively on operating and laboratory microscopes. A full line of 2/3-in and 1-in black-and-white cameras for surveillance and instructional applications in standard or low-light configurations is also produced.

Direct inquiries to: Robert N. Blair, Marketing Manager, at the address above.

Hope Industries, Inc., Wyandotte Rd., Willow Grove, PA 19090 (215) 659-5700.

Hope Industries has been designing and manufacturing photographic processors for over 30 years. Our Willow Grove facility produces equipment for every aspect of the photographic industry. Our completely leaderless film and paper processors have revolutionized the dark room. Our replenishment control and chemical mixing systems have made possible new simplicity and uniformity in all photofinishing. From tiny table-top units to complete high-production film processing systems, the same rigorous quality is maintained with stainless steel and thermoplastic construction throughout. World-wide network of dealers has been built to provide comprehensive service at the local level. Though all our machines are competitively priced, we believe that the greatest economy is achieved with simplified design, trouble-free operation, and consistent quality of output.

Direct inquiries to: Stephen F. Hope, General Manager, at the above address.

Ikegami Electronics (U.S.A.), Inc., 29-19 39th Ave., Long Island City, NY 11101

Ikegami Tsushinki Co., Ltd., started its business operation at the private residence of the late Kosei Saito in September 1946 and was formally established as a stock company in February 1948. Ikegami embarked on the production of broadcasting equipment in 1949. In 1962, our Handy Looky Camera, shipped to CBS, was used for the on-the-spot broadcasting of the launching of the man-made satellite Aurora No. 7. This made the name of Ikegami widely known all over the world. The U.S. corporate office, Ikegami Electronics (U.S.A.), Inc., was opened in 1964. Ikegami products consist of: broadcast studio equipment, broadcast field equipment, electronic newsgathering (ENG) cameras, transmitters and receivers, data processing and digital equipment, CCTV equipment, audiovisual education equipment, and power supplies and transformers.

Direct inquiries to: Nick H. Nishi, Vice-President, at the address above.

Infotechnics, Inc., 15730 Stagg St., Van Nuys, CA 91406

Infotechnics, Inc., is or has been involved in the production of the following products: a random access digital electromechanical positioner to

NORTON[®] magnetic heads

professional motion picture sound recording

sepmag • commag

erase • record • play

all formats: 8/16/35 mm

NORTON HEADS FOR MAGNETIC SOUND WITHOUT PICTURE

SERIES FG

8 MM SINGLE TRACK

A 150 mil (3.8 MM) edge track for use on full coat 8 MM magnetic film, regular or super 8 plus a 25 mil (0.6 MM) wear shoe for full film support.

Models Available:
 Erase FGE
 Record FGR
 Reproduce FGP
 Record/Reproduce .. FGRP



SERIES FE

16 MM SINGLE TRACK EDGE REFERENCE: PH 22.97

Standard 200 mil (5 MM) edge track for full coat 16 MM magnetic film perforated along one edge, plus a wear shoe for full support of the film.

Models Available:
 Erase FEE
 Record FER
 Reproduce FEP
 Record/Reproduce .. FERP

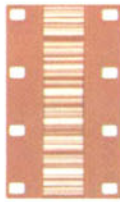


SERIES FC

16 MM SINGLE TRACK CENTER REFERENCE: ISO R890

The SEPMAG/CENTER 200 mil (5 MM) track for full coat 16 MM magnetic film perforated along both edges plus two wear shoes supporting the full film width.

Models Available:
 Erase FCE
 Record FCR
 Reproduce FCP
 Record/Reproduce .. FCRP



SERIES FD

16 MM TWO TRACK CENTER/EDGE CROSSTALK—66 DB CROSSFEED—46 DB

An inline dual track head incorporating a 200 mil (5 MM) edge track and a 100 mil (2.5 MM) center track. The wear shoe along the perforated edge insures full support of the film.

Models Available:
 Erase FDE
 Record FDR
 Reproduce FDP
 Record/Reproduce .. FDRP



SERIES FU

16 MM THREE TRACK CENTER/EDGE CROSSTALK—66 DB CROSSFEED—46 DB REF: NEW 16 SEPMAG E.B.U. TECH 3098-E ISO 4242

A three track head with two equal 150 mil (3.8 MM) center and edge tracks plus an additional 25 mil (0.6 MM) edge control track in one inline unit.

Compatibility with Series FC and FE is excellent as is its suitability for stereophonic use and magnetic sound transfer.

Also available as a dual track unit Series FB with a wear shoe substituted for the edge control track.

Models Available:

	Series FU	Series FB
Erase FUE FBE
Record FUR FBR
Reproduce FUP FBP
Record/Reproduce FURP FBRP



SERIES FM

35 MM SINGLE TRACK REFERENCE: PH 22.86 ISO 162

Standard 200 mil (5 MM) edge track for full coat or striped 35 MM magnetic film. A wear shoe provides uniform support for the film.

Models Available: Erase FME
 Record FMR
 Reproduce FMP
 Record/Reproduce .. FMRP

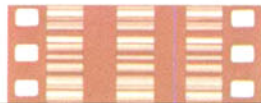


SERIES FT

35 MM THREE TRACK CROSSTALK—70 DB CROSSFEED—50 DB REFERENCE: PH 22.86 ISO 162

Standard 3 track 200 mil (5 MM) inline tracks for full coat 35 MM magnetic film. Very low crosstalk and crossfeed ratings.

Models Available: Erase FTE
 Record FTR
 Reproduce FTP
 Record/Reproduce .. FTRP

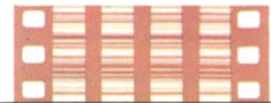


SERIES FQ

35 MM FOUR TRACK CROSSTALK—66 DB CROSSFEED—46 DB REFERENCE: PH 22.108 ISO 360

Standard 4 track 150 mil (3.8 MM) inline tracks for full coat 35 MM magnetic film. Very low crosstalk and crossfeed ratings.

Models Available: Erase FQE
 Record FQR
 Reproduce FQP
 Record/Reproduce .. FQRP



SERIES FS

35 MM SIX TRACK CROSSTALK—60 DB CROSSFEED—40 DB REFERENCE: PH 22.186 ISO 1753

Standard 6 track 100 mil (2.5 MM) inline tracks for full coat 35 MM magnetic film. Low crosstalk and crossfeed ratings.

Models Available: Erase FSE
 Record FSR
 Reproduce FSP
 Record/Reproduce .. FSRP



SERIES FO

35 MM EIGHT TRACK CROSSTALK—60 DB CROSSFEED—40 DB

Standard 6 track 100 mil (2.5 MM) inline tracks plus 2 additional 50 mil (1.2 MM) edge control tracks in one inline unit.

Models Available: Erase FOE
 Record FOR
 Reproduce FOP
 Record/Reproduce .. FORP



NORTON HEADS FOR MAGNETIC SOUND WITH PICTURE



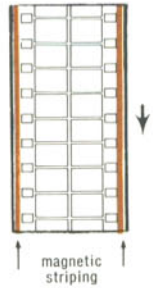
SERIES FJ 16/REG 8 SINGLE TRACK REFERENCE: PH 22.136

A single 25 mil (0.6 MM) track for sound on striped 16 MM film perforated regular 8 type 2R.

The sound tracks in this configuration are in opposite directions with the reversed sound track not recording.

Two support shoes are provided, one between the pictures and one for the unrecorded magnetic stripe.

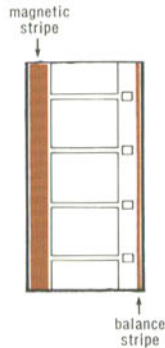
Models Available:
Record FJR
Reproduce FJP



SERIES FH 16 MM SINGLE TRACK REFERENCE: PH 22.87 ISO 891

A single 100 mil (2.5 MM) sound track for striped 16 MM picture film and includes a wear shoe for the balance stripe.

Models Available:
Record FHR
Reproduce FHP



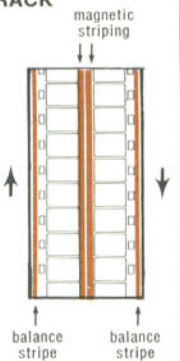
SERIES FL 16/SUPER 8 (1-4) SINGLE TRACK REFERENCE: PH 22.162 ISO 3068

A single 25 mil (.6 MM) track for sound on striped 16 MM film perforated super 8 type 2R (1-4).

The sound tracks in this configuration are in opposite directions with the reversed sound track not recording.

Two support shoes are provided for the balance stripes.

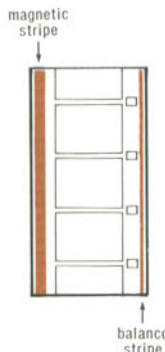
Models Available:
Record FLR
Reproduce FLP



SERIES FN 16 MM SINGLE TRACK REFERENCE: MAG OPT PH 22.127

A single 50 mil (1.2 MM) sound track for striped 16 MM picture film with a wear shoe for the balance stripe.

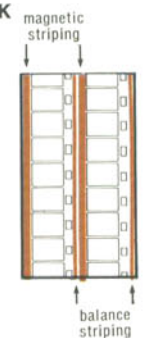
Models Available:
Record FNR
Reproduce FNP



SERIES FV 16/SUPER 8 (1-3) TWO TRACK REFERENCE: PH 22.176 ISO 3068

Dual 25 mil (0.6 MM) tracks for sound on striped 16 MM film perforated Super 8 type 2R (1-3). Both sound tracks are in the same direction and a support shoe is provided for the outboard balance stripe.

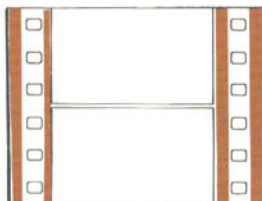
Models Available:
Record FVR
Reproduce FVP



SERIES FY 35 MM FOUR TRACK REFERENCE: PH 22.137

Three 50 mil (1.2 MM) and one 25 mil (0.6 MM) sound tracks for striped 35 MM picture film.

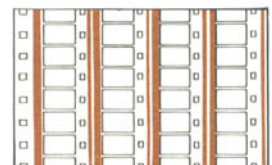
Models Available: Record FYR
Reproduce FYP



SERIES FW 35/SUPER 8 QUAD FOUR TRACK REFERENCE: PH 22.163 ISO 2967

Four 25 mil (0.6 MM) track for sound on striped 35 MM film perforated Super 8 type 5R. All sound tracks are in the same direction and a shoe is provided for the outboard balance stripe.

Models Available: Record FWR
Reproduce FWP



NORTON magnetic heads

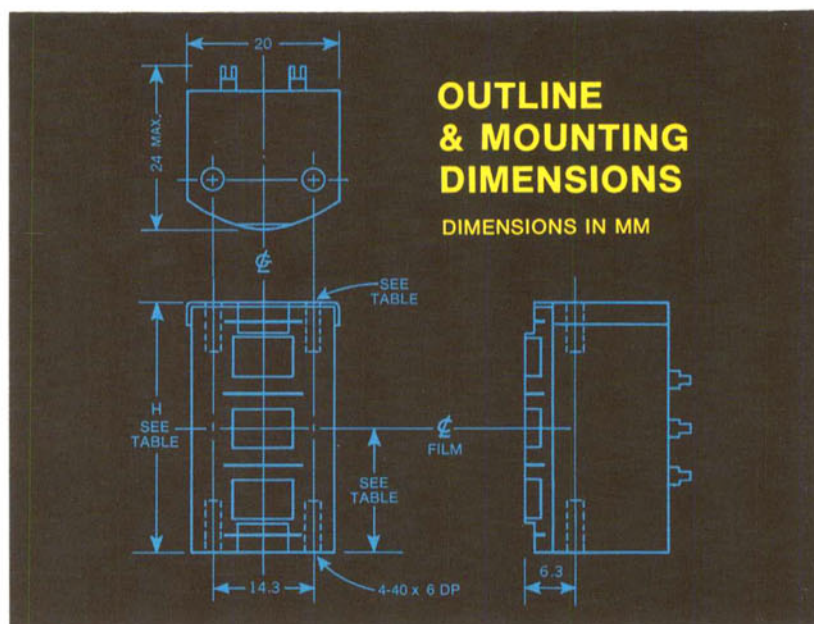
professional motion picture sound recording
sepmag • commag
erase • record • play
all formats: 8/16/35 mm

Designed especially for professional motion picture magnetic sound, the Series F Norton heads are the product of over 20 years experience in the research development and production of magnetic heads with many thousands in daily use throughout the world.

Outstanding performance and long life combined with the availability of almost all formats to ANSI/SMPTE/ISO specifications are major benefits.

Plus:

- Extremely low crosstalk and crossfeed ratings.
- + 75°C temperature operation without derating.
- Cores, shields and all metallic members mechanically and electrically bonded for effective electrostatic shielding and grounding of charges.
- Wrap around Mu metal shield can for magnetic shielding.
- Silver plated solder lugs on a high-temperature glass-phenolic terminal board.
- Tapped mounting holes top and bottom for mounting unsymmetrical format heads either way.
- Relieved face or projecting tracks as required for striped film, edge and sprocket clearance.
- Wear shoes as required for full and uniform support of the film loop.
- Low loss cores for efficient bias/erase at frequencies over 100 kHz.
- Inline gaps for full range stereo.
- Electrical and mechanical compatibility with all previously made Norton heads.



OUTLINE & MOUNTING DIMENSIONS

DIMENSIONS IN MM

SERIES	FILM MM	FILM CENTERLINE MM	HEIGHT H MM	TOP MOUNTING HOLES
FC	16	12	22	no
FD	16	12	22	yes
FE	16	12	22	yes
FG	8	10	21	yes
FH	16	12	22	yes
FJ	2x8R	12	22	yes
FL	2x8S	12	22	yes
FM	35	16	32	yes
FN	16	12	22	yes
FO	35	18	38	no
FQ	35	16	32	no
FS	35	16	32	no
FT	35	16	32	no
FU	16	12	22	yes
FV	2x8S	12	22	yes
FW	4x8S	18	38	yes
FY	35	18	38	yes

ORDERING INFORMATION

For an exact replacement head or a compatible unit from any Series, in addition to the Norton model number shown, please specify the impedance you require or the manufacturer and model number of your recorder.

NORTON ASSOCIATES, INC.

10 Di Tomas Court, Copiague, New York 11726 • (516) 842-4666

provide a random access capability in the final systems; a magnetic disc digital computer memory featuring interchangeable discs in cassettes, movable heads, and the above-mentioned random access positioner; a video frame recorder using magnetic discs with similar features to the digital computer memory and storage capacity of up to 500 frames; a video phone transceiver with all the functions of the frame recorder and, in addition, capable of transmission and reception of television frames by telephone; a magnetic disc cinematographic recorder which records continuous television programs with sound and color and replays at all speeds including slow motion with sound. All the above products are covered by patents in the U.S. and abroad.

Direct inquiries to: George E. Zenzefilis, President, at the above address.

Micro Consultants, Inc., 2483 E. Bayshore Rd., Palo Alto, CA 94303 (415) 321-0832; Telex: 334420

Organized in 1975, Micro Consultants imports and distributes in the Western Hemisphere products of Micro Consultants Ltd. of Caterham, England, and its subsidiaries. These products include: the DTC 300 digital time-base corrector; the DFS 1500 digital fieldstore synchronizer; the DFS 3000 digital framestore synchronizer; the FS-8 digital framestore control; the DSC 4000 digital standards converter; the DFP 5000 digital production control; the 3350 Series digital video lab units; the "Intellect" digital image processing system; high speed A-D and D-A converters; and pulse code instrumentation systems. MCI has exclusive distribution rights to all of these products.

Address inquiries to: George Grasso, Vice President of Marketing, or Bill Theisner, Manager, Market Administration, at the address above.

Neumade Products Corp., 720 White Plains Rd., Scarsdale, NY 10583 (914) 725-4900

Founded in 1916 by Oscar F. Neu, Neumade has progressed from a source for film exchange and cutting room equipment to the largest manufacturer of a complete line of film handling, servicing, cleaning, storage and accessories for the motion-picture, television, educational, commercial, and photographic industries. More than 100 models of storage and filing cabinets and racks are manufactured by Neumade in their modern factory in Buffalo, N.Y. They include facilities for 8mm, super-8, 16mm, 35mm, 70mm, 105mm and aerial film, as well as filmstrips, slides, cassettes, audio tape and video tape, each specially designed to provide the most efficient and practical product for a specific need. Other items manufactured by Neumade

are Griswold splicers, Neumade power and hand rewinds, measuring machines, synchronizers, Showtimers, Neuvator cleaning machines, reels, cans, cases, Fiesta leader in 6 colors for 16mm, 8mm and super-8, and the Neutaper film splicer, using Neutape instead of cement. Neumade products are available to the theaters through theater supply dealers. Educational, commercial, television and other users of Neumade products should contact their audiovisual dealer and better photographic stores, as well as dealers to the professional film industry.

Address inquiries to: Lee E. Jones, Executive Vice President, at the address above.

Norton Associates, Inc., 10 DiTomas Ct., Copiague, NY 11726

Manufacturers of magnetic heads designed especially for professional motion-picture sound, the result of over 20 years experience in research development and production with many thousands in use throughout the world. A complete line is offered in all formats 8 through 70mm to ANSI/SMPTE/ISO specifications.

Address inquiries to: R. S. Norton, President, at the address above.

PMPEA, c/o Victor Duncan, Inc., 2659 Fendren Dr., Dallas, TX, (214) 369-1165

The Professional Motion Picture Equipment Association (PMPEA) is a nonprofit organization comprised of the leading manufacturers, distributors, and dealers of professional motion-picture equipment. It serves this industry with a unified organization devoted to improving the quality of products and services available to the cinematographer. Annual meetings provide a vehicle of communication between manufacturers and dealers, affording its members an opportunity to work hand-in-hand to increase the usefulness of the professional motion-picture equipment industry to the filmmaker. A symposium is sponsored yearly in conjunction with the SMPTE Conference dealing with a practical aspect of filmmaking and hosted by prominent cameramen, directors, and producers.

Address inquiries to: Lee A. Duncan at the address above.

TeleMatlon, Inc., P.O. Box 15068, Salt Lake City, UT 84115

Founded in 1963, TeleMation, Inc., manufactures professional television equipment for use in broadcast, teleproduction, closed-circuit, and security television systems. Major products include character generators, distribution switchers, and telecine cameras. Proprietary and vendor products are distributed through company-owned offices and independent distributors. 1976 sales were \$9.5 million.

Address inquiries to: David J. Quebbeman, Ad. Mgr., at the address above.

Vas Corp., 2525 Maricopa St., Torrance, CA 90503 (213) 320-8334

Vas Corp. manufactures a broad line of video-disc recorders ranging from the instant replay Dynamic Memory System, with a storage capacity of 9.5 s of real-time video and variable slow-motion/stop-action playback, to the Ministore offering one or two frame storage with simultaneous playback. Included in the line are several models of the Image Store,™ offering 100 or 300 frames of video storage and several specialized private label models supplied to medical X-ray OEMs. Applicable to any monochrome closed-circuit television system, the recorders are widely used in situations requiring storage, retrieval, manipulation, and analysis of video information. Examples include medical X-ray (replay of contrast medium injections, radiation reduction during orthopaedic and other surgical procedures, etc.), horse racing and other sporting events (replay for analysis of selected portions, recorded live or prerecorded on tape), baggage inspection (capture of images produced by short pulse X-ray operation), and many military and industrial applications requiring instant replay and/or still-frame storage. Vas is currently building on its extremely successful product base in developing new products with even wider versatility and higher performance, including a buffer track unit (one moving, one fixed-head with transfer capability), a high-resolution unit, and various accessory items such as character generators, random-access track locator with optional memory for up to 10-track addresses, flat-faced 7-in television monitor for cine photography, automatic video-to-film transfer camera, and other video related products.

Address inquiries to: Claude Ravier, Director of Business Development at the address above.

Vlahos-Gottschalk Research Corp., 18607 Topham St., Reseda, CA 91335

Formed in 1976, with research laboratories located in Reseda, California. Its principal activities are research and development of new products and processes for the motion-picture and television industries. The company's first product is the UltiMatte, a blue-screen image matting device. Concurrently, the company has completed the development of a 3-D photographic process covering the range from micro to macro. Also, under development is an electronic composite printing device for producing high-resolution motion-picture blue-screen composites.

Address inquiries to: Petro Vlahos, President, at the above address.