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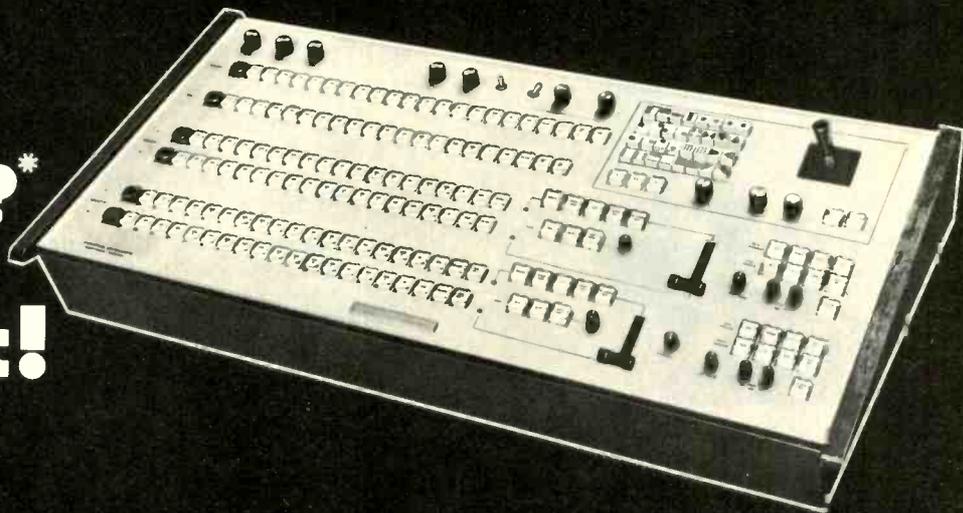
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BM/E

BROADCAST MANAGEMENT/ENGINEERING



Products and equipment of the industry . . . who makes it (fresh, updated, verified) . . . where to buy it . . . it's all in *The Source 1975*, beginning on page 38

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Editor

James A. Lippke

Associate Editor

Robin Lanier

Contributing Editor

Robert Wollins

Editorial Assistant

Karen Goudket

Art Director

Gus Sauter

Manager

Publication Services

Djuna Zellmer

Circulation Manager

Barbara B. Connolly

FCC Counsel

**Pittman Lovett Ford
and Hennessey**

Publisher

Charles C. Lenz Jr.

SEPTEMBER 1975/VOLUME 11/NUMBER 9

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BROADCAST INDUSTRY NEWS

NAB & RAB to Hold Joint Regional Conventions

The National Association of Broadcasters and the Radio Advertising Bureau have announced a series of regional radio conferences jointly sponsored by the two organizations to be held this fall. The regional conventions will replace the NAB Fall Conferences and the RAB Management Meetings.

Organizers plan to cover the entire spectrum of interest to broadcasters including government relations, sales, general management, engineering, legal, and FCC problems.

The Regional Radio Conventions will be held on the following dates, which are the same as for the previously announced NAB Fall Conferences: Oct. 13-14, Atlanta/Fairmont; Oct. 16-17, Boston/Marriott; Nov. 10-11, New Orleans/Montealeone; Nov. 13-14, Chicago/Pick Congress; Nov. 17-18, Denver/Brown Palace; Nov. 20-21, San Francisco/Fairmont.

National Radio Broadcasters Conference, Atlanta, Sept. 17-20. Will Be Previewed in BM/E's Atlanta Survival Guide Mailed to Pre-Registrants.

NAB Faults FCC On Ascertainment Policies

The National Association of Broadcasters has urged the Federal Communications Commission to abandon its proposed community guidelines in favor of a simple narrative statement reviewing steps taken to discern local problems, plus a listing of those problems and programs to meet them.

NAB said in comments filed with the FCC that the Commission's proposed new guidelines are arbitrary and inflexible and, like the old primer they are designed to replace, "misfocus attention upon ascertainment methodology and only secondarily, at best, consider

the overall performance of the licensee."

The NAB feels that a combined narrative-problem/program list would supply enough information for review by the FCC and the public and that it would shift attention from the technical detail of ascertainment to the performance of the licensee.

MDS To Give Boost To Pay-TV In Many Cities

By using the Multipoint Distribution Service for some part of the haul to the subscriber, pay-TV operators are about to expand their services rapidly in a number of cities, with plans for many other cities on the boards.

Cox Cable Communications and Microband National Systems Inc, the latter the operator of MDS in a number of cities, announced at the end of July that Cox would use Microband's facilities to expand pay-TV in 12 major cities, beginning with Atlanta. The MDS, which is a "private" television broadcasting service operating at 2150 MHz, will carry the Cox programs to antennas on apartment houses and condominiums not reached by Cox cable service. Programs will be distributed to subscribers via each building's MATV system.

A closely similar joint operation with Microband has been announced by Sammons Communications, cable operator in Kansas City, to take pay-TV programs to apartments, etc., in that city. And another will be set up in Phoenix, Arizona, where Microband will serve the American Cable Television Co. (see news item in BM/E, August).

In Chicago, which has no cable TV operation, Video Entertainment Inc. will use Microband to, again, serve apartments, condominiums, hotels, etc., with pay-TV programs. The MDS signal is converted to a mid-band frequency in each building, which

continued on page 8

WFMT Sells Five Years (11,000 Hr) of Sponsorship

Talman Federal Savings & Loan Association of Chicago renewed for



five years until December, 1980, its all-night classical music program and other sponsorships on WFMT, Chicago's fine arts station. This renewal is believed to be the largest and longest advertising agreement in FM history. Talman will continue sponsoring "Talman Through the Night," heard from midnight to 6 am plus 14 morning newscasts each week and two weekly programs of rare operatic recordings. Pictured at contract signing are Talman Federal Savings and Loan Association President and Chief Executive Officer Dimitry Wanda (left), President and General Manager of WFMT Raymond Nordstrand (right), and Talman's Executive Vice President Charles O. Jarasek (standing).



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goes over the building MATV system. Subscribers to the service have small "decoders," which are inexpensive converters to put the signal on an unused TV channel. A spokesman for Video Entertainment told BM/E that, even though the service was not slated to start until sometime in September, they were getting a substantial number of subscribers simply based on news stories of its coming.

In every case the staple programming fare for the operations announced is first-run movies, at least initially.

Looming ahead is national networking of MDS-served pay TV. Don Franco, president of Microband, announced an agreement, in principle, with Western Union for using the Westar Satellites to join Microband facilities coast to coast. Implementation is expected within about 18 months. In various cities joint ventures have been formed by several MDS applicants.

The new companies formed in each city are: Metrotel, Inc.—Los Angeles—a joint venture of Microband Corp. of America, RadioCall Corp. and Microwave Transmission Co.; Microband/MTC West Coast, Inc.—Anaheim, San Francisco and Seattle—a joint venture of Microband Corp. of America and Microwave Transmission Co.; Microvision Corp.—Denver—a joint venture of Microband Corp. of America and Tekkom, Inc.; and Microband United Corp.—Atlanta—a joint venture of Microband Corp. of America and United Video Inc.

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Satellite Earth Stations Spread Rapidly

A sampling of recent FCC announcements shows that applications for earth stations to help form various satellite communications channels are rising sharply in number. It is another indication that use of satellites will mushroom in the coming few years, bringing something of a revolution in many areas of telecommunications.

An informal survey by BM/E of earth station applications filed during the latter half of July showed that at least 30 to 40 new earth stations were sought during that period. Many of these are for the satellite systems which will carry radio, telephone and television to many previously unreached sections of Alaska. RCA promises launchings of new satellites this fall; Western Union, American Satellite Corp. and others important in satellite expansion are all stepping up activity.

FCC ACTIONS

Cable Reconstruction Deadline Cancelled

As reported in a BM/E bulletin in August, the Federal Communications Commission has cancelled the March 31, 1977 deadline for the reconstruction of major market cable systems in existence prior to March 31, 1972, to bring them into compliance with the channel capacity and access requirements of the rules (Docket 20363).

How the rule will ultimately be applied to such systems depends, the FCC says, on the outcome of a rule-making proceeding begun June 3rd (Docket 20508) addressed to that question.

Meanwhile, the FCC emphasizes that the cancellation of that particular deadline does not affect the following requirements which must still be met: major market stations must furnish by March 31, 1977 "composite" access services on available channel space,

continued on page 10

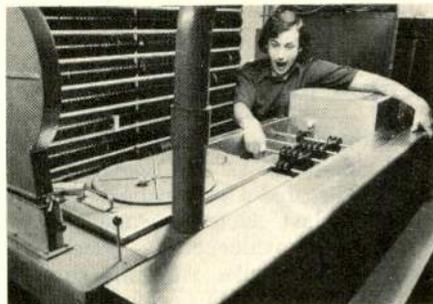
AT KY-3-TV, THE BRAND OF REPORTING AND THE BRAND OF FILM HAVE A LOT IN COMMON.

When the people in this picture wave 3 fingers in the air, what they're saying is, "We're number one" at Springfield, Missouri, Channel 3. Thanks to hard-nosed reporting and hard-hitting promotion, KYTV is the undisputed broadcast king in the Queen City of the Ozarks. By a margin of 3 to 1.

In addition to top-notch journalism, smart programming has meant taking maximum advantage of both videotape and film. And when the film cameras roll, the film they use is Eastman film.

Over the past year, Channel 3 news cameras unlocked the secret of behavior modification programs in a Missouri federal prison; dug up a problem in the underground water supply; whooped it up at a genuine hoe-down; and made friends with a mountain hermit whose only other visitors dropped in by UFO.

Besides winning viewers, their documentaries have won a



silver gavel from the American Bar Association, a certificate of achievement from the state medical association, and an Emmy nomination.

For station manager Don Moeller, film is a logical choice: the equipment is rugged enough for any job, portable enough for even the tightest spots, and the end product "looks absolutely great on the air."

When the KYTV cameras aren't recording news, the KYTV people are busy making it, through locally produced sports and entertainment shows. Take Virgil Ward (front row left) and the capable assistant you see perched on his lap. You can catch their weekly fishing show on 87

markets in the U.S. and Canada. And when Virgil packs his rod and reel, he includes a reel of Eastman film.

Then there's Promotion Director Clarence Martin (front row right). His 10-second-film ID spots for the station not only built awareness, but they helped develop a new market for locally produced commercials.

In the words of News Director Bill Williams (2nd row, 4th from right), "Film is essential to everything we do. After all, TV is *the* visual medium, and it wouldn't do to have a person on camera merely reading a piece of paper. We use film to tell our story. And, besides, our anchormen just aren't that pretty."

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NEWS

but without reconstruction; major market systems which started after March 31, 1972 must meet the channel and access requirements; systems with more than 3500 subscribers must meet the origination facilities requirement.

Rules for Antenna Strobe Lights are Adopted

In a rule adopted July 8, 1975, the FCC has made high-intensity strobe lights permissible for lighting of antenna structures, as an alternative to the standard painting and red obstruction lighting (Docket 19931). The rule, the FCC says, does not obsolete acceptability of the painting and red lights, nor does it make strobe lighting in any sense mandatory.

However, the FCC reserved the right to specify, on new antennas, which method would be required in accordance with FAA recommendations or when the standard marking proves to be confusing, inadequate, or otherwise dangerous.

Broadcasters who want to start or shift to strobe lighting must get specific FCC authorization.

New FM Translator Polarization Allowed

In January, 1974, the FCC indicated it would permit FM translator service for individual communities to be provided by a combination of signals vertically and horizontally polarized. The amendment allows the radiation of vertically and horizontally polarized signals either from a single antenna or from two antennas, each fed from a separate radio frequency amplifier.

Cable Report Form Revised by FCC

The Commission has adopted a rule revising form 326, the cable system annual report form, with the aim of making it both more complete as to financial data and less burdensome on the cable operator (Docket 20247).

Among the changes:

- A new format closely resembling normal bookkeeping schedules
- A new schedule of all basic balance sheet accounts, replacing one that carried only original cost and depreciation date
- Removal of the requirement that cable systems report on a calendar year basis—they can now use their fiscal year
- Elimination of the five-community limit on consolidated reporting in favor of a restriction to systems within a 40-mile radius of the "lead" system

Cable operators whose fiscal year ends after October 31, 1975, the effective date of the rule, should make sure they have the new forms.

Institutional Ownership Limit Increased by FCC

The FCC has proposed rule changes that would set a 5% limit on institutional ownership of broadcast and CATV companies. The proposal would amend the Commission's rules relating to multiple ownership of AM, FM and TV broadcast stations and cross-ownership of CATV systems.

The rules now set a 1% limit for shareholdings in broadcast or cable operations that have more than 50 voting stockholders. However, mutual funds have a 3% benchmark and banks a 5% benchmark for holdings on such corporations.

The proposed change comes after six companies petitioned the FCC to make the change.

Rules Revised for Station Applications

The FCC has amended its rules to limit the period for filing competing applications for new FM and TV stations and for filing petitions to deny, and the effect of certain amendments to applications for construction permits for AM, FM and TV broadcast facilities.

The rule changes provide a cut-off date of 30 days after publication of the application which is similar to those now provided for AM new and major change applications. This date will avoid the disruption of application processing that occurs when a new, mutually exclusive application is received after processing of the original application is nearly complete, the FCC said.

The FCC said its action was not intended to reduce the number of comparative proceedings (although it recognized this might happen) but to "avoid serious (and occasionally repeated) disruptions of the processing procedure."

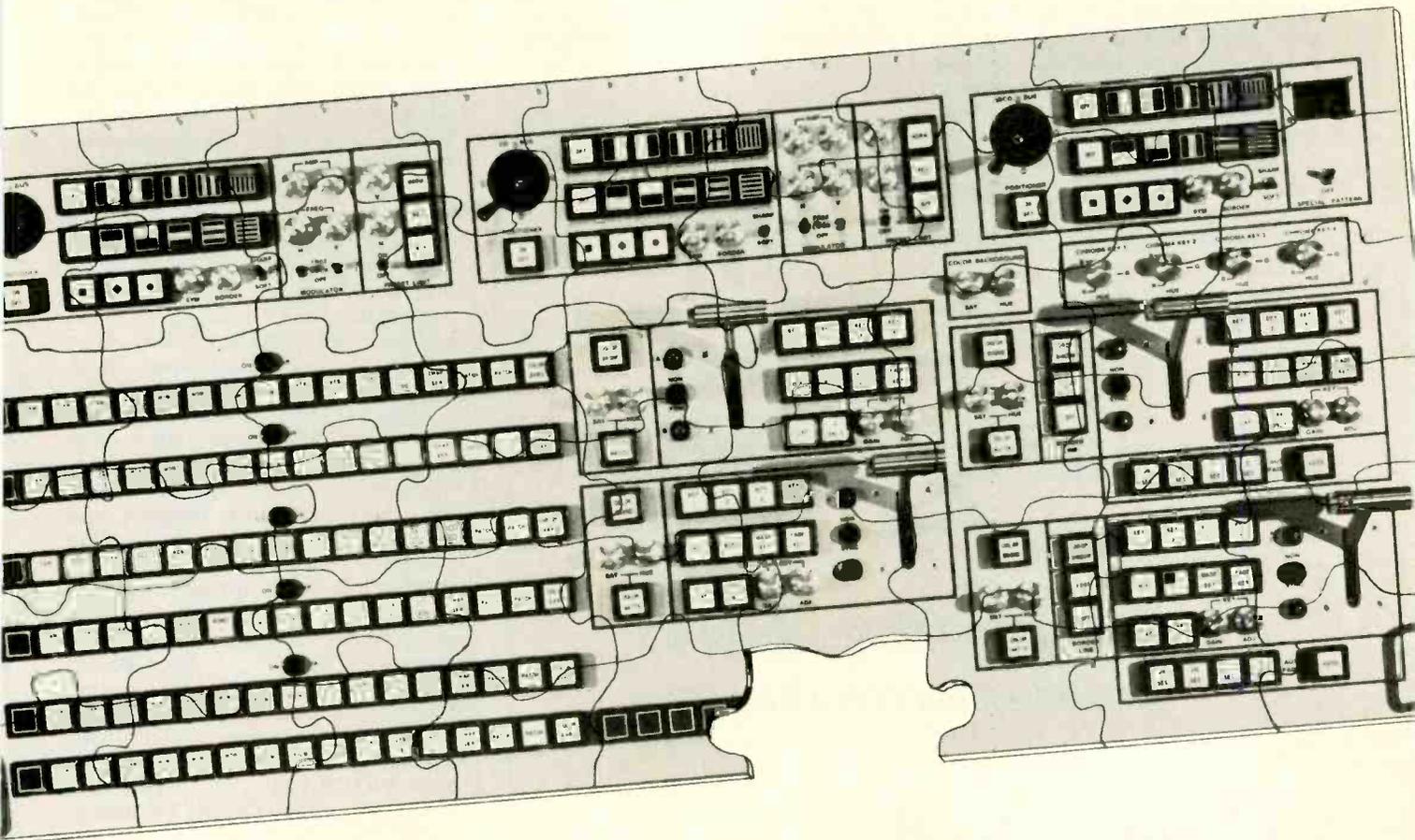
Other FCC Actions

An up-dated version of the **War of the Worlds** broadcast that scared millions in 1938 scared a lot of people in Rhode Island last October—and station WPRO, Providence, has received a sharp FCC rebuke. After investigating complaints, the FCC concluded that WPRO's advance notifications were insufficient to prevent public alarm . . . In response to requests for clarification, the FCC has ruled that a broadcast **action of merchandise**, with bids phoned

continued on page 12

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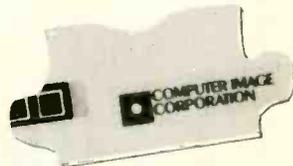


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NEWS

in and the station receiving some or all of the proceeds of each sale, is a program length commercial and must be logged as commercial matter . . . The Commission has issued a reminder to cable system operators that when they apply for **re-certification** (by March 31, 1977, or when the present franchise runs out, whichever is earlier) they must present a copy of a new, valid franchise consistent with FCC rules

. . . An inquiry to determine ways of improving the FCC's **Equal Employment Opportunity** program has been opened (Docket 20550) and comments are invited on all aspects of the program with a September 11, 1975 deadline.

Briefs

Ampex Corp. has recently entered into a two-year marketing agreement with

Audio Designs and Manufacturing, Inc. to distribute ADM stock and custom audio consoles and components to all international markets excluding Brazil . . . **WIOK**, Long Island, N.Y. (formerly WHLI-FM) became Long Island's first quad radio station with a Beautiful Music format for adults July 21st . . . **Mann Media, Inc.**, a Little Rock, Ark. based communications firm, has expanded its radio station ownership with the purchase of stations WNOS-AM and WNOS-FM serving the North Carolina cities of Greensboro, Winston Salem and High Point . . . **Smith, Cooper Associates**, CATV and pay TV management and consulting firm, have moved to 56 Haddon Ave., Haddonfield, N.J. 08033; 609-428-7275.

Manufacturing of the **Magnavox** Chromavue 400 series video color cameras has moved from Morristown, Tenn. to Fort Wayne, Ind. to increase the quality assurance program and make improvements in the design of the camera . . . The CATV systems serving the Quakertown/Boyertown, Penn. area have been sold to a cable operating group headed by **Richard Treibick** of Greenwich, Conn. . . . The CBS SQ method of quadrophonic broadcasting has been adopted by five major New York area stations: WQIV-FM, WRVR-FM, WIOK-FM, WNYC-FM, and WQXR-FM . . . **Meredith Corp.** has sold its Omaha TV station, WOW-TV, to **Chronicle Broadcasting Co.** . . . **WKY-TV**, an NBC-TV affiliate in Oklahoma City, Okla., has been named "Newsfilm Station of the Year" by the National Press Photographers Association.

"Agriculture News Service" has been formed by **Snider Corp.** to serve the needs of radio stations in the farming areas of Arkansas and the adjacent areas in Mississippi and Tennessee with up-to-the-minute market information, agri-weather and general farm news . . . **Saunders & Hayes Communications, Inc.**, a communications group who provide the business community with a complete range of audio/visual services, have opened their offices at 128 E. 91st St., N.Y., N.Y., 10028; 212-427-5509.

Arvin Systems, Inc., and **TeleMation, Inc.**, jointly announced negotiations of a marketing agreement wherein TeleMation will assume the exclusive marketing rights to commercial video products of the Arvin electronics subsidiary, Echo Science Corp. . . . **Systems Wire and Cable, Inc.**, has announced a contract with **Continental Cablevision** to supply all of the cable requirements, totaling approximately \$500,000, for the Lansing, Mich. system . . . **C-COR Electronics** now offers a complete repair and testing ser-

continued on page 16

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CHIRON II Electronic Graphics System,

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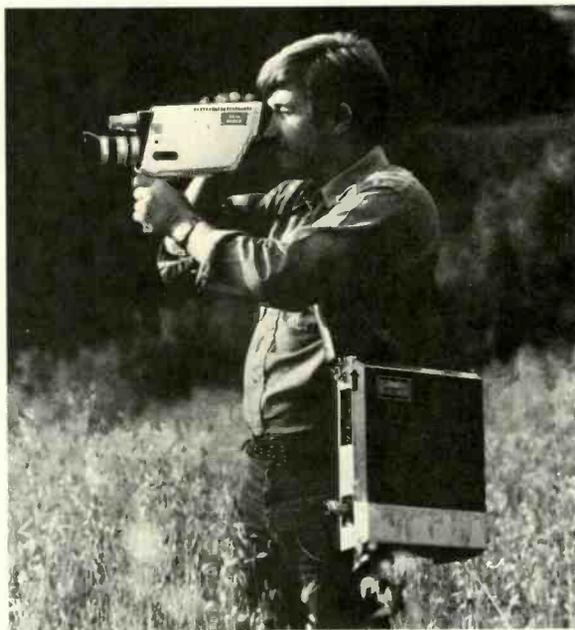
One of the common discomforts due to excessive videotaping is back pain.

Lugging around those 35 and 40 pound VTRs through crowds, down stairways, up stairways, up hills, steep hills.

Well, no more. Akai has a remedy — our new VTS-150B we call the Hustler.

The Hustler doesn't weigh 35 or 40 pounds like other recording units. It doesn't weigh half that.

In fact, it doesn't even



need to go on your back.

The Hustler is a 16 pound color videotape recorder you sling over your shoulder, and a 6 pound color camera you can carry in one hand.

No wonder 63 TV stations are now using our little Hustler.

The lightweight, two-piece, one-man operation that isn't a pain in the back — or anyplace else.

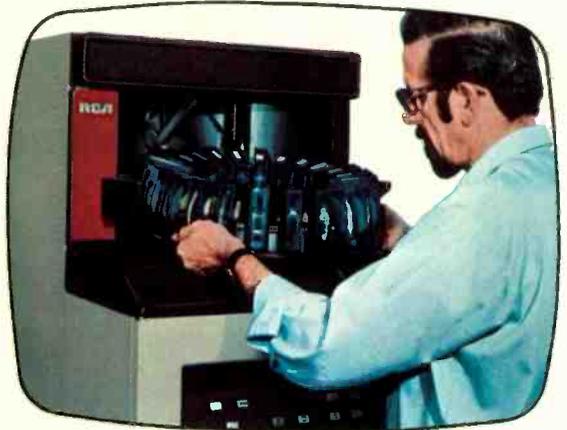
AKAITM

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RCA announces of the film



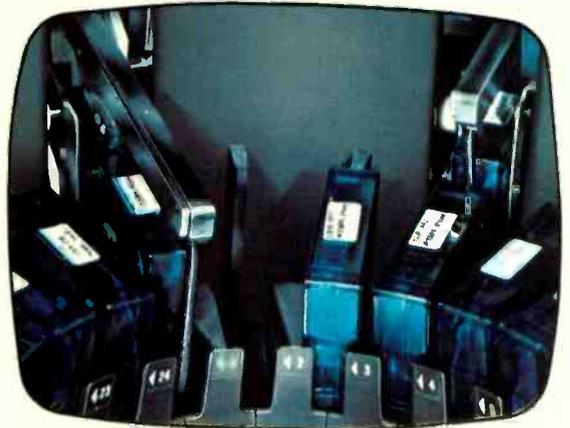
A special Mylar leader is spliced onto each film segment. Film is inserted into a cartridge—no further film handling.



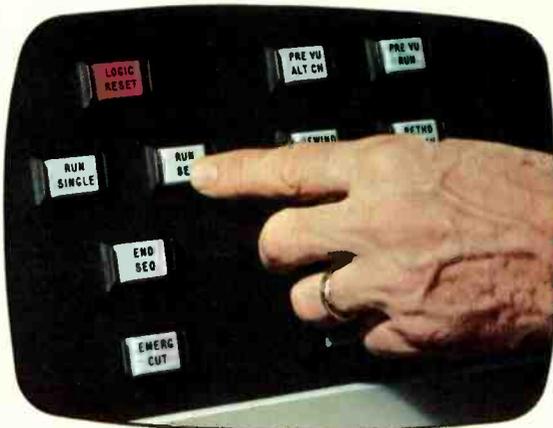
Each cartridge can contain from ten seconds to two minutes of film, with complete cartridge flexibility.



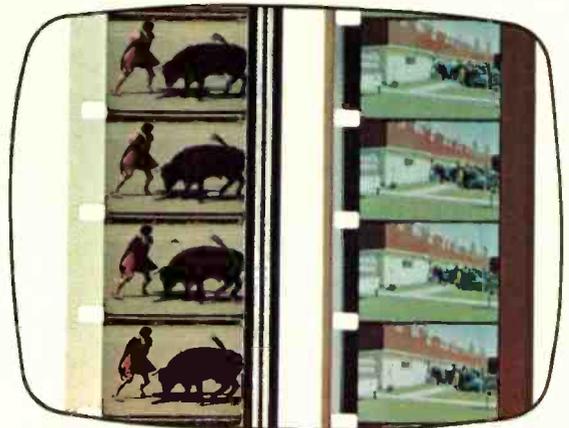
A cartridge is drawn into the machine on cue, shown by one of the two projectors, then rewound, all automatically.



As the first reel rewinds and is replaced in the magazine, the second projector runs film from the next cartridge.



The TCP-1624 will play one cartridge and stop, or will play cartridges continuously until it receives an order to stop.



The TCP-1624 switches automatically from optical to magnetic soundtrack, then returns to optical mode.

ances the end clip slip-up.

Now you can put miscues, make-goods, and imperfect film color all behind you. Do away with time-consuming, costly film clip cataloguing, storage, retrieval, dubbing, splicing, threading, cueing, playing, unsplicing—and the chances for error that go with them. The RCA TCP-1624 Cartridge Film Projector is here. In full production now.

A survey of TV station logs shows that 89% of film segments run from 10 to 120 seconds—the film lengths the TCP-1624 is made to handle. Its magazine holds 24 16mm. film cartridges, each of which can be cued, played and rewound with push-button or computer control, with full intermix; even last-minute changes can be made. Once film clips are cartridge-loaded, no further film handling is needed. You play the film spot on film, without dubbing. Spot reel makeup and breakdown are eliminated; each break can be programmed in any order.

The TCP-1624 is part of a new, problem-solving telecine system from RCA.

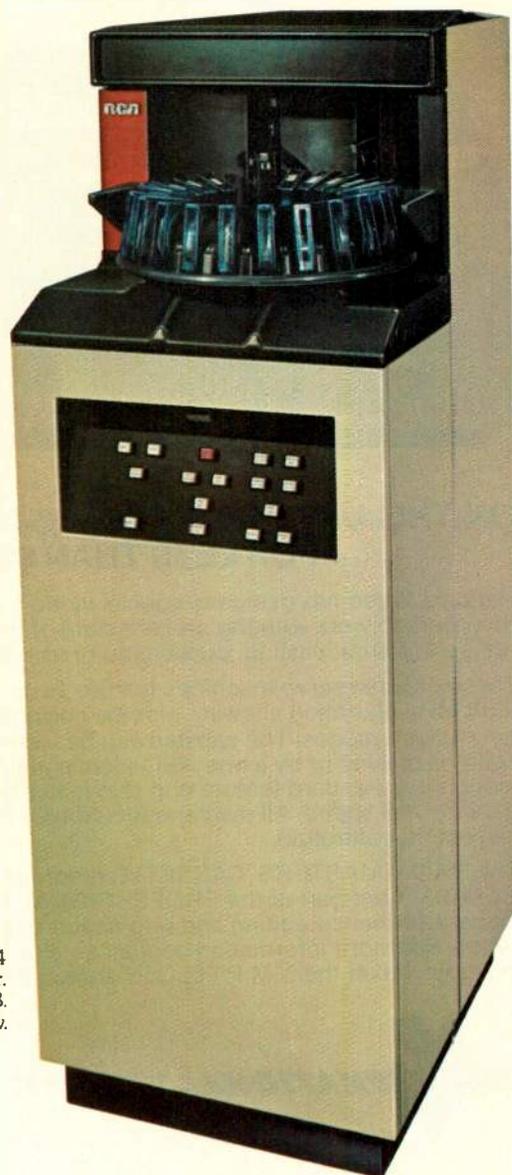
The TCP-1624 Cartridge Projector features two identical, self-threading projection systems with automatic cue, zero pre-roll, automatic switching between optical and magnetic sound tracks, and automatic film rewind. It can operate in "automatic sequential" or "single event" modes.

The RCA TCP-1624 can do for film what cartridge systems do for tape. In fact, the TCP-1624 is fully compatible with a cartridge system, to give you automatic station breaks using both film and tape.

In addition, the system offers consistent color quality in real time, automatically, with optional

ASCET (Automatic System for Correcting Errors in Telecine). ASCET is available as part of a TK-28 film island. With this new automatic color correction option, you can put a high-quality picture on the air with less than high-quality film.

Whether or not you saw the RCA TCP-1624 at NAB, contact us now. Your RCA Representative will gladly demonstrate the end of the film clip slip-up.



RCA TCP-1624
Cartridge Film Projector.
You've seen it at NAB.
You can buy it now.

RCA Broadcast
Systems

NEWS

vice of all manufacturer's CATV amplifiers

Cinema Products Corp. has been appointed exclusive U.S. distributor for the Cooke Varotal 20-100mm T3.1 zoom lens for professional 35mm cinematography. **WMAZ-TV**, Channel 13 in Macon, Ga., has been named Television Station of the Year by the Georgia Association of Broadcasters **Mobile Image Atlanta, Inc.**, a

new TV and video tape facility, has opened at 769 Peachtree St., N.E., Atlanta, Ga. 30308; 404-875-9048.

The Video Group, Inc. a Detroit-based TV production agency, has acquired the contents of two TV production studios formerly belonging to Lewron Television, Inc., of New York City **Central Communications TV, Inc.**, has purchased the Ft. Stockton, Texas cable system from Mr. Neville Haynes and partners The **CBS Radio Network** recently added stations WOAI, San Antonio, Texas;

WJAX, Jacksonville, Fla.; and KOCY, Oklahoma City, Okla., to its lineup of affiliates.

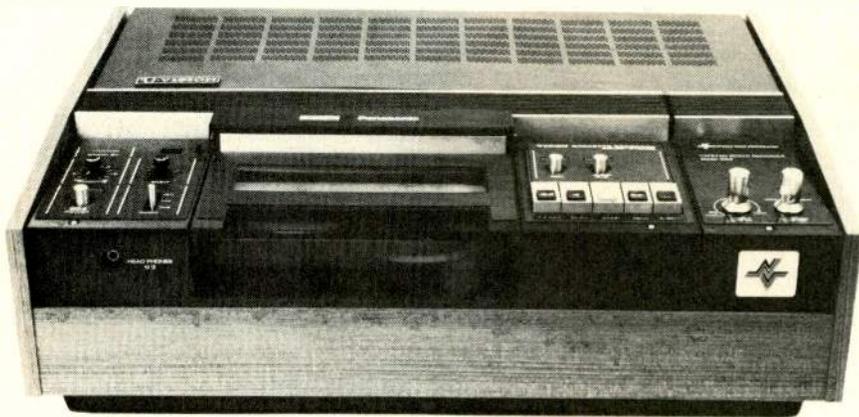
American Finance System Inc. of Silver Spring, MD recently sold all of its capital stock of Jefferson Cable Corp. and Martinsville Cable Vision Inc. to the Mansfield Journal Co., owner of several newspapers **Conrac Corp.** has been awarded a \$2.4 million contract to provide computer-controlled Telscreen scoreboards at five Olympic sites in Montreal The Customer Service Department at **HF Photo Systems** Division of Technology Inc. now offers its clients a round-the-clock telephone diagnostic service.

. . . . **Capitol Magnetic Products**, first U.S. company to develop a lacquer formulation for audio mastering discs, has closed down its coating operation in Glenbrook, CT and moved into a new manufacturing facility in Winchester, VA in order to increase production and meet increasingly critical lacquer requirements **Broadcast Electronics, Inc.** has established a network of eight regional repair and spare parts depots to service the Spotmaster line of equipment. For locations, call (301) 588-4983.

A contract totalling approximately \$2.3 million has been awarded to **Scientific-Atlanta** for ground station equipment for the domestic communications satellite program being undertaken by the Gov't of Indonesia

A competition sponsored by **Berkey Colortran, Inc.** at the Syracuse University School of Architecture to design a drafting table lighting fixture has resulted in cash awards to students totalling \$600 and a \$400 donation to the Deans Fund at the School **TEAC Corp.** has discontinued its fair trade policies effective June 15, 1975

THE BROADCASTERS CASSETTE™



ON-THE-AIR DIRECT FROM 3/4-INCH CASSETTES FOR LESS THAN \$3000!

National Video has designed special video cassette players and recorders to work with the present state of the art time base correctors for broadcasting, duplicating or as editing source machines.

These capstan servo machines feature switchable external/internal 3.58 MHz operation allowing chroma correction in either direct or heterodyne modes. The capstan can be locked by advanced composite sync or by a one volt video signal. Variable speed slow motion is a standard feature and provides a range from still frame to near normal speed. All machine functions, including slow motion, can be remote controlled.

The BROADCASTERS' CASSETTE recorder SCR-1053* and player SCP-1052* are part of the PROFESSIONAL CASSETTE™ series of high performance editing and origination equipment from National Video. For more information contact us. For a demonstration see us in Booth 116 at the S.M.P.T.E. Conference Sept. 29—Oct. 2.

 **NATIONAL VIDEO CORPORATION**
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*Patents Pending

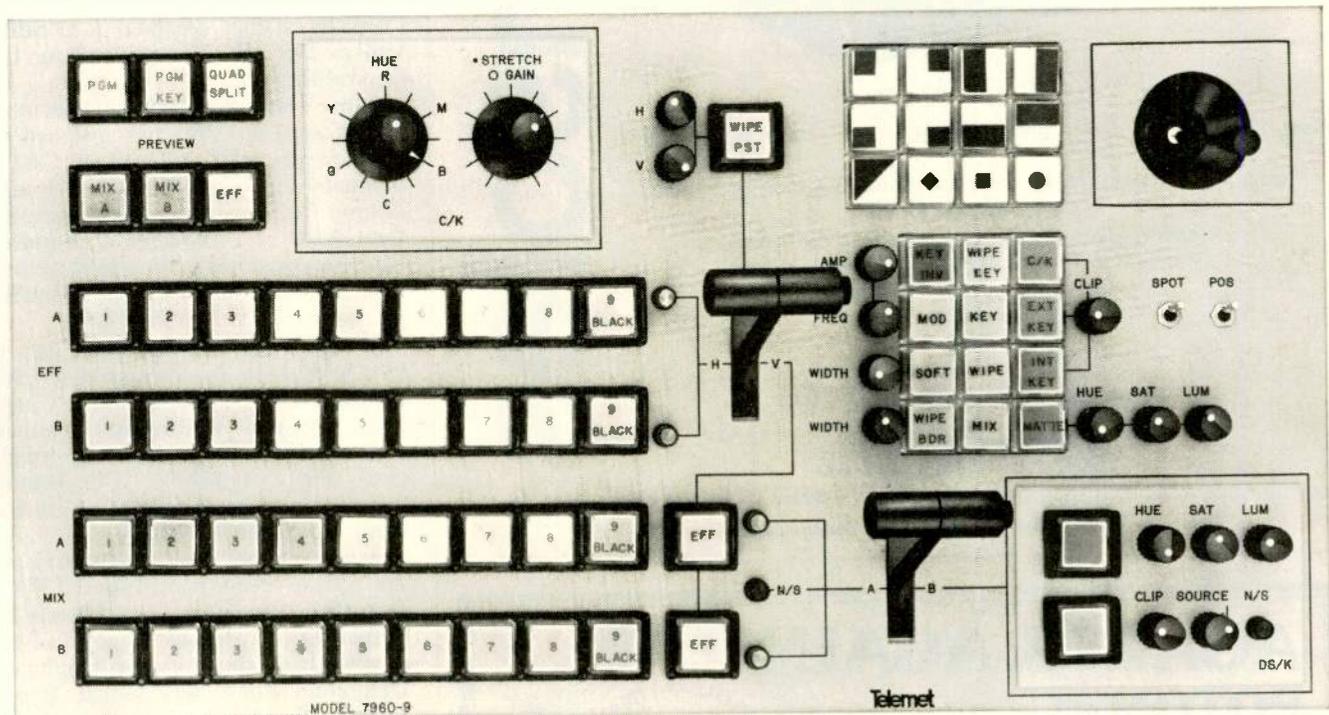
Circle 110 on Reader Service Card

People

Donald F. Smith has been appointed national broadcast marketing manager for TeleMation, Inc. **Alan B. Bennett**, vice-president and general manager of WKBF-TV, Cleveland, has been named vice-president, operations and engineering of Kaiser Broadcasting Co. **Jim Scherr**, formerly with the General Electric Television Division, is the new component engineer with the Broadcast Products Division of Harris Corp. **Edmund Henckel** has been appointed director, sales engineering of Vicon Industries, Inc. The appointment of **Roger A. Grover** as sales manager has been announced by Walther M.A. Anderson & Associates, Inc.

Larry L. Hayes has joined
continued on page 18

The Effects You Need— At a Price You Can Afford... Only From Telemet!



Introducing the Expandable Model 7960 Production Switcher—from \$13,375

The latest in production effects—all you need, plus the option to expand video input and effects at a nominal cost.

Model 7960 is a 4 bus switcher with re-entry and an independent preview option. The control panel is available in 3 standard configurations; 9, 15 or 21 inputs. Custom panels are available with up to 29 inputs, additional key, preview and program buses, machine control, audio breakaway, etc.

Check the features in this quality switcher:

- Nine wipe patterns
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- Wipe key
- Presettable wipe limits
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- Remote controlled
- NTSC or PAL versions available

Plus, look at these options:

- Positioner, including circle, square and diamond patterns
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- Chroma keyer
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- Preview bus
- Non-synchronous inhibit
- Color matte and black burst generator
- Soft wipes and keys

But most of all, consider the quality you get from Telemet, the leading name in quality test, production and switching equipment for the broadcast and telecommunications industry for 25 years.

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- Demodulators—Variable Tuned
- Video Signal Conditioners
- Audio Monitors
- Audio Distribution Amplifiers
- Video Distribution Amplifiers
- Pulse Distribution Amplifiers
- Clamper Amplifiers
- Monoscope Generator
- Video Routing Switchers
- Video Production Switchers
- Chroma Keyer—RGB
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NEWS

Coastcom, Concord, Calif., as senior research and development engineer responsible for new product development and design TeleMation, Inc. has appointed **W. Paul Warnock** as vice-president, finance **Dr. Walter S. Baer** of the Rand Corp. was named as a recipient of one of the 1975 Broadcast Preceptor Awards for his book, "Cable Television: A Handbook for Decision-Making" Warner Cable Corp. has named **Michael J. O'Sullivan** as director of operations for the Central Region.

Marc Nathanson, vice-president of TelePrompTer Corp. has resigned to become president of a new CATV company and to join Harriscope Broadcasting Corp. as senior vice-president for CATV **George T. Saddler** has been appointed to the newly created post of marketing manager for audio magnetic tape at Fuji Film USA

K. Blair Benson has been named vice-president of engineering for Goldmark Communications Corp. . . . **Richard W. Burden** has joined Automated Processes, Inc., as a broadcast sales engineer **Daniel Aaron**, vice-president of Comcast Corp., and **Robert Weary**, secretary-treasurer of Communications Services, Inc., have been named to NCTA's executive committee **Harvie E. Schwartz, Jr.**, former manager of the engineering laboratory of Goldmark Communications, has joined Byron Motion Pictures, Inc., as manager of technical operations of the video services laboratory.

David Paul McNamee has been named operations manager of KLIF, the 50,000 watt Fairchild Broadcasting Group AM station serving the Dallas/Ft. Worth market **Mark Mason**, operations manager of WVOX radio, New Rochelle, NY, has been elected vice-president and director of operations for the Westchester Community stations **Lynn Distler** has been named sales manager for Comrex Corp. . . . **James H. Anderson** has been elected president of ITT Canon Electric.

Bill Brock has been appointed regional sales manager based in Nashville for Auditorics Systems **Benjamin B. Bauer**, vice-president and general manager of the CBS Technology Center, Stamford, Conn., was awarded a "Debby" by the Society of Audio Consultants during the recent Consumer Electronics Show in Chicago for development of CBS' SQ quadrasonic system **Raymond A. Watson** has been appointed vice-president of McGraw-Hill Broadcasting Co., Inc., and general manager of KERO-TV, Bakersfield, Calif.

TEKTRONIX ANNOUNCES

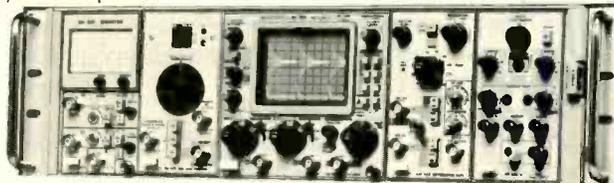
A new concept in portable instrumentation

The TEKTRONIX TM 515 Traveler Mainframe looks like fashionable flight luggage, compact and easy to carry, or slide under an aircraft seat. In reality, it's a five-compartment power module/mainframe that provides power and interface connections for TM 500 plug-in modular instrumentation. Plug in the new (two-wide) SC 502 15-MHz dual-channel oscilloscope, and you have the beginnings of a powerful take-along instrumentation system.

You can optimize a TM 500 system to your needs by selecting from more than 30 plug-in modular instruments. With the TM 515 Traveler Mainframe and SC 502 Oscilloscope as a nucleus, select from DMM's, counters, generators, power supplies, signal processors, and even blank plug-ins for your "home-built" circuits. Intended applications include areas from digital field service to medical, from audio/communications to on-site industrial controls maintenance.

The SC 502 is Tektronix quality, featuring clean triggering characteristics, delay line input, trigger view, trigger holdoff, 1 mV sensitivity, and the capability of working through the rear interface circuit board with other TM 500 instruments. It features a specially brilliant crt designed and built by Tektronix for use in areas of high ambient light. Include a DD 501 Digital Delay alongside the SC 502 and gain the capability of delay-by-events—you can then obtain stable digital displays from electromechanical sources like disc drives that would otherwise be too jittery for accurate viewing on any conventional oscilloscope. Include the DC 505A Universal Counter and DM 502 Digital Multimeter to complete your TM 515 package, and discover the benefits of simultaneous counter and DMM capability with trigger level readout at the touch of a push button.

The TM 500 concept lets you take along on field servicing trips the same instruments you use in the lab or for production testing, thereby enabling you to maintain the same standards on the "outside". The SC 502 Oscilloscope, for example, may be used as a bench instrument in any multiple-compartment TM 500 mainframe, and it offers unique systems capabilities, as well, when operated in a rack in the RTM 506.



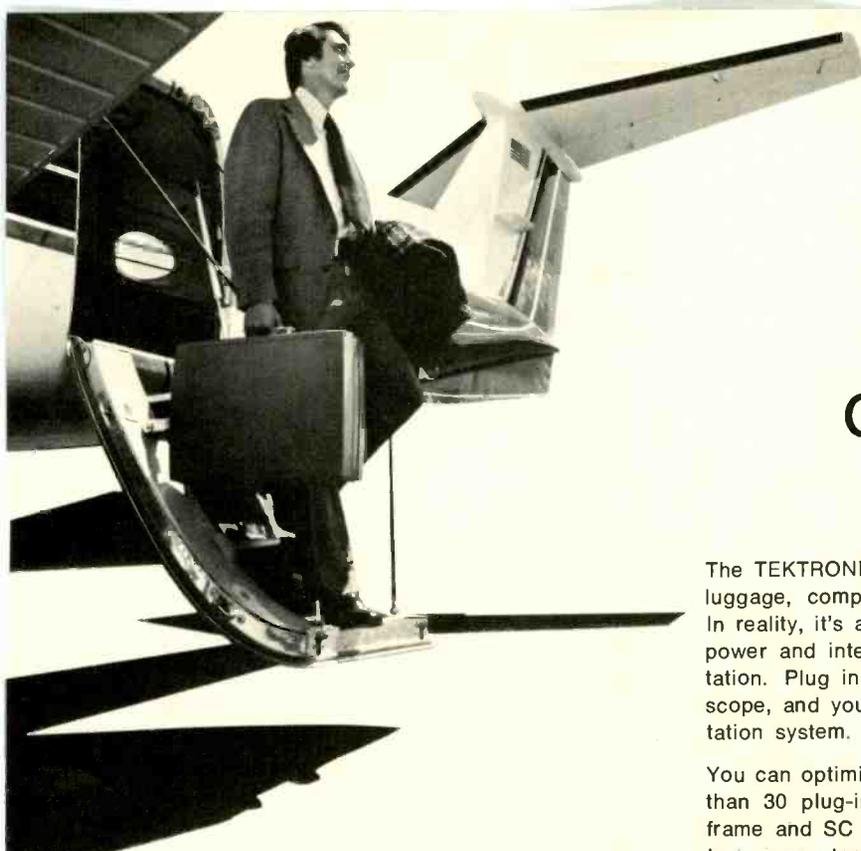
Contact your local Tektronix Field Engineer or circle the appropriate reader service number for a demonstration of TM 500 instrumentation or additional technical information on the TM 515 Traveler Mainframe and SC 502 Oscilloscope. For an up-to-date TM 500 Catalog write to Tektronix, Inc., P. O. Box 500, Beaverton, Oregon 97077. In Europe write Tektronix Limited, P. O. Box 36, St. Peter Port, Guernsey, Channel Islands.



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INTERPRETING THE **FCC** RULES & REGULATIONS

AM Restrictions Eased

By Frederick W. Ford and Lee G. Lovett
Pittman, Lovett, Ford and Hennessey, Washington, D.C.

In a move surprising for its swiftness, the Commission recently relaxed its AM acceptability and "suburban" policy restrictions, thus "opening the door" for existing AM stations to seek power increases and for new stations to secure assignments.¹ Essentially, the new AM rules eased past restrictions in four areas: 1 existing AM power increases, frequency changes and fulltime services, 2 new stations proposing daytime or unlimited time operation, 3 creation of a new power classification and 4 easing of "suburban" policy requirement.

The new AM rules eased considerably those instituted by the Commission in 1973² which were designed to conserve the remaining AM spectrum space for the assignment of stations that would provide service to underserved areas and to encourage FM development in areas lacking radio services. Pursuant to a rulemaking inquiry initiated in November 1974, the Commission herein found the 1973 rules to be "unnecessarily restrictive in controlling the rate of expansion of the standard broadcast service, and that in some cases they failed to afford reasonable opportunities to satisfy developing needs for new and additional aural service." The new AM rules are designed to encourage community-oriented radio services to many additional separate and distinct localities, especially newly-emerging *suburban* population centers. Comments on the four central areas of Commission action follow.

Existing AM Station Changes

The Commission loosened its power and time restrictions and opened its doors for applications for power increases and night-time services, so long as interference standards are maintained.

Existing *daytime* stations may seek power increases to the maximum permitted on their channel so long as they meet Commission interference standards³. That is, in effectuating its power increase, the station may not cause or receive new interference; if the station presently receives interference, it may continue to receive same so long as its total interference is not greater than that presently received.

Existing *daytimers* may also apply for fulltime service on its present or another frequency upon a satisfactory showing that the community for which the station is

proposed presently has fewer than two independent aural transmission facilities during the portion of the day for which the new service is proposed. Put another way, in order to secure fulltime service, the *daytimer* must show that it will provide the *first* or add a *second* fulltime facility to the community of license and, that no unused FM station is allocated to said community. Note: AM-FM combinations, licensed to the same owner in the same community, are considered as one. In addition, its "less-than-two-services standard" would *not* apply if an existing *daytimer* proposed a new *unlimited* time station if such would provide a first or second *nighttime* facility for the community. In the alternative, if the aforementioned criteria do not apply, proposals which meet the "25% white area" standard (discussed in "New Facilities" section below) would be accepted.

An existing *daytimer* or *fulltimer* may also apply to change its frequency to obtain a better allocation without being subject to the restrictions which apply to new stations. Like applications for increases in power, applications for changes in frequency need only meet the standards covering *overlap* and daytime and *nighttime interference*. Regarding existing *nighttime* stations, they may likewise seek power increases on their present frequencies and make changes in directional antennae systems providing they do not cause interference to other co-channel stations. The 50% rule on RSS applies here and a Theoretical design may be utilized for the DA.

In addition, a *nighttime* station proposing to change its frequency must meet the same interference standards as discussed above. Note: The directional antenna design must be a standard design in accordance with the rules.

New Facilities

The AM rule changes will permit new *nighttime* or *daytime* assignments to communities which meet the following standards.

Assuming the availability of a frequency, the Commission will accept applications for new *nighttime* or *daytime* AM assignments to communities with fewer than *two* aural facilities licensed to said community during the relevant portion of the broadcast day. Of course, the Commission still maintains its existing *overlap* and *nighttime* interference standards.

If a community has two or more fulltime aural facilities, applications for new stations may still be tendered providing they meet the following exceptions. First, the

¹Report and Order in FCC Docket 20265 (June 27, 1975).

²Report and Order in FCC Docket 18651 (February 21, 1973).

³FCC Rules and Regulations, Section 73.182(o).



Introducing a Color Corrector for Electronic News Gathering.

Electronic News Gathering makes tough demands upon the broadcaster. Color imbalance and colorimetry problems are frequently encountered. Matching remote camera shots to indoor studio programs or assembling tapes from different locations or cameras is "chancy" at best. Often that fast-breaking story doesn't allow for camera rebalancing!

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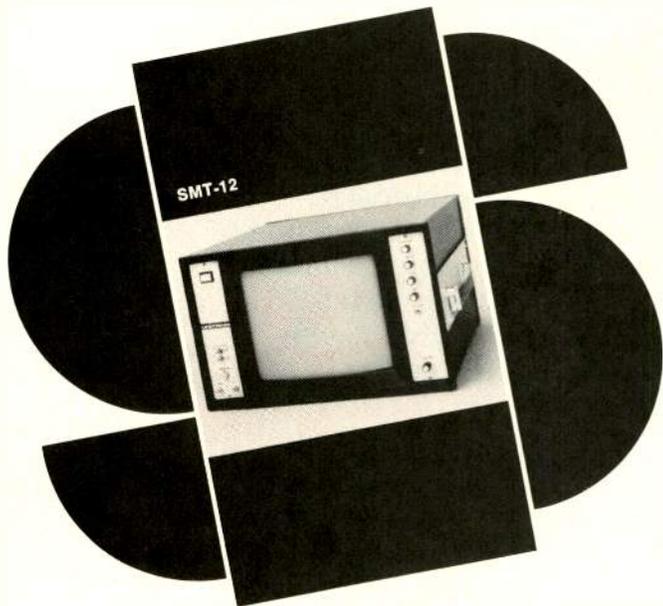
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FCC RULES & REGS cont. from page 20

applicant must demonstrate that its facility would serve a 25% "white area," i.e., that area lacking in interference-free, full primary service from either an AM or FM station. Note: "Primary service," in its "white area" context, refers to a 1 mv/m AM or FM signal from another AM or FM station. As mentioned above, these rules obtain both to (1) new facilities and (2) daytimers seeking to go fulltime.

New Power Classification

The new AM rules also create a new 2.5 kW power classification to provide an intermediate step between the present 1 kW and 5 kW classifications specified in the rules. Power classifications permitted by "station class" are listed below.

Station Class:	Power Level
IV	250, 500 watts or 1.0 kW
IIIA	1.0, 2.5 or 5.0 kW
IIIB	500 watts, 1.0, 2.5 or 5.0 kW
IIA	10.0, 25.0 or 50.0 kW
II B or D	250, 500 watts, 1.0, 2.5, 5.0, 10.0, 25.0 or 50.0 kW
I	10.0, 25.0 or 50.0 kW

The Commission felt that the creation of a new step between 1 kW and 5 kW "facilitated the maximum use of facilities" in cases where power greater than 1kW was feasible, but not as much as 5 kW.

Suburban Policy

The new AM rules also relax the heretofore troublesome "suburban" policy (Section 307 (b))⁴. The Commission's "suburban" policy, adopted in 1965, required applicants for AM stations in *suburban* communities to rebut the presumption that if the proposed station delivered a 5 mv/m signal over a nearby larger community, the facility was intended to serve the larger community. In its new AM rules, the Commission will now forego applying their "presumption" to (1) *uncontested* applications for new stations and (2) *increases* in power of existing stations. Hence, the rule will be limited to mutually exclusive applications that are involved in a comparative hearing. Note: The Commission issued its caveat that applications for power "clearly in excess of that necessary to serve the proposed community of license and its immediately surrounding areas" will be examined carefully.

Conclusion

In relaxing its acceptability restrictions and "suburban" policy for AM stations, the Commission has opened the door for a flood of AM applications seeking new or changed facilities. If a large backlog of unprocessed applications develops, it said it would likely impose measures to control the rate of application filings by declaring "open" and "closed" seasons for the filing of same. These measures will, if implemented, be temporary and advance notice will be given. The rule changes are effective August 22, 1975. Applicants for new or changed facilities should stay current with the Commission's processing schedule. BME

⁴Designed to implement Section 307(b) of the 1934 Communications Act calling for a "fair, efficient and equitable" distribution of broadcast facilities in the U.S.

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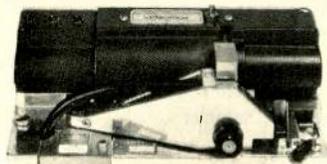
No one in the business exceeds our warranty protection. No one in the business offers a wider variety of

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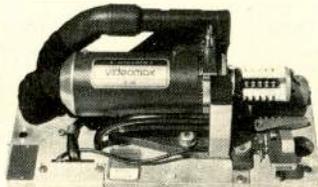
So, if you need a Mark X or a Mark III quad head in our "L" or "M" Series ... or an RCA High Band or Low Band quad head in our "M" Series ... contact Videomax.

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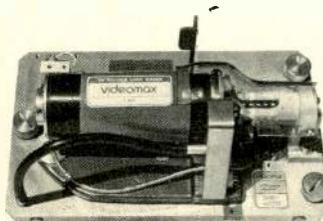
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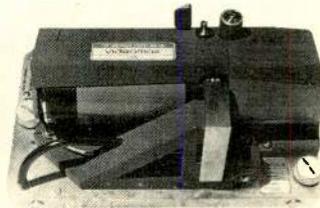
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MARK III



RCA LOW BAND



RCA HIGH BAND

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How To Backtime With Your Pocket Calculator

By Mary F. Zoller

As an air-director for 39 TV's "Eyewitness News," the author found her attention focused on the second hand of a too-small clock hanging on a dark wall fifteen feet away. To determine whether the station was running early or late she turned to the calculator as a digital backtimer. "It's the greatest aid since the stop watch," she says.

If you ever have trouble backtiming or adding a column of minutes and seconds, here's an efficient method you can really count on.

Adding segment times, predetermining reel changes, backtiming, totaling commercial material in an hour, and filling breaks can all be done quickly and accurately with a regular eight digit calculator. Any eight digit standard four function calculator can add and subtract hours, minutes and seconds without changing the figures to their decimal equivalents.

Because calculators function differently from model to model, you may have to set up the procedure a little differently i.e.: as to whether you punch + before the number you enter or = afterward. Regardless of the sequence, the events are the same, and the results fast.

Directors, both on-air and production, can utilize the calculator with ease; as can traffic, accounting and sales. The method is simple, but like anything new, it takes a little getting used to. To compute time, use the following procedure, watch how it compares to clock time as illustrated in the left column.

clock time		calculator display
3	As your initial entry use the hour	3
3:	and for each colon add 0	30
3:28	followed by your minutes	3028
3:28:	a 0 for the colon	30280
3:28:57	and your seconds	3028057

Now insert this series as one entry. Your commercial break runs 1:05, so add 1, a 0 for the colon, and 05 as a single entry.

+ 1:05		+ 1005
3:30:02	Your total is	3029062

Here now is the key to the system. Because the seconds total over 60, add 940 to the total.

		+ 940
(3:30:05)	Your converted total now is	3030005

Whenever your seconds show up as 60 or more, add

Ms. Zoller is a producer and on-air director for KCST, San Diego.

940. You can keep adding 940 until the seconds read under 60. For example:

clock time		calculator display
4:00:00	Your program hour starts straight up at	4000000
20	Movie open runs	20
34:15	Reel one of the movie is	34015
2:30	Break one at 4:10 runs	2030
2:50	Break two at 4:20 runs	2050
+ 2:40	Break three at 4:30 runs	+ 2040
4:42:35	The total is	4040155
	The seconds are way over 60 so add 940	+ 940
		4041095
	The seconds are still over 60 so add 940 again	+ 940
(4:42:35)	This is the converted total OR time for a reel change.	4042035

940 is the key. What you are doing with the addition of 940 is to carry the hundred digit over past 0 which you have in place of a colon.

Use 940 to convert second seconds to minutes.

Use 940000 to convert only minutes to hours leaving the seconds undisturbed.

Use 940940 when converting both minutes and seconds simultaneously, as in the example below.

4:42:35	To the previous total add 23:50	4042035
+23:50		+ 23050
5:06:25	To convert this total in both minutes and seconds, add 940940	4065085
		+ 940940
(5:06:25)	The correct time stands at	5006025

The same principles apply to subtraction. For example:

5:30:00	Local news ends at	5030000
- 1:30	Last commercial break runs	- 1030
5:28:30	Last Commercial break should start at	5028970
	To convert, subtract 940	- 940
(5:28:30)		5028030
	Sports segment runs 4:40 and includes :45 for bull session. Subtract	- 4040
- 4:40		- 4040
5:23:50	Sports would start at	5023990
	To convert, subtract 940	- 940
(5:23:50)		5023050

The only pitfall to avoid when learning to count time on a calculator is to remember to use the 0 in place of a colon. Once you've mastered that small obstacle, you've got it.

BM/E

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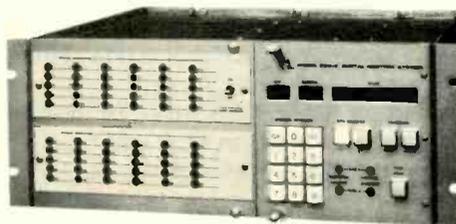
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Picking the Right ENG System for Your Market

by Rupert Goodspeed

If you don't have \$75-100,000 for a high quality ENG system, you don't have to let the Revolution pass you by.

We take you now to Portland, Oregon. . .
Stand by Portland, five second roll
. . .where our correspondant, Ross Hunter, has the latest word on the fishing rights. . .
Okay, New York, sync lock
. . .controversy between the U.S. Government and the Umatilla Indians.
Switch to Portland
Good evening, we're standing at Celilo Falls and off to the north you can see. . .
Looks good Portland

It had better look good, Portland, because your efforts at the moment are being directly compared to those of other network news gathering crews throughout the nation.

Network news groups, network owned-and-operated stations, and key network affiliates in major markets have an obligation to present a quality product to the viewer. It's not an easy obligation to fulfill, because you have to be in the right place at the right time, with the right kind of equipment to cover a fast-breaking story.

Electronic news gathering techniques have been pioneered by the networks and their owned-and-operated stations. The networks have indicated to equipment manufacturers the kind of ENG gear they require and the manufacturers have responded. The problem for the smaller broadcasters who want to be able to provide a feed on a hot story originating in their area is coming up with the capital. And the move to ENG may be resisted by news crews who fear that it could trim their ranks, or even eliminate jobs.*

Previous to the advent of electronic journalism everyone had about an even break: 16mm film was equally accepted everywhere. But now the station who can offer immediate 'direct from the scene of action' through ENG viewing has gained the upper hand.

But it's not easy for the smaller or medium sized market to find the \$75,000 to \$100,000 to set up a first class system. To match 16mm quality, a 3 Plumbicon tube system plus a good video tape recorder is necessary. Is there a reasonable alternative? Of course there is, but you trade off something for the lower dollar cost; namely quality of finished product. And because of the reduced sensitivity of your lower cost equipment there are limitations on where, and under what conditions you can shoot.

Two-tube color camera systems have proven capable of doing an excellent job under a wide variety of con-

ditions, as long as there's adequate light. Some ¼-in and ½-in videotape recorders even include an assembly edit mode, allowing a reporter to field edit an article or feature. In the case of fast breaking news stories this technique does not seem practical because you don't know how the story will end, and a taped story cannot be built in any logical sequence. Therefore you'll still need a videotape editing capability and you'll have to use a \$14,000 time base corrector in order to meet FCC specs when you air your finished tape. All of which brings us to a total of \$35,000 for a single camera electronic journalism package of this performance level.

There are still other approaches to ENG for some smaller market stations. Most stations already have a quad videotape machine, and by judicious scheduling the news department can usually be allocated some time on it to put their shows together. Using a one- or two-tube camera and a mating helical scan portable VTR, newsmen can cover an event, bring all the tapes back to the studio and then transfer them to quad through a time base corrector; after which the product can be edited and assembled like a regular television show. The ENG investment now comes down to approximately \$25,000; (including the time base corrector) assuming of course that the station already has color editing capability in house on quad VTRs.

An even more economical approach to ENG is to obtain a one- or two-tube camera with a matching VTR—either cassette or reel-to-reel—and invest in one of the lower cost time base correctors. Here again there's an inevitable trade off for the cost reduction. Less expensive TBC's use a different technique to accomplish their goal, resulting in a slight degrading of SNR and definition in the finished picture. The originating package has come down to about \$10,000, but you still face an editing problem. A ½-in EIAJ color editing machine can cost as little as \$1,900 but that's really the hard way to edit.

The most satisfactory solution appears to be investing the required \$13,000 in a decent editing system dedicated only to news and special events; to put your show together on this equipment and air it directly through a time base corrector.

It's been suggested that the most economical and practical method, although not exactly electronic journalism, is the use of super 8mm film with the newly available broadcast super 8 color scanner (Kodak Videoplayer VP-1). Requiring only the investment in some super 8 single system mag sound cameras, an editing system for

Mr. Goodspeed is vice-president, technical operations, Tri-Tronics, Inc., North Hollywood, Calif.

*However, except for the small two-tube hand-held cameras, ENG equipment weighs 50 lbs or more (not counting the VTR). Thus, two-man crews are necessary whereas one man can handle a 16mm film camera.

super 8, and one of the super 8 scanners, this entire system can be put together for under \$3,000; (exclusive of the rapid processor). A lot of people knock super 8, but if you want to see a really surprising result, just feed the output of one of the scanners through an inline vertical aperture corrector. *Voilà*, a fine airworthy product at a nominal cost.

But if you don't already have an aperture corrector, that adds another \$3,000, meaning that now you're up to \$6,000 and you haven't started to buy or process film yet.

Dilemma! If you send your film out to be processed you've lost the immediacy of a hot report. If you put in a rapid processor for super 8 you'll add another \$12,500. That brings the total package to \$18,500, and whoops, you're back up there to electronic journalism costs.

That's right, there's no such thing as a free lunch.

Those who advocate staying with 'good old reliable

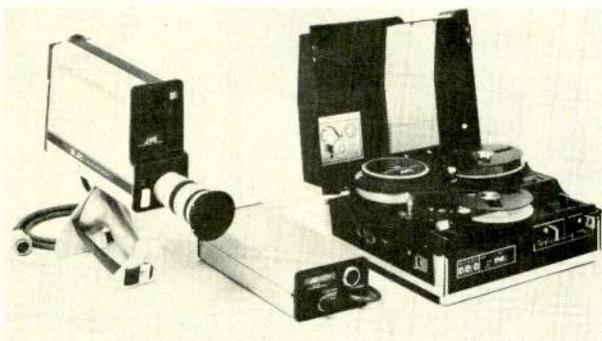
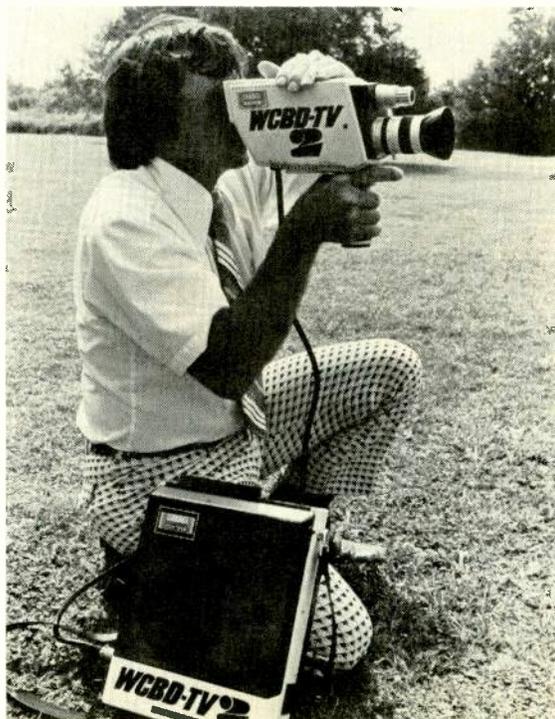
16mm film' conveniently forget that at one time they had to lay out about \$50,000 for editing and processing equipment. And keep in mind there's that \$85,000 color film island which has to be at least partially amortized against your news operations.

It all seems to boil down to this: ENG, or electronic journalism if you prefer, is a fact of life. To remain competitive you'll have to indulge in one form or another of the art. In view of that inescapable fact it seems advisable to make a careful examination of your competitive position in terms of the market you serve, the budget you can justify for equipment, the savings you could make by intelligent utilization of manpower and equipment, and the status and image you need to maintain.

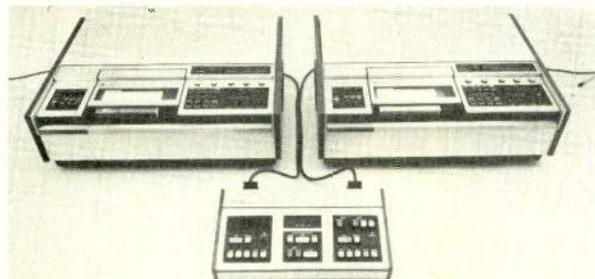
Weighing all these factors will enable you to determine the type of electronic journalism package best suited to your own needs. **BM/E**

Camera type & cost	VTR Type And cost	Editing and Processing Equipt. cost	Playback Equipt or correction Equipt & cost	Total Cost	Results obtainable and advantages or disadvantages
16mm film \$3.5K	Audio Rec. 5.K	16mm vwr/spl. color proc. 47.K	Film Telecine (10% of 85K) 8.5K	64.K	High quality, good definition, easy to handle, 1 man crew possible, direct report not avail. High cost of film
3 Plumb. 45.5K	Helical cassette 3.K	Helical VTR Editor/contr. 13.K	Time base corrector 13.5K	74.5 K	High quality excellent definition, good oper. flex., low oper. cost, good pix direct from action scene.
3 Vidicon 27.K	Helical cassette 3.K	Helical VTR Editor/cont. 13.K	Time base corrector 13.5K	56.5K	Good quality, close to 16mm, good flex. & immediacy—pix fair under lower light & poor under dim light. low oper cost.
2 tube col.cam. 5.K	R. to R. VTR ¼ or ½ in 3.K	Reel to reel or cass. edit 13.K	Time base corrector 13.5K	34.5K	Fair quality under brightly lit cond. flexible & immediate, lower qual. under low light, low weight, 1 man package
1 TUBE col.cam. 5.K	Helical cassette 3.K	Exist. Quad W/edit. (150.K)	Low cost T.B.C. 3.K	11.K	Fair quality under good light, econom. flexibility limited, less quality under low light, light weight, 1 man package
Super 8 mag snd \$450	Single syst.	8mm spl 250 Sup 8 proc. 12.5K	Sup 8 proj & Aper. corr. 5.K	18.2K	Fair to good qual depending on light and processing, loss of immediacy low cost easy for 1 man, less qual than 16

The AKAI camera/VTR combo is low-cost route that WCBD-TV, Charleston, S.C., and many other stations have taken to ENG.



Low cost editing equipment is now available for either cassette recorders or reel-to-reel machines. Shown is the Sony system.



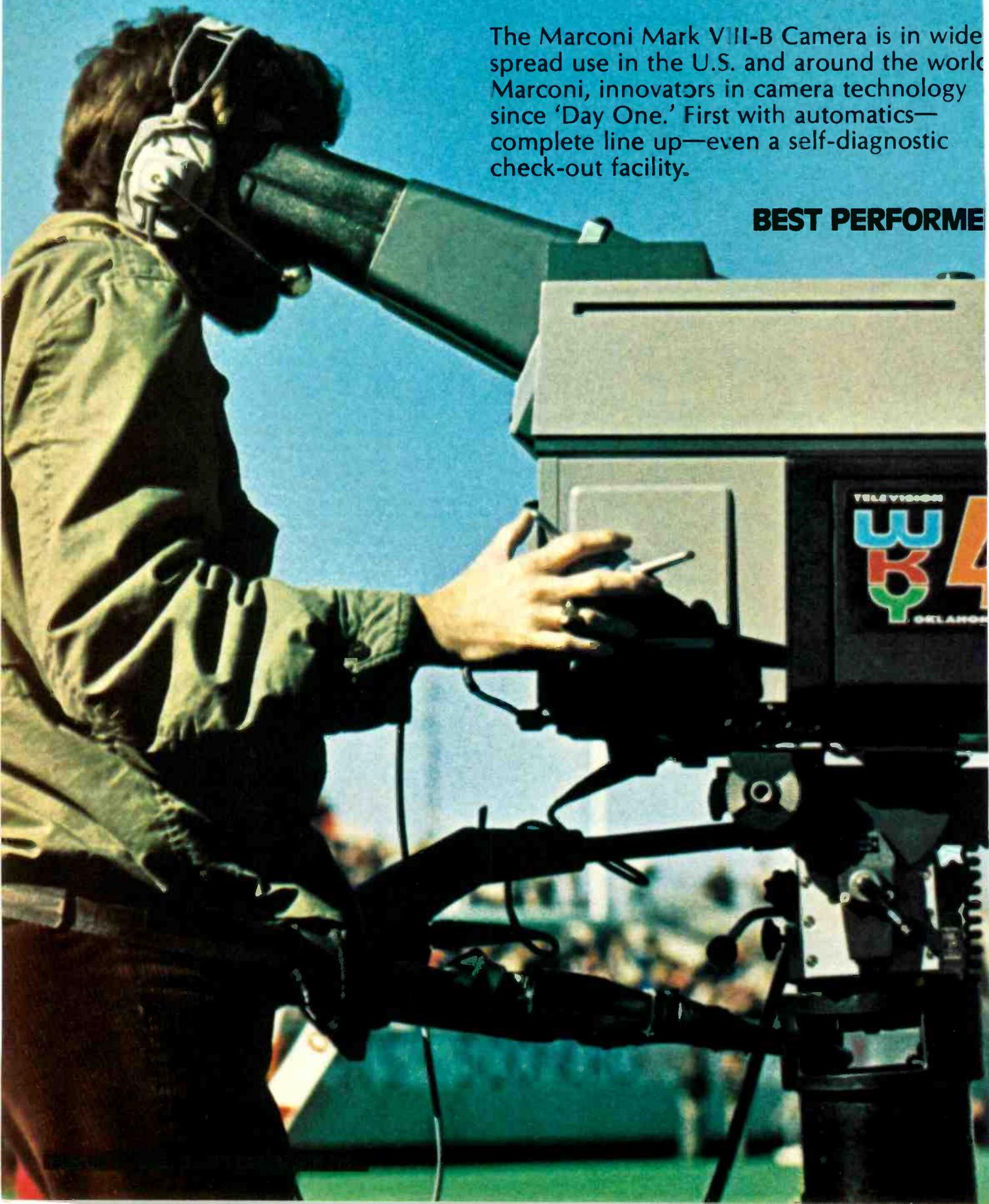
Low cost JVC package includes the PV-4800 (\$1950) reel recorder and two-tube GC-4800 camera (\$3750).

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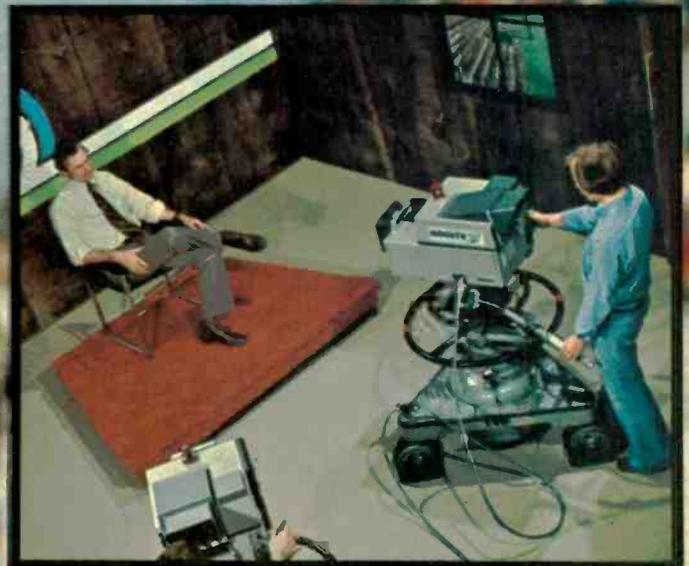
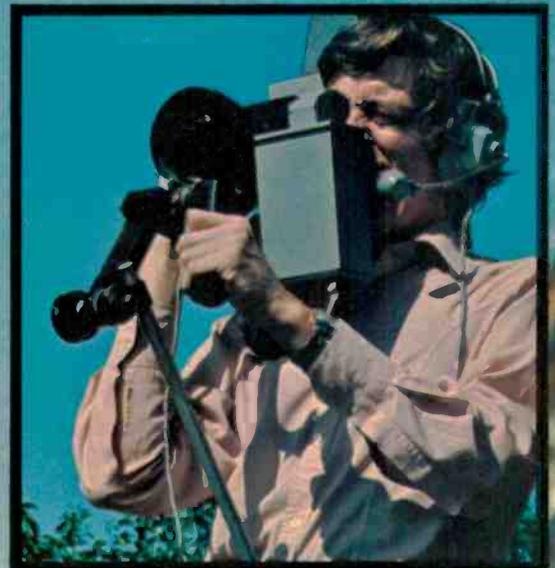
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How To Match Turntables To The Format—And The Pocketbook

Recently three classes of turntables have taken shape on the broadcast market. Each can work well in the right setting.

Time was when there were two classes of turntables for broadcasters—good and bad. In a sampling of users undertaken for this article, BM/E found, as was to be expected, that you can still get plenty of opinions for putting the available turntables into those old categories. The only trouble is that the engineers surveyed did not agree on which were which. With a sample of several



Russco "Studio-Pro" exemplifies standard broadcast-quality turntable built for quick starts, heavy use with minimum trouble.



Turntable of all-out mechanical sophistication, and very high price, is the EMT 930, imported by Gotham Audio of New York.

hundred it would probably work, but ours was necessarily much smaller.

What did have the weight of consensus and logic was a currently emerging assignment of classes of turntables related to classes of use. This division could not get started until a few years ago because before that one of the main classes did not exist. The movement is still in its early stages—but the outlines look firm.

What we might call the "standard" table, and referring particularly to the brands that have survived on the market over the years, is a rugged, long-lived, highly reliable table, with a high-torque motor for quick starts. Price is usually in the \$200 to \$500 span. The second class is the new direct-drive turntable, which has won a special, if still very small, niche on the broadcast market: prices \$300 to \$600. The third is the thousand-dollar-plus super-performance machine, also with a definite but obviously limited market.

Taking the second class first: the direct-drive table has a motor that turns at the turntable speed, and the table fixed directly to the motor shaft. With such a slow-turning motor "external" speed control becomes crucial and this is usually accomplished with a servo system: the table acts as a generator-tachometer, developing an error signal through comparison with some standard. The error signal can be fed into the motor drive to correct the speed.

The slow-turning, low-torque drive means very low vibration; the servo system means extremely low flutter and wow. The disadvantage is the comparatively slow start.

The direct-drive table came along as pressure built up on certain classes of stations for ever better sound, making the table's particular qualities highly desirable. The FM or AM station for which the *quality of sound* is an important competitive element has had to upgrade that quality steadily over the last few years. "Hi-fi consciousness" has spread through the audience, and home receiving equipment used by such listeners keeps going up in quality.

There is nothing presumptive about this trend; a number of stations have felt it directly expressed in listener dissatisfactions, as described in previous articles in BM/E. It applies not only to "classical" music stations, but also to purveyors of MOR, or "beautiful music," or any other format if the station puts heavy emphasis on the quality of the sound, and wins the allegiance of a substantial number of listeners who are "turned on" to high-grade sound.



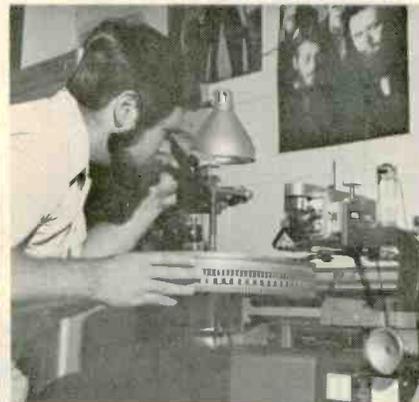
In Chicago, MOR station WYEN shifted to the direct-drive Panasonic SP-10's to reduce turntable flutter and rumble. Disc jockey Gary Meier cues up one at his right; another is to his left, in the background.

An example noted in the October, 1974 issue of *BM/E* is veteran classical music station WQXR in New York. About three years ago the station had a sizeable listener revolt on its hands because of alleged high turntable rumble. Basic in this is the spread of medium-priced home playback equipment with extended bass response. The listener who hears a walloping 50 or 60 Hz from his own records, without any audible interference from his turntable, will not stand for a subway-style noise along with his broadcast music. A broadcaster should have *professional* equipment, presumably superior to the home grade; it is a really serious blow to the "professional" image if the broadcaster's record playing equipment is audibly inferior.

WQXR solved the problem with the Panasonic SP-10,

one of the new breed of direct-drive turntables. A few of the others with similar experiences and the same solution are WCLV, in Cleveland; WTMI, in Miami; WCRB, in Boston. In Chicago, MOR station WYEN went on the air with Panasonic SP-10's because the management puts its money on a very clean sound (among other elements) for survival in the fiercely competitive Chicago radio market (*BM/E*, May, 1972). The approach has worked out; WYEN is surviving quite healthily.

The extremely good speed stability—low wow and flutter—of the servo controlled tables becomes important when the program includes a lot of slow piano, organ or violin music, again intended for fairly sophisticated listeners. (Note: jazz buffs are likely to be just as high on "hi fi" as classical listeners.)



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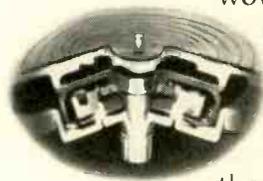
Your station's turntable cannot match the performance or reliability of this one.



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Abundant Torque

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No Audible Rumble

The SP-10 II completely eliminates audible rumble because it's driven by a brushless DC motor that spins at exactly 33 or 45 rpm. This slow speed introduces so little vibration into the system that any rumble remains a silent -70 dB (DIN B).

No Audible Wow & Flutter

The SP-10 II has no belts, idlers or gears to produce variations in speed. The only moving part is the motor. And, since the platter is actually a part of the motor

(an extension of the rotor shaft), the SP-10 II has less than 0.03% wow and flutter (WRMS). What's more, it'll stay less than 0.03% regardless of AC line voltage, because the motor is electronically controlled by an analog feedback system.

Direct-Drive Reliability

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MATCH TURNTABLES



Sony has announced a new direct-drive table, the PS-8750, on sale in Japan for about \$580, to come here soon. Crystal-controlled drive gives claimed speed accuracy of 99.997%.



Current top-of-the-line Sony direct-drive table, PS2251, claims flutter of 0.04%, has price of about \$430.00.



Sansui Electronics has announced a new direct-drive table, SR-525, above, with controlled dc motor. Price, about \$280.

Another turntable with direct drive that has done well in a number of broadcast stations is the Sony TTS-3000. That makes highly interesting the announcement by Sony, at the NAB show in Las Vegas, that a new direct-drive Sony table, with fantastically good speed stability claimed, is just going on sale in Japan. It will reach this country in the near future—Sony will not yet say when.

Also adding impetus to the swing to the direct-drive table are models from Sansui Electronics Corporation. Originally concentrating on the hi-fi market for turntables, Sansui is now actively marketing the machines to broadcasters as well. The firm has announced a new model, due soon, the SR-525, with a claimed flutter figure of 0.03%. Price will be about \$280.00.

U.S. Pioneer Electronics Corporation is another firm with a turntable on the way aimed at "hi-fi" performance for broadcasters. It uses a novel motor based on Hall Effect elements, which form a brushless dc servo-controlled drive. Price will be in the \$250-\$300 range. So broadcasters with a need for this kind of turntable are rapidly getting a wider choice.

It's not for everybody

But the direct-drive turntable is not for everybody. For example, the Top-40 station that is running a flock of 3-minute tunes every hour in a tightly knit pattern of DJ patter and commercials must have a table that starts on the instant, with plenty of torque right at the beginning. With so many starts in the course of a day, a rugged, simple mechanical construction becomes highly desirable.

Highly admired in a large number of stations (with a wide variety of formats) for ruggedness, quick starts, long-term reliability are these "standards": Harris (Gates QRK, RCA Russco.* As one engineer said about his Gates CB500, "two drops of oil a year is all I've ever done for it;" and the same sort of evaluation turned up in BM/E's survey for the others, too. At a guess, there are several hundred tables of this kind out there for everyone of the new direct-drive tables.

Over one grand—the super-machine

The third class of turntable is currently represented mainly by one brand—the imported EMT (from Gotham Audio in New York). It's price of around \$1500 implies extreme mechanical sophistication, and that is what a number of broadcasters want. Very long term reliability is acknowledged, and a number of users particularly like the cueing method, with a standard cue lead laid out and a muting relay that "waits" for the cue lead to pass. (See box for further description.)

One engineer likened his EMT's to high performance sports cars that need occasional expert tune-ups for their top performance—which is "top" indeed.

Another, in contrast to all the others, did *not* like the reaction of the table to the cueing methods used in his station. Although no careful analysis of this complaint was possible, it does suggest that the prospective purchaser of a turntable try out on it the cueing procedures used in his station, or imposed by his format. Evidently these vary considerable from station to station—or even, as BM/E was told about one station, among different on-air men and engineers.

BM/E

*Other brands with wide acceptance include Microtrak, Sparta, LPB; most of these have generally been made, under a "private label" arrangement, by Russco or QRK.

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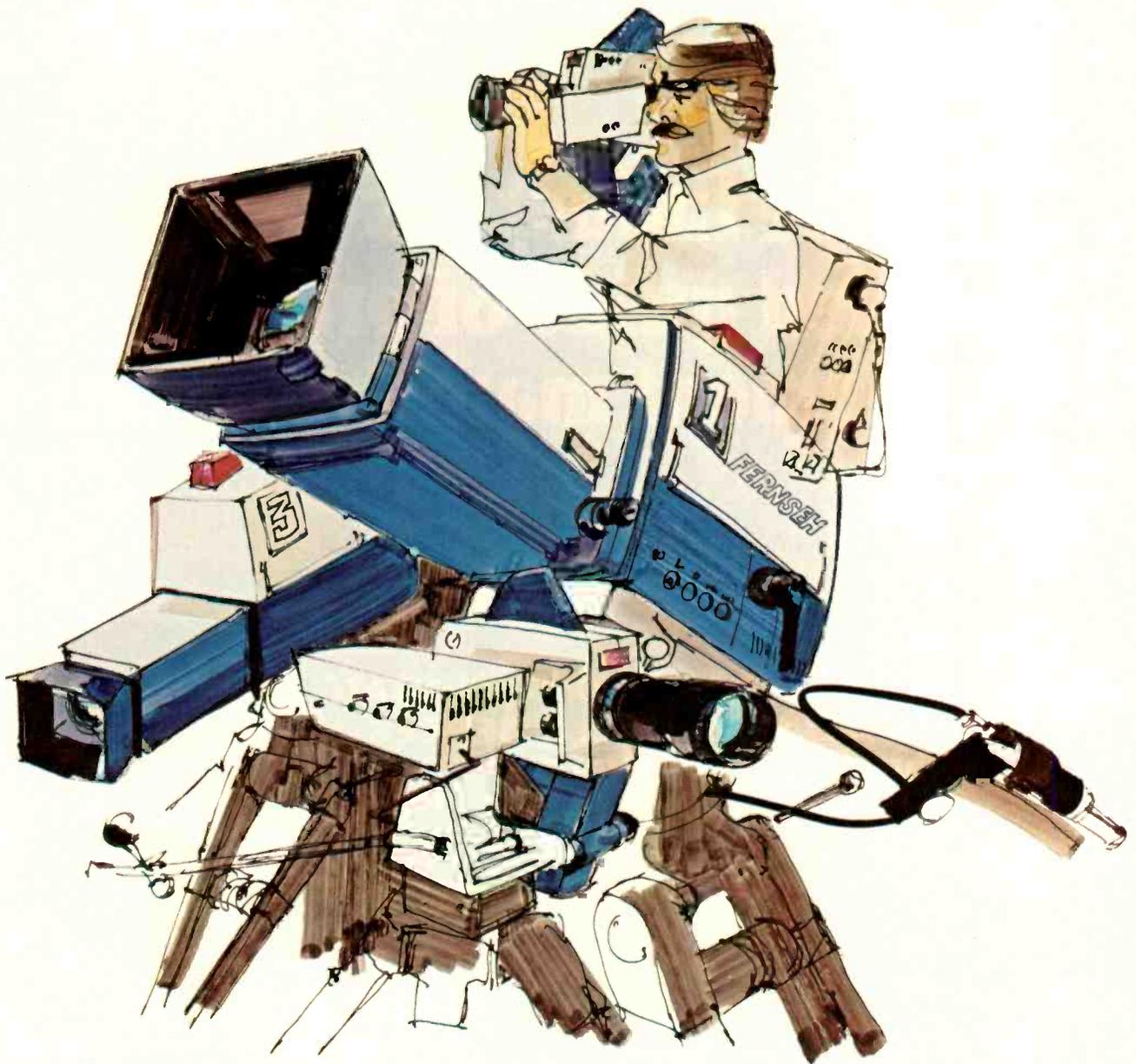
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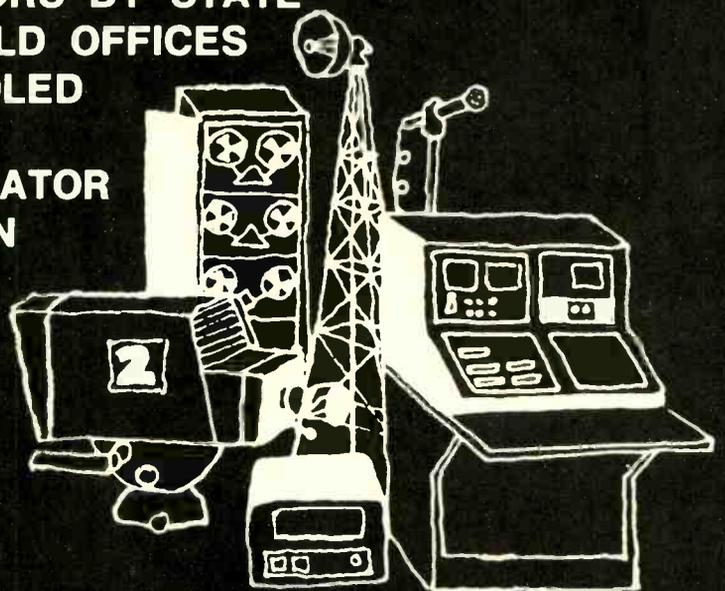


FERNSEH Robert Bosch Corporation

The Source.

**The industry's only
verified guide of broadcast
equipment manufacturers**

- REPS AND DISTRIBUTORS BY STATE
- MANUFACTURER'S FIELD OFFICES
- PRODUCT LINES HANDLED
- PHONE NUMBERS
- INSTANT SOURCE LOCATOR
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Instant Source Locator

- | | | |
|--------------------------------|------------------------|-------------------------|
| 1. Audio | 4. Film | 7. Antennas |
| 2. Components/Hardware/Systems | 5. Lighting/Set Design | 8. Measuring/Monitoring |
| 3. Video | 6. RF/Transmitters | 9. Cable TV |

AUDIO EQUIPMENT

Audio Amplifiers

- distribution
- line
- pre-amps
- op-amp modules
- monitor amps
- power amps
- public address amps
- audio power supplies

Altec 5,6,7* American Data 1,2,3,5* Audio Designs 1-3* Audio techniques 5-7* Automated Proc. 1-6* Autogram 2,3,5,6* Bethany Int'l 1* BE 1,3,5* Burwen 3* Collins 2,3,5* Cooke 1* Cetec 1* Channelmatic 1* Crown 3,5,6* Dunlap-Clarke 6* Dyma 1 Dynair 3,5* Datatek 1* Elec. Sound 3,6* Fairchild 1-7* Gotham 4* Harris 2,3,5,6* Heath 6,7* Int. Nuclear 1,2,3,5* Johnson 1-3,5-7* LPB 1,3* Marconi 1-3,5* Modular Audio 1-8* McMartin 5-7* McCurdy 1-3,5-7* Microtrak 3* Marti 2,5* NEC 1-3,5,6* Neve 1,2* Neff 1,2,5,6 Opamp Labs 1-6* Orange Co. 5 Pacific Recorders 1-3,5* Pulse Dynamics 2,7* Philips Audio 1-3,5-7* QRK 3-5* Quad Eight 2,3,5,6* ROH 1-3,6,8* Ramko 1-3,5* RCA 1-3,5,6* Revox 6,7* Russco 3,5,6* Spectra Sonics 1-3,5-7* Sphere 2,3,6 Shintron 1* Sescum 2,3,5* Sontec 2-4* Shure 2,3,6,7* Sony 2,3,6* Sparta 2,3,5* SMC 1,2,5* Sansui 3,6,7* Sequerra 3,6* Stanton 3* Tektronix 2-5* Telemation 1,5* Telemet 1* Telex 3,6,7* Thomson-CSF Labs 1* UREI 2,3* Vamco 1* Varian 3,6* VIF 2-4* Ward-Beck 1,2,5* Wilkinson 1-3,5*

Audio Controls

- Attenuators/pots
- filters
- mixers

Audio Designs 1* Auto. Proc. 1* Cetec 2,3* Crown 2* Control Design 2 Fairchild 1-3* Gately 1* Gotham 1-3* Hervic 1* McGraw-Edison 1* McMartin 3* Microtrak 3* NEC 3* Opamp Labs 1-3* QRK 3* Quad Eight 1-3* ROH 1,3* RCA 2,3* Revox 3* Spectra Sonics 1-3* Shintron 3* Superscope 3* Shure 2,3* Sony 3* Sparta 3* TEAC 3* Tech Labs 1* Telemation 3* Texscan 1,2* UREI 2* Waters 1*

Audio Disc Cutting Equipment

Gotham*

Audio Processing Equipment

- ALC and AGC amps
- compressor/limiters
- equalizers
- stereo phase enhancer
- speed compressor/expander
- quad matrix equipment
- noise-controlled auto vol. control

Allison 2 Altec 2,3* Audio Designs 3* Audio/Tek 2* Audio Techniques 3* Auto. Proc. 2,3* Audiotronics 3* BE 2,5* Burwen 3* CBS 6* Collins 2* Cetec 2* DBX 2* Eventide 1,2 Fairchild 1-3,7* Garron 4* Gotham 1-3* Harris 1,2,5* Inovonix 1,2* Lexicon 5* LPB 2* Marconi 3* Modular Audio 1-3* McMartin 2* McCurdy 1-3* Marti 2* NEC 1-3* Neff 1,2 Orange Co. 2 Orban 2,3* Opamp Labs 1-3,5* Pacific Recorders 2,5* Quad Eight 2,3* ROH 2* RCA 1-3* SpectraSonics 2,3* Sphere 3 Sescum 3* Sontec 2,3* Shure 1-3* Sony 6* Sparta 3* SMC 1* Sansui 6* Systems Eng 3 Thomson-CSF Labs 1-3* UREI 2,3* Wilkinson 1*

Automation Equipment

- controllers
- multi-cart machines
- reel decks
- read-out/display
- loggers
- tone generator
- time/weather announcers
- complete systems

Aitken 1 Ampro 2* Audio Services 1,8* Autogram 8* B&K 6* BE 2* Control Design 1-8* Fairchild 6* Harris 1-8* IGM 1,2,4-8* ITC 2-3* LPB 1,2,4 McCurdy 3,5* Neff 6 Otari 3* Quad Eight 1* RCA 1-4,7,8* Revox 3,5* Rowe 3* Sparta 1-3,5-8* SMC 1,2,4-8* Schafer 1-8* Scully/Metro 3,5* Tapethon 1,3,7* Telex 3* VIF 1,3*

Consoles

- mono
- stereo
- TV
- portable

Ampro 1,2* Audio Designs 1-4* Audio Techniques 2,4* Auto. Proc. 1-4* Audiotronics 1-4* Autogram 1,2* Altec 1,4* BE 1,2* Collins 1,2,3* Cetec 1-4* Crossroads 1,4* Dipol 1-3* Dyma 1,2 Fairchild 1-4* Gotham 2,4* Harris 1-4* KMS 1* LPB 1,2,4* Magna Sync/Moviola 1-2 Marconi 1,3* McMartin 1-4* McCurdy 1-4* Microtrak 1,2,4* NEC 3,4* Neve 1-4* Opamp Labs 1-4* Pacific Recorders 1-3* QRK 1,2,4* Quad Eight 1-4* Ramko 1,2* RCA 1-4* Revox 2,4* Russco 1,2* Spectra Sonics 1-3* Sphere 1,2 Shure 1* Sparta 1-4* Studer 2 Systems Eng 1,2 Ultra Audio 1-4* UREI 1,2* Ward-Beck 3* Wilkinson 1,2*

Headsets

Audio-Technica* Audiotronics* Koss* Panasonic* Philips Audio* RCA* Revox* Superscope* Sharp Sennheiser* Sony* Stanton* Sansui* Telephonics Telex* TEA* US Pioneer*

Intercom Systems

Clear Com* Comrex* Dyma Heath* Marconi* McMartin* McCurdy* NEC* Philips Audio* RCA* Telemation* Telex* TEA* Video Aids*

Microphones

- dynamic
- condenser
- electret
- wireless
- shotgun
- lavalier
- booms & dollies
- stands
- accessories
- ribbon

Atlas 1 Audio Techniques 7,8* Audiotronics 1,6* Altec 1,2,3* B&K 2* Collins 1,6* Comrex 4* Eddor 2,4,6* Electro Voice 1,3,5,6* Gotham 2,6* Group 128 3* Hervic 1,3,6* KMS 3,6,9* NEC 1,2* Panasonic 1,3* Philips Audio (AKG) 1-3,5-7* RCA 1,6,7* Revox 1,6,7,10* Sescum 1,3,6* Superscope 1-3* Sennheiser 1-6* Shure 1-3,6* Sony 1-4,6,7* Sparta 1-4,6,7* Studer 2* TEAC 3* Telex 1* TEA 1,4* Telev. Products 7* Transound 6* Turner 1,6 U.S. Pioneer 3* Vega 4*

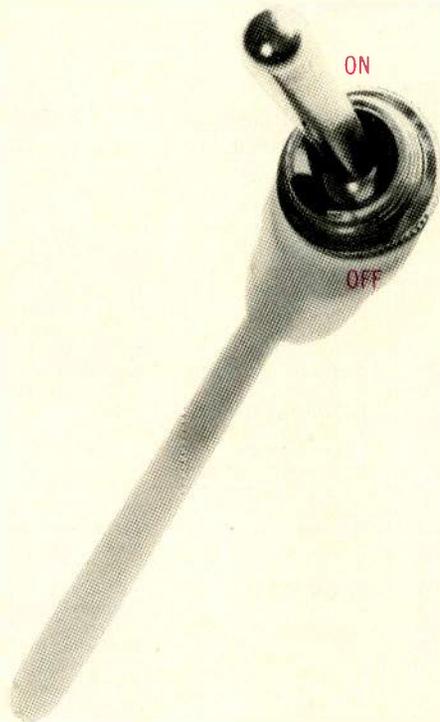
Music Synthesizers

Arp Ionic Electrocomp Moog

Noise Reduction Systems

Burwen* DBX* Dolby* Quad Eight*

*The asterisk denotes that manufacturers so identified have verified that the products mentioned are in regular production. Current data on these products are on file with BM/E.



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SOURCE LOCATOR

Patch Panels	Audio Accessories* Audio Designs* Auditronics* Cooke* Dyma Harris* McCurdy* NEC* Potomac* Quad Eight* RCA* Spectra Sonics* Trompeter* Ward-Beck*
Reverb Units	Fairchild* Gotham* Horizon* Micmix* McCurdy* Opamp Labs* Orban* Philips Audio (AKG)* Quad Eight* Shure* Sansui
Special Effects 1. phasers 2. tone synthesizers 3. delay lines 4. stereo synthesizer	Audio/Video Prod. 2* Eventide 1,3* Fairchild 2* Orban 4*
Tape, Audio 1. reels 2. cartridge 3. cassettes 4. test tape 5. tape cleaning & evaluating	Advent 2 Ampro 4 Agfa-Gevaert 1,3,4* Ampex 1-4* Aristocart 2 BASF 1-3 Capitol Magnetics 1-3* Fidelipac 1,2,4* Fuji 1-3* Harris 2,4* Maxell 1-3 Memorex 1-3* 3M 1-3* McCurdy 1,2,4* Nortronics 4* Pentagon 3 Philips 4* QRK 2* RCA 1-4* Recortec 3* Revox 4* Studio Tape Exchange 1,5* Superscope 1-3* Sharp 3 Sony 1-3* Standard Tape 4* Sansui 3* Taber 4* TDK 1-4* Telex 2* Wabash 1
Tape Accessories 1. empty reels 2. tension gauge 3. tension control 4. loader 5. splicers 6. splice finders 7. splicers, automatic 8. tape timer 9. tape cleaner 10. tape evaluators	Ampro 6* Audio/Tek 4* BE 6* Capitol Magnetics 1,5 Crown 1,5* Elec. Sound 4,7* Fidelipac 5* Fairchild 5* Gotham 8* In-ovonix 3* Memorex 1* 3M 1,2* Neff 4,6 Nortronics 5* Nova 9* Plastic Reel 1* Polyline 1 RCA 6* Superscope 1* Senstrol 6* Sony 1,5* Studer 1* TDK 1* Tentel 2,10* US Pioneer 1* Vamco 8* VIF 2*
Tape Heads 1. replacement heads 2. alignment gauge	Ampro 2 Crown 1* Elec. Sound 1* Fidelipac 2* FerraFlux 1 Forglu 1 Hercul 1* Minn. Magnetics 1* Nortronics 1* Superscope 1* Saki Magnetics 1* Sony 1* Sparta 1,2* SMC 2* Scully/Metro 1* Taber 1* VIF 1* Vikron 1
Tape Head Cleaners	Crown* Fidelipac* Fairchild* Memorex* 3M* Miller-Stephenson* Minn. Magnetics* Nortronics* RegmoData* Revox* Sony* SMC* Texwipe* TDK* VIF*
Tape Editing Equipment	Cent. Dynamics* Elec. Sound* Elpa* EECO* Kaitronics* Nortronics* Revox*
Tape Recorders 1. portable 2. studio 3. tape decks 4. tape delay units	Advent 3 Akai 1-3 Audio/Tex 2* Auditronics 1,3* Ampex 1,2* B&K 1* BE 4* Crown 1-3* Elec. Sound 1-3* Elpa 1-3* Echo 1,2* Gotham 2* Hercul 1* Harris 1-3* ITC 2-4* Magna-Tech 2* Magnasync/Moviola 2* McCurdy 1-4* MCI 2,3 3M 2,3* Otari 1-3* Pentagon 2,3 QRK 3* RCA 1,2* Revox 2,3,4* L.J. Scully 2,3 Superscope 1-3* Sony 1,3* Sparta 2,3* Studer 1,2* Schafer 2,3* Scully/Metro 2,3* Tapeathon 3* TEAC 2,3* Telex 3* U.S. Pioneer 3*
Tape Cartridge Equipment 1. single 2. dual 3. triple	Ampro 1* BE 1,3* Garron 1-3* Harris 1-3* ITC 1,3* LPB 1,2* McCurdy 1-3* QRK 1-3* RCA 1-3* Rowe 1* Sparta 1-3* SMC 1,2* Telex 1* Tapecaster 1
Tape Duplicators	Audio/Tek* Ampex* Cetec* Elec. Sound* Garner* Otari* Pentagon Telex* Visual Educom
Tape Erasers	Fidelipac* Fairchild* Garner* Harris* ITC* Nortronics* RCA* Senstrol Sony* Sparta* Taber*
Tape Storage Racks	BE* Dyma Fidelipac* Harris* Memorex* Microtrak* Neumade* Sparta* Storeel* Simpax*

Turntables, Accessories 1. turntables 2. arms 3. cartridge stereo 4. cartridge quad 5. stylii	Astatic 3 Audio-Technica 2-5* Elpa 1,2* Gotham 1-3* Hercul 1,3* Harris 1,2,3,5* LPB 1,2* McCurdy 1-5* Microtrak 1,2* Panasonic 1,3,4* Philips Audio 1-5* QRK 1-3,5* RCA 1-3,5* Russco 1* Shure 2,3,5* Sony 1,3,4* Stanton 1-5* Sparta 1-3,5* Sansui 1* US Pioneer 1,4*
Speakers	Acoustic Res. Advent Altec* Audio Techniques* Cetec* Crown* Electro Voice* Gotham* Heath* Orange Co. Philips Audio* QRK RCA* Russco* Superscope* Sparta* H.H. Scott* U.S. Pioneer*
Synchronizing Equipment 1. time code gen 2. tape machine synchronizer	Auto. Proc. 1,2* Central Dynamics 1,2* EECO 1,2* Magnatech 2* Magnasync/Moviola 1*
VU Meters 1. Analog 2. digital 3. LED	Audio Designs 1 Harris 1* McGraw-Edison 1* Marconi 1* Neff 1 Pulse Dynamics 3* Quad Eight 1,2* RCA 1* Simpson 1* Sontec 1,2* Sintronic 1 Triplett 1,2*
Other Audio Accessories 1. custom switchers 2. connectors 3. record cleaners	Audio Designs 1* Audio Services 1* Audio Techniques 3* Auto. Proc. 1* Audio-Technica 3* Comm. Tech 1* Dynair 1* ITT Canon 2* Int. Nuclear 1* IGM 1* Kings 2* Marconi 1* McCurdy 1* SMC 1* Ultra Audio 1* Viscount 1*
Studio Furniture Assemblies	Dyma LPB* Microtrak* McCurdy*

COMPONENTS/HARDWARE/SYSTEMS

Batteries	Calvert Elec Globe Battery* Gould Yardney*
Cabinets, enclosures, shipping cases	AMCO* Borg Ingersoll Dracon Dyma Fari-non Fidelipac* Modular Audio* Microtrak* Neumade* Optima* RCA* Shintron* Shure* Schafer* Storeel* Thermodyne*
Computer Business Services 1. Broadcasting 2. Cable TV	Cable Data 2 Compu-Net 1 Cox Data 1-2* Data Comm (BIAS) 1 Downe Computer 2 Jefferson Data 1 Kaman (BCS) 1* PSI 1* Unidyne 1 U.S. Computer 2
Connectors Also see Cable TV Connectors	Alford Andrews AMP BIW* ITT Canon* Kings* SRW Trompeter*
Delay Lines	WMA Andersen* ESC McGraw-Edison* TEA* (Matthey)
Emergency Power	Consolidated Caterpillar Onan Sawyer
Mobile Vans	AF Associates* Ampex Editel* RCA
Power Tubes	Calvert Elec* EIMAC* Eng Elec* Gen'l Electric* RCA* Thomson-CSF* Varian*
Rectifiers	Calvert Elec* Eng Elec* IRC RCA Varian* Wilkinson*
Surge Protectors	MSI Sintronic* ThetaCom*
Wire & Cable	BIW* Brand-Rex Calvert Elec* Cablewave* Gen'l Cable* ITT Suprenant Mohawk Phila Resins* Preformed* Plastoid Sitco*
RF Inductors	Delta Multronics
Transformers	Modular Audio* Gotham
Torque Motors	UMC
RFI Gasket	Chromerics
Quartz Crystals	Quaker US
Vacuum Capacitor	ITT Jennings*
Tools	Xcelite

*The asterisk denotes that manufacturers so identified have verified that the products mentioned are in regular production. Current data on these products are on file with BM/E.

SOURCE LOCATOR

VIDEO EQUIPMENT

*The asterisk denotes that manufacturers so identified have verified that the products mentioned are in regular production. Current data on these products are on file with BM/E.

Cameras, TV, Color Studio 1. over \$50,000 2. \$25-50,000 3. below \$25,000	Ampex 1* Cohu 2,3* CEI 2* Fernseh 1,2* GBC 3 Harris 1-3* Hitachi 2,3* IVC 1-3* Ikegami 1,2* JVC 3* Marconi 1* Magnavox 3* NEC 1,2* Panasonic 2,3* Philips Broadcast 1,2* Philips Video 3* RCA 1,2* Sharp 3 Sony 3* Sanyo 3* Thomson-CSF 1-3*
Cameras, TV Portable Color	Akai* Ampex* CEI* Concord Comm. Editel* Fernseh* Gen'l Electric* Hitachi* IVC* Ikegami* JVC* Marconi* Magnavox* NEC* Panasonic* Philips Video* RCA* Sony* Thomson-CSF*
Cameras, TV Mono	Akai* Ampex* Asaca Benjamin Cohu* Colorado Video* Echo* Gen'l Electrodynamics* Gen'l Electric* Hitachi* Javelin JVC* Koyo Lenco* Marconi* NEC* Panasonic* Philips Video* QSI* Sony* Sanyo* Telemation* Vicon Visual Educom
Camera Lenses and accessories	Angenieux* Asaca B&L Canon* Comquip* Cosmocar* Fujinon* General Electric* Hitachi* Javelin* JVC* Magnavox* NEC* Panasonic* Rank RCA* Schneider Sony* Tele-Cine* Visual Educom Visual Methods Zoomar
Camera Heads, Mounts, Dollies, etc.	Harris* Hitachi* Innovative TV* Listec* NEC* Panasonic* Quickset* RCA* Sharp Sony* Telev. Products*
Remote Control Mounts	Cunningham Innovative TV* NEC* Poweroptics* RCA* Sony*
Character Gens. 1. alpha-numeric gen 2. graphics generator	American Data 1* Ann Arbor T. 1,2* Cooke 1* Chiron 1,2* Conrac 1* Datatron 1 Datavision 1,2* EECO 1* GBC 1 Javelin 1* Kaitronics 1* KSN 1* Laird 1* Lexicon 1 3M 1,2* Moxon 1 MSI 1* NEC 1,2* RCA 1,2* Telemation 1* Thalner 1* Thomson-CSF 1,2* Ultra Audio 1,2* Vamco 1* Video Data 1*
Chroma Keyers 1. RGB 2. encoded 3. luminance	Amer. Data 1* Astrionics 2 Computer Image 1* Central Dynamics 1,2* Dynair 1,2* Grass Valley 1,2* Int. Nuclear 2* Panasonic 1* RCA 1* Richmond 1* Sonex 1,3* Telemet 1,2* Thomson-CSF 1,2* Viscount 1* Vital 1,2
Color Correctors	Cohu* Datatek* Fernseh* NEC* TEA* Thomson-CSF*
Color Encoders	Amtron Cohu* CEI* Lenco* Marconi* 3M* NEC* RCA* Telemation* Thomson-CSF*
Dropout Compensators	Echo* 3M* NEC* RCA*
Film Telecine Equipment 1. 16mm projectors 2. slide projectors 3. multiplexer 4. complete systems	Avtel 3 B&L 1,2 Buhl 2,3* Cohu 3,4* Kodak 1-3* Fernseh 4* GBC 3 Harris 1-3* IVC 4* Ikegami 4* Kalart 1* L-W Intl 1* Laird 1-3* Listec 2* Marconi 1-4* MSI 3 NEC 1,3* Panasonic 3* Philips Broadcast 4* RCA 1-3,4* Singer 3 Spindler & Sauppe 2* Telemation 3,4* Thomson-CSF 1,2* Zeimark 3*
Film to Video Transfer	Kodak* Goldmark Ikegami* Panasonic*
Image Enhancers	Cohu* CEI Dynasciences* 3M* NEC* Telemet* Thomson-CSF*
Monitors, picture 1. b&w 2. color	Amtron 2* AKAI 1* Ball 1-2* Barco 1,2* BE 1* Conrac 1,2* Electrohome 1,2* Fernseh 1-2* Harris 1,2* Hitachi 1,2* Javelin 1* JVC* Sanyo* Magnavox 1,2* Moxon 1,2 NEC 1,2* Panasonic 1,2* RCA 1,2* SC Electronics 1,2* Sharp 2 Tektronix 1,2* Ultra Audio 1* Unimedia 1,2* Video Aids 1,2* Videotek 2* World Video 2*

Monitor Calibrator	Barco* Imero Fiorentino* Minolta Philips Inst.* TEA* Tektronix*
Processing Amplifiers	American Data* Blonder-T* Central Dynamics* Dynasciences* Grass Valley* Intl. Nuclear* Lenco* Marconi* 3M* NEC* RCA* Richmond* Tektronix* Telemation* Telemet* Thomson-CSF* Vital
Pulse & Distribution Amplifiers 1. pulse 2. distribution 3. subcarrier	American Data 1-3* Blonder-T 2 Cooke 1,2* Cohu 1,2* Channelmatic 1,2* Central Dynamics 1-3* Dynair 1-3* Datatek 1-3* Dynasciences 1-3* Echo 1,2* Farinon 2,3* Fairchild 2* Grass Valley 1-3* Harris 1,2* Hitachi 2* Int. Nuclear 1-3* Javelin 2* Kaitronics 2* Lenco 1-3* Marco Video 1,2* Marconi 1-3* 3M 1-3* NEC 1-3* Neff 2 Panasonic 1,2* RCA 1-3* Richmond 1-3* Shintron 1,2* Tektronix 1* Telemation 1-3* Telemet 1,2* Thomson-CSF 1,2 Thalner 1-3* Vamco 2 Varian 1* Viscount 2* Vital 1,2
Production Switcher 1. large 2. small	American Data 1,2* Central Dynamics 1,2* Cohu 2* Computer Image 1,2* Dynair 2* Dynasciences 2* Grass Valley 1,2* Int. Nuclear 1,2* Marconi 1,2* 3M 2* NEC 1,2* Panasonic 1,2* Philips Video 2* QSI 2* RCA 1,2* Richmond 1,2* Shintron 1,2* Sony 2* Telemet 1,2* Ultra Audio 2* Video Concepts 2* Viscount 1,2* Vital 1,2
Routing Switchers	American Data* Central Dynamics* Channelmatic* Computer Image* Comm. Tech* Datatek* Dynair* Dynasciences* Grass Valley* Int. Nuclear* Marco Video* Marconi* 3M* NEC* Panasonic* RCA* Richmond* Telemation* Telemet* Trompeter* Viscount* Vital
Signal Equalizing System	Control Concepts* Datatek* Dynair* Grass Valley* Int. Nuclear* Lenco* Marconi* NEC* Richmond*
Sync Generator System 1. sync 2. color bar 3. black burst 4. stairstep/ramp 5. multiburst 6. digital sync decoder	American Data 1-5* BJA Systems 1* Central Dynamics 6* Cohu 1* Cooke 1* Control Concepts 1,3* Dynair 1* Dynasciences 1-5* Echo 1* Grass Valley 1,3* Heath 2* Hitachi 1* Int. Nuclear 3* JVC 1-2* Lenco 1-5* Laird 1* Marconi 1-5* 3M 1,2* NEC 1-3* Panasonic 1,2* Philips Inst 1-5* RCA 1-3* Richmond 1,3-5* Shintron 1* Simpson 2* Sharp 1,2 Sony 1* Tektronix 1-5* Telemation 1-5* Thomson-CSF 1-5* Thalner 1* Ultra Audio 1-2* Video Aids 1* Video Concepts 1*
Special Effects Generators	American Data* BJA Systems* Central Dynamics* Colorado Video* Dynair* Dynasciences* Grass Valley* Hitachi* Int. Nuclear* Marconi* 3M* NEC* Panasonic* RCA* Richmond* Shintron* Sony* Telemation* Telemet* Thalner* Video Concepts* Viscount* Vital
Switchers, Automated	Central Dynamics* Dynasciences* Grass Valley* Int. Nuclear* Marconi* NEC* QSI* RCA* Richmond* Vital
Standards Converters	F Fernseh* Int. Nuclear* Marconi*
Time Base Correctors	Ampex* CVS* Digital Video Echo IVC* Edutron Microtime* NEC* Kansas State RCA*
Videotape 1. new tape 2. tape cleaning & evaluating 3. reprocessed tape	Ampex 1* Fuji 1* Hitachi 1* Irish 1 Javelin 1 Karex 1* Memorex 1* 3M 1* NEC 1* Panasonic 1* RCA 1* Studio Tape Exchange 1,2* Sony 1* TDK 1* Video tape Co. 1-3*

Videotape Access.	FerraFlux 3 Hitachi 2,3* IVC 3* Memorex 1,2* Miller-Stephenson 2* NEC 1-3* Nortronics 2,3* Nova 1* Panasonic 2* Plastic Reel 4* RCA 3* Recortec 1, 3, 5* Regmo Data 1,2* Sony 1-3* Storeel 6* Spin Physics 3* Taber 3* TEA 1,5* Tentel 7* Texwipe 2* Ultra Audio 1,8* Videomax 3* Videotape Co. 1*
1. tape cleaners	
2. VTR head cleaners	
3. replacement heads	
4. reels	
5. tape evaluators	
6. storage	
7. tape tension gauge	
8. rewinder	

Videotape Recorder/Players	Akai 2* Ampex 1,2,4* Asaca 1 Echo 3* Fernseh 3* Hitachi 2* IVC 2-4* Javelin 2* JVC 2* Nat'l Video 2* NEC 1,2* Panasonic 2* QSI 2,4* RCA 1,2* Recortec 4* Sony 2* Summit 4 Sanyo 2*
1. quad	
2. helical	
3. segmented-helical	
4. automated systems	

VTR Head and Machine Rebuilding	A.F. Assoc.* Ampex Computer Magnetics* Merlin* Recortec* RCA Videomax*
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Video Cartridge/Cassette Equip.	Avtel 3* Channelmatic 3* Concord Comm. 1,2 Elec. Interface 3* Goldmark 4* Hitachi 1,2* JVC 1,2* Kodak 5* NEC 1,2* Panasonic 1,2* Philips Video 1,2* RCA 1,2,4,5* Recortec 1-3* Replay 6* Sony 1,2* Summit 1,2 Sanyo 1,2* Telemation 1,2* Telemedia 3*
1. players	
2. recorders	
3. automation controllers	
4. complete auto. systems	
5. film cart systems	
6. reloaded carts	

Videotape Editing	Beta Tech 1-3* CMX 1-2* Computer Image 1* Central Dynamics 1-5* Datatron 1,2,5 Datametrics 2,3,5* Dynasciences 1* Elpa 4* EECO 1,2,4* Fernseh 1-3* Kaitronics 1-3* Moxon 2* National Video 1* Panasonic 1,4* RCA 1-3,5* Recortec 1-3* Shintron 2* Sony 1,3,4* Sonex 6* Spectra Vision 1 TRI 1-2* Vamco 3* Video Aids 1* Video Concepts 1,3*
1. editor-controller	
2. time code gens	
3. tape timer	
4. splicers	
5. time code reader	
6. accessories	

Video to Film Transfer	Palmer Film* Teledyne*
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Video Identification Systems	Ampex* Central Dynamics* Grass Valley* Laird* 3M* NEC* Shintron* Telemation*
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Video Discs	Ampex* Data Disc Echo* JVC* NEC*
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Video Production Aids	Beta Technology 1* Colorado Video 1* Computer Image 2* Comquip 2* Dynasciences 1* Grass Valley 1* Imero Fiorentino 4* Int. Nuclear 1* Laird 1,3* 3M 1* Telemation 1*
1. colorizers	
2. animation	
3. time/date generator	
4. color contrast evaluator	

Video Equip., Misc.	WMA Andersen 7* Audio/Video Prod. 9* Audiotronics 8* Beston Elec. 1* Biomation 6* Burwen 2,5 Coastcom 3* CVS 10* Control Concepts 5,7* D.&S. Corley 11 Dynair 5* Datatek 3,5* Dynasciences 7* Fernseh 1* Frezzolini 12* Goldmark 13* Grass Valley 5* Harris 1* Image Magnification 14* Int. Nuclear 5* Kalart 14* Laird 1* Lenco 8* Magnatech 15* Marconi 8* NEC 4-7* Projection Systems 14* Richmond 5,7,8* Tech Labs 16* Telecomm. Ind. 17* Telemation 10* TEA 3,7* Viscount 8*
1. automatic telecine light control	
2. video film noise reducers	
3. video filters	
4. comb decoders	
5. equalizers	
6. A/D converters	
7. video delays	
8. video presence detector	
9. video slater/prompter	
10. frame sync.	
11. test materials	
12. power packs, portable video camera	
13. auto skew corrector	
14. large screen projectors	
15. video lock to mag. film record	
16. video attenuators	
17. video test charts & slides	

FILM EQUIPMENT

Cameras, Cine	Arriflex Bach Auricon Canon* Cinema Products* Comm. Elec Comquip* Eclair Frezzolini* GAF* Genl Camera* Alan Gordon* Hervic* Kodak* Paillard
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Camera Lenses	Angenieux* BL Canon* Cinema Products* Comquip* Cosmicar* Eclair Frezzolini GAF* Alan Gordon* Hervic*
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Camera Tripods & Accessories	Birns & Sawyer* Cinema Products* Comquip* Eclair GAF* Alan Gordon* Hervic* Innovative TV* RCA*
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Carrying Cases	Cinema Products* Comquip* Eclair Frezzolini* GAF* Genl Camera Alan Gordon* Kodak* Olean*
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Film	Comquip* Fuji* GAF* Kodak*
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Film Cases	Olean*
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Film Cleaners	Comquip* Kodak* Lipsner-Smith Regmo Data* Treise*
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Film Editing Equipment	Birns & Sawyer* Comquip* Alan Gordon* Hervic* Kalart* Kodak* Lipsner-Smith Magnasync/Moviola*
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Film Processors	Comquip* Kodak* Filmline GAF* Harwald HF Photo Systems* Jamieson* Magnatech Pako Treise*
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LIGHTING/STUDIO EQUIPMENT/SET DESIGN

Lamps	Berkey* Cinema Products* GTE Sylvania* Genl Electric* Meteor Lighting* Strand Century* Varian*
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Lighting Fixtures Incl. Stands & Hangers	Bardwell-McCallister Berkey* Burns & Sawyer* Cinema Products* Comquip* Alan Gordon* Kliegl* Lowel-Light* Mole-Richardson* Packaged Lighting Skirpan* Smith-Victor*
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Light Dimmer Controls	Audio Techniques* Berkey* Elec. Diversified Kliegl* Meteor Lighting* Skirpan* Strand Century*
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Patch Terminals	Berkey* Elec. Diversified Kliegl* Strand Century*
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Plugs & Connectors	Union Connector*
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Studio Equipment	Imero Fiorentino 3* Front Projection 4 Q-TV 2* Reynolds/Leteron 2 Telestrator 4
1. scenery, prefab.	
2. prompters, titling	
3. set design	
4. superimpose aids	

Film Projectors	Comquip 1,2* GAF 1,2* Alan Gordon 1* Hollogon 3 Kalart* Kodak 1,2* L-W Intl 1* Magnatech 1* Palmer Film 1* PSC 3* RCA*
1. motion picture	
2. slide	
3. flickerless	

Magnetic Film	3M 1* Standard Tape 2* Capitol Magnetics 1*
1. Recording	
2. test	

Magnetic Recording Equipment & Accessories	Cinema Products* Comquip* Echo FerraFlux Frezzolini* Genl Camera* Hervic* Magnasync/Moviola* Magnatech*
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Misc. Film	CPAC 1* Kodak 1,2* Heindl 2 HF Photo Systems 1* Magnatech 3* Profit Recovery 1
1. pollution control, silver recovery	
2. slide masks & mounts	
3. multi-lock, video and magnetic film	

Optical printer	PSC*
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SOURCE LOCATOR

RF/TRANSMITTING/ RECEIVING EQUIPMENT

Demodulators	Belar* Catel* Comark* Conrac* Dynair* Farinon* GTE Lenkurt* Harris* Jerrold* NEC* Philips Inst* RCA EIE* R&S* RHG* Scientific-Atlanta* Telemet* Wilkinson*
Diplexers	Alford CCA* Collins* Comark* Cont Elec* Dielectric* Harris* Marconi* NEC* RCA* R&S* Sparta* Tel Tech Varian* Wideband* Wilkinson*
Exciters	AEL* CCA* Collins* Dynair* Harris* Marconi* McMartin* NEC* RCA* RHG* Sparta* Sintronic* Varian* Wilkinson*
Modulators	Catel* Dynair* Fung GTE Lenkurt* Harris* Jerrold* NEC* Philips Inst* RCA CATV* RHG* R&S* Scientific-Atlanta* Sparta* Telemet* Tocom* Varian*
Microwave Equipment	Alford 1,2 Andrew 1,2 Collins 1,2* Comm Carrier 1,2 Comark 4* Comrex 1* Dielectric 5,6* Emcee 1,2 Farinon 1-3* GTE Lenkurt 1,2,4* Hitachi 1,2 Innovative TV-7 Moseley 1,2* McMartin 1* Microwave Assoc 1-4* Marti 1,2* NEC 1-4 Nurad 4* Raytheon 1,2 RCA 1,4* RF Systems 1,2 RHG 1-4* Sparta 1* Soladyne 1,2 Terracom 1-4* Thomson-CSF 1-3* Varian 1,2* Wilkinson 1*
1. STL & Remote Pickups	
2. Intercity	
3. Portable	
4. ENG	
5. Waveguide	
6. Coaxial Cable	
7. Supports, portable equipment	
Remote Control Systems	Alpha* Audio Services* CCA Delta* GTE Lenkurt Harris* Marti* Moseley* NEC* RCA* Rust Sparta*
Receivers, Comm & Monitor	Belar* Catel* Conrac* Fixtune* Heath* McMartin* NEC* RHG* HH Scott* Sequera* TFT* Unimedia* Varian*
RF Amplifiers	Acrodyne* AEL* Belar* CATV* Comark* Cont. Elec.* Harris Jerrold* Johnson* Kay* McMartin* Microwave Power* Moseley* Mu-Del* Marti* NEC* Rodelco RCA RHG* Sparta* Tel Tech* Tocom* Trompeter* Varian* Wideband* Wilkinson*
RF Loads	Alford Bird Cont. Elec.* Dielectric* Elec Impulse Marconi* RCA* Rex Rheostat* R&S* Sparta* Varian* Wideband*
RF Switchers	Alford Bird* Collins* Comark* Cont. Elec* Dielectric* Dynair* Farinon* Harris* ITTJennings* Jerrold* Marconi* Multronics* RCA* Sparta* Wideband*
Satellite Earth Stations	Collins 1,2* Marconi 1,2* Scientific-Atlanta 1,2* NEC 1,2* Varian 1,2*
1. Transmitter	
2. Receiver	
SCA Equipment	Belar* CCA Collins* Harris* Johnson* Moseley* McMartin* Marti* Norver* Permadyne RCA Sparta*
Translators	Acrodyne 2* Emcee 2 Harris 1,2* Marconi 1,2* NEC 2 Rodelco 1,2* RF Systems 1 R&S 2* Sparta 1* Tel Tech 1,2* Varian 1,2*
1. FM	
2. TV	
Transmitters, AM	AEL* CCA Collins* Cont. Elec.* CSI Harris* LPB* Marconi* McMartin* NEC* RCA* Sparta* Sintronic* Varian* Wilkinson*
Transmitters, FM	AEL* CCA Collins* CSI Harris* LPB* Marconi* McMartin* NEC* RCA* RHG* Sparta* Sintronic* Varian* Wilkinson*
Transmitters, TV	Acrodyne* CCA Emcee Harris* Marconi* NEC* RCA* Rodelco Thomson-CSF* Varian*

*The asterisk denotes that manufacturers so identified have verified that the products mentioned are in regular production. Current data on these products are on file with BM/E.

Misc. RF Equipment	AEL 6* Alden 5 Belden 7* Bird 4,8,9* Collins 1* Catel 1,10* Coastcom 1* Calvert Elec. 1* Cont. Elec. 3* Datatek 12* Farinon 1* GTE Lenkurt 1* Harris 1,3* ITT Canon 13* Jerrold 4* Kay 4* Kings 13* LPB 2* McGraw-Edison 4 Marconi 4* McMartin 1* Microwave Assoc. 1* Moseley 1* Multronics 3* Philips Inst. 14* Sparta 1-4* Telautograph 5 Telonic Altair 4* Varian 4* Wavetek 4 Wideband 8*
1. program subcarrier	
2. carrier current	
3. phasing network	
4. RF attenuators	
5. facsimile	
6. TV combiners	
7. RF cables	
8. RF filters	
9. RF filter couplers	
10. FM processors	
11. tubes	
12. trans. color phase equalizer	
13. connectors	
14. converters	

ANTENNAS/TOWERS/ TRANSMISSION LINES

Antennas, AM	Allied Tower* Collins* Cont. Elec.* Harris* Jampro* Marconi* Micro Communications Multronics* NEC* RCA* Stainless Utility Tower*
Antennas, FM	Alford Blonder-T* CCA Collins* Harris* Jampro* Marconi* Micro Communications Multronics* NEC* Phelps-Dodge* RCA* Scala* Shiveley Sitco* Sparta* Utility Tower*
Antennas, Microwave	Alford Andrew Corp.* Ant. for Comm.* Bogner Cablewave* NEC* Nurad* Prodelin* RCA* Scientific-Atlanta* Utility Tower*
Antennas, TV	Alford Andrew* Blonder-T* Bogner Harris* Jampro* Jerrold* Marconi* Micro Communications NEC* Nurad* RCA* Scala* Shiveley Sitco* Utility Tower*
Towers	Allied Tower* Andrew* Fort Worth Grasis Jampro* Jerrold* NEC* RCA* Rohn Sitco* Sparta* Stainless Utility Tower*
Tower Hardware & Construction Equip.	Air Space* Allied Tower* Andrew* Cont. Elec.* Jampro* NEC* Phila. Resins* Preformed* Rohn Sitco* Sparta* Stainless Utility Tower*
Tower Lighting	Andrew Dielectric* Flash Tech* Hughey Phillips ILC Jampro* Rohn Sparta* Stainless Utility Tower*
Transmission Line & Connectors	Alford Andrew Corp* Cont. Elec.* Cablewave* Dielectric* Harris* Jampro* Jerrold* Multronics* NEC* Phelps-Dodge* Prodelin* RCA* Scientific-Atlanta* Sitco* Sparta* SWC Trompeter*

MEASURING/MONITORING/ TIMING/LOGGING EQUIPMENT

Antenna Monitors	Delta* Dyma Harris* Potomac* RCA* Sparta*
Clocks, Time Systems	Alpha 1* American Data 1-4* Audio Services 1-4* Autogram 1* Barco 1-4* Beta Tech. 1,3,4* Birns & Sawyer 1 Chronolog 1 Collins 1* Cooke 1,5* Control Design 1* Datametrics 1,2,3* Efratom 4 Electro-neering 4* ESE 1-4 EECO 1-3* Eventide 1 Heath 1,4* IGM 1,4* Moxon 1-4* McCurdy 1,3,4* Nationwide 1 Pacific Recorders 1-4* Philips Inst. 4* Regmo Data 1,4* R&S 1* SMC 1-3* Standard Elec. Time 1-4* Stancil Hoffman 1 Scully/Metro 1* Sparta 1* Systron Donner 1-4* Tapecaster 4 TFT 1-4* Telemedia 1,2,4* Tracor 4 United Systems 1,4* Vamco 1-4* VIF 4*
1. digital clocks	
2. master clocks	
3. slave clocks	
4. timers	
5. time distribution sys.	
Chart Recorders	Gotham* Heath* Philips Inst.* Simpson*
Demodulators	CCA Comark* Dynair* Marconi* Philips Inst.* RCA* R&S* Scientific Atlanta*

Collins announces the next generation of FM transmitters. The Generation 4 line.



They're here now. Nine new FM transmitters from Collins. Named Generation 4™ because they're a full generation ahead of anything else on the market. And because every feature is the product of 4 decades of Collins broadcast experience.

At the heart of everything is Collins' new, field-proven Phase 4™ Exciter. The best FM exciter available today at any price. Just one part of a system designed to meet the requirements of today's new generation of radio audiophiles... with discrete quad compatibility and stringent specifications on all the things that count, like intermod distortion.

Choices? Everything from the big 40-KW

831H-2, the 22½-KW 831C-2B, and 2½-KW 831D-2, to the 10-watt 831A-2. And five more models in between. And they're available right now at prices that are going to be a pleasant surprise. With the same superior Collins quality you've come to expect. Backed with the same unequaled 24-hour parts and field service.

Act now, while we're still able to hold our current pricing. Contact your local Collins Broadcast salesman. Or Broadcast Marketing, Collins Radio Group, Rockwell International, Dallas, Texas 75207. Phone 214-690-5574 or 214-390-5219.



**Rockwell
International**

SOURCE LOCATOR

Field Intensity Meters 1. AM 2. FM 3. TV	Ameco 3 B&K 3* Blonder-T 3* Delta 1,2* Fluke 1,2 Harris 1,2* Jerrold 3 McGraw-Edison 1,2 Mid-State 3 Potomac 1-3* R&S 1-3* Sadelco 3 Sparta 1,2* Singer 1-3* Texscan 1,2*
Frequency Monitors and Counters	Ballantine* Belar* B&K* Collins* EIP ES Fluke* Harris* Heath H-P* Marconi* McMartin* McCurdy* Philips Inst.* R&S* Simpson* Singer* Sparta* Systron Donner* TFT* United Systems*
Generators, Audio	Ailtech B&K* Control Concepts* Dyma Elpa Gen'l Radio* Harris* Heath* H-P* Marconi* McCurdy* Philips Inst* RCA* R&S* Shure* Singer* Sparta* Spectra Sonics* SMC* Systron Donner* Sound Tech* Tektronix* Texscan* United Systems* Wavetek*
Generators, RF	Boonton Elec.* Comark* Delta* Heath* H-P* Kay* McGraw-Edison* Marconi* Potomac* Philips Inst.* Systron Donner* Sound Tech* Singer* Tektronix* Telonic Altair* Texscan* Wavetek*
Generators, Video 1. multiple output 2. cross pulse only	Barco 2* Lenco 1* Marconi 1* Philips Inst. 1 R&S 1* Video Aids 2* Video Concepts 2*
Impedance Bridges	Alford B&K Boonton Elec.* Delta* Heath* H-P* Marconi* Potomac* R&S* Simpson* Telonic Altair* Texscan*
Burst Phase Meters	Colorado Video*
Voltmeters, Multimeters, etc. 1. voltmeters 2. multimeters 3. dB meters	Ballantine 1-3* B&K 1-3* Boonton Elec. 1-3* Burwen 3* dbx 3 Cetec 3 Dyma 3 Harris 1* Hewlett 1-3* Philips Inst. 1-3* Quad 8 3 Simpson 1-3* Systron Donner 2* TEA 3* Telonic Altair 3* Triplet 1-3* United Systems 1-3* Weston 1-3
Harmonic Distortion Meters	Beta Tech.* B&K* Control Concepts* Elpa* Heath* H-P* Marconi* Sound Tech*
Intermodulation Meters	B&K* Crown* Heath* McGraw-Edison* Marconi* Texscan*
Phase Meters	B&K* Control Concept* Delta* Gotham* H-P* Potomac* RCA* Wavetek*
RF Watt Meters	Bird* Boonton Elec.* Dielectric* H-P* McGraw-Edison* R&S* Simpson*
Oscilloscopes	Ballantine* H-P* Philips Inst.* RCA* Simpson* Systron-Donner* Tektronix* Wavetek*
Loggers and Logger Equipment	Control Design* Ferra Flux IGM* Moseley* Marconi* Scully/Metro
Modulation Monitors	Belar* B&K* CCA Harris* McGraw-Edison* Marconi* McMartin* RCA* R&S* Sparta* TFT* Wilkinson*
Sideband Analyzers	B&K* H-P* Marconi* R&S* Systron-Donner* Texscan*
Spectrum Analyzers	B&K* H-P* Kay* Marconi* R&S* Systron-Donner* Tektronix* Texscan*
Status & Alarm Indicators	Belar* Bird* Marconi* Moseley* Marti McBee Rust SMC*
Automatic TV Monitors	Marconi* R&S*
Vectorscopes	Beston Electronics* Heath* Simpson* Tektronix*
Video Test Generators	Colorado Video* Datatek* Lenco* Marconi* R&S* Systron-Donner* Tektronix* Thomson-CSF*
VITS, VIR, Systems and Equipment	Marconi* Philips Inst.* R&S* Tektronix*
Waveform Monitors and Analyzers	Colorado Video* Gen'l Radio Gotham* H-P* R&S* Sharp Systron-Donner* Tektronix*

Wow & Flutter Meter	Elpa* Gotham* dbx*
DIFF Phase—Gain Measurement	Datatek*
EBS Two Tone System	Audio Services* McMartin* Neff TFT*

CABLE TV EQUIPMENT

Amplifiers 1. trunk 2. distribution 3. line extenders	AEL Comm 1-3* Anaconda 1-3 Ameco 1-3 Amplifier Design 2 AVA Elec 2,3* C-Cor 1-3 Coral 1-3 Delta Benco Cascade 1-3 Echo (Arvin) 3 GTE Sylvania 1-3* Jerrold 1-3* Lindsay 1-3 Magnavox 1-3* Oak 1,2* RCA 1-3* ThetaCom 1-3* Scientific Atlanta 1-3 Tocom 1-3*
Antennas, Receiving	Blonder-T* Cadco Cush Craft Jerrold* JFD Lindsay Nurad RF Systems Scala* Sitco* Scientific Atlanta Weingard
Cable 1. distribution 2. drop	Belden 2* CCS Comm Prod 1-2 Cerro 1,2* Comm/Scope 1,2* Essex 1-2 Gen'l Cable 1-2* Plastoid 2 Phelps Dodge 2* Systems Wire 1-2* Times Wire 1-2
Connectors	AVA Elect* Amer Tech* AMP Blonder-T* Cambridge Gamco Gilbert Eng* ITT Cannon* ITT Gremer Jerrold* Kings* Lindsay LRC* Phelps Dodge* Pyramid* Sitco* ThetaCom* Trompeter*
Converters 1. standard 2. pay TV	AEL Comm 1,2* Blonder-T 1,2* Gamco Hamlin Jerrold 1,2* Lindsay Magnavox 1,2 OAK 1,2* Summit 2 Tocom 1-2*
Distribution Accessories Passive	AEL Comm* Ameco Amer Tech* Anaconda AVA Biddle Blonder-T B&K Cerro* C-Cor Comsonics D&S Corley Delta Dynascan Echo Gamco GTE Sylvania Jerrold* Lindsay Magnavox RMS Theta Com
Head End Processors	Ameco AVA Elec.* Blonder-T* Catel* Dynair* Jerrold* Oak* Phasecom* RCA CATV* Scientific Atlantic Telemet* Theta Com* Tocom* Tomco*
Information Systems, News, etc.	Avtel Ameco CADCO Channelmatic* Metro Data Laird* Kansas State Network Metro Data MSI Phasecom* Summit Systematics System Concept Telemation* United Press* Video Data*
Microwave Equipment	Alford Andrew Catel* Communication Carrier Farinon* Gen'l Electric* GTE Lenkurt* Jerrold* Microwave Assoc* Nurad* RCA* Terracom* Texscan* ThetaCom* Varian*
Non-duplication Switchers	Dynair* Fung Jerrold* Phasecom*
Power Supplies	AEL Comm* Blonder-T* Glentronic Globe Gould GTE Sylvania* Lindsay MSI Oak* Sitco* Sawyer* Sola Teledyne* ThetaCom* Tocom* Topaz
Test Equipment CATV	AEL Comm* Ameco Avantek Biddle Blonder-T* B&K Comsonics D&S Corley Dynascan Echo Intech H-P Jerrold* Kay* Lampkin Marconi* Mid State Comm Philips Sadelco Tektronix* Telonic Altair Texscan* Theta Com* Vitek Wavetek*
Construction Accessories Underground & Pole 1. aerial lifts 2. trenchers 3. cable installation tools 4. enclosures & pedestals 5. strands 6. pole hardware	Aberdeen 5-6 Anixter-Pruzan 2-6 Christy 4 Contender 4 Copperweld 5 Ditch Witch 2* Davis Mfg. 2 Durnell 1* Electrovert 3 E-Z Way 3 Fribley 4 Gilbert Eng. 3* Gen'l Cable 1,3* Handley 4 Hunt-Pierce 1,3 Imperial Plastic 4 Jacobsen 2 Jerrold 3* Kings 3* Preformed 5,6 Pyramid 3* Repco Products 4 Utility Body 1* Utility Products 4* Utility Tool 3
Services 1. maintenance 2. design consulting 3. construction 4. finance	Able Comm 3 AEL Comm 1-3* Burnup Sims 2-4 Comark 1* Cable Construction 2,3 GTE Sylvania 3* Jackson 3 Jerrold 2-4* Network Analysis 2 OAK 3-4* RCA 2* ThetaCom 1-3* Tocom 1-3*

Discover Single System Sound Super-8 Movies with the New Beaulieu "5008S"

For the last 10 years, Super-8 film has been "silent". Without sound, your Super-8 movies were "incomplete".

Today, there is "Ektasound" film, a revolutionary film which provides the means to record sound (directly on the film) as you're filming. You, therefore, can shoot "complete" movies.

With the new Beaulieu movie camera, you will go even further in Super-8. The "5008S" benefits from the advanced technology provided by Beaulieu: an image with a professional touch, and now sound with a high quality level.

Professional Sound Quality

Pop in a new Super-8 sound ("Ektasound") film cartridge. Focus. Then, plug in the mike. That's all the preparation you need. With the Beaulieu "5008S", you're now ready to start filming professional quality Super-8 single system sound movies.

An amplifier is built into the camera which records the sound directly onto the magnetic stripe of your sound film. The camera records high fidelity sound, both in treble as well as bass (*frequency response*: 50-12,000 Hz \pm 1.5 dB; *distortion*: less than 0.75%; *signal-to-noise ratio*: 57 dB; *wow and flutter*, attenuated peak: less than 0.4%).

The "5008S" modulates the single system sound recording automatically. However, there is also a "manual" setting so that you can modulate the sound as you are filming (by using the VU meter).

"XL" (Existing Light) Filming Capability

The "5008S" has "XL" (Existing Light) filming capability which is provided by: a *super-fast* lens (f1.2, 6-80mm Angenieux zoom), a longer exposure time for the image (1/40 second), and a through-the-lens metering system that sends 100% of the available light to the film.

Since many of your sound movies will be filmed indoors, this feature will enable you to shoot films in the available light of your scene (whether that "light" is bright or not).

From the "Widest" Wide Angle Shot . . . To the "Closest" Close-Up

For the lens, Beaulieu turned to the professional and technical "know how" of Angenieux (which supplies NASA for all their space missions).

Angenieux succeeded in creating a new zoom lens that covers all the focal lengths from 6-80mm (a 13.3 to 1 zoom ratio).

Imagine such a lens in 35mm still photography. It would go from a 35mm wide angle to a 500mm tele.

In addition, the lens opens to f1.2 (an *unprecedented feature* on a zoom lens with such a wide focal length range).

New Dolly Shot Style

The power zoom of the Beaulieu "5008S" is continuously variable. You can travel the full focal length range in 4 seconds, or 12 seconds (*or any speed in between*).

Macrocinematography — Without Touching the Subject

To film macrocinematography with the "5008S", just zoom to 80mm and focus. At the minimum focusing distance of 2 feet, 8 inches, you get all the light available since the lens doesn't actually touch the subject. For example, at this distance, a postage stamp

(1½" x 1-1/5" in size) completely fills the viewfinder (and consequently, the screen—when projecting).

Forget the Exposure

With the "5008S", you can concentrate totally on framing and sound recording. The diaphragm operates automatically and stops instantly at the right aperture. (This feature has "Manual Override".)

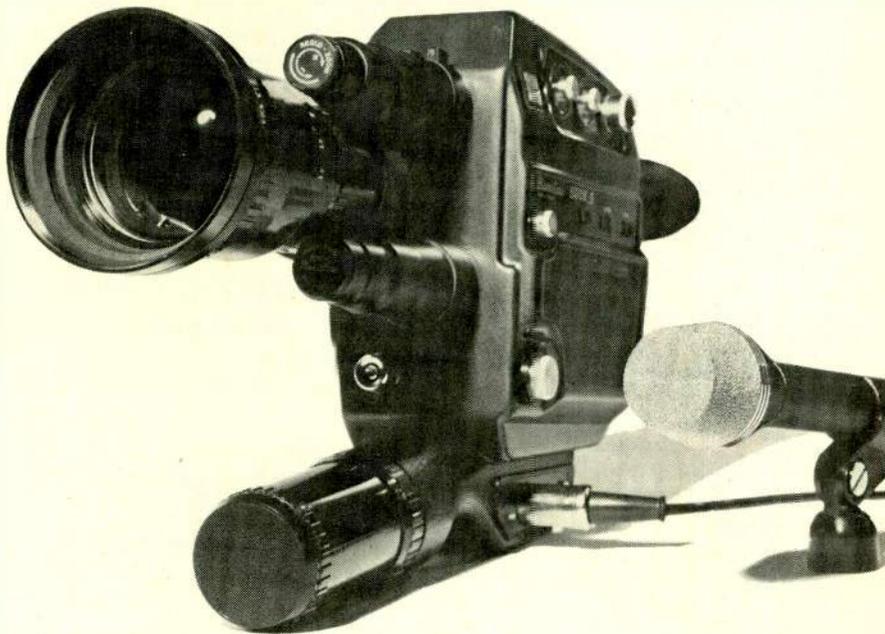
Lens Interchangeability

The "5008S" is the only single system sound camera with an interchangeable lens. It accepts 35mm still photography lenses (by means of an adapter), as well as all 16mm "C" mount lenses.

The choice is yours. You can interchange an unlimited amount of different lenses in order to create a certain "feeling" or effect in your films.

For full information on the new Beaulieu "5008S" Super-8 Single System Sound Camera, please write to:

HERVIC CORPORATION
14225 Ventura Boulevard
Sherman Oaks, California 91403



The Beaulieu "5008S" Sound Movie Camera

Circle 225 on Reader Service Card

DELTA ELECTRONICS

THE AM BROADCASTER'S SINGLE SOURCE FOR . . .

- DIGITAL ANTENNA MONITORING
- TRANSMITTER/ANTENNA CONTROL
- MEASUREMENT/TEST INSTRUMENTS

Digital Antenna Monitoring

DAM-1 DIGITAL ANTENNA MONITOR – FCC type approved. Provides digital readout of amplitude, ratio and phase. Also available: DAMA-1 Base Current Adapter for remote digital readout of antenna base currents; DAMA-2 Analog Converter to Interface DAM-1 Monitor with existing analog remote control systems; DAMX-1 to extend capacity of DAM-1 to arrays up to 12 towers.



Transmitter/Antenna Remote Control

TMCS-1 TRANSMITTER/ANTENNA REMOTE CONTROL SYSTEM – Provides digital readout and control of the DAM-1 and transmitter over a single voice channel. Other systems available: DAMR-1/DAML-1 for digital readout and control of the DAM-1 only; DAMH-1 for use where the remote control point is close enough to the monitor to permit hardwired inter-connection.

Measurement/Test Instruments



OIB-1 OPERATING IMPEDANCE BRIDGE – For antenna system measurements under transmitter power. May also be used as a conventional bridge.

RG-1 RECEIVER/GENERATOR – Two-watt signal generator with a tracking detector. Built-in rechargeable battery power supply for full portability in making low power impedance measurements. For use with OIB-1 or other RF bridges.



CPB-1 COMMON POINT IMPEDANCE BRIDGE – Monitors common point impedance continuously. Designed for permanent installation.



FSM-1 FIELD STRENGTH METER – Single frequency meter for simple, error-free, economical field strength measurements. Plug in modules for multi-frequency and harmonic measurements.

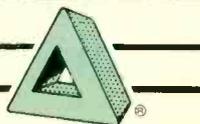
Other Products



TCT-() TOROIDAL CURRENT TRANSFORMER – Provides accurate, stable R. F. samples for phase and amplitude measurements. Available in three sensitivities. Also available: TCTR-1 Compensated Rectifier Circuit to provide DC voltage for remote current measurement when used with TCT-().

MJ-50 METER JACK – A make-before-break in line jack assembly that permits "hot" insertion of OIB-1 Bridge or Ammeters.

DELTA ELECTRONICS



5534 PORT ROYAL ROAD
SPRINGFIELD, VIRGINIA 22151
TELEPHONE: 703/321-9845 TWX: 710-831-0620

Broadcast Equipment Manufacturers Including Manufacturers of Cable TV equipment

The manufacturers in the Source directory—covering 9 major categories—received an extensive BM/E form to complete, indicating which equipment or products are in regular production. Manufacturers were also asked to supply supporting product bulletins or catalogs as verification that the product is indeed bona fide and readily available. The VS designation following the product description indicates that such verification was forwarded and is on file with BM/E.

Distributors that are nationwide exclusive sources for equipment are included in this manufacturer's section. Non-exclusive distributors are in the rep/distributor section. Field offices are given only for those companies which are advertising this issue. Advertisements are also cross referenced under corresponding reps/distributors except for those cases where the advertiser elected not to supply this data.

A

**ABERDEEN COMPANY PO BOX 2663
CULVER CITY CA 90230 213 870-5353**
lashing wire, messenger strand, pole line
hardware, buried system accessories

**ABLE COMMUNICATIONS &
ELECTRONICS 3422 US 19 NORTH PO
BOX 236 PALM HARBOR FL
33563 813 784-2734**
cable TV amplifier & other electronic equip
maintenance & consulting services

**ACOUSTIC RESEARCH 10 AMERICAN DR
NORWOOD MA 02062 617 769-4200**
loudspeakers

**ACRODYNE INDUSTRIES INC 21
COMMERCE DR MONTGOMERYVILLE PA
18936 215 368-2600**
TV transmitters & translators; rf amplifiers;
TV exciters VS
See ad pg. 103

**ADVENT CORP 195 ALBANY ST
CAMBRIDGE MASS 02139 617 661-9500**
tape cassette players, reel-to-reel
player/recorders, microphones, loudspeakers,
TV projection systems

**AEL COMMUNICATIONS CORP PO BOX
507 LANSDALE PA 19446 215 822-2929**
cable amplifiers; passive cable accessories;
cable connectors; CATV design services VS

**A.F. ASSOCIATES INC 415 STEVENS AVE
RIDGEWOOD NJ 07450 201 447-0096**
color framer for editing aid VS

**AGFA-GEVAERT INC 275 NORTH ST
TETERBORO NJ 07608 201 288-4100**
magnetic audio tape VS

**AILTECH (DIV OF CUTLER-HAMMER)
19535 E WALNUT DR CITY OF INDUSTRY
CA 91748 213 965-4911**
line of signal generators & broadcast
instrumentation

**AIR SPACE DEVICES INC PO BOX 197
PARAMOUNT CA 90723 213 774-4905**
tower accessories; safety devices; climbers VS

**AITKEN COMMUNICATIONS INC 701
TENTH ST TAFT CA 93268 805 765-5403**
automation programmer, audio controller,
time control

**AKG AUDIO DIV PHILIPS AUDIO VIDEO
SYSTEMS CORP 91 McKEE DR MAHWAH
NJ 07430 201 391-1000**
condenser microphones; dynamic
microphones; special purpose microphones;
headphones; audio amplifiers; reverb
systems; turntables; intercom systems VS
See ad pg. 51—refer to rep/dist section

**AKAI AMERICA LTD 2139 E DEL AMO
BLVD COMPTON CA 90220 213 537-3880**
portable video cameras, portable videotape
recorder/players, telecine equip VS
See ad pg. 13—refer to rep/dist section
Calif Akai America 2156 The Alameda San
Jose 95126 408 288-6228
NJ Akai America 6 Kilmer Rd Edison
08817 201 985-3760

**ALCO PRODUCTS INC 1551 OSGOOD ST
NO ANDOVER MA 01845 617 685-4371**
machine knobs

**ALDEN ELECTRONIC & IMPULSE
RECORDING EQUIP CO INC 1
WASHINGTON ST WESTBORO MA
01581 617 366-8551**
fax recording systems; weather data systems

**ALFORD MFG CO 120 CROSS STREET
WINCHESTER MA
01890 617 729-8050**
antennas, FM, TV, microwave; diplexers, rf
loads, rf switchers; microwave units;
transmission line & line accessories;
impedance bridge, CATV test equip

**ALLIED IMPEX CORP (DIV OF AIC PHOTO
INC) 168 GLEN COVE RD CARLE PLACE
NY 11514 516 742-7300**
photographic equip & accessories including
super-8 cameras also optical & misc
accessories

**ALLIED TOWER CO PO BOX 331 SOUTH
HOUSTON TX 77587 713 946-9546**
antenna towers & accessories; tower design,
construction, erection VS

**ALLISON RESEARCH INC 2817 ERICA
PLACE PO BOX 40288 NASHVILLE TN
37204 615 255-4766**
limiter/compressor, console modules

**ALPHA ELECTRONIC SERVICES INC 8431
MONROE AVE STANTON CA
90680 714 821-4400**
multi-function tone generators, (audible,
subaudible), digital clocks, remote control VS
See ad pg. 74

**ALTEC SOUND PRODUCTS DIVISION 1515
S MANCHESTER AVE ANAHEIM CA
92803 714 774-2900**
loudspeakers; microphones; audio consoles;

THE SOURCE '75

audio amplifiers; turntables, arms, pickups; intercoms; audio processing units VS

AMCO ENGINEERING CO 7333 W AINSLIE ST CHICAGO IL 60656 312 867-8500
racks, cabinets, enclosures VS

AMECO INC PO BOX 13741 PHOENIX AZ 85002 602 252-7731
cable trunk and distribution amplifiers; head-end signal processors; pilot carrier generators; bandpass filters, combining networks; CATV test equip & tools; video automation equip

AMERICAN DATA CORP (AN AIRPAX CO) PO BOX 5228 315 WYNN DR HUNTSVILLE AL 35805 205 837-5180

audio & video distribution amplifiers; vertical interval switcher; master control switcher; chroma keyers; pulse distribution amplifiers; production switchers; sync generators; special effects generators digital clocks systems; waveform monitors; video test generators VS

See ad pg. 55—refer to rep/dist section

Calif ADC W. Wiseman 425 S New Hampshire Suite 301 Los Angeles 90020 213 387-7756

Ga ADC J. Ryan 1729 Wilmont Dr Atlanta 30329 404 633-2100

AMERICAN ELECTRONIC LABORATORIES INC PO BOX 552 LANSDALE PA 19446 215 822-2929

FM exciters; AM & FM transmitters; sca equip; rf amplifiers VS

AMERICAN TECHNOLOGY CO INC 2562 W ENCANTO BLVD PHOENIX AZ 85009 602 272-1234

coaxial cables; coaxial connectors; passive distribution accessories VS

AMILLON CORP 49-12 30TH AVE WOODSIDE NY 11371 214 274-1794

audio cassette transport mechanisms

AMPEREX ELECTRONIC CORP EOD DIV PROVIDENCE PIKE SLATERSVILLE RI 02876 401 762-3800

tubes for video cameras; camera viewfinder picture tube VS

See ad pgs. 56, 94-95—refer to rep/dist section

Calif Robert Manahan 3760 Cahuenga Blvd No Hollywood 91604 213 762-2118

Ill Ralph E Johnson 175 Scott St Elk Grove 60007 312 593-8220

AMPEX CORP 401 BROADWAY REDWOOD CITY CA 94063 415 367-2011

audio tape; audio tape recorders/players (portable, studio, multi-channel); audio time code gen's; var speed ocs; videotape; videotape recorder/reproducers (quad & helical); automatic video cassette recorder/reproducer; broadcast color cameras; time base correctors VS

Ampex is also exclusive distributor of EECO products (see listing)

AMPRO CORPORATION 850 PENNSYLVANIA BLVD FEASTERVILLE PA 19047 215 322-5100

audio consoles & mixers; audio controls, equalizers, attenuators; tape cartridge player/recorder; multicart machines; test tapes; tape accessories VS

See ad pg. 76—refer to rep/dist section

AMP SPECIAL INDUSTRIES VALLEY FORGE PA 19482 215 647-1000

CATV connectors & tools; patch panels & terminals

AMTRON CORP PO BOX 21043 SAN JOSE CA 95151 408 238-2522

video monitors

ANACONDA CATV 7465 LAMPSON AVE GARDEN GROVE CA 92641 .. 714 898-2611

CATV cable; trunk & distribution amplifiers; head-end signal processors; CATV tools; passive cable units VS

ANDERSEN (WALTER M A) &

ASSOCIATES INC 4 MAIN ST EXT TARIFFVILLE CT 06081 203 658-7666

wideband if delay lines; ultrasonic delay lines for chroma keyers, enhancers, time base correctors, drop-out compensators, etc VS

ANDREW CORP 10500 W 153RD ST ORLAND PARK IL 60462 312 349-3300

earth station antennas; antennas, TV & microwave; transmission line & line connectors; general connectors VS

ANDREWS TOWER INC 1420 LAYTON AVE FT WORTH TX 76117 ... 817 831-1222

AM antennas; antenna towers, tower accessories; tower lighting

ANGENIEUX CORP OF AMERICA ISLIP AIRPORT PO BOX 340 RONKONKOMA NY 11779 516 567-1800

video camera lenses, cine lenses, lens accessories & associated hardware controls VS

ANIXTER COMMUNICATIONS SYSTEMS (MARK ANTENNAS) 5439 W FARGO SKOKIE IL 60076 312 675-1500

microwave antennas & accessories

ANIXTER-PRUZAN 1963 FIRST AVE SEATTLE WA 98154 206 694-6506

full line of pole line & CATV construction access; strand wires; passive components; head-end & distribution equip; power supplies; converters, local origination equip

ANN ARBOR TERMINALS INC 6107 JACKSON RD ANN ARBOR MI 48103 313 769-0926

display & terminal CRT equip; alphanumeric generators VS

ANNES (R B) CO 1101 N DELAWARE ST INDIANAPOLIS IN 46202 317 637-9282

demagnetizing kits

ANTENNA PRODUCTS CO BOX 520 MINERAL WELLS TX 76067 .. 817 325-3301

antenna services

ANTENNAS FOR COMMUNICATIONS INC CORDAGE PK PLYMOUTH MA 02360 617 746-8180

microwave antennas; earth station antennas VS

ARISTOCART DIV OF WESTERN BROADCASTING LTD 505 BURRARD ST VANCOUVER CANADA

V7X 1C4 604 687-2844

tape cartridges VS

See ad pg. 136

ARP INSTRUMENTS INC 320 NEEDHAM ST NEWTON MA 02164 617 965-9700

music synthesizers

ARRIFLEX CORP OF AMERICA 25-20 BKLYN QUEENS EXPWY (WEST) WOODSIDE NY 11377 212 932-3403

16mm & 35mm cine cameras, camera lenses

ARVIN SYSTEMS INC See Echo Sciences

ASACA CORP 1289 RAND RD DES PLAINES IL 60016 312 298-4380

portable TV color cameras; monochrome cameras; lenses, heads, mounts, dollies; video monitors; videotape recorder/players

ASSOCIATION OF CINEMA LABORATORIES 901 N WASHINGTON ST ALEXANDRIA VA 22314 703 548-7502

film processing laboratory

ASTATIC CORP BOX 120 CONNEAUT OH 44030 216 593-1111

pickups, microphones, microphone stands

ATLAS SOUND DIV AMERICAN TRADING & PRODUCTION CORP 4 POMEROY RD PARSIPPANY NJ 07054 201 887-7800

microphone stands & accessories, speakers, columns

AUDIO ACCESSORIES INC KEENE NH 03431 603 352-2320

audio connectors, jack panels, patch cords, plugs, jacks VS

AUDIO DESIGNS & MFG INC 16005 STURGEON ST ROSEVILLE MI 48066 313 778-8400

audio consoles; audio amplifiers, equalizers,

attenuators; audio processors; VU meters; custom consoles VS

AUDIO INTERFACE SYSTEMS INC 2708 FIFTH AVE S IRONDALE AL 35210 205 595-6469

audio consoles

AUDIOSEARS CORP SOUTH ST STAMFORD NY 12167 607 652-7305

microphones, dynamic & dynamic windscreens, headsets

AUDIO SERVICES INC 3140 E JEFFERSON ST DETROIT MI 48207 313 567-0555

transmitter computer for fault detection, stand-by activation; remote control systems; studio audio switcher, alarm indicators; digital clock systems; custom-designed studios & studio equip; automation systems; EBS signal equip

AUDIO-TECHNICA US INC 33 SHAWASSEE AVE FAIRLAWN OH 44313 216 836-0246

stereo & quad phono pickups, microphones, arms, headsets, audio chart recorder, record cleaners; audiocables VS

AUDIOTECHNIQUES INC 142 HAMILTON AVE STAMFORD CT 06902 .. 203 359-2312

mixers (Allen & Heath), speakers & accessories; mike stands & booms (monks); amplifiers (H/H); lighting systems; equalizers VS

AUDIO/TEK INC PO BOX 5012 SAN JOSE CA 95150 408 378-5586

audio tape cartridge loaders VS

AUDIOTRONICS CORP PO BOX 3997 NORTH HOLLYWOOD CA 91609 213 765-2645

headsets, microphones, tape cartridge equip, picture monitors VS

AUDITRONICS INC 207 SUMMIT ST MEMPHIS TN 38104 901 276-6338

audio consoles; line amplifiers; equalizers VS

AUDIO-VIDEO ENGINEERING CO 65 NANY BLVD MERRICK NY 11566 ... 516 546-4239

hum reduction filters

AUDIO/VIDEO PRODUCTS 9336 FOSTORIA ST DOWNEY CA 90241 213 861-6072

digital music maker; electronic slating system VS

AUTOGRAM PO BOX 456 PLANO TX 75074 214 424-8585

automation equip; audio amplifiers; mono & stereo consoles VS

AUTOMATED PROCESSES INC 789 PARK AVE HUNTINGTON NY 11743 516 427-6024

automated multi-channel mixer, audio consoles; audio preamps; distribution, power, line amplifiers; audio attenuators; equalizers; compressor/limiters; tape machine synchronizers VS

AVA ELECTRONICS 242 PEMBROKE AVE LANSDOWNE PA 19050 215 284-2500

cable TV multiple dwelling terminals; distribution amplifiers, line extenders; coaxial connectors; passive accessories VS

AVANTEK INC 3175 BOWERS AVE SANTA CLARA CA 95051 408 739-6170

CATV test equip, sweep generators

AVONIX PO BOX 505 BROOKFIELD WI 53005 414 784-1800

flying erase edit unit for Sony VC

AVTEL CORP 1280 BLUE HILLS AVE BLOOMFIELD CT 06002 203 242-0761

video information systems for pay cable, video switcher, film chains automatic videocassette player; mobile televisions VS

Network of over 40 dealers distributors throughout the USA & Canada—contact main office for local outlet

Calif D.J. Sofie 7119 Pomela Dr Canoga Park 91307 213 884-6269

NY Avtel 44 Railroad Ave Glenhead 11545 516 671-8010

See ad pg 128

continued on page 52

Bellow into it, sweat over it, man-handle it. Practically jam it into the bell of a trumpet. Without overloading. Without distorting.

This AKG D-140E is a super-tough single element, cardioid dynamic microphone that's sensitive enough for top studios or concert halls.

Frequency range: 30 to 15,000 Hz. SPL for 0.5% THD: at 1000 Hz is 129dB. Its front to back discrimination exceeds 18dB at 1000 Hz at a sound incidence angle of 180.°

The D-140E can be boom mounted or hand held. There are no grills or openings on the shaft to cause feedback or alter response when hand held.

The compact size of the D-140E works on stage or TV too.

While it delivers all the high quality audio a program produces, it's so small it can't hide anybody's video.

The D-140E lets music sound life-like, without any coloration of its own. There's a 12dB bass roll-off filter switch recessed into the handle to let you reduce the proximity effect. Or retain it, as the needs of a session dictate.

The D-140E's transducer is internally suspended and encapsulated by a wire mesh/urethane foam windscreen/shield. So handling noise, dust, wind and popping won't interfere with your work.

See your professional equipment dealer for the D-140E or write to us. Before the pressure builds up.

AKG MICROPHONES • HEADPHONES

distributed by:

PHILIPS AUDIO VIDEO SYSTEMS CORP.
AUDIO DIVISION

91 McKee Drive, Mahwah, New Jersey 07430
A North American Philips Company



For the pressure of your company.

(At 129dB, distortion is less than 1%.)



Circle 127 on Reader Service Card

THE SOURCE '75

B

BACH AURICON INC 6950 ROMAINE ST HOLLYWOOD CA 90038 213 462-0931
heads, mounts & dollies; cine cameras & lenses

BALLANTINE LABORATORIES INC PO BOX 97 BOONTON NJ 07005 201 335-0900
frequency counters; dB meters; voltmeters; waveform monitors; oscilloscopes VS

BALL BROTHERS RESEARCH CORP MIRATEL DIV 1633 TERRACE OR ST PAUL MN 55113 612 633-1742
color & b/w monitors; video signal multiplexers; special effects generators

BARCO US DIV KALLMAN ASSOC INC 2525 HYPERION AVE LOS ANGELES CA 90027 213 660-4900
picture monitors; magnetic video discs; digital electronic timers; cross-hatch generator VS

BARDWELL MCALISTER INC 12164 SHERMAN WAY NORTH HOLLYWOOD CA 91605 213 875-1913
studio lighting equip, lighting accessories, mounting hardware, dimmers, control systems, color gelatines & distribution equip

BARKER & WILLIAMSON INC CANAL ST BRISTOL PA 19007 215 788-5581
rf amplifiers; audio test equip

BASF CORP CROSBY DR BEDFORD MA 01730 617 271-4000
audio tape; calibration tape

BAUSCH LOMB SOPP DIV-OPTIC CTR BAUSCH ST ROCHESTER NY 14602 716 338-6470
TV camera lenses; motion picture camera lenses; spectrum analyzers

BCS—See Kaman Sciences

BELAR ELECTRONICS LABORATORY INC BOX 826 DEVON PA 19333 .. 215 687-5550
AM, FM, & TV frequency & modulation monitors; rf amplifiers; silence alarm; SCA equip VS
See ad pg. 132

BELDEN CORP (ELECTRONIC DIV) RICHMOND IN 47374 317 966-6661
rf cable; audio cable; wire; transmission lines; coaxial cable VS

BELL & HOWELL (AV PRODUCTS DIV) 7100 MC CORMICK RD CHICAGO IL 60645 312 262-1600
film chains, projectors

BELL P/A PRODUCTS CORP 1209 N FIFTH S COLUMBUS OH 43201 614 299-1487
amplifiers, background music systems, commercial sound systems

BENJAMIN ELECTRONIC SOUND CORP 40 SMITH ST FARMINGDALE NY 11735 516 694-7960
audio equip; CCTV equip

BERKEY COLORTRAN INC 1015 CHESTNUT ST BURBANK CA 95102 213 843-1200
studio lights, stands, controls, filters, accessories VS
See ad pg. 87

The VS designation following the description of a company's products indicated that the manufacturer verified to BM/E in July of 1975 that these products are in regular production and data on the product/equipment is on file with BM/E.

NY BERKEY-COLORTRAN 25-15 50TH ST NY 11377 212 721-3434

BESTON ELECTRONICS 9024 W 51ST TERRACE SHAWNEE KS 66203 913 362-4400
automatic density light controls; oscilloscope vector displays, rack frames VS

BETA TECHNOLOGY INC 94 VERDI ST FARMINGDALE NY 11735 516 293-4313
sync generator assignment control; digital timer; videotape editing timing control; display systems; colorizer; time code generator VS

BETHANY INTERNATIONAL INC 5750 BINTLIFF HOUSTON TX 77036 713 783-1260
audio distribution amplifiers VS

BIDDLE JAMES G CO TOWNSHIP LINE & JOLLY RDS PLYMOUTH MEETING PA 19462 215 646-9200
CATV test equip VS

BI ELECTRONICS 128 DONALDSON CTR GREENSVILLE SC 29604 803 277-5985
EBS alert system

BIOMATION 10411 BUBB RD CUPERTINO CA 95014 408 255-9500
analog to digital color video digitizer

BIRD ELECTRONIC CORP 30303 AURORA RD CLEVELAND (OLON) OH 44139 216 248-1200
rf wattmeters; rf loads; rf filters; rf attenuators; status & alarm systems VS

BIRNS SAWYER INC 1026 NO HIGHLAND AVE LOS ANGELES CA 90038 213 466-8211
camera heads, tripods, dollies; camera & lens accessories; film editing equip; lights & light stands

BIRNUP & SIMS PO BOX 2431 WEST PALM BEACH FL 33401 305 683-8311
cable TV construction, strand mapping, field engineering

BJA SYSTEMS INC 666 DAVISVILLE RD WILLOW GROVE PA 19090 .. 215 659-4141
color video synthesizer VS

B&K INSTRUMENTS INC 5111 W 164TH ST CLEVELAND OH 44142 216 267-4800
audio line, distribution, preamplifiers; dynamic & condenser microphones; open-reel type recorders; tuntables; rf amplifiers; signal generators; distortion meters, level meters; impedance bridges, phase meters, sideband analysers, spectrum analysers; CATV test equip VS

BLONDER-TONGUE LABORATORIES INC ONE JAKE BROWN RD OLD BRIDGE NJ 08857 201 679-4010
CATV headends, signal processing equip; MATV equip; CATV test equip; FM & TV antennas pay-TV systems VS

BOGNER BROADCAST EQUIP CORP 99 W HAWTHORNE AVE VALLEY STREAM NY 11580 516 561-9130
TV antennas; microwave antennas VS
See ad pg. 72

BOONTON ELECTRONICS CORP RTE 287 AT SMITH RD PARSIPPANY NJ 07054 201 887-5110
FM-AM signal generators; impedance bridges; dB meters; rf watt meters; capacitance test meters VS

BORG-WARNER (INGERSOLL PRODUCTS DIV) See EMCOR

ROBERT BOSCH CORP See Fernseh

BOSTON INSULATED WIRE & CABLE CO 65 BAY ST BOSTON MA 02125 617 746-7650
cable systems for TV cameras, connectors VS

BRAND-REX DIV AMERICAN ENKA CORP PO BOX 498 WILLIMANTIC CT 06226 203 423-7771
flexible transmission line, coaxial cable, wire & cable

BROADCAST ELECTRONICS INC 8810 BROOKVILLE RD SILVER SPRING MD 20910 301 588-4983
tape cartridge players/recorders; multicart machines; automatic playbacks; remote consoles, consoles and mixers; preamps; distribution & monitor amps; audio processing equipment; picture monitors; accessories; tapeheads VS
See ad pg. 110

BROADCAST EQUIPMENT LEASING CO 1412 GRANT BLDG PITTSBURGH PA 15219 412 281-3768
leasing programs for broadcast & CATV equip

BSC INC 8600 WEST SUNNYSIDE AVE CHICAGO IL 60656 312 625-0265
portable consoles, mixers VS

BUHL OPTICAL 1009 BEECH AVE PITTSBURGH PA 15233 412 321-0076
CCTV film chains; slide projector; multiplexer w.o. dedicated cameras
See ad pg. 84

BULOVA WATCH CO INC—AM TIME PRODUCTS DIV 61-20 WOODSIDE AVE WOODSIDE NY 11377 212 335-6000
studio clock systems & frequency standards

BURLEN LABORATORIES 209 MIDDLESEX TPKE BURLINGTON MA 01803 617 237-1488
noise filters, noise reduction systems, audio processors, distribution & monitor amps; audio processing equip; picture monitors; video film noise filters VS

C

CABLEDATA 1931 K ST SACRAMENTO CA 95813 916 442-4760
data processing services available to CATV systems

CABLE FACTS SUB OF UNITED DATA CENTERS 2228 YOUNG DRIVE LEXINGTON KY 40505 606 269-2323
Cable Facts, computerized subscriber billing/management service with tele-processing

CABLEVISION CONSTRUCTION CORP 910 BAY AREA BLDG HOUSTON TX 77058 713 488-6510
construction, services, system mapping

CABLEWAVE SYSTEMS INC 60 DODGE AVE NO HAVEN CT 06473 ... 203 239-3311
transmission lines & line connectors; transmission line pressurizing equip; waveguide & waveguide accessories VS

CADCO INC POB 18904, OKLAHOMA CITY OK 73118 405 681-5377
CATV pre-amps, message systems, antennas

CALVERT ELECTRONICS INC 220 E 23 ST NEW YORK NY 10010 212 679-1340
electronic tubes for cameras, transmitters, surge protectors, other components VS

CAMBRIDGE PRODUCTS CORP 101 FOLEY ST SOMERVILLE MA 02145 617 666-3343
CATV connectors & "F" fillings VS

CANON SCOOPIC 10 NEVADA DR LAKE SUCCESS NY 11040 516 488-6700
professional 16mm motion picture cameras; lenses (including zoom); complete systems
See ad pg. 107

CANON USA INC 10 NEVADA DR LAKE SUCCESS NY 11040 516 488-6700
video camera lenses, cine cameras & lenses, tape heads VS
See ad on pg. 101. Refer to rep/dist section
Cal Canon OBM 123 Pularino Ave E Costa Mesa 92626 714 979-6000
Ill Cannon USA 457 Fullerton Ave Elmhurst 60126 312 833-3070

continued on page 54

Clean up your image with EEV camera tubes.



8872V 1 inch magnetic Vidicon
for use in color film
chain operation



P8130 to P8133 30mm Coaxial
Leddicon® series with internal
light bias. Replaces most integral
or separate mesh color camera
tubes. Available in standard layer
as well as extended red or green.



P858 4 1/2 inch Image Orthicon
for use as the luminance tube
in color cameras.



8134V1 1 inch electrostatic
focus Vidicon for color film
chain broadcast applications.
8480V1 1 1/2 inch tube for use
in luminance channel.

Clean, precise, consistent—EEV Leddicon® camera tubes are made to last. They can be used as replacements for Plumbicon® and Vistacon tubes.

Hundreds of stations in the USA and throughout the world use Leddicons to down costs and up quality.

From the same one-stop source you can also specify EEV Image Orthicons—we're the world's biggest makers—and Vicicons.

All EEV tubes are available for immediate delivery with fast service back-up. Contact us now for type lists and prices.



EEV NORTH AMERICA

ENGLISH ELECTRIC VALVE NORTH AMERICA LTD.

1 American Drive • Cheektowaga, NY 14225

(716) 632-5871 • TWX: (710) 523-1862

67 Westmore Drive • Rexdale, Ontario M9V 3Y6

(416) 745-9494 • Telex: 06 965864

A member of the GEC - English Electric Group of Companies

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Plumbicon® is a registered trademark of N. V. Philips* of Holland

Circle 128 on Reader Service Card

THE SOURCE '75

Mesa 92626 714 979-6000
 III Cannon USA 457 Fullerton Ave Elmhurst
 60126 312 833-3070

CAPITOL MAGNETIC PRODUCTS 1750 N VINE ST HOLLYWOOD CA 90028

open-reel, cartridge & cassette audio tape; cartridges & cassettes; magnetic film VS

See ad pg. 73—refer to rep/dist section Canada
 Calif CMP 3117 San Fernando Rd Los Angeles 90065 213 255-5103

Ga CMP 1670 NE Freeway Access Rd Atlanta 30329 404 321-5441

III CMP 6401 Gross Point Rd Niles 60648 312 775-7101

Md CMP Century XXI 20030 Century Blvd Germantown 20767 301 428 0795

Mass CMP 235 Elm St Dedham 02026 617 329-5777

Mich CMP 550 E Mandoline St Madison Heights 48071 313 583-9600

NY CMP 1370 Ave of the Americas New York 10019 212 757-7470

Ohio CMP 7777 Exchange St Cleveland 44125 216 524-8940

Tex CMP 6730 Oakbook Blvd Dallas 75235 214 638-0784

CATEL (DIV UNITED SCIENTIFIC CORP) 1400-D STIERLIN RD MOUNTAIN VIEW CA 94043

FM modulators & demodulators; FM microwave sub-carrier systems; FM head end processors, filters VS

CATERPILLAR TRACTOR 100 NE ADAMS PEORIA IL

emergency power generators 309 676-3311

CBS TECHNOLOGY CENTER 227 HIGH RIDGE RD STAMFORD CT 06905

audio systems, quadrophonic encoders, sound systems 203 327-2000

CCA ELECTRONICS CORP 716 JERSEY AVE GLOUCESTER NJ

AM, FM, UHF, VHF transmitters all ranges, UHF-VHF antennas, transmission lines, AM & FM monitors; STL, remote pickup equip, audio consoles, tape cartridge equip, automation, turntables

See ads pg. 127 609 456-1716

C-COR ELECTRONICS INC 60 DECIBEL RD STATE COLLEGE PA 16801

CATV trunk, distribution, extender amplifiers; headend equip; cable passives; CATV test equip VS

CENTRAL DYNAMICS CORP 230 LIVINGSTON ST NORTHVALE NJ 07647

TV automation systems; computerized videotape & audio tape editing equip; tape machine synchronizers; processing amplifiers, chroma keyers, video production switchers, pulse distribution amplifiers, routing switchers; sync generators, special effects generators, colorblock & cue dot generators, time code generators, time code readers, video mixing amplifiers; CCTV, CATV video production switchers VS

See ad pg. 7

Calif P. Welcome 15130 Ventura Blvd Suite #219 Sherman Oaks 91403 213 789-0574

III R. Faulkner 331 W. Northwest Hwy Palatine 60067 312 991-4720

NJ CDC 230 Livingston St Northvale 07647 201 767-1300

CENTURY PRECISION CINE/OPTICS 10661 BURBANK BLVD NORTH HOLLYWOOD CA 91601

wide-angle lenses for 16mm & 35mm cine use; motion picture accessories 213 766-3715

CERRO CATV DIV OF CERRO CORP HALLS MILL RD FREEHOLD NJ 07728

trunk distribution & drop cable; splitters, taps & couplers VS

CETEC AUDIO (DIV OF CETEC INC) 13035 SATICOY ST NO HOLLYWOOD CA 91605

audio amplifiers, controls; consoles, mixers; tape duplicators, speakers VS

CHANNELMATIC ELECTRONICS 1234 ANOBE LN EL CAJON CA 92021

automated videocassette programmer; a-v switchers, routing switchers, distribution amplifiers VS

CHARLES MACHINE WORKS INC (SEE DITCH WITCH)

CHIRON TELESYSTEMS 11 GRACE AVE GREAT NECK NY 11021

character generators; graphics system; titling equip VS

See ad pg. 12

Calif CHIRON 851 Burlway rd Bulingame 94010 415 348-1144

CHOMERICS INC 77 DRAGON COURT WOBURN MA 01801

RFI strip gaskets, conductive RFI o-rings, shrinkable connector shields 617 935-4845

CHRISTY CONCRETE PRODUCTS INC 44100 CHRISTY ST FREMONT CA 94538

precast concrete & plastic housing for underground cable systems 415 657-7070

CHRONO-LOG CORP 2 W. PARK RD. HAVERTOWN PA 19083

digital clocks & calendars; time-code generators & readers VS

CINEMA BEAULIEU DIV HERVIC CORP 14225 VENTURE BLVD SHERMAN OAKS CA 91403

film cameras & lenses; tripods, camera accessories; microphones, tape recorder/players VS

CINEMA PRODUCTS CORP 2037 GRANVILLE AVE LOS ANGELES 90025

16mm film cameras; lenses for 16mm cameras; camera tripods, cases, accessories; camera sound recording systems & accessories; audio & location lights, light stands, accessories VS

See ad pgs. 77 & 83

NY CP Eastern Sales 262 Long Beach Blvd Long Beach 11561 516 889-2484

CLEAR-COM (DIV OF LUMIERE PROD INC) 759 HARRISON ST SAN FRANCISCO CA 94107

portable intercom systems VS

CMX SYSTEMS (ORROX CO) 635 VAQUEROS AVE SUNNYVALE CA 94086

videotape editing equip VS

COASTCOM 2346 STANWELL DR CONCORD CA 94520

voice over video duplexers for STL microwave; video low pass filters VS

COHERENT COMMUNICATIONS CO 13733 GLEN OAKS BLVD SYLMAR CA 91342

power supplies for cond microphones; importer of Rycote windshield; film footage counter VS

COHU INC ELECTRONICS DIV PO BOX 623 SAN DIEGO CA 92112

TV color & mono cameras, studio & portable; color connectors, color encoders, image enhancers, video switchers, pulse distribution amplifiers; TV film cameras, telecine chains; color pattern generators, sync generators; distribution amplifiers VS

See ad pg. 109

Ala COHU Huntsville 205 881-6220

Calif COHU Cerritos 213 962-7002

COHU Costa Mesa 213 869-5884

COHU Palo Alto 415 326-0280

COHU San Diego 714 278-8931

COHU Denver 303 573-8835

Fla COHU Orlando 305 896-4881

Ind COHU Michigan City 219 874-3333

Md COHU Washington DC 301 656-3061

Mass COHU Bedford 617 275-0370

Neb COHU Lincoln 402 467-2900

NJ COHU Florham Park 201 377-6636

NC COHU Greensboro 919 273-1918

Penn COHU Wayne 215 688-7325

Tex COHU Arlington 817 461-2900

COLLINS RADIO GROUP OF ROCKWELL INTERNATIONAL CORP DALLAS TX 75207

FM transmitters, AM transmitters, antenna systems, audio control consoles; microwave equip; frequency monitors; audio controllers & processors, full line consoles, microphones; dist of other lines VS

See ad pg. 45

Alaska R.F. Cassady PO Box 2743 Fairbanks 99707

Ariz Morris Courtright 1450 W Arroyo Dr Yuma 85365 602 783-6380

Fla R.J. Henry 14018 W Parsley Dr Madeira Beach 33708 813 391-8065

La W.J. Monroe 8427 Ridgemont Dr Pineville 71360 318 640-3412

Md C.M. Beverage 10104-M Woodlake Dr Cockeysville 21030 301 666-7059

Mich D.W. Hill 38780 Hartwell Sterling Heights 48077 313 979-6320

Minn J.L. Littlejohn 200C West Branch Rd Maple Plain 55359 612 479-2633

Mo John Shideler Rte #1 Box 217-B Oak Grove 64075 816 229-1141

NY A.A. Silver Collins Radio Group 200 Park Ave New York 10017 212 661-6530

Oreg R.G. Beattie 1122 N.E. 122nd Ave Rm B-211 Portland 97230 503 254-2818

Tenn R.C. Evans Rt. #1 Box 103D Glenmore Dr Rockford 37853 615 573-9717

Texas R.S. Rentford Collins Radio Group 1200 N. Alma Rd Richardson 75080 214 690-5424

COLORADO VIDEO INC PO BOX 928 BOULDER CO 80302

mono cameras, video compression equip; color synthesizers VS

See ad pg 142

COMARK INDUSTRIES INC PO BOX 196 MAIN LINE IND PARK WESTFIELD MA 01085

RF amplifiers; RF switchers; transmission line & connectors; demodulators VS

COMMERCIAL ELECTRONICS INC 880 MAUDE AVE SUNNYVALE CA 94043

TV cameras, studio & portable; color encoders; image enhancers 415 969-1910

COMM/SCOPE CO PO BOX 2406 HICKORY NC 28601

drop and distribution coaxial cable for CATV VS

COMMUNICATION ARTS INC BOX 478 BERNARDSVILLE NJ 07924

universal crystal sync unit for motion picture cameras 201 766-4012

COMMUNICATIONS CARRIERS INC 33 RIVER RD GREENWICH CT 06807

microwave communications systems VS

COMMUNICATIONS TECHNOLOGY CORP 2237 COLBY AVE LOS ANGELES CA 90064

CATV splicing, materials, fittings 213 478-5061

COMMUNICATIONS TECHNOLOGY INC 3070 LEE MAN FERRY RD HUNTSVILLE AL 35801

audio switchers, video routing switchers VS

COMMUNITY INFORMATION SYSTEMS JONATHAN VILLAGE CENTER CHASKA MN 55318

two-way duplex filters for CATV 612 448-4800

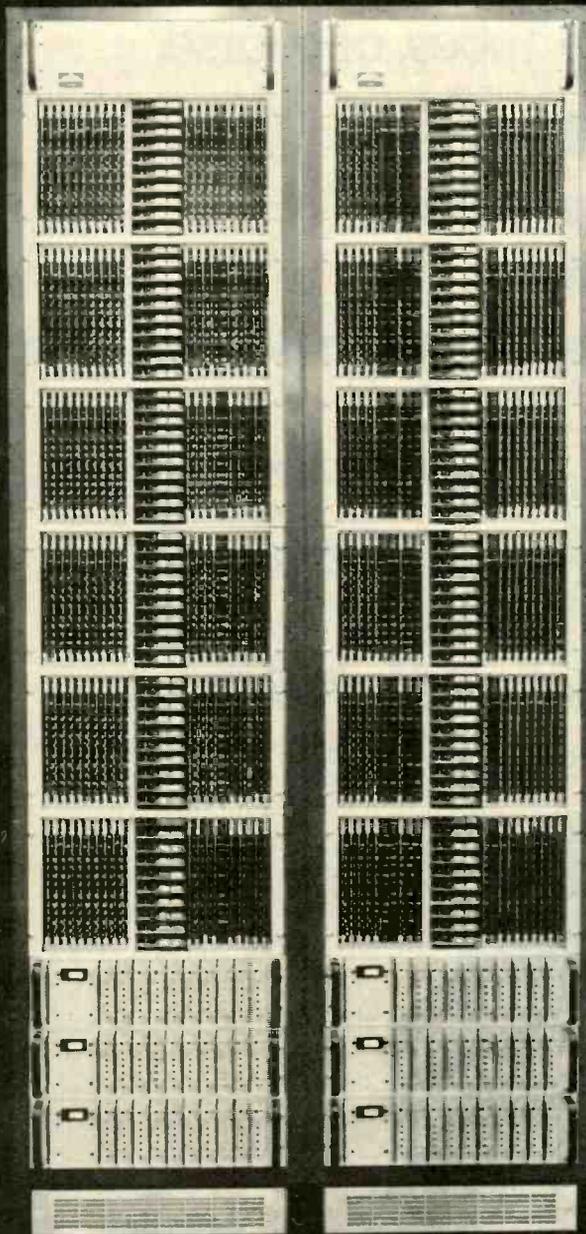
COMPQUIP INC 366 S MAPLE GLENROCK NJ 07452

mfg of fixed lens adapters for TV; distributor of lenses & film equip; stands, dollies; video animation aids VS

COMPU/NET INC 8616 LA TIJERA BLVD LOS ANGELES CA

automated business services for radio & TV 213 642-2211

continued on page 57



THE ADC 900

A distribution switching system for those who demand the finest performance available today.

The 900 is the **ONLY** system to feature a "developed for television" Integrated Circuit Crosspoint to *discretely* switch video-audio-tally, all with superb specifications.

While designed for computer control, the system is supplied with the facilities to accommodate any conventional or non-conventional control scheme.

The 900 is the most flexible, versatile and superior system available today.

40 x 60 AFV



AMERICAN DATA CORPORATION

AIRPAK COMPANY

315 WYNDY DRIVE, N.W. P. O. BOX 5228 HUNTSVILLE, ALABAMA 35805 TEL. 205-837-5180

1729 WILMONT DRIVE
ATLANTA, GA. 30329
404-83-2100

5504 WATERWAY
ROCKVILLE MD. 20853
301-480-1454

8500 WILSHIRE BL. STE 900
LOS ANGELES, CA. 90010
313-387-7756

2808 MULBERRY
PASADENA, TX. 77502
713-941-7272

AIRPAK ELECTRONICS

Cambridge Division

Cambridge, Md.

Circuit Breakers & Switches

Controls Division

Fort Lauderdale, Fla.

Tachometry & Control Instrumentation

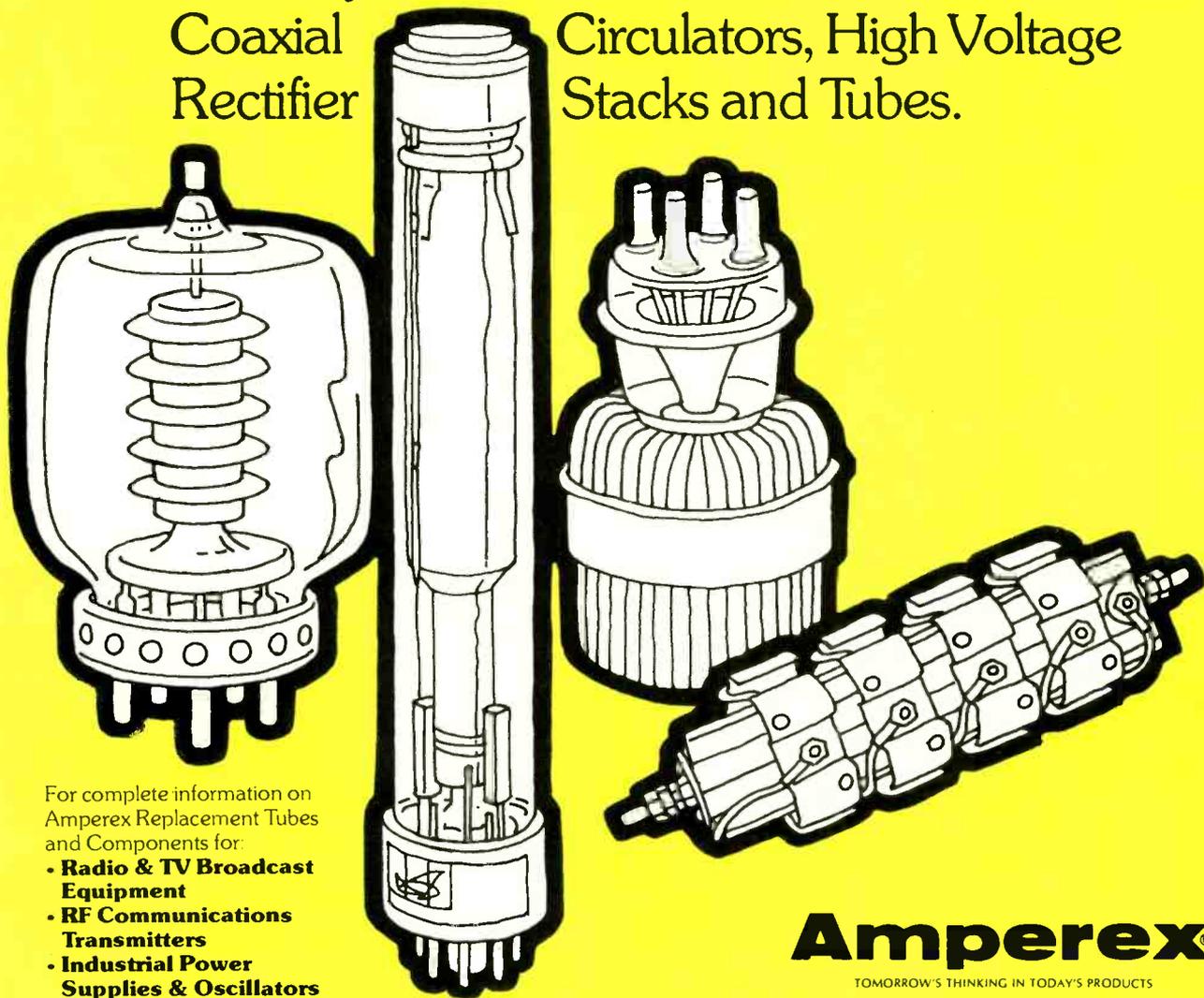
Circle 129 on Reader Service Card

Mention the name **Amperex** and what comes to mind?

Plumbicon* TV Camera Tubes, of course.

**That's fine, but we'd like
to remind you that Amperex
is your one stop source
for all these broadcast components, too!**

RF Power Triodes and Tetrodes
for AM and FM Transmitters, VHF Power Tetrodes
and Cavities, Variable Vacuum Capacitors,
UHF Klystrons, UHF-TV Triodes,
Coaxial Rectifier Circulators, High Voltage
Stacks and Tubes.



For complete information on
Amperex Replacement Tubes
and Components for:

- **Radio & TV Broadcast
Equipment**
- **RF Communications
Transmitters**
- **Industrial Power
Supplies & Oscillators**
- **Microwave Ovens & Commercial
Radar Equipment**
- **Scientific Instruments...**

contact Bob Norris, Distributor Sales Operation.
Amperex Electronic Corporation, Hicksville, New York 11802.
Telephone: 516-931-6210.

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS

A NORTH AMERICAN PHILIPS COMPANY

Circle 130 on Reader Service Card

* Registered trademark of N. V. Philips of the Netherlands

THE SOURCE '75

COMPUTER IMAGE CORP 2475 W 2ND AVE DENVER CO 80223 303 934-5801
animation equip; large & small production switchers, routing switchers; chroma keys, downstream mixer/keystroke
VS
See ad pg. 11—refer to rep/dist section

COMPUTER MAGNETICS CORP 125 W PROVIDENCIA AVE BURBANK CA 91502 213 849-2356
refurbished VTR heads

COMREX CORP PO BOX 269 SUDBURY MA 01776 617 358-4042
wireless mic systems for news gathering; intercom systems; CVE systems
VS
See ad pg. 138

COMSONICS INC PO BOX 1106 HARRISONBURG VA 22801 .. 703 434-2404
remote switching equip for CATV
VS

CONCORD COMMUNICATIONS SYSTEMS 790 PARK AVE HUNTINGTON NY 11743 516 673-8000
CCTV cameras, surveillance systems, cartridge & cassette vtr's, video switchers

CONRAC DIV CONRAC CORP 600 N RIMSDALE AVE COVINA CA 91722 213 966-3511
TV monitors; audio; video receivers; demodulators; monitor accessories
VS

CONSOLIDATED DIESEL ELECTRIC 1500 E PUTNAM AVE OLD GREENWICH CT 203 637-4341
emergency power generators

CONSOLIDATED VIDEO SYSTEMS 3300 EDWARD AVE SANTA CLARA CA 95050 408 247-2050
time base correctors, field synchronizers, video compressor
VS
See ad pg. 122—refer to rep/dist section
Ala Jerry Knight 2614 Scenic View Dr Huntsville 35801 205 852-3535
Fla Duane Tuttle 7601 Pasa Dobles Tampa 33615 813 886-4400
NJ Richard Deiss 471 W Main St Wyckoff 07481 201 891-5661

CONTENDER CORPORATION 433 COMMUNITY LANE PO BOX "D" WOODLAND CA 95695 916 662-3934
underground plant construction equip for CATV

CONTINENTAL ELECTRONICS MFG CO PO BOX 17040 DALLAS TX 75217 214 381-7161
high-power AM broadcast transmitters; 5/10 kW transmitters; AM antennas; diplexers & rf loads
VS

CONTROL CONCEPTS CORP 411 N STONESTREET AVE ROCKVILLE MD 20850 301 762-8580
video sync generators; audio signal generators; harmonic & IM distortion meters; videowaveform equalizers; delay lines; test sets
VS

CONTROL DESIGN CORP 205 S WHITING ST ALEXANDRIA VA 22304 .. 703 751-5650
radio automation systems; tape cartridge players; digital clocks loggers
VS
See ad pg. 63—refer to rep/dist section

CONVERGENCE CORP 4400 CAMPUS DRIVE NEWPORT BEACH CA 92660 714 549-3146
editing control systems

COOKE ENGINEERING CO 900 SLATERS LANE ALEXANDRIA VA 22314 703 548-3889
video, audio & pulse distribution equip; audio equalizers & line amplifiers; patch panels; character generators; master clock systems; time distribution modules
VS

COPPERWELD STEEL COMPANY WIRE CABLE DIV 1000 MONONGAHELA AVE

GLASSPORT PA 15045 412 664-7131
antennas tower accessories, wire & cable
CORAL INC 7700 MARINE PLAZA RIVER ROAD NORTH BERGEN NJ 07047 201 656-2020
CATV trunk & distribution equip; passive components

CORLEY D&S LTD 80 GALAXY BLVD UNIT 3 REXDALE ONTARIO M9W 4Y8
test materials for CATV

COSMICAR OPTICAL CO LTD 2-568 SHIMOOCHIAI SHINJUKUKU TOKYO JAPAN
video camera lenses; camera heads, mounts & dollies; CCTV camera lenses, cine lenses
See ad pg. 108
VS

COX DATA SYSTEMS INC 1601 W PEACHTREE ST NE ATLANTA GA 30309 404 892-7390
billing package for CATV system operators; mini computer systems for TV automation
VS

CROCK BRUCE A INC 8286 WINTON RD CINCINNATI OH 45231 513 521-5040
storage racks for cartridges
VS

CROSSROADS AUDIO PO BOX 19671 DALLAS TX 75219 214 526-1636
concert sound reinforcement mixer; cable fault tester
VS

CROWN INTL 1718 W MISHAWAKA RD ELKHART IN 46514 219 294-5571
audio power amplifiers, audio preamplifiers; variable filters; tape player/recorders; intermodulation distortion test equip
VS

CSI ELECTRONICS INC 835 INDUSTRIAL HWY BLDG 4 CINNAMINSON NY 08077 609 786-1060
AM and FM transmitters

CUNNINGHAM CORP 10 CARRIAGE ST HONEOYE FALLS NY 14472 . 716 624-2000
remote control pan & tilt units

CUSH CRAFT 621 HAYWARD ST MANCHESTER NH 03103 603 627-7877
yagi antennas for CATV

D

DATA COMMUNICATIONS CORP 3000 DIRECTORS ROW MEMPHIS TN 38131 901 332-3544
computer service for sales, traffic, operational accounting (TV & radio)
VS

DATA DISC INC 686 W MAUDE AVE SUNNYVALE CA 94086 408 732-7330
stop action video recorders

DATA LOGIC/RUST PO BOX 273 EVERETT MA 02149 617 322-1313
remote control systems

DATA METRICS 340 FORDHAM RD WILMINGTON MA 01887 617 658-5410
time code generator, digital clocks, master & slave clocks; time code readers
VS

DATATEK CORP 1200 W CHESTNUT ST UNION NJ 07083 201 964-3656
video/audio routing switchers; video, audio & pulse distribution amplifiers; video color phase equalizers & waveform correctors video sweep generators; video test equip; audio processing amplifiers
VS
See ad pg. 75—refer to rep/dist section

DATATRON INC 1562 REYNOLDS AVE SANTA ANA CA 92711 714 540-9330
videotape editing equip
VS
See ad pg. 61

DATAVISION VIDEO PRODUCTS-3M COMPANY 15932 SHADY GROVE RD GAITHERSBURG MD 20760 .. 301 948-0460
character generators, including graphic arts generators
VS
See ad pg. 125—refer to rep/dist section

The VS designation following the description of a company's products indicates that the manufacturer verified to BM/E in July of 1975 that these products are in regular production and data on the product/equipment is on file with BM/E.

DAVIS MANUFACTURING DIV OF J.I. CASE PO BOX 1801 WICHITA KN 67213 316 265-6251
trenchers for direct cable burial; line layers
VS

DBX INC 296 NEWTON ST WALTHAM MA 02154 617 899-8090
tape recorder noise reduction systems; dynamic expanders; noise reduction modules, gain control modules
VS
See ad pg. 82

DELTA-BENCO-CASCADE LTD 124 BELFIELD RD REXDALE ON CANADA M9W 1G1 416 241-2651
headend, trunk amplifiers, distribution amplifiers for CATV

DELTA ELECTRONICS INC 5534 PORT ROYAL RD SPRINGFIELD VA 22151 703 321-9845
antenna/transmitter remote control systems; antenna monitors; field strength meters, impedance bridges, phase meters; monitoring & test accessories
VS
See ad pg. 48
NY Delta Intl Div PO Box AB Mamaroneck 10543 914 698-2783

DICTAPHONE CORP 120 OL POS RD RYE NY 10580 914 967-6211
telephone answering equip

DIELECTRIC COMMUNICATIONS DIV OF SOLA BASIC RTE 121 RAYMOND ME 04071 207 655-4555
strobe beacons, rf watt meters, coaxial cable, waveguide & accessories
VS

DIGITAL COMMUNICATIONS INC 310 14TH AVE SOUTH ST PETERSBURG FL 33701 813 895-3214
pay-TV systems & software

DIPOL ELECTRONICS INC 1970 ELLESMORE RD SEARBOROUGH ON CANADA M1H 2 W1 416 438-5135
studio consoles for broadcasters

DITCH-WITCH TRENCHERS PO BOX 66 PERRY OK 73077 405 336-4404
trenchers; vibratory plow; earth saw; backhoe; hydraulic breaker
VS
Contact main headquarters for local office.

DIX HILLS ELECTRONICS INC 25 N MALL PLAINVIEW NY 11803 516 420-1166
cross modulation, intermodulation & distortion measurement equip for CATV

DOLBY LABORATORIES INC 1133 AVE OF THE AMERICAS NEW YORK NY 10036 212 489-6652
noise reduction systems; audio processing amplifiers; magnetic recording accessories
See ad pg. 121—refer to rep/dist section
VS

DOWNE COMPUTER SERVICE INC 112 TENTH ST DES MOINES IO 50309 515 282-5131
subscriber billing services for CATV TV

DRACON INDUSTRIES 9541 MASON AVE CHATSWORTH CA 91311 213 882-8595
aluminum relay racks
VS

DUNLAP CLARK ELECTRONICS 230 CALVARY ST WALTHAM MA 02154 617 547-0638
audio power amplifiers
VS

DURNELL ENGINEERING INC HIGHWAY 4 SOUTH EMMETSBURG IA 50536 712 852-2611
aerial personnel lift trucks
VS

DYMA ENGINEERING INC RT 1 BOX 51 TAOS NM 87571 515 758-2686
custom audio consoles for broadcasters
VS

DYNAIR ELECTRONICS INC 6360

continued on page 58



the first
reel to reel
with the rugged
reliability of
itc

The makers of premium quality tape cartridge equipment in the reel-to-reel market? It had to happen! The result is what you, Mr. Broadcaster, have been looking for. All the features you demand plus a few innovative optionals of our own. And all with the rugged reliability inherent in the International Tapetronics' name. Check out these plusses in your own studios. We offer a 30 day guarantee of satisfaction plus a one year warranty. Just call collect and say you want to try the "850" series. We'll do the rest.

Phone 309-828-1381



**INTERNATIONAL
TAPETRONICS CORPORATION**

2425 South Main Street Bloomington, Illinois 61701

Marketed exclusively in Canada by
McCurdy Radio Industries Ltd., Toronto

Circle 131 on Reader Service Card

THE SOURCE '75

FEDERAL BLVD SAN DIEGO CA 92114 714 582-9211
video pulse & distribution amplifiers, routing & production switchers, sync generators, spec effects generators, modulators, demodulators, chroma keyers, equalizers, exciters, diplexers, sideband analyzers, audio preamps, audio monitor amps, audio switchers, rf switchers VS

See ad pg. 124

Company products available from all major video distributors throughout the world

DYNASCAN CORP B&K DIV 1801 W BELLE PLAINE AVE CHICAGO IL 60613 312 327-7270
CATV test equip

DYNASCIENCES VIDEO PRODUCTS TOWNSHIP LINE RD BLUE BELL PA 19422 215 643-0250
videotape editing equip; automatic program controllers; image enhancers, processing amplifiers, production switchers, pulse & distribution amplifiers, routing switchers, colorizers, sync generators, special effects generators VS

See ad pg. 96—refer to rep/dist section

E

EASTMAN KODAK CO MOTION PICTURE & AUDIOVISUAL MARKETS DIV 343 STATE ST ROCHESTER NY 14650 716 325-2000
motion picture cameras; motion picture film; projectors for TV; film processors VS

See ad pg. 9

Calif Kodak PO Box 38939, Hollywood 90038 213 464-6131
Kodak PO Box 3145, Rincon Annex, San Francisco 94119 415 776-6055
Ga Kodak PO Box 4778 (Fed. Annex) Atlanta 30302 404 351-6510
Haw Kodak PO Box 17007, Honolulu 96817 808 833-1661
Ill Kodak 1901 W 22 St, Oak Brook 60521 312 654-5300
NY Kodak 1133 Ave of the Americas New York 10036 212 262-7100
Kodak 1187 Ridge Road West Rochester 14650 716 254-1300
Texas Kodak 6300 Cedar Springs Rd Dallas 75235 214 351-3221
DC Kodak 500-12th St, SW, 20024 202 554-9300
Can Kodak 3500 Eglinton Ave W Toronto, Ontario M6M 1V3 416 766-8233

ECHO SCIENCE CORP 485 E MIDDLEFIELD RD MOUNTAIN VIEW CA 94040 415 961-7145
portable video tape recorder/reproducers VS

ECLAIR CORP OF AMERICA 62 WEST 45TH ST NEW YORK NY 10036 212 869-0490
professional motion picture cameras, lenses; tripods, cases accessories for cameras

EDCOR DIV OF P.A.C. 3030 RED HILL AVE COSTA MESA CA 92626 714 556-2740
wireless microphones, dynamic & lavalier; wireless sound systems VS

EDISON ELECTRONICS See MCGRAW-EDISON

EDITEL COMMUNICATIONS LTD 5610 CHEMIN BOIS FRANC MONTREAL QUEBEC H4S 1A9 514 331-2951
portable TV cameras; custom-built mobile video units; custom built video design & installation VS

EECO 1441 E CHESTNUT AVE SANTA ANA CA 92701 714 835-6000
(SEE AMPEX) audio & video tape editing equi; character generators VS

EFRATOM CALIF INC 3303 HARBOR BLV E-1 COSTA MESA CA 92626 714 556-1620
rubidium freq standard

EG&G INC ELECTRO MECHANICAL DIV MOULTON ST GEORGETOWN MA 01833 617 352-6200
cable connectors

EIMAC, DIV OF VARIAN 301 INDUSTRIAL WAY SAN CARLOS CA 94070 415 592-1221
complete line of broadcast quality power grid tubes (triodes, tetrodes, pentodes)

See ad cover III

Ariz Varian 7117 Third Ave., Scottsdale 85251 602 947-5461
Calif Varian 4940 El Camino Real Los Altos 94022 415 968-7630
Calif Varian 2901 Wilshire Blvd Santa Monica 90403 213 828-5588
Fla Varian 314 S. Missouri Clearwater 33516 813-446-8513
Ga Varian 6650 Power Ferry Rd, N.W. Atlanta 30339 404 252-0045
Ill Varian 205 W Touhy Ave Park Ridge 60068 312 825-6686
Md Varian 4701 Lydell Rd Cheverly 20781 301 773-7010
Mass Varian 400 Totten Pond Rd Waltham 02154 617 890-4560
NJ Varian 306 Fellowship Rd Mount Laurel 08057 609 235-6800
NJ Varian 25 Route 22 Springfield 07081 201 376-6600
NY Varian 115 Twin Oaks Dr Syracuse 13206 315 437-2568
Ohio Varian 10 Southmoor Circle Dayton 45429 513 298-7318
Texas Varian PO Box 789 Richardson 75080 214 235-2385

EIP INC 3130 ALFRED ST SANTA CLARA CA 95050 408 244-7975
microwave frequency counters

ELECTRA CO DIV OF MASCO 300 S COUNTY LINE RD CUMBERLAND IN 46229 317 894-3929
automatic scanning monitors

ELECTROCOMP ELECTRONIC MUSIC LAB INC VERNON CT 06066 203 875-0752
music synthesizers

ELECTROHOME LTD 809 WELLINGTON ST N KITCHENER ON CANADA N2G 4J6 519 744-7111
color & b&w monitors VS

ELECTRONIC INTERFACE SYSTEMS INC 2409 S BROADWAY SANTA ANA CA 92707 714 979-0033
automated video cassette controller (random access) VS
See ad pg. 135

ELECTRO IMPULSE INC 116 CHESTNUT ST RED BANK NJ 07701 201 741-0404
dry TV loads

ELECTRONEERING INC PO BOX 85 SELMA NC 27576 919 284-2102
digital timers VS

ELECTRONIC INDUSTRIAL ENGINEERS
See RCA Community Antenna Systems

ELECTRONICS DIVERSIFIED 1675 NW 216TH ST HILLSBORO OR 97123 503 645-5533
studio light controls; patch panels

ELECTRONICS MISSILES COMMUNICATIONS INC PO BOX 116 WHITE HAVEN PA 18661 717 443-9575
low power TV transmitters for broadcast; TV transmitters for ITFS and MJS; TV translators; TV antennas

ELECTRO SOUND INC 160 SAN GABRIEL SUNNYVALE CA 94086 408 245-6600
audio tape recorder/players; portable mixers; tape duplicating systems, open-reel, cartridge, cassettes; automatic tape winders, splicers; power amplifiers; theatre sound systems; magnetic film duplicators; video cassette winders VS

continued on page 60

READ THIS PAGE BEFORE YOU BUY ANYTHING IN THIS BOOK.

As even a casual look at this book will convince you, there's hardly a shortage of video equipment on the market—much of it with advanced features and special capabilities. So choosing the right equipment for your needs should be easy.

Trouble is, it's just as easy to make costly mistakes. Because the gear you get to fill your present needs lacks special features you'll want later. Or

isn't compatible with equipment you'll be adding. Or won't be versatile enough for future applications.

At Camera Mart, we have a "systems" approach to video that can help you get the most for your dollar today, without putting you in a bind tomorrow. By carefully selecting the right equipment

now—in most cases, by actually trying it out on our premises first.

We'll even let you have your cake and eat it too—with rental and leasing plans that give you the equipment *now*, when you need it—plus the flexibility of purchasing whatever and whenever you want.

Talk to us. Or better yet, visit. With all the money you're investing in video, it pays to invest a little time with us.

**CAMERA
MART** 

THE CAMERA MART, INC.

456 W. 55th St., New York, 10019

(212)757-6977

SALES/SERVICE/RENTAL

Circle 132 on Reader Service Card

THE SOURCE '75

**ELECTROVERT INC 86 HARTFORD AVE
MOUNT VERNON NY 10553 . . . 914 664-6090**
harnessing equip, markers

**ELECTRO-VOICE INC SUB OF GULTON
IND INC 600 CECIL ST BUCHANAN MI
49107 616 695-6831**
microphones & monitor loudspeakers VS

**ELPA MARKETING IND INC THORENS &
ATLANTIC AVES NEW HYDE PARK NY
11040 516 746-3002**
source for tape recorder/players
(Ferroglyph); tape editing equip (Editall);
test equip (Ferroglyph signal generators,
distortion meters, wow & flutter) VS

**EMCOR INGERSOLL PRODUCTS 1000 W
120 ST CHICAGO IL 60643 . . . 312 264-7800**
cabinets; modular enclosure systems

**ENGLISH ELECTRIC VALVE CO NO AM
LTD 67 WESTMORE DR ONT CAN M9V
3Y6 416 745-9494**
camera tubes, power tubes, rectifiers VS
See ad pg. 53—refer to rep/dist section
NY EEV 1 American Dr Cheektowaga
14225 716 632-5871

**ESC ELECTRONICS PALISADES NJ
07650 800 631-0853**
delay lines, LC filters

**ESE ENTERPRISES 505½ CENTINELA
AVE INGLEWOOD CA
90302 213 674-3021**
digital clocks, programming devices, timers
See ad pgs. 112, 134 VS

**ESSEX INTERNATIONAL INC
COMMUNICATIONS/CATV DIV 6235 S
HARLEM AVE CHICAGO IL
60638 312 586-3000**
coaxial cables, CATV & general; CATV drop
cables; wire & cable generally

**EVENTIDE CLOCK WORKS INC 265 WEST
54TH ST NEW YORK NY
10019 212 581-9138**
audio phase controllers; audio
compressor/expander/limiters; audio digital
delay lines; audio flanger VS

**E-Z WAY PRODUCTS INC 13155
NEBRASKA AVE PO BOX 17196 TAMPA
FL 33612 813 971-1961**
communication towers

F

**FAIRCHILD SOUND EQUIPMENT CORP 75
AUSTIN BLVD COMMACK NY
11725 516 543-5200**
audio power, pre-, processing amplifiers;
reverberation units; compressor/limiters;
audio attenuators, equalizers, mixers; audio
consoles; TV consoles; video distribution
amplifiers; tape erasers, splicers, head
cleaners VS

**FARINON ELECTRIC 1691 BAYPORT AVE
SAN CARLOS CA 94070 415 593-8491**
microwave systems; multiplex equip;
microwave repeaters; FM over video
systems; relay systems for radio & TV
broadcasters; microwave accessories; video
distribution & subcarrier amplifiers VS

**F&B/CECO OF CALIFORNIA INC 7051
SANTA MONICA BLVD HOLLYWOOD CA
90038 213 469-3601**
manufacture & rental of motion picture equip
lighting equip sound equip editing equip &
CCTV equip

**FERNSEH GROUP ROBERT BOSCH CORP
279 MIDLAND AVE
SADDLE BROOK NJ 201 797-7400**
studio & portable TV cameras; videotape
recorder/players; multiplexer for telecine;
video color monitors; color encoders; TV
color standards converter VS
See ad pg. 37

Calif G R. Walker 6300 Arizona Circle,
Los Angeles 90045 213 659-4330
Ill V. J. Lyons 2800 South 25th Ave.,
Broadview 60153 312 681-5000
NJ J. Ewansky 279 Midland, Saddle Brook
07662 201 797-7400
Texas L. E. Wolff 4131-A Directors Row,
Houston 77018 713 688-9171

**FELLER VACUUM FORM STUDIOS INC
381 CANAL PL BRONX NY
10451 212 993-2999**
pre-fabricated scenery

**FIDELIPAC (DIV OF TELEPRO
INDUSTRIES) 109 GAITHER DR MT
LAUREL NJ 08057 609 235-3511**
tape cartridges; cartridge storage racks, tape
accessories; test tapes VS
See ads pgs. 64, 78

**FILMLINE CORP 43 ERNA ST MILFORD
CT 06463 203 878-2433**
film processors

**FIORENTINO IMERO ASSOC INC 10 W
66TH ST NEW YORK NY
10023 212 787-3050**
kits for testing gray scale of colors, con-
sulting service; color monitor calibrator VS

**FIXTUNE SOLID STATE ELECTRONICS
INC 1 WEST 30th NEW YORK NY
10001 212 683-9353**
one station FM receivers; SCA receivers VS

**FLASH TECHNOLOGY CORP OF AMERICA
111 LOCK ST NASHUA NH
03060 603 883-0521**
strobe beacons for towers VS

**FLUKE JOHN B MFG CO PO BOX 7428
SEATTLE WA 98133 800 426-0361**
frequency counters, calibrators, test sets,
gen purpose test equip VS

**FORGLO CORP FRONT & REGAN ST
SUNBURG PA 17801 717 286-5611**
magnetic recorder heads for audio

**FORT WORTH TOWER CO INC 5201
BRIDGE ST PO BOX 8597 FORT WORTH
TX 76112 817 536-5676**
towers, prefab bldgs. reflectors

**F & P SYSTEMS 1053 EAST MEADOW
CIRCLE PALO ALTO CA 94303**
digital weather station

**FREZZOLINI ELECTRONICS INC 7 VALLEY
ST HAWTHORNE NJ 07506 . . . 201 427-1160**
professional 16mm cameras, lenses,
accessories; motion picture lights; portable
power packs for video cameras VS

**FRIBLEY ENTERPRISES PO BOX 389
CANADA RD PAINTED POST NY
14870 607 962-3890**
terminal boxes for CATV MATV

**FUJI VIDEOTAPE, 350 FIFTH AVE, NEW
YORK, NY 10001 212 736-3335**
videotape VS

**FUJINON OPTICAL INC 420 WEST END
AVE NEW YORK NY 10024 . . . 212 724-9834**
camera lenses VS

**FUNG ENGINEERING CO 111 GLENN WAY
BELMONT CA 54002 415 591-5141**
CATV Channel switchers, filters, modulators
See ad pg. 133 VS

G

**GABRIEL ELECTRONICS PO BOX 626
SCARBOROUGH INDUSTRIAL PARK
SCARBOROUGH ME 04074 . . . 207 883-5161**
parabolic, horn & shrouded antennas;
elliptical & circular waveguides

**GAF CORP 140 W 51ST ST NEW YORK
NY 10020 212 582-7600**
8mm motion picture cameras; color films,
slide films, motion picture films; film
processing equip; film & slide projectors;
accessories VS

**GAMCO INDUSTRIES INC 317 COX ST
ROSELLE NJ 07203 201 241-7500**
CATV fittings; splitters; directional 1 taps;

locking terminators; hardware

**GARNER ELECTRONICS 4200 N 48TH
LINCOLN NE 68504 402 466-1816**
tape duplication systems; conveyor-type tape
erasers VS
See ad pg. 139

**GARRON ELECTRONICS INC 1216 KIFER
ROAD SUNNYVALE CA
94086 408 736-8737**
cartridge tape player/recorders; cassette
player/recorders; stereo phase enhancer VS
See ad pg. 139

**GATELY ELECTRONICS 57 W HILLCREST
AVE HAVERSTOWN PA
19083 215 446-1415**
audio amplifiers; playback systems;
automation systems

**GATES BROADCAST DIVISION (See
HARRIS CORP.)**

**GBC CLOSED CIRCUIT TV CORP. 74
FIFTH AVE NEW YORK NY 10011 212
989-4433**

TV cameras, studio & portable (b&w color);
camera mounts; char gen's; telecine chains;
monitors; sync gen's; spec effect gen; VTRs
(helical); videotape; audiotape

**GENERAL CABLE APPARATUS DIV PO
BOX 666 5600 W 88TH AVE
WESTMINSTER CO 80030 303 427-3700**
CATV construction tools; aerial lifts;
underground splicing modules; cable
construction accessories (clamps, etc) VS

**GENERAL CABLE CORP 500 W PUTNAM
AVE GREENWICH CT 06830 . . . 203 661-0100**
distribution cable, drop cable for CATV;
cable processing systems, ventilators;
heaters; dryers VS

**GENERAL CAMERA CORP 471 11TH AVE
NEW YORK NY 10018 212 594-8700**
cine cameras; camera accessories; film
magnetic recording equip

**GENERAL ELECTRIC CO CCTV DIV 316 E
9TH ST OWENSBORO KY
42301 502 683-2401**
CCTV cameras; CCTV systems; lenses;
tripods & accessories VS

**GENERAL ELECTRIC CO LAMP DIVISION
NELA PARK CLEVELAND OH
44112 216 266-2121**
stage, studio, TV lamps VS

**GENERAL ELECTRODYNAMICS CORP
4430 FOREST LANE GARLAND TX
75042 214 276-1161**
monochrome TV cameras; camera tubes VS

**GENERAL RADIO CO 300 BAKER AVE
CONCORD MA 01742 617 369-4400**
test equip; bridges; sound level meters

**GILBERT ENGINEERING CO 3700 N 36TH
AVE PHOENIX AZ 85019 800 528-5567**
coaxial cable connectors, adapters, fittings,
terminations, accessories, tools VS

**GLOBE BATTERY 5757 N GREEN
BAY AVE MILWAUKEE WI
53201 414 228-2116**
batteries VS

**GOLDMARK COMMUNICATIONS ONE
COMMUNICATION PLAZA STAMFORD CT
06904 203 327-7270**
film to video transfer system; auto skew
corrector; auto video cart player

**ALAN GORDON ENTERPRISES INC 1430
N CAHUENGA BLVD HOLLYWOOD CA
90028 213 985-5500**
motion picture cameras, projectors; lenses &
accessories; film editing equip VS

**GOTHAM AUDIO CORP 741 WASHINGTON
ST NEW YORK NY 10014 212 741-7411**
condensor microphones (Neumann); audio &
stereo consoles (Faylon); audio disc cutting
equipment (EMT); reverberation units (EMT);
audio recorder/players (Telefunken);
compressor/limiters (EMT); broadcast
turntables (EMT); headsets (Beyer); tape
timers; flutter meters (Woelke); phase
meters (Neumann); audio attenuators

continued on page 62

THE SOURCE '75

(Danner); polarity testers; rumble meters (Neumann); digital audio delay unit; monitor speakers (K&H); wire & cable (EMT); input transformers (Beyer) **VS**

Calif GAC 810 W Bristol St Suite E
Elkhart 46514 219 264-0931

GOULD INC 467 CALHOUN ST TRENTON NJ 08607 609 392-3111
power inverters; battery chargers, batteries

GRASIS FABRICATING CO 5601 GARDNER AVE KANSAS CITY MO 64120 816 483-1100
broadcast, CATV, microwave towers; molded fiberglass head-end buildings

THE GRASS VALLEY GROUP INC PO BOX 1114 GRASS VALLEY CA 95945 916 273-8421
automation equip; video production & routing switchers; pulse & distribution amplifiers, chroma keyers, processing amplifiers, sync generators, special effects generators; colorizers; equalizers **VS**
See ad pg. 5

NY GVG Station Plaza E Great Neck
11021 516 487-1311

Calif GVG 4419 Van Nuys Bl Ste 307
Sherman Oaks 91403 213 990-6172

Ga GVG 1644 Tuille Cir NE Atlanta
30329 404 634-0521

Tex GVG PO Box 482 Mabank 75147 .. 214 887-1181

Ind GVG 810 W Bristol St Suite E Elkhart
46514 219 264-0931

GROUP 128 50 SUN ST WALTHAM MA 02154 617 891-1800
electret microphones

GTE LENKURT INC 1105 COUNTRY RD SAN CARLOS CA 94070 415 591-8461
microwave equip; remote control systems; remote pickup & STL systems; demodulators; program subcarrier equip **VS**

GTE SYLVANIA CATV OPERATIONS 114 S OREGON ST EL PASO TX 79901 915 544-7550
CATV distribution & trunk amplifiers, passive devices, connectors, constr. services **VS**

GTE SYLVANIA (LIGHTING PRODUCTS GROUP) 100 ENDICOTT ST DANVERS MA 01923 617 777-1900
studio, theatre & TV lights, accessories **VS**

GULTON INDUSTRIES INC ENGINEERED MAGNETICS DIV 13041 CERISE AVE HAWTHORNE CA 90250 213 679-0111
CATV standby power & amplifier protection systems

H

HAMLIN INTERNATIONAL CORP 126 SW 153RD ST SEATTLE WA 98166 206 246-9330
CATV band-pass filters; converters; passive head-end processing devices; couplers; receivers

HANDLEY INDUSTRIES INC 2101 BROOKLYN RD JACKSON MI 49204 517 789-6181
plastic closures for buried service wires

HARRIS CORP GATES BROADCAST DIVISION QUINCY ILL 62301 217 222-8200
AM & FM transmitters; radio automation; TV transmitters; TV exciters, modulators, drivers; rf switches, diplexers; TV, AM, FM antennas & accessories; TV studio cameras; telecine equip; video distribution switchers, color encoders; TV & audio consoles; microphones, turntables, arms, limiting amplifiers; tape cartridge player/recorders; tape accessories; monitor speakers; video monitors; sync generators, waveform

monitors; videotape recorder/players; phase, modulation, frequency monitors; rf amplifiers; transmission lines & accessories; remote control equip. **VS**

See ad pg. 105

Field offices

Ca Harris Corp BE/DIV 1945 S Figuereia Los Angeles

DC Harris Corp BE/Div 1522 K St NW Washington 20005 202 223-5508

Ga Harris Corp BE/Div 1745 Tully Circle NE Atlanta 30329 404 636-09006

NY Harris Corp BE/Div 130 E 34th St New York 10016 212 889-0790

Oh Harris Corp BE/Div 55 Public Square Cleveland 44113 216 781-6322

Tx Harris Corp BE/Div 4019 Richmond Ave Houston 77027 713 623-6655

PQ Gates Div Harris 212 Brunswick Blvd Pointe-Claire 514 695-3751

On Gates Div Harris 19 Lesmill Road Don Mills M3B-2T3 416 447-7234

District managers, radio

Al JD Miller 413 20th Court NE Birmingham 35215 205 251-0485

CA R Switzer 1945 S. Figueroa Los Angeles 90007

Fl I Raulerson PO Box 958 Macclenny 32063 904 791-0108

Mi D Orienti 56 S Crestview Dr Adrian 49221 313 423-4560

Mo C Patterson PO Box 1173 Maryland Heights 63043

Neb G. Hassinger 1479 19th Ave Waverly 68462

NC R Sawicki 2006 Cedar Park Dr Apt A Greensboro 27407 919 855-1146

NY E Karl 130 E 34th St New York 10016

Oh E Huber Rte 3 Rinehart Rd Bellville 44813

Oklahoma C Lutz PO Box 45107 Tulsa 74145

SC ER Lowder 7209 Stonehaven Drive Columbia 803 776-2059

Tx L. England 4019 Richmond Ave Houston 77027

Wa N Arveschoug PO Box W Oak Harbor 98277 206 682-6860

DC P. Timple 730 Federal Bldg 1522 K St NW 20025

Wi R Gorjance 3320 Ivy Lane Racine 53402 416 639-7889

District managers, television

Ca T O'Hara 1945 S Figuera Los Angeles 90007

DC L Page 730 Federal Bldg 1522 K St NW Wash 20005

Ga G Hardy 1745 Tully Circle NE Atlanta 30329

Ill V Russell 1810 N Ridge Ave Arlington Heights 60004

NY D Spindle 130 E 34th St New York 10016

Oh B Culbertson PO Box 2927 Rocky River 44116

Tex V Killion 4019 Richmond Ave Houston 77027

HARWALD CO 1245 CHICAGO AVE EVANSTON IL 60202 312 491-1000
film inspection, cleaning equip; splicers; editing equip

HARWOOD MFG CO 1800 W FULLERTON CHICAGO IL 60614 312 929-1100
photographic & electronic lighting equip

portable lighting bars

HEATH CO BENTON HARBOR MI 49022 616 982-3200
intercoms; tape cartridge equip;

loudspeakers; oscilloscopes; multimeters; frequency counters; signal generators, af & rf; distortion meters; impedance bridges;

CATV test equip

HEINDL MASK MOUNTS 200 ST PAUL ST ROCHESTER NY 14604 716 454-5080
Mounts & masks for photo slides

HELLER-OAK CABLE FINANCE CO 105 W. ADAMS ST CHICAGO IL 60690 312 346-2300
CATV financing

HELLER-OAK CABLE FINANCE CO 105 W. ADAMS ST CHICAGO IL 60690 312 346-2300
CATV financing

HELLER-OAK CABLE FINANCE CO 105 W. ADAMS ST CHICAGO IL 60690 312 346-2300
CATV financing

HELLER-OAK CABLE FINANCE CO 105 W. ADAMS ST CHICAGO IL 60690 312 346-2300
CATV financing

HELWICK-DOUGLAS ELECTRONICS 2409 23RD ST GULFPORT MS 39501 601 863-1295

CATV test equip
HERVIC CORP 1508 COTNER AVE W LOS ANGELES CA 90025 213 478-5086

Beaulieu cine cameras; Stellovox tape recorders & mixers; lenses & accessories; fluid tripods; film editors; microphones; digital FM receiver **VS**
See ad pg. 47

HEWLETT-PACKARD CO 1501 PAGE MILL RD PALO ALTO CA 94304 ... 415 493-1501
oscilloscopes, frequency counters, waveform analyzers, digital multimeters, signal generators, sweep oscillators, spectrum analyzers **VS**

HITACHI SHIBADEN CORP OF AMERICA 58-25 BROOKLYN-QUEENS EXPRESSWAY WOODSIDE NY 11377 212 898-1261
studio & portable color & mono video cameras; video monitors; pulse distribution amplifiers; sync generators; special effects generator; videotape recorder/players; video cartridge recorder/players; microwave equip; semi-conductors **VS**

HOLLAND ELECTRONICS INC 842 E 94TH ST BROOKLYN NY 11236 212 649-7330
crossbar intercom systems, credit crawls

HORIZON ELECTRONICS 1151 W VALLEY BLVD ALHAMBRA CA 91803 213 284-4217
artificial reverberation unit **VS**

HUGHEY PHILLIPS INC 3050 N CALIFORNIA ST BURBANK CA 91505 213 849-1104
tower lighting, beacons, de-icers **VS**

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

HUNT-PIERCE CORP 230 OLD GATE LANE MILFORD CT 06460 ... 203 878-7491
aerial platforms; cable handling; pulling equip

IDEAL INDUSTRIES 1780 BECKER PLACE SYCAMORE IL 60178 815 895-5181
wire, cable stripping equip

IGM DIV OF NORTHWEST TECHNOLOGY INC 4041 HOME RD BELLINGHAM WA 98225 206 733-4567
radio automation systems; multicart machines; random access memory; auto logging systems; read out/display units; time/weather announcers **VS**
See ad pg. 130

IKEGAMI ELECTRONICS INDUSTRIES INC OF NY 35-37 31ST LONG ISLAND CITY NY 11106 212 932-2577
rugged portable color TV cameras for electronic journalism **VS**

ILC TECHNOLOGY INC 164 COMMERCIAL ST SUNNYVALE CA 94086 ... 408 738-2944
CATV tower lighting systems

IMAGE MAGNIFICATION INC 538 BLOOMFIELD AVE VERONA NJ 07044 201 239-1141
large-screen TV projection systems **VS**

IMPERIAL PLASTICS INC 1015 W HOOVER ORANGE CA 92667 714 532-1671
watertight plastic underground boxes; plastic conduit for buried systems; cable clips; tap cabinets

INDUSTRIAL ELECTRIC REELS INC 1125 JACKSON ST OMAHA NE 68102 402 422-1001
cable reels & collector rings

INOVONICS INC 1630 DELL AVE CAMPBELL CA 95008 408 374-8300
solid state replacements for tube-type Ampex recorder audio processing equip **VS**
See ad pg. 134-refer to rep/dist section

INSTRUMENT LABORATORIES CORP 315 W WALTON PL CHICAGO IL continued on page 64

AM, FM, SW BROADCAST

MODULAR PROGRAM AUTOMATION



CD25G 25 Hz TONE GENERATOR

For production studio use to insert the standard 25 Hz automation actuating tone. Starts tape transport and actuates muting to eliminate bias pops and other start-up noises. Tone button applies 25 Hz tone and stops transport at end of tone.



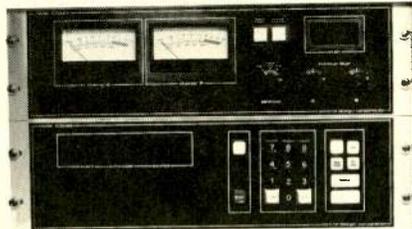
CD25S 25 Hz TONE SENSOR

Senses the presence of pre-recorded 25 Hz tones on audio material and provides automation control functions. Features tone removal filter, adjustable delayed stop contacts, and fixed tone alarm for automatic tape rewind.



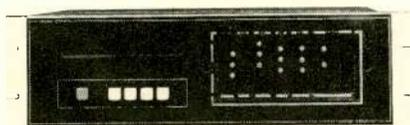
CD60T TIME ANNOUNCE CONTROL UNIT

Adds versatility to your automation system by using two cartridge machines or reel-to-reel transports for automatic time announcements. Contains its own internal IC clock. Power failure interlock disables time announcement until clock reset.



CD28AS SEQUENCER

Low cost way to start automation with easy and economic expansion at a later date. Uses keyboard entry for simplicity of programming. Eighty events of pre-programming provide ample storage for most formats.



CD12C TIME PROGRAM CONTROLLER

Provides 10 programmable exact time points per hour for real time control of CD28AS and CD28 APM plus digital clock display. 8 relay function outputs for time announcements, transmitter on/off control and other functions. Crystal time base and battery backup.

CDRMD REMOTE CONTROLLER

Provides full entry remote control for traffic department or control room access to automation system. Allows complete programming with display of next-to-run or program-entry.



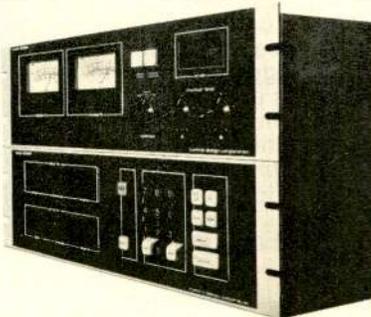
Control Design provides the total modular approach to AM, FM and Short Wave program automation. Our individual modules may be used alone, assembled into complete automation systems, or used with existing equipment to update and expand automatic programming. All Control Design equipment is manufactured to the highest standards for excellent reliability and easy maintenance. Easily obtained solid state devices are used with printed circuit construction, socket mounted integrated circuits and quick disconnect interface connectors. All equipment is covered by a one year full warranty.

CD24R MULTIPLE CARTRIDGE MACHINE

The CD24R cartridge machine (shown above) is simple and reliable — so reliable it is used by the U.S. Government for flight training. Provides six second access to any one of 24 cartridges.

**CD28APM AUDIO CONTROLLER
AND PROGRAMMER**

The CD28 family of audio controllers is perfect for your new automation system, or for use with present audio sources. Features 2000 pre-programmed events (expandable to 8000) 12 audio sources (expandable to 96), full random select for 9 multiple cartridge players. Accessories include remote control, logging and computer interfaces.



**control
design
corporation**

205 S. Whiting St. • Alexandria
Virginia 22304 USA
TEL. 703-751-5650
TELEX 899149 • CODECOR

WRITE OR TELEX FOR BROCHURES AND TECHNICAL SPECIFICATIONS

Circle 134 on Reader Service Card

THE SOURCE '75

60610 312 642-0123
test equip; cable locators; fault finders

INTECH LAB 4175 VETERANS HWY
RONKONKOMA NY 11776 ... 516 585-6754
automatic CATV spectrum analyser

INTERACTIVE VIDEO INC 327 S FOURTH
ST ANN ARBOR MI 48108 ... 313 769-0364
interactive terminals for 2-way cable
communications; pay-TV terminals;
hotel/motel systems

INTERNATIONAL NUCLEAR CORP 608
NORRIS AVE NASHVILLE TN
37204 615 254-3365
chroma keys; video processing amplifiers;
video switchers; sync generators; special
effects generators; standards converters;
colorizers; equalizers; audio amplifiers; audio
switchers VS

INTERNATIONAL RECTIFIER CORP 233
KANSAS ST EL SEGUNDO CA
90245 213 678-6281
high power cartridge rectifiers; high voltage
rectifier columns; solid state tube
replacements

INTERNATIONAL TAPETRONICS CORP
2425 S MAIN ST BLOOMINGTON IL
61701 309 828-1381
tape cartridge equip; reel-to-reel
recorder/layers VS
See ad pgs. 8, 58

INTERNATIONAL VIDEO CORPORATION
990 ALMANOR AVE SYNNEYVALE CA
94086 408 738-3900
video color cameras; telecine chains;
videotape recorder/players; video cartridge
player/recorders; time base correctors VS

INTERSTATE TELEPHONE ELECTRONICS

PO BOX 34497 DALLAS TX
75324 214 241-4128
stand-by power supplies for head-end
microwave, line amplifiers; emergency
lighting

INNOVATIVE TELEVISION EQUIP BOX 681
WOODLAND HILLS CA
91364 213 888-9421
heads for TV cameras, pedestals, stands

IONIC INDUSTRIES INC MORRISTOWN NJ
07960 201 539-1040
music synthesizers

IRISH ELECTRONIC ENTERPRISES INC
270-78 NEWTOWN RD PLANVIEW NY
11803 516 293-5582
video tape

ITT CANNON ELECTRIC 666 E DYER RD
SANTA ANA CA 92702 714 557-4700
CATV coaxial connectors VS

ITT GREMAR CONNECTORS CANADA LTD
FOUR CANNON COUR WHITBY ONTARIO
CANADA L1N 5V8 416 668-8881
CATV connectors, fittings; above- &
under-ground fittings

ITT JENNINGS 970 MC LAUGHLIN AVE
SAN JOSE CA 95116 408 292-4025
coaxial switchers, variable vacuum
capacitors; rf voltmeters; kilometers; vacuum
coaxial relays VS

ITT SUPRENTANT 172 STERLING ST
CLINTON MA 01510 617 365-6331
CATV wire, cable

J

JACOBSEN MFG CO SOD MASTER DIV
3456 WASHINGTON AVE N MINNEAPOLIS
MN 55412 612 529-9566
vibratory plows for cable burial

The VS designation following the
description of a company's products
indicates that the manufacturer verified to
BM/E in July of 1975 that these products
are in regular production and data on the
product/equipment is on file with BM/E.

JAMIESON FILM COMPANY 6911 FOREST
PARK RD DALLAS TX
75235 214 350-1283
color film processors; film processor
accessories VS

JAMPRO ANTENNA CO 6939 POWER INN
RD SACRAMENTO CA
95828 916 383-1177
AM, FM, TV antennas; antenna accessories VS

JAVELIN ELECTRONICS 6357 ARIZONA
CIRCLE LOS ANGELES CA
90045 213 641-4490
CCTV cameras, lenses, accessories; video
tape recorders; character generators; picture
monitors; video amplifiers VS

JEFFERSON DATA SYSTEMS ONE JULIAN
PRICE PL CHARLOTTE NC
28208 704 374-3631
business data systems for radio & TV

JERROLD ELECTRONICS CORP 200
WHITMER RD HORSHAM PA
19044 215 674-4800
cable trunk, distribution & line extender
amplifiers; cable passive distributors;
headend processors; complete headend
systems; turnkey cable installations; cable
system design; coax connectors; pay-cable
systems; antennas for cable, MATV;
modulators, demodulators, rf amplifiers;
transmission line end connectors VS

JFD SYSTEMS DIV RIKER
COMMUNICATIONS 142 CENTRAL AVE
CLARK NJ 07066 201 382-3700
amplifier splitters; line stretchers; bridgers;

The MASTER CART from FIDELIPAC®

For the cleanest cart sound
your station can broadcast,
Master Cart is the answer.
Engineered to use natural
tape flow patterns that
eliminate erratic tape
behavior and assure
repeatability both from
cartridge to cartridge and
usage to usage.
Provides that added edge
in stereo performance
that conventional
cartridges *can't* deliver.
Fewer parts for simpler
maintenance ... and
greater reliability.

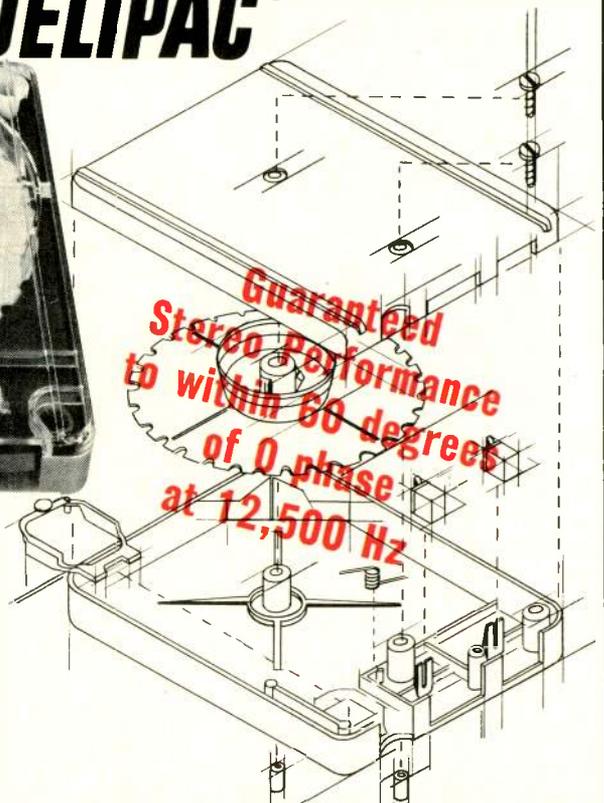
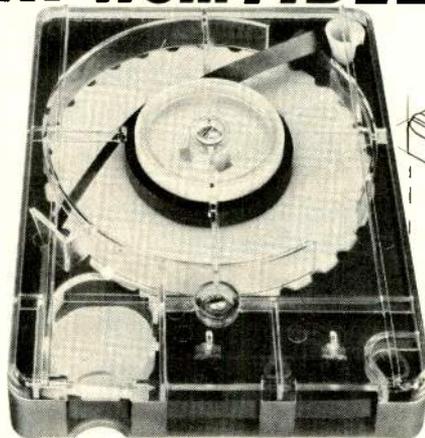
For detailed information,
contact your
Fidelipac Distributor or



FIDELIPAC®

109 Gaither Drive • Mt. Laurel, NJ 08057
(609) 235-3511

* Trademark



Guaranteed
Stereo Performance
to within 60 degrees
of 0 phase
at 12,500 Hz

Circle 135 on Reader Service Card

tap-offs

JOHANSON MFG CO ROCKAWAY VALLEY
RD BOONTON NJ 07005 201 334-2676
variable capacitors

JOHNSON ELECTRONICS INC PO BOX 7
CASSELBERRY FL 32707 305 339-2111
FM & SCA broadcast receiving equip; pa
amplifiers VS

JVC INDUSTRIES INC 50-35 56TH RD
MASPETH NY 11378 212 392-7100
video color cameras; portable video
cameras; monochrome cameras; lenses,
head mounts, tripods, camera accessories;
videotape recorders/players; monitors,
routing switchers, sync generators, special
effects generators; videotape; video cassette
players; video superimposers; video
mixers VS

See ad pg. 91—refer to rep/dist section
Calif JFC 1011 W Artesia Blvd Compton
90220 213 537-8230
Ill JFC 3012 Malmo Dr Arlington Hts
60005 312 593-8997

K

KAHN RESEARCH LABORATORIES INC
956 BRUSH HOLLOW RD WESTBURY NY
11590 516 997-4545
communications research & design

KAITRONICS CORP 870 MAHLER RD
BURLINGAME CA 94010 415 697-9102
video character generators; SMPTE time
code equip VS

KALART VICTOR CORP HULTENIUS ST
PLAINVILLE CT 06062 203 747-1663
large screen TV projectors; TV image
impresser; optical multiplexer; TV film chain;
TV movie projector, film editing equip,
accessories VS

KAMAN SCIENCES CORP (BROADCAST
COMPUTER SERVICES) 1500 GARDEN OF
THE GODS RD COLORADO SPRINGS CO
80907 303 598-5880
computerized radio TV traffic/accounting
systems
See ad pg. 40 VS

KANSAS STATE NETWORK INC 833 N
MAIN ST WICHITA KS
67203 316 265-5631
time base correctors; character generators;
information systems for CATV

KAPPA NETWORKS INC 165 ROOSEVELT
AVE CARTERET NJ 07008 ... 201 541-1600
delay lines, networks

KAREX INC 1262 LAWRENCE STATION
RD SUNNYVALE CO 94086 .. 408 734-3341
videotape VS

KAY ELEMETRICS CORP 12 MAPLE AVE
PINE BROOK NJ 07058 201 227-2000
CATV test instruments; noise meters;
spectrum analyzers; sound spectrographs VS

KINETIC TECHNOLOGY INC 3393
DeLaCRUZ BLVD SANTA CLARA CA
95050 408 249-7750
filters for telephone signals

KINGS ELECTRONICS CO 40 MARBLE
DALE RD TUCKAHOE NY
10707 914 793-5000
coaxial & triaxial connectors; high voltage
connectors; high density connectors; plugs &
jacks VS

KLEIN MATHIAS SONS INC 7200
McCORMICK RD CHICAGO IL
60645 312 588-6820
hand tools; safety equip for CATV

KLIEGEL BROS UNIVERSAL ELECTRIC
STAGE LIGHTING CO INC 32-32 48TH AVE
LONG ISLAND CITY NY
11101 212 786-7474
lighting control systems & fixtures for remote
pick-up, studio locations

KOLLMORGEN CORP 347 KING ST
continued on page 66

Remember! When it comes to computer editing...

If you haven't spoken to CDL, you're getting less than half the story.

We have a 13 minute color
video cassette which shows
you what is being done every
day with CDL Computer
Editing Systems in production
and post production
facilities... and what you
could be doing.

If you would like to see it,
write to us on your company
letterhead; c/o Sales Dept.
BM/E, or give us a call. Or,
ask for our Computer Editing
Brochures.

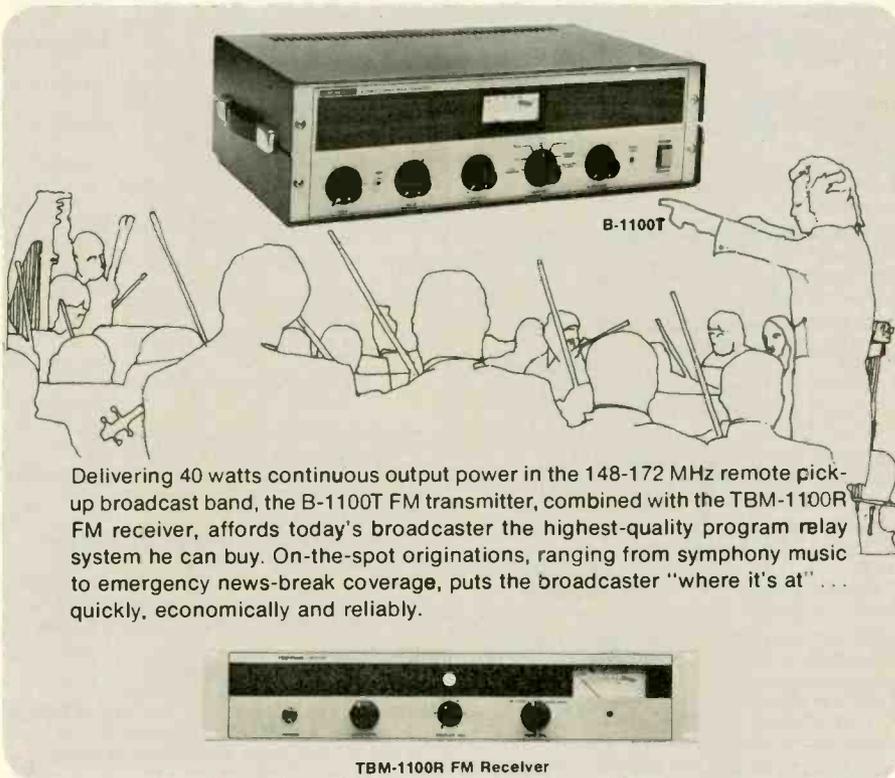


CENTRAL DYNAMICS LTD

Canada: 147 Hymus Blvd., Montreal, Que., H9R-1G1 ■ 514-697-3811
U.S.A. 230 Livingston Street, Norhvale, N.J. 07647 ■ 201-767-1300

Circle 136 on Reader Service Card

remote pickup broadcast systems



Delivering 40 watts continuous output power in the 148-172 MHz remote pick-up broadcast band, the B-1100T FM transmitter, combined with the TBM-1100R FM receiver, affords today's broadcaster the highest-quality program relay system he can buy. On-the-spot originations, ranging from symphony music to emergency news-break coverage, puts the broadcaster "where it's at"... quickly, economically and reliably.

McMartin

4500 South 76th Street • Omaha, Nebraska 68127 • (402) 331-2000 • telex 048-485

Circle 137 on Reader Service Card

THE SOURCE '75

NORTHAMPTON MA 01060 .. 413 586-2330
visual, TV special optical systems

KORTICK MFG CO 5600 THIRD ST SAN FRANCISCO CA 94124 415 822-6660
pole line hardware

KOSS CORP 4129 N WASHINGTON ST MILWAUKEE WI 53212
headphones, dynamic & electrostatic

KMS ELECTRONICS 13733 GLENOAKS BLVD SYLMAR CA 91342 213 362-2566
portable battery-operated audio mixers for film & TV VS

KVC INC 770 LEXINGTON AVE NEW YORK NY 10021 212 752-3690
portable video camera shoulder braces; camera mounts, heads, tripods

L

LAIRD TELEMEDIA INC 2125 S WEST TEMPIE SALT LAKE CITY UT 84115 801 486-6251
character generators; multiplex equip; slide projectors; time/date generators VS
See ad pg. 118

LAMPKIN LABORATORIES INC 8400 NINTH AVE NW BRADENTON FL 33505 813 746-4175
signal generators; frequency meters; modulation monitors; deviation meters; TV signal conditioner

LENCO ELECTRONICS 319 W MAIN ST JACKSON MO 63755 314 243-3147
color encoders, processing amplifiers; pulse distribution amplifiers; sync generators; black burst generators; video presence detector; changeover switch; video camera (mono) VS
See ad pg. 79—refer to rep/dist section

LEXICON INC 60 TURNER ST WALTHAM MA 02154 617 891-6790
audio digital delay system; variable speed tape recorder; speech compressor/expander VS

LINDSAY SPECIALTY PRODUCTS LTD 418 CAREDEAN DR HORSHAM PA 19044 215 674-5510
CATV headend antennas; cable connectors; trunk & distribution amplifiers; distribution accessories

LIPSNER-SMITH CORP 7334 N CLARK ST CHICAGO ILL 60626 312 338-3040
film inspection projectors; film, tape ultrasonic cleaner VS

LISTEC TELEVISION EQUIPMENT CORP 35 CAIN DR PLAINVIEW NY 11803 516 694-8963
video camera heads, pedestals, tripods, dollies; slide projectors; prompting devices; tilting machines VS

LONDON CO THE 811 SHARON DR CLEVELAND OH 44145 216 871-8900
modulation meters

LOWEL-LIGHT MANUFACTURING INC 421 W 54TH ST NEW YORK NY 10019 212 245-6744
TV studio & location lights; light stands, light accessories VS

LPB INC 520 LINCOLN HIGHWAY FRAZER PA 19355 215 644-1123
audio consoles, equip; control room furniture; carrier current AM broadcast equip; FM transmitters; audio processors VS
See ad pg. 77—refer to rep/dist section

LRC ELECTRONICS INC 901 SOUTH AVE HORSEHEADS NY 14845 607 739-3844
cable TV connectors; CATV distribution passives; cable tools & accessories VS

L-W INTERNATIONAL 6416 VARIEL AVE WOODLAND HILLS CA

91364 213 348-8614
TV film chain projectors VS

L-W PHOTO INC 15451 CABRITO RD VAN NUYS CA 91406 213 781-0457
16 mm film chain projectors

M

3M COMPANY MAGNETIC AUDIO/VIDEO PRODUCTS DIV ST PAUL MN 55117 612 733-4399
full line of recording tape for audio & video VS

3M COMPANY MINCOM DIV ST PAUL MN 55117 612 733-9880
professional audio recorders

3M COMPANY MINCOM DIV 300 S LEWIS RD CAMARILLO CA 93010 805 482-1911
video color encoders, videotape evaluator, color drop-out compensator, processing video amplifier, bridging video switchers, video image enhancer, special effects generator VS

See also DATAVISION
See ads pgs. 67, 68, 69, 70
Alaska 3M 3934 Spenard Rd Anchorage 99503 907 279-6481

Calif 3M 126 W Elm Court Burbank 91502 213 848-5534

3M 6023 S Garfield Ave Los Angeles 90040 213 726-1511

3M 320 Shaw Rd S San Francisco 94080 415 589-2663

Ga 3M 2860 Bankers Industrial Dr Atlanta 30340 404 449-6666

Haw 3M 2880 Ualena St Honolulu 96819 808 841-0147

Ill 3M 6850 S Harlem Ave Argo 60501 312 496-6500

Mass 3M 155 4th Ave Needham Heights 02194 617 449-0300

Mich 3M 23923 Research Dr Farmington 48024 313 477-5000

Minn 3M 3130 Lexington Ave S Eagan 55133 612 733-3300

Mo 3M 10725 Baur Blvd St Louis 63166 314 991-1320

NJ 3M 15 Henderson Dr West Caldwell 07006 201 227-9100

NY 3M 330 Greene St Buffalo 14240 716 894-5214

NC 3M 2401 Brevard St, High Point 27261 919-0141

Ohio 3M 12200 Brookpark Rd Cleveland 44130 216 267-1800

Penn 3M 5698 Rising Sun Ave Philadelphia 19120 215 742-0200

Texas 3M 2121 Santa Anna Ave Dallas 75228 214 327-7311

Wash 3M 100 Andover Park W Seattle 98188 206 244-7200

DC 3M 1750 Pennsylvania Ave NW Suite 1100 20006 202 298-9200

MAGNASYNC/MOVIOLA CORP 5539 RIVERTON AVE N HOLLYWOOD CA 91601 213 877-2791
film editing equip; field & studio tape recorders VS

MAGNA-TECH ELECTRONIC CO INC 630 NINTH AVE NEW YORK NY 10036 212 586-7240
magnetic film recorder/players; synchronizers for magnetic film recorders & motion picture film equip VS

MAGNAVOX CO CATV DIV 100 FAIRGROUNDS DR MANLIUS NY 13104 315 682-9105
CATV trunk & distribution amplifiers, distribution passives, connectors, terminals, accessories, converters VS

MAGNAVOX VIDEO SYSTEMS 1700 MAGNAVOX WAY FT WAYNE IN 46804 219 482-4411
studio & portable video color cameras; video monitors, educational TV receivers VS

MARCONI INSTRUMENTS 100 STONEHOUSE COURT NORTHVALE NJ 07647 201 767-7250
modulation monitors; TV sideband analyzers, spectrum analyzers, video test generators; automatic TV monitors, digital synchronizers; noise test sets; sweep generators; other TV test gear; frequency counters; audio & rf signal generators; distortion meters VS
See ad pg 119—refer to rep/dist section
Ga MI 1309-5 Stone Mill Ct Stone Mountain 30083 404 469-7471

MARCONI ELECTRONICS INC 1309-J STONE MILL COURT STONE MTN GA 30083 404 469-7471
TV cameras; telecines; switchers; transmitters; audio consoles; intercoms; video pulse & distribution amplifiers VS
See ads pgs 30-31

MARCO VIDEO SYSTEMS INC 6114 N 20TH ST PHILADELPHIA PA 19138 215 849-9500
video routing switchers

MARTI ELECTRONICS INC PO BOX 661 CLEBURNE TX 76031 817 645-9163
remote pick-up & aural STL equip; audio amplifiers; remote control telemetry & automatic digital transmitter logging equipment; rf amplifiers; SCA equipment; audio line amplifiers; audio compressor/limiters VS
See ad pg 123

MATSUSHITA (SEE PANASONIC)

MATTHEY PRINTED PRODUCTS LTD. (See TELEVISION EQUIPMENT ASSOCIATES)

MAXELL CORPORATION OF AMERICA 130 W COMMERCIAL AVE MOONACHIE NJ 07074 201 933-4200
audio tape, video tape VS

McBEE LABORATORIES 5151 WISCONSIN AVE NW WASHINGTON DC 20016 202 244-2345
automatic digital logger, digital remote control equip

MC CURDY RADIO INDUSTRIES 1051 CLINTON ST BUFFALO NY 14206 716 854-6700
audio consoles; audio distribution, line & preamplifiers; audio controls & attenuators; audio processing units; intercom systems; patch panels; turntables, pickup arms; monitor speakers; racks, cabinets, console assemblies; audio tape cartridges; complete studio installations VS

McGRAW-EDISON CO EDISON ELECTRONICS DIV GRENIER FIELD MANCHESTER NH 03103 603 669-0940
audio line amplifiers, audio attenuators & potentiometers; intercom systems; rf attenuators; field calibration meters, IM distortion meters; rf watt meters; af & rf signal generators; audio level meters VS

McKAY DYMEK 675 N PARK AVE POMONA CA 91766 714 623-1581
high fidelity AM receiver, shielded loop antenna

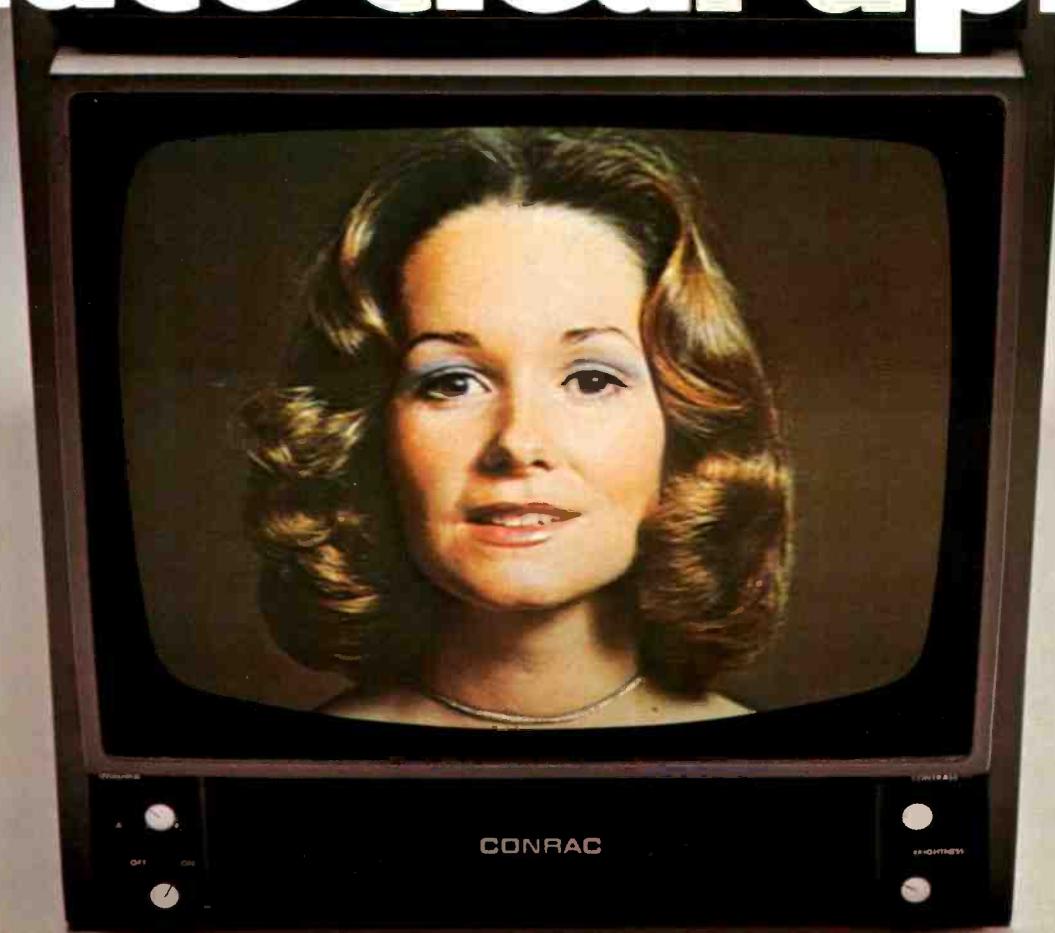
MC MARTIN INDUSTRIES INC 4500 S 76TH OMAHA NE 68127 402 331-2000
audio & TV consoles; audio mixers; line amplifiers; audio limiters; pa amplifiers; turntables, arms, intercom systems; rf amplifiers; AM & FM transmitters; exciters; remote control equip; remote pickup & STL; SCA equip.; FM antennas; antenna monitors; frequency monitors; signal generators; modulation monitors; EBS two-tone equip VS
See ads pgs. 18, 65, 90, 135—refer to rep/dist section

Kan F Eckhoff 8123 Monrovia Shawnee Mission 66216 913 888-0127

MEDIATECH 824 BUSSE HIGHWAY PARKRIDGE IL 60068 312 693-8366
tape-to-film transfer

continued on page 71

“From those wonderful folks who made my face clear up.”



In 1965, 3M introduced a quadruplex color drop-out compensator that has since become the standard of the industry. Today, all three networks and thousands of television stations across the country rely on 3M Brand color DOC's to bring viewers better picture quality.

But what have we done for you lately?

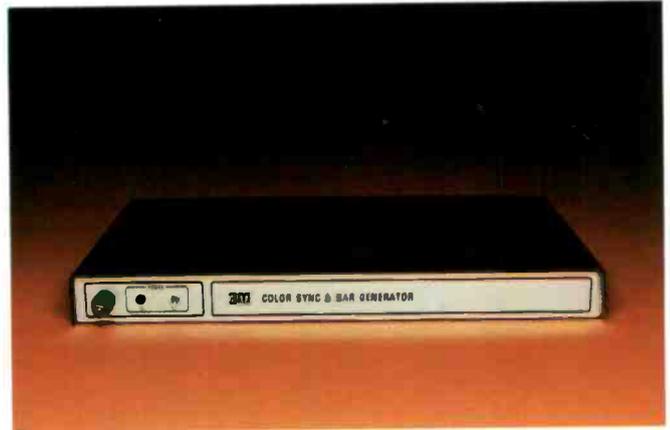
See us at Video Expo, booth 601

Watch 3M's Bicentennial television series "From Sea to Shining Sea." Consult local listing for time and channel.



3M Bridging Video Switcher

This is a broadcast-quality unit. It is a highly-sophisticated 10-input switcher with momentary-contact illuminated buttons. There is an audio D. A. to eliminate loading, and this unit also provides remote capability.



3M Color Bar and Sync Generator

Now your studio can have a color reference for a surprisingly modest cost. This unit produces an NTSC 8-bar pattern and all sync signals just like the very expensive units used in professional broadcasting studios.



3M Digital Video AGC

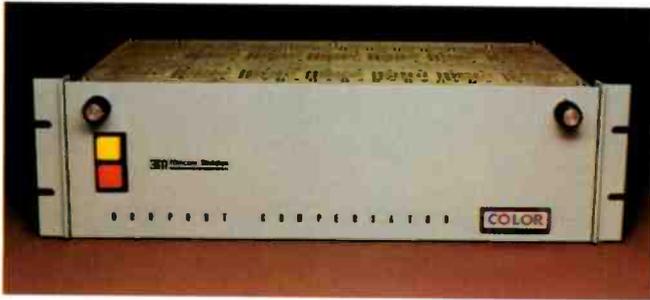
This digital unit is a new concept. There is none other like it. It can be used in any application where sudden and undesirable signal level changes occur without incurring the unacceptable effects usually associated with AGC circuitry. There is no overshoot with large duty cycles. And calibration/setup is simple and straightforward. Other important features include a peak white or VIR reference signal; fade-to-black recognition circuit for gain memory; selectable attack and release time; and a total AGC range of 15 db, with unity gain under no-input conditions. Suitable for broadcast, industrial, educational and cable TV applications.



3M Video Distribution Amplifiers

This complete line of products suitable for any video application includes a Pulse D. A. that reforms distorted incoming sync pulses, and if your application requires, will accept composite video and separate and distribute sync as needed. Then mate this unit with our Subcarrier D.A. that has four independently phase-able outputs, and our totally reliable four-output Analog D.A. with cable equalization.

Turn the page for six more 3M professional-quality products.



Quadruplex Color DOC

The 3M dropout compensator is the industry standard for broadcast VTR use. It replaces color dropouts in videotape recordings with the correct color video, avoiding the problems of other types of signal compensation.



Special Effects Generator and Program Switcher

This 3M SEG 672 performs vertical interval program switching, dissolves and wipes between six video inputs. The key and mat key feature can be used to produce many imaginative special effects. Joy-stick positioner. Many features of more expensive units.



Helical DOC and Processing Amplifier

Our 3M DP-100 is a complete video processing system designed to clean up, correct and stabilize helical scan VTR signals for any VTR format. Corrects for high or low contrast, inaccurate or washed-out colors, picture jump and roll.



Dropout Profile Recorder

The DPR evaluates video dropout rate and annoyance factor during normal on-line playback, and provides a permanent strip chart of the resulting profile. The logical companion to the 3M dropout compensator.



Video Source Identifier

The VSI inserts a preselected, 8-character identification code into any 525/625 composite video signal which appears on your picture monitors to help keep your switching straight and locate video path failures.



Color Video Encoder

This supplies a standard NTSC color signal from either a three or four-channel camera source, and is compatible with live color cameras and film chains. The resulting signal meets all applicable EIA and NTSC specifications.

Attn: Bill Curtis, Mincom Division, 3M Company,
350 South Lewis Rd., Camarillo, Calif. 93010

Please send me more detailed information, including
technical specifications, about your video products.
I am interested in _____ applications.

Name _____

Title _____

Address _____

City _____

State _____ Zip _____

Phone number (_____) _____
Area Code

We don't quit when we're ahead.

Your dealer is:

VIDEO PRODUCTS
Mincom Division **3M**
COMPANY
350 SOUTH LEWIS RD. • CAMARILLO, CALIF. 93010

THE SOURCE '75

**MEMOREX CORP 1200 MEMOREX DR
SANTA CLARA CA 95052** 408 987-1169
audiotape; audiotape accessories; videotape
for all video record formats; videotape
accessories VS

**MERLIN ENGINEERING WORKS 1880
EMBAR CADERO PALO ALTO CA
94303** 415 329-0198
rebuilt VTR machines, band color systems,
air systems

**MICMIX AUDIO PRODUCTS INC 9990
MONROE DR SUITE 222 DALLAS TX
75220** 214 352-3811
reverberation units VS

**MICROFLECT CO INC 3575 25TH ST SE
SALEM OR 97302** 503 363-9267
billboard-type passive repeaters;
tower-mounted reflectors

**MICROTIME INC 1280 BLUE HILLS AVE
BLOOMFIELD CT 06002** 203 242-4242
time base correctors; velocity error
correctors VS

See ad pg. 106—refer to rep/dist section
Network of over 40 dealer/distributors throughout
the USA and Canada. Contact main office for name
of local outlet.

Calif. D.J. Sofie 7119 Pomela Dr. Canoga
Park 91307 213 884-8025
NY Microtime 44 Railroad Ave Glenhead
11545 516 671-8025
Penn D.C. Smith 1101 Dansville Rd
Southampton 18966 215 355-6642

**MICRO-TRAK CORP 620 RACE ST
HOLYOKE MA 01040** 413 536-3551
turntables, arms, pickups; pre-amps,
equalizers; monitor speakers; cartridge tape
racks; studio furniture VS

**MICROTRAN CO INC 145 E MINEOLA AVE
VALLEY STREAM NY
11582** 516 561-6050
bulk tape erasers

**MICROWAVE ASSOCIATES INC 2ND
BURLINGTON MA 01803** 617 272-3000
microwave TV equip for STL; spurs; intercity
systems; air-to-ground microwave TV relay
systems VS

See ad pg. 115—refer to rep/dist. section
Calif MA 850A Stewart Dr Sunnyvale
94086 206 232-3550
Ga MA 175 W Wieuca Rd, N.E. Atlanta
30342 404 252-4311
Mass MA South Avenue Burlington
01803 617 272-3000
Mo MA 8800 Blue Ridge Blvd Kansas City
64138 816 763-5395
Texas MA 4398 Shady Bend Dr Dallas
75234 214 239-2893

**MICROWAVE POWER DEVICES INC
ADAMS COURT PLAINVIEW NY
11803** 516 433-1400
microwave power amplifiers; if amplifiers VS

**MID-STATE COMMUNICATIONS INC 40
NORTH 7TH AVE BEECH GROVE IN
46107** 317 786-9537
frequency measurement equip; signal level
meters; installer's meters

**MILLER-STEPHENSON CHEMICAL CO INC
PO BOX 628 DANBURY CT
06810** 203 743-4447
degreaser; head cleaner; contact cleaner VS

**MINNEAPOLIS MAGNETICS INC 8125
PLEASANT AVE SOUTH MINNEAPOLIS
MN 55420** 612 884-7393
magnetic tape recorder heads, replacements
for leading recorder brands VS

**MINOLTA CORP 200 PARK AVE S NEW
YORK NY 10003** 212 674-8525
TV crt color analyzer; light measurement
equip; color temperature meter

**MIRATEL DIV
(See BALL BROS RESEARCH)**

MODULAR AUDIO PRODUCTS INC 1385

**LAKELAND AVE BOHEMIA NY
11716** 516 567-9620
modular audio components; modular line
amplifiers, equalizers, compressor/limiters;
preamplifiers; power supplies, etc VS
See ad pg. 120—refer to rep/dist section

**MODTEC
(See BROADCAST ELECTRONICS)**

**MOHAWK WIRE CABLE CORP 9 MOHAWK
DR LEOMINSTER MA
01453** 617 537-9961
broadcast color camera cables, connectors,
accessories VS

**MOLE-RICHARDSON CO 937 N
SYCAMORE AVE HOLLYWOOD CA
90038** 213 851-0111
TV, photo lighting equip; microphone booms,
perambulators; mechanical special effects
equip VS

**MONROE ELECTRONICS INC 100 HOUSEL
AVE LYNDONVILLE NY
14098** 716 765-2254
unattended phone answering devices, tone
signal generators, detectors, timers,
multi-frequency receivers VS
See ad pg. 80

**MOOG MUSIC INC PO BOX 131
WILLIAMSVILLE NY 14221** ... 716 633-2280
music synthesizers

**MOSELEY ASSOCIATES INC 111
CASTILIAN DR GOLETA CA
93017** 805 968-9621
digital remote control systems; automatic
loggers; microwave systems for remote
pickup & STLs; rf amplifiers; SCA equip;
status & alarm indicators VS
See ad pg. 27

**MOUNTAIN WEST ALARM 4215 N 16TH S
PHOENIX AZ 85016** 602 263-8831
burglar & fire alarm systems

**MOXON INC SRC DIVISION 2222
MICHELSON DR IRVINE CA
92664** 714 833-2000
CCTV cameras; surveillance TV cameras;
mobile vans; airborne microwave TV
systems VS

**MSI TELEVISION 4788 S STATE ST SALT
LAKE CITY UT 84107** 801 262-8475
character generators; weather, news, stock
data systems; titling equip; data casting for
CATV

**MU-DEL ELECTRONICS INC 2426 LINDEN
LA SILVER SPRING MD
20910** 301 587-6087
rf amplifiers; rf attenuators & multicouplers;
band-pass filters VS

**MULTIPLIER INDUSTRIES CORP 224 N
FIFTH AVE M VERNON NY
10550** 914 699-0990
vehicle, aerial bucket, lineman safety equip

**MULTRONICS INC 12307 WASHINGTON
AVE ROCKVILLE MD 20852** .. 301 881-5774
AM antennas; antenna phasing & branching
networks; rf power indicators; contractors,
relays; fixed & variable rf indicators; antenna
tuning assemblies; other accessories VS

**MYERS-OAK COMMUNICATIONS
CONSTRUCTION CORP CRYSTAL LAKE IL
60014** 815 459-5000
CATV system construction VS

N

**NAGRA MAGNETIC RECORDERS INC 19
W 44TH ST NEW YORK NY
10036** 212 661-8066
miniature reel-to-reel audio/cine recorders

**NASCO TELEVISION SYSTEMS 947
JANESVILLE AVE FORT ATKINSON WI
53538** 414 563-2446
video distribution equip; special effects units

**NATIONAL VIDEO CORP 840 W
GLENOAKS BLVD GLENDALE CA
91202** 213 244-3115

The VS designation following the
description of a company's products
indicates that the manufacturer verified to
BM/E in July of 1975 that these products
are in regular production and data on the
product/equipment is on file with BM/E.

helical video cassette players; editors for
VTR cassette players VS
See ad pg. 16

**NATIONWIDE ELECTRONIC SYSTEMS INC
1536 BRANDY PARKWAY STREAMWOOD
IL 60103** 316 289-8820
digital stopwatch

**NEC AMERICA INC (NIPPON ELECTRIC
CO LTD) 277 PARK AVE NEW YORK NY
10017** 212 758-1666
audio amplifiers, controls, processing
equipment; consoles; intercoms;
microphones; patch panels; TV cameras;
teletext equip; switchers; video tape
recorders; time base correctors; monitors,
character generators; video distribution
systems; transmitter (AM, FM, TV);
antennas; microwave equip VS

**NEFF ELECTRONICS INC 11511
MARYLAND AVE BELTSVILLE MD 20705**
audio amplifiers; audio processing equip;
tape encoders; splicers; EBS
generator/detector EBS receiver

**NEUMADE PRODUCTS CORP PO BOX 568
SCARSDALE NY 10583** 914 725-4900
storage & filing cabinets for tape reels,
cassettes VS

**NEVE RUPERT INC BERKSHIRE IND
PARK BETHEL CT 06801** 203 744-6230
audio consoles; audio amplifiers VS
See ad pg. 97

Calif Rupert Neve 1800 N Highland Ave
Suite 614 Hollywood 213 465-4822
Can Rupert Neve of Canada 2717-19 Rena Rd
Malton Ont 416 677-6611

**NORTH AMERICAN PHILIPS CORP (SEE
AKG DIV & PHILIPS AUDIO VIDEO
SYSTEMS)**

**NORTHWEST BROADCAST SYSTEMS
10035 NE SANDY BLVD PORTLAND OR
97220** 503 253-9363
network cue decoder

**NORTRONICS CO INC RECORDER CARE
DIV 8101 TENTH AVE N MINNEAPOLIS
MN 55427** 612 545-0401
magnetic tape recorder heads; tape erasers;
tape editors; test tapes; recorder care
accessories for audio & video machines;
VTR head cleaners VS

**NORVER CO INC 7300 N CRESCENT
BLVD PENNSAUKEN NJ
08110** 609 665-2020
SCA receiver VS

**NOVA CORP BOX 2121 CANOGA PARK
CA 91306**
videotape cleaner attachment for VTR

**NURAD INC. 2165 DRUID PARK DR.,
BALTIMORE, MD** 301-462-1700
quad polarized antennas for remote-TV
broadcasts; microwave equip VS
See ad pg. 137

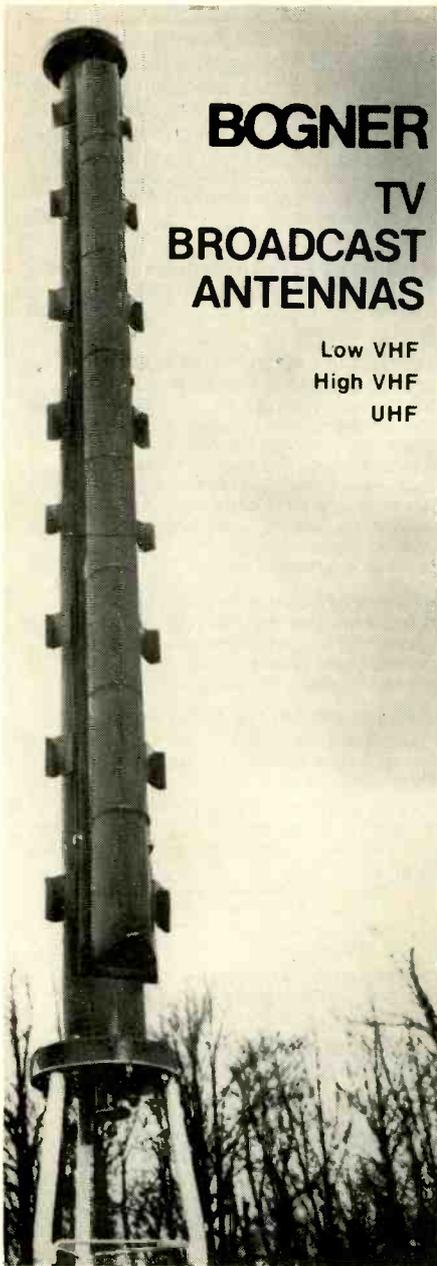
O

**OAK COMMUNICATIONS GROUP OAK
INDUSTRIES INC CRYSTAL LAKE IL
60014** 815 459-5000
converters; pay-TV devices; CATV amplifiers VS

**ODETICS 1859 S MANCHESTER AVE
ANAHEIM CA 92802** 714 530-6050
time elapse VTR

**OK MACHINE AND TOOL CORP 3455
CONNER ST BRONX NY
10475** 212 994-6600
wire-wrapping equip; connector pressers;
pliers; wire cutters; strippers

continued on page 72



BOGNER TV BROADCAST ANTENNAS

Low VHF
High VHF
UHF

Omnidirectional and directional, high gain rugged slot and dipole arrays. Available in 9 standard horizontal patterns, choice of vertical patterns...with power gains to over 100 and power ratings of 3 KW, 10 KW, or 30 KW. Hundreds of Bogner Antennas have been providing continuous service in urban and remote areas since 1965. Write for free catalog and price list, including all required electrical mechanical and structural data.

BOGNER BROADCAST EQUIPMENT

CORP. 156 Haven Ave.
Port Washington, N.Y.
(516) 883-2811

Circle 138 on Reader Service Card

THE SOURCE '75

wire-wrapping equip; connector pressers; pliers; wire cutters; strippers

**OLEAN CASE CORP 322 HOUGHTON AVE
OLEAN NY 14760** 716 372-0700
vulcanized fibre & wood covered case for audio & video equipment; film shipping **VS**

**ONAN DIV ONAN CORP 1400 73RD AVE
NE MINNEAPOLIS MN
55432** 612 574-5000
emergency stand-by power generators **VS**

**OPAMP LABS INC 1033 N SYCAMORE
AVE LOS ANGELES CA
90036** 213 934-3566
production consoles; portable mixers; operational amplifiers; audio components; basic amplifier kits **VS**

**OPTIMA ENCLOSURES DIV
SCIENTIFIC-ATLANTA 2166 MOUNTAIN
INDUSTRIAL BLVD TUCKER GA
30084** 404 939-6340
racks, equip enclosures **VS**

**ORANGE COUNTY CORP. 1079
AUTUMNWOOD DR WINNEPEG MANITOBA
R2J 1C6 CANADA** 204 475-1026
monitor amplifiers and speakers, audio switchers, audio processors

**URBAN BROADCASTING 271 COLUMBIA
AVE SAN FRANCISCO
94133** 415 421-3894
FM modulation controller

**OTARI CORPORATION 981 INDUSTRIAL
RD SAN CARLOS CA
94070** 415 593-1648
reel-to-reel audio tape recorder/reproducers; tape duplicators **VS**

P

**PACKAGED LIGHTING SERVICES INC PO
BOX 285 WALDEN NY
12586** 914 778-3515
portable quartz lighting system for CCTV

**PACIFIC RECORDERS & ENGINEERING
CORP 1760 SORRENTO VALLEY RD SAN
DIEGO CA 92121** 714 453-3255
variable-speed motor drive amplifier; compressor/limiter; digital timing systems; custom audio consoles; preamps; line & distribution amplifiers **VS**

**PAILLARD INC 1900 LOWER ROAD
LINDEN NJ 07036** 201 381-5600
16 mm cameras/projectors

**PAKO CORP 6300 OLSON MEMORIAL
HWY MINNEAPOLIS MN
55418** 612 540-6011
film processors

**PALMER (WA) FILMS INC 611 HOWARD
ST SAN FRANCISCO CA
94105** 415 986-5961
motion picture film projectors; color TV film recorders (video to film transfer) **VS**

**PANASONIC VIDEO SYSTEMS
MATSUSHITA ELECTRIC CORP OF AM
ONE PANASONIC WAY SECAUCUS NJ
07094** 201 348-7000
complete line of cameras color and mono (portable and studio); videotape recorders; tape duplicators; studio equipment including telecines **VS**

See ads pgs. 22, 23—refer to rep/dist section
Ga PANASONIC 2 Meca Way Duluth
30136 404 448-5683
Ill PANASONIC 1098 Greenleaf Ave Elk
Grove Village 60007 312 593-0710
Texas PANASONIC 2008 E Randol Mill Rd
Arlington 76011 817 469-1421

**PANASONIC TECHNICS ONE PANASONIC
WAY SECAUCUS NJ 07094** .. 201 348-7000
turntables; audio components **VS**
See ad pg. 35

**PANDUIT CORP 17301 RIDGELAND AVE
TINLEY PARK IL 60477** 312 532-1800
nylon cable ties, accessories; plastic wiring duct; terminals

**PAPERWORK SYSTEMS INC 2000 "A" ST
PO BOX 38 BELLINGHAM WA
98225** 206 733-8510
automated billing, accounting, traffic & payroll systems **VS**
See ad pg. 10
Toll free call 800 426-8872

**PARASOUND (ORBAN) INC 680 BEACH S
SAN FRANCISCO CA 94109** ... 415 776-2808
dynamic sibilance controller

**PENTAGON INDUSTRIES INC 4751 N
OLCOTT CHICAGO IL 60656** 312
867-9200
high-speed tape duplicators

**PERMADYNE ELECTRONICS CORP 2929 N
SOUTHPORT AVE CHICAGO IL
60667** 312 525-5559
SCA receiver

**PHASECOM CORP 13130 S YUKON AVE
HAWTHORNE CA 90250** 213 973-4191
cable TV headend signal processors; rf modulators & demodulators; CATV information systems **VS**

**PHELPS DODGE COMMUNICATIONS CO
RTE 79 MARLBORO NJ
07746** 201 462-1880
FM antennas; transmission lines **VS**

**PHILADELPHIA RESINS CORP 20
COMMERCE DR MONTGOMERYVILLE PA
18936** 215 855-8450
non-metallic antenna guys **VS**

**PHILIPS AUDIO VIDEO SYSTEMS 91
McKEE DR MAHWAH NJ
07430** 201 529-3800
AUDIO & VIDEO DIVS

audio amplifiers, audio consoles & mixers; headsets, intercom systems; microphones & microphone accessories; tape recorder/players, tape duplicators; turntables; column loudspeakers; CCTV cameras; video cassette recorder/players; mobile TV vans **VS**
BROADCAST EQUIP DIV
studio & field TV color cameras, telecine chains

**PHILIPS TEST & MEASURING
INSTRUMENTS INC 400 CROSSWAY PARK
DR WOODBURY NY 11797** ... 516 921-8880
color encoders; sync generators, color video signal & pattern generators; pulse generators; video level meter, decoder, if generators; modulators; frequency counters, audio generators; video test equip; multi-meters, oscilloscopes **VS**

**PLASTIC REEL CORP OF AMERICA 640 S
COMMERCIAL AVE CARLSTADT NJ
07072** 201 933-9125
reels for video & audio tape **VS**

**PLASTOID CORP 42-61 24TH ST LONG
ISLAND CITY NY 11101** 212 786-6200
coaxial cable; direct burial coaxial cables; moisture sealant coaxial cables

**POLYLINE CORP 1241 RAND RD DES
PLAINES IL 60016** 312 298-5300
plastic reels

**POTOMAC INSTRUMENTS INC 932
PHILADELPHIA AVE SILVER SPRING MD
20910** 301 589-3125
antenna monitors; field strength meters; antenna impedance bridges; video & RF jack panels **VS**
See ad pg. 18—refer to rep/dist section

**POWER-OPTICS INC PO BOX 266
FAIRVIEW VILLAGE PA
19409** 215 539-5300
remote control systems for TV camera mounts **VS**

**PREFORMED LINE PRODUCTS CO PO
BOX 91129 CLEVELAND OH
44101** 216 461-5200
antenna tower accessories; preformed metal & plastic deadends, lashings, guywires, etc **VS**

**PRODELIN INC PO BOX 131
HIGHTSTOWN NJ 08520** 609 448-2800
continued on page 74

Fewer parts... fewer problems with **audiopak® A-2** broadcast cartridge

*Ribs are molded into the flange —
no pencil leads
to break and jam.*

*No top wire.
Reloading's easier.*



*Tape guide is
an integral part of
the cartridge base
— not glued in —
to insure accurate azimuth control.*

Try one free

In the broadcast cartridge world, the simpler the better. That's why the design of the audiopak A-2 eliminates parts that can give you trouble.

The lessons learned from our years of experience developing the world's leading 8-track cartridge have been applied to our audiopak A-2. The result is a more durable, more reliable broadcast cartridge. And because we manufacture the entire product — from tape to packaging — we can assure you of the highest possible quality control.

We're so sure we have the best product on the market, we want to prove it... at no cost to you. For

your free sample and more information on the audiopak A-2 broadcast cartridge, write on your company letterhead to: Capitol Magnetic Products, Division of Capitol Records, Inc., 1750 North Vine St., Los Angeles, Calif. 90028. Attention: Marketing Manager, Professional Products.



CAPITOL MAGNETIC PRODUCTS
A DIVISION OF CAPITOL RECORDS, INC.
LOS ANGELES, CALIFORNIA 90028
A MEMBER OF THE EMI GROUP



TM. OF EMI LIMITED

Circle 139 on Reader Service Card

Finally... an EBS encoder/decoder in a compact package at an affordable price!



THE ALPHA
EBS-230
ONLY \$295

We've broken the price and size barrier with our new two-tone EBS-230. It's priced at one-third less than some competitive models and combines both encoder and decoder in a package that's half the size of anything on the market. Check these outstanding features:

- Low profile--1 1/4" high x 19" wide, rack-mountable
- Versatile--program channel loop-through standard
- Output--three modes: balanced, unbalanced, floating
- Higher output level-- +12 dBm
- Adjustment controls for both tones, front panel accessible
- Built-in step attenuator--0, 20 or 40 dB
- Self-test feature
- Meets all proposed FCC specifications*

You're assured of quality and reliability when you buy the EBS-230. We've been in the "tone" business for more than a decade, and our advanced thick-film hybrid circuitry offers the ultimate in stability.

Don't wait. The new FCC regulations on two-tone attention systems go into effect on January 15, 1976. Be ready for them with the lowest-cost, smallest-profile and most versatile unit available--the Alpha EBS-230.

Alpha also offers a separate encoder with remote capability and a decoder--the EBS-210 and EBS-220--at comparably low prices.

Write or call us today for complete technical specifications.

*Like all other EBS equipment manufacturers, Alpha is awaiting FCC type acceptance finalization.

Alpha Electronic Services, Inc.
8431 Monroe Ave., Stanton, CA 90680
(714) 821-4400

Circle 140 on Reader Service Card

THE SOURCE '75

VHF & UHF antennas; flexible & rigid transmission line; transmission line connectors; microwave antennas, reflectors, waveguides **VS**

PROFIT RECOVERY SYSTEMS PO BOX 25 LEICESTER NY 14481 716 382-3223
bleach regeneration system; silver recovery; chemical recovery; pollution abatement systems

PROJECTION SYSTEMS INC 517 VAN HOUTEN AVE PASSAIC NJ 07055 201 473-0180
TV projection systems (Amphicon) **VS**

PSC TECHNOLOGY INC 1200 GRAND CENTRAL AVE GLENDALE CA 91201 213 245-8424
Acme optical printers for super 8 & 16mm with special effects; flickerless projector **VS**

PULSE DYNAMICS MFG CORP PO BOX 355 COLCHESTER IL 62326 .. 309 776-4544
remote broadcast originating consoles & equip; portable public address systems; PA loudspeakers **VS**

PYRAMID INDUSTRIES INC 2612 W ENCANTO BLVD PHOENIX AZ 85009 602 269-2319
coaxial cable; cable tools; cable connectors **VS**

Q

Q-E MANUFACTURING CO NEW BERLIN PA 17855 717 966-1017
cable stringing blocks & aerial construction tools for coaxial cable

QRK ELECTRONIC PRODUCTS (DIV OF CCA) 1568 N SIERRA VISTA FRESNO CA 93703 209 251-4213
studio turntables; pre-amplifiers; audio controls; consoles; tape decks; tape cartridge equip **VS**
See ads pgs. 136, 139

QSI SYSTEMS INC 993 WATERTOWN ST W NEWTON MA 02165 617 969-7118
video sequential switcher, TV cameras (mono); time elapses VTR; time date generator **VS**

Q-TV/TELESYNC 342 W 40TH ST NEW YORK NY 10018 212 695-2775
TV prompter systems **VS**

QUAD EIGHT ELECTRONICS CORP 11929 VOSE ST N HOLLYWOOD CA 91605 213 769-1516
audio preamps, line & power amplifiers, equalizers; audio controls; audio consoles & mixers; reverberation units; dB meters; noise gates; audio digital delay unit; compressors; attenuators; tone oscillators; cabinets, racks **VS**

QUAKER ELECTRONICS INC PO BOX 215 HUNLOCK CREEK PA 18621 717 256-3477
quartz crystals

QUICK-SET INC 3650 WOODHEAD DR NORTHBROOK IL 60062 312 498-0700
tripods; stands; mounts; dollies for TV **VS**

R

RANK PRECISION IND INC 411 JARVIS AVE DES PLAINES IL 60018 312 297-7720
video camera lenses

RADIANT CORP 8220 N AUSTIN MORTON GROVE IL 60053 312 966-4200
front projection screen

RADIO CONSTRUCTION 1830 YORK RD TIMMONIUM MD 21093 301 252-2880
antenna towers; tower erection

RAMKO RESEARCH 3516-C LA GRANDE BLVD SACRAMENTO CA 95823 916 392-2100

The VS designation following the description of a company's products indicates that the manufacturer verified to BM/E in July of 1975 that these products are in regular production and data on the product/equipment is on file with BM/E.

distribution amplifiers, preamplifiers, mic/line amplifiers, monitor amplifiers; controllers; cartridge & cassette loaders; consoles **VS**

RAPID Q (See also GARRON)
See ad pg. 84

RAVEN SCREEN CORP 124 E 124TH ST NEW YORK NY 10035 212 534-8408
front & rear projection screens

RAYCHEM CORP 300 CONSTITUTION DR MENLO PARK CA 94025 415 329-3333
Thermofit sleeving & covers; water proofing products for cable plant; molded parts

RAYTHEON DATA SYSTEMS 1415 PROVIDENCE TNPK NORWOOD MA 02062 617 762-6700
microwave communications equip

RCA CORP BROADCAST SYSTEMS FRONT & COOPER ST BLDG 2-5 CAMDEN NJ 08102 609 963-8000

audio line, power, distribution amplifiers; radio automation equip; consoles, mixers; automatic tape cartridge recorder/players, audio & video; headsets; intercom systems; microphones; patch panels; audio tape recorder/players; tape erasers; turntables, arms, pickups; loudspeakers; video automation equip; video color & mono cameras, studio & portable; ENG systems; camera heads, mounts, dollies; quad VTRs character generators, chroma keys, drop-out compensators, color encoders; telecine chains; production & routing switchers, pulse distribution amplifiers, processing amplifiers, sync generators, special effect generators; videotape recorder/players; motion picture cameras, tripods, projectors, AM, FM & TV transmitters; modulators, demodulators, mixers, excitors; remote control, remote pickup & STL links; rf amplifiers, loads, switchers; SCA equip; AM, FM & TV antennas; antenna towers & lighting; transmission line; antenna monitors, modulation monitors, field intensity meters, audio generators; video picture monitors; phase meters, sideband analyzers, rf watt meters, mobile TV vans **VS**
See ad pg. 14-15

Ala RCA Office Park Bldg #.10 Office Park Circle Birmingham 35223 ... 205 871-1155

Calif RCA Suite 531 6363 Sunset Blvd Hollywood 90028 213 461-9171

Calif RCA 330 Primrose Rd Suite 305 Burlingame 94013 415 343-2741

Colo RCA 2695 Alcott St Suite 231-S Denver 80211 303 433-8484

Fla RCA 2747 Art Museum Dr Suite 5 Jacksonville 32207 904 398-4588

Fla RCA 3900 RCA Blvd Palm Beach Gardens Bldg 110 West Palm Beach 33410 305 622-1100

Ga RCA 3395 NE Expressway 404 455-3400

Ill RCA Gateway II Bldg Suite 1400 120 S Riverside Plaza Chicago 60606 312 782-0700

NC RCA 6230 Fairview Rd Suite 104 Charlotte 28210 704 366-0626

NJ RCA Front & Cooper Sts Bldg 2-2 Camden 08102 609 963-8000

NY RCA 1133 Ave of the Americas 3rd Flr New York 212 598-5900

Ohio RCA 11430 Hamilton Ave Cincinnati 45231 513 825-1550

Pa RCA 761 N Washington Rd McMurray 15317 412 941-5570

Tex RCA 3909 Executive Ctr Dr Suite 213 Austin 78731 512 345-2224

Tex RCA 8700 Stemmons Freeway Dallas 75247 214 638-6200

Va RCA 1901 North Moore St Arlington 22209 703 558-4212

Wash RCA 408 Second Ave West Seattle 98119 206 285-2375

RCA/COMMUNITY TELEVISION SYSTEMS

(EIE) 7355 FULTON AVE N HOLLYWOOD
CA 91605 213 764-2411
distribution amplifiers, headend signal
processors, modulators & demodulators;
microwave for CATV VS

RCA ELECTRONIC COMPONENTS NEW
HOLLAND AVE LANCASTER PA 17604
..... 717 397-7661

TV camera tubes, power tubes, display
tubes; blank audio tapes; batteries, test
instruments; digital display devices; CCTV
cameras; receiving tubes; semi-conductors;
TV picture tubes, instrument cathode-ray
tubes VS

RCA GLOBAL COMMUNICATIONS INC 60
BROAD ST NEW YORK NY
10004 212 363-3986
satellite communications service VS

RCA SERVICE CO (RCA DIV) DEPT 1614
BLDG 203-3 COMMERCIAL PRODUCT
SALES CAMDEN NJ 08101 ... 609 779-5892
monitors (b&w/color), stands; FM-TV master
antennas VS
See ad on p. 79

R-COLUMBIA PRODUCT CO 2008 ST
JOHNS AVE HIGHLAND PARK IL
60035 312 432-7915
self-powered electrostatic headphone

RECORTEC INC 777 PALOMAR AVE
SUNNYVALE CA 94086 408 735-8821
video tape evaluators; video tape
conditioners; quad upgrade kits; videotape
editors; audio tape cartridges VS
See ad pg. 92, 93—ref to rep/dist section

REDDING RADIO BOX 344 FAIRFIELD CT
06430 203 579-0284
microphone station identification plates;
phone loop induction pickups

REDIFFUSION INC 5 BROADWAY SAUGUS
MA 01906 617 233-8600
switched (dial-a-program) & non switched rf
distribution systems

REGMO DATA CORP 6992 OXFORD ST
MINNEAPOLIS MN 55426 612 925-3800
time-code controlled sequencer; a/v tape
head cleaner & anti-static disc spray
(Kontakt Chem.) VS

REK-O-KUT (See QRK)

REPCO PRODUCTS 7400 STATE RD
PHILADELPHIA PA 19136 215 338-1110
CATV closures, for above & below ground

RE-PLAY VIDEO CARTRIDGE SERVICE
315 THORNBERRY CT DR PITTSBURGH
PA 15237 412 486-1694
reloaded quad VTR cartridges VS

REVOX CORP 155 MICHAEL DR SYOSSET
NY 11791 516 364-1900
open-reel tape recorder/players; FM tuner
preamps automatic remote control for tape
players (Lamb); head-sets (Beyer);
microphones (Beyer); consoles & mixers
(Lamb); disc cleaners; studio lights (Meteor) VS

REYNOLDS/LETERON CO 9830 SAN
FERNANDO RD PACOIMA CA
91331 213 889-5281
TV titlers

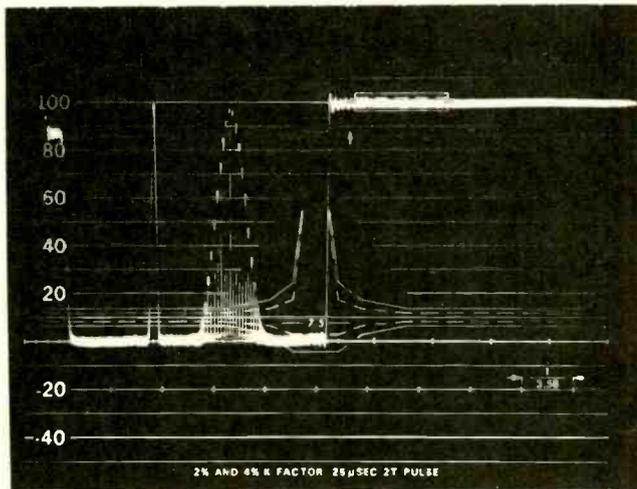
REX RHEOSTATS CO INC 149 BABYLON
TPKE ROOSEVELT NY
11575 516 379-1030
dummy loads to 2kW VS

RF SYSTEMS INC 155 KIND ST
COHASSET MA 02025 617 383-1200
CATV antennas; yagis for channels 2-13;
log periodic antennas; microwave equip,
translators, microwave antennas

RHG ELECTRONICS LABORATORY INC
161 EAST INDUSTRY COURT DEER PARK
NY 11729 516 242-1100
microwave relay links including portable
systems VS

RICHMOND HILL LABORATORIES LTD
1240 ELLESMERE RD SCARBOROUGH
ONTARIO CANADA
M1P 2X4 416 291-7921
continued on page 76

if your T.V. Transmitter is not approaching this performance



...you need a Datatek D-701

waveform corrector and transmitter phase equalizer system



Now used by many
leading stations

Other Advanced
Datatek Products:

- Differential Phase & Gain Measuring
- Video Sweep Generators
- Envelope Delay Measuring Sets
- Video Waveform Equalizers
 - Video-Audio Routing Switchers
 - Video, Audio & Pulse D.A.s

Unique features provide superior color picture quality...

- Direct waveform correction by incremental time method
- Phase and amplitude equalizing
- Corrects errors left by existing phase equalizers
- Removes smearing, streaking, antenna reflections
- On Air adjustments using VITS

DATATEK

CORP.

1200 W. Chestnut St.
Union, N.J. 07083 (201) 964-3656

Circle 141 on Reader Service Card

THE SOURCE '75

automation equip; chroma keyers; video processing amplifiers; video production & routing switchers; pulse & distribution amplifiers; sync generators; special effects generators VS

**RMS ELECTRONICS 50 ANTIN PLACE
BRONX NY 10462** 212 892-1000
coaxial cable passives, connectors, hardware

**ROBINS INDUSTRIES CORP (SEE
FAIRCHILD SOUND)**

**RODELCO ELECTRONICS CORP 365A
COMAC RD DEER PARK NY
11729** 516 643-5110
TV & FM translators VS

ROH CORPORATION 170 TECHNOLOGY

**PARK NORCROSS GA
30071** 404 449-0873
audio preamps, line & power amplifiers;
audio attenuators; audio test sets; all
foregoing in modular form VS
See ad pg. 103

**ROHDE & SCHWARZ SALES CO (USA)
INC 14 GLORIA LANE FAIRFIELD NJ
07006** 201 575-0750
demodulators; field intensity meters for AM,
FM TV; pf power meter; rubidium frequency
standards; video test signal generators; VIT
distortion meter; waveform monitor; monitor
receivers; sideband analyzers; TV translators VS

**ROHN MFG., DIV UNARCO IND INC PO
BOX 2000 PEORIA IL 61601** .. 309 697-4400
antenna tower builders & erectors;
microwave reflectors VS

**ROWE INTERNATIONAL INC CUSTOM
MUSIC DIV 888 PROVIDENCE HWY
DEDHAM MA 02026** 617 326-4446
automated tape cartridge equip; background
music systems; background music programs VS

RUPERT NEVE INC (See NEVE)

**RUSSCO ELECTRONICS MFG INC 1070
BROOKHAVEN DR CLOVIS CA
93612** 209 299-2167
compact audio consoles; audio amplifiers;
monitors; turntables; speakers VS
See ad pg. 138

RUST CORP (SEE DATA LOGIC/RUST)

**RYAN F B MFG CO PO BOX 451
CHARITON IA 50049** 515 774-5981
underground cable plows

CHECK... COMPARE... CONSIDER...

does your audio console, or the one you're talking about purchasing, have all these standard features:



Every input channel equipped with preamp
4 transformer coupled inputs per channel
Remote start contacts on all high level inputs
Modular plug-in amplifiers
2 location cue/intercom system with remote talkback
4 selectable monitor inputs
4 programmable speaker muting outputs
Step type faders with cue on all channels
15 watt rms protected monitor amp
4 selectable headphone inputs plus stereo cue
+ 18dBm transformer coupled outputs
Telephone grade lever keys
Shielded PC board mixing bus for extra RF immunity
Engraved panel markings
Extra cost hidden options
High purchase price

	AMPRO		YOURS	
	YES	NO	YES	NO
Every input channel equipped with preamp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 transformer coupled inputs per channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote start contacts on all high level inputs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modular plug-in amplifiers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 location cue/intercom system with remote talkback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 selectable monitor inputs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 programmable speaker muting outputs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step type faders with cue on all channels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 watt rms protected monitor amp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 selectable headphone inputs plus stereo cue	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ 18dBm transformer coupled outputs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telephone grade lever keys	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shielded PC board mixing bus for extra RF immunity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engraved panel markings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extra cost hidden options	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High purchase price	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ampro audio consoles are available in 6, 8, 10 and 12 channel rotary or slide fader versions in mono, dual mono, stereo or dual stereo/simulcast configurations. Priced from \$1,995.00 to \$5,275.00.

Ampro also produces a comprehensive line of *broadcast tape cartridge equipment*. For complete details, call collect today or write.



AMPRO CORPORATION

850 PENNSYLVANIA BLVD., FEASTERVILLE, PA 19047 • (215) 322-5100
Professional Equipment for Broadcasting Professionals

See us at Booth #1, NAFMB, Atlanta

Circle 142 on Reader Service Card

S

**SADELCO INC 299 PARK AVE
WEEHAWKEN NJ 07087** 201 866-0912
CATV test equip

**SAKI MAGNETICS INC 1649 12 ST SANTA
MONICA CA 90404** 213 451-8611
magnetic tape heads VS

**SANSUI ELECTRONICS 55-11 QUEENS
BLVD WOODSIDE NY
11377** 212 779-5300
4-channel stereo encoder; turntables;
preamps; power amps; reverb units VS
Calif 333 W Gardena 90248 213 532-7670
Ga 5675 Roswell Rd NE Atlanta 30342
Ill 3416 W Main St Skokie 60076
Texas 6350 LBJ Freeway Dallas 75240

**SANYO ELECTRIC INC 1200 W ARTESIA
BLVD COMPTON CA 90220** .. 213 537-5830
audio tape recorders; helical VTRs, video
cassette players; TV cameras color & mono VS

**SAWYER INDUSTRIES INC 5649 PECK RD
ARCADIA CA 91006** 213 442-5981
CATV stand-by power supplies;
uninterruptible power supplies VS

**SCALA RADIO 1970 REPUBLIC AVE SAN
LEANDRO CA 94577** 415 351-3792
broadcast antennas

**SC ELECTRONICS
See Audiotronics**

**SCHAFFER ELECTRONICS CORP 75
CASTILIAN DR GOLETA CA
93017** 805 968-0755
radio automation equip; multitrack machines,
automatic logging equip, open-reel tape
machines. Also handles the following lines:
Andrews, Ampro, AKG, Audiopak, Belar,
Beyer, Broadcast Electronics, CBS
Electronics, Delta, Dielectric Labs, Dorrugh,
Fidelipac, Garron, Hughley & Phillips, ITC,
Jampro, JBL, Inovonics, Kintronics, LPB,
Luxo, Marti, McMartin, Multronics, Phelps
Dodge, Potomac, QRK, Revox, Rohm,
Scully, Sony, Spir-o-line, Stainless, Sintronic,
Shively, Stanton, TFT, UREI, Utility, UMC,
Wilkinson VS

See ad pg. 100—refer to rep/dist section
Calif Chester Coleman 75 Castilian Dr
Goleta 93017 805 968-0755
Colo Communications West Inc Dick Maynard
PO Box 1193 2 Parkwood Plaza Grand
Junction 81501 303 243-5373
Fla Gordon Lund 510 Belair Ave Merrit
Island 32592 305 452-6950
Mass Ron Dagenais 42 Main St Leominster
01453 617 534-0441
Penn George Pupala 401 Carver Dr
Bethlehem 18017 215 691-8574
Texas Tom Copeland 10523 Maplegrove
Dallas 75218 214 328-4944
Wisc Bud Thomas PO Box 87 Butte des Morts
54927 414 582-4121

**SCHAFFER INTERNATIONAL 1355 HARBOR
DR SAN DIEGO CA 92101** 714 236-1200
cassette players for broadcast

**SCHNEIDER CORP OF AMERICA 154 LODI
ST HACKENSACK NJ
07601** 201 343-3939
video camera lenses; motion picture cameras

lenses; lens accessories

**SCIENTIFIC-ATLANTA INC BOX 13654
ATLANTA GA 30324** 404 938-2930
CATV tv systems; headend modulators,
demodulators, signal processors; satellite
ground stations; microwave antennas;
transmission line, CATV trunk, distribution
amplifiers; CATV antennas; cabinets, racks

**SCOTT HH INC 111 POWDERMILL RD
MAYNARD MA 01754** 617 897-8801
loudspeakers; digital FM tuner VS

**SCOTT INSTRUMENTS LABORATORIES
533 MAIN ST ACTON MA
01720** 617 263-2986
sound level meters VS

**L J SCULLY MANUFACTURING CORP 138
HURD AVE BRIDGEPORT CT
06604** 203 368-2332
tape deck reproducers

**SCULLY/METROTECH (DIV OF
DICTAPHONE) 475 ELLIS ST MOUNTAIN
VIEW CA 94043** 415 968-8389
tape recorders/payers (reel-to-reel), portable,
studio); playback equip for automation; time
code for loggers; loggers; underground cable
locators VS

**SENCORE INC 3200 SENCORE DR SIOUX
FALLS SD 57107** 605 339-0100
field strength meters; sweep generators for
VHF, UHF, FM, & chroma; field effect
meters; dual-trace oscilloscopes; AM/FM
stereo analyzer

**SENNHEISER ELECTRONIC CORP 10 W
37TH ST NEW YORK NY
10018** 212 239-0190
microphones, headsets VS

**SEQUERRA CO 143-11 ARCHER AVE
NEW YORK NY 11435** 212 297-5000
FM broadcast monitor tuner; audio preamp
& power amplifier VS

**SESCOM INC 12931 BUDLONG AVE
GARDENA CA 90247** 213 770-3510
audio amplifiers; audio equalizers VS

**SHARP ELECTRONICS CORP 10
KEYSTONE PLACE PARAMUS NJ
07652** 201 265-5600
headsets; tape decks; video cameras;
picture monitors; sync generators; waveform
monitors; phase shifters

SHIBADEN (See HITACHI SCHIBADEN)

**SHINTRON CO INC 144 ROGERS ST
CAMBRIDGE MA
02142** 617 491-8700
video consoles, special effects generators,
sync generators, video & audio distribution
amplifiers, sequential video switchers VS
See ad pg. 111
Calif Shintron 1234 Uppinham Dr Thousand
Oaks 91360 805 492-5422

**SIMPAC INTERNATIONAL INC 369 SAN
MIGUEL DR SUITE 365 NEWPORT BEACH
CA 92660** 717 644-6857
storage systems for racks

**SHIVELY LABS INC RAYMOND ME
04071** 207 655-3844
broadcast antennas; transmission line; filters,
rf loads; coaxial switches, power combiners

**SHURE BROTHERS INC 222 HARTREY
AVE EVANSTON IL 60204** 312 679-5830
microphones, microphone accessories; audio
mixers & preamplifiers; feedback controllers;
phono pickup cartridges; audio level
controllers; p.a. systems; column speakers;
audio consoles; compressor/limiters; reverb
units VS
See ad pg. 85

**SIEMENS CORP 186 WOOD AVE S ISELIN
NJ 08830** 201 494-1000
gas-filled surge voltage lightning protectors
for cable amplifiers & powers supplies

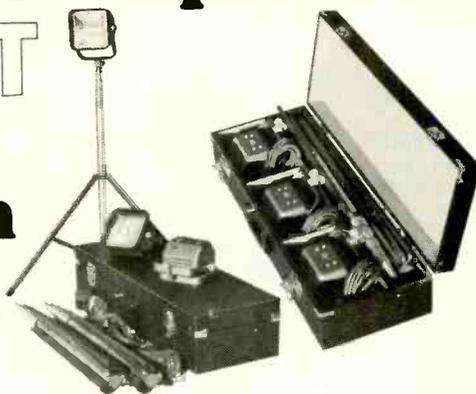
**SIMPSON ELECTRIC CO 853 DUNBEE
AVE ELGIN IL 60120** 312 697-2260
analog & digital voltmeters & multimeters;
oscilloscopes VS

SINGER EDUCATION SYSTEMS 3750
continued on page 78

The seventeen and one-half pound

CAT-KIT

Quartz Location Lighting Kit



The CAT-KIT is ideal
for CATV and for all
on-location filming
requiring an extremely
compact and ultra-
lightweight lighting kit.

For further information, please write to:

cinema E products
CORPORATION

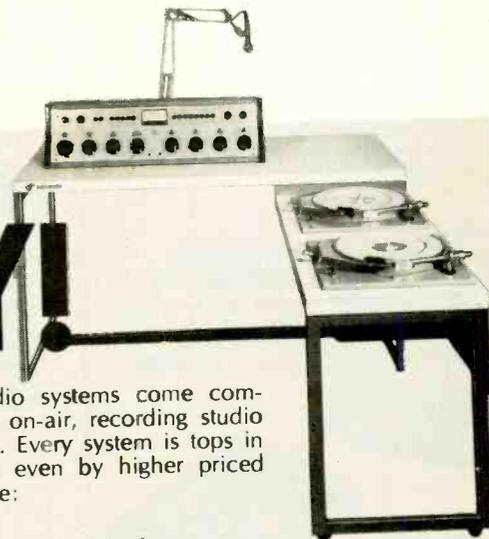
Technology in the Service of Creativity
2037 Granville Avenue, Los Angeles, California 90025
Telephone: (213) 478-0711 ■ Telex: 69-1339 ■ Cable: Cinedevco

The CAT-KIT, which weighs only
17 lbs., 8 oz., includes: three non-
focusing fill lights (*miniature broods*);
three 10 ft. long three-wire cables
(with in-line switches and parallel
blade U-ground plugs); three "POP"
light stands (made of aluminum); and
a sturdy carrying case, measuring
only 5 3/4" x 9 1/2" x 27".

The CAT-KIT operates at
120-volts AC/DC with
650-watt double-ended
quartz lamps.

Circle 143 on Reader Service Card

READY!



LPB's **dj** mini-studio systems come complete and ready for on-air, recording studio or remote operation. Every system is tops in value... unmatched even by higher priced systems! Included are:

- Console.
- 2 Professional 3-speed 12-inch Turntables.
- 2 12-inch Tone Arms.
- 2 Stanton Cartridges with styli.
- Turntable Equalizer/Preamplifier... 2 for stereo.

There's a full range of complete systems to choose from... each with sturdy, handsome, white Formica® top furniture over blue textured finish steel legs and supports.

LPB offers a complete line of broadcast audio equipment. Call or write us for all your audio needs, from mike stands to headphones.

LPB

LPB Inc.
520 Lincoln Highway, Frazer, Pa. 19355
(215) 644-1123

Please see us at
Booths # 91 & 92
NAFMB, Atlanta

Circle 144 on Reader Service Card

FIDELIPAC® ACCESSORIES & CARTRIDGES

CART-A-ROUND CARTRIDGE STORAGE RACKS

Each WR-25 Modular Rack holds 25 Type A Cartridges . . . eight can be mounted on our Mobile Carousel Base to make up the MR-200.

WR-25 \$13.25
MR-200 \$145.95

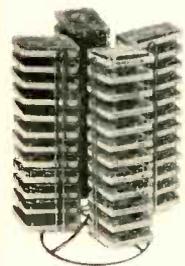
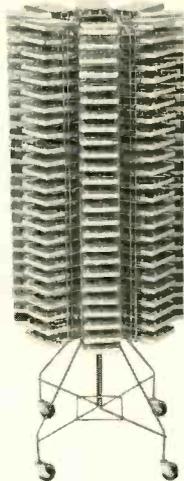


TABLE TOP CARTRIDGE RACK

Model TR-96 holds 96 Type A cartridges, Model TR-48 holds 48.
TR-96 \$73.85
TR-48 \$38.55



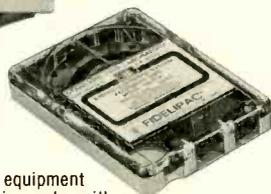
STUDIO ON AIR LIGHT

brilliant red lettering on jet black background can be seen even in the brightest ambient light conditions. \$29.95



CART-E-RASE DEMAGNETIZER

can be used for erasing cartridges, reel-to-reel tape, film sound stripping, etc. \$34.50



ALIGNMENT PROBLEM?

Keep your cart equipment in perfect working order with:

- 350 STA Alignment Cartridge \$38.50
- 350 STF Wow and Flutter Cartridge \$24.50
- 350 STQ Cue Test Cartridge \$35.00
- Head Insertion Gage \$3.35
- Height Gage \$12.95
- Right Angle Zenith Gage \$21.75

Contact your Fidelipac Distributor or



FIDELIPAC®

109 Gaither Drive, Mt. Laurel, NJ 08057
(609) 235-3511

® Trademark

THE SOURCE '75

MONROE AVE ROCHESTER NY

14603 716 586-2000
16mm TV projectors

SINGER INSTRUMENTATION 5340 ALLA RD LOS ANGELES CA

90066 213 822-3061
field intensity meters, test equip VS

SINTRONIC CORP 705 HAVERFORD RD

BRYN MAWR PA 19010 215 525-3700
am & fm broadcast transmitters; exciters;
line surge protectors VS

SITCO ANTENNA CO 10330 NE MARX ST

PORTLAND OR 97220 503 253-2000
cable tv antennas; antenna preamplifiers;
antenna towers & accessories; wired cable;
connectors VS

SKIRPAN LIGHTING CONTROL CORP

41-43 24TH ST LONG ISLAND CITY NY
11101 212 937-1444
studio lights, light systems, solid state
dimmers, light accessories

SMITH-VICTOR CORP 301 N COLFAX ST

GRIFFITH IN 46319 312 768-1025
lighting systems VS

SOD-MASTER DIV JACOBSEN MFG CO

3456 N WASH AVE MINNEAPOLIS MN
55412 612 529-9566
oscillating plows for cable burial

SOLA ELECTRIC 1717 BUSSE RD ELK

GROOVE VILLAGE IL
60007 312 439-2800
CATV power supplies; CATV transformers

SOLADYNE INTERNATIONAL INC 7455

CONVOY CT SAN DIEGO CA
92111 714 279-7872
microwave communications equip

SOLL INC 311 E 72 ST NEW YORK NY

10021 212 249-2031
rf switching systems

SONEX INTERNATIONAL 4001 WALAMEDA

BLVD BURBANK CA 91505 .. 213 843-7487
chroma keyers; luminance keyers VS

SONTEC CORPORATION 10120 MARBLE

COURT COCKEYSVILLE MD
21030 301 628-2282
audio line amplifiers, preamps; audio
limiter/compressors; equalizers VS

SONY CORP OF AMERICA 9 W 57TH ST

NEW YORK NY 10019 212 371-5800
video cassettes, video cassette
recorder/players; videotape recorder/players;
audio preamps & power amplifiers; quad
matrix equip; headsets; microphones; audio
tape; audio cars & cassettes; tape
accessories; audio tape recorders;
turntables; phono cartridges; video cameras;
video switchers; sync generators; special
effects generators; videotape editing
equip VS

See ad Cover II

Calif 230 W Hill Place Crocker Ind Park
Brisbane 94005 415 467-4900

700 W Artesia Blvd Compton
90220 213 537-4300

Ga 20 Perimeter Park Suite 109 Atlanta
30341 404 451-7501

Ill 6801 W Jarvis St Niles
60648 312 792-3600

Md 1358 Holton Lane Langley Park
20783 301 439-3500

Mich 10610 Galaxie Ave Ferndale
48220 313 548-9325

NY 47-47 Van Dam St Long Island City
11101 212 361-8600

Texas 9004 Ambassador Row Dallas
75247 214 631-3431

SOUND TECHNOLOGY 1400 DELL AVE

CAMPBELL CA 95008 408 378-6540
audio generators; rf generators; harmonic
distortion meters VS

SPARTA ELECTRONICS CORP 5851

FLORIN-PERKINS RD SACRAMENTO CA
92828 916 383-5353
radio automation systems; audio amplifiers,
audio cartridges, cassettes; audio consoles

& mixers; microphones & microphone
accessories; tape cartridge recorder/players;
tape erasers; turntables; arms, monitor
speakers; AM & FM transmitters; duplexers,
exciters; remote control equip; remote
pickup & STL systems; SCA equip; FM
antennas, antenna towers, lights;
transmission lines, antenna monitors; field
intensity meters, frequency counters, signal
generators, distortion meters, modulation
monitors; status & alarm indicators, loggers;
cabinets, cable, connectors VS

SPECTRA SONICS 770 WALL AVE OGDEN

UT 84404 801 392-7531
audio consoles; audio preamplifiers; line,
mixing, power amplifiers;
compressor/limiters; variable equalizers,
electronic crossover filters; audio attenuators
& accessories VS

See ad pg. 137

Calif 6430 Sunset Blvd Suite 1117

Hollywood 90028 213 461-4321

SPECTRA-VISION CORP 1528 BELFIELD

AVE PHILA PA 19141 215 457-6500
videotape editing equip; videotape
duplication; origination equip & equip service

SPECTROLAB SOUND POWER SYSTEMS

12481 GLADSTONE AVE SYLMAR CA
91342 213 365-4611
solar power systems VS

SPINDLER & SAUPPE INC 13034 SATICOY

ST N HOLLYWOOD CA
91605 213 764-1800
slide projection system for film chains VS

SPIN PHYSICS INC 11633 SORRENTO

VALLEY RD SAN DIEGO CA
92121 714 453-5410
videotape recorder/players; replacement
heads for vtr's VS

STAINLESS INC THIRD STREET N WALES

PA 19454 215 699-4871
am antennas; antenna towers; tower lighting,
tower accessories VS

STANCIL-HOFFMAN CORP 921 N

HIGHLAND AVE HOLLYWOOD CA
90038 213 464-7461
magnetic tape recorder/players; digital
clocks; digital time recorders for magnetic
recorders VS

STANDARD ELECTRIC TIME 89 LOGAN

ST SPRINGFIELD MA
01101 413 732-1141
electronic master clocks

STANDARD TAPE LABORATORY INC 2081

EDISON AVE SAN LEANDRO CA
94577 415 635-3805
audio test tapes VS

STANTON MAGNETICS INC 175 TERMINAL

DR PLAINVIEW NY 11805 516 681-0200
stereo phono pickups; headphones;
turntables, arms; turntable preamp/equller
See ad pg. 34—refer to rep/dist section VS

STOREEL CORP PO BOX 80523 ATLANTA

GA 30341 404 458-32289
cabinets & racks for equip; storage racks &
enclosures for tape reels VS

STRAND CENTURY INC 20 BUSHES LANE

ELMWOOD PARK NJ 07407 .. 201 791-7000
TV lighting equip; lighting controls, stands,
filters, accessories VS

See ad pg. 00

WILLI STUDEL AMERICA INC 3916

BROADWAY BUFFALO NY
14227 716 681-5450
audio tape recorder/players; audio consoles;
condenser microphones

STUDIO FILM EXCHANGE 366 W 46TH ST

NEW YORK NY 10036 212 265-3740
film stock at reduced prices VS

STUDIO TAPE EXCHANGE 366 W46TH ST

NEW YORK NY 10036 212 265-3740
reconditioned video tape VS

See ad pg. 132

SUMMIT SYSTEMS INC 171 W

ORANGETHORPE AVE PLACENTIA CA
92670 714 528-0700
automated videotape systems; video
cartridge-cassette equip

**SUPERSCOPE INC 8150 VINELAND AVE
SUN VALLEY CA
91352 213 767-9750**
Sony tape recorders; microphones; tape;
tape accessories **VS**
See ad pg. 117

Ariz Superscope SW 15234 N. 51st Dr
Glendale 85301 602 938-4820
Ill Superscope Chicago 1300 Norwood Ave
Itasca 60143 312 569-2147
Mass Superscope NE 24 Cumings Park Woburn
01801 617 935-8250
Mich Superscope Detroit 591 Executive Dr.
Troy 48084 313 588-7200
NY Superscope NY 56-08 37th Ave Woodside
11377 212 446-7227
Wash Superscope NW 12842 NE 15th Place
Bellevue 98005 206 454-5162

**SYSTEMS WIRE AND CABLE INC 3500 S
30TH ST PHOENIX AZ
85040 602 268-8744**
CATV coaxial line & drop cables;
interconnection cables; special cable
constructions

**SWR INC PO BOX 215 GOFFSTOWN NH
03045 603 497-3000**
transmission line accessories; rf equip &
service

**SYSTA-MATICS 510 N SHERIDAN TULSA,
OK 74115 918-835-2368**
automatic video cassette player system

**SYSTEMS ENGINEERING CO PO BOX
49224 ATLANTA GA 30329 ... 404-633-7200**
audio consoles, video consoles, modular line
amplifiers, equalizers, audio distribution
amplifiers, power supplies

**SYSTEMS MARKETING CORP 1019 W
WASHINGTON ST BLOOMINGTON IL
61710 309 829-6373**
radio automation equip; controllers, multcart
machines, tape cartridge players; loggers;
time/weather announcers; digital clock
systems; audio amplifiers; audio generators **VS**

**SYSTEMS RESOURCES CORP 223
NEWTOWN RD PLAINVIEW NY
11803 516 249-3018**
character generators; video titling equip

**SYSTRON-DONNER CORP 10 SYSTRON
DR CONCORD CA 94518 415 676-5000**
frequency counters; digital clocks; sweep
generators; spectrum analyzers; rf watt
meters; time code generators; waveform
analyzers, audio generators; digital
multimeters; analog/keyboard computers;
power supplies; frequency synthesizers **VS**

T

**TABER MFG & ENG CO 2081 EDISON
AVE SAN LEANDRO CA
94577 415 635-3831**
replacement audio heads for VTR & audio
recorder/players; test tapes; tape erasers **VS**

JOEL TALL—see ELPA MARKETING
**TAPE-ATHON CORP 502 S ISIS AVE
INGLEWOOD CA 90301 213 776-6933**
tape recorders/players (reel-to-reel);
playback equip for automation, loggers,
mono & stereo music service **VS**

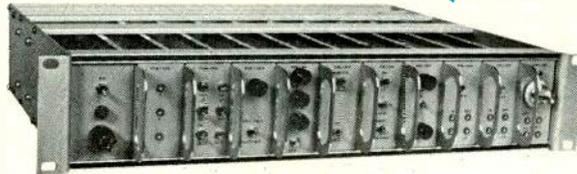
**TAPECASTER TCM PO BOX 662 12326
WILKINS AVE ROCKVILLE MD
20851 301 881-8888**
tape cartridge equip; digital timers;
programmers; clocks; amplifiers

continued on page 80

LENCO

THE NAME THAT MEANS

QUALITY



FOR:

- VIDEO TEST GENERATORS**
- GEN-LOC SYNC GENERATORS**
- NTSC ENCODERS**
- DISTRIBUTION AMPLIFIERS**
- BLACK AND WHITE CAMERAS**

Quality With Reliability At A Reasonable Price.

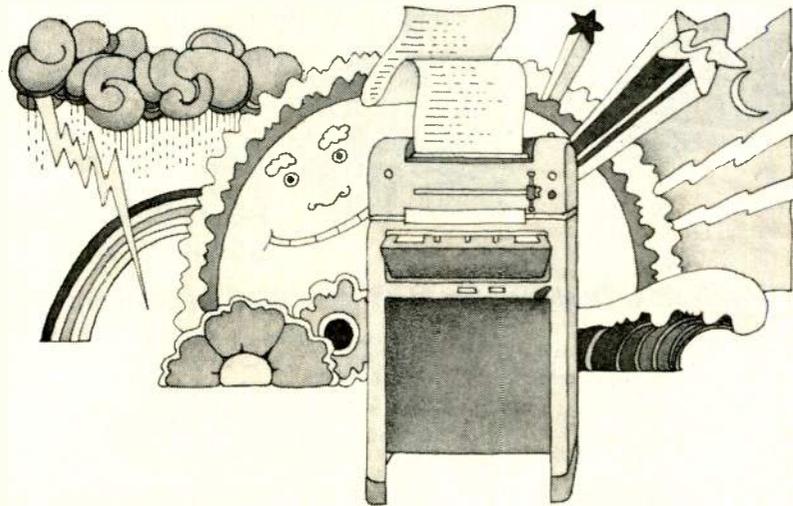
Lenco offers a two year warranty, parts and labor, including surface transportation to and from the factory.



LENCO, INC., ELECTRONICS DIVISION
319 W. Main St., Jackson, Mo. 63755
(314) 243-3147 or (314) 243-2394

Circle 146 on Reader Service Card

And now the weather...



Get your weather forecasts via a teleprinter from RCA. Teleprinter, including maintenance, on a lease basis — just \$64 per month on 1-year lease, slightly higher for 90-day lease. Also available on outright purchase.

The teleprinter prints out the weather forecast automatically, and we make sure it keeps running reliably. Maintenance is prescheduled and automatic. Installation and service are fast, because RCA data communications specialists are based in over 140 cities, and our warehouse network is nationwide.

The weather changes, but RCA reliability stays constant.

Call us at (609) 779-5087.

RCA Service Company, A Division of RCA
Technical Services, Bldg. 204-2, Camden, N.J. 08101



WE GIVE YOU MORE OF WHAT YOU'RE LOOKING FOR.

Circle 147 on Reader Service Card

THE SOURCE '75

**TDK ELECTRONICS 755 EASTGATE BLVD
GARDEN CITY NY 11530** 516 746-0880
open reel, cartridge, cassette audio tape

**TEAC CORP OF AM 7733 TELEGRAPH RD
MONTEBELLO CA 90640** 213 726-0303
audio tape recorders/reproducers,
microphones, mixers VS

**TECH LABS INC BERGEN BLVD
PALISADES PARK NJ 07650 201
944-2221**
audio controls, attenuators; program memory
switchers video attenuators; volume and
gain standard VS
See ad pg. 90

**TECHNOLOGY INC HF PHOTO SYSTEMS
DIV 11801 W OLYMPIC BLVD LOS
ANGELES CA 90064** 213 479-3941
8-, 16-, 35mm film processors VS

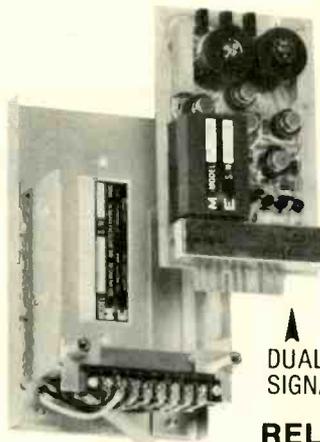
**TEKTRONIX INC PO BOX 500
BEAVERTON OR
97007** 503 644-0161
oscilloscopes, video & picture monitors,
sideband analyzers, spectrum analyzers,
waveform monitors, video test generators,
sync generators, automatic video correctors,
VTR equip, vectorscopes, monitor
photometers video processing amplifiers; VS
See ads pgs. 19, 86
field offices:
Ala TKX Suite 8, 3322 S. Memorial Parkway
Huntsville, Ala 35801 205 881-2912
Ariz TKX 2643 E. University Drive Phoenix
Ariz 85034 602 244-9795

Calif TKX 2339A Stanwell Circle Concord
Calif 94520 415 687-8350
TKX 16601 Hale Avenue Irvine Calif
92705 213 778-5225.6
TKX 6841 Convoy Court San Diego Calif
92111 714 292-7330
TKX 3200 Coronado Dr. Santa Clara Calif
95051 408 249-5500
TKX 16930 Sherman Way Van Nuys Calif
91406 213 987-2600
Colo TKX 6801 S. Yosemite Street
Englewood Colo 80110 303 771-8012
Conn TKX 20 Commerce Park Rd Milford
06460 203 877-1494
Fla TKX 1871 West Oakland Park Blvd. Fort
Lauderdale Fla 33311 305 731-1220
TKX Suite 109, 1040 Woodcock Rd.
Orlando Fla 32803 305 894-3911
TKX 4900 Bayou Blvd. Suite 130 Pensacola
Fla 32503 904 476-1897
Ga TKX Suite 3, 2251 Perimeter Park
Atlanta Ga 30341 404 451-7241
Ill TKX 5350 Keystone Ct Rolling Meadows
Ill 60008 312 259-7580
Ind TKX 6121 East 30th Street
Indianapolis Ind 46219 317 546-2408
Kan TKX 8920 West 62 Terrace Kansas City/
Shawnee Mission Kan
66202 913 262-8770
La TKX 3004 34th Street New Orleans
Metairie La 70001 504 837-8454
Md TKX 1526 York Road Baltimore/
Lutherville Md 21093 301 321-7000
TKX 1335 Piccard Drive Rockville Md
20850 301 948-7151
Ma TKX 244 Second Avenue Waltham Ma
02154 617 890-4550
Mich TKX 22132 West Nine Mile Road
Detroit/Southfield
Mich 48075 313 358-3122
Minn TKX 3563 N Lexington Ave St. Paul
Minn 55112 612 484-8571
Mo TKX 422 Anglum Road, St. Louis/
Hazelwood Mo 63042 314 731-4696
NJ TKX 964 South Springfield Avenue
Springfield NJ 07081 201 379-1670
NM TKX 1258 Ortiz Drive, S.E. Albuquerque
NM 87108 505 268-3373
NY TKX 678 Troy Rd Albany/Latham NY
12110 518 785-3353
TKX 100 Crossways Park West Woodbury
NY 11797 516 364-9060
TKX 31 Haight Ave Poughkeepsie NY
12603 914 454-7540
TKX 77 Ridgeland Rd Rochester NY
14623 716 244-2600
TKX 1 Northern Concourse North Syracuse
NY 13212 315 455-6661
NC TKX 3725 National Drive Raleigh NC
27612 919 782-5624
Ohio TKX 5689 Pearl Road Cleveland Ohio
44129 216 884-6558
TKX 501 Progress Rd Dayton Ohio
45449 513 859-3681
Okla TKX Suite 201 800 N.E. 63rd Oklahoma
City Okla 73105 405 849-3361
Ore TKX 8845 SW Center Court Tigard
97223 503 639-7691
TKX 501 Progress Road Dayton Ohio
45449 513 859-3681
Pa TKX 3834 Northern Pike Monroeville Pa
15146 412 351-3345
Tx TKX 4455 Sigma Rd. Dallas Tx
75240 214 233-7791
TKX 5755 Bonhomme Houston Tx
77036 713 783-1910
TKX 3311 Roselawn San Antonio Texas
78226 512 434-4334
Utah TKX 65 West 2950 South Salt Lake
City Utah 84115 801 484-8501
Va TKX 1929 Coliseum Dr Hampton Va
23366 804 826-4020
Wa TKX 641 Industry Drive Seattle Wa
98188 206 575-0180

Monroe Electronics' New DUAL-TONE EMERGENCY BROADCAST SYSTEMS MONITOR



↑
WALL
MOUNTED
ENCLOSURE



↑
POWER SUPPLY
AND TIMER

↑
DUAL TONE
SIGNAL DETECTOR

RELIABLE
SOLID STATE

New System Designed To Meet New FCC Regulations

- Dual Tone Input
- Wide Dynamic Input Range
- Immune to Voice and Music
- Built-in Audible Alarm
- Relay Closure Output
- \$298.00

This monitor is tailored to FCC regulations covering the new Dual Tone Alert system. The unit accepts a dual tone input from any radio receiver or audio cable and provides an audible alarm and relay closure output when activated.

The Monroe unit is housed in a metal cabinet suitable for wall or panel mounting. It is furnished complete with power cord and internal audible alarm.

The EBS Monitor occupies 6½" x 4" x 2½", and weighs 2 pounds. Plug-in circuit cards, and ready access to test terminals make servicing fast and effective. A one year full warranty is furnished by the manufacturer. Parts availability and factory service exceeds 10 years.

Phone or write for full details.



MONROE ELECTRONICS, INC.

100 HOUSEL AVENUE, LYNDONVILLE, NEW YORK 14098

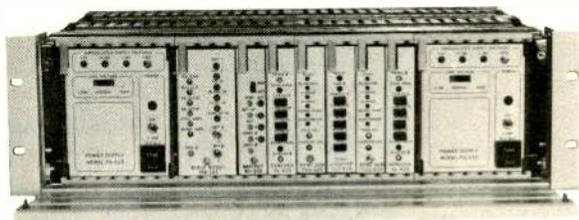
Area Code 716 765-2254

**TELAUTOGRAPH CORP 8700 BELLANCA
AVE LOS ANGELES CA 90045 213
776-5022** fascimile equip

**TELECOMMUNICATIONS INDUSTRIES LTD
6335 HOMEWOOD AVE LOS ANGELES CA
90028** 213 461-3561
optical test pattern, charts, slides, films VS
See ad pg. 140—refer to rep/dist section

Instrumentation Precision in Broadcast Terminal Products

TeleMation's *Precision* Line Terminal Equipment



Within TeleMation's "525 Series" audio and video terminal product line, certain units are designated *precision* as distinguished from their *broadcast* counterparts. The *precision* designation is much more than a simple "marketing label". *Precision* is a demarcation assigned through TeleMation R&D that puts a particular product into a separate, unique attention category, from design concept through manufacture and quality-assurance verification. All this to assure the buyer that the product not only meets or surpasses all known competitive products in its performance parameters, but also that it is designed to operate for months and even years without need for periodic adjustment or any other routine maintenance. This philosophy and practice, then, take the *precision* units in the 525 Series terminal equipment into a quality/stability/reliability realm that is usually associated with instrumentation electronics.

TeleMation has used a number of design techniques in accomplishing the high performance and stability achieved by these products. For example, one-percent-tolerance resistors having a temperature coefficient of 20PPM/°C are generally used as gain-determining elements and wherever drift would affect stability. They provide both freedom from temperature drift and freedom from the effects of aging that are common to the less expensive resistors normally used in video products. Junction matching — each PN junction being matched with an NP junction to cancel the characteristic 2.2mv/°C drift of silicon junctions — is also employed to improve stability and prevent offset drift in DC-coupled outputs.

Feedback is extensively used in *precision* grade units as a means of insulating performance characteristics from the effects of component variables. Audio amplifiers are typically high-gain op-amps inside 100-dB feedback loops, while video amplifiers are typically transistor pairs inside 40-dB feedback loops. In these applications, a 2:1 change in the gain characteristic of any active component will have negligible effects on overall circuit performance.

The advantages of push-pull, cascode, and complementary symmetry circuits are exploited to provide low distortion, wide bandwidth, and high signal handling capability. Current-sourcing techniques are also employed as a means of minimizing distortion that otherwise can result from operating semiconductor junctions over wide current ranges.

TeleMation engineers also have successfully coped with capacitor leakage (another source of long-term drift) in the *precision* series designs. Capacitors are either operated with minimum DC voltage drop or the effects of increased leakage with age are otherwise eliminated, as in the TVA-524 and TVA-525 video distribution amplifiers where the capacitance of a small capacitor having extremely low leakage current is "amplified" by a high-gain op amp; the result—longer time constant, less tilt, and greatly improved long-term stability.

Our TVA-525 video distribution amplifier, whose performance characteristics are listed below, is a representative application of the quality and stability factors inherent in the *precision* series product.

TVA-525 PERFORMANCE SPECIFICATIONS

	TYPICAL	PUBLISHED
Differential Phase @ 3.58 or 4.43MHz	0.12°	0.2°
Differential Gain @ 3.58 or 4.43MHz	0.11%	0.2%
Frequency Response to 5.5MHz	0.05 dB	0.1 dB
Frequency Response to 10MHz	0.20dB	0.25dB
Hum and Noise	72dB	66dB
Distortion, 50Hz Squarewave DC Mode	.1%	<.15%
Distortion and Tilt, 50Hz Squarewave AC Mode	.20%	<.25%
Output return loss @ 5.5 MHz	38dB	35dB
Input return loss @ 5.5 MHz	43dB	40dB
Bounce and Overshoot DC Mode	1%	—
Bounce, AC Mode (Monotonic)	8 sec.	5 sec.
Overshoot, AC Mode	None	None
K Factor	.25%	0.5%
Input Offset Compensation Range	>3VDC	>2VDC
Common Mode Rejection, 60Hz	>70dB	>60dB
Common Mode Rejection, 5MHz	>43dB	>40dB

A functional schematic of this amplifier along with a product description is available on request. We suggest you compare this circuit to that of any competitive product. We feel you will agree that the stability and long-term quality performance intrinsic to our *precision* design will justify whatever small additional initial cost might be involved through including such quality electronic devices in your broadcast system.



TeleMation

P.O. BOX 15068, SALT LAKE CITY, UTAH 84115
(801) 487-5399, TELEX: 388-352

CLEAN UP YOUR AUDIO



WITH 30 DB NOISE REDUCTION AND 10 DB EXTRA HEADROOM

With dbx Model 142 noise reduction in the rack, you can:

- Nearly double the usable signal-to-noise ratio of your cartridge chain, studio master recorder, line and program amps, full-frequency land lines, and micro-wave links.
 - Make original tapes completely free of hiss or background noise on open reel, cartridge, or cassette format.
 - Duplicate tape through three or more generations without audible noise build-up.
- dbx noise reduction linearly compresses audio signals by a 2:1 ratio at the front end and produces an exact mirror image 1:2 expansion at the terminus of the audio chain.

True RMS level sensing circuitry insures perfect encode/decode tracking over a dynamic range well in excess of 100 dB irrespective of phase shifts in the transmission or storage medium. There is no breathing, pumping, or other coloration of the sound with dbx noise reduction, and there are no pilot tones or calibration levels to worry about.

dbx Model 142 provides two channels of broad-band audio noise reduction in excess of 30 dB coupled with an additional 10 dB increase in headroom for all components and lines included within the noise reduction loop.

For complete product information and list of demonstrating dbx dealers, circle reader service number or contact:

dbx dbx, Incorporated
296 Newton Street
Waltham, Mass. 02154
617/899-8090

Circle 150 on Reader Service Card

THE SOURCE '75

**TELEDYNE BIG BEAM 290 EAST PRAIRIE
CRYSTAL LAKE IL 60014** 815 459-6100
emergency lighting

**TELEDYNE CAMERA SYSTEMS 131 N
FIFTH AVE ARCADIA CA
91006** 213 359-6691
video film recording systems

**TELEDYNE ENERGY SYSTEMS 110 W
TIMONIUM RD TIMONIUM MD
21093** 301 252-8220
power supplies for remote applications VS

**TELE-CINE INC 294 E SHORE DR
MASSAPEQUA NY 11719** 516 798-2828
motorized pan & tilt heads; pan heads;
tripods; pedestals; motorized lenses; camera
housings; remote camera control systems

**TELEMATION INC PO BOX 15068 SALT
LAKE CITY UT 84115** 801 487-5399
TV cameras mono; TV film cameras;
telecine chains; character gens; encoders,
sync gens; routing switchers; source
identifiers, frame synchronizers, VTRs,
helical (cassettes); audio consoles,
processing amplifiers; pulse & distribution
amplifiers; special effects generator; video
cassette units; colorizers; TV event display
system VS

See ad on pg. 81—refer to rep/dist section

Calif TM 375 Beach Rd Burlingame
94010 415 348-3322

Ill TM Koenig & Strey Center 1948-B Lehigh
Rd Glenview 60025 312 729-5210

Mass D'Lefebvre 19 Francine Dr Holliston
01746 617 429-5858

**TELE-MEASUREMENTS INC 145 MIAN
AVE CLIFTON NJ 07014** 201 473-8822
test slide projectors; test slides for b/w &
color camera alignment

**TELEMEDIA ELECTRONICS 1548 W
WINTON HAYWOOD CA
94545** 415 783-3311
automatic videocassette playback equipment;
tone generators; digital clock VS

**TELEMET 185 DIXON AVE AMITYVILLE
NY 11701** 516 842-2300
multiburst, stairstep, window, waveform
generators; video distribution amplifiers;
envelope delay measuring equip; VITS
keyers; video switching systems; TV
demodulators cable TV modulator &
demodulators; chroma keyers; image
enhancers; video processing amplifiers; TV
test equip; audio monitors VS

See ad pg. 17—refer to rep/dist section

Calif TEL P.O. Box 2443 Riverside
92506 714 683-0641
Robert B. Daines 1261 Lel Curtola Walnut
Creek 94595 415 938-8887

NY TEL Easthill RFD #3 Brewster
10509 914 279-3231

Ohio TEL 12992 Cedar Rd Cleveland Heights
44118 216 321-7523

Tex TEL 13620 Littlecrest Dr Dallas
75234 214 241-0928
SOUTHEASTERN REGION call 516
842-2300

**TELEPHONICS 770 PARK AVE
HUNTINGTON NY 11743** 516 549-6000
cordless stereo headphones

**TELESTRATOR INDUSTRIES INC 166 E
SUPERIOR ST CHICAGO IL
60611** 312 943-1200
electronic video graphic systems

**TELEVISION EQUIPMENT ASSOCIATES
BOX 1391 BAYVILLE NY 11709** 516
628-8068
communications headsets; intercom systems;
video-tape cleaners; video delay lines; video
envelope correctors; color monitor
comparator; video test slides VS

**TELEVISION PRODUCTS CO INC 9016
AVIATION BLVD INGLEWOOD CA
90301** 213 776-3276
camera pedestals VS
See ad pg. 114

TELEVISION RESEARCH INTERNATIONAL
 INC 1003 ELWELL CT PALO ALTO CA
 94303 415 961-7475
 video tape editing equip

TELEVISION TECHNOLOGY CORP 9150
 BROOKVILLE RD SILVER SPRINGS MD
 20910 301 565-0770
 TV & FM translators; rf amplifiers VS

TELEX COMMUNICATIONS INC 9660
 ALDRICH AVE SO MINNEAPOLIS MN
 55420 612 884-4061
 headsets, tape recorder/players, tape
 cartridge recorder/players, tape duplicators VS

TELONIC ALTAIR PO BOX 277 LAGUNA
 BEACH CA 92652 714 494-9401
 test instruments; rf attenuators; test equip
 for CATV; rf generators; impedance bridges;
 dB meters VS

TENTEL 50 CURTNER AVE CABELL CA
 95008 408 377-7588
 magnetic tape tension guage VS
 See ad pg. 142

TERRACOM DIV OF CONIC CORP 9020
 BALBOA AVE SAN DIEGO CA
 714 278-4100
 microwave equip VS

TEXAS ELECTRONICS INC PO BOX
 7225-INWOOD STATION DALLAS TX
 75209 214 827-3033
 meteorological (weather) monitoring equip

TEXSCAN CORP 2446 N SHADELAND
 AVE INDIANAPOLIS IN
 46219 317 357-8781
 audio attenuators & switchers; coaxial
 attenuators & switchers; signal generators,
 sweep generators, oscilloscopes, spectrum
 analyzers, impedance bridges, cable TV
 system analyzers, tunable filters, VHF/UHF
 tuner test equip, test accessories &
 terminators VS

TEXWIPE THE CO 51 PROSPECT PLACE
 HILLSDALE NJ 07642 201 664-0555
 cleaners for tape heads VS

THALNER ELECTRONIC LABS 7235
 JACKSON RD ANN ARBOR MI
 48103 313 761-4506
 character generators; special effect
 generators; pulse & distribution amplifiers;
 sync generators VS

THERMODYNE INT. LTD 12600 YUKON
 AVE HAWTHORNE CA
 90250 213 679-0411
 reusable shipping & handling containers VS

THETA-COM PO BOX 9728 PHOENIX AZ
 85068 602 944-4411
 CATV trunk, distribution amplifiers;
 distribution passives; head-end signal
 processors to other equip; microwave equip;
 cross-mod analyzers; information display
 systems VS

THOMSON-CSF INC 75 ROCKEFELLER PL
 NEW YORK NY 10019 212 977-2200
 video cameras; video discs; color flying spot
 scanner; flying spot telecine; camera
 telecine chain; TV transmitters VS

THOMSON-CSF LABORATORIES INC 37
 BROWNHOUSE RD STAMFORD CT
 06902 213 327-7700
 audio distribution amplifiers; audio
 processing amplifiers; character generators;
 chroma keyers; color correctors; color
 encoders; telecine equipment; image
 enhancer; video processing amplifiers; pulse
 & distribution amplifiers; sync generators;
 video cameras; video test generators VS
 See ad pg. 21—refer to rep/dist section
 Midwestern Reg. Sales Office
 Mo 4233 Barcelos Dr St Louis Mo
 63129 314 487-2450

TIME & FREQUENCY TECHNOLOGY INC
 3000 OLCOTT ST SANTA CLARA CA
 95051 408 246-6365
 digital clocks, master clocks; frequency
 counters; remote digital displays; frequency
 monitors; modulation monitors; SCA
 monitors; standard time & frequency

continued on page 84

PLC-4 Magazine

The most advanced design in 16mm 400 ft. magazines.

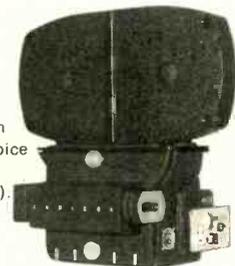


FEATURES:

- The PLC-4 magazine is made of extremely lightweight, glass-filled Lexan®, a material with greater impact strength than magnesium.
- Hinged magazine doors provide quick access for fast loading and unloading.
- Two thumb-activated latches on each magazine door guarantee positive safe closure.
- Compartment-type magazine design permits the use of either 200 ft. or 400 ft. darkroom cores or daylight-loading spools.
- The relatively square configuration of the compartment makes it easy to remove a daylight-load spool.
- Magazine may be fastened to the camera by conventional screwdown methods or the unique Cinema Products snap-latch technique.
- The molded plastic PLC-4 magazine completely eliminates the problem of film spotting caused by particles of magnesium adhering to the emulsion and then reacting in the developing bath.
- The PLC-4 magazine is extremely silent in operation.



PLC-4 Magazine
 shown mounted on a
 CP-16R Reflex camera.



PLC-4 Magazine
 shown mounted on
 an Auricon CineVoice
 Camera (400 ft.
 Conversion model).

MAGAZINE COMPATIBILITY

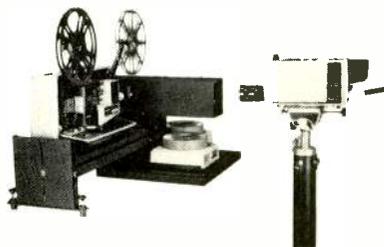
PLC-4 MAGAZINES ARE COMPATIBLE WITH ALL 16MM CAMERA SYSTEMS
 WHICH ACCEPT STANDARD 400 FT. MITCHELL-TYPE MAGAZINES.

For further information, please write to:

cinema E products
 CORPORATION

Technology in The Service Of Creativity

2037 Granville Avenue, Los Angeles, California 90025
 Telephone: (213) 478-0711 ■ Telex: 69-1339 ■ Cable: Cinedevco

BUHL**A FILM CHAIN
WITHOUT
A DEDICATED CAMERA****MOBILE MULTIPLEXER!**

Save the high cost of an extra color camera
Studio camera adapts to film chain
use in seconds

Use standard TV zoom lens

Input: Two 35mm slide projectors in
dissolve mode plus 16mm or Super-8

Mobile Multiplexer saves studio space
At \$975.00,

out performs units at twice the price!

For complete technical details--
Contact Buhl.

BUHL OPTICAL
1009 Beech Avenue
Pittsburgh, Pa. 15233
Phone 412 321 0076

BUHL

Circle 152 on Reader Service Card

**RAPID-Q^{T.M.}
CART MACHINES**

RQ 71 Series for all size cartridges
**Custom 3000 Series for "A" size
cartridges**



- Record/Playback
- Playback Only
- Single Units
- Multiple Units
- Monaural
- Stereo

Automatic fast-forward standard

GARRON ELECTRONICS, INC.
1216 Kifer Road
Sunnyvale, California 94086
(408) 736-8737

Circle 153 on Reader Service Card

THE SOURCE '75

receivers; EBS receivers, EBS
encoders/decoders VS
See ad pg. 136—refer to rep/dist section

**TIMES WIRE & CABLE CO 358 HALL AVE
WALLINGFORD CT 06492 203 265-2361**
CATV cable & wire

**TOCOM INC 3301 ROYALTY ROW IRVING
TX 75062 214 438-7691**
CATV trunk, distribution amplifiers; head-end
processors; connectors; distribution passives;
two-way cable communication systems VS

**TOMCO COMMUNICATIONS INC. 2399
CHARLESTON RD. MOUNTAIN VIEW, CA
94043**
pre-amps, converters for CATV

**TOPAZ ELECTRONICS 3855 RUFFIN RD
SAN DIEGO CA 92123 714 279-0111**
power supply converters, uninterruptible
powersystems, power isolators

**TRACOR INC 6500 TRACOR LANE
AUSTIN TX 78721 512 926-2800**
automatic, crystal frequency standards

**TRANS-LUX CORP 625 MADISON AVE
NEW YORK NY 10022 212 751-3110**
rear projection screens VS

**TRANSOUND INC 13733 GLEN OAKS
BLVD SYLMAR CA 91342 213 367-6543**
electret condenser microphone VS

**TREISE ENG INC 1941 FIRST ST SAN
FERNANDO CA 91340 213 365-3124**
motion picture film processors; film cleaners
VS

**TREPAC CORP OF AMERICA 30 WEST
HAMILTON AVE ENGLEWOOD NJ
07631 201 567-3810**
audio/video automatic line program alarm

**TRI-EX TOWER CORP 7182 RASMUSSEN
AVE VISALIA CA 93277 209 732-8383**
self-supporting, guyed towers; portable
towers VS

**TRIPLETT CORP 286 HARMON RD
BLUFFTON OH 45817 419 358-5015**
vu & dB meters; unimeters; voltmeters;
multimeters VS

**TROMPETER ELECTRONICS INC 8936
COMANCHE AVE CHATSWORTH CA
91311 213 882-1020**
coax, twinax, triax cable patching equip;
coax, twinax switching matrices VS

**TUCKER ELECTRONICS CO PO BOX 1050
GARLAND TX 75040 214 494-2326**
audio, rf test equip

U

**ULTRA AUDIO PRODUCTS/PIXTEC BOX
921 BEVERLY HILLS CA
90213 213 849-1433**
audio consoles; rewinders; video picture
monitors; videotape cleaners; prompters,
titling equip; waveform monitors; pulse cross
monitors, vectorscopes VS
See ad pg. 132—refer to rep/dist section

**UMC ELECTRONICS CO SENSTROL DIV
460 SACKETT PT RD NORTH HAVEN CT
06473 203 288-7731**
hysteresis synchronous motors; splice
finders; tape erasers VS

**UNIDYNE CORP (RADONIC DIV) 981
SCOTT ST NORFOLK VA
23513 804 855-1089**
business automation systems for radio & TV

**UNIMEDIA RTE 2 PO BOX 2574E AUBURN
CA 95603 916 272-1971**
video picture monitors; demodulators;
speaker amplifiers VS

See ad pg. 24—refer to rep/dist section
**UNION CONNECTOR CO INC 149A
BABYLON TPK ROOSEVELT NY
11575 516 623-7461**

patch terminals; heavy duty
plugs/connectors VS

**UNITED RECORDING ELEC IND (UREI)
11922 VALERIO ST N HOLLYWOOD CA
91605 213 764-1500**

audio consoles; amplifier & equalizer
modules for audio consoles;
compressor/limiters VS
See ad pg. 131—refer to rep/dist section

**UNITED RESEARCH LAB CORP 681 FIFTH
AVE NEW YORK, NY 10022 .. 212 751-4660**
professional tape recorders; rebuilds of
Ampex, Scully, etc

**UNITED PRESS INTL 220 E 42ND ST NEW
YORK NY 10017 212 682-0400**
newswire service; cable newswire VS

**UNITED SYSTEMS CORP (MONSANTO)
918 WOODLEY RD DAYTON OH
45403 513 254-6251**
frequency counters, counter-timers; digital
clocks; digital voltmeters; frequency
converters, frequency synthesizers; pulse,
sine, square-wave generators; time base
generators VS

**U S PIONEER ELECTRONICS CORP 75
OXFORD DR MOONACHIE NJ
17074 201 935-4300**
tape recorders; head sets; microphones;
stereo monitor receivers VS

**UTILITY BODY CO 901 GILMAN ST
BERKELEY CA 94710 415 524-9333**
aerial lifts VS

**UTILITY PRODUCTS CO 6665 N 60 ST
MILWAUKEE WI 53223 414 353-1010**
buried cable closures VS

**UTILITY TOOL CORP TOWN ST E HADDA
CT 06423 203 873-8687**
hand & machine-powered tools for cable
preparation

**UTILITY TOWER CO PO BOX 12027
OKLAHOMA CITY OK
73112 405 946-5551**
antennas & towers for AM, FM, TV &
microwave VS

V

**VAMCO ENGINEERING BOX 7512 TULSA
OK 74105 918 252-4142**
digital tape timers; clock systems;
distribution amplifiers VS

**VARIAN ASSOC ELECTRON DEVICE
GROUP 611 HANSEN WAY PALO ALTO
CA 94303 415 591-1710**
power vacuum tubes; rf switches; sockets,
klystrons; TWTs; microwave components;
xenon lighting; cooling equip VS

**VARIAN/BERERLY MICRO-LINK
PRODUCTS 8 SALEM ROAD BEVERLY MA
01915 617 922-6000**
ITFS & MDS microwave & systems;
microwave rf if components, assemblies &
subsystems; exciters, modulators, TV
translators VS

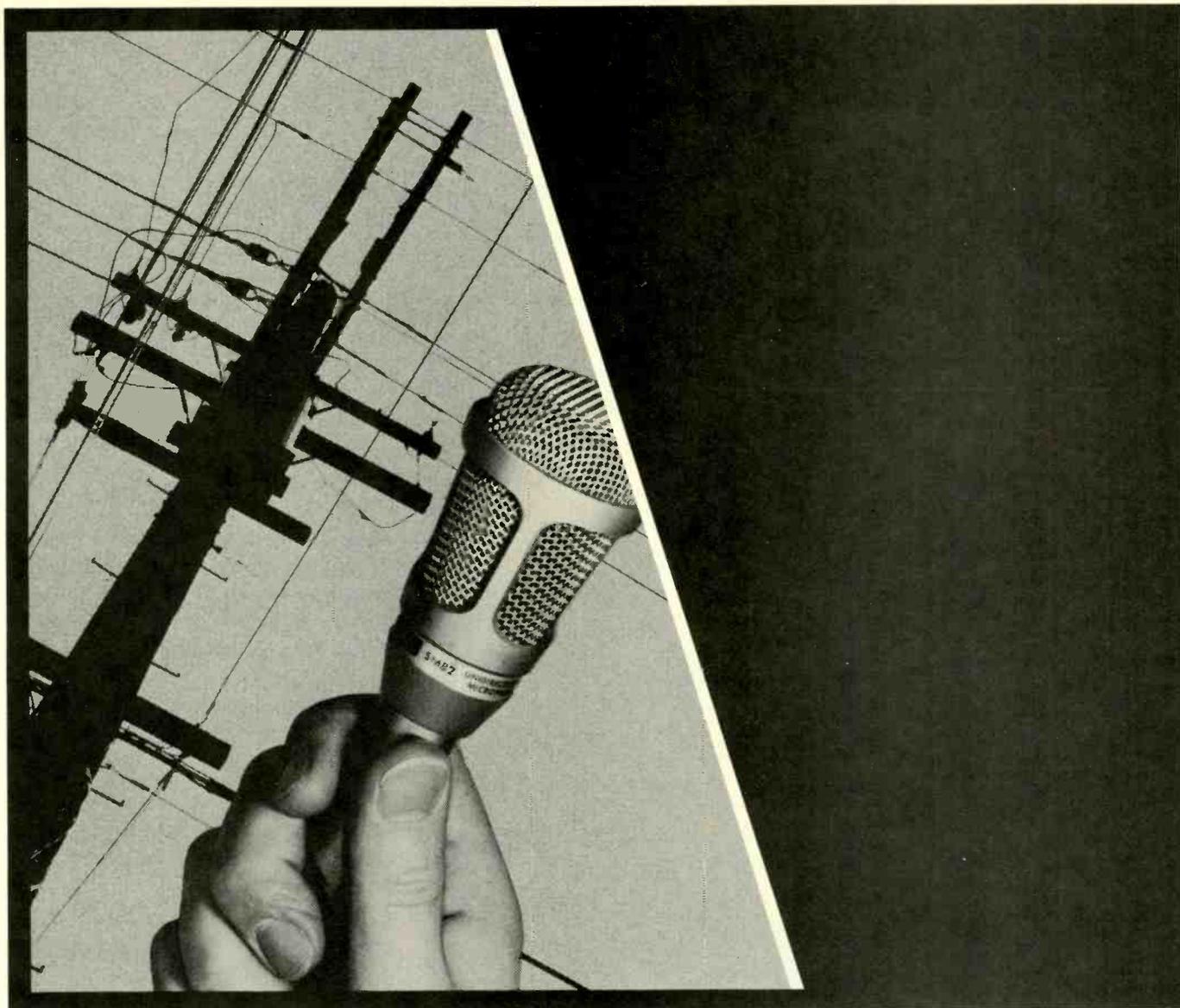
**VEDCO INC 2320 N WOODLAWN AVE
METAIRE LA 7001 504 885-9010**
routing switchers; a/v distribution amplifiers

**VEGA ELECTRONICS 3000 W WARNER
AVE SANTA ANA CA 92704 .. 714 540-0222**
wireless microphone systems; wireless
microphone accessories VS

**VICON INDUSTRIES 130 CENTRAL AVE
FARMINGDALE NY 516 293-2200**

**VIDEO AIDS CORP OF COLORADO 112 W
FOURTH ST LOVELAND CO
80537 303 667-3301**
sync generators; cross pulse generators;
burst phase meter; monitors; videotape
editors; intercom VS
See ad pg. 104

VIDEO CONCEPTS INC 3715 LOMITA
continued on page 87



Hand-held hotline.



Finally there's a microphone that follows the news wherever it goes—to the end of a mile-long parade or to the center of a championship golf course. The new Shure SM82 super-rugged microphone—with its own built-in, line-level amplifier—is the long-distance hotline designed for broadcasting. Used with a telephone line or voice coupler, the SM82 becomes a complete remote amplifier/microphone with line-level output and a self-contained peak limiter to prevent overloading. All in the new Shure SM82, the long hotline for the short deadline.

Shure Brothers Inc.
222 Hartrey Ave., Evanston, IL 60204
In Canada: A. C. Simmonds & Sons Limited



Manufacturers of high fidelity components, microphones, sound systems and related circuitry.

Circle 154 on Reader Service Card

How flat is each input on your console? What about distortion? Noise? Crosstalk?



Your answers to these and lots of other questions come easily with modern Spectrum Analysis. Quickly and effectively you can do your audio maintenance, testing and monitoring. Do your audio proofs of performance too, with a 5L4N Spectrum Analyzer and a few related instruments.

Transmitter maintenance, antenna testing and rf proofs are easily handled with the 7L12 Spectrum Analyzer.

Two new booklets describe FM/AM broadcast measurements using the 5L4N and 7L12 Spectrum Analyzers. Step-by-step instructions are included. Ask for your copies.

Write: Tektronix, Inc., Box 500A, Beaverton, Oregon 97077. In Europe, write: Tektronix Limited, P.O. Box 36, St. Peter Port, Guernsey, Channel Islands.

- Send me a copy of AM Broadcast Measurements.
- Send me a copy of FM Broadcast Measurements.
- Have a Field Engineer contact me.

NAME _____

TITLE _____

STATION OR COMPANY _____

ADDRESS _____ PHONE _____

CITY _____ STATE _____ ZIP _____



TEKTRONIX®

*committed to
technical excellence*

Circle 155 on Reader Service Card

SEPTEMBER, 1975—BM/E

THE SOURCE '75

BLVD TORRANCE CA

940505 213 373-8539
cross pulse generator; videotape editor;
digital clock timer; small video switcher VS

VIDEO DATA SYSTEMS 657 OLD WILLETS PATH HAUPPAUGE NY

11787 516 234-1010
character generators; TV titling & data
display systems VS

VIDEOMAX CORP 154 SAN LAZARO AVE SUNNYVALE CA

94086 408 739-5391
rebuilt video recording heads & headwheel
assemblies VS

see ad pg. 25—refer to rep/dist section

Calif 7020 Delco Ave Canoga Park
91306 213 980-7927
Md 13708 Stoner Dr Silver Spring
20904 301 384-4733
NJ 552 Wyndham Rd Teaneck
07666 212 947-8031

VIDEO MEMORY CORP 3070 KENNETH ST SANTA CLARA CA 95050

..... 408 246-5820
broadcast quality helical VTR

VIDEO SENTRY SYSTEMS 1080 RTE 46 CLIFTON NJ 07013

..... 201 777-7600
video/audio TV program loggers

THE VIDEO TAPE CO 4212 LANKERSHIM BLVD N HOLLYWOOD CA

..... 213 985-1666
reprocessed videotape; videotape cleaning &
evaluation; tape accessories VS

See ad pg. 132

VIDEOTEK INC 640 E VINE ST

STOWE PA 215 582-2053
9-in color monitors VS

VIDREEL INC 42 CENTRAL DR

FARMINGDALE NY 11735 516 420-1470
plastic reels & boxes for video & audio tape

VIDTRONICS 855 N CAHUENGA BLVD

HOLLYWOOD CA 90038 213 466-9741
film to tape transfer

VIF INTERNATIONAL BOX 1555 MT VIEW CA 94042

..... 408 739-9740
background music systems; automatic
program intermix units; tape
recorder/players; tape heads; plug-in
amplifier adaptors for Ampex recorders;
audio amp; video program timers VS

VIKRON 4918 WEST 35TH ST

MINNEAPOLIS MN 55416 612 927-7716
magnetic tape heads VS

VINTEN See Listec

VISCOUNT INDUSTRIES LTD 105 E 69TH AVE VANCOUVER BC

V5X-2W9 604 327 9446

video production switchers; pulse &
distribution amplifiers; routing switchers;
special effects generators; chroma keyers VS
see ad pg. 98—refer to rep/dist section

VISUAL EDUCOM INC 4333 S OHIO ST

MICH CITY IN 46360 219 879-8311
CCTV cameras; surveillance video cameras;
picture monitors, video switchers, distribution
amplifiers; sync generators, special effects
generators; tape duplicators; pulse
amplifiers; wire & cable; connectors

VISUAL ELECTRONICS CORP

(See Garron Inc)

VISUAL METHODS INC 5 WORTENDYKE AVE MONTVALE NJ 07645

..... 201 391-7383
TV surveillance cameras; camera lenses VS

VITAL INDUSTRIES INC 3700 NE 53RD AVE GAINESVILLE FL

32601 904 378-1581

TV automation equip; video processing
amplifiers; video production & routing
switchers; video & audio distribution
amplifiers; pulse distribution amplifiers;
special effects generators; chroma keyers

VITEK ELECTRONICS INC 200 WOOD AVE MIDDLESEX NJ 08846

..... 201 469-9400
CATV test equip

The VS designation following the
description of a company's products
indicates that the manufacturer verified to
BM/E in July of 1975 that these products
are in regular production and data on the
product/equipment is on file with BM/E.

W

WARD BECK SYSTEMS LTD. 841

**PROGRESS AVE SCARBOROUGH ONT
M1H 2X4** 416 438-6550
audio consoles; modules; TV intercom VS
See ad cover III

WATERS MANUFACTURING INC

**LONGFELLOW CENTER WAYLAND MA
01778** 617 358-2777
audio attenuators & controls, rotary & slide

WAVETEK INDIANA INC 66 N FIRST AVE BEECH GROVE IN

46107 317 783-3221
CATV test equip; sweep/signal generators,
rf detectors; function, signal, sweep
generators; oscilloscopes; phase meters;
transmission level test set; programmable
waveform synthesizers; test accessories VS

WABASH TAPE CORP 2720 DES PLAINES AVE DES PLAINES IL

60018 312 298-8585
helical-scan video magnetic tape; audio
magnetic tape

WEAVER J A CO 8676 PENNEL DR ST

LOUIS MO 63114 314 997-5555
bonded copper ground rods, ground rod
clamps; jumper clamps

WIDE BAND ENGINEERING CO INC PO

**BOX 21642 PHOENIX AZ
85036** 602 254-1570
rf amplifiers, analyzers; impedance bridges;
directional couplers; power dividers VS

WILKINSON ELECTRONICS INC 701

**CHESTNUT ST TRAINER (CHESTNUT) PA
19013** 215 497-5100
AM & FM broadcast transmitters; audio
consoles; audio compressor/limiters;
distribution amplifiers, equalizers, line
amplifiers; demodulators, exciters, rf
amplifiers; modulation & frequency monitors
see ad pg. 99—refer to rep/dist section VS

WINEGARD CO 3000 KIRKWOOD ST

BURLINGTON IA 52601 319 753-0121
CATV antennas, accessories; home system
amplifiers

WORLD VIDEO INC PO BOX 117

BOYERTOWN PA 19512 215 367-6055
broadcast & CCTV one-gun (Trinitron) color
monitors; demodulators VS
See ad pg. 128—refer to rep/dist section

X

XCELITE INC 118 BANK ST ORCHARD PARK NY 14127

wire stripping tools, hardware

Y

YARDNEY ELECTRIC CORP 82 MECHANIC ST PAWCATUCK CT 02891

..... 203 599-1100
silver, zinc & cadmium batteries; chargers,
high intensity lights VS

Z

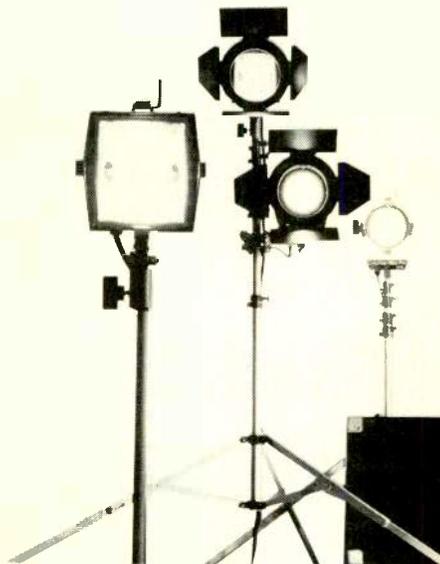
ZEI-MARK CORP PO BOX 182

BROOKFIELD CENTER CT 06805
optical multiplexer; neutral density wheel;
telescope film chain with preview; film chain
adapters for 16 mm & super-8 mm film
projectors

ZOOMAR INC 55 SEA CLIFF AVE GLEN COVE NY 11542

..... 516 676-1900
optics; optical instruments

Get a better Bang for your buck! Colortran.[®] Pro-kit IV



a

complete 4 light kit for \$695.

Berkey Colortran 

1015 Chestnut St. Burbank, Ca. 91502 • 213 843-1200

Circle 156 on Reader Service Card



Independent Broadcast Reps/Distributors

Including cross reference to companies
whose products are advertised

ALABAMA

ADAMS & ASSOCS
P.O. Box 26119
Birmingham 35226
Line: audio equip

BCS ASSOCS
3322 S. Memorial Pkwy.
Huntsville 35803
205-881-6220
Line: video products
TFT see ad p 136

CALHOUN CO. INC.
240 Oxmoor Circle Suite 102

Birmingham 35209
205-870-7620
Line: full line video equip
CVS see ad p 122
Lenco Electronics see ad p 79
Strand Century see ad p 102

JAMES W. CLARY CO.
1713 Second Ave. So.
Birmingham 35233
205-322-2486
Line: audio components

GRICE ELECTRONICS
3696 Airport Blvd.
Mobile 36608
Line: video equip
AKAI see ad p 13

LEE ASSOCS.
817 Wheeler Ave.
Huntsville 35801
205-533-5896
Line: test instruments
Marconi see ad p 119

THE MAZE CORP.
P.O. Box 6636
Birmingham 35210
205-591-4800
Line: full line broadcast (radio & TV)
& recording equip
Inovonics see ad p 134

POWELL ELECTRONICS
3906 Jackson Hwy.
P.O. Box 369

Sheffield 35660
205-383-3330
Line: video products
AKAI see ad p 13

PROFESSIONAL REPS
804 Floral Ave.
Opelika
205-745-2192
Line: audio and video products

SIGNAL ENGINEERING & SALES
P.O. Box 10167
Birmingham 35202
206-595-5855
Line: audio & video systems
CVS see ad p 122
TeleMation see ad p 81

JESS SWICEGOOD
P.O. Box 1741
Dothan 36302
205-794-7944
Line: audio equip; transmitters

ALASKA

HARRY J LANG & ASSOCS.
1406 W. 47th Ave.
Anchorage 99501
907-279-5741
Line: audio & video equip
McMartin Industries see ads pgs
18, 65, 90 & 135

NORTHERN VIDEO SYSTEMS INC.
4600 Business Park Blvd.
Anchorage 99503
907-279-5571
Line: full line audio & video equip
CVS see ad p 122
Lenco Electronics see ad p 79
TeleMation see ad p 81

ARIZONA

MOXON ELECTRONICS
4210 N. Brown Ave.
Scottsdale 85251
602-945-3737
Line: test instruments
Marconi see ad p 119

PACKER SALES CO.
855 E. Plaza Ave.
Scottsdale 85253
602-949-9443
Line: audio equip
AKG see ad p 51

POLARIS LABORATORIES
4446 N. 36th St.
Phoenix 85018
602-956-6281
Line: audio equip

PERSPECTIVE MEASUREMENTS
7244 E. Indian School Rd.
Scottsdale 85252
602-947-3860
Line: video systems

ROH'S INC.
4553 E. Broadway
Tucson 86711
602-327-5929
Line: full line video equip, CCTV
systems
AKAI see ad p 13
Lenco Electronics see ad p 79

ARKANSAS

ALLIED SOUND VISUAL ED. INC.
3520 W. 69th St. Suite 306
Little Rock 72209
501-568-2294
Line: full line video equip
CVS see ad p 122
Lenco Electronics see ad p 79

CARLTON BATES CO.
6821 Scott Hamilton Dr.
Little Rock 72209
501-562-9100
Line: audio and radio products

PAUL JAMESON
Magnolia
501-234-3778
Line: attenuators
Tech Labs see ad p 90

SUDBURY WHOLESALE CO.
P.O. Box 989
Blytheville 72315
501-762-2093
Line: audio components
Stanton Magnetics see ad p 34

CALIFORNIA

ACCURATE SOUND CO.
114 5th Ave.
Redwood City 94063
415-365-2843
Line: full line of audio equip
Innovonics see ad p 134

AITKEN COMMUNICATIONS
701 S. 10th St.
Taft 93268
805-765-5403
Line: audio components
Stanton Magnetics see ad p 34

ANIXTER-PRUZAN
2228 S. Ritchey
Santa Ana 92705
714-556-6270
Line: Sony studio video equip, cable construction accessories, tools, headend, passives, test equip, power supplies

ARCAL SOUND & VIDEO
2001 El Camino Ave.
Sacramento 95821
916-927-4502
Line: audio components, lighting equip
Strand Century see ad p 102

AUDIO INDUSTRIES CORP.
1419 N. LaBrea Ave.
Hollywood 90028
Line: audio components, equip

AUDIO VIDEO CRAFT
7710 Melrose Ave.
Los Angeles 90046
213-655-3511
Line: a/v equip
AKAI see ad p 13

TOM AYE ASSOCS.
766 The Dalles
Sunnyvale 94087
408-738-1406
Line: audio components, full line radio equip

Control Design see ad p 63
Stanton Magnetics see ad p 34

B&L SALES
4312 Colfax Ave.
Studio City
Line: audio products

BROADCAST AUDIO ASSOCS.
5905 Jurupa Suite A
Riverside 92504
714-453-3255
Line: full line of audio equip
Inovonics see ad p 134

BROADCAST COMMUNICATIONS DEVICES INC.
5526 E. LaPalma Ave.
Anaheim 92807
714-528-9505
1850 Warburton Ave., Suite 203
Santa Clara 95050
408-984-6614
Line: full line audio & video equip
Computer Image see ad p 11
Datatek see ad p 75
Dolby see ad p 121
Stanton Magnetics see ad p 34
Thomson-CSF Labs see ad p 21
TFT see ad p 136

BROADCAST ENGINEERING
1259 Callens Rd.
Ventura 93003
Line: audio components
Stanton Magnetics see ad p 34

CAMEX CORP.
6362 Hollywood Blvd.
Hollywood 90028
213-464-0174
Line: full line of radio equip
Control Design see ad p 63

CMC TECHNOLOGY
733 Pastoria Ave.
Sunnyvale 94086
408-245-3345
Line: video equip
AKAI see ad p 13

COAST RECORDING EQUIP.
6114 Santa Monica Blvd.
Hollywood 90038
213-462-6058
Line: audio equip
Inovonics see ad p 134

DOBBS-STANFORD CORP.
569 Laurel St.
San Carlos 94070
415-592-5948
Line: sound systems

DYNAMIC ASSOC.
2500 S. La Cienga Blvd.
Los Angeles
213-837-9123
Line: measuring equip monitors, TBC char generators

EDUCATIONAL ELECTRONICS OF CALIFORNIA
Suite #8
90 Glen Way
Belmont 90004
415-592-5713
Line: CCTV video systems

EDUCATIONAL ELECTRONICS OF CALIFORNIA
936 West Florence Ave.
Inglewood 90301
213-674-5595
Line: CCTV video systems

BRYANT W. ELLIS BROADCAST, CARTRIDGE SERVICE
1227 N. Vine St.
Hollywood 90038

213-464-5108
Line: broadcast cartridge sales, re-loading, service
Aristocart see ad pg 136

EQUINOX SALES CO.
210 N. Richman Ave.
Fullerton 92632
714-879-3190
Line: audio & sound systems
Stanton Magnetics see ad p 34

EVANS MARKETING CO.
1438 Rollins Rd.
Burlingame
415-432-3030
Line: audio equip

F&B/CECO OF CALIF. INC.
7051 Santa Monica Blvd.
Hollywood 90038
213-466-9361
Line: cameras, lighting equip photo supplies
Cinema Products see ad p 77, 83

HANK GABRIEL
600 16th St.
Oakland 94612
415-465-5361
Line: audio components, equip

ADOLPH GASSER INC.
181 Second St.
San Francisco 94105
Line: camera equip
Cinema Products see ads p 77, 83

GOLDEN STATE SOUND
P.O. Box 9188
Santa Rosa 95405
707-546-7540
Line: audio equip

ALAN GORDON ENTERPRISES INC.
5362 N. Cahuenga Blvd.
Hollywood 91601
Line: cameras, photo equip, lighting equip
Cinema Products see ads p 77, 83
Strand Century see ad p 102

GOTHAM AUDIO CORP.
1710 N. LaBrea
Hollywood 90046
213-874-4447
Line: audio components
Stanton Magnetics see ad p 34

GRAVCO SALES INC.
6515 Sunset Blvd.
Los Angeles 90053
213-462-6618
Line: video amps, proc amps, switchers

BILL HAHN
3639 Wilmington Rd.
Fremont 94538
415-651-2653
Line: video proc amp switchers
Datavision see ad p 125

HELD & MOLLARD INC.
Palo Alto 94303
415-965-9321
Line: audio components
Tech Labs see ad p 90

DAVE HILL
P.O. Box 1589
Burlingame 94010
Line: video proc amp swi
Datavision see ad p 125

H&K SALES CO.
3723 Haven
Menlo Park 94024

415-369-6244
Line: audio components
Superscope see ad p 117

JOHN G. HUMBLE
2011 W. Kattella #44
Anaheim 92804
714-991-1964
Line: audio & video equip
McMartin Industries see ads pgs 18, 65, 90 & 135

KAYTRONICS
1743 W. Vartikian
Fresno 93705
Line: full line radio equip
Control Design see ad p 63

KDH ELECTRONICS
4233 W. Sierra Madre #205
Fresno 93705
Line: audio & video equip
Dynasciences see ad p 96

DAVID LINT ASSOCS.
2444 Old Middlefield Way
Mountain View 94040
408-964-5344
Line: audio equip

MacPHERSON SALES CO.
P.O. Box 5212
Walnut Creek 94596
415-937-1482
Line: audio equip
AKG see ad p 51

MANUFACTURERS REPRESENTATIVE
600 16th St.
Oakland 94612
Line: audio equip

MARSHANK SALES CO.
10455 W. Jefferson Blvd.
Culver City 90230
213-559-2591
Line: audio equip, sound systems
AKG see ad p 51

CHARLES MICHEL
P.O. Box 5218
Redwood City 94063
415-365-6263
Line: camera lenses, full line CCTV video equip, video camera accessories, video editors

THOMAS M. MORRIS ASSOC.
1315 El Soloy Ave.
Campbell 95008
408-377-6600
Line: audio components

MOUTHROP SALES INC.
1530 East 12 St.
Oakland 94606
415-261-7676
Line: audio components

MOXON ELECTRONICS
17801 B. Sky Park Circle Dr.
Irvine 92707
714-556-6500
2376 Walsh Road
Santa Clara 95050
408-249-2491

7969 Engineer Road
San Diego 92111
714-292-4800
Line: test instruments
Marconi see ad p 119

NEWCRAFT INC.
8383 Wilshire Blvd.
Beverly Hills 90211
213-655-1111
Line: full line of CCTV, video equip
Panasonic see ad pgs 22-23

THE SOURCE '75

OMEGA ASSOCS.

14169 Hawthorne Blvd.
Hawthorne 90250
213-644-3649

Line: video equip

AKAI see ad p 13

Lenco Electronics see ad p 79

Telecommunications see ad p 140

PACIFIC RECORDERS & ENG. CORP.

11760 Sorrento Valley Rd.

San Diego 92121

714-453-3255

Line: full line audio equip accessories

Dolby see ad p 121

Inovonics see ad p 134

Stanton Magnetics see ad p 34

PERSPECTIVE MEASUREMENT

7034 Covoy Ct.

San Diego 92111

714-278-8931

Line: video systems

RIGGINS ELECTRONIC SALES

2331 San Anselme

Long Beach 90815

213-596-6247

Line: audio components, equip

Control Design see ad p 63

Stanton Magnetics see ad p 34

SAN DIEGO CAMERA EXCHANGE

1071 6th Ave.

San Diego 92101

Line: film equip

SCAFER INTERNATIONAL

5801 Soledad Mountain Rd.

Lajolla 92037

Control Design see ad p 63

HOWARD C. SCHUSTER

2139 E. Del Amo Blvd.

Compton 90220

213-537-3880

Line: video equip

AKAI see ad p 13

DAVID S. SIEGEL

235 Montgomery St.

San Francisco 94104

415-788-0600

Line: audio and video equip

SIGMA AUDIO SYSTEMS

P.O. Box 2469, H'wood Sta.

Hollywood 90038

213-462-8515

Line: full line of audio equip

Inovonic see ad p 134

SOUND GENESIS INC.

445 Bryant St.

San Francisco 94017

415-391-8776

Line: audio equip

SOUND WEST

5042 Ruffner St.

San Diego 92111

714-560-7727

Line: audio equip

TARRODAYCHIK & ASSOCS

480 E. Arbor Ave.

Sunnyvale 94086

408-739-4262

Line: audio & video equip

TEL-ALPHA

358 Matthew St.

Santa Clara 95050

408-247-0911

Line: full line video equip

Viscount see ad p 98

TOTAL VIDEO SERVICE

4201 LaMirada Dr.

Bakersfield 93309

805-324-7239

Line: video equip

AKAI see ad p 13

TREGO SALES CO.

2239 Benedict Canyon Dr.

Beverly Hills

213-274-8351

Line: audio equip

TRI TRONICS INC.

4019 Tujunga Ave.

N. Hollywood 91604

213-985-6616

Line: video equip

AKAI see ad p 13

Viscount see ad p 98

UNITED SOUND

1811 W. Magnolia Blvd.

Burbank 91506

213-845-7435

Line: audio components, equip

VIDEO EQUIPMENT CORP.

7377 Convoy Court

San Diego 92115

714-278-4274

Line: audio & video equip

AKAI see ad p 13

CVS see ad p 122

TeleMation see ad p 81

VIDEOMEDIA

3079 Lawrence Expressway

Santa Clara 95051

408-733-6500

Line: video equip

AKAI see ad p 13

VIDEODETICS CORP.

2121 S. Manchester Blvd.

Anaheim 92802

Line: video equip, lighting equip

Strand Century see ad p 00

VIDEONICS

Santa Clara

408-246-9520

Line: video systems

VIDEO SYSTEMS INC.

12530 Beatrice St.

Los Angeles 90066

213-871-0677

Line: video equip

AKAI see ad p 13

V&L ASSOCIATES

Encino 91316

213-986-9703

Line: audio components

Tech Labs see ad p 90

WESTERN BROADCAST SERVICES

1030 West Evelyn

Sunnyvale 94086

408-738-2100

Line: audio equip, RF monitors

COLORADO

AUDIO-VIDEO SYSTEMS INC.

6440 E. Colfax Ave.

Denver 80220

303-333-0665

Line: full line video equip

Lenco Electronics see ad p 79

B&B ELECTRONICS

884 S. Lipan

Denver 80223

303-934-2123

Line: sound systems

AKG see ad p 51

RON BOWEN & ASSOCS.

1440 S. Santa Fe

Denver 80223

303-744-2501

Line: audio & video equip

Canon USA see ad p 101

Shintron see ad p 111

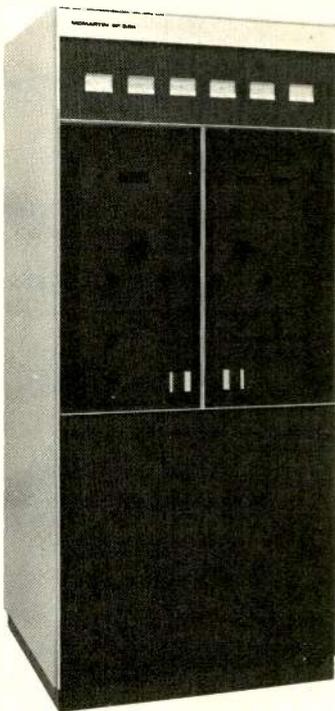
Ultra Audio see ad p 133

CABLE OF AMERICA

6767 E. 50th St.

continued on page 92

the NEW McMARTIN FM TRANSMITTER • BF-3.5K



traditionally, McMARTIN engineering has supplied the AM/FM broadcaster with the finest professional equipment. The new BF-3.5K is one of those products.

excellent efficiency for power output levels from 2000 to 3500 watts.

the high performance solid state B-910 exciter, is the heart of the system

superb bandwidth characteristics and operating stability

optimum stereo and SCA performance — zero bias, grounded grid PA — no neutralization... no screen grid or bias voltage supplies are needed

standard features include illuminated pushbutton switch controls, output reflectometer, memory-type LED status indicators, built-in harmonic filter, remote control capability of metering and operating functions

McMartin

McMartin Industries, Inc. 4500 South 76th Street, Omaha, Nebraska 68127 (402) 331-2000

Circle 157 on Reader Service Card

FREE FROM

Tech Labs



INDUSTRY'S MOST COMPLETE TECHNICAL INFORMATION ON

- ROTARY SWITCHES
- PROGRAMMING SWITCHES
- THUMBWHEEL SWITCHES
- ATTENUATORS

Call or Write For Free Catalog

TECH LABORATORIES, INC

Bergen & Edsall Bldgs., Palisades Park, N.J. 07650
Tel. (201) 944-2221

Circle 158 on Reader Service Card

remote or studio?

JVC's complete color recording system...

On the spot video coverage or preparing a program in the studio . . . the JVC PV/GC 4800 system keeps you ready for any situation. Grab the camera and 1/2" EIAJ-1 recorder and go into the field with only 28 pounds of equipment and record audio and video in color under battery power.

Or use the same equipment to set up under the lights in your studio for program taping. Add the color camera adaptor provided and tape directly into a 3/4" U video cassette recorder or other video equipment. Either way you'll have a complete system offering high resolution . . . low power consumption . . . and simple operation. Call your video dealer for a demonstration.

JVC Industries, Inc., 50-35 56th Road, Maspeth, N.Y. 11378, Tel.: (212) 392-7100. In Chicago: 3012 Malmo Dr., Arlington Hgts., IL. 60005, Tel.: (312) 593-8997. In Los Angeles: 1011 W. Artesia Blvd., Compton, CA. 90220, Tel.: (213) 537-8230.



PV/4800 EIAJ-1
tape deck for use
with camera.

JVC Best by Design

JVC

JVC INDUSTRIES, INC.

Circle 226 on Reader Service Card
for a demonstration

Circle 227 on Reader Service Card
for a demonstration

JVC Industries, Inc. • 50-35 56th Road
Maspeth N.Y. 11378 • (212) 392-7100
BM/E-95

Please send me information on:

- Complete system
- Camera
- VTR
- Please arrange a demonstration

Name _____

Title _____

Organization _____

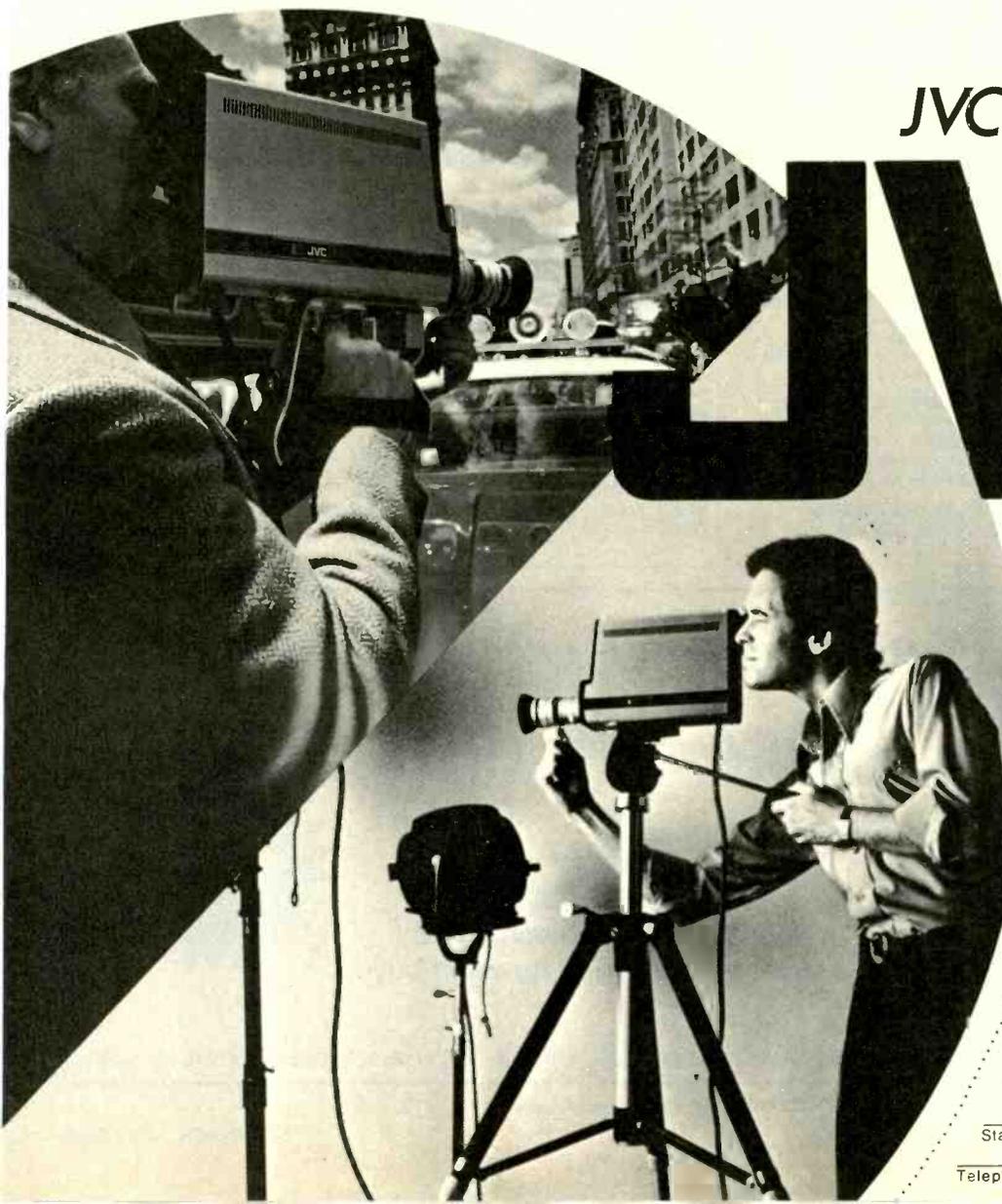
Address _____

City _____

State _____

Zip _____

Telephone _____



THE SOURCE '75

Commerce City 80022
303-287-3497
Line: CATV equip
AKAI see ad p 13

COLORADO NASHVILLE INC.
322 Prairie Road
Colorado Springs 80909
303-473-1272
Line: audio equip

DENVER SOUND SPECIALISTS
5701 N. Logan
Denver 80216
303-573-5611
Line: full line of audio equip
Inovonics see ad p 134

DIDIER/DENVER
P.O. Box 1599
Evergreen 80439
303-674-6000
Line: full line audio & video equip
Computer Image see ad p 11
Datatek see ad p 75
Datavision see ad p 125
Roh see ad p 103
Strand Century see ad p 140
Telecommunications see ad p 140
Thomson-CSF see ad p 21
TFT see ad p 136
World Video Aids see ad p 128

DIDIER/DENVER



We have the EBS solution

Herb Didier · Nick Didier
W.W. Myers
Box 1599
Evergreen, Colorado 80439
(303) 674-6000

ELECTRO TEK
Box 395
Westminster 80030
303-255-4566
Line: audio components, systems

J.A. GEDNEY
476 East 58th Ave.
Denver 80216
303-238-3112
Line: sound systems

GEMINI TELECOMMUNICATIONS
1776 S. Jackson St.
Denver 80210

303-758-8756
Line: audio equip
HIGHLAND ASSOCS.
P.O. Box 99
1380 W. Midway Blvd.
Broomfield 80020
303-466-3851
Line: full line audio & video equip
Control Design see ad p 63
Thomson-CSF Labs see ad p 21

H.P. MARKETING
7342 S. Quince St.
Englewood 80110
303-770-1158
Line: audio equip
UREI see ad p 131

PLS ASSOCS.
7418 E. Princeton Ave.
Denver 80237
303-771-0140
Line: test instruments
Marconi see ad p 119

SATTER SALES CO., INC.
4100 Dahlia
Denver 80207
303-399-7493
Line: audio components
Superscope see ad p 117

CONNECTICUT

JOHN B. ANTHONY
992 High Ridge Rd.
Stamford 06905
203-322-9202
Line: full line audio equip
AKG see ad p 51
UREI see ad p 131

AUDIOTECHNIQUES, INC.
142 Hamilton Ave.
Stamford 06902
203-359-2312
Line: full line audio equip, recording accessories imported and domestic

BURNS ELECTRONIC SECURITY INC.
735 Route 5
S. Windsor 06074
203-528-2186
Line: full line audio & video equip
CVS see ad p 122
Dynasciences see ad p 96
Lenco Electronics see ad p 79
TeleMaton see ad p 81

NELSON-BENNETT ASSOCS
Thomaston 06787
203-283-5959
Line: audio components
Tech Labs see ad p 90

VIDEOPLAY INDUSTRIES
Kingsbury Ave. Box 415

Rockville 06066
Line: lighting equip
Strand Century see ad p 102

DELAWARE

CLEARVIEW ELECTRONICS
P.O. Box 326
Newark 19711
302-368-4000
Line: TV systems

DISTRICT OF COLUMBIA

BRENNER CINE-SOUND
5215 Wisconsin Ave. N.W.
Washington 20015
Line: sound & film equip
Cinema Products see ad pgs 77, 83
Strand Century see ad p 102

CTL ELECTRONICS
6912 4th St. N.W.
Washington 20012
202-726-6767
Line: video equip
AKAI see ad p 13

EMCO INC.
1212 Connecticut Ave. N.W.
Washington
202-638-4381
Line: audio equip

GLENS INDUSTRIAL COMPLEX
6200 Chillum Pl. N.W.
Washington 20011
202-723-1710
Line: video equip
AKAI see ad p 13

PROFESSIONAL PRODUCTS INC.
4964 Fairmont Ave.
Bethesda 20014
301-933-3451
Line: full line video equip
Lenco Electronics see ad p 79

VIDEO ENGINEERING CO.
Washington
202-882-6131
Line: video systems

FLORIDA

BCS ASSOCS. INC.
940 N. Fern Creek Ave.
Orlando 32802

Line: measuring equip, monitors, audio & video equip
TFT see ad p 136

MAC R. BOUGERE ASSOCS.
8716 Palisades Dr.
Tampa 33615
813-886-8553
Line: audio components
Stanton Electronics see ad p 34

F.T.C. BREWER CO.
P.O. Box 8057
Town & Country Plaza
Pensacola 32505
904-433-7932

Line: audio equip, transmitters
Dolby Labs see ad p 121
Inovonics see ad p 134

BROADCAST AUTOMATION
5199 NE 12th Ave.
Ft. Lauderdale 33308
305-776-4762
Line: full line audio & video products
Stanton Magnetics see ad p 34

BROADCAST ENG. CO.
Box 14444
Ft. Pierce 33450
Line: audio products

CONTROLLED TECHNOLOGY INC.
2513 Tortugas Lane
Ft. Lauderdale 33312
305-587-2716
Line: full line audio & video equip
Control Design see ad p 63
Dolby see ad p 121
Roh see ad p 103

EXECUTONE OF WEST CENTRAL FLORIDA
Box 7637
Tampa 33673
813-229-9311
Line: full line audio/video equip

FINE SALES CORP.
12790 N.W. 42nd Ave.
Opa Locka 33054
305-685-6431
Line: video equip
AKAI see ad p 13

FIRESTONE ASSOC.
285 N.E. 185th St.
Hollywood 33021
305-651-3830
Line: audio components, test equip

FLAGLER RADIO CO.
1068 W. Flagler St.
Miami 33130
305-373-6548
Line: audio components, equip
Stanton Magnetics see ad p 34

FLORIDA ELECTRONICS
P.O. Box 15889
Orlando 32808
305-293-4804
Line: audio & video equip



Still the industry's MOST WANTED

VIDEO TAPE TIMER

- Bright LED display
- Optional remote display
- Available for all 2-inch VTRs
- Free evaluation to qualified buyers



RECORTEC, INC. 777 PALOMAR AVE. SUNNYVALE, CA. 94086 TEL: (408) 735-8821 TWX: 910 339 9367

Circle 160 on Reader Service Card

SEPTEMBER, 1975—BM/E

GRICE ELECTRONICS

320 E. Gregory
Pensacola 32501
904-433-4616
Line: full line audio/video equip
AKAI see ad p 13

HARRIS CO.

633 Shenandoah
Miami 33145
Line: audio equip

L.P. HENCH CO.

990 Richmond Ave.
Miami
305-251-4343
Line: audio products

IMAGE DEVICES INC.

811 N.W. 111th St.
Miami 33168
Line: photo cameras
Cinema Products see ad pgs 77, 83

J&B ASSOCS.

380 N.E. 67th St.
Miami 33138
305-751-9752
Line: audio components
Superscope see ad p 117

J&J ELECTRONICS

5855 Johnson St.
Hollywood
Line: video production switchers, pulse & distribution amps, routing switchers, special effects generators
Viscount see ad p 98

LAUDERDALE ELECTRONIC LABS

16 S.W. 13th St.
Ft. Lauderdale 33315
305-525-0478
Line: audio components
Stanton Magnetics see ad p 34

LEE ASSOCS.

P.O. Box 672
Winter Haven 3380
813-294-5815
201 NE 2nd ST.
Ft. Lauderdale 33301
305-525-9767
Line: test instruments
Marconi see ad p 119

JARRELL C. LESTER

4515 South Hale
Tampa 33611
813-932-4365
Line: video equip

LYKES ELECTRONICS CORP.

1800 N.W. 23rd St.
Miami
5426 W. Crenshaw
Tampa 33622
813-886-6621
Line: full line audio & video equip
AKAI see ad p 13

CVS see ad p 122

Dynasciences see ad p 96
Lenco Electronics see ad p 79
Strand Century see ad p 102

MIDWEST**TELECOMMUNICATIONS**

3331 N.W. 82nd Ave.
Miami 33122
Line: audio & video equip
CVS see ad p 122
TeleMation see ad p 81

PHOTOMART

6237 S. Orange Ave.
Orlando 32809
305-851-2780
Line: video equip
AKAI see ad p 13
MORT PRESS
1800 San Souci Blvd.
N. Miami 33161
305-895-2262
Line: video cameras, lenses, video editors

PROFESSIONAL REPRESENTATIVES

709 N. Franklin St.
Tampa 33602
813-223-2911
Line: camera lenses, full line CCTV video equip, video camera equip, video editors

REPELECT

Box 7102
Tampa 33603
813-227-5051
Line: audio & video equip, transmitters
McMartin Industries see ads pgs 18, 65, 90 & 135

REYNOLDS & ASSOCS.

Thomaston 06787
203-283-5959
Line: audio components
Tech Labs see ad p 90

SOUTHEAST ELECTRONICS

1125 Rouselle St.
Jacksonville 32203
904-356-3007
Line: full line of audio/video equip
TeleMation see ad p 81

SPIRE AUDIO VISUAL CO.

24 N.W. 36th St.
Miami 33132
305-576-0844
Line: audio/visual equip
AKAI see ad p 13

WEST COAST ELECTRONICS

5922 60th Ave., N.
St. Petersburg
Line: lighting equip
Strand Century see ad p 102

WORLD WIDE PRODUCTS

P.O. Box 279

Miami 33168

305-754-5475
Line: audio components, equip, tape recorders
AKG see ad p 51

GEORGIA**ADAMS & ASSOCS.**

P.O. Box 877
3719 Stanford Circle
Decatur 30031
Line: audio equip

ALPHA MARKETING

830 W. Peachtree St.
Atlanta 30308
404-881-9595
Line: audio systems

ANIXTER-PRUZAN

4303 Pleasantdale Rd.
Atlanta 30340
404-449-6533
Line: Sony studio video equip, full line of CATV equip, cable construction accessories, tools, head end, passives, test equip, power supplies

ATLANTA FILM EQUIPMENT RENTALS

1848 Briarwood Rd N.W.
Atlanta 30329
Line: video equip
Cinema Products see ads pgs 77, 83

BCS ASSOCS.

2522 Tanglewood Rd.
Atlanta 30033
404-321-0980
Line: full line video equip
TFT see ad p 136

BROADCAST SUPPLY OF

ATLANTA
2971 Flowers Rd. S. Suite 170
Atlanta 30341
404-458-0815
Line: full line audio equip & supplies

CALHOUN COMPANY

121 Forrest Ave. N.E.
Atlanta 30303
404-659-0750
Line: video systems, audio equip, lighting equip
Dynasciences see ad p 96
Lenco Electronics see ad p 79
Strand Century see ad p 102

GRADY DUCKETT SALES

P.O. Box 20967
Atlanta 30329
404-451-3529
Line: audio systems, components
Tech Labs see ad p 90

ELECTRONIC EQUIPMENT INC.

526 Plaster Ave. N.E.
Atlanta 30324
404-873-5841
Line: audio components & equip
Stanton Magnetics see ad p 34

FIDELICOM, INC.

P.O. Box 80644
Chamblee Station
Atlanta 30341
404-458-3616
Line: audio equip, test equip
AKG see ad p 51

GRAVCO SALES, INC.

1644 Tully Cir. N.E.
Atlanta 30301
404-634-0521
Line: video processing equip; switchers

GRAY COMMUNICATIONS

132-38 Pine Ave.
Albany 31702
2128 Faulkner Rd.
Atlanta 30303
Line: audio & video equip, video systems
AKAI see ad p 13
CVS see ad p 122
TeleMation see ad p 81

C. HARRISON ASSOCS.

6695 Peachtree Blvd. #107
Atlanta 30341
404-449-7696
Line: audio & video equip
Shintron see ad p 111
Ultra Audio see ad p 132

J&B ASSOCS.

1782 Marietta Blvd. N.W.
Atlanta 30318
404-351-9816
Line: audio components
Superscope see ad p 117

LEE ASSOCS.

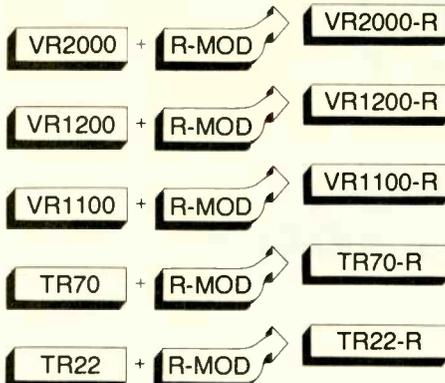
P.O. Box 587
Buford 30518
404-457-7117
Line: test instruments

MAITLAND K. SMITH, INC.

110 Robin Rd. RFD #3
404-971-2831
Line: sound equip

RADFORD ASSOCS.

3203 Lanier Drive
Atlanta 30319
Line: full line audio & video equip
Aristocart see ad p 136
Computer Image see ad p 11
Datavision see ad p 125
McMartin Industries see ads pgs 18, 65, 90 & 135
Roh see ad p 103
Thomson-CSF Labs see ad p 21
continued on page 96



Still the industry's MOST USED

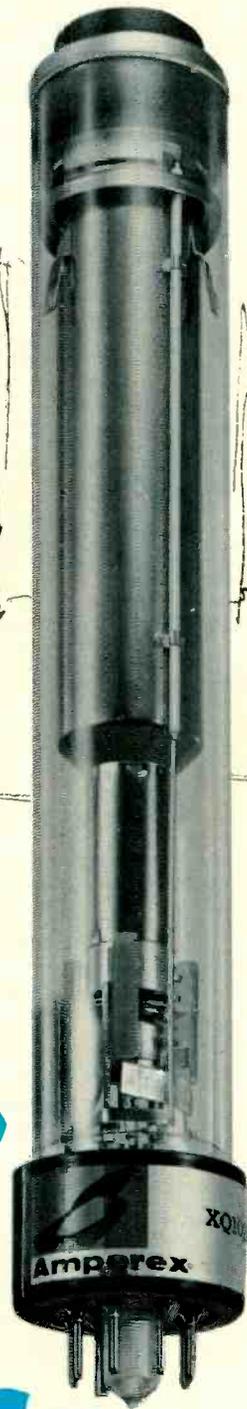
VIDEO TAPE RECORDER

R-MOD is the logical answer to your requirement for automating existing VTRs.

The field installable modification kit upgrades your existing VTR transport to achieve performance like that of the newer vacuum buffered drives.

RECORTEC, INC. 777 PALOMAR AVE. SUNNYVALE, CA. 94086 TEL: (408) 735-8821 TWX: 910 339 9367

Circle 161 on Reader Service Card



**Some day,
somebody
may imitate
the Product...**

...but nobody will ever duplicate the Service!



And in TV Broadcasting, it's the service behind the product...that keeps the product out front

On the way to selling more than 30,000 Plumbicon* TV camera tubes, we learned how important Service is to the broadcaster. The first thing we learned was about availability — No TV station, commercial or educational, can ever afford to shut down an operation while "waiting for parts." Plumbicon tubes are instantly available, at all times, through local franchised distributors and through Amperex factory sales representatives.

And we learned the importance of the name Plumbicon to TV stations who have come to depend on it as their assurance of consistent performance and quality.

Because no product is ever "good enough," we taught ourselves to build smaller and smaller Plumbicon tubes that provide performance standards similar to the original (we're down to $\frac{2}{3}$ inch tubes now,) and we learned to produce tubes with reduced comet tailing, with higher resolution and modulation depth, with extended-red response, and with minimum lag. Contemporary camera tubes outperform the original Plumbicon by a wide margin.

We learned that the TV camera user is concerned about the operation of his camera... not merely about the performance characteristics of our tubes. So we provide him with a wide range of expert and valuable information, in print and via our field engineers, to help him get the most out of his TV camera-system. Plumbicon users who are about to install a new camera need only give our

field engineering staff a call and we'll have an expert there to help with the job.

Our franchised distributors, (your own local businessmen,) are carefully selected for their ability to support Plumbicon TV camera systems with on-the-spot customer support and service. We, in turn, support our distributors with two kinds of "seminars" for Plumbicon camera users. One is on video tape, the other is presented "live" by an Amperex field engineer. The purpose of both is to maximize the value of Plumbicon camera systems.

Finally, we learned that the best way to deal with warranty questions was to design the warranty for the customer's benefit — not to protect ourselves... and even then, to interpret the warranty in the customer's favor whenever possible. For example, a customer may return any Plumbicon tube for testing (even one that's technically out of warranty) and we'll subject it to a complete technical evaluation at our expense... and send the customer a detailed engineering report on the tube.

Yes, we've learned a lot about the importance of Service in the ten years, in the more than 30,000 tubes sold, in the 600-plus TV stations served, since the Plumbicon tube won the Emmy award. Little wonder, then, that the Plumbicon, after all this time, still offers the best all-around package of performance, price, reliability and service available. Little wonder, then, people keep on saying, "There's only one Plumbicon."

Electro-Optical Devices Division, Amperex Electronic Corporation, Slatersville, Rhode Island 02876, Telephone: 401-762-3800

Amperex®

A NORTH AMERICAN PHILIPS COMPANY

There is only one Plumbicon

* Reg. T.M. of N.V. Philips of the Netherlands

THE SOURCE '75

World Video Sales see ad p 128

SYSTEMS ENGINEERING CO.

P.O. Box 49224
Atlanta 30329
404-482-2446

Line: audio components

TECHNICAL SYSTEMS REPS

2080 Peachtree Ct.
Chamblee 30341
404-457-0426

Line: audio equip

UREI see ad p 131

TELESYSTEMS MARKETING, INC.

2425 Wood Valley Dr.
Morrow 30260
404-363-4503

Line: audio components & equip

VISUAL SYSTEMS

3870 N. Peachtree Rd.
Atlanta 30341
404-457-1388

Line: video equip, charger

HAWAII

ATTCO

2855 Koapaka St.
Honolulu 96819

Line: lighting equip

Strand Century see ad p 102

BROADCAST SERVICES INC.

2877 Kalakua Ave.
Honolulu 96815
808-533-3877

Line: full line audio equip; CCTV equip

JAMES CHANG

190 S. King St.
Honolulu

808-531-2165

Line: audio and video equip

ELECTRONIC SYSTEMS, INC.

875 Waimana St., Suite 500
Honolulu 96813
808-533-3848

Line: full line of audio/video equip

TeleMation see ad p 81

HAWAII BROADCAST ASSOCS.

P.O. Box 1344
Honolulu 96807
808-537-3991

Line: broadcast equip

Microwave Assocs see ad p 115

J.C. ELECTRONICS

190 S. King St.
Suite 976
Honolulu 96813

Line: audio equip

UREI see ad p 131

PACIFIC INSTRUMENTATION

5388 Papai St.
Honolulu 96821

Line: video & photographic products

Cinema Products see ads pgs 77, 83

GENE PIETY FACTORS INC.

861 Mapunapuna St.
P.O. Box 2903
Honolulu 96802

808-839-9059

Line: audio components

Superscope see ad p 117

IDAHO

FUNLAND PRODUCTIONS

1300 Hill Road
Boise 83702

Line: audio components & equip

ILLINOIS

ADVANCED PHOTO/SOUND

495 S. Washington St.
Hinsdale 60521
312-323-7464

Line: video & photo equip

AKAI see ad p 13

J.D. ALLYN

419 S. Bruner St.
Hinsdale 60521
312-325-0495

Line: audio & broadcast equip

Modular Audio Products see ad p 120

A/V CENTER

6160 W. Oakton St.
Morton Grove 60053

Line: audio/video equip

Strand Century see ad p 102

B.W. ASSOCIATES

415 W. Fullerton Pkwy. Suite 701
Chicago 60614
312-935-4900

Line: audio components

UREI see ad p 131

CENTER VIDEO CENTER

5800 W. Fullerton Ave.
Chicago 60639
312-637-1600

Line: video equip

AKAI see ad p 13

CRIMSON ENGINEERING CO.

Glenview 60025
312-724-1780

Line: audio components

Tech Labs see ad p 90

VICTOR DUNCAN INC.

676 St. Clair St.
Chicago 60611

Line: photo equip & supplies

Cinema Products see ads pgs 77, 83

GORDON DUVAL CO.

6838 N. Ottawa St.
Chicago 60631
312-774-5115

Line: audio components, full line radio equip

Stanton Magnetics see ad p 34

GRAVCO SALES, INC.

125 S. Wilke Rd.
Arlington Heights 60004
312-394-1344

Line: video processing equip; switchers

HELIX LTD.

679 N. Orleans
Chicago 60610

Line: lighting equip

Strand Century see ad p 102

RAY R. HUTMACHER ASSOC. INC.

6668 Northwest Highway
Chicago 60631
312-631-3248

Line: audio components, communications equip; tape recorders

INTERNATIONAL AUDIO INC.

2934 Malmo Dr.
Arlington Heights 60005
312-956-6030

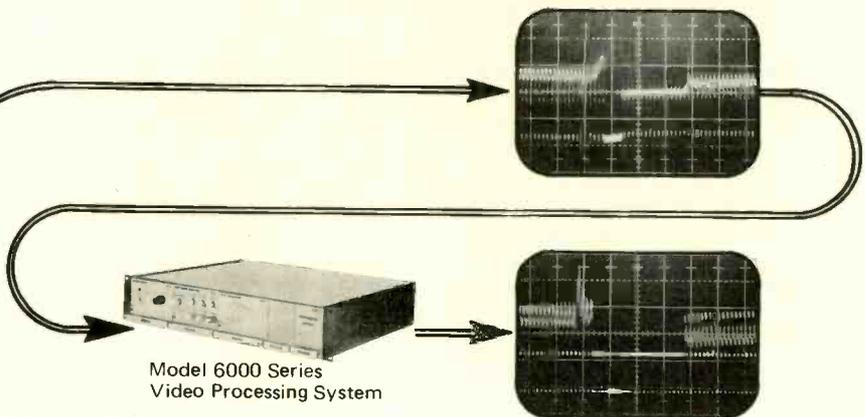
Line: audio equip

LA SALLE AUDIO

740 N. Rush St.
Chicago 60611
312-266-7500

Line: full line of audio equip

OUR PROC AMP WORKS WITH ANY COLOR OR BLACK & WHITE VTR... 1/2"... 3/4"... 1"... 2"... QUAD... HELICAL SCAN



Model 6000 Series
Video Processing System

Does yours? For more information, write or call:

DYNASCIENCES video products

TOWNSHIP LINE ROAD • BLUE BELL, PA. 19422

Telephone: (215) 643-0250

Telex: 84-6358

Inovonics see ad p 134
Stanton Magnetics see ad p 34

LOREN F. GREEN ASSOC.
5218 W. Diversey
Chicago 60639
312-286-6824
Line: sound equip; test equip

MILAM AUDIO CORP.
700 W. Main
South Pekin 61564
309-348-9605
Line: audio components, equip;
recorders
Inovonics see ad p 134

KENNETH MEYERS
7442 N. Harlew
Chicago 60648
312-774-6440
Line: test instruments
Marconi see ad p 119

THEODORE PAPPAS & ASSOC.
5218 W. Diversey Ave.
Chicago 60639
312-685-2338
Line: audio equip
AKG see ad p 51

ROGER PRYOR
220 E. 21st St.
Chicago
312-255-7900
Line: video proc amp switchers
Datavision see ad p 125

ROSCOR
6160 W. Oakton St.
Morton Grove 60053
312-539-7700
Line: audio & video equip

IRVING ROSE ASSOCS.
137 Ridgeway Ave.
Skokie 60076
312-674-6790
Line: audio and video equip

SANKO TRADING, INC.
1386 Jarvis Ave.
Elk Grove Village 60007
312-439-2280
Line: audio and broadcast products

SONIC SERVICES
161 E. Grand Ave. Suite 400
Chicago 60611
312-969-4414

SWIDERSKI ELECTRONICS
5456 N. Milwaukee Ave.
Chicago 60630
312-775-3232
Line: audio & video equip
CVS see ad p 122
Lenco Electronics see ad p 79

BRIAN TUCKER
P.O. Box 730
Barrington
312-381-4559
Line: audio products

VITRONICS, INC.
676 N. LaSalle St.
Chicago 60610
312-337-6670
Line: video products

V-TIP, INC.
128 Kishwaukee St.
Rockford 61104
815-968-4683
Line: full line audio/video equip
TeleMation see ad p 81

INDIANA

ALLIED BROADCAST EQUIP.
124 S. 6th St.
Richmond 47374
317-962-8596
Line: audio equip for radio

B&A ELECTRONICS
666 Walnut St.
Terre-Haute
Line: video equip
CVS see ad p 122

EVANSVILLE THEATRE SUPPLY
2274 E. Division St.
Evansville 47714
812-476-6410
Line: video equip
AKAI see ad p 13

J.O. GOETZ SALES
5941 Brendonridge N.
Indianapolis 42226
317-545-5638
Line: audio & video equip
McMartin Industries see ads pgs
18, 65, 90 & 135

HARRISON RADIO, INC.
P.O. Box 327
Corydon 47112
812-738-3241
Line: radio broadcasting equip

INDIANAPOLIS VIDEO
6226 LaPas Trail
Indianapolis 46268
317-293-3313
Line: video equip
AKAI see ad p 13

KEVIN JOYCE
1207 E. Wayne S.
South Bend 46615
219-233-1592
Line: electronic tubes, components
English Electric Valve see ad p 53

MEADE ELECTRONIC CO.
1825 Summer St.
Hammond 46320
219-932-2100
Line: audio & video products
CVS see ad p 122
Dynasciences see ad p 96

KENNETH MEYERS
3512 Rockville Road
Indianapolis 46222
317-243-6687
Line: test instruments
Marconi see ad p 119

RA-DIS-CO, INC.
814 N. Senate Ave.
Indianapolis 202
317-637-5571
Line: full line broadcast equip
Control Design see ad p 63

IOWA

ALEXANDER ELECTRONICS
Des Moines
515-274-4741
Line: video products

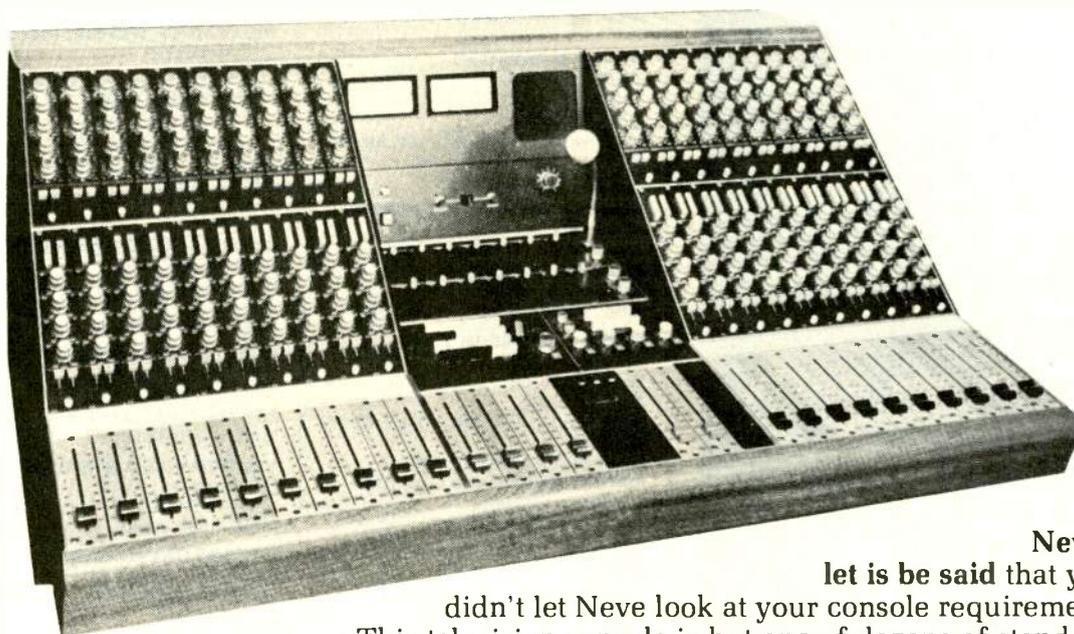
BEAMS INC.
517 5th Ave.
Des Moines 50309
515-282-0292
Line: audio equip
AKG see ad p 51

K&M ELECTRONICS
1910 Ingersoll
Des Moines 50309
Line: full line video equip
Lenco Electronics see ad p 79

MASTERTONE CO.
1105 Maple St.
West Des Moines 50285
515-274-2551
Line: full line audio equip; trans-
mitters, monitors

VIDEO COMPONENTS
3116 Dearborn Ave.
Sioux City 51104

continued on page 98



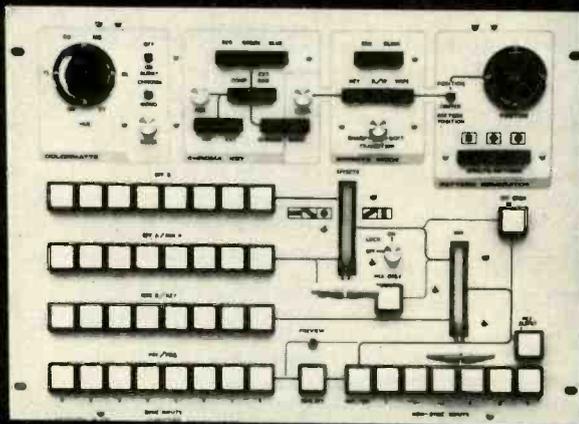
Never
let it be said that you
didn't let Neve look at your console requirement.
This television console is but one of dozens of standard
console designs for various applications. From the most modest studio
to the largest of network facilities, Neve probably has a standard console
to satisfy your Radio or TV requirement. If it doesn't exactly match — we'll
modify. Of course, we also build many custom consoles. Call us.
You'll be pleased with the prices and you'll be buying the best.

Rupert Neve Incorporated, Berkshire Industrial Park, Bethel, Connecticut 06801 Tel: (203) 744-6230, Telex: 969638
Rupert Neve Incorporated, Suite 614, 1800 N. Highland Ave., Hollywood, California 90028 Tel: (213) 465-4822
Rupert Neve of Canada, Ltd., 2717 Rena Road, Malton, Ontario L4T 3K1, Canada Tel: (416) 677-6611
Rupert Neve & Company Ltd., Cambridge House, Melbourn, Royston, Hertfordshire, SG8 6AU England, Tel: (0763) 60776
Rupert Neve GmbH, 6100 Darmstadt Bismarckstrasse 114 West Germany, Tel: (06151) 81764

Circle 164 on Reader Service Card

VISCOUNT 1150B PRODUCTION SWITCHER

**PROFESSIONAL...
and... AVAILABLE**



KEY FEATURES:

- * 14 inputs - 8 sync, 6 non
- * 4 busses
- * 27 std. wipe patterns
- * int., ext., chroma key
- * composite, ext. RGB
- * soft key, wipe of key
- * mix-blink on wipe-key
- * spot light effect
- * black burst, clr. mat. gen
- * 'on-air' inputs indication
- * full preview
- * colour timed, any path
- * vert. int. switching
- * processing amplifier
- * remote control panel

* **\$9250 - '1150B'**
(shown above)

also available:

\$7500 - '1150A'

VISCOUNT INDUSTRIES LTD.

105 EAST 69th AVENUE
VANCOUVER, BRITISH COLUMBIA
CANADA V5X 2W9
PHONE (604) 327-9446 TELEX (04) 508-605

THE SOURCE '75

712-276-0404

Line: camera lenses, full line CCTV video equip, video camera accessories, video editors
Canon USA see ad p 101

WARREN RADIO CO.

1205 E. River Dr.
Davenport 52808
319-323-8051

Line: video products

KANSAS

BEAMS INC.

9416 W. 87th Terrace
Shawnee Mission 66212
913-341-7744

Line: audio equip
AKG see ad p 51

A.K. ELLIOTT CO.

P.O. Box 6129
Leawood
913-649-6540

Line: audio products

WILLIAM MENEZES & ASSOCS.

5600 W. 95th St.
P.O. Box 7070
Overland Park 66207

Line: video equip
AKAI see ad p 13

STEVE SMITH CAMERAS INC.

623 Kansas Ave.
Topeka
913-235-3481

Line: video equip

KENTUCKY

BRUCE L. DAWSON

7105 Greenlawn Rd.
Louisville 40222
502-426-4022

Line: video equip, cameras, lenses
Canon USA see ad p 101
Shintron see ad p 111

ELECTRONIC LABORATORIES, INC.

Suite 2002 800 Bldg.
800 South 4th St.
Louisville 40203

Line: audio components & equip

SIGHT & SOUND INC.

Box 1644
Louisville 40201
502-584-5535

Line: audio & video equip, CCTV systems

Ultra Audio see ad p 133

World Video Inc see ad p 128

SONIC SERVICES

P.O. Box 5142
Louisville 40205
502-583-6863

Line: full line of audio equip
Inovonics see ad p 134

LOUISIANA

AUDIOMEDIA ASSOCS.

P.O. Box 29264
New Orleans 70189
504-586-0140

Line: audio components
Stanton Magnetics see ad p 34

JASPER E. WING & SONS

1904 Poydras
New Orleans
Line: lighting equip

Strand Century see ad p 102

INTERSTATE SCHOOL SUPPLY

2918 Neal Dr.
Pineville 71360
1620 Clio St.
New Orleans 70131
1835 Front St.
Baton Rouge 70821
504-387-5131

Line: audio & visual equip

CVS see ad p 122

Lenco Electronics see ad p 79

TeleMation see ad p 81

LYKES ELECTRONICS

3308 Orleans Ave.
New Orleans 70119

Line: audio & video equip

Dynasciences see ad p 96

Strand Century see ad p 102

MAR ELECTRONICS

3521 E. Louisiana State Dr.
Kenner 70062
504-729-4524

Line: full line audio & video equip

Thomson-CSF Labs see ad p 21

NATIONAL BROADCAST EQUIP.

P.O. Box 52844
New Orleans 70152
504-522-3089

Line: audio components equip

SCOTT ORMSBY COMPANY

P.O. Box 7
La Combe 70455
504-882-7248

Line: sound equip

PAN AMERICAN FILMS

822 No. Rampart St.
New Orleans 70116

Line: photo supplies and accessories

MAINE

R.G. HARRIS ASSOC., INC.

5 Portland Pier
Portland 04111

Line: CCTV systems

MARYLAND

ASSOCIATED SALES REPS.

8706 Wilson Ave.
Baltimore 21234
301-661-2888

Line: audio equip

DAVID BROTHERS & CO.

6302 Lincoln Ave.
Baltimore 21209
201-764-7189/202-783-3480

Line: audio equip

CRAMER VIDEO SYSTEMS

Gaithersburg
301-948-6110
Line: video equip

ROBERT HALVORSON

4000 Thornapple
Chevy Chase 20015
301-654-1680

Line: audio equip; audio tapes transmitters

HAYDEN ASSOCS.

16 Decatur Ave.
Annapolis 21404
202-296-6059

Line: measuring equip, monitors

INTERNATIONAL SOUND CORP.

7102 Milford Industrial Rd.
Pikesville 21208

Line: audio & video equip
Dynasciences see ad p 96

HABCO ELECT.

Towson 21204
301-825-9637

Line: audio components
Tech Labs see ad p 90

GERALD KERR

15932 Shady Grove Rd.
Gaithersburg 20760
301-948-0460

Line: video proc amp switchers
Datavision see ad p 125

PIERCE PHELPS INC.

8204 Felton St. Suite 105
Silver Spring 20910
Line: video equip
CVS see ad p 122

PROFESSIONAL PRODUCTS INC

4964 Fairmont Ave.
Bethesda 20014
301-933-3451

Line: full line video products
CVS see ad p 122

Lenco Electronics see ad p 79

RECORDING CONSULTANTS INC

7912 Georgia Ave.
Silver Spring 20910
301-565-2270

Line: full line of audio equip
Inovonics see ad p 134
Stanton Magnetics see ad p 34

GENE ROSEN ASSOCS.

9501 Wadsworth Dr.
Bethesda 20034
301-530-8448

Line: audio products

SELINGER & ASSOCS.

401 Southlawn Lane
Rockville 20850

Line: audio & video equip
AKAI see ad p 13
Dynasciences see ad p 96

S&S ASSOCS.

7720 Wisconsin Ave.
Bethesda 20014
301-654-1434

Line: test instruments
Marconi see ad p 119

TAUB SALES

12810 Gaffney Rd.
Silver Spring 20904
301-622-0300

Line: audio equip
AKG see ad p 51

BILL WESTON

15932 Shady Grove Rd.
Gaithersburg 20760
301-948-0460

Line: video proc amp switchers
Datavision see ad p 125

WILTRONIX INC.

5504 Waterway
Rockville 20853
301-460-1454

Line: broadcast equip & access
Datavision see ad p 125
World Video inc see ad p 128

MASSACHUSETTS

CHAS A. BERUBE CO.

P.O. Box 177
Westfield 01085
413-562-6690

Line: audio equip

MAC R. BOUGERE ASSOC.

125 Norwood Terrace
Holyoke 01040
413-533-2024

Line: audio equip

CRAMER ELECTRONICS

120 Hampton Ave.
Needham 02194
617-449-2100

Line: CCTV systems
AKAI see ad p 13

DAN GREEN

3 Buckingham Rd.
Natick 07610

Line: electronic tubes, components
English Electric Valve see ad p 53

INDUSTRIAL COMPONENTS CORP.

2551 Boston Rd.
N. Wilbraham 01067
413-596-3854

Line: audio components
Stanton Magnetics see ad p 34

KEN CORP.

38 Montvale Ave.
Stoneham 02180
617-438-5464

Line: test instruments
Marconi see ad p 119

LAKE SYSTEMS CORP.

55 Chapel St.
Newton 02160
617-244-6881

Line: full line audio & video equip
CVS see ad p 122

Stanton Magnetics see ad p 34
TeleMation see ad p 81

LEBOW LABS

56 Chestnut Hill Ave.
Boston 02135
617-566-1125

Line: audio components, radio equip
Control Design see ad p 63

Dolby see ad p 121

Stanton Magnetics see ad p 34

NELSON-BENNETT ASSOCS.

Auburn 01501
617-757-3131

Line: audio components
Tech Labs see ad p 90

F.M. VALENTI

16 Saddle Club Rd.
Lexington 02173
617-861-0089

Line: audio equip, video equip;
camera lenses

Ultra Audio see ad p 132

V.F. SALES, INC.

181 Worcester Rd.
Route #9
Natick 01760

617-237-6544
Line: audio & video products

AKG see ad p 51

UREI see ad p 131

VICTOR ASSOCS.

1400 Worcester Rd.
Framingham 01701
617-879-5710

Line: full line radio equip
Control Design see ad p 63

MICHIGAN

J. HAROLD ABNERGOYNE & ASSOCS.

4103 Kings Lane
Burton 48529
313-235-1191

Line: lighting equip
Strand Century see ad p 102

AUDIO DISTRIBUTORS

2342 Division Ave. S.
Grand Rapids 49507
616-452-1596

Line: full line of radio equip
Control Design see ad p 63

CHAMPAGNE SALES CO.

24001 Southfield Rd. Suite 102
Southfield 48075
313-354-0270

Line: audio & video equip, transmitters

McMartin Industries see ads pgs 18, 65, 90 & 135

CLOVER ELECTRONICS CONSTRUCTION

19353 Beech Daly Rd.

continued on page 100

WORLD'S BEST STEREO GENERATOR

WILKINSON ELECTRONICS SG1E

POSITIVE PROOF

- * 60 db separation 50 Hz-7500 Hz
- * 55 db separation 7500 Hz-10000 Hz
- * 50 db separation 10 KHz 15 KHz
- * FM Noise - 75 db Cross Talk - 60 db



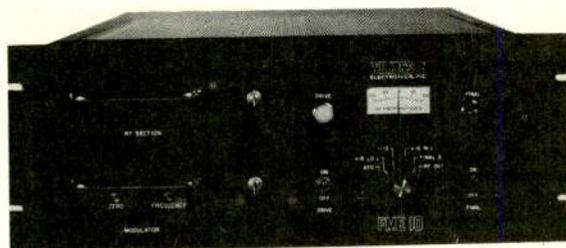
COMES COMPLETE WITH POWER SUPPLY
REQUIRES ONLY 3½" RACK SPACE
ONLY ONE FRONT PANEL ADJUSTMENT
REMOTE STEREO ON/OFF FUNCTION

WORLD'S BEST FM EXCITER

WILKINSON ELECTRONICS FME10

POSITIVE PROOF

- * Frequency response $\pm 1/4$ DB 15 HZ-350 KHz.
- * FM Noise Level - 70 DB below 100% Mod.
- * Distortion - 0.3%
- * Modulation - Direct FM
- * Power Output - Adjustable to 18 watts
- * Stability 1 part in 100000
- * Requires no oven and is not susceptible to rumble and microphonics



FCC TYPE ACCEPTED
POWER SUPPLY INCLUDED
REQUIRES 7" VERT. SPACE
IMMEDIATELY USABLE IN ANY TRANSMITTER
SHIELDED BY BOTH STEEL & ALUMINUM
COMPLETELY METERED
ADJUSTMENT FREE

NO ONE CAN MATCH THIS COMBINATION

WILKINSON ELECTRONICS, INC.

701 Chestnut St.
Trainer (Chester) PA. 19013
Telephone (215) 497-5100

Circle 166 on Reader Service Card

THE SOURCE '75

Detroit 48240
313-535-2322
Line: video equip

CRUSE COMMUNICATIONS
4903 Dawn Ave.
East Lansing 48823
Line: lighting equip

VICTOR DUNCAN INC.
11043 Gratiot Ave.
Detroit 48213
Line: photo supplies & equip
Cinema Products see ads pgs 77, 83

H.M. DYER ELECTRONICS
31185 Ten Mile Rd.
Farmington Hills 48024
313-478-2157
Line: time stds, audio & video products

Computer Image see ad p 11
Datavision see ad p 125
Dolby see ad p 121
Roh see ad p 103
Thomson-CSF Labs see ad p 21
TFT see ad p 136
Ultra Audio see ad p 132
World Video Inc see ad p 128

ROBERT HAWKINS
4103 Kings Lane
Burton 48529
Line: audio equip

R.P. HERMES CO.
9600 Whittien St.
Detroit 48224
313-886-4567
Line: audio & video equip
Dynasciences see ad p 96
TeleMatton see ad p 81

TOM HOUGHTON

4106 Edgeland
Royal Oak 48073
313-549-6679
Line: audio equip

ROBERT MILSK CO.
22420 Telegraph Rd.
Southfield 48075
313-342-6660
Line: audio components

NEWMAN VISUAL EDUCATION
400 32nd St.
Grand Rapids 49508
Line: video equip
CVS see ad p 122

NORWOOD SCROGGS CO.
Jackson 49201
517-750-1170
Line: audio components
Tech Labs see ad p 90

SHALCO INC.
2359 Woodward Ave.
Ferndale 48220
313-547-4771
Line: audio products
AKG see ad p 51

THALNER ELECTRONICS
7235 Jackson Rd.
Ann Arbor 48103
313-761-4506
Line: video products
CVS see ad p 122

VIDECOM ENGINEERING INC.
2330 Byrd Drive
Kalamazoo 49001
616-382-5452
Line: full line video equip
Lenco Electronics see ad p 79

MINNESOTA

T.B. ALLEN & ASSOCS.

4810 Excelsior Blvd.
Minneapolis 55416
612-926-7658
Line: audio equip
AKG see ad p 51

D&L BROADCAST SERVICES
3325 Flag Circle N.
Minneapolis 55427
612-545-3372
Line: complete line audio & video equip
McMartin Industries see ads pgs 18, 65, 90 & 135

FMI/MAGNATECH CO.
3601 Park Center Blvd.
Minneapolis 55416
612-920-6677
Line: audio components & equip, FM monitor equip, transmitters
Wilkinson see ad p 99

GALAXY FILM SERVICE
3000 France Ave.
Minneapolis 55416
Line: photo supplies & equip
Cinema Products see ads pgs 77, 83

K&M ELECTRONICS
7360 Ohm Lane
Minneapolis 55435
612-835-3080
Line: full line audio & video equip
AKAI see ad p 13
CVS see ad p 122
Dynasciences see ad p 96
Lenco Electronics see ad p 79
TeleMatton see ad p 81

KENNETH W. MEYERS
3601 Park Central Blvd.
Minneapolis 55416
612-920-7080
Line: test instruments
Marconi see ad p 119

JAYNUS ASSOC., INC.

10700 Lyndale Avenue S.
Minneapolis 55420
612-884-1700
Line: broadcast equip, transmitters

MORE SALES, INC.
Industrial Drive S.W.
Willmar 56201
612-235-0034
Line: audio components
Superscope see ad p 117

R.C. SALES
10052 County Rd.
Maple Grove
612-425-5543
Line: audio products

SIEDARE ASSOCS.
Minneapolis 55427
612-545-5663
Line: audio components
Tech Labs see ad p 90

SKOR
1821 University Ave.
St. Paul 55104
612-645-6461
Line: audio products

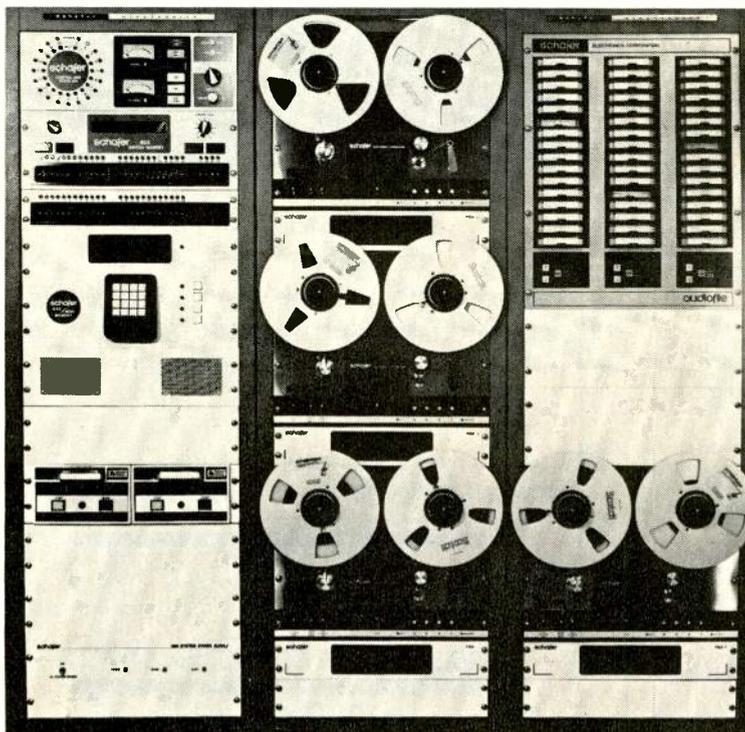
SOUND 80, INC.
2709 E. 25th St.
Minneapolis 55406
612-721-6341
Line: audio components, equip; recording accessories
Inovonics see ad p 134

VCI, INC.
7601 Washington Ave. S.
Minneapolis 55435
Line: lighting equip
Strand Century see ad p 102

WAHL & WAHL INC.
1907 Hiawatha Ave.
Minneapolis 55406
612-338-6825
Line: video equip

continued on page 102

The Great American Music Machine...



Meet the Schafer 902 . . . The economical system with up to 2048 programmable events.

The Schafer 902 Switch Memory runs your sequential music format flawlessly, hour after hour. In addition, the 902's Random Access Memory provides 2000 events of commercial availabilities.

Because your commercials are programmed in the Random Access Memory separate from your music, the Schafer 902 can provide up to 50 percent more commercial storage capability than other systems with 2048 events.

Shop around. Compare. Before you choose, remember . . . The Schafer 902 can give you up to 50 percent more walkaway time without re-programming. That's just one of many things the 902 can do for you. If you'd like to find out for yourself why the Schafer 902 will give you more value for every dollar you invest, call or write for details today.

The Schafer 902. The Great American Music Machine . . . and much, much more.

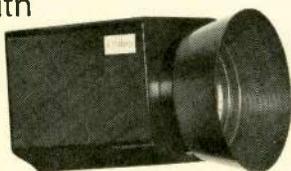
schafer
ELECTRONICS CORPORATION

75 Castilian Drive • Goleta, California 93017 • (805) 968-0755

Circle 167 on Reader Service Card

IT'S TIME YOU CHANGED THE WAY YOU LOOK AT THINGS.

Broadcast people, you've changed. Over the last few years, you've effectively turned the industry on its ear with a determination to provide your public with more, and *more effective* coverage. Your resolve has brought about vast changes in camera technology—in size, weight, mobility and versatility.



P10 x 20B. Lowest-priced 10:1 for major broadcast cameras.

We've been changing, too. While quietly supplying the broadcast industry with high-quality optics for the last two decades, we've been hard at work, developing a family of lenses to expand the capabilities of broadcast TV equipment... while keeping the economics under control.

You are our requirements. More than any other factor, Canon products are the result of user inputs. So it's no coincidence that we offer the widest, most customized range of optical products for the broadcast field—in terms of function *and* price. From the lightest-weight, most compact (and by the way, most popular) 10-120mm on the market to an enormously-versatile 32-1070mm with



PV25 x 16B-DZ. Longest low-cost lens for 1" plumbicons.*

continuous zoom and 1.8 meter minimum object distance. Your requirements also inspired our new budget-stretching Versatility Packages—

a family of two-lens systems that give one camera the versatility of two at substantial savings. (And we're always listening for new ideas.)

We've invested in you. Because major optical advances don't happen without a lot of expensive thinking and heavy experimentation. While the dividends are visible in every Canon product (for example, for some

years now, we've been pioneers in super spectral coating), they've also won us acclaim in the process. Like a special award from the Motion Picture Academy of Arts and Sciences. No less important, our sizeable investment in manufacture and quality control insures that the advances in our labs aren't diminished on the production line.

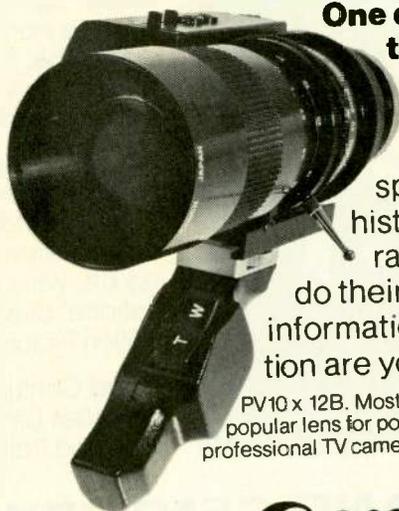
You make us look good. Service isn't just a matter of goodwill—it's good business. So we support what we sell with an extensive staff of factory-trained technicians, headquartered in New York, Chicago and Costa Mesa, California. Equipped with the finest, latest test equipment—much of it of our own design. To help insure the consistency of our standards... and facilitate the fastest possible turn-around time.



PV34 x 24B-DZ. Widest range double-zoom lens.

One demo is worth a thousand claims.

We could spend a lot of time on awe-inspiring technical specs and case-histories. But we'd rather let our lenses do their own talking. More information, or a demonstration are yours for the asking.



PV10 x 12B. Most popular lens for portable, hand-held professional TV cameras.

Canon®

Canon U.S.A. Inc.
Head Office, 10 Nevada Drive,
Lake Success, N.Y. 11040
457 Fullerton Avenue,
Elmhurst, Illinois 60126
123 Paularino Avenue East,
Costa Mesa, Ca. 92626

Canon Optics & Business Machines
Canada, Ltd. 3245 American Drive,
Mississauga, Ontario. L4V 1B8, Can.
Canon Amsterdam N.V.
Industrial Products Division
De Boelelaan 8
Amsterdam, Netherlands
* © N.V. Philips of Holland

Circle 168 on Reader Service Card

THE SOURCE '75

AKAI see ad p 13

MISSISSIPPI

MISSISSIPPI SCHOOL SUPPLY
P.O. Box 1059, 217 W. Capitol St.
Jackson 39205
601-948-8600
Line: audio-visual equip
CVS see ad p 122
Dynasciences see ad p 96
Strand Century see ad p 102
SOUTHERN VIDEO SYSTEMS

527 Northside Dr.
Jackson 39205
601-982-8734
Line: CCTV systems

MISSOURI

ALEXANDER ELECTRONICS INC.
155 Weldon Pkwy.
Maryland Heights 63043
Line: audio & video equip
CVS see ad p 122
Dynasciences see ad p 96
TeleMatlon see ad p 81
ANIXTER-PRUZAN
9449 Aerospace Dr.

St. Louis 63134
314-423-9555
Line: Sony studio video equip, full
line of CATV equip, headend, pas-
sives, test equip, power supplies

BEAMS, INC.
7263 Lansdowne
St. Louis 63119
314-781-6855
Line: audio equip
AKG see ad p 51

**CHUCK BERRY
COMMUNICATIONS**
2800 Market St.
St. Louis 63103
314-534-3323
Line: video equip
AKAI see ad p 13

COMMUNICATIONS SYSTEMS INC.

1001 Perry Ave.
Cape Girardeau 63701
314-334-6097
Line: audio components, full line
radio equip
Control Design see ad p 63
Stanton Magnetics see ad p 34

KSW ASSOCIATES
7546 Troost Ave.
Kansas City 64131
816-363-5651
Line: audio components

MOELLER/PICKETT & ASSOC.
2260 Grisson
St. Louis 63141
Line: audio products

MOELLER/PICKETT & ASSOC.
12506 Grandview Rd.
Grandview 64030
Line: audio products

PAC
9052 A.E. 50 Highway
Raytown 64133
816-737-0066
348 Brooker Lane
Hazelwood 63042
314-731-2331
Line: test instruments
Marconi see ad p 119

PACER CORP.
11221 E. 76th St.
Raytown 64138
Line: video equip
Canon USA see ad p 101

THROCKMORTON SALES CO.
P.O. Box 1088
Ballwin 63011
314-227-7222
Line: audio equip

TV ENGINEERING
519 Rudder Rd.
Fenton 63026
314-343-5605
Line: broadcast equip
**McMartin Industries see ads pgs
18, 65, 90 & 135**
Thomson-CSF Labs see ad p 21

JACK VINES
519 Rudder Rd.
Fenton 63026
314-343-5605
Line: video proc amp switchers

MONTANA

HOLM-JAMES DISTRIBUTING
P.O. Box 2487
320 6th St. S.
Great Falls 59403
Line: audio & video equip
Dynasciences see ad p 96

NEBRASKA

K&M ELECTRONICS
120 S. 41st St.
Omaha 68131
402-551-7600
Line: video equip
CVS see ad p 122
Lenco Electronics see ad p 79

SECO LABS
206 S. 44th St.
Omaha 68131
402-553-1164
Line: audio equip

VID-A-COMM SYSTEMS
2079 Fourth Ave.
Lincoln 68508
Line: video equip
CVS see ad p 122

Cool kits for hot camera crews.

Only famous Janiro lighting fixtures, (the ones you get in Strand Century lighting kits), give you cool-to-touch fiber glass housings, for safe, comfortable handling at any time. And only Strand Century kits give you superbly rugged carrying cases for years of trouble-free use.



Strand Century kits offer the best kit value available anywhere. Light weight. Sturdy, durable stands. Easy to adjust during use. Smooth, even light distribution. Quick heat dissipation for fast pack up.

For use on location, and in the classroom, or wherever rugged portables are needed, insist on Strand Century lighting kits. Write for details to National Director of Television/Motion Picture Sales,

Strand Century Inc
20 Bushes Lane,
Elmwood Park, N.J. 07407.

STRAND CENTURY INC
A COMPANY WITHIN THE RANK ORGANISATION



Circle 169 on Reader Service Card

NEVADA

CINEMA SERVICE OF LAS VEGAS
3050 Sheridan St.
Las Vegas 89102
Line: lighting equip
Strand Century see ad p 102

GLOBAL PRODUCTIONS
1624 Mojave Rd.
Las Vegas 89104
Line: video equip
CVS see ad p 122

PORTER INDUSTRIES
3276 Spring Mountain Rd.
Las Vegas 89102
702-876-2413
Line: audio components, equip

VIDEO VISION
524 Denslowe Dr.
Reno 89502
702-329-6323
Line: video systems

NEW JERSEY

**AUDIO & ELECTRONIC CONSULT.
SVCE.**
63 Kiel Ave.
Kinnelon 07405
201-838-0080
Line: CCTV systems

FLOYD CHURCHILL
Haddonfield 08033
609-429-7871
Line: audio components
Tech Labs see ad p 90

CINECRAFT INT'L INC.
11 Caesar Place
Moonachie 07074
Line: photo video products
Cinema Products see ads pgs 77, 83

ELDISERCO
12 Estal Place
Greenbrook 08812
201-968-0344
Line: audio and broadcast products
Urei see ad p 131

H.M. HOLZBERG ASSOCS.
P.O. Box 322
Totowa 07511
201-256-0455

Line: audio equip, program auto-
mation, video switchers, proc amp,
monitors, char generators, trans-
mitters, STL, microwave
Control Design see ad p 63
Lenco Electronics see ad p 79
Roh see ad p 103
Stanton Magnetics see ad p 34
World Video Inc. see ad p 128

LANDY ASSOCS.
12 Buxton Rd.
Cherry Hill 08003
609-424-4660

continued on page 104

NEW HAMPSHIRE

A&H PRODUCTIONS, INC.
38 Everett St.
Manchester 03104
603-669-9999
Line: audio and broadcast equip

**TELECOMMUNICATIONS
SERVICES**
P.O. Box 141
Merrimack 03054
603-889-3001
Line: full line of audio/video equip
TeleMation see ad p 81

On the Air®

with a full range of high reliability

TV TRANSLATORS

TV TRANSMITTERS

TV AMPLIFIERS

@j acrodyne
industries, inc.

21 Commerce Drive • Montgomeryville, Pa. 18936
(215) 368-2600 TWX 510-661-7265

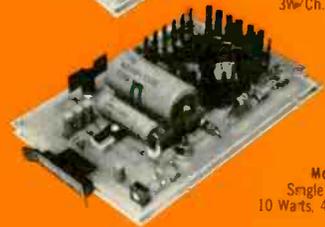
Circle 170 on Reader Service Card

SEPTEMBER, 1975—BM/E

ROH ADDS* POWER TO FLEXIBILITY 1-300 WATTS 1-20 CHANNELS MODULAR CONSTRUCTION POWER AMPLIFIERS



*Model 230
Dual Channel
1W/Ch., 4-50 ohms
3W/Ch., 8 ohms



Model 210
Single Channel
10 Watts, 4-8 ohms



Model 220
Dual Channel
10W/Ch., 4-8 ohms
30W Bridge, 8 ohms



Model: 202, 203, 204
1, 3, and 10 module powered enclosures
include plug in power supplies and barrier
block module termination.



Model 271
Single Channel 100 Watts, 4-15 ohms



Model 272
Dual Channel
100W/Ch., 4-16 ohms
300W Bridge, 70.7V Line

25 modules, 4 enclosures
and the necessary accessories from
a single source,

Write today for additional information
Roh Corporation

107 Technology Park/Atlanta
Norcross, Georgia 30071 404/449-8873

Circle 171 on Reader Service Card

yes it's TRUE... the PRICE of Cross-Pulse & Color monitors HAS DROPPED

Now you can convert any monitor to a cross-pulse monitor with VACC's new \$345* model CPG-1 Cross Pulse Generator. Your monitor requires no modification. Fill out the coupon below for more information. At the same time, ask for a free copy of VACC's Troubleshooting Chart. This handy wall chart has actual photos showing typical video conditions such as normal sync with and without burst, time-base errors, overshoot, clipped sync, and many more. VACC's chart is a valuable aid when adjusting and troubleshooting video problems using a cross-pulse monitor.

If a video monitor is needed, install a VACC Electro-optical Isolator in a Sony receiver. A engineer or electronic technician can install a model A-1 in a 12", 15" and 17" Sony receiver in less than an hour. Model A1-A should be installed in a KV1711, KV1722 and all 19 inch Sony receivers. You add only one-half pound to your receiver and your Sony can be used as a high quality monitor or retained as a receiver by merely flipping a switch. Isolation is far superior to heavy transformer isolated monitors and you can connect up to 20 monitors without troublesome ground loops if all monitors have VACC isolators.

by popular request NEW DEMODULATOR KIT

NEED AUDIO/VIDEO-OUT TO RECORD OFF-THE-AIR? Order VACC's new model D1 or D1A Optical Demodulator. Similar to, but smaller in size than the widely used VACC A1 or A1-A Optical Isolator, VACC's new optical demodulator kit is easy to install and has the same outstanding isolation and weight advantages. Use model D1 for Sony's KV1201, 1203, 1212, 1214, 1500, 1511, 1710 and CKV 171 and the D1-A for KV1711, 1722, 1910, 1922 receivers. Yes, you can install the A1 and D1 or A1-A and D1-A in the same Sony receiver to have a receiver monitor demodulator. Add VACC's Cross Pulse Generator and you can have all four functions using one CRT.



VIDEO AIDS corporation of colorado
12 West 4th Street, Loveland, Colorado 80537
phone (303) 667-3301

Circle 172 on Reader Service Card

THE SOURCE '75

Line: audio consoles, video proc equip

Computer Image see ad p 11

Datek see ad p 75

Roh see ad p 103

Stanton Magnetics see ad p 34

Telecommunications see ad p 140

Thomson-CSF Labs see ad p 21

TFT see ad p 136

LA SALLE AUDIO

P.O. Box 373

Teaneck 07066

201-692-0010

Line: full line of audio equip

Inovonics see ad p 134

Stanton Magnetics see ad p 34

MERRILL LENT

P.O. Box 189

East Hanover 07936

201-887-4849

Line: audio & video equip, char gen

Ultra Audio see ad p 132

L & M ASSOCS.

511 Victon St.

Saddle Brook 07662

201-843-8700

Line: test instruments

Marconi see ad p 119

MAGNETIC MARKETING

29 Valley View Terrace

Wayne 07470

201-694-3511

Line: audio equip

METROREP

1 Oxford Dr.

Freehold

201-462-1221

Line: audio and video equip

BERNARD MUNZELLE

6 Kilmer Rd.

Edison 08817

201-985-3760

Line: video equip

AKAI see ad p 13

OPTIMEDIA SYSTEMS INC.

1080 Rte. 46

Clifton 07013

201-777-7600

Line: audio & video products

AKAI see ad p 13

CVS see ad p 122

Dynasciences see ad p 96

TeleMation see ad p 81

TELEMEASUREMENTS, INC.

145 Main Ave.

Clifton 07014

201-473-8822

Line: full line audio & video equip

AKAI see ad p 13

CVS see ad p 122

Lenco Electronics see ad p 79

Strand Century see ad p 102

NEW MEXICO

DYMA ENGINEERING

Rt. 1 Box 51

Taos 87571

505-758-2686

Line: full line audio equip, transmitters

Control Design see ad p 63

Stanton Magnetics see ad p 34

Wilkinson see ad pg 99

World Video Inc see ad p 128

PLS ASSOCS.

4300 H. Silver Ave. S.E.

Albuquerque 87108

505-255-2330

Line: test instruments

Marconi see ad p 119

G.C. VIDEO

9624 Gutierrez Rd. N.E.

Albuquerque 87111

505-296-5653

Line: audio & video products

CVS see ad p 122

Lenco Electronics see ad p 79

TeleMation see ad p 81

Strand Century see ad p 102

INTEGRATED SYSTEMS

133 Jackson St. N.E.

Albuquerque 87108

Line: video equip

CVS see ad p 122

NEW YORK

ANIXTER-PRUZAN

180 Dupont St.

Plainview 11802

516-822-8585

Line: Sony studio video equip, full line of CATV equip, cable construction accessories, tools, head end, passives, test equip, power supplies

ASHTON COMMUNICATIONS

5 Glenwood Ave.

Binghamton 13905

Line: video equip

CVS see ad p 122

AUDIO-VIDEO CORP.

55 Delaware Ave.

Delmar 12054

518-439-7611

Line: full line of audio/video equip

TeleMation see ad p 81

AURORA COMMUNICATIONS

408 W. 57th St.

New York 10019

212-541-7040

Line: lighting equip

Strand Century see ad p 102

BACH SALES

4 Longview Place

Great Neck

212-233-3300

Line: sound systems

DAVID BAIN ASSOCS.

P.O. Box 1014

Port Washington 11050

516-883-4818

Line: audio equip, transmitters, CCTV systems, video equip

Canon USA see ad p 101

Control Design see ad p 63

Stanton Magnetics see ad p 34

Viscount see ad p 98

MARTY BETTAN SALES, INC.

77-15 164th St.

Flushing 11366

212-969-7600

Line: audio components

W.G. BROWN SOUND EQUIP.

Syracuse

315-475-5161

Line: audio & video products

THE CAMERA MART

456 W. 55th St.

New York 10019

212-757-6977

Line: cameras & accessories

Cinema Products see ads pgs 77, 83

Strand Century see ad p 102

CELEBRATION SOUND

157 Gray Rd.

Ithaca 14850

607-272-8964

Line: full line of audio equip

Inovonics see ad p 134

continued on page 106

Harris MW-5 5kW AM transmitter has PDM* going for it.

Harris' MW-5 transmitter needs only two tubes for 5,000 watts—provides 125% positive peak modulation capability for a louder sound—has plate efficiency approaching 90% for lower operating cost. All this possible because of Harris' patented Pulse Duration Modulator* (PDM) also featured in our top-selling 50,000 watt MW-50 transmitter. For complete information write, Harris Corporation, Broadcast Products Division, 123 Hampshire Street, Quincy, Illinois 62301.



HARRIS



COMMUNICATIONS AND
INFORMATION HANDLING

Circle 173 on Reader Service Card

THE SOURCE '75

CHROMACORD CORP.

60 Margaret St.
Plattsburgh 12901
518-561-2900
Line: full line of audio equip
Inovonics see ad p 134
Stanton Magnetics see ad p 34
Urei see ad p 131

B. DARMSTEDTER & ASSOCS.

8201 Speech Drive
Baldwinsville 13027
315-638-1261
Line: audio equip
AKG see ad p 51

FERCO

419 W. 54th St.
New York 10019
Line: lighting equip
Strand Century see ad p 102

F&B/CECO INC.

315 W. 43rd St.
New York 10036
Line: cameras & accessories
Cinema Products see ads pgs 77, 83
Strand Century see ad p 102

GOTHAM AUDIO CORP.

741 Washington St.
New York 10014
212-741-7411
Line: audio components
Stanton Magnetics see ad p 34
UREI (export only) see ad p 131

GRAVCO SALES INC.

Station Plaza E.
Great Neck 11022
516-487-1311
Line: video processing equip;
switchers

HENRY GROSSMAN ASSOCS.

519 S. 5th Ave.
Mount Vernon 10550
914-664-5393
Line: audio components, radio equip
Control Design see ad p 63
Stanton Magnetics see ad p 34

L.K. HANER ASSOCS.

Commack 11725
516-864-2220
Line: audio components
Tech Labs see ad p 90

HARVEY RADIO CO.

60 Crossways Park W.
Woodbury 11797
212-297-7577
Line: audio components & equip

TONY HAWKINS

224 6th Ave.
Brooklyn
212-789-7829
Line: audio equip

JOSEPH ASSOCS.

8 Cove Lane
P.O. Box 307
Port Washington 11050
516-883-1829
Line: audio equip, RF monitors
Control Design see ad p 63

OSCAR E. KRAUT

530 D Grand St.
New York 10002
212-228-5511
Line: video equip
Shintron see ad p 111

F. LANNEN

342 Madison Ave.
Suite 916
New York 10017
212-687-0400
Line: full line radio equip
McMartin Industries see ads pgs 18, 65, 90 & 135

L&M ASSOCS.

175 W. 12th St.
New York 10011
212-675-7486
7 Mayflower Court
Brentwood 11717
516-231-8363
Line: test instruments
Marconi see ad p 119

L.S.M. ASSOCIATES

27 Orchard Park
Phelps 14532
315-548-4891
Line: audio components

MARTIN AUDIO/VIDEO CORP.

320 W. 46th St.
New York 10036
212-541-5900
Line: audio components, equip,
recording accessories
Inovonics see ad p 134
Stanton Magnetics see ad p 34

WENDELL MARTIN CO.

3573 Howlett Hill Rd.
Camillus 13031
315-673-2943
Line: audio equip; RF monitors

MOBIUS CINE LTD.

7 E. 47th St.
New York 10017
Line: cameras & accessories
Cinema Products see ads pgs 77, 83

R.A. MURRAY CO.

Buffalo 14221
716-632-6913
Line: audio components
Tech Labs see ad p 90

NORTHEAST BROADCAST

EQUIP.
R.R. #2
Westport 12993
518-962-4567

Line: broadcast equip
Control Design see ad p 63
Wilkinson see ad p 99

NORTHEAST BROADCAST LABS.

15 Charles St.
South Glen Falls 12801
518-793-2181
Line: audio equip
McMartin Industries see ads pgs 18, 65, 90 & 135

P.M. ELECTRONICS

83 Russel Rd.
Garden City 11530
516-248-4858
Line: full line video equip
World Video see ad p 128

PROFESSIONAL ELECTRONICS CO.

678 Troy-Schenectady Rd.
Latham 12110
518-785-1660
Line: audio video products
CVS see ad p 122
Dynasciences see ad p 96
Lenco Electronics see ad p 79

RONCO COMMUNICATIONS & ELECTRIC

595 Sheridan Drive
Tonawanda 14150
716-873-0760
Line: full line video products
Lenco Electronics see ad p 79

SAVAGE SALES

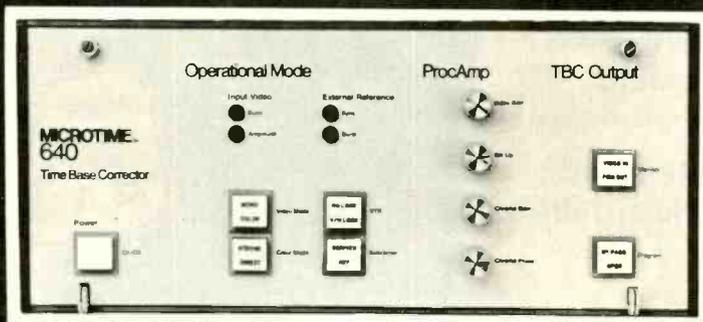
Box 95
Fayetteville 13066
315-682-2131
Line: test instruments
Marconi see ad p 119

SENECA COMMUNICATIONS

112 Killewald St.
Tonawanda 14150
716-693-8446

continued on page 108

640 Series Digital TBC



Reliability of second generation digital design from the TBC pioneers

Simple front panel operation

Lowest cost full capacity digital TBC

Un que Features include:
High speed bi-polar memory
Standalone or 3.58 feedback heterodyne
Optional plug-in DOC

MICROTIME

Microtime, Inc.
12E0 Blue Hills Avenue
Bloomfield, Connecticut 06002
(2C3) 242-4242 TWX 710-425-2390

HOW CAN WE CONVINCE YOU TO BUY A BETTER CAMERA WHEN YOU ALREADY HAVE THE BEST?

Canon Professional Motion Picture Division
10 Nevada Drive, Lake Success, New York 11040
123 East Paularino Avenue, Costa Mesa, California 92626
Canon Optics & Business Machines Canada, Ltd.
3245 American Drive, Mississauga, Ontario

I'm interested. Please send me more information about the new Canon Scoopic 16M, as well as the name of the nearest dealer participating in your one-week free trial and trade-in program.

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Offer ends September 30, 1975



TRY A BETTER SCOOPIC. FREE.

If you're in the news, documentary or industrial field, chances are you've already become attached to our camera. (After all, 8 out of 10 TV stations and literally thousands of producers and cameramen own them.) But now that the original Scoopic 16's performance and reliability have convinced you what a good camera it is, we'd like to *un*-convince you. With something better.

Meet the new Scoopic 16M...with all the good features and dependability of the original, and more. Starting with more lens, for greater versatility: a 12.5-75mm *Macro Zoom* that focuses as close as 3½". Rack focuses *continuously* to distant objects. And optically dollies forward and back, with constant field size.

To keep you in action longer, there's a more efficient battery/transport system that runs *sixteen* 100' rolls on a single, faster charge. Has even greater ruggedness (though some say that's impossible). And gives you greater comfort, too, with smoother operation and better balance.

All this is just the beginning. Because the new Scoopic 16M offers many features you'd expect in a \$4,000 camera—at an under \$2,000 price.

But why take our word for it, when you can prove it to yourself—on-the-job and *free*. For a limited time, at participating Canon dealers* you can try a new Scoopic 16M for a week. With one tiny, friendly catch. Once you try our new camera, you'll want to make it *your* new camera, no matter how attached you've become to the one you're using. To make the deal

even harder to resist, you'll find your Canon dealer eager to help, with a generous trade-in allowance on your Scoopic 16.

If that's no problem, send in the coupon for more information, or see your local Scoopic dealer...and let him spoil you for anything else.

*Participating dealers determine exact terms of trial offer and trade-ins, in your area.

Canon[®]

Canon Professional Motion Picture Division
10 Nevada Drive, Lake Success,
New York 11040 (516) 488-6700
123 East Paularino Avenue, Costa Mesa,
California 92626 (714) 979-6000
Canon Optics & Business Machines
Canada, Ltd.
3245 American Drive, Mississauga, Ontario
(416) 678-2730

Circle 175 on Reader Service Card

THE SOURCE '75

Line: audio & video products
CVS see ad p 122
TeleMation see ad p 81

SONOCRAFT CORP.
29 W. 36th St.
New York 10018
Line: audio & video equip
AKAI see ad p 13
CVS see ad p 122
TeleMation see ad p 81
Viscount see ad p 98

SOUND SYSTEMS INC.
42-12 28th St.
Long Island City 11101
212-786-4474
Line: full line of audio/video equip
TeleMation see ad p 81

TEL-COM, INC.
1475 East Henrietta Rd.
Rochester 14623
716-442-7900
Line: CCTV systems

TELEMERICA INC.
25 W. 43rd St.
New York 10036
212-687-0370
Line: audio & broadcast products
CVS see ad p 122

TELEVISION EQUIPMENT ASSOCIATES
Box 1391
Bayville 11709
516-628-8068
Line: brand line radio & TV equip; accessories

VIDEO COMPONENTS INC.
601 S. Main St.
Spring Valley 10977
914-356-3700
Line: camera lenses, full line CCTV

video equip, video camera accessories, video editors
Canon USA see ad p 101

VIDEOSOUND
1458 Slaterville Rd.
Ithaca 14850
607-272-2060
Line: full line of audio/video equip
TeleMation see ad p 81

WINDSOR TOTAL VIDEO
652 First Ave.
New York 10016
212-725-8080
Line: videotape

XEDIT CORP.
182-25 Tudor Rd.
Jamaica Estates 11432
212-380-1592
Line: full line of audio equip
Inovonics see ad p 134

ADAMS & ASSOCIATES, INC.
P.O. Box 9256
1300 Westover Ter.
Greensboro 27408
919-272-6838
Line: audio components

NORTH CAROLINA

APPLIED VIDEO CONCEPTS LTD.
3800 Menton Dr.
Raleigh 27609
Line: video equip
Canon USA see ad p 101
Strand Century see ad p 102

BCS ASSOCS.
1310 Beamon Pl.
Greensboro 27408
919-273-1918
Line: video products

TFT see ad p 136

BROADCAST SERVICES CO.
P.O. Box 85
Selma 27576
919-284-2102
Line: full line of radio equip

A.W. GREESON, JR.
219 Homewood Ave.
Greensboro 27403
919-292-1791
Line: full line audio & video equip, RF monitoring equip
McMartin Industries see ads pgs 18, 65, 90 & 135
Thomson-CSF Labs see ad p 21

HAMMOND ELECTRONICS
2923 Pacific Ave.
Greensboro 27228
919-275-6391
Line: audio components
Aristocart see ad p 136

KIRKMAN ELECTRONICS, INC.
Drawer K
Salem Station
Winston Salem 27108
919-724-0541
Line: video systems

LEE ASSOCS.
P.O. Box 18833
Raleigh 27609
919-787-5818
Line: test instruments
Marconi see ad p 119

NELCO TECHNICAL VIDEO SYSTEMS
1148 Burke St.
Winston-Salem 27101
919-722-6181
Line: video equip
AKAI see ad p 13

SOUTHEASTERN SIGHT & SOUND
1717 South Saunders St.

Raleigh 27606
919-828-2311
Line: video systems
Strand Century see ad p 102

STANDARD THEATRE SUPPLY CO.
125 Higgins St.
Greensboro 27220
919-272-6165
Line: cameras & accessories
Cinema Products see ads pgs 77, 83

TECHNICAL VIDEO SYSTEMS
1148 Burke St.
Winston-Salem 27101
919-725-2026
Line: audio & video equip, CCTV systems
CVS see ad p 122
Dynasciences see ad p 96
Strand Century see ad p 102
TeleMation see ad p 81

P.D. THOMPSON
2550 Weymouth Rd.
Winston-Salem 27103
919-765-3157
Line: full line broadcast equip (audio & video)
Datavision see ad p 125
Lenco Electronics see ad p 79
McMartin Industries see ads pgs 18, 65, 90 & 135

NORTH DAKOTA

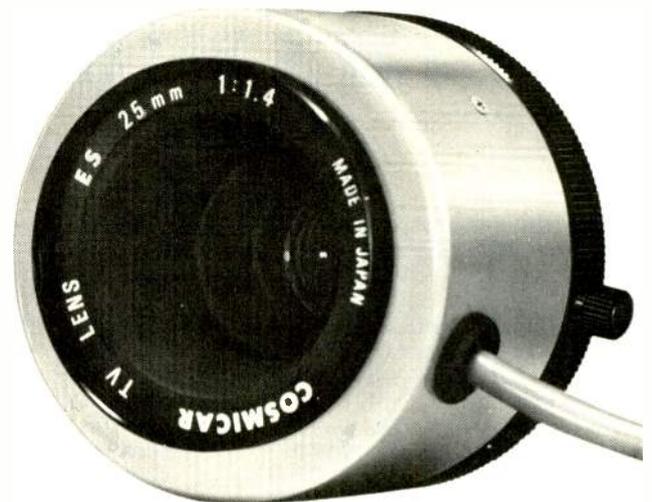
K&M ELECTRONICS
306 N. University Dr.
 Fargo 58102
Line: full line video equip
Lenco Electronics see ad p 79
continued on page 111

PERFECT YOUR CCTV SYSTEM WITH COSMICAR® LENSES

NOW AVAILABLE COSMICAR ES SERIES LENSES, newly developed high sensitivity VIDICON LENSES with AUTOMATIC IRIS that operate for the ranges from 1.4 ft-c to 100,000 ft-c. SMALLEST in sizes, ECONOMICALLY priced and provide VERY WIDE APPLICATIONS.

NEW COSMICAR ES SERIES LENSES

- F.L. 8.5mm f/1.5—ES for 2/3" cameras
- F.L. 12.5mm f/1.4—ES for 2/3" & 1" cameras
- F.L. 16mm f/1.6—ES for 2/3" cameras
- F.L. 25mm f/1.4—ES for 2/3" & 1" cameras
- F.L. 50mm f/1.8—ES for 2/3" & 1" cameras



COSMICAR OPTICAL CO., LTD.

424, Higashi-Oizumi, Nerima-ku, Tokyo, Japan

Cable Address: "MOVIEKINO TOKYO"

U.S. Representative & Service Office: Asahi Optical (America) Inc. 15 East 26th Street, New York, N.Y. 10010, U.S.A.
Circle 176 on Reader Service Card

The COHU 1550

Compare features of telecines available in today's market and you will quickly see why Cohu's 1550 "Performer" is proclaimed the standard in the industry and stands as a GIANT in terms of performance.

SMPTE slides look great on the 1550, but more importantly its superior performance can be verified by its ability to handle the typical everyday quality of program source material.

Technically, the 1550 gives you 700-line center and 600-line corner resolution, manual Instant Paint, automatic black and white color balance, response for 2 to 1 increase in light is 70 milliseconds to within 90% of final value with zero overshoot, gamma control continuously variable from 0.4 to 1, less than 1% geometric distortion, 52 dB minimum signal-to-noise ratio, unsurpassed colorimetry, and fully sealed electron beam coated optics.

Cohu's new color encoder/image enhancer/auto balance unit, the Model 9900, is standard equipment on the 1550. It provides automatic two-level horizontal and vertical detail enhancement and adjustable detail coring with both manual and automatic detail gain including remote control of level. The encoded color signal meets all applicable NTSC, EIA, and FCC specifications. Other user advantages are vertical interval reference insertion, full or split color bars, plus remote control of color burst, color bars and chroma.

Don't buy any telecine until you have seen the GIANT. Contact your local Cohu sales office or Cohu, Inc., Electronics Division, P.O. Box 623, San Diego, CA 92112. Telephone (714) 277-6700. TWX 910-335-1244.

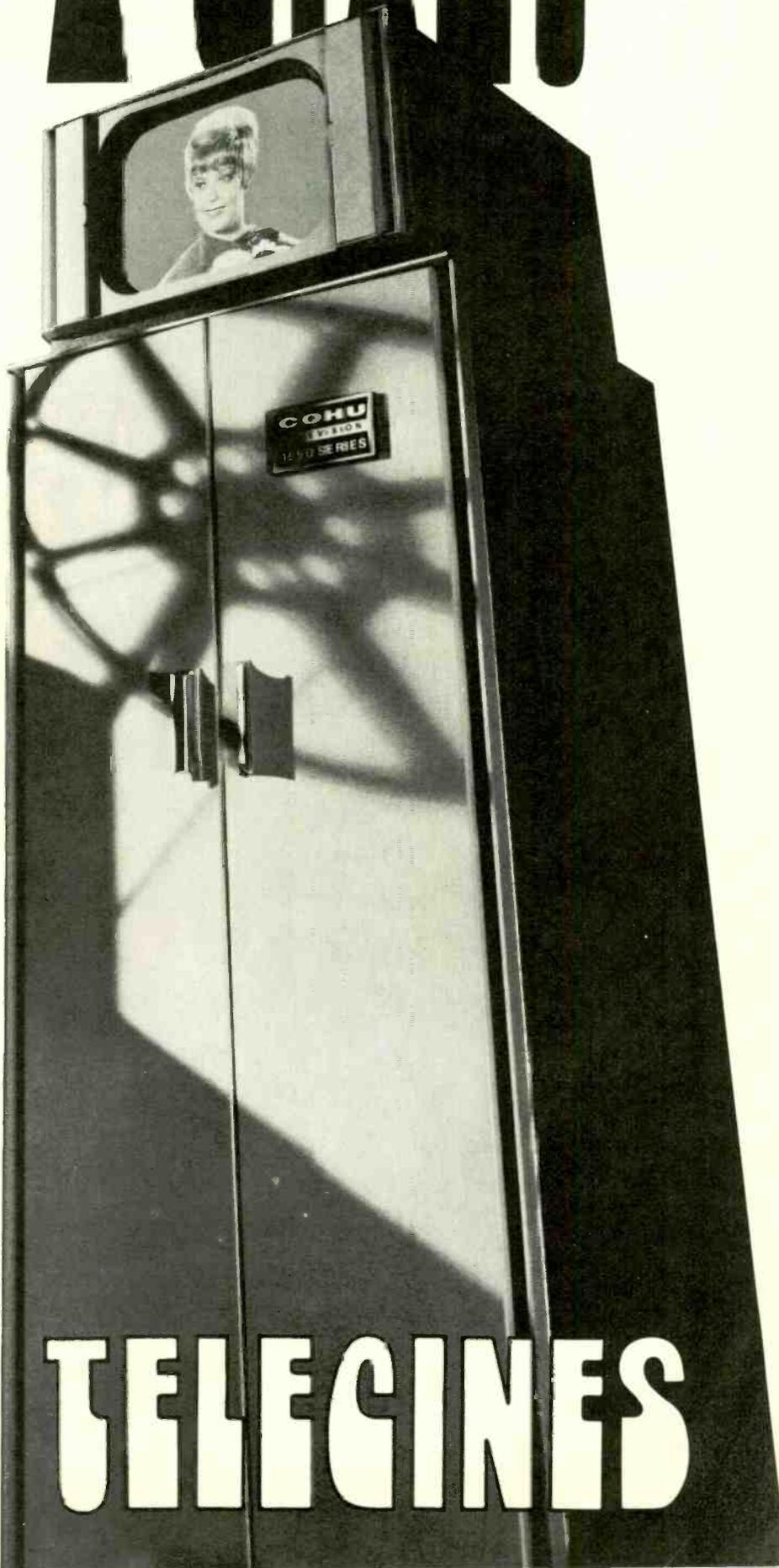
YOU EXPECT
MORE FROM
...AND
YOU GET IT.



COHU SALES OFFICES:

NEW ENGLAND Bedford, MA 617-275-0370 • NEW YORK Florham Park, NJ 201-377-6636 • WASHINGTON, DC 301-656-3061 • PENNSYLVANIA Wayne 215-688-7325 • GREAT LAKES Michigan City, IN 219-874-3333 • NORTH CENTRAL STATES Lincoln, NE 402-467-2900 • SOUTHEAST Orlando, FL 305-896-4881; Huntsville, AL 205-881-6220; Greensboro, NC 919-273-1918 • ROCKY MOUNTAIN Denver, CO 303-573-8835 • TEXAS Arlington 817-461-1707 • CALIFORNIA San Diego 714-278-8931; Costa Mesa 213-869-5884; Cerritos 213-926-7002; Palo Alto 415-326-0280

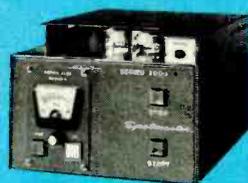
A GIANT



AMONG TELECINES

Spotmaster[®]

Tape Cartridge Machines



SERIES 2000



SERIES 3000



SERIES 4000



MULTI-DECKS

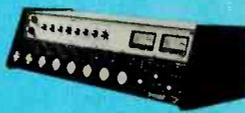
Audio Consoles



VERSA CONSOLE



50 SERIES MONO



100/200 SERIES
MONO AND STEREO



SLIDE-TYPE
MONO AND STEREO

Audio Amplifiers



CLE-500
SOUND BRITENER



CLE-FM
SOUND
BRITENER



CLA 20/40A
COMPRESSOR/
LIMITER
AMPLIFIER



BETMS-100/200
TURNTABLE
PRE-AMPLIFIERS

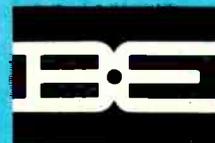
ACCESSORIES

Fault/Splice Detectors • Sequencers/Switchers • Remote Controls • Phase-Lok Head Brackets • Distribution Amps • Monitor Amps • Telephone Answering Systems • Tape • Tape Cartridges • Alignment Tapes • Test Tapes • Tape Winders/Loaders • Delay Tape Cartridges • Rebuilding/Reconditioning Services Maintenance Supplies/Cleaners • Heads • Demagnetizers • Erasers • Microphones • Headphones • Turntables • Tape Cart Racks • Control Room Furniture • Studio Clocks

BROADCAST ELECTRONICS INC.

— A FILMWAYS COMPANY —

8810 BROOKVILLE ROAD • SILVER SPRING, MARYLAND, 20910
PHONE 301-588-4983 • TWX 710-825-0432



Circle 178 on Reader Service Card

THE SOURCE '75

OHIO

ABCOM SALES

1166 Chesapeake Ave.
Columbus 43212
614-486-9684
Line: audio components
Superscope see ad p 117

APPLIED VIDEO ELECTRONICS INC.

P.O. Box 25
Brunswick 44212
216-225-4443
Line: full line video equip
Lenco Electronics see ad p 79

AUDIO LOGIC

601 Rockwell
Cleveland 44114
216-771-1972
Line: audio equip

A/V MEDIA, INC.

3344 W. Broad St.
Columbus 43204
614-272-0014
Line: video and audio products

CENTRAL VIDEO SYSTEMS, INC.

7311 Valley View Dr.
Independence 44131
216-524-9696
Line: video products

DOUG COOK & ASSOCS.

2185 Trent Rd.
Columbus 43229
614-471-4114
Line: audio & video equip, transmitters
McMartin Industries see ads pgs 18, 65, 90 & 135

DAYTON COMMUNICATIONS

CORP.

2971 Bluefield Ave.
Dayton 45414
513-278-7937
Line: video equip, CCTV systems
CVS see ad p 122
Viscount see ad p 98

ELECTRONIC PRODUCTS CORP.

16006 Waterloo
Cleveland 44110
Line: audio & video equip
CVS see ad p 122
Dynasciences see ad p 96
Strand Century see ad p 102
TeleMation see ad p 81

GOSS COMMUNICATIONS

1450 E. 289th St.
Wickliffe 44092
216-944-0268
Line: video equip
AKAI see ad p 13

KLOPF A/V CO.

3381 Successful Way
Dayton 45414
513-236-5500
Line: audio & video products
Dynasciences see ad p 96
Lenco Electronics see ad p 79
TeleMation see ad p 81
Viscount see ad p 98

MANDABACH ASSOCIATES

1350 Crestwood Ave.
Columbus 43227
614-235-0265
Line: audio components

McFADDEN SALES, INC.

150 E. Broad St.
Columbus 43215
614-221-3363
Line: audio components

DICK MURRAY

Box 222
Celina 45822

Line: full line radio equip
Control Design see ad p 63

OHIO INSTRUMENTS

7180 Brundage Road
Waldo 43356
614-726-4242
Line: test instruments
Marconi see ad p 119

J.B. PARENT CO.

19706 Center Ridge Rd.
Cleveland 44116
216-333-9955
Line: audio equip
AKG see ad p 51

RIXAN ASSOCS.

5062 Wadsworth Rd.
Dayton 45414
513-278-4216
Line: audio & broadcast equip
Modular Audio Products see ad p 120

A.C. WAHL & ASSOCS.

Cincinnati 45215
513-821-3270
Lyndhurst 44124
216-449-1788
Line: audio components
Tech Labs see ad p 90

OKLAHOMA

HILL RADIO EQUIP. CO.

Rte 6, Box 622
Claremore 74017
918-341-5240
Line: audio components
Stanton Magnetics see ad p 34

SYSTA-MATICS INC.

510 N. Sheridan
Tulsa 74112
Line: audio & video equip

CVS see ad p 122
Dynasciences see ad p 96
Strand Century see ad p 102

DOUG BROWN ENTERPRISES

Box 7494
Tulsa 74105
918-747-5045
Line: audio components
Stanton Magnetics see ad p 34

OREGON

EARL & BROWN CO., INC.

P.O. Box 19406
Portland 97219
503-245-2283
Line: audio equip
AKG see ad p 51

OREGON A/V SYSTEMS, INC.

117 S.W. Front Ave.
Portland 97204
503-224-4313
Line: audio & video products
AKAI see ad p 13
CVS see ad p 122
Inovonics see ad p 134
Lenco Electronics see ad p 79
TeleMation see ad p 81

REX RECORDING CO.

1931 S.E. Morrison St.
Portland 97214
503-233-2471
Line: audio components
Stanton Magnetics see ad p 34

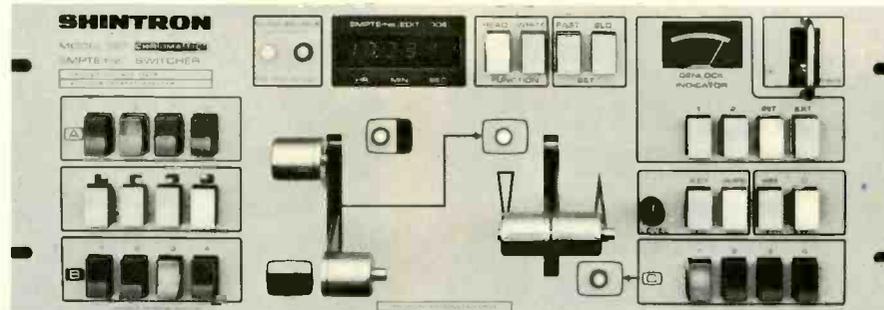
PENNSYLVANIA

GEORGE M. CONNEEN CO., INC.

24 S. Newtown St. Rd.
Newtown Square 19073
Line: audio equip

continued on page 112

PROFESSIONALS SPECIALIZE



MODEL 367 SMPTEmat Switcher

- Color Switcher
- Color NTSC Genlock Sync Generator
- SMPTE Edit Code Reader/Generator
- Interface Panel

Post Production Switcher

▼ \$3,300 List

CHROMATIC DUET

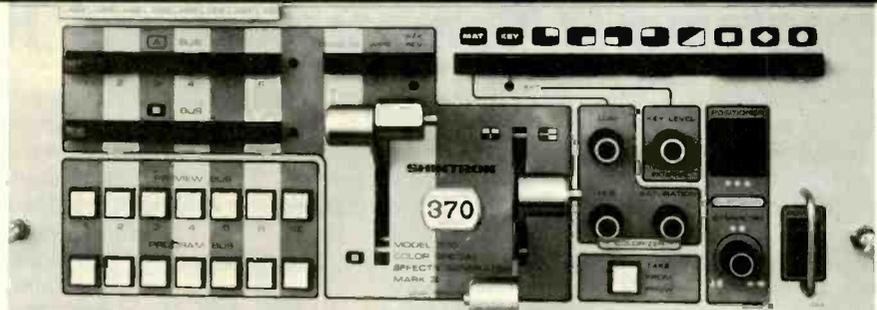
▲ \$3,780 List

MODEL 370

Special Effects Generator

- 10 Basic Wipe Patterns
- Dissolve to Effects
- Built-in Color Background Generator
- Over 1000 Units Sold

Production Switcher



SHINTRON
Cambridge, MA 02142 (617) 491-8700

... The Precision People

Circle 179 on Reader Service Card

THE SOURCE '75

D&H DISTRIBUTING CO.

2525 N. 7th St.
Harrisburg
Line: lighting equip
Strand Century see ad p 102

EASTERN TELECOM, INC.

700 Seco Rd.
Monroeville 15146
412-373-2170
Line: CCTV systems

MILTON ESHELMAN CO.

2902 Sycamore St.
Harrisburg 17111
717-564-2437
Line: CCTV systems

O.H. HIRT

41 N. 11th St.
Philadelphia 19107
Line: lighting equip
Strand Century see ad p 102

L&M ASSOCS.

965-A Bristol Pike
Andalusia 19020
215-639-3100
Line: test instruments
Marconi see ad p 119

COMMUNICATION MEDIAS

P.O. Box 54
Allentown 18105
215-437-0607
Line: audio components, full line
audio & video equip
Roh see ad p 103
Stanton Magnetics see ad p 34

JERRY CONN & ASSOC.

550 Cleveland Ave.
Chambersburg 17201
717-263-8258
Line: CATV electronic units; coaxial

cable, cable connectors; broadcast
antennas; TV and FM modulators,
processors; microwave systems

ESTERSONH ASSOCS.

541 Davisville Rd.
Willow Grove 19090
215-657-1414
Line: audio components
Superscope see ad p 117

OSCAR H. HIRT, INC.

41 N. 11th St.
Philadelphia 19107
Line: cameras & accessories
Cinema Products see ads pgs 77, 83

HOLT TECHNICAL SERVICE

428 Broadhead Ave.
Bethlehem 18016
215-865-3775
Line: audio & video products
Control Design see ad p 63

LERRO ELECTRICAL CORP.

3125 N. Broad St.
Philadelphia 19132
215-223-8200
Line: video equip

MARCO VIDEO SYSTEMS, INC.

6114 North 20th St.
Philadelphia 19138
215-849-9500
Line: CCTV systems

PEIRCE PHELPS, INC.

2000 N. 59th St.
Philadelphia 19131
215-477-9000
Line: audio & video equip, CCTV,
video systems
CVS see ad p 122
Dynasciences see ad p 96
Strand Century see ad p 102
TeleMation see ad p 81

PENNSYLVANIA EDUCATIONAL

AIDS

307 E. Carson St.

Pittsburgh 15219
412-381-2826
Line: CCTV systems, video equip
Lenco Electronics see d p 79

HENRY RHEA

1229 Hunt Club La.
Media 19063
215-566-6558
Line: audio equip; transmitters

RPC ELECTRONICS

620 Alpha Drive
Pittsburgh 15238
412-782-3770
Line: full line of audio/video equip
TeleMation see ad p 81

VAL-TRONICS, INC.

10 Park Bldg.
Pittsten 18640
717-655-5937
Line: audio & video equip, RF moni-
tors
Control Design see ad p 63
McMartin Industries see ads pgs
18, 65, 90 & 135
Stanton Magnetics see ad p 34

WAGGONER-VERHILL ASSOCS.

Pittsburgh 15235
412-241-5205
Line: audio components
Tech Labs see ad p 90

RHODE ISLAND

WRH PRODUCTIONS

5 Industrial Way
Riverside 02915
401-434-6272
Line: full line audio components,
equip RF monitors
Stanton Magnetics see ad p 34

SOUTH CAROLINA

R.L. BRYAN CO.

P.O. Drawer 368
Columbia 29202
803-779-3560
Line: audio & video products
AKAI see ad p 13

CALHOUN A/V CO.

1217 Broad River Rd.
Columbia 29210
803-772-9130
Line: audio & video products
CVS see ad p 122
Lenco Electronics see ad p 79
Strand Century see ad p 102

TENNESSEE

ALLIED SOUND-VISUAL EDUCATION DIV.

2741 Nonconah Blvd. S. Suite 320
Memphis 38132
901-396-4747
401 Spence Lane
Nashville 37210
615-254-6473

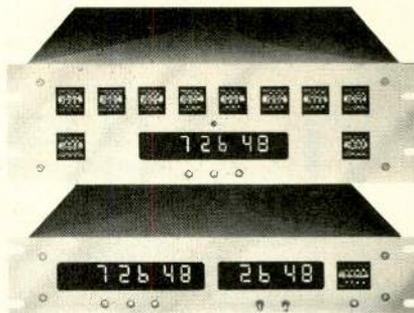
Line: audio & video equip
CVS see ad p 122
Dynasciences see ad p 96
Lenco Electronics see ad p 79
Strand Century see ad p 102

BILL BILLINGS PHOTO

129 S. Front Ave.
Rockwood 37854
Line: photo products
Cinema Products see ads pgs 77,
83

continued on page 114

PERFECT TIMING



Programmer/Comparators and Network Joiners

Whether your station is based in New York, Honolulu or anywhere in between, perfect timing of station breaks and commercial time-outs is essential. To meet your exacting timing requirements ESE now offers two precision timing components. To fulfill the needs of Network Broadcasters ESE has designed a complete line of Programmer/Comparators. Rugged thumbwheel programmers coupled with a reliable ESE clock or timer to provide a single pole contact closure (1 Amp contact rating) for the length of time program matches display. In addition ESE P/C's are available with a 10 second preroll cuing lite.

Write, Wire or Call Today: 505½ Centinela Avenue



To meet the needs of Affiliates ESE has designed the Network Joiner. A solid-state Re-programmable memory united with an ESE clock or timer to provide as many user-programmed single pole contact closures as needed. Supplied with manual override and mode selection to provide maximum programming flexibility.

The Programmer/Comparator and the Network Joiner are furnished on a 19" aluminum relay rack mounting panel. The prices of Programmer/Comparators start at \$305. The price of the 10 program P/C shown above is \$1100. The base price of the Network Joiner is \$1000. Custom options and special orders are available.

Inglewood, California 90302 • (213) 647-3021

Circle 180 on Reader Service Card



OPTEK PRODUCTS
Marketed Exclusively by:
BROADCAST COMMUNICATIONS DEVICES, INC.

5526 E. La Palma Avenue
Anaheim, California 92807
(714) 528-9505

1850 Warburton Avenue
Suite 203
Santa Clara, California 95050
(408) 984-6614

BCD
BROADCAST COMMUNICATIONS DEVICES INC

Specialized products for the special needs of the broadcast industry.

Optek 1400 Transmitter Demodulator

A precision, low cost, no-nonsense television visual demodulator, the 1400 was designed to provide ideal detection and filter characteristics that allow monitoring and measurement of the transmitted visual signal. A sound notch is included that permits measurement without interference from the aural transmitter. The 1400 is perfectly suited for interface with Automatic Video Correctors in "closed-loop" transmitter pre-correction applications.



Optek 7400 Automatic Bulk Tape Degauser

Fully automatic, the 7400 provides hands-off operation and erasure to levels in excess of -90dB^* . Audio and video reel sizes up to 16 inches, as well as quadruplex cassettes and cartridges, are quickly and easily accommodated. A unique Flux Pattern Selector assures maximum magnetic tape erasure, no matter what the recording format of the tape. The 7400 gives complete and automatic erasure of tape in less than one minute.

*For standard ferrous oxide audio tape.



Optek 1010B Video Noise Meter

The 1010B permits rapid and accurate measurement of signal-to-noise ratio in any standard video waveform. A tangential measurement technique permits precise measurement without interrupting system operation. Stable design and built-in calibration insure accuracy to better than $\pm 0.5\text{ dB}$ throughout the range 20 dB to 55 dB, with SNR shown directly on a large LED display.

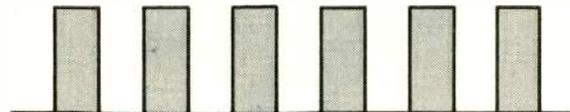


Optek Stor-Mor® Storage Systems

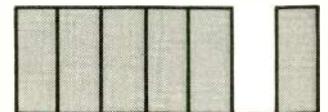
Low cost Stor-Mor** mobile storage systems save valuable studio floor space while providing double the storage capacity for magnetic tape, instruments, etc., and faster, smoother, quieter access to any required item. These systems are custom-designed to fit into your existing facility without expensive remodeling. One moveable aisle goes where you want it to, effortlessly.

Featuring all-steel construction, the shelving is mounted on moveable carriages that travel on 5" steel wheels along tracks that are completely flush with the finished floor. Each carriage, operating either mechanically or electrically, will handle up to 60,000 pounds and provides positive, effortless tracking. The floor is completely finished with attractive and durable 1/4-inch rubber-backed carpet.

**Stor-Mor is a trademark of the International Products Company.



Conventional Storage



Stor-Mor. Same Amount of Storage In About Half The Space.

Represented Elsewhere by:

Didier-Denver
Evergreen, Colorado 80439
(303) 674-6000

H. M. Dyer Electronics
Farmington Hills, Michigan 48024
(313) 478-2157

Glentronix, Ltd.
Don Mills, Ontario, Canada
(416) 444-8497

Landy Associates
Cherry Hill, New Jersey 88034
(609) 424-4660

Lew Radford Associates
Atlanta, Georgia 30319
(404) 237-6097

Sudduth Associates
Carrollton, Texas 75006
(214) 242-2690

Circle 181 on Reader Service Card

THE SOURCE '75

BROADCAST DISTRIBUTORS

Bible Place
Cleveland 37311
615-472-8200
Line: audio components and equip

BROADCAST EQUIPMENT & SUPPLY CO.

P.O. Box 3141
Bristol 37620
615-968-7342
Line: full line audio equip
Stanton Magnetics see ad p 34

CLW BROADCASTERS

2004 S. Orchard Knob Ave.
Chattanooga 37404
Line: full line of radio equip
Control Design see ad p 63

CONSOLIDATED ELECTRONIC SYSTEMS

Knoxville
615-947-2881
Line: audio and video products

CREATIVE EXPRESS

1905 Broadway
Nashville 37203
615-327-1573
Line: audio products

DELTRONICS

819 Woodland St.
Nashville 37206
615-262-3177
Line: video systems

LOFSTROM ELECTRONICS

Empire Bldg.
Glassport 15045
412-461-2116
Line: video equip

AKAI see ad p 13

MEDIA ASSOCS.

P.O. Box 249
Franklin 37064
Line: full line radio equip
Control Design see ad p 63

MOTION PICTURE LABORATORIES, INC.

781 S. Main St.
Memphis 38102
Line: cameras & accessories
Cinema Products see ads pgs 77, 83

OPUS II ASSOCS.

4284 Summer Ave.
Memphis 38122
901-682-2455
Line: full line audio/video equip
TeleMation see ad p 81

STUDIO SUPPLY CO.

P.O. Box 280
Nashville 37202
615-327-3075
Line: audio components, equip; recording accessories
Inovonics see ad p 134

TEXAS

ACCURATE SOUND CORP.

1206 Euless Blvd. Suite 106
Euless 76039
817-267-3911
Line: full line of audio equip
Inovonics see ad p 134

BOB AMOR & ASSOCS.

916 Green Hill Rd.
Dallas 75232
214-823-7820
Line: audio consoles, FM monitoring

equip, audio & video equip, transmitters

McMartin Industries see ads pgs 18, 65, 90 & 135

UREI see ad p 131

ARNOLD BARNES CO.

P.O. Box 9748
Austin 78766
512-454-4371
7616 LBJ Freeway, Suite 401
Dallas 75240
214-233-5535
3801 Kirby, Suite 834
Houston 77006
713-523-4333
802 Lingco
Richardson 75080
214-235-4553
Line: audio, video, broadcast products

AKAI see ad p 13

CVS see ad p 122

BRADENCO

2646 Andjon Drive
Dallas 75220
214-358-3278
Line: test instruments
Marconi see ad p 119

CROUSE-KIMZEY CO.

3507 W. Vickery Box 9830
Ft. Worth 76107
817-737-9911
Line: audio components
Stanton Magnetics see ad p 34

D&J SALES COMPANY

2307 59 St.
Lubbock 79412
806-792-0001
Line: audio products, transmitters

VICTOR DUNCAN INC.

2659 Fondren Ave.
Dallas 75206
Line: cameras & accessories
Cinema Products see ads pgs 77,

83

JOHN FITZGERALD

13844 Peyton Dr.
Dallas 75240
214-631-5470
Line: video equip; char generators

GEE-GIBSON ELECTRONIC ENT

4002 E. Houston Hwy.
Victoria 77901
512-578-4323
Line: audio, video products
Control Design see ad p 63
Stanton Magnetics see ad p 34

GRAVCO SALES INC.

Redbird Airport D
Dallas 75221
214-330-1245
Line: video processing equip.; switchers

GUARANTEE RADIO SUPPLY CORP.

1314 Iturbide St.
Laredo 78040
512-722-3233
Line: audio components

INDUSTRIAL AV INC.

7315 Ashcroft # 116
Houston 77036
Line: video equip
CVS see ad p 122

BOB LANDINGHAM

2121 Santa Anne Blvd.
Dallas 75028
214-327-7311
Line: video proc amp switchers
Datavision see ad p 125

LEE SALES CO.

5635 Yale Blvd.
Dallas
214-363-3831
Line: audio products

continued on page 116

Television Products Company 9016 Aviation Blvd. Inglewood, CA 90301

For years, most of the major network studios have considered anything but pneumatic pedestals obsolete. The tough requirements of day-to-day use has proven TVP Pedestals to be reliable, flexible and maintenance free.

Our superior pneumatic counter-balance system is used in all of these. With this, cameras float on telescoping columns that glide on ball-bearing races. Camera height can be raised or lowered at the touch of a finger . . . smoothly.

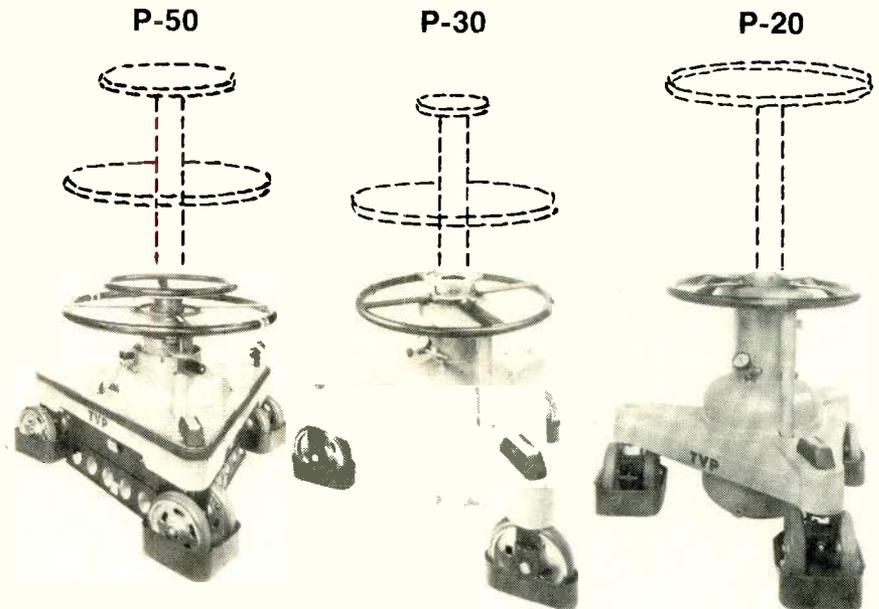
And without lead weights, there's less weight to have to push around.

The 360° steering is adjustable from crabbing to tracking at the touch of a foot pedal. This mechanism has been specially designed for quiet operation.

You won't find 8-inch tires on most pedestals, but they're standard equipment on ours. Bigger is better: not only do they roll easier, but they'll transmit less vibration to the camera.

If you're worried about maintenance, you'll be glad to know that we've used sealed ball bearings wherever possible. The air system requires only one-point lubrication, once a year. And everything is designed for easy access.

Compare these three with any other pedestals available—you'll find them a very attractive combination of quality and price.



	P-50	P-30	P-20
Column Range	36"	30"	20"
Min/Max Height*	21" to 57"	25" to 55"	30 5/8" to 50 5/8"
Load Capacity	300 lbs.	100 lbs.	285 lbs.

*Measured from the top of the pan-head' mount to the floor.

Circle 182 on Reader Service Card



VIA MICROWAVE ASSOCIATES.

More and more TV stations are bringing the excitement and drama of electronic news gathering (ENG) to their station's programming. And more of them are coming to us than to anyone else in the world.

We're Microwave Associates. And if it has anything to do with microwave video equipment, from miniature battery operated transmit-

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Microwave Associates is the *only* company making a complete line of microwave equipment for electronic

news gathering. So if you're considering ENG, consider us. Making it easier for you is one reason Microwave Associates has become number one in ENG at TV stations coast-to-coast.

Microwave Associates, Communications Equipment Division, Burlington, Mass. 01803. 617-272-3000.

Circle 183 on Reader Service Card



**MICROWAVE
ASSOCIATES**

cut your editing down to size with Central Dynamics' EDS-200



The microcomputer Audio/Video Tape Editor for Commercial, Industrial and Educational Applications

The EDS-200 Automatic Editor and Synchronizer provides professional and economical assembly of master tapes. Utilizing its built-in SMPTE Time Code Reader, Micro-computer and program, the EDS-200 automatically locates, previews and records audio and video edits accurately . . . all to a *single* frame!

Single button scene location, entry and storage, audio and video synchronizing and switching (in *all* modes), automatic cueing, and simultaneous machine control cuts the tedium and time of manual editing. The EDS-200's modular design, multi-machine control and available options allow for easy and economical expansion to meet more demanding post-production requirements.

Other features include:

- Can control several Quad, Helical and Multi-Track Audio machines.
- Built-in, sensitive and accurate SMPTE Time Code Reader compensates for poorly recorded time code and can read in all modes.
- Performs Time Code duration calculations.
- Keyboard controls permit simple entry of new data, corrections or changes.
- Automatically stores scene locations from a single control.
- Audio & Video operations are selectively independent or combined.
- Fully compatible for all on-line and off-line editing operations . . . NTSC or PAL.

For the complete story on the EDS-200, Video Tape Editing and associated equipment, call or write today!



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THE SOURCE '75

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P.O. Box 26816
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Line: audio & video equip
Dynasciences see ad p 96

MARTIN, ZIENKOSKY, BROWNE & ASSOCS.

3801 Kirby, Suite 834
Houston 77006
713-523-4333
13731 Omega Rd.
Dallas 75240
214-233-5535
P.O. Box 9748
Austin 78766
512-454-4371
Line: full line of audio & video equip
Control Design see ad p 63
Thomson-CSF Labs see ad p 21
TFT see ad p 136

MILLER & ASSOCS.

4304 Beltwood Pkwy N.
Dallas 75240
214-661-5002
Line: audio components
Superscope see ad p 117

NATIONAL BROADCAST EQUIP.

1401 S. Floyd Rd.
Richardson 75080
214-690-3131
Line: audio and video equipment

PHOTOGRAPHIC SUPPLIERS

800 Montana Ave.
El Paso 79902
915-533-9828
Line: video equip
AKAI see ad p 13

PROFESSIONAL AUDIO SERVICES

P.O. Box 1953
Ft. Worth 76101
817-536-6254
Line: audio components
Aristocart see ad p 136
Stanton Magnetics see ad p 34

SAVCO

P.O. Box 427
Richardson 75080
214-234-1841
Line: wide range of products for radio, TV & sound recording
Control Design see ad p 63
Wilkinson see ad p 99

J.Y. SCHOONMAKER CO.

2995 Ladybird Lane
Dallas 75220
214-357-8481
Line: tape recorders, audio equip

SOUND IDEAS ASSOCS.

6123 Spruce Forest
Houston 77018
5641 Yale Blvd.
Dallas
Line: video equip
Canon USA see ad p 101

SOUTHWEST ELECT.

Dallas 75230
214-233-9816
Houston 77035
713-729-1670
Line: audio components
Tech Labs see ad p 90

STUDIO SOUND SERVICE

1401-F S. Floyd Rd.
Richardson 75080
214-690-3131
Line: audio components, equip
Stanton Magnetics see ad p 34

GENE SUDDUTH

2809 Raintree Drive
Carrollton 75006
214-242-2690
Line: full line vide equip
Computer Image see ad p 11
Datatek see ad p 75
Datavision see ad p 125
Roh see ad p 103

TAFT BROADCASTING CORP.

4808 San Felipe St.
Houston 77027
713-622-1010
Line: video equip
CVS see ad p 122
Lenco Electronics see ad p 79

TEXAS VIDEO SYSTEMS

10209 Plano Rd.
Dallas 75238
214-341-1771
Line: CCTV systems, video equip
Lenco Electronics see ad p 79

RUSSELL TREVILLIAN

2908 Mulberry
Pasadena
713-941-7272
Line: video equip
American Data Corp see ad p 55

UNIVERSAL VIDEO

11929 Radium
San Antonio 78216
512-341-1492
Line: full line audio/video equip
TeleMation see ad p 81

VIDEO ELECTRONICS

3000 Carlisle St.
Dallas 75204
214-741-1440
Line: CCTV systems, audio & video equip
CVS see ad p 122
TeleMation see ad p 81

VIDEO SYSTEMS

2000 A Governors Circle
Houston 77018
713-686-9641
Line: video systems
Dynasciences see ad p 96

WHALIN'S PRO AUDIO SALES

2910 Buena Vista
Arlington 76010
817-261-8197
Line: full line audio & recording equip
Dolby see ad p 121
Inovonics see ad p 134
Stanton Magnetics see ad p 34

WYBORNY SALES CO.

6619 Shady Brook # 3169
Dallas 75206
214-691-6484
Suite # 108
7315 Ashcroft
Houston 77036
713-772-0961
Line: audio components, equip
AKG see ad p 51

UTAH

BOB BACON

2536 Campus Dr.
Salt Lake City 84121
Line: video equip
CVS see ad p 122

B&B ELECTRONIC PRODUCTS

445 E. 2nd St. S.
Salt Lake City 84111
801-524-2500
Line: audio equip
AKG see ad p 51

BROADCAST SERVICE INC.

145 Social Hall Ave.
Salt Lake City 84111
801-524-2500
Line: full line audio & video equip
Thomson-CSF Labs see ad p 21

CARTER SUPPLY CO.

3208 Washington Blvd.
P.O. Box 9197
Ogden 84401
801-393-8603

continued on page 118

BEAT 'EM TO THE DRAW



With the Superscope Action-Corder

Ready when you are. With the fastest news team in town. Superscope's rugged, pocket-sized C-106 Action-Corder with built-in condenser microphone. And the ingenious, optional Pistol Grip accessory that lets you stop and start the Action-Corder in the time it takes to pull the trigger-switch.

Aim for the heart of the story—even if you have to go over the crowd to get it. The optional Pistol Grip gives you a full arm's reach and one free hand. No cords, microphone cables, plugs or worthless weight. You'll be wrapped up in the action—not in the wires.

Fire, flood or fuel shortage—one disaster is enough. You don't need risky erasures, fluffs or blank spots. With the Pistol Grip stop/start switch, you can edit as you go and integrate your own commentary when you're ready. Now that's good news!

Superscope C-105 Professional Three-Head Cassette Recorder features three heads for tape/source monitoring that allow instant comparison of program source to actual recording. A built-in condenser microphone that picks up any sound within earshot. And special features for taped discussions and professional interviews that include a special telephone pickup jack and a mechanical instant pause control. For more convenience, get the Superscope EC-3S hand-held condenser microphone with remote stop/start switch. When not in use, the microphone snaps into a unique slide holder on the shoulder strap to leave your hands free.

Superscope EC-12B Tie Clasp/Wand Electret Microphone engineered for use with any portable recorder or PA system. Telescopic wand extends to 17½" for hand-held or podium use. Unscrew the wand, and microphone instantly converts for tie clasp application. See the entire line of Superscope professional tape equipment, microphones and accessories at your nearest Superscope dealer.

from the makers of Marantz

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Listen to us.

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Circle 185 on Reader Service Card

WILL THE
TELEVISION CHARACTER GENERATOR
THAT YOU ARE CONSIDERING
INCLUDE THESE AS
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- ☆ Practical Character Size
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- ☆ Window Format Positioning
- ☆ 20 Auxiliary Control Keys
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SYSTEM PERMIT EXPANSION
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- ☆ Time/Day/Date Generator
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- ☆ Lower-Case Characters
- ☆ Foreign Language
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THE LAIRD TELEMEDIA
MODEL 3600 WILL!

 **LAIRD TELEMEDIA INC.**
2125 SOUTH WEST TEMPLE • 801 487-6251
SALT LAKE CITY, UTAH 84115

Circle 186 on Reader Service Card

THE SOURCE '75

Line: video equip
AKAI see ad p 13

H.P. MARKETING
2361 S. Main
Salt Lake City 84115
801-466-6105

Line: audio equip
UREI see ad p 131

MEDIA WEST INC.
187 West 3100 South, Box 458
Bountiful 84010
801-295-3308
Line: audio components & radio equip
Control Design see ad p 63
Stanton Magnetics see ad p 34

STOCKDALE & CO. INC.
200 E. First South
Salt Lake City 84111
Line: cameras & accessories
Cinema Products see ads pgs 77, 83

VERMONT

GNS TELESYSTEMS CORP.
Box 456 Shelburne Shopping Park
Shelburne 05482
802-985-2675
Line: full line of audio/video equip
TeleMation see ad p 81

VIRGINIA

AIRPORT INDUSTRIAL PARK
1395 Air Rail Ave.
Virginia Beach 23455
804-464-9323
Line: video equip
AKAI see ad p 13

AVEC ELECTRONICS CORP.
2002 Staples Mill Rd.
Richmond 23230
804-359-6071
Line: audio & video products
Lenco Electronics see ad p 79

BROADCAST CONSULTANTS CORP.
21 N. Wirt St.
Leesburg 22075
703-777-8660
Line: audio equip
Dolby see ad p 121

BROADCAST ENGINEERS & EQUIP. REPS.
Box 4777
Richmond 23229
Line: full line of radio equip
Control Design see ad p 63

DAVID GREEN BROADCAST CONSULTANT
21 N. Wirt St.
Leesburg 22075
703-777-8660
Line: broadcast products
Stanton Magnetics see ad p 34

LEE HARTMAN & SONS INC.
P.O. Box 659
3236 Cove Rd. N.W.
Roanoke 20004
703-366-3494, 3493, 3713
Line: full line audio & video equip
Thomson-CSF Labs see ad p 21

MIDWEST CORP.
1395 Air Rail Ave.
Virginia Beach 23455
804-855-1056
Line: audio & video products
CVS see ad p 122
Strand Century see ad p 102

PROFESSIONAL SOUNDS INC.
711 W. Broad St.
Falls Church 22046
703-533-0011

Line: full line of audio equip
Inovonics see ad p 134

PROGRAMMED MATERIALS, INC.
Box 360, RFD #7
Roanoke 24018
703-774-1974

Line: audio equip; transmitters

VIRGINIA MELODY & SOUND INC.
3602 Melrose Ave. N.W.
Roanoke 24017
703-344-5563

Line: audio components
Stanton Magnetics see ad p 34

WASHINGTON

AERO MARC INC.
5518 Empire Way S.
Seattle 98118
206-725-1400
Line: audio & video products
Dynasciences see ad p 96
Lenco Electronics see ad p 79

ANIXTER-PRUZAN
1963 First Ave. So.
Seattle 98134
Line: Sony studio video equip full line of CATV equip, cable construction accessories, tools head end, passives, test equip, power supplies

BAILIE VIDEO WORLD
170 Denny Way
Seattle 98109
206-682-3770
Line: video equip
AKAI see ad p 13

BENNETT ENGINEERING CO.
Box 23
Mercer Island 98040
Line: audio & video products
Thomson-CSF Labs see ad p 21
TFT see ad p 136
World Video Inc see ad p 128

BROADCAST SUPPLY CO.
2607 Bridgeport Way W.
Tacoma 98466
206-565-2301
Line: broadcast products
Stanton Magnetics see ad p 34
Aristocart see ad p 136

DAVE CHAMPLIN
12347 Lake City Way
Seattle
206-233-3300
Line: audio products

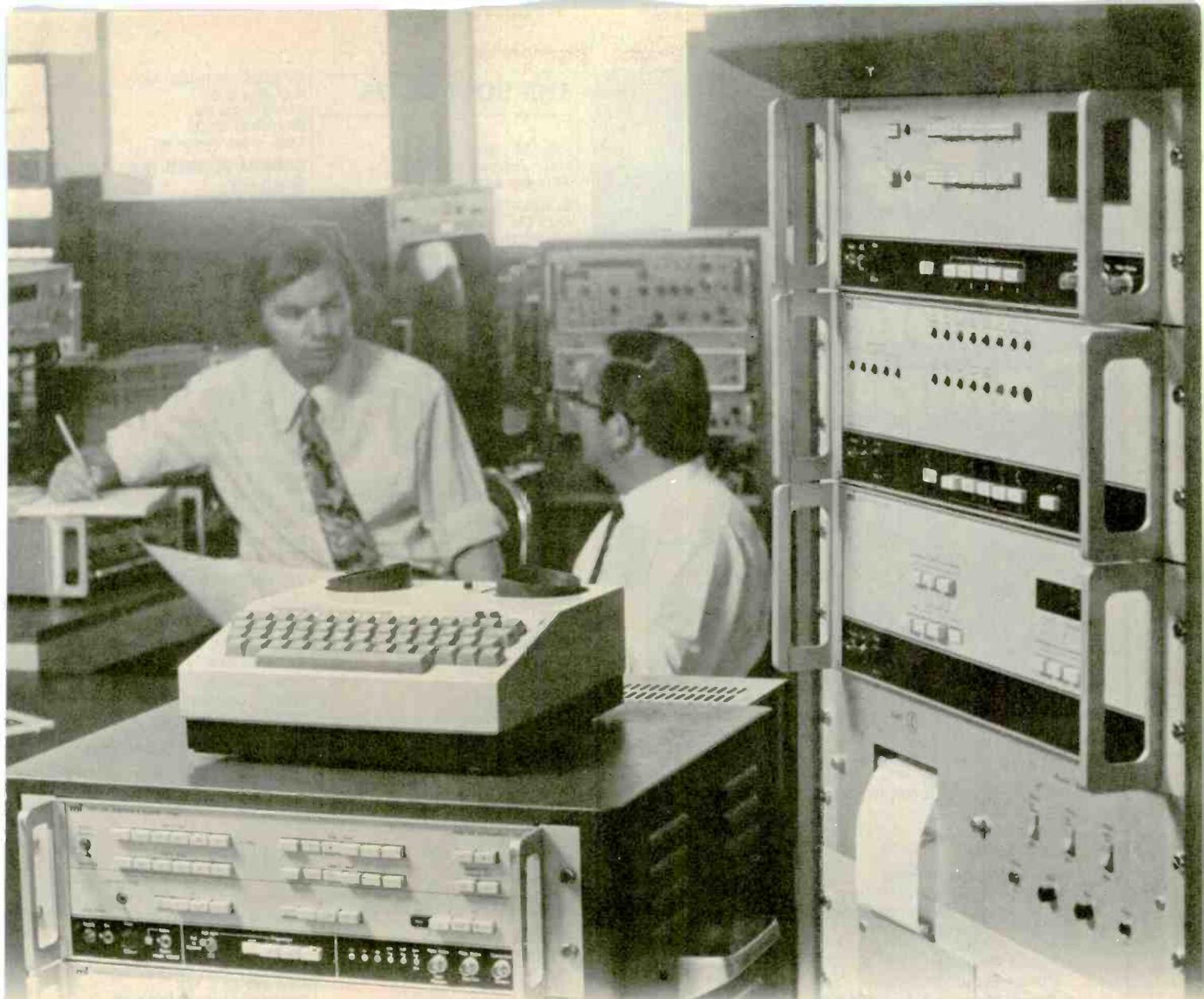
CUSTOM VIDEO SYSTEMS
8320 Lake City Way N.E.
Seattle 98115
206-752-2080
Line: audio & video equip
TeleMation see ad p 81
Viscount see ad p 98

DATACOM ASSOCIATES
111 Tower Place
Seattle 98109
206-285-2525
Line: recorders, audio consoles, FM monitors, video equip
Control Design see ad p 63
McMartin Industries see ads pgs 18, 65, 90 & 135

RUSH S. DRAKE
6133 6th Ave. S.
Seattle 98108
206-763-2755
Line: test instruments
Marconi see ad p 119

EARL & BROWN CO. INC.
P.O. Box 9285
Seattle 98109

continued on page 120



mi automatic TV monitoring sets free the engineers

Time was when highly trained transmission engineers had to waste their brains (and their time) watching a battery of waveforms and pictures — instead of concentrating on work more worthy of them.

Now the TV monitoring scene has been transformed. For TF2914 Insertion Signal Analyser, TF2915 Data Selector together form **THE FIRST COMMERCIALY AVAILABLE AUTOMATIC TRANSMISSION MONITORING SYSTEM**. In conjunction with a test line signal generator and inserter (such as **mi** TF2913), it will automatically cycle through the measurement of all the important parameters of the test line

signal from five separate inputs. Comparison with pre-selected limits is continuous, and an 'out of limits' fault can initiate executive action by automatic switching to standby, with remote alarm indication and simultaneous data transmission of fault location. Up to 16 parameters can also be measured manually by means of push-button selection and a self-contained digital voltmeter. Versions are available for all national and international standards. Systems are now operating in seven countries. Applications include broadcast monitoring, common carriers and satellite operations. Call **mi** and discuss your application.



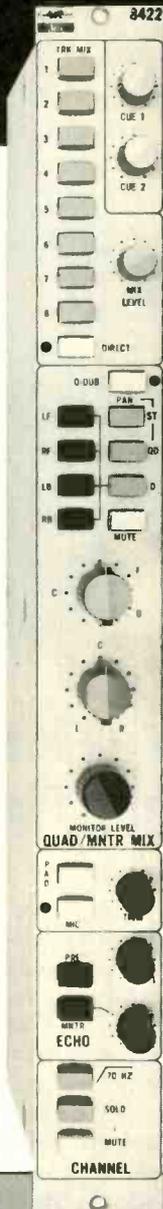
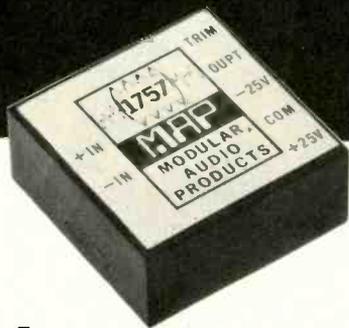
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DIVISION OF MARCONI ELECTRONICS INC.

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Modules
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Amplifiers
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A UNIT OF MODULAR DEVICES, INC.

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THE SOURCE '75

206-284-1121

Line: audio equip
AKG see ad p 51

GLAZER'S CAMERA SUPPLY

1923 3rd Ave.
Seattle 98101

Line: cameras & accessories
Cinema Prods see ads pgs 77, 83

JOHN McCLAMROCK CO.

11206 Des Moines Way S.
Suite #.108

Seattle 98168

206-244-9391

Line: full line radio equip
Control Design see ad p 63
Wilkinson see ad p 99

NORTHSTAR

2150 N. 107th Suite 520
Seattle 98113

Line: video production switchers,
pulse & distribution amps, routing
switchers, special effects generators
Viscount see ad p 98

NORTHWEST ELECTRONICS

P.O. Box 3047

Spokane 99220

509-535-7652

Line: video equip

AKAI see ad p 13

Viscount see ad p 98

JOHN NUTTING

SEattle

206-775-2707

Line: video products & accessories

PACNOR MARKETING

815 W. Ewing St.

Seattle 98119

Line: video equip

Canon USA see ad p 101

DON ROSE

19001 40th Place N.E.

Seattle 98115

206-363-2200

Line: electronic tubes, components

English Electric Valve see ad p 53

SEA-TAC PRODUCTIONS

20103 Des Moines Way S.

Seattle 98148

206-878-2505

Line: audio & broadcast equip

Modular Audio Products see ad p 120

W.J. WOLFENBARGER

P.O. Box 6715

2217 42nd Ave. S.W.

Seattle 98116

206-932-7747

Line: audio components, radio equip

Control Design see ad p 63

Stanton Magnetics see ad p 34

WEST VIRGINIA

ROBERT HARRISON

Rte. 3, Box 24

Princeton 24720

304-425-4665

Line: transmitters

Wilkinson see ad p 99

MIDWEST CORP.

300 First Ave.

Nitro 25143

304-722-2921

Line: audio & video products

AKAI see ad p 13

CVS see ad p 122

WISCONSIN

AVIONIX DIVISION

AV ELECTRONICS INC.

P.O. Box 505

21675 Doral Rd.

Brookfield 53005

Line: video systems

CAMERA CORNER, INC.

Green Bay

414-494-1151

Green Bay

Line: video products

**CONCORD COMMUNICATIONS
SYS-TEMS**

11901 W. Dearborn Ave.

Milwaukee 53226

414-778-0210

Line: audio & video products

WILLIAM McEVOY

2426 Riverview Dr.

Janesville 53545

608-752-3613

Line: video equip

AKAI see ad p 13

MILWAUKEE VIDEO

1024 6th St.

Milwaukee 53201

414-224-0660

Line: video products

CVS see ad p 122

Strand Century see ad p 102

SATTERFIELD ELECTRONICS

1900 S. Park St.

Madison 53701

608-257-4807

Line: audio & video equip

CVS see ad p 122

VIDEO IMAGES

2400 S. Commerce Drive

New Berlin 53151

414-784-2080

Line: full line audio/video equip

AKAI see ad p 13

TeleMation see ad p 81

CANADA

ADCOM ELECTRONICS LTD.

29-16 Connell Court

Toronto, Ont.

Line: audio & video equip

CVS see ad p 122

Dynasciences see ad p 96

**ADVANCE INDUSTRIAL
ELECTRONICS**

538 Berry St.

Winnipeg, Manitoba

204-722-0386

Line: video systems

APPLIED ELECTRONICS

299 Evans Ave.

Toronto M8Z 1K2

416-252-3761

Bay No. 1

4519 12th St. N.E.

Calgary

403-277-8600

Line: full line radio & TV equip

Collins Radio see ad p 45

ATLANTIC VIDEO CENTRE

151 Mountain Rd.

Moncton, N.B.

506-854-1108

Line: video systems

AUDIO ELECTRONICS

219 1147-17th Ave. S.W.

Calgary, Alberta T2T OB7

403-245-1001

Line: audio automation systems

Schafer Electronics see ad p 100

AUVINIX LTD.

11636 P.M. Favier

Montreal Nord

514-322-4564

This is all you need to get moving with Dolby FM



Remember the first time you came across Dolbyized cassettes? And how surprised you were that music could sound so good in such a convenient form?

Well, now the same principles are being used to improve FM broadcasting. The audible effect of the Dolby system as used on FM is a bit more subtle than with

cassettes. But the overall results are just as important. Dolby FM is cleaner, with sparkling high frequencies free of limiting. And, of course, noise is reduced, which often increases the area of good reception.

As of August 1975, over 100 US stations have purchased the Dolby Model 324 or

334 FM Broadcast Unit. The unit accurately compresses the signal in accordance with the Dolby B-Type characteristics and changes the effective transmission time-constant to 25 microseconds. This allows the station to reduce or eliminate any high frequency limiting required previously.

London OH	WAEZ	97.5	Cincinnati OH	WGUC	90.9
Albany NY	WHSB	106.5	Collegeville MN	KSJR	90.1
Leontown PA	WFMZ	100.7	Columbus GA	WEIZ	100.1
La Vista VA	WKDE	105.5	Columbus OH	WCOL	92.3
Ridginton TX	KAMC	94.9	Columbus OH	WOSU	98.7
Baltimore MD	WAMR	106.5	Dayton OH	WTUE	104.7
Birmingham MI	WRNE	94.7	Dallas TX	KCHU	90.9
Boston MA	WROR	98.5	Dallas TX	KTLC	100.3
Boston MA	WVBF	105.7	Dallas TX	KVIL	103.7
Buffalo NY	WDCX	99.5	Dallas TX	KZEW	97.9
Buffalo NY	WBEN	102.5	Denver CO	KBP1	105.9
Carbondale IL	WESU	91.9	Denver CO	KLZ	106.7
Charlotte NC	WFOQ	95.1	Detroit MI	WABX	99.5
Charlotte NC	WFMT	98.7	Detroit MI	WOMC	104.3
Chicago IL	WLOO	100.3	Detroit MI	WJZZ	105.9
Chicago IL	WEBN	102.7	Detroit MI	WMLJ	103.5
Cincinnati OH			Detroit MI	WQRS	105.1

Edmond OK	KWHP	97.7	Los Angeles CA	KGBS	97.1
Fairmont NC	WFMO	100.9	Los Angeles CA	KIQQ	100.3
Flint MI	WGMZ	107.9	Los Angeles CA	KPFK	90.7
Fort Wayne IN	WMEF	97.3	Lancaster PA	WDAC	94.5
Fort Worth TX	KWXI	97.1	Lexington VA	WLUR	91.5
Fresno CA	KP-ID	95.5	Louisville KY	WCSN	99.7
Gainesville GA	WDUN	106.7	Louisville KY	WLSR	102.3
Grand Rapids MI	WZZM	95.7	Madison WI	WYXE	92.1
Hanover NH	WDCR	99.3	Maine FL	WAIA	97.3
Hartford CT	WTIC	96.5	Manassas VA	WEZR	106.7
Henrietta NY	WITR	89.7	Memphis TN	WKNO	91.1
Houston TX	KILT	100.3	Miami FL	WAIA	97.3
Houston TX	KRLY	93.7	Minneapolis MN	KSJN	91.1
Indianapolis IN	WNAP	93.1	Morgantown WV	WAJR	101.9
Jackson MS	WSLI	96.3	New Orleans LA	WEZB	97.1
Kettering OH	WVUD	99.9	New Orleans LA	WNOW	101.1
Los Angeles CA	KBIG	104.3	New York NY	WNEW	102.7

New York NY	WQXR	96.3	Seattle WA	KIXI	95.7
New York NY	WRFM	105.1	Skokie IL	WCLR	101.9
Normal IL	WGLT	91.7	St. George SC	WPWR	95.9
Opportunity WA	KZUN	96.1	St. Louis MO	KCFM	93.7
Paterson NJ	WPAT	93.1	Stevens Point WI	WSPT	97.9
Philadelphia PA	WMMR	93.3	Sylvania OH	WXEZ	105.5
Portland ME	WDOS	97.9	Topeka KS	KTPK	106.9
Richmond VA	WEZS	103.7	Tuscaloosa AL	WUOA	95.7
Rochester NY	WCMF	96.5	Utica NY	WOUR	96.9
Rochester NY	WEZO	101.3	Washington DC	WAMU	88.5
Saline MI	WIOB	102.9	Washington DC	WASH	97.1
Salt Lake City UT	KDAB	101.1	Washington DC	WGMS	107.3
Salt Lake City UT	KSL	100.3	Washington DC	WHUR	96.3
San Antonio TX	KEXL	104.5	Washington DC	WMAL	107.3
San Diego CA	KGB	101.5	Wilkes-Barre PA	WYZZ	92.9
San Francisco CA	KABL	98.1	Youngstown OH	WYSU	88.5
Seattle WA	KIRO	100.7			

As listeners to these stations can hear for themselves, a Dolby FM signal is compatible. In fact, most people find it a better signal even when received on their normal equipment without Dolby decoding.

However, some listeners like to take advantage of every opportunity for improvement. If they use Dolby circuitry* during reception, they can bring the signal even closer to the quality of the original source material used at the station.

Naturally, the noise is reduced. But that's not all. Dolby compression is standardized, recoverable compression. By using Dolby encoding instead of the conventional high frequency limiting normally required during transmission, the station gives the listener at home the opportunity of recovering the full frequency range and dynamics of the signal. Furthermore, depending on the amount of limiting previously used, many stations find that Dolby encoding permits them to increase their level - which is good for both the listeners and the station.

If these prospects excite you, we think you will soon be wanting to check out the new Dolby Model 334 FM Broadcast Unit. \$1,350 and 1 3/4 inches of rack space are all you need to get moving with Dolby FM - an improvement we think both you and your listeners will appreciate.

Distributors
 CTC Brewer Co, Pensacola, FL
 Broadcast Communication Devices, Anaheim, CA
 Broadcast Consultants Corp, Leesburg, VA
 Collins Radio Group, Dallas, TX
 Control Technology Inc, Fort Lauderdale, FL
 M Dyer Electronics, Farmington Hills, MI

La Salle Audio, Chicago, IL
 Lebow Labs Inc, Brighton, MA
 Pacific Recorders and Engineering Corp, San Diego, CA
 Schaler Electronics Corp, Goleta, CA
 Sparta Electronics Corp, Sacramento, CA
 Whalin's Pro Audio Sales, Arlington, TX

Technical literature and reprints of papers describing these developments are available from our offices or distributors - or call in and see us on Booth 66-67 at NAFMB Atlanta 17-20 September.

*Some of the 50 Dolby licensees are already producing their new receiver models, and others have new designs in the pipeline.

Dolby
 Dolby Laboratories Inc
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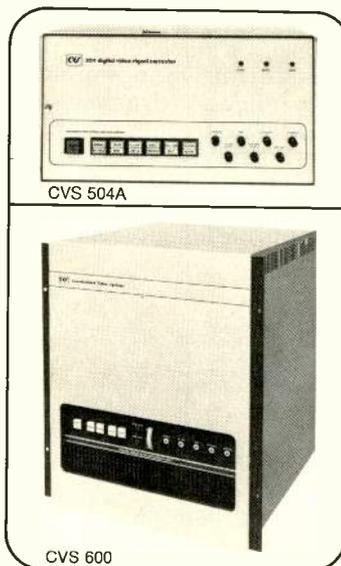
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Here are three digital video signal processing products which have set the pace in the television industry. There's more to come from CVS.

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Corrector: Fully equipped including EIA Gen Lock generator for complex systems interfacing. This "universal" TBC works with 1/4", 1/2", 3/4", 1" and 2" nonsegmented helical VTR's. The CVS 504A processes direct or heterodyne color to broadcast standards. Total velocity correction for direct and heterodyne VTR's is now available as an option.

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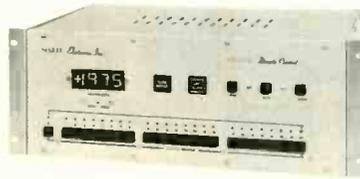
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8. Having a Dual-Channel STL is like having a Spare Link.
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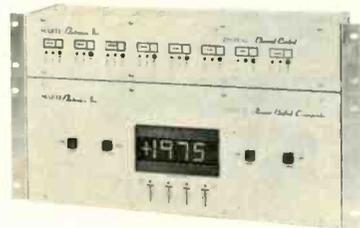
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1. Channel Separation more than 65 db.
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DIGITAL REMOTE CONTROL



DRC-24 Studio Unit



DRT-24 Transmitter Unit

- 8 - Channel — \$2350.00
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FEATURES: • Single Button, Direct Channel Select • Exceeds All FCC Requirements for Accuracy of Antenna System Data • Studio and Transmitter Units Phase Locked to Common Clock • Telemetry Accuracy 0.1% • Basic 8-Channel System Expandable to 16 or 24 Channels • Status/Tolerance Limit Alarm • Fully Digital for Radio Circuit or Wire-Line Operation • Plug-in Modules for FSK Frequency Change • Adaptable to Multiple Transmitter Control From Multiple Control Points • Status Indication (Optional)

• Compatible with Composite or Dual STL Systems

The Marti DRC-24 is a completely Digital Remote Control, Telemetry and status/alarm system, providing the **ultimate in accuracy, simplicity, and speed of operation.** Channel selection is accomplished simply by pressing a single button. The data for the selected channel is then read from the large digital panel display. Raise/Lower commands can be given for the selected channel by pressing the Raise or Lower button.

The integrity of the entire digital process is assured by validation of received data transmission by checking proper start, parity, and stop bits, a **feature found in the most sophisticated data processing equipment.** This advanced design feature virtually eliminates the possibility of error in channel selection, command and telemetry data.

RADIO REMOTE PICKUP 150 - 450 MHZ



RPU Transmitter

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FEATURES: • All Solid-State • Direct FM Modulator • Broadcast Quality — Continuous Duty • Four Audio Mixing Channels • Plug-in Modular Construction • I.F. Crystal Filter • Taut Band Meters

Radio Remote Pickup Equipment is versatile, dependable and an entree to profitable radio broadcasting. That is the acclaim given to Marti RPU Equipment by American Radio Broadcasters. "How did we ever operate a radio station without it?", is the comment most often heard after equipment has been purchased and put into service.

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PORTABLE BROADCAST REMOTE PICKUP TRANSMITTER

Model RPT-1

\$495.00 (150 MHZ)

FEATURES: • Portable operation on internal rechargeable nickel-cadmium battery. Total weight only 5¼ lbs. • All Solid-State • Built-in battery charger • Dual frequency operation (One crystal included) • Meter indicates battery condition and modulation • Whip antenna mounted directly on unit • Broadcast-quality Compressor/Limiter handles toughest remote pickup conditions • Two microphone inputs (one push-to-talk) and one Hi-Level input each with individual mixing gain control

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GREAT IDEA CONTEST

26. An Inexpensive Set-and-Forget Phone Patch

*J.H. Wiegman, Chief Engineer,
KWAL, Osburn, Idaho*

Problem: To wire a telephone into a radio station in such a way that distant and local audio levels are nearly the same. Do so without buying an automatic gain controller. And wire it in such a way that it is impossible for anyone to forget to disconnect when the call is done.

Solution: Many telephones (all those made by Automatic Electric) have a transformer circuit which phases out the microphone at the earphone. All you have to do is pick off the audio for your programming at the earphone. The outgoing signal (your phone mike) is attenuated at this point, so that even with a long distance call, both the near and far voice will be about the same level. In our situation, this system has worked well, especially where we have been recording. The usual vast difference in levels between the two sides of a phone conversation are too hard to compensate for manually; an AGC would cause

Flexible, solid-state audio switching

Input-output configurations are virtually unlimited with this modular, building-block solid-state, audio switch. And . . . this flexibility comes at reduced cost.

Starting with a single 8¾-inch by 19-inch rack frame assembly, the user can build to a 20-input by 20-output configuration through selection of plug-in switching and amplifier boards.

Still using the same basic frame assembly, other configurations such as 20 by 5, 10 by 20 or combinations in between can be assembled. Greater capacities, including dual inputs or outputs, are just as easy . . . just add.

Control? . . . a snap! pushbuttons, thumbwheels, dials, touch pads . . . even a computer.

Performance is outstanding. Using field effect transistor switching and integrated amplifiers, the Series 8100 handles -6 to +8 dBm levels through its balanced transformerless inputs. Flat within ± 0.15 dB (20 Hz to 20 kHz) ± 1.0 dB (1 Hz to 50 kHz), crosstalk (better than 70 dB below output), harmonic distortion (less than 0.15%) and hum and noise (85 dB below maximum output) the 8100 compromises nothing for its flexibility.

Best of all, users will really appreciate the economy. By specifying the initial capability for any remotely-controlled, switched audio distri-

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\$10 per crosspoint**



bution network, the buyer saves now and isn't penalized later. High reliability solid-state audio switching costs can be cut to as little as \$10 per crosspoint . . . significantly less than competitive switching systems.

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DYNAIR

some pumping and costs too much. But with this hookup, when you hang up the phone, the line hangs up as well. No need to disconnect your recorder or console from the line. Line isolation is provided by a scrapped radio audio output transformer. The high-impedance side goes to the earphone. No pad is needed, and clicks and pops are nil.

service do not.

The process was automated with a relay and a couple of 10,000 ohm resistors (for stereo). As shown in the diagram, the resistor, one per channel, is installed after the output transformer, effectively padding the noise below audibility. When the Start button is pushed, voltage is applied to the relay, which has contacts to short the resistor and restore normal oper-

ation. When the cart stops, the relay drops out. Normal audio is loud enough to mask the hiss while a cart is playing. Use a miniature low-current relay. Connect it to the Start circuit. For Spotmaster-500 machines, one side of a 24-volt relay coil goes to K-1 Point 10 of the Spotmaster circuit board. The other side is wired to chassis ground.

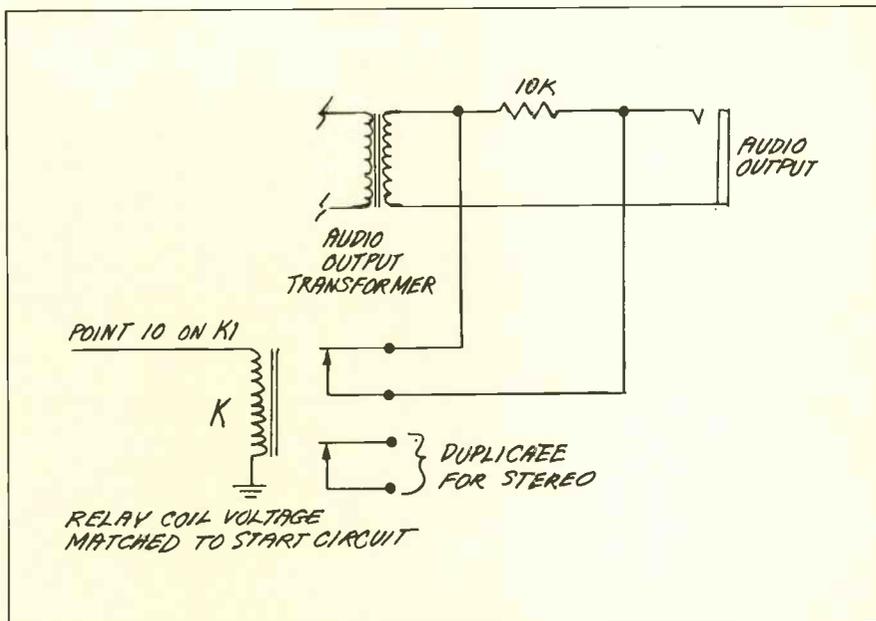
continued on page 126

27. De-Hissing a Cart Machine

John E. Shepler, Chief Engineer, WACI-FM, Freeport, Ill.

Problem: To eliminate the noise (hiss) of cart machine amplifiers when they are not being used. Stations with multiple machines can find the combined noise output annoying at least, and perhaps strong enough to be the cause of a proof-of-performance failure, at worst.

Solution: The modification we are using at WACI pads the audio output of the cart machines when they are not in use. Some of the newer machines have this feature, but many now in



Datavision D-3000 Generates Characters ...Smooth on the Curves!

The most significant feature of any character generator is the quality of the characters it generates. Simple. Character quality shows in the smoothness of curved letters and numerals. An obvious "stair-step" tells you that the manufacturer skimped by using less elements in the matrix.

The Datavision D-3000 has 1120-element character resolution, as good as the most expensive equipment on the market, and at significant cost saving. Plus, the D-3000 is loaded with other features: two character sizes; two independent output channels; 3 speed roll and crawl; character edging; word flash; automatic centering; and optional D-4000 Random Access Storage System.

For all the facts, and a free on-site demonstration, phone (301) 948-0460 or write: Datavision Video Products, Mincom Division, 3M Company, 15932 Shady Grove Road, Gaithersburg, MD 20760.



D-3000...you're a smoothie!

Datavision Video Products **3M**
MINCOM DIVISION COMPANY

28. Tape-Roll Switcher 'Shares' Control Room Monitor

Kurt M. Blackburn, Engineer, KVIQ-TV, Eureka, CA

Problem: To expand the capabilities of a single switcher which serves both air and production feeds. Since ours is a small station, the switcher Preview buss is often tied up as a VTR feed buss, so one operator handles both production and air functions simultaneously. When the

switcher Preview buss is tied up, the only way the operator can monitor his pre rolls during a station break is by using a separate monitor tied into a nonsynchronous routing switcher. Problem is, this monitor must also serve as the incoming-network monitor; the control panel for the routing

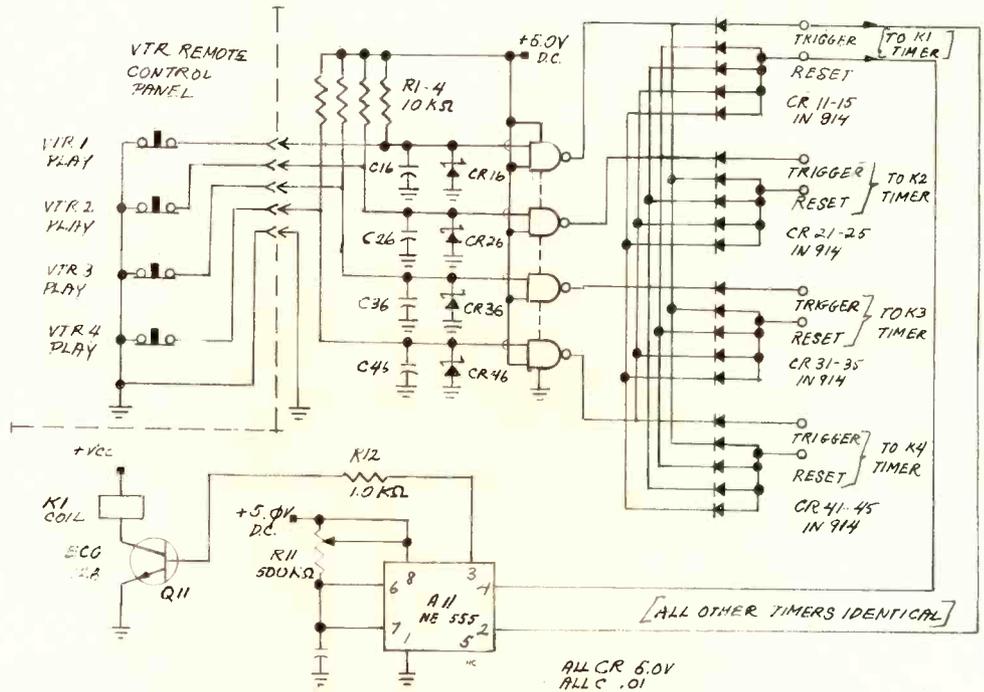


Fig. 1 Blackburn's time and reset system.

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switcher is a long reach from the operator's normal position.

Solution: A small 4 × 1 switcher was placed downstream from the routing switcher in the line feeding the monitor. The switcher is designed to automatically switch the monitor to display the output of any of four VTRs

whenever any given VTR is rolled from the operator's remote control panel. After a set time the unit automatically switches back to whatever had been pre-selected on the routing switcher.

It was desired that the circuit only work from the remote position (to

avoid miscellaneous switches while tapes were being cued), and to avoid modifications to the VTRs. We use an unconnected pair of normally-closed contacts available on each of the remote Play buttons to control the

continued on page 128

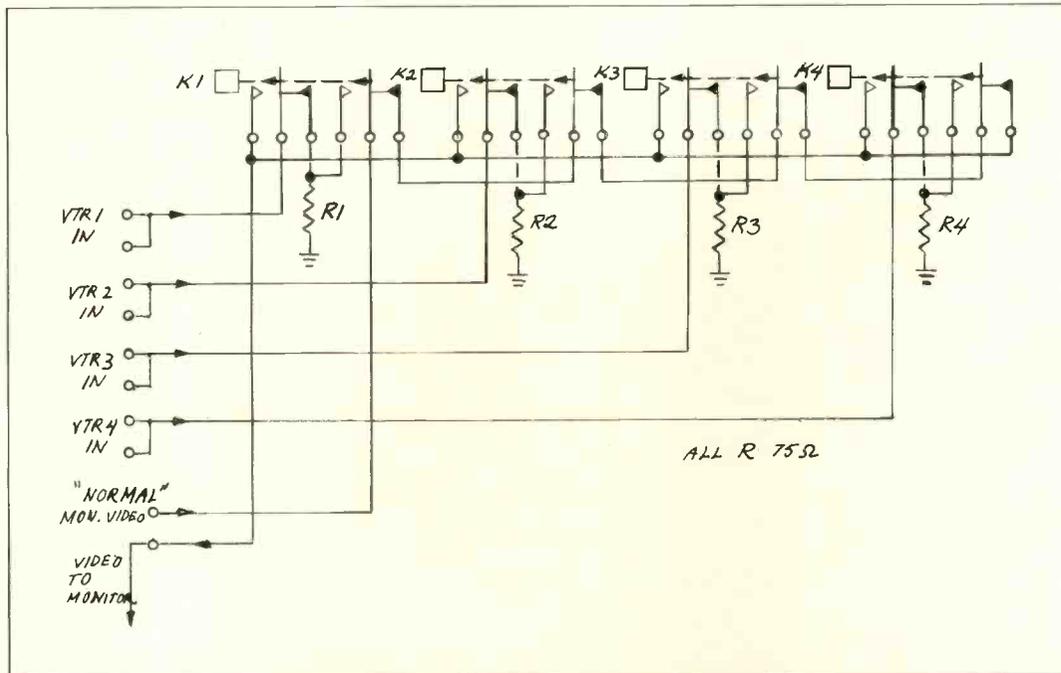


Fig. 2 Blackburn's downstream switcher.

Typical measured Pattern #21
Peak hor. power gain 3.38

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SOLID STATE AM MONITORS ACCURATE @ 125%

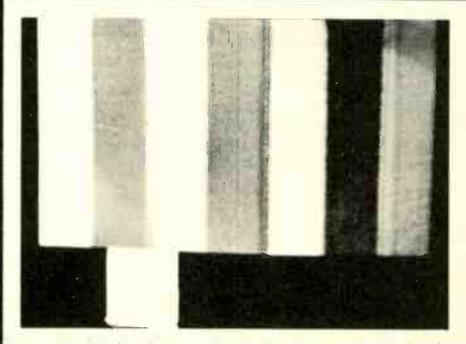
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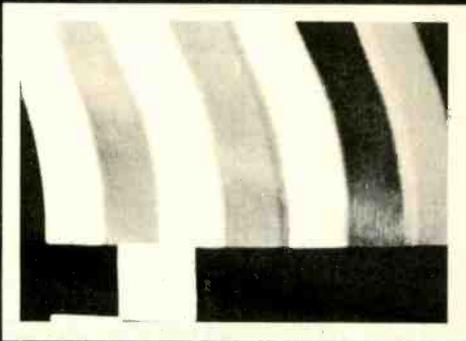
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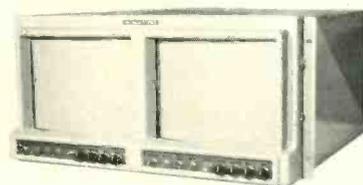
switcher.

An input NAND gate is used on each input to provide a fast transition of the proper polarity to trigger its associated NE555 timer. Each timer in turn controls the length of time the monitor remains on the VTR output in question before returning to the source which has been selected on the routing switcher. Since KVIQ uses a six-second pre-roll, the timers are set for ten seconds, allowing the operator to monitor the preroll and the first four seconds of the spot before returning to the preset source, by which time the tape should have been placed on the air (or on the Preview buss during dubbing).

The timer is a NE555 wired as a one shot. Large values of R11 and C11 are chosen to give a wide-range of possible delays; they could be chosen to give a highly accurate fixed delay if desired. The output of the timer is used to control the switching transistor, Q11, which supplies current to the relay, see Fig. 2. A set of solid-state crosspoints could be substituted if desired.

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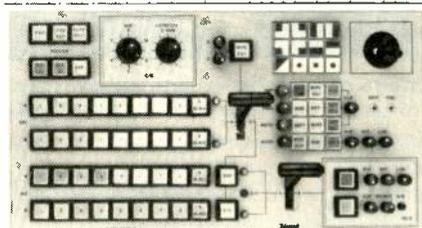
BROADCAST EQUIPMENT

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Color TV camera is suited for use in industrial training facilities, CATV origination centers, schools, hospitals and production firms. The LDH-20 produces a color signal after 2 minutes of warm-up. One coax cable is needed to synchronize it to an existing system. The output encoded-color signal meets EIA, NTSC and FCC requirements. Some internal circuit features include dynamic focus correction, linear matrix coefficients, horizontal contours-out-of-green signal enhancement. PHILIPS AUDIO VIDEO SYSTEMS CORP. **300**

RF directional wattmeter measures forward or reflected CW power with the additional feature of an RF sampling output for frequency analysis on a scope, spectrum analyzer or frequency center. The Model 4527 wattmeter is designed for $\pm 5\%$ power measurement from 100mW to 1kW from 2 to 200MHz and up to 500W from 200 to 512MHz. Insertion VSWR is 1.05 max. \$245. BIRD ELECTRONIC CORP. **301**

TV broadcast production switcher, Model 7960, is a 4-bus switcher with re-entry and an independent preview option. The control panel is available in 3 standard configurations; 9, 15 or 21 inputs. Custom panels are available with up to 29 inputs, additional key,



preview and program busses, machine control and audio breakaway. Some standard features include nine wipe patterns, wipe modulation and colored wipe borders. Prices for the switcher begin at \$13,385. TELEMET **302**

Modular broadcast transmitter, Model 635, outputs 35kW FM. Features include VSWR protection, automatic power control, and a fault locator system. The final amplifier is the

grounded-grid type. Maintenance access is provided through front and rear doors. Options include manual or automatic power switch-over, and Model 682 Stereo and Model 683 SCA generators. The base price is \$38,500. SPARTA **304**

Mixing consoles, the Alpha I and II, are equipped with 8 input channels. The Alpha I has stereo outputs and the Alpha II features 4 mixing busses. The Alpha series contain long-throw, conductive plastic faders, solo input, program echo & return, independent cue mix and program echo pan. SPHERE ELECTRONICS **305**

Color video-tape recorder provides more than 60 minutes of color or monochrome recording and playback on 1/2-in. video tape. Features of the GV-215C include audio dubbing, stop action, edit control, and auto-manual level adjustment. GBC CLOSED CIRCUIT TV CORP. **306**

Phono cartridge, Model M95ED, offers a thinner, uninterrupted pole piece. Biradial elliptical stylus tip is nude mounted. The cartridge tracks at between 3/4 to 1 1/2 grams. \$59.95. SHURE BROTHERS **307**

Mic mixer offers an 8 in/2 out configuration with two independent level controls, equalization, and a 30 dB variable pad on each input. Eight direct lo-Z microphone inputs are provided on the SM-8, along with two hi-Z lines. Forward and monitor signals may be mixed independently, and stereo mixing may be accomplished. \$750. ASHLEY AUDIO **308**

Four input, two output mixer, Model PML422 Series, incorporates input sensitivity preselection, separate low, mid and high frequency equalizers, echo send/return controls and adjustable output limiters. The PML424 has 8 input, quad/4 or 2 output, and the PML426 provides six input channels. All three mixers use quad pan faders in each input source channel. An operating manual will be sent to all interested parties, rather than literature, owing to mixer complexity. Price of the PML422 is \$675; PML424 is \$675; PML426 is \$625. REVOX **309**

Phonograph record vacuum, called Groovac, consists of an arm similar to a pick-up, and an acoustically isolated suction enclosure. The arm's nozzle

contains fine cleaning hairs which penetrate to the bottom of the record grooves. Available from Research Instruments Ltd., Kernick Rd., Penryn, Cornwall TR10 9DQ, England. **310**

Color monitor/receiver, Model JU-970W, is designed for studio applications, including direct off-air and general purpose monitoring. The monitor is equipped to accept RF or bridged direct TV video and audio line feed without the adapters needed by home TV sets. There is also a separate 75-ohm video output for direct off-air recording. RCA **311**

VU meter is built with 7 LED's indicating volume level. The M-241 is ranged from -15 to +3VU in 3dB steps. Meter requires 12-15Vdc @ 30mA. Vertical or horizontal mounting is offered. PULSE DYNAMICS MANUFACTURING CORP. **313**

Four accessories for the Revox A700: built-in track synchronizer, remote variable pitch control, remote controller, and portable rigid carrying case. The 'IN SYNC' accessory enables track one of a previously recorded tape to be heard through the top section of the record head, permitting a synchronized recording to be made on the lower section. Price: \$229. The pitch control offers continuous sweep variation of tape speed over ± 7 musical half tones. Price: \$85. The remote control includes play, record, fast forward, rewind, stop, auto replay or record, pause and recap. Price: \$125. The carry case comes lined and features compartments for spare reels, NAB hubs, etc. Price: \$175. REVOX **312**

Audio mixer offers 8 input, 4 output configuration. Each input channel of the TASCAM Model 5 features a low-impedance, balanced mic input, pan, an LED overload indicator, two bands of selectable equalization, solo, a direct output and cue and echo send. \$1499.50. TEAC **314**

Video transmission system is for coaxial cable communications using frequency modulation. The VFMS-2000 uses a video FM modulator and demodulator. Where audio transmission is required, FM audio modulators and demodulators are available as complementary modules. Any frequency from 19 to 260MHz is available, and input baseband bandwidth options are

continued on page 130

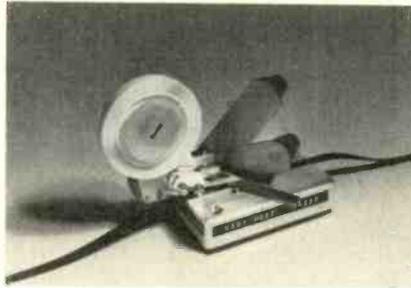
PRODUCTS

from 10Hz to 500kHz minimum, 5MHz maximum. Channel bandwidth is 3 times the highest modulation frequency. CATEL **315**

Portable two-channel reverberation unit, Model BX-10, is based on the torsion transmission line principle. Independent decay-time adjustment, high and low frequency equalization and reverberation/dry signal mixing are provided for each of the two electronically and acoustically separate channels. Dimensions are 17W × 12H × 19D inches. Price is \$1400. AKG/PHILIPS **316**

Battery pack, Model GRL/HL-33NC, and companion Model GRL/HL-33NCT single-channel charger, is available for Ikegami HL-33 or HL-35 cameras. Pack contains 24 D-size cells that provide 4AH. The single-channel charger has a built-in timer for auto charging battery pack in 3 hours or less. The GRL/HL-33NC costs \$575; the charger is \$812.50. GENERAL RESEARCH LABORATORIES **317**

Audio tape splicer, Model TS250, semi-automatically shears ¼-in. tape. Stainless steel, self-sharpening shears cut both the tape and splicing tape. A



hand-machined dove-tail groove in a hard aluminum block secures the tape. Mount holes and rubber base are provided. \$49.95 + \$1.50 postage & handling. NAGY RESEARCH PRODUCTS **318**

Bi-polar power supply, with output current capability of ±4A, provides adjustable dc voltages from ±14 to ±16V. The Model 7000 has crowbar over-voltage protection, foldback current limiting, and interlocked output protection. Some other features include remote sensing, resettable power line circuit breaker, an overload indicator, and front panel voltage adjusting controls. MODULAR AUDIO PRODUCTS **319**

Frequency comparator aids in calibrating crystal oscillators against television network atomic standards. Model 175 generates a vertical rainbow bar on the screen of a color TV receiver. The rate of color change of the bar indicates the phase difference be-

tween the crystal oscillator output and the network color subcarrier. The comparator accepts inputs of 2.5, 5, or 10 MHz while the Model 175 Mod. 1



accepts 1, 5, or 10 MHz. Price of the 175 is \$99.95; the Mod. 1 sells for \$109.95. DYNATRON **320**

Room equalization filter set has 27½-octave active filters that each provide up to 15 dB of attenuation to adjust for a desired house curve. Frequencies are centered on standard ISO channels. Band-end, tunable-high-pass and low-pass filters attenuate 18 dB/octave. Gain is adjustable to +20 dB to make up for average level lost in equal-

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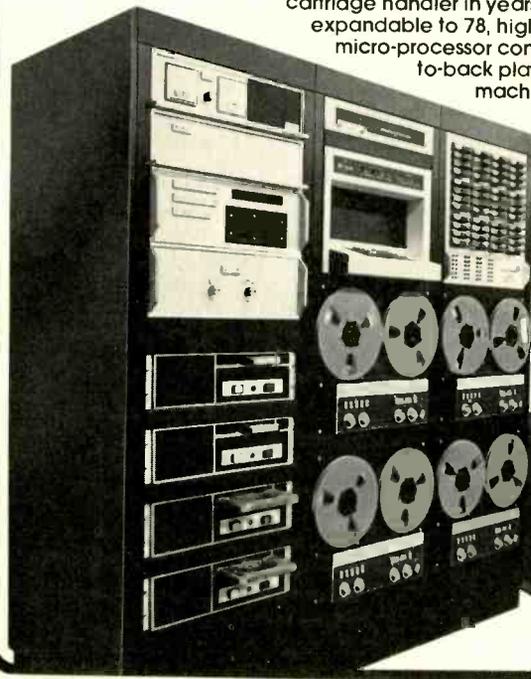
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321

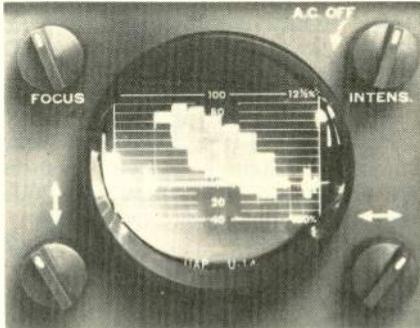
Power meter needs one head for 25-1000 MHz, 20 mW-320W, respectively. Model NAUS-80A has an accuracy of 4% of reading $\pm 1\%$ full scale; operating temperature range: -20 C to $+55\text{ C}$; battery operated for over 7000 hrs from one set of D cells. \$750. RHODE & SCHWARZ. 322

Zoom lens, the 10X150, is an addition to the lens line for the TGX-16mm cine sound system. \$2850. GENERAL CAMERA CORP. 323

Bonded-foil, 75 ohm drop cables are available in combinations of foil and braid (or drain wire) shield, dual and messengered versions in both RG/59 and RG/6 types. 50-ohm types in RG/58 and RG/8 sizes will soon be available. CERRO COMMUNICATION PRODUCTS 324

Oscillator/phase shifter offers variable frequency, phase for wattmeters, phase meters and phase angle voltmeters. Two independently adjustable voltage outputs are provided by the RCD-709 over the range of 10-110kHz. Phase angle differences between the outputs over a 0-360V range can be dialled in. Available options include phase lock, high resolution vernier and 10 volt output amplifiers. \$3995. OPTIMATION 325

Single-sweep waveform monitor, the WM31, offers single-line/single-field display on a 3-in. CRT. User-adjustable trimmers permit establishing



the lines and the fields sweep start-stop points individually to user preference. \$695. ULTRA AUDIO PIXTEC 326

Data logger, Model 4024, provides up to 72 analog or digital input channels. It is used in single or multi-station systems where the data is to be logged on magnetic tape or transmitted for computer processing. METRODATA 327

Wireless system, Series WR420, remotely controls a/v projectors, audio and video tape equipment, and sound/lighting systems. Three models controlling from 22 to 44 functions are offered. Range of each is 250 ft. INTERNATIONAL VISUAL PRODUCTS. 328

continued on page 132

BL-40 MODULIMITER

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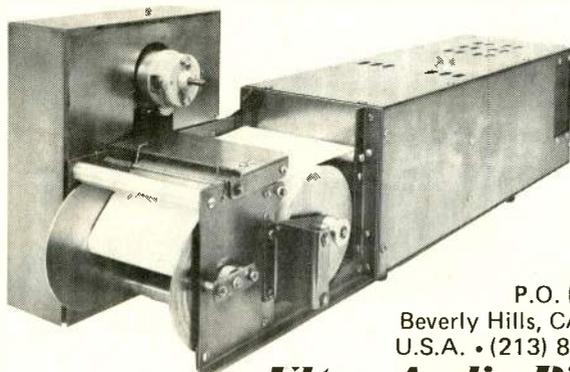
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PRODUCTS

Push-pull, 2-way-capable internal distribution amplifier offers up to 35 channel capability. Designated Model IDA-45, the amp meets or exceeds FCC Rules Part 76. It is encased in a die cast aluminum housing. Output levels can be +48dBmV/channel in 35 channel system, or up to +54dBmV/channel in 12-channel systems. Cross modulation: -57dB; second order beat -68dB and triple beat -72dB. Plug-in and accessory modules are available. \$438. JERROLDELECTRONICS CORP. **329**

Data modems for CATV networks, terrestrial microwave links and satellite communications ground stations feature standard data rates from 1200Bps to 230.4kBps. The modem operates on a point-to-point or multi-point dedicated basis and is capable of full duplex operation. Interchangeable interface options allow use of RS-232C, Bell 303 current or other special interface arrangements. Four LED status indicators provide visual monitoring of operational status and signal quality. \$1950. INTECH **330**

Dolby FM compensator provides the FM time-constant compensation needed for the reduced transmitter pre-emphasis in Dolby FM broadcasting. The compensator works with Dolbyized FM receivers and when playing Dolby-recorded tapes. Model 622PI contains no amplification, power supply or power lead. \$24.95. SWITCHCRAFT **331**

Studio console has 20 inputs and 16 output-mix channels plus quad, stereo and mono mixdown, 4 echo and 2 cue channels. Patching system features closed-circuit TV, tape machine remotes, digital timer. SPHERE ELECTRONICS **332**

Television title generator, the K128, superimposes standard typewriter alphanumerics, foreign language letters, math and engineering notation on TV screen. Features include programmable line length and character size selection; expanded memory is optional. \$3500. KNOX **333**

Stereo tape cartridge, the A-2SP, is guaranteed for phasing, high-frequency output, tension and azimuth up to 12.5Hz. Cart is available in lengths from 20 sec. to 12 mins. CAPITOL **334**

Random access controller (RAC) has 2048 events of keyboard addressable memory and interfaces with up to 19 multi-cartridge, single cart, or reel tape sources. Expandable to 4096 events, the RS-2000 has battery back-up for power failures. The RAC is compatible

with any automation controller.
SPARTA 335

RF modulator, RFM-26, transforms video source signal to tunable RF signal over TV channels 2-6. The modulator is equipped with RF and Video gain controls. UHF ASSOCIATES 336

CATV VHG/subchannel converter is available with a double-balanced mixer circuit to permit VHF low-band to low-band conversions, mid-band conversions and high-band conversions. The Model XO-2b attenuates 70% of the spurious signals generated in single-ended mixers, and employs a built-in regulated power source. Gain is 18dB from VHF to subchannel and 13dB from subchannel to VHF or from VHF to VHF. Maximum input signal (for 0.5dB of sync compression) is 30,000 μ V. BLONDER-TONGUE LABORATORIES 337

Outdoor multi-tap for CATV systems, the 3800, has 12 different tap values. Bandpass is 5-30MHz; return loss is 23dB max; 30dB tap-to-tap isolation. \$6.25 each for two-tap models and \$6.50 each for four-tap in small lots. Discounts are available. GTE SYLVANIA 338

Alphanumeric encoder/CRT video terminal is installed in the newsroom for late news flashes, etc. The DT-1 can



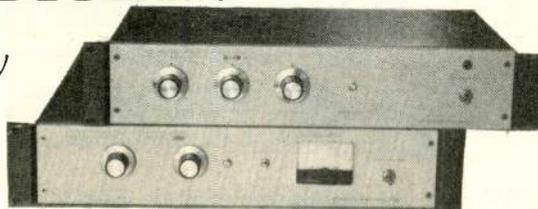
also be used for in-station paging or to summon personnel for messages. \$1625 for the keyboard with one video terminal, \$220 for each additional terminal. SYSTEMS MARKETING CORP. 339

EBS broadcast system, Model 760, consists of two modules: a two-tone EBS generator which produces the required 853 and 960Hz \pm 0.25Hz tones simultaneously and a two-tone EBS decoder-receiver which can be either continuously-tunable, frequency synthesized or FM fixed-tuned. Additional features include auto program intercept, internal generator/decoder testing, a contact closure for external alarm and adaptability to remote control. TIME AND FREQUENCY TECHNOLOGY 340

continued on page 134

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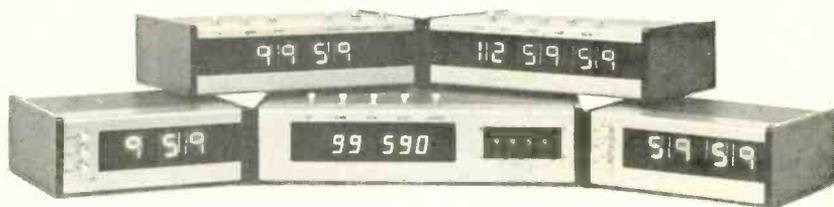
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- ES-400: Three digit ten minute timer (9:59) with Start, Stop, Reset. **\$ 98.00**
- ES-510: Four digit sixty minute timer (59:59) with Start, Stop, Reset. **\$125.00**
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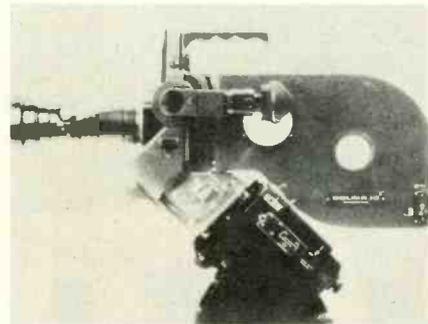
PRODUCTS

Video assist may be attached to the CP-16R reflex camera. Cinevid-16 picks up the image directly from the CP-16R and electronically transmits it. Pickup measures 2¼ × 3¾ × 5-in., weighs 1 lb. 13 oz., and uses a ⅜-in. silicon matrix tube. The CP-16R reflex



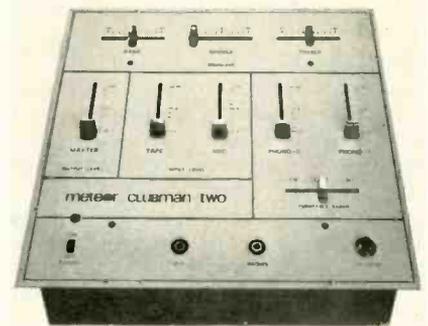
optics system is not interfered with; the access cover on top of the camera is replaced with a relay lens and a quick-disconnect bayonet lock. Video image is rated at 400 TV lines min. Assist is powered from a 12Vdc battery or 120/240Vac line. \$3850. CINEMA PRODUCTS CORP. **341**

Motor for the French Eclair NPR, the Beala III, can be used with all international standards of speed and fre-



quency. It features ball bearings, electronic starting circuit, crystal oscillator and humidity protection. \$2750. E-CAM Co. **342**

Mixer-preamp for discos provides stereo output from phono, tape and microphone inputs. Individual slider fader controls on each input, full equalization, overall master volume control, pre-cue and talkover facilities are fea-



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FM monitors

tures of the Clubman II. \$449. METEOR LIGHTING 344

CCTV monitor, Model VM-9A, is UL-approved, and is corrected for use with standard and time lapse video tape recorders. The 9-in. monitor has an EIA scanning system, aluminized CRT, requires 1V peak-to-peak composite video at the dual-impedance type UHF input jacks. Horizontal resolution is 550 TV lines. Also available in a rack-mounted version. JAVELIN ELECTRONICS 343

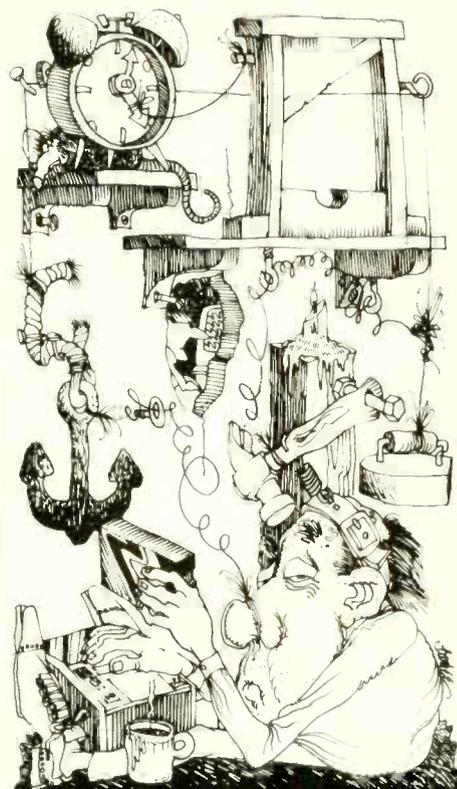
Pulse cross monitor, used to adjust VTR skew, tracking and tape tension, is a modified Hitachi P-43M receiver/monitor. Price is \$350. M.P. VIDEO 344

Motorized zoom lens, the model V12.5-75M, provides 6X range for 3/8 inch format C-mount cameras. This unit operates with the V100C or V101C lens control to provide remote control of zoom, focus and iris. VICON INDUSTRIES 345

Variable attenuator provides variable loss up to 18 dB for TV and FM signals (54 to 900 MHz). The VA-18 employs a rotary attenuation control with slip-clutch construction. Impedance is 75 ohms. Return loss up to 300 MHz is 20 dB at the minimum setting; 13 dB at the maximum setting. For the frequency range of 300 to 820 MHz, return loss is 14 dB and 8 dB; for the range 820 to 890 MHz, 12 dB and 6 dB. The VA-18 uses F-type cable connectors; two adapters are supplied for use with RG-59 coax. BLONDER TONGUE LABORATORIES 346

Channel elimination filter blocks one CATV channel from crossing political subdivisions. (When differences in monthly rates occur, it may be desirable to provide one municipality with more channels than another.) The model CEF is a multiple cavity absorption filter and has 45 dB rejection of the unwanted channel and less than 2 dB attenuation in the adjacent channel. The unit is housed in a cast aluminum enclosure for strand mounting with standard input and output center seizure ports. C-COR ELECTRONICS 347

CCTV modulators in four configurations add closed circuit TV programs into master TV antenna or CATV systems. Model AVMT 4923 provides both a modulated visual and aural RF carrier output on any single VHF TV channel. Model VMT 4922 feeds a modulated visual RF carrier output on any single VHF channel. Model VM 4925 offers modulated video bandwidth of up to 8 MHz, while the AMT 4921 feeds a modulated aural RF carrier output on any single VHF TV channel. All units are rack mounted,



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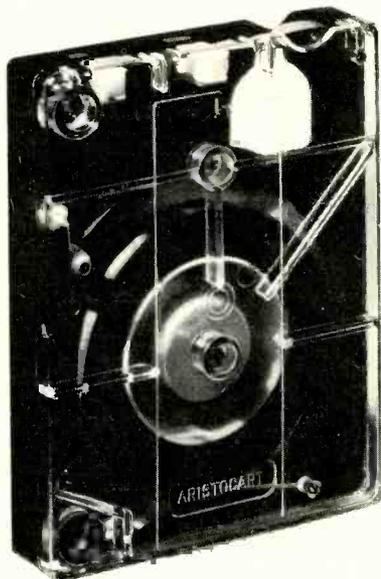
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PRODUCTS

and are 1 3/4 inches high. BLONDER-TONGUE LABORATORIES 348

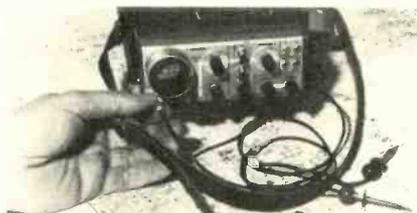
Microwave relay system for ENG is available in any frequency band from 1.7 GHz to 15.3 GHz. The system consists of the TCM-3 series manpack microwave transmitter, TCM-6 series receiver, and TCM-6 transmitter. The tripod-mounted transmitter and receiver is available in various optional mounting configurations. Horn or dish



antennas of any polarization are used interchangeably as desired. A built-in test tone enables antenna alignment and level and deviation of both video carrier and internal program channels. TERRA-COM 349

Fitting deters pay TV theft of service and removal of equipment. Called Security Shield, the fitting prevents removal of the converter inside the home, and discourages bypassing trap connection changes for pay TV service. In addition, the fitting also prevents disconnections of the matching transformer to cable and F-style connection removal. The shield is made of zinc-plated steel and is difficult to crush or distort. The fitting costs 16 to 24 cents, depending on quantity. A tool for installation and removal is also available and costs \$6.50. LRC ELECTRONICS 350

Mini Portable oscilloscope, the model A1010, features Z-axis modulation. The Y preamp has 10 mV sensitivity, 10 MHz bandwidth, and can feed its output into the X amplifier to increase sensitivity, leaving direct access to the



Y deflection amplifier. The unit measures 2 1/4 x 5 1/4 x 7 3/4-inches, and weighs 3 3/4 pounds. It is powered by rechargeable batteries. The synchronizing circuits lock on any waveform. The scope is available from Lawtronics Ltd., 139 High St., Edenbridge, Kent TN8 5AX, England. 351

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General descriptions, specifications, application diagrams and pictures of **broadcast products** are available in a 44-page catalog. EECO. **250**

"Tools and Equipment" is the name of a catalog which contains listings on over 2,000 items regularly stocked and commonly used by linemen, installers and technicians in the CATV, telephone and power industries. Anixter-Pruzan. **251**

A six-page, illustrated equipment brochure covers "Broadcast Audio Transmission Systems," equipment for **terrestrial program channels** and for satellite channels. Coastcom **252**

"The Music-Maker's Manual of Microphone Mastery" offers tips in non-technical format from sound engineers on how to select and use **microphones**, plus guidelines for on-stage miking situations. Shure Bros. **253**

Super 8 Sound is selling the manual for their Super 8 Sound Recorder. It also serves as a source of technical information about the various stages of production and post-production when working in **sync Super 8**, and with the Super 8 fullcoat. To obtain a copy, send \$1 to Super 8 Sound, 95 Harvey St., Cambridge, Mass. 02140. **254**

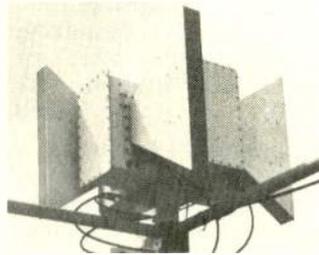
A color brochure describes the Telscreen system, a **large-screen TV projection display system** which produces theater-size pictures with high lumen output. Conrac. **255**

A 16-page catalog of **portable and bench test instruments** for service, industry and education, including single- and dual-trace scopes, a digital multimeter, function generator, FET multimeters and a sweep and marker alignment generator, is available. Catalog 75CBA lists features, operating data and specifications. Hickok Electrical Instruments. **256**

The 1976 "Engineering Manual & Purchasing Guide" is 228 pages of **electronic parts and equipment** from Allied Radio and other manufacturers. Available for \$1, the catalog can be obtained by writing to Allied Electronics, Dep't. 76, 401 East 8th St., Fort
continued on page 138

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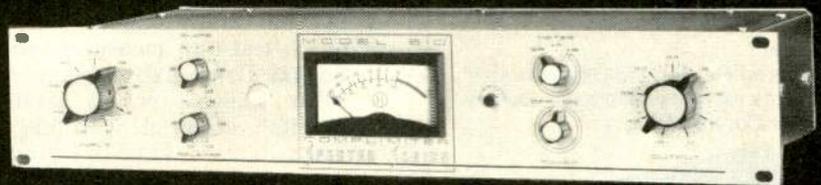
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The "1975 Tube Caddy—Tube Substitution Guidebook" shows the correct **tube substitutions** for most domestic and foreign receiving tube types, CRT's, and industrial and commercial receiving and transmitting types. Over 7300 primary tubes and almost 34,000 substitutions are shown. Hayden. **258**

The "Radio Operator's License Q & A Manual," by Milton Kaufman, offers **FCC exam preparation** for all classes and endorsements, and includes sample FCC-type exams for every element in this, the 8th, edition. The question-answer style is followed as in the previous editions, but this latest one anticipates future exams by adding a completely new group of transistor questions, and solid-state schematics and discussions to existing FCC-type questions. Hayden. **259**

"AM-FM Broadcasting: Equipment, Operations, and Maintenance," by Harold E. Ennes, presents the **engineering fundamentals** needed by the chief engineer or maintenance technician, or trainee at an AM or FM broadcast station. The 800-page hardbound book is divided into 14 chapters with exercises included at the end of each. Answers to these exercises are given at the end of the book. Howard W. Sams. **260**

A five-section catalog describes electrical and mechanical specifications, application information, curves and charts on **test and measurement instruments**. Detailed description sheets are also available on all 1500 instruments covered. Rohde & Schwarz. **261**

Cable Handbook, 1975-76 has been published by Publi-Cable, a non-profit national consortium of individuals and organizations trying to help cable develop in the public interest. The handbook consists of chapters by experts in many sectors of cable development, technical, economic, regulatory, etc., which offer detailed and extensive guidance to municipalities, as well as potential local users of cable, in planning and operating a successful cable system and getting maximum value from its use. The Handbook is available at \$6.95 a copy plus 40¢ for postage from Communications Press, 1346 Conn. Ave, NW, Washington, DC 20036.

Hundreds of different in-stock relays, solenoids and stepping switches are described in a 40-page complete catalog. Universal Relay. **258**

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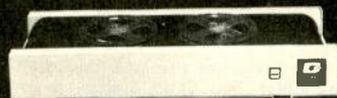
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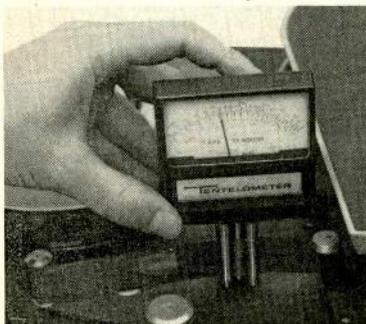
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