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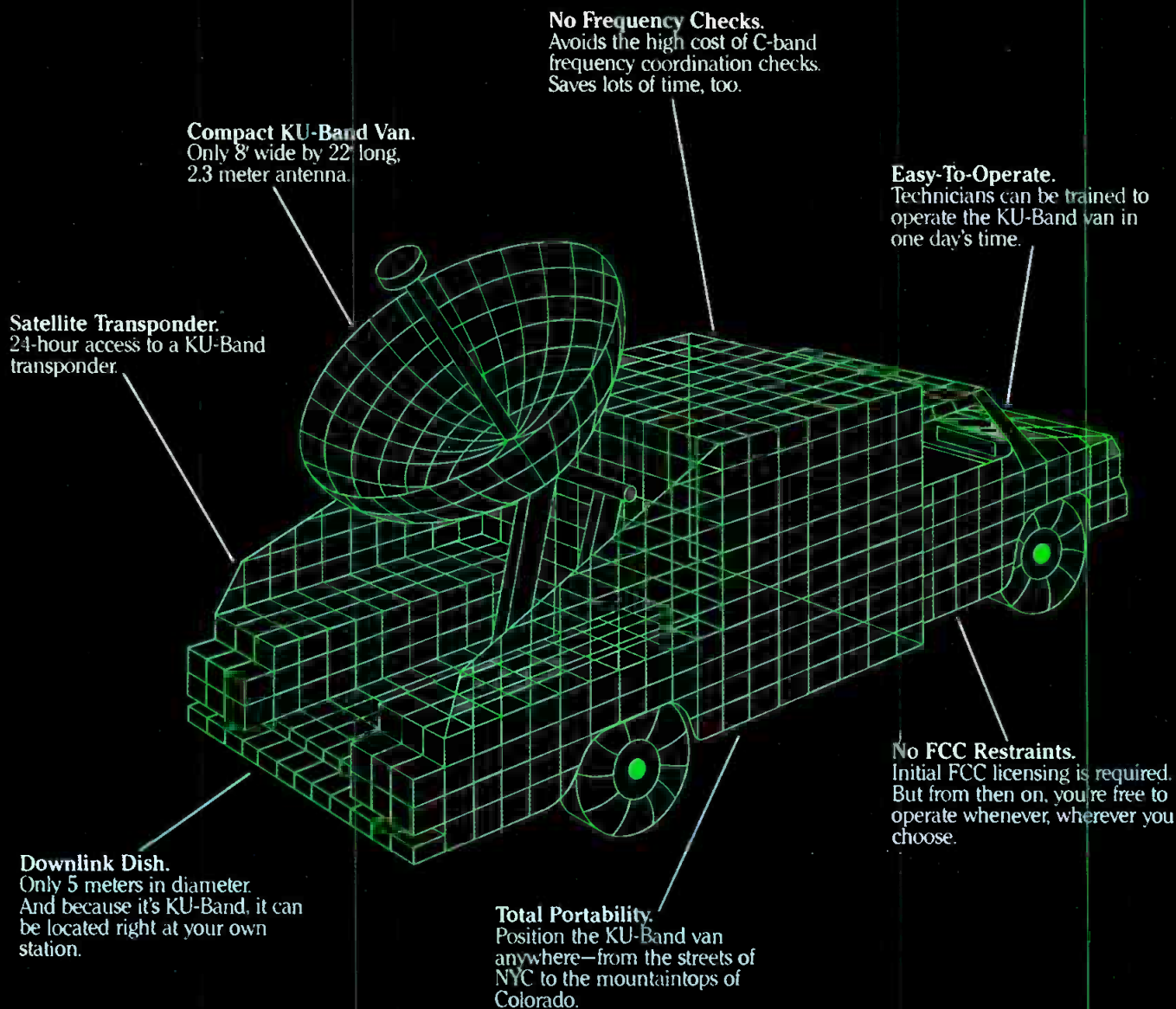


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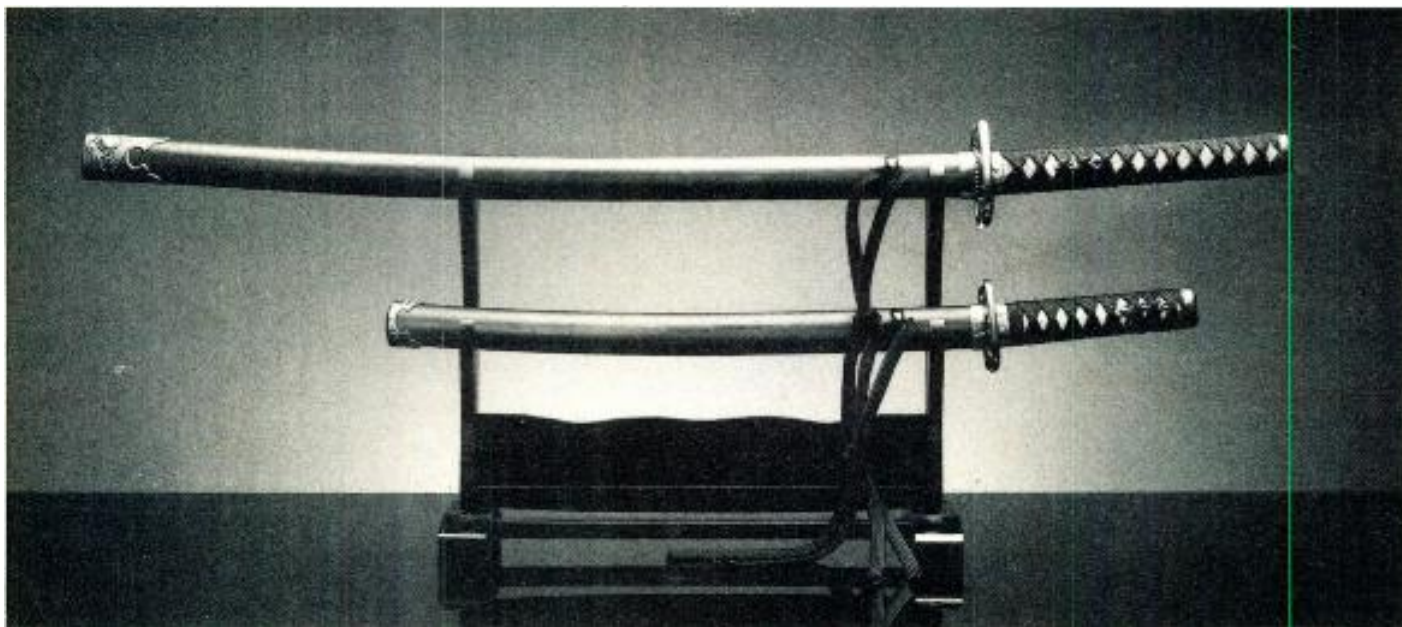
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Broadcasting **Apr 30**

Tauke and Tauzin throw in the towel on broadcast dereg Preview of NAB 84 □ Post view of MIP-TV At Large with FCC Chairman Mark Fowler

WALL HANDWRITING □ Tauke and Tauzin end talks with Wirth in fashioning broadcast deregulation bill. **PAGE 35.**

STATE OF THE INDUSTRY □ NAB president, Eddie Fritts, reviews list of accomplishments broadcasters have seen during Reagan administration; previews prospects for future deregulation. **PAGE 36.**

CABLE'S PRESENT □ Kastenmeier introduces copyright bill that would effectively cancel CRT rate-hike decision of 1982. **PAGE 37.**

BROADCASTER'S PRESENT □ Trible introduces bill that would codify FCC's must-carry rules. **PAGE 38.**

CHANGING OF GUARD □ Rubenstein among three top Mutual executives who resign; Clements takes over reins. **PAGE 39.**

MORE UNDERBRUSH □ FCC votes to allow ITFS licensees to sublease time, pre-empts state regulation of common carrier service on FM's. **PAGE 39.**

HOT TIME □ Proliferation of home video sales, joint venturing and co-productions highlight annual MIP-TV gathering. **PAGE 41.**

NAB 84 □ New and improved products proliferate

on exhibit floor of NAB's 62d annual convention. **PAGE 46.** A list of exhibitors runs from **PAGES 48 to 102.** The agenda appears on **PAGES 104-112.** The hospitality suite listing begins on **PAGE 112.**

FREEDOM FIGHTER □ FCC Chairman Mark Fowler has spent the last three years, embarking on a course of unregulation. In this "At Large" with BROADCASTING editors, Fowler describes the commission's accomplishments and maps out its goals. **PAGE 116.** An accounting of the Fowler FCC's deregulatory track record appears on **PAGE 122.**

SEPARATE PEACE □ HBO's Biondi says relations between pay cable network and Hollywood have improved; outlines company's future course. **PAGE 130.**

ON THE ROAD TO HDTV □ Advanced Television Systems Committee moves closer to agreement on improving television pictures. **PAGE 142.**

HILL HEARING □ NTIA chief answers House subcommittee's questions on turf fight between State and Commerce departments. **PAGE 153.**

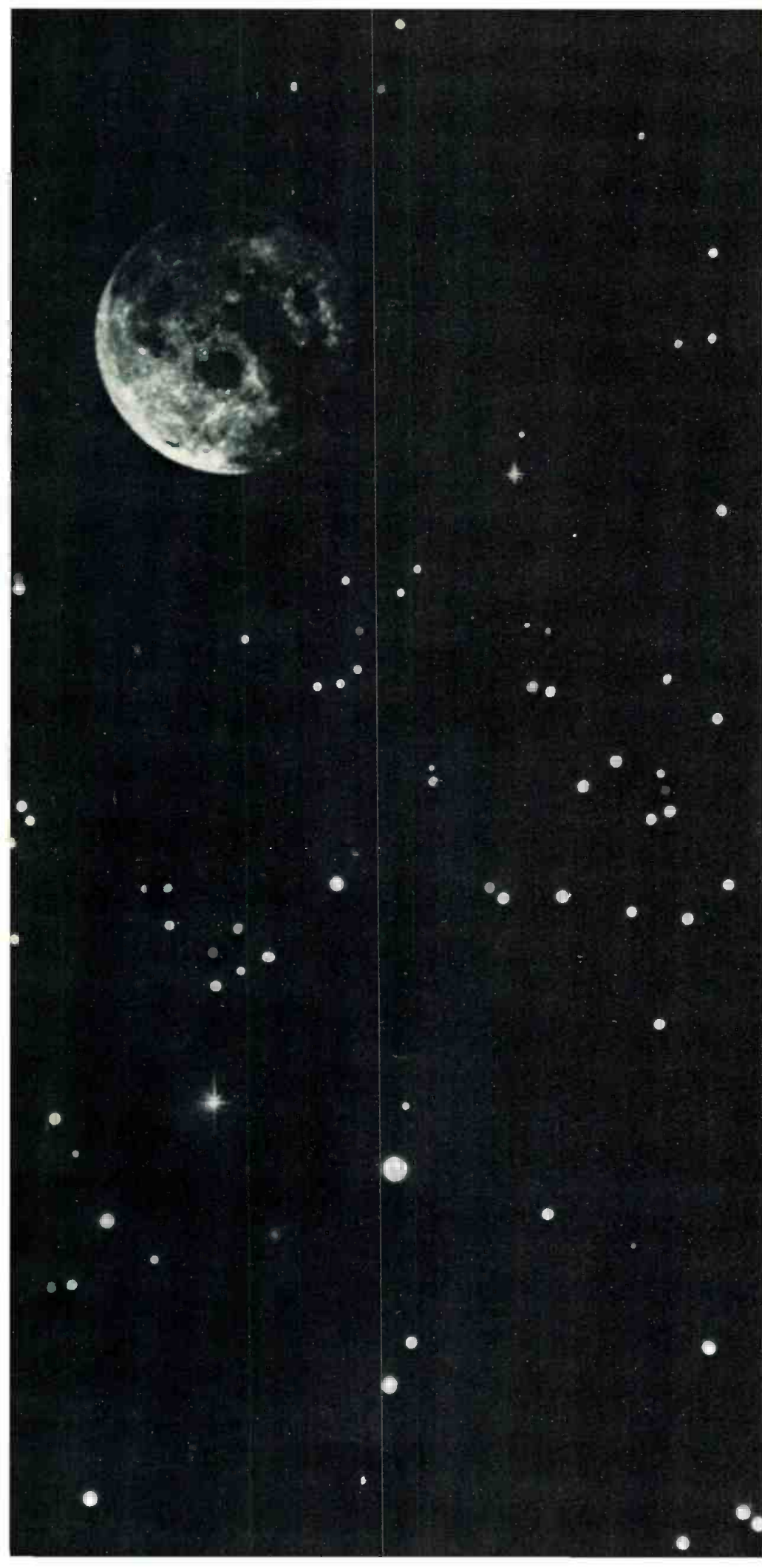
GOLDEN YEARS □ Anthony Cassara, president of Golden West Television and Wometco Broadcasting, finds opportunities in the changing business of television. **PAGE 181.**

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More 'choice' than 'prime'

Agency officials say second-quarter prime time scatter market in television networking is soft; network sales executives say demand is sufficient. There seems to be consensus, however, that cost-per-thousand is averaging 15% lower than when second-quarter market began. Though networks might wish for stronger demand, all three are 97%-plus sold in prime time, according to industry sources, and are thus protected better against further C-P-M decline than CBS was last year when it held back excess inventory.

Numerous reasons are being offered for softness in prime time prices, including shift of money to other dayparts, Olympic siphoning and additional units that networks added to inventory last year.

Big boost

According to data to be released this week by Larchmont, N.Y.-based Radio Expenditure Reports, national spot radio business in March rose 10.6% to \$58,038,300. This is healthy improvement over January and February, when spot advertising expenditures were up only 3.6%.

Awaiting signal

FCC Office of General Counsel is said to be working on notice of proposed rulemaking seeking to define all pay video services—whether delivered directly to homes by satellites, subscription TV or multipoint distribution services—as “hybrid” and not subject to statutory broadcast regulation. Word is that draft was ready for action earlier this year, but commission opted to keep item under wraps until it sees how Court of Appeals in Washington rules on pending direct broadcast satellite cases. During oral argument in one of those cases, Judge Abner Mikva expressed incredulity that FCC could entertain notion that DBS need not be considered broadcast service (BROADCASTING, Feb. 27).

First things first

Decision by Daytime Broadcasters Association as to whether or not it will merge its membership with National Association of Broadcasters or National

Radio Broadcasters Association may be made this week. DBA board is holding meeting after its forum on Monday afternoon at NAB convention in Las Vegas and is slated to discuss topic, but it may delay decision. Its first order of business is to settle controversy over Senate bill S.880, which would expand daytimers' operating hours. Bill has aroused strong opposition from clear channel broadcasters. DBA may push for modification to legislation in effort to assuage clear channel stations' concerns and gain passage.

By himself

Representative Tim Wirth (D-Colo.), chairman of the House Telecommunications Subcommittee who has announced bid for re-election, has easy race so far. He faces no opposition in Democratic primary, and no Republican candidate has surfaced yet.

Money talks

Interest evidenced by “educational” groups in instructional television fixed services *since* FCC loosened rules to permit them to turn profit from “excess capacity” would appear to prove something. According to FCC records, commission received only 26 applications for new ITFS facilities from beginning of 1981 until it loosened its ITFS rules last May (BROADCASTING, May 30, 1983). Since then, commission has received 449 applications for new ITFS facilities.

Japanese partners

United States Satellite Broadcasting, ambitious DBS venture of Hubbard Broadcasting, may soon receive what could amount to down payment on two-satellite DBS system. Okura Trading Ltd., which is representing USSB in Japan, has reportedly lined up group of Japanese investors willing to ante up minimum of \$30 million.

Charmed circle

With just under 16 million homes passed, Financial News Network expects to be metered by Nielsen ratings service “some time in the next week, barring any glitches,” according to A. Scott Hulst, sales vice president. One possible problem

is how to discriminate between FNN's cable and UHF viewers, since FNN programming is cable must-carry in dozen markets. Meantime, Nielsen is conducting telephone coincidental survey for 13-hour business and financial news service, contacting viewers who have entered FNN in Nielsen diaries.

Try again

It's safe bet that CBS will file for reconsideration this week in Washington district court over right to videotape deposition of Richard Helms, in connection with Westmoreland-CBS libel case (see page 40). Several weeks ago court rejected network's plea for ruling allowing it to do so, over Helms's objections. So far, in papers filed with court, CBS has not directly referred to what is obvious concern with any testimony given by former CIA chief—that he was convicted (with two-year suspended sentence and \$2,000 fine) in 1977 of lying to congressional committee about CIA's role in Chilean elections in early 1970's. CBS wants videotape of Helms deposition in event he does not appear at Westmoreland trial, so that jurors will have more than bare transcript to assess value of his testimony.

Deal near

Word is that ABC Radio is close to sale of WXYZ(AM) Detroit, valued at \$4.5 million-\$6 million. Prospective buyer is said to be station vice president and general manager, Charles D. Fritz.

Pie in the sky?

United Satellite International Communications Inc. (USIC), Peekskill, N.Y.-based start-up company, claims to be developing novel, 24-hour-a-day cable news service. Advertiser-supported network would import unedited newscasts from around world and distribute them to cable affiliates via satellite, according to vague promotional literature. Foreign-language newscasts would be dubbed with English translations, it said. USIC representatives have been talking to businessmen in Eagle Pass, Tex., about leasing land in border town for uplink and operations center and have generated interest as well as skepticism there. Donald Hanauer, head of USIC could not be reached for comment last week.

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THE STORY OF DAVID

Another station aloft

United Video, the Tulsa, Okla.-based satellite common carrier, announced last week that it would create yet another superstation by putting KTVT(TV) Dallas-Fort Worth on RCA's Satcom IV satellite this summer. It will be the carrier's third superstation: Since late 1978 it has been distributing WGN-TV Chicago to cable systems via Satcom III and later Satcom III-R and it plans to begin relaying WPIX(TV) New York to systems tomorrow (May 1) over Satcom IV.

United Video's decision to put Tribune's WPIX and Gaylord Broadcasting's KTVT on the bird is based on the belief that it can persuade many of the systems that now import the signals by terrestrial microwave through other carriers to switch to the satellite. According to Jeff Treeman, vice president of marketing, the belief seems to be well founded. He said United Video has been able to sign up 152 systems (serving around 900,000 subscribers). Most of the systems, he said, are switching over from microwave. Although the stations are intended to be "regional" superstations, their signals will be available to any cable systems with an earth station aimed at Satcom IV.

According to Treeman, KTVT will be put on the bird on June 15 for testing and the service will be officially launched on July 1. United Video is looking at independents that reach cable systems through microwave networks in other regions as potential future superstations. "Independent stations are the best bang for the buck in basic cable programming," said Treeman, "and a lot of cable systems are beginning to realize that."

'HiLife' coming to life

A new adult entertainment service, HiLife Channel, for cable and other pay TV outlets will debut July 1 and will be headed by Paul Klein, former president of The Playboy Channel. The service is being launched by Domestidyne, a joint venture of Microdyne and Domesticom Corp., the latter based in New Orleans and operating private cable systems (SMATV) and pay-per-view systems in hotels and motels. HiLife will offer adult-oriented programming on a pay-per-night, pay-per-view or monthly subscription basis, to cable operators, apartment complexes, hotels and motels. The company says it will offer a "tasteful" menu of programs, with nothing X-rated.

The new service will be transmitted by scrambled signal nine hours per night from 9 p.m. to 6 a.m. via Westar V (transponder 10X), which has access to more than 5,000 cable systems reaching 30 million homes. Domestidyne is leasing its transponder space from American Buildings Inc. Microdyne will provide specially designed encryption and decoding equipment. Viewers will order pay-per-night and PPV programs

with a special telephone access code to cut down on unauthorized viewing (especially by children).

Initially, Klein said, all of the HiLife programming will come from outside sources, but the service intends eventually to produce some of its own programming. Klein will report to Stuart Levin, president and chief executive officer of Domestidyne.

It's Showtime, folks

Mike Weinblatt, president and chief operating officer, Showtime/The Movie Channel, told members of the Washington Metropolitan Cable Club that Showtime's original programming "will take the high road," but will not be "high brow" or of limited appeal. As an example, he cited *The Paper Chase*, the series Showtime picked up after CBS



Weinblatt

dropped it due to low ratings. The show has broad appeal, he said, although not broad enough for a broadcast network. "It is a high quality, intelligent program and the kind of project we intend to do more of."

At the same time, Showtime would eschew "exploitative projects the networks are famous for—particularly in the made-for-TV movie area," he said. "You will not see *Mother Was a Teen-Age Prostitute* on Showtime."

If Weinblatt has any doubt that the future of cable is bright, he wasn't about to let anybody know about it. Many of the homes in cabled areas that are now labeled "untouchables," he said, are, in fact, "distinctly touchable.... We'll get them as we keep learning how to market to them." Showtime will do its part, he said. At this year's National Cable Television Association convention, he said, Showtime will unveil a new advertising campaign.

Weinblatt also set forth his belief that in two years the triple-pay package will be the industry standard. "And because of the plans we're making, it's my belief that Showtime and The Movie Channel will be

two of the three pay services sold in that triple."

Mickey says a million

Disney Channel President James Jimirro is predicting that the family-oriented pay cable service will pass the one-million-subscriber mark "some time within the next several weeks." The estimate comes on the heels of an April 18 announcement that the Disney Channel is being added to Group W Cable systems serving 300,000 homes in the Los Angeles area. Disney officials peg the March 30 subscriber total at 916,000 homes with the break-even point of two million attainable by the service's second anniversary. Jimirro has also announced that the channel's third made-for-pay feature is in production with a fourth scheduled to begin filming soon in Spain.

Meanwhile, the Disney Channel came under attack from the National Coalition on Television Violence, which monitors television networks. NCTV said it found 18 incidents of violence in each hour of the pay service's cartoon programming and nine in each hour of noncartoon programming. In 43 hours of prime time programming surveyed, the coalition recorded 55 murders and 57 attempted murders.

Strike on hold

A decertification vote has been scheduled for May 3 for members of the bargaining unit represented by the National Association of Broadcast Employees and Technicians at the Financial News Network in Santa Monica, Calif. FNN suspended negotiations with NABET on April 13 (BROADCASTING, April 23) after management received a petition signed by 41 of 61 employees indicating that they "no longer wish to be represented by NABET." The union, which represents news, production, technical, engineering and facilities employees at FNN, has been striking the financial and business news service since March 19. All employees, except for six who have taken other employment, have returned to work following suspension of picketing April 13. Processing of unfair labor practices charges filed against the network by NABET has reportedly been put on hold pending the decertification vote results.

New man in Beirut

Cable News Network has appointed Mark Dulmage bureau chief of its Beirut bureau, replacing Jeremy Levin, who was kidnapped March 7 and has not yet been released. Dulmage has been an executive producer at CNN in Atlanta since May 1980 and before that was a news editor at both WDM-TV and WTTG-TV in Washington. Meanwhile, negotiations to secure Levin's release are continuing.

Book report. The National Cable Television Association's 1984 Directory of Cable Education and Training Programs is now available. The 89-page book lists training centers, junior colleges and universities in the U.S. with instruction in cable technology and management, and includes information on entry requirements, curricula, fees and financial assistance. Copies are available for \$5 from Association Affairs Department, 1724 Massachusetts Avenue, NW, Washington, 20036.

More music videos

Superstation WTBS(TV) Atlanta has renewed its 11-month-old music video series, *Night Tracks*, for an additional 52 weeks beginning this June. The series airs for six hours every Friday and Saturday night and features approximately 80 music videos in each program. The producers of *Night Tracks*, Tom Lynch and Gary Biller, have sold to WTBS a second series, *Chartbusters*, which will air from 11 p.m.-midnight on Saturday beginning later this year.

In an unrelated announcement, Turner-owned Cable News Network said it will expand its daily Olympic games coverage to three weekend cablecasts. *The Games of '84*, anchored by Mike Cowman, "will follow the paths of leading amateur athletes hoping to qualify for this year's summer games." The updates will continue to air daily during six CNN Sports segments.

School day

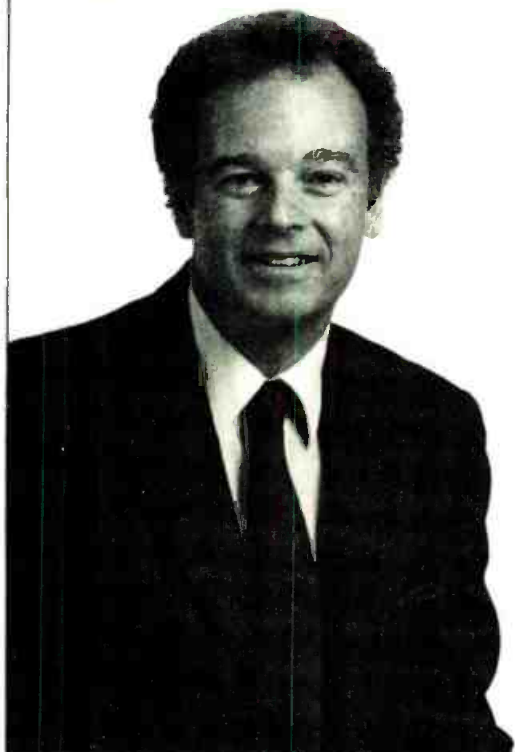
Terry Sanford, chairman of The Learning Channel, the nonprofit satellite-delivered basic cable educational service, announced that TLC's board has approved a January 1985 target date for the service's expansion from 10 to 24 hours a day. "[I]t is essential," said Sanford, "that we extend our programming into prime time when the largest num-

ber of adults have the time to watch television." TLC now programs from 6 a.m. to 4 p.m. NYT, on Satcom III. According to Harold Morse, president of TLC, several different deals for the increased transponder time are in the works. In addition, Sanford announced that Morse, and John Frazee, group VP, Centel Corp., and president, Centel Cable Television, have been named to the board of directors.



And the winner is. As part of Cinemax's recent launch in Wilkes-Barre, Pa., its sister service, HBO, honored one of its 365 pioneer subscribers with a lifetime subscription to Cinemax. Making the presentation to the winner, Marion Sabestinas, were (l-r) Hoyt Walter, vice president, Service Electric Cable TV, the local cable company; Wilkes-Barre Mayor Thomas McLaughlin; Sabestinas; Steve Davidson, HBO senior vice president, and Ed Ganc, manager, Service Electric Cable TV.

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- Pace

LOGS:

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CONTRACT/CONFIRMATIONS

PSA/PROMO LISTS AND AFFIDAVITS

DAILY LOG VALVE

FCC LOG ANALYSIS

COMPLETE PREEMPT/MAKEGOOD HANDLING

TAPE CARTRIDGES:

- Automatic allocation
- Inventory control
- Dub lists
- Cartridge labels

BILLING:

- Invoices — airtime/production
- Statements
- Accounts receivable
- Cash receipts
- Co-op reports
- Salesperson journal
- Rep report
- Revenue analysis by:
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We pride ourselves on the fact that our training, installation and customer services people are broadcasters. Our systems are designed from the user point of view and in broadcast language. All Systems are easy to learn, operate, and bring up. Our program consists of station personnel being in Colorado Springs for advanced training, and our installation team being at the station for instruction and live conversion. We have Customer Service personnel available thereafter.

At Kaman, today's quality is tomorrow's reputation.

Business Briefly

RADIO ONLY

Missouri Tourism □ Co-op advertising campaign will air in 18 markets in Oklahoma, Nebraska, Kansas, Iowa and Illinois for four weeks over eight-week period, starting in mid-July. Commercials will be carried in mornings and afternoons. Target: adults, 25-54. Agency: Kenrick Advertising, St. Louis.

Diamond Department Stores □ One-week flight will be conducted in Las Vegas, Phoenix and Tucson, Ariz., markets in mid-May. Commercials will be scheduled in all dayparts during weekdays and weekends. Target: men, 25-49. Agency: Grey Advertising/Twin Cities.

Metrocall □ Beeper system for professional persons will start eight-week flight in July in Richmond and Roanoke, both Virginia, while its service for consumers will begin two-week flight in Washington and Baltimore this week. Commercials will be carried in all

dayparts on weekdays and weekends. Target: adults, 18 and older, and adults, 25-54. Agency: Demaine, Vickers & Associates, Richmond, Va.

Knudsen Corp. □ Three-week flight for dairy products will start in mid-May in 18 markets. Commercials will be slotted in mornings and afternoons on weekdays and weekends. Target: women, 18-49. Agency: Dailey & Associates, Los Angeles.

Alaska Seafood Marketing Institute □ Generic promotion campaign for Alaska seafood is set to begin in late June for four weeks in eight markets, including Atlanta, Boston, Chicago and San Francisco. Commercials will be broadcast in all time periods during weekdays and weekends. Target: women, 25-54. Agency: Evans/Pacific Inc., Seattle.

TV ONLY

Land O' Frost □ Packaged frozen meat products will be spotlighted in two four-

week buys in 14 markets, beginning May 21 and Aug. 20, respectively. Commercials will be inserted in daytime and fringe periods. Target: women, 25-54. Agency: Ron Berns & Associates, Chicago.

Smuckers □ Fruit spread will be promoted in 12-week flight beginning on May 21 in top 100 markets. Commercials will be carried mostly in daytime but early fringe will also be used. Target: women, 25-54. Agency: Wyse Advertising, Cleveland.

Valvoline □ Motor oil will be highlighted in four-week flight starting in late July in about 50 markets. Commercials will run in prime, fringe, sports and news programs. Target: men, 18-49. Agency: Fahlgren & Ferriss, Cincinnati.

Flower City Stores □ Patio furniture will be featured in one-week flight to begin in early May in eight markets. Commercials will appear in daytime and fringe periods. Target: adults, 25-54. Agency: Labelle & Shallbetter, Minneapolis.

Citizen of America □ U.S. marketing company of Citizen Watch Co. breaks campaign this week estimated to cost between \$12 million and \$15 million for remainder of year in 23 top markets. Campaign will be flighted for four weeks in some markets and run continuously in others. Commercials will run in prime time, late news and late fringe. Target: adults, 18-49. Agency: Levine, Huntley, Schmidt & Beaver, New York.

RADIO AND TV

International House of Pancakes □ Restaurant chain will begin five-week flight on television in early May in eight markets, supplemented by two markets in radio. Commercials will run in all dayparts on radio and in daytime and fringe on television. Target: adults, 25-54. Agency: Brooks Advertising Inc., Palos Heights, Ill.

Frederick & Herrud □ Bacon will be advertised in 15 to 18 markets, with contingency plans for 10 additional markets, in four-week flights starting in early May. Commercials will be carried on radio in all dayparts and on television in daytime, prime access and prime time. Target: women, 25-54. Agency: De Leuw Hill & Associates, Southfield, Mich.

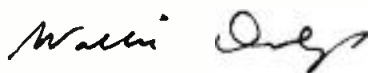
THANK YOU, NAB MEMBERS!

Since it's not possible to shake hands with each of you personally, I'm taking this means to express my appreciation to all of you who supported me during my recent campaign for the NAB TV Board of Directors.

Being elected to the Board is a high honor and I'll work hard to be worthy of the trust you have placed in me.

Thank you for your help and support. Lets stay in touch!

Sincerely,



Wallie Dunlap



Washington, D.C.

ANYONE CAN SELL THE NUMBER ONE RATED STATION

We are specialists.

Our specialty is selling in the highest competitive sales situations.

In many markets there is only five tenths of a point separating the number two station and the number seven station for a four-station buy.

If our station is the fourth, fifth or even seventh, our strength is our ability to get to be part of that buy.

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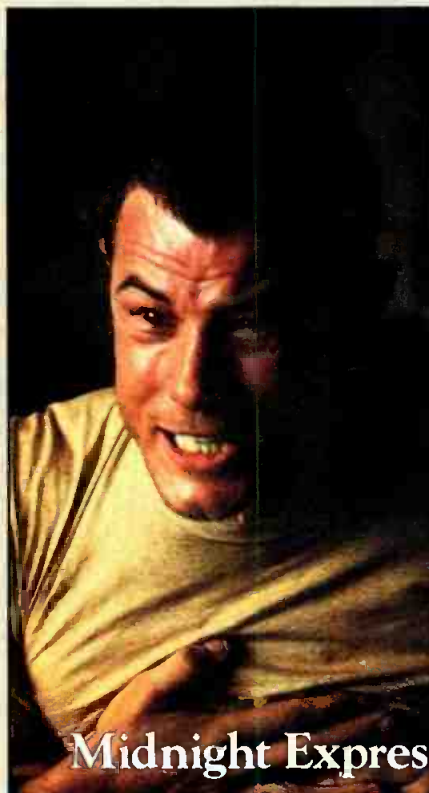


MASLA RADIO

Winners have to be hungrier than losers.

VOLU

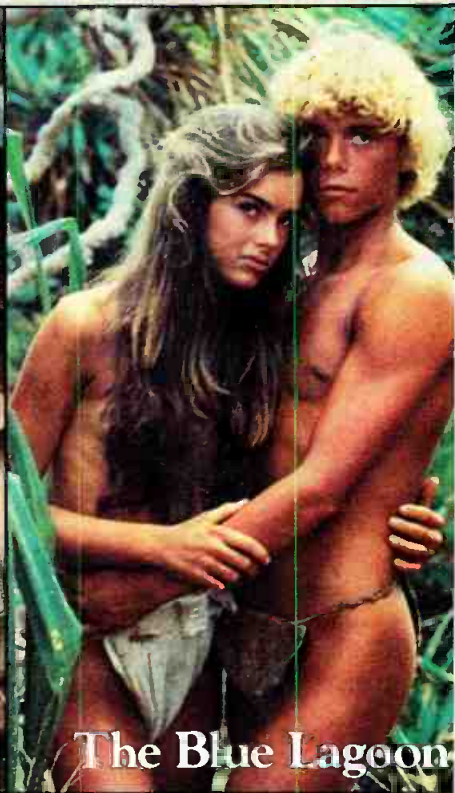
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The China Syndrome



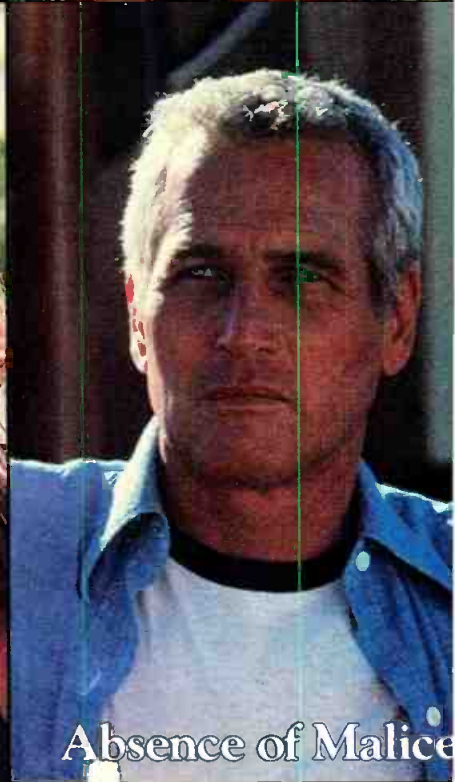
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Kramer vs. Kramer



Absence of Malice

M E IV

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**GLENWOOD
SPRINGS, CO.**

VOLUME IV DELIVERS



AdVantage

Katz's look at radio. Katz Radio reports that 25-54 demographic was most requested by agencies in first quarter of 1984, although its percentage slipped to 40% from 42% in comparable period of 1983. In second place with 19% was 18-49, up from 16% last year, and in third spot was 18-34 with 11%, same as last year. Report also showed increase in requests for Metro Area data, which climbed to 81% in first quarter of this year versus 74% last year. Katz said, most requested daypart was Monday to Friday, 6 a.m.-7 p.m., with 30%, followed by Monday to Friday, 6 a.m.-7 p.m. plus weekend with 27%, and full rotation packages at 16%. Almost 80% of all requests were for 60-second announcements. Average number of weeks and markets per campaign was five, whether 52-week advertisers were included or excluded.

ASTA seminar. Approximately 200 executives of advertising agencies and client firms attended 12-minute presentation in New York last Wednesday (April 25) under auspices of Advertiser Syndicated Television Association. Presentation extols merits of advertiser (barter) syndication and suggests that this form of sponsorship be used to complement network television buys. Advertisers and agencies are reminded that advertiser syndication can provide extensive coverage and impact at cost-efficient prices. Presentation offers scenes from advertiser-syndicated offerings for 1984-85 from 19 companies belonging to ASTA. Goals of ASTA, which was formed last year, are to provide wider choice of better quality programs; standardize contracts and procedures in advertiser syndication; supply improved research for syndicated programming, and develop information for advertisers, agencies and television stations.



Ad coalition. Agency advisory board made up of broadcast media supervisors and directors from seven major ad agencies has been formed by Major Market Radio ("In Brief," April 16). Board members pictured at Major Market's New York headquarters are (l-r): Mary Lou Ahern, radio supervisor, Needham, Harper & Steers; Paul Thury, radio broadcast supervisor, Scali, McCabe & Sloves; Elizabeth Soldinger, vice president/media supervisor, Gaynor Media; Dennis McGuire, spot radio supervisor, Cunningham & Walsh; Art Catalanello, broadcast buying supervisor, Ogilvy & Mather, and Joanne Taub, assistant media buyer, Grey Advertising. Not pictured is Karen Fishback, vice president/broadcast director, Bozell & Jacobs.



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A complete promotional package
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Donald V. West, vice president.
David N. Whitcombe, vice president.
Jerome H. Heckman, secretary.
Philippe E. Boucher, assistant treasurer.

The Fifth Estate Broadcasting

1735 DeSales Street, N.W., Washington 20036
Phone: 202-638-1022

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Lawrence B. Taishoff, publisher.

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Mark K. Miller, senior news editor.
Kira Greene, assistant to the managing editor.
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Doug Halonen, Matt Stump, Kim McAvoy,
assistant editors.
John Eggerton, Susan Dillon, staff writers.
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Jeanne A. Omohundro
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Broadcasting ■ Cablecasting

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Joseph A. Esser, associate editor.
Daniel L. Martucci, production assistant.

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John Andre, sales manager (equipment and
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Doris Kelly, sales service manager.
Christopher Moseley, classified advertising
manager.

New York

David Berlyn, senior sales manager.
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Marie Leonard
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Hollywood

Tim Thometz, sales manager.

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Albert Anderson.

Irving C. Miller, financial consultant.
Debra Shapiro, secretary to the publisher.
Wendy J. Liebmann.

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Patricia A. Vance, director.

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Vincent M. Dillingo, senior editor. radio.
John Lippman, assistant editor.
Geoff Folsie, staff writer.

Hollywood: 1680 North Vine Street, 90028.
Phone: 213-463-3148.

Richard Mahler, correspondent.

Tim Thometz, Western sales manager.
Sandra Klausner, editorial-advertising assistant.



ABP American
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in 1946. Television * acquired in 1961. Cablecasting *
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THE FIRST PRIME-TIME NEWS IN L.A.!

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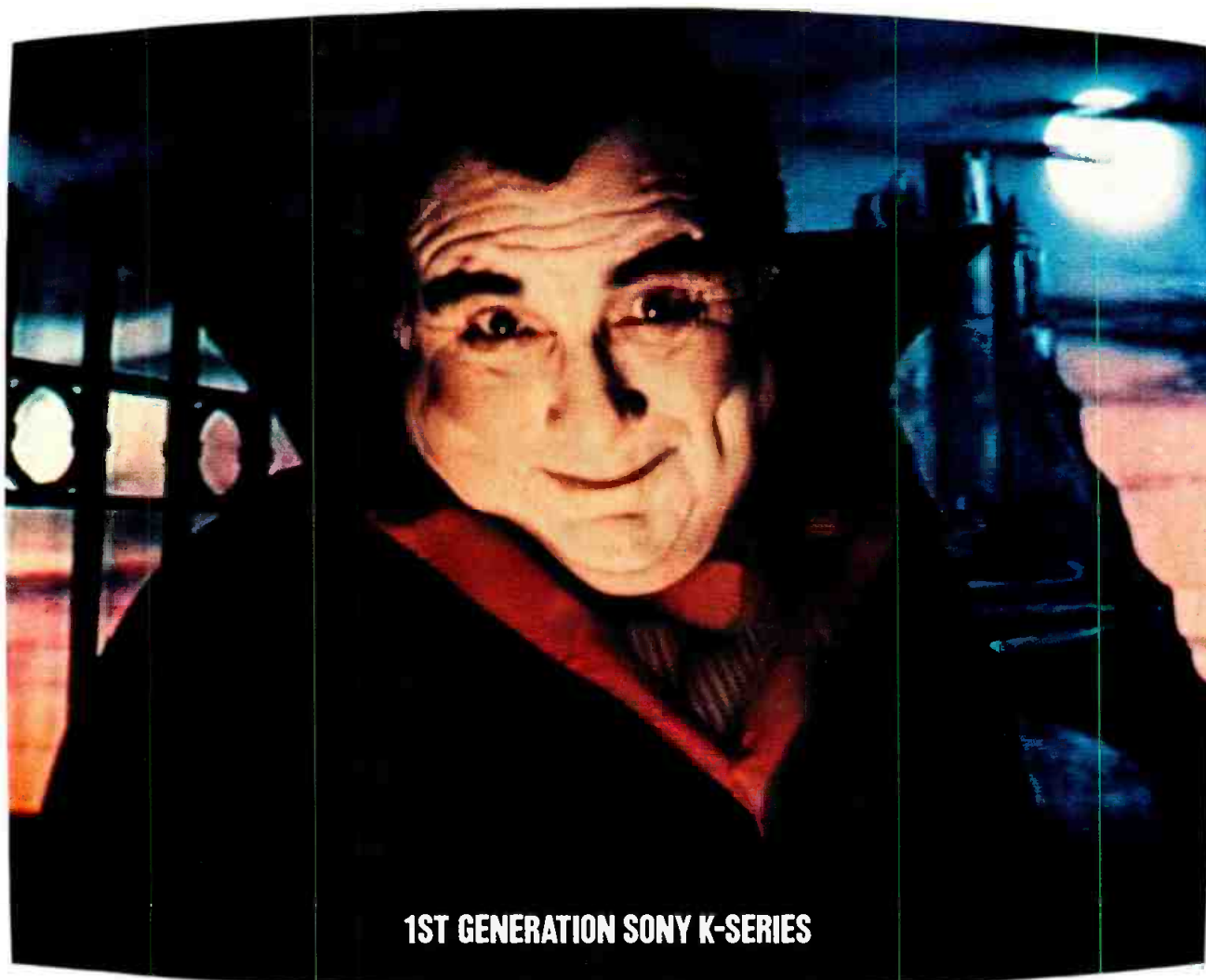
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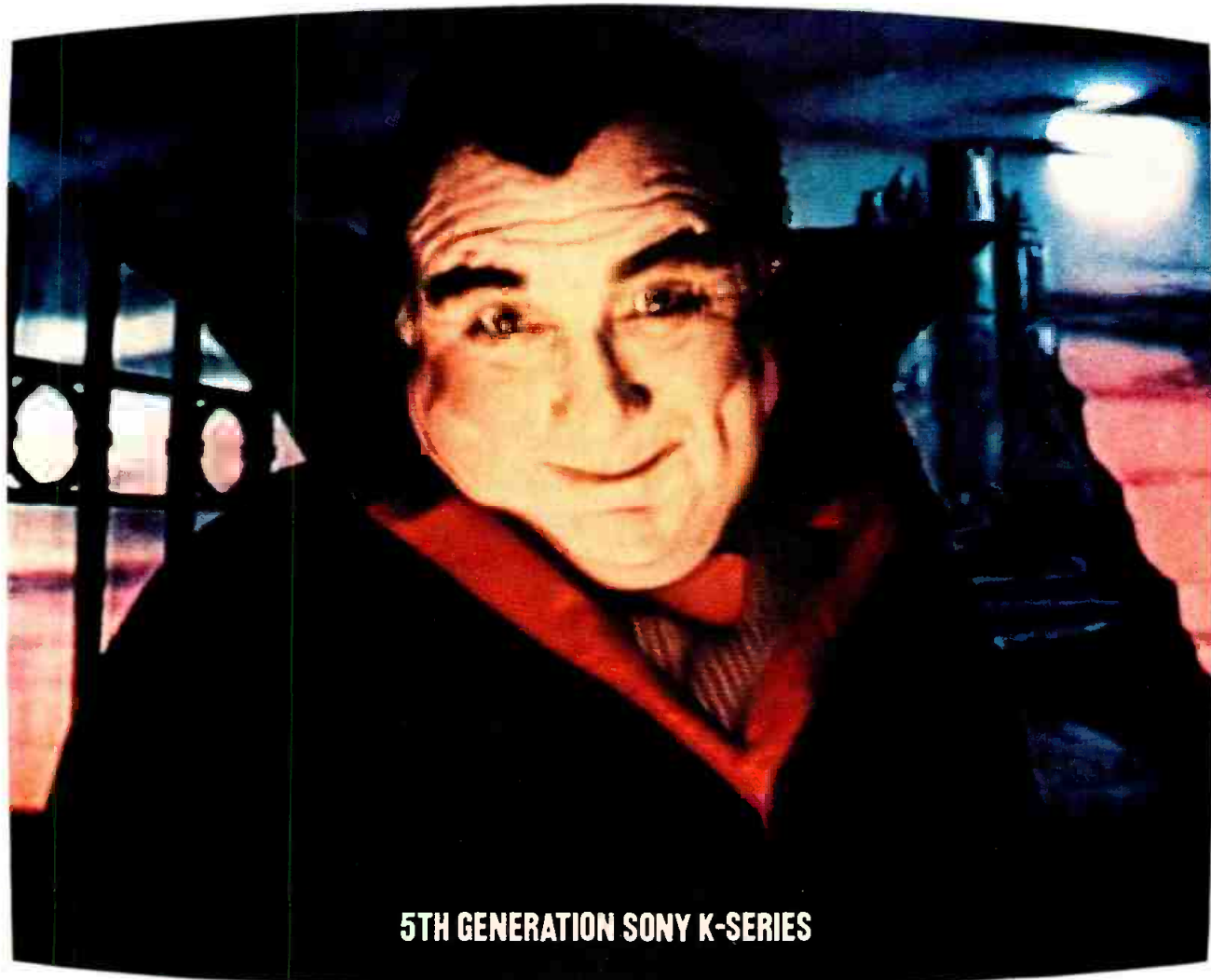
You can search the tape manufacturing facilities from Toledo to Transylvania and you'll go bats trying to find a $\frac{3}{4}$ " videotape that'll render pictures like the new Sony K-Series.

In the deep recesses of the Sony labs, our scientists have discovered the secret to long life. No longer will multi-generations draw the color out of your production. This is due in part to Sony's exclusive signal retention binder. It keeps the signal on the tape under the most demanding uses, even extreme temperature fluctuations.

The tape formulation is equally unique. Sony K-Series features Vivax™ magnetic particles, which are smaller than chrome oxide particles, and give you more information on the tape than ever before. So you start out with more vivid, lifelike pictures. Demons like dropouts, which have a nasty habit of puncturing holes in your video, have been dramatically reduced. As is the case for modulation noise. And the Sony K-Series has the highest color

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signal-to-noise ratio in the industry. This new Sony U-matic® tape is also distinguished by a smoother tape surface. It reduces headwear. So you not only increase your tapes' usability, but your tape recorder's as well.

And there's one other significant factor to consider. After close examination of videotape, we've discovered one thing is consistent: the inconsistency of tape. This is a problem you won't have to face with Sony K-Series. The millionth one you buy will be a mirror image of the first.

So if you're looking for a U-matic tape that gives you better pictures that last longer, look for the one designed for the run and rerun and rerun and rerun. New K-Series from Sony.

SONY
The Tape Measure In Video.



A lottery regulation commentary from Joel Levy, Cohn and Marks, Washington

On the legal edge of gambling and advertising

Broadcasters gather this week for their annual convention in Las Vegas. Many will indulge in what only Las Vegas and now Atlantic City offer: legalized casino gambling. The games are baccarat, blackjack, craps, roulette, poker, and, of course, the slots. Put up your money, *consideration*, take a *chance* with lady luck, and maybe your *prize* will cover convention expenses—and then some. But don't count on it. About 12 million visitors to Las Vegas lost nearly \$1.9 billion in the local gaming halls in 1983.

Broadcasters may enjoy the casinos that never close, but they had better not advertise or promote such activities on radio and television stations.

Since adoption of the Communications Act of 1934, federal statutes and FCC regulations have barred the broadcast of "any advertisement of or information concerning any lottery, gift enterprise, or similar scheme" over radio or television stations. Similar provisions of the federal criminal code prohibit the use of the mails to distribute lottery information and cover newspapers and other forms of printed matter that travel in interstate commerce. All of these statutes have their origin in the 19th century when state scandals involving fraudulent lotteries occurred. As state legislatures outlawed lotteries, the federal government pitched in by prohibiting the interstate transportation of lottery information or tickets and, later, the distribution of such information electronically.

Now the pendulum has swung the other way, and state-authorized and -operated lotteries are a principal means of funding a variety of local activities, primarily education. In addition to legalized casino gambling in Nevada and New Jersey, 21 states conduct legal lotteries and 47 of the states and territories permit the operation of bingo. A variety of other gambling-type activities, such as parimutuel betting on greyhounds and horses, jai alai, and off-track betting are now legal in numerous states.

These changes in the social, economic, and moral climate that permit and encourage public participation in games of chance have not been followed with substantial reform in the criminal statutes prohibiting advertisement or promotion of this aspect of the growing tourist and entertainment industry. In 1975, Congress did lift the ban on advertising of state-conducted lotteries, but no effort was made to rationalize the lottery laws in light of the pervasive extent of legal private gambling. The result is anomalous, at best.

A state, such as New Jersey, conducts a statewide lottery, promotes and advertises it, and at the same time legal, state-authorized,



Joel H. Levy is a partner in the Washington law firm of Cohn and Marks. A graduate of Harvard Law School, Levy worked in the FCC's rules and standards division of the Broadcast Bureau from 1960 to 1962 and in the litigation section of the Office of General Counsel from 1963 to 1965. He joined Cohn and Marks in 1965 and has been a partner since 1971.

but private, casino gambling may not place similar advertisements or promotional material on the air and in the mails. The original purpose of the federal lottery statute was to help enforce local prohibition of lottery activity. Now the effect of the ban on advertising of any lottery information, other than that of state-conducted lotteries, has been to turn the federal statute into a device to shield state-authorized lotteries from the full competition of private legal lotteries. Current law and federal regulation thus unfairly discriminate, particularly against legal casino gambling. Broadcasters are deprived of the opportunity to sell their air time, and perhaps more important, as with any restriction on the advertisement of lawful products and services, the ultimate loser is the consumer.

An effort is now under way in the Congress, led by Senator Paul Laxalt (R-Nev.) to remove the federal restrictions on advertisements of private lotteries "authorized, licensed, and regulated by a state acting under authority of state law." This effort has not received much attention, if any, from the broadcast industry, yet its interests in this bill and its impact upon the merchandising of promotional games are much at stake.

Give-away promotions are a familiar means to promote retail products and services. Escaping the clutches of the lottery laws in designing such games and promotions has long bedeviled the advertising industry, media outlets, and their lawyers. The federal treasury is regularly re-stocked with fines extracted from broadcasters who fail to understand or ask why a particular promotion may be prohibited. What is consideration and what is chance? Those questions

can trip up even the well-intentioned. Even when understood, the federal laws and FCC rules now prohibit the advertisement or promotion of games that are innocuous and often beneficial to society.

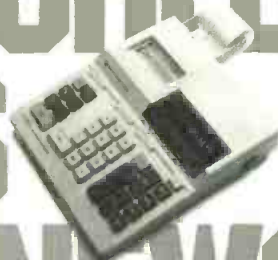
Church bingo cannot be advertised on the air, even when legal under state law. A ticket stub give-away at the local baseball game may not find its way into copy urging baseball fans to attend the next home game. Yet a cleverly designed promotion, with all the elements of a lottery, can be broadcast if the person or group that receives the money is different from the person or group that runs the lottery. Talk shows about gambling in general or how to play a complicated game, such as craps, are legal. If the same program talks about a specific lottery run by a specific hotel or church, the line has been crossed between what is legal and what is illegal. Those are just some of the examples of the illogical rules that pretend to control legal activity by prohibiting talk about it. All illustrate the need for reform.

Contemporary Supreme Court decisions limiting restrictions on commercial speech, e.g., advertisements for birth control, abortions and legal services, offer the prospect of a successful judicial challenge to the federal laws. Congressional repeal is a surer, quicker and less costly approach and while the Laxalt bill is not perfect, it is a positive step. One change that should be made in the bill is to allow advertising of any lottery or game of chance that is legal under state law, even if it is not "licensed and regulated by state authority," as are the Nevada and New Jersey casinos. Advertisements or public service announcements for less pervasively regulated but no less legal activities, like church bingo, would then be permissible.

Federal relaxation of the ban on advertising of lotteries will shift the arena of potential regulation to the state and local communities which are most closely affected by such advertising. The states will also have the authority to address the manner in which merchandising of commercial products and services could be accompanied by the use of games of chance to entice consumers. Local concerns, economic and political, as well as notions of public morality, may result in a patchwork of laws that may create other issues. Maintaining standards of truthful advertising and assuring that criminal elements do not infiltrate legalized gambling operations will continue to require government oversight. Nonetheless, state control is far preferable to the current situation where an anachronistic federal statute effectively bars the full use of modern communications to inform the public about legal activities.

Here then is an issue that broadcasters can decide to act upon during their recreation time in Las Vegas at the blackjack table, as well as during business hours at convention events.

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Datebook

This week

April 29-May 1—"Communication in the 80's: Major Broadcasting and Telecommunications Issues," conference sponsored by *University of Calgary, Communication Studies*, Calgary, Alberta.

April 29-May 2—*National Association of Broadcasters* annual convention. Las Vegas Convention Center, Las Vegas.

April 30—*Maximum Service Telecasters* engineering breakfast, during National Association of Broadcasters' convention. Las Vegas Hilton hotel, Las Vegas.

April 30—Cable course offered by *Women in Cable, Rocky Mountain chapter*. University of Denver, Denver. Information: (303) 321-7550.

April 30—*National Academy of Television Arts and Sciences, New York chapter*, drop-in dinner. Theme: "Varied Views on Voice-Overs." Copacabana, New York.

April 30-May 1—"Minority Television Programming Exhibition," sponsored by *National Association of Broadcasters, minority and special services and television departments*, during NAB's annual convention. Las Vegas Convention Center, Las Vegas. Information: Dwight Ellis, NAB, (202) 293-3534.

May 1—*Broadcast Pioneers* annual breakfast. Las Vegas Hilton, Las Vegas.

May 2—*Women in Cable, New York chapter*, "Basics of Cable TV" course. Topic for session one: overview of cable TV and background. Viacom conference center, New York. Information: (212) 484-6778.

■ Indicates new or revised listing

May 2—*National Academy of Television Arts and Sciences, New York chapter*, drop-in luncheon. Speaker: Pat Robertson, president, Christian Broadcasting Network and CBN Cable Network. Copacabana, New York.

May 3—*American Women in Radio and Television, New York chapter*, fifth annual Pinnacle Awards. Presenter: actress Helen Hayes. Guggenheim Museum, New York. Information: Ellen Bedell, (212) 221-8181.

May 3—*Women in Cable, Chicago chapter*, monthly meeting, "Shape of TV to Come: Programming Trends of the 80's." Como Inn, Chicago. Information: (312) 399-2278.

■ **May 3**—*Northern California Broadcasters Association* luncheon meeting. Trader Vic's, San Francisco.

May 4-6—*Illinois News Broadcasters Association* spring convention. Holiday Inn Mart Plaza, Chicago.

May 5—*Radio-Television News Directors Association* region six meeting with Society of Professional Journalists, Sigma Delta Chi. Grenada Royale/Alameda Plaza, Kansas City, Mo. Information: (202) 737-8657.

May 5—*Radio-Television News Directors Association* region 14 meeting with UPI. Colonial Square, Atlanta. Information: (202) 737-8657.

May 5-9—Eurocast '84, cable and satellite television exhibition. Swiss Industries Fair, Basel, Switzerland. Information: Michael Hyams, Cable & Satellite Television Exhibitions Ltd., 100 Gloucester Place, London, W1H 3DA; telephone: 01-487-4397.

Also in May

May 7—Fund-raiser for *Big Sisters of Washington*, roasting FCC Commissioner Mimi Weyforth Dawson. Roasters: FCC Chairman Mark Fowler, former FCC Commissioner Richard Wiley, former FCC Mass Media Bureau Chief Larry Harris, and Jerri Crisman, president, American Women in Radio and Television. Washington Marriott. Information: Karen Kershner, (202) 328-1847.

May 7—Cable course offered by *Women in Cable, Rocky Mountain chapter*. University of Denver, Denver.

Major Meetings

April 29-May 2—*National Association of Broadcasters* annual convention. Las Vegas Convention Center, Las Vegas. Future conventions: Las Vegas, April 14-17, 1985; Dallas, April 13-16, 1986; Dallas, April 12-15, 1987, and Las Vegas, April 10-13, 1988.

May 7-9—*ABC-TV* annual affiliates meeting. Century Plaza, Los Angeles.

May 13-16—*CBS-TV* annual affiliates meeting. Century Plaza, Los Angeles.

May 20-22—*NBC-TV* annual affiliates meeting. Century Plaza, Los Angeles.

May 20-23—*Broadcast Financial Management Association* 24th annual conference. Grand Hyatt, New York. Future conferences: May 12-15, 1985, Chicago; May 18-21, 1986, Los Angeles.

May 30-June 2—*American Women in Radio and Television* annual convention. Palmer House, Chicago. Future conventions: May 7-11, 1985, New York Hilton, New York, and May 27-31, 1986, Loew's Anatole, Dallas.

June 2-6—*American Advertising Federation* national convention. Fairmont hotel, Denver. Future conventions: June 8-12, 1985, J.W. Marriott, Washington; and June 14-18, 1986, Hyatt Regency Chicago, Chicago.

June 3-6—*National Cable Television Association* annual convention, including National Cable Programming Conference. Las Vegas Convention Center, Las Vegas. Future conventions: June 2-5, 1985, Las Vegas; March 16-19, 1986, Dallas, and May 17-20, 1987, Las Vegas.

June 10-15—*Broadcasters Promotion Association/Broadcast Designers Association* annual seminar. Caesars Palace, Las Vegas. Future conventions: June 5-9, 1985, Hyatt Regency, Chicago; June 10-15, 1986, Loew's Anatole, Dallas; June 17-20, 1987, Peachtree Plaza, Atlanta; June 22-25, 1988, Bonaventure, Los Angeles; June 22-25, 1989, Renaissance Center, Detroit.

Aug. 12-15—*Cable Television Administration and Marketing Society* 10th annual conference. Waldorf-Astoria, New York.

Sept. 6-8—*Southern Cable Television Association* Eastern show. Georgia World Congress Center, Atlanta. Future show: Aug. 25-27, 1985, Georgia World Congress Center.

Sept. 16-19—"The Radio Convention," combined conventions of *National Radio Broadcasters Association* and *National Association of Broadcasters* Radio Programming Conference. Westin Bonaventure hotel, Los Angeles.

Sept. 21-25—10th *International Broadcasting Convention*. Metropole Conference and Exhibition Center, Brighton, England.

Oct. 28-Nov. 2—*Society of Motion Picture and Television Engineers* 126th technical conference and equipment exhibit. New York Hilton.

Oct. 30-Nov. 1—*Atlantic Cable Show*, Atlantic City Convention Center, Atlantic City, N.J. Information: (609) 848-1000.

Nov. 7-9—*Television Bureau of Advertising* 30th annual meeting, Hyatt Regency, Chicago. Future meetings: Nov. 11-13, 1985, Hyatt Regency, Dallas; Nov. 17-19, 1986, Century Plaza, Los Angeles, and Nov. 18-20, 1987, Washington Hilton, Washington.

Nov. 11-14—*Association of National Advertisers* annual meeting. Camelback Inn, Scottsdale, Ariz.

Nov. 17-20—*AMIP '84, American Market for International Programs*, second annual program marketplace, organized by Perard Associates with MIDEAM and National Video Clearinghouse. Fontainebleau Hilton, Miami Beach.

Dec. 5-7—*Western Cable Show*, sponsored by *California Cable Television Association*. Anaheim Convention Center, Anaheim, Calif. Information: (415) 428-2225.

Dec. 5-7—*Radio-Television News Directors Association* international conference. San Antonio Convention Center, San Antonio, Tex.

Jan. 5-8, 1985—*Association of Independent Television Stations (INTV)* annual convention, Century Plaza hotel, Los Angeles.

Jan. 10-15, 1985—*NATPE International* annual convention. Moscone Center, San Francisco. Future conventions: Jan. 17-22, 1986, New Orleans Convention Center, and Jan. 24-27, 1987, New Orleans.

Jan. 30-Feb. 1, 1985—25th annual Texas Cable Show, sponsored by *Texas Cable TV Association*. San Antonio Convention Center, San Antonio.

Feb. 10-13, 1985—*National Religious Broadcasters* 42nd annual convention. Sheraton Washington, Washington.

Feb. 15-16, 1985—*Society of Motion Picture and Television Engineers* 19th annual television conference. St. Francis hotel, San Francisco.

March 7-9, 1985—16th annual Country Radio Seminar, sponsored by *Country Radio Broadcasters Inc.* Opryland hotel, Nashville.

May 15-18, 1985—*American Association of Advertising Agencies* annual meeting. Greenbrier, White Sulphur Springs, W. Va.

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May 7—National Academy of Television Arts and Sciences, New York chapter, drop-in dinner. Theme: "The Talent of Agents." Copacabana, New York.

May 7-9—Classical Music Broadcasters Association convention. Warwick hotel, New York. Information: Tim Davidson, (206) 343-3981.

May 7-9—ABC-TV annual affiliates meeting. Century Plaza, Los Angeles.

May 7-26—Los Angeles Television Festival, compilation of past *Museum of Broadcasting* exhibitions, presented by Museum in cooperation with *Academy of Television Arts and Sciences Foundation*. ABC Entertainment Center, Los Angeles.

May 8—Hollywood Radio and Television Society newsmaker luncheon, "Covering the Summer Olympics," with ABC News and Sports President Rooney Arledge. Beverly Hilton, Los Angeles.

May 9—Second annual "Excellence in Media" awards

luncheon, sponsored by *Institute of New Cinema Artists*. Helmsley Palace, New York.

May 9—Women in Cable, New York chapter, "Basics of Cable TV" course, session two. Topic: programming, basic, pay and local origination. Viacom conference center, New York. Information: (212) 484-6778.

May 9—National Conference of Black Lawyers communications task force. Speaker: Senator Barry Goldwater (R-Ariz.), chairman of Senate Communications Subcommittee. Washington Marriott, Washington.

May 9—National Academy of Television Arts and Sciences, New York chapter, drop-in luncheon. Speaker: John Lazarus, vice president, sports marketing and sales, ABC-TV. "The Marketing of the 1984 Olympics." Copacabana, New York.

May 10—Armed Forces Communications and Electronics Association luncheon. Speaker: FCC Commissioner Mimi Weyforth Dawson. Shoreham hotel, Washington.

May 11-13—Pennsylvania AP Broadcasters annual meeting and awards presentation. Treadway Resort, Lancaster, Pa.

May 12—Radio-Television News Directors Association region 12 meeting with Pennsylvania AP Broadcasters. Lancaster, Pa. Information: (202) 737-8657.

May 13-16—CBS-TV annual affiliates meeting. Century Plaza, Los Angeles.

May 14—Cable course offered by *Women in Cable, Rocky Mountain chapter*. University of Denver, Denver. Information: (303) 321-7550.

May 14-17—International Conference on Communications, sponsored by *Institute of Electrical and Electronics Engineers Communications Society*. RAI Conference Center, Amsterdam. Information: (31) 40-742131/742236.

May 15—Deadline for entries in *National Federation of Community Broadcasters* "Community Radio Program Awards." Information: NFCB, 1314 14th Street, N.W., Washington, 20005; (202) 797-8911.

May 15—Women in Communications, New York chapter, annual business meeting and spring luncheon. Tavern on the Green, New York.

May 15—"Minority Ownership, Training and Recruiting," conference sponsored by *Northeastern University, journalism department*. Ell student center, Boston. Information: Bill Kirtz, (617) 437-3236.

May 15—Southern California Cable Association monthly meeting. Speaker: Larry Wangberg, president, Times Mirror Cable, Irvine, Calif. Los Angeles Airport Hilton, Los Angeles. Information: (213) 684-7024.

■ May 15-17—Maryland/Delaware Cable Television Association annual spring meeting. Belvedere, Baltimore. Information: Barbara Martin, (301) 332-4098.

May 16—New Jersey Broadcasters Association annual spring conference. Rutgers, State University of New Jersey, New Brunswick, N.J.

May 16—Women in Cable, New York chapter, "Basics of Cable TV" course, session three. Topic: advertising and research. Viacom conference center, New York. Information: (212) 484-6778.

■ May 16—Women in Cable, Washington chapter, meeting. Topic: DBS, SMATV and MDS. Speakers: Ron Castell, Satellite Television Corp., Daniel Bean, Skyvision Corp., and Steve Wechsler, Marquee Television Network. National Cable Television Association headquarters, Washington.

May 16—National Association of Broadcasters metro market committee meeting. NAB headquarters, Washington.

May 16-19—Public Telecommunications Financial Management Association annual conference. The Pointe at Squaw Peak, Phoenix. Information: (803) 799-5517.

May 16-19—American Association of Advertising Agencies Southern region annual meeting. Mandalay Four Seasons, Dallas.

May 16-20—Fourth International Conference on Television Drama, sponsored by *Michigan State University*. MSU campus, East Lansing, Mich. Information: (517) 355-4714.

May 17—World Telecommunications Day, sponsored by *International Telecommunication Union*. Information: ITU, Place des Nations, CH-1211, Geneva, 20; telephone: (022) 99-5111.

May 17—National Academy of Television Arts and

Stay Tuned

A professional's guide to the intermedia week (April 30-May 6)

Network television □ PBS (check local times): *American Playhouse*—"Concealed Enemies," part I (three-part mini-series), Monday 9-11 p.m. [continued following Tuesday and Wednesday]; *American Playhouse*—"Hughie," Tuesday 9-10 p.m. ABC: *The Last Days of Pompeii*, part I (three-part mini-series), Sunday 8-11 p.m. [to be continued following Monday and Tuesday]. NBC: *V: The Final Battle*, part I (three-part mini-series), Sunday 8-10 p.m. [to be continued following Monday and Tuesday].

Syndication □ Turner Program Services: *Cousteau/Amazon part II*—"The New El Dorado: Invaders and Exiles" (three-part special), Monday 8-10 p.m. [third part to be broadcast June 12].

Cable □ Arts & Entertainment: *Emlyn Williams as Charles Dickens*, Tuesday 9-10:30 p.m.; *Bloodlines: 1915* (seven-part dramatic series), Tuesday through following Tuesday 8-9 p.m. Bravo: *Wagner Tribute*, Tuesday 10-11 p.m.; *Dance Fest: An Evening With the Royal Ballet*, Saturday 10-11:30 p.m.

Play it again (rebroadcasts) □ Arts & Entertainment: *Through A Glass Darkly*, Saturday 8-9:30 p.m. Cinemax: "Tootsie," Thursday 8-10 p.m. NBC: *Adam*, Monday 9-11 p.m.

Museum of Broadcasting □ (1 East 53d Street, New York) *Lucille Ball: First Lady of Comedy*, 90 minutes of programing per day, through Sept. 13; *Rod Serling: Dimensions of the Imagination*, 60 hours of programing, through May 3.

* indicates premiere episode

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Poll talk

EDITOR: I have read your editorial in the April 9 issue, "Stand-off," which deals with the use of exit polls, etc. The industry ought to get behind the uniform polling hour bill that has been introduced for the past several Congresses by Representative Mario Biaggi (D-N.Y.).

The essence of his idea is that elections should take place on a Sunday and that the polls should be open from noon to 8 p.m., Eastern time, across the nation.

Exit polls are a nonissue. After all, the First Amendment takes care of that question, so it's not worth discussing.

Yesterday morning NBC News reported that the chairman of the Democratic party in Missouri had predicted that Walter Mondale would carry the Democratic caucuses quite handily. Now there's an authoritative voting prediction before the polls have opened, much less before they've closed.—*William L. Putnam, chairman, Springfield Television, Springfield, Mass.*

What's at issue?

EDITOR: I was disappointed by the FCC's recent decision not to launch a rulemaking to establish a class of low-power FM stations (BROADCASTING, April 16), but at least the basis attributed to Mr. McKinney (that many of them would be knocked off the air by the new full-power FM stations that Docket 80-90 would establish, and so a petition for low-power should wait until the dust had settled from 80-90) was defensible. I was surprised, however, by the frankness of the quote from Mr. Fritts, spokesman for the National Association of Broadcasters, erstwhile champion of First Amendment freedom, in endorsing the FCC's ruling, that the NAB "expects" (clearly, from the context, meaning "hopes" and not simply "predicts") that "extensive local origination of programing [on existing translator transmitters] will not be tolerated."

The NAB cannot claim that additional electronic interference would result from changing the content of the programing of an existing translator. The only kind of interference that could result would be in the form of additional competition for audiences and advertisers. There is no dispute that any new competitor should, by becoming a local broadcaster, be subject to the same rules as other broadcasters, so arguments about "level playing fields" should be directed to making sure that this is the case.

If the NAB truly believes in the virtues of free competition, and not simply in the protection of its current members against any accountability to the public, whether that accountability is brought about by government regulation or through the entry of new com-

petitors, it will disavow Mr. Fritts's statement and make it clear that the NAB will not oppose the entry of new competitors to the field of communication.—*Philip R. Olenick, attorney, Boston.*

Search for substance

EDITOR: It is interesting to note that the National Cable Television Association was about half right in its study of cable franchise fees and city overcharges, as borne out by the FCC (BROADCASTING, March 12). This appears to jibe with the character of much of the information the NCTA has provided to Congress, the press, and the public in its unbridled push for legislation favorable to the industry. Half-truths, questionable statistics, non-sequiturs, and attacks on the character of those who would disagree seem the order of the day.

In this light, your March 12 editorial attack on Peggy Charren, Tim Wirth and their efforts in support of quality television for children is just a bit confusing. "Careful staging," as you put it, is practiced universally in Washington to present an "image" so as to "mold" opinion. That NCTA and Action for Children's Television should do so should hardly be surprising. At least Wirth and Charren are doing so for the benefit of children whose young minds are not yet able to discern the intentions of advertisers in a commercial medium.

But why an attack on the methods of Charren and Wirth without one on those of Wheeler and company? Indeed, that such methods should be used by a communications industry should be at least equally deplorable to a publication dedicated to the ideals of the First Amendment.

Perhaps we would all be better served if all such efforts were concerned more with substance and facts, that with image and PR.

But I suppose you could say it's all just a matter of perception.—*John A. Figliozzi, Clifton Park, N.Y.*

Oversimplification

EDITOR: Your "Monday Memo" of April 23, "Psychology for General Managers" by Jerry Johnson of Voice Crafts, makes some salient points about delegation of authority, the supervision of creative, technical and artistic people, and differences in learning and problem-solving styles.

However, few program directors receive training in how to effectively direct, control and motivate their subordinates. Often, the assumption is made that their own artistic temperaments will enable them to provide leadership for others of like nature. A core of management skill is still a fundamental requirement for fulfilling the mandate of get-

ting things done through others.

Second, the learning styles postulated in D.A. Kolb's book cannot and should not be regarded as mutually exclusive, as Mr. Johnson's reference suggests. To label a class of specialists as "accommodators" or as "convergers" is to overlook the tremendous overlap in personality dynamics, and to suggest to managers that their people can be pigeonholed into categories and dealt with unidimensionally.

Perhaps space limitations did not afford Mr. Johnson the opportunity to discuss the points raised in this letter more fully. Nevertheless, as a broadcasting consultant for more than a dozen years, specializing in the assessment of managerial and sales candidates, I tend to wince at the simplistic views that the article implies, and am especially distressed by the use of labels to classify people. Most individuals are a great deal more complex and need to be treated as multidimensional.—*Jay S. Ferkin, senior partner, Jay S. Ferkin Associates, Great Neck, N.Y.*

Degrees of difference

EDITOR: Someone seems to have made an egregious error in your April 2 story, "Intelsat opens new bird to Comsat competitors." There are several references to the placement of Intelsat V at 307 degrees east.

That is geographically impossible. No point on Earth can be farther than 180 degrees east/west from the 0° meridian at Greenwich, England; the 180° meridian is commonly known as the International Date Line.

The easternmost point in Brazil (over which the story indicates Intelsat V will be placed)—at Recife—is approximately 35° west longitude and the western-most point is approximately 75° west; the longitude will have to be somewhere between those two figures.—*Richard H. Gleick, RHG Communications, Maitland, Fla.*

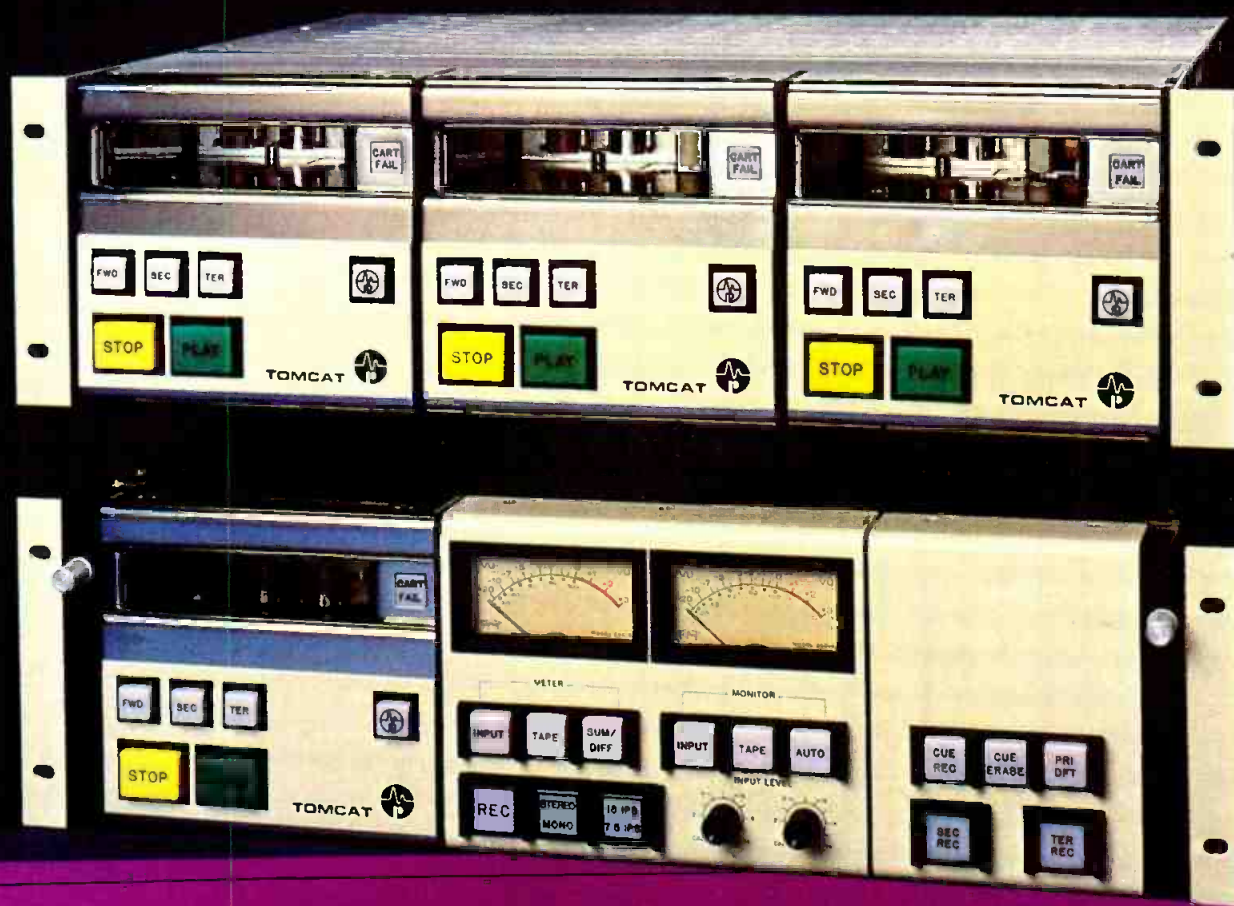
Editor's note: Intelsat has always referred to the geographical location of satellites in terms of East to avoid the ambiguity of saying east when west is intended, or vice versa. The practice dates from the days of the International Communications Satellite Committee, in the mid-1960's, before the definitive agreements creating Intelsat were signed.

Credit where due

EDITOR: BROADCASTING's April 23 Special Report—an advance synopsis of NAB's convention—states that I "created" the multimedia opening show. In fact, we retained TM Communications Inc. of Dallas and conveyed to them our objectives and thoughts. It was their creative product that the industry witnessed yesterday.—*Shaun Sheehan, senior vice president, public affairs, National Association of Broadcasters, Washington.*

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TOP OF THE WEEK

Agreement to disagree on deregulation

Tauke and Tauzin walk away from negotiating table after concluding deal with Wirth is impossible; he, on other hand, accuses them of conduct verging on bad faith

The death knell for broadcasting deregulation legislation sounded last week. Talks among members of the House Telecommunications Subcommittee on legislation collapsed after Tom Tauke (R-Iowa) and Billy Tauzin (D-La.), NAB's two chief congressional allies, walked away from the table. The breakdown between members is being viewed by some as the end of a year-long effort to achieve a broadcasting deregulation bill in the House this session.

In a statement released late last week, Tauke and Tauzin said they had "terminated negotiations on a broadcast deregulation bill with Subcommittee Chairman Tim Wirth (D-Colo.) after concluding that an agreement with Wirth on a consensus bill is not possible this session of Congress."

Wirth, on the other hand, says he wants to continue negotiating. At a press briefing last Friday, members of Wirth's staff explained where the chairman stood. "Wirth wants to work this out," said David Aylward, the subcommittee's staff director and chief counsel. "We're prepared to do everything we can to get a bill. If there's going to be broadcast legislation, there's going to have to be a compromise," he said. Aylward maintained that "walking away from the table only insures there will be no bill."

Most of Aylward's criticism was leveled at the National Association of Broadcasters. It was the NAB, Aylward felt, that "impeded the process. He said it was clear that NAB put 'enormous pressure on the process and has been able to explode it.'"

He accused the association of "wanting it all," and said the association was like a young child with its hand in the cookie jar, who "wants all the cookies."

Furthermore, he maintained that NAB had become the "critical player in all this." Aylward said what had really happened was that "NAB decided they didn't want a bill."

"I am not surprised," said NAB President Eddie Fritts when he learned that the talks collapsed. Fritts was in Las Vegas when the Tauke and Tauzin statement went out. He denied the proposal was NAB's. The NAB bill, he said, is H.R. 2382, which has a clear majority of the House as co-sponsors. "We don't dictate to them what they do," Fritts said.

Tauke told BROADCASTING that he and



Tauke



Tauzin



Wirth

Tauzin concluded it was "impossible to reach a compromise" after they met with Wirth to offer him a revised version of his draft bill; they were unable to swallow parts of Wirth's proposed bill (BROADCASTING, March 12). They shuttled proposals between themselves addressing such issues as a strengthened petition to deny process and a sunset provision for proposed quantified TV programming standards.

Tauke said their proposal did not include Wirth's children's programming requirement (telecasters would be required to air at least one hour, five days a week, of children's programming). He also said it eliminated the FCC's ability to reregulate radio, another proposal backed by Wirth. Wirth, he explained, wanted to have the prehearing discovery for petitions to deny in the hands of the petitioners. "We have it in the hands of the commission," Tauke said. Wirth and others (including Representative Al Swift [D-Wash.]) back a provision that would authorize the FCC to dismiss frivolous petitions and fine or penalize any petitioner found guilty of harassment.

Tauke also noted they dropped a provision that would establish rules to insure that a significant preference be granted to minor-

ities in contests for broadcast licenses or construction permits. In addition they removed the section calling for codification of the FCC's existing personal attack and political editorializing rules.

In the area of equal employment opportunity standards, Tauke said, they suggested the standards apply to stations with 10 or more employees rather than five or more, as proposed by Representative Mickey Leland (D-Tex.).

"We did not have a commitment or support from the NAB, but we felt we could sell the package," Tauke said. He explained that he and Tauzin told Wirth to go ahead and move a bill acceptable to him through the subcommittee. If Wirth fails to move a bill, Tauke said, they will ask Energy and Commerce Committee Chairman John Dingell (D-Mich.) to bring a measure before the full committee.

The rift between Wirth and Tauke and Tauzin may have begun to widen before their meeting. In a memorandum dated last Wednesday (April 25) Wirth outlined his concerns about their proposal, and was critical of Tauke and Tauzin's latest move. "To be blunt, it has become very apparent to me that after months of discussions you now are attempting to substantially alter the underlying premise of all our negotiations while also going back on a series of specific understandings and agreements we had reached," Wirth wrote.

He accused them of taking a "giant step backward from the entire package after all these concessions were made," and said it "comes close to evidencing bad faith."

Wirth claimed their proposal "reneges on a whole series of compromises that had been made and understandings that had been reached." Furthermore, the subcommittee chairman questioned their motives. He said they seemed interested in reaching agreement on a package that NAB will buy. "I do not think it reflects well on the integrity of this process to enable a trade association to dictate whether we as members of Congress are able to develop and agree to a fair compromise. I strongly suggest that a little more statesmanship is in order," Wirth wrote.

At this point it is unclear if Tauke and Tauzin will convince Dingell to bring the matter up in full committee. Their chances appear slim unless they enlist Swift's support. Swift, an aide said, has not fully decided where he stands on the Tauke-Tauzin proposal. "It sounds like it might be acceptable, but there are a number of ambiguities," the aide said. □

NAB's goal: Making most of Reagan presidency

Fritts says association must take maximum advantage of four-year window to capture deregulatory results; failure to win legislation this year is credited as 'useful exercise'

The paramount mission of the National Association of Broadcasters in the first half of this decade has been and remains to take advantage of a "four-year window" of opportunity provided by the election of Ronald Reagan and his appointment of a deregulatory-minded FCC. It is a task NAB has undertaken with zeal. The increase in competition, in the form of new media and greater opportunities among existing media, that has accompanied the new freedom doesn't faze Eddie Fritts, the NAB's president.

On the eve of NAB's 62d convention, which began Sunday (April 29) in Las Vegas, Fritts sat down with BROADCASTING editors to discuss the state of the industry and the association. He expressed unyielding faith in broadcasting and its ability to adapt to a constantly changing environment.

"If one looks at the broadcast industry four years ago, with all the government regulations and the paper work, everyone recognized that with the new administration, there was a four-year window of opportunity to relieve broadcasters of much of the burdensome bureaucracy."

Since then, NAB has witnessed the fruits of those regulatory changes. But competition, says Fritts, "is a way of life" for broadcasters. "They've lived with it, recognized it and prospered under it for years," he said.

Moreover, said the NAB chief, there will be still further change which means broadcasters must work "harder and be more creative." However, he added, that is something "they have always done in the past."

Nonetheless, Fritts emphasized that the NAB must insure that the new regulations created for the new technologies do not put broadcasters at a competitive disadvantage. Unlike the broadcasting industry, the NAB chief stressed, there are no public interest responsibilities for low-power TV, DBS or for any of the other new technologies.

Despite the challenges posed by the new technologies, Fritts believes the future of broadcasting is on firm ground. The key to a strong industry, he says, lies within those challenges.

"Anybody can develop a national system, but what makes the difference is a national system that integrates a local system. Right now, none of the new technologies can do that. Whereas broadcasters are uniquely positioned to do just that," says Fritts.

Some industry officials have voiced concern about an overzealous FCC. While Fritts admitted that the NAB had some concerns about the commission's deregulatory push, overall it was pleased by the deregulatory trend. He explained that NAB fears that under the guise of deregulation some of the rules that have provided "sanity in the marketplace" are being deleted or will be de-

leted. "We have great concerns that the laws of physics do not change. Interference is still interference," he argued. "Acceptable interference is one thing and unacceptable interference is totally something else. We think the commission needs to take a go-slow approach in many areas. In the technical area especially, we would like to make sure that thorough studies are completed before the commission decides the direction that's needed."

Does Fritts, like FCC Chairman Mark Fowler, call himself a "foe" of the public trustee concept of commercial broadcasting? On the contrary, Fritts believes it is a concept that has served the industry well.

Broadcasters have lived under the public trustee concept and built the "greatest system of communication in the world under that concept," he added. "To propose to do away with that would conceptually change



Fritts

broadcasters' role as we view the future. It would take an awful lot of careful and thoughtful consideration as to what would replace it and how broadcasters' obligations would be imposed upon them in the future," he said. But it is an issue that draws fire from all sides, he admits.

Overall, he feels NAB is strong and healthy, and he insists that it is making fast progress toward becoming a far more effective trade association. "In the future this foundation will pay off handsomely," Fritts predicted.

In government relations, 1983 was a rocky year for the NAB. The broadcasters' attempts to achieve regulatory relief from the 98th Congress appear all but dead (see story, page 35). Congressional criticism accompanied much of the NAB's deregulatory campaign on Capitol Hill. The association's relationship with House Telecommunications Subcommittee Chairman Tim Wirth (D-

Colo.) has been deteriorating. Even one of NAB's staunchest Senate allies, Bob Packwood (R-Ore.), at last year's convention made a stinging attack on the broadcasters' abilities ("You can't lobby your way out of a paper bag in the House"). Moreover, the association's loss of three of its senior vice presidents and its chief lobbyist didn't help matters (BROADCASTING, Jan. 16).

Despite the setbacks (even Fritts describes 1983 as a "traumatic year" for the association) the NAB president feels the push for deregulation legislation in the House was not a wasted effort. Rather, he calls it a "useful exercise" and the "first test."

Moreover, Fritts noted that as an exercise "to have garnered 235 co-sponsors in the House of Representatives says that our lobbying effort is gaining strength." (Fritts was referring to the number of co-sponsors for H.R. 2382, introduced by Representatives Tom Tauke [R-Iowa] and Billy Tauzin [D-La.]—the industry's major deregulation bill.)

Furthermore, he added, "this is the first time this administration had tested our grassroots system. The response was overwhelmingly favorable, but it needs to be doubled."

Fritts explained that NAB launched the drive for deregulation legislation last year only after its congressional allies, Tauke and Tauzin, felt it was right to move on it. "We more or less followed their lead. And we think as we begin to build we'll find we can be far more effective in the future," Fritts said.

Fritts doesn't see much hope for legislation passing in this Congress. However, he maintained that what has been accomplished gives NAB a base from which to work. "It has given us a baseline to test our system to determine where our strengths and weaknesses are. We've done that and we've been able to isolate some weaknesses."

When this new Congress went into session, Fritts said, the consensus was that there would be little if any legislation. NAB was disappointed that a deregulation bill did not sail through, "but we are not discouraged," he said.

Moreover, he added, there is still an opportunity to look at other methods. (Sources on Capitol Hill say the NAB has already switched its legislative strategy and is pushing for a "radio-only" bill.)

Fritts acknowledges that NAB has been toying with the idea and is discussing the possibilities with the National Radio Broadcasters Association. "A number of months ago we attempted informally to move a radio-only bill there was no sentiment in Congress to move one. There now is a possibility and we are having ongoing discussions with NRBA to move a radio-only bill." (There is a chance that NAB's convention will serve as a backdrop for an announced drive to pass such a radio-only bill.)

It seems unclear, however, whether the broadcasters will start their initiative in the Senate or House. There are a number of scenarios that might develop. NAB might ap-

proach Tauke and Tauzin, asking them to lead the charge, or the association may turn to Packwood.

In the meantime, NAB is pinning its hopes on the FCC. "Our mission," Fritts says, "is to position the industry to take advantage of the best available options. We feel that we've done that. We found out what was doable in the Congress and pretty much what was not doable. As we look now at the FCC, it is apparent they will likely be moving on television deregulation. The deregulation portion of H.R. 2382 was not a major reshaping or restructuring of the industry. It clearly just released broadcasters from onerous paperwork."

NAB, he says, did not go in with an omni-

bus bill, but with a narrowly defined bill. "We ended up in discussions in a number of arenas that go far beyond the intentions of H.R. 2382. I think we've been willing to sit down and negotiate, but there was not a lot in the bill for us to negotiate with. There was not a lot of financial gain or reward for broadcasters in this particular piece of legislation."

Fritts reiterated that the experience had been a "good test and a very useful exercise."

Fritts resists suggestions that the broadcasting industry has lost rather than gained ground in its relationships with the Congress. "We don't feel that we've lost ground. On the contrary, we feel like we've gained

ground and a considerable amount of it." Despite the strained relationship with Wirth, Fritts maintains NAB has grown much closer to Energy and Commerce Committee Chairman John Dingell (D-Mich.) and to a substantially large number of other congressmen.

"While Tim Wirth was able to effectively block an initiative for broadcasting in this Congress, this doesn't mean we're not gaining ground. We're gaining a lot of ground as evidenced by securing 235 co-sponsors; it shows that broadcasters across the country are launching a massive grass-roots effort at the entire Congress. And we think that even though the bill did not emerge from this Congress, this is not the last Congress." □

Hear all about it

Ask Tom Keller what the hottest topic in television technology will be at this week's National Association of Broadcasters convention and he'll answer without hesitation: "Multichannel television sound. . . . A lot of broadcast engineers will be trying to find out what they have to do to put MTS on the air."

The FCC gave television stations the green light to broadcast MTS or, more specific, stereophonic sound and/or a discrete audio service such as a foreign-language soundtrack. At the same time, the FCC effectively established an MTS national standard by protecting the industry-recommended Zenith/dbx MTS transmission and noise-reduction system from interference, and thus helped insure a quick rollout of the service.

As the NAB's technical expert and as chairman of the industry group that recommended the Zenith/dbx system, Keller has been fielding plenty of questions over the past few months about MTS and how it should be implemented. He hopes that many of the questions will be answered fully on the exhibit floor and in the panel sessions of the convention. Among the most eager to learn are several broadcasters who are determined to be the first with stereo or a foreign-language service in their markets.

Two technical sessions will address problems in implementing MTS in general and the Zenith/dbx system in particular. Among the sessions' topics: studio and transmitter conversion for MTS, monitoring MTS signals, stereo production and transmission impairments to the MTS signal.

One reason engineers will be following the discussions closely and questioning broadcast equipment salesmen carefully is the potentially high cost of offering the new service. Although most broadcasters will not jump into stereo production, Keller said, most will want to broadcast in stereo the network and syndicated programming that arrives at the station in stereo. The cost will vary depending on the vintage and type of the station's equipment, he said. "Extremely modern" stations may be able to begin regular stereo broadcasts for less than \$10,000, he said, but stations where the MTS signals are incompatible with the present routing switchers, studio-to-transmitter links or transmitter may have to spend hundreds of thousands of dollars to get into the act.

During the convention, it's hoped that the broadcast networks will make known their plans for stereo or other audio services. So far, said Keller, "the networks haven't been saying much."

Kastenmeier's copyright gift to the cable industry

Draft bill would effectively cancel Copyright Royalty Tribunal's 1982 rate hikes for distant signals and would legalize home taping; motion picture and broadcasting industries expected to offer opposition

A House Copyright Subcommittee began debate last week on a draft of an omnibus copyright bill, which is expected to ignite further lobbying battles among Hollywood producers, cable operators, broadcasters, video retailers and the consumer electronics industry. The draft was offered by the subcommittee's chairman, Wisconsin Democrat Robert Kastenmeier, and addresses a plethora of issues including cable copyright, home taping, audio and video "first sale" and reform legislation affecting the Copyright Royalty Tribunal.

Kastenmeier said two weeks ago, during a hearing on the video "first sale" doctrine, that he was considering an omnibus bill (BROADCASTING, April 16). It incorporates a number of provisions from pending legislation: H.R. 1027 and H.R. 1029 which modify the "first sale" doctrine; H.R. 175

which would exempt home taping from copyright liability, and H.R. 2902 and H.R. 3419 which would permit cable systems to import additional distant broadcast signals without having to pay significantly higher compulsory license fees for them.

The draft was quickly prepared during the Easter recess, and subcommittee members combed through it during a meeting two days after they returned. The bill was ex-

pected to be officially introduced late last week and a markup is tentatively scheduled on Thursday.

About 10 of the subcommittee's 14 members were huddled around a table discussing the draft, in a room filled with lobbyists straining to hear. Even after the two-hour session closed it was unclear where some members stood.

Many members were skeptical about taking an omnibus approach and combining so many pieces of controversial legislation which they feared would ultimately harm the bill's chances of passage.

Chairman Kastenmeier feels it is the best way to go. It is a "balanced" approach, he argued. Kastenmeier wants the legislation to serve as the framework for a compromise among the competing interests.

The draft, like H.R. 1027 and H.R. 1029, introduced by Representatives Don Edwards (D-Calif.) and Carlos Moorhead (R-Calif.), would modify the "first sale" doctrine of copyright law to give Hollywood and the record industry control over the subsequent sale or rentals of recorded audio and visual works. (The control would not extend to



Kastenmeier

nonprofit rental or lending by a nonprofit library or educational institution.) The present doctrine holds that copyright owners are not entitled to royalties from the re-sale or rental of their works after the first sale is completed.

Representative Barney Frank (D-Mass.) thought the draft's cable provisions should be pulled out. He later withdrew that suggestion after Representative Mike Synar (D-Okla.), author of H.R. 2902, protested. Synar said he favored the omnibus approach, but he wanted a commitment that if the package failed, his cable bill would go forward. Kastenmeier failed to recognize the request.

Like H.R. 2902, Kastenmeier's measure would exempt cable operators from paying higher compulsory licensing fees for carriage of additional distant broadcast signals.

The draft would essentially nullify a 1982 Copyright Royalty Tribunal decision that cable systems must pay 3.75% of their gross revenues each six months for each distant signal they added after the FCC dropped its restrictions on importing signals.

It provides that "the first three distant independent television broadcast signals carried by any cable system which does not carry any local independent television broadcast signals can be retransmitted at the old rates; or the first two distant independent television broadcast signals carried by any cable system which carries any local independent television broadcast signals may be retransmitted at the old rates."

The Kastenmeier proposal also includes suggestions offered by the cable industry during previous hearings on the subject. Cable wants standards imposed on the CRT for setting copyright royalty rates for distant sig-

nals.

The draft would require the tribunal "to consider among other factors, the declining marginal value of additional distant television broadcast signals, the extent to which television broadcast stations compensate copyright owners for the secondary transmission of their signals by cable systems located outside their respective local services areas, and the impact of the rates on cable subscribers both as to the availability and cost of receiving copyrighted materials."

Kastenmeier also incorporated another cable industry proposal concerning the authority of the Register of Copyrights to "prescribe by regulation royalty fees for cable systems which provide tiers."

According to the National Cable Television Association: "Cable systems would be permitted to compute amounts owed for distant signals by assigning fractional values to fractional distant signal equivalents, allocating revenues attributable to distant signals in the case of a system which provides programming to subscribers both inside and outside the local service area, and allocating revenues attributable to those who receive distant signals in the case of distant signals offered on a tier other than basic."

In addition, the draft contains a provision mandating that judicial review of CRT decisions should not be affected by the "placement of the tribunal in the legislative branch."

Kastenmeier's measure, like H.R. 3419, introduced by Representative Sam Hall (D-Tex.), calls for reducing the size of the CRT from five commissioners to three and authorizes the tribunal to hire a general counsel and a chief economist.

The draft would permit many independent stations, now considered distant signals, to be picked up by cable systems without incurring copyright liability. (That proposal has been characterized as a "may-carry rule," which would permit a cable system to carry without copyright liability all broadcast signals within the Arbitron Area of Dominant Influence in which the cable system is located. It was a plan that was espoused during an earlier subcommittee hearing by the Association of Independent Television Stations [INTV].)

A spokesman for the Motion Picture Association of America, who had only begun to analyze the bill, said it was doubtful the association could support a bill that permits home taping and erodes the CRT rate hike decision of 1982.

Further opposition is expected to come from broadcasters. John Summers, National Association of Broadcasters executive vice president, said the NAB stood opposed to any erosion of 3.75% rate hike. "We believe the adjustment is fair and reflects the marketplace," Summers said.

The cable industry, on the other hand, was happy. "We're clearly pleased," said Steve Effros, executive director, Community Antenna Television Association.

NCTA's Executive Vice President James Mooney was equally pleased. He said cable "would not be bought off by putting a Band-Aid on what the CRT did last year. We are more interested in what the CRT will do next year."

Representatives of video retailers and members of the Home Recording Rights Coalition are opposed to repeal of the "first sale" doctrine and are not likely to find the measure palatable. □

Trible offers must-carry legislation

Virginia senator introduces legislation codifying FCC's rules; measure strongly supported by NAB

Legislation that would preserve the FCC's must-carry rules was introduced last week by Senator Paul Trible (R-Va.). Trible, a junior member of the Senate Commerce Committee, co-sponsored the measure with committee member Slade Gorton (R-Wash.). Introduction of the bill sets the scene for a massive Senate lobbying campaign by the National Association of Broadcasters.

The measure (S. 2539) would codify the FCC's rules requiring cable systems within a 35-mile radius or within the station's predicted grade B contour, to carry the signals of local television stations upon the stations' request. The rules also require cable operators to carry distant broadcast station signals that are defined as "significantly viewed."

Trible's initiative was heartily endorsed by the NAB. "We applaud Senator Trible's foresight and look forward to working with him," said NAB President Eddie Fritts. Fritts said the legislation was a "starting point" for the NAB. He pledged that NAB would support the bill vigorously. And, he hinted, that

the measure might lead to "a number of offshoots."

The legislation is bound to generate debate this week as the NAB's membership gathers in Las Vegas for its annual convention (April 29-May 2). The convention agenda includes a congressional panel, featuring Trible, among others, devoted to the must-carry topic.

Fritts also praised members of the Virginia Association of Broadcasters and NAB's Must-Carry Task Force for playing a major role in gaining Trible's support.

Trible stated his concerns about preserving the localism principle when he introduced his bill. "If the continued attacks on the 'local carriage' provisions ever prove successful, the results would be detrimental to many of our citizens," Trible said. "Many local television stations outside of the major metropolitan markets would be eliminated by cable systems. As a consequence, the ability of cable subscribers to receive local news, sports, weather, and other programming of unique local interest, would be curtailed," he said.

The measure has been referred to the Commerce Committee where, a Trible aide said, the senator is confident there is support for

the measure.

It seems unlikely, however, that Commerce Committee Chairman Bob Packwood (R-Ore.) shares Trible's sentiment. The NAB has lobbied the committee for support for such legislation before, but to no avail. Although the must-carry issue was briefly addressed in the committee report on the Senate cable deregulation bill (S. 66), Packwood and other members were reluctant to take action on the matter. The rules have been under attack by the cable industry and more specifically by superstation owner Ted Turner. He filed a petition with the FCC asking it to eliminate the rules. The FCC, however, denied the request last month.

Some Capitol Hill sources believe NAB's sudden push for a must-carry bill is a only a means to obtain leverage over the cable industry, now negotiating for a comprehensive cable copyright package in the House (see story, page 37).

Protection of the must-carry rules has been a long-term NAB goal. In 1981 the cable and broadcasting industries, among others, reached a compromise on cable copyright legislation which incorporated codification of the rules. The bill passed the House, but never made it out of the Senate.



Rubenstein



O'Brien



Wallace

Amway takes axe to MBS's top team

**Rubenstein, O'Brien, Wallace
deposed in intracompany coup;
Clements named general manager**

The mystery deepened at the Mutual Broadcasting System last week with the sudden departures of Martin Rubenstein, the president and chief executive officer, and two of his principal aides: Tom O'Brien, vice president of news, and Jerry Wallace, senior vice president of corporate services (including finance). Amway Corp., Mutual's owner, gave no explanation for the separations, other than a general statement that they would "streamline" Mutual's operations.

For months, it has been reported that Amway—suffering severe economic problems of its own—was entertaining offers to buy the network. Among the known bidders were Tom Burchill, then representing the RKO Radio Network; Westwood One, and, most recently, a group headed by former Central Intelligence Agency figure Max Hugel and Texas oilman Nelson Bunker Hunt ("Closed Circuit," April 16). Amway's policy has been neither to confirm nor deny negotiations, and generally to deny that the company is up for sale.

(In addition to the network, Amway also owns WHN[AM] New York and is in the process of selling WCFL[AM] Chicago, pending FCC approval.)

Sources close to the situation said the three executives were likely forced out as part of a fiscal evaluation to help meet new financial goals set for Mutual by Amway. Just two months ago Mutual laid off 24 employees, and Amway itself dropped some 100 executives from its rolls. Still other reports had it that Amway was seeking to lighten ship to make Mutual more attractive to a potential buyer.

Jack Clements, Mutual's senior vice president, who has been with the company for 11 years, was named to the newly created post of executive vice president and general manager. He has served in a number of broadcast positions at stations in the South, then was news and program director of WCAU(AM) Philadelphia before joining MBS as vice president for programs in 1973. He became vice president for sports in 1976 and then became senior vice president in 1982.

Clements will report to Bill Nicholson,

who has been Amway's coordinator of planning and policy since last November, and who has overseen Mutual for the parent company. Nicholson—a long-time friend of Amway co-founders Richard DeVos and Jay Van Andel—reportedly recommended and carried out the decisions to sever Rubenstein, O'Brien and Wallace.

Rubenstein first joined Mutual as executive vice president after a long career with ABC, culminating as vice president and general manager of ABC News. He was named president of Mutual in 1978. Among the accomplishments for which he is most known was development of the first nationwide interconnected satellite network system—a system that Amway noted last week it planned to expand.

O'Brien and Wallace both joined Mutual in 1979. O'Brien formerly was vice president of radio news for ABC while Wallace was assistant director of finance for Satellite Business Systems. In a statement to the Associated Press, O'Brien was quoted as saying "I concluded I could not continue to run the Mutual news department because [Amway] wouldn't give me the money I needed. They expected me to cover the political conventions this summer with mirrors. It just became obvious that the Amway Corp. would not permit us to seriously cover the news." □

FCC eases way for expanded subcarrier uses; profits for ITFS

**Commission pre-empts states from
blocking FM licensees from offering
common carrier services; it also
allows ITFS licensees to lease time**

Giving FM broadcasters who want to use their subcarrier channels to offer common carrier services a break, the FCC last week pre-empted the states from erecting regulatory barriers to such offerings.

In other action, the FCC opened the door

wide for instructional television fixed service licensees to turn profits from their facilities.

The commission described its pre-emption action as a "narrow" one, which it said proved necessary because some states appeared bent upon prohibiting FM broadcasters from launching common carrier offerings on their subchannels. The National Association of Broadcasters and others had requested preemption for FM subcarrier paging operations. One petitioner had alleged that 15 states, through various regulatory barriers, were making common carrier entry impossible, or the next thing to it.

According to Jim McKinney, FCC Mass Media Bureau chief, the commission's pre-emption order will leave the states with the authority to otherwise regulate FM common carrier offerings. For example, under the game plan, FM operators won't have to get state common carrier certifications—a process that can be used to block entry—but the states will still be free to require FM operators to provide notice of their services, and then subject those services to rate or other post-entry regulation.

Commissioner Henry Rivera dissented in part from the decision, questioning whether the FCC had the legal authority to pre-empt state regulation of "strictly local" common carrier services.

In a move that could make established radio common carriers (RCC's) think twice about seeking judicial review of an order that admittedly could lead to the entry of plenty of competition, the FCC also amended its rules to permit the RCC's to lease FM channels within their own markets without first having to demonstrate that they have adequately utilized the frequencies they already have. "The economics of leasing agreements and overall marketplace forces [will] thwart the practice of warehousing spectrum," the FCC said in a news release.

The FCC's ITFS action would appear to be good news for ITFS licensees and commercial operators who want to use ITFS frequencies for multichannel video services. Under the commission's action, ITFS licensees remain the landlords of their microwave frequencies. To qualify to lease those out, licensees will have to provide ITFS services for modest portions of some days. But the rest of their air time can be leased to commercial operators, or retained under ITFS operator control and devoted to whatever commercial or noncommercial venture the ITFS licensee desires.

The FCC action is intended to "clarify" what the commission meant in its original order authorizing multichannel multipoint distribution service by the "significant portion of the main channel capacity" that ITFS licensees were supposed to be devoting to educational purposes before they could lease their "excess capacity" to commercial operators. The FCC is now saying that "significant portion" means that each channel leased, or put to other non-ITFS use, has to be devoted to ITFS purposes for at least 15 hours a week between 8 a.m. and 10 p.m., Monday through Friday, but only during the school year (excluding holidays and vacation periods). □

CBS wins two of three taping decisions in Westmoreland libel case

It gets aproval to tape depositions of Rusk and Rostow; loses in bid to record Helms testimony

In three separate court decisions involving CBS's right to videotape the depositions of witnesses testifying on behalf of General William Westmoreland in his celebrated libel suit against the network, CBS prevailed twice and lost once—in the case concerning the deposition of former ambassador and CIA chief Richard Helms. Indications are that the network will seek some kind of reconsideration in the decision it lost, handed down by a federal judge in Washington.

CBS won the right to videotape the depositions of the former Secretary of State Dean Rusk and former national security adviser Walter Rostow in connection with the \$120-million libel suit filed by Westmoreland last year in response to a January 1982 CBS documentary, *The Uncounted Enemy: A Vietnam Deception*. The Rusk decision was handed down by the U.S. District Court in Athens, Ga., on April 16, and the Helms decision followed on April 20 in Washington district court. Federal Judge Pierre Leval, who is hearing the main case in New York district court ruled in CBS's favor concern-

ing the Rostow deposition last Monday (April 23).

And in another development concerning the Westmoreland case, CBS and the Macmillan Publishing Co. are involved in a war of words over a recently published Macmillan book on the case by Don Kowet, the co-author of an article on the documentary that appeared in *TV Guide*. CBS says the Kowet book is as distorted as the original *TV Guide* article (co-authored by Sally Bedell Smith, now with the *New York Times*), and Macmillan has responded that CBS has orchestrated an effort to "chill" distribution and critical acceptance of the book.

In the Rusk deposition case, the former secretary of state argued that his testimony would undoubtedly touch on areas "highly sensitive and confidential in nature" and expressed concern that a videotaped version might be used for purposes "other than the preparation and trial of this action," such as a future CBS documentary or film. CBS wants to videotape all the depositions it takes because the New York court where the main trial will be held (assuming CBS's motion for summary dismissal is denied) does not have the power to subpoena witnesses residing outside its jurisdiction. Thus, if a deposed witness decides not to testify at the trial, CBS wants the jury to be able to assess the appearance of such a witness under deposition.

Ruling in the Rusk case, Athens district court Judge Wilbur D. Owens, said that Rusk's concern about extra-judicial use of a taped deposition by itself was insufficient to bar taping. Ruling that Rusk's deposition could be taped, Owens did, however, impose measures to insure that any tape made would only be used for purposes connected with the trial. □

fer two-way Qube service "until such time as demand warrants, substantive programing is developed that fully utilizes technology available and implementation does not place a burden upon nonsubscribers to Qube." The report added, however, if WA is operating "significant" Qube service in other metro systems after Milwaukee has been operating for five years, that system should receive Qube as well.

The report called upon WA to build at the outset an institutional network that the company had proposed deferring, to be activated upon vote of the common council and funded from the city's franchise fee.

The report said WA should be able to charge a break-even fee of \$2.95 for the first level of service and \$11.95 for level two. It said that the tier-one rate should be frozen throughout construction and initial marketing, but the company would be allowed to pass on certain programing costs. Tier two would not be regulated, Rutter said. It also said WA should commit \$10 million over the life of the franchise to public access programing.

WA generally applauded the Rutter report, contending that it supported the company's basic plan, but objected to several recommendations. It said the guarantee of \$10 million for public access over the life of the franchise was not appropriate. Rather, said WA, access funding should be counted against its outstanding obligations.

WA executives downplayed the report's concerns as relatively minor and indicated that the company and the city were close to a compromise. City officials were not quite so sanguine, indicating that WA was pressing its luck by taking exception to some of the Rutter proposals. There is still resentment among city officials over WA's handling of the whole affair—the perception being that Drew Lewis and company essentially are trying to ram the cutbacks down the city's throat, and as loudly and publicly as possible.

Richard Berman, WA senior vice president and general counsel, said that was certainly not the company's intention. "Drew felt it was better to lay it out there," he said. And "by no means," he added, is WA's proposal a take it or leave it proposition. He was optimistic last week that the two sides could come to terms.

Meanwhile, city cable administrator Rober J. Welch is digesting the Rutter report and WA's reaction with it. He will come up with a final recommendation and a "finding of fact" as to whether, after weighing the evidence, WA adequately made a case that unforeseen circumstances justify the proposed service cutbacks.

The city's common council will probably make its final decision in June. Meanwhile, Welch has prepared a series of resolutions for the council to take up once it has made its decision, including one authorizing the city to renegotiate the franchise with WA. Another spells out a procedure for issuing a new request for proposal. Welch's office has also compiled, at the council's request, the available case studies concerning cable system cooperatives and municipally owned cable systems. □

Milwaukee cable report supports many of Warner's proposals

Study agrees that economic situation justifies some changes in company's franchise proposal; city administrator will now make recommendation and city council decision is expected in June

A report assessing Warner Amex Cable's proposed system design and service cutbacks for the city of Milwaukee has concluded that unforeseen circumstances in the cable industry since 1981, when the WA bid was first prepared, made the proposed system economically unsound, thus supporting WA's main contention. The report also urged that much of the relief sought by the cable MSO should be granted, including allowing WA to string a single residential cable instead of a dual cable (at least to start with), increase rates and reduce its access offerings.

However, the report, written by city cable consultant Edward Rutter, didn't endorse all of the Warner proposals. "We believe their proposal does not fully address the cable television service requirements of the com-

munity," Rutter said. "We think some further consideration should be given to access, institutional networks and service tiering," he added.

The report left open the question of a possible merger of WA's metro operation with 12 surrounding suburban systems owned by Viacom. It asked for more information concerning the proposal and expressed concern over merging with the smaller systems—all equipped with dual residential cable, which WA claims can't be economically justified. However, Rutter said he would support the merger if the Milwaukee system were economically viable on a stand-alone basis and if the venture didn't have a "negative impact" on the Milwaukee system.

Rutter urged the city to allow WA to build a single, 450 mhz, 56-channel capacity system, with expansion required in the future if certain channel utilization and penetration levels are met. Expansion could be accomplished by either upgrading the existing plant to 550 mhz or adding a second cable to the system.

Rutter also endorsed WA's proposal to de-

MIP programmers bask in Cannes sun

Paramount and Telepictures among firms reporting successful sales in foreign marketplace; home video market boon in some countries

The sun shone in Cannes last week, and it didn't take the sunbathers along the Plage de la Croisette to signal that springtime had indeed arrived. A more certain measure was the thousands of television program executives at this Riviera resort for the 20th Marche International des Programmes de Television (MIP-TV). Over 5,500 registrants passed through Cannes Palais des Festivals to sample scenes from among 22,000 television programs up for sale.

How many of those attending actually purchased programs at MIP remains to be seen. Halfway through the market last week, more than one seller remarked that traffic in the Palais was unusually light. But most blamed that on a coincidence of three factors. The first was the timing of the market, which began immediately following the long Easter holiday and was cited as the reason for the sparse attendance on the market's first day. The second was a slowdown among Air France employees, which delayed people traveling from Paris to Nice. The third—half jokingly—was said to have been the weather, which was described as unseasonably warm and sunny and thus a slight deterrent from immediate sojourn to the exhibit floor to conduct business.

But once MIP-TV got under way, the complaints quickly subsided. Distributors from around the world swelled the Palais. Although U.S. suppliers were a conspicuous minority, much of their product was in demand, and at least two American companies—Paramount and Telepictures—commandeered center stage.

For Paramount, its good fortune lay in *The Jesse Owens Story*, which was committed by 32 foreign markets in the first two days of selling. Bruce Gordon, president of Paramount Television's international distribution division, predicted that it would be sold to 50 markets by the end of the show. The mini-series will be dubbed into 15 languages, Gordon said, with each hour of dubbing requiring about 10 days. Gordon added the "headache" will be to have *The Jesse Owens Story* delivered to the foreign markets in time for this summer's Olympic games in Los Angeles, as promised. "After the Olympics," Gordon acknowledged, "it wouldn't have much pull."

Gordon also said that *Return to Eden*, for which Paramount holds foreign distribution rights, had been picked up in 22 markets as of last Wednesday.

The second American company making its presence felt on the international scene was Telepictures. Michael J. Solomon, Telepictures' chairman, announced at MIP-TV that both the BBC and the Italian Canale 5 network had bought the 12-hour mini-series, *Anodomini*, which cost \$34 million and required 20,000 extras to produce. *A.D.* will be broadcast in the U.S. on NBC-TV during the 1985 February sweeps, but Solomon,

without being too specific, characterized *A.D.*'s sale to Canale 5 as "a record" purchase by that network. Solomon said that had *A.D.* not been produced in Tunisia, it would have cost about a third more.

After Telepictures previewed portions of *A.D.* at an evening reception in Cannes, "we had potential buyers literally lined up the next morning," Solomon related. Asked later what other countries might be expected to buy *A.D.* by the close of MIP-TV, Solomon replied: "The reason a deal may not be closed here is that I'm asking for such a high license fee that some thinking has to be done" on the part of the buyer. Contemplative buyers notwithstanding, Solomon said Telepictures was presently in discussion with 40 countries regarding rights for *A.D.*

Telepictures also used MIP-TV to announce the creation of a new company called TeleLex-VIP Media Scandinavia, which will supply 545 hours of TeleLex programs for cable television systems in Sweden, Finland, Norway and Denmark, beginning Jan. 1, 1985. TVMS is a joint venture comprising TeleLex, a company formed last year by Telepictures and Lexington Broadcast Services to exploit opportunities in international barter programming, and VIP Scandinavia AS, a publicly traded Oslo, Norway-based media company.

The new three-way joint venture will supply daily three-hour blocks of programming for cable systems in Scandinavia in exchange for six minutes commercial time per hour. The six minutes of advertising will be sold to both American and European sponsors. Solomon said the programming will be a mixture of movies, documentaries, family and children's programming and will carry subtitles for each respective country in which the programming is carried. Solomon stressed there would be no adult programming of any kind.

At present, Telepictures executives said there only about 320,000 cable subscribers in Scandinavia, but the number is expected to grow to 2.6 million by 1986. Solomon

also indicated that discussions are also taking place to expand the venture to other European cable systems and other delivery vehicles—such as direct broadcast satellites.

Another deal involving an American company and a foreign counterpart was Worldvision's arrangement to distribute programming to two German television companies. Worldvision, which is owned by Taft Broadcasting, sold 100 hours of *Love Boat* to Axel Springer, a German publishing company, which in turn was planning to distribute *Love Boat* by satellite to cable television systems in Germany. The second Worldvision deal involved the sale of 365 hours of *General Hospital* to Beta Films, a German distribution company.

Worldvision officials said that its *General Hospital* deal marked the first time an American soap opera had been sold to a German television company. The Beta Films deal also included 100 hours of another soap opera—the title of which Worldvision executives were withholding, to be announced at a later date—and covers the first full season of *Highway to Heaven*, the new Michael Landon production committed by NBC for the 1984-85 season. Worldvision also concluded an arrangement to sell 100 half hours of various animated programs to Beta Films.

Bert Cohen, senior vice president for international sales at Worldvision, said Axel Springer is planning to deliver the programming via the Westbeam satellite ECS-1 to a cable television service provided free to German subscribers. "These deals represent the impact of the new media technologies that are rapidly emerging in Europe," Cohen said.

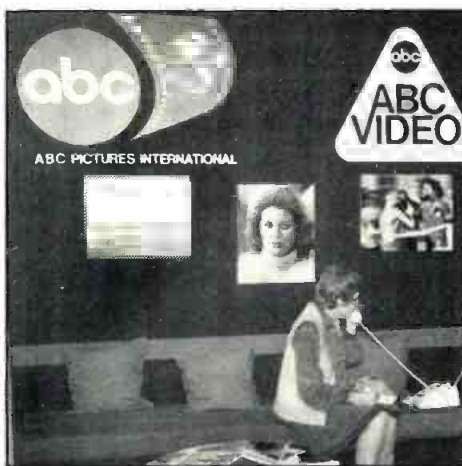
But individual deals aside, MIP-TV was an opportunity for programmers to exchange not only their wares but their ideas as well. Dick Coveny, president of Blair Entertainment, was attending his first MIP-TV. Blair Entertainment has been distributing new first run episodes of *Divorce Court*, which it acquired the right to do after buying Rhodes Productions—the original distributor of the



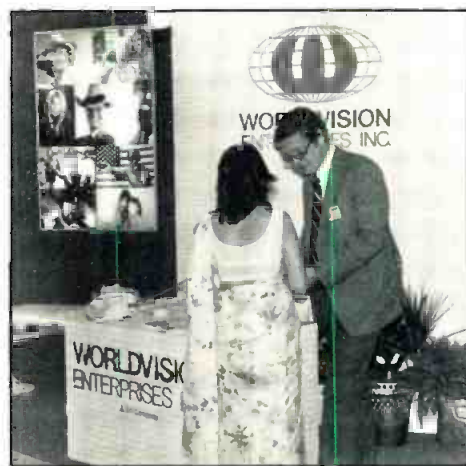
Looking for programming in the Palais



Paramount's Bruce Gordon



ABC Video's June Shelley



Worldvision

show—in 1983.

Coveny said that *Divorce Court* was one of the Blair shows he was trying to distribute internationally. One problem, he explained, was the limit some governments imposed on foreign-produced programs. "Britain will only allow 14% foreign programs," he lamented, and that will be eaten up by the *Dynastys* and *Dallases*. "One possible way around that problem, Coveny hopes, lies in licensing the concept of the show rather than selling the entire show. 'I don't think divorce differs around the world,' he said. 'The only difference is what the justice systems are like... Blair can sell other countries the stories, or the concept, but let them produce it, not us.'"

Like many other of the smaller U.S. distributors at MIP-TV, Coveny explained that Blair works through an agent for most of its foreign sales and divides up the world through various representatives. Blair's agent in Europe is London-based Anthony Morris Ltd.

One U.S. distributor who actually put the licensing concept to work is New York-based Fremantle International Inc. Paul Talbot, Fremantle president and owner, said he made an agreement with Mondadore, the Italian publisher which owns the network Rete Quarto, to produce a half-hour strip called *Vendetta Familiare*, better known to U.S. viewers as *Family Feud*. Talbot said the deal was worth over \$1 million and represented "the largest overseas contract ever made for a game show." Talbot said that Fremantle will send to Italy "game show producers and experts" to help develop the Italian version of *Family Feud*. He added that Goodson-Todman, the creator and producer of *Family Feud*, will also be sending to Italy three or four of its producers as consultants.

Often remarked upon at this year's MIP-TV were the number of buyers from home video markets who turned up in Cannes. Tom Parker, an independent distributor of theatricals to foreign broadcasters, observed that "if it weren't for home video buyers, the independents would be doing very badly here." Parker noted, "I guess I talked to a dozen" home video buyers. According to Parker—and supported by others—the dominant home video buyers at MIP-TV were from Spain, South Africa and the Scan-

dinavian countries. He said that in Spain, home video rights for programs are selling at two or three times the price that broadcasters are paying for the same programs.

Paul Rich, vice president for worldwide sales at Metromedia Producers Corp., made a similar observation. He said there was a "censorship problem" in getting *Dynasty* on the air in Spain. Instead, he explained, MPC "turned around to the home video distributors and got at least as much money." The same thing happened in Norway, he reported, where *Dynasty* had been on the network for two years. "The home video distributors came along and outbid the network for the fourth and fifth year of *Dynasty*... in the course of it, we got eight times the license fee per episode over that two-year period. If that trend were to continue—and indications are that it will—then broadcasters are going to be competing against the home video market" all over Europe.

Rich also cites South Africa as one of the fastest growing home video markets, principally attributable to an undeveloped broadcasting system.

Although entertainment programming was the staple at MIP-TV, several news services were also present. U.K.-based UPITN and Biznews had exhibit booths as did CBS Broadcast International, the last which was

offering, among other selections, 60 Minutes and old Edward R. Murrow *See It Now* episodes (all eight years' worth).

Gregg Risch, Washington bureau chief for Group W's The Newsfeed Network and the former White House correspondent for Group W stations, found interest at MIP-TV in launching an international version of the service. Furthermore, Risch said that Group W could be ready to have the new international Newsfeed operating by the fall. At present, Risch reported, Newsfeed is supplying 60 stations in the U.S. with two feeds per day, and in addition, has deals with Rupert Murdoch, Australian 10 Network and Global Television of Canada. For technical reasons, Risch said Newsfeed would begin servicing Mexico, followed by Latin America and South America before attempting to jump the feed over to Europe. "We're moving slowly on this," he noted modestly, "but we've managed to build this thing from Group W's five stations to 80 stations in a little over two years."

If it was sometimes difficult for American sellers to sell their programs to overseas markets—and outside the 10 or so major U.S. firms that had big hits, it often was—then it frequently was even more difficult for a foreign producer to get its shows picked up by U.S. buyers. Jean Luc Stercks, whose Brussels-based Citespa S.A. company was trying to sell a 13-part documentary series titled *Abraham's Posterity*, criticized the U.S. for having "closed and protective markets." His documentary traces Abraham's pilgrimage through the Middle East. Commercial buyers balk at documentaries, Stercks said, in obvious frustration, "Everybody directed us to public television."

On the other hand, there appears to be a market for noncommercial programming produced in the U.S. and sold abroad. Bruce Paisner, president of Hearst's King Features Entertainment, said that in the three years his company has been handling the worldwide sales of noncommercial WGBH-TV Boston's programming, it has increased sales from six countries to 70 countries. And the revenue from the worldwide sale of WGBH-TV programming—mostly *Nova*, *Evening at Pops* and *Enterprise*—is "in the seven figures and much of that has been plowed back to WGBH-TV." □



Metromedia's Paul Rich

VOLUME 24

Warner Bros. Television Distribution
A Warner Communications Company



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is Boston's first commercial television station to establish a complete, comprehensive news at 10pm. A newscast with local, national and international news, live, on-location reporting, sports and weather... all at a new more convenient time.

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—on sports—
A veteran of the Boston sports scene for 18 years, Bill brings you the late scores first.

JACK HYNES

Jack is Boston's most experienced newsman, having reported on New England for more than 25 years.

JERRY BROWN

—with weather—
A native Bostonian... Jerry predicts you'll never have to wait up for the late forecast again.

JULIE EMRY

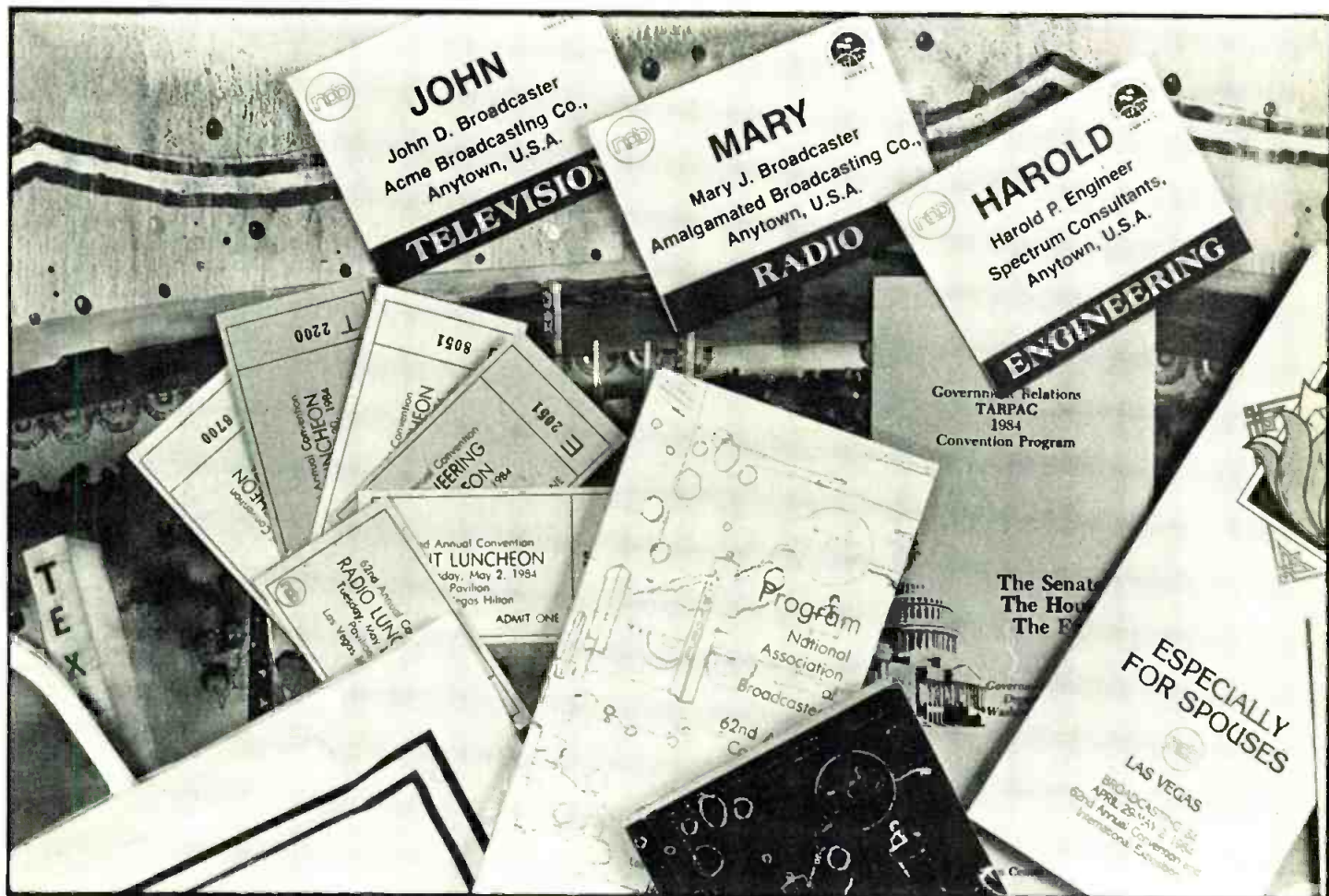
Julie brings a concern for people, along with award-winning reporting to the anchor desk.



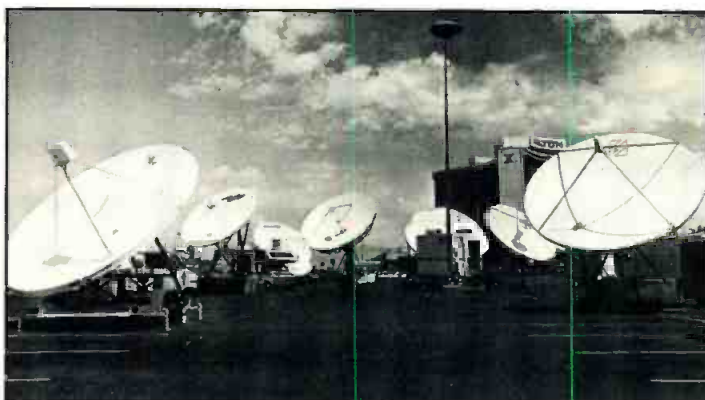
GANNETT
BROADCASTING GROUP

WLVI
TV 56

Special Report



The annual National Association of Broadcasters convention is a cornucopia of opportunities—opportunities to buy, to sell, to learn, to inform. This year's gathering in Las Vegas should prove to be no exception. ¶BROADCASTING's convention guide begins on page 46 with an examination of some of the new or innovative radio and TV products on the exhibit floor of the Convention Center and is followed by a listing of exhibitors, networks, brokers and reps on pages 48-102. ¶A look at some of the workshops and sessions appears on page 104, with the complete agenda on pages 106-112. A guide to hospitality suites is listed on pages 112-114. ¶And NAB's president, Eddie Fritts, reviews the state of the industry and of his association in "Top of the Week."



Convention Center jammed with the new and the improved

The acres of broadcast gear on display in Las Vegas include the latest in recording cameras, AM stereo, teletext, HDTV and digital videotape recorders

More than 650 companies were hard at work last week, creating within the expansive Las Vegas convention center a high-tech marketplace of radio and television equipment as part of the annual convention of the National Association of Broadcasters.

The marketplace, which was set to open its doors yesterday (April 29), is expected to draw thousands of broadcasters and other users of video and audio.

The annual exhibition is, in a word, comprehensive. Everything needed to equip the state-of-the-art radio or television station or video production studio is available and, in most cases, being demonstrated in the elaborate booths of the exhibiting companies.

As veteran convention-goers will readily testify, most of the hardware is continuously evolving, but little of it as rapidly as the ENG equipment. The big news in ENG this year is the promise of a standardized recording camera and the introduction of RCA's solid-state camera.

Smaller And Lighter Recording Cameras

Broadcasters want a recording camera—a small-format recorder and camera combined into one lightweight unit—for ENG, but most have balked at buying the available recording cameras with half-inch videocassette recorders because of the existence of two incompatible recording formats—the Masushita/RCA M-format and the Sony Beta format. The networks, desiring to freely interchange equipment and cassettes with other networks in the field, have been particularly reluctant to buy half-inch equipment.

The solution to the incompatible half-inch format may be a standardized quarter-inch format. After evaluating the incompatible quarter-inch recorders proposed by Hitachi and Bosch-Fernseh, a working group of the Society of Motion Picture and Television Engineers earlier this month tentatively adopted a modified Hitachi system as a SMPTE national standard.

"There is still a long row to hoe" before the standard is finalized, said Robert Thomas, ABC senior equipment planning engineer, broadcast operations and engineering,

and chairman of the SMPTE working group. But Bosch-Fernseh has indicated that it will go along with a Hitachi-based standard, he said, if Hitachi can prove in demonstrations this summer that its system, using oxide tape, meets certain subjective performance criteria. Chief among them, he said, is that the system's third-generation pictures be at least as good as the three-quarter-inch U-matic recorder's first-generation images. Hitachi originally designed the recorder to use scarce metal-particle tape, Thomas said, but, to satisfy the wishes of the SMPTE committee and potential users, it revamped the system so that it could also use the readily available oxide tape.

According to Susumu Hotta, general manager of Hitachi's broadcast and professional equipment division, the Hitachi time multiplex analog-component system was modified considerably over the past year to win the approval of the SMPTE group. Besides dropping the system's reliance on metal-particle tape, he said, the recording time on the cassettes, which are slightly larger than the audio cassettes, was increased from 12 to 20 minutes.

At its NAB booth, Hitachi plans to demonstrate a prototype of the modified recorder, which it calls the Quarter Recorder, along with a complementary three-tube camera that couples with it, the SR-3C. According to Hotta, the production recording camera will not be available until the recorder passes its last round of tests and until the SMPTE group finishes work on a mechanical and electrical interface that would permit different makes of cameras and quarter-inch recorders to be coupled to form a recording camera, he said. Once the interface standard is settled upon, he said, it will be incorporated into the Hitachi equipment. Hitachi is also refining the recorder's controls, he said.

The Hitachi quarter-inch recording camera, Hotta said, will be lighter, less power hungry and cheaper than the Sony's Betacam, the most popular half-inch recording camera. With lens and batteries, he said, it will weigh 18 pounds, draw 25 watts of power and retail for around \$25,000.

At least one broadcaster is ready to leapfrog half-inch and go right to quarter-inch. According to Michael Fisher, ABC-TV's director, equipment planning, broadcast operations and engineering, the quarter-inch is better than half-inch for ENG simply be-

cause it is smaller. The smaller recorder will be more rugged and easier to handle, he said. What's more, the cassettes can be easily carried and stored. "You can put three or four of them in a man's shirt pocket," he said. "That's a hell of an advantage.... If quarter-inch really takes hold, half-inch will be obsolete."

RCA showed a prototype camera that used charged coupled devices (CCD), light sensitive silicon chips, instead of tubes during last year's NAB in a hotel suite. It earned rave reviews from most of the engineers who saw it. After nearly a year of intensive development, RCA has turned the prototype into a product. The CCD-1, as it is called, will be on sale on the NAB floor this year with a price tag of \$37,500, excluding lens. The CCD chips eliminate or alleviate many of the problems inherent in tube technology. With the chips, there is no burn-in or comet tailing, and moving objects can be captured without smearing. The chips also boast an extraordinarily high signal-to-noise ratio. The chips fall short of the tubes in horizontal resolution, but RCA is promising further chip development to improve it.

One-Inch, MERPS, Teletext, AM Stereo, HDTV and Digital VTR's

The battle between Sony and Ampex for domination of the one-inch videotape recorder market will apparently not heat up this year. Neither is introducing new machines. Ampex will return with its top-of-the-line VPR-3, general purpose VPR-2B and low-cost VPR-80. Sony will again feature its BVH-2000 and BVH-2500. Trying to challenge Sony and Ampex for a significant share of the market is Hitachi, which will show for the first time at an NAB its fully computerized HR-230. Having dropped its TR-800 VTR, RCA will be marketing the Ampex VPR-3 as the TR-400.

Several companies will be pushing multi-event record/playback systems (MERPS) to replace the two-inch cart machines—RCA's TCR-100 and Ampex's ACR-25—that broadcasters have used for commercial playback for more than a decade. Panasonic will return with its MVP-100 MERPS, which can automatically feed M-format half-inch cassettes into multiple decks. Not to be outdone, Sony will introduce its Betacart system, which features four decks and room for

“We ask a lot of questions to help our viewers find answers.”

Before we get involved, we ask a lot of questions. Why? Because we want to make sure what we do really serves the communities we're in. Whether it's in New Jersey/New York, Los Angeles or Memphis, our tradition of community service always tries to answer the most pressing needs of our local audiences.

Over the past year, that commitment has taken many forms. For example, the entire RKO Television “family”—WOR•TV, KHJ•TV and WHBQ•TV—took part in a comprehensive locally produced broadcast project entitled, “The Changing Family.” The culmination of a year's work, it not only featured special documentar-

ies, but involved news, public affairs and programming. Each geared to a different aspect of today's changing family ...from kids, to adults, to the elderly.

In Los Angeles and New Jersey, KHJ•TV and WOR•TV both launched ambitious Job-A-Thons that turned stations into clearinghouses for real jobs. And in Memphis at WHBQ•TV, 11 tons of food was collected to help feed the area's poor and hungry.

Exploring the family in today's society. Giving the unemployed help and hope. Aiding the needy. Viewers turn to RKO Television stations for answers. There's no question about it.

RKO  TELEVISION
WHERE VIEWERS FIND ANSWERS

WOR•TV SECAUCUS NJ • KHJ•TV LOS ANGELES • WHBQ•TV MEMPHIS

40 Beta format half-inch cassettes. Whether any of the machines will be adequate to replace two-inch cart machines is uncertain; some broadcasters want better picture quality than the half-inch formats can offer.

Montage Computer Corp., of West Concord, Mass., seems to have taken a big step forward in videotape editing. As it announced earlier this month, it will be showing a sophisticated computer-based system that, as Montage software designer Michael Tindell puts it, is "an analog of the film editing process." The system uses images instead of time-code edit lists, he said. It holds up to 2,500 video clips on 14 video-cassette machines, he said, and digitized snapshots of the beginnings and ends of any seven of the clips are displayed on the system's 14 black-and-white monitors. Because of the system's random access capability, he said, the system can automatically preview an entire program by playing back the clips in the designated order. "You can really look at the whole show without having to record anything."

The exhibit will also contain some hardware that broadcasters can use to tap into what may be new revenue sources. Proponents of the North American Broadcast Teletext Standard (NABTS), which is being backed by NBC and CBS, and of the incompatible World System Teletext (WST) standard, which is being backed by Taft Broadcasting, will exhibit teletext origination equipment and urge broadcasters to initiate local teletext services.

AM stereo equipment will be more pervasive than ever on the floor, with more companies than ever offering AM stereo transmission equipment. There will be monitors and exciters built to each of the four AM stereo systems still vying to become the nation's de facto or marketplace standard. Since receiver manufacturers will have as much impact, if not more, on which system will ultimately be the standard, their handiwork—single- and multiple-system radios—will be demonstrated. The Motorola proponents plan to have two General Motors automobiles in the parking lot, for instance, equipped with Motorola-only radios built by GM's Delco Electronics division.

Those with deep pockets will be able to buy high-definition television equipment at this year's show. Sony has announced that its full line of HDTV equipment, built to the NHK standard (1,125 scanning lines, 60 hz field rate and a five-to-three aspect ratio), is now available, but that it isn't inexpensive. The camera and control unit sells for \$200,000; the VTR with time base corrector, for \$275,000; the projection television system, for \$95,000, and the monitors, for around \$14,000. A Sony spokesman said the gear was put on the market primarily for researchers and is being sold with the caveat that an HDTV standard has not been set and that the equipment may one day become obsolete. The spokesman said some orders have already been taken, but he would not say from whom. CBS's Dwight Morss confirmed that the network has already taken delivery of a Sony camera and 17-inch monitor as well as a Panasonic 120-inch HDTV projection television system. The CBS Tech-

nology Center is using the gear in the development of its two-channel 1,050 line HDTV transmission system, he said.

One of the convention's more significant technological developments will be nowhere the exhibit floor. In a suite in the Tropicana hotel, Sony plans to demonstrate two experimental digital studio VTR's—one with 19 mm (around three-quarter-inch) tape in cassettes and the other with 19 mm tape on open reels. Sony did not arbitrarily select the 19 mm tape size. Meeting in Rome earlier this month, the European Broadcasting Union adopted the 19 mm tape size as a key element of the digital VTR standard it is working on.

According to Fred Remley, chairman of the SMPTE working group on digital VTR standards, Sony has been pushing for 19 mm tape in the group's meetings, while RCA and Ampex have been pulling for one-inch tape. Although the group has yet to reach any conclusions, he said, it's generally assumed that the digital VTR's for all applications will use cassettes. Henry Klerx, Sony's senior vice president, product operations and marketing services, said the 19 mm cassettes that will be shown in the hotel suite will not be capable of recording a full hour, but that is the goal. □

Where the wares are

The following is a list of exhibitors for the NAB convention. The exhibit hall will be open from 9 a.m. to 6 p.m. on Sunday, Monday and Tuesday, April 29 through May 1, and 9 a.m. to 2 p.m. on Wednesday, May 2. Radio exhibits are located in the North and South halls, and the South concourse. TV exhibitors are located in the East hall and some in the South concourse. Public service and special exhibits are located in the East concourse. An asterisk denotes a new product.

Abekas Video Systems 1620A
319 Lincoln Center Dr., Foster City, Calif. 94404

Digital video systems for broadcast, post-production and cable.

ABP Systems 1607A
400 Roosevelt Ave., Freeport, N.Y. 11520

Video systems design, engineering and construction, mobile units.

Accu-Weather 1134C
619 W. College Ave., State College, Pa. 16801

Graphics, TV and radio forecasting/briefing services. **Staff:** Dr. Joel Myers, Dr. Joseph Sobel Jr., Evan Myers, Jeff Bertram, Barry Lee Myers, Maria Myers.

Accurate Sound 632
3515 Edison Way, Menlo Park, Calif. 94025

Acrodyne Industries 1228
516 Township Line Rd., Blue Bell, Pa. 19422

Modular upconverter*, 1 kw UHF LPTV transmitter*, main and alternate transposer system with automatic switchover and optional solar/wind power systems, plus low- and medium-power television broadcast equipment. **Staff:** Marshall Smith, Richard Broadhead, Ray Doreian.

Adams-Smith 1724
34 Tower St., Hudson, Mass. 01749

Modular controllers* for television audio synchronizing, editing and mix-down, demonstration of videotape editing using vertical interval time code. **Staff:** Harry Adams, George Jaramillo, Andy Simon, Steve Strassberg, Hal Williams.

ADC Magnetics 1320
4900 W. 78th St., Minneapolis 55435

Prewired jackfields, pro-audio connectors, plugs, audio components and accessories, coaxial jacks, plugs and panels. **Staff:** Sue Saltarelli, Lonnie Pastor, Jim Troutfetter, Bruce Bailey, Jack Brandmueller, Ken Masci, Pat Gallagher, V.J. Brennan, Danny Dean, Maria Coyne.

ADDA Corp. 1100
130 Knowles Dr., Los Gatos, Calif. 95030

ESP II digital still store system*, AC 21P (PAL version of AC 20)*, electronic still processors, library control system, dual channel video signal processor, video image processor, frame synchronizer/time base corrector. **Staff:** Bill Hendershot, Ron Fried, Janet Peterson, Frank Alioto, Walter Werdmuller, Don Carlsen, Butch Fadely, Dave Brack, Tom Califano, Emerson Ray, Sheila Ross, Jon Teschner, Bernie Munzelle, Tim Stockhaus, Frank Bush.

ADM Technology 1223
1626 E. Big Beaver Rd., Troy, Mich. 48064

Stereo television on-air and production audio consoles. **Staff:** Robert Bloom, John Juhasz, Murray Shields, Bill Keeley, Larry Mandziuk, Rick Fisher, Gordon Peters, Ron Webb.

Advanced Designs Corp. 146
924 W. 17th St., Suite 3, Bloomington, Ind. 47401

Advanced Music Systems 1330
Wallstreams Ln., Worthington, Burnley Lancs, UK

Digital audio processing systems.

ÄEG Telefunken (Bayly) 124
167 Hunt St., Ontario L1S1P6

FM transmitters, remote control, two-way radios, advertising display and data on all Telefunken transmitters LW, MW, HF, VHF, UHF, up to 500 kw. **Staff:** H. Schmidt, J. Graaff, I. Mark.

Agfa-Gevaert 1608
275 North St., Teterboro, N.J. 07608

Tapes, bulk duplicators, mastering tape*. **Staff:** Maria Curry, Dave Rubenstein, John Matarazzo, Ken Wiedeman, Ruth Hladyk, Andrew DaPuzzo, Bob McNabb, Joe Tibensky, Ed Walton, Barry Rosen, Barry Bindell, Mark Nevejas, Bob Zamoscianyk, Peter Jensen, John Riggs.

A.F. Associates 1611
100 Stonehurst Ct., Northvale, N.J. 07647

Turnkey video systems and mobile units, Marconi digital line array telecine, digital standards converter, VTR's. **Staff:** Arnold Ferolito, Lou Siracusano, Marty Irwin, Irv Pannaman, Dick Sirinsky, Tom Canavan, Richard Lunniss, Bill Ebell, Al Slater, Andre Macaluso, Bud Pearson, John Dale, Marc Bressack.

Alamar Electronics 187
478 W. Hamilton Ave., Suite 207, Campbell, Calif. 95008

Alden Electronics 1336
Washington St., Westborough, Mass. 01581

Talknet

THE PROBLEM SOLVER.

*"Talknet attracts new audience.
Listeners stay with us through other dayparts,
which helps improve our overall shares."*

Gary Eaves VP/GM

WDBO, Orlando, Florida

*"We sell out most of the local avails
and we have a tremendous amount of repeat business."*

Scott Meir GM

KSTP, Minneapolis, Minnesota

*"The great thing about Bruce's show is its
ability to draw advertisers who never really thought about
radio as an advertising medium."*

Diane Sutter GM

WTKN, Pittsburgh, Pennsylvania

*"Bruce and Sally lead the nighttime talk race
in Houston. Talknet dovetails perfectly with our local
programming... When a national radio show
sounds that good and does that well in the ratings,
somebody is doing something right."*

Harry Schultz

News & Program Director

KPRC, Houston, Texas



Call on our problem-solvers. Bruce Williams and Sally Jessy Raphael weeknights.
Bernard Meltzer and Dr. Harvey Ruben weekends.
Talknet. Our unique call-in talk shows currently solving problems
for 166 radio stations. Call (212) 664-4745.

Alexander Mfg. 1714

1511 S. Garfield Pl., Mason City, Iowa 50401
Battery packs for VTR and ENG equipment, one and three unit analyzers for battery packs*, six-unit sequential charger for VTR and ENG*. **Staff:** Robert Williams, Georgia Franks, William Sapp, William Sapp Jr., Charlie Stinson, Jim Sapp.

Allen Avionics 1627

224 E. Second St., Mineola, N.Y. 11501

Video delay lines and filters, LC delay lines and filters, equalizers, hum eliminator. **Staff:** Lester Jacobson, John Sessoms, Richard Mintz.

Allied Broadcast Equipment 639-41

635 Southeast St., Richmond, Ind. 47374

Audio and RF equipment. **Staff:** Roy Ridge, David Burns, Bob Groome, Jeff Nordstrom, Cal Vandegrift, Pat Hurley, John Timm, Joe Ziemer.

Allied Tower 409

12450 Old Galveston Rd., Webster, Tex. 77598

Designs, fabricates and installs broadcast transmission towers. **Staff:** Jerry Bennett, V.G. Duvall, Charlie White, Richard Jessup.

Allsop 1177

Box 23, Bellingham, Wash. 98227

Video recorder cleaners, microcassette cleaners. **Staff:** Jeff Heininger, Eivind Clausen, Mike Allsop, Ivor Allsop, Jim Allsop, Randy Nolvold, Charley Highlander, Tena Veenstra.

Alpha Audio 210, 1331A

2049 W. Broad St., Richmond, Va. 23220

Acoustical foam. **Staff:** Eric Johnson, Nick Colleran, David Jones, Bobby Tulloh, Carlos Chafin.

Alpha Video & Electronics 645

28 E. Mall Plaza, Carnegie, Pa. 15106

Alphabetized Sony type VTR's*. **Staff:** Henry Lassige, Terance Lassige, Vincent Ferry, Thomas Stoffel, John Tomini, Gary Craig.

Altran Electronics 124A

17021 Kingsview Ave., Carson, Calif. 90746

AM SCA services.

Amber Electro Design 422

4810 Jean Talon West, Montreal H4P 2N5

Model 5500* programable distortion and noise measuring systems. **Staff:** Wayne Jones, Mike Hogue, Larry Maguire.

Amco Engineering 1218

3801 N. Rose St., Schiller Park, Ill. 60176

Modular instrument enclosures, consoles and cabinets, computer desks and desktop cabinets, blowers, fans and accessories. **Staff:** Floyd Johnson.

Amek Co. 1620

11540 Veniura Blvd., Studio City, Calif. 91604

Stereo television audio console, television post-production console with audio follows video module and stereo input modules, portable broadcast console. **Staff:** Tim Mungouan, Arnie Toshner, Bob Owsinski, Jim Vaughn, Graham Langley, John Penn.

American Diversified 176

3200 Park Venter Dr., Costa Mesa, Calif. 92626

American Horizon 1122A

1481 N. Fruitridge Ave., Terre Haute, Ind. 47804

American Image Productions 653

112 Union Ave., Memphis 38103

Radio and TV station image campaigns*, station ID's, sales production libraries.

Staff: Jerry Williams, Richard Fain, George Lale.

Ameritext 808

341 Madison Ave., New York 10017

World system teletext system, origination and receiving equipment, Keyfax and Electra teletext services. **Staff:** Steve Crowley, Jerry LeBow, Bernard Koteen, Alison Langridge, Lisa Stevenson, Minoo Saboori, Cliff Hargest, Malcolm Walker, John Taylor.

AMP Special Industries 634

Box 1776, Southeastern, Pa. 19301

Amperex 1412

Providence Pike, Slatersville, R.I. 02876

XQ4087 half inch diode gun plumbicon*, YK1263 klystron, camera tubes and accessories for color studio and portable cameras, transmitting tubes, diode gun low output capacitance camera tubes. **Staff:** Bob Richman, Greg Smith, Don White, Sandy Camicia, Lee Nowell, Ron Barnes, Tom Perry, Raleigh Utterback, Greg Murphy, Kipp Rabbitt.

Amplex 1400

401 Broadway, Redwood City, Calif. 94063

Studio and portable videotape recorders, M-format camera/recorder system portable ENG/EPF camera, editing systems, switchers, digital special effects systems, still store systems, time base correctors, video and audio magnetic tape. **Staff:** M. Sanders, D. Chapman, S. Faught, D. Kleffman, C. Moggs, W. Scullion, T. Nielson, J. Williamson, A. Bergman, R. Antonio, D. Haight, D. Bogue, R. Natwick, B. Ballantyne, G. Easton, C. McCartney, R. Ostrom, F. Rush, G. Rose, D. Schmitt, R. Stanford, P. Hansil, J. Byars, E. Higgins, J. Houman, M. d'More, R. Coomes, J. Walsh, M. Wolschon, C. Wright, F. Nault, T. Johnston, H. Persoon, L. Roberts, R. Miller, D. Carroll, D. Clayton, R. Ide, M. Pinkel, M. Wachtel, R. Welsh, B. Carpenter, J. Clardy, T. Hasty, P. Zakit, B. Bohunicky, B. Justus, R. Marconi, D. Massa, T. Goldberg, J. diGeorge, P. Wonfer.

Amtel Systems 1745

400 W. Cummings Park, Woburn, Mass. 01801

VITC/LTC reader, portable VITC/LTC generator, SMPTE generator/reader, distribution amplifiers. **Staff:** Mark Wronski, Peter McDonnell, Gary McKoen, Allan Leon, Michael Martin, Donald Herring, Alan Lambshead, Sean Carnahan, Edward Labanowicz, Allan Proctor.

Anchor Systems 1618C

5097 Sante Fe, San Diego 92109

Portable, mini, P.A. and monitor and mobile audio systems.

Andrew Corp. 1201A

10500 W. 153d St., Orland Park, Ill. 60462

Earth stations, microprocessor controlled ESC-200, broadcast transmission lines, UHF circular waveguides, LPTV transmitters, high powered UHF transmitters, coaxial cable and elliptical waveguides, UHF stand-by antennas.

Angenieux 1201

770 N. Kendall Dr., Suite 303, Miami 33156

Zoom lenses and optical accessories for broadcast cameras. **Staff:** B. Angenieux, C. Stampfli, J. Abbaticucci, P. Hawkes, G. Corbasson, J. Angenieux, J. Naime, F. Guillot, J. Martinez, Tang Sum.

Antenna Technology 1737

8711 Pinnacle Peak Rd., Suite C-103, Scottsdale, Ariz. 85255

Three-meter, five-meter and seven-meter* earth stations. **Staff:** Joe Stever, Scott Grone, Eric Schechter, Gary Hatch, Al Libby, Gary Hester.

Anton/Bauer 1337

One Controls Dr., Shelton, Conn. 06484

Portable battery and lighting equipment for cameras, VTR's, monitors. **Staff:** George Bauer, Anton Wilson, John O'Keefe, Joseph Lantowski, Jane Lytle-Manns, John Corrigan.

Anvil Cases 1112

4128 Temple City Blvd., Rosemead, Calif. 91770

Heavy duty and rackmount cases.

Apert-Herzog 1703

7007 Realm Dr., B3, San Jose, Calif. 95119

Model A2 digital frame synchronizer*, model H2 time base corrector/synchronizer*, digital time base corrector, video distribution amplifier, video building block line driver in a chip, digital video tester. **Staff:** William Herzog, William Nichols, William Hardy, Ken Herzog, Debra Reinert, Linda Giffin.

Aphex Systems 513

13340 Saicoy St., N. Hollywood, Calif. 91605

Staff: Marvin Caesar, Jon Sanserino, Johnny Garcia, Paula Lintz, Jim Martindale, Harvey Rubens, Linda Goodman, Donn Werrbach.

Apix Corp. 1762

2960 S.W. Temple, Salt Lake City 84115

Applied Digital Technology 1730

17 E. 96th St., New York 10028

Toby Arnold & Associates 107

3234 Commander Dr., Carrollton, Tex. 75006

Automated and live-assist radio formats. **Staff:** Toby Arnold, Dolly Arnold, Jim Kerr, Norma Kerr, Bill Pasha, Chris Clausen, Carolyn Clausen.

Arbitron 802

1350 Avenue of the Americas, New York 10019

Target AID, Arbitrends, Radio Today, computer graphics, television meter measurement. **Staff:** Ted Shaker, Rick Aurichio. (Radio)—Joe Buys, Dave Burril, Susan Dingethal, Cliff Fletcher, Scott Herman, Marv Korach, Bill Livek, Tom Murphy, Dean Mutter, Rip Ridgeway, Maddy Schreiber, Dick Sheppard, Janet Zahler. (Television)—Pete Megroz, Kathy Baske, Doug Marks, Jim Mocarski, Jon Nottingham, Bill Shafer, Kit Smith, Dennis Spragg, Mark Stephen, Mark Young.

Arrakis Systems 211

400 Cormorant Ave., Fort Collins, Colo. 80525

Audio consoles, audio routing switchers.

Arriflex Corp. 1421

500 Route 303, Blaauvelt, N.Y. 10913

Power supplies.

Artel Communications 1163

93 Grand St., Box 100, Worcester, Mass. 01602

Fiber optic transmission capability system*, both portable and fixed, multichannel systems for multiplexed video and dual audio, battery-operated portable ENG/EPF systems and high resolution video systems for RGB computer graphics and HDTV, fiber optic cables. **Staff:** Tad Witkowitz, Richard Cerny, Alan Kent, Nancy Krakora, Steve Lang, Jeff Mauro, Steve Mariuz, Bob Hart.

Asaca/Shibasoku 1226

12509 Beatrice St., Los Angeles 90066

Video and audio test equipment, cart sys-

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tem*, multi-image viewers*, high-definition TV monitors*, 150 mhz sweep and digital signal generators*. **Staff:** Alan Davis, Susan Grossinger, K. Ezoe, H. Nishimura, R. Maefune, T. Shigezaki, N. Shigezaki, Paul Backer, Frank Santucci, Len Dozier, Tim Moore, I. Ichinose.

Associated Press 419/2976
50 Rockefeller Pl., New York 10020

AP Radio Wire, AP Network News, APTV, AP laserphoto, AP photo color, AP Newscable and Music Country Network. **Staff:** Roy Steinfert, Glenn Serafin, Bill Cook, Brent Kallestad, Jim Williams, Jim Hood, John Kenney, Sue Cunneff, Rosie Oakley, Jim Spehar, John Schweitzer, Jerry Jackson, John Harris, John Strachan, Ed Busch.

Associated Production Music 150
888 7th Ave., New York 10106

Atlas Tower 443
227 S. Vann, Vinita, Okla. 74301

Manufacturing, erecting and leasing of radio and TV broadcast, microwave, industrial and utility towers. **Staff:** George Bubrick, Richard Bell, Dan Weathers.

AT&T Communications 407
Route 202-206, Bedminster, N.J. 07921

AT&T Information Systems 1429
1 Speedwell Ave., Suite 641E, Morristown, N.J. 07960

Call management with voice response, interactive voice and data management, teleconferencing. **Staff:** Alan Adler, Hugh Jarrett, Gary Tarantino, Al Werner, Norm Korin, Larry Hendrickson, Marsha Gewirtzma, Terry O'Connell, Charlie Maynard, Shirley Marrs, David Hammond, Joe Sperino, Susan Littell, Joe McKeown, Jeff Syphus.

Auburn Instruments 1711
107 Church St., Watertown, Mass. 02172

Two-wire machine remote control system. **Staff:** Donald Kalischer, Eric Aker.

Audico 1343
219 Crossen Ave., Elk Grove, Ill. 60007

Videocassette tape loader, reloader, rewriter, Model 619 VCR*. **Staff:** Bill Hinkle, Norm Deletzke.

Audi-Cord 123
1845 W. Hovey Ave., Normal, Ill. 61761

Models A, S and TDS* cartridge tape machines. **Staff:** Carl Martin, Delmar Rowe, Duane Martin, Michael Craig, Carol Williams.

Audio Broadcast Group 637A
2342 South Division, Detroit 49507

Audio Developments 1743
414 N. Sparks St., Burbank, Calif. 91506

Multimixer, pico mixer, ENG mixer. **Staff:** Antony Levesley, Roger Tromans, Ron Feller.

Audio Engineering 174
1029 N. Allen Ave., Pasadena, Calif. 91104

Record cleaning machine*. **Staff:** Wes Doolley, Michael Baskin.

Audio Kinetics 1173
4721 Laurel Canyon Blvd., Suite 209, N. Hollywood, Calif. 91607

Time code synchronizers.

ATI-Audio Technologies 420
328 W. Maple Ave., Horsham, Pa. 19044

Audio processors, amplifiers, microphones.

Audio Video Consultants 234
11538 Prager Ave., Lake View Terrace, Calif. 91342

Audio + Design 402

Box 768, Bremerton, Wash. 98310

SCAMP 4-band modular processing systems for TV/AM/FM satellite applications*, F601 superdynamic limiter*, ambisonic surround sound system*, compressors, limiters, expanders, filters, distribution amps, condenser and soundfield microphones*. **Staff:** Nigel Branwell, Kathleen Mallory, Howard Smith, Michael Beville.

Audio-Technica 1141
1221 Commerce Dr., Stow, Ohio 44224

Microphones, mixing consoles, headphones, tone arms, phono cartridges.

Auditronics 505
3750 Old Getwell Rd., Memphis, Tenn. 38118

Broadcast consoles, audio and multichannel production consoles, audio distribution amplifiers, programable equalizer. **Staff:** Welton Jetton, Steve Sage, Jim Woodworth, Larry Lamoray, Jerry Puckett, Keith Arnett.

Aurora Systems 1312
185 Berry St., Suite 143, San Francisco 94107

Digital videographics and animation system. **Staff:** Richard Shoup, Damon Rarey, W. Tom Beams, Chuck Kozak, Donna Foster-Roizen.

Autocue 1318A
33 W. 60th St., New York 10023

Autogram Corp. 120
Box 456, 631 J Pl., Plano, Tex. 75074

Microgram production consoles (six-, eight- and 10-channel). **Staff:** Ernest Ankele, DeLores Ankele, Neva White, Jim Laird, Don Kuhlmann, Richard Benjamin.

Avantek 1742
481 Cottonwood Dr., Milpitas, Calif. 95035

AR-2000 simulchannel earth station video receiving system. **Staff:** Rob Corrao, Don Smith, Bill Le Doux, Dave Stogner, George Sears, Eric van der Kaay.

AVC Systems 331
1517 E. Lake St., Minneapolis 55407

Consoles, reel-to-reel machines, loudspeakers, microphones, compellor and aural exciters, digital audio processors. **Staff:** Billy Emery, Michael Halleck, Doug Ordon.

William Bal Corp. 1614
947 Newark Ave., Elizabeth, N.J. 07207

Barrett Associates 103
800 Grand Ave., Suite C-1, Carlsbad, Calif. 92008

Staff: Mayer, Kettering, Mayou, Robison.

Basys 1129
2685 Marine Way, Mountain View, Calif. 94043

Newsroom computer equipment and software. **Staff:** David Lyon, Ed Grudzien, Joe McGoldrick, John Chapman, Dan Moloney, Roy Terry, Ted Feurey, Peter Kolstad, Roy Holland, Adrian Scott, Claire Pullinger.

Bayly (see AEG Telefunken)

Beaveronics 1313
8 Haven Ave., Port Washington, N.Y. 11050

Belar Electronics 203
Box 826, Devon, Pa. 19333

AM modulation monitors, stereo frequency monitors, FM modulation monitors and stereo monitors, TV aural modulation monitors and frequency monitors, SCA monitors for FM and TV, AM, FM and TV RF amplifiers.

Belden 166
2000 Batavia, Geneva, Ill. 60134

Color and resin filters.

Belden Communications 1628
534 W. 25th St., New York 10001

Filters.

Beston/McInnis-Skinner 1020
15315 S 169 Hwy., Box 937, Olathe, Kan. 66061

Data-Graphics, Newscan, data prompters, electronic newsroom and character generator equipment, production titlers. **Staff:** B.J. Lipari, Don MacClymont, Rod Herring, Bob Barnes, Judy Skinner, Marvin McInnis, Bill Borchert, Brian Bruton, Dave Anderson, Bud Malone, Ross Dixon, John Wall, Dale Leinen.

Beyer Dynamic 426
5-05 Burns Ave., Hicksville, N.Y. 11801

Dynamic condenser microphones, headphones, microphone stands, booms and accessories.

BGW Systems 421
13130 S. Yukon Ave., Hawthorne, Calif. 90250

Audio power amps.

Bird Electronic 1625
30303 Aurora Rd., Cleveland 44139

15 kw and 25 kw load resistors*, RF measurement components, RF wattmeters*, heat exchanger loads, line terminations, digital calorimeters. **Staff:** Bruce Bird, Leon Kuklinski, Greg Johns, Leo Lesyk, Rick Nelson, Herbert Heller, George Churpek.

BIW Cable Systems 1405
65 Bay St., Boston 02125

Cable, connectors, assemblies and repair services for broadcast cameras, armoured VTR cable assemblies*, quick disconnects VTR cable assemblies*. **Staff:** J. Rath, J. Hathaway, R. Osburne, E. Konkel, J. Pirrons.

Black's Communications Consultants 657
120 W. Picacho, Las Cruces, N.M. 88005

Bogen Photo 1705
100 S. Van Brunt St., Englewood, N.J. 07631

Cine/video tripods, fluid heads and accessories*, quartz lighting, support/back-ground equipment, light stands, TSE video cases*, M-100 mini video light*, Micro fluid head*, filters, dollies, video accessories. **Staff:** Bruce Landau, Kriss Brunngraber.

Bogner Broadcast Equipment 1319
401 Railroad Ave., Westbury, N.Y. 11590

High power UHF TV transmitting antenna (220 kw), low and medium power VHF and UHF slot and dipole transmitting antennas, circularly polarized FM transmitting antennas, MDS and ITFS transmitting and receive antennas, LPTV transmitters and communication antennas for cellular radio. **Staff:** Richard Bogner, Leonard King, Robert Pivano, Steve Weinstein, Joe Nigro.

Boonton Electronics Corp. 228
791 Route 10, Randolph, N.J. 07869

Bosch 1603
2300 South 2300 W., Salt Lake City 84119

TVS TAS 2000 routing switcher*, micro-processor-controlled graphic paint box system*, graphic system animation system*, control panels for routing switchers including telephone address panels*, camera/recorder including playback routing switcher*, videotape editing system, character generators, telecine, videotape recorders, monitors, cameras, machine control system. **Staff:** William Butler, Dietmar Zieger, A.R. Pignoni, Anthony Maglicco, Eloy Chairez, Ron Ferguson, John Webb, Davis Spindle, Paul Scaglione, O. Oechsner, H.

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SOURCE: Arbitron



Groll, D. Pohl, W. Fink, H. Schoenberg, H. Deutschmann, H. Schenider, E. Remiger, H. Trein.

Bowen Broadcast Service 1770
8343 Lynn Haven Ave., El Paso 79907

Equipment computer system*. **Staff:** W. Bowen, S. Bowen, Pauline Bowen, Leroy Bowen, Jerry Servatius, John Thayer, George Nowak, Connie Benson, Mague Pitones.

BPI 200
Box 2027, Bellevue, Wash. 98009

Album Rock, Personality Adult Contemporary, Personality Country, Compulist. MOR, classical, beautiful, easy listening, consultancy. **Staff:** Bob English, John Sherman, Beau Phillips, Bob Wikstrom, Bill Wolkey.

Bradley Broadcast Sales 186
15155-L Frederick Rd., Rockville, Md. 20855

Broadcast Audio 319
11306 Sunco Dr., Rancho Cordova, Calif. 95670

Audio consoles, amplifiers, studio furniture. **Staff:** David Evans, John Fernandez, Gary Maggiore, Doug Laue.

Broadcast Cartridge Service 611
15131 Triton Ln., Suite 108, Huntington Beach, Calif. 92649

Reconditioning service, tape cartridges, storage systems, alignment tools, accessories, tone box, AA-4 stereo cartridge*. **Staff:** Bryant Ellis.

Broadcast Electronics 303
4100 N. 24th St., Box 3606, Quincy, Ill. 62305

FM transmitters, exciters, stereo and SCA generators, microprocessor program automation system, cartridge machines, audio control consoles, turntables, preamps, exciters, stereo generators, tonearms. **Staff:** Lawrence Cervon, Curtis Kring, Geoff Mendenhall, Joseph Engle, E.L. Corujo, Tim Bealor, Gil Housewright, Dick Anderson, Rick Carpenter, John Lyles.

Broadcast Microwave Services 1749
7320 Convoey Ct., San Diego 92111

Portable microwave equipment for helicopters and vans, transmitters, receivers and antennas.

Broadcast Music 619
320 W. 57th St., New York 10019

Staff: John Alves, Paul Bernard, Edward Chapin, Edward Cramer, Thomas Curry, Oliver Henry, Ed Molinelli, Rick Reichenbach, Alan Smith, Lawrence Sweeney, Joan Thayer, Robert Warner, Theodora Zavin.

Broadcast Supply West 112A
7012 27 St. W. Tacoma, Wash. 98466

Wall racks, carousel racks*, turntable bases, preamps*, tonearms. **Staff:** Irv Law, Bernice McCullough, Tim Schwioger, Jon Ferren, Pat Medved.

Broadcast Systems 1500
8222 Jamestown Dr., Austin, Tex. 78758

DC-8 automatic video cartridge machine*, pro pak equipment cabinets*, machine control and interface panels*, prewired audio jack panels. **Staff:** Donald Forbes, John Harms, Chuck Balding, Les Hunt, Byron Fincher, Jim Spears, Art Smith, Tom Welsh, Jay Kirtley, Jay Riekenberg, Fred Scott.

Broadcast Technology 1701
33 Comac Loop, Ronkonkoma, N.Y. 11779

Vector 4000 single pair 24-channel monitor distribution system*, TI 5000 telephone hybrid system with automatic answering*, Mix Minus with 5-level priority interrupt*, pro-

gram interrupt, audio card line and card frames. **Staff:** Louis Lindauer, John Bubbers, Rex Nathanson.

Broadcast Video Systems 1326
1050 McNicoll Ave., Unit 15, Agincourt, Ont. M1W 2L8

CVP-100 computer video processor*, BVS NTSC decoder*, Cox component downstream keyer* and color corrector*, NTSC/PAL encoder, combined waveform/vector monitor, video delay lines and filters, encoded color corrector with time code control and safe area generator. **Staff:** Bert Verwey, Andy Wintonyk, Brian Elliot, Tony Frere.

Bruel & Kjaer Instruments 511A
185 Forest St., Marlboro, Mass. 01752

Studio microphones (4003, 4004, 4006, 4007) for broadcasting, recording and sound reinforcement and line amplifier/power supply. **Staff:** Dick Trump, John Bareham, Lou Cowherd, Glen White, Dick Lewis, Henning Moller, Rob Green.

Bryston Ltd. 517
57 Westmore Dr., Rexdale, Ont. M9V 3Y6

2B-LP 50 watt, audio amplifier. **Staff:** John Russell, Christopher Russell.

BSM Systems 637
S. 9604 Cedar Rim Ln., Spokane, Wash. 99204

Audio routing switchers, video routing switchers, audio distribution amplifiers.

BTX Corp. 1124
75 Wiggins Ave., Bedford, Mass. 01730

Time code products, synchronizers, edit controllers, readers and generators.

B&B Systems 222
28111 Avenue Stanford, Valencia, Calif. 91355

BW Lighting Systems 1753
Box 470162, Tulsa, Okla. 74147

Tall Cyc cyclorama lights, cyclorama track systems with curtains, lighting fixtures and portable lighting kits. **Staff:** Wally Whaling, W. Blair Powell, Nancy Parker.

Cablewave Systems 108
60 Dodge Ave., North Haven, Conn. 06473

Antenna and transmission line systems, low loss foam coaxial cable*, 18 ghz antenna*. **Staff:** Ken Robinson, Bill Meola, Douglas Proctor, Harry Lambert, Margie Barneschi, John Gailey, Pierre Suard, G. Dupuy D'Angéac.

Calvert Electronics 125
One Branch Rd., East Rutherford, N.J. 07073

Distributor of broadcast related electronic components including those of Ampex, Eimac-Varian, RCA, GE, Raytheon, Westinghouse, and including camera tubes. **Staff:** Larry Broome, Raul Melo, Jack Stack.

Calzone Case 1179
225 Black Rock Ave., Bridgeport, Conn. 06605

Travel and shipping cases including video, camera, rack mount, camera, monitor, lighting and editing systems, recording, audio and broadcasting. **Staff:** Joe Calzone, Vin Calzone, Tom Mackno, Greg Ouzunoff, Jim Edelmanna, Perry Lengyel, Leslie Mola, Wayne June, Jim Monroe, Joe Calzone Jr., Betsy Calzone, Lesley Hyde, Craig Col-diron, Alan Sarlaty, Randy Tecicki.

Cambridge Products Corp. 1328
244 Woodland Ave., Bloomfield, Conn. 06002

Staff: Alan Horowitz, Joyce Johnson.

Camera Mart 1018
456 W. 55th St., New York 10019

Video production and post-production

equipment. **Staff:** Samuel Hyman, Paul Meistrich, Shelly Brown, Jeff Wohl, Herb Browning, Leo Rosenberg, Ray Blumenthal, Shimon Ben-Dor, Dean Leeson, Peter Leeson, Nick Liatsis, Steve Gordon, George Winslow, Jean Yacobellis, Cathy Smith, Jessie Diaz, Laszlo Denes, Quent Nelson, Jose Rosado, Barry Glasser.

Canare Cable 1732
6733 Vineland Ave., N. Hollywood, Calif. 91606

Canon U.S.A. 1012
One Canon Pl., Lake Success, N.Y. 11042

Lenses. **Staff:** Tom Yamasaki, Jack Keyes, Ken Rice, Todd Okugawa, Kenji Saotome, Bob Low.

Capitol Magnetic Products 206
6902 Sunset Blvd., Hollywood, Calif. 90028

AA4 broadcast cartridge*, demonstration of AA4 in hands-on production unit. **Staff:** Larry Hockemeyer, Joe Kempler, Dick Dunleavy, Dennis Schleich, Gordon Stafford.

Capitol Production Music 165
1750 N. Vine St., Hollywood, Calif. 90028

CAT Systems 1014B
401 E. 74th St., New York 10021

Computerized remote control system with color graphic displays for radio, TV and earth station facilities, facility monitoring system*, security system*, computerized automation for teletypes, computer systems, station planning and construction. **Staff:** J. M. Soli, T. J. Vaughan, S. Pumble, M. Des Noyers.

CBS Radio Stations News Service 606
2020 M St., Washington 20036

Byline Magazine with news/information features. **Staff:** Allen Balch, Anna Mae Sokusky, Nancy Johns.

CBX Inc. 160
147 E. Olive Ave., Monrovia, Calif. 91016

Ceco Communications 1010A
2115 Avenue X, Brooklyn 11235

Broadcast transmitting and receiving tubes, semiconductors, video equipment, camera tubes. **Staff:** Anthony Ianna, Lew Levenson, Hugh Mullins, Fred Andersen.

Celestial Mechanix Inc. 441
612 Hampton Dr., Venice, Calif. 90291

Staff: Robert Benderson, Edward Dale, Leah Brown, Roseann Schyjer.

Celwave R.F. 202
Route 79, Marlboro, N.J. 07746

Staff: Saul Esocoff, Jack Nevin, Ed Boehm, John Peterson, Henry Edwards, Bill Bryson, Don Ayes.

Central Dynamics 1409
401 Wynn Dr., Huntsville, Ala. 35805

Video production switchers, FlexiKey digital video effects system, distribution amplifiers, master control switchers, signal distribution system, routing switchers, downstream keyer.

Centro Corp. 1101
9516 Chesapeake Dr., San Diego 92123

Tractor/trailer remote production unit, editing console, portable display and graphics modules for video teleconferencing. **Staff:** Darrell Wenhardt, Fred Powers, Rex Reed, Wayne Opperman, H.A. Smith, Al Cervenka, David Shiff.

Century Precision Optics 1781
10713 Burbank Blvd., N. Hollywood, Calif. 91601

Century periscope lens*, 7x wide angle adaptor for zoom lenses*, duplikin III for two-thirds and one-inch video*, tele-alienar telephotos for video and film use, super teles modified for video and film and wide angle lenses. **Staff:** Steve Manios, Steve Manios Jr., William Turner, Jeff Giordano.

Century 21 Product and Program 204
4340 Beltwood Pkwy., Dallas 75234

Programming and equipment for automated and live-assist radio, including 19 formats, Motivators production service*.

Cetec Antennas 509
Box 28425, Sacramento, Calif. 95828

FM and TV antennas including circularly polarized spiral, circularly polarized FM panel antenna*, horizontally polarized TV antennas, combiners, filters and turnkey antenna systems. **Staff:** Jim Oliver, Bill Cunningham, Ed Fitzgerald, Ali Mahnad.

Cetec Broadcast Group 509
1110 Mark Ave., Carpinteria, Calif. 93013

Business systems, program automation systems*.

Cetec Vega 1401C
9900 Baldwin Pl., El Monte, Calif. 91731

Portable battery power receiver with Dynex II*, Portable diversity battery powered receiver with Dynex II*, T-81 through 83 hand held transmitter with D II*, impedance converter for musical instrument pick-up*, pocket transmitter with Dynex II, pro, pro plus and pro plus diversity receiver with Dynex II, wireless intercom full duplex master stations, wireless intercom body pack receiver and transmitter, quad case. **Staff:** Paul Baughman, Ken Bourne, Gary Stanfill, Stan Fowler.

Channelmatic 328
821 Tavern Rd., Alpine, Calif. 92001

Chemigraphic Products 659
301 Veterans Blvd., Rutherford, N.J. 07070

Chester Cable 1320A
Drawer D, Chester, N.Y.

Studio wire and cable. **Staff:** Bill Dungan, Ken Wyant, Rich Smalling.

Christie Electric Corp. 1403A
20665 Manhattan Pl., Torrance, Calif. 90501

Batteries, belt packs for VTRs, power supply, burping charger*, bulk tape/cassette degaussers. **Staff:** Fred Benjamin, Diane Church.

Chroma Digital Systems
Engineer, manufacturer and marketer of digital television equipment*, Chromaflex 766 special effects device. **Staff:** John Sparkman, Carl Youngberg, Brian Cabeceiras.

Chyron Corp. 1610
265 Spagnoli, Melville, N.Y. 11747

Expanded Chyron IV*, and VP-2*, remote graphics unit, character generators. **Staff:** Joseph Scheuer, David Buckler, Ron Witko, James Haigney, Bill Hender, Bill Reinhart, James Keane, Steve Sadowsky, Larry Mincer, Susan Stanco, Andrea Geiger.

Cine 60 1423
630 Ninth Ave., New York 10036

Battery systems, chargers, power supplies, lighting equipment. **Staff:** Paul Wildum, Don Civitillo, Bob Kabo, Evan Green.

Cinema Products 1221
2037 Granville Ave., Los Angeles 90025

Video cameras, remote control systems,

power supplies, portable camera prompting systems, fresnel light systems, microphone boom.

Cinemills Corp. 1140
3500 W. Magnolia Blvd., Burbank, Calif. 91505

Cipher Digital 1606
150 Huntington Ave., Boston 02115

Vertical interval time code products, high resolution character displays.

Circuit Research Labs
(see CRL Audio)

Clear-Com 1502
1111 17th St., San Francisco 94107

CP-300 remote station, TW-12 interface device. **Staff:** Robert Cohen, Peter Giddings, Gerow Brill, William Fluster.

Clyde Electronics 204A
1660 NW 18th Ave., Delray Beach, Fla. 33445

Modular broadcast mixer and delta push-button news mixer.

CMC Technology 1425
2650 Lafayette St., Santa Clara, Calif. 95050

Refurbishing of quad video and audio head components. **Staff:** William Fitts, Tony Mlinaric, Willard Bell, Robert Pearson, Jim White-ly, Fred Koehler, Tommy Thompson, Bill Zimborski.

CMX/Orr 1639
3303 Scott Blvd., Santa Clara, Calif. 95030

Medium and large scale editing systems. **Staff:** Philip Arenson, Allan Behr, Stanley Becker, Gary Schultz, Gary Hinderliter, Ed Bolger, George Cotroneo, Murray Beviz, Richard Statin, David Orr, Bill Ludwig, William Fink.

Colorado Video 1222
Box 928, Boulder, Colo. 80306

Model 250 T transmitter and 250R receiver for slow-scan television transmission over 8 khz audio subcarrier bandwidth. **Staff:** Jim Dole, Richard Taylor.

ColorGraphics Systems 1114A, 1116
5725 Tokay Blvd., Madison, Wis. 53713

Ultra high resolution color weather graphics system, data storage, news/weather/sports computer system, election graphics. **Staff:** Terry Kelly, Dick Daley, Chris Alvord, Bob Waever, Valerie Jones, Doug Hiwahara, Linda Post, Chuck Beichlin, Jim Waterman, Ron Clowney, Scott Harris.

Colortran 1205
1015 Chestnut St., Burbank, Calif. 91506

Fresnels.

Columbine Systems 118, 1323
7 Jackson Bldg., Golden, Colo. 80401

Broadcast information system with traffic, sales, billing, accounts receivable, payroll, general ledger, accounts payable, cash management, music, media inventory and film investing and amortization.

Comark Communications 1217
Box 257, Feeding Hills Rd., Southwick, Mass. 01077

110 kw S series UHF transmitter*, Magic T RF power combiner with switchless bypass system*, automatic multiplexed diplexer system*, BCD/ABC pulsing system*, ED and ICPM corrector system*, high-tech exciter system*, broadcast modulator with IF SAW filter*, mod anode pulsing system*, UHF transmitters from 10 kw to 220 kw, waveguide and coaxial transmission systems and components, broadcast modulators, exciters, IF correction systems, diplexing

equipment and RF components, turnkey RF installation capability. **Staff:** Richard Fiore Sr., Nat Ostroff, Stuart Kravitz, Richard Fiore Jr., Andrew Whiteside, Don Adams, Mark Altken, Ray Keisel, Bill O'Neil, John Molta, Alvin See, Mark Duclos.

Comex 1508
600 W. Service Rd., Suite 101, Chantilly, Va. 22021

Communication Graphics 630
Box 54110, Tulsa, Okla. 74155

Staff: Rick Lawrence, Donna Aubright, Sandra Berkshire.

Comprehensive Video Supply 1145
148 Veterans Dr., Northvale, N.J. 07647

Video lighting, production music and sound effects library, microphones, power belts, battery charger, tripods, video supplies and accessories.

Compucon 1405D
Box 809006, Dallas 75380

Engineering services including STL paths, earth stations, ENG, LPTV. **Staff:** Becky Shipman, Mike Welch, Philip Lindsley, Scott Goldman, Rick Miller, Vince Dainotto.

Computer Broadcasting 624
6085 Dawn Dr., Rohnert Park, Calif. 94928

Computer Concepts 404
8375 Melrose Dr., Lenexa, Kan. 66214

Inhouse broadcast computer system and co-op management system, microbridge 80, rate card optimizer program. **Staff:** Greg Dean, Vicki Dean, John Clark, Donna Bush, Don Shipman, Klover Schafer, Marty Hawke, Frank Crane, Wayne Blackmon.

Computer Graphics Lab 1143
405 Lexington Ave., New York 10174

Broadcast animation system, image manipulation and graphic enhancement system, still-frame rendering device.

Comrex 400
60 Union Ave., Sudbury, Mass. 01776

Frequency extenders, ENG communications equipment, wireless microphones, talk show system.

Comsearch 1136
11503 Sunrise Valley Dr., Reston, Va. 22091

Systems design and engineering of satellite earth stations, point-to-point microwave systems, common carrier private, auxiliary broadcast (STL), CARS band and LPTV systems including site acquisition, frequency engineering, coordination and protection, FCC application and FAA notification form preparation, radio and facilities engineering, project management. **Staff:** Harry Stemple, Jim Fitzgerald, Mike Morin.

Comtech Data Corp. 314
350 N. Hayden Rd., Scottsdale, Ariz. 85257

TVRO receivers, 59-channel agile modulators, fixed modulators, SCPC audio receivers, digital audio receivers, satellite audio uplinks, satellite antennas. **Staff:** Allen Scharf, Glenn Higgins, Jeannine Hillier, Larry Weightman, Rick Cannon, Pres Windus, Tom Christy.

Corn-Tek Communication Tech. 1122B
365 W. Lemel Cr., Salt Lake City 84115

Concept Productions 423
1224 Coloma Way, Roseville, Calif. 95678

Adult Contemporary, Contemporary Hit Radio, Album Rock, Country and MOR formats, 1984 Disneyland Radioaction telephone game. **Staff:** Dick Wagner, Mary

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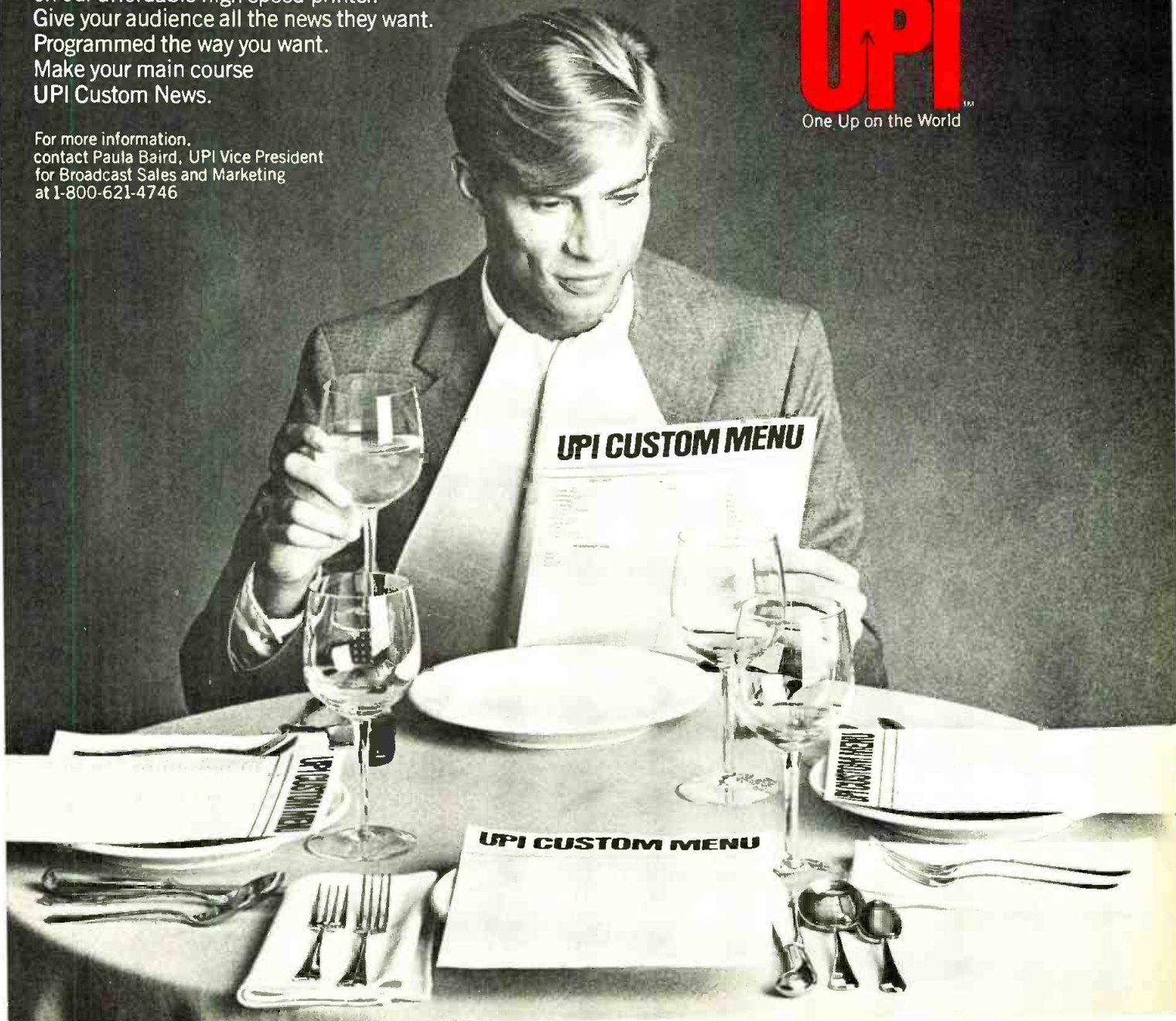
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Wagner, Rich Lee, Gary Carmichael, Sharon Stiles.

Connect-Air International 1764
50 37th St., NE, Auburn, Wash. 98002

Cable assemblies. **Staff:** Jess Moore, Ron Jones.

Connectronics Corp. 608

652 Glenbrook Rd., Stamford, Conn. 06906
Staff: Richard Chilvers, Stephen Ash.

Otis Conner Cos. 414

2829 W. Northwest Hwy., Suite 940, Dallas 75220

Staff: Otis Conner, Larry Conner, May Moseley, Steve Gustafson, Rusty Gold, Richard Guthrie, George Weathersby, Denise Conner, Jessica Conner, Linda Weathersby, Lillian Ragland, Ron Lagerlof, Les Studdard, Beurt Servaas, Corena Servaas.

Conrac 1401

600 N. Rimsdale Ave., Covina, Calif. 91722

Color and monochrome monitors. **Staff:** Warren O'Bych, Robert Hofer, William Ems, Gene Ornstead, Pete Portoulas, Paul Thomson, John Kennan, Don Pickle.

Continental Electronics 101

Box 270879, Dallas 75227

AM transmitters (from 1 kw to 50 kw), FM transmitters (from 2.5 kw to 55 kw), AM and FM stereo exciters, eight- and 10-channel stereo audio consoles, phasers and other related equipment. **Staff:** J. Weldon, W. Mitchell, B. Watson, A. Vernon Collins, R. Floyd, Steve Clatterbaugh, Everett King, Bob Dunkin, Paul Kittenbacher, Gene Randolph, Ken Perkins, Cliff Rogers, John Hutson, Dave Hultsman, John Abdou, Jim Littlejohn, Barry Ariaz, Steve Schott, Tom Cauthers, Steve Keating, Ray Tucker, Dave Chenoweth, Dave Russell.

Control Concepts Corp. 1751A

328 Water St., Box 1380, Binghamton, N.Y. 13902

Isatrol, Isafil, Isatron transient voltage suppressor. **Staff:** Orat Evans, Robert Galaher, Herbert Montague, Robert McLoughlin.

Control Video 1157

1640 Dell Ave., Campbell, Calif. 95008

Videotape editors, automatic spot insertion equipment, synchronizers, tape code equipment.

Convergence Corp. 1430

1641 McGaw, Irvine, Calif. 92714

Character inserter*, video editing systems, EditDroid post production system. **Staff:** George Bates, Richard Moscarello, Deborah Harter, Frank Logan, Carla Denney, Leslie Tippetts, Julian Hansen, Doug Tao, Monique De Vusser, Doug Hutten, Pattie Ciccio, Richard Nelson, Charles Smith, Tom Drewke, Ken Cawley.

Cool Light 1329

5723 Auckland Ave., N. Hollywood, Calif. 91601

Cool trillite, mini Cool kits, lamps, reflectors.

Corporate Communications

Consultants 1161

4250 Veterans Memorial Hwy., Holbrook, N.Y. 11741

Color correction systems.

Countryman Associates 1720

417 Stanford Ave., Redwood City, Calif. 94063

Creative Trade 217A

456 W. 55th St., New York 10019

Crest Audio 204C

150 Florence Ave., Hawthorne, N.J. 07506

35 w to 375 w power amplifiers*. **Staff:** John Lee, Wane Fuday, Carl Schwartz, John Fly, John Caporale.

CRL Audio 300

2522 W. Geneva Dr., Tempe, Ariz. 85282

AM, FM and TV audio processors including AM stereo and SCA subchannel control systems, FM stereo generator*. **Staff:** Ronald Jones, Gary Clarkson, Bob Richards, Dee McVicker, Chris Dieterle.

Crosspoint Latch 1321

95 Progress St., Union, N.Y. 07083

Staff: Michael Molinaro, Tony Grosboll, George Cudabac, Barry Hettinger, H. George Pires.

Crown International 428

1718 W. Mishawaka Rd., Elkhart, Ind. 46517

Pressure zone microphones, broadcast amplification systems and audio test equipment. **Staff:** Charles Gushwa, James Beatlie, Tony Satariano, James Bumgardner, Dennis Badke.

CSI Electronics 507

18248 E. Rogers Cr., Boca Raton, Fla. 33431

AM (5 kw, 10 kw and 25 kw) and FM (3 kw and 25 kw) transmitters, phasing equipment. **Staff:** Bernard Gelman, Blanch Gelman, Saul Gelman, Michale Krowitz, William Hoffman, William Moats, Bruce Singleton.

CSP Inc. 440

203 Airport Rd., Doylestown, Pa. 18901

Cubicomp Corp. 235

3165 Adeline St., Berkeley, Calif. 94703

Custom Business Systems 317

Box 67, Reedsport, Ore. 97467

Business complete computer system.

Cybernetic Data Products 1134A

208 44 Plummer St., Chatsworth, Calif. 91311

Peter Dahl Co. 612

4007 Fort Blvd., El Paso, Tex. 79930

HV rectifiers*, three-phase 5 kw plate transformer, 1 and 5 kw modulation transformers and reactors, high voltage rectifiers and primary transient suppressors. **Staff:** Peter Dahl, Clarice Dahl, Ozzie Jaeger, Gary Komassa.

Dalsat 1785

Box 1960, Plano, Tex. 75074

Bill Daniels Co. 1706

9101 Bond, Box 2056, Shawnee Mission, Kan. 66201

Customized equipment dealer catalogues, 1984 black books (6). **Staff:** Bill Daniels, Kathy Daniels, Vern Howard, Pat Hibbs, Patricia Braymer, Judy Pinder.

Data Communications 1014

3000 Directors Row, Memphis 38131

BUYLINE information network, BIAS newsroom management system, REPLINE products for the rep. SPOTLINE products for the ad agency, DCC newsroom management system. **Staff:** Norfleet Turner, Scott Pierce, Skip Swayer, Mike Bower, Doug Dommegue, Greg Calhoun, Sarah Turnipseed, Cindi Aeree, Michael Hunter, Bob Livingston, Marshall Clark, Randy Culpepper, Frances Ryan, Dick Dortch, David Heckel, Patti Ballew.

Datatek 1428

1121 Bristol Rd., Mountainside, N.J. 07092

Video and audio routing switchers, video, audio and time code amplifiers, TV transmit-

ter color phase equalizers, and identification of source system. **Staff:** Mervyn Davies, Bob Rainey, Bob Rainey Jr., Allen Witheridge, Skip Malley.

Datatronix 1504

2100 Reston Ave., Reston, Va. 22091

Broadcast consoles, amplifiers, equalizers, faders, patch bays.

Dataworld 315

1302 18th St., NW, Suite 502, Washington 20036

Broadcast database including translators, allocations, cellular radio contours and other FCC data. **Staff:** Jack Neff, Pat Gallagher, Mabel Nelson, Shirley Ostmann, Hank Brandenburg, Bob Kircher.

Datum 1708

1363 S. State College Blvd., Anaheim, Calif. 92806

Encoders and decoders, character generators, videomagnetic tape search system.

Davis & Sanford Co. 1751

24 Pleasant St., New Rochelle, N.Y. 10802

Tripods, heads, fluid heads, dollies, monitor mounts, pedestal stands for cameras and model fluid head*. **Staff:** E. Edward Resk, Gloria Gonye, Redi Resk.

dbx 107A

71 Chapel St., Newton, Mass. 02195

Tape noise reducers, compressor/limiters.

Delcom Corp. 1638

6019 S. 66th E. Ave., Tulsa, Okla. 74145

Custom and standard system design with control room furnishings and cabinetry. **Staff:** Sam Pate, Patrick Quinn, Gerald Whitworth, Tom Roberts, Chris Miller, John Vavrock, Marty Brown, Jerry Koerner, Ken Clayton, Cherridah Pate.

Delta Electronics 105

5730 General Washington Dr., Alexandria, Va. 22312

AM stereo exciters and modulation monitors, RG-4 receiver/generator, and ATS option for RCS-IV remote control system. **Staff:** Bob Bousman, Joseph Novak, John Wright, Charles Wright, Tom Wright, B. Shreve.

Desisti Americas 1131

141 Garden St., Hoboken, N.J. 07030

200 w CID hand held discharge light* for use with standard 30-volt battery belts, 2500 w CID followspot*, 200, 575 and 1200 w HMI par units with new sylvania brite beam lamps*, 2500 w focusing open face CID discharge unit*, 650, 1000 and 2000 studio fresnels*, 2000 w lightweight focusing unit*, motorized hoist/rigging system for lights and studio monitor mounting on grids*, three-light kit case*, 2500 w HMI soft-light with ballast and accessories*, portable lighting kits, other softlights, electrical track system, lightweight grip and mounting equipment, 500 w pinza clamp light with accessories. **Staff:** Mario DeSisti, Frank Mar-sico, Jorge Montero, Fred Costantini, Wally Mills.

De Wolfe Music Library 1734

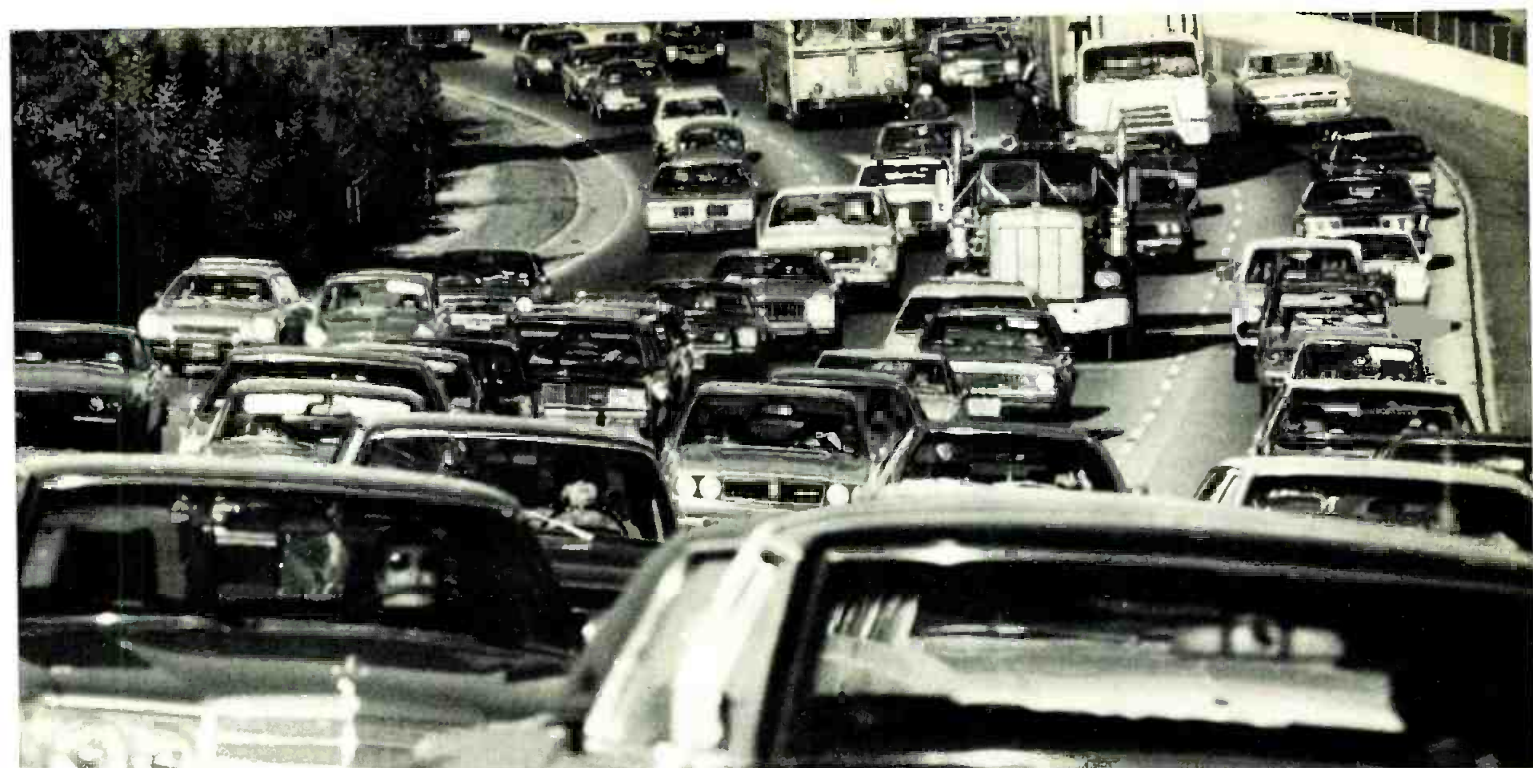
25 W. 45th St., New York 10036

Production music library, sound effects library. **Staff:** Andy Jacobs, Mitchel Greenspath.

Dielectric Communications 455

Tower Hill Rd., Raymond, Mass. 04071

FM antennas, coaxial switches, coaxial transmission line, dehydrators, RF loads,



YOU TAKE DRIVE TIME AND LEAVE THE REST TO US

Drive time is where you make the bulk of your profits.

We know it; you know it.

So if you measure the contribution of the rest of your radio day to that of drive time, you'll come to this inevitable conclusion: you ought to be concentrating your resources where they count most.

But that may leave you with the problem of filling the rest of your broadcasting day with quality programming. How do you do it?

More and more radio executives say the answer is ABC Talkradio.

ABC Talkradio not only can fill most of your regular broadcasting day (up to 12 hours), we'll make your weekends totally listenable, too. With 9 hours of programming Saturday and Sunday.

The ABC Talkradio lineup is packed with personalities who are experienced professionals, informed, provocative, entertaining. So audiences do more than just stay tuned, they get involved, not only with the programming but also with your sponsors.

Want some examples?

Dr. Susan Forward and Michael Jackson have grown their 18+ audiences more than 63% and 70%, respectively, for KNUS-Denver in the latest rating period.

Owen Spann, Dr. Forward and Jackson have scored increases ranging from 29% to 218% for WCBM-Baltimore.

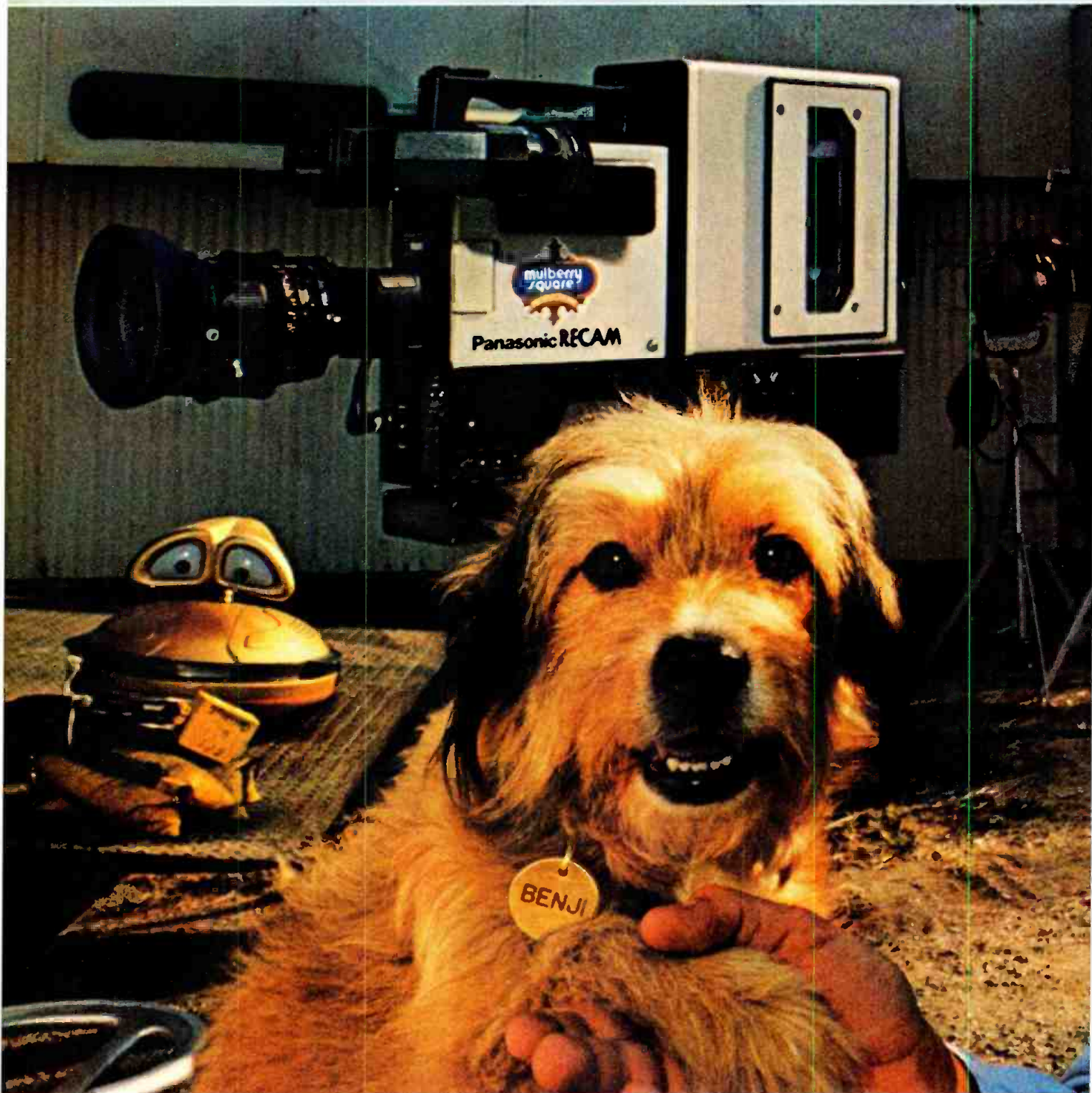
Even in a mature Talkradio market like Los Angeles, Michael Jackson and Dr. Toni Grant are increasing audiences. For KABC, Jackson increased his 25-54 women listenership by 22% and Dr. Grant increased hers by 56% in one year.

Each program host on ABC Talkradio has achieved national recognition. Each generates publicity coverage from every type of medium. So it's no wonder audiences talk about the personalities on Talkradio.

To learn more about why you should be concentrating locally on drive time and letting the stars of ABC Talkradio integrate with your local staff, talk with Rick Devlin, Vice President, Director of ABC Talkradio at (212) 887-5638.



"Panasonic RecamTM made our



On Saturday mornings, children all over America are being entertained by a unique new CBS-TV series, "Benji, Zax and the Alien Prince." What makes this show unique is more than a lovable dog. It's the fact that this Mulberry Square Productions project is the first network series

entirely shot and edited on ½-inch tape. And the system they selected was Panasonic Recam.

One of the reasons Joe Camp selected Recam is its incredible YIQ M-Format picture quality. Another reason is its portability. It makes changing scenes and locations fast

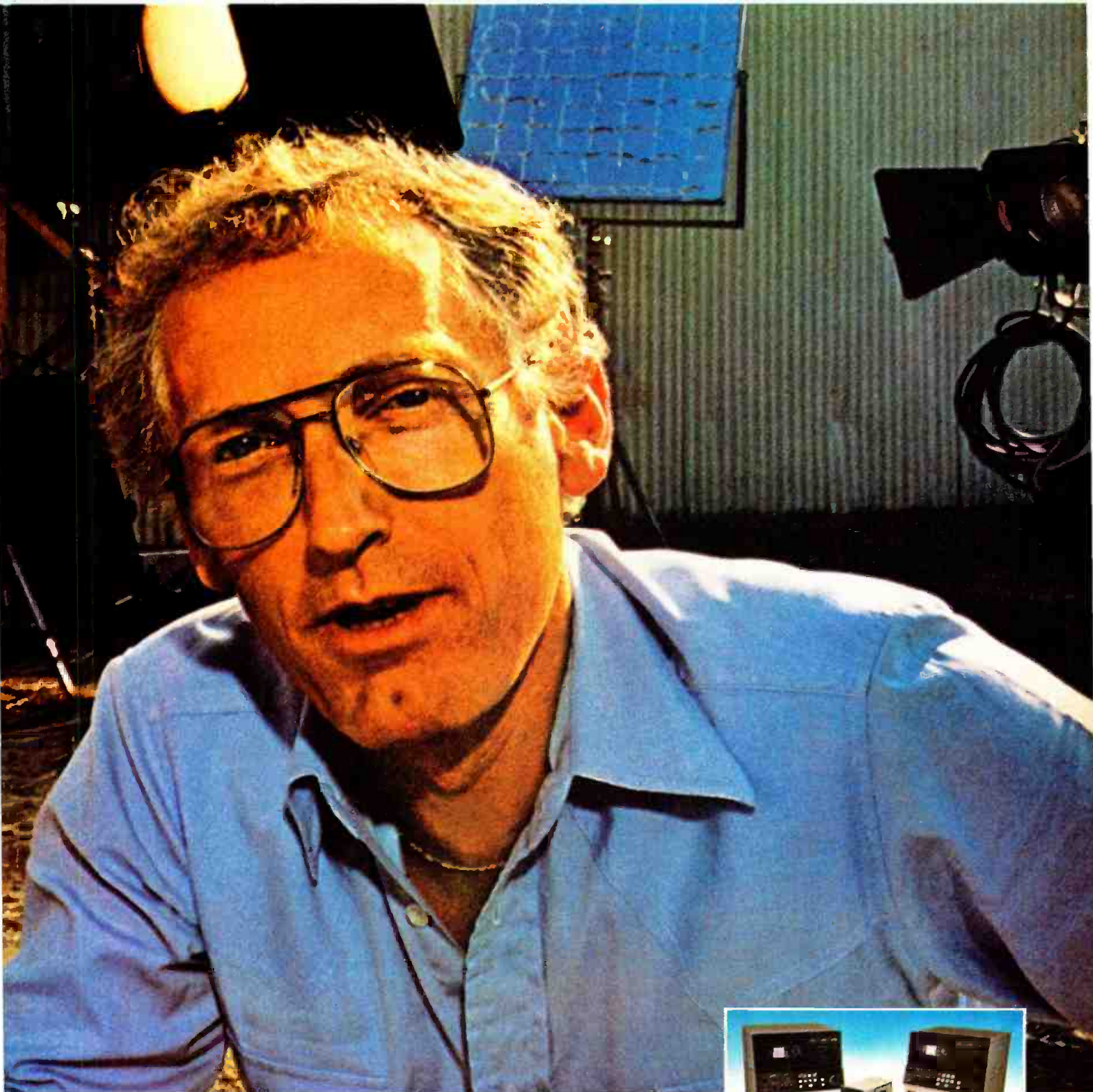
and easy. And that's important on a tight production schedule.

What's more, this "Benji" production utilizes Recam's remarkable ½-inch off-line editing system, after which, each show is transferred to 1-inch for television broadcast.

Recam was also selected by ABC

new Benji TV series possible."

Joe Camp, Creator of Benji.



Sports to record their momentous ascent of Mt. Everest for "The American Sportsman". And by the producers of the epic science-fiction film "Dune" to record "The Making of Dune" for TV broadcast in 1984.

You can see "Benji, Zax and the Alien Prince" on Saturday mornings.

But you can see Recam right now. Just call your nearest Panasonic regional office:

Northeast: (201) 348-7336

Midwest: (312) 981-4826

Southeast: (404) 925-6835

Southwest: (214) 258-6400

West: (714) 895-7200



Panasonic®
AUDIO-VIDEO SYSTEMS DIVISION



FUTURE WORK: Where in the Rewired World Will Americans Find Jobs?

Martin Agronsky moderates this new segment of the provocative, critically-acclaimed series, "Rewiring Your World," which can be previewed by you for broadcast during the Orwellian year of 1984.

FUTURE WORK goes behind the grim headlines ... "Robots Make Robots" ... "Computers Eliminate Jobs" ... to ask some of the most vital questions of the decade. How can we survive as a nation in a world that is bewildering in its breakneck rate of change? Who is working to meet the tremendous challenge to train America's workers for future work in the Information Age if we are not to become obsolete?

FUTURE WORK is the latest edition of "Rewiring Your World," a public affairs series sponsored by the Communications Workers of America (CWA) to focus attention on issues emerging in this nation's leap from the Industrial Age to the Information Age.

Panelists include Eleanor Holmes Norton, head of the National Council on the Future of Women in the Workplace; Dr. John Gibbons, Director of Congress' Office of Technology Assessment; Bill Wiggernhorn, director of the Motorola Corporation's Training and Education Center; Edward Cornish, president of the World Future Society, and Glenn E. Watts, president of the 650,000-member Communications Workers of America.

This half-hour program is now available for television broadcast. Program directors should contact Thea Marshall, executive producer, at 1511 K Street, N.W., Suite 207, Washington, DC 20005. (202) 737-5840.

waveguides and accessories, waveguide switches, multiplexers, combiners and diplexers. **Staff:** J. Beville, H. Acker, S. Thomas, S. Smith, S. Dickinson, W. DeCormier, D. Manion, W. Warren, W. Holroyd, A. Pratt, L. Waterhouse.

Digital Entertainment Corp. 1600
69 North St., Danbury, Conn. 06810

Digital audio recording system.

Digital Services 1302
3622 N.E. 4th St., Gainesville, Fla. 32601

Digital video effects, master control automation.

Digivision 1507
4980 Carrol Canyon Rd., San Diego 92121

High resolution digital converter. **Staff:** Hugh Gillogly, John Cambon, Sherman DeForest, Dale Seegmiller.

Dilor Industries 1134B
Box 2169, 37749 Second Ave., Squamish, B.C. V0N 3G0

Di-Tech 1301
48 Jeffry Blvd., Deer Park, N.Y. 11729

Audio/video routing switchers, audio/video/pulse distribution amplifiers, video equalizers, video detectors. **Staff:** George Petrilak, Bob Johnson, Joe Perullo, Anthony Bolletino.

Dodge Data Systems
1515 Winne. Helena, Mont. 59601

Stationmate—computer software for small and medium sized radio and TV stations. **Staff:** Bob Fitzgerald, Steve Harper, Dick Dodge.

Dolby Laboratories 1311
731 Sansome St., San Francisco 94111

Noise reduction equipment for audio and videotape recording including one-inch modules for VTR's.

Dorrough Electronics 312
5221 Collier Pl., Woodland Hills, Calif. 91364

AM, AM stereo and FM audio processors*, stereo generator*, loudness monitor. **Staff:** Mike Dorrough, Kay Dorrough, Scott Stevens, Craig Kingcaid.

Drake-Chenault 2875
8399 Topanga Canyon Blvd., Box 1629, Canoga Park, Calif. 91304

Consulting services for adult contemporary, contemporary hit radio, modern country, black, MOR and Nostalgia/oldies formats, plus Contempo 300, Great American Country, Supersoul, Lite Hits, Great Gold*, Hitparade, XT-40, History of Rock & Roll*, and Radio Free America*. **Staff:** James Kefford, Denny Adkins, Ed Boyd, Steve Sandman, Franke Jolle, Debbie Primo, Len Boardman, Carol Holt, Chris Carrell, Paul McQuillan, Bob Laurence.

Dreamdata 1728
940 N. Orange Dr., Los Angeles 90038

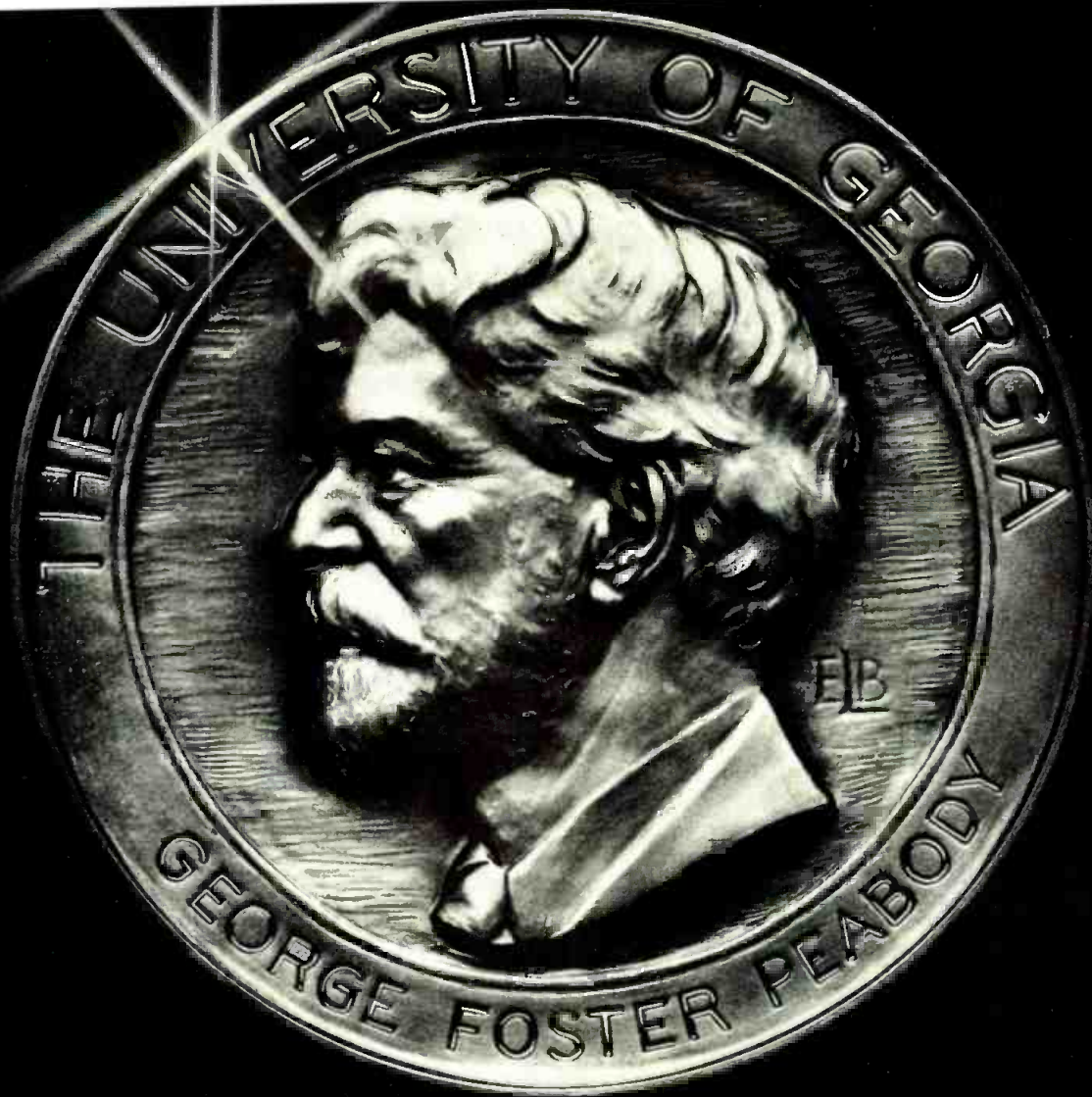
Color computerized video prompter.

DSC 1302
3622 NE 4th St., Gainesville, Fla. 32601

Digital effects system, full video manipulation unit*, master control switcher automation, sports and elections statistical package. **Staff:** John Davis, James Seipp, Ann Merideth.

Dubnar Computer Systems 1630
158 Linwood Pl., Fort Lee, N.J. 07024

Upgrade options to CBG-2 video graphics generator*, CCC-12 color corrector com-



**Broadcasting's
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Yet that is what WBBM-TV has done.

This year, to Scott Craig and Michael Beatty for "Studebaker:
less than they promised" . . . a fascinating look at an automobile
that had been the heart of a town for more than a century.

Another Peabody. Another example of WBBM-TV's
commitment to excellence.

WBBM-TV CHICAGO CBS 2

puter. **Staff:** Gary Berger, Emily Dubner, Harvey Dubner, Steve George, Mick Ghazey, Jerry Ilowite, Stuart Lang, Ivan Maltz, Keith Thomson, Andy Cooper.

Dwight Cavendish 442
2117 Chestnut Ave., Wilmette, Ill. 60091

DX Communications 465
116 Midland Ave., Port Chester, N.Y. 10573

Dynair Electronics 1404
5275 Market St., San Diego 92114

Routing switchers, machine control, data/control switching, distribution and switching equipment. **Staff:** Garry Gramman, Bob Vendeland, Bob Jacobs, Tom Meyer, Al Wilson, Ed Manzo, Walt Wydro, Mike Hall, Ellie Jett, Phyllis Lynch.

Dynamic Technology 1719
Zonal House, Alliance Rd., Action, London
VTR library system.

Eastman Kodak 1214
343 State St., Rochester, N.Y. 14650

Videotape supplier, VCR's, films, film-to-tape transfer techniques. **Staff:** J.D. Agin, W.A. Koch, L. F. Coleman, R.K. Schafer, J.M. McDonough, J.G. Spence, R. S. Woolman, G.D. Winter.

ECD Industries 229
2034 Armacost Ave., Los Angeles 90025

Echolab 1510
175 Bedford Rd., Burlington, Mass. 01803

Color special effects generators, audio follow video programmable audio switcher. **Staff:** Ted Whittaker, Larry Baxter, Russell Whittaker, Roger Smith.

Econco Broadcast Service 1759
1318 Commerce Ave., Woodland, Calif. 95695
Rebuilt power tubes for AM, FM and TV. **Staff:** Jean Baker, Bill Barkley, Dave Elliott, Ray Shurtz, John Sullivan, John Canevari.

EECO Inc. 1314
1601 E. Chestnut Ave., Santa Ana, Calif. 92702
Multimachine computer-assisted editing system*, IVES editing system enhancement, VTC and LTC readers and generator and complete IVES editing system. **Staff:** John Ludutsky, George Swetland, George Treneer, Gerald Miller, Tim Thompson, Eloy Chairez, Sam Villari.

EEG Enterprises 1155
1 Rome St., Farmingdale, N.Y. 11735

Vertical Interval digital transmission equipment, closed captioning and line 21 text service data recovery decoders, computers for data transmission.

EEV 1335
7 Westchester Pl., Elmsford, N.Y. 10523

Leddicon and vidicon camera tubes, amplifier klystrons for UHF transmitters, CCD's and CCD cameras, power tubes for AM and FM transmitters, 55 kw klystron*. **Staff:** Paul Plurien, Mike Mandl, Tom Soldano, Charles Shellenberger, Walter Bielinski, Harry Kozicki, Kees Van Der Keyl, Don Rose, Ann Sayers, David Clissold, Art Ferry, Ed Sonddek, Dave Farrar, Dave Wilcox, Geoff Clayworth, Mike Kirk, Gary Chapman, Graeme Chalk, Peter Batay, Rick Bossert.

EG&G Electro-Optics 1327
35 Congress St., Salem, Mass. 01970
High intensity lighting equipment.

Elcom Bauer 412
6199 Warehouse Way, Sacramento, Calif. 95286
AM/FM transmitters, audio processing

equipment. **Staff:** Paul Gregg, Rene Trujillo, Dick Noteman.

Electro Controls 1631C
2975 S. 300 West, Salt Lake City 84115
Studio lighting and control equipment.

Electro Impulse Laboratory 117
116 Chestnut St., Box 870, Red Bank, N.J. 07701

High power RF loads, attenuators, baluns and wattmeters. **Staff:** Thomas McNicholas.

Electro-Voice 1159
600 Cecil St., Buchanan, Mich. 49107

Microphones, mixers, audio effects devices, studio monitor speakers.

Electrohome Ltd. 1744
809 Wellington St., North Kitchener, Ont. N2G 4J6

Video and data monitors.

Electronic Research 105A
108 Market St., Newburgh, Ind. 47630

Electronic Systems Lab 406A
Box 100456, Fort Lauderdale, Fla. 33310

Elicon 143
245 Viking Ave., Brea, Calif. 92621

EMCEE Broadcast Products 1621
Box 68, White Haven, Pa. 18661

100 w UHF LPTV transmitter, 1 kw UHF amplifier, 10 w MDS transmitter, turnkey installations, tower erection and maintenance.

Emcor 429
1600 4th Ave., Rochester, Minn. 55901

Modular enclosure systems.

Emergency Alert Receiver 508
1 W. 30th St., New York 10001

SCA*, EBS and AM-FM receivers. **Staff:** Jack Bergman, George Ipolyi, Len Feldman, Ruth Kovner.

ENG Corp. 1022
2930 Cloverdale Ave., Concord, Calif. 94502

Environmental Satellite Data 1509A
5200 Auth Rd., Suitland, Md. 20746

Color weather graphics terminals and equipment*. **Staff:** Terry Hambrick, Ken Geremia, Terry McClain, Lorne Kenney.

ERA 1618
20 E. Huron, Chicago 60611

ESE 116/1757
142 Sierra St., El Segundo, Calif. 90245

Digital clocks, timers, time code generators and readers, master clock systems, programmable timers, SMPTE time code comparators* and phone patch*. **Staff:** Jerry Johnson, Bob Mayers, Bill Kaiser, Terry Williams, Lois Stroud, Jan Mayers, Diane Johnson.

Euro Equipment Services 1175
7 Tallman St., Spring Valley, N.Y. 10977

Magstand animation stand. **Staff:** C. Cattellani, P. Desposte, D. Turchen.

Eventide 323
265 W. 54th St., New York 10019

Special effects processor/digital reverb*, time compression system, Specsystem, digital effects unit, broadcast digital audio delay and delay lines, audio digital delay line, harmonizer for audio time compression. **Staff:** Joseph Shapiro, Richard Piatt, Richard Factor, Anthony Agnello, Suzanne Langle.

Evertz Microsystems 1745
3515 Mainway, Burlington, Ont. L7M 1A9

Longitudinal and vertical interval time code generators, readers and character generators including 4900 LTC/MITC reader/VCG/translator*, 3600D and 3700D LTC generator/reader/VCG. **Staff:** Alan Lambshead, Dieter Evertz, Shawn Carnahan, Mark Wronski, Peter McDonnell, Gary McKeon, Alan Leon.

Excalibur Industries 1106
12427 Foothill Blvd., Lake View Terrace, Calif. 91342

Standard, custom and shock absorber* cases. **Staff:** John Gresch, Joe Byron, James Lee.

Fartronics 1709
151 Bentley St., Markham, Ont. L3R 3X9

Intercom systems, pre-wired audio patchfields, audio distribution amplifiers, audio consoles.

Feldmar Watch 1777
9000 W. Pico Blvd., Los Angeles 90035

Analog and digital stopwatches and clocks, timers and watches. **Staff:** Sol Meller, Elie Schlimovits, James Andres, Barney Feldmar.

Fenwal Inc. 196
400 Main St., Ashland, Mass. 01721

Fiberbilt 232
601 W. 26th St., New York 10001

Ficon 202A
Box 150846, Nashville 37215

Fidelipac 411
Box 808, Moorestown, N.J. 08057

Dynamax broadcast tape, reload kit, tabletop bulk tape eraser. **Staff:** Art Constantine, Dan McCloskey, Roger Thanhauser, Rosemary Jukes, Joanne Donahue, Gary Gresham, Vladimir Nikanorov.

Film House Inc. 231
700 18th Ave., South, Nashville 37203

Film/Video Equipment Service 1153
1875 S. Pearl St., Denver 80210

Portable Energy Products SLA 12120 battery pack*, sealed lead-acid and NiCad battery packs and belts wide angle attachments for ENG lenses, continental helicopter mount. **Staff:** Dean Schneider, Jerry Schneider, Jane Swearingen, Ron Cotty.

Flash Technology 1619
55 Lake St., Nashua, N.H. 03060

Tower lighting, obstruction marking for towers. **Staff:** Fred Gronberg, Lew Wetzel, Stan Kingham, Denis Buckland, Rick Sullivan.

John Fluke Mfg. 227
6920 Seaway Blvd., Everett, Wash. 98206

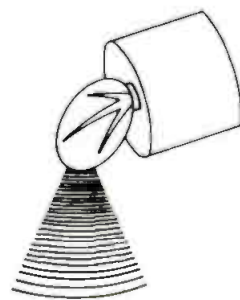
For-A Corp. 1306
49 Lexington St., West Newton, Mass. 02165

VTW-400 character generator*, FA-430 time base corrector and image processor*, FA-600 and FA-650 time base correctors*, CCS-4300 color corrector*, DEC-1000 color decoder*, FA-400P PAL color frame memory*, other time base correctors, video typewriters and accessories, video writers, time code generators and readers, title keyer and color encoder.

Bret Ford Manufacturing 183
9715 Soreng Ave., Schiller Park, Ill. 60176

Ford Aerospace 1507B
Ford Rd., Bldg. 2, Rm. 38, Newport Beach, Calif. 92660

Taft and Harris team up again... for satellite uplinks



As a pioneer in the installation of TVRO satellite earth stations, it is only natural that Taft Broadcasting is taking the lead in the use of satellite uplinks.

"A few years ago, when we decided that satellite communications was the wave of the future, we took a good, hard look at all of the TVRO equipment available," says John Owen, Taft Vice President for Television Engineering. "The Harris high-speed, positionable kingpost antenna system was the one that best fit our needs, with its ability to reposition between any two satellites in less time than a normal station break.

"We started out equipping three of our stations with Harris systems, and soon expanded the service to all of our TV stations. Most of these TVROs paid for

themselves in a year's time—with network fees and switching cost-savings contributing a majority of the payback.

"Now, with the growing opportunities in satellite uplink business, Taft has installed four Harris redundant 9-meter uplinks, all with facility control for a totally automatic approach.

"At WDAF-TV in Kansas City, we are uplinking Royals baseball. At WBRC-TV in Birmingham, it's Stallions football. And at WDCA-TV in Washington, D.C., Black Entertainment Television is transmitted six hours a day. We are also using our uplinks for news feeds to the major

networks, and we're renting time to private users for teleconferencing and other requirements. Also, we own and operate Transponder 12X on Westar V to support our satellite activities."

Taft's extensive commitment to satellite communications is just one example of the company's foresightedness and solid business sense. Its choice of Harris satellite equipment is still another.

For more information on how Harris can help you get ready for the future, contact Harris Corporation, Broadcast Transmission Division, P.O. Box 4290, Quincy, Illinois 62305. (217) 222-8200.



Forox Corp. 1620D
393 West Ave., Stamford, Conn. 06902

Videotape animation camera systems, audio display systems.

Fort Worth Tower 1010
1901 E. Loop 820S, Box 8597, Fort Worth 76112

Towers prefabricated equipment and earth stations. **Staff:** T.W. Moore, T.C. Moore, C. Moore, B. Moore.

Fortel 1409B
2985 Gateway Dr., Suite 600, Norcross, Ga. 30071

Time base correctors, synchronizers, image correction systems. **Staff:** Darryl Keeler, Ray Connelly, John Larkworthy, John Duffy, Harris Rogers, Alan Kartes, Virgil Lowe,

Kipp Kramer, Herb Johnson, Bruce Pharr, Bernie Johnson, Jorle Monk.

Fostex 1765
15431 Blackburn Ave., Norwalk, Calif. 90650

Staff: Yoshiharu Abe, Fred Huang, Mark Cohen, Maria Mudd, Mary Uhle, Kim Champlin, Budd Johnson, Shinji Sugiura, A. Adachi, Sheri Trehan, Tina Cancino, Gary Watson, Nick Nuetra, Bob Hunt, Satoshi Isomoto.

Frezzolini Electronics 1107
7 Valley St., Hawthorne, N.J. 07506

Nickel cadmium battery packs, chargers and AC adaptors, portable and studio lighting kits, videotape recorders, multiple battery chargers/AC adaptors and associated

hardware, soft-pattern 12-14.4 VDC mini fill lighthouse*, power charges*, dual channel battery charger and cell conditioner*, hi-tech battery packs*. **Staff:** James Crawford, Jack Frezzolini, Jack Zink, Bill Birdsall, Dick Turchen.

Fuji Photo Film 1413
350 Fifth Ave., New York 10118

Videotapes for mastering and duplication, head cleaners. **Staff:** J. Dale, T. Kobayashi, S. Bauer, A. Bedross, T. Ushijima, E. Havens, T. Daly, B. Kuczk, J. Lester, J. Walsh, S.P. Henderson.

Fujinon 1411
672 White Plains Rd., Scarsdale, N.Y. 10583

Staff: H. Minoshima, Jack Dawson, Dave Waddell, Jess Kodaira, M. Ito, John Newton, Keith Tindall, T. Sumiya, John Geiger, N. Suzuki, Rob Russin, Reno Morabito, Mort Russin, Bill Kelemen, M. Kanari.

G&M Power Products 339
1130 N. Highland Ave., Los Angeles 90038

Garner Industries 1233
4200 N. 48th St., Lincoln, Neb. 68504

Bulk erasers* for audio and videotapes. **Staff:** Philip Mullin, Bruce Alderman, Terry Morrison, Don Becker.

GEC McMichael 1514
Sefton Park, Bells Hills, Stoke Pages, Slough, Berkshire, SL2 4HD

Broadcast telephone interface systems, pre-wire patch panels, mono and stereo program switchers.

General Electric 1007
Nela Park-4033, Cleveland 44112

Watt-Miser lamps*, multi-mirror camera lights*, other lighting equipment. **Staff:** Charlie Clark, Dick Dottermusch, Dan Fox, Dave Graham, Neil Kirschner, Andy Liscow, Kevin McMaster, Dick Somerfeldt.

Generic Computer Systems 308
Box 151, Butler, Pa. 16001

Software for traffic and billing on the Apple IIE and IBM personal computer. **Staff:** Joel Rosenblum, Dai Rosenblum.

Gentner Engineering 636
540 W. 3560 South, Salt Lake City 84115

Prewired patch panels, stranded wire punch block system*, telephone hybrid and interface systems*, Microtel tiny mixer for field use*. **Staff:** Russell Gentner, Bill Gillman, Elaine Jones, Gary Smith, Chris Gentner, Ron Jones, Susan Smith, Torina McMullin, Jim Barnes, Leslie Tipton.

Gerstenslager Co. 1347
1425 E. Bowman St., Box 390, Wooster, Ohio 44691

Mobile TV vans and trailers. **Staff:** Stanley Buczek, Allen Butts, Earl Daye, Arthur Stillo, Kenneth Vagnini.

Giese Electronic 327
Klaus-Groth-Strasse 84-86, Hamburg 26, West Germany 0

Global Systems Corp. 1123A
15 Hale St., Haverhill, Mass. 01830

Goldnugget 628
Box 13 EE, San Antonio, Tex. 78201

Alan Gordon Enterprises 1726
1430 Cahuenga Blvd., Hollywood, Calif. 90028
Power supplies and batteries, video dollies and accessories, fluid heads, jib arm, wind-screens and sound accessories, video test charts, Trans Vid wireless video artist*, AGE sound collector for PZM and Q master sys-

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NEW SALES OPPORTUNITIES
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KATZ TELEVISION CONTINENTAL / A DIVISION OF KATZ COMMUNICATIONS INC

tem. **Staff:** Grant Loucks, Robert Kuhagen, Robert Capps, Ted Lane, Tad Malone.

Gorman-Redlich 506
6 Curtis St., Athens, Ohio 45701

NOAA weather radios, digital AM antenna monitors, EBS encoders and decoders. **Staff:** James Gorman, Judy Gorman, John Gorman, Elizabeth Gorman, Catherine Gorman, Thomas Gorman.

Gotham Audio 509A
741 Washington St., New York 10014

Systex digital audio system, microphones, edit turntables and broadcast products, tape machines, loud speakers, broadcast limiters, audio and production consoles. **Staff:** Stephen Temmer, Russell Hamm, George Johnson, John Hall.

Graham-Patten Systems 1227A
Box 1960, Grass Valley, Calif. 95945

Downstream keyer for post production, post production audio mixer, distributions amplifiers, 1235 and 1238 downstream keyers*. **Staff:** Merv Graham, Mike Patten, Jim Ward, Bill Rorden, Richard Bannister, Jeanie Sickie.

Gralan Distributors 230
Box 45134, Baton Rouge, La. 70895

Grass Valley Group 1207
Box 1114, Grass Valley, Calif. 95945

Video production systems and switchers, component video switchers, audio/video routing switchers, video distribution equipment, sync and video processing equipment, fiber optic transmission system. **Staff:** Harry Armstrong, Jeffrey Baron, Arthur Berne, Craig Birkmaier, Michael Bober, Les Brown, Douglas Buterbaugh, Gloria Carbone, Peter Challinger, Robert Cobler, Charles Coover, Leonard Dole, Larry Ehnstrom, Barry Enders, Steven Hackett, Roger Hale, Edward Hobson, Karen Holt, Robert Johnson, Jay Kuca, Robert Lambdon, Richard Le Forge, David Moore, Pete Mountanos, Ronald Naumann, Thomas O'Conner, Thomas Parrish, William Powers, Keith Reynolds, Donald Schlichting, Dennis Shelton, Frank Shufell, Louis Swift, Peter Symes, Kay Turner, Jo Ann Vander Beek, Robert Webb, Daniel Wright.

Gray Communications 1618A
Box 3229, Albany, Ga. 31708

Supplier of video equipment to broadcast, cable and professional users, mobile production vehicles. **Staff:** Perley Eppley, Richard Schmidt, Fran Fehr, Ken Shewmake, Bill Baird.

Gray Engineering Labs 1755
504 W. Chapman Ave., Orange, Calif. 92668

Staff: John Gray, Scott Gray, Phillip McFadin, Tom Clark, Lewis Reitz Jr., Jim McAtee.

Great American Market 1108
826 N. Cole Ave., Hollywood, Calif. 90038

LZR 'lighting control console*', low voltage battery-operated sequencer, fiber optic display* and compact projector*. **Staff:** Joseph Tawil, Mofid Bissada, Andrea Tawil, Nuella Armbruster, Jon Harshaw, Rolfe Tisdale, Ken Whitwright, T.J. McHose, Len Shulman, Walter Devore, Ed Gallagher, Bill McManus, Steve Lister, Keiichiro Ryu, S. Harada.

David Green Consultants 417
22 W. Royal St., Leesburg, Va. 22075

Equipment sales and rental, consulting services. **Staff:** David Green, Ashley Scarborough,

ough, Walt Lowery, Kathleen Karas, Nancy-lee Marshall, Sherry Kirk, Carol Baker, Gary Baker, Barbara Schneider, Bill Stacy, Ellen Scarborough, Gloria Green.

Gregg Laboratories 438
1542-A Moulton Pwy., Tustin, Calif. 92680

AM stereo audio processing system, audio broadcast control console, studio/telephone interface system.

Grosh Scenic Studios 1163A
4114 Sunset Blvd., Hollywood, Calif. 90029

Grumman Aerospace 1631B
Mail Station C1405, Bethpage, N.Y. 11714

Machine control system, sync proc.

James Grunder & Associates 1760
2019 W. 49th Terrace, Westwood Hills, Kan. 66205

GTE Spacenet Corp. 1139
1700 Old Meadow Rd., McLean, Va. 22102

Transponder time. **Staff:** Michael Jeye, Susan Kalla, Gene Tamplin, Dave Schweppe, Marianne Voight.

Hallikainen & Friends 208A
101 Suburban Rd., San Luis Obispo, Calif. 93401

DRC190 automated multisite transmitter remote control system*, audio mixing system for television, digital metering update kits, transmitter control computer. **Staff:** Harold Hallikainen, Frank Calabrese, Eric Dausman, Gerry Franke, Len Filomeo, Rick Smith, Betsy Ehrler, Donna Franke, Rita Kinnear, Bill Foote, Gerry Fortier, Mike Nolan.

Harris Corp. 401
Box 4290, Quincy, Ill. 62305

12-channel Medalist audio consoles*, 60 kw UHF transmitter with new high-efficiency klystron*, 30 kw VHF transmitter*, 50 kw medium wave transmitter*, TTS-4 teletext origination system*. HVS 540 time base corrector*, digital video effects unit*, 632 frame synchronizer with component input*, 2 ghz portable transmitter* and 2 ghz and 13 ghz STL transmitter and receiver*, AM, FM and TV transmitters, FM and TV antenna models, AM stereo generator and monitor, satellite antenna control system, computer-controlled studio camera, ENG/EFP camera, audio consoles, Autotron Star business automation system, Harris 9000 program automation, Harris 9100 intelligent remote control system, Iris II digital still-store system, frame synchronizers and time base correctors, television microwave equipment, 2, 7 and 13 ghz transmitters and receivers, Global IX portable microwave transmitter. **Staff:** G. Whicker, E. Jaeger, K. Schwenk, J. Delissio, E. Edwards, H. Regnier, I. Corbell, J. Smith, J. Ash, J. Barry, R. Burns, R. Fluent, E. Gagnon, D. Meier, J. Parke, B. Vaughan, R. Weirather, J. Lakin, R. Pawley.

Harrison Systems 1324
437 Atlas Dr., Nashville 37211

Audio mixing consoles and processing equipment, frame synchronizers, cameras, earth stations, microwave equipment, teletext systems, time base correctors, TV digital still store systems.

HEDCO 1225
Box 1985, Grass Valley, Calif. 95945

Audio line amps, routing switchers, video switchers, video pulse amps, video and audio distribution amplifiers, video monitoring alarm module. **Staff:** Peter Hughes, Lee Frisius, Larry Arzt, Bob Grant, Maggie Fleck-

steiner, Sherri Douglas, Steve Miller, Rick Grant.

Karl Heitz 1747
34-11 62d St., Woodside, N.Y. 11377

Fluid and counter-balanced heads for cameras, levelling balls for fluid heads for cameras, mini-microphone fishpole. **Staff:** Karl Heitz, Laval Fuller, Cliff Sawyer, Zinita Sawyer, Ken Bannister.

Hipotronics 1779
Rt. 22, Brewster, N.Y. 10509

Hitachi Denshi America 1402
175 Crossways Park West, Woodbury, N.Y. 11797

Broadcast cameras, recorders and playback equipment, closed circuit systems.

HM Electronics 1130
6151 Fairmont Ave., San Diego 92120

Wireless microphones system*, wall-mount speaker station*, wireless interface belt pack*, other wireless microphones and intercoms. **Staff:** Harry Miyahira, John Kenyon, Irene Machaj, J. Michael Hughes, Don Kutz.

Holaday Industries 206A
14825 Martin Dr., Eden Prairie, Minn. 55344

Isotropic broadband field strength meters*, fiber optic link for readout of above meters. **Staff:** Reed Holaday.

Hotronic 1331B
1210 S. Bascom Ave., Suite 128, San Jose, Calif. 95128

TBC/frame synchronizer.

Howe Audio/BCP 321
3085 A Bluff St., Boulder, Colo. 80301

Audio consoles*, phase chaser, accessory equipment. **Staff:** Dave Howe, Jeff Michael Lee Edwards, Dave Orr, Rick Patterson, Mike McClain, Seldon Ridenour.

Hungerford & Co. 310
678 Front St., NW, Grand Rapids, Mich. 49504

Composite radio and television revenue reports. **Staff:** Clifford Aldrin, Richard Hungerford, George Rivin.

IBM Corp. 1607C
1133 Westchester Ave., White Plains, N.Y. 10604

Staff: Dyrvald Haag, Ben Meyerhoff, Hans Weiss, Paul Reps, Barbara Nash, Carlin Mercer, Al Armstrong, Bob Evans, Nils Thompson, Stan Stoller, Gerry Mueller, Charlie Doolittle, Rod Rockwell, Mike Wood, Tim Chunn.

ICM Video 1766
Box 26330, Oklahoma City 73126

Video processors, video enhancers, video/audio distribution amplifiers, satellite receivers and accessories.

IGM Communications 403
4041 Home Rd., Bellingham, Wash. 98226

Broadcast automation control systems, new and update instacart, go-cart services and custom service. **Staff:** Jim Wells, Nick Solberg, Carl Peterson, Jim Wolniakowski, Rick Sawyer.

Ikegami Electronics 1013
37 Brook Ave., Maywood, N.J. 07607

HL-95 camcorder and camera systems*, ENG/EFP video camera system*, high-definition studio/field camera and monitor system and electronic cinematography camera with lenses and accessories*, ENG microwave system for cameras*, In line gun CRT high resolution color monitors*, auto setup telecine camera system*, other ENG/EFP

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field and studio cameras, color monitors, broadcast monochrome monitors and distribution amplifiers. **Staff:** N. Nishi, H. Schkolnick, Sam La Conte, Y. Sato, Craig Sloss, John Lynch, John Webb, Stuart Rauch, John Chow, Jerry Kraus, Frank Heyer, Wayne Weickel, Jim Starks, Bud Mills, Harvey Caplan, Len Wolff, Michael Aiello, Jeff Cohen, S. Yana, M. Narumi, T. Arai, T. Kazuma, H. Inuzuka.

Image Video 1341
700 Progress Ave., Unit 16, Scarborough, Ont. M1H 2L7

RGB and AFV routing switchers*, master control switchers*, passive routing switcher*, under monitor display*, voltage monitor, border generator downstream keyer. **Staff:** Andy Vanags, Frank Christo, Brian Mitchell, Bob Crowder, Bob Munzner, Gary Youngs, George Reesor, Alek Makarewicz.

Industrial Acoustics 322
1160 Commerce Ave., Bronx, N.Y. 10462

Acoustic structures for implementing studio design and construction. **Staff:** Robert Bue-low, John Duda, John Handley, Mike Weber, Robert Hysong, Zachary Jaquett.

Industrial Sciences 1232
3521 SW 42d Ave., Gainesville, Fla. 32608

Audio and video distribution amplifiers*, terminal/processing equipment, desk top controller* **Staff:** Homer Masingil, Robert Bachus, Roy English, Doug Akers, Mark Peterson, John Saurenman, Tom Harmon, Steve Dietrich, Dave Stanley, Kathy English.

Inflight Services 1316
485 Madison Ave., New York 10022

Information Transmissions Systems 1734A
16 E. Water St., Canonsburg, Pa. 15317

Innovative Television Equipment 1215
Box 681, Woodland Hills, Calif. 91365

Staff: Bert Rosenberg, Stanton Hollingsworth, Michael Rosenberg, Mark Rosenberg, Rick Low, Bob Gallagher, Hans Ziegner, Yury Podolsky.

Inovonics 304
503-B Vandell Way, Campbell, Calif. 95008

Audio signal processing, recording and instrumentation equipment for broadcast and recording. **Staff:** James Wood, Brian Fogerty.

Interactive Motion Control 138
8671 Hayden Pl., Culver City, Calif. 90230

Interactive Systems 1167-71
5601 N. Broadway, Boulder, Colo. 80302

Interand 1016
666 N. Lake Shore Dr., Suite 1100, Chicago 60611

Video graphics devices—Telestrators. **Staff:** Dr. Leonard Reiffel, Geoffrey Dunbar, Dr. Wayne Jung, Richard Karlin, Fred Corle, John Sarsfield, Michael Hiles, Andrea Morow, Linda Thomas-Phillips, M. Edwin Marlin, Larry DiBattista.

Intercommunications 1790
Ginza, Choku 1-13-9, Tokyo, Japan 104

Interface Electronics 1405A
One Studio Center, 8535 Fairhaven, San Antonio, Tex. 78229

Audio production mixer module for radio

and television, remote recording mixer for film, portable VTR and ENG. **Staff:** Robert Bruce, John Whipple, Nancy Bruce.

International Tapetronics 311
2425 S. Main St., Bloomington, Ill. 61701

Staff: Jack Hanks, Chuck Kelly, John Schaab, Bill Parfitt, Janet Schroeder, Mark Hill, Dave Montgomery, Mike Bove, Mark Wasserman, John Fesler, Cecil Henocq, Karen Ryder, Dick Lund, Gregg Paul.

Isis Electronics 337
2664 S. Santa Fe Ave., Los Angeles 90058

Itelco USA 1338
1620 W. 32d Pl., Hialeah, Fla. 33012

JBL Inc. 615
8500 Balboa Blvd., Northridge, Calif. 91329

Model 4411 loudspeaker system, two-way broadcast and compact studio monitor, broadcast consoles, compressor limiter, dual optiband equalizer and notch filter. **Staff:** Ron Means, Garry Margolis, Ken Lopez, Mark Gander, Juergen Wahl, Debra Watson.

Jefferson Data Systems 1629
501 Archdale Dr., Charlotte, N.C. 28210

In-station computer system, program management system, electronic news processing.

Jensen Tools 1747B
7815 S. 46th St., Phoenix 85040

Tool kits.

Jingle Machine 200A
4242 S. 35th St., Arlington, Va. 22201

Johnson Electronics 162
Box 7, Casselberry, Fla. 32707

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Jones Broadcasting Systems 326
106 N. Avondale Rd., Avondale, Ga. 30002

JVC Corp. of America 1234
41 Slater Dr., Elmwood Park, N.J. 07407

KY and ProCam video cameras, tape-Handler three-quarter inch and VHS video-cassette recorders, VE series edit controllers, special effects generators, monitors/receivers and accessories. **Staff:** Daniel Roberts, Michael Messerla, Gary Horst-korta, David Walton, John Brown, Steve Martin, Douglas DiGiacomo, Charles Roberts, Logan Enright.

K&H Products 1746
Box 246, N. Bennington, Vt. 05257
(See Porta-Brace).

Kahn Communications 625
839 Stewart Ave., Garden City, N.Y. 11530
AM stereo exciter, high and low frequency extenders for remote telephone service, AM stereo receiver*. **Staff:** Leonard Kahn.

Kaman Sciences 1607
1500 Garden of the Gods Rd., Colorado Springs 80933

Television and radio traffic and billing system designed and implemented on the IBM In-house system 38 minicomputer. **Staff:** Richard E.W. Smith, Ray Durrance, George Beattie, Ted Donovan, Vicki Clinebell.

Kangaroo Video Productions 1151
10845 Wheatlands Ave., Suite C, Santee, Calif. 92071

Kangaroo video pack* carrying case, Nagra recorders*, shoulder strap*, padded and top loading camera cases for video cameras*. **Staff:** Steve Leiserson, Lynne Domash, Steve Sickman, Joni Maussang, Sarah Carlin, Taeko Kobayashi.

Kavco 1509B
3931 Image Dr., Dayton, Ohio 45414

Audio, video, RF and communications systems, Kavcart VTR automation system, tape identification preparation center. **Staff:** Russell Johnson, Ralph Johnson Jr., Carl Raasch, David Thomas, Heinz Kapui, Don Wurst, Harold Thompson, David Borden, James Klopff, Everett Bergman, Brooke McCarter.

Kavouras 1635
6301 34th Ave., South, Minneapolis 55450

High-resolution weather graphics and animation system*, high-resolution real-time colorization system*, high-speed weather data transmission via Westar III*, color weather radar remoting equipment, real-time atmospheric monitoring—meteorological services and database Triton X—graphics, animation and GOES weather satellite image processing equipment. **Staff:** William Schlueter, Peter Sappanos, John Traynor, Stephen Kavouras, Leroy Walker, David Schlueter, Ralph Manuel, Bill Nelson, Sarah Stewart.

Kay Industries 122
604 N. Hill St., South Bend, Ind. 46617

Rotary phase converters for radio and TV transmitters. **Staff:** Aaron Katz, Bertha Katz.

Keylite Productions 1220
333 S. Front St., Burbank, Calif. 91502

Lighting/grip equipment, and expendables, sales and rental. **Staff:** Victor Kunkel.

Kings Electronics 1623
40 Marbledale Rd., Tuckahoe, N.Y. 10707

Video patch panels, patch cords, coaxial, triaxial and camera connectors.

Kliegl Bros. 1604
32-32 48th Ave., Long Island City, N.Y. 11101

Digital dimmers, command performance performer II/III and entertainer memory, lighting control systems, fresnel key, lights, scoop, backlights, cyclorama lighting units, reflector spotlight pattern projector. **Staff:** Laura Askew, Dr. Ronald Olson, Dr. Joel Rubin, John Kliegl, Tom Hays, Josephine Marquez, Peter Baselici, Patricia Ackerman, Ira Minkoff, Michael Dalzell, Michael Connell, Charles Hurth.

George Kleinknecht Inc. 1769
940 8th Ave., New York 10019

Knox Video Products 1511
8547 Grovenmont Cr., Gaithersburg, Md. 20877
Character generators and video processing equipment, video correctors*, color box dual colorizer/edger/keyer. **Staff:** Philip Edwards, Suzanne Edwards, Roland Blood, Kim Thomas.

Kobold of America 1725
Box 1, Marblehead, Mass. 01945

Kurv Inc. 223
2185 S. 3600 West, Salt Lake City 84119

Laird Telemedia 1721
2424 S. 2570 West, Salt Lake City 84119

Character generators, dual channel option, multiplexer and accessories, video related equipment. **Staff:** Ron Jones, Ken Wooton, Naum Shumsky, Dave Tubbs, Ralph Lee, Tom Lang, John Perry, Chuck Harwood, Gary Bates, Dave Golding.

Lake Systems 1165
55 Chapel St., Newton, Mass. 02160

La-Kart matrix 6M for station break automation utilizing component switching and process through Lake matrix switcher. **Staff:** Bill Dwyer, Frank DeMayo, Walter Kelley, Phil Sills, Roland Boucher, Terrance Barnum, Robert Hemenway, James Gonsey.

Landy Associates 1747A
1890 E. Marlton Pk., Cherry Hill, N.J. 08003

Ikegami cameras, Artel fiber optics, Lieben-se modular television sets, Interphase slate and border generator and machine control equipment. **Staff:** Jim Landy, Steven Landy, Michael Landy, Brad Reed, David Newborg, Michael Keller.

Lang Video Systems 1780
700 Warrington Ave., Redwood City, Calif. 94063

Digital video test generators and source identifiers.

Larcan Communications 1626A
323 D Washington Blvd., Laurel, Md. 20707

Radio and TV transmitters.

Laumic 1771
306 E. 39th St., New York 10016

Portable computer assisted videotape editing system, film-to-tape transfer system. **Staff:** Bill Kradelman, Stuart Mann, Karen Carter, John Shike.

Leader Instruments 1349
380 Oser Ave., Hauppauge, N.Y. 11788

Video, audio and general purpose test instruments including vectorscopes, waveform monitors*, NTSC sync/test generator*, PAL and SECAM test generators*, vectorscopes and waveform monitors, oscilloscopes, frequency counters, audio generators, distortion, wow and flutter, millivolt meters, power supplies, function and RF

signal generators, X-Y displays, meters and bridges. **Staff:** W. Brydia, S. Hirota, J. Mortellaro, R. Sparks, B. Storch, R. Storm, M. Iacone, J. Terry, R. Sileo.

LeBlanc & Dick Communications 1149
514 Charnwell Rd., Box 880, Oakville, Ont. L6J 5C5

Design, supply and installation of towers, antennas, transmission lines, lighting and other accessories.

Leitch Video of America 1021
835K Greenbrier Cr., Chesapeake, Va. 23320

Video processing amplifiers, digital test generators, video distribution amplifiers, scrambler system, sync generators, master clock system and clocks, frame store synchronizer*, CTG-240 combination calibration test generator, DTG-1010 digital test signal generator, VPA-331 video processing amplifier*, HDS-481 high definition video switcher. **Staff:** John Walter, Bob Lehtonen, Jim Leitch, Gary Becknell, Bernie Poulin, Don Jackson, Gary Newhook, Stan Moote, Richard Kupnicki, Paul Milazzo, Dwight Wilcox, Ron Schlameuss, Keith Emmons, David Wilcox, Dick Strauss, Keith Campbell, Ray Smart, Dave Craddock, Dave MacGregor, Brian Cuff, John Prigmore, Homer Hull, Harry Glass.

Lemo U.S.A. 1334
335 Tesconi Cr., Box 6626, Santa Rosa, Calif. 95406

Electronic cylindrical connectors, audio patching connectors, triaxial TV camera connectors, stereo and monaural audio patch panels. **Staff:** Samuel Sokolik, David Battaglia, Phillip Balmer, Mario Preston, Marcello Pesci, Georges Laurent.

Lenco 1419
300 N. Maryland St., Jackson, Mo. 63755

Video distribution, processing and test equipment, monitors, noise meters. **Staff:** Andy Perrin, Ken Tiffany, Bruce Blair, Bob Henson, Andy Leonard, Gary Stephens, Roberto Orfila, Richard Fay, Jim Timberlake, Mike Birch, Ron Wells, Tony Mattia, Tom Sabiston, Milton Wyatt, Herb Van Driel.

Lexicon 1139
60 Turner St., Waltham, Mass. 02154

1300S audio delay synchronizer*, 1200C audio time compressor*, reverb/effects processor, programable digital reverberator, digital delay processor. **Staff:** Ronald Noonan, Philip DeSantis, Keith Worley, Brian Zolner, Lawrence Rich, Virginia Casale.

Lightning Elimination Associates 302
12516 Lakeland Rd., Sante Fe Springs, Calif. 90670

Surge eliminators, electronic filters, other lightning elimination equipment.

Lighting Methods 182
691 St. Paul St., Rochester, N.Y. 14605

Lipsner-Smith Co. 1626
4700 Chase Ave., Lincolnwood, Ill. 60646
Film cleaning machines.

Listec Television 1406
39 Cain Dr., Plainview, N.Y. 11803

Remote digital camera control system*, scriptWriter electronic prompter*, camera mounting equipment, on-camera monitor prompters. **Staff:** Jack Littler, Joanne Camarda, Paulette DiBona, Cliff Guice, Paul Gomes, Rudy Zadworny, Bill Vinten, Mike Martin, Peter Wayne, Adrian Matthews, H. Kawahara, Keith Takenaka, Jon Bart.



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Logica 1405A

955-H N. Plum Grove Rd., Schaumburg, Ill. 60195

Teletext origination equipment. **Staff:** Trevor Armstrong, Ray Goff, Marvin Segel.

Logitek 613

3320 Bering Dr., Houston 77057

Audio consoles*, pro audio interface*, power amplifiers*, audio modules, speakers, audio processors and accessories. **Staff:** Scott Hochberg, Tag Borland, Jody Patton.

Pam Lontos Inc. 120A

Box 741387, Dallas 75374

Sales motivational seminars. **Staff:** Pam Lontos.

Lowel-Light Manufacturing 1309

475 10th Ave., New York 10018

Location and studio lighting equipment. **Staff:** Ray Low, Dave Tearle, Amy Carter, Marvin Seligman.

LPB 405

28 Bacton Hill Rd., Frazer, Pa. 19355

Audio consoles, distribution amplifiers, compressors/limiters, studio furniture, tone arms, AM transmitters for PSRA and PSSA service, travelers information stations and STL use. **Staff:** Richard Crompton, Harry Larkin, James Malone, Richard Burden.

LTM 1518

1160 N. Las Palmas Ave., Hollywood, Calif. 90038

HMI lighting units including fresnels, floods, softlights, spotarcs, par lights, studio and small incandescent fresnels, DC and AC in-

verter, microphones.

L-W International 1602

6416 Variel Ave., Woodland Hills, Calif. 91367

Telecine system, multiplexer system, uniplexer system. **Staff:** Marvin Hodges, Albert Malang, Dave Greve, Walter Peterson, Robert Lawrence.

Lyon Lamb Video Animation 1632A

4531 Empire Ave., Burbank, Calif. 91505

Animation system, videodisk mastering, computer graphics. **Staff:** Bruce Lyon, Jeff Stone, Doug Epps.

3M 1002

3M Center Bldg., 225-3s-05, St Paul 55144

Optical Recording Project division, Broadcasting and Related Products division, Magnetic Audio/Video Products division. Character generators, routing switchers, VTRs, videotape.

M/A-Com Video Systems 1004

63 Third Ave., Burlington, Mass. 01803

Design, build, installs and service microwave telecommunications and associated equipment including ENG central receive systems (4), ENG portable systems, intercity microwave systems, point-to-point microwave systems, fiberglass ENG antennas with interchangeable feeds, interference free ENG and fixed link fiber optic transmission systems, helicopter ENG system, transmitter/receiver. **Staff:** E. van der Kaay, J. Delissio, J. Morse, E. Stromsted, D. McCarthy, G. Hardy, C. Guastafarro, J. Fielek, D. Archer, J. Hellyer, J. Van, R. Briggs, P. Bradbury, L. Barzana, J. Nielsen.

Macrotel 1702

107 Delaware Ave., Suite 1400, Buffalo, N.Y. 14202

Magnasync/Moviola 1147

5539 Riverton Ave., North Hollywood, Calif. 91601

V-1000, V-500, V-400, edgewriter*, specialist voice*, logging recorder.

Magnum Towers 119

9370 Elder Creek Rd., Sacramento, Calif. 95829

AM/FM towers, VHF/UHF TV antenna towers, microwave system support towers, communications towers. **Staff:** Pete Smith, Larry Smith, Ron Smith, Alexander Perchevitch.

The Management 627

Box T, Alledo, Tex. 76008

Super Log TV computer system*, software* for Sky Log, Electric Log integrated traffic, billing, accounts receivable, affidavits, avails and sales projections and sales order analysis programs, cable billing package. **Staff:** Pete Charlton, Don Stafford, Debbie Patrick.

Marcom 306

Box 66507, Scotts Valley, Calif. 95066

C.N. Rood BAX 114 portable modulator telephone bandwidth extension system. **Staff:** Martin Jackson, Ted Tripp, Doug Howland, Andy Thompson, Paul Rowan.

Marconi Electronics 1615/1609

100 Stonehurst Ct., Northvale, N.J. 07647

RF power meter*, audio transmission test

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system, AM/FM modulation meter, insertion signal analyzer, television interval timer.
Staff: Ken Harrison, John Robinson, Jon Gorboid.

Mark Electronics 1227
3521 SW 42d Ave., Gainesville, Fla. 32602

Marketing Services Development 661
1111 Paulison Ave., Clifton, N.J. 07013

Marshall Electronics 1331
Box 2027, Culver City, Calif. 90230

Staff: Leonard Marshall, Henry Shultz, Bill Cara, Joel Schwartz, Bob Sherwood, Dave Roberts.

Marti Electronics 501
Box 661, Cleburne, Tex. 76031

Automatic transmitter switchers, aural STL, base station, watt telemetry return links, aircraft power supply, automatic repeater, battery powered remote transmitter, aircraft RPU transmitter. **Staff:** George Marti, M.E. McClanahan, Rick Neace, Steve Jones, Charles Wells.

Matthews Studio Equipment 1209
2405 Empire Ave., Burbank, Calif. 91504

C-boom clamp*, expendable reflectors and brackets*, ped-a-mote control*, stage stands*, kit stand new track lengths*, tulip cranes, sky cam and cam remote heads, dollies and track, cine-vators, crank-o-vators, aluminum and stainless steel stands, diffusion and lighting control, grip and mounting equipment. **Staff:** Ed Phillips, Carlos DeMattos, Button Fox, Fred Farish, Bob Nettmann, Loet Farkas, Alex Torres, Rick Hansen.

Maxell Corp. 1624
60 Oxford Dr., Moonachie, N.J. 07074

Blank audio and videotape. **Staff:** Jim Ringwood, Joe Birkovich, John Selvaggio, Joe Santangelo, Dan Malda, Jeff Moreland, Pat Byrne, Kathy Frey, Linda Healy, Chris Mangiapane, T. Okada, H. Matsumoto.

MBI/AHB 148
5 Connair Rd., Orange, Conn. 06477

McCurdy Radio 207
1051 Clinton St., Buffalo, N.Y. 14206

Audio consoles, switchers*, DAs, intercoms*. **Staff:** Paul Hudson, Sudy Shen, Murray Porteous, Jon Young, Bob Lefroy, Erik Ryalen, Ed Fritz, Rick Jalsavec, Les Radvanyi, Ernie Moldowan, Marc Vallee.

McMartin Industries 701
4500 S. 76th St., Omaha 68127

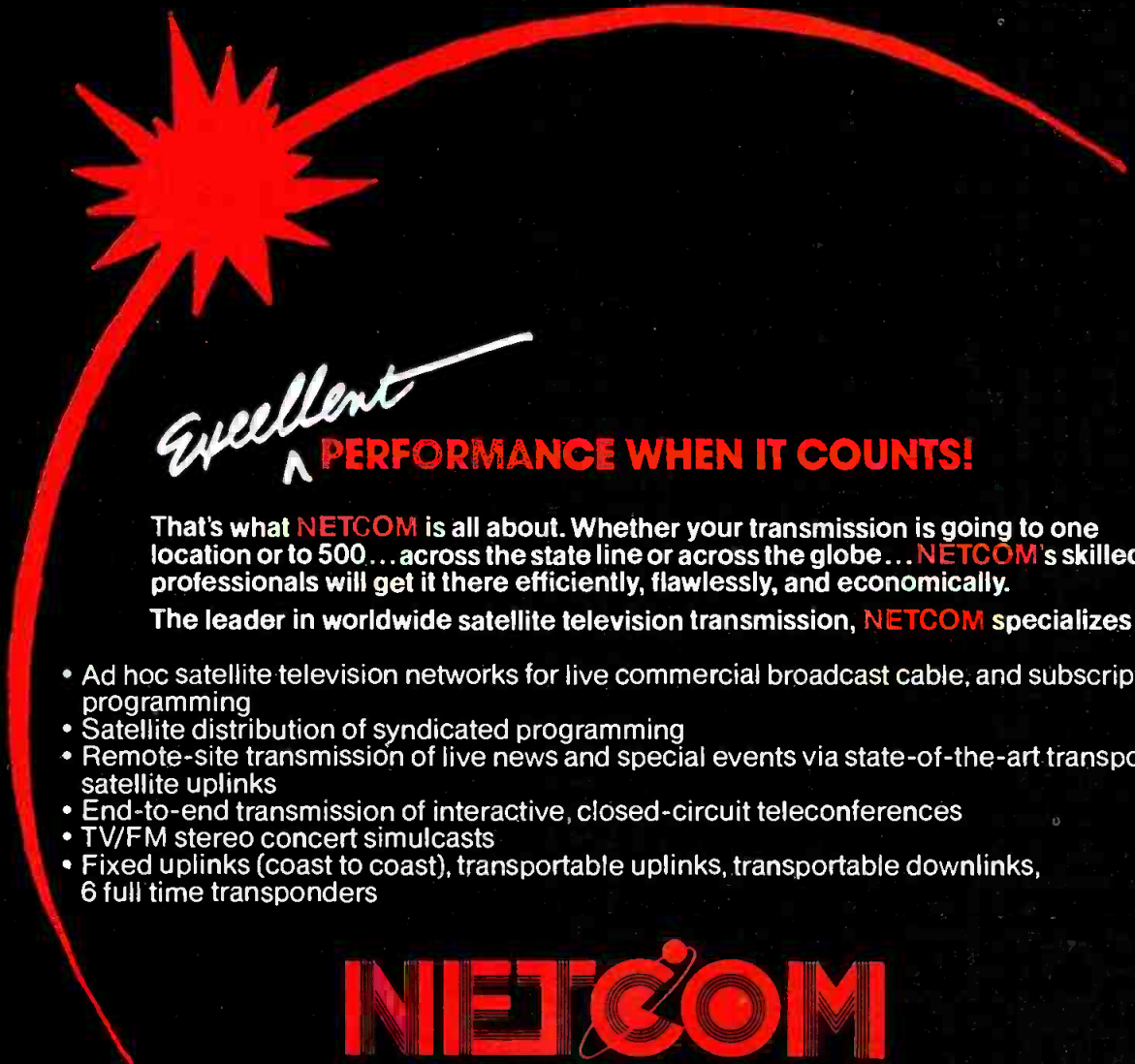
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MCG Electronics 167
12 Burt Dr., Deer Park, N.Y. 11729

MCI/Quantel 1631
3290 W. Bayshore Rd., Palo Alto, Calif. 94303

Digital video products, special effects systems, synchronizers, graphics systems, Cypher* character generator, library systems. **Staff:** George Grasso, Dave Dever, Larry Belhi, Chuck Martin, Paul Fletcher, Tom

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McGowan, Dave Diels, Mike Lang, Tom Carigan, Bud Schneider, George Hamilton, Kevin Prince, Peter Owen, Paul Kellar, Richard Taylor.

MCI/Sony 605
15 Esses Rd., Paramus, N.J. 07652

Meadowlands Communications 110
23-47 Ames Blvd., Hamburg, N.J. 07419

Media General Broadcast Services 410
2714 Union Extd., Memphis, Tenn. 38112

TIME World News Service*, ID's libraries, commercial productions. **Staff:** Jim Linen, Don Robinson, Zack Hernandez, Gordon Buckingham, Kurt Alexander, Bob Blow, David Tyler, Carl Reynolds, Dick Denham, Bob Westlake, Ken Theiss, Dannie Hill, Bill Lafey, Bob Stack, John Hagerman.

Media Software Systems 622
4910 Dudley St., Lincoln, Neb. 68504

Merlin Engineering 1023
1880 Embarcadero Rd., Palo Alto, Calif. 94303
VTR's and accessories, engineering services for VTR's.

MICMIX Audio Products 106A
2995 Ladybird Ln., Dallas 75220

Dynafex noise reduction system* (DX-2), master room reverberation systems modular signal processing systems. **Staff:** Bill Allen, David Rettig, Bob Rodgers, Barbara Rettig, Linda Allen.

Micro Communications 1014
Box 4365, Manchester, N.H. 03101

High power UHF lineside RF systems, circular and rectangular waveguide transmission line, low power UHF and VHF diplexers, MDS/ITFS diplexer and multichannel combiner*, coaxial switches, microwave point-to-point antenna with interchangeable 2, 7 and 13 ghz feeds, LPTV antenna and microwave interferometer, phase shifting combiner and diplexer*. **Staff:** Thomas Vaughan, William Amos, Howard Bouldry, Linda Bruning, Dennis Heymans, Thomas Greenway.

Micro Controls 104
Box 728, Burleson, Tex. 76028

Microwave wideband and narrowband STL*, remote control microwave or phone-line, heterodyne FM exciter, AM stereo STL, automatic switching units for studio or transmitter, SCA generators, receivers and paging systems, STL repeater systems, pulse laser communications. **Staff:** Jeff Freeman Jr., J.E. Freeman III, Bob Hite, Bob Richards, Tom Butler, Tom Butler Jr.

Microdyne 1612
Box 7213, Ocala, Fla. 32672

Satellite transmission and receiving equipment including the 1100 BDC/DCR-12 Ku-band system, 1100 SDC synthesized SCPC downconverter, C-band and Ku-band antennas (3, 3.66, 5 and 7 meter). **Staff:** Dave Alvarez, Earl Currier, Jim Grabenstein, Tom Kidd, Brett Swigert, Diane Giansante, Bob Voss, Jerry Throne, Mike Balbus.

Micron Audio Products 1122C
210 Westlake Dr., Valhalla, N.Y. 10595

Wireless microphone systems, portable systems for ENG use, hand-held transmitter, portable diversity receiver, modular multichannel space diversity receiver, camera mount. **Staff:** Paul Tepper, John Wykes, Linda Tepper.

Microprobe Electronics 221
910 Sherwood Dr., Suite 19, Lake Bluff, Ill. 60044

Microtime 1230
1280 Blue Hills Ave., Bloomfield, Conn. 06002
Digital video and video processing equipment including synchronizers, image enhancers, time base correctors.

Midwest 1710
One Sperti Dr., Edgewood, Ky. 41017

Mobile television productions units including ENG van, EFP unit and broadcast remote unit.

Mini-TP 1134
3250 Wilshire Blvd., Los Angeles 90010

Minolta 1113
101 Williams Dr., Ramsey, N.J. 07446

Audio distribution and switching equipment, amplifiers, switcher crosspoint cards, VCA modules, oscillators, equalizers, compressor/limiters, pre-wired jackfields and patch cords, newsroom dubbing and switching units.

Mitchell Camera Corp. 224
11630 Tuxford St., Sun Valley, Calif. 91352

Mitomo Co. 1509
8-11 I-Chome, Jinnan, Tokyo 150

Modular Devices 325
50 Orville Dr., Bohemia, N.Y. 11716

Modulation Sciences 204B
115 Myrtle Ave., Brooklyn, N.Y. 11201

Mole-Richardson 1006
937 N. Sycamore Ave., Hollywood, Calif. 90038

Lighting equipment including Solarspots, risers, fixtures, kits, grip equipment, hangers and adapters.

Keith Monks Audio 132
Box 1069, Palatine, Ill. 60078

Montage Computer Corp. 1775
52 Domino Dr., West Concord, Mass. 01742
Montage picture processor.

Moseley Associates 301
111 Castilian Dr., Goleta, Calif. 93117

PCL-606/C composite studio-transmitter link in the 1.7 ghz band for Canadian AM stereo*, CRT and logger options for MRC-1600 remote control system*, other remote control system and studio-transmitter links, subcarrier generator and demodulator, stereo generator and demodulator. **Staff:** John Moseley, Fred Zimmermann, Chuck Rockhill, Kin Jones, Weldon Squyres, Dave Chaney, Jim Jones, Vince Mercadante, Darl Dumont, Dan Barnett, Don Sharpe, Glenn Sanderson, Bruce Tarr, Sharon Katayama, Liz Atesman.

Motorola Communications 309
1301 A. Algonquin Rd., Schaumburg, Ill. 60196

AM stereo system, portable radio communications products.

MPCS Video Industries 1121
514 W. 57th St., New York 10019

Full-service video organization representing major manufacturers and suppliers. **Staff:** Alan Neil, Wally Robbins, Jeff Steier, Paul Wilson, Marvin Charyn, Max Meyerson, Mike Assal, Jody Lotito, Nancy Dall, Frank Suarez, Ken Seelig, Henry Bernstein, Bill Jarrett.

Multi-Track Magnetics 1712
3 Industrial Ave., Upper Saddle River, N.J. 07458

Ultra high speed recorders and reproducers microprocessor controlled DC servo

drive and torque motors for film speeds up to 30 times, Transfer Mate II recorder.

Music Director
Programing Service 709
Box 103, Indian Orchard, Mass. 01151

Music testing research*, country music supply service*, pop, country and oldies libraries, Christmas programing package, A/C playlist and music supply service. **Staff:** Budd Clain, Dick Garde, Brenda Clain, No-reen Bennett.

Musicworks 209
Box 111390, Nashville 37211

Ralph Emery Show*, Jim Reeves Radio Special*, Alive Country, Casual Country, Country 80, Pop Adult Lifestyle. **Staff:** Bill Robinson, Skeeter Dodd, Jeff Miller, Dean Landsman, Gary Havens, Tom Perryman.

Mycro-Tek 1752
820 W. Second, Wichita, Kan. 67203
Character generators.

MZB & Associates 1507A
4203 Beltway, Dallas 75234

Mobile television vehicles. **Staff:** John Zienkosky, Dick Bock, Rich Hajdu, Herb Hoff, Danny Dyess, Tom Hooper, Ralph Miller, Don Ingalsbe.

Nady Systems 1133
1145 65th St., Oakland, Calif. 94608

Cordless microphones, communications systems and intercom systems; mini-receiver/cordless microphone system for video cameras*. **Staff:** Peter Kalman, John Nady, Royce Krilanovich.

Nagra Magnetic Recorders 1213
19 W. 44th St., New York 11036

Portable and miniature recorders, T-audio recorder, synchronizers. **Staff:** Dom Notto, Manfred Klemme, Gerry Kearns, Tom Daniel, Dan Grimmes, Pierre Chan.

Nalpak Video Sales 1722
3928 S. Sepulveda Blvd., Culver City, Calif. 90230

Tripak plastic tripod shipping/carrying case, Ata case for video production equipment, field and studio test charts, travel karts. **Staff:** Bob Kaplan, Debra Kaplan, Chuck Ehrman, Jack Eddy, Stanley Singer, Dennis Vance.

Nautel Maine 216
201 Target Industrial Cr., Bangor, Me. 04401

AM broadcast transmitters. **Staff:** Dave Grace, Wendell Lonergan.

NEC America 1415
130 Martin Ln., Elk Grove Village, Ill. 60304

AS-18 audio synchronizer*, FBN-9000 FM transmitter, commercial message bank, digital video effects system, digital video multiplex, CCD camera, frame synchronizer, 7 ghz microwave. **Staff:** Jeffrey White, Robert Curwin, Richard Dienhart, Larry Litchfield, Frank Stollen, M. Imai, M. Mitsui, T. Fujiyasu, M. Mitsui, Malcolm Burleson.

Network Productions Music 1138
4429 Morena Blvd., San Diego 92117

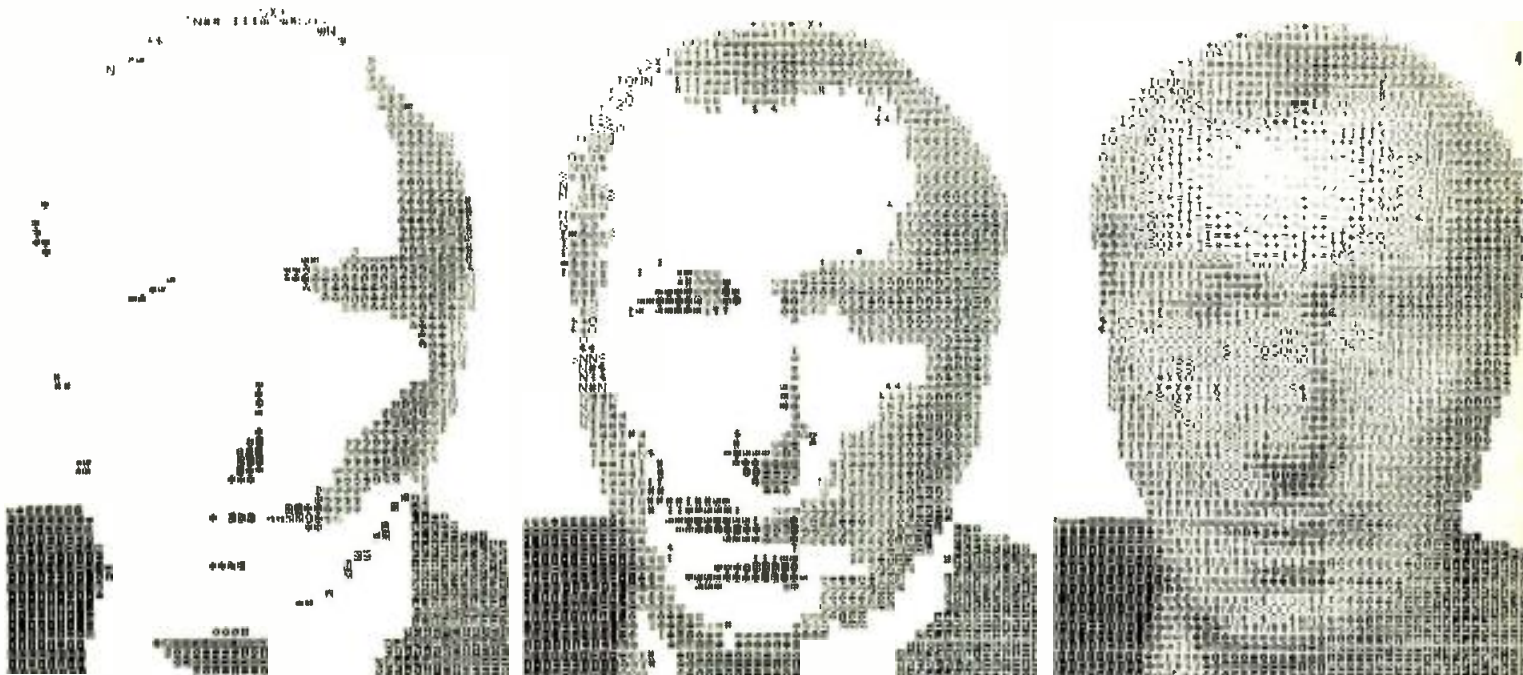
Music production library.

Net-Com International 1516
1702 Union St., San Francisco 94123

New York Communications 1730A
101 Bryn Mawr Ave., Bryn Mawr, Pa. 19010

Nortronics 705
8101 10th Ave., Minneapolis 55427

Replacement magnetic heads, mainte-



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nance products for audio and video. **Staff:** Peter Lang, Sharon Goetzke.

Nova Systems 1345
20 Tower Ln., Avon, Conn. 06001

NTI America 1014-D
1680 N. Vine St., Los Angeles 90028

Digital audio store*, digital video still/store. **Staff:** Tsuneo Mikado, S. Nakayama, S. Murakami, S. Okamoto, S. Aoyama, G. Nakaki.

Nurad 1426
2165 Druid Park Dr., Baltimore 21211

Airborne ENG system with Loran*, 10 w 7ghz amplifier*, 13 ghz portable transmitters and receivers*, 6.5 ghz systems*, Linearly polarized antennas*, central receiver antenna systems, remote transmit antenna systems, STL/ICR systems and ITFS systems. **Staff:** J. Gordon Neuberth, David Fairley, Vincent Rocco, Fred Hock, Stephen Neuberth, Eric McCulley, Cheryl Jacobs, Lisa Czirkjak.

Nytone Electronics 1135
2424 S. 900 West, Salt Lake City 84119
Flying spot scanner systems.

OKI Electric Overseas 1505
1 University Pl., Hackensack, N.J. 07601

TV standards converter. **Staff:** H. Uehara, Tomoda.

Olesen 1307
1535 Ivar Ave., Hollywood, Calif. 90028

Fabrication of studios for the industrial user, pipe grids, curtain tracks, curtains and drapes, lighting, dimming, distribution. **Staff:** Bob Downs, Terry Collopy, Rae Medvitz, Steve Brown, John Canton, Stew Romans, Ted Conroy, Barney Klein.

Omicron Video 1748
22251 Roscoe Blvd., Canoga Park, Calif. 91304

Distribution amplifiers, sync generators, routing switchers, editing systems, synchronizers, time code generators. **Staff:** Kimi Akiyama, Mio Akiyama, D. Cadora, M. Honda.

Orban Associates 607
645 Bryant St., San Francisco 94107

412A/414A mono and stereo compressor/limiter*, programable parametric equalizer*. **Staff:** Bob Orban, John Delantoni, Jesse Maxenchs, Sid Goldstein, David Dunetz, Bob Burkhardt, Kevin Tam, Dave Shantz.

J. Osawa & Co. 1716
Shibaura 4-2-8, Minatoku, Tokyo 108

Otari Corp. 601
2 David Dr., Belmont, Calif. 94002

Multichannel open-reel audio tape recorders*, EC-400 series tape speed resolvers*, duplicators and reproducers, videotape loading equipment, disk drives. **Staff:** John Carey, David Roudebush, Jack Soma, Mike Pappas, Steve Krampf, Steve Hill, Jeff Phillips, Phil Sun, Barry Ross, Michael Bernard, Scott Heineman, Larry Good, Tom Defigho, Tom Sharples, Kae Wiley.

O'Connor Engineering 1103
100 Kalmus Dr., Costa Mesa, Calif. 92626

Camera support systems.

Pacific Recorders & Engineering 1113
2070 Las Palmas Dr., Carlsbad, Calif. 92008

Audio production consoles*, cartridge recorders, studio systems, distribution amplifiers, turnkey systems, studio furniture.

Staff: Jack Williams, Larry Zaiser, Mike Uhl, Sandy Berenics, Bonnie Smith, Gary Stigall, Robin Thomas.

Paltex 1005
2942 Dow Ave., Tustin, Calif. 92680

Vanguard and edit-star videotape editing system. **Staff:** R. Bailey, J. Horning, T. Greaves, D. Curtain, J. Schoen, R. Smith, F. Blaha, T. Belford, J. Wagner, S. Pogoda, W. Frantz, B. Soto, D. Sorenson.

Panasonic 437/1019
1 Panasonic Way, Secaucus, N.J. 07094

In camera recorders, camera kits, low capacitance diode gun plumbicon tubes, saticon tubes, editing systems, editing controllers, high resolution monitors.

Patch Bay Designation 1773
Box 6278, Glendale, Calif. 91205

Labeling for rear lighted switches. **Staff:** Scott Lookholder, Charles Schufer, Dale Lookholder, Ted Lookholder.

Peerless Sales 1618B
1950 Hawthorne Ave., Melrose Park, Ill. 60160

TV/VCR/cable accessory products including security hardware, stands, mounts, carts and brackets for desk, wall ceiling. **Staff:** Walter Griffing.

Penny & Giles 436
1640 Fifth St., Suite 224, Santa Monica, Calif. 90401

Faders. **Staff:** Gay Moses, Bob Rose, David McClain, Chris Thomson.

PEP 1408
25 W. 54th St., New York 10019

Perrott Engineering Labs 1729
7201 Lee Hwy., Falls Church, Va. 22046

Nickel cadmium and silver zinc battery packs for ENG and EFP equipment, mini-chargers series for portable packs, single or sequential ni-cad fast chargers, battery packs for VTR's, video analyzers, ENG and EFP lighting systems, service and rebuild batteries and chargers for ENG and EFP equipment, design and engineer equipment for special requirements. **Staff:** V. Perrott Tygesen, William Mallon, Robert Clutter, William Aylor, Lawrence Westhaver, Joseph Nigro, Douglas Sheer, Al Audick.

Philadelphia Resins 126
20 Commerce Dr., Box 454, Montgomeryville, Pa. 18936

High performance tower guys. **Staff:** W. Wynne Wister, Kenneth Knight.

Phillips Television Systems 1500A
900 Corporate Dr., Mahwah, N.J. 07430

LDK 26 studio camera*, LDK-614 portable camera*, LDK-6 studio and field camera, LDK 54 camera recorder system*, 14 and 20 inch color monitor, LDM 1208 55 kw transmitter, 100 w to 20 kw FM transmitters, high definition television technology, digital compact disks, optical disk mastering. **Staff:** James Wilson, Warren Anderson, Alan Keil, Nicholas LaBate, Robert Blair, John Giove, Jeffrey Clarine, Michael Hart, Michael Mackin, Bob Mahoney, William Sturcke Jr.

Phillips Test & Measuring Instruments 1408A
85 McKee Dr., Mahwah, N.J. 07430

Color generators, sync test generator, TV test modulator, color generator multipattern, teletext test generator, studio V ITS generator, TV modulator. **Staff:** Ken Wheeler, Robert Joseph, Leonard Milchuk, John Stanley,

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Cable TV Construction

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V R Corporation of
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2800 Third St., San Francisco 94107

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Phoenix Systems 609

4685 S. Highland Dr., Salt Lake City 84117

Computerized broadcast management system, traffic/billing, full financials, IBM PC version of Phoenix broadcast system*. **Staff:** M. Ned Briner, Randal Chase, Bradford Melis, Gregory Chachas, Don Beard, Rae Dean McEun.

Picture Element 1517B

635 Waverly St., Palo Alto, Calif. 94301

Video sequence processor.

Piher Electronics 1409B

Albala, 12, Madrid 17

Box 947, N. Miami Beach, Fla. 33160

Color character generators, professional color and B/W monitors, transposers, transmitters, color sync generators, video, audio and pulse distribution amplifiers, video switcher, mobile units. **Staff:** Antonio Diaz-Borja, Mario Castellanos, Jesus Martin, Enrique Bermudez, Arnaldo Gonzalez, Gaspar Sastre, Antonio Rodriguez, Jose-Manuel Albiste, Dalmacio Tola, Alfonso Saiz, Alfonso Castellon, Manuel Martin, Jesus Diaz, Manuel Lopez, Carlos Xifra, Santiago Mendioroz, Alicia Seyler, Carlos Yhama.

Pinzone Communication Products 1615A

10142 Fairmont Rd., Newbury, Ohio 44065

Plastic Reel 170

240 W. 60th St., New York 10023

Polar Research 511

Pennington Ave., Thief River Falls, Minn. 56701

Porta-Pattern 1427

750 N. Highland Ave., Los Angeles 90038

Test charts and systems, telecine test slides and films, spherical transparency illuminators and transparencies and associated optical test media, BBC zone plate charts*. **Staff:** Ed Ries, Ed Taylor Jr., Anne Summers-Ries, Elena Sherik, Dorel Cojan, Tony Reyes, C. Webster.

Potomac Instruments 100

932 Philadelphia Ave., Silver Spring, Md. 20910

Staff: Guy Berry, Bill Casson, Bob Ellenberger, Dave Harry.

Precision Echo 1617

3105 Patrick Henry Dr., Santa Clara, Calif. 95054

Video disk frame store animation recorder/reproducer system, video compression system, videodisk recorder*. **Staff:** Jim Crouch, Kathie Farkas, Steve Goze, Tom Parkinson, Jackie Streeter, Bob Werbicki, Ron Zimbrick, Barry Rubin.

Prismagraphics 110A

Box 703, Milwaukee 53201

Procart 112

7012 27th St., W., Tacoma, Wash. 98466

Tape cartridges. **Staff:** Tim Schwieger, Don Kalmokoff, Bernice McCullough, Irv Law.

Procommotion 43A

350 W. Green Tree Rd., Milwaukee 53217

Money Chamber promotional item.

Products International 1125

8931 Brookville Rd., Silver Spring, Md. 20910

Equipment, tools supplies for electronic printed circuit board maintenance and repair. **Staff:** Daniel Schoen, Corey Parry, Kathleen Schoen.

QEI Corp. 307

Box D, Williamstown, N.J. 08094

FM transmitters (25 kw*) and exciters*, stereo generators, monitors and test equipment. **Staff:** Charles Haubrich, William Hoetzel III, John Pilman, John Tiedeck.

QSC Audio Products 626

1926 Placentia Ave., Costa Mesa, Calif. 92627
Audio power amplifiers.

QSI Systems 1325

12 Linscott Rd., Box 2176, Woburn, Mass. 01888

Color bar generators*, video source identifiers, master clocking systems, video and pulse distribution amplifiers, 24-hour TV loggers, demod tuners, countdown generators, numerical video slates, routing switcher input identifiers. **Staff:** Alfred Smilgis, Richard Smilgis, Charles Ricciardi, Richard Sanford, Paul Coughlin, Dr. Frank Erculei, Mark Erulei, Leo Rymer, Mike Dyer, Glen Dash, William Hickey, John Martin, Joanne Beichler.

Q/TV/Telesync 1401-D

33 W. 60th St., New York 10023

VPS-500 computerprompter systems*, videoprompter system, mini Q prompter. **Staff:** George Andros, John Maffe, Hy Sheft, Al Eisenberg.

Quad-Eight Electronics 1636

11929 Vose St., N. Hollywood, Calif. 91605

Digital reverberation system, audio console.

Quanta Corp. 1432

2440 S. Progress Dr., Salt Lake City 84119

Quante Corp. 1216A

3350 Scott Blvd., Bldg. 15, Santa Clara, Calif. 95051

Fiber optics transmission equipment*. **Staff:** J. Hawkins, G. Vignaud, A. Gaytan, A. Yan.

Quantum Audio Labs 509A

1909 Riverside Dr., Glendale, Calif. 91201

Production consoles.

Quickscan Systems 1405B

9465 Wilshire Blvd., Beverly Hills, Calif. 90212

Quickset 1105

3650 Woodhead Dr., Northbrook, Ill. 60062

Instrument positioning equipment. **Staff:** Mark Stolman, John Andre, Paul Mooney, Dennis Ryan.

RAB 217

485 Lexington Ave., New York 10017

Radac Marketing 218

804 Main, Trenton, Mo. 64683

Radio Arts 418

210 N. Pass, Suite 104, Burbank, Calif. 91505

Radio formats—American Rock, Sound 10, Soft Contemporary, The Entertainers, Country's Best, Encore; plus The Dream Concert, Ray Anthony's History of the Big Bands, Johnny Mercer: The Man and His Music, Your Hit Parade, Billboard Honor Roll of Hits, Holiday Spirit (240), Light of My Life. **Staff:** John Benedict, Dave Price, Clair Mario, Mary Perkins.

Radio Systems 213

Box 356, Edgemont, Pa. 19028

Phono preamps, distribution amplifiers, stu-

dio timer, ESA-10 broadcast console. **Staff:** Daniel Braverman, Neil Glassman, Andy Lovell, Edward Corse.

Ramko Research 415

11355A Folsom Blvd., Rancho Cordova, Calif. 95670

Four-channel portable mixer with built-in intercom*, distribution amps, audio routers, broadcast consoles, phasemaster cart machines, audio mixers, mic/line amps, line equalizers, solid state meters, compressor noisegates, power amps. **Staff:** Ray Kohfeld, Jim Lucy, Leonard Dont, Ted Johansen, Anita Edwards, Jim Nichols, Dave Baldwin.

Rank Cintel 1219

Watton Rd., Ware, Heerts, England

ADS 1 telecine for broadcasting from film*, Mk III C telecine for film-to-tape transfers, FeRRIT separate magnetic sound-follower. **Staff:** J. Etheridge, C. Waldron, A. McIlwaine, M. Batsch, I. Glenn, K. Taylor, J. Rodgers, T. Mead, K. Clark, M. Griffiths, B. Townsend, J. Campbell, D. Fenton, N. Kempt, D. Corbitt, G. Collett, W. Capon, F. Bundesmann, K. Sadhvani, E. Goodwin, Y. Yu, P. Chapman.

RCA Americom 1000

400 College Rd., Princeton, N.J. 08540

Digital audio transmission service via satellite for radio networking and TV channel service for broadcasters, syndicators and videoconferencing. **Staff:** J. Tietjen, E. Murphy, A. Schmitt, J. Williamson, G. Lewis, J. Grady, J. Thiesing, L. Donato, R. Boyland, H. Rice, G. Kaplan, D. Reinert, W. Berman, D. Cornell, B. Lazarus, J. Christopher.

RCA Broadcast Systems 1000

Box 900, Gibbsboro, N.J. 08026

Staff: J. Volpe, D. Woywood, J. Gimbel, K. Johnson, K. Gee, R. Abbenante, J. Ayers, B. Culbertson, T. Newman, K. Pierce, R. Walsh, H. Magno.

RCA New Products Division/Tube Operations 1000

New Holland Ave., Lancaster, Pa. 17604

Lead oxide Vistacons, Saticons and Vidicon camera tubes, VHF power tubes from 5-50 kw, FM tubes for 5-50 kw and 1 kw UHF tube and cavity for low power TV and translator service, tape of charged coupled device technology. **Staff:** George Brody, Erich Burlefinger, R. Davis, Gene Dymacek, Jerry Grill, Pete Koustas, John Malan, Bob Mazeski, F. Nelles, Bob Neuhauser, Jack Nicholson, C. Rintz, Jerry Ryan, Dick Savoye, B. Scott.

R-Columbia Products 1111

2008 St. Johns Ave., Highland Park, Ill. 60035

FM wireless intercom headphone, sports and studio broadcasting headphone, remote powered intercom headphone, hands free telephone operation.

Reach Inc. 341

301 S. 68th St., Lincoln, Neb. 68510

Message and storage retrieval services using SCAs. **Staff:** Jon Canaday, Lynette Green, Don Naber, Mark Mitchell, Joe Shaya, David Caragher, Bob Charmichael, Doug Schreckengost, Jim Graf.

Real World Tech. 1520

3176 Pullman St., Suite 106, Costa Mesa, Calif. 92626

Recortec 1416

475 Ellis St., Mountain View, Calif. 94043

Videotape evaluators. **Staff:** Lester Lee, Eldon Corl, Edwin Wong, Ed Bloom.



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Rees Associates 1727
4200 Perimeter, Oklahoma City 73112
Architectural planning, consulting, design and engineering services, LPTV facility package design and equipment.

Register Data Systems 128
Box 1246, Perry, Ga. 31069

Regis-BLT 152
2 Bluejay Way, Woodside, Calif. 94062

Reiman Syndication Network 172
5400 S. 60th, Greendale, Wis. 53129

Research Technology 1626
4700 Chase Ave., Lincolnwood, Ill. 60646
Videotape evaluator/cleaners, digital film editing and cleaning equipment.

Restoration 705
15904 Strathern St., Van Nuys, Calif. 91406
Replacement heads for audio and video recorders.

RF Technology 171
145 Woodward Ave., S. Norwalk, Conn. 06854
Staff: Pat Bradbury, Jack Fackler, Chuck Bobbins, Kristi Irish, John Clifford, Drew Lance, Ian Aizlewood.

Richardson Electronics 212
Box 424, Franklin Park, Ill. 60131
Electron tubes, RF power transistors and amplifiers, power semiconductors, silicon controlled rectifiers. **Staff:** Ian Stewart, Jim Matzas, Richard Thomas, David Gilden.

Riviera Broadcast Leasing 1784
220 Avenue 1, Redondo Beach, Calif. 90277

Rockwell Int. (Collins div.) 1767
400 Collins Rd., NE, Cedar Rapids, Iowa 52498
Collins doppler weather radar*. **Staff:** John

Giordano, Gary Frederick, Bryan Hawkins, Ron McGraw, Butch Postel, Ed Mumford, Dean Huntsinger.

Roh Corp. 1634
3603 Clearview Pl., NE, Atlanta 30340
Intercom/PL and IFB systems, digital announcement systems. **Staff:** Jerry Levy, Jerry Huber, Dan Garrigan, Frank Harvey, Tammy Smith.

Rohde & Schwarz 1203
13 Nevada Dr., Lake Success, N.Y. 11042

TV data distortion meter for videotext signals*, video noise meters, precision demodulator*, delay measuring system*, video test signal generator*, mobile compact test setup for checking and aligning TV transmitters and transponders. **Staff:** Joel Hymowitz, J. Schindler, E. Kushner, R. Goebel, R. Quitt, L. Estin, C. Porzky, M. Miczek.

Rosco Laboratories 1235
36 Bush Ave., Port Chester, N.Y. 10573

Roscor Corp. 1181
6160 W. Oakton St., Morton Grove, Ill. 60053
Design, engineering, fabrication and installation of custom turnkey video and audio systems and mobile units, Ikegami EC-35 electronic cinematography camera, mini-ram ENG unit and TV-20 mobile production unit, and engineered video rentals. **Staff:** Phillip Roston, Paul Roston, Steven Detch, Lee Ruber, Jim Pianowski, Howard Ellman, Steve Robinson, Jerry Garber, Steve Kozola, Andy Turner, Craig Kohler, Jon Ulfsrud, Yves Souvenir.

Ross American Logic Systems 1332
20540 Unit D, Superior St., Chatsworth, Calif. 91311

Electronics lighting displays and control systems.

Ross Video 1110
9 Plaza Dr., Iroquois, Ontario K0E 1K0

Encore memory system with serial interface to computerized videotape editing system*, RVS 524 and 508 production switchers. **Staff:** John Ross, Ole Skrydstrup, Fernando Paulino, Jim Millard, Jack McQuigge, Merle Quinn.

R/Scan Corp. 1740
511 11th Ave. South, Minneapolis 55415

LPATS—Lighting position and tracking system*

RTNDA 1501
1735 DeSales St., NW, Washington 20036

Staff: Ed Godfrey, Lou Adler, Lou Prato, Dean Mell, Ernie Schultz, Eddie Barker, Joe Tiernan.

RTS Systems 1142
110 W. Chestnut St., Burbank, Calif. 91506

System 2500 amplifiers*, series 17 intercom*, RTS/Plantronics communications headsets*, TW intercom systems, series 800 intercom, series 4000 IFB system, series 400 pro audio amplifiers, HPM41 mixer. **Staff:** Ethan Bush, Douglas Leighton, Robert Tourkow, David Brand, Vicki Bertrand, Stan Hubler, Sue Seidenglanz, Linda Rico, Cliff Michael.

John B. Ruby Co. 1776
20950 Brant Ave., Long Beach, Calif. 90810

Rupert Neve 1410
Berkshire Industrial Park, Bethel, Conn. 06801

Necam system fitted on 51 and 81 series consoles, 51 series of stereo production and post production television consoles, audio consoles, VCAs with interface to most video production switchers, DA 90 distribution amplifiers, 33 series limiter compressors. **Staff:** Laci Nester-Smith, Derek Tisley, Barry Roche, Dr. Martin Jones, Anthony Cornwell, Anthony Langley, B. Morgan Martin, James Kuroski, Steve Boze.

Russco Electronics 413
5690 E. Shields Ave., Fresno, Calif. 93727

Turntables, tone arms, small consoles, phono preamps, portable mixers, remote mixer amplifiers, studio monitor/audio amplifier, telephone line to console audio interface/equalizer. **Staff:** Russell Friend, Barbara Gaudin, Michael Vink, Diane Turnipseed.

Sachtler Corp. 1648
400 Oser Ave., Hauppauge, N.Y. 11788

Fluidheads for ENG use—Video 14", 20, 25, 30, and Panorama. **Staff:** Eric Falkenberg, Fiete Deckmann, J. Gehrt, Kim Sachtler, Heinz Feierlein, Walter Hopfinger, Werner Friedl, Hardy Jaumann.

Saki Magnetics 416
8650 Hayden Pl., Culver City, Calif. 90230

Ferrite heads for Ampex, MCI, Mincom, Otari, Revox, Scully, Studor and Technics machines, long-life metal heads for cartridge machines. **Staff:** Bob La Violette, Trevor Boyer.

Samson Music Products 324
124 Fulton Ave., Hempstead, N.Y. 11550

Sansul Electronics 130
58 Round Hill Rd., Dobbs Ferry, N.Y. 10523

SCA Communications 508
1 W. 30th St., New York 10001
SCA receivers.

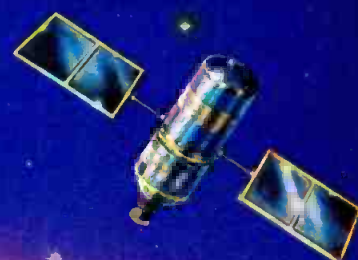
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fishing near
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400 Crossways Park Dr., Woodbury, N.Y. 11797
TV lenses for cameras with one-half, two-thirds, one- and one-and-one-quarter inch pick-up tubes with 14 by 9 mm ENG/EFP zoom with 2x range extender and 15x wide angle studio lens*. **Staff:** Bob Jones, Craig Marcin, Gunter Hess, Horst Stahl.

Scientific-Atlanta 1017
3845 Pleasantdale Rd., Atlanta 30340

Satellite earth stations, video receivers, protection switches, video excitors, control systems, RF matrix systems, 11-meter transportable earth station, DAT32 and DAT800 digital audio terminal. **Staff:** Sidney Topol, Phil Wooden, Del Botho, Mike Kelly, Alex Kaplinsky, Jay Levergood, Jamie Huff, Ed Pietras, Gerry Rosenblatt, Paul Huffman, Martha Schulte, Betsy Crawley, John Bacon, Trent Davis, Don Crumm, Vin Godleski, Dan Landreth.

Scribe Recorders 214
1618 Orrington, Suite 320, Evanston, Ill. 60201
Audio tape cassette recorders. **Staff:** Frank Beaman, Erik Horvitz.

Sennheiser 1137
48 W. 38th St., New York 10018

Headphones and microphones including ultraminiature electret lavalier microphone*. **Staff:** G. Langdon, T. Tudisco, J. Tait, K. Burke, B. Grover, C. Rancilio, K. Kawamura, D. Speelge, C. Muse, J. Munchow, P. Walters, F. Iaconis, J. Essig, N. Schneider.

Sescom 1616
1111 Las Vegas Blvd., Las Vegas 89101

Audio transformers and modules, mic-splitters, audio distribution amplifiers, a news-bridge, and intercom system, SAT-1 audio leveling for satellite receivers*, MLD-5 mic-line driver. **Staff:** Franklin Miller, Richard Schumake.

Sharp Electronics 1102
10 Sharp Pl., Paramus, N.J. 07652

XC-900D color camera, XC-800 color camera. XC-803TX triax control system*, and XM-1300 high resolution rack mount color monitor*. **Staff:** Robert Garbutt, Neil Kobu, Peter Gloegler, Ron Colgan, Ron Parker, Bob McNeill, Paul Insko, Bruce Pollack, Liz Sauter, Hank Miura, Mike Yamaguchi.

Shintron Co. 1417
144 Rogers St., Cambridge, Mass. 02142

Broadcast distribution amplifiers*, editor interfacing switchers*, component editing suite, time code equipment*.

Shively Labs 623
86 Harrison Rd., Bridgeton, Me. 04009

TV/AM isocouplers*, reflectometer display and protection systems*, FM mount antennas, FM panel antennas, UHF panel antennas, RF switch, RF patch panel, manual switch. **Staff:** Paul Wescott, Ed Shively, Charles Peabody, Bob Surette, Steve Collins, Paul Ricci, Carroll Cunningham, Bob Cauthen, David LaRenais, Bob Beattie, Tom Butler, Dr. Vittorio Raviola, Gildo Ventura, Aldo Laus, Larry Hall.

Shook Electronic Enterprises 1310
6630 Topper Pkwy., San Antonio, Tex. 78233
Mobile TV production vehicles. **Staff:** Edwin Shook, J. Hollenbeck Shook.

Shure Brothers 1401-A
222 Hartley Ave., Evanston, Ill. 60204
FP31 mixer*, SM83-CN lavalier microphone*, SM63L microphone, M267 mixer*

Staff: John Phelan, Michael Pettersen.

Sigma Electronics 1333
1830 State St., East Petersburg, Pa. 17520

Generators, video processing amplifiers, distribution amplifiers.

Singer Broadcast Productions 101A
875 Merrick Ave., Westbury, N.Y. 11590

FM excitors, stereo generator, AM and FM transmitters.

Skotel Corp. 1126
1445 Provencher, Brossard, Quebec J4W 1Z3

Time code readers and generators, digital metronome.

Warren R. Smith 1717
Drawer C, Ocean Gate, N.J. 08740

SMPTC 1632
862 Scarsdale Ave., Scarsdale, N.Y. 10583

"Television Image Quality" book. **Staff:** Lynnette Robinson, Alex Alden, Peg Caggiano, Barry Detwiler, Dorothy Smith.

Solid State 1723
2633 15th St., NW, Washington 20009

Audio mixing systems and studio computers.

H.A. Solutec 1517
4360 Iberville St., Montreal, Que. H2H 2L8

Staff: Gilles Fortin, Ernest Grondin, Michel Beland.

Solway Inc. 139
5010 Johnson St., Hollywood, Fla. 33021

Sono-Mag 707
1833 W. Hovey Ave., Normal, Ill. 61701

Staff: William Moulic, Stephen Sampson, Bob Popke, Bill Hoisington, Jerry Bassett.

Sony Broadcast Products Co. 1200
Sony Dr., Park Ridge, N.J. 07656

SOAR, frequency synthesis VHF wireless microphone*; sync master, time-code based synchronizer*; video editor interface option for MCI/Sony JH-800 compact console*, two channel audio recorder*, CD modular system for compact disk playback*, Betcam half-inch recorder-camera, high definition television system.

Soper Sound Music Library 1620B
Box 498, Palo Alto, Calif. 94301

Series IX, X and XI music series libraries. **Staff:** Harn Soper, Karen O'Neill, Kathy Wolff.

Sound Ideas 1620C
86 McGill St., Toronto M5B 1H2

Sound effects, music library.

Sound Technology 500
1400 Dell Ave., Campbell, Calif. 95008

Audio test equipment.

Sound Workshop Professional Audio Products 461

1324 Motor Pkwy., Hauppauge, N.Y. 11788

Series 30 TV edit console*, serial console interface*, series 34 post production console*. **Staff:** Michael Tapes, Paul Galburt, Lee Pomerantz, Carl Schiovone, Mike Cuneo, Jim Overrocker.

Soundcraft Electronics 219
20610 Manhattan Pl., Suite 120, Torrance, Calif. 90501

SAC 2000* audio console, series 20 two-track master recorder/reproducer*, multi-track recorders/reproducers. **Staff:** Wayne Freeman, Betty Bennett, Graham Blythe, Charlie Day, Shane Morris, Linda Frank, Larry Schara, Gary Lynn.

Soundolier 1704
9380 Watson Industrial Park, St. Louis 63126

Spectrum Planning 510
1850 N. Greenville, Suite 122, Richardson, Tex. 75243

Spencer Broadcast 406
316 E. El Camino Dr., NE, Phoenix 85020

Sprague Magnetics 705
15904 Strathern St., Suite 12, Van Nuys, Calif. 91406

Replacement magnetic tape heads for reel to reel, cart, film, duplicator and audio/video recorders, refurbishment services and recorder care products. **Staff:** Robert Reiss, Dorothy Sprague, Darrell Sprague, John Austin, Bart Williams, Peter Lang.

Stage Lighting Distributors 1128
346 44th St., New York 10036

Digital lighting control equipment, autocolor, indexing color wheel for lighting fixtures, stage and studio lighting and supplies. **Staff:** Robert Riccardelli, Jack Forster.

Stainless 1315
Third & Montgomery Ave., North Wales, Pa. 19454

AM, FM and TV towers, Verda lightning deterrent. **Staff:** Henry Guzewicz, Robert Farrington, Jess Rodriguez, John Windle, Owen Ulmer, Peter Starke, Ronald Pagnotto, Harold Balshukat, H. William Guzewicz.

Stanton Magnetics 102
200 Terminal Dr., Plainview, N.Y. 11803

Announcer's headphone. **Staff:** G.L. Bidwell III, George Alexandrovich.

Stantron 1132
6900 Beck Ave., N. Hollywood, Calif. 91605

Cabinets and furniture. **Staff:** Guy Tessier, F. Weiss, Dick Turchen.

Steenbeck 1424
9554 Vassar Ave., Chatsworth, Calif. 91311

ST 941V video-sound editing table*, film-to-video transfer unit with electronic counter, loop programming and interlock capabilities. **Staff:** W. Bass, W. Otto, T. Diamond.

Stephens Electronics 1318B
3513 Pacific Ave., Burbank, Calif. 91505

Portable tape recorders/reproducers.

Storeel 1008
2050 Carroll Ave., Atlanta 30341

Mobile and stationary storage systems for videotape, film and videocassettes. **Staff:** Carolyn Galvin, Paul Galvin, Michael Plaut, Robert Kearns, Dale Miller.

Straight Wire Audio 408
2523 Wilson Blvd., Arlington, Va. 22201

Noise reduction systems, amplifiers, preamps, rack mount units, horizontal card frames and vertical card frames. **Staff:** Ricki Sacks, William Sacks, Lauri Fowler, William Shute, Kandy Shute, Chris Shute, David Kersten, Kerry Kertsen.

Strand Century 1418
Box 9004, Rancho Dominguez, Calif. 90224

Solid state ballast* for 575 w and 1200 w lighting fixture*, HMI par fixture Field interchangeable from 575 to 1200 w, other lighting and dimming control equipment. **Staff:** Marvin Altman, Gene Murphy, Bob Schiller, Harry Forman, Mike Collier, Susan Danbridge, Mike Valentino, Brigid Menke, Archie Fletcher, Lin Bedard, Tom Brady, Bill Liento, Donna Appleton.

Strata Architect 614
1713 N. North Park Ave., Chicago 60614

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1425 Elm Hill Pk., Nashville 37210

Cassette decks, multichannel recorders, microprocessor controlled audio recorders with SMPTE code channel, other recorders, series consoles, telephone hybrid systems, compact recorders.

Swintek Enterprises 1503
1180 Aster Ave., Unit T, Sunnyvale, Calif. 94086

Wireless headsets, handheld or body pack transmitters with VHF/UHF broadcast quality. **Staff:** William Swintek, Les Underwood, Darisa Hill, Don Hall, John Ferguson, Jorge Montero, Wayne Wyche, Carl Cuthcart, Sheldon Goodman, Richard Pass, Frank Kelly.

Switchcraft Inc. 427
55555 N. Elston Ave., Chicago 60630

Jack fields and panels.

SWR Inc. 1644
Box 215, Goffstown, N.H. 03045

Sylvania US Lighting 1401-B
Sylvania Lighting Center, Danvers, Mass. 01923

Lighting equipment. **Staff:** C. Durkee, R. Shay, R. Levin, D. Scioli, D. Richardson, C. Gungler, A. Westlund, S. McCleneghan, R. Fleming, M. Skerry, S. Collins, J. Domrowski, Dr. Fohl, S. Brown, A. Rugo.

Symetrix 616
109 Bell St., Seattle 98121

Audio signal processing devices including telephone interface unit and remote control system. **Staff:** Dane Butcher, Dan Kingsbury.

Symtec 1522
15933 W. 8 Mile Rd., Detroit 48235

Staff: Paul Ambrose, Georgiann Mannino, Clive Catchpole.

System Associates 1331-E
5801 Uplander Way, Culver City, Calif. 90230

Brokers of used TV equipment. **Staff:** Billy Seidel, Walter Shubin.

Taber Manufacturing 711
2468 Embarcadero Way, Palo Alto, Calif. 94303

Model 409 bulk manual tape degausser, Model 1500 automatic bulk tape degausser, replacement audio heads for professional recorders, overhaul services on audio/video recorders. **Staff:** Veldon Leverich, Diane Leverich, Robert Souza, Florin Arsenne.

Taft Broadcasting 136
81 Canal St., Boston 02114

Tamron 1640
17-11, 7 Chome, Takinigawa, Kita-Ku, Tokyo

Zoom lenses for color cameras.

Tapscan 106
2100 Data Park, Suite 202, Birmingham, Ala. 35244

Tascom/TEAC 1304
7733 Telegraph Rd., Montebello, Calif. 90640

Audio products. **Staff:** Barry Goldman, Anne Pumphrey, Jimmy Yamaguchi, Anders Madsen, Marc Chover, Bill Mohrroff, Yuki Oshikawa, John Bliese, Tom Yamaguchi, Bob Lowig, Dave Oren, Bruce Black.

Teatronics 1786
101-D Suburban Rd., San Luis Obispo, Calif. 93401

Lighting control systems, dimmer packs,

control consoles. **Staff:** Roger Volk, Paul Rabinovitz, Paul Carlsen, Mike Griffith.

Tektronix 1601
Box 500, Beaverton, Ore. 97077

1740 and 1750 waveform/vector monitors*, 494 spectrum analyzer*, 118-AS audio synchronizer*, 10-bit frame synchronizer, digital generator/insert, video monitoring software, portable 150 mhz oscilloscope, color picture monitor, audio analyzer, test monitor, demodulators, waveform monitors, vectorscopes, sync and test signal generators, spectrum analyzers. **Staff:** Larry Kaplan, Steve Kerman, Austin Basso, Dick Walters, Stuart Fox, Tom Jordan.

Telegen (TDF) 806
1742 Willow Rd., Suite 206, Palo Alto, Calif. 94304

Telemet 1202
185 Dixon Ave., Amityville, N.Y. 11701

Computerized routing switcher. **Staff:** Eugene Murphy, Seymour Hamer, Robert Griffiths, Alex Kwartiroff, Vincent Delmato, Leo Lazarus, Ivan Slovak, Tony Silva.

Telepak San Diego 192
8360 Clairemont Mesa Blvd., Suite 102, San Diego 92111

Telescript 1407
445 Livingston St., Norwood, N.J. 07748

Digital prompting system*, monitor prompting service. **Staff:** Bob Swanson, Rich Mergner, Bill Coomes, Jerry Swanson, Phil Miller, Kay Hyde, John Lennan.

Telesource Communications Services 1607-B

730 E. Highland Ave., Phoenix 85011

Television and radio newsroom management and editing system, in-station election system. **Staff:** Bob Early, Marilyn Taylor, Ryan Nolan.

Television Engineering 1700
580 Goddard Ave., Chesterfield, Mo. 63017

ENG vans, complete systems, studios and remote broadcast vans.

Television Equipment Associates 1216
Box 393, S. Salem, N.Y. 10590

Video and pulse delays, video filters, headsets, tape cleaners, tape evaluators, intercom systems, distribution amplifiers, teletext products and systems.

Telex Communications 600, 1605A
9600 Aldrich Ave., South, Minneapolis 55420

Wireless microphone systems, microphones, closed circuit intercom system, headsets, open reel and NAB cartridge audio tape recorders and loggers, high speed tape duplicating systems and high speed cassette copiers, insta-Load, 16 mm motion picture projectors, silent and sound filmstrip projectors and 35 mm slide projectors. **Staff:** Jim Arrington, Chris D'Amico, Dean Flygstad, Pat Gillette, Jerry Hines, Tom Johnson, Claude Kleiman, Steve Lichtenauer, Don Mereen, Michael Olinger, Frank Olson, Dan Paulnock, Jerry Wade.

Tennaplex Systems 1127
21 Concourse Gate, Nepean, Ont. K2E 7S4

Broad signature, broadband panel antennas for triangular masts for FM CP and TV. **Staff:** Marvin Crouch, Manfred Muenzel, Ed Riitz, Anton Kathrein, Manfred Schienter, Steve Crouch.

Tentel 1613
1506 Dell Ave., Campbell, Calif. 95008

Universal head protusion gauge for VCR's, tape tension gauges, spindle height gauges. **Staff:** Wayne Graham, John Chavers, John Bonn, Burke Stafford, Kathryn McLaughlin, Bev Zern.

TFT 109
3090 Oakmead Village Dr., Santa Clara, Calif. 95051

830 SCA generator*, 840/841 AM stereo exciter*, 8300 aural studio transmitter link, AM, FM and TV monitors, series microprocessor remote control, aural transmitter studio link, emergency broadcasting system, AM/FM E/Alert. **Staff:** Joe Wu, Henry Wu, John Leonard, Terry Peterson, John James, Carla Dal Colletto.

TFTP 161
509 Bardon Rd., Knoxville, Tenn. 37919

Theater Service & Supply 1513
1792 Union Ave., Baltimore 21211

Heavy duty cyclorama curtain fabric. **Staff:** Richard Antisdel.

Theater Vision 1318
5426 Fair Ave., N. Hollywood, Calif. 91601

Lighting, intercom and dimming systems.

Thermodyne 1637
20850 S. Alameda St., Long Beach, Calif. 90810

Shipping cases, rack-mounted instrument cases.

James Thomas Engineering 163
5025 S. Eastern Ave., Suite 16-B120, Las Vegas 89119

Thomson-CSF Broadcast 1001
37 Brownhouse Rd., Stamford, Conn. 06902

Color studio camera*, three-tube automatic betacam*, editing suite*, automatic contrast controller*, image processor for special effects*, THOM. C.A.T. computer aided test instrumentation, D/A and A/D converters, 2 kw VHF, 2.5 kw FM, 1 kw FM and 200 w FM transmitters*, monaural and stereo FM volumax peak controller, AM volumax, dual audio distribution amplifier, audimax automatic level controller, NTSC color correction systems, image enhancer, vidiplex encoder and decoder, color slide scanner, three-tube betacam with half inch VTR, character/graphics system, NABTS teletext system, LPTV, UHF, VHF and FM transmitters, TVRO. **Staff:** Stan Baron, Stan Basara, Frank Benson, Jean Luc Bellet, Rene Bourdon, Michel Boxberger, Mike Clayton, Frank Comoro, John Craven, Tom Creighton, Jim Egloff, Bob Estony, Debra Gauer, George Guette, Greg Harper, Tom Hindle, Jim Hegadorn, Matt Howryletz, Bernard Joseph, William Kane, Lynn Kranzler, Dagmar Lanigan, Tom Lorenzen, Dick Mathys, Greg Morton, Tom Oliviero, Bill Park, Altaf Rahman, Mike Redden, Mike Richardson, Johana Safar, Warren Singer, Ed Svorc, Art Smith, Jim Sprague, Mike Stephanak, Hubert Stijns, Ben van Benthem, Ron Volpe, Ellen Zalk.

Thomson-CSF Electron Tube 1003
301 Rt. 17 North, Rutherford, N.J. 07070

Tubes and cavities for LPTV.

Thorn-EMI Lighting 1331D
175 Rt. 46 West, Fairfield, N.J. 07006

Lamps and lighting fixtures and accessories.

Tiffen Manufacturing 1422
90 Oser Ave., Hauppauge, N.Y. 11788

Full line of TV and special effects filters, lens accessories. **Staff:** Nat Tiffen, Steve Tiffen,

Five things you should know about Broadcasting Publications Inc.

1 BROADCASTING: The Newsweekly of the Fifth Estate: radio, television, cable TV, satellites and the allied arts. Providing wall-to-wall coverage of broadcast entertainment, journalism, advertising, regulation, engineering, finance and other areas essential to professionals in all sections of the broadcast media universe. Authoritative, widely read, widely quoted. \$60 a year.

2 BROADCASTING/CABLECASTING YEARBOOK: One-book library of radio, television and cable TV facts. Indispensable reference work of the broadcast and cable TV business world. Published every March. \$80.

3 ACROSS THE DIAL: A handy guide to where the action is on AM and FM radio in North America. Lists stations and formats in alphabetical order by state and city. Also contains a listing of all TV stations in North America by channel and network, 160 pages, \$6.95.

4 BROADCASTING INDEX: A handy guide—classified and cross-indexed for ready reference—of the year's events in broadcasting. 1981, 539 pages, \$160; 1980, 437 pages, \$150; 1979, 400 pages, \$145; 1978, 384 pages, \$145; 1977, 368 pages, \$130; 1976, 384 pages, \$130; 1975, 340 pages, \$115; 1974, 298 pages, \$105; 1973, 254 pages, \$90; 1972, 228 pages, \$80.

5 THE FIRST 50 YEARS OF BROADCASTING: A year-by-year informal history of the times, people and events that shaped the development of radio, TV, cable TV and allied fields, compiled from reports in BROADCASTING, indexed for easy reference. \$29.95.

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DON'T WORK
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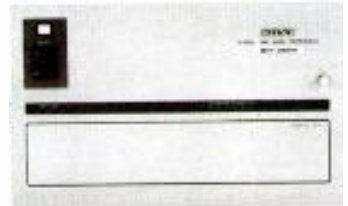
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1" RECORDER**



**BYT-2000
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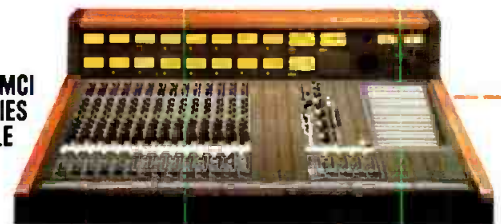
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1/2" RECORDER**



**SONY/MCI JH-24
24-TRACK
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**SONY/MCI
JH-600 SERIES
AUDIO CONSOLE**



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**CPD-5001
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SONY
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Tom Grosso, Bill Cohen

TIO 812

745 Fifth Ave., New York 10151

Torpey Controls 463

98-2220 Midland Ave., Scarborough, Ont.

Toshiba Tokyo 1631A

1-6 Uschisai Wai-Cho, 1 Chome, Chiyoda-Ju, Tokyo 100 Japan

Total Spectrum Manufacturing 142

20 Virginia Ave., West Nyack, N.Y. 10994

Townsend Associates 1420

79 Mainline Dr., Westfield, Mass. 01085

VHF (25 kw*) and UHF (55 kw*) transmitters, LPTV transmitters (1000 w*), MDS/ITFS transmitters, vacuum contactors, exciters and accessories. **Staff:** George Townsend, Howard McClure, Robert Anderman, Andrew Juettner, Warren Trumbly, Harry Craig, Wayne McMahon, Robert Bromley, Roger LaFrance, Bob Klein.

Transimage International 1512

245 Hanworth Rd., Hounslow, Middlesex, England TW3 3UA

Trident USA 633

652 Glenbrook Rd., Stamford, Conn. 06906

Synchronizers—VFM, Trimix, series 70, 80, 80B, TSM. **Staff:** Malcolm Toft, Jack Hartfield.

Trompeter Electronics 1211

8936 Comanche Ave., Chatsworth, Calif. 91311

Coax patching, cable assemblies, connectors and accessories. **Staff:** E. Trompeter, S. Trompeter, Hap Gladish, Dick Coleman, Dave Vernon, Ev Westfahl, Bill Lipsett, Paul Cox, Herb Hatzhold, Tracy Hunter, Ross Gaines.

True Time Instruments 643

3243 Santa Rosa Ave., Santa Rosa, Calif. 95401

Master timing systems, phase comparators, NBS synchronized clocks, receivers, digital clocks. **Staff:** Victor Kunkel.

Turner Broadcasting Systems 621

1050 Techwood Dr., NE, Atlanta 30318

Tweed Audio 313

12 Ilex Dr., Newbury Park, Calif. 91320

Tyler Camera Systems 184

14218 Aetna St., Van Nuys, Calif. 91401

Ultimate Support Systems 651

1331 Red Cedar Cr., Fort Collins, Colo. 80524

Ultimate Corp. 1642

18607 Topham St., Reseda, Calif. 91335

Ultimate and Newsmatte video compositing devices. **Staff:** Pat Smith, Paul Vlahos, Dave Fellingner, Arpag Dadourian, Ron Ungerman, Roger Factora.

UMC Electronics 114

460 Sackett Point Rd., North Haven, Conn. 06473

Uni-Set Corp. 1236

449 Avenue A, Rochester, N.Y. 14621

Modular studio staging system, graphic design cart, riser blocks, tops, ramps, rear screen module.

Union Connector 1783

149 Babylon Tpke., Box H, Roosevelt, N.Y. 11575

Digitally remote controlled 2.4 kw dimmer*. **Staff:** Richard W. Wolpert, Richard A. Wolpert, Stephen Skirpan, Irving Stein.

United Media 1300

4075 Leaverton Ct., Anaheim, Calif. 92807

Sequencer computer controlled coinci-

dence comparator, electronic editing system, looping controller system, cue writer, audio router/dissolver, time code readers, generators and character generators.

United Research Laboratory 604

16 E. 52d St., New York 10022

UNR-Rohn 1605B

Box 2000, Peoria, Ill. 61656

Broadcast, microwave, mobile radio and high level lighting towers and accessories. **Staff:** M. Fleissner, Al Repsumer, R. Kleine, Gene Francis, Larry Grimes.

UPI 430

1400 Eye St., NW, Washington 20005

UPI news and business office computer systems, Custom News, radio network. **Staff:** Paula Baird, Gordon Rice, Richard Boggs, Bill Adler, Jim O'Keefe, Bruce Kanner, Gary Neeleman, Bill Ferguson, Phil Stone, Ed DeLong.

Ursa Major 512

50 Trapelo Rd., Belmont, Mass. 02178

Digital reverberation remote unit, main-frame and space station digital reverb and effects system.

U.S. Tape and Label 602

1561 Fairview Ave., St. Louis 63132

Bumper strips, window labels and concert patches. **Staff:** Byron Crecelius, Audrey Moore.

Utah Scientific 1114

1685 W. 2200 South, Salt Lake City 84119

Video and audio routing switchers with new control systems*, master control switcher, video and audio distribution amplifiers. **Staff:** Lyle Keys, Earl Gray, Gary LaMunyan, Eric King, Scott Bosen, Steve Monsen, Paula Parker, Karl McDonald, Dale Buzan, Don Reynolds, Carl Meek, Larry Walker, Charles Schultz, Bill Vice, Neil Gardner.

Utility Tower 703

3200 NW 38th, Oklahoma City 73157

Tower sections for AM, FM, TV, MW, CATV and LPTV installations. **Staff:** R. Nelson, C. Nelson, Robert Morris Jr., Joe James, Chris Payne.

Valentino Production Music 1231

151 W. 46th St., New York 10036

Staff: F. Valentino Jr., M. Valentino, G. Dario.

Valley People 318

Box 40306, 2817 Erica Pl., Nashville 37204

Audio level and noise meter*, balanced level matching interface*, dual compressor/expander, multi function dynamics processor, dual transformerless preamplifier mixer, keyable program expander/noise gate, limiter/compressor/voice-over device, three-band parametric equalizer. **Staff:** Norman Baker, Ray Updike, Mike Morgan, Joel Smith.

Varian Associates 1605

3200 Patrick Henry Dr., Santa Clara, Calif. 95050

Power grid tubes, cavity amplifiers, low power and TV translators.

Vdo-Pak Products 220

164 Howes St., Box 67, Port Orange, Fla. 32019

Vectrix Corp. 175

2606 Branchwood Dr., Greensboro, N.C. 27408

Video Associates Labs 1303

2304 Hancock Dr., Suite 1F, Austin, Tex. 78756

Video International 1524

1280 Sunrise Hwy., Copiague, N.Y. 11726

Digital standard converter with full frame

store synchronizer, built in time-base corrector and TV pattern generator. **Staff:** Peter Kaminsky, Gerhard Freitag.

Videomagnetics 1109

155 San Lazaro Ave., Sunnyvale, Calif. 94086

Quad video head refurbishing, random access videocassette changer*. **Staff:** Ted Barger, Tony Korte, Denise Shelton, Eduardo Zanetta.

Videomedia 1308

211 Weddell Dr., Sunnyvale, Calif. 94086

Editing and control systems*. **Staff:** Bill Stickney, Jim Thibodeaux, Hank Wilks, C. Legois, Sherry Branch, V. Maranta, L. Sorby, Herb Kneiss, S. Hall, Tom Grancey, Ken Royer, R. Dorsa.

VideoStar Connections 1122

3390 Peachtree St., Atlanta 30326

Ku and C-band closed circuit satellite communications for news, sports and teleconferencing. **Staff:** William Papa, Kenneth Leddick, Harry Mahon, John Davis, Jeffrey Rothfus, Bryan Allen, Roy Wiggins, Robert Megar, James Black Jr.

Videotek 1633

125 N. York St., Pottstown, Pa. 19464

Waveform monitor with line-select, routing switcher series, sync generator, audio program monitors, vectorscope, distribution amplifiers, color monitors. **Staff:** Phil Steyaert, Peter Choi, Dan Antonellis, Barry Gardner, John Raczenski, Eric Walhberg, Emery Grady, Ron Moyer, Don Taylor, Cary Sagady, Dick Brooks, Jim Mauger, Rick Hol-lowbush.

Viking Cases 1731

10480 Balz St., NE, St. Petersburg, Fla. 33702

Staff: Art Stemler, Bob Stemler, Bruce Stemler.

Vital Industries 1212

3700 NE 53d Ave., Gainesville, Fla. 32601

Production switchers, station automation systems, digital effects unit, distribution amplifiers, routing switchers, machine controllers.

VJ Electronics/Anchor Systems 1618C

913 W. 223 St., Torrance, Calif. 90502

Rackmount, porta-com cabled intercoms, snakes. **Staff:** Evan Landrum, Jim Van Wary.

Ward-Beck Systems 1224

841 Progress Ave., Scarborough Ont. M1H 2X4

MicroCom communications system*, TV and radio audio consoles, distribution amplifiers. **Staff:** Ronald Ward, Rodger Beck, Arthur Schubert Jr., Peter Brentnell, Duke McLane, William McFadden, Prodromos Constantinou, Eugene Johnson.

Wavetek 1782

875 Maude Ave., Mt. View, Calif. 94043

Wegener Communications 515

150 Technology Park, Norcross, Ga. 30092

Satellite and microwave transmission equipment for radio networks and stereo TV audio, teletext equipment. **Staff:** Bob Placek, Heinz Wegener, Ned Mountain, Jon Thrasher, Peggy Placek.

Western Group 1134

3250 Wilshire Blvd., Los Angeles 90010

Laboratory-quality precision registration and optical alignment device for portable production and ENG cameras. **Staff:** John Lee, John Welland.

Wheatstone 121

249 N. Eric Dr., Palatino, Ill. 60067

Audio mixing consoles.

Whirlwind 329

100 Boxart St., Rochester, N.Y. 14612

White Instruments 1318C

Box 698, Austin, Tex. 78767

Wilk Power & Video 1229

16255 Ventura Blvd., Suite 10001, Encino, Calif. 91436

Staff: Leslie Spitzer, Cynthia Hastings, Tom Hamilton, George Newman, George Kopetski, Ray Wilk.**Wilkinson 305**

5970 W. 60th Ave., Arvada, Colo. 80003

Winsted 1238

9801 James Cr., Minneapolis 55431

Editing consoles, tape and film storage systems, videotape and film trucks, equipment cabinets, dubbing racks and post-production consoles. **Staff:** Gerald Hoska, Brenda Sabin, Charles Johnson, Greg Hedlund, Randy Smith, Nancy Walker.**Wireworks 1014C**

380 Hillside Ave., Hillside, N.J. 07205

Multipin input microphone splitters*, phantom power supply components*, prism components*, metric length mic and coax cable*, 12-foot multitails*, multitunks*, microphone multicable components group, microphone cables, multicables, cabletester, coaxial cables. **Staff:** A. DiCicco, G. Kruliewicz, L. Williams.**Wold Communications 1515**

10880 Wilshire Blvd., Los Angeles 90024

Satellite distribution services, earth stations, news origination facilities and transmission equipment, satellite subcarrier transmission services, radio point-to-point transmission services. **Staff:** Robert N. Wold, Gary Worth, Robert E. Wold, Paul Johnson, Clayton Packard, Ian Joseph, Dorothy Marsh, Ellen Kimmelman, Thomas Bartunek, Mark Wallhauser, Nell Donovan, Jon Schwenzer.**Wolf Coach 1317**

7 B St., Industrial Park, Auburn, Mass. 01501

ENG/EFP vehicles*. **Staff:** Richard Wolf, Marcia Germagian, Mark Leonard.**Frank Woolley & Co. 1405-C**

529 Franklin St., Reading, Pa. 19602

Motionmaster video animation system. **Staff:** Frank Woolley, Larry Whalen.**World Tower 519**

Box 405, Mayfield, Ky. 42066

Broadcast towers and related services. **Staff:** M. Sholar, Jeff Sholar, James Wilson, Don Prescott.**WSI 1104**

41 N. Road, Box B, Bedford, Mass. 01730

Weather graphics* and computerized sports scores. **Staff:** Dave Miller, Russ Christie, Alan Riley, Roy Reiss, Ray Costello, Grady Young, Ron Strahm, Dave Devlin, Bob Draper, Todd Glickman.**Yamaha International 1340**

6600 Orangethorpe, Buena Park, Calif. 90620

REV-1 digital reverberation device* permitting separate control of up to 40 early reflections, YDD-2600 digital delay device with various modes of operation*, R-1000 digital reverb effects device*, mixing consoles, recording consoles, signal processing and effects devices, power amplifiers, load speakers systems. **Staff:** Bob Davis, Phil Moon, John Gatts, Craig Olsen, Jeff Wilson, Gerry Tschetter, Craig Bullington, Steve Baxter, Gary Davis.

Mobile exhibitors

Ampex Corp. 38

401 Broadway, Redwood City, Calif. 94063

Andrew Corp. 8, 9, 11, 12

10500 W. 153d St., Orland Park, Ill. 60462

Antenna Technology Corp. 6

8711 E. Pinnacle Peak Rd., Suite C-103, Scottsdale, Ariz. 85255

AT&T Communications 4

Route 202-206, Bedminster, N.J. 07921

Avantek 7

3175 Bowers Ave., Santa Clara, Calif. 95051

Broadcast Microwave Services 60

7320 Convoy Ct., San Diego 92111

Canadian Mobile TV 47**Comtech Data Corp. 42-44**

350 N. Hayden Rd., Scottsdale, Ariz. 85257

Dalsat 24

Box 1960, Plano, Tex. 75074

EECO 36

1601 E. Chesnut St., Santa Ana, Calif. 92702

Encom 10, 13, 14**Harris Corp. 1, 2**

Box 4290, Wismar Ln., Quincy, Ill. 62305

Hubbard Broadcasting 21

3415 University Ave., St. Paul 55114

Kavouras 67

6301 34th Ave., South, Minneapolis 55450

GeC Michael 28

Sefton Park, Belts Hills, Stoke Pages, Slough, Berkshire, England SL2 4HD

Microdyne 22

491 Oak Rd., Ocala, Fla. 32672

Motorola C&E 5

1301 E. Algonquin Rd., Schaumburg, Ill. 60196

MZB & Associates 41

4203 Beltway, Dallas 75234

Pinzone Communication Products 25

10142 Fairmont Rd., Newbury, Ohio 44065

Satellite Group 23**Scientific-Atlanta 17-19**

Box 105600, Atlanta 30348

Shook Electronics 39,40

6630 Topper Pkwy., San Antonio, Tex. 78233

Sony Corp. 48-51

1600 Queen Anne Rd., Teaneck, N.J. 07666

Wolf Coach 45

7 B St., Auburn Industrial Park, Auburn, Mass. 01501

Networks

(all suites at the Hilton unless otherwise noted)

American Broadcasting Cos. Sands

1330 Avenue of the Americas, New York 10019

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51 W. 52d St., New York 10019

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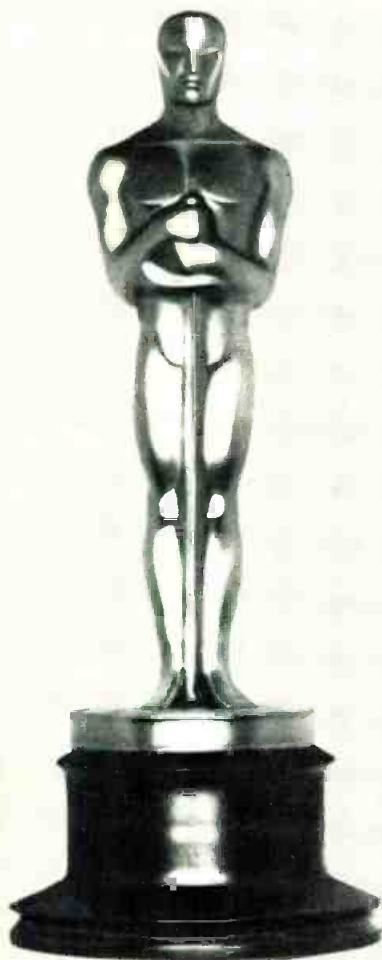
1755 S. Jefferson Davis Hwy., Arlington, Va. 22202

Staff: Martin Rubenstein, Jack Clements, Ben Avery, Bill Wisniewski, Craig Whetstone, Mark Feldman.**NBC Inc.**

30 Rockefeller Pl., New York 10020

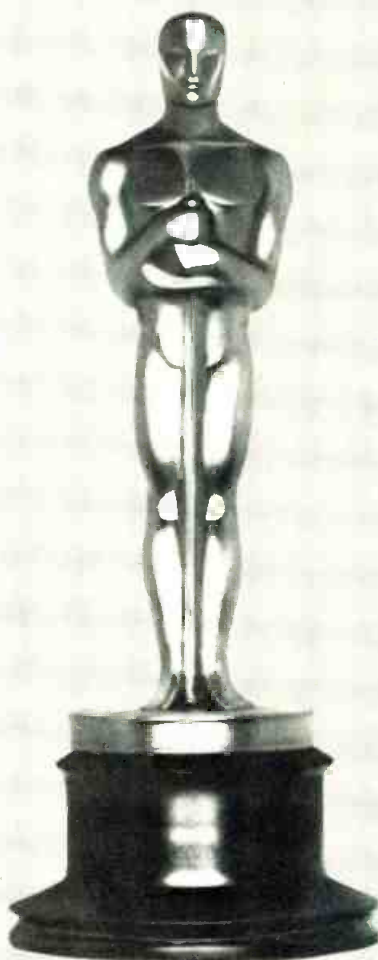
Staff: Ray Timothy, Robert Walsh, Irwin Segelstein.**NBC-TV Network MGM Grand 1862A, Hilton 560****Staff:** Pierson Mapes, Ric Quakenboss.**NBC-TV Affiliate Relations****Staff:** Anthony Cervini, William Kelley, Diane Healey, Jim Ritter, Eric Bennorth, Mort Dil-

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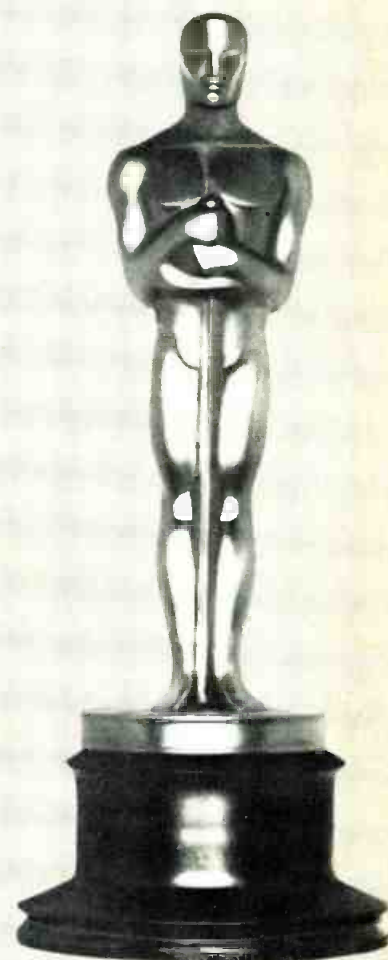
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lon, Paula Gigante, Jim Bloom, Bette Mooney. **Operations & technical services:** Michael Sherlock, Steve Bonica, Joseph Ulascewicz, Crawford McGill, Robert Galvin, Anthony Pedalino, Eric Coopman, Henry Kanegsberg. **TV Stations Division:** Robert Walsh, Al Jerome, Duffy Sasser, Robert Finnerty, William Slater, Jack Nachman; WNBC-TV: Hilary Hendler, Phil Hayes, Ed Knapp, Beverly Littlewood, Bob Davis, Joe Saraceni, Don Brookfield; WRC-TV: John Rohrbeck, Jim Van Messel, Harris Sullivan, Al Levin, George Geesey, Paul Kirrkamm; WKYC-TV: Dick Lobo, John Llewellyn, Kristin Ostrowski, Ray Smith, Tom Miller, Tom Powers, Richard O'Dell; WMAQ-TV: Paul Beavers, Ron Jankowski, Fred Rodey, Jim Powell, William Marshall, Jack Signorelli, Rick Hassel. **KNBC-TV:** Steve Antoniotti. **News:** Tom Wolzien, Dave Schmerler, Sheldon Hoffman, Ralph Famiglietta, Robert Muller, Stephen Reverand, Michael Reitman. **Sports:** Ken Aagaard, Phil Brown, Sid Bajak. **Press:** Helen Manasian, Don Giofre, Jamie Wenner. **Corporate:** Rick Kelly.

NBC Radio Hilton 2925

Staff: Michael Eskridge, Robert Mounty, Barbara Landes, Nick Schiavone, Richard Penn, Joan Voukides, Steve Soule, Steve White, Craig Simon, Gerry Green, Robert Wogan, Diane Ingle, Meddy Woodyard, Frank Cody, Nancy Cook, Rona Elliot, Gig Barton, Alan Stinson, James Farley, Maurice Tunick, Bruce Williams, Randy Bongarten, Harry Durando, Bart Walsh, Jim Smith, Tom Hoyt, John Hayes Jr., Charles Pickering.

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Satellite Music Network 2630
40655 N. Central Expwy., Suite 600, Dallas 75243

Staff: John Tyler, David Hubschman, Bob Bruton, Carlos Hurd, George Williams, Ellyn Ambrose, Dave Gerety, Jim Stansell, Laddie Schaeffer, Jim Key, Greg Daugherty, Cris Sites.

Sheridan Broadcasting Hilton 2919
1811 Boulevard of Allies, Pittsburgh 15219

Staff: Glen R. Mahone, Robert Dockery Jr.

SIN Television Network
460 W. 42d St., New York 10036

Staff: Rene Anselmo, William Stiles.

Transtar Radio Networks Hilton 2869
620 S. Pointe Ct., Suite 185, Colorado Springs 80906

Staff: Terry Robinson, Ivan Braiker, Ron Ruth, Larry Shipp, John Lodge, Robert Bein, Clark Jones, Tim Roberts.

Unity Broadcasting Network Hilton
10 Columbus Cr., New York 10019

Staff: Eugene Jackson, Sydney Small, Joan Logue-Henry, George Edwards, Del Raycee.

Brokers

Americom MGM
900 17th St., Suite 1050, Washington 20006

Staff: Thomas Gammon, Daniel Gammon.

Bill-David Associates Royal Las Vegas
2508 Fair Mount St., Colorado Springs 80909
Staff: Bill Martin.

Blackburn & Co. 669 East
1111 19th St., NW, Washington 20036

Staff: Jim Blackburn, Richard Blackburn, Tony Rizzo, Joe Sitrick, Alan Tindal, Roy Rowan, Jay Bowles, Howard Stassen, Bud Doss, Charles Kurtz, George Otwell.

Broadcast Properties West Sands
221 First Ave., Seattle 98119

Staff: Chester Coleman, Charles Kinney.

Business Broker Associates
399 Somerville Ave., Chittanooga 37405

Staff: Alfred Dick.

Robert A. Chaisson Inc. Sands
50 Locust Ave., New Canaan, Conn. 06840

Staff: Robert A. Chaisson.

**Chapman Associates Radio—15-121,
TV—MGM Grand 5510**
1835 Savoy Dr., Suite 206, Atlanta 30341

Staff: John Emery, Corky Cartwright, Bill Cate, Brian Cobb, Elliot Evers, Warren Gregory, Bill Lochman, Greg Merrill, Ernie Pearce, Ray Stanfield, Peter Stromquist, Bob Thornburn, Bill Whitley, Milt Younts, David LaFrance, Marty Lomonaco, Ron Hickman, James Mergen, Randy Jeffrey.

Donald K. Clark 1569
Box 1065, Merritt Island, Fla. 32952

Staff: Donald Clark, Anne Clark.

R.C. Crisler & Co. 1749-51
Suite 801, 580 Walnut St., Cincinnati 45202

Staff: R. C. Crisler, Clyde Haehnle, Larry Wood, John Babcock, Carl Ward.

William A. Exline 26-121
4340 Redwood Hwy., San Rafael, Calif. 94903

Staff: Bill Exline, Andrew McClure.

Wilt Gunzendorfer & Associates Hilton
2210 Hastings Dr., Belmont, Calif. 94002

Staff: Wilt Gunzendorfer.

Norman Fischer & Associates MGM
Box 5308, Austin, Tex. 78763

Staff: Norman Fischer, Jay Harpo, Barry Sherman.

Milton Q. Ford & Associates 1330-31
5050 Poplar Ave., Memphis 38157

Staff: Milton Q. Ford.

Frazier, Gross & Kadlec Aladdin
4801 Massachusetts Ave., Suite 390, Washington 20016

Staff: Charles Kadlec, Susan Harrison, Arthur Dietz, James Bond Jr.

Gammon & Ninowski 650
Suite 306, 1925 K St., Washington 20006

Staff: Jim Gammon, Ron Ninowski, Carl Fielstra.

Dan Hayslett & Associates 2530
11311 N. Central Expwy., Dallas 75243

Staff: Dan Hayslett, Mary Hayslett.

Hogan-Feldmann Hilton
16255 Ventura Blvd., Suite 219, Encino, Calif. 91436

Staff: Arthur Hogan, Jack Feldmann.

The Holt Corp. Caesars Palace
Suite 205, Westgate Mall, Bethlehem, Pa. 18017

Staff: Arthur Holt, Bernard Fuhrmann.

Horton & Associates North tower
Box 948, Elmira, N.Y. 14902

Staff: Keith Horton, Mel Stone, Jack Aldworth, Bill Cook.

Kalil & Co. Hilton
3438 N. Country Club, Tucson, Ariz. 85716

Staff: Frank Kalil, Howard Duncan.

Kepper, Tupper & Co. Caesars Palace
2508A W. Route 120, McHenry, Ill. 60050

Staff: William Kepper, John Tupper.

H.B. LaRue MGM
44 Montgomery St., San Francisco 94104

Staff: H.B. LaRue, Harold Gore.

Robert O. Mahlman 2962
1 Stone Pl., Bronxville, N.Y. 10708

Staff: Bob Mahlman.

R.A. Marshall & Co. Hilton
508A Pineland Mall Office Center, Hilton Head Island, S.C. 29928

Staff: Bob Marshall, Marti Marshall, Jack McVeigh, Billie McVeigh.

Reggie Martin & Associates 26-121
731 S. Mashta Dr., Key Biscayne, Fla. 33149

Staff: Reggie Martin, Ron Jones, Marge Martin.

Ralph Meador 310
Box 36, Lexington, Mo. 64067

Staff: Ralph Meador.

George Moore & Associates Frontier
Suite 712, 6116 N. Central Expwy., Dallas 75206

Staff: Jim Moore.

Prikryl Media Flamingo Hilton
8340 E. Princeton Ave., Denver 80237

Staff: R.W. (Bill) Prikryl.

Stan Raymond & Associates Hilton
1819 Peachtree Rd., Suite 606, Atlanta 30309

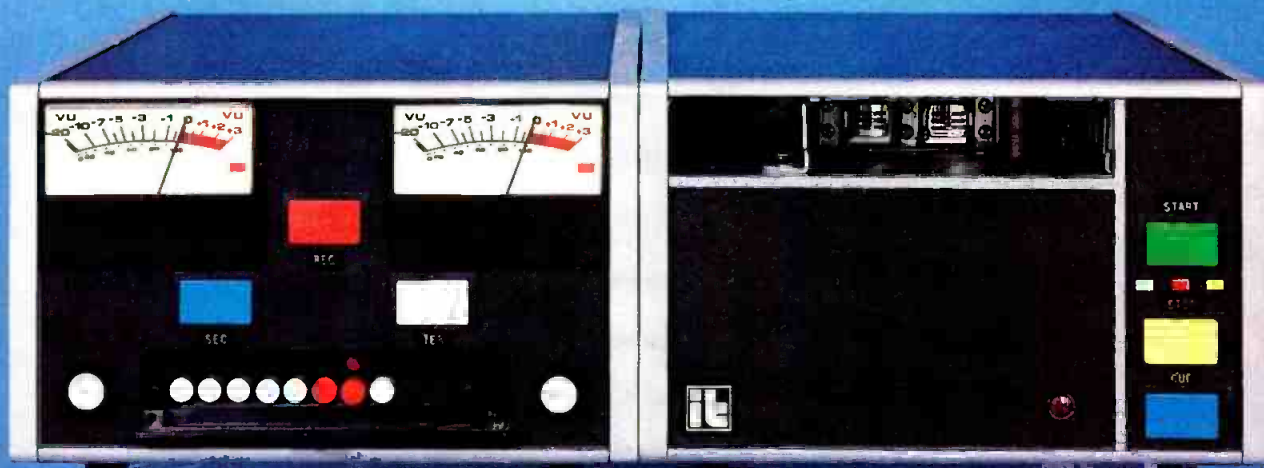
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Va. 22043

Staff: Cecil Richards, Loyola Richards,
Bruce Houston, Lee Hague.

Richter O'Grady Co. MGM Grand
1350 N. Kolb Rd., Suite 125, Tucson, Ariz.
95715

Staff: Edwin Richter Jr., James O'Grady, David Richter.

Robert Rounsaville 1610
Box 11898, Atlanta 30355

Staff: Robert Rounsaville, Mary Bush, Arnold Kaufman.

Sherman & Brown Associates Caesars
Palace
4770 Biscayne Blvd., Suite 600, Miami 33137

Staff: Gordon Sherman.

Howard E. Stark MGM Grand
575 Madison Ave., New York 10022

Staff: Howard Stark (by appointment only).

Edwin Tornberg & Co. MGM Grand
Box 8698, Washington 20011

Staff: Edwin Tornberg.

Reps

Avery-Knodel MGM Grand
437 Madison Ave., New York 10022

Staff: J.W. Knodel, Robert Kizer, Robert Kalthoff, Robert Dudley, Taylor Eldon, Richard Hughes, Leon West, David Brangan, Jan Micheli, John Baston.

Blair Radio, TV, Satellite, Video Enterprises, Quantiplex 24-121
1290 Avenue of the Americas, New York 10104

Staff: TV: Harry Smart, Walter Schwartz, Patrick Devlin, James Kelly, William Breda Jr., Floyd Celini, John Poor Jr., Kenneth Donnellon, Robert Billingsley, John Ryan. **Radio:** John Boden, Jim O'Neill, Bob Ferraro, Brian Robinson, Mike Horn, Ken Miller, Patti Rouen, Gloria DeMaria. **Blair/RAR:** Dick McCauley, Tom Turner. **Blair Entertainment:** Richard Coveny, Tony Brown.

Christal Co. Caesars Palace
919 Third Ave., New York 10022

Staff: Robert Duffy, Charlie Columbo, Bruce Blevins, Bella Warner, Paddy Ramsay, David Winston, John Fouts.

Eastman Radio Desert Inn 2904
1 Rockefeller Pl., New York 10020

Staff: Frank Boyle, Bill Burton, Dave Recher, Jerry Schubert, Carl Butrum, Jerry Donovan, Lee Lahey, Dan Prodanovich.

Harrington, Richter & Parsons
805 Third Ave., New York 10022

Staff: John Walters, Peter Ryan.

Hillier, Newmark, Wechsler & Howard 2908
277 Park Ave., New York 10072

Staff: Bernard Howard, Phil Newmark, Bill Froelich, Ira Wechsler, Chuck Hillier, Nick Imbornone, Patti Fahn, Elaine Pappas, Jacqui Rossinsky, Jerry Charm, Jane Engel, Pat Byrne, Valerie Tuttle, Bob Steadman, Georgann Lavelle, Rocky Crawford, Esther Felsenfeld.

Katz Communications Hilton 2915
One Dag Hammerskjold Pl., New York 10017

Staff: James Greenwald, Richard Mendelson, Frank McCann, Gordon Hastings, Ken Swetz, Larry Lewis, Victor Ferrante, David

Abbey, Paul Arzen, Elissa Lebeck, James Beloyianis, Michael Hugger, Richard Goldstein, Richard Brown, Peter Goulazian, Tom Olson, Jerry Cregan, Bill Fortenbaugh.

Major Market Radio Caesars Palace 1080
415 Madison Ave., New York 10017

Staff: Warner Rush, Tom McKinley, Austin Walsh, Rich White, Barry Gorline.

Masla Radio Hilton 14-121
41 E. 42d St., New York 10017

Staff: Jack Masla, Stan Feinblatt, Charles McCreery, Rhona Waxenberg, Mel Trauner, David Adams, Doug Masla, Johnnie Pegues, Arnold Taylor, Julie Judge, Bruce Schneider, Kathy Murphy, Bud Pearse, Elizabeth Rooney, Bob Masla.

McGavren Guild Hilton/Imperial
154 E. 46th St., New York 10017

Staff: Ralph Guild, Ellen Hulleberg, Jan Sperazza, Dona LaVitala, Erica Farber, Martha Harrington, Dick Sharpe, Peter Doyle, George Pine, Eddie Leeds, Frank O'Neill, Pamela Little, Tom Poulos, Anthony Durpetti, John Bitting, Greg Campbell, Gary Ahrens, Fran Sharp, Anthony Maisano, Shane Fox, Jim Peacock, Les Goldberg, Jeff Dashev, Sally Leben, Dennis Dalton, Denton Holmes, David Wisentaner, Vincent Ballino, John Rykala, Bob Lion, Tony Miraglia, Marc Guild, Gina Ansaldi, Tom Dollitt, Elaine Slasinski, Gary Donahue.

Selcom 460
521 Fifth Ave., New York 10017

Staff: Lou Faust, Linda LaPlant, Andy Rainey, Barbara Crooks, Bill Smither, Donn Winther, Andrea Gooch, Bob Smith.

Seitel MGM Grand
750 Third Ave., New York 10017

Staff: Jack Mulderrig, Larry Maloney, Bob Coppinger, Joe Eisberg, Ray Johns, Tom Will, Steve Boutis.

TeleRep MGM Grand
875 Third Ave., New York 10022

Staff: Tom Belviso, Jay Isabella, Mickey Colen, Sandra Murray, Mac Lorimar.

Torbet Radio Desert Inn
1 Dag Hammerskjold Pl., New York 10017

Staff: Peter Moore, Mike Bellantoni, Tony Fasolino, Mariann DeLuca, Bob Lurito, Lou Mahacek, John Graziano.

Weiss & Powell MGM Grand
277 Park Ave., New York 10172

Staff: Bob Weiss, Ralph Connor, Steve Marriott, Pam Caldwell, Mike Sobol, Nancy McNeil.

Adam Young Marina hotel
3 E. 54th St., New York 10022

Staff: Vincent Young, Keith Thompson, Kevin Bainbridge, Joan Barron.

Others

A.C. Nielsen Co. Sahara
Nielsen Plaza, Northbrook, Ill. 60062

Staff: Dave Traylor, Paul Baard, Bill Miller, Dave Wolfson.

Arbltron 1150
1350 Avenue of the Americas, New York 10019

ASCAP
1 Lincoln Plaza, New York 10023

Birch Report
3200 N. University Dr., Coral Springs, Fla. 33065

Staff: David Gingold, Ken Gross, Craig Harper.

Firstmark Financial Corp. Hilton
110 Washington St., Indianapolis 46204

Staff: Phillip Thoben, William Van Huss, Michael Lewis, Bill Kennedy.

Jhan Hiber & Associates Hilton
14440 Cherry Lane Ct., Suite 215, Laurel, Md. 20707

Staff: Jhan Hiber, John E. Patton, Wendy Minafo, John Stonis.

Ward L. Quaal Co. Hilton
401 N. Michigan Ave., Suite 340, Chicago 60611

Staff: Ward L. Quaal.

SESAC Sahara
10 Columbus Cr., New York 10019

Staff: A.H. Prager, Bob McGarvey, W.F. Myers, Al Altman.

T.A. Associates Hilton
111 Devonshire St., Boston 02109

Staff: David Croll, Richard Churchill, William Collatos, Stephen Gormley, Jim Wade.

TelCom Associates Hilton
80-33 Sunset Blvd., Suite 559, Los Angeles 90046

Staff: Ron Krueger, Grace Jacobs, Jim Cusick.

Television Information Office Booth 8/2
745 Fifth Ave., New York 10022

Staff: Roy Danish, Louis Ames, Jim Folsom, Jerry Lanser.

Wall Street Journal Report Hilton 28-121
222 Cortlandt St., New York 10007

Staff: Bob Rush, Joe Guilfoyl, Ken Martin.

Public service

Armed Forces Broadcasting Association—906; Broadcasters Promotion Association—917; Headquarters Department of Army Reserve—923; IEEE—900; National Committee for Employer Support of the Guard and Reserve—920; National Guard Bureau—921; National Weather Service—922, 24; NBA of Community Affairs—902; Society of Broadcast Engineers—926; Social Security Administration—904; U.S. Air Force—919.

FCC

The FCC will be represented at NAB by all of its commissioners. Present will be FCC Chairman Mark Fowler and Commissioners James Quello, Mimi Dawson, Henry Rivera and Dennis Patrick. Accompanying them will be Robert Pettit, legal assistant to Dawson, and Ricky Silberman, special assistant to Dawson; Renee Licht, legal assistant to Rivera, and Diane Silberstein, legal assistant to Patrick. Representing the Mass Media Bureau will be James McKinney, bureau chief; Roderick Porter, deputy chief; Bill Hasinger, engineering assistant to the chief; Larry Eads, audio services division chief; Ralph Haller, technical and international branch chief; John Relfer, technical and international branch assistant chief; Barbara Kreisman, low-power television branch chief; Milton Gross, fairness/political broadcasting branch chief. Also attending will be William Russell Jr., director, Office of Public Affairs, and Alex Felker, senior electrical engineer, Office of Plans and Policy.

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Everything's coming up roses in Vegas

NAB runs up curtain on four days of news-making sessions, some laughs and a lot of technical dazzle

The National Association of Broadcasters was to kick off its 62d annual convention yesterday (April 29) in Las Vegas, with 30,000 persons expected for the four-day meeting (April 29-May 2).

Preregistration last week was at an all-time high at 4,958—despite the ongoing strike by employees of many of the city's largest hotels. The convention is being held at the Las Vegas Convention Center and Hilton hotel. Even if the strike were not settled before conventioners arrive, the Hilton has assured NAB that services will not be interrupted.

Although much of the news will emanate from the numerous legislative and regulatory panels on the program and at the concurrent engineering conference (April 28-May 2) with its expanded agenda, the exhibit hall may steal the show. The convention's equipment display has doubled in five years.

This year the convention's spotlight is on the broadcasters themselves as NAB asks its members to participate in a national voter education campaign. The association will stress the civic contribution broadcasters can make during an election year and has designed the convention's theme, "You've Got

What It Takes" around it.

NAB's push is part of a larger voter education drive in conjunction with The Advertising Council (BROADCASTING, April 23).

On Sunday at 2:30 p.m., at West Hall across from the Convention Center, the meeting opens with a "State of the Industry" address by NAB President Eddie Fritts. It is followed by the presentation of the Distinguished Service Award to Elton Rule, retired vice chairman of ABC.

Next on the agenda is a "You've Got What



Russell



Osgood

It Takes" extravaganza featuring a multimedia show. Called, "An Audio/Visual Celebration of America" and produced by TM Communications Inc., Dallas, the 40-minute show may be repeated on Wednesday. NAB's patriotic theme will be reinforced by a number of workshops on political advertising, exit polling and debates.

On Tuesday, CBS News Correspondent Charles Osgood will speak at the radio luncheon. Political satirist Mark Russell is the guest speaker for the TV luncheon on Monday. (The Radio Hall of Fame induction ceremony, honoring Red Skelton and Bob & Ray, will take place during the radio luncheon.)

The FCC will be present in full force. Chairman Mark Fowler will address a closing joint luncheon on Wednesday. A "one-on-one" with Jim McKinney, FCC Mass Media Bureau chief, is slated for Monday afternoon. The NAB will hold its traditional FCC/congressional staff breakfast on Tuesday. FCC Commissioners James Quello, Mimi Dawson, Henry Rivera and Dennis Patrick will appear on a panel on Wednesday.

As for government relations, NAB has mapped out an agenda featuring leading congressional figures. More than 40 House and Senate members will participate on four panels: "Deregulation: A Congressional Update"; "Congressional Cable Copyright"; "Local Cable Carriage," and "Media Issues of the 80's."

Other highlights of the convention include the Minority Programing Exhibition, Monday and Tuesday, a series of legal "how-to workshops" on Tuesday evening, and presentations on Tuesday by the Radio Advertising Bureau and the Television Advertising Bureau.

The agenda begins on page 106.

A NEW WORLD FOR TV MUSIC LICENSING . . . PRACTICALITIES, PROBLEMS, PATIENCE AND DOLLARS!

ATTEND OUR NAB WORKSHOP. MON., APRIL 30, 8-9:15 A.M.

MODERATOR: LESLIE G. ARRIES, JR., WIVB-TV, BUFFALO, N.Y.

PANELISTS: ABIAH A. CHURCH, STORER COMMUNICATIONS, MIAMI, FLA.
R. BRUCE RICH, ESQ., WEIL, GOTSHAL & MANGES, NEW YORK, N.Y.
JACK ZWASKA, T.V. LICENSE COMMITTEE, NEW YORK, N.Y.

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The auto industry has opposed air bags for years. They claim they would cost twice what the government's independent experts have testified. And they say car buyers don't want

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What's on tap for NAB '84 in Las Vegas

Registration. The registration desk will be located in the rotunda of the Las Vegas Convention Center. The desk will be open 9 a.m. to 5 p.m., Saturday, April 28; 8 a.m. to 5 p.m. on Sunday and Monday; 9 a.m.-5 p.m. on Tuesday, and 9 a.m. to noon on Wednesday. All joint sessions are listed under the radio section. Event locations are in the Las Vegas Convention Center unless otherwise specified.

Sunday, April 29

Opening ceremonies. 2-2:30 p.m. West Hall. Concert with U.S. Marine Band.

Opening session. 2:30-4:30 p.m. West Hall. State of the industry address by Edward Fritts, NAB president. Presentation of the Distinguished Service Award to Elton Rule, retired vice chairman, ABC Inc.

Monday, April 30

RADIO SESSIONS

Syndicators/program producers breakfast. 7:30-9 a.m. Las Vegas Hilton, Ballroom B.

Two concurrent clinics. 7:30-8:45 a.m. *Age, Sex and Equal Employment Opportunity in Radio.* Room N1. Moderator: Michael Berg, NAB. Panelists: L. Michael Zinser, King Ballow & Little; Matthew Leibowitz, Miami attorney; Gordon Coffman, Bonneville International Corp.

Personal Taxes, Investments and Estate Planning. Room N2. Panelists: Jim Carnegie, Radio Business Reports; Ellis Elgart, Elgart, Dickler & Co.; Mark Dressler, First Interstate Bank. Legal advisor: Steven Simpson, Maupin, Taylor & Ellis.

Joint clinic. Alcohol and Drugs—More Than a Personal Problem. Room D1. Moderator: Charles Woods, AFTRA. Panelists: Gary Graham, M.D., Kemper Life Insurance Co.; Henry Huestis, NBC; Lou Sanman, ABC; Mary Vasquez, Vasquez Management Consultants. Legal advisor: John Hoover, Hogan & Hartson.

Four concurrent clinics. 9-10:15 a.m. *Motivating You and Your Personnel.* Room T2. Presenter: Charles Reilly, In-Person Communications. (To be repeated Tuesday at 7:30 a.m.).

Making \$\$\$ with New Technologies. Room T1. Moderator: John Abel, NAB. Panelists: Paul Bortz, Brown, Bortz & Coddington; Gregg Skall, Blum, Nash & Railsback. (To be repeated Tuesday at 7:30 a.m.).

What To Do Before the Computer Arrives. S2. Moderator: Catherine Seigerman, NAB. Panelists: Sidney King, KGIN(AM) Victorville, Calif.; Joseph McGranaghan, WKOK(AM)-WQXX(FM) Sunbury, Pa.; Phil Robbins, WYTL(AM)-WOSH(FM) Oshkosh, Wis.; Bayard Walters, The Cromwell Group.

Great Station Promotions. S1. Moderator: Jim Kefford, Drake-Chenault. Panelists: Steve Smith, WKTI(FM)-WTMJ(AM) Milwaukee; George Allen, KLGA(AM) Algona, Iowa. Legal advisor: Rose Perez, NAB.

Two concurrent clinics. 9 a.m.-noon. *Managing Your Time More Effectively.* Room L. Presenter: David Oakley, Satisfaction Guaranteed.

The One-Minute Radio Manager. Room M. Patricia Zigarmi, Blanchard Training & Development.

Joint concurrent workshops. 10:30-11:45 a.m. *Media Issues of the 80's.* Rooms R2 and 4. Introductions: Martin Rubenstein, Mutual Broadcasting System. Moderator: Bill Monroe, *Meet the Press*. Panelists: Senators Alan Simpson (R-Wyo.), Arlen Specter (R-Pa.) and Ted Stevens (R-Alaska) and Representatives Jim Bates (D-Calif.), Henry Hyde (R-Ill.) and Patricia Schroeder (D-Colo.)

Deregulation: A Congressional Update. Room E1, 2 and 3. Moderator: John Summers, NAB. Panelists: Representatives Cardiss Collins (D-Ill.), Michael Oxley (R-Ohio), Matthew Rinaldo (R-N.J.), Al Swift (D-Wash.), Thomas Tauke (R-Iowa), Billy Tauzin (D-La.) and Henry Waxman (D-Calif.)

Three concurrent clinics. 10:30-11:45 a.m. *In-House Research: How To*

Do It and Use It. Room S2. Moderator: Ellen Hulleberg, McGavren Guild Radio. Panelists: Ted Bolton, Ted Bolton & Associates; Ellen Burke, KLZ(AM)-KAZY(FM) Denver; Terry Donner, WHN(AM) New York. (To be repeated Tuesday at 4 p.m.).

Accounting for Nonaccountants. Room N1. Presenter: George Riven, Miller, Kaplan, Arase & Co. (To be repeated Tuesday at 4 p.m.).

AM Stereo: Chapter II. Room T2. Moderator: Fred Walker, Broadstreet Communications. Panelists: Wayne Eddy, KYMN(AM) Northfield, Minn.; Joe Ernest, KTSX(AM) San Antonio, Tex.; Don Dalton, KFI(AM)-KOST(FM) Los Angeles; Jon Strom, Sony. Legal advisor: Edward Henneberry, Howrey & Simon. (To be repeated Monday at noon.).

Hands-on Microcomputer Lab. 12:30-2:30 p.m. Room L.

Two concurrent clinics. Noon-1:15 p.m. *Getting Your Clients To Pay Or...* Room N1. Panelists: Jim Hooker, Media Sales Training Systems; Mike Oatman, Great Empire Broadcasting; Craig Fox, WAQX(AM) Syracuse, N.Y.; Don Weir, WHBY(AM)-WAPL-FM Appleton, Wis. Legal advisor: Richard Waysdorf, Wilner & Scheiner. (To be repeated Tuesday at 7:30 a.m.).

AM Stereo: Chapter II. Room T2 (Repeat of earlier session).

Clinic. 12:30-2:30 p.m. *Attracting Political Advertising.* Room T1. Presenter: Jerry Russell, Campaign Consultants. Legal advisor: William Rehner Jr., Hogan & Hartson.

Two concurrent clinics. 2:30-3:45 p.m. *Hispanic Radio.* Room N2. Legal advisor: Raul Rodriguez, NTIA.

Daytimers Forum. Moderator: Jim Wychor, KWOA(AM)-FM Worthington, Minn. Panelists: Bill Hassinger, FCC; Wayne Eddy, KYMN(AM) Northfield, Minn. Legal advisor: Barry Umansky, NAB.

Joint clinic. 4-5:15 p.m. *One-on-One with Jim McKinney.* Rooms E1, 2 and 3. Moderator: Eddie Fritts, NAB, with FCC Mass Media Bureau Chief James McKinney.

Joint clinic. Minority Recruitment and Development...Everyone Wins. Room N2. Panelists: Paul Yates, KYW(AM) Philadelphia; Howard Woolley, NAB; Lillian Holford, Bay Area Broadcast Skills Bank; Ed Gomez, KABQ(AM). Legal advisor: Howard Braun, Fly, Shuebruk, Gaguine, Boros, Schulkind & Braun.

Reception. 5-6:30 p.m. Hilton Pavilion 9. Daytimers reception.

Reception. 6-7:30 p.m. Hilton Ballroom. Sixth annual ham radio operators reception. Special guest: Senator Barry Goldwater (R-Ariz.)

TV SESSIONS

Three concurrent early bird workshops. 8-9:15 a.m. *Innovative Revenue Sources for Smaller Markets.* Room D2. Moderator: Bill Bengtson, KOAM-TV Pittsburg, Kan. Panelists: James Blake, KSTP-TV Minneapolis; David Ludwig, Ludwig & Associates, Lake Oswego, Ore.; Charles Pittman, Jefferson-Pilot Retail Services. Legal advisor: B. Jay Baraff, Baraff, Koerner, Olender & Hochberg.

1984—A New World for TV Music Licensing. Room A1. Moderator: Leslie Arries Jr., WVB-TV Buffalo, N.Y. Panelists: Abiah A. Church, Storer Communications; R. Bruce Rich, All-Industry Television Music License Committee; Jack Zwaska, All-Industry Television Music License Committee.

Marketing the News. Room A4. Moderator: Roy Danish, Television Information Office. Panelists: Lois Hinkle, WKRC-TV Cincinnati; Lee Minard, KSTV-TV Denver; Donald North, WKRC-TV Cincinnati; James Topping, KTRK-TV Houston. Legal advisor: Richard Schmidt Jr., Cohn & Marks.

Opening general session. 9:30-10:30 a.m. *Television and the White House...Why Can't We Be Friends.* Rooms A2, 3, 5 and 6. Moderator: Elmer Lower, Syracuse University. Panelists: David Gerger, American Enterprise Institute; Herb Klein, Copley Newspapers; Ed Fouhy, ABC News; George Reedy, Marquette University; Robert Pierpoint, CBS.

Two concurrent workshops. 10:45 a.m.-noon. *Congressional Cable Copyright.* Moderator: David Polinger, WPix Inc. Panelists: Senators Patrick Leahy (D-Vt.) and Charles McC. Mathias (R-Md.) and Representatives Hamilton Fish Jr. (R-N.Y.), Sam Hall Jr. (D-Tex.), Robert Kastenmeier (D-Wis.), Carlos Moorhead (R-Calif.) and Mike Synar (D-Okla.).