

DECEMBER 1985

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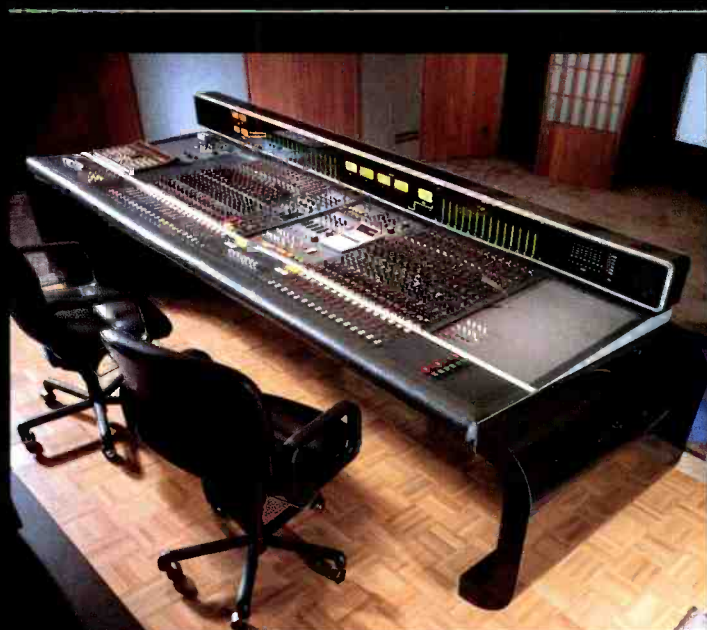


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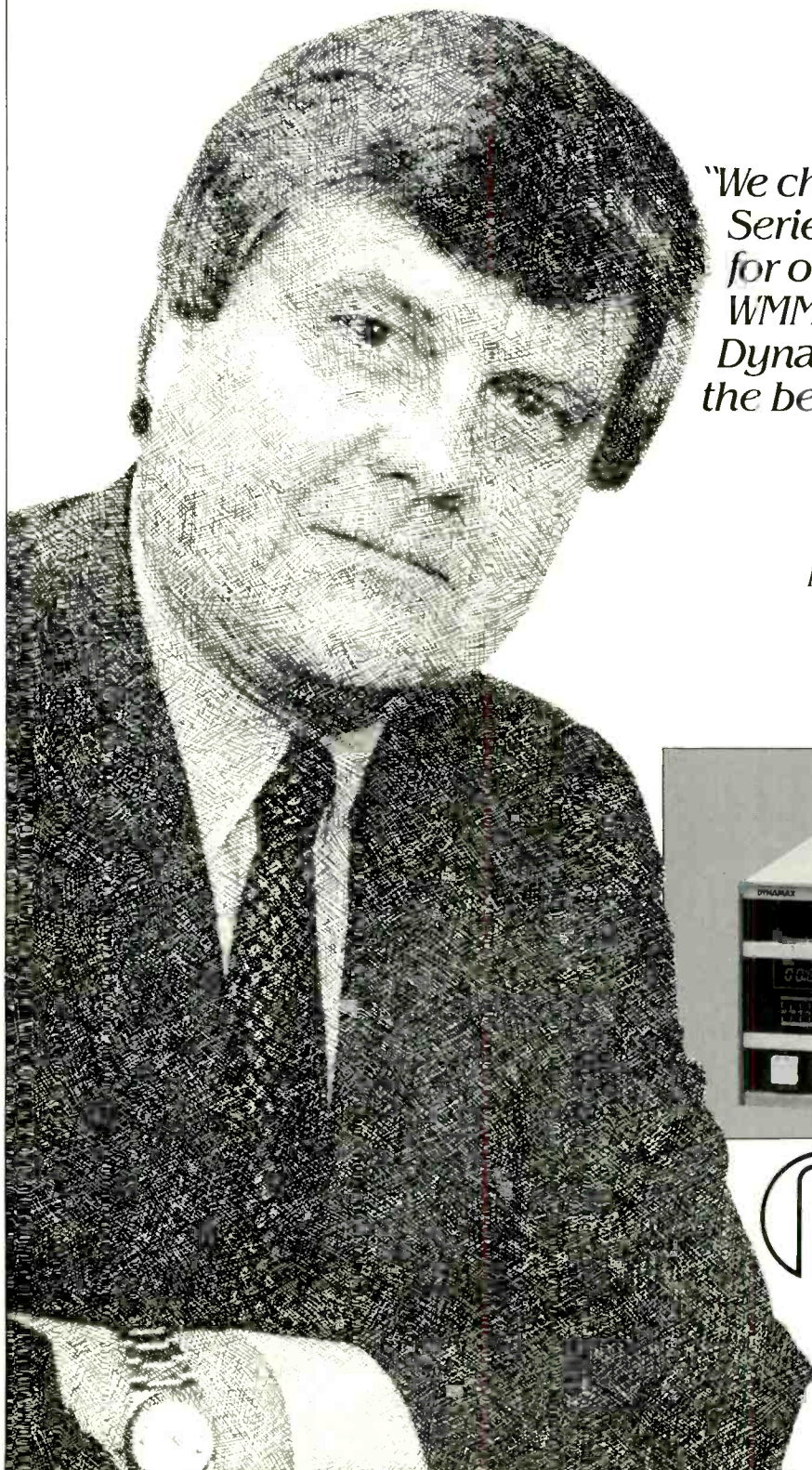
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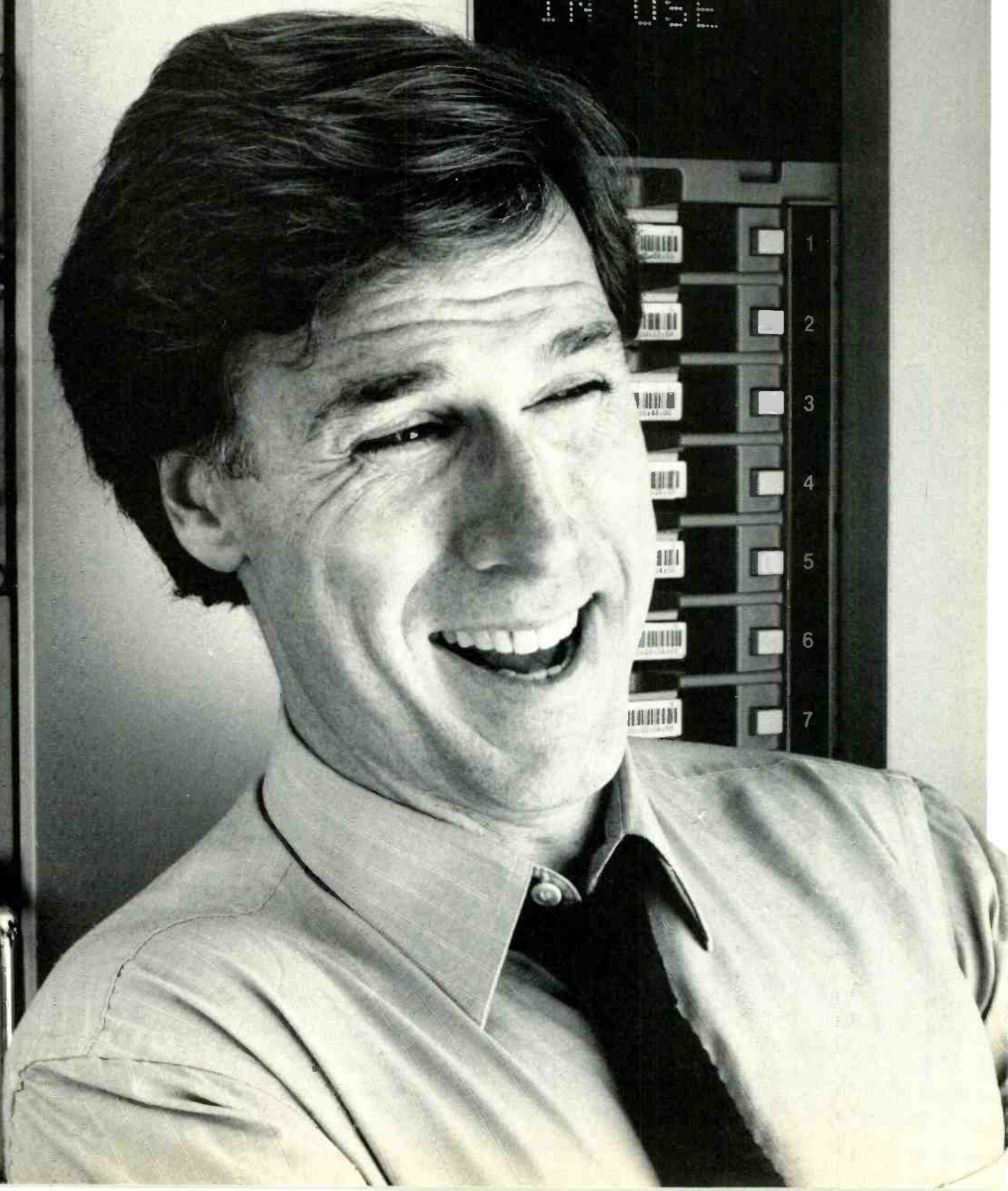
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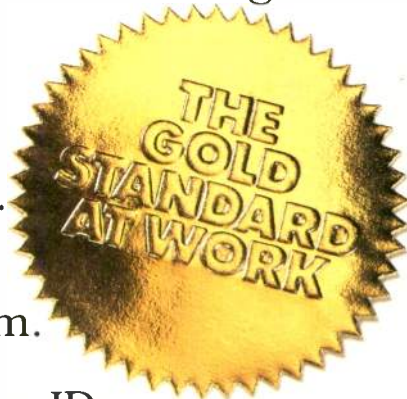
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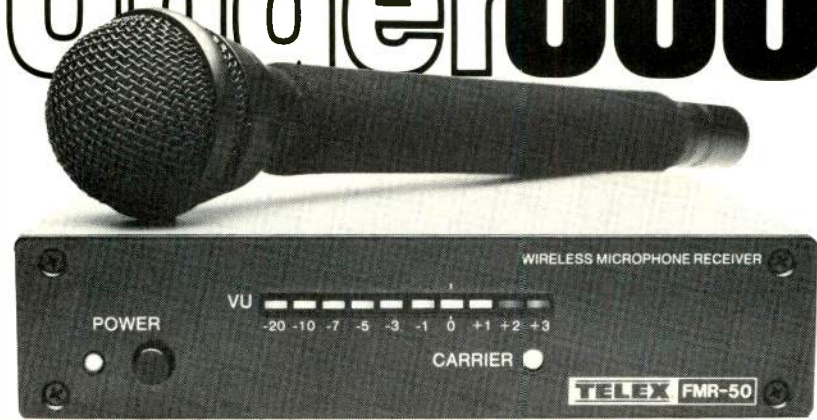
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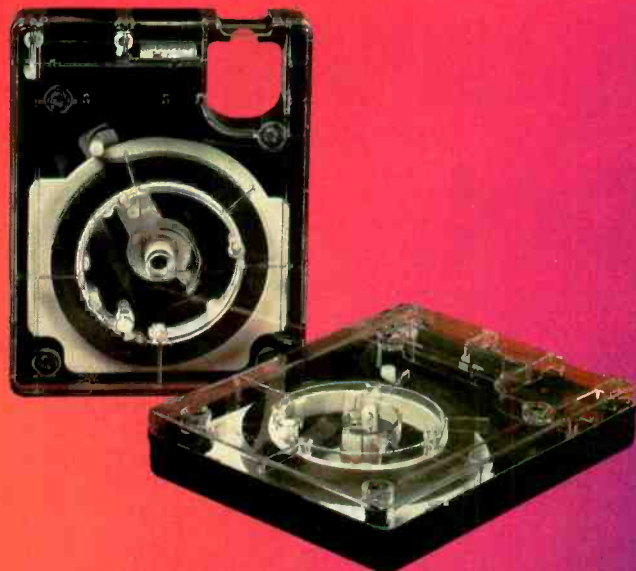
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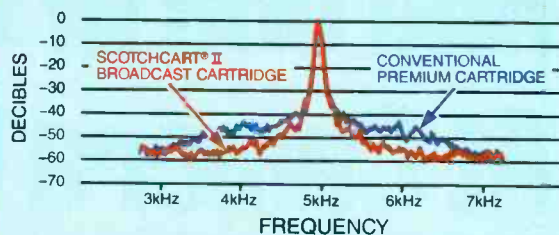
A REAL VALUE

No broadcast cartridge in the world combines long life and performance like the new ScotchCart® II cartridge. Tape and cartridge design complement each other like never before in the ScotchCart® II broadcast cartridge. Its revolutionary design eliminates pressure pads, utilizes a non-rotating hub, and now ... a new tape! With 5 times the average life of its nearest premium grade cartridge competitor and superior audio performance, the ScotchCart® II broadcast cartridge is your best value ever.

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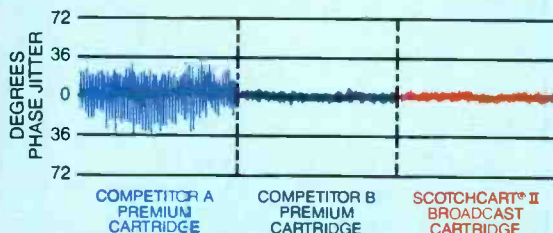
To be successful in today's competitive environment, professional broadcasters need the best. The ScotchCart® II broadcast cartridge clearly outperforms its premium grade competitors.

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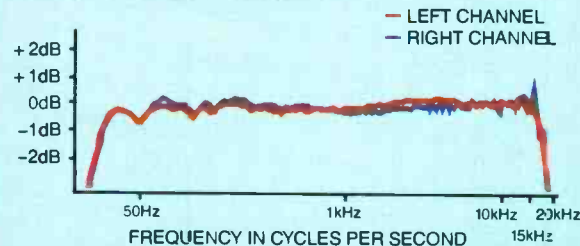
The Revolutionary ScotchCart® II broadcast cartridge design eliminates the excessive audio sideband noise which results from the rubbing effects of pressure pads and the mechanical irregularities of rotating hubs found in conventional cartridge designs.

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Some competitive cartridges sound muddy on the air because of excessive phase jitter. ScotchCart® II broadcast cartridges sound crisp and clean.

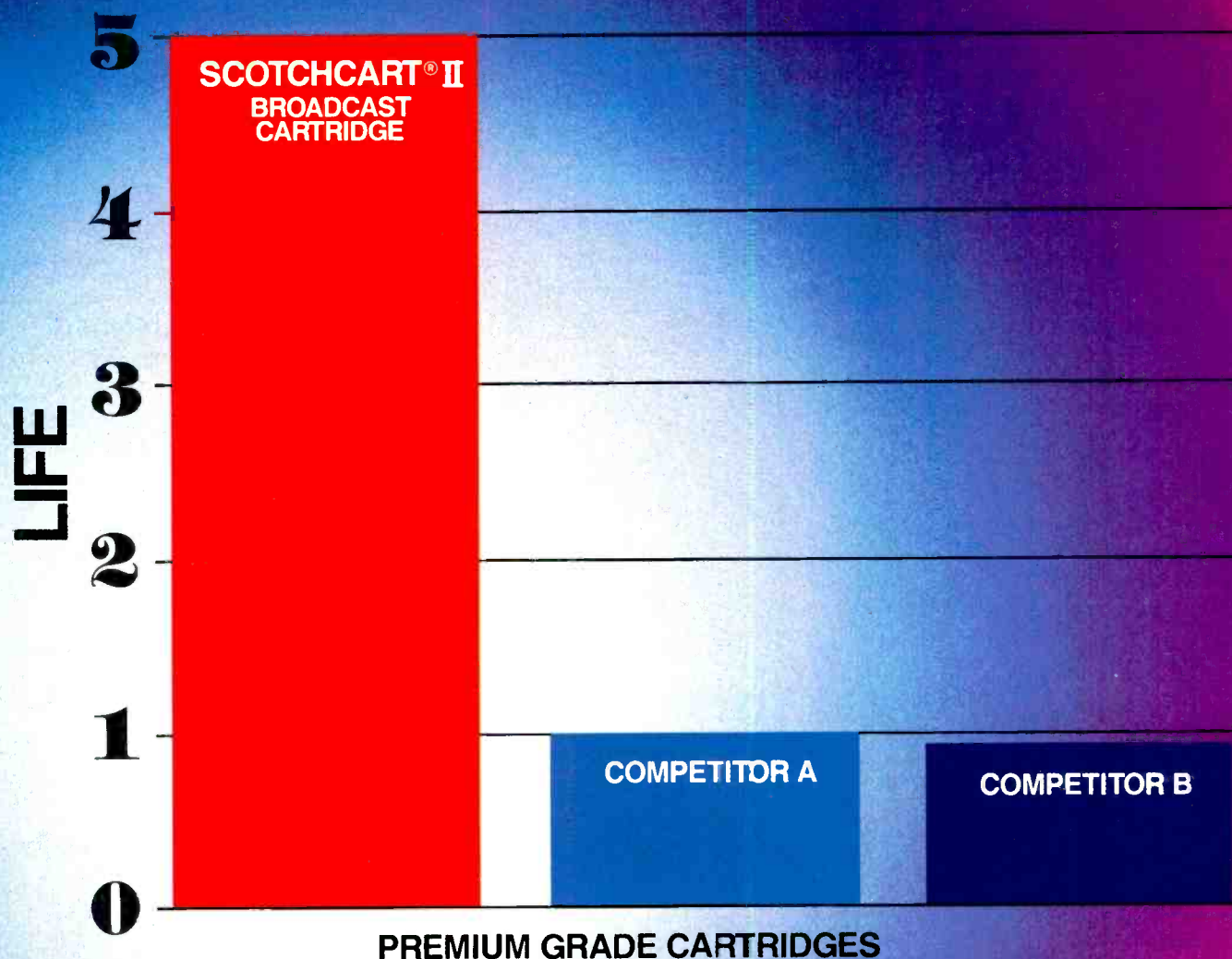
FREQUENCY RESPONSE



The new tape was conceived as an integral part of a complete cartridge system. When used with high quality equipment, such as an ITC "99B" cartridge machine, the ScotchCart® II broadcast cartridge is capable of frequency response equalling professional reel-to-reel performance.

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Results are based upon tests using 3.5 minute length premium grade cartridges and ITC cartridge machines. A cartridge was considered at the end of useful life when it reached a 5 dB frequency response loss at 10 kHz, .5% DIN weighted flutter, or mechanical failure. These criteria represent easily recognizable problems that should result in the cartridge being removed from service.

To order ScotchCart® II broadcast cartridges or request a technical manual to optimize ScotchCart® II performance, contact your local 3M sales office, your professional audio dealer, or call International Tapetronics Corporation/3M at 800-447-0414 or collect 309-828-1381 from Alaska or Illinois. In Canada, call Maruno Electronics, Ltd. at 416-255-9108.

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BM/E

BROADCAST MANAGEMENT/ENGINEERING

DECEMBER 1985

VOLUME 21/NUMBER 12

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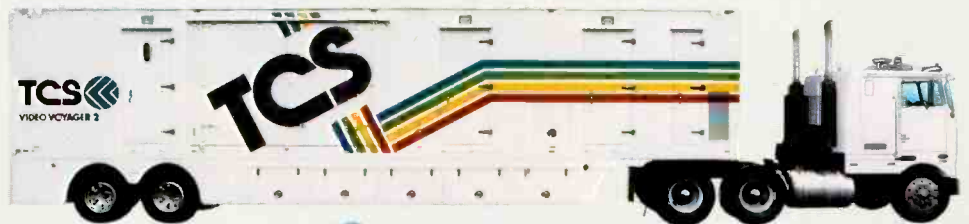
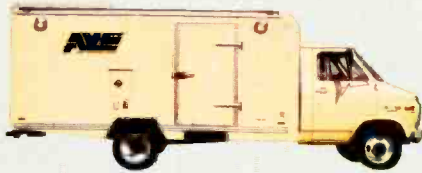
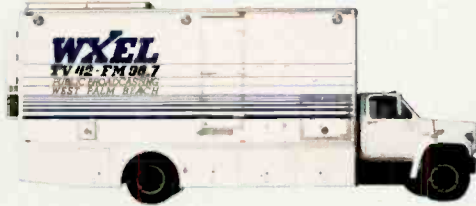
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People Design Facilities

In reviewing this year's nominees for *BM/E's* Eleventh Annual Best Station and Facility Design Competition, a number of points stand clear: The technology of radio and television broadcasting and production is acquired and applied by people and for people; there has been no slackening by people in the industry to seek out and implement the latest in technologies in order to serve their clients and audiences; and throughout the approach to radio and television engineering today, the effort has been placed on the development of environments in which people create the contents of programs.

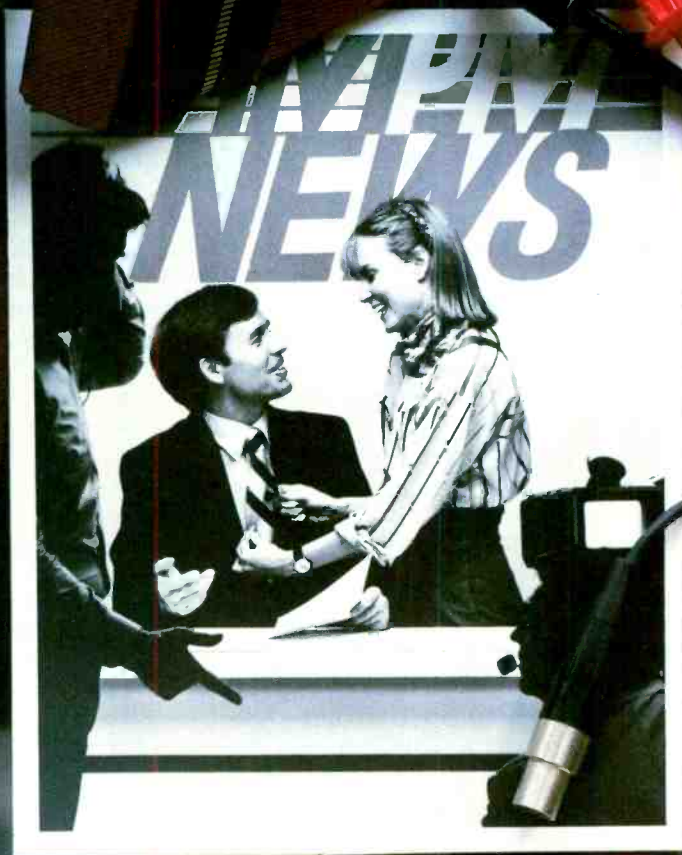
All too often, though, because of esoteric references to technical functions and needs, and descriptions of engineering difficulties, the role that people play seems to fall into the shadows of our machines and buildings.

Because our entrants this year, as in years past, have strived to tell their stories efficiently, laying out in detail their options and choices, we fear that the role they as people played and the roles played by the other people who contributed to the development of their stations and facilities may go unrecognized. This brief statement will hopefully redress that situation in some small measure.

In the past few years we have noticed the increasing frequency of statements by radio and television managers regarding their concerns over the future of this industry. One common theme has been: "where is the new generation of engineers and technicians going to come from?" The lament is that because of the advance of technical sophistication, many young people are finding that other industries, with a common technological foundation, can offer greater financial reward and technical challenge than can our own industry.

This lament is fruitless. The point radio and television communications businesses must emphasize is that there exists the opportunity to work with and for people in the development of what is clearly one of society's most important and exciting areas of human endeavor.

As you consider the entries offered this year, note that all the technological innovation and effort has been applied to the problem of creating environments for creative people to deal with the issue of how to entertain, inform, and communicate through business enterprises whose object is the promotion of a vibrant, vivacious society willing to confront its problems in the light of information rather than in the darkness of the established status quo. Increasingly, our free society relies on the development of new and better ways to bring people together through communication.



Our new lavalier mic makes everyone look good. Introducing the SM83.

People in news broadcasting have been using the same lavalier mic for a long time. But our new Shure SM83 is out to change all that. It's just what everyone has been asking for in an omnidirectional condenser microphone.

On-camera talent like the SM83 because its electronics provide for a dip in the mid-range, giving both male and female voices a smoother, more natural sound. And unlike its Japanese counterpart, the SM83 unplugs from the battery pack for easy storage.

Sound engineers appreciate the SM83 because its tailored frequency response requires less equalization. They like its low-frequency rolloff too, which quiets on-air rumbling and mechanical and clothing noise.

Set directors are impressed with the SM83's neat appearance on camera. The cord exits from the side and disappears from view, running down behind a tie, shirt or blouse.

Production assistants enjoy the SM83's mounting versatility. It comes with a single clip that works either vertically or horizontally, a double clip that holds two mics, and a universal mount that can be sewed, pinned or taped to clothing.

Repair technicians love the SM83's easy maintenance. The cartridge is easily accessible by unscrewing the end cap. And cable replacement requires only a screwdriver and tweezers; no soldering is necessary.

Field crews are also big fans of the SM83 because its electronic pack is powered by a standard 9-volt battery or by a mixer's phantom supply.

For more information on the Shure SM83, the little mic with big advantages, call or write Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204. (312) 866-2553.

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HDTV Studio Standard Almost Assured

The last major hurdle facing adoption of a worldwide HDTV studio standard has been cleared with the unanimous approval of NHK's 60 Hz, 2:1 interlace, 1125-line standard. The 60 Hz standard is now expected to be formally approved in May.

As reported in last month's *BM/E*, (see November issue, p. 16) International Radio Consultative Committee (CCIR) Study Group 11 was to hold a last meeting with the express purpose of discussing political and economic factors attached to an HDTV standard. The meeting involved over 50 countries and broadcast organizations, including the U.S. State Department and the Advanced Television Systems Committee (ATSC), which worked with SMPTE to formulate the U.S. position on technology.

Some European countries, notably France, Britain, and the Netherlands, have not been happy with 60 Hz HDTV since it poses compatibility problems with 50 Hz television systems, especially when looking ahead to questions about transmission. At the last Study Group 11 meeting, the French and Dutch reportedly tried to rally other countries interested in MAC transmission systems, but most countries support the 60 Hz parameters, and all are aware of the advantages of one world TV standard. Thus, in the end, those two countries went along with the majority, and the 60 Hz proposal passed by a unanimous vote.

As for final approval at the Plenary Assembly this spring, the outlook is good. Robert Hopkins, executive director of the ATSC, says he is "quite optimistic," especially since momentum is gaining and the situation "keeps getting more favorable." Though the European Broadcasting Union is continuing its studies of how to transmit the standard, he notes that only a few EBU members have trouble with the 60 Hz standard, and even in a worse scenario, he predicts these members will not pull out in May but instead indicate their "nonsupport."

What makes CCIR passage so delicate is that it requires a unanimous vote. Hopkins says that a small number of CCIR delegates, about four or five

countries, could state their reservations without damaging the unanimous position.

Assuming that the 60 Hz studio standard is adopted, the next question for study will be transmission. With the varieties of bandwidth spacing arrangements, and different mediums of broadcast, cable, fiberoptics, and DBS, Hopkins thinks that this issue will take "a good part of the next four years" until the next Plenary Assembly. He also says that there will not be so much of a time constraint since the means of transmission can change, unless, he adds, a transmission standard begins to fall into place.

McKinney's AM Tour & Deregulation . . .

The AM field continues to brew with activity as the NRBA schedules a notable series of "Town Meetings" between AM broadcasters and Mass Media Bureau chief James McKinney, while the FCC deletes and revises several AM regulations.

McKinney, who has proposed major changes in the structure of AM radio (see last month's news section), will meet with broadcasters in four cities to speak on his ideas for AM and any proposals the Commission makes by then, and answer questions in an informal environment. The schedule of meetings is as follows:

- January 6, Los Angeles, Beverly Wilshire Hotel.
- January 20, Dallas, Loews Anatole Hotel.
- February 12, Chicago, downtown Marriott.
- February 26, Washington D.C., Capitol Hilton.

All meetings will take place from 1:00 p.m. to 5:00 p.m. There is no charge, but the NRBA asks that those planning to attend register by calling (202) 466-2030.

More immediately, the FCC has eliminated and modified several field strength measurement requirements for AM stations with directional antennas. As of January 1, skeleton proofs of performance measurement do not have to



Keith Williams, writer and director, looks on with actor Gabriel Damon at special effects created for *Arrival*, an HDTV music video about Halley's Comet that is scheduled for theatrical distribution in January.

It's A Bird; It's A Plane — No, It's HDTV!

Many Americans will catch first sight of Halley's Comet and HDTV next month when *Arrival*, a five-minute music "video," blazes its way across movie screens throughout the U.S. The short is being produced by the

American Film Institute with assistance from Sony, Ultimatte, and Grass Valley Group. Sony will loan its High-Definition Video System, which was designed for 35 mm transfer.

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be performed due to their "limited value in showing actual antenna performance." Stations will also be able to set schedules for partial proofs as long as they provide compliance with station authorization. The monitoring point measurement schedule has also been changed from weekly or monthly to quarterly measurements. Design and installation specs for antenna monitor sampling systems have been eliminated in favor of general criteria for sampling systems. The Mass Media Bureau will

publish a policy statement detailing those criteria soon.

Finally, in what may be housecleaning before McKinney's remodeling of AM, the Commission has dropped several nontechnical AM application acceptance criteria. New AMers or those contemplating major changes no longer have to include in at least 25 percent of their coverage an area or population without AM or FM primary service. Principal communities can have more than two authorized

local services and an FM channel available, and more than two aural services and FM in more than 20 percent of the area or population. As the FCC commented, "the basic policies regarding AM allocations had not been reviewed for many years."

FM Upgrades & More Rules Dropped . . .

The FCC has proposed allowing upgrades by FM licensees on their current or adjacent channels and also says it wants to drop FM standards for stereo transmission, subsidiary communications transmission, and safety and electrical properties of transmission systems. In addition, the right of an FM station to broadcast despite interference with existing translators was upheld.

The upgrade proposal would allow an FM station to upgrade on its present channel or go to adjacent channels without the Commission having to set aside an equivalent class channel for other parties, as is now required.

In another proposal, the Commission wants to streamline or eliminate three sets of FM standards. Those for FM stereo transmissions (73.322) are no longer necessary, the FCC says, since market competition guarantees stations will maintain sufficient signal quality. Rules limiting interference would be retained.

The marketplace is also considered a sufficient regulator for the second set of standards, on subsidiary communications transmissions. Rules governing allowable forms of modulation for subcarrier operation and crosstalk on the main channel would be deleted.

The third section (73.317) covers safety and the electrical properties of transmission systems. Since few stations build their own transmission systems now and other departments' safety regulations cover them, the safety rules would be dropped. Emission limitation rules are to stay, but electrical property requirements are no longer needed to prevent interference.

In other FM activity, the FCC affirmed that full-service FM stations do not have to protect existing FM or TV translators, even if local or state laws attempt to do so. The case arose when a county official tried to prevent operation by an FM station at a common antenna site because the station would interfere with translators there.

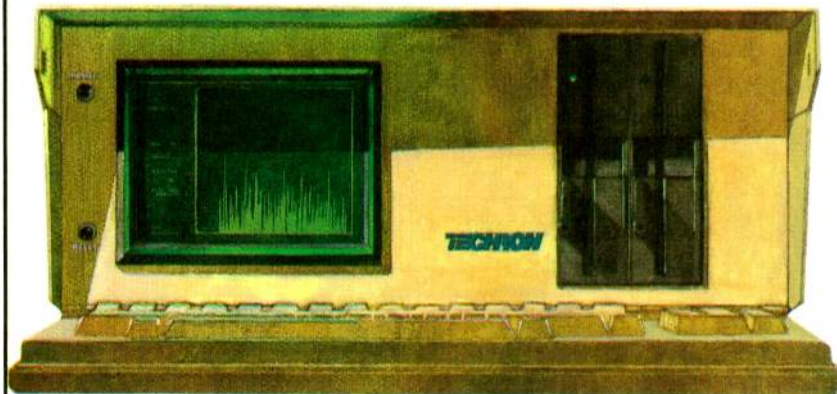
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"Explicit Lyrics": Record Rating Code

The debate over rock lyrics has been settled with the recording industry's agreement to institute a rating system. Records that go into detail about sex, drugs, and violence will have to either provide lyrics or inscribe "Explicit Lyrics—Parental Advisory" on the back cover. Throughout the debates on this issue, broadcasters have not been targeted for pressure to change their programming. In fact, most have re-

ceived high marks for sensitivity to the issue.

MTV, the cable music channel, is still being pressured to drop some of its more violent videos.

During the debate, many broadcasters expressed their dislike of a code, notably at this fall's NRBA/NAB radio convention, stating that it will put them under pressure to censor their programming on the basis of the advisory.

The driving force behind the new code was the National PTA and a recently formed group called the Parents

Music Resource Center (PMRC), the latter powered by several wives of Washington VIPs. Both pushed for a rating system for record albums and music videos, a requirement that "pornographic" lyrics be printed on album covers, and segmenting of MTV's videos into early and late night fare. Songs by Prince, Sheena Easton, some heavy metal groups, and a Van Halen video caused the most commotion.

Both groups contacted the NAB, which sent letters to broadcasters about "growing public concern." NAB president Eddie Fritts said that the association had made broadcasters more sensitive to the issue but that it would never try to intrude on programming decisions.

During the negotiations, RIAA, the recording industry's association, suggested that records be labelled "Parental Guidance—Explicit Lyrics." The PTA had asked for "R" ratings.

Cable Technical Rules Deleted

The technical requirements for cable systems' signal quality have been dropped. Local laws still apply, but the FCC is only keeping guidelines on its books.

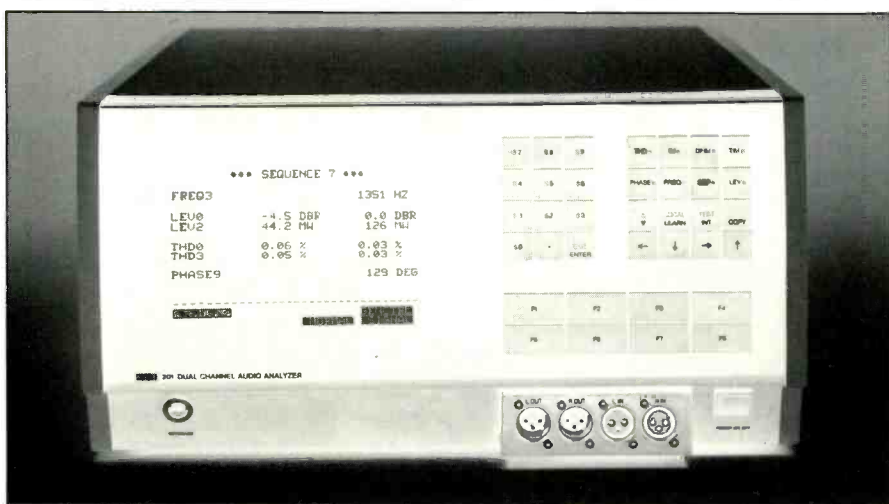
Citing the pressure of the marketplace, the FCC said cable systems no longer have to meet its technical quality performance standards. The standards themselves are being retained. Local or state laws may still mandate certain quality levels, but they may not exceed the Commission's standards since federal law overrules them.

Signal leakage limits for cable may also be relaxed. The FCC is investigating the subject and will ask for engineering data on which to make a decision. Signal leakage rules will stay in effect.

Harris Buys ADDA

Harris Corp. has bought ADDA Corp., the Los Gatos, CA manufacturer of television studio equipment. Terms of the deal were not revealed.

Harris says it will move production for some of ADDA's product line of TBCs, frame synchronizers, still store and digital video effects systems to Harris' Video Systems Operation division in Mountain View, CA. Harris also says it will continue to provide parts and service for "selected" ADDA products.



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Digital Radio Feed for Live Concert

WGBH-FM, Boston, MA has transmitted what is believed to be the first digital feed of a live concert to radio stations across the country. Twelve public broadcasters were equipped with dbx 700 digital audio processors to decode the satellite feeds.

Both digital and analog feed systems were employed. The sound went from a Studer 169 mixer at the MIT concert

auditorium in Boston into two dbx 700s, a VCR and modulator at the institute's cable TV system, and then on via two microwave paths, one as backup, to WGBH. There, the digital signal was uplinked via WGBH-TV's master control (the dbx 700 uses video-format signals), the video output going to a Westar IV PBS transponder and the audio to an NPR transponder.

Those stations with Model 700 processors then broadcast the all-Ravel concert.

A Caveat on Call Sign Changes

In a special public notice, the FCC is drawing attention to its rules governing the award of broadcast call signs.

Calls already in use, the Commission notes, are not available until the date on which a station switches to its new letters. Applications for calls that have not yet cleared this process—that means the next working day if the effective date is on a weekend or holiday—are unacceptable. As for impressions that someone can designate an heir to their old calls, the Commission wants everyone to know that such agreements have no effect on who gets the abandoned letters.

The Radio Information Center of New York City, which puts out a kit for stations wanting to find different call signs, says that interest in such changes has remained constant over the past two years, with about seven percent of all commercial stations making the switch each year.

Major Studios Sign with PPV Service

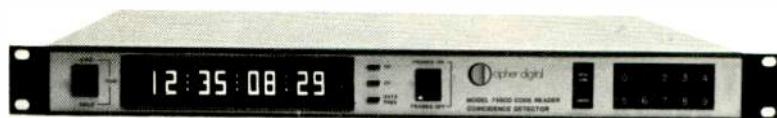
Several major movie studios have signed up for pay-per-view distribution of their first-run movies. Request Television, a PPV service, estimates that it will make available to cable subscribers 120 to 150 films a year as they are released to the home video market, at a price of \$4 to \$5 each.

Current plans are that two to four movies from one studio will be aired 20 hours a day for half a week. Each studio will have its turn every five weeks. Participating companies include Columbia Pictures, Lorimar, Paramount, 20th Century Fox, Universal, Walt Disney, and Warner Brothers. Request TV hopes that a few years it will generate enough money for studios to open up a PPV release date in advance of the VCR market.

Offerings during the service's first month, scheduled for the end of November as of presstime, include *Bedknobs and Broomsticks*, *Godzilla 1985*, and *Police Academy II*.

Jeffrey Reiss, the man behind Request and founder of Showtime, said that cable ops now signed with his company reach 110,000 homes, and he expects to reach a million—and a profit—in one year.

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NEWS BRIEFS

An updated list of **Cuban broadcast stations** that might interfere with U.S. stations on 107 AM channels has been put together by the FCC. The list also gives calculated location and operating power as of the end of September. Call Wilbur Thomas at (202) 857-3800; there is a fee.

A one-hour training course teaching how to take **AM field strength measurements** is available on video along with written materials from Ellis & Wiebe. Phone is (303) 367-1626. . . . The NAB has released a report on interim standards for **RF lighting devices** to protect AM. It has recommended the standards to the FCC. Contact the NAB's Science and Technology Department.

The FCC has proposed making subscription television and DBS **point-to-multipoint services**, thus exempting them from broadcast station regulations. . . . The Commission has "noted a large increase" in **unlicensed video transmitters** sold to the general public to link VCRs or cameras and TV receivers. Marketing such equipment is a

crime, the Commission emphasizes, punishable by a fine and jail term.

Visnews International is providing the first private uplink and editing facilities **on-site at U.N. headquarters**. . . . **V.I.P. Newsmaker Interviews**, the local station-to-news figures interview service from Visnews, starts its regular broadcasts the first week in January. . . . A stock photo service is now transmitting its **video stills via satellite**. The Photo Store is located in Washington, D.C.

Conus has started offering a **Ku-band up and downlink package** to any station in the continental U.S. for under \$100,000. Lease options run about \$1750 per month.

The NAB's **1985 Television Financial Report and Market Analysis** surveying all commercial stations is now available. This year's response rate is said to be about 69 percent. Cost to members is \$40 for the former and \$150 for the latter. Call (800) 368-5644.

KVEA(TV), a new Los Angeles independent, says it is the first **full-service Hispanic indie** in that market

. . . . **Coverage of the U.S. Senate** is inching closer: the Senate Rules Committee gave its okay to a bill that would institute a three- to six-month test period. . . . **The Council for Cable Information**, which had been producing and buying time on broadcast television to promote the cable industry, has folded due to conflicting marketing aims.

An NAB survey finds that about three-quarters of responding stations have produced their own **alcohol abuse PSAs**. MADD and the National Highway Traffic Safety Commission were among the most common source for outside PSAs.

The NAB is holding a one-day seminar on **cutting telephone costs**. The seminar will take place in Washington.

Neil Vander Dussen has taken over as president of Sony Corp. of America, replacing Kenji Tamiya, who has headed the Sony subsidiary since 1981. Vander Dussen had been in charge of marketing for Sony America. . . . Phyllis G. Tritsch has retired as head of the 3000-member **American Women in Radio and Television** (AWRT).

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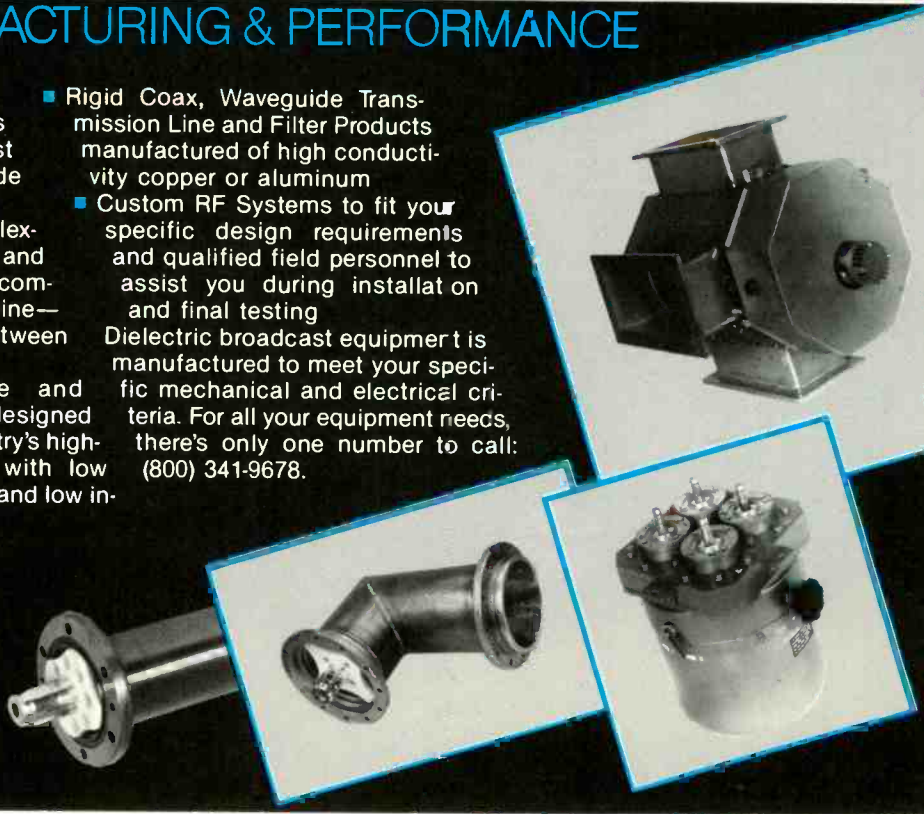
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RADIO programming & production

Radio That Listens to Children

By Judith Gross
Associate Editor

A female "doctor" with a European accent gives advice, except the call-ins come from children. It isn't Dr. Ruth, it's Dr. Rita Book, and the subject isn't good sex, it's good reading matter.

"Dr. Rita Book" is one of the regular features on *Kids America*, the only live national daily radio program for children.

The program started as a local show called *Small Things Considered*, on WNYC-AM in 1984. In October of this year it went national with funds from the Corporation for Public Broadcasting and additional support from the Helena Rubenstein Foundation. The show is currently being distributed by American Public Radio (APR, not to be confused with NPR) via satellite to eight "test" markets and two other stations.

Broadening the audience of the program, which won WNYC a prestigious Peabody Award, meant a few changes had to be made.

The changing of the name to *Kids America* was done to give the show a more national appeal and to try to attract an audience beyond public radio listeners, according to APR's promotion coordinator Diane Engler.

"*Small Things Considered* was almost an inside joke, a play on the NPR show *All Things Considered*," Engler notes. "We are trying to tap into kids who don't normally listen to public radio."

The show was also shortened from three hours to 90 minutes, with each special segment lasting a half hour, instead of the hour that was devoted to it before. For call-ins from children, which have always been a main feature of the program, *Kids America* now has an 800 number, and gets callers from across the country, taking some 230 calls during the 90 minutes compared with the 150 young listeners who would call each day when the show lasted three hours locally.

Everything on the program is done live, to live up to young listeners' ex-



Hosts Larry Orfaly and Kathy O'Connell chat with Benjamin Carlin from 3-2-1 Contact on *Kids America*, a radio show for and about children.

pectations of radio, according to producer Keith Talbot. Each day cohosts Kathy O'Connell and Larry Orfaly are joined by a cast of characters and special guests in the studio to produce what amounts to a very tightly structured format.

"People think we're being spontaneous, but we do have a format," Talbot explains.

Guests and segments include a visit from Susan Dias, who makes up songs on the spot as listeners request on "Susan's Songs"; or Sam, the talking computer, played by Tom Trocco, who gives information on a variety of computer topics.

"Martha's Mishaps" is a soap opera featuring the "problem of the week," which listeners are asked to help solve. Talbot stresses the importance of such a feature in a world where "kids are rarely asked for their advice." Similarly, a weekly opinion poll will ask children tough questions on topics as weighty as weapons in space.

Other imaginative segments include the "Duke of Words" with his weekly spelling bee; pet advice from veterinarian Dr. Mark Burns; "Xeno," an alien lost on planet earth who gets kids to use geography and logic to help him find his way; the "Mystery History Guest"—a sort of *What's My Line* using historic figures; and the ever popular ad-

vice from "Dr. Rita Book," a takeoff of Dr. Ruth Westheimer.

Kids America has been airing from an old studio in New York's municipal building, but the show is slated to be the first into WNYC's brand-new facility. There will be two control rooms in the new studio, one for on-air and one to take call-ins. Currently, both call-ins and on-air are done from the same room.

The show airs 6:30 to 8:00 p.m. eastern time, so that even in earlier time zones it becomes an after school experience. The audio is monaural currently, but is scheduled to go stereo at the beginning of 1986.

The lure of music

Talbot points out that in addition to the live aspect of the show, another constant kids have come to expect from radio is music. *Kids America* regularly gives its young listeners generous doses of music they ask for, and music that they might not otherwise hear.

A segment known as "Radiovision" airs classics such as Vivaldi's "Four Seasons" and asks listeners to describe images that come to mind. Then there are the request selections. Listeners call in to request songs, and the top three requests are aired toward the end of the 90 minutes, lending an air of suspense to

RADIO PROGRAMMING

the show. At the end of the week, the top five requests for the week are counted down. In the past these have included recent hits by Michael Jackson and Weird Al Yankovic, but the program tries to gently influence requests by playing music children might not hear on a top forty radio station or on MTV. Allen Sherman's humorous "Hello Muddah, Hello Faddah," a vintage selection from the 1960s, recently made the number one slot on the countdown, and after being exposed to Beethoven's Fifth Symphony, young listeners chose it for the number one song over Michael Jackson's "Beat It" for several consecutive weeks. Talbot says O'Connell and Orfaly play at least one classical selection each evening, and that he hopes to broaden the musical portion even further by including Cajun and other ethnic music.

Not afraid to phone

Like the talk shows that have become so well-received on radio, *Kids America* relies heavily on call-ins. Callers are

put on the air to answer contest questions or give their opinions, and some past calls have been from listeners as young as four years of age. The program is targeted toward the six to 12 age group, and Talbot says the average caller is nine-and-a-half or 10 years old. Although it's a wide age range to target, the show tries to recognize the differences between an eight-year-old and a 12-year-old and meet the needs of both.

The call-ins help give children a chance to communicate with each other, and most importantly, according to Talbot, to interact in a unique way with the adult world.

"It's a vehicle for children to have the first experience they may have talking with an adult outside their family, and we make sure it's a rewarding one," he explains. One mother wrote in to say that it helped her child get over a fear of using the phone.

Another "phone" feature that has been added since the show has gone national is the "challenge of the day." Kids call in with a challenge to other

listeners, with questions such as: "How can you remember the names of the planets or great lakes?" The first one to call in with the right answer wins a book.

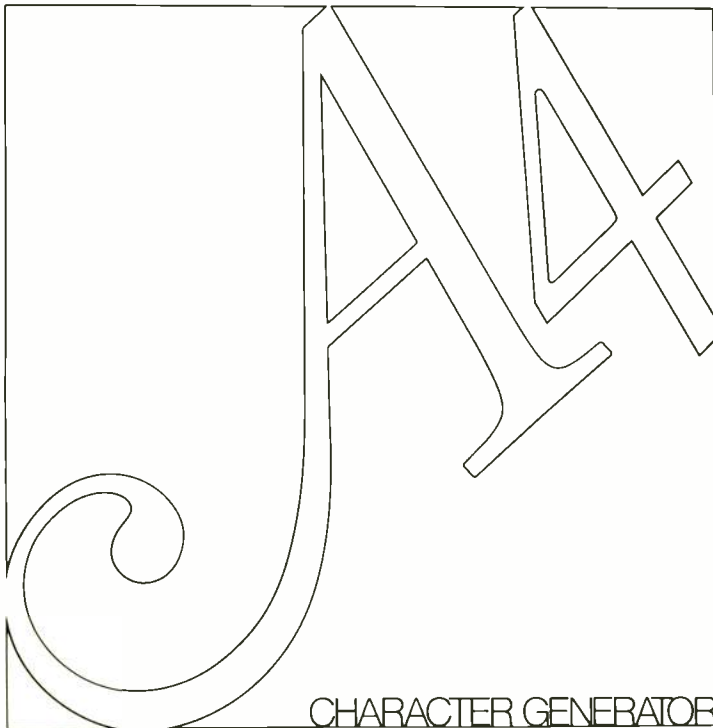
"All our prizes are books donated by publishers," says Talbot. The call-ins provide instantaneous feedback to the show, and help determine what works and what doesn't.

"Everything in the show now is what has worked in the past; we're applying what we learned in the local show to the national program," Talbot says.

He believes *Kids America* is starting to get more of a cross section of the country, although he believes the economic and ethnic mix will broaden as the show becomes more widely distributed.

Test period

Kids America is currently being test-marketed to public stations in New York City, Milwaukee, San Mateo/San Francisco, Buffalo, NY, St. Paul, Boston, Rochester, NY, and Cincinnati.



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RADIO PROGRAMMING

Then, APR's Engler says, "We can let the stations know what works in promoting the show, and show them it's a success." Mail and calls have already shown the extent of *Kids America's* popularity.

During the evaluation period, CPB is also trying to devise a way to measure the program's audience, since Arbitron does not measure radio listeners under 12 years of age.

The "test" period ends in September of 1986, at which time *Kids America* will go into widespread distribution. Two nontest markets, Des Moines, IA, and Macomb, IL are currently airing the show, and APR has gotten interest from other areas as well.

Just for kids

Besides the obvious communications, language, and thinking skills *Kids America* encourages, the show has been cited by organizations for its creativity, which combines the inherent imagination of a medium such as radio with a realistic view of the world of



Marcy Markoff hosts "Marcy's Friday Party," a regular feature on *Kids America*.

children. The show and its cast also believe in having fun, which may explain its popularity and also why some adults without children tune in.

But Talbot believes children may listen because *Kids America* is a show just for and about them, the way *Sesame Street* is for kids on TV: it makes them

feel important. Shows just for children are rare on radio; although as Talbot points out, kids listen to radio aimed at general audiences all the time. As a slogan coined by APR explains: "For years kids have been listening to the radio. But now there's radio that listens to kids." **BM/E**

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- EXTERNAL DIMENSIONS..... W9.8"×H3.2"×D12.7"
- WEIGHT..... 8.2lbs

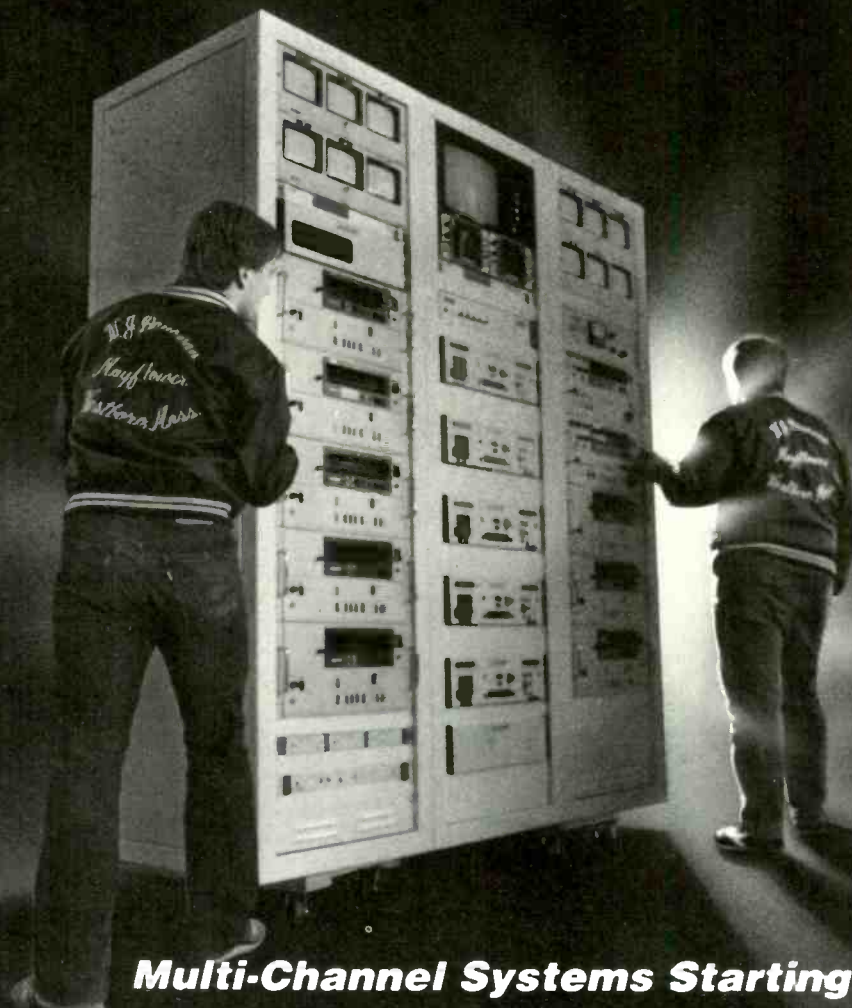


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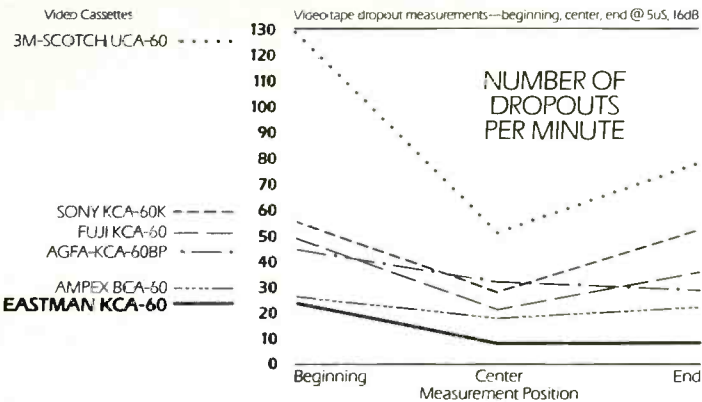
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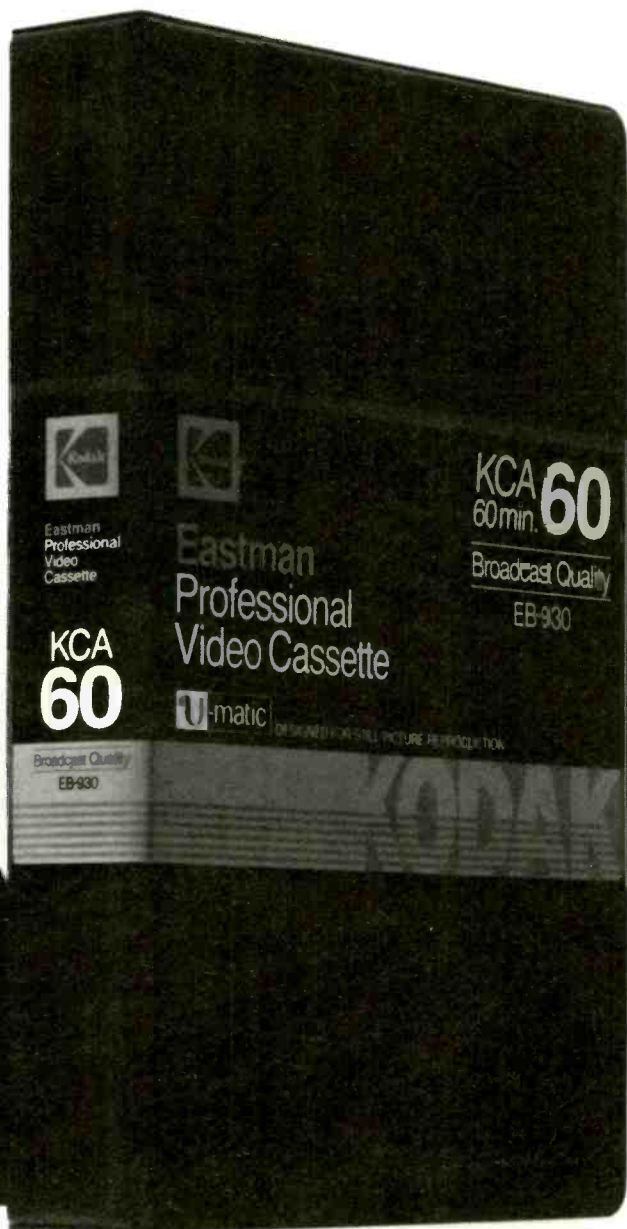
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TELEVISION programming & production

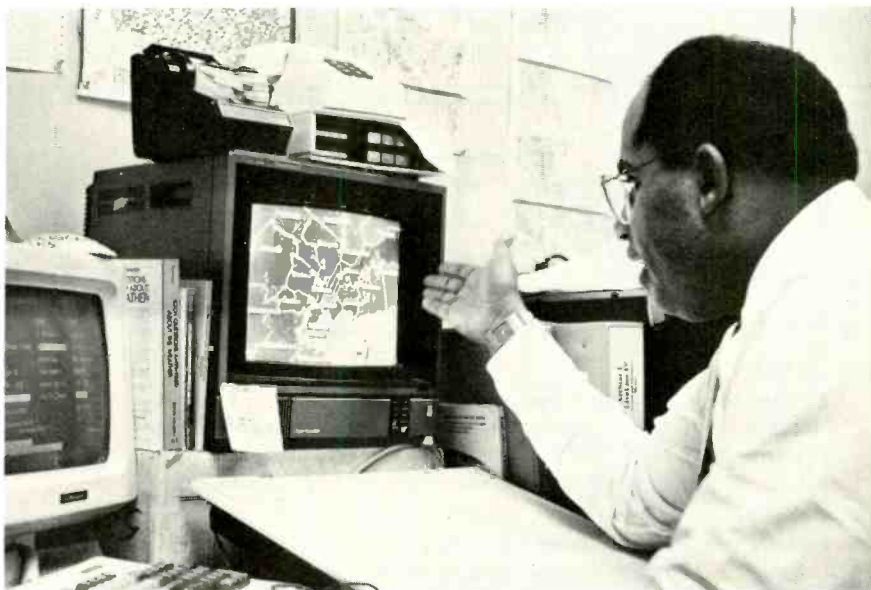
Stations "Eye" Storms with Doppler Radar

By Eva J. Blinder
Senior Editor

Hurricanes, thunderstorms, and tornadoes regularly turn the weather into a top news story, and television stations around the country have found that enhancing their news operations can be a potent way to serve viewers. Weather graphics is now an expected part of the news in many markets, and stations routinely have access to satellite pictures and dial-up radar reports from the National Weather Service and other sources.

A purchase of weather forecasting or tracking equipment involves other considerations, however. Will it really add to the station's weather operation, or will it simply duplicate information already available from other sources? Will station personnel be able to operate and interpret it efficiently? Will it effectively serve the station's market area?

All these questions are being asked



WNBC-TV's Al Roker checks a Doppler radar image on the station's ColorGraphics weather computer. Radar is fed directly into the computer through an interface.

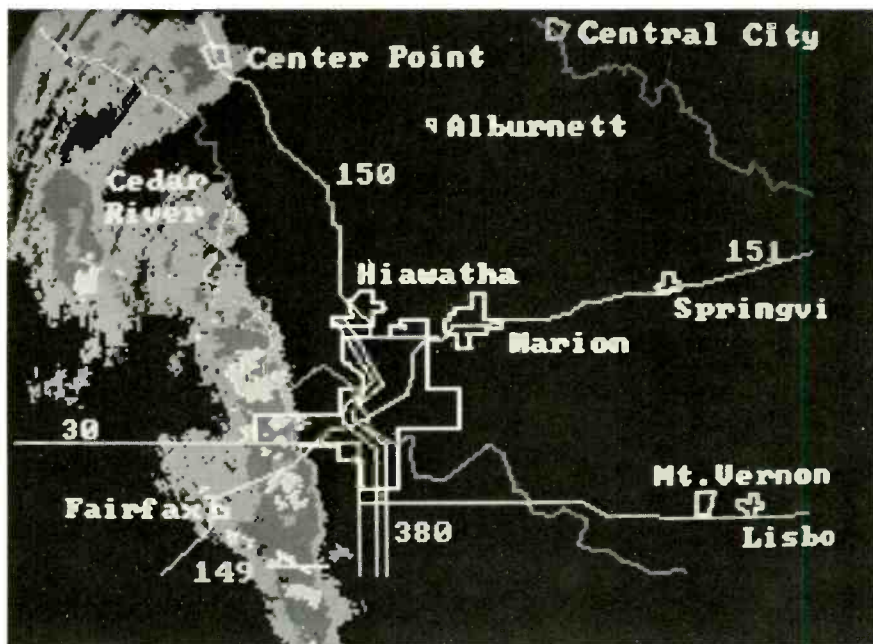
by stations considering owning a Doppler radar unit. Unlike conventional weather radar, Doppler radar can

sense and display turbulence, thereby pinpointing the heavy winds of a thunderstorm or tornado. It does this by a patented technique, based on pulse-pair processing, that measures the speed of rain particles relative to each other. For stations in storm-prone markets, such a unit can be a boon to weathercasters and viewers alike.

According to the Collins Avionics Divisions of Rockwell International Corp., manufacturer of the Doppler radar, 26 U.S. television stations have found it worth their while to install Doppler radar systems. Dealers include many of the leaders in the weather graphics and information field: Advanced Designs Corp., Alden Electronics, ColorGraphics Systems, Environmental Satellite Data, and Kavouras.

Beating ground clutter

The New York City broadcast market, on the face of it, would seem one of the less likely places to find a Doppler radar installation. Despite the city's re-



A typical Doppler radar picture. Color-coded display indicates intensity and velocity of precipitation.

TELEVISION PROGRAMMING

cent encounter with Hurricane Gloria, severe storms are relatively uncommon compared with areas such as the south and the midwest. In addition, extremely heavy ground clutter makes conventional radar almost useless within the city itself.

Nevertheless, WNBC-TV, the NBC O&O that broadcasts over Channel 4 in New York City, recently installed its own Doppler radar system, which weatherman Al Roker believes is the first weather radar at a New York television station. The egregious ground

clutter that blocks most radar's usefulness is easily overcome by the Doppler system, Roker states.

According to Roker, "The ground clutter pattern in New York City is such that it effectively obliterates about half the viewing area. The basic problem is that the radius of ground clutter can be anywhere from 10 to 25 miles."

The Doppler radar uses its ability to detect turbulence to screen out ground clutter. If a target does not reach a certain threshold for movement, the radar system identifies it as ground clutter

and screens it out of the display. With ground clutter out of the way, WNBC's radar can indicate areas of rainfall and storms that occur even in heavily built-up New York, as close as one mile to the radar transmitter and out to a 50-mile radius.

The freedom from ground clutter and ability to track storm winds benefitted WNBC during the recent attack of Hurricane Gloria, which proved less destructive than predicted but still caused serious damage in portions of the station's viewing area.

"During the hurricane we were able to show where the strongest winds were within the areas of precipitation," Roker says. "We were really pleased with it because it showed where the stronger winds were, and also showed that the storm was weakening as it came on shore." Viewer reaction was strongly positive. "People felt overall that we did a service," Roker adds. "Some of the newspapers said we were flexing our muscles and that our coverage was overkill, but that was before anybody knew the extent of the damage. But the viewers were calling to thank us. A lot of the people who called or wrote mentioned the radar."

Roker explains that WNBC's radar unit is located on top of the RCA building 70 stories above the city—"actually about 30 feet above the National Weather Service radar." In addition to its special features, it is highly sensitive to regular precipitation, and Roker says he has detected rainfall as far as 230 miles from the station. The Doppler effect is more limited, he says, "but it effectively covers our viewing area."

Graphics connection

WNBC acquired its Doppler radar through Advanced Designs Corp., which Roker says is working with ColorGraphics Systems to provide an integrated weather system for stations. The station's seventh-floor weather center includes a ColorGraphics weather graphics computer, the radar terminal, and an interface that allows the computer to operate the radar. The package, supplied by Advanced Designs, lets various weather graphics elements—radar pictures, satellite pictures, and weather maps, for example—be layered, manipulated, and colorized by the ColorGraphics computer. Roker believes his setup is the first in the country to interface a

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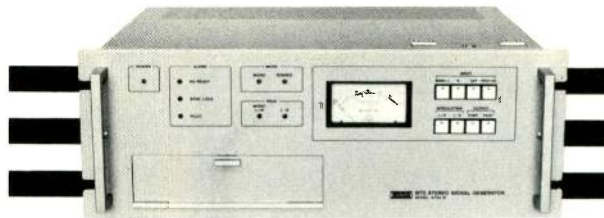
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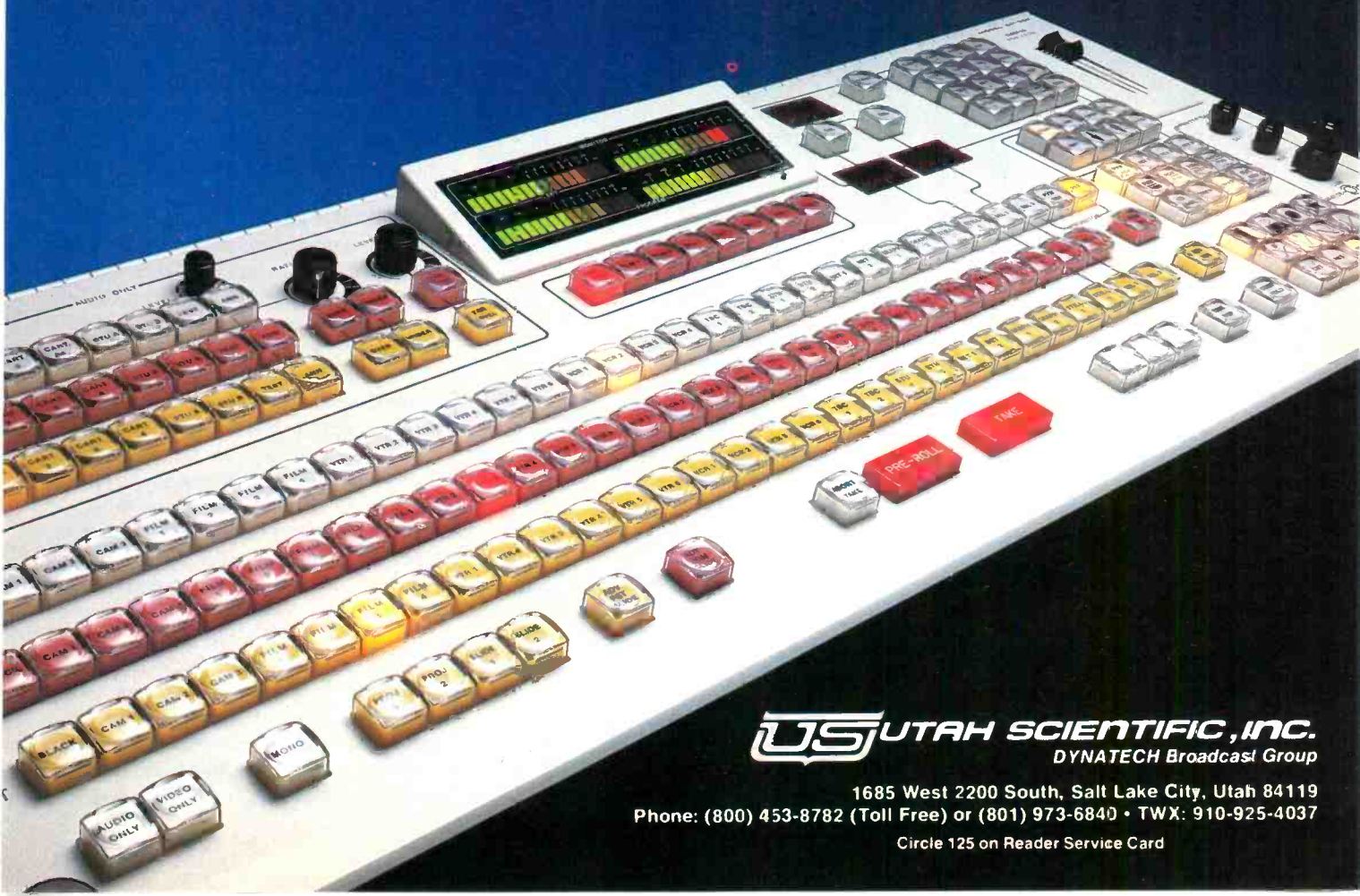
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TELEVISION PROGRAMMING

weather radar unit with such sophisticated graphics.

"I'm really pleased," Roker says of the system. "Our maps are a lot cleaner. Before, we had a radar map with eight or nine colors, but now we can have up to 256 colors." Roker's background in computer graphics made the system simple to learn. "While this is a little more sophisticated, it's still the same basic principal," he notes. "After a while, it's hard to work without it."

Besides its own radar, WNBC has access to hourly NWS satellite pictures and NWS radar through the Color-Graphics unit and surface maps on dedicated NWS NAFAX lines. In about six months, when the NWS begins satellite distribution of the surface maps, the station will install a two-foot satellite dish to receive them and download them directly into the computer.

"Weather is another part of our information service," Roker states. "[Hurricane] Gloria was a perfect ex-

ample of where the weather became news."

Stormy weather

At WHO-TV in Des Moines, Doppler radar seemed like an obvious choice when the station installed it last spring at the beginning of the severe thunderstorm season. The installation has been plagued with problems, however, as chief meteorologist Mike Lozano relates.

"We had fits with it from the very first day," Lozano complains. Initially the radar itself malfunctioned, which was first suspected and then became graphically clear when a heavy storm occurring near the station failed to show up on the display. Many conversations with supplier Kavouras and with Collins finally produced the correct replacement part, after which "the thing worked fabulously."

The idyll was not to last, however. During the summer while the unit was on the air it took a direct hit of lightning that knocked it out completely. It was sent back to Collins for repair, and a replacement unit supplied by Kavouras also showed some problems. Once the original unit was reinstalled, it started picking up extraneous signals from the lines coming from the station's tower. WHO corporate engineer Vic Landau and chief engineer Chuck Myers identified the problem as impedance mismatch and installed twinax cable, and since then the unit has been operating properly.

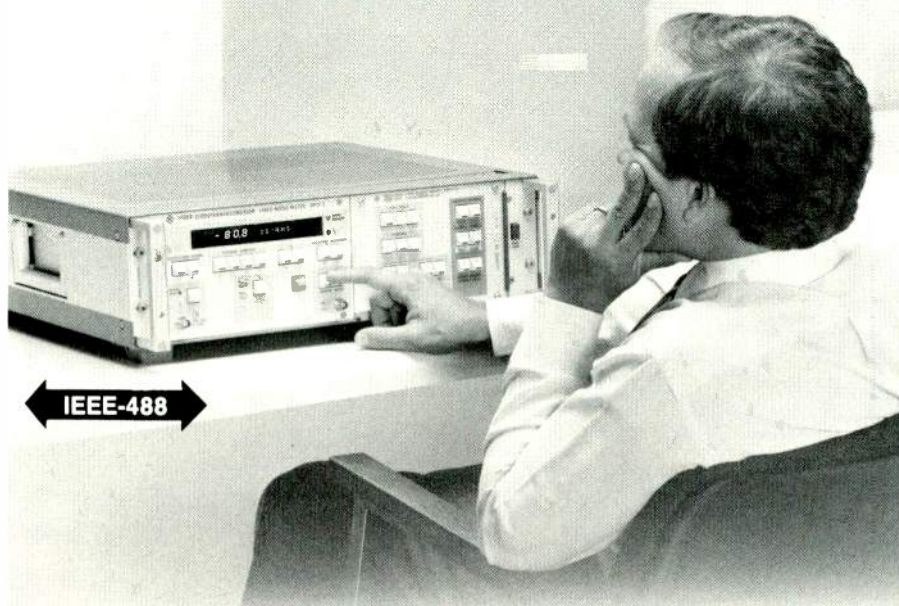
WHO also has a Kavouras TridentX weather graphics computer, which is not interfaced to the Doppler radar. Prior to purchasing the Doppler unit the station used Kavouras's RADAC dial-up radar service.

Despite WHO's Keystone Kops experience with Doppler radar so far, Lozano agrees that "when it's working, it works well." He notes that the unit's Doppler range, about 50 miles, is fine for the station's A contour; WHO, however, covers a large portion of Iowa on cable, and the Doppler doesn't reach that far. Nevertheless, he expects it to be a useful addition.

In the world of Doppler radar, it's not always fair weather, but the visibility is clear enough to make a difference to a growing number of stations. This new technology has the potential to let television eye the storm more accurately than ever before.

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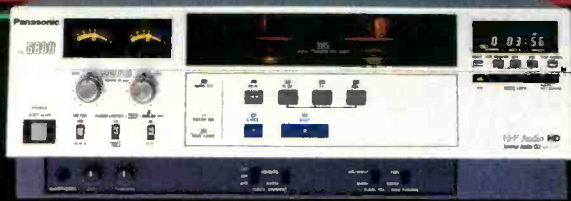
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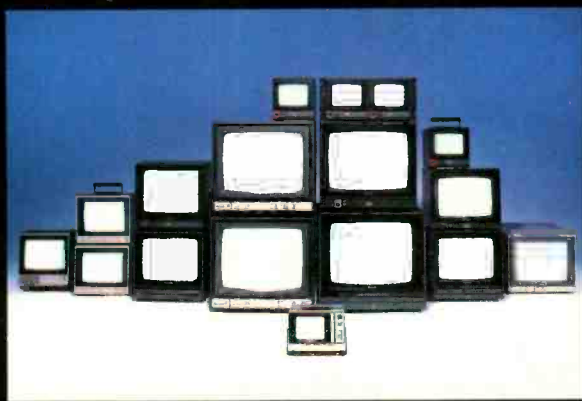


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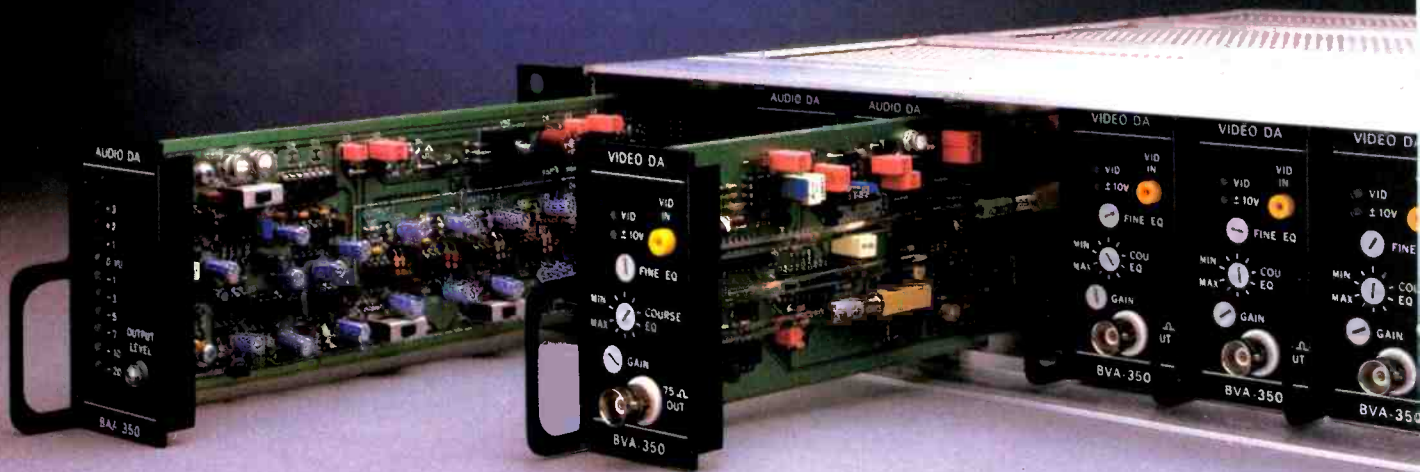
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BEST STATION FACILITY DESIGN COMPETITION

Here, arranged in five categories—AM Radio, FM Radio, AM/FM Radio, Television, and Teleproduction Facilities—are the nominees for *BM/E's* Eleventh Annual Best Station and Facility Design Competition.

Our editors have carefully selected these entries from the many that were received, believing them to reflect the very best in new design ideas; now it's your turn to select the winner in each category by voting with the ballot card that appears in this section.

As you read through the entries, please bear in mind that the contest is designed to recognize management and engineering excellence no matter what the station's size and resources. A top market station may have had an almost unlimited capital budget and may therefore, at first reading, appear to be the best simply because it is the biggest. But the small-market station may, out of necessity, come up with the inspiration for the most creative solutions. To help you evaluate the station's size, we have included its market rank as part of the standard entry information.

To vote, simply select your favorite station in each category, check it on the ballot card (page 81), and drop the card in the mail. Each winner will receive a handsome plaque, to be presented by

BM/E at the 1986 NAB Show, so we must receive the ballot *no later than February 15, 1986* to be eligible. But please read the entries and vote now while they are still fresh in your mind.

One final note. It's never too early to begin thinking about next year's competition. If you think your station might be a winner, drop us a postcard and we will contact you next fall.

1985 NOMINEES

AM RADIO

WANN	44
KSJL	45
WWNR	48

FM RADIO

KFOG	52
WYAY	53
WLLT	56

AM/FM RADIO

WNYC	63
KIMN-KYGO	66
KTAM-KØRA	70

TELEVISION

WCVB	75
WJBK	78
KCIT	83

FACILITIES

IMAGE MIX	86
VIDEO WISCONSIN	87
THE POST GROUP	89

AM RADIO

WANN-AM

ANNAPOLIS, MD

METRO RANK: 15

Submitted by
Morris H. Blum,
 President & General Manager
 and **M. W. Pittman,**
 Chief Engineer



A Delta C-Quam ASE-1 exciter and ASH-1 modulation monitors have been added to the 50 kW McMartin BA-50K transmitter at left. In the foreground is the four-tower phaser from Vector Technology.



WANN-AM in Annapolis has just installed a Radio Systems ESA-10 console and Revox PR-99 ATRs as part of its ongoing conversion to stereo.

again increased power, to 50 kW on the same frequency, but because of our 10 kW site limitations the transmitter is located seven miles away.

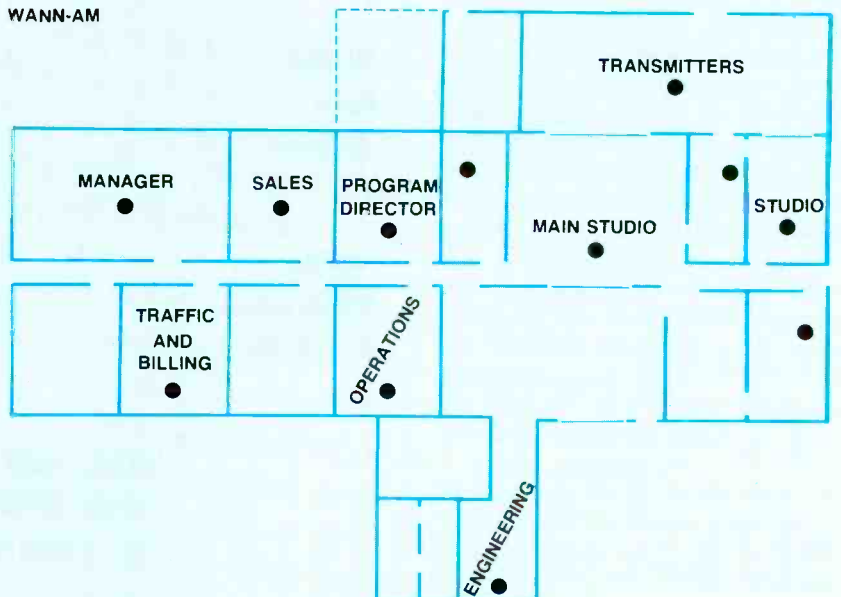
At present, a Potomac Instruments RC16 remote-control system helps handle the McMartin BA-50K transmitter. The four-tower phaser is from Vector Technology, formerly CSP, and the towers are Stainless, guyed by Phillystran. Programming is fed via telephone lines, but we expect to utilize STL in the very near future. To protect this investment, the new transmitter site is equipped with special Halon gas fire extinguishers.

And once again, WANN is in transition. We are converting from mono to stereo with a Delta C-Quam ASE-1

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At that time, we were 1 kW D with studios located over a bank. In 1960 we increased power to 10 kW DA-D with a two-tower array and moved to our present studio/transmitter location in Annapolis. Additional offices, mostly for administration, programming, and sales, were added in 1975. In 1983 we

WANN-AM



VOTE
 BALLOT ON PAGE 81

exciter and ASH-1 modulation monitor, installed by Delta Electronics. We have also just had a Radio Systems ESA-10 console put in the main studio, along with Revox PR 99 ATRs, as part of what we call our AM stereo starter package. The mic is an Electro-Voice 20. Essentially, WANN is converting to stereo in reverse, proceeding from the transmitter to the main studio, which needs new cart machines and turntables, and then on to the second studio.

For an AM station to go stereo takes time and money, but we are making the change, slowly and carefully, because we view it as a superior audio sound for AM, especially with the coming of much-needed and improved AM stereo receivers.

Our conference room doubles as an

additional studio for recording interview programs. Wall-mounted microphone plates allow us to plug in up to six Shure mics, all feeding into a small cabinet that conceals a Shure mic mixer and SE-30 gated compressor/mixer, along with a remote-control unit for one of our Ampex tape recorders.

As for the overall building layout, the main idea was to reduce the amount of walking necessary and still not remove staff too far from their immediate work areas. We tried to put people who need direct contact closer together, and tried not to cramp quarters.

Special attention was paid to the climate control system. Heating and air conditioning are zoned to allow control over each studio's temperature. Oversized fiberglass-lined ducts dump air, rather than blowing or forcing it, and so

eliminate blower noise. Heating and air conditioning equipment is mounted next to the building on its own separate cement slab. When the 10 kW transmitter was in operation, its heat was added to the system, a cost-saving idea that is used to heat the present transmitter building.

For emergencies, a 1 kW CCA transmitter and a 15 kW generator can keep us on the air for three days without any utilities. We are planning to move our former transmitter, a 10 kW CCA, to the remote site as a more powerful auxiliary.

It is clear that WANN has not yet finished changing. We have moved and added on to the station plant over the years and are proceeding with the conversion to stereo. Now we are considering the possibility of building a whole new station out at the transmitter site.

KSJL-AM SAN ANTONIO, TX METRO RANK: 37

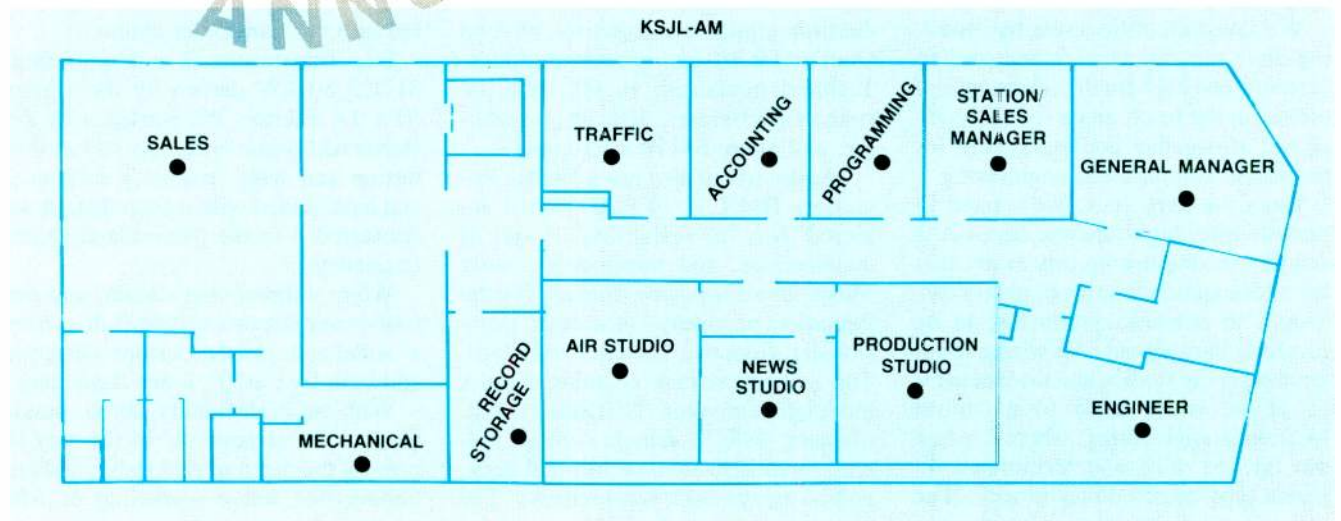
Submitted by
Thomas Sittner,
Chief Engineer



The production room centers around a Pacific Recorders BMX II 14 fader board. Turrets on either side of the board contain an Orban 424A compressor/limiter, 111B stereo spring reverb, and an Eventide H949 Harmonizer.

Our station is a brand-new 50,000 W high-fidelity AM stereo station owned by Inner City Broadcasting. We decided to locate our studios as close to downtown San

Antonio as possible. As it turns out, we found the Reuter Building, a partially renovated building in Alamo Plaza, right across the street from the Alamo. It was built in 1891 and at one time



AM RADIO

housed a saloon and hotel. We leased the second floor.

In our initial design, we stripped the floor space of all existing walls and started with a large empty space. Our first consideration was to eliminate noise and vibration coming from the outside. One problem is a major bus route directly in front of the building; although the walls are two-foot-thick stone, the sound and vibration was still coming through.

Architect James Mayeux of Austin called in a structural engineer who determined that the existing wood-supported walls could hold more weight than might the floors in a modern office building. Our unique solution to the sound-vibration problem was to erect a studio complex as a separate structure isolated from all walls and sitting on a six-inch concrete slab that floats on a two-inch pad of foam plastic. The studio walls are double drywall with fiberglass interiors, an air space, and then another set of double drywall and fiberglass.

Since we were limited to about 4000 square feet of usable floor space, efficiency was a must. The blueprint shows how we managed to accommodate all the normal functions of a radio station and not feel crowded. The longest side of the building without windows was used for the studio complex, engineering, mechanical/phone room, record library, and rest rooms. The longest side with windows is where offices for traffic, accounting, programming and management were located. The sales offices are in a large space at the end of the building.

We saved on utility costs by installing three separate heating and cooling systems: one each for the sales area and offices in the front, and a specially-designed all-weather cooling system for the studio complex and engineering.

From the very start, we wanted to provide true, high-fidelity, stereo AM sound. Accomplishing this meant that the entire audio chain from phono cartridges to antenna system had to be carefully thought out. All wiring to interconnect the studios and the mechanical/phone room leads to a central location in engineering, where it is laid out on one wall and terminated on phone-type punch-down blocks. The racks in front of this wall are on a



DJ Sharon LePere in KSJL's air studio, which features a BMX II 14 fader board, six Tomcat play-only cart machines, and two Technics turntables.

raised floor for easy cable access.

The production room centers around a Pacific Recorders BMX II 14-fader board. Turrets on either side of the board contain an Orban 424A compressor/limiter, 111B stereo spring reverb, an Eventide H949 Harmonizer and patch bays on the left, and an Orban 674A stereo equalizer, with two Pacific Recorders record/play Tomcat cart machines on the right. The rest of our production equipment consists of two Otari MTR-10 reel-to-reel machines, Technics turntables, an ITC ESL IV splice finder/eraser, JBL 4411 speakers, and Shure SM5B microphones.

The air studio also has a Pacific Recorders BMX II 14-fader board selected for its reliability, ease of maintenance, and transparent sound. Music for air is played from six Pacific Recorders play-only Tomcats or, occasionally, from two Technics turntables. The equipment rack contains a Belar modulation monitor, TFT EBS system, Moseley MRC2 remote-control system, Otari MX-5050 reel-to-reel deck, and a cassette deck for airchecks. The air voice is fed to the BMX mic chan-

nels through an Orban 422A compressor/limiter used to ride gain and prevent distortion.

Our STL is a two-step process. The audio is first sent via private line to a hotel across the street, then up to the transmitter via a Moseley 606C composite microwave system. The signal is fed into an FM stereo generator and decoded at the transmitter site before being sent through audio processing, then fed into the transmitter chain.

Our transmitter is a Continental 317C2 50 kW driven by the Harris STX-1A exciter. We started with the Harris AM stereo system for its low distortion and wide frequency response, and have stayed with it even though we converted it to the Motorola C-Quam frequency.

We're a directional station, and our four-tower antenna system is driven by a wideband phaser custom designed and built by Carl T. Jones Associates.

With our high-fidelity stereo sound, we feel we've gone out of the way to prevent the death of AM radio, and are hoping that active marketing of AM stereo radios comes about soon.

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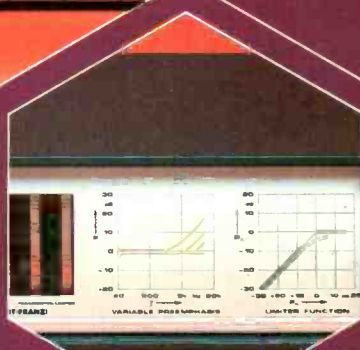
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AM RADIO

WWNR-AM

BECKLEY, WV

METRO RANK: 246

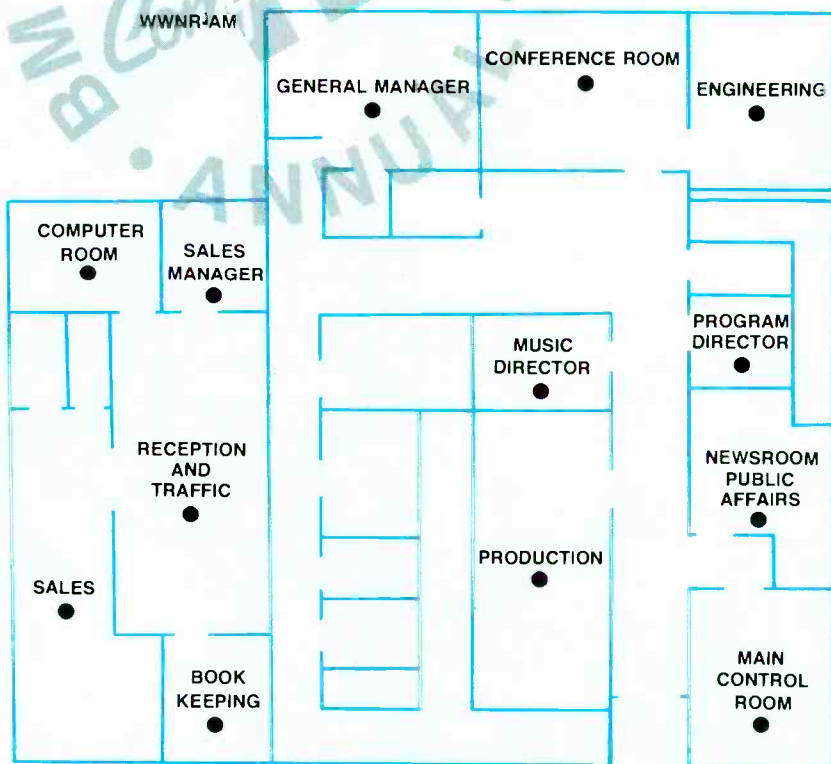
Submitted by

Al Martine,

President/General Manager



Also in the station's production room, two new Otari MX-5050 II reel-to-reel machines were added.



A new Harris Medalist Board, Technics SP-10 MK II turntables, and ITC cart machines geared WWNR for AM stereo production.

If there's one thing that's worse than distortion coming from one channel, it's distortion coming from two channels. That pretty much describes the saga of our station's transition to AM stereo. Like many AM stations, we were committed to switching from monaural to stereo, but did not know which system to choose. We were also concerned by the lack of AM stereo receivers.

Martine Broadcasting had owned WWNR just six months, and that short period of time helped generate enthusiasm for making improvements. I knew AM stereo to be the one marketable improvement that would help make us competitive. I was able to convince the local bank that the station had a bright future if we could finance technical improvements in the large abandoned building we had recently bought to relocate our offices and studios.

The station's equipment was old. Our 19-year-old Gates transmitter wasn't worth converting to stereo, so we invested in a new Harris SX-1. To our delight, our reach was increased by 40 percent. Our sound was cleaned up by adding an Orban 9100 A/2 Optimod and the Motorola C-Quam AM stereo exciter.

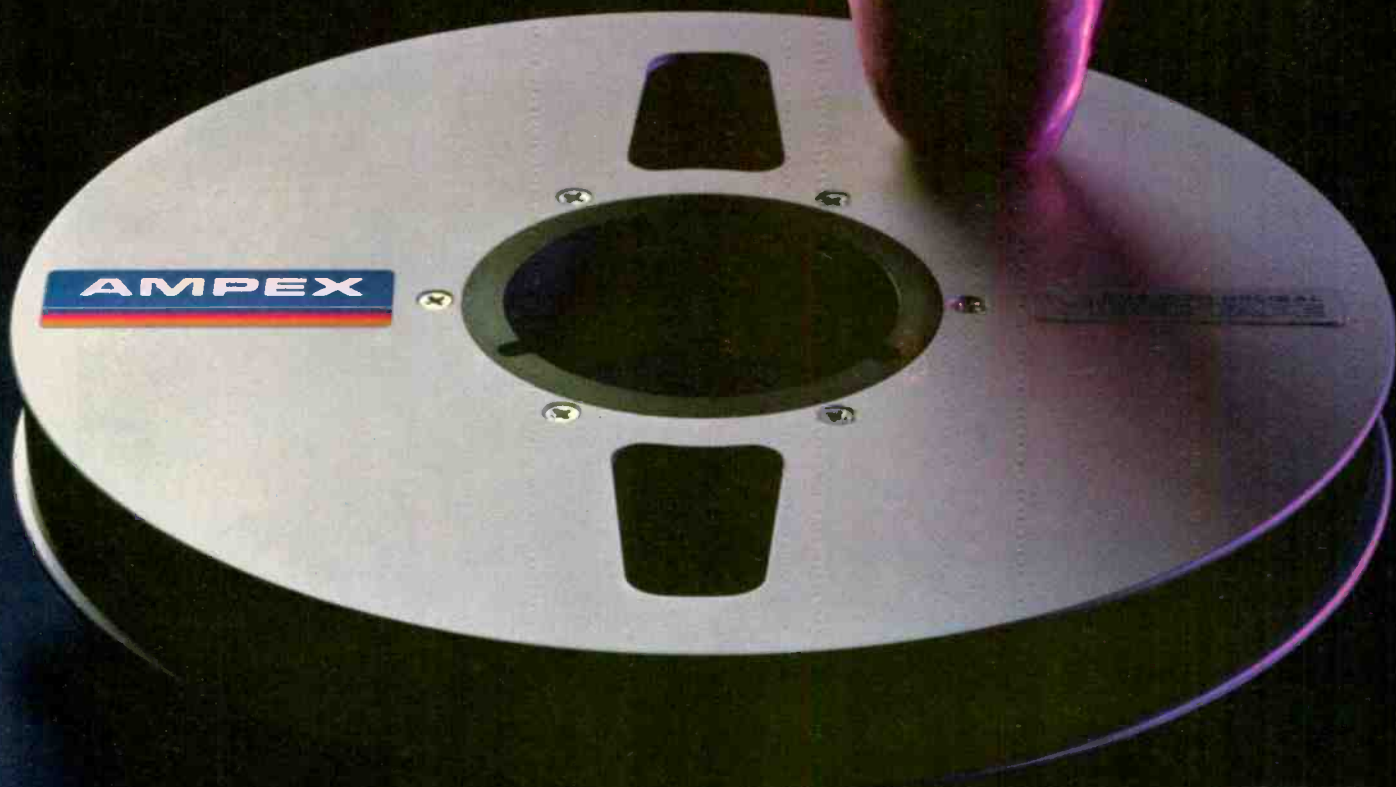
The next step was to replace our monaural equipment with stereo. We converted our main studio to accommodate stereo by adding two Revox B77 stereo tape recorders and upgrading our Centurian II main control board to stereo. Our ITC cart machines were already stereo.

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Circle 132 on Reader Service Card

AM RADIO

For the new production studio, we chose the Harris Medalist 10 board, Technics SP-10 MK II turntables, two Otari MX-5050-11 tape recorders, and ITC cart machines.

Initially, we kept our news/public affairs room monaural, and it contains a Cetec Sparta board, Rusco turntables, and an Otari 7MX-5050-11 tape recorder. Since we air local gospel music from this room on Sundays, we plan to convert this studio to stereo in February.

Because of the enormous jump in telephone line tariffs, we have recently installed a Marti STL-10, which not only saves costs but cleans up the air sound.

The transition to stereo equipment eliminated many sound quality problems that affect most AM stations with aging equipment. We were able to eliminate drag in our turntables and tape machines that should not have existed in the first place.



In the station's main control room, the Centurian II board was upgraded for stereo. The ITC cart decks in back were already geared for stereo playback.

In replacing our aging equipment, it cost only a few dollars more to go stereo and centralize the termination of all our equipment on punch blocks in the engineering room. Our new engineering room also houses our Scientific-Atlanta 7325 Digital Pro-

cessing unit and 7300 Wideband receiver for our 10-meter SA satellite dish.

Finally, in order to do remotes and broadcast area ballgames, we have a 1979 Chevy Van equipped with two Marti RPT remote pickup transmitters allowing for total flexibility.

Our transition shows that music over AM need not be distorted simply because the high frequency response is not equivalent to FM. Most car dealerships in our area offer AM stereo in their new models, but with or without stereo reception, our move to stereo has given back the respect and competitiveness we desired in a very aggressive radio market.



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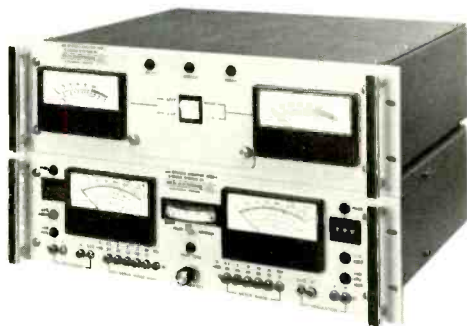
work the way it should. Literally trouble-free. Plus, it's got the numbers to back it up: over 65 systems operating in the U.S. and worldwide.

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"Stop by and I'll personally give you the deluxe station tour.

"Better yet, turn your dial to 1190 and hear for yourself the new sound of AM Stereo—and hear where your listeners are going to be."

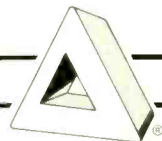


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DELTA ELECTRONICS



Circle 134 on Reader Service Card

FM RADIO

KFOG-FM SAN FRANCISCO, CA METRO RANK: 5 Submitted by Bill Ruck, Engineering Manager

One of the problems facing KFOG's new owners, Susquehanna Broadcasting Co., was finding a new home for studios and offices. After a thorough review of locations, we located a building at 55 Green St. and signed a lease less than three months before our old lease expired. A combination of intensive design work with architects Wudtke Watson Davis and Engstrom, and daily review of progress, minimized the time needed to complete the job.

The two design goals were to build a station suitable for the present that also allows for future growth.

The station is divided into two major areas: operations and administration. They are separated by a door leading to the studios and further delineated by carpet and wall colors.

Modular office furniture in the administration area maximizes the use of available space and provides work areas for the station secretary, promotion director, sales staff, and music research with room to grow. On the perimeter of this area is situated the conference room, copy/mail room, two storage rooms, a kitchen, computer room and offices for traffic, office manager, station manager and program manager with a spare office.

The operations side houses three studios, a programming staff office, engineering manager's office, and the engineering shop.

The studios were built by Industrial Acoustics from their modular, prefabricated line. After considerable comparison shopping, IAC was chosen based on quality and lower cost per foot than

"built in place" construction, and in addition they guaranteed acoustic performance. In fact, actual measured on-site acoustic performance exceeds all our contracted specs.

Because the studios fall under the category of "equipment" and not "leasehold improvements" for tax purposes, they qualify for 10 percent investment tax credit and faster depreciation.

Due to a relatively limited equipment budget, however, we were unable to completely abandon our old equipment and start fresh. Careful planning and the cooperation of our air staff kept the station operating while studios were being disassembled, moved and reassembled.

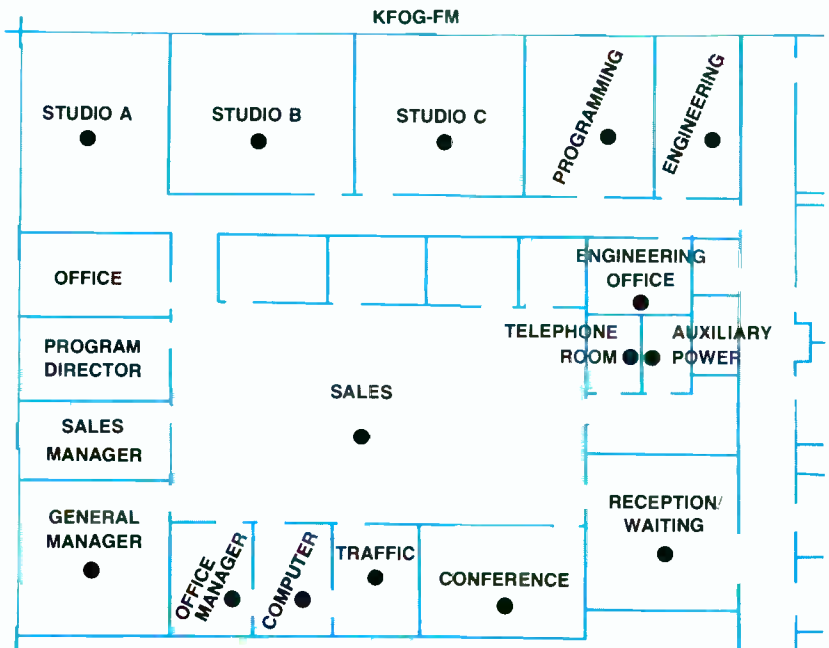
Studio A, which is 15 feet by 20 feet, is used for air broadcast. Three large windows to the outside allow the DJ to check on weather. A console desk featuring a Pacific Recorders BMX-14 Series II holds three turntables and pro-



Common equipment racks in the hall outside of Studio A and Studio B.



Promotions director Trish Robbins in Studio B. The window looks into Studio A.



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KFOG midday DJ Dave Morey in Studio A, which features a BMX-14 Series console, three turntables, six Tomcat Players and Studer CD player.

vides convenient access to six Pacific Recorders Tomcat cart players and a Studer CD player.

Studio B, which is 15 feet by 18 feet, is used for morning news, minor production, and tape or record listening without tying up the main production studio. Most equipment is from our old Studio B and includes Pacific Recorders BMX-14 Series I and Tomcat player and recorder, plus two Ampex AG-440C tape machines.

Studio C, measuring 15 feet by 20 feet, is the main production studio. Most of the equipment is brand-new, built around a Pacific Recorders

ABX-26 console equipped for four-track production. Three Otari MTR-10s are the primary reel-to-reel decks, with two two-tracks and one half-inch four-track. There are also two Ampex AG-445C players for extra playback, one record and two playback Pacific Recorders Tomcats, and Orban signal processing.

The turntable pedestals in all studios are McCurdy isolation mounts, while the turntables are Technics, with two SP-10 MKIIs and one SP-10 MK2A in Studio A and two SP-15s each in Studio B and C. The tone arms in all are Audio-Technica AT-1005IIs with Stanton

681SE cartridges. The turntable preamps in Studios A and B were designed and built locally by audiophile broadcast engineer Walt Palmer, while Studio C has RTS-405 preamps.

One other important aspect is the wiring: the entire facility is wired with Mogami Neglex 2820 cable for improved detail and subjective frequency response.

In the hall outside the studios are the news and Metro Traffic printers and the station's common equipment racks. The four racks are: STL transmitter and satellite receivers, network recording, monitoring, and signal routing equipment.

The programming staff office provides work areas for the production and air staff, plus lockers and record storage space.

The station's telephone system is an ITT System 3100. We chose it for its excellent quality transmission for broadcast, allowing cost savings through use of its electronic key capabilities, rather than purchasing a separate 1A2 key system just for the studios.

A 3 kVA UPS system by Best Power Technology, Inc., provides three hours of battery standby power. Most power failures in our area last less than an hour, so that amounts to adequate protection without the need to meet the complicated and expensive city code requirements for generator fuel storage.

KFOG's careful attention to detail helped to insure that the individual needs of our staff were met in what amounted to a remarkably smooth transition from old studios to new.

WYAY-FM

ATLANTA, GA

METRO RANK: 18

Submitted by
Johnny Bridges,
Chief Engineer

Katz Broadcasting acquired WYAY as its Atlanta property in mid-1984, and directed local

management to turn it into a competitive state of the art facility within the Atlanta market.



George Dixon at the Pacific Recorders ABX-26 console in WYAY's multitrack Studio C.

FM RADIO

An analysis of the microwave path to the transmitter plant identified three suitable sites, and one of them, Galleria Atlanta, was selected. We then leased a 7600-square-foot space in the Galleria, and the studio complex was laid out by the Katz Engineering Group with input from Jack Williams of Pacific Recorders and Engineering.

Pacific Recorders manufactured the consoles and studio cabinetry, and delivered it prewired for on-site assembly. The air studio is built around a Pacific BMX-III console with 15 of the possible 18 positions in use. Six Pacific Recorders Tomcat cart players and two Technics turntables are used for source material. The three mic positions are gang-switched when needed, using a module also built by Pacific Recorders. Mic processing is handled with dbx 900 Series equipment, with EQ and limiting on each to allow for individual settings. We use a Sony JH-110 recorder both for program replay and telephone uses, and a Tascam 122-B cassette unit, which can also be used for complete program recording, is interfaced for skimming airchecks. Patching facilities allow us to reconfigure all studio equipment if necessary.

The overhead cabinetry in the air studio contains all required operator controls and monitoring equipment. Located here are the remote-control display and controller, microwave sta-

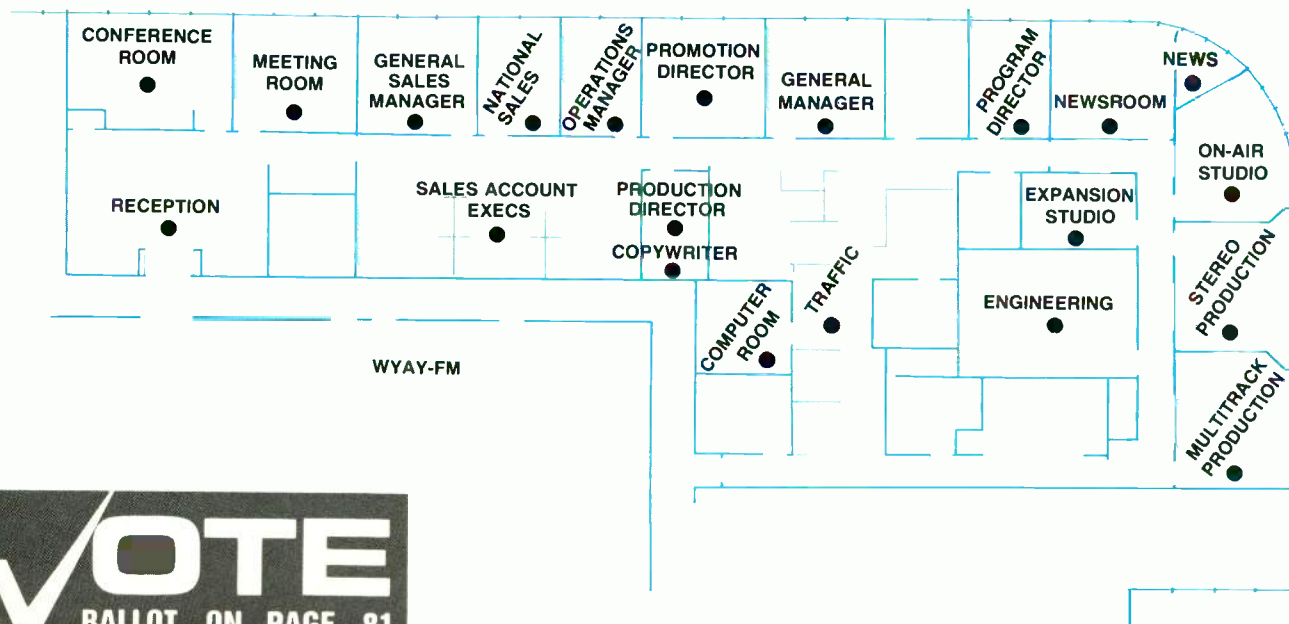


DJ Johnny "Stonewall" Jackson in the air studio, which is built around a Pacific BMX-III console, six Tomcat cart players, and two Technics turntables.

tus and control panel, EBS alarms, sounders for the telephone hotline, and control switches for the EBS system, telephone system and other systems.

Our "B" studio is assigned for stereo production and is built around a Pacific Recorders AMX console with 12 of 18 inputs in use. All sources except cart machines have insert EQs

installed, and an Orban compressor/limiter/de-esser, an Ursa Major Stargate, and an Orban Paragraphic EQ/filter are available for sweetening production. This studio also has two Pacific Recorders Tomcat record/play cart decks, and two Sony JH-110C reel-to-reels. Technics turntables complete the equipment roster in this studio.



VOTE
BALLOT ON PAGE 81

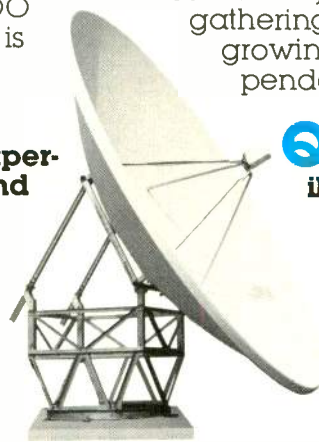
Q. If Microdyne's Ku-band downlinks are so good, why can they cost \$30,000 less?

A. Microdyne's 5- and 7-meter dishes are precise, broadcast quality antennas providing up to 57.7 dB of gain and more than 10 years of service life. The telephone industry has run field tests which prove that top quality fiberglass antennas in outdoor service are unsurpassed in performance.

A manufacturer of metal antennas cannot escape expensive tooling if his goal is quality approaching that of Microdyne. Amortizing the dies, jigs and molds is a heavy cost which must be passed along to you, the buyer. Therefore, a Microdyne downlink can save you as much as \$30,000 because fiberglass is a *superior* material.

Q. How much experience with Ku-band installations does Microdyne have?

A. We are among the pioneers of Ku-band technology. We have supplied the



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receivers, antennas and support equipment for a major electronic manufacturer's nationwide teleconferencing



1100 HDR

network. We've been supplying uplinks and downlinks for as long as there's been a commercial Ku-band market.

Q. What organizations and broadcasters have actually purchased Ku-band equipment from Microdyne?

A. CONUS, Dalsat, Florida News Network and all the other major satellite news gathering networks, plus a growing number of independent TV stations.

Q. How much flexibility do I get, in bandwidth and frequency?

A. Microdyne downlink electronics offer virtually unlimited access to any

satellite signal. Microdyne's newest 96-channel receiver with plug-in programmable modules is capable of receiving Ku- or C-band, and has dual IF bandwidth filters for half or full transponder reception. Whatever you want to do with Ku-band, Microdyne can find a way to help you do it, without destroying your budget.

Q. How can I get more information on Ku-band downlink systems by Microdyne?

A. We've put together a small folder which contains a big collection of facts and performance figures of Microdyne antennas and electronic hardware for Ku-band. Just call us at (904) 687-4633 or write for all the facts on these products.



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FM RADIO

which is used for dry voice production, as well as music mastering and telephone feeds of spec spots for clients.

Studio "C" is used for multitrack production. Our console is a Pacific Recorders ABX-26 unit, with 15 input modules, four multitrack modules, and a two-mix module. As with studio "B," all inputs except carts have insert EQ available. This studio also has a Sony JH-110-4 four-track recorder and two Sony JH-110-C stereo recorders, along with two Pacific Recorders Tomcat record decks. An Ursa Major Stargate, Eventide 949 Harmonizer, Orban Paragraphic EQ/filter, an Orban compressor/limiter/de-esser, and Orban stereo synthesizer, plus two Technics turntables complete the rest of the equipment in studio "C."

In our news on-air booth we use an Autogram IC-10 console, and Pacific Recorders Tomcat cart machines. A Tascam cassette unit is available, along with an ITC 850 reel machine and an

Orban paragraphic EQ to clean up poor feeds. The news rewrite station consists of an ITC 850, Pacific Recorders Tomcat recorder, Scribe cassette recorder, Urei graphic EQ, and a Rane mixer.

Our studios all have Pacific Recorders logic interfaces, configured for ease of operation. There is tape start-stop with channel on-off provided, but it is switch defeatable from the console when needed.

For our telephone needs, we modified a Telrad distributed microprocessor key system. In the studios we switch incoming lines to our Gentner hybrids, which are interfaced to the consoles using Pacific Recorders telephone modules. Our remote broadcasts are fed on dialup lines using a Comrex frequency extender.

Studio signals are routed through the central racks in the connecting hallway through ADC ProPatch bays. These racks also mount all audio amps, modulation monitors, EBS equipment, mon-

itor tuners, the master clock, house music and paging amps, audio DAs, and the Comrex equipment.

The transmitter remote control is built around a Hallikainen and Friends DRC-190, with 20 channels of control and metering. Based on past experience, we were aware that the air staff doesn't always notice control readings, so we interfaced the unit with a Commodore C-64 computer, color monitor, and printer. Out-of-tolerance conditions cause the display to change colors, and in some instances it flashes in order to get the operator's attention. The printer prints transmitter parameters each half-hour. The DRC-190 is mounted overhead to allow direct control and to allow manual logging in the event of a computer failure.

One source of pride in completing the new facility was the timetable we were able to meet. Construction began in November of 1984, and we occupied the facility on February 2, 1985.

WLLT-FM CINCINNATI, OH METRO RANK: 28

Submitted by
Jim Stitt,
Chief Engineer and
Project Director



The WLLT newsroom is equipped with an Autogram console, three ITC-99B carts, two Studer-Revov PR-99B tapes, Technics cassette, Yamaha tuner, and Fostex speakers.



The four-story glass atrium has tiered balconies, Italian marble floors, and computerized theatrical lighting.

After a successful format change, WLLT's group owner, H & W Communications, decided that the next phase of the station's growth would be to become more visible and more a part of the greater Cincinnati community. The decision was made to maintain studios and offices for public service programming and access at the previous Fairfield location, about 15 miles from the metropolitan area, while

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Elevation: 24-49 inches

MC-300
Maximum Mounting Weight: 242 lbs.
Elevation: 23-60 inches

TR-60/TR-90 TRIPODS



Featuring collapsible tubular leg construction, integral spreaders, flip-tip legs with spikes and rubber padding.

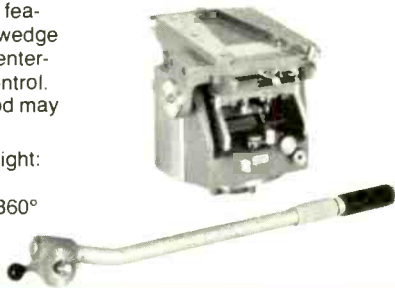
TR-60
Maximum Mounting Weight: 132 lbs.
Elevation: 20-45 inches

TR-90
Maximum Mounting Weight: 198 lbs.
Elevation: 23-48 inches

SC-15 CAM HEAD

Designed for use with all pedestals and tripods, it features a convenient "V" wedge mounting system and center-of-gravity adjustment control. The modular panning rod may be used on both sides.

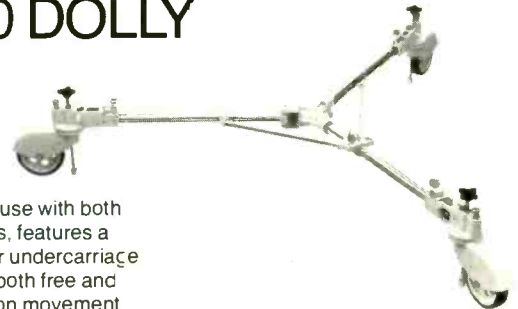
Maximum Mounting Weight: 330 lbs.
Tilting: $\pm 50^\circ$ Panning: 360°



CD-10 DOLLY

Designed for use with both Canon tripods, features a tricycle caster undercarriage that enables both free and single-direction movement.

Maximum Mounting Weight: 198 lbs.



For years, broadcasters have made Canon lenses a top choice for studio, field and news production because they know and trust Canon's proven commitment to quality and value.

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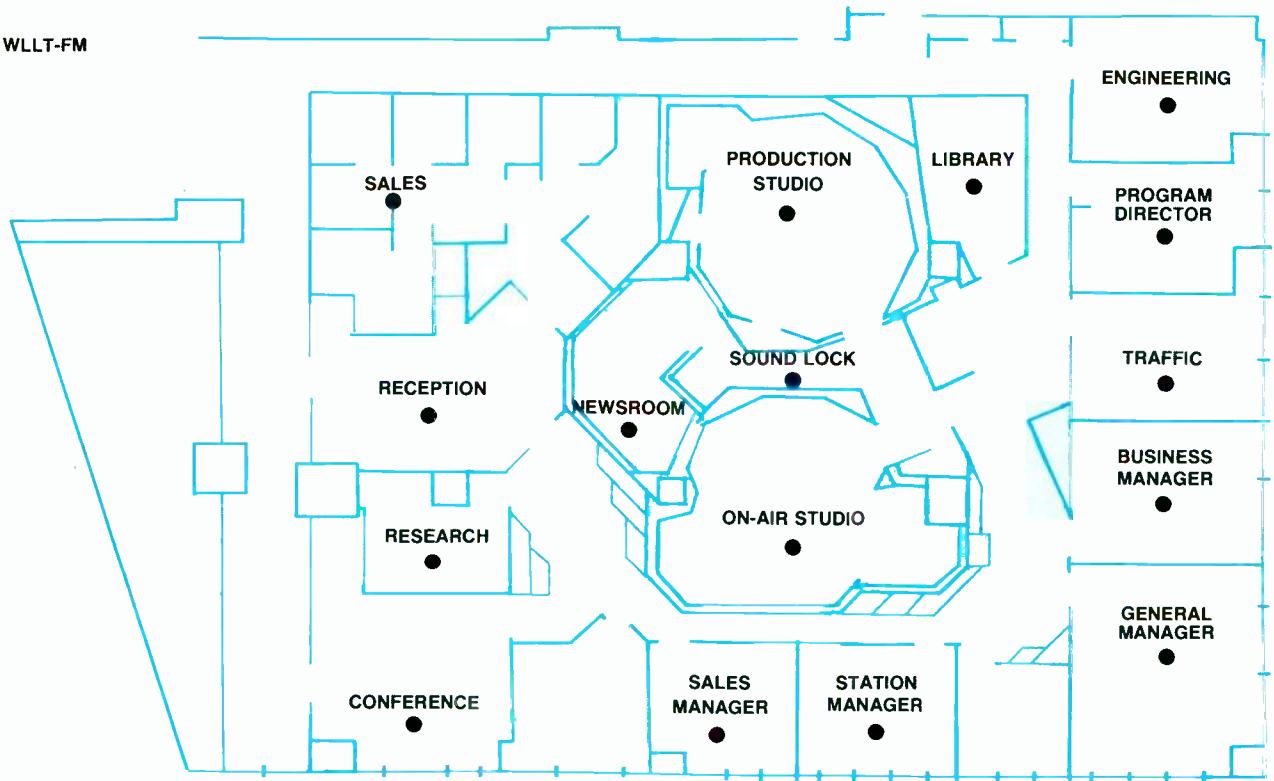
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Circle 136 on Reader Service Card

FM RADIO

WLLT-FM



building a new studio/office facility in downtown Cincinnati, thus serving both communities.

The building we selected was an old French Bauer Dairy plant that was being converted into a glamorous showcase encompassing a four-story glass atrium with tiered balconies, Italian marble floors and computerized theatrical lighting. It encompasses a 5200-square-foot area with an atrium balcony and view of the downtown skyline.

Employee input figured prominently in our design plans. The initial plan called for the studio to be situated in the atrium, but air personalities objected to the idea of a "fishbowl" environment. We put the studios in the center, as the station's hub, and surrounded it with offices along the building perimeter, so each office has a window.

The dimensions and symmetry of the rooms, and angles of the walls and ceilings, were calculated to eliminate undesirable early reflections while providing accurate stereo imaging. The ratio of the room dimensions, as well as the tuned bass traps and resonators, eliminate objectionable low frequency standing waves that cause a muddy sound. The time coherent speakers are

mounted on suspension isolators inside the walls with the faces flush with the wall, thus providing an infinite baffle to launch the low frequency wave while eliminating distorting reflections.

Sound isolation is accomplished by means of a floating floor and triple wall system creating a "room within a

room." The center wall is eight inches thick, runs from slab to slab, and is sealed airtight. A floating floor is constructed within each studio and is completely isolated from the building. The five-inch-thick interior walls rest on the airspace between each wall. The five-inch-thick ceilings are supported by the



WLLT's air studio features oak cabinetry custom-built by the Audio Broadcast Group. To the right is a housing with special slide-out shelves for six ITC-99B cart machines; two Sony CDP-650 CD players; and two Sony two-track machines.

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FM RADIO

interior floating walls and suspension isolators, so that there is no rigid vibration-transferring connection between the studio interiors and the outdoors. The doors are 350-pound units custom-made of three multiple density layers with airtight seals on all four sides that operate automatically when the doors are closed. Window construction techniques maintain the sound isolating integrity of the triple wall system with three panes of multiple density glass to eliminate sympathetic vibrations.

The studio air conditioning system is separate from the building system, so it can run continuously and undisturbed. The system is designed to deliver high volume at low velocity with appropriate duct silencers and other techniques to eliminate noise. Each studio's temperature is separately controlled and humidity is regulated at 50 percent.

The studio's electrical system is isolated with a Sola line conditioner that provides 120 dB of common and transverse mode noise and transient rejection. A 12 kW emergency diesel generator automatically comes on-line within two seconds following a power failure. There is also an isolated low inductance studio equipment common point ground bus. To eliminate ground loops, nothing is grounded to the ac conduits or neutral bus. Studio receptacles are special three-wire isolated ground types as used in hospitals, each with its own #12 wire to this common point ground.

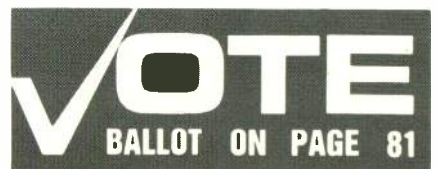
Lighting throughout consists of a combination of quartz halogen and incandescent track or recessed luminaires on rheostat dimmers, as well as special three-level fluorescent fixtures with remote dimming ballasts. The cabinetry and parquet flooring are finished in oak. A carbonized backing was applied to the plush cut-pile computer carpet and then installed with conductive adhesive to achieve the lowest static rating.

A highlight of the studio complex is the state of the art multitrack production facility. WLLT's production studio can produce original jingles on our synthesizer system, a Yamaha DX-7 with eight additional slaved modules. Equipment includes an Auditronics 382

custom 24x8x2 console; Urei 813 speakers; Otari eight-track recorder with multipoint search to cue; Sony and Studer two- and four-track recorders with SMPTE for locking to video or other audio; an Eventide Harmonizer; Orban 424A compressor/limiter/de-esser; and 10 channels of dbx noise reduction.

The on-air studio is engineered for comfort and ease of operation. To the left of the Auditronics 218 custom console is a cabinet with two Technics SP-15 turntables on special isolated pedestals. Above the turntables is a rack unit for EBS, cassette skimmer, and transmitter remote-control unit. To the right is a housing with special slide-out shelves for six ITC-99B cart machines that allows easy access for alignment. Next to the carts are two Sony CDP-650 CD players, behind the jocks are two Sony two-track machines, and in the rear corner are three floor stand cart racks. An adjacent equipment room with a wall of equipment racks serves as the terminal point for interstudio and station interconnections. It contains ADC Propatch jack-fields, modulation, weather, and house monitors, Moseley PCL-606C STLs, Harris Audio Time Base Corrector, and our proprietary dynamic split band processing system that varies the processing according to the program content.

The newsroom, which doubles as a dubbing facility and isolation booth for the production studio, is equipped with an Autogram console, three ITC-99B carts, two Studer Revox PR-99B tapes, Technics cassette, Yamaha tuner, Fostex speakers, scanner, TV, and a turret with controls for the 218 air console including clock, timer, mic channel control, monitor, and remote starts. Interface to the outside via phone lines is handled by a Mitel SX-100 Superswitch PBX with a custom key system behind the switch, and Gentner SPH-4 hybrids.



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When Alaska Video Productions set out to cover the 1985 Yukon Quest International Sled Dog Race, it went with a winner.

It picked 1/2-inch PRO FORMAT EASTMAN Professional Video Cassettes with Betacam equipment to record the grueling event, which saw 28 entrants mush over a 1000-mile course from Whitehorse, in Canada's Yukon Territory, to Fairbanks, Alaska.

Says AVP partner Garry Russell, who handled most of the camera work for the production: "The Eastman tape performed flawlessly through the rigors of the two-week event, in temperatures ranging from -30°F to 40°F. In dazzling sunlight, blowing snow, and after dark."

Adds producer Alex Epstein: "The pictures we brought back were some of the finest we've ever seen of this beautiful part of the world."

Altogether, AVP shot nearly 17 hours of tape during the race. This was edited into a 30-minute production that was seen throughout Alaska via satellite, in the Pacific Northwest on McCaw Cablesystems, and in parts of Canada on CBC-North TV.

Recording "The Challenge of the North" proved to be another challenge overcome by EASTMAN Professional Video Cassettes. If you'd like to tell us how EASTMAN Professional Video Cassettes have helped you, write to Eastman Kodak Company, Dept A-3063, 343 State Street, Rochester, NY 14650.

For more information about EASTMAN Professional Video Tape, call 1 800 242-2424, Ext 80, or contact your nearest dealer in EASTMAN Professional Video Products.

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Circle 141 on Reader Service Card



AM/FM RADIO

WNYC AM/FM

NEW YORK, NY
METRO RANK: 1

Submitted by
Mary Perot Nichols,
General Manager



Tables in both studios can accommodate up to seven guests and a host.

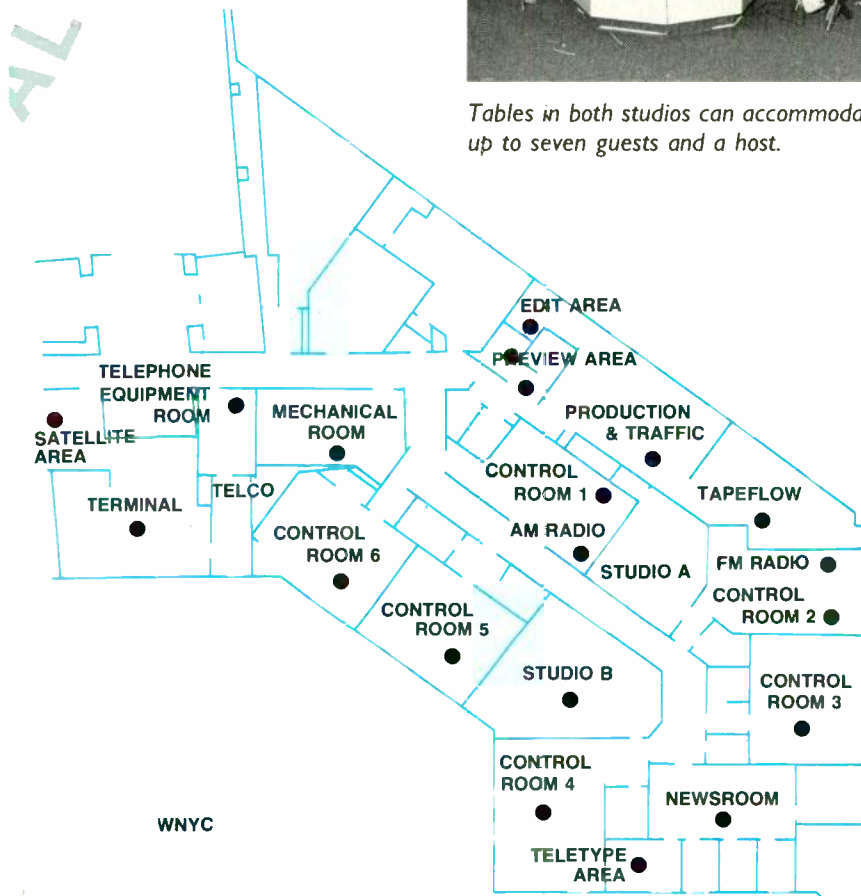
The construction of WNYC's Fiorello H. LaGuardia Telecommunications Center, located on the twenty-fifth floor of Manhattan's historic Municipal Building, marks the first major technical upgrade for the station since 1952.

The state of the art complex is designed to house AM/83 and FM/94 on-air studios, production facilities, national broadcast studios, and satellite operations that include downlink program taping as well as distribution and uplink (NPR satellite system) services.

The complex is a combination design, which allows the talent to remotely control all control room equipment, thus eliminating the need for an engineer. The central distribution switcher, located in the terminal room, also helps to cut back on the labor force needed to run the plant. The switcher and the layout of decks and racks allows one person to perform multiple duties by remote control. The satellite operations, a substantive revenue producer, are also laid out to function as a one-person operation.

The station's air conditioning system consists of seven complete units that are controlled and monitored separately by an operator in the terminal room. Although the initial installation costs are higher for such a system, the energy conservation aspect of a split system will pay for itself.

Cost and time savings were an integral part of the planning stage. Since all control rooms are at least stereo, no further studio costs would be incurred if AM 83 was converted to stereo. Because the plant has six control rooms



and two studios, maintenance crews are able to shut down a facility without disturbing on-air or production time. This encourages routine maintenance checks rather than the more expensive "emergency" maintenance.

In the station terminal room, located behind the reception area glass window, stands the NTP central distribution switcher, which is responsible for sending audio throughout the entire facility. This switcher is equipped with 96 stereo inputs and 32 stereo outputs and replaces the need for patch boards, that are, however, available as a backup system. The terminal room is

also equipped with 10 Revox PR99 reel-type recorders for downlink recording and distribution as well as separate machines for recording directly from remote units located within Manhattan's City Hall.

Adjacent to the terminal room is the satellite area, where uplink operations can be remotely controlled. (The uplink transmitter itself is located in Brooklyn.) This satellite area also includes a Pacific Recorders BMX III console, and four Studer A-80RC reel recorders with selectable Dolby noise reduction to uplink supplied programming.

Each control room is equipped with

VOTE
BALLOT ON PAGE 81

AM/FM RADIO



Each WNYC control room is equipped with Pacific Recorders consoles and stereo cart machines, as well as Technics SP15 turntables, Studer 2706 monitor speakers, and a Studer compact disc machine.

Pacific Recorders consoles, two of which are ABX multitrack and four of which are BMX III; three Pacific Recorders stereo cart machines; a Tascam

122B cassette deck; two Studer A80 reel-type machines; AKG 414EB microphones; two Technics SP15 turntables; and Studer 2706 monitor speakers

and an isolated announce booth. Since CDs comprise a portion of our music programming, we also have a Studer compact disc machine.

Each control room serves as a full production facility. With this in mind, the complex also includes five audio edit suites, each equipped with a Scully 280B reel-to-reel, and space-saving furniture modules designed to make optimum use of the various shapes and sizes of each suite. This additional workspace frees control rooms for heavy production work and on-air broadcasts.

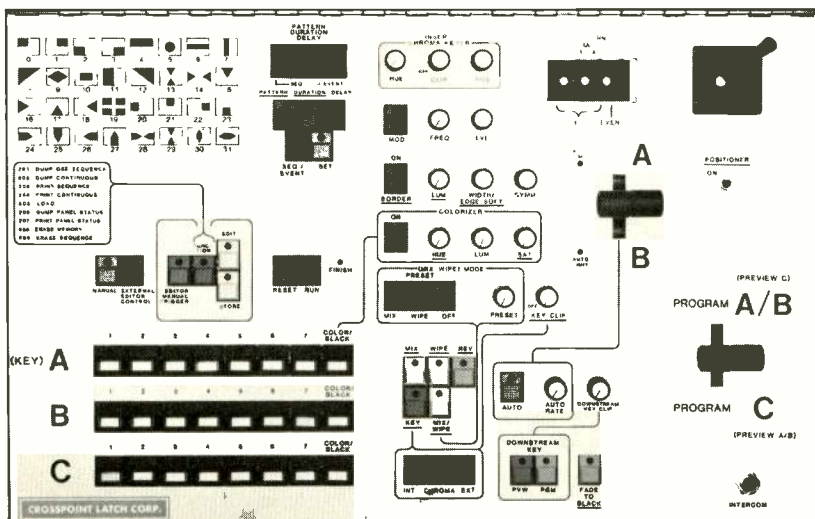
The newsroom, which contains an editor's office, a copy desk area, and a teletype room, also has three separate news edit stations that include a Sony reel-to-reel machine, a Tascam cassette deck, and an access terminal to the central distribution switcher.

All studio, control room, and terminal room walls are covered with two-inch acoustical panels and have large

400 EVENT REGISTERS, 100 SEQUENCES 6109/7209 (WITH 99 SEQUENCES) AUDIO FOLLOW MIXER

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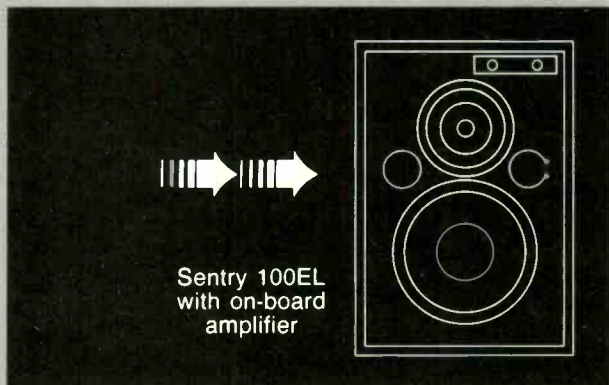
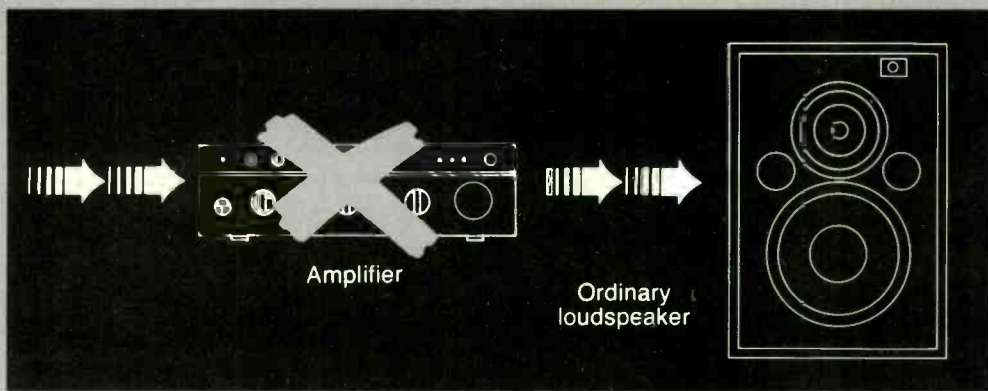
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With speaker and amplifier in one compact, rack-mountable package, this monitor system solves problems like limited rack space, equipment transport on remotes or cramped spaces in video editing booths.

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The on-board amplifier in the 100EL makes it ideal for single-channel monitoring. Why buy one speaker and an extra amplifier channel, when the Sentry 100EL does the job all by itself? And because amplifier power is perfectly matched to the speaker system, there's no chance of damage from inadvertent signal overload.

But convenience and trouble-free operation are only part of the package. Like all Sentry designs, the 100EL offers uncompromised accuracy. So you can be certain of quality sound.

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Circle 143 on Reader Service Card

AM/FM RADIO

windows. The studios are lined with fluorescent cove lights around the outer edges of the room, and incandescent spots controlled by four separate dimmers accommodate various studio setups.

Supporting the complex are

computer-type raised floors, which provide room for wires and cables under the floor panels. Separate telephone rooms for Telco and interconnect services are provided for interoffice, intercom, and broadcast services.

Finally, the WNYC audio complex

is equipped with a video system, which consists of three off-air tuners, controlled from the terminal room; a monitor tuned to our sister station, WNYC TV/31; a security monitor; and monitors in the studios. These are frequently used during simulcasts.

KIMN-AM/KYGO-FM

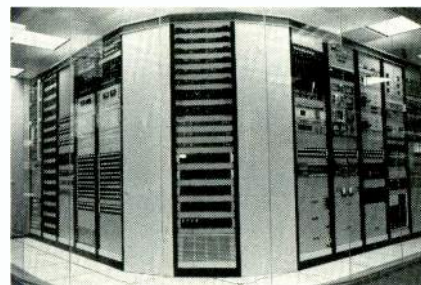
DENVER, CO

METRO RANK: 23

Submitted by

Chuck Waltman,

Engineering Director



Eleven eight-foot equipment racks, which contain all processing, distribution, monitoring, satellite, and noise reduction equipment, are located on the second floor.

The two-story, 20,000-square-foot studio building constructed exclusively for the studios and offices of our AM/FM was designed by Lee Architects of Lakewood, CO, and built by Calcon Constructors of Denver between May, 1983 and July, 1984.

The building is a fully active solar heated facility with 48 solar collectors that supply all heating and hot water

needs. It is supplemented with a backup electric boiler system when needed. Air conditioning is of the zone type, utilizing small compressor units located near each zone in the ceilings.

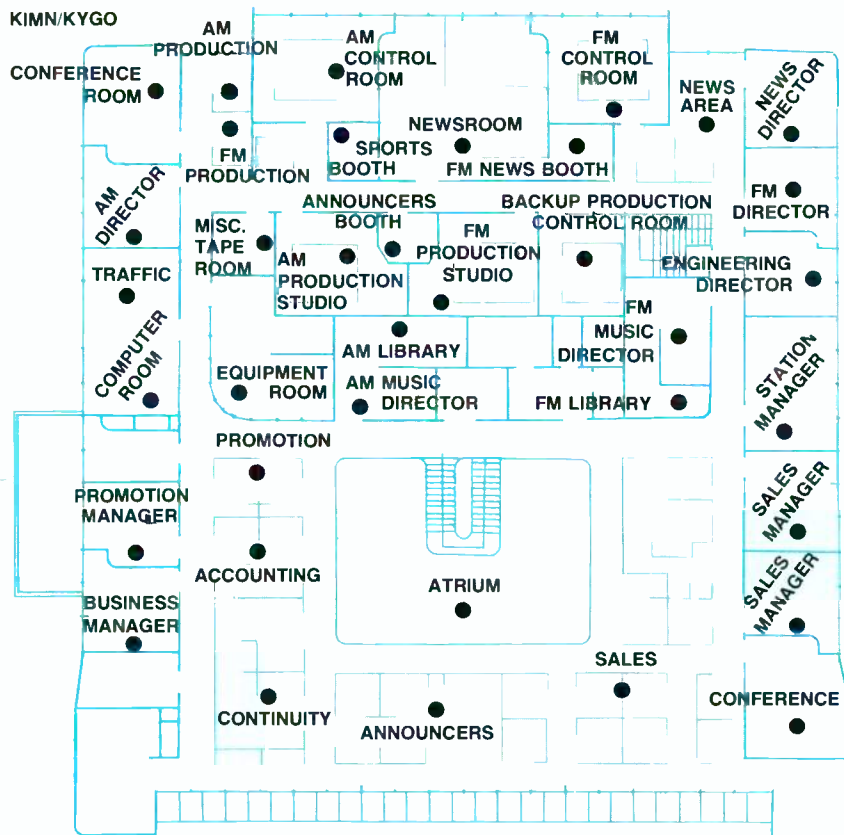
The building's large garage houses two large mobile studio vans, a 75,000 watt standby diesel generator, and two Scientific-Atlanta 9000 Series 2.8-meter earth station dishes.

On the roof is an antenna rack structure supporting some two-dozen assorted two-way, police monitor, STL, satellite, and modulation monitor pickup antennas. All coaxial cables enter through a single point and are routed directly into the central equipment room racks.

Also contained in the building are several storage areas, two conference rooms, including one which may be used as an auditorium or banquet hall, a full kitchen and projection room facilities, and access to a covered patio. Also on the ground floor are the technical shop, employee lounge, garage, telephone equipment room, and exercise areas featuring showers and Nautilus equipment.

On the second floor are the business and management offices, as well as all studios and music libraries.

In the central equipment room are racks containing all processing, distributing, monitoring, satellite, and noise reduction equipment, as well as all audio amps for studio speakers, headphones, intercom, and utility



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Not only does the APR-5000 do its job well; it does it consistently. The die-cast deck plate and Sony's long-standing commitment to quality control maintain that the APR-5000 will hardly need time off.

All of which results in a consistent sonic performance that'll stand even the most critical audio professionals on their ears.

For a demonstration of the recorder that transports analog audio to a new fidelity high, contact your nearest Sony office:

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SONY
Professional Audio



AM/FM RADIO



DJ Randy Jay in the KIMN/KYGO control room, which utilizes Howe Audio 24-channel consoles in addition to the three-sided overhead cockpit turret cabinetry, which contains eight ITC Delta single-play decks.

mixing and busing is done with the studio consoles being essentially dc control heads to accomplish level control. The control room consoles contain no audio, which allows for better maintenance of active electronics by removing them from high traffic areas. All studio cart machines employ dbx Type II noise reduction, and the encode/decode modules are also in the central room.

The control rooms use Howe 24-channel consoles with remote electronics. There is full dc VCA control, remote multiple input selectors, and rack space to accommodate Otari MTR-10 Autolocator units, a Farrtronics intercom panel, and special control functions. Overhead turrets contain eight ITC Delta single play decks (two with record), and the rest of the cabinet layout houses two Technics SP-10 Mark III turntables on isolated boxes, two guest positions behind the console, and two Otari MTR-10 reel-to-reels.

speakers. Also mounted in the equipment room are the electronics for our custom-designed and built Howe 24-channel audio consoles. All audio

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Systems — a Step Ahead

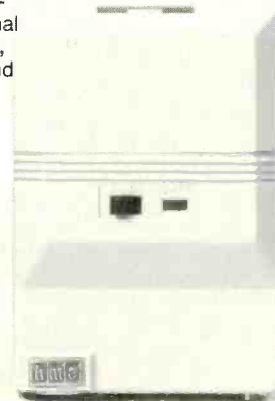
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Circle 144 on Reader Service Card

Our production rooms face each other and are divided by a shared wedge-shaped announcer's booth and back-to-back record/tape closets. The focal point of the rooms is the Quad Eight 248 Series console. It is self-contained except for power supplies which are rackmounted. The console has 64 monaural and 32 stereo inputs and may be arranged into a four-track, two-track, or mono mix mode via bus routing selectors and submix pots.

Also in the studio are two Otari MTR-10 two-track reel-to-reels, and an Otari MTR-10/4 four-track unit. Each of these has its own autolocator mini-computer. The turntables are Technics SP-10 Mark IIIs with Stanton preamps and Audio-Technica tone arms. The room is acoustically isolated by use of four sound-resistive layers of dry wall from concrete floor to building roof, and filled with dense fiberglass batting.

The newsroom, which is used primarily by KIMN-AM, has a Howe Au-



The stations' newsroom features a main anchor position (left) that uses a Howe Audio Model 7500 console, two Otari MTR-10 two-track machines, and three ITC Delta III three stack cart decks with record amplifiers.

dio 7500 console with minor modifications, two Otari MTR-10 two-track machines, and three ITC Delta

stack cart decks with record amplifiers for rapid reload-fire. There are also various network, telephone and two-way radio sources at the console, but audio may be routed without the use of the console, so multiple feeds may be recorded or edited simultaneously. There are three small workstations in the newsroom, equipped with five-channel Cetec Vega consoles, an Ampex 440 reel-to-reel, and two cart machines.

The news operation uses the Jefferson Data Systems ENP computer system for wire service gathering, writing, editing and storage. One other unique computer system is built around inexpensive Radio Shack Model 100 microcomputers and a low-band VHF link. It's for the delivery of road and traffic information to the airborne traffic reporter who receives his information on a computer screen in the cockpit. We believe it is the first such system of its kind in operation.

With our Automatic Remote Control System your transmitter – and your personnel – will operate with increased efficiency

Have you ever wondered if your night operator will remember . . . to switch patterns at sunrise? . . . to periodically check critical levels? . . . the correct transmitter restart sequence? You'll never have to worry if Potomac Instruments' RC16+ is on the job. Because it'll do all these tasks for you. Plus a lot more. Automatically.

With its microprocessor based control logic, the basic RC16+ provides 16 telemetry channels with automatic out-of-tolerance alarms and remote raise/lower controls;

plus 16 status channels. The automatic functions — pattern shift, transmitter restart, power control — are pre-programmed in accordance with station license requirements and controlled with an accurate master clock.

The RC16+ is also expandable. In 16 channel increments, up to a total of 64 channels. With the remote video display option your chief engineer can get a detailed readout of all measured parameters. It's updated every 30 seconds and connects to any standard telephone. The optional plug-in automatic logger provides a permanent record of all transmitter activity. Log intervals, sequence, and alarm flags are user-selectable.

And, best of all, the RC16+ is cost effective. No other unit on the market offers these features and capabilities at this low price.

Basic System	\$4,995.00
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AM/FM RADIO

KTAM-AM/KORA-FM

BRYAN, TX

METRO RANK: 291

Submitted by
Ben Downs,
Station Manager



The KTAM/KORA motor fleet consists of two 25-foot GMC motor homes used as mobile studios for either station. The van is used for on-the-road broadcasting of special promotions.

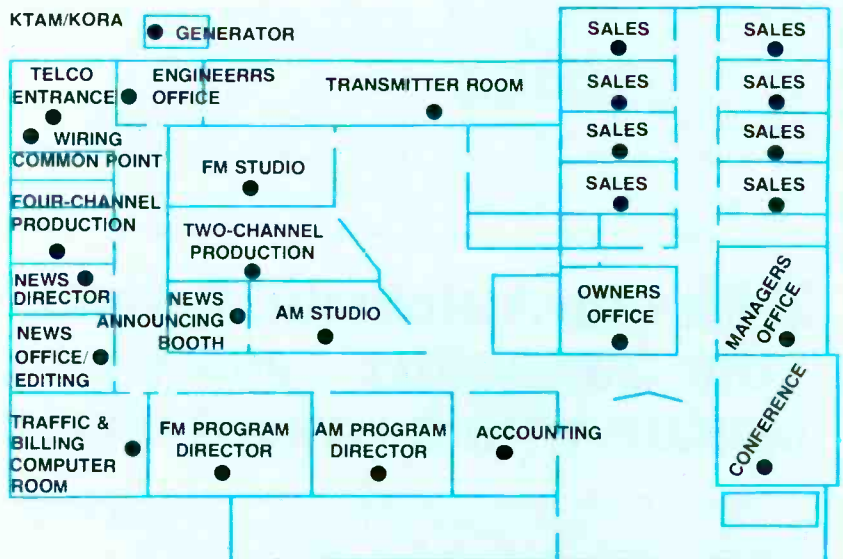
KTAM and KORA are both designed with unique two-way studios. A recent phase of remodeling gave us a chance to install state of the art internal communications equipment and to upgrade our remote broadcasting facilities. Unlike most stations, we designed from the outside in.

When we expanded our facility to the 8000 square feet it is today, we built around the core studio area. The outer ring features an automatic security system that electronically locks all access doors in the evening and unlocks them in the morning. A keypad by the door allows for after-hours entry. We are equipped with a 25 kW emergency power generator that powers all the transmitters, studios, typewriters, and transmitter room air conditioning. An emergency lighting system uses batteries to light studios and hallways until the generator is on line.

The conference room has various uses, from staff meetings to broadcasting. It has AM and FM air monitor

jacks as well as a four-channel mixer. A jack for the UPI printer makes this area ideal for commentators during election coverage. This room can also feed any studio.

Each room has a five-channel sound



Special effects production room includes EQ, digital delay, flanging, compression, and stereo enhancement. Recorders are four-channel Teacs.

system that allows the staff to choose between our two stations, or to monitor three of our competitors. Cassette recorders in the AM and FM program director's offices are connected to the studio mic switch allowing them to only record the air announcers' portion of a show. Timers make it easy to air-check even the midnight announcers.

Each station's studio is set to receive any network or remote frequency. Because of this requirement, we chose Ramko 32 input stereo consoles. The

VOTE
BALLOT ON PAGE 81

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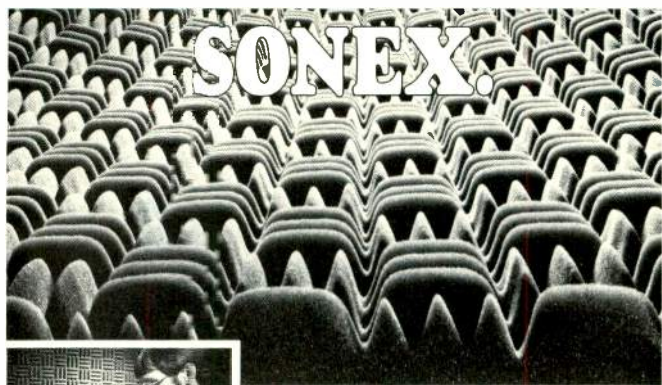


KTAM control room features video monitor (left) that displays the front door, UPI messages, and local zone weather forecasts. Technics turntables are used for special programs.

used to deliver cues and information to the remote site. Difficult interior locations call for our "bounce" system. One transmitter broadcasts back to the mobile studio and another transmits to the receiver at the station.

Another source of remote information comes from the news department. Our news staff can choose actualities from ABC, Mutual, or the Texas State Network. Three satellite dishes and receivers provide a great choice of material. Local material is recorded in the field on Marantz cassette recorders and brought back for editing at either of the two news workstations. When the news has to be reported on the scene, we use Motorola 2 W handheld transmitters tied into a local repeater. The units are computer-controlled so that only the three units used by the station can be on the channel. The local stock report is brought to the station by Marti directly from the broker's office, giving it a much higher quality sound.

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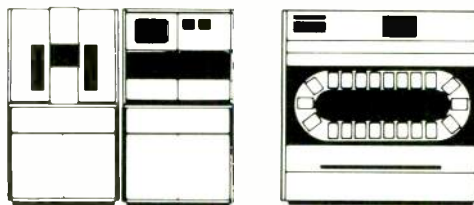
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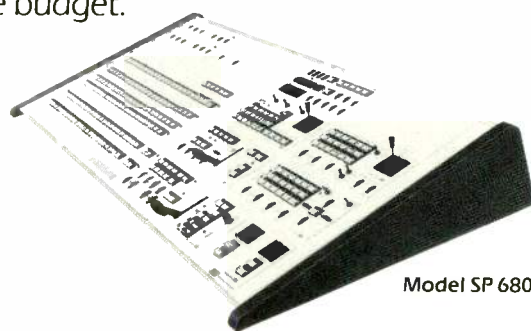
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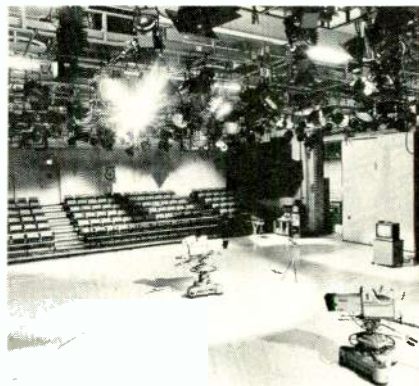
TELEVISION

WCVB-TV

BOSTON, MA

ADI NO.: 6

Submitted by
Ross Kauffman,
 VP Engineering,
David Folsom,
 Chief Engineer, and
Jim Gilbert,
 Assistant Chief Engineer



The station's new 5400-square-foot studio has a motorized lighting grid.

The enlargement and renovation of WCVB-TV's studio and technical facilities, undertaken in the spring of 1984, involved a number of special problems. WCVB-TV broadcasts full time and prides itself in producing more local programming than just about any other television station in the country. In addition, news has a special significance in the highly competitive Boston market.

We first faced the problem of rebuilding and enlarging the station's only active control room and adding a

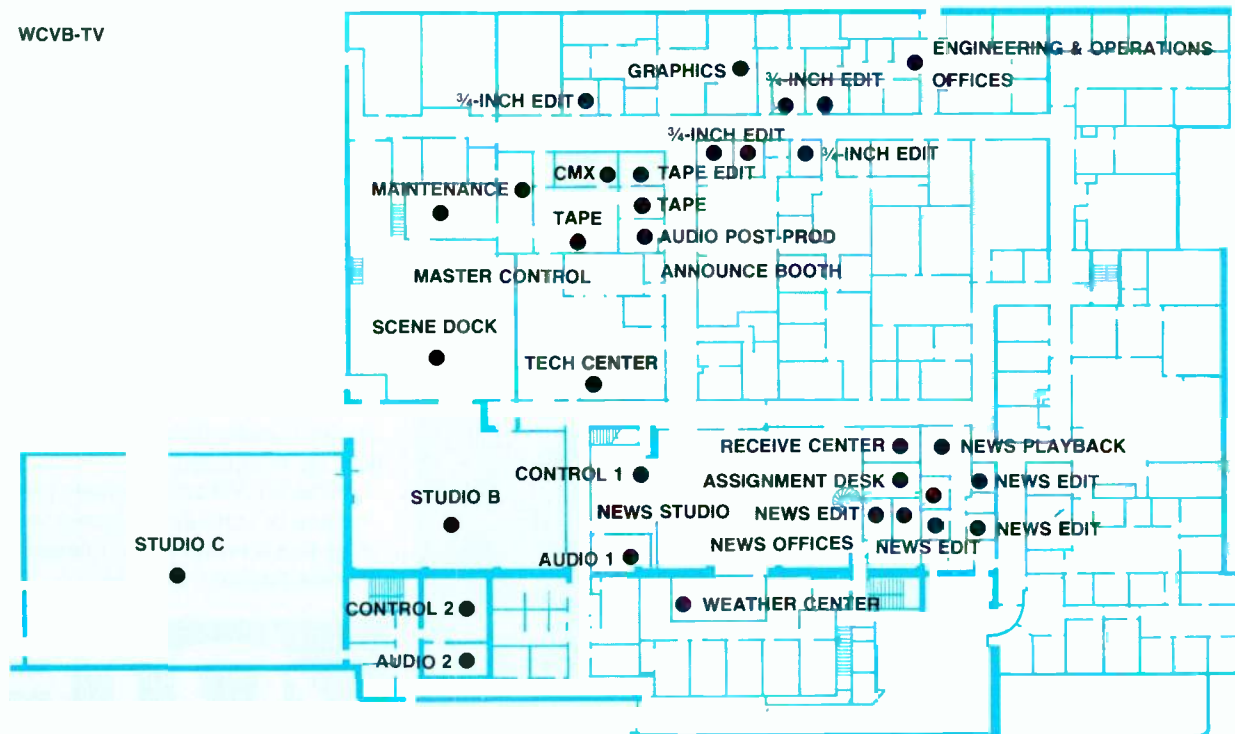
second identically equipped room. To smooth operations, a temporary control room was constructed.

The control room adjacent to the working news office/set was built first. This room is separated from the newsroom by a large tinted and tempered glass window with a large motorized shade, painted green, that is used for chromakey when needed throughout the newscast.

All cameras, recorders, and machine control are available in each control room. Each has a Grass Valley 300-3

switcher with full Master E-MEM and E-Disk, and a two-channel Quantel DPE-5000+ with flex and rotation. Our still store is a Quantel DPS 6030 with 320 Mbytes of disk storage. Although the GVG switcher has an excellent chromakeyer, we use Ultimatte Newsmattes for the highest quality keys. An assignable Utah Scientific machine control system is at the TD's position. Both control rooms have McCurdy computerized communications and 36-input Neve Model 5610 audio boards.

WCVB-TV



TELEVISION

The first of WCVB's three studios combines the news offices and set into a working studio. Its lighting grid extends into the office area to allow reporters to go live with fast-breaking news events from their desks. The noise and bustle of the busy newsroom provides viewers with a feeling of immediacy. The cameras in this studio are three new, computerized Ikegami HK-322s with triax. Six edit suites for the exclusive use of news are immediately adjacent to the news playback area.

Attached to the news studio is the weather center, which can originate reports when warranted. Its equipment includes ColorGraphics LiveLine 3 and 4 computers, a Vitro weather radar, and an Alden dialup radar system for access to National Weather Service radar facilities.

The two other studios measure 2400 and 5400 square feet, respectively. They share five Ikegami HK-312 computerized cameras on triax.



Control room for the WCVB working news set is visible through sliding glass doors. A motorized green shade drops down in front of the control room for on-air chromakeys.

The larger studio was designed for optimum flexibility with a motorized

lighting grid system designed and built by Texas Scenic, which also provided all the battens, track, and curtain material. Each of the studio's 312 lighting circuits has its own Teatronics dimmer, with control by a Concept computerized lighting controller with built-in floppy disk drive and a Teatronics Director 36-channel dimming controller. Motorized seating for 144 people folds to within five feet of the studio wall.

The centrally located tech center contains the station's four film chains, master.

Adjoining the tech center is a CMX 340 computer edit suite with three Sony one-inch tape machines, a 16-track Ampex ATR, and processing and terminal equipment.

The graphics area contains a Quantel Paintbox, with an Ikegami ITC-730 camera for input. A control point for the station's still store is here so the artists can transfer their images as soon as they are completed.

We at WCVB are extremely proud of our newly remodeled operation and know that it brings to our talented staff the best facilities available.

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VOTE

BALLOT ON PAGE 81

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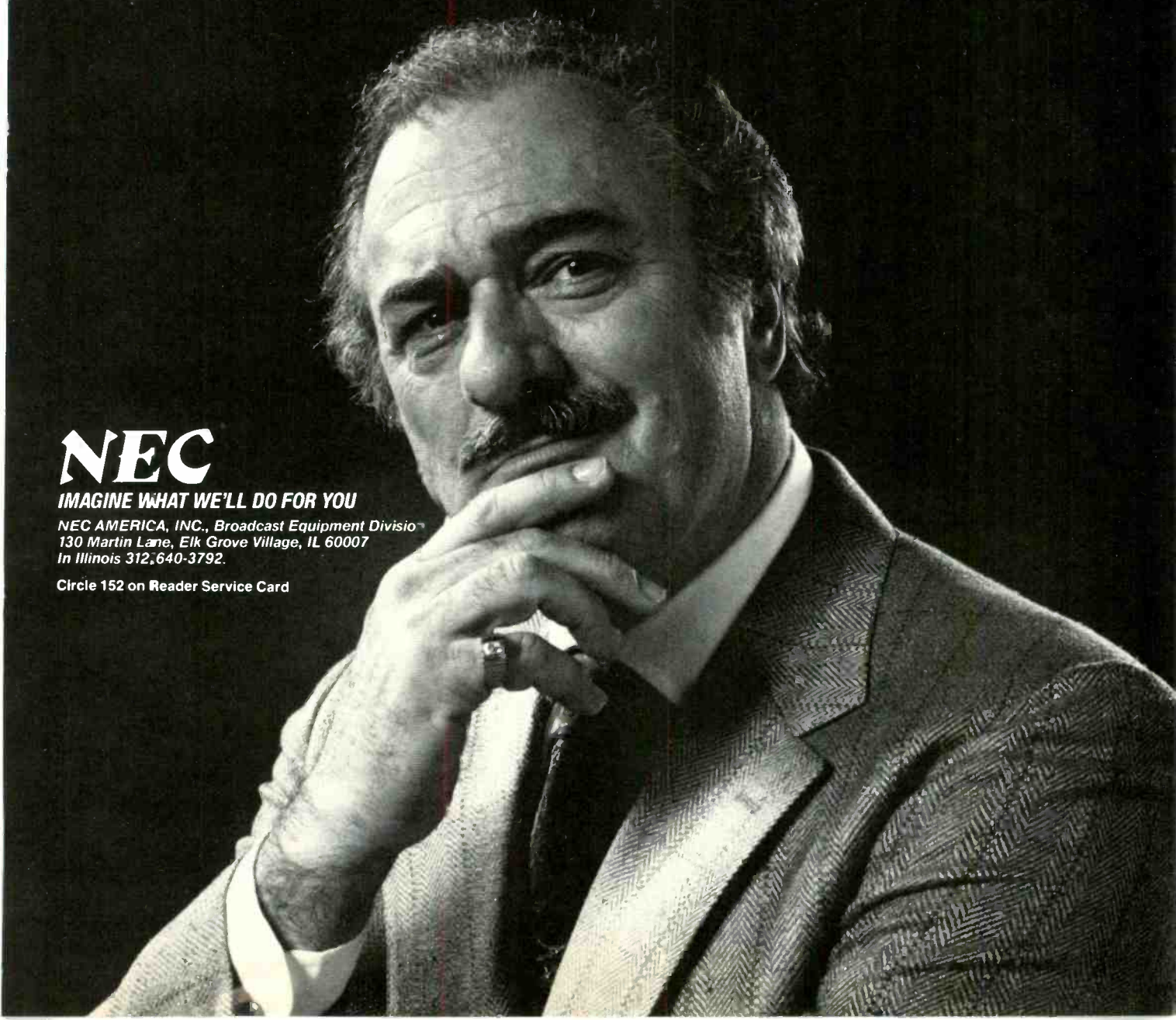
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TELEVISION

WJBK-TV SOUTHFIELD, MI

ADI NO.: 7

Submitted by
Rod Luoma,

Technical Services



In WJBK's master control, a custom console houses the GVG 1600-4S MC switcher that automates on-air operations.

In 1971, WJBK-TV, Ch. 2, moved to a new building in Southfield with what was then state of the art equipment. Eleven years later, management recommitted itself to a state of the art plant.

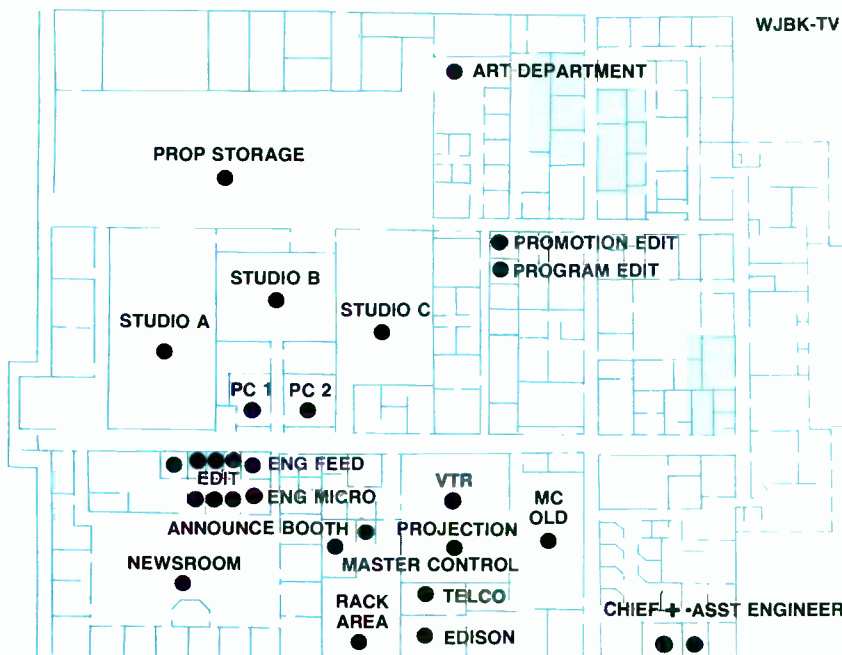
The work began with a new master control room. A 64x64 Grass Valley 440 routing switcher is its heart, and a GVG 1600-4S master control switcher with 20-event 202-level automation handles air operations. A custom U-shaped console houses the switcher, scopes, monitors, cart machines, transmitter controls, Vidifont 4, and other equipment. Analog and digital clocks display real time and a remote control digital ESE countdown/up clock is also available. A Radio Shack EC4075 time calculator aids in timing programs. The room has two levels of Halo track lighting: one for fill light and the second for key lighting with 12 V tight spot lamps. JBL 4312 speakers provide for future stereo monitoring.

The operating area is acoustically isolated from the racks by tinted double-pane glass in stationary and sliding panels. Racks in this area house electronics for three RCA TK-47 and three Hitachi SK-70 studio cameras, three TK-27 telecine cameras, Thomson-CSF Vidifont 4 and Vidifont 5 character generators, a Color-Graphics LiveLine 4 weather graphics system, a Quantel DLS-6000 still store, an American Data 554 switcher, and a Farrtronics intercom system. GVG pulse and video distribution amps are used along with Hedco and Ward-Beck audio DAs. All sources pass through a DA prior to the router input, providing each jack with two spare outputs for testing or utility use. Cutover to the new MC room was quite involved, with parallel operation with the old MC room aiding in checkout and operator training. On August 18, 1984, a carefully orchestrated changeover placed the new facility successfully on the air.

In the fall of 1984, one of the two production control rooms was completely stripped and its multilevel concrete floor removed and replaced with a two-level computer floor. Mockups were constructed to test various ideas for console design and room layout. Glass and dark brown brushed aluminum partition the room into an audio booth and a producer/client booth, both separate from the switching area. Carpeted panels were installed above and below the eye-level glass areas to aid in acoustical control.

A 24-input Grass Valley 300 switcher with Master E-MEM and E-Disk and an NEC MK II two-channel digital effects unit comprise the video system. Six racks just in front of the custom console house the 39 monitors that display inputs and outputs. Just to the switcher's left are the Quantel 6000 control and effects panels and below them, the Grass Valley machine controls. Further left is a Font V terminal and disk drive. Storage for disks, manuals, and related items is provided just to the left rear of the switcher.

An ADM 9000 computer-controlled, 32-input stereo console fills the full



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zation for comprehensive signal control and modular construction for reliability and easy maintenance. Along with the phenomenal sonic performance with which the name "Sony" has been synonymous for decades.

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The MX-P21 is portable, durable, and has an incredible array of features for its size—including phono EQ, fader-start and cascade interface.



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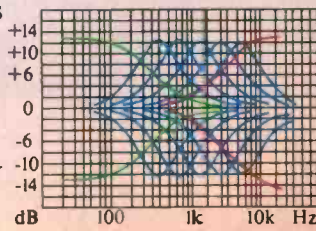
All of which makes the choice between Sony and any other portable mixer a simple one.

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EQ characteristics of the MX-P61.

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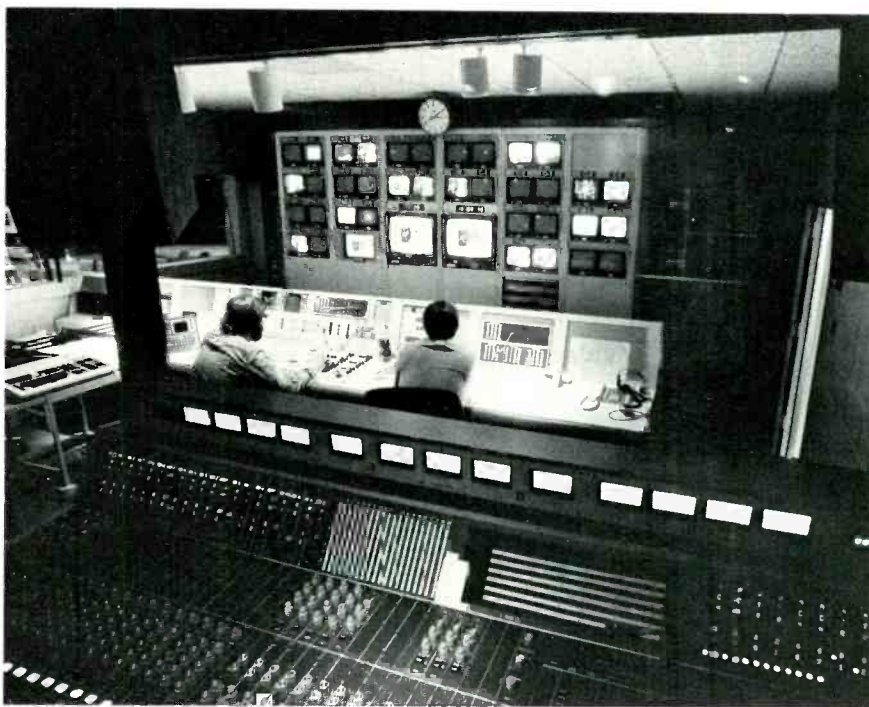


TELEVISION

width of the audio booth and is monitored by a pair of JBL 4312 speakers. Three racks in the rear of the room house the main and backup power supplies, jackfields, Otari ATR, IFB select panel, and Crown D75 amps.

The producer's booth offers the ability to carry on two-way radio and other communications without disturbing the other operators. All the control room monitors are visible through the glass; certain key sources also appear on six monitors in the producer's console. A switchable color monitor and audio system allows checking remote feeds prior to airing. Two Electro-Voice 100 speakers are utilized, one with the switcher and the other dedicated to air. This booth is also available to clients.

Throughout, the goal has been to provide pleasing design, neatness, and cleanliness in order to promote the highest operating proficiency and most pleasant working environment possible.



The audio booth, with its ADM console, looks into the switching area.

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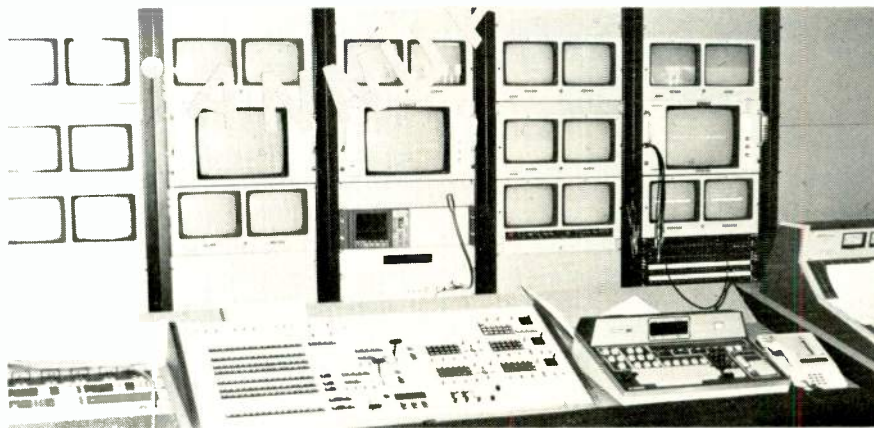
TELEVISION

KCIT-TV

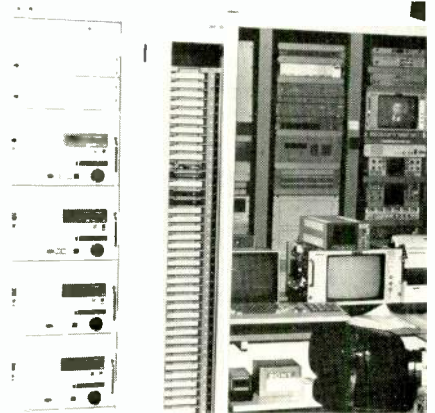
AMARILLO, TX

ADI NO.: 116

Submitted by
Scott McIver,
 Station Manager, and
Dick Stafford,
 Chief Engineer



Studio control at KCIT-TV employs a CDL 480 switcher, 3M D-8800 character generator, and an ADM 1600 II audio console, at right.



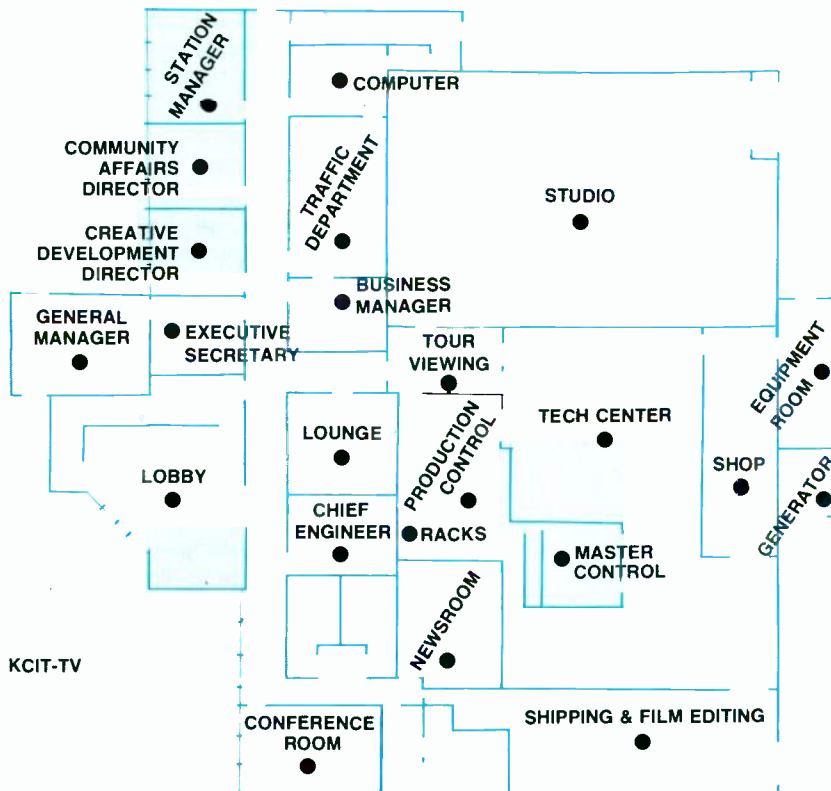
For on-air playback, the Amarillo independent bought a Sony Betacart system, which links with a CDL 990 air switcher.

Where can a former satellite independent UHF station build a new facility that provides the high visibility of a central location and still has microwave paths to the remote transmitter and satellite receivers? In Amarillo, TX, KCIT-TV found the answer at Eleventh and Fillmore, one of the busiest intersections in the downtown district.

KCIT-TV, formerly KJTV, was receiving programming from its sister station in Lubbock, TX, before the sale to Ralph C. Wilson Industries, Inc., in February 1985. The station's general offices were in a 900-square-foot office park suite and the transmitter and tech center were five miles north of Amarillo.

Construction of a 17,000-square-foot, two-story broadcast facility was completed in July 1985, allowing KCIT to combine the offices and tech center and to originate all of its programming on-site. The station currently occupies 12,000 square feet, with an additional 5000 square feet on the second floor available for future expansion.

Nearly 14,000 cars pass the downtown facility on a daily basis, making it a very attractive location for the high visibility all broadcasters hope for. The problems we encountered in building



VOTE
 BALLOT ON PAGE 81

TELEVISION

downtown were satellite reception interference and STL path obstacles. The STL path was assured with a 150-foot self-supporting tower constructed on site. Two five-meter FFOge satellite receivers and TSL path from the transmitter location allow clear reception for recording the nearly seven hours of programming satellite-fed daily.

The office layout of the new facility

combines G&A, traffic, promotion, and engineering departments on the first floor with sales and production areas upstairs. A first floor tour viewing area at the juncture of production control, the studio, and the tech center allows visitors visual access to our operation without interrupting the workflow. The tech center, engineering shop, master control, newsroom,

and production control are all constructed upon a computer floor with two-foot-square carpet inlays that keep dust and noise to a minimum. To assure easy access to the computer floor areas, the cement pad was dropped one foot below the other station areas, eliminating the need for stairs or ramps and permitting a flush fit to the outside access floors.

All equipment racks in the tech center have either a three-foot rear passage access or access through the engineering shop. The air conditioning system for the tech center was designed to vent cooled air below the computer floor, cooling the equipment in racks with a flow of air from below.

Local programs and production can now be accomplished in the 1800-square-foot studio, which uses a lighting design and fixtures provided by Strand Century Lighting.

Studio control is equipped with a CDL 480 production switcher and a 3M D-8800 character generator. Production currently has four Ampex VPR-80 one-inch VTRs available with field production using the Ampex VPR-5 field recorder and a Sony BVP-3A camera.

The on-air operation is enhanced with a Sony Betacart on-air playback system tied to a CDL 990 air switcher. The routing switcher chosen was the 3M 40X-LD, which interfaces with a 3M 6500C machine control system to remote control all VTRs.

With a movie schedule pushing nearly 40 features per month, the film department relies on its RTI TV-2000 film editor for fast and accurate editing. Our movie look has improved with the use of an RCA TK-298 film chain.

The transmitter building is monitored by a remote-control camera to check all meter readings and catch any problem early.

The staff has tripled—from 10 to 30—since the purchase, and our building can continue to accommodate the growth we expect in the future.

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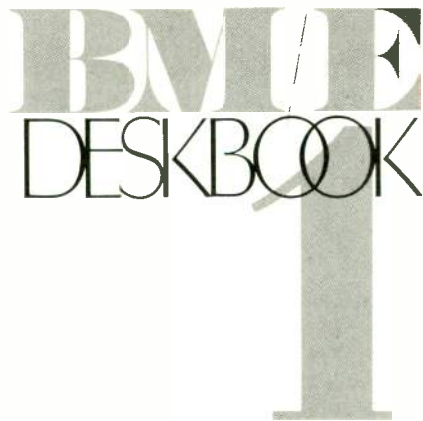
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VOTE
BALLOT ON PAGE 81

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FACILITIES

IMAGE MIX, INC.

NEW YORK, NY

Submitted by
Robert C. Weisgerber,
President and Chairman
of the Board, Modern
Telecommunications, Inc.



Image Mix insert studio features an Ikegami HL-79 camera.

In New York City's fashionable East Side, known for its top restaurants and upscale housing, a jewel of a post-production film/tape boutique opened its doors in the fall of 1984. Image Mix, Inc., has posted numerous TV commercials, music videos, and movie trailers in its initial year and recently doubled its editing and color correction capabilities.

Image Mix is a division of Modern Telecommunications, Inc. (MTI), one of the city's largest and most progressive full-service teleproduction facilities. Although MTI encompasses an expansive midtown teleproduction facility as well as a three-building complex uptown called MTI TV City, we saw a need for a personalized video boutique serving the advertising industry.

We built the entire 10,000 square feet of Image Mix on-line in just over three months. Located in a historic 1929 building, Image Mix was designed by the award-winning architectural/interior design firm of Papadatos Moudis Associates P.C.

Founding partner and principal Steven P. Papadatos, project assistant Brenda Vanaman, and architect associate Saverino Crea designed Image Mix with a relaxed yet professional look to the facility. Clients say that they feel as if they were located in a tower, an effect created with the type of finishes and wood used and the glass effect.

The color correction and electronic editing suites are spacious, with raised platforms for clients to view the monitors. Image Mix's first color correction suite offers the latest technology of the Bosch FDL 60 solid-state telecine in conjunction with the FRP 60 color corrector. This system provides the maximum latitude in color and luminance control, while eliminating noise, weave, and film jitter.

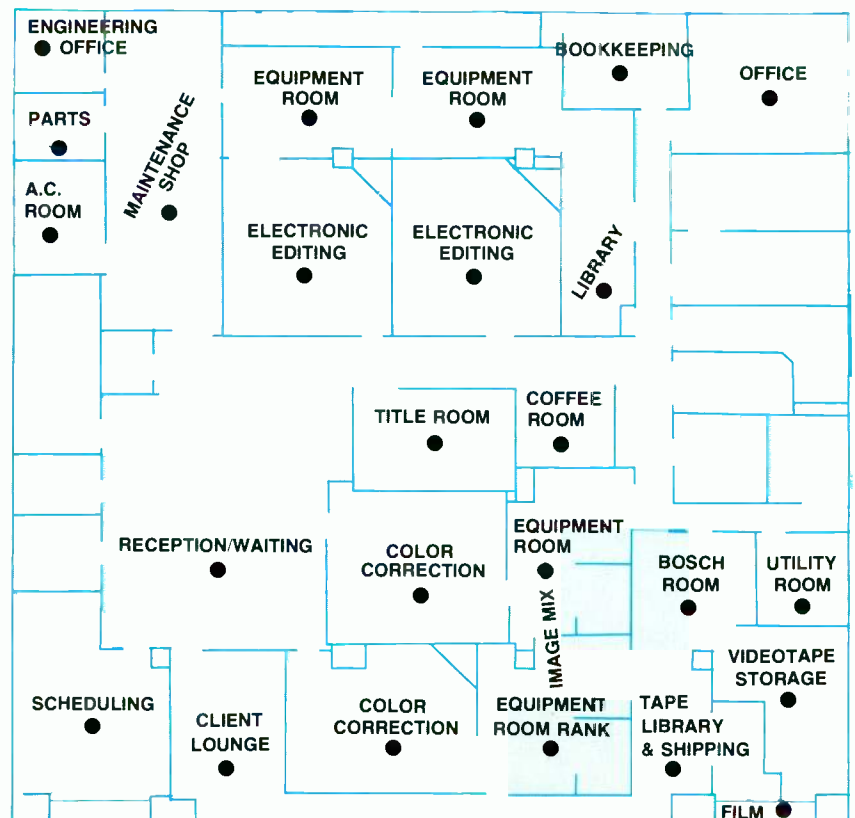
The color correction capabilities also include a CDL Model 480-4 switcher, Neve audio boards, title cameras, and Ultimatte key system.

Recently, we added a second color correction/film transfer room, which features a Rank Cintel MK III telecine with Digiscan, anti-weave gate, and X-Y zoom.

Our two identical computerized editing suites contain GVG System 41 editing computers, Ampex VPR-3s, CDL 1080 switchers with audio follow packages, Ampex ADOs, Chyron 4100 character generators, Neve audio boards, Sony Betacam VCRs, and graphics cameras. Audio equipment includes Studer half-inch ATRs and

¼-inch recorders with center-track time code, Lexicon stereo time compressors, and Dolby noise reduction. The second suite was installed in September.

Image Mix also features an insert





Machine room has film editing equipment in addition to Betacam recorders, Ultimatte, and test equipment.

studio equipped with Ikegami HL-79 camera and Ultimatte keying system.

A unique feature of Image Mix is its special service called Scene Sync, which is a conforming system for expedient post-production of filmed commercials.

Physically, we designed a sloped ceiling in the reception area with a skylight effect, which is a "window" lit from behind. This interesting design element creates an openness.

The light, clean lines of the reception area give a strong feeling of spaciousness. There are glass walls in the sched-



The Bosch transfer/color correction suite at Image Mix provides ample workroom plus comfort for clients.

uling room and client conference areas to expand the space.

In the future, Image Mix plans to convert part of the upper floor into audio sweetening suites.

Image Mix is complemented by MTI's midtown facility, located only one block away, which houses spacious studios, post-production center, com-

puter animation, and satellite communications divisions serving long-term broadcast projects.

VIDEO WISCONSIN BROOKFIELD, WI

Submitted by
John Barto,
President

Video Wisconsin is a 14,000-square-foot, client-oriented video post-production house located minutes from downtown Milwaukee in an area of enormous growth in a western suburb.

The facility is housed on the lower level of a building designed by Video Wisconsin president John Barto.

The remainder of the year-old building houses a retail camera store (owned by Video Wisconsin co-owner Mike Crivello) on the street level with its corporate offices on the lower level, plus

two other street-level retail stores and a lower-level advertising premium company. The split-level effect is ideal for the building's occupants, with retail located on the street level and nonretail below.

The lower level opens to the natural light outside due to an atrium effect across the entire front of the building. At Video Wisconsin, the reception area, conference room, and president's office capitalize on this openness and are topped with skylights.

The entire facility is tastefully fin-



The 3/4-inch suite, visible through its oak and glass partition, has a Convergence editor and Tapco audio mixer.

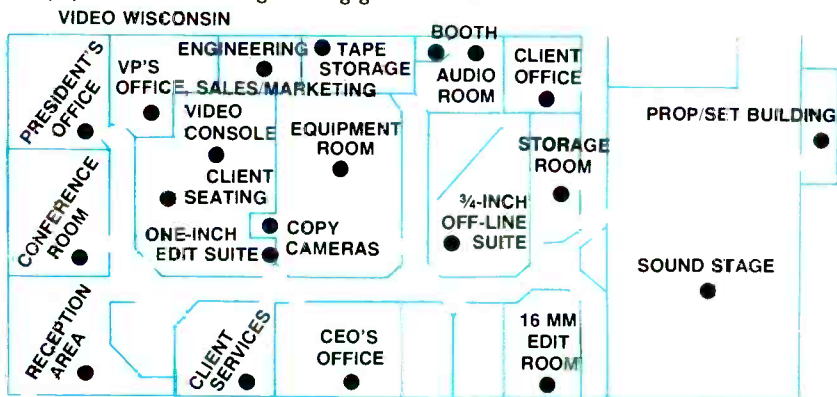
ished in tones of gray, burgundy, and mauve, with angled glass window treatments for each room. Green plants abound in the areas open to sunlight.

The one-inch on-line edit suite is located in the most visible area. It is complemented by the equipment room, which is visible to the editors and cli-

FACILITIES



Video Wisconsin's one-inch edit suite, with its Ampex ACE editor, offers a view of the equipment room through sliding glass doors.



Audio suite includes a narration booth and has Sony ATRs and a Ramsa mixer.

ents through sliding glass doors. Recessed lighting, an elevated custom-built oak client area, and a wet bar are the enhancements that make this room comfortable to work in.

At the forefront of the one-inch suite is the Ampex ACE touchscreen editor and Ampex Digital Optics effects system. Additional equipment includes Ampex VPR-80 one-inch recorders, an Ampex 4100E switcher, Beston Marquee 3000 character generator, 12-track Ramsa audio mixer, and a Betacam recorder/player. The associated equipment room houses Ikegami color and monochrome cameras for slide and art card insertion.

Beyond the one-inch suite, Video Wisconsin has a 1/4-inch off-line suite, 16 mm edit room, audio suite, and a 40 foot by 60 foot sound stage area. The 1/4-inch suite features a Convergence ECS-90 edit controller, a Sony VO-5800 player and VO-5850 recorder, a Panasonic switcher and special effects generator, Video Precision 3300 character generator, and 12-channel Tapco audio mixer. In the audio suite, equipment includes a 16-track Ramsa stereo mixer, eight-track and two-track Sony ATRs, a Vector Research cassette deck, and Nagra 4.2 full-track. A narration booth is adjacent to the audio suite.

The electronics for each edit room are tied together via underground channels for combined capabilities.

The sound stage features the ability to drive in (due to the ground grading on the building's exterior) and a hard curved cyc. Immediately off of the sound stage is an unloading, construction, and prop storage area.

Video Wisconsin is soon to complete its first year of operation. The amenities were included to make the client comfortable with the surroundings and provide for the best possible working environment. Technical and aesthetic design was considered. Details like the amount of client workspace, telephone placement, and the comfort level of chairs did not go unnoticed. Expansion is already evident. The Betacam unit is very new and a decision will be made soon on a graphics system. Staying on top of client needs and the changing technology are the goals at Video Wisconsin.

THE POST GROUP

HOLLYWOOD, CA

Submitted by
Rich Thorne,
Senior VP



Sweetening Room A at the Post Group gives operators eye contact with the machine room (left) and the announce booth (right). The suite has a Neve 8128 automated console, CMX edit control, and Otari recorders.

The Post Group is a full-service video post-production facility committed to providing our clients with the best designed and best equipped facility in the country, staffed by the finest creative, engineering, and support people available.

The Post Group occupies a two-story building and adjacent structures in the center of Hollywood's production community. At the heart of our services are 10 editing suites. Eight are one-inch bays with CMX 340X edit control (three have CMX 3400A systems with motion memory). Four on-line rooms

are equipped with Grass Valley 300 switchers; the other four feature Grass Valley 1600 switchers.

The ninth suite is a Betacam room featuring a Shintron component switcher. The tenth is a 3/4-inch on-line/off-line bay with a CDL 480-4 switcher. VTRs of any format can be delegated to any suite to accommodate client requirements. The facility houses a total of 36 one-inch VTRs, 28 3/4-inch VCRs, and 20 half-inch Betacam VCRs.

All on-line rooms are zero-timed. The machine room itself is equipped

with 14 Sony BVH-2000 VTRs. Machine assignment is handled by a 100x100 Utah Scientific routing switcher with two channels of audio and time code. Because of heavy daily

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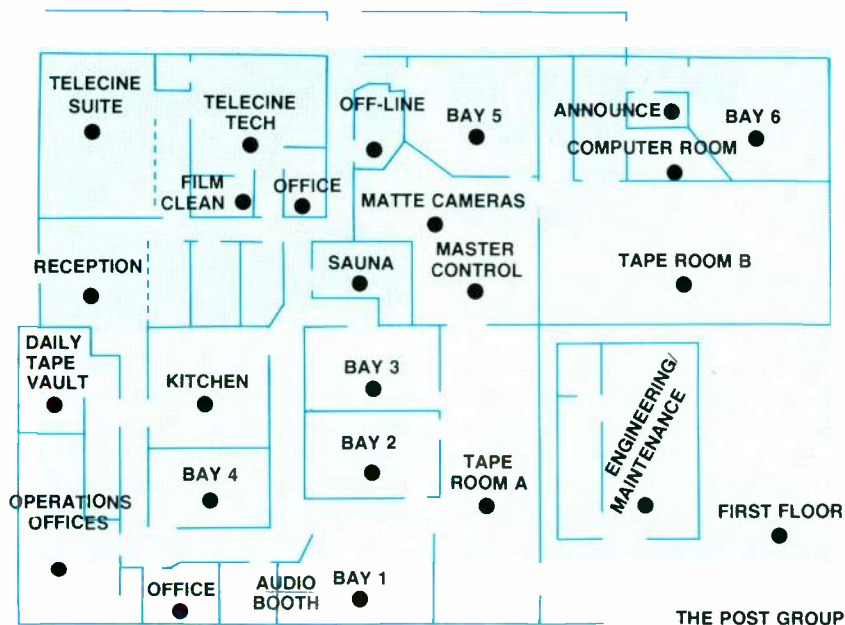
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usage, ADOs are routed by a proprietary routing switcher that enables us to

have a keyboard in each edit room. Digital effects, housed in the ma-

chine room, include Quantel Mirage, five channels of ADO, and NEC Mark II DVE. All on-line rooms can summon up to four channels of ADO, Mirage, and DVE simultaneously. In addition, the Betacam room can utilize Mirage, ADO, and Chyron in component format.

Graphics hardware is housed in dedicated suites and includes Aurora 100, Quantel Paintbox, and Bosch FGS-4000 systems, along with a Sony BVH-2500 stop-frame animation VTR. The most recent addition to our effects capability is the Abekas A-62 digital disk recorder, which can be routed automatically into all bays and graphics rooms.

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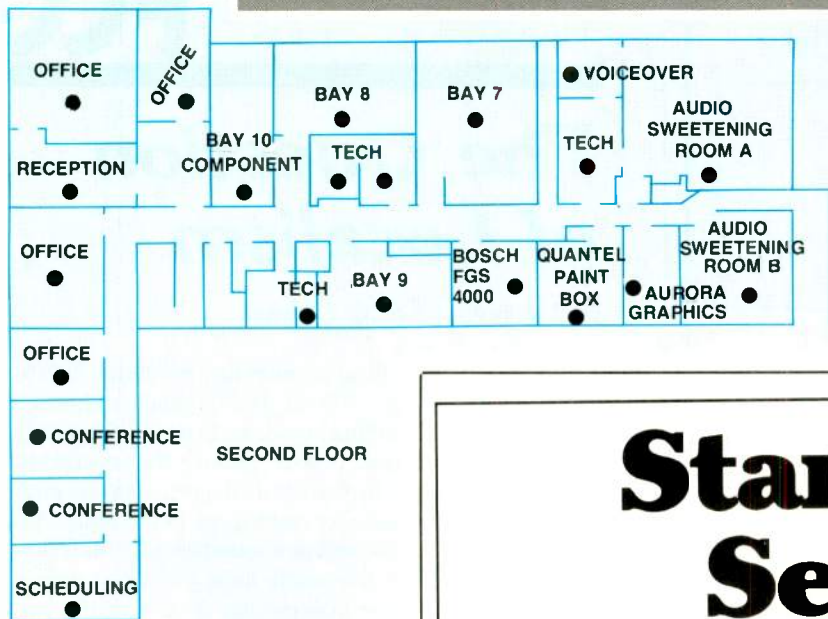
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complete sound isolation for audio sweetening, the second story has a concrete-based floating foundation.

For the future, suites are being readied to house an EditDroid, due this month, and the SoundDroid in the first quarter of next year. Should additional growth dictate, an additional two stories will be built to further expand the existing complex.

audio sweetening, with two suites opened last August. The department features a Neve 8128 48-track audio console with NECAM 96 automation, Otari recorders, and CMX 340X edit control.

In the last three years we have virtually rebuilt our facility from the inside out, constructed a two-story addition, and acquired adjacent buildings to cope with our continuing growth.

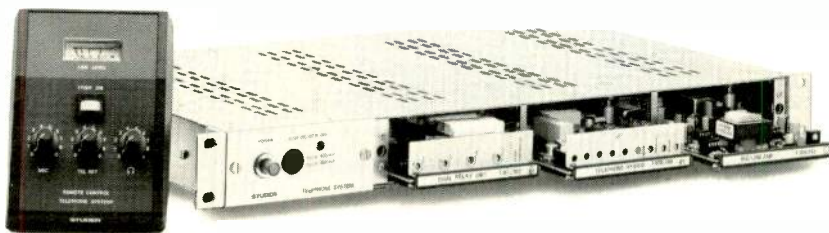
In 1982, to cope with our growth and prepare for future needs, management prepared a five-year construction and expansion plan. One of its central tenets was that the facility would be rebuilt within its present building, but with no facility downtime for the construction.

Among the changes, the facility had to stretch internally to accommodate an expanding machine room. A two-story addition now houses an edit bay, audio sweetening, two graphics rooms, and additional machine room space. For



The Post Group's Edit Bay 6, with GVG 300 switcher and CMX 340C editor, can simultaneously summon up to four channels of ADO, Mirage, and NEC DVE Mark II.

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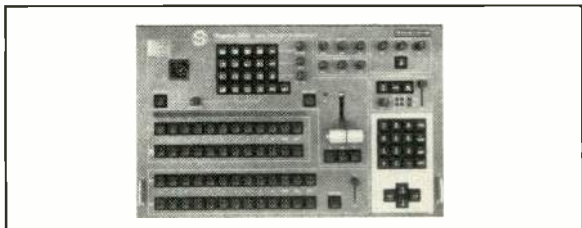
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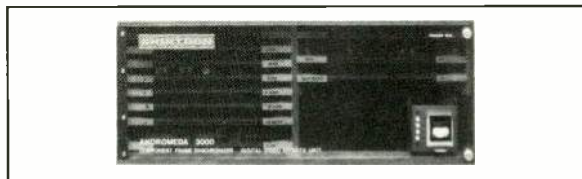
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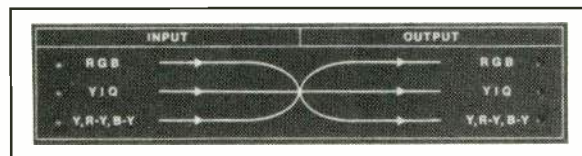
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interpreting the FCC

The Question of Localism

By Harry Cole, FCC Counsel

The question of localism is embodied in Section 307(b) of the Communications Act of 1934, which requires the Commission to distribute broadcast licenses, frequencies, hours of operation and power "among the several states and communities as to provide a fair, efficient and equitable distribution of radio service to each of the same." This language has been the bedrock foundation for the 50-year development of the essentially local broadcast industry.

In some senses, the concept has accelerated in recent years. For example, the FCC opted to modify its AM clear channel policies in order to create more local stations: the AM clears, of course, are a vestige of the earliest days of AM radio, when some thought that the most effective way of assuring radio service to as many people as possible was to restrict nighttime use of the AM band to a limited number of high-power stations, each of which could serve vast areas beyond their own respective communities of license. Similarly, Docket No. 80-90 was intended in part to create new FM stations in communities that did not have their own local stations. And on the television side, of course, there is the whole low-power television industry, designed to assure the availability of local TV service.

DBS and localism

But there has been a contradictory quality to the Commission's attitude toward localism. In 1983, the Commission decided to abandon certain policies that had been designed to assure that broadcast stations would serve their respective, local communities. That decision appeared to dilute the likely effectiveness of the scheme of local broadcast service. (This was discussed in the May, 1983 issue of *BM/E*.) Readers of this column may even recall the September, 1982 issue, where we discussed the impact of localism on the then newly authorized direct broadcast satellite ("DBS") service. DBS—which is still undergoing a difficult birthing process—is in some ways the functional equivalent of normal, over-the-air television. However, the Commission declined to regulate it as a broadcast service, subject to such statutory requirements as the Fairness Doctrine, political advertising rules, and the like.

In its DBS decision, the Commission also neglected to explain how DBS could fit into the concept of localism, a fact which was not lost on the U.S. Court of Appeals, which reviewed the FCC's DBS decision. The court told the Commission that it should take steps to explain how its treatment of DBS as a nonbroadcast service could be

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rules & regulations

justified in light of the fact that it would appear to be essentially a broadcast service. Part of the problem that the court had with the DBS decision arose from the fact that DBS service was in many ways indistinguishable from the types of services offered by conventional television licensees who choose to operate subscription television ("STV") services. Such services generally involve first-run movies and the like. While STV programming is broadcast on a normal television station, the signal is coded, or scrambled, at transmission so that, in order to receive the service, a consumer has to obtain a decoder from the STV operator. From the consumer's point of view, then, it seemed to the court that STV and DBS were in effect identical services. Yet the Commission chose not to subject them to the same regulatory scheme. Because of this, the court sent that portion of the DBS plan back to the FCC for another look.

Redefinitions

All of which brings us to the present and, possibly, the future. This past October, pursuant in part to the court's ruling in the DBS case, the Commission began a rulemaking proceeding looking to redefine both DBS and subscription television service as nonbroadcast services. If the Commission were ultimately to adopt such a redefinition, both DBS and STV operators would be exempted from a number of broadcast-related regulations. They would instead be treated as "point-to-point" services.

On its face, the Commission's proposal carries a certain logic. The underlying notion of a "broadcast" service is one that is receivable by anyone who chooses to go out and obtain a receiver: the operator of the station transmits the signal intending that it be available to everyone. Subscription services such as DBS and STV, on the other hand, involve an element of privacy in that, unless the consumer has made a specific arrangement with the operator, the signal is not normally available (except in a scrambled and, thus, unintelligible, form). In other words, the subscription services from this perspective offer something more in the nature of a private communications system, serving to deliver certain information or programming from one point to a specified, identifiable and limited number of other points (thus making it a point-to-point or, perhaps more accurately, a point-to-multipoint service). Thus, it might make sense not to treat such services in the same regulatory manner as broadcast services are treated.

This logic is reinforced by the existence of the multipoint distribution service ("MDS"), a service that operates on certain microwave frequencies and by which, in many instances, a subscription programming service virtually identical to those offered by STV operators is distributed. MDS (and its recently arrived cousin, multichannel MDS [MMDS]) facilities operate on frequencies reserved for common carrier usage, and the

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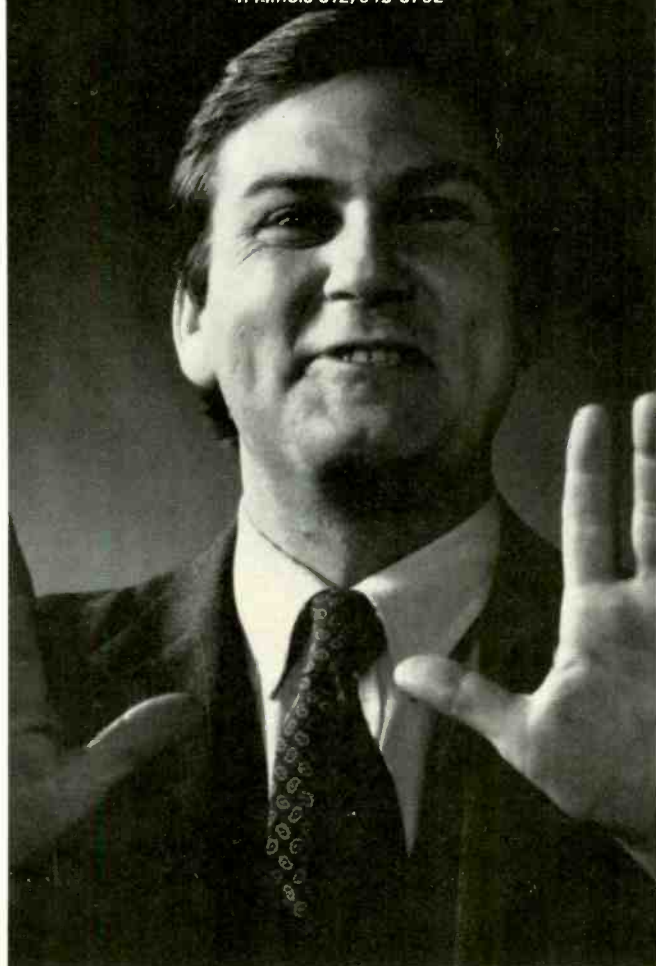
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MDS and MMDS services are regulated as common carrier, and not broadcast, services. It is easy to see how a court might wonder why DBS, STV and MDS are regulated differently when each involves the provision to the public of precisely the same types of programming services.

DBS stations involve programming beamed directly from a satellite into the home and MDS stations involve frequencies earmarked for common carrier usage. But STV stations are nothing more than normal, run-of-the-mill television stations that happen to send out scrambled signals. If STV services are defined as something other than broadcast services, it would appear that a television broadcast licensee could secure a normal broadcast license and then exempt itself from broadcast regulation by initiating an STV service. Take this another step. Suppose that, as part of the redefinition of STV service, STV stations are relieved of any obligation to provide programming responsive to their respective communities' needs and interests. While the specifics of the FCC's proposed redefinition have not, as of this writing, been released, it is a pretty safe bet that some such relief might be expected. That would mean that a licensee who wished not to have to worry about news, public affairs, and other programming responsive to community matters could avoid such worries by opting to provide an STV service.

It should be apparent where this speculation is heading. Such a redefinition could lead to a situation where the continued availability of broadcasting service as we now know it could depend on whether, from an economic point of view, such a service is more profitable than any nonbroadcast use to which the frequency could otherwise be put. That, in turn, could reduce (and, in some instances, possibly eliminate) conventional broadcast services—i.e., services intended to serve the local community and all of its residents by providing, among other things, programming aimed at local needs, problems and interests.

The FCC approach

Now as a practical matter, it is safe to say that broadcast service as we now know it is not likely to dry up and go away just because STV specifically, or subscription services generally, get redefined along the lines that the Commission has proposed. But the speculative scenario set forth above does reflect some weakness in the FCC's approach. After all, if the Commission does intend effectively to license portions of the spectrum and then to let the licensee determine whether or not it will offer a broadcast or a nonbroadcast service, the FCC will be placing in the hands of the licensee the ability to affect significantly how much broadcast service will ultimately be available. But Congress gave that job to the Commission in Section 307(b) of the Communications Act.

Abandonment of the concept of localism would involve a dramatic shift in one of the most basic of the doctrines of communications regulations which have been in effect for more than half a century. Possibly technological, social, and cultural changes that have occurred during that period warrant such a shift. The Commission should be sure of that before attempting to adopt such a sweeping change.

BM/E

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BUSINESS BRIEFS

Ampex Corp.'s Magnetic Tape Division has announced the signing of a three-year contract to supply **MTM Enterprises** with its professional broadcast quality 196 and 197 videotape.... **Norman Enterprises**, a subsidiary of Photo Control Corp., recently acquired Bardwell & McAlister. Plans are under way for expansion of the Bardwell product line in both lighting and grip equipment.... In Westboro, MA, **Alden Electronics** has signed an exclusive multiyear agreement with **FleetWeather, Inc.** of Hopewell Junction, NY to offer FleetWeather-developed software programs to enable users of weather data to convert their IBM PC microcomputers to weather data receive terminals. The two software programs, WEATHER-CAPTURE 1800 AND WEATHER-CAPTURE 604 will be offered by Alden to sublicensees receiving government weather data transmissions via satellite distribution channels on Galaxy 3.

In Hollywood, **Commercial Video Services** has introduced a matte verification service for its film production clients.... **Century III Teleproductions** recently opened a new post-production facility in Orlando, FL.... Veritech Corp. has inaugurated its new **TV and video production facility** in East Longmeadow, MA.... Seven one-inch VTRs, ADO, Mirage, Aurora, and the Bosch FGS 4000 were used to create a fall promotional package for WHAS-TV, Louisville, KY at **The Post Group** in Hollywood.... Also on the west coast, **Pacific Video** posted *Harry Belafonte: Don't Stop the Carnival* for HBO.

In New York, **LRP Video** has purchased several Ampex VPR IIIs, and has updated its CDL switchers and CMXs.... Editel/LA has acquired a **second Rank Cintel MK IIIC Flying Spot Telecine** featuring X-Y Zoom.... Up in Montreal, **Andre Perry Video** has completed a \$3 million production center that includes a command center, 2D and 3D computer graphics department, and a fully equipped shooting stage.... Now available from Realltime Video Productions of San Francisco is a **new "periscope" snorkel lens**, manufactured by Century Precision Optics. The lens fits the Sony BVP-330 video camera, Betacam and compatibles,



Grammy award-winning recording artist Ray Parker Jr. at the Sony JH-636 console in his Ameraycan Studios in Hollywood, CA.

and the Aaton film camera.... **Modern Telecommunications**, located in Manhattan, will be the new home of *The Dr. Ruth Show* and *Regis Philbin's Lifestyles* through December of 1986.

Wold Communications has chosen the Wegener Communications 2000 Series Multiprotocol Data Transmission System to deliver WINX, the weather and information distribution service provided by Wold and Environmental Satellite Data.... **WCAX-TV Ch. 3**, Burlington, VT has inaugurated a component video system for its commercial production. The system includes a Shintron Stratos component switcher, Shintron Andromeda 3000 digital RGB framestore-frame synchronizer, Panasonic AV300 VTRs, and a Convergence Model 195 editor.... *America*, the new syndicated daytime show from Paramount Domestic Television, is edited on **two Convergence 204 Video Editing Systems**... NEC's **DVE System 10** has been delivered to WPCQ-TV, Charlotte, NC; WVAH-TV, Hurricane, WV; WFIE-TV, Evansville, IN; WOKR-TV, Rochester, NY; and WTVM-TV, Columbus, GA.... An MTS-compatible TV stereo generator, the Model 710, has

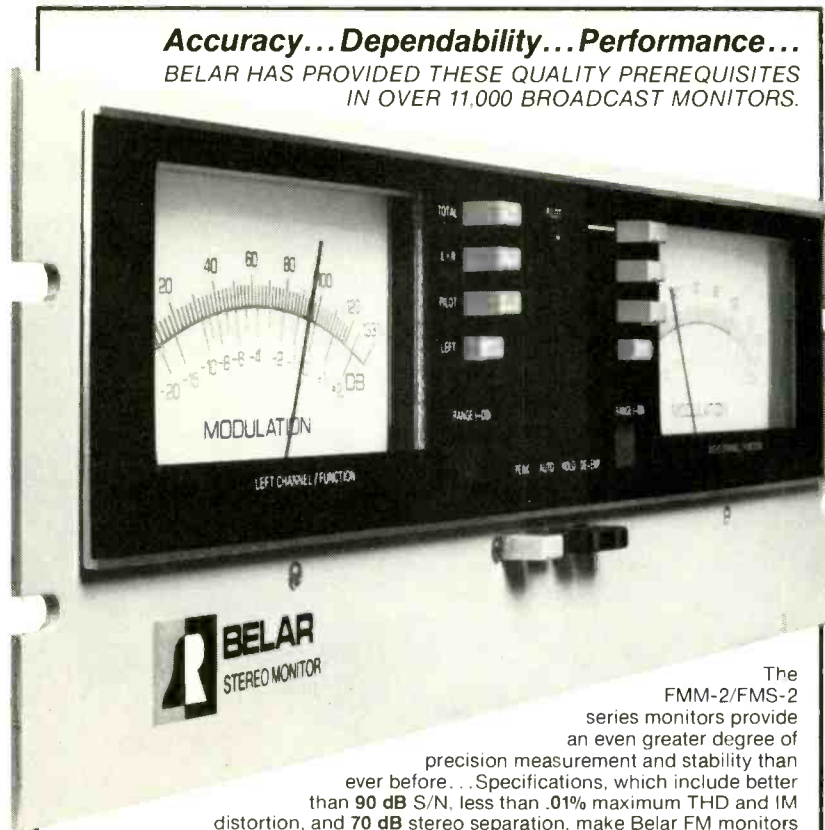
been made available by **Inovonics**

In an important marketing move, Ampex announced it will package a **reel of its 467 one-inch High Energy Digital Audio Mastering Tape** with every Mitsubishi X-850 32-channel digital recorder.... M-21 Series professional audio tape recorders are available immediately from **AEG Corporation**.... "AMRADIOHELP," a total packaging aid that works with AM and AM/FM Combo owners and managers, has been formed by Charlie Warren, DJ and former product designer for WPRO, Providence, RI.... CFTR-AM, located in Toronto, Canada, will test the Delta Electronics ASE-1 C-Quam AM stereo exciter, in what will be the **first Delta AM Stereo exciter ever to be evaluated** in that country.

Among the personnel changes this month, John Hartley is the new president and CEO at **Harris Corp.**.... At **Barco**, Walter Werdmuller has been named sales and marketing manager for the Broadcast Products Division.... **dbx** has appointed Stan Peters VP of marketing and sales.... Kinsley Jones has joined **Fidelipac** as marketing director.

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broadcast EQUIPMENT

Component Video Graphics New TVT from Philips

Philips has introduced the Pye TVT LDM 3010 Component Video Graphics System (CVG), a high performance paintbox system.

The CVG comes as a complete package, and includes many standard features. Included is a menu-driven control system, two color screen outputs with on-air picture swap, a color palette with access to over 7.3 million colors, a picture library including Winchester disk and floppy diskette for archiving, and a QWERTY keyboard with unlimited software-generated font capability.

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The job of a good lavalier microphone is to be heard and not seen. So we're introducing the new MKE 2 micro-miniature electret lavalier mic—our smallest ever. It comes with a variety of clothing attachments and can even be taped to the wearer's skin. So whether your talent is fully costumed for an epic or scantily clad, they'll hardly know it's there.

You'll know it's there, though. Thanks to Sennheiser back-electret technology and an extremely thin, low-mass diaphragm, the MKE 2 gives you uncanny transient response, and frequency response from 40 to 20,000 Hz, all with low sensitivity to mechanical noises. Which means you hear clear voices, not ruffled clothing. See the MKE 2 for yourself, but be prepared to look closely.

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Yamaha PM3000 Audio Mixing Console

The Yamaha PM 3000 Audio Mixing Console, introduced at AES, is a professional audio mixing console available in three configurations of 24, 32, or 40 input channels. It has a five-position attenuation pad switch and gain control; eight Voltage Controlled Amplifier (VCA) groups; eight group mixing buses and eight auxiliary mixing buses; a discrete stereo bus; and extensive cue and solo capabilities.

All of the conventional auxiliary and group buses may be operated independently, resulting in a total of 18 discrete audio mixing buses when the stereo bus is used as well. In addition, a total of 26 audio mixes are available by resetting the mix matrix internal preset switches. The mix matrix permits 11 possible sources to be mixed together eight different ways on eight different modules.

A new feature of the PM3000 is a VCA grouping system which provides the capability of each channel

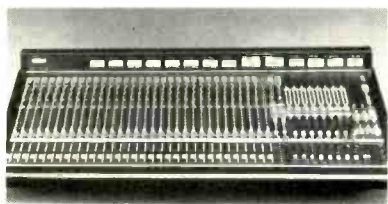
NT

In addition, the LDM 3010 has a full "font factory" for customer fonts, CEL animation with multiple CEL sequence and multiple vector capability, and "ON AIR" mode for transmission of picture sequences, using manual or automatic timing of transitions.

Other features include picture grab input from monochrome video sources, key signal output for external vision mixers, RGB and composite outputs on the primary picture channel, and digital processing to full broadcast standard per CCIR recommendation 601 giving resolution of 720 x 576 pixels.

Power for the CVG is supplied by 234/220/117/110 V ac, 47-63 Hz, 400 watts. It comes in both PAL and NTSC formats.

Circle 175 on Reader Service Card



to be controlled by one or more VCA master faders. Each channel's post-fader output levels can be raised or lowered by the VCA master fader, something not possible with a conventional group master fader. The PM3000 also has the functional equivalent of 26 separately-controlled groups, in the event that an application calls for using the eight VCA groups as discrete buses.

Where extra grounding isolation is required, optional onboard IT3000 input transformers are available. Extensive metering is provided with 14 VU meters, each with peak LED, that can be switched to monitor 35 different points.

The PM3000 will be made available early next year.

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