

# Radio World



**SBE Founder Charlie Hallinan Remembered**  
See Page 7

Vol 22, No 13

Radio's Best Read Newspaper

June 24, 1998

**NEWS MAKER**

## Suren Pai: Lucent Is For Real

The name Suren Pai is not known widely in the radio business. That is likely to change in coming months. Pai is president of Lucent Digital Radio, a new venture of Lucent Technologies that has declared its interest in developing an in-band, on-channel digital audio broadcasting system. The 35-year-old Pai is responsible for all business initiatives within the venture and works closely with Lucent's R&D arm, Bell Labs.

He talked with RW News Editor/Washington Bureau Chief Leslie Stimson.

**RW:** Who owns Lucent Digital Radio?  
**Pai:** Lucent Digital Radio is wholly owned by Lucent Technologies. It is a new venture of Lucent Technologies.



Suren Pai With 1928 Western Electric Model 9A Condenser Mic

**RW:** How does Bell Labs fit in?  
**Pai:** Bell Labs is an R&D division of Lucent Technologies. Just to give you some background here of what we do ... We have a business at Lucent called New Ventures Group. What New Ventures Group is chartered to do is to eventually find promising opportunities for Bell Labs Innovations to be applied at. As a result of all of our work over the past year or so, we have identified IBOC DAB as a very promising opportunity for us to apply a full range of diverse technology that will benefit Bell Labs

See IBOC, page 8 ▶

## VOA Africa Service Ready to Roll

by Randy Stine

**WASHINGTON** In a move aimed at offering more balanced and reliable news reporting to the nations of Africa, the Voice of America has expanded its African division. Called Radio Democracy for Africa, the new service will allow VOA to expand its role by adding additional hours of programming to Africa.

While on a two-week tour of Africa in late March, President Bill Clinton unveiled the formation of RDA. Employees of the new division will put additional emphasis on news reporting on government, politics, human rights and business development in Africa. VOA Director Evelyn Leiberman said most programming offered to Africa prior to RDA included more world coverage. "This new undertaking is aimed at Africans in Africa," she said.

The new service is expected to begin next month. "We'll roll this new service out small, initially, just to see how we're doing," Leiberman said. Because the VOA already had an Africa division in place, employees hope to get the start-up off the ground quickly.

The African division of VOA already employs hundreds of stringers across Africa. Division officials are hiring dozens more. VOA Africa Division Chief Steve Lucas said, "With

the additional stringers we're recruiting, we'll be able to offer programming much more specific to certain regions of Africa." Stringers fluent in Swahili, Amharic and English are being sought initially.

Lucas said, "Specifically, we will be able to offer more conflict-resolution or conflict-prevention programming. We call it civic broadcasting. That's when we focus on civic building and programs."

RDA programming will target a broad social base in Africa. Lucas said,

"Generally, our listeners are concentrated in somewhat urban areas. Those are the news centers." With the additional hours being offered and the specifically tailored language programming, division officials hope to see significant listenership increases.

The Africa Division of VOA was founded in 1963. Today, the division has 115 employees at VOA headquarters in Washington.

RDA is being phased in over a three-year period, with phase one under way. A

See VOA, page 14 ▶

### Wheatstone's New High-Tech Home Page 19



Jim Anthony cuts sheet metal with a Cincinnati Inc. CL6 laser system.

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## Police Slam WFLA for Interview

by Bob Rusk

**TAMPA, Fla.** A news/talk radio station here that put itself in the middle of a breaking news story is being criticized by police for how it handled the situation.

A man shot and killed two Tampa police detectives and a state trooper, then took a hostage at a gas station. As Hank Earl Carr, 30, held a female clerk captive at the Shell station off Interstate 75, Jacor-owned WFLA(AM) placed a telephone call to the gas station. Carr then granted a live interview to WFLA news director Don Richards.

The six-and-a-half minute broadcast is being condemned by police. "No news organization should interfere with an ongoing police investigation. It's a violation of law," Tampa Police

See WFLA, page 17 ▶



# NEWSWATCH

## USADR Transmits Digital Signal

**COLUMBIA, Md.** USA Digital Radio began transmitting an FM in-band, on-channel digital audio signal June 3 from its new headquarters in Columbia. USADR Director of Engineering Glynn Walden said, "We're transmitting an analog signal and an IBOC signal on 93.5 MHz." Power level was approximately 600 W.

The company has an experimental license from the FCC to conduct such broadcasts. Walden said USADR was transmitting only for a few hours at a time for a couple of days. USADR

planned to conduct FM characterization tests soon.

## CD Radio Doubles Channels

**NEW YORK** CD Radio has doubled the number of channels it will offer for its satellite-delivered digital audio broadcasting service to 100. The company exercised its option to purchase a fourth satellite from Loral Space & Communications Ltd.

CD Chairman and Chief Executive Officer David Margolese said, "The step-up from 50 to 100 channels is analogous

to the difference between a regular bookstore and a Barnes and Noble Superstore." The extra channels will carry Hispanic and sports programming.

Under terms of the agreement, Loral replaces Arianespace as CD's launch service provider, delivering three Loral FS-1300 satellites in orbit and one ground spare. The first launch is set for November of 1999.

## Capstar IPO at \$19 a Share

**AUSTIN, Texas** Capstar Broadcasting Corp. sold an initial public offering

of 31 million shares of Class A Common Stock at \$19 per share on May 27. The stock is traded on the New York Stock Exchange under the symbol "CRB." Capstar used the proceeds of \$555,861,000 (after fees and commissions) to help finance the SFX acquisition, consummated May 29. Capstar gained 68 stations from SFX for total of approximately 300 stations.

## Justice OK's Sinclair-Heritage

**WASHINGTON** The Justice Department approved Sinclair Broadcast Group's

See NEWSWATCH, page 3 ►

# Index

### RUNNING RADIO

<b>A New Brand of Christian Radio</b> by Gordon Govier	20
<b>Challenges of Radio News</b> by Paul Ladd	20
<b>To Cover a Show About Nothing</b> by Peter King	21
<b>Hooked on Trivia: Let the Games Begin!</b> by Dee McVicker	21
<b>Anything Goes in Promotions</b> by Doug Hyde	24
<b>That's Enough of That Funky Stuff</b> by Harry Cole	27
<b>Are You Ready for Inspection?</b> by Ronald Ramage	28
<b>Sales Strategy: Hitting the Number</b> by Mark Lapidus	30

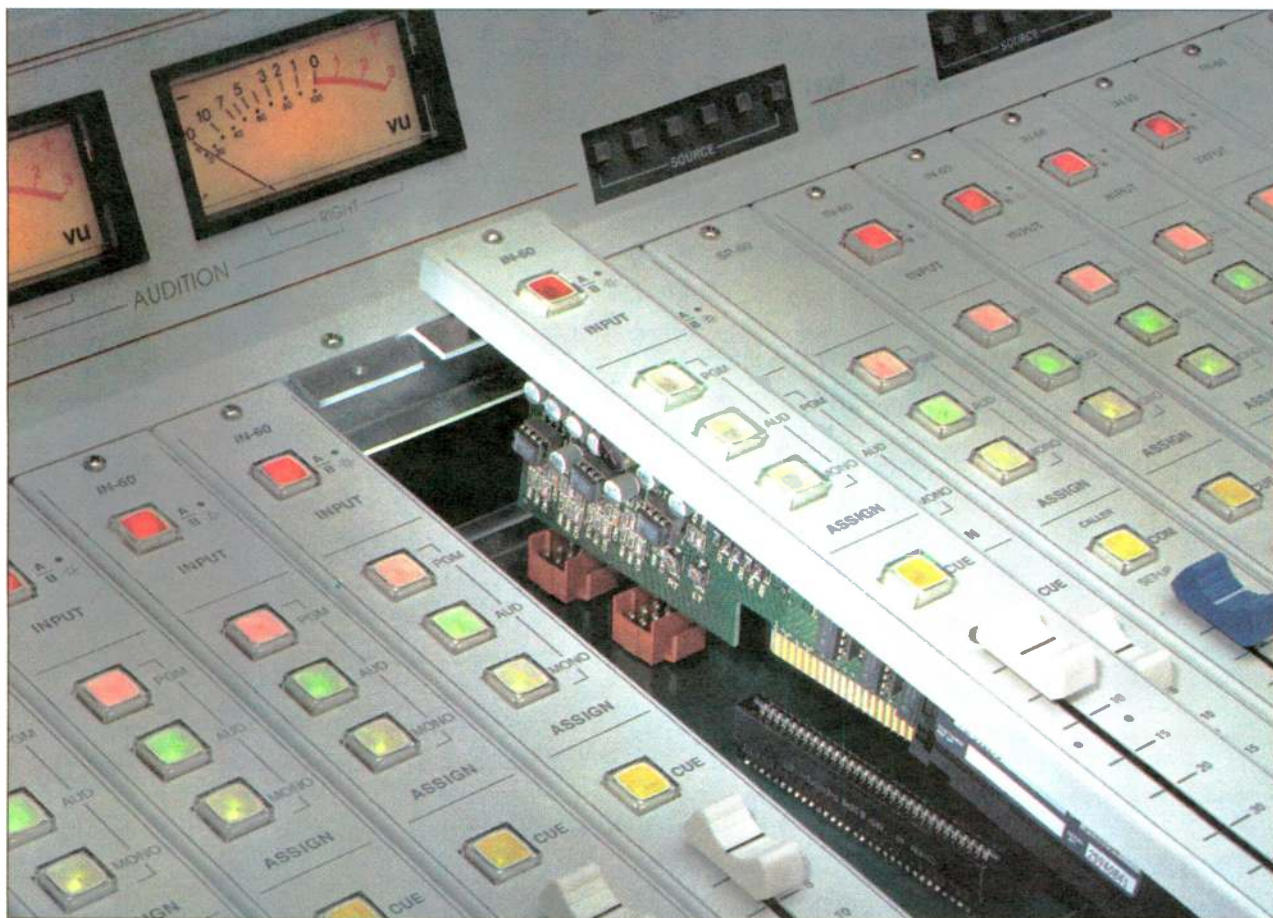
### FEATURES

<b>Troubleshoot Your DAT Machine</b> by Jeff Johnson	34
<b>Does the Power Company Know You?</b> by John Bisset	36
<b>Meet the Amazing RF Alternator</b> by Ronald Pasha	37
<b>Design and Test for Quality</b> by Mario Hieb	38
<b>Choosing Microphone Cable</b> by Steve Lampen	39
<b>Almost Time to Hit the Switch</b> by W.C. Alexander	40
<b>Radio, a Medium Full of Memories</b> by Richard O'Donnell	41

### STUDIO SESSIONS

<b>Roland DAW Has Effects and More</b> by Ty Ford	45
<b>As Creative As I Want To Be: An Observation</b> by Sallie Schneider Sauber	45
<b>Hafler TRM8 In the Jingle Mix</b> by Ken R.	46
<b>Plain Labels Hide Solid Library</b> by Sallie Schneider Sauber	47
<b>Audio Software 'Just For Fun'</b> by Alan R. Peterson	49
<b>DVD-Audio: Are We Getting Close?</b> by Mel Lambert	55
<b>A Radio Romp With 'Anagram AI'</b> by Alan R. Peterson	57

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**AUDIOARTS ENGINEERING**



# Revocations for Hicks, Pathfinder?

by Leslie Stimson

**WASHINGTON** Hicks Broadcasting and Pathfinder Communications were ordered to explain to the FCC why their licenses for Indiana stations WRBR(FM) in South Bend and WBYT(FM) in Elkhart should not be revoked.

Commission staff is looking into allegations by Niles Broadcasting that Pathfinder is not qualified to be a licensee. Niles, licensee of WNIL(AM) and WAOR(FM), Niles, Mich., objects to the proposed assignment of WNDU-AM-FM, South Bend from Michiana Telecasting Corp. to Pathfinder.

## Niles' objections

Niles has alleged that Pathfinder's controlling stockholder and president, John Dille III, misrepresented the facts to the FCC in an application by Hicks Broadcasting to purchase WRBR (which was granted by the FCC in March of 1994.) Niles asserts that Dille, not Hicks, provided the money for the purchase and was in control of the station. If true, the purchase would also violate the radio-newspaper cross-ownership rule, as Dille owns a newspaper in Elkhart. (Hicks and Dille have denied Niles' claims.)

The FCC believes there are enough questions to prevent the assignment of WNDU, and order Hicks and Pathfinder to appear at a hearing, with a date yet to be set. Both Hicks and Pathfinder also could be fined up to \$250,000 each...

They are not the only groups in the news because of fines.

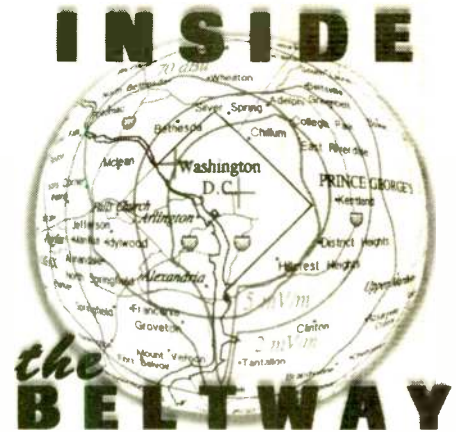
The FCC has fined both Palm Beach Radio Broadcasting and American Radio Systems Corp. \$18,500 for unauthorized transfer of control of PBR's stations in

permit ARSC to acquire the stations. Under the agreements, ARSC had the right to review and approve PBR's budgets and the right to review changes in the senior management of the stations.

When it levied the fines, the commission said "the financing agreements exceeded generally acceptable boundaries for loan agreements."

ARSC and PBR concede that ARSC's involvement in PBR's West Palm stations before the deal was final resulted in an unauthorized transfer of control.

ARSC and PBR had 30 days to show why the fines should either be reduced or not imposed...



A Roundup of News and Comment Affecting Radio From the Nation's Capital

West Palm Beach, Fla. In 1995, ARSC entered into asset purchase agreements with the licensees of these stations in the West Palm Beach area: WPBZ(FM), Indiantown; WSTU(AM), Stuart; and WMBX(FM), Jensen Beach. ARSC later assigned its rights to buy the stations to PBR and both companies reached financing agreements that included options to

filed its appeal. "Inclusive (job) searches are the foundation of equal opportunity. If you don't know about the job, it's hard to apply."

In April, a three-judge panel of the appeals court rejected the FCC's argument that its EEO rules are designed to achieve program diversity, and said the commission has not narrowly defined "diversity."

The commission has asked for a rehearing by the full appeals court...

## Ness in a cape?

Finally, can you imagine Commissioner Susan Ness as a caped crusader? We can. Ness has agreed to lead what the FCC is calling a "DTV Tower Strike Force." Participants will target potential problems in the digital TV transition, and work with local authorities and broadcasters to expedite the process.

In order to provide digital service, TV broadcasters may have to modify their transmission towers or build new towers. FM stations that lease tower space with TV stations are affected as well.

The strike force will make commission staff available to local government authorities and broadcasters to answer questions about tower modification or construction. The commission has created a Web site with a fact sheet on tower siting and DTV at [www.fcc.gov/mmb/prd/dtv](http://www.fcc.gov/mmb/prd/dtv)

In the first wave of DTV, 24 stations in the top 10 TV markets are slated to be on the air by November. A total of 40 broadcasters in the top 10 TV markets will be broadcasting digital signals by May, 1999.

## EEO appeal

Will radio EEO rules survive? As expected, the FCC has asked the United States Court of Appeals for the D.C. Circuit to reconsider its April decision to strike down the commission's EEO rules.

Chairman William Kennard argued, "The rules are constitutional. They impose no quotas, set-asides or preferences. The rules merely require that broadcasters reach beyond the 'old-boy network' and consider qualified minorities and women job applicants. This is not too much to ask of broadcasters who are entrusted with a valuable license to use the public's airwaves."

## Kennard speaks out

Kennard was more blunt in a speech to the NAACP just before the commission

## NEWSWATCH

► NEWSWATCH, continued from page 2  
purchase of five radio stations in New Orleans from Heritage Media Corp. and Phase II Broadcasting Inc. But to get that approval, Sinclair had to agree to spin off three stations in that market. Justice Department officials said Sinclair's acquisitions from Dallas-based Heritage and New Orleans-based Phase II would have given Sinclair control of nine stations in New Orleans. Nine is one more than permitted in one market by the Telecommunications Act. According to the DOJ, the deal would have let Sinclair accumulate about 55 percent of radio advertising revenue in New Orleans. The DOJ generally has not approved deals allowing one radio group to garner more than 40 percent of radio ad revenue in one market.

Joel Klein, assistant attorney general in the DOJ's antitrust division, said Sinclair knew the deal raised competitive concerns. "Sinclair offered to fix the competitive problem, and made a serious proposal right off the bat — that's the kind of cooperation we welcome."

Sinclair will own or operate 50 radio stations after all announced deals close.

## Feds Green Light CBS-ARS

**WASHINGTON** CBS expected to complete its purchase of the radio operations of American Radio Systems

shortly after receiving FCC approval in May. The Justice Department already signed off on the deal in March. In a settlement agreement with the DOJ, CBS agreed to sell a total of seven in three markets: Baltimore, Boston and St. Louis. CBS will acquire 97 radio station licenses or permits from ARS (24 AMs and 73 FM). CBS controls, directly or through its subsidiaries, 15 TV stations, three satellite TV stations and 75 radio stations (31 AMs and 44 FM.)

## Neuman Joins Chancellor Team

**IRVING, Texas** Eric Neuman is now senior vice president of strategic development for Chancellor Media Corp, a new position in which he will focus on media investments. Neuman was a senior vice president for Chancellor's largest shareholder, Hicks, Muse, Tate & Furst Inc. Neuman joins new president and CEO Jeffrey Marcus, senior vice president and COO James de Castro and senior vice president and CFO Matthew Devine.

Interim President and CEO Thomas Hicks will continue to serve as chairman. Hicks said Chancellor is one of the most significant investments in the Hicks Muse portfolio, and "our primary platform to build a leading domestic and international media company engaged in overlapping radio, television and outdoor advertising businesses."

# WHAT COMES AFTER DIGITAL?

In the beginning, there were stone axes. Then came fire, the wheel, and the steam engine. Then came analog audio and then digital audio. What comes next?

Certainly the stone wheel must have looked to the caveman to be the greatest discovery that ever could be. And to the simple farmer of the 1800's, the steam engine was the most modern contrivance that his mind could imagine. But neither was a terminal technology. Both have been replaced as time marches on.

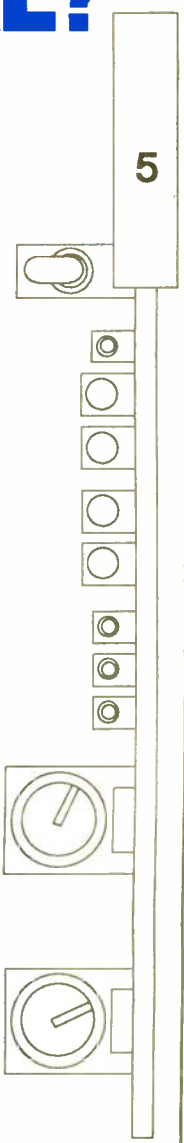
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# ARMA Takes Its First Steps

**ATLANTIC CITY, N.J.** A small but determined group of radio equipment manufacturers met here this month and displayed their wares, in what its organizers hope will be the first in a series of affordable regional expositions.

Attendance at the American Radio Manufacturers Association 1998 Spring Equipment & Technology Expo was modest, and even the sponsors admitted they wished more people could have come to see the two dozen booths and two days of seminars. But as one participant told me, the mere fact that this show came together at all was "miraculous," given the short time since it was conceived and the presumed troubles in getting any group of competing suppliers to agree on anything. The event did draw engineers and managers, not only from surrounding southern New Jersey, but from Philadelphia, New York and Connecticut. The keynote speaker, whom I introduced, was Glynn Walden of USA Digital Radio.

ARMA, in fact, accomplished quite a

bit here, electing a board of directors and a steering committee. That group will work to generate ARMA membership and explore the possibility of creating partnerships with other regional show sponsors, in an effort to coordinate those events better and in the hopes of putting on another event toward the end of this year.

The organizers now face a lot of questions. Can they attract more people next time? If not, no amount of good intentions will keep these shows going. I'm betting they will draw more, given more time to promote themselves. Will their colleagues in the supply business be willing to pay a membership fee to join ARMA? Will the organizations that sponsor other regional shows — SBE chapters, state broadcast associations and so forth — cooperate with ARMA, or will they find the concept of an organized supplier group troubling?

RW asked the steering committee these questions, and you will read its answers in our next issue.

\*\*\*

A last note on this topic: In a May 27 letter to the editor, ARMA co-founder Dan Braverman, president of Radio Systems (and my former employer), took me to task for "condemning" ARMA in an earlier column. In Dan's view, I implied that ARMA's show would be bad for business.

Dan didn't quite capture what I wrote. I do feel that our industry already has a good range of choices in regional and national equipment shows, and I said so. But I also said ARMA deserves a chance to show what it can do. I wrote that the NAB has let its show costs escalate. And, I argued, an organized association of manufacturers is well worth exploring.

Radio equipment suppliers, with our readers, are the lifeblood of RW. You can be sure this newspaper supports them.

\*\*\*

As we report on page 19, Wheatstone

just moved into a huge, high-tech facility in North Carolina. During my recent visit to the plant, Gary Snow, president of Wheatstone, took time with me to chat about his upbeat assessment of the broadcast industry.

The market is healthy, Snow said. Clients at the recent NAB show came with budgets to spend. Wheatstone also has diversified into several markets, most notably television, where Snow said users have a renewed interest in sound quality and multichannel audio.

Any fears among radio suppliers that consolidation would kill their business have not come to pass, Snow told me, noting that the pool of potential equipment buyers remains large.

"Maybe 3,000 radio stations have coalesced since deregulation. How many remain, maybe 8,000? Those stations will not be squeezed out," he said.

"I visited a 'consolidated' facility recently, and do you know what I saw? Four sales facilities, four on-air rooms and so forth. Consolidation doesn't mean less gear."

Sometimes equipment suppliers tend to put a good face on things when you ask them, "How's business?" But Snow seems to be putting his money where his mouth is, with a visible financial commitment to growth.

\*\*\*

A letter from Burt Fisher in our May 27 issue was critical of ham radio operators. We will print your replies in an upcoming issue, but most readers disagreed with Fisher.

One went further, criticizing RW for even printing the letter. "Why it was even published is a mystery," the reader wrote.

See, now, you're going to get me started.

Part of our responsibility as an industry newspaper is to present a forum of ideas. Some of these ideas may not be pleasant to read; indeed many do not reflect our editorial position. But if they contribute to the discussion of important topics, they have

## From the Editor



**Paul J. McLane**

a place here. In fact, we as journalists should work constantly to avoid the human inclination to write only about what we know, and to print only those opinions with which we agree.

I personally do not agree with Fisher's letter. But these facts should not prevent RW from printing a thought-provoking letter on the topic, and the response to his letter supports that. Some of the respondents, in fact, have stated that, while they disagree with Fisher, they acknowledge that hams have some work to do in getting out the "good word" on what they contribute.

By the way, many publications take a different tack, printing only opinions that support their editorial position or the feelings of a majority of their readers. These publications are cheerleaders, not journalists.

I would rather err on the side of airing too much debate, than too little. For that reason we occasionally print guest commentaries, pro and con, about topics like EAS implementation, NAB policies, the FCC, EEO, audio processing and other matters of import to radio readers ... even about the editorial decisions of our own newspaper.

I doubt any reader of RW would want us, in covering these topics, to print only letters that fit some predetermined standard of "good" for the industry. Who decides that? Better the reader, than the editor.

Replies on this topic or about Fisher's letter are welcomed at [radioworld@imaspub.com](mailto:radioworld@imaspub.com)



## A.R.M.A

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## ◆ READERS FORUM ◆

Letters received are the property of RW, and may be edited for space considerations.

**Rush, radio and reporting**

Dear RW,

FAIR (Fairness and Accuracy in Reporting) is right. To put Rush Limbaugh into the NAB Hall of Fame (RW, March 18) is much like giving Saddam Hussein the Humanitarian of the Year award. By his own admission, he is no newscaster. His only claim to being a broadcaster is the fact that he's actually on the airwaves. You do not have to be a rocket scientist to get on the air and be vile, degrading, anti-American, and full of lies. People listen to Rush for the same reason they buy tabloids. Unfortunately, because of the integrity of professional newscasters, some people actually believe the tripe he spews forth.

Rush said it best. He doesn't have to tell the truth; he's an entertainer. People

need to know that Rush is a "bought and paid for" mouthpiece for a political party grasping at straws.

Radio is a powerful medium. "Shock" jocks are one thing. People know vulgar talk when they hear it. Use the "F" word enough and most moral people will turn you off. Rush, however, has the ability to mesmerize people and make them believe it for the truth. Big deal! So could Hitler. I think this decision by the NAB will come back to haunt them ... and make others doubt the validity of the "prestigious" Hall of Fame.

Rob Jones  
Operations Manager  
WBMC(AM)/WTRZ-FM  
McMinnville, Tenn.

**Well-founded fears**

Dear RW,

I'd like to address the opponents of micro broadcasting. It is true that your fears of possible interference to crucial audio services and other FM stations are well-founded. The problem could be solved by using inexpensive FM exciters, now available in powers from 10 W and up. The exciters would be used as the main transmitter. The antenna manufacturers could work with the transmitter manufacturers and be sold as packages. This would open up a whole new business and make it affordable to those who want to get into broadcasting.

I propose a maximum of 10 W at 100 feet or 20 W at 50 feet or less.

Bruce A. Burger  
Producer, Account Executive  
WERE(AM)  
Cleveland

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**Tower tuning tips**

Dear RW,

I read with interest W.C. Alexander's article "More Antenna Tuning Unit Tips" (RW, May 13) in which he recommends the use of a folded unipole to feed a grounded, guy insulated, tower. A cheaper and simpler method that I have used is to install an insulated (a one-foot eye/roller fiberglass insulator — get one from a tower company) number 6 hard-drawn copper wire up the middle of the inside of the tower up about 100 feet and bond to the tower.

The bottom of the feed wire (above the insulator) is connected to the tuning unit and a shorting wire is connected to the vertical wire and the tower — start at the bottom, working up until you get

**Public Convenience or Necessity?**

Just how far is too far, when your station is chasing down a news story? We all want to scoop other news organizations, but where do you draw the line between aggressive news reporting and interference?

We read on page 1 about a news/talk station in Florida that found itself in the middle of a controversy over how the station news director handled an interview with a dangerous fugitive. A man who shot and killed three police officers had taken a woman hostage at a gas station. The news director called the gas station and was granted a live interview with the suspect. Police in Tampa were furious. They said the station tied up the phone line, thus keeping negotiators from getting through to the accused.

The station general manager is quoted as saying, "Obviously we weren't going to turn him down; it was an exclusive."

What the station called an exclusive, police labeled as a violation of law: interfering with an ongoing police investigation.

While we understand the eagerness a radio reporter would feel in chasing this opportunity, the station in this case crossed the line between reporting a story and becoming part of it. Reporters should not interfere with police activities. Maybe the news director was caught up in the excitement of the moment, and did not realize the possible consequences of his actions. But lives were at stake. The news director should have seen immediately the inappropriateness of contact with the suspect in this setting.

Remember PICON? There is a fine line between serving the public interest, and serving a station's own interest with "first on the scene" coverage. The station's actions were based in neither convenience nor necessity.

A good rapport with police is fruitful for a news room staff, with scoops and other benefits in the long run. But whether you pursue a policy of cooperation with the cops, or choose to maintain journalistic distance from them, a radio station must respect the police department commitment to protect and serve. Let's not put the interest of ratings above the interest of community.

— RW

an impedance you can handle in the tuning unit — the taller the tower the higher up you will have to go to get a reasonable impedance; i.e., on quarter-wave towers I have found a suitable impedance around 25 to 30 feet up the tower.

Ralph T. Winquist  
Consulting Engineer  
Lake Worth, Fla.

**Growth in religious radio?**

Dear RW,

Your April 1 report, "New 50 kW AM Signs on in Oregon," cites the latest annual count of 1,240 religious radio stations published by National Religious Broadcasters. But then your writer further asserts that an "explosive growth nationally in religious radio" has occurred in which "during the past decade, there has been a 30-percent increase in the number of religious stations."

In fact, the 1,240 stations listed in the NRB 1998 directory represent a 25-percent decline from the previous year's tally of 1,648. Moreover, your suggestion that religious radio has grown 30 percent over the past decade is derived by comparing the current count to 1987, the year of the Jim Bakker scandal and a low-water mark in religious radio.

As a religious broadcaster, I am concerned that portrayals of religious radio as an unstoppable juggernaut may stifle discussion of some troubling signs within the genre. Just as in the radio industry generally, large religious radio groups control a growing number of outlets, even as the ranks of independent local religious stations are disappearing from major markets.

Religious stations have traditionally survived their low ratings by a reliance

on program sales rather than advertising. Yet, consolidation is also occurring among the syndicators of religious programs who have historically provided religious stations' chief source of revenue. Whether religious radio can generate enough ratings and advertising to make up the difference had not yet been proven.

Over the past three years of industry consolidation, my own analysis suggests that the number of religious stations has fallen from about 1,300 to 1,100. Since many of these outlets are parts of duopolies or groups, the actual number of religious radio operators is about 700. At present, the 20 largest religious chains own about 400 stations. Thus, some 3 percent of owners control more than one-third of religious outlets, and an even higher percentage in the major markets.

Press reports typically present evangelical Christianity as a monolithic entity. But religious broadcasters are a diverse group, comprised of both chains and independents, who are struggling with consolidation just like everybody else. Arguments can be made about the best strategy for religious radio in today's marketplace. But that debate will not happen so long as religious radio is portrayed as something it's not.

Mark Ward, Sr.  
Director of Communications  
WFAX(AM)  
Falls Church, Va.

(Note: The writer served as editor of the 1994 and 1995 issues of the NRB Directory of Religious Media and is author of "Air of Salvation: The Story of Christian Broadcasting" (Baker Books, 1994). He is currently editor of the Washington-FAX monthly professional newsletter for religious broadcasters.)

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telephone: (703) 998-7600  
editorial fax: (703) 820-3245  
e-mail: [radioworld@imaspub.com](mailto:radioworld@imaspub.com)  
Web site: [www.rwonline.com](http://www.rwonline.com)

For a complete list of contributors, please see the back matter of this issue.

Paul J. McLane ext. 117 Editor  
Sharon Rae ext. 126 Managing Editor  
Alan Peterson ext. 135 Technical Editor  
Leslie Stimson ext. 129 News Editor/  
Washington Bureau Chief  
Chris Hamaker ext. 147 Associate Editor  
Brian Galante ext. 146 Assistant Editor  
Thomas R. McGinley Technical Advisor  
Stevan B. Dana Publisher/CEO  
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Christine Joaquim ext. 138 Managing Editor (International)  
Rogelio Ocampo ext. 121 Latin America Managing Editor  
Marguerite Clark European Editor  
Linda Sultan ext. 141 Editorial Assistant  
Stephanie Muller ext. 130 Editorial Assistant

Contributors: W.C. Alexander, James Careless, Harry Cole, Troy Conner, Ty Ford, Alan Haber, Harold Hallikainen, Lee Harris, Mel Lambert, Mark Lapidus, Dee McVicker, Lynn Meadows, John Montone, Rich Rarey, Bob Rusk, Tom Vernon.

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## FIRST PERSON

# Nerds on Tour: The Challenge

by Frank McCoy

The author is vice president of engineering for GulfStar, part of the Capstar station group. As we reported last issue, McCoy is embarking on a three-month technical tour of GulfStar stations. Here, he explains the concept behind this novel project.

It's time for a road trip, so I've been told by the folks who run GulfStar — the GMs in the markets. This is to be a technical wrap-up for what has been a terrific technical project.

For the past 18 months, the engineers in GulfStar have been busy moving or replacing just about everything. Shutting back and forth between all the markets, we came to call them the Star Team. Star stands for Studio Technical Asset Redeployment, a slick acronym for the incredibly complex task of moving and consolidating radio properties into new homes without lost airtime. I believe we are the only industry that expects the delivery of our product to be uninterrupted even while the business moves to a new location.

Almost instantly after a move is complete, every employee of the station begins clamoring to reestablish all the connections they previously had. The

salespeople need help figuring out the phone system, the promotions department needs that phone answering gizmo reconnected, everybody needs help getting network printing working, and all the rest.

This comes on top of what was already a full-time job for the engineer. Those of you who haven't been through managing a buildout, then relocating from three buildings into a fourth, moving six radio stations with the associated staffs and their stuff, simply haven't had a complete engineering career. Just ask any GulfStar engineer.

These projects are a recurring theme in GulfStar and other consolidating ownership groups. They leave a wake behind them. Often there simply are not enough time or resources to examine the air chain completely after such a move. That's the mission of Nerds on Tour. The 83 stations in 19 markets that make up GulfStar will be measured end to end and baseline performance will be evaluated. The goal is to tune the properties up for the fall Arbitron ratings period.

GulfStar has been pretty good about buying stations that cover the markets well. Coming from Chicago, I was unaccustomed to FM stations that have good car radio coverage all the way

across a state. There's something a bit amazing about the reach of a 100 kW signal on an antenna over one-third of a mile in the air.

But many of the stations were acquired from long-time owners. Through those years of ownership, the essential devices in the audio chain had remained largely unchanged. There were no digital STLs or exciters.



Frank McCoy

Through the years, everyone grew accustomed to the sound of consoles and processors with dry electrolytics. Outages were common. Spare parts were few. I learned there *is* ice in Texas — all the way to the Gulf Coast, at times. I also learned that we and the local utility companies were poorly prepared for it. Perhaps it was El Niño, but it knocked us off just the same.

Necessity drove a significant repair-and-improvement program. GulfStar hungrily devoured consoles, STLs and dishes, transmitters, antennas, generators and the rest. Then we undertook the installation of 40 stations of Prophet Systems hard-disk playback equipment simultaneously. Hot on Prophet's heels

was wide-area connection across frame relay, with all the local telco problems that brought.

At the time it seemed a nearly impossible task, but since then, another 30 stations have been equipped and several installs are always in progress. Our threshold of change (pain) moved higher. The process continues to accelerate.

The rush to complete consolidations and install improvements, along with the cooperative spirit of the Star Team engineers, added up to a lot of frequent flyer miles. In an environment where contract engineers were the norm at many of the stations under the previous ownerships, test equipment was scarce. GulfStar has made inroads, but the economics of our middle-tier markets and the present appetite for computing hardware make it unlikely that much truly high-end equipment will be deployed widely anytime soon.

That leaves the shared-resource approach, but with test equipment like network analyzers, spectrum analyzers and their cousins, the fast-Fourier transform devices, air travel is particularly risky. I still have that image of the gorilla playing with the Samsonite in the cage at the zoo. I'm sure there are gorillas behind the wall at the baggage carousel.

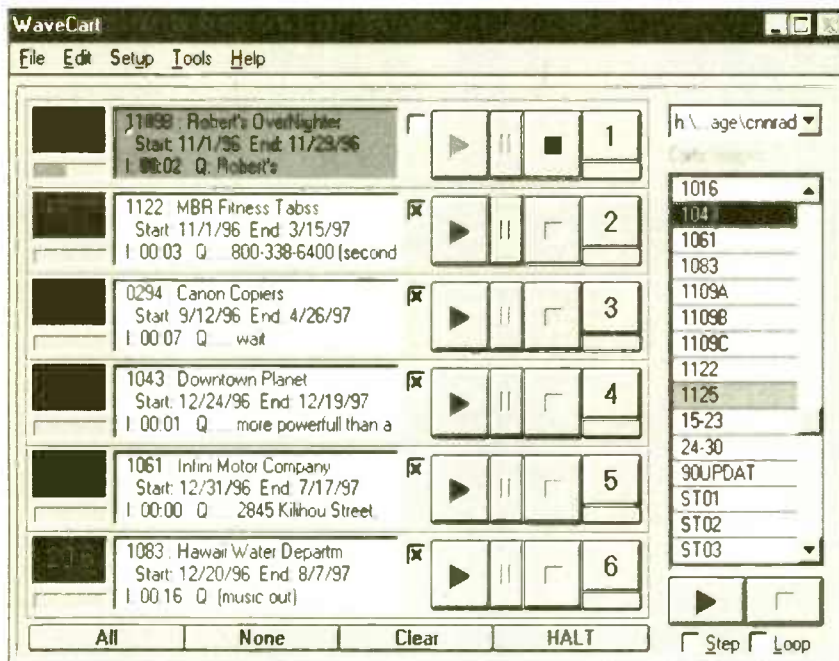
There's also the challenge of using a measuring device with which you are unfamiliar. These days, most sophisticated instruments support automated testing routines, but there's no substitute for a box you know. Shipping equipment around doesn't fit with that need, either.

So to get truly meaningful results from a measurement program with sophisticated equipment, and ensure the gear will be alive at the next stop, it has to be a road trip. Enter Nerds on Tour.

In many ways we're fortunate to have a small community of vendors and manufacturers servicing the broadcast industry. Through the years this has created a partnership environment. As a few long-gone providers learned, you must tread

See MCCOY, page 7 ▶

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► McCOY, continued from page 6  
softly and satisfy very nearly every customer if you are to survive. The computer industry, for example, could learn much from the customer service objectives and strategies used by broadcast equipment suppliers.

**Participants**

Several of these key players have committed to Nerds on Tour. Of course, there is much exposure to be had through such a project, but that, interestingly, is not the reason given for participating. Every one of the participants saw this as an opportunity to demonstrate a new level of commitment to our industry and its goals.

Not satisfied to simply answer the phone around the clock (how many providers outside of broadcast do that anymore?) and make the occasional house call, Harris Broadcast agreed to underwrite this experiment in station service. Harris also steered me to other key players. These are the legends of our industry. Names like Bob Orban, Dan Braverman at Radio Systems, Arno Meyer of Belar, Gary Geppert at Gepco, Tom Silliman at Electronics Research Inc. are all contributors to our art in ways that are difficult to repay. Because this kind of thing has not been undertaken before — 80 or so stations in about 90 days — there is a large element of uncertainty. We hope to learn and accomplish much.

I'll keep you posted. *Nerds rule!*

## PR&E to Buy Graham-Patten

by Leslie Stimson

**CARLSBAD, Calif.** By now, officials at Pacific Research & Engineering hoped to close on the purchase of Graham-Patten Systems. PR&E announced it signed a letter of intent to purchase Graham-Patten on May 26. Terms were not disclosed.

Both companies have been developing digital technology for different markets. The merger allows them to combine their resources.

Susan Dingethal, vice president, sales & marketing for Pacific Research said, "We (will) have the ability to develop a joint platform for both the audio for video as well as audio for radio stations."

Graham-Patten, founded in 1980, manufactures digital audio mixers for video editing. Pacific Research manufactures studio design/integration services. Products include on-air and production mixing consoles and digital audio workstations.

PR&E has been looking for acquisitions since it went public in 1996 and after the launch of its SoundFire audio engine, Integrity digital console and Airwave analog console. SoundFire is an IEEE-1394-based audio engine that delivers multiple streams of audio.

Jack Williams, chief executive officer of PR&E, said the acquisition positions PR&E for the television industry's conversion to digital.

For radio, Dingethal said, "We'll be working on the same technology and leverage it in two marketplaces (radio

See PR&E, page 12 ►

# SBE Founder Hallinan Remembered

by Randy Stine

**BINGHAMTON, N.Y.** As one of the founders of the Society of Broadcast Engineers, Charlie Hallinan will be remembered by friends in the broadcast industry as a man who loved radio.

Hallinan died April 22 after a long battle with diabetes. He was 79.

Born in New York City, the young Hallinan rubbed shoulders with New York Yankees greats including Babe Ruth in the 1920s. Hallinan liked to reminisce about Ruth and other Yankees who often stayed at a hotel

owned by Hallinan's parents.

But while baseball was fun, according to the SBE officials and friends to whom RW spoke for this article, Hallinan's true love was radio.

He was graduated from the RCA Institute in New York City in 1938. Soon after he was hired by WOR(AM) to engineer remote big-band broadcasts.

A move to Binghamton followed in the mid-1940s. Ray Ross, general manager at WINR(AM) in Binghamton, said of Hallinan, "He loved to build things and put the pieces together to make it work."

Ross worked with Hallinan for more than five years.

With a Raytheon RA-1000 transmitter in his possession, Hallinan went to work building WKOP(AM). Ross said, "He built WKOP from scratch beginning in the late 1940s. I recall he put up the tower by himself using a jeep and a winch. Charlie's level of ingenuity was incredible."

**The SBE Is born**

It was around the kitchen table in Hallinan's Binghamton farmhouse that the Society of Broadcast

See HALLINAN, page 12 ►

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# Suren Pai on Lucent's IBOC Plan

► IBOC, continued from page 1

and Lucent. So what we have done is to facilitate, to provide a channel for those technologies to be applied, and for new products to be created around the IBOC DAB phase. We have created an internal venture, called Lucent Digital Radio.

**RW:** It is 100 percent owned by Lucent?

**Pai:** Yes, at this time. But as with any company, that investment profile could change. You could have all kinds of investors. It is a privately held company.

**RW:** Is it your goal to build and sell hardware for terrestrial DAB, or do you want to sell the technology?

**Pai:** Our goal at a minimum is to ensure that we have developed an IBOC DAB system for AM and FM systems, and to ensure that we meet the needs of U.S. broadcasters through the development of such a system. Our objective is to see that once the system is developed and accepted by the regulatory processes, that it gets implemented in the form of transmission equipment and receivers that get employed in the market. So going beyond the development of the system, it is our main objective to make sure this gets deployed commercially, once we have met the technical and regulatory criteria that we want to set for the future of digital radio systems in Europe.

**RW:** Are you going to build and sell hardware as well as provide the system?

**Pai:** Clearly, we need to be selling technology and the question is how does that technology get embodied in software/hardware. Those kinds of decisions are clearly proprietary and we don't want to comment at this time. (*Pressed later on this question, Pai said, "At the very minimum, it is our goal to sell the technology, and as time goes by we will evaluate our business plan and look at what might make sense whether we get into the hardware business."*)

**RW:** Are you planning to provide a hybrid system, as USADR plans, that would allow stations to broadcast both analog and digital signals during a transition phase?

**Pai:** That is absolutely our concept. Any practical rollout will have to find some way of bridging existing analog systems and an all-digital system. You have to provide a migration path. It is

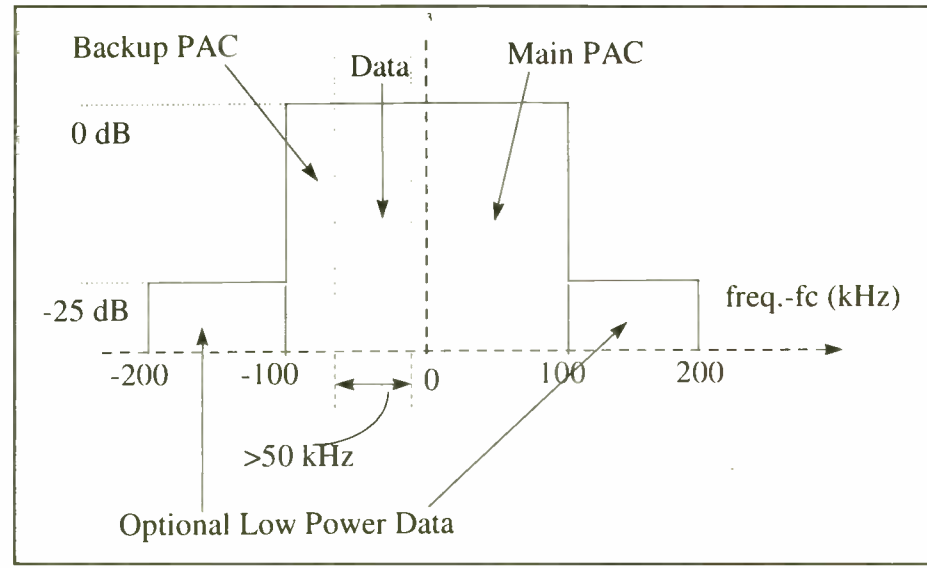
clearly our intention to provide a commercially viable migration path. We have called it a hybrid system in the past, and that is exactly what we will do as an initial step.

**RW:** So, some sort of hybrid bridge system. Not necessarily the same one as USADR or ...

**Pai:** No, it is not the same.

## Development pact

**RW:** Would you describe the development agreement with USADR, how long the agreement was for?



**Pai:** I believe we started sometime, May 1997. The agreement was a joint development agreement for an IBOC system. It was to jointly explore the challenges and the potential solutions to developing a real commercially viable system. ... That is what the agreement was all about, and to continue the relationship in that form as long as it made sense.

**RW:** When did the agreement end?

**Pai:** It officially ended Feb. 28, 1998.

**RW:** What did you both get out of it?

**Pai:** I can tell you what we learned. We learned a lot about what the challenges are in developing a system. We have learned a lot about understanding some of the key broadcaster needs and that in order to make this commercially viable, (it) requires a significant commitment and resources, and resources across a wide range of technical expertise. It is such a complex system that you really need to commit a significant level of resources — technical resources and technical experts in a wide related field to DAB.

**RW:** As far as how much money and people you need?

**Pai:** Absolutely. And not just how many people, but it is also getting the right kind of skills and talent. We are dealing with a very complex technological challenge.

**RW:** Do you get to use any of the technology that was developed in that agreement or do you have to walk away from it ... not use it in your system?

**Pai:** We have made it our mission to walk away from that technology. Clearly everything that they (USADR) are developing is based on proprietary resources and technology. And we have no intentions of using any technology

that is not owned privately.

**RW:** USADR plans to conduct FM characterization tests. DRE plans to conduct station tests this summer. Are you conducting any tests now?

**Pai:** The FM characterization tests were part of the joint development efforts. It was a Lucent-USADR joint effort. With the conclusion of that agreement, we have ended those tests.

**RW:** Do you get to use the information that you have learned from those tests in your system?

**Pai:** We can use any information that is not proprietary.

**RW:** From those tests, or any other tests that you jointly did?

**Pai:** If it is not proprietary, any one can use it. As soon as it comes proprietary, then you have to get the appropriate license and approval.

**RW:** When does it become proprietary?

**Pai:** When you are able to stake some kind of legal claim on it, either through patents or trademarks or other kinds of mechanisms ... But I want to clarify, any intellectual property that is developed using the joint development agreement, was only meant to be used for purposes of the joint development. And so, as far as we are concerned, Lucent will not be using any intellectual property that we do not own going forward.

**RW:** Is that like starting from scratch now?

**Pai:** Not exactly. Much of the technology that the Americans are doing has been a part of Lucent, so it is not really starting from scratch.

**RW:** Was Lucent interested in continuing in the agreement? Why go off on your own?

**Pai:** We believe that as a leading-edge communications technology company, we have a lot to offer here in terms of bringing the latest advances across a wide range of technologies that were mentioned. Like an IBOC system on the AM and FM (bands). We also feel that it is extremely important and necessary to serve the needs of the broadest cross-section of broadcasters in the U.S. in order to implement an IBOC system that will satisfy the needs of the radio broadcast industry.

**RW:** Addressing the needs of the U.S.

**Pai:** We do not believe in subcontracting

**RW:** Is Lucent going to do all of the work or subcontract some of the work out?

**Pai:** We do not believe in subcontracting

**RW:** See IBOC, page 10

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**RW:** See IBOC, page 10

broadcaster is our primary target. We are thinking broader and taking it one step further. We will be looking at international markets as a followup. So given all of these things, we felt that it was not only in our interest, but also in the interests of U.S. broadcasters, that we start up a company that is run by Lucent management, because we bring all of these capabilities to the table.

**RW:** So you intend to pursue DAB for other countries?

**Pai:** Yes, (but) our primary target is the U.S. market and our focus will remain the U.S. market in coming years. We have to succeed in the U.S. market first.

**RW:** If, down the road, you do pursue DAB in other countries, will it be non-IBOC? Perhaps satellite-delivered?

**Pai:** No, our focus would be IBOC.

**RW:** Was one of the decisions to come out of that agreement, to go with the PAC algorithm?

**Pai:** Lucent Digital Radio is clearly using the PAC algorithm because it is the best and most advanced audio codec available today. We have clearly decided and always supported PAC as one of the core components of our system, and we will continue to use it. (*The Lucent-developed PAC compression algorithm is patented. Bell Labs has been involved with digital audio broadcast for most of the 1990s and the work that was done in patenting PAC was strongly linked to the DAB work that Bell Labs was doing in the early '90s, according to Lucent.*)

**RW:** So both Lucent Digital Radio and USADR are going to use the PAC algorithm?

**Pai:** I can't say. That is something you will have to check with them. They have clearly supported PAC in the past. (*USADR is now looking at both PAC and AAC compression algorithm technologies as reported in RW, June 10.*)

**RW:** Is it not a big deal that you both use it? Do you care?

**Pai:** PAC is a Lucent proprietary algorithm. It always has been and will continue to be. If USADR wants to use it, they would have to obtain the necessary licenses, which we are not opposed to. We have licensed PAC for all kinds of radio applications.

**RW:** Such as?

**Pai:** For example, PAC is sold as a component in software packages. It is not something that we have licensed for any DAB application, but that's something to be discussed. We don't have any set plan for that, other than making it a critical and core component of our IBOC system through Lucent Digital Radio.

## New venture

**RW:** Focusing on the new venture, Lucent said in its announcement that it is making a "huge" commitment to IBOC DAB. How many dollars are we talking about?

**Pai:** That is proprietary information. It is going to be significant to the extent that all the constituencies involved in the DAB market have not ever witnessed before, coming to Lucent.

**RW:** Is Lucent going to do all of the work or subcontract some of the work out?

**Pai:** We do not believe in subcontracting

See IBOC, page 10

Pai has been working on DAB for Lucent since 1996. Until his May 11 promotion, he was Lucent's director of business development. Pai received an M.B.A. from Dartmouth College. He also holds an M.S. from the University of Massachusetts, and a Bachelor of Technology from the Indian Institute of Technology, New Delhi.

Prior to joining Lucent, Pai worked as a management consultant with Booz-Allen & Hamilton, serving clients in the communications and electronics industries. Before Booz-Allen, he worked with Digital Equipment Corporation leading the development and implementation of advanced automation technologies.





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# IBOC Promises by Lucent's Pai

► IBOC, continued from page 8 for the simple reason that we have all these capabilities in-house. This is a very complex system. It is very hard to subcontract pieces of the system and expect them to all work together. That is a next-to-impossible approach.

**RW:** What is your timetable for roll-out?

**Pai:** We will discuss that in the coming months as we start to demonstrate products, but it is consistent with what we have seen happening with respect to expectations of the different constituencies and what the NAB is expecting in terms of new IBOC DAB systems.

**RW:** When would stations be able to buy transmitters?

**Pai:** I would say in the 2000 year time frame.

**RW:** And receivers?

**Pai:** Around the same time.

**RW:** Can you describe the IBOC playing field right now? Who might be playing now and who will be a player?

**Pai:** You have only two (other) proponents that have publicly declared their intentions: USADR and Digital Radio Express. We feel that all their efforts will raise the awareness of broadcasters and the awareness of how technical and

complex the issues. At this time I know of no others.

## Standard setting

**RW:** Do you intend to work with the National Radio Systems Committee?

**Pai:** We absolutely intend to support their process. ... We will absolutely do that because our ultimate goal is to bring something out that is commercially viable, and we have significant expertise and expedience in doing things like this because of our background in wireless (telephone) technologies and deploying nationwide wireless networks.

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**RW:** So you are prepared to work with them to develop some sort of tests that you would conduct?

**Pai:** Yes, and there would be several other tests that we would probably do also in addition as needed, that meet the necessary requirements in order to ensure that we have a very advanced system.

**RW:** Some people are worried that no one standard will develop, that we might run into what we ran into with AM stereo, with no agreed-upon single industry standard. Do you think this will or won't happen with DAB?

**Pai:** It takes a lot to bring out a standard, and we will just have to see how the situation and process evolves. It is very hard to predict what is going to happen.

**RW:** Is some government action necessary to make DAB happen in the U.S.? From either the FCC or Congress?

**Pai:** Government action will clearly enable deployment of new technology. It will be necessary to the extent that we need to change any rules related to transmission of AM or FM signals. Anything that we need to change to allow for DAB transfer, clearly to that extent the government needs to be involved. Beyond that, any kind of requirement imposed by the regulatory authorities can only go to enhance the adoption rate of the technology in the market place.

**RW:** What kind of a demonstration do you plan in Seattle at the NAB show?

**Pai:** We will reveal our demonstration plans as the technology gets developed and we will invite folks to look at our development along the way. At this time I don't want to be very specific about exactly what we are going to show.



HE **DARED** TO GO THERE.





# Hallinan Was 2nd SBE President

► HALLINAN, continued from page 7  
Engineers was born in 1963. Hallinan and the other SBE founders were disenchanted with their membership in the Institute of Electrical and Electronic Engineers.

Today's SBE Executive Director John Poray said, "I think they felt IEEE was moving away from the radio broadcast area and that it was too diluted. Charlie, along with John Battison and the others, set out to form a professional group whose mission it was to organize and train radio broadcast engineers specifically. They did that with SBE."

Hallinan was the SBE's first vice president and its second president, serv-

ing two terms from 1966-1968. He went on to become the longtime chairman of SBE Chapter 1 in Binghamton.

Hallinan's commitment to SBE and its goals never changed over the years. Chuck Kelly, director of international sales for Broadcast Electronics in Quincy, Ill., said, "His intentions were always clear. He was doing what he thought best for engineers as a whole. No one ever doubted his dedication to the profession and his love of radio. He had a profound vision of what radio could become."

Hallinan had his quirks, like anyone. For example, he refused to fly. "He would climb a tower, but wouldn't fly in a plane," said

Kelly. Hallinan would often take the train out west for SBE meetings. "He would ride for two days, address the luncheon, then hop the train back to New York state. I think that shows the kind of dedication Charlie had to the SBE," Kelly said.

### The old school

Although Hallinan was of the "old school," he was willing to learn new things. Ross said, "I remember him climbing the tower at WKOP(AM) and testing the radiating elements of the antenna by holding a florescent light bulb in his hand. If the bulb started to glow, he knew the antenna was radiating."



Charlie Hallinan in 1995

In the late 1950s, Hallinan knew FM radio was the next big wave. "Charlie told the owner of WKOP that he needed an FM station," Ross said. Hallinan picked up a cheap FM transmitter and then called the FCC to find out if a certain frequency was open.

"The FCC guy asked him, 'Why that frequency?', and Charlie said, 'Because I've got that crystal.'"

Hallinan was granted a license for 99.1 MHz and started the FM station in his own kitchen when WKOP's owner changed his mind and backed out of the deal. "That is how WAAL(FM) in Binghamton was started. It's now worth millions," said Ross.

Margaret Bryant, who worked with Hallinan in Binghamton and now is director of engineering and technical operations for ABC Radio Networks, said, "Charlie always told everyone he wanted to live to be 100. He believed in longevity, in both life and his work. He didn't make it, but it was a terrific 79 years."

Hallinan is survived by three cousins and close friend and health aide Clara McCleary.

Contributions may be made to the Ennes Educational Scholarship Fund, 8445 Keystone Crossing, Suite 140, Indianapolis, IN 46240.

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**Bill O'Brian - KRKT, Albany, Oregon**  
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**Michelle Mercer, PD - KPWR FM, Los Angeles**

*Tom Koza, Chief Engineer, top rated afternoon personalities "The Baka Boys" surround Program Director Michelle Mercer*

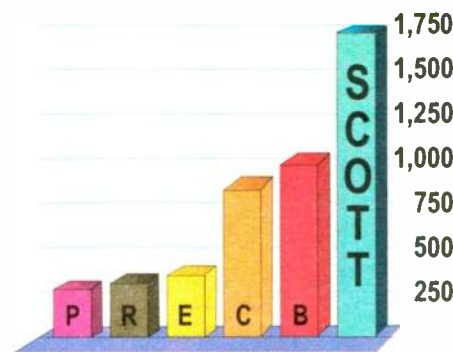
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## PR&E, Graham Mix Resources

► PR&E, continued from page 7  
and TV) at a price that radio can afford. The cost of development is spread over audio for the video market."

Both sides have been talking about some type of alliance for about a year. Graham has about 30 full-time employees compared to 130 at PR&E. Graham employees will remain in Grass Valley, rather than transfer to PR&E's base in Carlsbad — near San Diego.

Despite the acquisition, the companies plan to maintain separate identities. Dingethal said, "We'll be sharing ideas and resources, but both companies are well-branded."

Officials said no major management changes were anticipated. Mike Patten remains Graham president, but now reports to Williams.

Participants said Graham Patten also will continue supply digital motherboards to Fidelipac, a competitor of PR&E.



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# RDA to Air 100+ Hours a Week

► VOA, continued from page 1

half-hour of English-, French-, Kinyarwanda- and Kirundi-language programming will be added each day. One hour of Amharic and Swahili will be added. These additions are expected to be integrated by September, the end of fiscal year 1998. VOA currently airs more than 90 hours of programming a week in Africa. That number will exceed 100 hours within the next three years. Eight language services will broadcast to 15 countries.

Central Africa is one area of the continent that will receive more service from RDA. VOA Africa Division officials believe the area is under-served by VOA programming and that many Central African countries restrict their press. Lucas said, "We'll be very targeted. Specifically, Democratic Republic of Congo (Zaire), Nigeria, Rwanda and Burundi are very important with this initial phase." The horn of Africa and Swahili-speaking countries also will be targeted for additional service for similar reasons.

The need for a free media in Africa is apparent to supporters of the new service. Leiberman said a 1997 survey by

imprisoned. Countless others were threatened just during the past year," she said, citing the survey. "These statistics have a very undermining effect when it comes to fair and balanced reporting of African news."

## Funding

Funding for RDA through fiscal year 1998 will come from a surplus in the International Broadcasting Bureau budget. The IBB consists of VOA, Radio and TV Martí, Radio Free Europe and Radio Liberty.

"We have reprogrammed some money, \$1.2 million for this fiscal year, that will take us through September," said Leiberman. "The funding shift was done by sending a special request to Congress." Congress had yet to approve the request by RW deadline.

Nevertheless, plans for the new service have gone forward. RDA officials project a budget of \$3 million in the second year and \$6 million for the third fiscal year. VOA's total budget for fiscal year 1998 is \$96 million. That does not include transmission and engineering costs, which are included in the \$387 million IBB budget for the fiscal year.

**African governments, 'aware of radio's power, often deny or delay applications for proposed independent radio stations.'**

— HR 415

Freedom House, a group that tracks press atrocities, showed that only six countries in Africa meet its standards for a free press.

"Over the past eight years, 53 independent journalists in Africa have been murdered and 42 journalists have been

One of the RDA's staunchest supporters is the chairman of the House Subcommittee on Africa, Ed Royce, R-Calif. Royce is the main sponsor of a bill that supports the idea of VOA promoting independent radio broadcasting in Africa (HR 415).

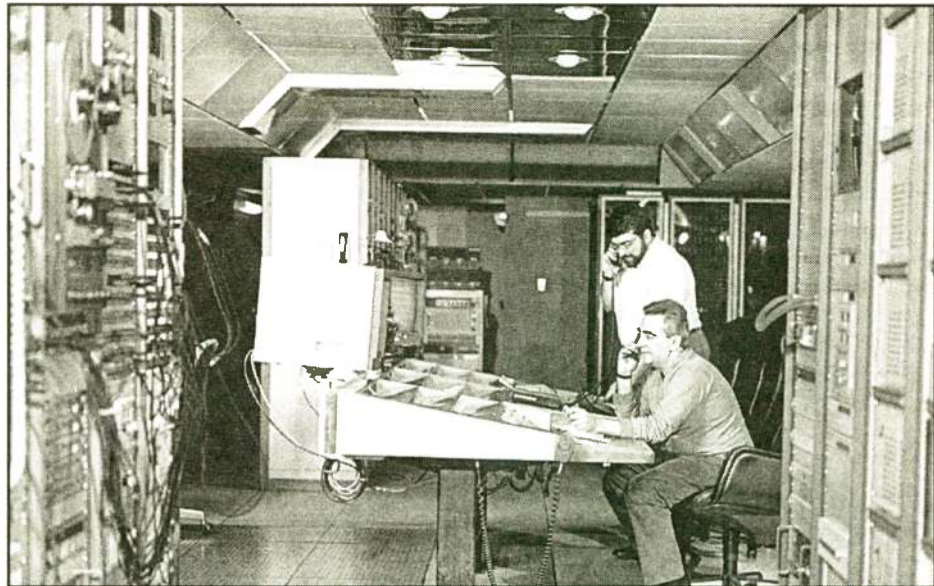
According to the legislation, radio, rather than TV or newspapers, is the primary medium in Africa, and most of the stations are government-owned and operated. African governments, "being aware of radio's power, often deny or delay applications for proposed independent radio stations."

Over the past five years, private radio has made significant in-roads throughout Africa, particularly in sub-Saharan nations like Ghana, Kenya and Uganda. However, some critics in the region feel

Africa. "We use a wide variety of transmitters for the short- and medium-wave signals," Shurtz said. VOA uses a wide range of transmitters to reach Africa, including units from General Electric, Gates (part of Harris), Continental Electronics Corp., Collins, Marconi and Thomcast.

"Our current system gives us thorough enough coverage to satisfy our needs," Shurtz said. There are no plans to update the system.

RDA programming also will be available to local African radio stations, just as other Africa Division programming has been. "Right now we have about 25 affiliates in major cities throughout



A Typical VOA Control Room

governments tend to move slowly in licensing new operators.

HR 415 passed its subcommittee and was expected to make it to the House for a vote before the July 4 congressional recess.

## From here to there

Radio Democracy for Africa programming originates in the United States at VOA headquarters in Washington, D.C. The VOA has 19 core on-air studios and another 25 language area production studios, where employees of 46 different language services work to produce programming. Engineers can patch directly between the production and core studios as needed.

The broadcasting center also contains a main talk studio, where major interviews are conducted, and a highly automated major music studio. Robert Shurtz, operations manager for technical support for VOA broadcast operations, said, "The VOA's 24-hour music service is called VOA Express. The music service is run on an RCS computer automation system. It's a tapeless, automated voice-track studio," he said.

"It's interfaced with an Auditronics 800 series console." VOA Music Express has the only computerized studio in the facility.

VOA programming is delivered to Africa via satellite and rebroadcast over a series of short- and medium-wave networks. Two 650 kW AM transmitters, one in Botswana and the other in São Tome, help cover Southern and Central Africa. "We have shortwave stations set up all over Africa to give us the appropriate coverage, plus networks in the Philippines and Sri Lanka to hit the east-part of Africa," Lucas said.

The RDA will use this existing system of receivers and transmitters to reach

Africa that carry VOA programming," Lucas said.

Most of these affiliates are FM. Some stations carry several hours a day, while others carry only a few hours per week. Affiliates are not required to air a minimum amount of VOA programming; most sign seven-year agreements.

"We expect to sign more affiliates with the new RDA service. On the whole, radio stations appreciate the programming because it lends them credibility by airing VOA programming and extends their broadcast days," Lucas said.

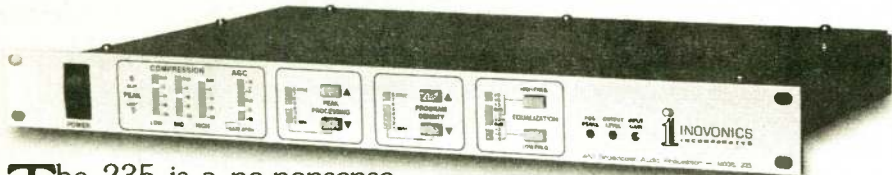
Radio stations in Africa, equipped with decoders, receive the signal by satellite. The VOA provides African stations that carry its programming with satellite downlink equipment.

## We are not alone

The United States is not the only country broadcasting into Africa. Russia, with Radio Moscow, still maintains a presence on the continent, although considerably less than it did during the Soviet era. Competitors of RDA include the BBC World Service, Deutsche Welle of Germany, Radio France Internationale and Radio Vaticana. The Vatican offers more than 400 hours of programming each week to Africa. National broadcasters from countries such as Egypt, Iran and Saudi Arabia also broadcast to Africa for political purposes.

The Voice of America broadcasts in 52 languages around the world to almost 90 million people. "We broadcast literally in every corner of the world, except the United States," said Leiberman. The VOA is prohibited from broadcasting in the United States. Worldwide, nearly 1,100 VOA employees work to promote democracy through broadcasting.

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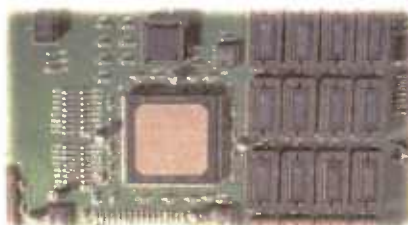
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PACIFIC RESEARCH & ENGINEERING

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World Radio History



# Station Says Call Was Proper

► WFLA, continued from page 1  
 Department Deputy Chief Ken Taylor told RW. "There was no advancing of the criminal investigation by virtue of what that radio station did. There was absolutely no purpose for it; it was not a public service."

WFLA General Manager David Reinhart said, "We called to see if we could find out what was happening inside (the gas station). (Carr) picked up the phone. After our program director verified that it was him and spoke with the hostage to make sure that (she) was okay, (Carr) said that he wanted to go on the air and tell his story. Obviously we weren't going to turn him down; it was an exclusive."

Taylor said the broadcast prevented the police department from being able to make phone contact with Carr. "We were very desperately trying to keep that line open," said Taylor. "We tried to call him and got a busy signal."

Reinhart claimed the broadcast was appropriate because it revealed "extremely valuable" information. "(Carr) made a full confession to killing the two detectives," said Reinhart.

But Taylor said the police already had a confession from Carr. In addition, Taylor stated that a radio station should never be involved in securing a confession from a crime suspect. "That's the role of police," he said.

## Negotiating techniques

Taylor, who organized and for more than 10 years was commander of the Tampa Police Department Hostage Team, was particularly critical of the station for having a person without proper hostage training interview Carr. "There are things that you don't say, just as much as there are things that you try to say," Taylor said.

News director Richards "did not have a plan on how to proceed with negotiations," and that put additional lives in danger, said Taylor. "It was pure luck that something worse didn't happen."

Richards said this was the first such

incident in which he has been involved in his 31 years in broadcasting. "I had 10 seconds, maybe" to prepare for the interview, he said. During the conversation with Carr, Richards repeatedly asked him to release the hostage. "Who's in the Shell station with you?" Richards asked

**There was no advancing of the criminal investigation by virtue of what that radio station did.**

automatic assault rifle and two handguns, subsequently released the hostage unharmed. The nearly four-hour standoff ended when the police stormed the gas station and found Carr dead from a self-inflicted gunshot wound to the head.

The incident had begun on the morn-

— Deputy Chief Ken Taylor

at one point.

"Um, the lady that works here," Carr said. "No harm will come to her; she's been very nice, very cooperative. If anything, I'll shoot myself. But my wife is supposed to be on the way. They're going to let me talk to her; hopefully she can talk me into making the right decision. Basically, I want to tell her that I'm sorry, and that it was an accident ..."

Richards then asked if Carr would release the hostage. "Not at this time," he said. "Not until I hear from my wife ..."

Richards continued questioning Carr, which further infuriated Deputy Chief Taylor. The woman Carr identified as his wife was actually a girlfriend, and he made it clear that he wanted to speak with her, Taylor said. "(Carr) tried to terminate the conversation," said Taylor.

Taylor ultimately telephoned WFLA and requested that the conversation be terminated. "We immediately complied and cleared the line so they could get a call through," said Reinhart.

Carr, who was armed with a semiauto-

ing of May 19, when Carr was detained by detectives for questioning in the shooting death of his girlfriend's four-year old son. Carr claimed that the shooting occurred accidentally, when he took the gun away from the child, who had picked it up.

Carr escaped from the detectives, then shot and killed them. He fled the scene and was pursued by a Florida Highway Patrol officer, whom Carr also shot and killed.

Carr had an extensive police record dating back to 1986, including convictions for

battery on a law enforcement officer, burglary with assault, and cocaine possession.

To avoid a "public relations nightmare," no charges of interfering with a police investigation will be filed against the highly-rated WFLA, said Taylor. "It might have been an issue if Carr had not killed himself and there would have been a trial," Taylor said. "What he told us on tape was not the same self-serving things he said on the radio."

## Past relationship

Taylor stressed that the police department has enjoyed an excellent relationship with the news-talk station in the past. "WFLA is a supporter of law enforcement. That's what makes this worse," he said. "I've been on their talk shows. This hurts me personally and professionally because I know these people. I am shocked and disappointed that this happened."

Despite what happened, Taylor said he would continue to cooperate with WFLA in the future. "I have some very good friends at that radio station — people who I would call in a minute and give a scoop to," he said. "They made a bad call in this case and are trying to put the best face on it."

Reinhart said that he would welcome the opportunity to sit down with police representatives and develop guidelines for covering similar situations in the future. Taylor said he would willingly participate in such a discussion; however, he concluded, the policy for broadcasting an interview with a suspect during a breaking news story should be simple: "don't do it."

## DAB Group Sets Roadmap

**WASHINGTON** Members of a radio standards-setting group have agreed on targets they would like to meet in helping the industry set a single standard for DAB.

The objectives of the digital audio broadcasting subcommittee of the National Radio Systems Committee are to study in-band, on-channel DAB systems and determine if the systems provide broadcasters and users with the following features:

- a digital signal with significantly greater quality and durability than available in current analog AM and FM systems in the United States;
- a digital service area that is at least equivalent to the host station's analog service area, while simultaneously providing suitable protection in co-channel and adjacent channel situations.

The group also aims to provide broadcasters and receiver manufacturers with information so they can make an informed decision on whether or not

it is appropriate to implement DAB in the United States.

To meet its objectives, the subcommittee will work on the following goals:


- to develop a technical record in order to evaluate IBOC systems;
- to compare IBOC systems to analog systems over different types of terrain and under adverse propagation conditions;
- to assess the impact of an IBOC signal on existing analog signals with which they must coexist;
- to develop a testing process and measurement criteria that will produce acceptable results and yet not impede rapid technology development;
- to work with IBOC proponents in development of their lab and field test plans;
- to help independent testing agencies, or watch proponent-conducted tests, to ensure the testing is thorough, impartial and fair.

— Leslie Stimson

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World Radio History



# Wheatstone: New Plant, Big Hopes

Console Manufacturer Predicts Business Boom Driven by Digital Conversion in Radio, TV

by Paul J. McLane

**NEW BERN, N.C.** After 23 years in New England, broadcast console supplier Wheatstone Corp. has moved south. In February, the company completed a new 51,000-square-foot manufacturing facility in the North Carolina town of New Bern, and moved there from Syracuse, N.Y.

President Gary Snow stated, "In just four years, we outgrew the Syracuse facility. As the broadcast industry continues to grow, we needed to expand to make room for new manufacturing and equipment, especially the kinds of cutting-edge technology used to manufacture digital components."

The company said all 80 employees were offered the opportunity to move, and 38 did so.

New Bern is located about 90 miles from the Raleigh Research Triangle. The town is on the Neuse River, which feeds Pamlico Sound along the eastern coast of North Carolina. The Wheatstone facility is located in an industrial park a few miles inland.

A center of fishing, farming and forestry in the 19th century, New Bern now is busy with tourism, historical activity and economic development. Pepsi-Cola was created there in 1898.

**In Snow's view, successful suppliers will be those with the capacity to meet demand.**

"We wanted to have a factory in a highly desirable community," Snow said, one that offers "a better quality of life and lower cost of living, so current employees can enjoy it and we can attract good new people."

## Room to grow

In designing the facility, Wheatstone is counting on a boom in business. "We're posturing for the long-term future," Snow said. "We've tooled up with extensive capacity."

The new plant has more than twice the square footage of the Syracuse facility, and a number of the new offices stand vacant at present. Snow would not reveal how many consoles the company ships in a typical week, but he said the factory could produce 3,000 per year.

"The entire broadcast industry is going to be retooling. It's driven by the digital revolution," Snow said. That process has already begun in the television industry, he said, and the same will happen in radio.

In Snow's view, successful suppliers will be those with the capacity to meet demand. "It's not going to be who has the products, it's who has the capacity."

With an eye on that expected growth, Wheatstone made a significant capital

investment in high technology at the New Bern plant. It has its own turret punch equipment, a sophisticated paint room with powder coat process, a printing department for equipment labeling, and expensive laser technology to cut sheet metal with precision.

Snow said Wheatstone invested almost \$2 million in automated surface-mount capability alone.

"Some products have circuit boards with up to six layers," he said, and Wheatstone typically mounts 25,000 components onto circuit boards every day. For example, the surface-mount sys-



The doors are open but the lawn is yet to come at Wheatstone's new factory.

tem allows technicians to load all of the parts in an R-5 audio console in 18 minutes.

"A high-end console can have more than 100,000 components," he said. "Some components, especially in digital, are *only* available in surface mount." He said the size and speed of the new machinery allows Wheatstone engineers to design a circuit board and have a prototype available for test within two hours.

Snow said the need for a larger, more sophisticated facility also is driven by what he called "the quality issue." The average consumer, he said, is more aware of quality today, and that demand is passed up the line by broadcasters to their suppliers.

The new plant sprawls out over a sandy lot at the end of an industrial park. The company is unlikely to move again anytime soon. The building can hold up to 200 employees, Snow estimated, and the 200-acre property provides room for expansion. The site is near a marina and open water, where Snow, a boat lover, spends much of his personal time.

## Harris

Snow said the New Bern area will help the company attract and keep qualified employees. To help make the transition and develop new workers, Wheatstone set up a technical training program in conjunction with a local college, in advance of its move.

Wheatstone builds audio consoles for radio and TV, as well as wiring packages, studio furniture and studio accessories including distribution amplifiers. It rolled out a digital console, the D-500, in 1995. A new console called the A-5000 reflects Wheatstone's attention to the digital market: it is an analog console that fits in a D-500 digital frame, allowing the customer to upgrade more easily to digital later.

Wheatstone also manufactures the

Audioarts line of consoles.

Among its noteworthy recent business decisions, Wheatstone has begun supplying consoles to Harris Corp. as the latter pursues "total solutions" for major-market radio customers. The alliance brings together two big names in the radio supply business. Industry observers are watching closely as Snow, known as a strong-willed independent business owner, enters into a working relationship with a large, prominent equipment dealer that has its own strong and varied business interests.

Snow said he sees "really great potential" in the relationship.

"Harris acquired Northeast Broadcast Labs, one of our major distributors," Snow said. "We had a long-standing rela-



Gary Snow

Harris Vice President of Radio and Studio Lines Jim Woods said Harris had already been talking to Wheatstone about such a relationship, and that the NBL deal helped move things along.

"Rarely can a single manufacturer offer a range of solutions to address every segment of the radio console market. Audioarts and Wheatstone come very close," Woods said. "They are focused on supplying the best audio consoles to the broadcast industry. Harris is focused on supplying the best solutions — hardware and services — to our broadcast customer base. I think the synergy between these two strategies is obvious."

Wheatstone certainly remains focused on sales. A nautical-style bell hangs in the hallway outside the offices of the sales team in the new facility. When the company receives an order of a certain size, the Wheatstone salesperson is allowed to ring the bell.

With a major investment in a new facility and a new high-profile relationship with a prominent national dealer under its belt, Wheatstone is hoping the bell will be ringing frequently in months to come.

## Wheatstone: A Thumbnail History

- 1975: Wheatstone is founded in New Haven, Conn., by Gary Snow, president and sole stockholder. Its first product is a portable audio mixer. Parametric EQs and electronic crossovers are added the following year.
- 1977-78: Company introduces its first audio mixing console and exhibits at 58th AES in New York City; shows large multichannel sound reinforcement console at AES and establishes a distribution network.
- 1981: Incorporated as Wheatstone Corp.; annual sales reach \$500,000. Acquires 5,000 s.f. building in Bethany, Conn.
- 1983-84: Company shows its first broadcast console, the A-500 radio on-air board, at AES; exhibits at its first NAB convention.
- 1986: Relocates to Syracuse, N.Y. Annual sales \$1.37 million, 22 employees. SP-6 stereo production console introduced.
- 1989: Studio furniture line introduced.
- 1991-92: Company introduces SP-4 combo production/air console, TV-600 console and A-6000 "flagship" radio console.
- 1994: Moves to larger facility in Syracuse. \$4.3 million annual sales, 58 employees.
- 1995: D-500 digital radio console introduced, winner of **Radio World Cool Stuff Award**.
- 1996-97: SP-8 stereo production console and TV-1000 television console.
- 1998: Relocation to 51,000 s.f. facility in New Bern, N.C. Projected sales of \$12 million; 85 employees. TV-80 live TV console.

Source: Wheatstone Corp.



## A New Brand of Christian Radio

*A New Radio Network Plans to Broadcast Its Message When It Signs on in September*

**Gordon Govier**

After the Reformation, Protestant missions to Palestine found it difficult to make headway there. The Catholic and Orthodox churches had all of the best locations already locked up.

Today it is airtime, not land, that some Catholics want. But that's not easy to find, either: conservative evangelical Protestants have dominated religious broadcasting in the United States for the last half-century.

"They are mainly coming from Mother Angelica's Eternal Word Television Network, which has a satellite feed for radio in Spanish and English."

Fessio is editor of Ignatius Press in San Francisco. Last November he came to the conclusion that Catholic stations could not be established in large markets merely through donations. Those properties were too valuable.

### A voice

"Why not set up a for-profit company and get investors to put up money to purchase stations and have a voice?" he asked.

Counts vary, but Fessio says there are perhaps 1,800 religious stations in the United States. "Only 10 or 15 at the most are Catholic," he said. He thinks there should be more.

"This is one of those things, you know, you ask the guy, 'Why'd you climb the mountain?' and he says 'Because it was there.' People ask me, 'Why'd I get this idea of Catholic radio?' It's because it wasn't there."

The effort took a giant step forward on April 20, when Children's Broadcasting Corp. announced it had sold the assets of 10 of its owned-and-operated stations to Catholic Radio Networks.

CBC's innovative Radio AAHS had a network of 32 stations for its kid-oriented mix of music, news and games when

Disney started its own network last year.

In September, Children's Broadcasting sued Disney and ABC in U.S. District Court in Minneapolis, claiming misappropriation.

CBC had had a strategic relationship with ABC to market RADIO AAHS since 1995, including scheduling and billing of network commercial

time. But after Disney acquired ABC, CBC alleges, ABC helped Disney gain an unfair competitive advantage.

The dispute has yet to be tried. "We're still waiting for a trial date," said CBC Media Relations Coordinator Stephanie Wynne.

Last January CBC announced the cessation of RADIO AAHS programming and the sale of its stations to Global Broadcasting Company for \$72.5 million. However, "their funding wasn't available," Wynne said and the sale was not completed.

See CATHOLIC, page 25 ▶



"In the last several months there have been a number of independent efforts to establish Catholic radio stations across the country," said Father Joseph Fessio.

## Challenges of Radio News

*With Increased Competition, Are Radio News Operations Doing an Effective Job?*

**Paul Ladd**

The proliferation of cable television news networks and Internet news sources, some of which are extensions of cable TV operations, has raised the stakes for radio news departments as the dawn of the 21st century approaches. Now more than ever, getting the news out fast and first is important, because another technologically infused outlet is poised to beat a radio provider to the punch.

Many stations — about two-thirds of all

Papper, who also oversees annual surveys for the Radio-Television News Directors Association (RTNDA), said this number appears to be on a slight upswing.

In today's get-it-to-me-yesterday world, radio stations face many of the same challenges, from staffing to budget and time constraints, whether they are in major markets or small towns — whether they operate with full- or part-time staffs. One thing is common to all operations, however: making sure that everything is covered.

### The sanctity of immediacy

Ask Chris Camp, news director at WSB(AM) in Atlanta. The station has been on the scene covering local floods and tornadoes to bombing investigations, getting help every so often from the WSB-TV news operation. (Although most of the radio arm's coverage is exclusive, TV staffers are called into service on occasion).

WKAK, WJAD, WECG and WALG are AM stations in Albany, Ga., owned by Brooke Communications. They have a relationship with the local Fox TV affiliate WFXL, which functions as their primary source for local news. The stations do have a local newsperson on staff, but General Manager Dean Burke characterizes that job function as a "clip-and-read" gig.

Whether local or otherwise, story See NEWS, page 22 ▶



John Butler

radio outlets in the United States, according to Dr. Bob Papper, associate professor of telecommunications at Ball State University — take the local approach.

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# To Cover a Show About Nothing

'Seinfeld' Last-Episode Party Provides Our Writer With Eight Hours of Intense News Work

**Peter King**

How do you cover a TV show about nothing, in a town that has no real connection to it — and do it for a serious radio news operation? An e-mail from CBS News Executive Producer Charlie Kaye had asked me to look for "anything special" happening for the final episode of "Seinfeld." I found a party in downtown Orlando, hooked up with the promoter, ordered a phone drop, and started gathering MOS (you know, "What's your favorite episode, favorite character, favorite line?") a few days ahead, to air that Thursday.

**May 14**

2 p.m.: It's set-up time. I've got a table and several bar stools in the rear of One Eyed Jack's, one of three bars at the Wall Street Cantina. The power drop is there, both phone lines work, and I hook up my laptop, my Comrex HotLine, Shure mixer, Sennheiser headset-mic ... also an extra hand mic and closed headsets in

case it gets too noisy in there later on. I've got a Sennheiser shotgun mic for "field" work around the viewing areas, and my Sony MZ-R3 MiniDisc machine for recording and editing my actualities.

4:30 p.m.: The first update isn't scheduled for two hours, but I'm back, getting ready to grab some tape with early comers getting the best seats.

6:10 p.m.: "Seinfeld" reruns have been on the air for 10 minutes. The noise level starts to rise. I've been e-mailing the assignment desk asking whether I'm needed for hourlies or updates. I learn that the first update has been changed to 7:31. There's a request for a "Newsfeed" wrap for the 6:35 feed.

I break down tape with a woman whose favorite episode is "The Contest," but instead of using a cut where she talks about being the master of her domain, I opt for a cut of her explaining why she's watching here and not at home. The affiliates will also get the "master of my domain" cut, but as an extra instead of in the wrap.

Separating the cuts on my MiniDisc recorder takes about a minute, writing and timing it takes about five minutes, and feeding it to New York on the HotLine takes three takes and about two minutes.

**Scene-setter**

7:10 p.m.: I will be needed for the 7:31 update, with a 25-second scene-setter. I'll also be needed for the 8 p.m. hourly for

have the bite I want.

7:45 p.m.: Copy editor Tom Sabella is being generous; this time, I get about 30 seconds for a live wrap! How can I squeeze in two cuts? I get the trivia question and answer down to nine seconds by cutting out some dead space, then isolate an earlier cut (seven seconds), and move it next to the trivia cut on the disc.

7:50 p.m.: Writing away frantically, and waiting to hear a voice on the return cue from New York. Once, I lost a live shot on the HotLine because the feed was only working in one direction, and they



Seinfeld Look-alike Winner Steve NeSmith of Orlando and Peter King

about 20 seconds, both live.

7:22 p.m.: The tech in Studio One in New York tells me the ambient noise level is too high, and has me adjust my mic level. One good sign: I can hear the talk-back circuit loud and clear. My sound is ready and the script is ready. By 7:28 I have my intro from anchor Bill Vitka ... we joke a little ... laughter on both ends, and then, "30 seconds ..."

7:31 p.m.: "CBS News Update. I'm Bill Vitka." My headset is filled with the sound of "Seinfeld" music and audio clips. Then, "Peter King is at a 'Seinfeld' party in downtown Orlando." Twenty seconds later, I'm already writing for the 8 p.m. cast.

7:35 p.m.: New sound opportunity, with a trivia contest. Fighting through the crowd, I head to the stage with my Sony and shotgun. Not exactly like covering a political convention! Ten minutes later, I

couldn't hear me in New York, although we were showing a good connection on the indicator lights. No more leaving anything to chance. I call New York on the second phone line and ask them to verify we have a solid connection. Moments later, I hear the news sounder in my headset and a technician's voice calling me from Studio One.

**Show time**

8:00 p.m.: There's the sounder ... and we're on and off in 33 seconds. NBC's Clip Show has hit the air, which means more beer flowing, more laughter, more noise ... and a few last chances for me to get more tape before the final episode begins.

8:45 p.m.: The finale begins and the place gets very quiet, except for laughter and cheers. The challenge is now

See YADAYADAYADA, page 23 ▶

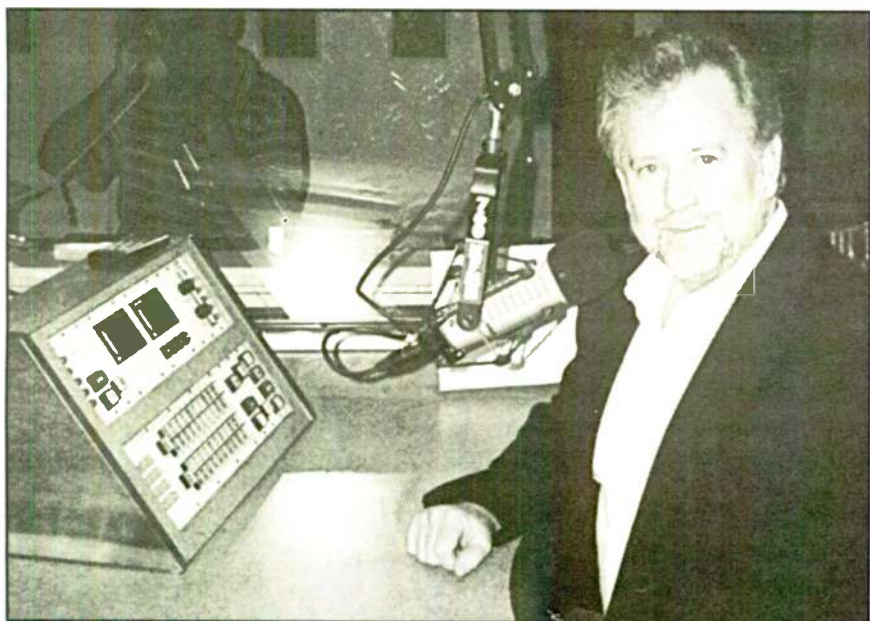
## Hooked on Trivia: Let The Games Begin!

**Dee McVicker**

Quick. For 10 share points, name one of the top-rated shows aired Saturday nights on the San Diego AM dial.

Need another clue? It gives away \$3,900 in prizes and airs over 9,900 trivia and game show brain teasers every month. And, far less trivial is fact that in the last book, it ranked within the top five shows aired in its time slot.

"It ranks up there in the top five of all stations sampled, 12 plus. And, that includes all the FMers too," said KFMB Program Director Dave Sniff, who claims that Mike Cook's "Hooked on Trivia: The Radio Game Show" usually comes in a close second to Art Bell's "Coast to Coast" show, also on Saturday nights opposite the game show. "Art generally wins, but Mike is a close second."



Mike Cook hosts 'Hooked on Trivia: The Radio Game Show' on San Diego's KFMB (AM).

The answer is "Hooked on Trivia: The Radio Game Show," now on KFMB(AM), 760 kHz, Saturday nights 7 p.m. to 3 a.m. and midnight to 2 a.m. on weekdays. It's no "Wheel of Fortune," certainly. But it truly is the only game in town, and the people who put it together hope they can succeed with the program in syndication.

Who could have guessed that this show, which started on the air in 1983 at Christian station KMJC(AM) and had a long run on several San Diego AMs before moving over to KFMB in 1995, would be such a hit with the listeners? "The truth of the matter is that game shows never went out of style.

See TRIVIA, page 26 ▶



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# Radio News: Info Fast and First?

► NEWS, continued from page 20  
immediacy and freshness are challenges for most radio news operations. Sometimes that means keeping a close eye on the effects of radio's most seemingly omnipresent competitor, television.

"Television is giving us a very good run for our money," said John Butler, news director at St. Louis news/talker KMOX(AM). "Keeping your product fresh is a challenge as you're doing news every hour, and during drive times every half-hour. So the key is to keep your product immediate, or at least (offer) the perception of immediacy."

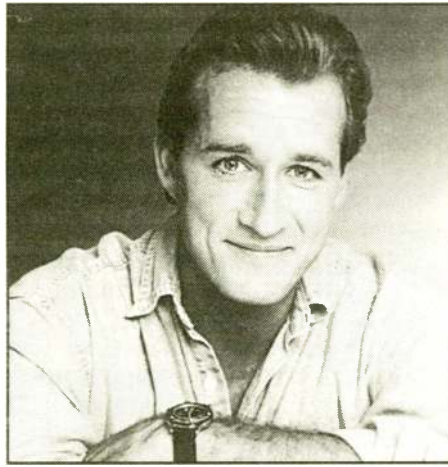
But how can that be done when time constraints, owing to reduced or over-worked staffs, are an issue? As Loy Engelhardt, president and general manager of KINO(AM) in Winslow, Ariz., said, "In a small market, there's only so much time to go around and only so many bodies." That could be said, of course, for both small and large news operations. Because radio news staffs and budgets tend to be smaller than those of TV outlets, limited resources put added pressure on radio news teams.

Not to mention those operations for which morning drive is a programming hallmark. Paul Tinkle, president and general manager of WCMT-AM-FM and WCDZ(FM), in Martin and Dresden, Tenn. respectively, said the morning programs on his stations are the only source of local broadcast news in the area (there are two local newspapers — one weekly and another twice-weekly).

Martin and Dresden are located roughly halfway between Paducah, Ky., and Jackson, Tenn., the nearest cities with television stations; each is more than 50 miles away from Martin. TV crews occasionally cover local stories with broader interest, said Tinkle, but radio is the primary source of local information for area residents. On WCMT and WCDZ, the all-important local angle may be presented in the form of a hospital report or obituaries.

Of course, local communities hunger for weather and traffic as much as anything. "Everybody's concerned about whether it's going to rain today," said Kelly Carls, operations manager for Clear Channel stations in Louisville, Ky., and former program director of Nashville news/talk fixture WLAC(AM). "Everyone wants to know what the temperature's going to be. Everybody wants to know if their favorite way of driving to work is going to be clear."

Weather and traffic are, for many sta-



John King

tions, part of the core information package. "At least in our area, weather is always a big deal," said Camp. "It always scores high in the research. Traffic is woven into this as well. Commute times here in Atlanta are horrible and getting worse, if that's possible. Certainly traffic is a top-of-mind thing, as far as an information source goes."

In the end, it may well be difficult to separate news, weather and traffic from the overall information package provided by radio news operations. John King, managing editor for KIRO-AM-FM and KNWX(AM) in Seattle, describes the news commitment of his news stations as "major," and acknowledges: "Weather and traffic are two of the most important things that we do. When we question our listeners

about why they tune in, weather and traffic always score highly. It's a very important part of our programming."

Just as some radio news operations are taking advantage of the services provided by TV counterparts, some are making use of outside providers offering traffic, weather, sports and other "peripheral" elements that help to complete the radio news package.

In some cases, stations now are outsourcing the "meat" of their newscasts — the news. Money is far and away the biggest reason; stations save on salaries and benefits when they subcontract with broadcast service suppliers.

Across the country, decisions about where elements of newscasts are coming from are being influenced by changes in management and other forces, thanks to consolidation. But in some eyes, mergermania may not be a bad thing.

## Trends

"Overall trends in our business are going to have an impact on radio news," said Carls. "The growing consolidation of ownership ... will allow radio news departments to serve more stations under one roof. And actually, that could benefit radio news operations. It's easier to justify the expenses of news gathering if you're servicing five stations, as opposed to if you're just doing one or two."

No hard-and-fast data exists about the effects of consolidation on radio news: RTNDA hasn't done any significant research on this. But Papper believes there is a little good news to report.

"There is some evidence that stations involved in multistation ownership are a more likely to do news than stations that are not (part of a group). At the same time, we see more and more evidence of consolidated newsrooms. But that's not a universal. There are any number of operations where they've combined stations and kept the news operations separate."

But the local aspect of news still is important to a news operation's success. "People are always interested in what's going on locally," Engelhardt said. "I don't think that's ever going to go away."

But will newscasts, whether local or national, be offered on a regular basis throughout the radio broadcast day, and will these newscasts be on the long or short side?

Tinkle, for his part, sees stations doing less local news and offering shorter newscasts. "They want to play records in a lot of larger markets," he said.

Papper's research seems to support this view, at least in part; he points to an increasing number of stations doing shorter newscasts, although some of these are offering more newscasts, especially in midday and afternoon-drive.

If anything is certain, it is that competition from Internet, cable and broadcast TV and print news sources will continue.

It may well be that certain competition will still have to deal with restrictions that radio doesn't have. Television news operations, for example, still will need to coordinate pertinent visuals with the words spoken by anchors and reporters during a story, and newspapers will likely never be able to print a new edition to accommodate every new development in a particular story (at least not in the old-fashioned way), no matter how important that story is.

How will radio news operations fare against their competition? Radio news still has its believers. King says he gets "more out of a five-minute newscast on the radio" than he does "in a half-hour on television."

KMOX's Butler: "Where else can you turn around a story so quickly and get it on the air and get the information out? Where's the first place people go to when something big happens? They need that information and radio is still in a position to supply it."

■ ■ ■

Tell us about your station's approach to radio news, and whether consolidation has affected it. Send e-mail to radioworld@imaspub.com

Paul Ladd is a news anchor for Metro Networks in Nashville.

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# 'Sein-Off' Episode Newsworthy

► **YADAYADAYADA**, continued from page 21 twofold: get reaction from the audience, but without interrupting their viewing and without revealing anything about the plot, as not to spoil the show for those who haven't seen it in the western time zones.

9:22 p.m.: After a couple of tries, I clip out the obscenities and put together a short wrap with comments from viewers.

9:26 p.m.: I get my lead-in line from Bill Vitka and producer Gerrard Koppell in New York. I adjust my copy, read it for time and have it to a perfect :20.

9:28 p.m.: Copy editor Tom Sabella comes on the talkback to tell me I'm needed at 10 p.m., and will be handing off to Lisa Karlin of "Entertainment Weekly" at Tom's Diner in New York.

9:31 p.m.: Update time again and Bill Vitka asks me how the finale is playing in Orlando. "Bill, it's getting the thumbs up here at the Wall Street Cantina," ... roll sound, and conclude.

9:40 p.m.: I grab my MD recorder and head to a less-crowded spot where viewers are now watching the parade of witnesses at the trial. I'm also praying for a commercial break so I can get my sound without interrupting anyone during the show, run back inside, break it down and get it on, live at 10.

9:47 p.m.: My prayers are answered, NBC takes a spot break! I go round-robin with a group of people watching the show.

9:50 p.m.: I'm working the edit wheel on my MD overtime to make that montage quickly. By 9:54 it's done. By 9:56, the script is written and e-mailed to New York, and I'm talking to Lisa Karlin at Tom's Diner on the talkback.

## It's over

10 p.m.: Paul James opens, throws to me, and we're on again. "Paul, the last Seinfeld has apparently lived up to all the hype and expectations, just ask the people who watched here!" Sound rolls in perfectly, and seconds later, I toss to Lisa and there she is, right on time.

I can't help but think this sounds so cool ... and that this is just the kind of coverage the radio news pioneers like Paul White and Ed Murrow had in mind more than half a century ago. OK, maybe not for this kind of event, but it does sound major-league!

10:03 p.m.: People start filing out after the end of the show, I grab some comments for the upcoming newscast, a special late night "Newsfeed," and a morning "World News Roundup" piece.

10:10 p.m.: What's next? An e-mail from Charlie White, now on duty as copy editor. "The plan is to open the hourly with you, then toss to David Dow at a 'Seinfeld' party in Los Angeles."

10:15 p.m.: The "Seinfeld" festivities are officially over; a band is playing and hockey is now on the big screens. I note that for my upcoming piece. Anyone who hears the rest of my pieces tonight and tomorrow morning will know immediately that they weren't produced in any radio studio!

10:25 p.m.: Three MOS montages of viewer comments are done. A wrap, based on the piece I aired live at 10, is written. Scripts e-mailed to "Newsfeed" producer Tricia Corrigan. Ten minutes later, all is fed down the line, and I begin writing for 11.

10:55 p.m.: The final version of my script has been e-mailed to Charlie. I trim the script a little bit more, and as always, double- and triple-check to be sure my sound is cued.

10:59:30 p.m.: I get a final check from Studio One and a "woof" from Charlie, telling me that we're 30 seconds to air.

11 p.m.: There it is, the sound I refer to as the five most important notes in the musical spectrum, otherwise known as the CBS News sounder ... and I hear myself saying, "CBS News, this is Peter King live in Orlando, where rock music and hockey have now replaced the 'Seinfeld — We'll Miss You Party' here at the Wall Street Cantina." A quick

recap of the night's events, a sound montage of viewer comments (without giving away the plot) follows, and then, "CBS News Correspondent David Dow is attending a 'Seinfeld' party in Los Angeles, where they have yet to find out how it all ends."

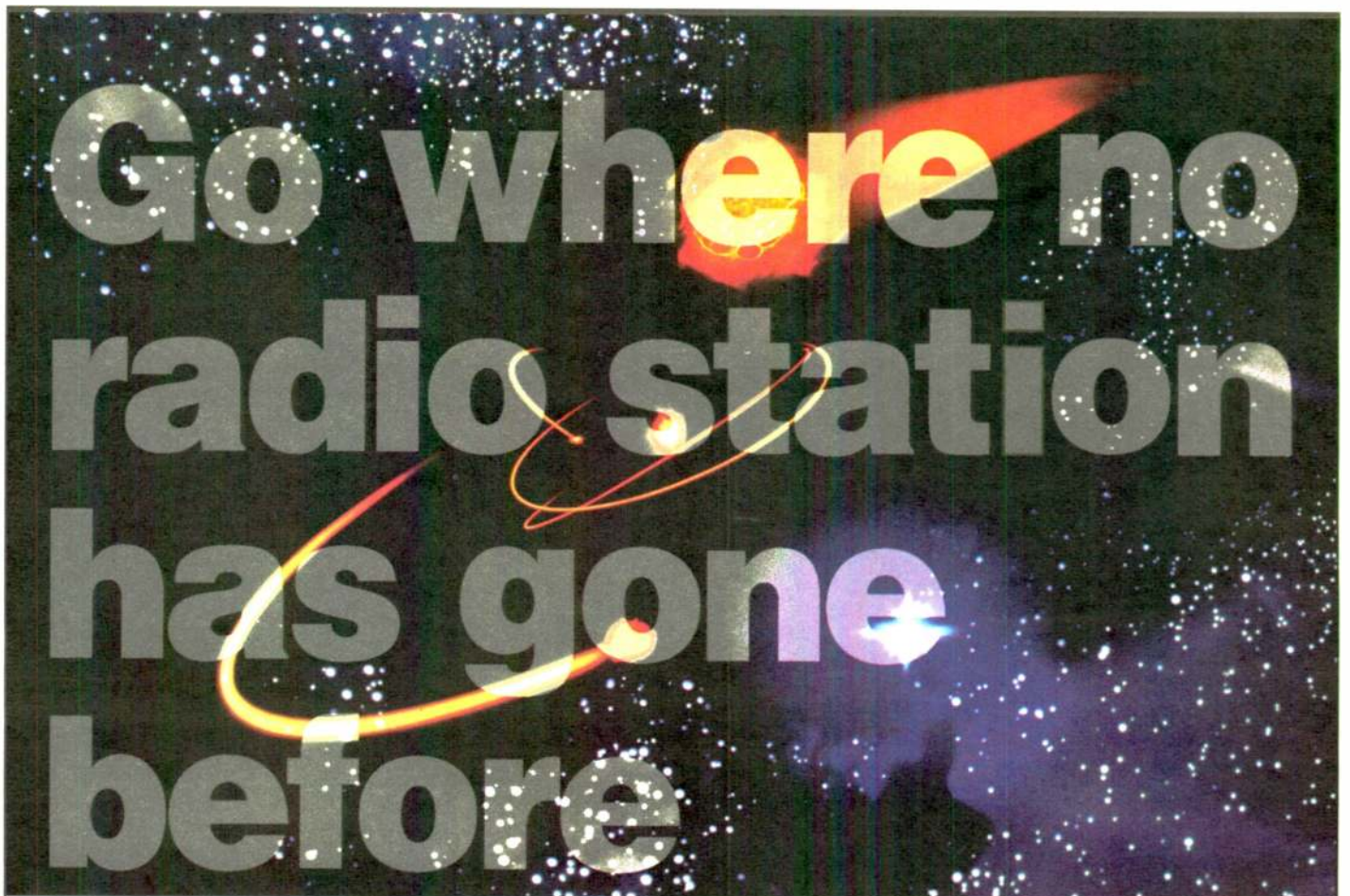
11:20 p.m.: Two or three debriefs to file and a piece for the morning "World News Roundup." The Roundup is extra-special to me, because my earliest memories of radio news include watching my dad shave while he listened to that broadcast every morning on WCBS(AM). The piece will include a self-ID opening because it will come out of a montage of "Seinfeld" clips.

I've found two good viewer bites, but am frantically looking for something good to close with. Then, suddenly, I remember recording the bar emcee leading everyone in a "Goodbye Jerry — YadaYadaYada" cheer ... but that was ages, and dozens of track marks, ago on my MD. The search begins, and 10 minutes later, I've found it, isolated it and edit-wheeled it to its proper location.

11:55 p.m.: Producer Jim Ryan comes on the talkback and says he's ready to take in my pieces. By the time I hear "yadayadayada," it's time to say, for the last time tonight, "Peter King, CBS News, Orlando."

■■■

Peter King is a reporter for CBS Radio News. Reach him via e-mail at Pkingnews@aol.com



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# Anything Goes in Promotions

*Promo Advice: Take It or Leave It, But You Should Be Prepared to Accept the Consequences*

**Doug Hyde**

No four words apply more to the art of radio promotion than "just about anything goes." In today's increasingly competitive radio world, stations are just as likely to bombard current and potential listeners with billboards and television ads as they are likely to trot out more intricate and creative "events" in the interest of rising audience share. And then there is the practice of generating nontraditional revenue.

The days of relying simply on the "be the tenth caller and win a prize pack" type

of promotion to increase audience are long gone. Today's promotion directors are devising new and creative opportunities to increase visibility and generate revenue.

They are, in fact, becoming increasingly important in any radio station's master plan — creative, living tools for devising marketing strategies in the interest of sales and ratings growth.

"The role of the promotion director has become much more vital in the past few years," said Doug Harris of CRN International, a Hamden, Conn.-based outfit that offers consulting to

radio promotion directors.

Harris said promotion directors must appease programmers concerned with the purity of their on-air sound and sales managers who are focused on making the quarterly budget.

"When sales' favorite word is 'yes' and programming's favorite word is 'no,' the promotion director has to ask 'How?' How do you maintain the integrity of the station and still get the Taco Bell buy?" he said.

Mike Ellis, promotion and marketing director for the KXLY-FM Broadcast Group in Spokane, Wash., offered a similar take on the promotion director's role. "Promotion director is one hell of a job," he said. "You must keep programming

happy, sales happy, the clients happy, the listeners happy and your boss happy. My job is to do the best thing for everyone without pissing anyone off."

## Satisfy the audience

It is important to satisfy the audience and keep a station's air product healthy, said Despina Vodantis, director of marketing, advertising and promotion for Cox Broadcasting's WZZK-AM-FM in Birmingham, Ala.

"First, I think about what will come listeners, and second, I help sales on promotions that will come listeners," she said.

According to Audra Kotcho, promotions director of CHR station KRQQ(FM) in Tucson, Ariz., planning is the most important element when determining which promotions will be beneficial to the programming and sales departments. "It comes down to troubleshooting," she said. "You have to find ways to meet the goals of the client, and be constantly aware of the needs of the radio station. Any promotion has to be entertaining and exciting for the listener."

**We create  
breakthrough  
promotions that  
irritate the  
competition.**

— Mike Ellis

Ellis handles promotion responsibilities for five radio stations in Spokane — CHR KZZU-FM, AC KXLY-FM, sports KTRW(AM), news/talk KXLY(AM), and adult standards KKPL(AM). His heavy workload inevitably creates a time crunch, something many promotion directors face in this age of consolidation.

"As a promotion director, you're very busy," Ellis said. "It's the standard in the industry these days."

Harris said, "With one station, it's already a 60-hour-a-week job. Due to consolidation, the resource of time is running thin."

## Confidence game

Consolidation, in fact, has a costly impact on the psyche of the employees in a radio station, said Harris. "The air personalities must be confident in their delivery, the GM must be confident in his plan, the PD must be confident in his vision, and the promotion director is the one who pulls it all together," he said. "You can't have confidence if you get bought out and herded into a five o'clock meeting."

The ability to use time efficiently is crucial to a promotion director's success, said Vodantis. "Time management is a major challenge. Finding the time to do everything is almost impossible. (Being a promotion director is) a full-time job that never, ever stops."

Ellis said a good promotions director is not merely a "banner hanger," but someone adept at solving problems.

"You have to be opinionated, creative (and) proactive," he said. That means working with the sales department on a creative basis. "When Coca-Cola is placing a buy," he said, for example, "they want creative ideas and we come up with ideas that move product."

Sometimes, bigger-than-life promotions  
See PROMOS, page 28 ▶

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# Catholic Network in the Works

► CATHOLIC, continued from page 20

Catholic Radio Networks then put up \$52 million in cash and a \$5 million dollar promissory note for 10 of the CBC stations: KAHZ(AM), Dallas; KCNW(AM), Kansas City; KID(AM), Phoenix; KKYD(AM), Denver; KPLS(AM), Los Angeles; WAUR(AM), Chicago; WJDM(AM), New York; WPWA(AM), Philadelphia; WWTC(AM), Minneapolis; and WZWR(AM), Milwaukee.

Two of the remaining CBC stations, KYCR(AM) in Minneapolis and KTEK(AM) in Houston, were purchased by Salem Communications Corp. for \$2.7 million cash. The final station, WCAR(AM) in Detroit, was sold to a Detroit group called 1090 Investments for an unknown amount.

"We're anticipating for everything to close in September," said Wynne. CBC is using the proceeds to diversify into "other media and advertising-related businesses."

The Catholic Radio Networks, meanwhile, still face some major financial challenges before going on the air in September.

"We're talking about \$70 million (total) for the purchase, working capital and upgrade costs," said Fessio. "We have been looking for investors that would see this as a legitimate business investment, which we think it is."

## Voice value

"Pretty much everybody (we talk to) recognizes the value of having a Catholic voice in radio," he said. "We're hoping they will see the investment makes sense."

The response from investors and bankers so far "looks very positive," said Fessio's partner, John Lynch, in San Diego. Lynch is a 30-year radio veteran who sold off his Noble Broadcasting group of 25 stations about 18 months ago.

It wasn't easy to get him back into broadcasting. "But, for one, there's an incredible need for this," he said. "And two, we can make a difference."

Lynch is in the process of hiring a vice president of programming. As soon as that position is filled, work will begin on assembling a programming schedule.

"We'll have 24 hours of talk, interspersed with commentary and features," Lynch said. "If you listen to

Dr. Laura and Rush, we'll be very close to that kind of presentation."

Catholic values will underlie the programming philosophy and won't necessarily be immediately noticeable to casual listeners. "It won't be preaching to the choir," says Lynch, although the hourly news will include Catholic and religious news.

"We want to have talk radio, and we want to talk about things which interest the widest possible audience. We think the Catholic church, with her tradition, has a lot to draw on in commenting on politics, economics, social things, family and pro-life issues," Fessio said.

"We feel there's a lot of common ground that exists between the Catholic church and pro-family organizations like Focus on the Family, for example. We definitely want to work with them in addressing some of the social, moral and family issues that are facing this country right now."

## Active talent

Fessio said he has discovered around the country a number of good local programs that don't have national distribution. "We think there's a lot of talent already active out there, it's just not been given a national market."

Fessio also plans to call on his long

friendship with Mother Angelica, whose cable TV programs have a gigantic national following. "She's agreed to give us any program we want, for free," he said. She will also help them develop new programming.

National Religious Broadcasters is the umbrella group for the mostly Protestant religious broadcasters of America. Will the Catholic Radio Network become affiliated with NRB?

"That step hasn't been contemplated yet," said Fessio. NRB Vice President Michael Glenn isn't sure if CRN would be eligible. "It's a little tricky," he said. "There are a number of hurdles to overcome."



Gordon Govier is editor of SCRIBE, a newsletter for Christian radio news directors. Reach him at scribe@xc.org

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## Radio World



# The Points Add Up for KFMB

► TRIVIA, continued from page 21

The only reason they disappeared from radio in the late '40s was because of television. Had they never disappeared from radio, they still would be highly rated today," said Mike Cook, the show's producer and host who, ironically, has been on the air almost uninterrupted for over 14 years but has never so much as been on the payroll of an AM or FM, let alone owned a station.

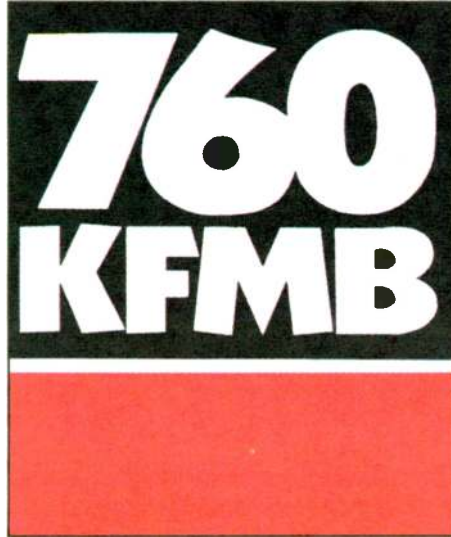
This one-time retail merchandise buyer made a go of it on radio with what was initially to be a "Name That Tune" type of show but quickly turned into a radio hybrid of television game shows with more than 60 guessing games. Early on, the popularity of "Trivial Pursuit," the board game, set the course and tone of the show.

"All of a sudden, Trivial Pursuit came out ... and the popularity in the trivia segment of our show began to expand," Cook said.

Meanwhile, radio, particularly the talk format, also began to expand into something other than traditional full-service. "You have your all-news station, you have your all-sports station, you have what you might consider a conservative-talk station and one that might be considered a hot-talk station," said Sniff, whose station takes a more holistic approach to the format.

Midwest Television's KFMB(AM) is a full-service talk station in the tradition of

WCCO(AM) in Minneapolis; it runs the full talk gamut, from baseball to its comedic morning show, complete with character voices. It now shares the dial with two major talk/news stations, each with a unique spin on the genre, plus an



all-sports station and countless others with at least some talk or news bent, not to mention KFI(AM) Los Angeles, which penetrates San Diego as well.

"People are getting talked to death," said Cook of the overly compartmentalized talk formats that pepper the dial.

That "Hooked on Trivia: The Radio Game Show" jam-packs the phone lines in a typical broadcast segment — the

average number of calls aired per hour is 25 — isn't too surprising, given the long-running popularity of television game shows.

"'Wheel of Fortune' and 'Jeopardy' were the number one and number two shows in the world for 10 years before 'Baywatch' came along. Now they're number two and three in the world," said Cook. "Our show is like watching all the game shows. It's a little bit of 'Jeopardy,' 'Wheel of Fortune,' 'Pyramid,' 'Name that Tune,' 'Beat the Clock' — it's all those shows rolled into one."

Cook likens the show to a three-ring, on-air circus. Contestants have three chances to gain points, starting with round one, a series of trivia questions that progressively get harder. Each question is worth 100 to 400 points. Once a question is missed, it's on to round two: the true/false questions. The tougher but more interesting bits of trivia, such as how far away the sun is from the earth, are presented as true or false questions.

## Guessing games

Next is any one of a number of unique guessing games, and they, too, are fast-paced for the listening audience. "Play It Again, Mike," for example, is a spin-off of "Name that Tune," whereby listeners guess half-second to six-second takes on songs. "Clues" is another fast-paced game in which a caller gets three clues to guess a common everyday item. Over the years, Cook has developed more than 60 games, and he continues to develop new games monthly.

The caller's goal is to win 1,000 points, which will get his or her name in a drawing that in turn will make him eligible for a weekly \$500 drawing redeemable in cash or prizes.

Cook's 17-year-old son and his wife assist on and off the air while he hosts and does all the research for the show, tracking down trivia on automobiles, plants, animals, history and anything of human interest. He focuses on Americana from the 1950s, '60s and '70s.

Both Cook and Sniff argue that radio talk formats need to engage the listener more, as the Internet does, and as radio did once upon a time. They claim shows that engage the mind are good for the station's cume.

"We retain (listening) longer than the normal 15 minutes. We have people who will listen to a full five hours or eight hours of a broadcast," said Cook, whose goal this year is to syndicate the show nationwide under a barter arrangement. Someday he envisions a board game that could be played by listeners alongside broadcasts. He sees this as another way to interact with and engage the listener's mind in a market flooded with shock formats.

"Some things, like Jerry Springer, are engaging because they're shocking ... (but) how many things can you shock people with before they've had enough?" asked Cook.

The answer is probably worth a few rating points to stations.

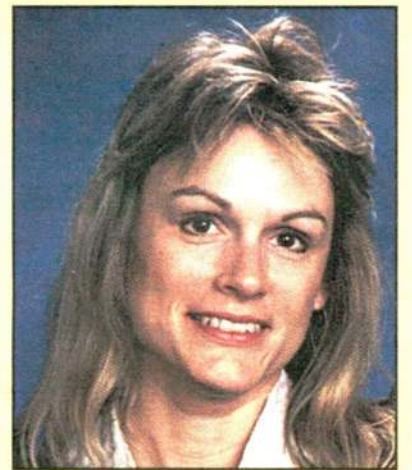


Dee McVicker is a regular contributor to *Radio World*. She can be reached at (602) 545-7363 or via e-mail at roots@primenet.com

## Meet the Writer: Dee McVicker

In 1988, Dee McVicker heard an interesting tale about a radio tower being built on top of a sewer site. Fascinated, she called the engineer, got the scoop, and put pen to paper to cover the story. Thus began her tenure with *Radio World* as a contributing writer.

Over the past 10 years, she has covered broadcasting milestones and the millstones, the poignant and the



Dee McVicker

absurd. She wrote about a solar-powered radio station high in the snowdrifted mountains, and about sending digital audio over the phone line long before there was such a thing as the Internet. She wrote about Digital Dan the voiceless DJ, curmudgeon Simon Geller who ran a radio station from his two-room apartment, and a sound-catcher who trudged the Amazon in search of a particular sound for his radio drama.

She has talked it up with Radio Hall of Famer Stan Freberg, MTV VJ Adam Curry, and renowned farm broadcaster and two-time Oscar winner Orion Samuelson. She held clandestine phone meetings with radio pirates and talked candidly with those who hunt them down.

Her introduction to the fifth estate was more than 20 years ago, when she went to work for WTCN-TV in Minneapolis as a mail clerk. In 1980, after several years with an advertising agency, she joined manufacturer Circuit Research Labs in Arizona.

McVicker is the author of more than 400 published articles and one book, "Easy Recycling Handbook: What to recycle and how to buy recycled ... without all the garbage." Her byline has appeared in M.I.T.'s "Technology Review," "Entrepreneurial Woman" and other trade magazines. She has taught classes on technical writing for Scottsdale Community College, sat on the judging panel of the 1992 International Gold Quill Awards and was a literary judge for the Arizona Authors' Association. She lives in Gilbert, Ariz., with her husband Chuck Adams and their two children, two cats, and a dog.



This is one in a series of profiles of *RW* contributors.

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MP-4	4	800W	3.3	\$1,280
MP-2-4	4	2,000W	3.3	\$1,820
MP-3-5	5	3,000W	4.1	\$2,270
MP-3-6	6	3,000W	5.2	\$2,740

#### LOW POWER CIRCULAR SERIES

Model	Bays	Power	Gain	Price
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GP-2	2	4,000W	0	\$1,350
GP-3	3	6,000W	1.5	\$1,900
GP-4	4	6,000W	3.4	\$2,600
GP-5	5	6,000W	4.3	\$3,150
GP-6	6	6,000W	5.5	\$3,700

#### MEDIUM POWER CIRCULAR SERIES

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SGP-4	4	10,000W	3.3	\$4,500
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## COLE'S LAW

# That's Enough of That Funky Stuff

Are Noncommercial Stations Crossing the Line With Sponsor Announcements?

Harry Cole

In the increasingly competitive world of commercial broadcasting, one might easily ignore noncommercial stations as a potential source of competition. After all, they are NONcommercial, aren't they?

While noncommercial licensees were once no real threat to the bottom lines of their commercial confreres, that has changed over the years. Of course, the FCC supposedly places significant limitations on noncommercial broadcast "underwriting." The Communications Act itself prohibits noncommercial stations from airing "advertisements," which are defined as any program material broadcast "in exchange for remuneration" and intended to "promote any service, facility, or product" of for-profit entities.

But wait. Noncommercial licensees are permitted to acknowledge contributions to the station on the air. Isn't that inconsistent?

No, according to the commission, because such underwriting acknowledgments "may be made for identification purposes only and should not promote the contributor's products, services or business. Specifically, such announcements may not contain comparative or qualitative descriptions, price information, calls to action, or inducements to buy, sell, rent or lease."

In other words, permissible underwriting announcements can do little, if anything, more than identify the folks who contributed funds ... at least that's the way the theory works.

## The real world

In real life, however, there is obvious pressure to stretch those limitations. Many companies that contribute to noncommercial stations understandably would like to get as much bang for their buck as possible. And sure enough, the phone banks here at the Team Cole's Law complex have received numerous calls over the past several years from commercial radio (and some TV) operators concerned about apparent commercialism on noncommercial stations.

Recently, noncommercial TV station WTTW in Chicago found out the hard way that there is a limit to what they can get away with. The station was cited in a December 1997 decision from the Mass Media Bureau. What, exactly, did the station broadcast?

First, there was an announcement for Zenith, which included text about how a particular Zenith product was "easier to control," made "colors more vivid" and "images more realistic than ever before." This clearly contained "comparative ... descriptions" of the underwriter's products. In fact, even the licensee recognized that it could not defend this particular announcement.

Second, there was the announcement for Sun America, which included the text: "Many Americans haven't saved enough to enjoy (retirement). That's why there's Sun America ... Sun America, because it's not just your retirement, it's your future." The licensee claimed that this was merely "factual" information that was not really promotional. The FCC

disagreed, finding the overall presentation to be promotional in nature.

Third, and perhaps most egregious, there was an Amoco "announcement" that depicted a customer who starts pumping Amoco premium gas into her car, at which point the car "revives, becoming animated," while doll figures mounted on the car's rear deck start "bobbing their heads in apparent smiling approval, while the customer stomps her foot to background music."

We should also note that the back-

ground music was not the Bach, Beethoven or Mozart that you might ordinarily associate with a noncommercial station; it was "Can't Get Enough of That Funky Stuff."

Incredibly, the licensee was not willing to concede that this was an advertisement. It argued that the doll figures were not really nodding approval of the product, but rather were simply responding to the background music (that would be "Can't Get Enough of That Funky Stuff"). The licensee claimed that it was the dolls' head-bobbing which in turn provoked the "amazed reaction" from the customer, and that the whole thrust of the

spot, er, we mean announcement, was "inconsistent with product approval."

On the whole, according to WTTW, the announcement conveyed only the identification and description of the underwriter's product.

The FCC wasn't buying that line for a minute. It hit the licensee for a \$5,000 fine. Looking at the overall production, the commission concluded that the announcement "appears to promote a favorable quality associated with a specific product, Amoco premium gasoline, viz., that it will help revive your automobile."

The commission added that the musical lyric "directly accompanied the product's introduction into the automobile, and its text, 'can't get enough of that funky stuff', also appeared to refer approvingly to the product."

See COLE, page 30 ▶

## Industrial Strength Digital Audio Delivery

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# Are You Ready for Inspection?

**Ronald Ramage**

*FCC Inspector Ronald Ramage offers tips about what he looks for during inspections. This is the second of three articles; the first appeared June 10.*

Let's begin our discussion with the site review. This part of an inspection involves a visit to the transmitter site to determine if the facility is in accordance with the station authorization. The visit will cover the following areas:

**1. Painting,** as required by the station license or tower registration: I check for the correct number of alternating bands



Tower registration numbers can be posted on the gate to the transmitter property.

of paint, condition of the paint (peeling, rusting, fading), and, most important, whether the tower is visible clearly from a distance of a quarter mile. The most frequent problem I find is paint that has been faded. A second big trouble area is multiple-use towers that are hung with solid black cables that obscure the paint, reducing the visibility of the structure. In most instances, the cables should be painted or run inside the tower.

**2. Lighting:** I check that the actual lighting matches the specifications shown on the station authorization or tower registration. Where a photocell is used to turn the lights on at night, I make certain it is working properly. Be prepared to describe how the lighting is monitored. I also check to ensure that your station logs document when any light on the tower was inoperable, when the FAA was notified of beacon or strobe outages, and when any corrective actions were taken. See §73.1820(a) of the FCC Rules.

**3. Coordinates:** I compare the latitude-longitude coordinates of the antenna structure(s) with the station authorization and/or tower registration and make certain that these coordinates accurately reflect the location of the tower.

**4. Fencing:** For AM stations having RF potential at the base, I make certain that either the property or the tower(s) have sufficient fencing to protect small children, pets and livestock from gaining access to the tower, where they could be harmed. I look for large gaps in and around the fence, and make certain gates are locked. The same criteria apply regardless of the surrounding population or terrain. I recommend that licensees check with their insurance agents if they are in doubt as to the appropriate amount and type of fencing. See §73.49.

**5. Antenna:** I determine if the number of AM towers or FM antenna bays and their height(s) match with the specifications on the station authorization.

**6. Registration:** Because this is a relatively new requirement, it is receiving a lot of attention by the FCC. For any communications tower requiring painting or lighting, the owner must register the structure and receive a tower number. The tower number should be posted where it is clearly visible, either near the base of the tower or somewhere near the gate to the property, or both.

The rules indicate only that it is to be posted near the base of the tower.

Unfortunately, in many cases the tower base is not visible from the entrance gate to the property. I do not climb fences. The purpose is that people can identify the owner of the tower, so use common sense and your best judgment. Post the number where it can be seen easily.

Please keep in mind that the first four items of this outside inspection are mainly safety-related. Again, use common sense. A licensee need only consider the liability that could be involved should a child get into an AM tower, or an air-

plane hit a tower, to realize how important these simple steps are.

## Monitoring and control

This part of the review will determine how a station is monitored and controlled. With the change in rules to permit unattended transmitter operation, these items have received much attention of late. The mode of transmitter operation (attended, unattended, automated) is separate from the main studio presence requirements. Do not confuse the two.

At a minimum, all stations must have the capability to turn the transmitter off at all times; see §73.1350(b)(2). If a licensee does not have the ability to turn off the transmitter under any conditions, then the licensee does not have control of the transmitter. All broadcasting must cease until the licensee can provide control during all periods of broadcast operation. For stations operating without personnel attending to the transmitter, the licensee must have either automated equipment that

will terminate operation automatically for out-of-tolerance conditions, or that allows an operator to terminate remotely within three minutes of a request to do so by an FCC official.

During an inspection I will ask the broadcaster to demonstrate this capability if there is reason to question that the licensee has control over its station.

All stations are required to maintain compliance with power, modulation, AM directional parameters, AM directional monitoring point field intensities and AM mode of operation. If a station cannot demonstrate that it is operating at or below the maximum allowable power with the metering that it has available, then it should cease operation until it can. I realize that metering and other equipment may become defective and may take hours or days to replace.

In such instances there are usually alternative methods to determine power, or the station can take monitoring point field strength readings (AM stations), to provide a separate indication that the station is not over power. I will not be concerned with a defective meter or under-power operation as long as the licensee has properly documented in its logs when the problem began, that they are trying actively to correct the problem and that the licensee can demonstrate the station is not operating with excessive power or modulation.

## Documentation

One of the primary things I look for when a station has equipment problems is the effort it is putting forth to correct the item.

Equipment outages occur. What I'm looking for is that the station log has good documentation as to what occurred and when, and that appropriate efforts are being made to correct the problem.

Only once have I ever found a station with properly logged equipment problems where this documentation was to its detriment. The station engineer had

## The mode of transmitter operation is separate from the main studio presence requirements. Do not confuse the two.

placed a note on the AM antenna current meter stating that it was defective and that it was not to be used until it was repaired. The problem was, the note was dated five years prior to my visit! The meter was still defective, and the station had no other means to determine output power. The documentation was there, but not the effort!

Stations operating without personnel continuously attending to the transmitter may want to view the Mass Media Bureau Fact Sheet on Unattended Operation, available on the Internet at [www.fcc.gov/mmb/usd/noonehome.html](http://www.fcc.gov/mmb/usd/noonehome.html)

In the next part of this series, I will take a look at AM directional systems.

■ ■ ■

*Ron Ramage is assigned to the FCC-CIB office in Kansas City, Mo. The views expressed are those of the author and do not necessarily reflect those of the FCC.*

*If you have questions pertaining to this or any other article in this series, please contact the author at (816) 353-8934 or send e-mail to [rramage@fcc.gov](mailto:rramage@fcc.gov)*

# Events and Promos = Revenue

► **PROMOS,** continued from page 24 are a station's bread and butter, able to create street buzz. "We're not just about an on-air 'secret song' contest," said Ellis. "We create huge, gigantic, breakthrough promotions that cut through the clutter and (irritate) the competition."

Unique promotions are necessary in order to cut through that clutter, said Harris. "The public is desensitized to superlatives like 'the best' or 'the biggest,' so just simply giving away a Buick Regal might not get it done," he said.

With the trend toward "breakthrough" and "bigger-than-life" promotions, with stations in virtually every city involved in outrageous remotes and contests, the question arises: Is there such a thing as taking a promotion too far? Harris said that a radio station can go too far when it deals in "death, destruction and sexually related and suggestive promotions." He said judgments about what is going too far should rest with the programming department.

## Differences

Whether promotions can go too far may come down to personal opinion, but they certainly cut across different market sizes and wear many different styles. At Clear Channel's FM stations WAVK, WFKZ and WKRY in the Florida Keys, one promotion that worked was "Kids Fest," a youth-oriented festival held in Key West, which resulted in nonspot revenue that led to the second-strongest sales month of August 1997, a typically slow month for the Key West tourist economy.

"People were coming up to us, saying that it was the first event in Key West that didn't involve partying and drinking," said Joel Day, vice president and general manager for the Clear Channel stations. Day uses promotions in large part to seek out new listeners. "Our chief objective is to increase our AQH and increase our ratings, but we need packages that are going to generate revenue," he said.

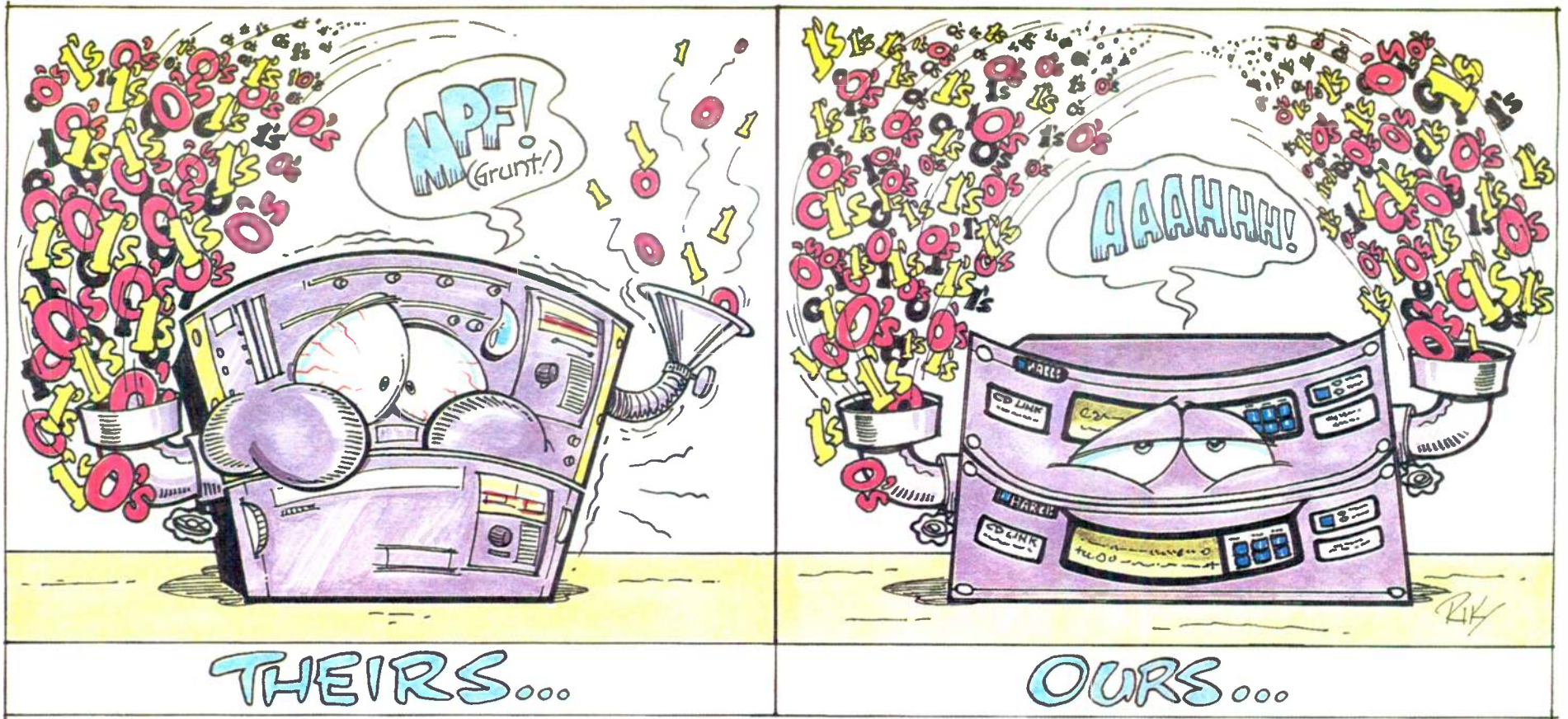
The Clear Channel executive expects to be on the lookout for more special events that will generate nonspot revenue. "It's a win-win situation for clients, because they are exposing their products and getting new people at these promotional events," he said.

"More and more promotion directors will be asked to be creative," said Ellis. These problem solvers are proactive team leaders, directing radio's ongoing promotional effort and meeting the challenges head on.

"Instead of just buying a billboard, promotion directors will have to sit down and think of innovative ways to break through the clutter," said Ellis.



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# On-Air Noncom 'Spot' No-Nos

► COLE, continued from page 27

Apparently, it's hard to slip one by the commission.

Still, it is possible that this particular enforcement activity was the exception, not the rule, and that similarly promotional "underwriting announcements" are being broadcast by other noncommercial stations. We suspect that a relatively high number of noncommercial stations broadcast some form of "advertising" and don't get caught. We have no data to support this suspicion.

## Noncommercial commercials

As mentioned above, we have received numerous calls in recent years from commercial licensees concerned about noncommercial commercials. Unfortunately, hard statistics on such practices are a tad hard to come by — FCC staff decisions in this area tend not to be published, so unless you are highly motivated to dig deep into the bowels of the FCC's more obscure files, official information is scarce.

Still, we do know of at least one instance where a noncommercial radio station was called on the carpet for broadcasting repeated announcements that included such language as "Don't forget to call Insurance Company X ... to get to know the best prices" and "Visit Jewelry Store Y and you will be persuaded that we have low prices on all our merchandise. Don't buy expensive things, come see us and save."

In this case, the station was KNON(FM) in Dallas. The year was 1991. The noncommercial station assured the commission that it had cleaned up its act and would take greater precautions in the future to avoid such promotional language. Then came the FCC's next letter, six months later. It seems that, within a week of the licensee's answer, the station had run announcements including the same kind of promotional language; for instance, "Let me tell you, still, in a town where you pay more at other places and get less quality, it is a pleasure for me to recommend Casa Jose," and "The Feedbag also has some great prices on longnecks and buckets of beer. Whatever your pleasure, The Feedbag makes you feel at home. So why settle for less, when The Feedbag offers so much more?"

The upshot of that case was a \$5,000 fine to the operator — maybe not a huge sum to a commercial operator, but a considerable penalty to a low-budget noncommercial guy. Perhaps most surprising here is that, faced with the first FCC inquiry, and even after assuring the FCC that they had cleaned up their act, this particular noncommercial licensee continued to air clearly promotional announcements.

## Broadcaster bottom line

In practical terms, at least some of the money that noncommercial stations derive from such announcements may not have much impact on the bottom lines of most broadcasters. We suspect, for instance, that many small noncommercial "community" stations may, inadvertently or otherwise, allow individual programmers to break the rules from time to time. Such cases may be attributed to the limited resources and experience available to such community licensees and the relative autonomy

sometimes given to the individual programmers on such stations. But the advertising dollars involved in such situations probably are in limited and come from smaller advertisers looking for the specialized audiences that such stations might offer.

Of greater concern to most mainstream commercial broadcasters should be situations such as the recent one, in which big-time, national advertisers (e.g., Amoco, Zenith) or prominent

commercial folks. As long as the underwriter announcements being broadcast on noncommercial stations stay within the limits imposed by the commission, everyone should be able to coexist peacefully. We do suggest that, when a noncommercial station's "underwriting announcements" appear to veer off the narrow path of description only, and head in the direction of promotion or "call to action," commercial stations in the area should not be shy about raising

## Are noncom 'announcements' such as these costing commercial stations money?

local advertisers throw their cash in the direction of noncommercial stations. Commercial licensees should be attentive to the identity of underwriters providing funding to local noncommercial stations.

This is not to say that commercial folks should declare war on noncom-

mercial folks. As long as the underwriter announcements being broadcast on noncommercial stations stay within the limits imposed by the commission, everyone should be able to coexist peacefully.

Why go to the noncommercial station first? Because the noncom may not be aware of, or appropriately sensitive to, the FCC limits. A simple conversation may solve the problem without the

time, expense and hassle of calling in the feds. It's a neighborly thing to do.

But the commission is available, should a friendly reminder fall on deaf ears. Based on the recent case, it appears that the FCC is ready to step in when warranted.

The bottom line: while noncommercial broadcasters are supposed to avoid promotional or commercial announcements, they do not always do so. Where this happens only occasionally or accidentally, it may not be a problem. But if you are a commercial licensee and you find that one or another noncommercial licensee appears to be engaging in *de facto* commercial broadcasting through the sale of supposed "underwriting announcements" which sound like spots, you may be losing business. In that case, it may be appropriate to take steps to stop any improper activities.

It is wise to check with your communications counsel before taking any action in this area.

■ ■ ■

Harry Cole is a principal in the Washington-based law firm of Bechtel & Cole, Chartered. He can be reached at (202) 833-4190 or on the Internet at coleslaw@erols.com

RW welcomes other points of view. Send e-mail to radioworld@imaspub.com or mail to the address on page 5.

## PROMO POWER

# Sales Strategy: Hitting the Number

## Fire Sales and Non-Competes May Be Undercutting Your Sales Battle Plan

Mark Lapidus

I'd like to relate two sales strategies that have resulted in tragedies. Anyone outside our business would probably find these situations amusing. We as an industry should find them sad.

A friend of mine called recently to relate a new sales tactic. At the end of every month, the group owner he works for runs a "fire sale" on commercial inventory. This means that rates for spots are dramatically cut during the last week of each month to boost sales.

It took a few months, but even as slow as many advertisers are on the uptake, they finally figured the system out. Why advertise for the first three weeks of the month, with such a deal coming up at the end of the month? And here's the best part: Because the group owns so many properties, you get this deal on half the stations in town!

I asked my pal how something like this could happen. "Easy," he answered, "it's the pressure to hit the number." He went on to say that several of the best salespeople had already quit.

## Non-compete concerns

The second story concerns non-compete contracts. While it has been common for years for top air talent to sign non-compete clauses in contracts, asking salespeople to sign them was rare until two years ago. To clarify: a non-compete clause in a contract specifies the time a salesperson must wait out before she can go to work for another radio station or radio group in a defined marketplace.

Prior to dereg, this might not have

been a big deal, if the contract kept you away from one or two direct competitors. Now, though, with two or three groups owning entire markets, the picture is different. A friend of mine had

## Why advertise for the first three weeks of the month with such a deal coming up?

lived and worked her entire life in her hometown. When the big group bought her station, she was told to sign a non-compete or else. Certainly this is coercion; nonetheless, in order not to make waves, she and the rest of the staff signed the clause that stated she couldn't work for the competing group in that market for five years after leaving her current company.

You can guess the end of this story. She's now out of radio. Things didn't work out with the incoming group, and she felt she couldn't work for the other group in town. Not wanting to move, she took a job with the local newspaper. She's happy now, but wonders where the next group of new salespeople will come from if they aren't able to move around for better lists as they improve their skills.

I am an advocate of embracing change, but that doesn't mean running off a cliff to do it. Dumb top-down

decisions and unfair working practices can only hurt the radio industry during our growing pains in consolidation.

Back now to the big question: How do managers and employees hit the number that is now far greater than any other number they've seen? We start by making the right programming and marketing decisions. Then we permit salespeople to sell without enormous interference or undue obligation.

Our moves must be planned carefully, and we must hire experienced people to execute them. Don't hire a former intern to be the promotion director for five radio stations and expect results. Don't give an inexperienced account exec challenges that your most seasoned salespeople would have trouble delivering. Do encourage your employees by accentuating the positive and helping them continue their education in a way that will benefit your station.

The other way to improve your sales position is to begin generating money through nontraditional vendor programs: by selling promotions and through incentive travel. I have seen these areas push stations above the monthly budget line, but only if they were already healthy spot sellers. Concentrate first on selling the units. When that is well in hand, tackle these other arenas, but be sure to allow time for development. Selling these add-on programs takes between six months to a year for significant results. Too often, managers will say "That doesn't work," when it is just beginning to have impact.

That's my story ... and I'm sticking to it.

■ ■ ■

Mark Lapidus is president, Lapidus Media. For marketing and programming consultation, call (703) 383-1805 or e-mail lapidus@erols.com



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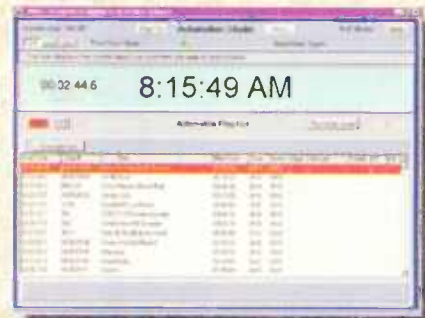
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# Troubleshoot Your DAT Machine

**Jeff Johnson**

*This is the fourth in a multipart primer on how to service your digital audio tape machines. The previous part appeared May 27. Also visit [www.rwonline.com](http://www.rwonline.com) for an archive of this series.*

Before you pack up that DAT machine and send it off for service, check out this list of common faults and tips.

Recall our discussions about the theory and operation of DAT. Remember that a machine's shop manual should document its failure modes and the recommended steps to investigate.

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Keep detailed records of your work. Each of our machines have been labeled with the last three digits of its serial number. I ask that individual cassettes be marked with this serial number and the date placed in service.

I maintain a service log for each of our machines. During servicing, I keep notes of troubleshooting and parts replaced. I make drawings of the positions of the post rollers during skew alignment. When each machine is in good shape, I record a cut or two, and play it on numerous machines around the facility to check compatibility, then note findings in the log.

The log is marked "OK for use." Copies are taped to the top cover for immediate reference. Originals are filed with each machine's log. When parts have been replaced, I place them in a small plastic bag, mark the bag with the date of replacement, and tape it inside the machine. In this way we can quickly ascertain the service history of a certain machine.

I invite e-mail correspondence to discuss questions and share our experiences.

### Machine Fails to Play Any Tape

A gross failure to load a cassette or attempt to play it is caused by a power supply problem or an obvious thing such as a broken belt, a defective drive motor or bad sensor switches. Open the machine and watch the loading attempt. Common sense and a reasonable familiarity with the machine are useful here.

## I invite e-mail correspondence to discuss questions and share our experiences.

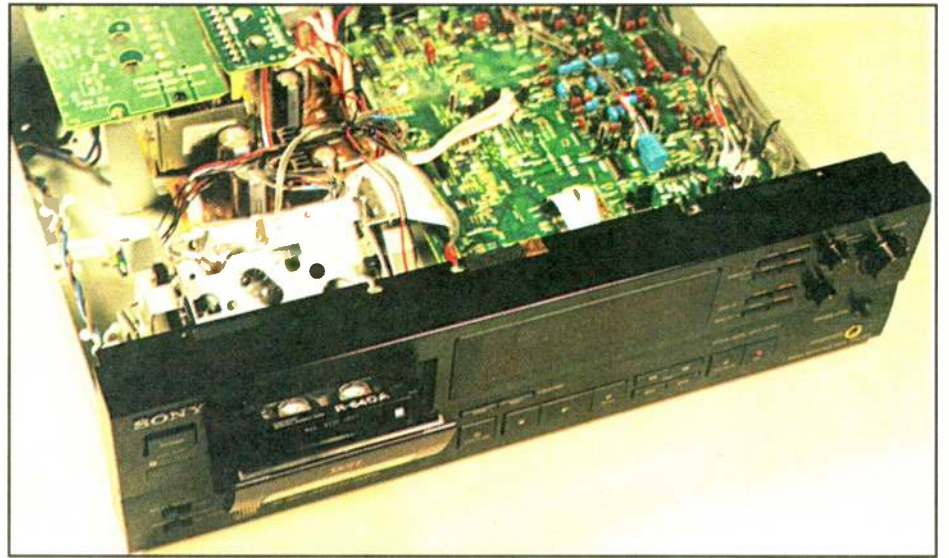
Does the cassette load and seem to play mechanically (many models have a window)? If there is no output, look at the timer. Is it counting? If so, perhaps the error rates are too high for the machine to demute but not too high to decode the time signals. Popular Panasonic models do not mute, but they have an error rate display.

On a Panasonic SV, press and hold down, in sequence, "counter/mode," "counter/reset" and "pause." Then release them, one by one, in reverse order. Press "counter/mode" once again to display the error rate. If it is in the thousands, the machine is not picking up the signal properly. Try a known good tape and observe the results. If they are the same, open the case, clean the mechanism, observe the tape path and watch the error rate. An improvement indicates that the heads were dirty.

If the counter was not working either, you will no doubt observe the tape not wrapped properly or following the path accurately. A probable cause for this, in addition to dirty heads, is a buildup of tape coating on the capstan and pinch roller causing the tape to "walk" up or down and out of the proper groove. See our earlier discussion on cleaning. It is unlikely that the heads are worn beyond usefulness.

Reverse cue from play is the toughest function for the mechanism to perform. It must quickly flip the hub drive to the supply hub to rewind the tape, reverse the capstan, maintain tape tension, and reacquire tracking sync very quickly.

The most likely cause of the problem is



Servicing your DAT machine is less trouble than you think.

coating buildup on the capstan, causing the tape to "walk" up the capstan and forcing the tape out of its path. An early warning that a machine requires cleaning is tracking trouble after reverse cue. Reverse cue is more critical because the capstan now is pushing the tape toward the head drum. If it tends to cause the tape to move up or down, the machine will mistrack. In normal play or cue, the tape passes the heads before it encounters the capstan. An imme-

mediate possible cure is to place the machine in Pause momentarily, to allow the tape to snap back to its proper path.

mediate possible cure is to place the machine in Pause momentarily, to allow the tape to snap back to its proper path.

### You Hear a Rough 'Whine' or 'Squall'

If the raw RF data signal from the heads contains too many errors, the machine will be unable to decode cleanly, and a characteristic digital whine will result. It will occasionally come and go slowly at the speed of the hubs. Some machines will mute under these conditions; the Panasonic models will not. I prefer the lack of mute; the problem is more obvious. (See our earlier discussion of dropouts.) On a machine with clean heads that played the previous tape perfectly, a sudden onset of the whine typically means the tape was recorded on a machine that lacked skew compatibility. Skew angle is a standard, as all DAT tapes are expected to be interchangeable among all machines, at least at standard speed.

If the whine shows up after a forward or reverse search, pause momentarily and restart play immediately. If the culprit was a capstan with built-up coating (let's call it crud), the tape should pop back between the guides and play properly. Occasionally, you can fix this by unloading the cassette and reloading. The search function looks for the start of a program

dropouts were in the recorded signal. On machines that mute during periods of high error rates and on which error rates cannot be checked, listen for a relay opening and closing. If that is not heard, the dropouts were recorded and are not a sign of a problem with the playback machine.

### Tape Snags on Ejection of Cassette

A particularly troublesome problem is the failure of the mechanism to rewind the tape fully into the cassette before ejection. The tape will be creased or torn and the cassette essentially ruined. Possible causes are slippage of the hub drives or failure of the post rollers, guides and capstan to retract fully before ejection.

Prime suspects are the hub drive slip clutches. These are spring-loaded felt plate clutches located in the hub assemblies or as part of the hub gear drive. If they slip excessively, the tape will not be rewound fully before ejection. Concerning retraction of the posts and guides, inspect the mechanism of the particular machine for damaged gears or misadjusted positioning sensors.

### Program Numbers or Timing Will Not Display

Assuming the program numbers and timing were recorded and are available on other machines, adjustment of PG phase may be required. PG stands for Phase Generation. PG phase adjustment alters timing of the switching between the heads on playback. If the relationship is incorrect, sensing of the information in the data headers (sub data and ATF data, sub data incorporating track and timing numbers) will be missed. Set this by comparing the timing relationship of the PBRF and SWP traces with the scope when playing the test tape Sony TY-7252. In the absence of this tape, merely adjust until the timing data returns to the front-panel display.

■■■

Jeff Johnson is network engineer at WXVU(FM) in Cincinnati and the eight-station WXVU Network. Send questions or suggestions via e-mail to [Jeff.Johnson@goodnews.net](mailto:Jeff.Johnson@goodnews.net)



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# Workbench

Radio World, June 24, 1998

## Does the Power Company Know You?

John Bisset

The summertime usually means thunderstorm time. One precaution can minimize the effect of storms on your AC service at both the studio and transmitter sites. The best part is, it doesn't cost a lot of money. It's called "getting to know your utility." Drop by your utility office and ask to speak to the site manager or service manager. After you have made your introduction, arrange to go with the general manager and take this person out to lunch.

Broadcast stations are good customers of the utilities, consuming a lot of power on a predictable basis. Especially in

I came across a note from Mark Persons, who related a story about an emergency plate blocker. The blocker is usually a Teflon sheet that is wound between two metal cylinders in the final cavity of some FM transmitters. The blocker "blocks" the DC plate voltage from being coupled into the RF output network.

Mark said there was no spare Teflon on hand, so the engineer used four-mil plastic sheeting, usually found in the walls of homes as a vapor barrier. Enough plastic was used to equal the original Teflon thickness, and the transmitter was run at half power.

If you run into a problem like this,

transmitter would not come on until he was done. Before he screwed the board back up against the switch, he sandwiched in a piece of heavy plastic, to serve as an insulator, should any more traces come unglued.

★ ★ ★

It's a sign of the times, I guess. I was visiting with a customer the other day, and was touring their studios. On the wall of the control room was a big red sign that said "Engineer on call." Below the words was a bracket that held a removable plastic sheet with the engineer's name engraved on it. The purpose of the bracket was to permit the name to be easily changed, depending who was on call.

I remarked that it was a good way to ensure the jocks knew whom to call in an emergency. The engineer agreed, but added that due to consolidation and attrition, his name has been the only one up there for the last two years!

★ ★ ★

If one of your capital projects is upgrading components inside your AM coupling unit, you may need to bend copper tubing. Trying to bend copper tube without a spring bending sleeve can result in the

package of assorted diameter bending springs at a plumbing or air conditioning supply shop (both work with copper tubing).

★ ★ ★

Heat can be a major problem in the summer. I remember a client calling to have tubes replaced that only lasted a few months. We sent the tubes to Eimac; their diagnosis was poor filament regulation. This was hard to accept, because the transmitter incorporated a Sola regulation transformer and didn't appear to have any voltage problems. Further discussion with the Eimac engineers led us to the problem. It was heat.

If the tubes are operated with an excessive anode temperature, the filament temperature will also increase, and dissipate the carbon deposit from the filament.

Our work had taken place at night, so we didn't have to contend with the daytime heat. A return visit during the day showed a much different picture. The transmitter was so hot you could hardly touch it. The owner admitted that the rig "ran hot." We crawled into the attic and found the exhaust fan inoperable. The convection currents turned the blades, so some air was being exhausted, but nowhere near the amount necessary to keep the transmitter running cool.

A new blower motor corrected the problem. Several pieces of yarn also were tied to holes in the edge of the

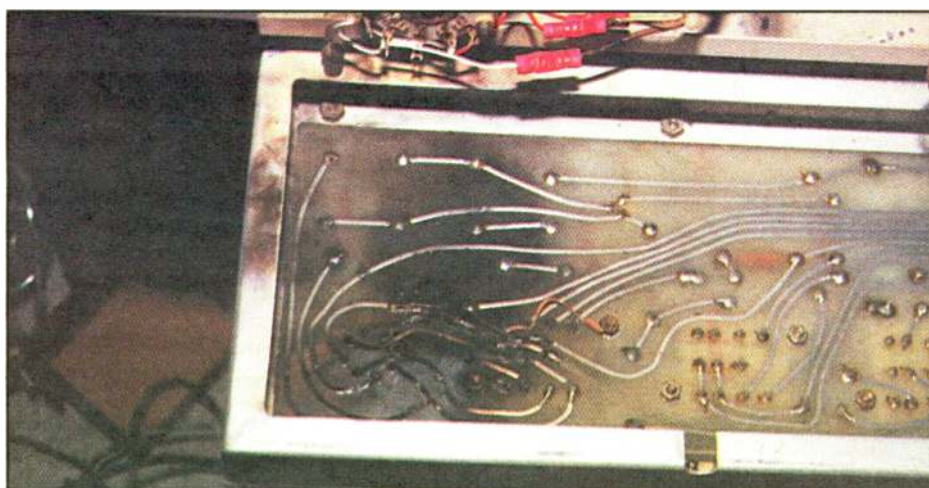


Figure 1: AC line voltage and circuit board traces don't mix!

smaller communities, the district manager will want to keep you happy. Chances are no customer has ever taken him out to lunch, so he will remember you. If your station has T-shirts or ball caps, bring some along for the crew. A working relationship will pay dividends later. In my experience, I've gotten "inside" numbers to call in the event of an outage, had the station put on the same priority as hospitals with respect to service calls, and always had the staff falling all over themselves trying to get me serviced.

Don't think you can't do the same. You will be amazed how the door to the "prize closet" swings open when a station is off the air. These little spiffs, tips for a job well done, will make your life easier. After you get on a first-name basis, the utility will become much more receptive to your concerns about voltage regulation, spikes and high line voltages. Don't hesitate to ask for a chart recording of your voltage done for a week if you suspect poor regulation.

Another advantage to a relationship with your utility is the insight you will get from the utility point of view. You also can expect to be kept in the loop when service interruptions are planned.

★ ★ ★

Mark recommends you inspect the sides of the two metal sleeves, because the arc can sometimes pit the cylinders. The sharp edges of the pit can cause a repeat performance when the transmitter is turned on. This is by no means a permanent fix, but it you can use it to get back on the air, albeit at reduced power, until the proper materials arrive.

★ ★ ★

That Arcs and Sparks photo from a previous issue of *RW* really got some attention. Why is it we are so curious about things that burn up? My former associate, Tom Ringer, sent me the picture in Figure 1, with a warning. If you own a very old transmitter, check the traces on the printed circuit board. If you look closely, you'll see what appear to be circuit traces "floating" in the air. Your eyes aren't playing tricks on you.

The control traces on this old Sparta transmitter actually lifted from the board. Unfortunately, the three phase monitoring switch contacts got in the way, hence the blackened areas, and vaporized traces. Tom spent nearly four hours performing "surgery" on the board, replacing the vacant traces. Because the flare-up occurred with the control wiring, the

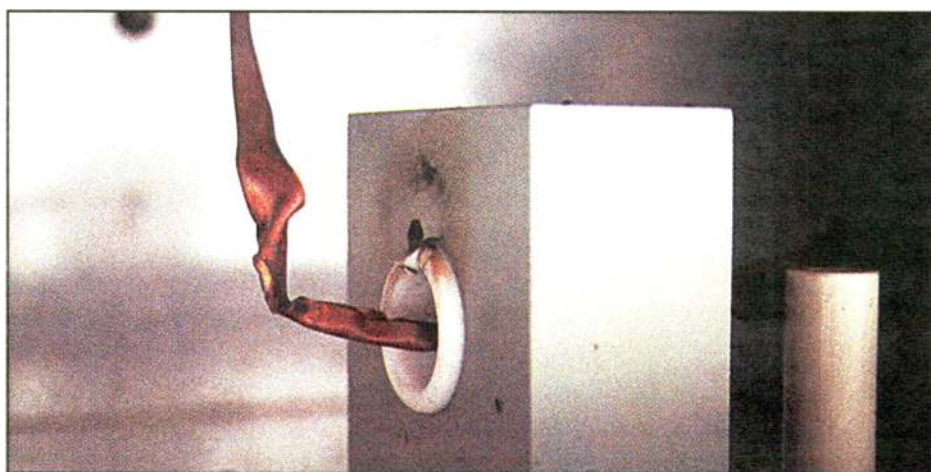


Figure 2: Avoid flashover arcs by incorporating smooth copper tubing bends.

mess seen in Figure 2. The resultant sharp ends that were formed where the tube bent and broke caused the arcing of the toroid, even though the center conductor was in the middle of the pass-hole.

Here's how to make the bends when you don't have the proper tools: Fill the copper tube with sand. The volume of sand inside the copper tubing prevents it from collapsing when you make your bend. The finished product won't be a pretty as using a commercial tubing bender or bending spring, but you won't end up with the mess in Figure 2!

Are you a contractor that does a lot of AM work? You can usually find a

exhaust duct. When the blower was working properly, the exhaust air pressure pulled the pieces of yarn upward toward the exhaust. If the blower motor was turned off, the air would spill out into the room, pushing the little yarn "indicator" away from the exhaust duct.

■ ■ ■

John Bisset has worked as a chief engineer and contract engineer for more than 20 years. He is a district sales manager for Harris Corp.

Submissions for this column are encouraged, and qualify for SBE recertification credit. Fax your submission to (703) 323-8044, or via e-mail to jbisset@harris.com



ROOTS OF RADIO

# Meet the Amazing RF Alternator

Ronald Pesha

The wheel form of the lever ranks as a significant discovery. The discovery that AC electricity of sufficiently high frequency will leave a wire and travel through space altered communications.

Credit for the discovery goes to Heinrich Hertz and his high-voltage spark. Hertz basically used miniature lightning to communicate in dot-and-dash "static."

The addition of a tuned circuit helped, but practical communications by many stations over great distances required a high-power generator of high frequency alternating current on a discrete frequency: an alternator.

**Alexanderson**

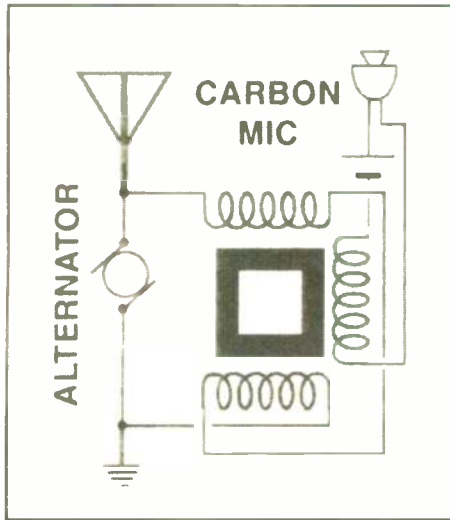
An early alternator running at 1,200 rpm would have used a three-pole rotor to generate 60 Hz. But in order to achieve 100 kHz, an alternator would require 5,000 poles. On a rotor with a diameter of two feet, poles would be 0.005 inches wide, slots for windings 0.01 inch wide. None too practical.

Drop to 500 poles and the winding slots become a tenth of an inch wide. But the speed must be increased to 12,000 rpm, resulting in a rotor speed of 850 mph! This puts extraordinary demands on balance.

Many early radio experimenters such as E.F.W. Alexanderson tried to develop alternators for high-power RF generation. Alexanderson avoided the winding problem by using stationary

windings, so the high-speed rotor need only induce a pulsating field.

Metallurgists designed an all-metal rotor that withstood the centrifugal force of 20,000 rpm, and a rim speed of 720 mph. Apparently it worked, producing 100 kHz at 2 kW back in 1908.



Magnetic Modulation

Alexanderson modulated the RF with a magnetic amplifier (these were the days before vacuum tubes). As shown in the schematic diagram, a high-impedance iron-core inductance is shunted across the alternator. As the iron core is nonlinear with respect to DC in the third coil (the hysteresis effect), varying the DC will vary the load presented to the alternator and hence modulate the RF in the antenna. If the DC varies at an audio rate, the

modulation is at audio frequencies.

The new vacuum tube eventually brought all-electronic, nonmechanical generation of RF energy. Early triodes were low-power, low-frequency devices, thought incapable of alternator-level output. But the first transistors were low-power, low-frequency devices, too. Vacuum tube development turned alternators into dinosaurs.

**Retaining interest**

Alexanderson, who graduated from Stockholm's Royal Institute of Technology at the end of the 19th cen-

tury, retained an interest in electro-mechanics and turned to television, using mechanical scanning disks into the 1930s when companies such as RCA had proceeded to the development of all-electronic TV.

Alexanderson ultimately worked on electronic control of motors, receiving his last patent in 1973.

We will take a more detailed look at modulation schemes employed with alternators in the second part of this two-part series.



Ronald Pesha is associate professor of Broadcasting at Adirondack Community College, Queensbury, N.Y. Reach him at (518) 743-2300 (ext. 567); fax: (518) 745-1433 or e-mail peshar@acc.sunyacc.edu

## You Must Remember This



It's not exactly a car radio, but this radio was manufactured by a car maker.

The Crosley company made cars and appliances in addition to this 1950 model 10-135 radio. Crosley also owned AM stations WLW and WSAI in Ohio.


This radio retailed for \$42.95.

The Crosley cars were not as fancy as the company's radios. Crosley automobiles in 1950 had a wheelbase of only 80 inches. Under the hood was a four-cylinder, 44-cubic-inch engine that generated a mere 26.5 horsepower.

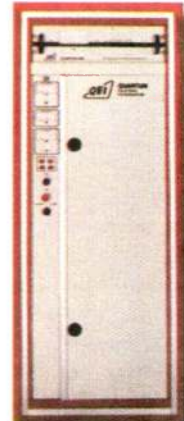
This is one in a series of photographs in RW featuring classic and less well-known radios.

The pictures and descriptions are by collector Bill Overbeck, president of the Delaware Valley Historic Radio Club, who has made every effort to ensure accuracy.


Contact him via e-mail at [billoradio@aol.com](mailto:billoradio@aol.com) or through RW.




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# Design and Test for Quality

Follow This Checklist During the Design, Testing And Construction Phases of New Studio Buildouts

**Mario Hieb**

So you are building new studios. You have thousands of dollars budgeted so you can purchase the best new gear on the market. Or perhaps you don't have thousands of dollars; maybe you're just moving all the old stuff to a new building. With a bit of planning, your new facility can outperform your old one even though the equipment is the same.

Start by asking yourself a few questions:

What is the facility reference level?  
How are the cable shields terminated?  
How are power outlets grounded?  
How clean is the power?  
How is the facility documented?  
How is the facility tested?

We are dealing only with analog facilities; AES3 is a different animal, to be discussed separately.

*What is the facility reference level? Or, what is the level at the output when the VU meter reads 0 VU?*

This question relates to system headroom and affects noise, crosstalk and distortion.

Typically, +4 dbu (1.23 VRMS) = 0 VU; occasionally you'll see facilities that choose +8 dbu = 0 VU. First, pick a standard and *stick with it*. If you choose +4 dbu = 0 VU as your standard, then every piece of gear should deliver +4 dbu when the VU meter reads 0 VU, and likewise, +4 dbu in shows up as 0 VU. This may require readjusting the ins and outs, but again, this is a must.

I like to feed a distribution amp with a stable, house tone generator, typically 1,000 Hz at +4 dbu. Send a feed to each studio. Use this tone to verify that every piece of equipment is calibrated to your reference level.

Now a word on the -10 dbv unbalanced standard gear typically used on

one and only one end. I've seen good arguments for grounding the shield at either the source or at the destination; this topic is worthy of its own article. The important thing again is consistency. Pick one end or the other, and carry it through the entire plant. Treat patch panels as if they were any other piece of

compliance.

Also, make sure your ground strap does not touch other grounds such as building metal, HVAC ducts or conduits.

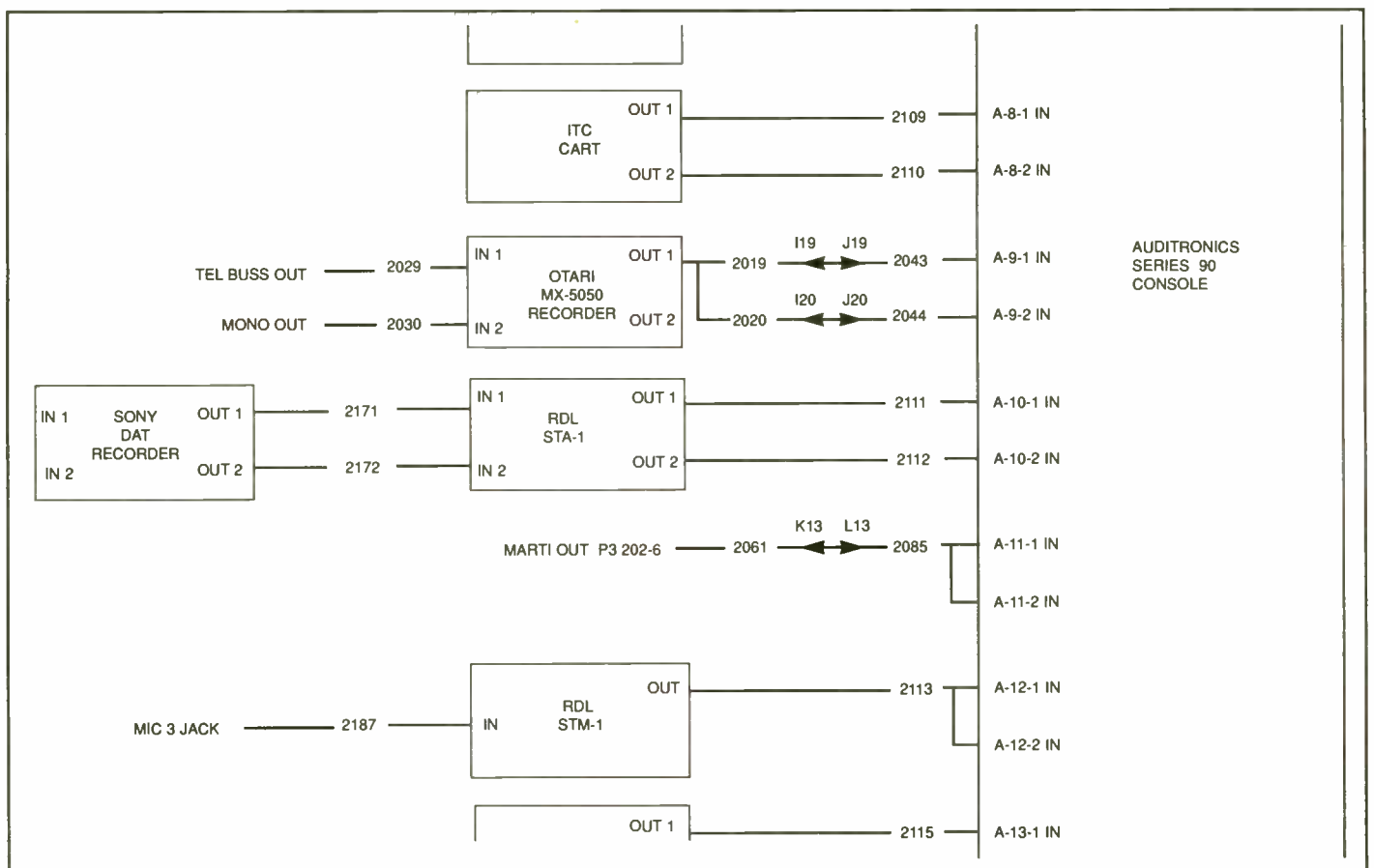
*How clean is the power?* This question relates to hum and noise.

Clean power, like a clean ground, is necessary for clean audio. Computer-based equipment — just about every-

• If you are a contract engineer, label one of the drawings APPROVAL and have your client sign it before you start building. This helps define the project for contracts.

• Preparing a budget is easier if your plan is on paper. You will be less likely to forget items, and may even see ways to cut corners and save money.

• If you hire help to wire the facility, workers will have a plan to follow.



Use a CAD program to document studio wiring.

gear; don't carry the ground through. Note: some equipment manufacturers assume you will use their shielding preference and leave grounding terminals off either the input or output. Beware!

thing these days — needs power free of fast-rising power spikes. Sometimes, the building mains are very clean and require no conditioning. Other times, elevator motors, HVAC motors and light dimmers put a lot of grunge on the mains, and a power transformer or conditioner is necessary for studio power. Once isolated or conditioned, use the clean power only for studio equipment. Keep light dimmers and large motors on separate circuits.

*How is the facility documented?* This question relates mainly to quality control.

I believe in thorough and accurate documentation. Before construction begins, create a flow diagram of the entire facility. CAD programs such as AutoCad make this task a lot easier. The flow diagram shows every piece of gear, patch bay and cable and how they are interconnected (Figure 1). Often I can get an entire studio flow drawn on a single 24-by-36-inch sheet of paper.

When your drawing is complete, make three copies and label them INSTALL, TEST and AS BUILT. Documentation also includes assigning a wire number to each cable.

Why go to all this trouble? Several reasons.

• Putting your concept of a studio on paper lets you visualize the facility before it is built, so you will develop a better design.

As you install, use a highlighter pen to cross off each cable on the INSTALL print as it goes in.

When a studio is built, go through and test the wiring. As each cable is tested as good, use a highlighter pen to cross it off on the TEST print.

When you make changes, draw them in by hand on the INSTALL and TEST prints. Transfer these changes to the AS BUILT print. You now have a thorough and accurate documentation package of your facility.

These techniques are especially useful when you must assemble a new facility while the equipment is in use at the old facility. When you are ready to move, just bring over the old gear and plug it in.

Sure this is a lot of work, but aren't you glad when documentation is included when you buy a piece of gear?

*How is the facility tested?* We'll save this important topic for the conclusion of this two-part series.

High-performance audio facilities are designed with the plan put down on paper and careful post-installation testing. It is well worth the effort.

■■■  
Mario Hieb, CPBE, is the chief engineer for KXRR(FM) in Salt Lake City and consults for various clients.

He wrote about new FM transmitters in our May 13 issue.  
Reach him via RW.

consumer-grade equipment. Long, unbalanced lines can create awful ground loops and resultant hum. If I must use unbalanced gear, I try to locate an unbalanced-to-balanced interface amplifier as close to the unit as I can.

Set the levels on the interface amp so that -10 dbv in equals +4 dbu out. Also remember that dbu and dbv are not the same thing; -10 dbv equals -7.7 dbu.

*How are the cable shields terminated?* I'm referring to the overall shield on twisted pair cable wired for balanced or differential inputs and outputs. This question relates to noise and crosstalk.

The cable shield must be grounded at

*How are power outlets grounded?* This question relates to hum, noise and safety.

Ideally, all studio power grounds should be isolated from other building grounds and cable shields should be tied together at one point, the ground node. The ground node must have very good conductivity with the earth. A good way to do this is to connect the ground node to the metal building frame or to a buried chemical ground rod.

I like to run copper strap to each studio and then a short ground wire to each outlet or power strip. The resistance of the copper strap is very low. It's as if every piece of equipment in every studio is plugged into one strip, tied directly to earth. Check your local electrical code to ensure that this technique is in



WIRED FOR SOUND

# Choosing Microphone Cable

Steve Lampen

We have spent a lot of time in this column talking about microphone connectors, even about how to wire them. It's about time to talk about the cable that goes into them. The subject of microphone cables is so extensive that it will take several columns to explore the ramifications.

We will concentrate on twisted-pair balanced line constructions and leave the unbalanced stuff for a later column. Quad or star-quad constructions also are part of the balanced line story.

If you are old enough to remember broadcasting and broadcasting equipment before the 1960s, you recall a time when all cable was, in effect, microphone cable — that is, stranded twisted pairs with a braid shield and jacket. Even equipment was wired internally with similar cable.

I vividly remember opening my first broadcast console to find it wired with braid-shield twisted pairs. In this case, however, the manufacturer decided to save money and space by using unjacketed cable of that construction. The manufacturer saved a bundle, no doubt, but it was a nightmare for the engineer who desired to modify, or even just clean out, such a console.

Using unjacketed braid-shielded pairs meant that the shields of any two cables might touch. One of the "rules" of wiring, which this manufacturer may not have known, is that the signal on pair 1 will be more likely to feed to pair 2 if the shields touch. In fact, it is almost the same as having both pairs together with an overall shield.

Braid-shielded cables are rarely used in manufacturing today. The technology of wire and cable has progressed a bit since 1960. (The ideas surrounding crosstalk, and what is often called cable ingress/egress, will be fodder for a future installment.)

For microphone cables, most frequently we see a single twisted pair, surrounded by a braid or spiral (also called "serve") shield. At the high end, we see four conductors spiraled together, called "quad" or "star quad."

The key parameters for microphone cable are, in order of importance: ruggedness, low external noise, low self-noise and performance. Note that performance is fourth on the list. If you don't have the other three, it doesn't matter what the performance is. Your cable may be unusable.

### Ruggedness

The ultimate in ruggedness is rubber, or its artificial cousins such as EPDM (ethylene propylene diene monomer). These materials are not plastics, or more correctly, not thermoplastic. Thermoplastics can be melted and formed, then melted and formed again, and so on. Once rubber or EPDM is put on a wire, it goes through a curing process called vulcanization, which is not reversible.

This is why we have such a problem with old tires. They, too, are vulcanized, and it has nothing to do with Mr. Spock on Star Trek. They cannot be recycled easily. If someone invented the thermoplastic tire, which would last about as long, they would be an instant billionaire

and instant presidential candidate for the Green Party.

Processing rubber is slow and expen-

sive, so these cables are not cheap. But they last almost forever. If you are going to install mic cables in a high school, for instance, or any place they will get considerable punishment, rubber/EPDM is the way to go.

**You can test for ruggedness by taping cable samples to the floor and running over them with a wheeled office chair.**

The vast majority of mic cables don't have to stand up to such long-term punishment and, therefore, can be made with

polyvinyl chloride jackets. PVC has made great strides in ruggedness in the past few years. In fact, in lab testing, some PVC versions are 40 times more cut-resistant than compounds of just a few years ago. But you wouldn't know that without serious field comparisons. Unfortunately, manufacturers do not list ruggedness in their catalog descriptions. In fact, because no industry standard for ruggedness exists, you cannot know the ruggedness of any particular cable before you have had extensive experience with it.

However, you can approximate field ruggedness testing by taping a number of mic cable samples to a hard floor and running over them repeatedly with a wheeled device (office chair, shopping cart, wheeled piece of equipment). Metal

See MICS, page 40 ▶

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# Almost Time to Hit the Switch

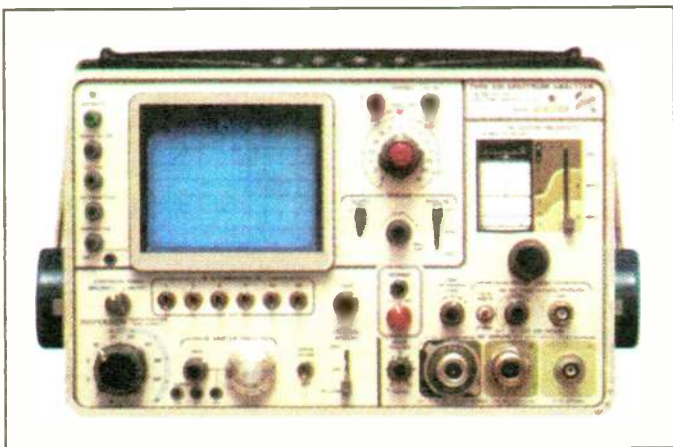
W.C. Alexander

*This is one in a multipart series of articles about constructing an AM expanded-band station. The previous part appeared June 10.*

What remains to be done so we can throw the switch and begin broadcasting on the expanded band?

In an earlier article, we looked at special conditions that the FCC may have put on your construction permit. These special conditions determine, to a large extent, what is left to be done after construction before you can begin to broadcast.

Many stations, especially standalone operations, are eligible for automatic program test authority. This is the case



Measure occupied bandwidth of your new station with a spectrum analyzer.

unless a special CP condition spells out otherwise. In this case, you may simply turn the station on and begin broadcasting under automatic program test authority. The only requirements: you must comply with the terms of the construction permit, and you must submit a license application within 10 days.

Many other stations do have special conditions on their construction permits. These may range from proof-of-performance requirements on nearby AM directional antennas, to spurious and harmonic measurements on your own station. These stations are not eligible for automatic program test authority and must comply with the special condition(s) and file a license application/request for program test authority at least 10 days before the start of program tests are desired.

## Are you in compliance?

We'll start our discussion with the easy one: automatic program test authority. If your station falls in this category, you need to do a few things on your own before you hit the switch. First, you must determine that the station as constructed is in compliance with all the terms and conditions of the construction permit. Is the tower located at the coordinates specified in the CP? Is the tower built to the proper height? Is the ground system installed as specified in the CP? Is the transmitter type accepted for the frequency on which it is being used?

These are the basic technical parameters specified on a CP for a nondirectional standalone station, and they should be easy to answer. The station, we hope, has been built in compliance. If not, someone has made a big mistake that will have to

be fixed or addressed with the FCC.

Assuming that the CP conditions have been satisfied, the next step is to make certain that the station as built complies with FCC technical rules and regulations. These primarily have to do with frequency tolerance, power tolerance and purity of emissions. The frequency of the station should be checked with a recently calibrated frequency counter or service monitor. Modern AM exciter frequency-determining circuits are highly stable, synthesizing the operating frequency from a stable, high-frequency source. Maintaining the frequency within the 20 Hz window usually is not a problem, but the frequency should be checked during equipment tests.

Power is determined using the "direct method" — I.R. During the tune-up process, the resistance and reactance of the antenna on the operating frequency were measured and noted. The resistance is used to determine the value of RF base current required to produce the power authorized in the construction permit. To

find the proper current, divide the power by the resistance and take the square root.

Purity of emissions is big with the FCC these days. Not so many years ago, AM stations were required to run an audio proof every year. These days, the audio proof requirement is gone, and in its place is the requirement to measure the occupied bandwidth of the station annually. This can be done using a spectrum analyzer or a "splatter monitor."

**With these items checked off, you are ready to go; you may begin broadcasting.**

Whichever method is used, the emissions should be measured at a point about 1 km from the station that is easily accessible and free of overhead wires or nearby large metallic structures.

Since all AM stations must make these measurements annually and have been required to do so for a number of years, most station engineers should be well-versed in the procedure. In many larger markets, services will make these measurements for you and submit a detailed report for a nominal fee. It may be worthwhile to employ such a service and save yourself the trouble of having to set up, make and document the measurements yourself.

With these items checked off, you are ready to go; you may begin broadcasting.

The CP should list sunrise and sunset times for the station's location, at which



daytime or nighttime power should be used. Be careful to adjust the times listed for daylight savings time if it is in effect in your area.

Sometimes, licensees get in trouble when operating under automatic program test authority because they inadvertently fail to file the requisite license application. I recommend that program tests not begin until the application and filing fee are in the main. That way, there is no way you can get busy with the operation and programming of the new station and forget.

A filing fee must accompany the license application. Check with the FCC or your communications counsel

## Microphone Cables Offer Protection, Flexibility

► MICS, continued from page 39

wheels are, of course, the worst case. Any manufacturer should gladly send you short samples of any cable you wish to test. Just tape them an inch or more apart and run over them a few dozen times. Make sure to tape only the ends so the cable takes the brunt of the punishment. Then untape them and examine. Which are rugged, which are not? The answer should be apparent.

Minimizing the pickup of external noise is accomplished in several ways.

First is the shielding. Foil shields, which we will discuss further at another time, are to be avoided because they are noisy.

Most low-quality cables use spiral ("serve") shields. These are easy to apply; you just spiral the wire around the pair. But spiral shields suffer from two major deficiencies. First, a spiral of wire is an inductor. The inductance of such a cable generally limits it to analog audio frequencies (to 20 kHz). But second, and more important, a spiral shield will open up when the cable is bent. This means the cable has no shielding at that point.

The key advantage to spiral shields is excellent flexibility. These cables are limp, easy to coil and uncoil. It is unfortunate that many people cite this flexibility as a key reason for buying a microphone cable, when, in fact, it indicates a potential shortcoming in shield effectiveness.

Some better mic cables use a double serve. This helps reduce, but does not eliminate, gaps in shield coverage, and also reduces the inductive effect of a single serve.

The ultimate shield is a braid shield. However, a braid shield is the single most time-consuming step in the manufacture of mic cables. (In fact, it is the most time-consuming step wherever it is used, on any kind of cable.) Braid

to get the current fee amount and fee code. Although you or your consulting engineer must sign the engineering portion of the application, the station licensee — the owner, a partner or an officer of the corporation — must sign the application itself and attest to all the facts therein.

With this application on file, at some point you will receive a station license in the mail. Be prepared for a wait; it may take several months. When you do receive the license, check it carefully against the license application for errors. If you find any, have your communications counsel address them with the FCC by letter. You can do this directly if you wish. Be sure to include daytime phone numbers in your correspondence so the person reviewing the corrections can contact you with any questions.

We'll continue next issue with this important topic.

■ ■ ■

*Cris Alexander is director of engineering for Crawford Broadcasting in Dallas.*

*Share your expanded-band experiences with RW. Send e-mail to radioworld@imaspub.com*

shield cannot open up when the cable is bent; the conductors are braided or interwoven. They give excellent coverage well into the MHz range and are therefore excellent for analog or digital audio.

There is a new version of braid called a "French Braid," consisting of two spirals interlocked along one side. Considerable lab testing has shown this construction gives noise protection equal to or better than a braid shield and yet retains the high flexibility of a spiral shield.

After this discussion of shields, you may be surprised to learn that, in fact, the majority of noise reduction comes from the twisted pair *inside* the cable. And it doesn't take much twisting to have an effect. In fact, twisting a pair only once every 4 inches (i.e., three twists per foot) will give you -23 dB of noise rejection. By the time you get to six twists per foot, you're up to -41 dB. But you get diminishing returns thereafter; for example, 12 twists is only -43 dB. Only exotic data cables venture into the super-tight twist area, and not for noise reduction.

The only reason we would shield a pair, therefore, is because the pair is not perfect. Those imperfections show up as pickup of noise by the cable, or generation of noise by the cable to be picked up by other cables around it. To understand how this works is to understand the real reason we have a pair of wires: the balanced line.

We will complete the discussion of balanced lines, self-noise and performance of various microphone cables in the next column.

■ ■ ■

*The author is a technology development manager for Belden Wire & Cable Co. His book "Wire, Cable, and Fiber Optics for Video and Audio Engineers" is published by McGraw-Hill.*

*RW welcomes other points of view.*



ROOTS OF RADIO

# Radio, a Medium Full of Memories

Richard O'Donnell

Fond memories!

Radio World readers phoned in their favorites, after a request for treasured memories of the good old days of radio.

Granite Stater Peter Schindler loved Al Jolson.

"As far as I'm concerned, he was the greatest," said the Manchester resident. "I loved Jolson's voice, and the tunes he selected were wonderful. Back in the '30s, he did the old 'Kraft Music Hall' on NBC, and after that he had a half-hour show on Boston's WEEI, our local CBS outlet in those days. He was on at 8:30 on Tuesday nights, if I recall correctly. That man could sing up a song. And he had a great sense of humor too," Schindler said.

"Over the years, I have collected tapes and recordings of old Jolson shows. I have quite a few of them now. From time to time, when I get weary of what is going on in the world today, I'll play those old Jolson shows, and have a wonderful time. Life was so innocent back then. At least, I think it was. Jolson lifted my spirits in the old days. He still does today. Of all the performers I heard on the radio, and there were

later on, to shut the radio off, after I fell asleep. She took the blanket off my head, so I would be able to sniff the air.

"One night, they did 'Frankenstein' on that show. I loved it! I twisted and turned as I listened. That was one night when I didn't fall asleep under the blankets."

Frances Smith, who lives in sunny Fort Myer, Fla., also has favorite memories of radio's golden years, even though she wasn't around back then.

"I missed them," she said, "but my father was a collector of old radio shows, and he wasn't too fond of television. My sisters and brothers went to

bed about 8 or 9, when we were younger, and, after the lights were out, Dad would put on an old radio show.

"I loved Fibber McGee and Molly. I think that was my personal favorite. We also heard 'The Great Gildersleeve,' and Jack Benny. They were fun too. I loved those old radio comedies.

**Great for kids**

"We also heard 'The Lone Ranger.' What a program! I've watched The Ranger on TV, but he was much better on the radio. The music was great, and you could conjure up your own image of The Masked Man. In my mind, he

was always taller, better looking, and stronger than those actors who played him on TV. And Silver was much faster and smarter on the radio. Or so it seemed," she said.

"Our family is young right now, but later, when our children are older, and able to appreciate those vintage radio shows, I plan to play them, as they drift off to sleep at night."

Phil Allen, who resides in San Francisco, used to stay up until the wee small hours to hear his favorite on the radio.

"His name was Bobby Dale, and he was on KSFO years ago," said Allen. "He played jazz, among other things, and he was a raconteur. It was great listening to him tell his stories about the music he played. As for the music, it

See MEMORIES, page 43 ▶

**'If any of your readers out there know how Tom Mix and The Old Wrangler escaped from that ghost train, I'd sure like to know.'**

many outstanding performers, Jolson tops the list. I wish we had singers like him today."

A chap from Seattle, who identified himself only as Victor — no last name was offered — recalled all those great "spooky shows they used to have on the radio."

**Under the blankets**

"You know the ones," he said. "'Inner Sanctum,' 'Lights Out,' 'Hall of Fantasy,' 'Haunting Hour,' shows like that. There was one that came on close to midnight. I think it was called 'The Weird Circle.' I'll never forget that show. I was only a kid, and I had to keep the sound down low, so my parents wouldn't know I was playing the radio that late at night. The lights were always out, and I was alone in my room, when that horror show came on. Every week, they had monsters and murderers all over the place. The hero always showed up at the last second to save the leading lady, just as the fiend was about to do something vicious," Victor recalled.

"I loved those shows, even though they scared the devil out of me. Know what I'd do? I'd cover my head with a blanket — often I'd duck under the pillow too — so I'd be safe in all that darkness. Many a night I fell asleep with that blanket over my head. Fortunately, my mother would come in

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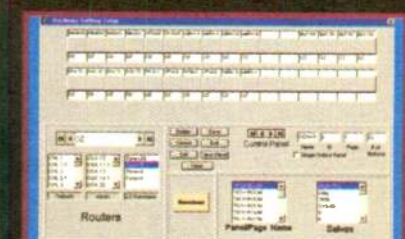
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**Solutions for Tomorrow's Radio**



**MFN Hires Pettis**

The Minnesota Farm Network is welcoming Kristi Pettis aboard as a farm broadcaster. Pettis' duties include farm programming anchor responsibilities and the writing and production of agriculture-related stories. Pettis also will cover press conferences and act as a liaison with MFN affiliated stations.



MFN is a division of The MNN Radio Networks Inc., which distributes news, agriculture, sports, weather, feature programming and data service to more than

100 commercial radio stations in the upper Midwest.

**BE Appoints Ely, Onan**

Broadcast Electronics Inc. has named Stephen Ely as the new vice president of North American sales and marketing. Ely's responsibilities include the development of a strategic sales and marketing plan along with managing BE's marketing efforts and overseeing the development of major group accounts. He will also be the driving force behind BE's North American distribution channels.

Also, there's a familiar face at BE these days. Former eastern regional sales manager Criss Onan has returned as a member of the sales team. His new responsibilities include account management throughout



Criss Onan

the northeast and north-central United States from Maine to Michigan.

Onan, a member of the SBE, will be based in Rochester, N.Y.



**Premier Appoints Kitchin**

Kraig T. Kitchin has a new title at Premiere Radio Networks. Kitchin has been named to the new position of chief operating officer. He also will continue to act as the director of sales for the network.



Kitchin was one of the founders of Premiere in 1987. He previously ran Premiere's sales department as vice president, senior vice president and executive vice president in addition to serving on the company's board of directors.

**Klotz Opens Americas Operation, Picks Esparolini as Sales VP**

Klotz Digital Audio Communications, based in Munich, Germany, has announced plans to open an Americas operation. The new office will be based in the eastern United States and will head the company's sales, marketing, customer

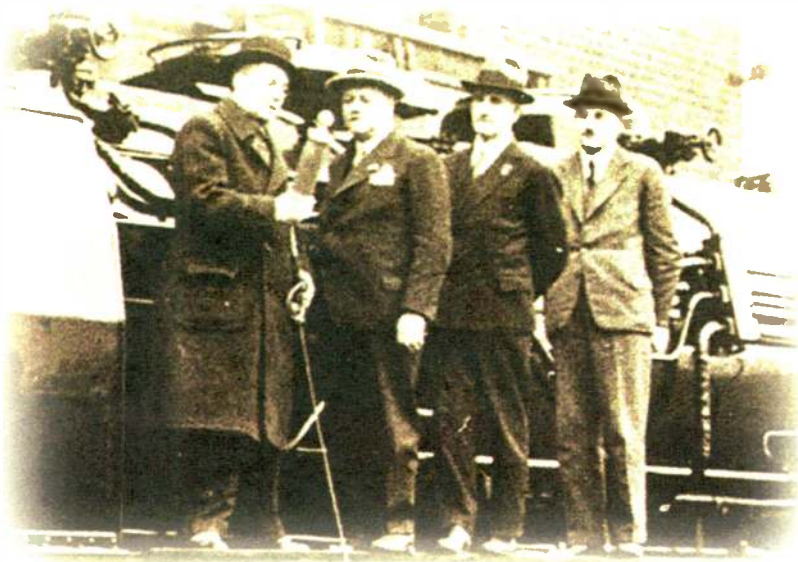


support and technical systems for North, Central and South America.

Klotz has also announced the selection of Ramon Esparolini, formerly of Wheatstone, as vice president of sales and marketing for the new Americas division.

Klotz manufacturers digital audio mixing consoles and routers for the broadcast industry.

See SOUNDWAVES, page 43 ▶



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# The Good Old Days of Radio

► MEMORIES, continued from page 41  
 was fabulous. I remember I used to have a fight to keep from falling asleep.  
 "Bobby Dale was, and still is, my favorite radio memory," he said. "No

"They weren't my favorites," he said, "but I heard plenty of them. I worked nights, and my wife used to play them every day. And my mother before her had them on. Do you remember 'Stella

An actor named Curley Bradley played him on the radio. The show was on Monday to Friday at 5:45." Jake said.

### The mystery ending

"Every few weeks or so, they'd be a new adventure. I used to play tag football, or a baseball game, where we hit a rubber ball with our hands, out in the street every afternoon with the kids on our block. I always got home in time for Tom Mix.

"Well, one time there was an adventure called 'The Ghost Train.' This train was coming out of nowhere, even when there were no tracks on the highways, and causing people to get killed when they swerved to avoid it. One Friday, that train was headed right for Tom and his friend — they called him The Old Wrangler — who were in a car. The show ended. It was a cliffhanger and you had

to wait until the next Monday to find out what happened. When that Monday rolled around, we had a tie going in our tag football game. I missed Tom Mix. I never did find out how he escaped that ghost train. On Tuesday, Tom was off and running in a new adventure. He apparently solved the big train mystery on that Monday I missed."

Jake concluded, "If any of your readers out there know how Tom and The Old Wrangler escaped from that ghost train, I'd sure like to know. I've been waiting for a lot of years to find out what happened. I've asked plenty of people what happened that Monday, but, as yet, I have failed to meet anybody who recalled how the case was solved."

Old time radio memories. If you were a listener way back then, you have them. We all have them.



*Dick O'Donnell is a free-lance writer and old-time radio buff living in Florida. Reach him at (813) 842-6638. Especially if you know how 'The Ghost Train' ended.*



Photo courtesy of Library of American Broadcasting

From left, Jackson Weaver, Ruth Crane Schaefer and Brace Beemer, The Lone Ranger. The undated photo was taken by Paul J. Dennehy of the Washington Times-Herald.

doubt about that. Nothing on TV today can match listening to Bobby in the middle of the night. At that, nothing on radio today can match the old Bobby Dale show."

Dallas,' 'John's Other Wife,' 'The Goldbergs,' and those other radio soaps? Well, I got to know them pretty well, because they were always on when I was trying to sleep, during the daytime. I have memories of those shows, but they are not fond ones. Nevertheless, I must admit, from time to time, I enjoyed them.

"But they were not my favorites. My favorite show was called 'Tom Mix,' and it was named after the old time Hollywood cowboy. The real Tom Mix was long gone by the time I heard the radio show. On the airwaves, Tom was sort of a cowboy detective. He was always solving crimes, and the federal government often called on him for help, when there was an emergency.

"That radio Tom Mix had a ranch, a sidekick, and did a lot of driving in a car. He didn't use his horse Tony all the time, the way he did in the movies,

**It was a cliffhanger and you had to wait until the next Monday to find out what happened.**

An octogenarian from Long Island, who identified himself as Jake and requested his last name not be used, recalls the soap operas.



► SOUNDWAVES, continued from page 42

### Starling, McDonnell Upped at NPR

National Public Radio has promoted Mike Starling and Ellen McDonnell. Starling has been named

vice president of engineering, in charge of day-to-day operational management of engineering, which comprises three departments: new media, engineering technology and technical operations.



Starling came to NPR in 1989 as senior engineer. He has worked in both public and commercial broadcasting and is an SBE certified professional broadcasting engineer.

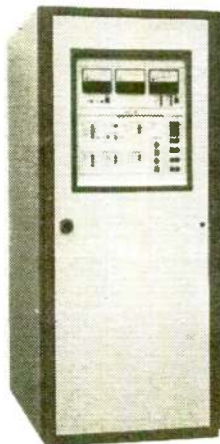
NPR named Ellen McDonnell as executive producer of the news program "Morning Edition." McDonnell has been a part of the "Morning Edition" team since 1979, most recently as senior producer.

Before coming to NPR, McDonnell was a news reporter in Washington. She has also worked at commercial radio and TV stations.

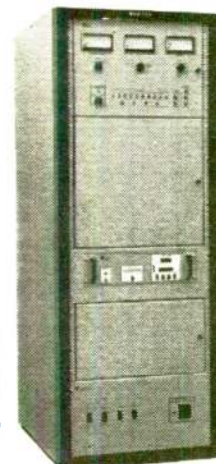


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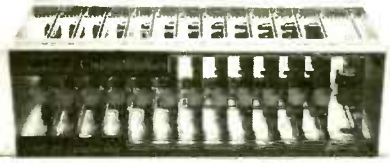
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READER SERVICE NO. 130



# Studio Sessions



**Time to Play!**  
**See Page 49**

Radio World

Resource for Radio Production and Recording

June 24, 1998

**PRODUCT EVALUATION**

## Roland DAW Has Effects and More

**Ty Ford**

In the June 10 *RW*, we began our look at the new version of the Roland VS-880 workstation — the VS-880-S1, with Roland digital signal processing on a drop-in DSP card built into the unit. This time out, the effects and sync capabilities of the unit get a workout.

To recap, the VS-880-S1 comes with 100 new preset effects patches based on 10 new algorithms. And one popular Roland/Boss toy made it into the new box: the VT-1 Voice Transformer. I tried it. It changed my sex, but it warbled and didn't really sound natural.

**What's new, mic?**

There is the COSM mic simulator that recreates the characteristics of the Neumann U 87 and U 47, AKG C451, Sennheiser MD421, Shure SM58 and SM57 microphones. It shifts the timbral and frequency response and, I suspect, the formants, making one mic sound sort of like another.

When the limiter is disabled, there is a strange phase thing going on in the cans that is a bit disconcerting. Do not expect to see studios tossing U 87s out the win-

dow for a VS-880-S1. One U 87 costs about the same as the street price of two VS-880-S1s. If you cannot hear the dif-

ference, no need to embarrass yourself by bragging about it.



Roland VS-880: New Effects Board Makes Difference

ference, no need to embarrass yourself by bragging about it.

Set the stereo inputs to InsertL and InsertR respectively, and the Voice

Canceller does a respectable job of getting rid of center-channel information. Vocals, bass lines, kick drums and anything else in the center of the mix disappears. There is a balance control that lets you chase after sources not directly in the center.

The Hum Canceller greatly reduces various buzzes you try to ignore during the recording process. It tamed the warm-up hum from my pre-CBS Fender Super Reverb amplifier, even as I stood jacked-in under a fluorescent light fixture.

The filter does take a bit off the top end, and voices sound chorused when adjusted too aggressively, but the cure is usually better than the disease.

The 19-band Vocoder is a very deep and pure effect with a stereo chorus and enough tweaks to find yourself — as I did — plugged in for about an hour, playing and singing stupid things, just to hear what it sounds like.

Warning, Will Robinson: *Please* do not show the Vocoder or the Voice Transformer to neophyte radio station

production people. The potential for abuse is enormous.

Less notable to me but maybe to you are the Lo-Fi Processor, Space Chorus (Dimension D), Reverb with gate and ducking on both Effect 1 & 2, four-band parametric EQ and 10-band graphic EQ.

**In the sync**

I got together with VS-880 user Brian Glock to see how easily two VS-880s would link up. Linking is achieved by feeding the mix from the slave machine through its S/PDIF port to the master machine and linking the two machines via MTC (MIDI Time Code).

We tried syncing up the demo recordings of "Fire In The Rain" that came on every VS-880. We got close, but there was enough delay to cause a slight flange when the same track from different machines was combined in mono. While I didn't have time to try it before press time, I know there is a new 30-step procedure to enhance sync that is downloadable from the Roland Support page, [www.rolandus.com/support/FAQs/sup-notes.html](http://www.rolandus.com/support/FAQs/sup-notes.html)

In terms of sound quality, the mic pre-amps ran out of usable gain (without noise) a little early. Later, when trying the built-in compressor/gate, I heard the hiss fall away as the expander did its job.

The input trim pot is tapered so that a lot of the gain happens in the last increment, which is also where the noise is. If you have the input trim up all the way, you will be recording some hiss. With 35 dB of gain from my GML mic pre, my 416 Sennheiser mic overloaded

See ROLAND, page 57 ▶

## As Creative as I Want To Be: An Observation

**Sallie Schneider Sauber**

There are two things I have learned in creating commercials for a living. First, production directors are as creative as they are allowed to be. After ten years in radio, I am still discovering new ways to be creative all the time. Thankfully, so far, no one has stood in my way.



Sallie Schneider Sauber

Second, I am never going to find the sound effect I want. At least not in a ready-to-use form.

Every other sound effect in the world

can be found in alphabetical order, from belches to Blackhawk helicopters. It seems as if I can find just about anything in one of four sound effects libraries, with the exception of the very sound effect I am looking for.

**Aaaugh!**

Sometimes I need a scream; a *man's* scream. What do I find? Several versions of a woman's scream. I may need a cold winter wind howling from the perspective of a person braving it, but end up with wind whistling through a slightly opened window.

A capable production rat can doctor up inadequate recordings with equalization, processing or adding other sounds to the mix. Sometimes the sound effect I want simply does not exist in pre-recorded form, although I am certain that just yesterday I saw that very sound effect on a CD somewhere.

It seems as if I spend more time ineffectively digging through catalogs than the time it would have taken me to simply record the sound myself. And naturally, if the sound exists in the library, it will be discovered two weeks later when I am looking for

See CREATIVE, page 53 ▶

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## PRODUCT EVALUATION

# Hafler TRM8 in the Jingle Mix

Ken R.

You probably know the name Hafler in association with power amplifiers, but did you know the Tempe, Ariz. company also makes speakers?

You do now, and so do we. Recently, a pair of Hafler TRM8 near-field monitors arrived in a huge crate for us here at Ken R. Music to examine.

What are the advantages to powered speakers? Cost for one. A pair of good powered speakers is priced less than a pair of non-powered speakers plus a power amplifier. Portability might be

one other factor if you have remote recording on your calendar. A self-contained amplifier provides a lot of sound from relatively small speakers.

I intend to present this review mostly from the non-technical viewpoint of a jingle writer, more concerned about how things sound than how they function. But first, a few notes to satisfy the tech-nerd in us all.

## Hefty Haflers

These are very substantial (35 lbs.) monitors that come in basic black. The only touch of color is a little green light

on each box to let you know they are powered up. These LEDs begin to flash red for clipping and stay red if there is about to be a meltdown.

The TRM8 powered monitors are designed to be fairly flat from roughly 100 Hz to 21 kHz but will pass signals down to 45 Hz. Each speaker has a high-frequency driver set above the low-frequency driver, mounted in cabinets measuring approximately 10 by 15 by 13 inches. The outside has a semi-gloss finish, and a rubber pad mounted on the underside controls vibration.

The concept behind the TRM8's

**Product Capsule:**  
Hafler TRM8 Powered Monitors

**Thumbs Up**

- ✓ Large sweet spot
- ✓ Multiple inputs and EQ options
- ✓ Lots of power

**Thumbs Down**

- ✓ Less "sizzle" and "air" in comparative tests

For more information contact Hafler in Arizona at (602) 967-3565, or circle Reader Service 86

Transconductance Nodal Voltage Amplifier structure is that the audio signal is allowed to pass through the amp at low voltage. The monitors feature an output stage with a simpler gain structure and shorter signal path than conventional high-voltage models. On the outside, the speakers are shaped to improve off-axis frequency response, which should enlarge your "sweet spot."

On the back are a set of unbalanced RCA jacks, balanced quarter-inch TRS phone jacks and XLR inputs. There is an input sensitivity adjustment that matches the monitor with signal levels coming off the mixer. A set of dip switches selects bass shelving (40 to 200 Hz) and treble shelving (3 to 20 kHz). The TRM8s are powered by a 120 VAC power line.

**These are very strong speakers with a big output. Little gain is called for when the monitors are turned up.**

I actually read the manual, only because I was unfamiliar with powered speakers. The manual is very complete, although at 30 pages for a pair of speakers, I think my car might have a smaller manual. Danger warnings are printed in several languages. *Achtung!*

I have run a very busy jingle studio for over 20 years and have never used powered monitors before. We have been using a big, old set of JBL 4411s on the wall and a pair of Tannoy 6.5 II near-field monitors that require a power amp.

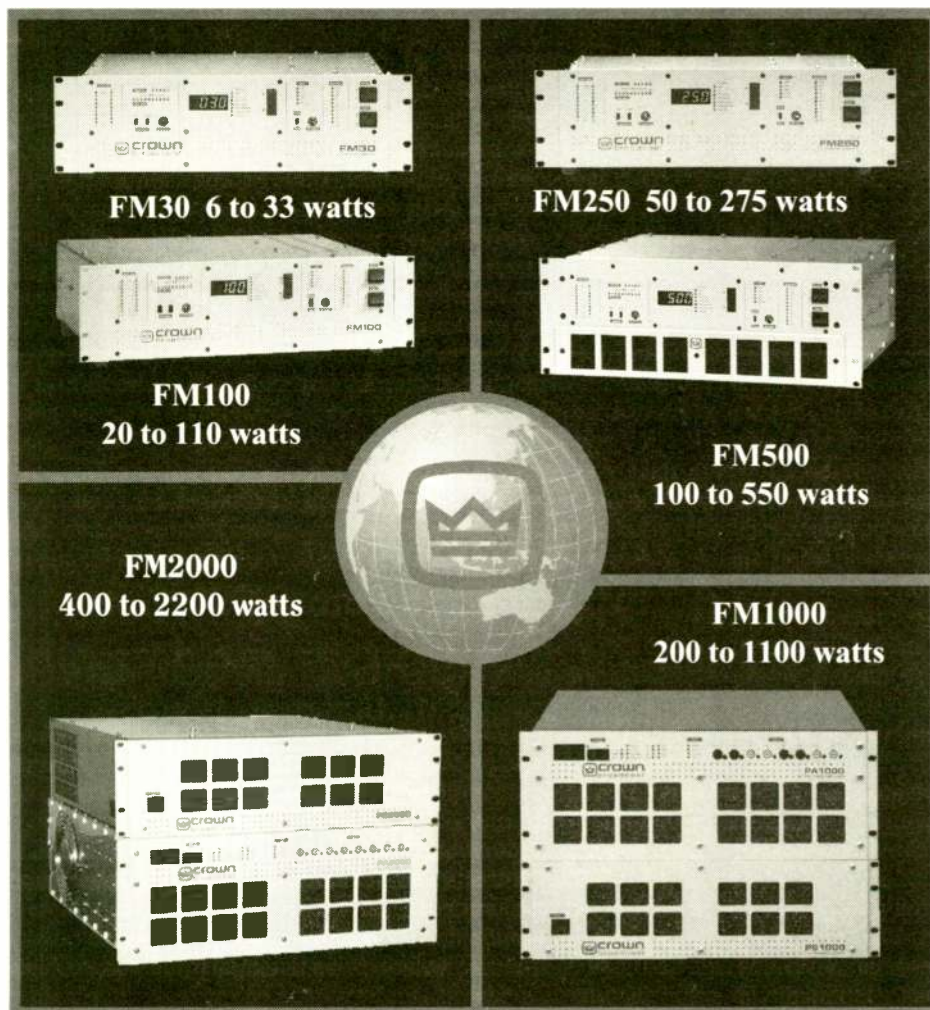
### In the sweet spot

We placed our new test speakers on the shelf above our console, about five feet apart and three feet from the mixing position. This put the speakers just about level with my ears while I sat in the mix position. For wall or ceiling mounting, Hafler suggests contacting OmniMount Systems at (602) 829-8000 to obtain the proper hardware. The speakers are built with mounting inserts in the base for this purpose.

We had a real live engineer hook up the TRM8s to minimize the chance of my blowing anything up. I wanted to be

See HAFLER, page 51 ▶

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PRODUCT EVALUATION

# Plain Labels Hide Solid Library

◀ **Sallie Schneider Sauber**

I wondered if there was anything left to say about music libraries that had not already been said.

I looked at the 16 compact discs in the Quixotic Production Music Library and sighed. The discs themselves are pretty boring to look at — no flashy logo or anything — just red and black print on a white background. But after listening through a few of the discs, I realized I would not have to repeat myself. This is a solid collection that proves the somewhat modified adage, “Never judge a music library by its CD cover.”

The Quixotic Music Production Library is a 16-CD set: 15 discs contain music; one is a sound effects disc. Each music CD contains 60 tracks, split between two categories — for instance, techno and disco teamed up together, or perhaps acoustic guitar and solo piano.

Like many other libraries, every bed or theme has a 60-second mix, a 30-second version and a 15-second edit, each on separate tracks for quick and easy cueing.

One notable gesture on the part of Quixotic Music is its low-pricing policy for college and public radio-affiliated stations, who could always use a break. Equally notable, the music beds on these CDs sound like songs — good songs. This stuff could almost get air play.

**Typecast**

I realize this sounds subjective, but there is something about most commercial music beds that say, “Hey, hi there, I’m a *commercial music bed*.” They always seem to identify themselves as such instantly.

Beyond the length of a selection, I have never been able to pinpoint just what it is about a music bed that makes it a music bed and not a song. I cannot explain it, but I recognize it when I hear it.

In the case of the Quixotic library, the writing and scoring are superb. Some of the modern alternative/industrial tracks are more together than a lot of the stuff we play on the radio. I would bet the folks at Quixotic would have a couple of hits on their hands if they would add a few lyrics to the mix.

Quixotic also must have spent some money on studio musicians. The solo piano section gave me goose bumps. My mother played a Steinway baby grand and I am convinced the musician on the disc is also playing one, or else a fine Steinway sample is in use. The sound is unmistakable.

**Studio use**

I used one of the Industrial cuts, “Pendulum,” on an image spot promoting our “Budweiser Weekend Blastoff.” The build was perfect and the cut was really rocking by the end of the promo. I used my “sexy announcer voice” and a NASA countdown behind the bed, and it really worked well. I was pleased by how well this bed jammed without being overly complicated or taking emphasis away from the information in the promo.

The Bluegrass and Country cuts — twang and all — have an air of intelligence about them, the musicianship and themes themselves are so good.

This really was the first time I heard a production library bluegrass section I could take seriously. Most country and/or bluegrass music beds sound hokey to me, leaving me no choice but to reserve them for humorous spots with a cartoonish backwoods theme.

Most all of the categories in the Quixotic library are well-represented by the music. I listened to every track on every disc for fear I was happening across only the really good stuff. As it turned out, it is *all* really good stuff.

I might believe Quixotic hired different musicians and writers for each of the

seven or so different styles of music. Each individual section is true to its genre of music and different from all the other sections. The feeling is as though capable and creative musical talents were hired for each style, from top-notch blues guitarists to new-age flutists.

**Going soft on us?**

It scares me to think I would ever make a conscious decision to listen to New Age music and like it. As far as I can tell, it will never happen. I will say, however, that Quixotic has put some interesting elements into this otherwise

droll, vanilla music style, such as actual chord changes and delays.

The Jazz music beds contain the elements that actually constitute jazz music. Man, what a concept. This is completely unlike the definition some libraries give “jazz”: miscellaneous cheese that cannot fit into any other category.

There is one cut called, “Fat Sakasnap.” I’m here to tell you *that* is a jazz track, complete with sax, guitar, tight snare and brushes, with each instrument doing its own thing in the proper jazz fashion.

The Drama and Suspense sections are theatrical, with long, drawn-out “Phantom of the Opera”-like minor chords, and great use of pipe organs, bells and strings.

The ‘50s and ‘60s section really does a

See MUSIC, page 49 ▶

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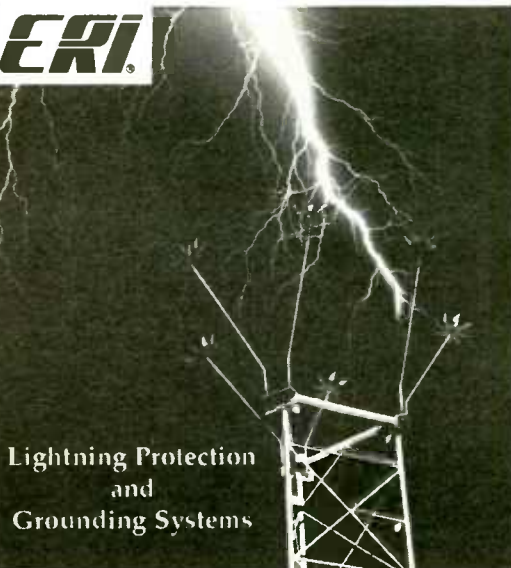
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# Quixotic Production Library

► MUSIC, continued from page 47

good job representing facets of rock in the early years, from Chuck Berry's 12-bar blues riffs to the Rolling Stones' "Honky Tonk" sound.

## Quack, crash, beep

The Sound Effects CD is filled with 94 cuts of people weighing themselves, radio dial-surfing and "taking a drag," to the sounds of various household appliances, telephone busy signals and glass breaking. The sound is of good quality and personal. Even the bathroom scale sound effect is decipherable.

I would say 90 percent of the sound effects here would not be construed as anything other than their intended sound. A radio station down the road from us ran a contest in which listeners would call in and identify a sound effect. The station gave up because nobody could figure out what these sound effects were.

## The Dark Side

As with anything good and wonderful, there has to be a downside.

A couple of elements are disappointing. The news/talk beds are a little too big and serious-sounding for small-market radio stations like mine. It is hard to picture our news director saying, "This is Bob Beyette. News this hour is brought to you by Fred's Bank," underscored by a music bed more appropriate for "War in the Gulf."

The hip-hop themes were unique, but all were moderately slow-to-medium tempo. I wanted some hot and heavy hip-hop for that huge dance club that may someday come to the area and advertise on my station.

The Quixotic rate card is simple: The larger the market, the higher the smaller the market, the lower the fee. Apparently the license is permanent but non-exclusive; it is yours to keep, but the station down the road can buy it, too.

Quixotic is "The Sound Alternative," as depicted by the rate card. I say it is a sound alternative to many music libraries out there now. Quixotic is musical, true to each musical style represented and was enjoyable to listen to.



For information, contact, Quixotic Music in Oregon at 888-33-Sound or circle Reader Service 112.

Sallie Schneider Sauber is production director at WATH(AM)-WXTQ(FM), Athens, Ohio, and a frequent contributor to Studio Sessions.

# Audio Software 'Just For Fun'

Work and Play Go Together in the Studio, So Why Not Try Some Software That Enhances the Process?

Alan R. Peterson

Production people like to play as hard as they work. It is often through a certain

your own.

If you require software or hardware components meant for dependable day-to-day radio use, it is best to go with

where to find them, just for fun.

Many an on-air jock would like his/her own "instant replay" type of box. The PC Disc Jockey comes close.

This program runs under Windows 95 on a minimum 486 PC and allows access to over 800 sound events. An MPEG decoder module is included to play back compressed files. PC Disc Jockey requires a minimum Pentium 75 for MPEG decoding.

Programmer Daniel Lewis created PC Disc Jockey primarily as an audio event playback device for baseball games and other sporting events, but it is equally at home in an on-air talent's personal laptop PC, allowing an entire show's worth of effects to be transported and brought to live events.

Figure 1 shows a functioning PC Disc Jockey page. Note the Fader control toward the top; abrupt cutoffs are faded in and out without abrupt cutoffs and without the use of a hardware mixer. Lewis

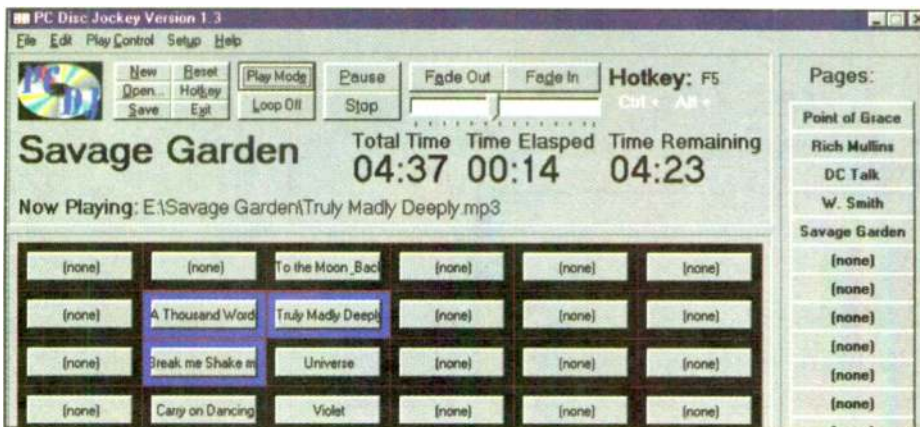


Figure 1: PC Disc Jockey turns a computer into an instant recall-type player.

amount of creative play that new ideas and production styles are born. A number of Internet sites feature audio software waiting to be discovered by creative production engineers.

Some of this software is free. Some is offered inexpensively as shareware, while other products let you mess around before giving you the sales pitch. Many are meant as serious tools, but a great deal are just fun to have knocking around, hence this list.

All Web addresses shown are accurate at the time of this writing and RW makes no guarantee as to the usefulness, functionality or product support of the software mentioned here — just that it is available. Basically, you are on



Figure 2: MusicMatch JukeBox for home music automation.

products supported by known manufacturers. But if you are the type who likes to touch wires together to watch them spark, here are several programs and

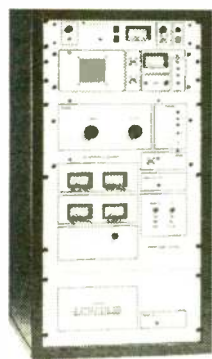
noted a slight delay when audio is called for, but hopes to have this resolved by the next release.

See FUN, page 50 ►

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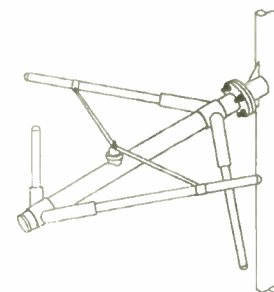
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# Software Creates PC Playground

► FUN, continued from page 49

PC Disc Jockey is offered at a typically low shareware price (around \$50), but Lewis offers further special pricing for small schools and non-profit operations. Find a downloadable demo at [www.town.com/hp/zero\\_999/pcdj/index.html](http://www.town.com/hp/zero_999/pcdj/index.html)

## Voice FX

Strange vocal effects can be created by using Voice FX, a \$69 program from Synoptic Software. Record your voice or any sample file into a PC, then use the 40

automation system with a music selector database — nearly an entire station music and programming department in a box.

The bundle combines a CD ripper (which copies an audio CD directly into the computer), MPEG 3 support, Real Audio encoding, a music database and player. The database system allows a user to sort a library by artist, title or other database field. The Jukebox can also generate a playlist based on what type of music flow the user wishes.

System requirements call for a

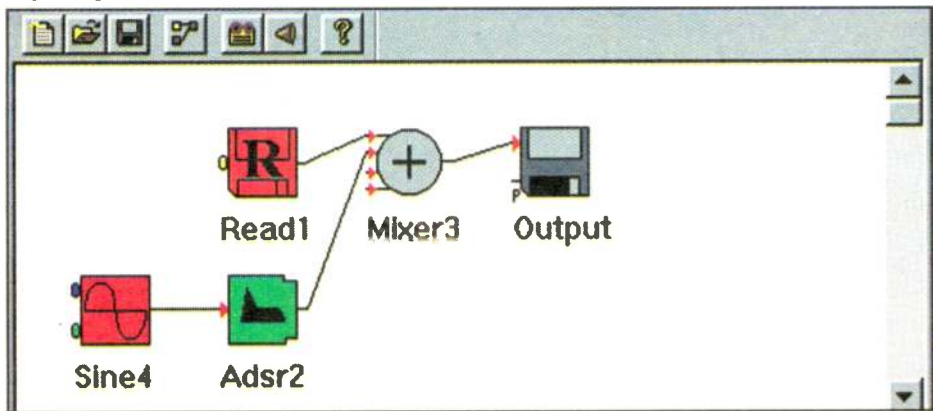


Figure 3: Click the Quack icons together to make new WAV files.

presets of Voice FX to alter the characteristics of the file.

The effects include acoustic spaces such as airports and cathedrals; alien creature processing; stammering; echoes and reverses; dynamic and resonant filters; robotic effects and jammed transmissions. A feature-limit demo can be found at [www.synoptic.net](http://www.synoptic.net)

Note that if you intend to buy the program, you may receive it under a different name. Because "Voice FX" is a trademarked name actually belonging to another U.S. company unrelated to Synoptic Software, the product is likely available domestically under a different name and packaging.

Home jukeboxes have come of age with the MusicMatch Jukebox (Figure 2), a software package that combines an

Pentium 166 running Windows 95 or 98 and a Red Book-compatible CD-ROM drive. [www.musicmatch.com](http://www.musicmatch.com)

## Audio Library

Similarly, Audio Library from Celestial Tech ([www.celestialtech.com](http://www.celestialtech.com)) also turns a multimedia-equipped computer into a jukebox.

Audio Library uses PAC compression to transfer and compress audio in real time to a 200 MHz Pentium or better computer. Depending on the degree of compression, it is possible to store up to 60 hours of near-CD-quality music on a 2 GB hard drive.

This program also stores music information in a database. Songs are cross-referenced by playlists, categories and artists. Any song, list, or category can be

manually programmed, played randomly or in order. See Figure 3.

Suggested uses for Audio Library include wedding reception DJ services. With the potential for pre-programming and playing back dozens of hours of music from a simple laptop PC, the life of the moonlighting DJ-for-hire — who now must transport heavy cases filled with LPs and CDs — may well have become a lot less complicated.

## Quack

When a silly mood strikes, the Quack Sound Effects Studio is ideal. This program allows the creation of sound effect WAV files from scratch by tacking together icons representing synthesizer components. By connecting icons such as oscillators and filters together, it is possible to visualize a sound before it is generated, just the way it was done back in the days of analog synthesis.

Once a Patch Map is created by linking the desired synthesizer components (Figure 3), the "Create" button is clicked to generate the WAV file. Complex sounds can be created in minutes.

Quack can be found by going through Dave Central, a shareware "warehouse" on the Internet. Find it by visiting [www.davecentral.com](http://www.davecentral.com) then click the "Audio" icon.

WaveSurgeon automatically finds drum segments and loop points within a sample, then saves each segment as a WAV file along with a MIDI timing template based on the sample itself. Processing options allow conversion between mono and stereo, normalization of samples and automatic segmenting into eight, 16 or 32 parts.

WaveSurgeon can slow down or speed up loops without changing pitch; transpose or pitch-bend loops without changing the speed; automatically pick out drum segments from loops; and export a sample via Windows clipboard to a dedicated sample editor, allowing external processing before being pasted back into WaveSurgeon. See Figure 4.

Square Circle Software is the company responsible for WaveSurgeon. Find a demo at [www.wavesurgeon.com](http://www.wavesurgeon.com)

## Wind Chimes

Finally, Syntrellium Software — the company that created the \$50 Cool Edit audio editor — has a fun program called Wind Chimes, which is just what the name suggests: it mimics the sound and random behavior of actual wind chimes.

Wind Chimes communicates with the MIDI synthesizer built into most soundcards, playing random notes specified in a particular musical scale. A setup screen shown in Figure 5 lets the user pick wind speed (from a gentle breeze to a raging storm), the desired scale and what MIDI instrument to use. The program normally

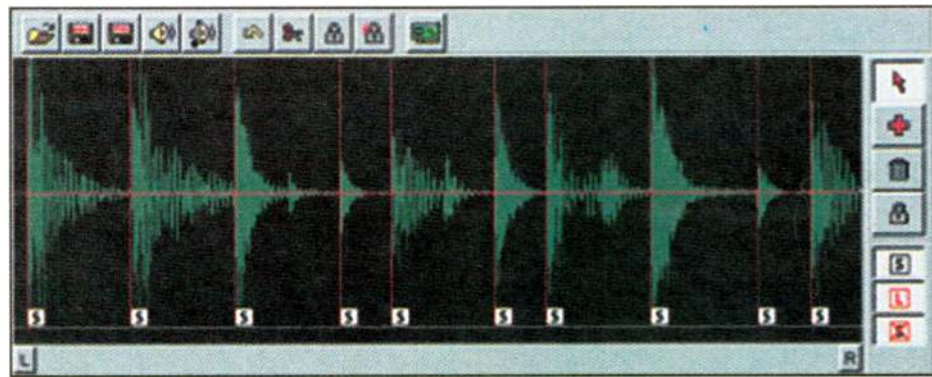


Figure 4: Wave Surgeon drops edit points on a drum track.

A similar but more elaborate program, Virtual Waves, also synthesizes, processes and analyzes sound. Various modules — consisting of oscillators, filters, modulators and more — can be clicked and connected together to function as a high-end synthesizer. Once parameters have

defaults to the General MIDI "Tubular Bell" setting, but can be set to anything from piano tones to gunshots.

Wind Chimes also integrates with Kaleidoscope 95, a screen-saver authored by Syntrellium. When the two programs run simultaneously, the audio response

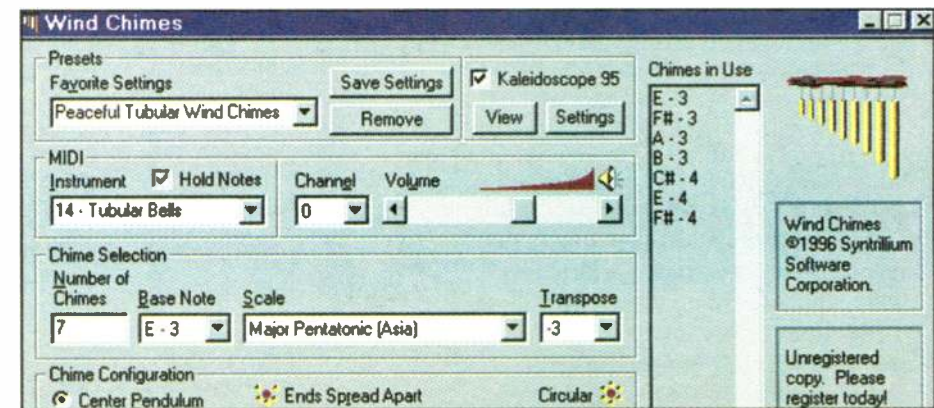


Figure 5: Meditate the digital way with Wind Chimes.

been adjusted, the resulting audio is calculated using the control panel and saved in WAV format. Unique types of synthesis such as Waveform Sequencer and Spectral Sketch Pad are included.

A Virtual Waves demo is downloadable from Synoptic Software. See the entry for Voice FX earlier in this article.

Producers looking to experiment with hip-hop music and drum loops may want to try out WaveSurgeon, a breakbeat tool designed to automate sample editing.

feature causes the Kaleidoscope screen to respond directly to the sound coming from Wind Chimes.

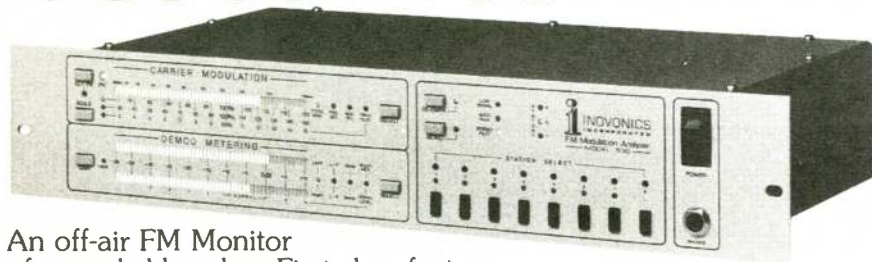
Not terribly useful, but fun. Which means you may not get much work done.

■ ■ ■

To find more audio shareware and freeware programs, visit [www.davecentral.com](http://www.davecentral.com)

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# Mixing Radio Jingles With Hafler Monitors

► **HAFLER**, continued from page 46  
able to A/B the speakers with our existing nearfields, so we went to Radio Shack and got an audio/video selector switch box. When we would punch the "A" button, we would get the Tannoys. Hitting "B" would give us the powered Haflers.

The first thing I noticed when I selected the latter was a hiss at what used to be our normal listening volume. This was disconcerting until my engineer pointed out that we did not need to turn the Haflers up as loud when audio was present. These are very strong speakers with a big output so very little gain is called for when the monitors are turned up.

When I brought the dial back down to the new normal listening level, the hiss

**I never used more than about 10 percent of the volume on the Haflers — they had power to spare.**

became a non-issue. Hafler claims a signal-to-noise ratio of better than 100 dB.

I ran a variety of test audio through these speakers, comparing them to our other nearfields. Overall, the Haflers had a little better bass definition and a beefier sound. I also felt that the dispersion in the room was a little better. I could move around, stand up, sit down and still get good stereo definition. When switching from the Haflers back to the Tannoys, I noticed the latter had a little more sizzle on the high end. There was something about the cymbals, something about the "air" in the vocals that I perceived to be better in the Tannoys.

The Haflers were fuller-sounding, without being muddy. When I stepped back about 10 feet from the monitors and cranked them up a bit, the Haflers yielded a much more full-bodied, robust sound. Interestingly, I never used more than about 10 percent of the available volume on the Haflers — they had power to spare. When I did listen at louder levels I noticed no distortion. Again, we used very subjective listening tests with radio jingles as our main audio source.

Out of fairness, we undertook a slightly more objective measurement. I selected test tones from our board at various frequencies, at comparable volume levels between the Tannoys and the Haflers.

Our findings: At 40 Hz, the Haflers rock. At 100 Hz, both were about the same. At 1 kHz there was a very slight audible difference, with the Tannoys sounding thinner. Both sets carried 10 kHz very cleanly, but it was painful to listen to this pitch on both. I would not recommend listening to loud 10 kHz tones very often, or ever if possible.

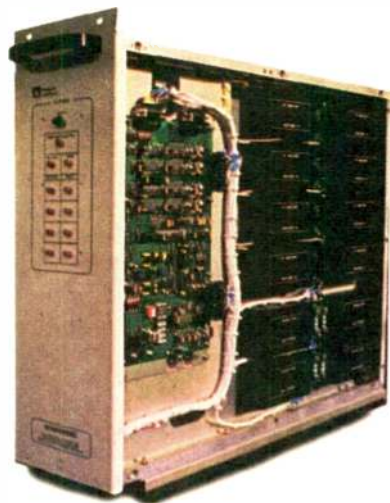
No huge surprises here. The Hafler TRM8s are very solid and substantial powered near-field monitors. Their sound should impress your clients. The monitors are well-planned and, although a bit pricey on their own at \$2,400 per pair, consider that they do not require you to purchase a separate amplifier.

■ ■ ■

*Ken R. produces radio jingles through his company Ken R. Music in Toledo, Ohio, and contributes to Studio Sessions. Reach him at kenr5367@aol.com*



Our author put the TRM8s to work in his jingle studio.



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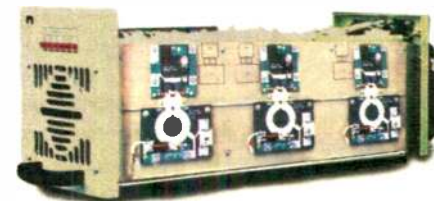
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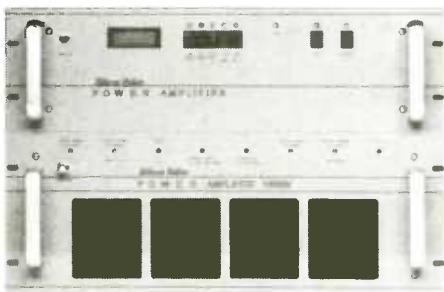


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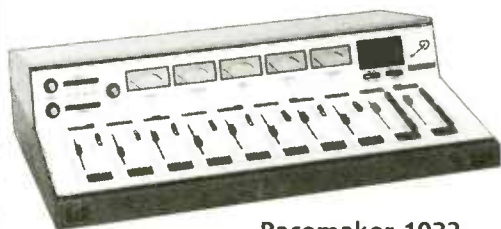
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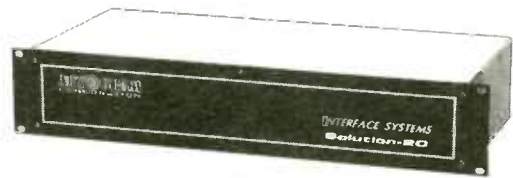
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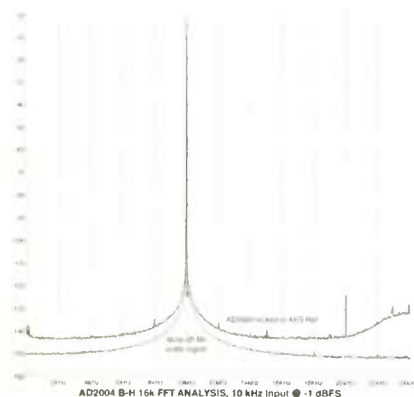
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READER SERVICE NO. 52



# Bubbles, Bloopers and Big Boats

► CREATIVE, continued from page 45 something else.

Tell me if this sounds familiar: The sound effect for a thick bubbling or boiling sound is *not* listed under the seemingly obvious "B" section of the catalog. But there it is listed under "L" for lava bubbles.

Only after having created my own thick bubbling effect by considerably pitch-shifting boiling water and bumping up the low end did I discover lava bubbles by accident.

## Man the lifeboats

There are some sound effects you are simply never going to find, like the sound of the Titanic sinking.

I had to create this one at my station by mixing those lava bubbles with a creaking wooden boat and a holding tank being drained. A touch of reverb, and the client loved it.

Some sound effects are extremely easy to produce in the studio.

**The first take was the best. One singer forgot the words and the whole thing was so funny I decided to use it.**

Unwrapping a present? No need to go to the CD collection. Just crinkle a piece of dead copy a foot from the microphone. Somebody vocalizing their thoughts while writing them down is done simply by scribbling on a clipboard while voicing the copy. A commercial we produced for Conn's Potato Chips included a slow bite into a Dorito chip, which was thicker and sounded better on mic than the actual product.

## Everyone is a star

The sales people love my frequent interruptions for group sound effects, like the time I had them walk across the parking lot, mumbling quietly to each other to simulate a sight-seeing tour. I often gather them into the production studio for group reactions — *Ooh! Ahh!*

One piece of copy called for a phone receptionist to say, "Thanks for calling On Call Medical Associates. What time would you like to make an appointment?" Rather than try to fake a receptionist on-mic and EQ it to sound like a phone, I just telephoned On Call and recorded the actual receptionist, saying her line quite naturally.

There are always a couple of complaints when sirens or pagers are in a spot or promo. One devoted sales person reached for her own pager while driving because she thought she heard it go off. My brother once started to pull off the road before he realized the siren he heard was on one of my commercials.

It is interesting to note television shows commonly use the sound of a pager being turned on rather than the actual paging sound. I suppose this way no one is distracted from the program by running off to check a pager.

A few of us at the station can, fortunately, carry a tune. Our program director and I have been in a couple of bands. Jennifer from our sales force once sang the National Anthem at a White Sox game during her honeymoon.

One of my commercials called for three people to sing "Row, Row, Row Your Boat" in a round. My initial intention was for the singers to be somewhat serious. The first take was the best because it wasn't rehearsed. When one singer forgot the words, it made the whole thing so funny I decided to use it.

This spot was not forgotten. A year later, two clients wanted us to sing their spots too.

One spot was for a weight loss center,

to be sung *a capella* (voice with no accompanying instruments —ed.) and very seriously. The other spot was for a restaurant called The Blue Moon Café, with silly singing overdubbed atop one of our Network music beds.

## Who wants to sing this one?

Clients pay thousands for a good jingle, yet we were being asked to sing for the regular price of a spot. Nobody wanted to sing the weight loss spot and I was not too keen on risking humiliation trying to sound like a real jingle singer. I was not sure where to draw the line, so Jennifer opted to perform the one with music behind it.

The music bed was "Twinkle Twinkle Little Star," over which she sang, "Let the blue moon shine on you, inside Swindel-fish Sa-loon ... " The next few bars were an instrumental donut to insert the special of the week. Then Jennifer came back in at the end, singing, "Let the Blue Moon shine — on — you."

The whole thing was pretty simple to do and worked quite well. Maybe I can convince the sales staff to sell this idea to other clients and charge a higher price for in-house jingles. Then maybe we could make some pretty good money.

Even I will sing to that!

■■■

*Sallie Schnieder Sauber is production director at WATH(AM)/WXTQ(FM), Athens, Ohio, and a frequent contributor to Studio Sessions. Read her review of the Quixotic Music Library on page 47.*



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# ◆ PRODUCT GUIDE ◆

## Products for Radio Production

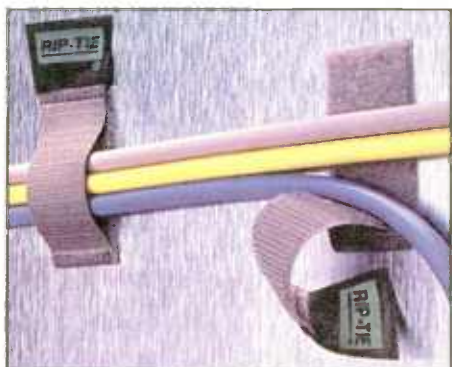
Mail info and photos to: RW Product Guide, P.O. Box 1214, Falls Church, VA 22041

### Rip-Tie CableCatch

Studios making the transition to digital and/or optical cabling will find Rip-Tie CableCatch fasteners helpful, whether for permanent cable installation or temporary routings.

A Rip-Tie CableCatch is a Velcro loop with a strong adhesive backing and a convenient pull-tab. The adhesive backing is attached to the underside of a console or interior of a rack cabinet. Cords and cables are bundled together and held snug inside the CableCatch. The pull-tab releases the bundle so new

cables can be added or other rerouted. Company testing has shown the



CableCatch is good for more than 10,000 closure cycles and claims the cable organizer is more environmentally friendly than disposable nylon cable ties.

For information, contact The Rip-Tie Company in San Francisco at (415) 543-0170 or circle Reader Service 110.

### Community Professional Speakers

Designed for use in audio-visual systems and meeting rooms, the

Community CPL 23 and CPL 27 speakers are useful in radio station conference rooms for reinforcement and playback.

The CPL 23 is a two-way system with an 8-inch low-frequency driver and 1-inch high-frequency dome driver. Power handling capacity is 100 W RMS. The CPL 27 has two LF drivers and a 1-inch dome HF driver mounted coaxially on the upper LF speaker. Power handling is 200 W RMS.



Both speakers are manufactured from 3/4-inch wood composite with 16-gauge perforated steel grilles and are available in white or black enclosures. External rigging points allow the cabinets to be mounted in different ways. Neutrik Speakon connectors are mounted on steel input panels. Both carry a five-year warranty.

For information, contact Community Professional Loudspeakers in Pennsylvania at (610) 876-3400 or circle Reader Service 162.

### R-Columbia Intercom System

Appropriate for use in directing radio drama and coordinating sports events, the R-Columbia MS/PW-22 is a lightweight, single-channel portable intercom system that can be interconnected with other units by standard 3-conductor XLR cables.



Communication between directors and technicians is important when cueing effects or performers. The single-channel main unit can be used with a gooseneck mic or headset/mic combo. Each main station can handle up to 10 headset stations each, and plug-in slave units increase capacity by ten more each time.

The main unit has a line-level input to monitor programming and also has the ability to switch mic audio directly into a PA system for stage announcing.

For information, contact R-Columbia Products in Illinois at (847) 432-7915 or circle Reader Service 188.

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Prices shown are published manufacturer's list prices as of 3/1/98



## DIGITAL DOMAIN

# DVD-Audio: Are We Getting Close?

Recording and Production Studios Are Adding DVD Mastering Suites With Flexible 5.1-Channel Monitoring

Mel Lambert

DVD — three letters that stand for Digital Versatile Disc — is impacting a growing number of audio and video producers across our fair land.

While the reservations originally expressed by studios about piracy and other licensing abuses have now been mostly resolved (with several turning to the new Divx format for help in only allowing pay-per-play for rentals), the shelves of specialty stores are filling up with an impressive number of DVD software offerings.

Note the "V" in "DVD" was used previously to designate *video*. Its innovators decided to expand the potential of their data-hungry peripheral markets into a whole host of peripheral markets. In terms of a replacement for our familiar VHS and Betamax decks, DVD has a lot to offer, especially when recorders appear in the next several months. And things on the audio front are warming up as well.

## Lot of space

It has not escaped the industry's attention that the DVD format offers a staggering storage capacity: up to 17 GB of data. While the DVD-Video format includes variable bit-rate, MPEG 2-encoded video, eight streams of data-compressed or PCM audio, 32 subtitle streams, interactive menus plus other functions, the landscape is still empty for audio-only applications. But it is a topology that is destined to fill up with a number of applications looking for a high-capacity data carrier.

There are already well-researched proposals for an audio-only DVD that might offer as many as a dozen discrete, non-data compressed playback channels. One format that has a great deal of appeal is, in essence, a version offering the familiar 5.1-channel discrete surround-sound configuration offered by DVD-Video. The difference is, the data to be mounted would be linear PCM rather than Dolby AC3-compressed material.

There is nothing inherently wrong with AC3 data-reduction techniques, nor its European cousin, MPEG-2. Yet if there is no reason to stomp on the audio to pack more data onto the disk, perhaps we might take advantage of the sonic enhancements offered by conventional linear PCM encoding.

## Getting fancy

Now that consumers are equipping their TV viewing rooms and dens with sophisticated home-theater systems offering as many as six playback channels, there exists a growing need for additional, non-picture-related software. Classical, non-picture-related discrete left-center-right and stereo-surround playback in an attempt to recreate the realism of a concert hall performance.

Consider the possibilities for popular rock music, with five potential directions for sonic invasion in addition to the low-frequency extension (LFE) subwoofer channel.

The final stinger lies in our visually-gifted brethren, television.

The coming evolution in digital TV will mean enhanced quality pictures via high-capacity cable, satellite and conventional broadcast outlets in addition

## One proposed DVD-Audio format is expected to be finalized by midsummer.

to AC3-encoded 5.1-channel audio. Material that is not being produced with at least some nod in the direction of surround sound is going to be eclipsed by programming that does. The time to climb aboard the discrete multichannel bandwagon is now.

According to recent reports, one proposed DVD-Audio format is expected to be finalized by midsummer, with commercial players being made available as early as next year. Various uncompressed PCM audio formats would provide producers, artists and record labels with the ability to offset playing time against enhanced sampling rates and extended word lengths.

Currently, "96/24" is the hot buzzword, standing for 96 kHz with 24-bit resolution. The format would also allow artists some tradeoff playing time to include, for example, an optional music.

## All on one disc

While details are still sketchy, one prominent proposal calls for mono, stereo or multichannel uncompressed PCM audio, with compressed-audio options coexisting on the same disc.

This draft supports a 64-minute, five-channel, linear-PCM sequence on Data Layer No.1, utilizing three 96 kHz/24-bit channels across Left-Center-Right (LCR), plus two 48 kHz/24-bit surround channels. Interestingly, a playback capacity could be offered for 5.1-channel material with three 96/24 channels across the front, plus 48/16 stereo surround and LFE channels.

I understand that, because it would exceed DVD's maximum data rate of 9.22 Mbps, this format cannot support either 5.1- or 6-channel PCM-encoded material with 96/24 across all channels. The math simply will not let us get there from here.

The proposed specification also supports 192 and 176.4 kHz sampling rates at up to 24-bit resolution. Materials coded to 192/24, for example, would play for up to 67 minutes via a single DVD layer. And, of course, playback times would be doubled via dual-layer DVD discs. Japan currently leads this market, according to recent reports, with more than 100 dual-layer DVD titles currently available.

Of the possible compressed formats being considered as options for multichannel offerings, several groups are looking at the Sony/Philips Direct

Stream Digital (DSD) format, as well as a number of lossless coding schemes.

Of the currently available data-reduction schemes being used for multichannel DVD and laserdisc releases, both Dolby Digital and DTS are casting their corporate hats into the ring, and proposing audio-only versions that can utilize existing AC3 and DTS decoding hard-

ware. Rumor also has it that Sony will continue to market its SDDS 7.1-channel system for movie theaters, but not as a consumer format.

One problem is building DVD players that will recognize all of the current and just-around-the-corner formats. How this potential Tower of Babel gets resolved remains to be seen. One suggestion has been to offer programmable players that could be updated via a special, factory-authorized disc. This disc would reprogram a decoder chip to handle new or emerging compression schemes and playback formats.

And for home systems that do not have the full 5.1-channel playback speakers, there is also talk of offering the ability to place special codes in the bit stream that would instruct suitably equipped players to fold down or

collapse the material so that it is fully compatible with a conventional two-channel stereo playback system. There is even talk of instructing a DSP section of the DVD player or external decoder to re-create a characteristic acoustic that mimics that of the recording venue.

## Hear the band

As will be readily appreciated, the future possibilities for DVD-Audio are very exciting. In response, a growing number of recording and production studios around the world are adding DVD mastering suites with flexible 5.1-channel monitoring. And the first DVD music single has already arrived on the scene.

News was recently posted on **RW Online** of a new DVD single from the Pioneer Music Group, a subsidiary of Pioneer Electronic Corp. The debut album "Collide" from the Michigan band Full on the Mouth features a 5.1-channel mix of the song "People Mover."

According to Charlie Lico, CEO of Pioneer Music Group, "We felt that a 5.1 surround sound mix would be a great medium to showcase the capabilities and technology of DVD and the electronic elements of Full on the Mouth."

Maybe one or two of the more innovative broadcasting groups might benefit from investigating ways of securing either more spectrum space on their existing carrier, or investigating techniques for broadcasting multichannel audio in data-reduced formats.

The future beckons.

■ ■ ■

Mel Lambert is principal of Media&Marketing in Los Angeles. He can be reached at [mediapr@earthlink.net](mailto:mediapr@earthlink.net)

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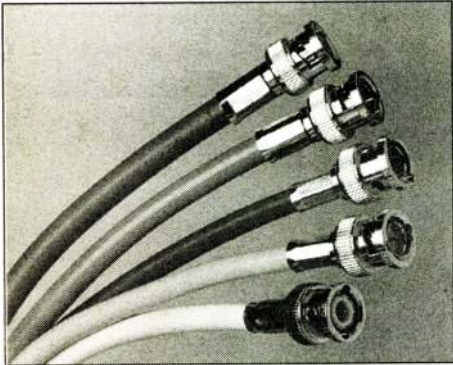
## Products for the Radio Broadcast Professional

Mail info and photos to: RW Marketplace, P.O. Box 1214, Falls Church, VA 22041

### Bomar Delivers New Line of Connectors

**Bomar Interconnect Products** has released a full line of Specialty Broadcast Connectors exclusively for broadcast studio use.

The SBC Series includes several popular RF types of connectors: BNC, N, TNC and F are featured in the new line. All connectors are engineered of precision-machined brass with a heavy, bright nickel plating. Additionally, they feature



Teflon insulators and gold plated, semi-captive contacts to ensure continuous reliability.

To simplify orders and inventory management, the part numbers of the SBC Series match those of the leading broadcast manufacturer. This means a competitor's connector for an 8281 cable is labeled as "SBC8281."

The SBC Series requires no special tooling, however, hand crimp tools to fit each connector are available from Bomar.

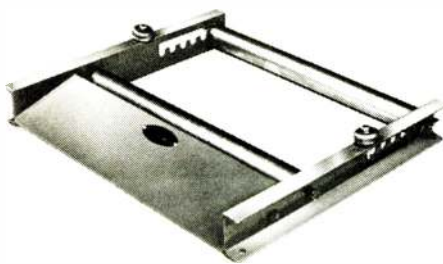
For more information, contact Bomar in New Jersey at (973) 347-4040; fax (973) 347-2111; or circle Reader Service 165.

### Portable Reel Platform

**Roll-A-Reel** offers its Style A product for efficient payout and take-up of cable, wire, rope or anything stored on reels.

The Style A Roll-A-Reel is a structural steel platform — 31-1/2 inches wide by 28 inches deep. It is equipped with a permanently mounted heavy duty ball bearing roller assembly at the front and an adjustable roller assembly at the rear. The unit accommodates reels up to 28 inches wide and is load rated per CEMA standards at 1,500 pounds.

The rear roller can be adjusted without tools to any of six positions to accommo-



date reels of various diameters. The front roller has a positive spring loaded lock which facilitates reel loading and unloading.

The platform has a built-in steel ramp permitting one man to safely load the reel with minimum effort and without the need for lifting equipment or jacks. As an

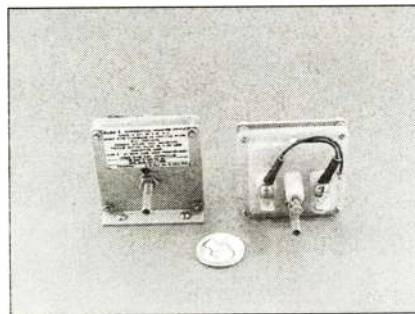
added safety factor, the reel is never more than four inches from the floor.

For more information, contact Roll-A-Reel Company in Ohio at (513) 761-8500, or circle Reader Service 139.

### Air Cooling Monitor

The Model E switches from **The Henry Dietz Company** are used to detect the loss of air cooling due to blower failure, dirty air filters or blockage of air intake in small-sized, critical air-cooled equipment.

The Dietz Model E differential pressure switches are the smallest size possible (approx. 2 by 2 by 1-1/2 inches), consistent with the fact they must be of a size capable of operating on ultra-low pressure and have no detectable on/off switch differential. These are used as replacements for smaller switches that, due to size limitation, require 2-1/2 times more pressure for actuation, and lack the sensitivity of the Model E switches.



The switches are supplied with normally closed gold contacts, which are open during proper airflow. Using normally closed contacts makes the extreme low operating pressure possible. Because the switch is designed for low voltage and current use with logic circuits, an inverter circuit can be used to make the switch function as a normally closed unit when there is airflow.

Special Model E switches can be obtained for 120 VAC use, requiring the switches be connected in series with the load and supplied with an alternating current.

For more information, contact The Henry Dietz Company in New York at (718) 728-3976; fax (718) 726-7270; or circle Reader Service 190.

### Post-Tensioned Structure

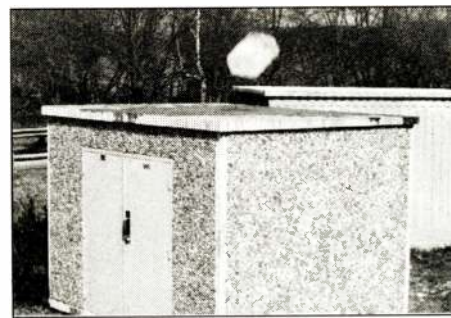
**EASI-SET Industries** has added a post-tensioned design to its pre-cast concrete EASI-SET building.

The improved structure will withstand the collision a 100-pound block of ice falling from 200 feet without suffering damage. The new post-tensioned design increases the punch-shear resistance of the roof and the floor by 28 percent over the previous patented EASI-SET system.

The design also increases the uniform radial compression forces in the slab by 33 percent. The overall result is a roof and floor system impervious to water penetration without the use of concrete sealers or membranes.

The EASI-SET building is a strong environment for electrical controls, transmitters and other communications and mechanical equipment. It is available throughout the U.S., Canada and Puerto

Rico, in clear roof spans of 12, 20, 24, 30 and 40 feet.

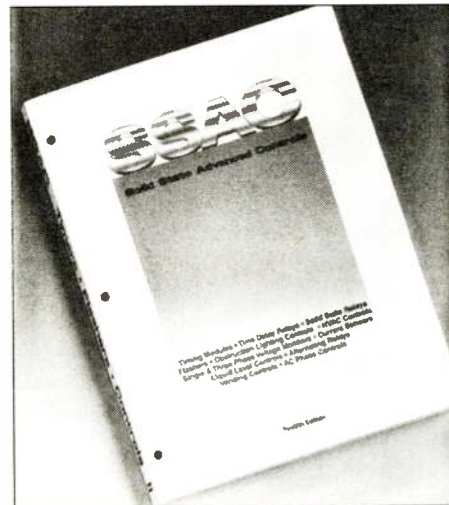


The maintenance-free, transportable building protects equipment and materials from weather, fire and theft, and can withstand Zone 4 seismic activity as well as winds up to 150 miles per hour. Installation takes less than a day in most cases, as there is no need for foundations or footings.

For more information, contact EASI-SET Industries in Virginia at (540) 439-8911; fax (540) 439-1232; or circle Reader Service 216.

### SSAC Publishes New Reference Guide

Electronic controls manufacturer **SSAC** has just released its 12th Edition of its Solid State Timers and Control Catalog. It is particularly helpful for engineers needing a source of control components for HVAC and power maintenance



This 352-page product selection guide and application manual provides concise data and application tips unavailable elsewhere. A revised product selection guide organized by mode of operation speeds consists of: Time Delay Relays, Solid State Timing Modules, Flashers, HVAC Timers and Controls, Three-Phase Voltage Monitors, AC Current Sensors, Alternating Relays and more than 150 additional controls.

Each section has its own selection chart, and double indexing and sectional tabs streamline reference time. A new products section has been added to the 12th edition, along with expanded application notes and information about quality control and custom product design programs from SSAC.

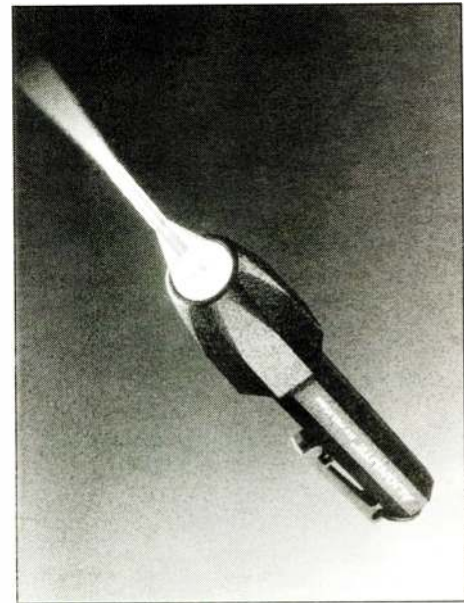
The SSAC Solid State Timers and Controls Catalog is free to industry users.

For more information, contact SSAC in New York at (315) 638-1300; fax (315) 638-0333; or circle Reader Service 164.

### Lighted Alignment Tool

The new **Pelican AlignLite** alignment tool has a built-in light designed to illuminate tight spaces where electronic calibrations and adjustments must be made.

This tool makes it easy to see and access small electronic components in limited light. The 6,000-candlepower xenon beam lights up the darkest corners of electronic devices and chassis. When the tool tip is detached, the AlignLite may be used as a pocket light. It is submersible to 500 feet and is FM, CSA and CENELEC approved.



The light is 600 percent brighter than ordinary flashlights and is made of chemically resistant Xenon. The package includes two alignment tool screw tips, a pair of AAA Energizer batteries and two vision aid lenses.

For more information, contact Pelican Products in California at (310) 326-4700; fax (310) 326-3311; or circle Reader Service 138.

### Signal Processing for Web

The Omnia.net digital audio signal processor from **Cutting Edge** is now available to broadcasters and others who wish to improve the sound of their Internet Webcasts.

Currently, radio stations achieve a distinctive sonic personality by using audio signal processing equipment. Until now, no such tools existed to provide a similar benefit for the requirements of audio transmission on the Internet. The introduction of Omnia.net now gives Webcasters such capabilities.

Omnia.net is configured by choosing presets that are rooted in the transmission bitrate. The system delivers a digital audio signal that is tailored for transmission over the Internet, heightening the listening experience.

Thus far, the Omnia.net system has been operating continuously in Webcasts by Superadio ([www.superadio.com](http://www.superadio.com)) and WFBQ(FM) in Indianapolis, Ind. ([www.wfbq.com](http://www.wfbq.com)).

For more information, contact Cutting Edge in Ohio at (216) 241-3343; fax (216) 241-4103; or circle Reader Service 9.



# A Radio Romp With 'Anagram Al'

**Alan R. Peterson**

It is not enough that I spend all day in front of a terminal here at the RW office; once I get home, the PC is fired up to do a little audio production, retrieve my personal e-mail, then hit the Internet, just to see what is out there.

It makes me wonder why I am spending money on my cable TV subscription. I never watch the thing.

Two of my new favorite sites are where anagram generators are located. These sites ask you to input a word or series of words, hit "Enter" and watch as some computer somewhere twists and your submission into new words by rearranging the letters.

The results are often humorous, sometimes ironic, occasionally vulgar and generally nonsensical, but are endlessly amusing. For example, *Clint Eastwood* anagrams into "Old West Action."

At one time, anagrams were believed to contain hidden meanings, that one's true nature was revealed in the rearrangement of the letters of his or her name. It became

## Forget 'IBOC Radio.' How about 'Non-non, Rabid Enchilada'?

so universal a belief, it is said one French king had an official anagrammist.

A trip across cyberspace will have you almost believing this today. Several sites contain anagrammed versions of the names "William Clinton" and "Monica Lewinsky," purportedly revealing the true events behind the headlines. I suppose like numerology and backward Beatle records, it works if you really want it to.

Take the name of this column. *World According to ARP* anagrams very neatly to "Radar Pig, Clown Doctor" and "Gild Word, Cartoon Carp." Some will say, "Yeah, that fits him," but I am clearly not a

carp nor a doctor, and I am nowhere near qualified for radar endorsement.

My parents would have renamed me instantly had they known *Alan R. Peterson* could be rearranged into "Parental Snore." The anagram "Ran Stereo Plan" might, at one time, have landed me a job on the Motorola C-QUAM project.

My parents also may not have wanted me to become a *Radio Personality*, as that can easily be misconstrued as "Interior Soap Lady" or an "Indoor Nile Astray."

When *Radio World Newspaper* gets rearranged, you get "Appraise Wonder World," "Slow Down, Prepare Raid (how's that for a great euphemism for consolidation?) and the amusing "Parson Pear Worldwide," which sounds like a satellite-delivered gospel radio show.

### Other folks

My radio inspiration was *Cousin Brucie Morrow*, back in his heyday at WABC(AM), New York. How he must feel today, knowing his name works out to "Oboe Ruin Worm Circus" or the gardening tip, "Boom Wire Ruin Crocus."

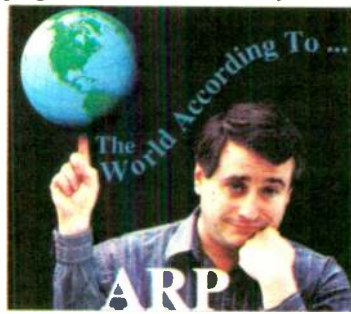
The syndicated *Imus In The Morning* show also takes on a similar gardening theme with "Nitrogen Mini-Mush," and the cue that it is time to hit the network: "Imminent Hour Sign."

When the original *CBS-Westinghouse-Infinity* deal went down, who could have foreseen the news headline, "Newsboy Incite Sinus Fight," the very market-savvy "Inhibit Teensy Focus Swing" and "Boss: Swift Niche Ingenuity" or even the tasty new snack, "Ingenious Chef Twisty-Nibs."

When *In-Band On-Channel Radio* becomes a reality, you can drive out to the country and listen to it on the "Bacon-Hen-Land Inn Radio." At this particular inn, they serve "Bland Chard, Inane Onion" every Sunday at 12 o'clock, where you can also hear the "Noon Ireland-China Band." Just be careful what you order; the French waitress working there may advise you, "Non-non, Rabid Enchilada!"

Even an anagram-related word can tell an anagrammatic story. Who remembers grandpa's old *superheterodyne* radio receiver? The

one he'd sit in front of, sipping "Penthouse Red Rye" while grandma drank "Pretend House Rye." Every Christmas he'd tell the kids, "Heed Your Present," as he put his penny-loafers back on his "Puny Red Shoe Tree." Then the commercial for the video store would come on, telling us to "Rent 'Spud-Eye Hero.'" But we'd already seen it.



phrase and extract its true meaning?

Remember, six years ago we were ready to believe the "Mister Ed" theme contained backward satanic messages. Folks, they are *only words*. They mean what we want them to mean when we say or write them.

These anagram engines are there only for fun and should not be taken seriously. But why don't you see for yourself? What the heck, they're free: [www.genius2000.com/anagram.html](http://www.genius2000.com/anagram.html) sends back elaborate, and often blue anagrams in about two hours. [www.easypeasy.com/cgi-bin/anagrams/r-us.pl](http://www.easypeasy.com/cgi-bin/anagrams/r-us.pl) sends results right away.

Enjoy yourself. Meet you at the Inn: you bring the twisty-nibs, I've got the enchilada.

### It must be true

So, have you been converted? Do you believe it is possible to scramble a word or

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## Roland VS-880 DAW

▶ ROLAND, continued from page 45  
the VS-880-S1 input. Once I pulled back to 30 dB and re-adjusted the VS-880-S1 input trim to the 9 o'clock position, I got great sound with negligible noise.

An ElectroVoice RE-27ND mic set with its top rolled off and jacked straight in to the VS-880-S1 with no external preamp sounded pretty darn good. The bottom was very full and the top had that edge that makes the RE-27ND scratch through more than its cousin, the RE20. A Neumann U 87 through an API mic preamp sounded very flat and clean.

If you are planning to run the VS-880-S1 in the same space with open microphones, be aware that track drive-back causes the internal disk drive to work and "chug." You will not hear the chug on your first track, nor will you if recording on a portion of the production where there are no other tracks playing

back. If the sound sources are loud enough and the mics are far enough away from the VS-880-S1, you probably won't pick up the hard drive.

The 18-bit A/D and D/A converters and 24-bit internal path result in an acceptable sound quality. The headphone amp section is not beefy enough to feed my set of AKG K240 headphones to the level to which I am accustomed, but that happens a lot.

Overall, my two main cautions about the VS-880-S1 are that casual users may have problems remembering what buttons to push and when, and its size make it extremely easy to steal. If your eyes demand a bigger display and your fingers wish for more dedicated controls, step up to the Roland 1680 workstation.



For more information, visit the Roland home page at [www.rolandus.com](http://www.rolandus.com) or circle Reader Service 32.



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- F. Other

**3 Purchasing Authority**

- A. Authorize/Make Final Decision
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- C. No Purchasing Authority

**4 Equipment/Services Purchases in the Next 12 Months (Check all that apply)**

- A. Transmission, STL/RPU
- B. Antennas, Towers, Cable
- C. Audio Processing Delays
- D. Telco, Codecs, Remote, Field, Audio
- E. RDS/RBDS & Subcarrier Equipment
- F. Delivery Systems & Satellite Equipment
- G. Digital Editing & Production
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- K. Headphones
- L. Microphones
- M. Monitors/Speakers
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**5 Equipment Budget For Next 12 Months**

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002	037	072	107	142	177	212
003	038	073	108	143	178	213
004	039	074	109	144	179	214
005	040	075	110	145	180	215
006	041	076	111	146	181	216
007	042	077	112	147	182	217
008	043	078	113	148	183	218
009	044	079	114	149	184	219
010	045	080	115	150	185	220
011	046	081	116	151	186	221
012	047	082	117	152	187	222
013	048	083	118	153	188	223
014	049	084	119	154	189	224
015	050	085	120	155	190	225
016	051	086	121	156	191	226
017	052	087	122	157	192	227
018	053	088	123	158	193	228
019	054	089	124	159	194	229
020	055	090	125	160	195	230
021	056	091	126	161	196	231
022	057	092	127	162	197	232
023	058	093	128	163	198	233
024	059	094	129	164	199	234
025	060	095	130	165	200	-
026	061	096	131	166	201	-
027	062	097	132	167	202	-
028	063	098	133	168	203	-
029	064	099	134	169	204	-
030	065	100	135	170	205	-
031	066	101	136	171	206	-
032	067	102	137	172	207	-
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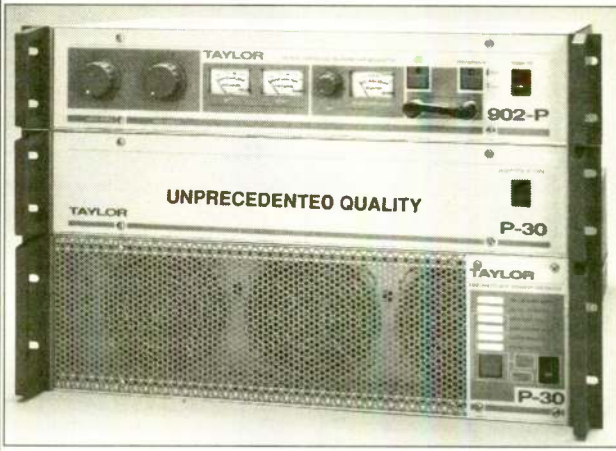
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ADVERTISER INDEX

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Page No.	Advertiser	Reader Service No.	Page No.	Advertiser	Reader Service No.
32,33	Arrakis	185	35	Harris	211
44	ATI	104	57	Harris	161
43	Audio Broadcast Group	134	48	Henry Engineering	103
2	Audioarts Engineering	1	14	Inovonics	54
58	Auralex	234	50	Inovonics	31
52	Autogram Corporation	102	22	J Squared Technical Service	74
6	Belar	131	58	J&I Audio/Video	233
52	Benchmark Media Systems	128	22	Kintronic Labs	77
45	Bext	160	54	Muscam USA	57
15	Broadcast Electronics	80	47	NAB	-
24	Broadcast Electronics	34	51	Nautel	212
41	Broadcast Electronics	82	42	Neumann/USA	108
44	Broadcast Richmond	-	21	News Broadcast Network	210
6	Broadcast Software Int'l (BSI)	105	52	Nott Ltd.	48
52	Broadcast Tools	52	26	OMB America	81
10	BSW	209	31	Orban	159
4	Burk Technology	79	18	PR&E	132
44	Circuit Werkes	26	23	Prophet Systems	3
3	Clark Communications	53	48	PTEK	129
48	Comet North America	76	37	OEI	30
7	Comrex	157	20	Radio Spirits	158
25	Continental Electronics	55	44	Reach Radio Network	51
44	Cortana	25	61	RF Parts	230
46	Crown Broadcast	186	53	RTNDA	-
11	Cutting Edge	-	52	S.C.M.S., Inc.	23
13	Cutting Edge	28	60	Satellite Systems	232
16	Dalet	106	12	Scott Studios	2
22	Econco	6	48	Shively Labs	24
61	Econco	231	52	Silicon Valley Power	49
48	Electronic Research Inc.	8	20	Sine Systems	184
27	Enco Systems	107	48	Spacewise Broadcast Furniture	50
52	Excalibur Electronics	75	49	Superior Broadcast Products	5
39	Fidelpac	56	61	Svetlana Electron Devices	229
55	Ghostwriters	101,127	9	Telos Systems	183
44	Gorman-Redlich Mfg. Co.	78	55	The Radio Mall	22
58	Hall Electronics	225	51	Transcom Corp.	228
44	Halland Broadcast Services	130	48	Videoquip Research	100
1	Harris	27	63	Wheatstone	109
29	Harris	133	64	Wheatstone	135

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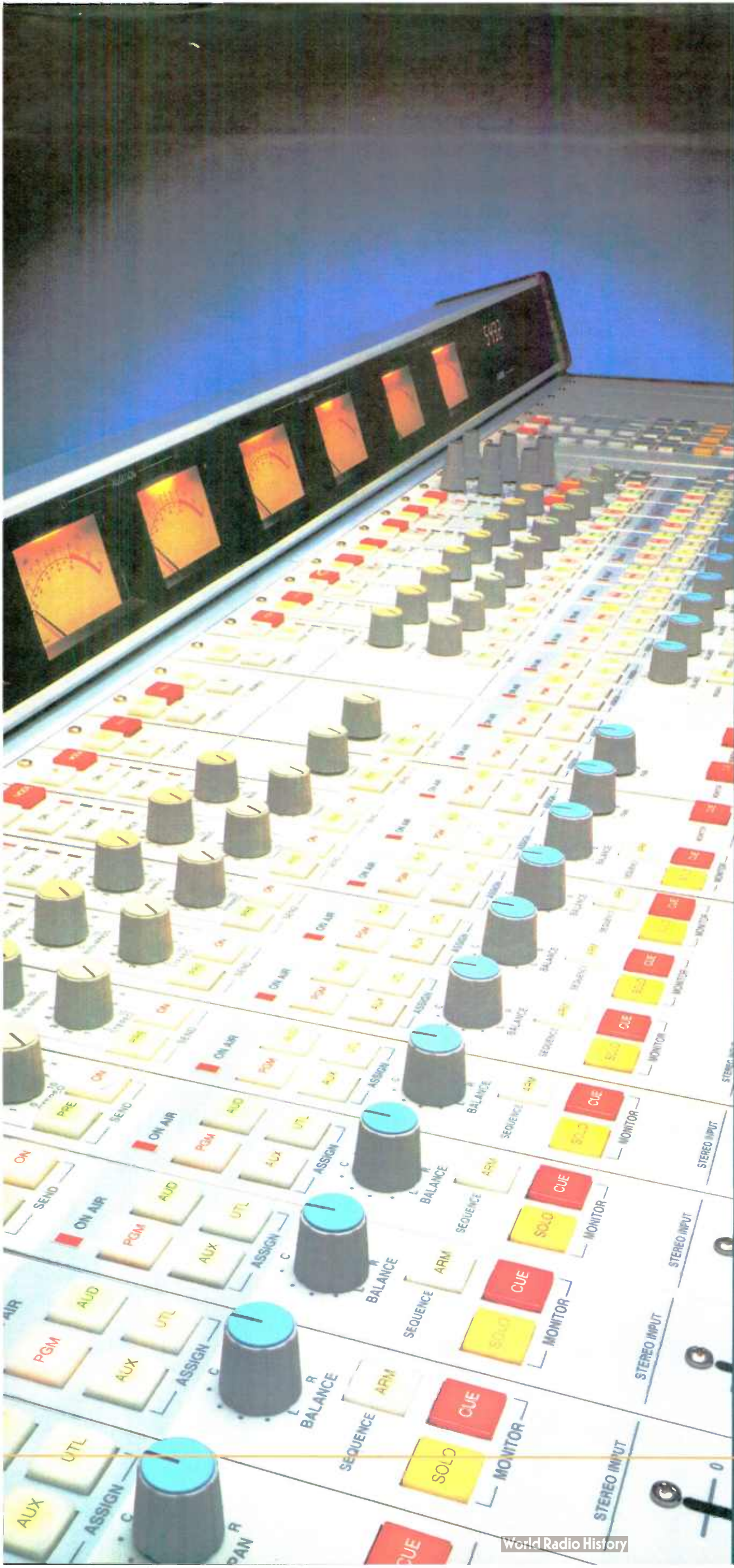
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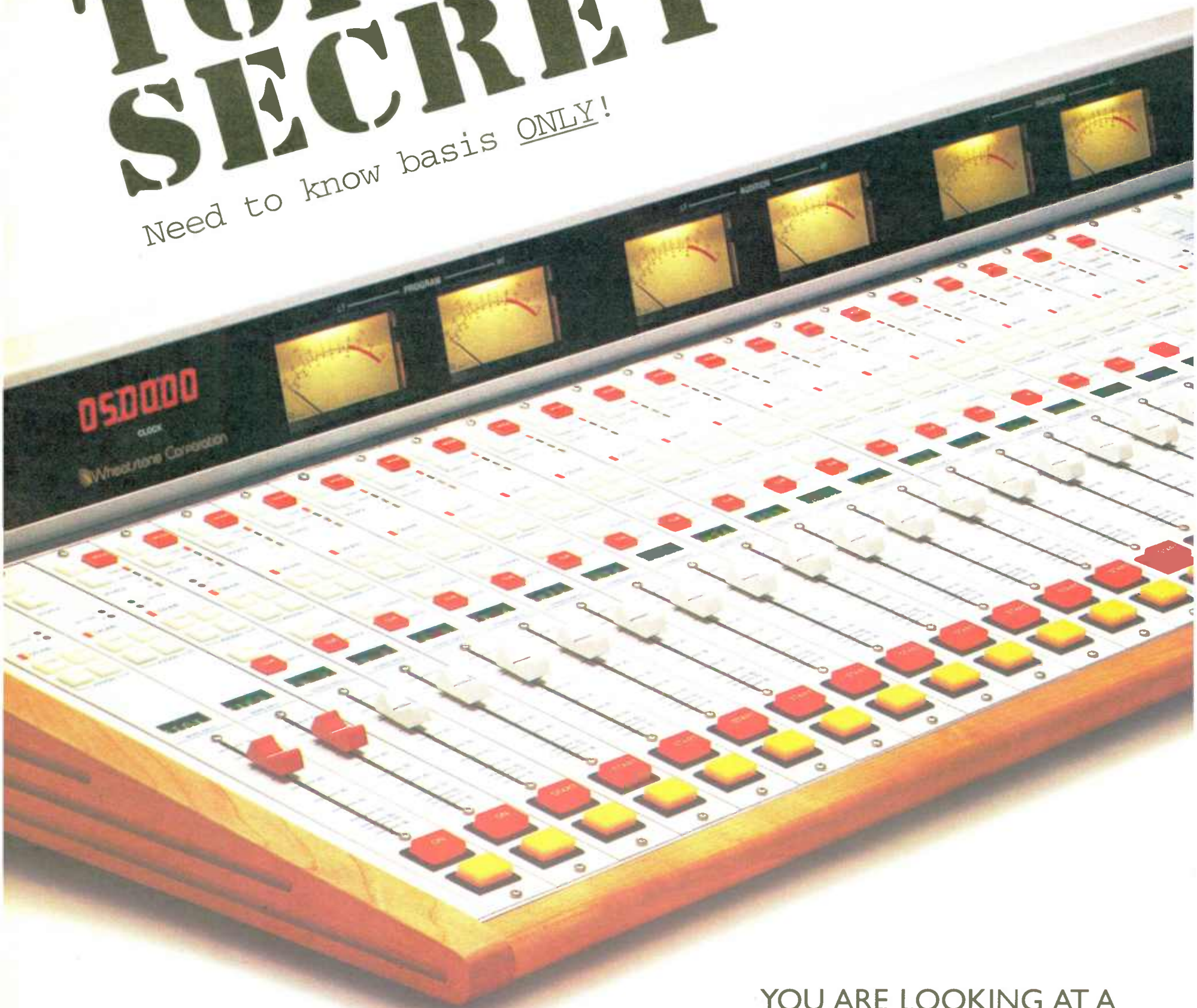
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