

The LPTV Report

News and Features for the Community Television Industry

NAB '88

Vol. 3, Issue 4

A Kompas/Biel Publication

April 1988

Blacks, Hispanics, Finance Mean Dollars, Community Service For Milwaukee's TV-55

—by Jacquelyn Biel

Milwaukee's TV-55 is an example of what a major market LPTV station can be—service-oriented, tightly targeted, successful.

"We were showing a positive cash flow four months after we went on the air, and by seven months we'd paid off our debt," says general manager Ken Shapiro. Now, 4 1/2 years after sign-on, Shapiro declines to give specific figures but does say that sales and profits "are going up every year."

The secret of the station's success is that new phenomenon of the last decade—niche marketing. Following a delicately orchestrated program schedule, W55AS programs to the City's financial community during business hours, to the Hispanic sector on the City's near south side on weeknights, and to the Black community on Saturdays and Sundays. On weekends, the station also features native language programming for the Italians, Yugoslavs, Filipinos, Poles, Chinese, Arabs, Iranians, and East Indians—all of whom are part of Milwaukee's ethnic melting pot.

Revenue comes from advertising (rates range from \$30 to \$150/30) and from independent Milwaukee producers who lease time on the station at \$150/half hour. Since many of these producers support their programs by selling ads locally, says Shapiro, TV-55 is well-known among the advertising community—"At one



Jeannetta Robinson with Chicago's late Mayor Harold Washington.

time, we had 21 people selling ads for Channel 55—covering the whole city."

• • •

"We initially felt TV was an excellent creative medium for this highly demonstrable product—to show live quotes. But it didn't make sense to use mass-targeted TV, nor could we afford it!" This from one happy ad agency whose client was marketing a hand-held instant stock and commodity quotation monitor.

"The response...was much better than I had expected and the turnout...was tremendous." From a Milwaukee stockbroker who sponsored an investment seminar.

These are only two of the dozens of positive letters Shapiro can show pro-

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AN NAB WALK-THROUGH The LPTV Broadcaster's Guide To The 1988 NAB Exhibit Floor

It's NAB time again, and the exhibit halls in Las Vegas will boast a multitude of products and services—many new, some tried and tested—that should be considered by LPTV broadcasters who are building or upgrading their stations. From antennas to vectorscopes, it's all here at this biggest trade show in the country.

We asked exhibitors to tell us about the products and services that would be of special interest to an LPTV operator. Stop by their booths and take a look.

And tell them about your station. There's a lot of interest right now among suppliers in *your* business and how they can better serve *you*. Let them know what you need.

• • •

Circuit Research Labs, Booth 133, will be featuring three product areas for LPTV: 1) a complete line of audio processing equipment for mono or stereo television applications, 2) a standalone MTS generator/audio limiter, and 3) a single-ended noise reduction system for production or on-air use.

Bogner Broadcast Equipment will once more be displaying their television broadcast antennas in Booth 2666. Of particular interest to LPTV operators are

continued on page 8



**We invite you to see
our complete line of
LPTV equipment at
NAB Booth 1801**

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See the TTC ad on page 11 for details.

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In Our View

An Advanced Television Test Center, which will evaluate new ATV systems, including high definition TV technologies, is being formed by a coalition of broadcasting companies and industry associations. The Center will be assessing which of the proposed systems will potentially produce the highest quality HDTV pictures.

Specifically, the Test Center will:

1) Develop and conduct subjective tests, including psychophysical tests, to assess the quality of proposed advanced TV systems and to determine the reaction of viewers to them.

2) Identify spectrum bands that could be used for terrestrial ATV broadcasting. This requires analyzing how the spectrum is presently allocated and then developing alternative allocation and assignment schemes.

3) Test each proposed ATV system, in the lab and in the field, both separately and comparatively, over the air and on cable, on both large and small screens, and on both ATV and NTSC receivers.

The Test Center is intended to support the work of the Federal Communications Commission and the FCC's Advisory Committee on Advanced Television Systems, which assists the Commission in setting ATV policy. It is also intended to supplement the role of the Advanced Television Systems Committee, which sets ATV standards.

Funding for the Center will be provided by the National Association of Broadcasters, NBC, CBS, and Capital Cities/ABC. The Association of Maximum Service Telecasters (MST), the Association of Independent Television Stations, and the Television Operators Caucus have committed to raise comparable funds from broadcast station owners.

The FCC's Advisory Committee includes representatives from the National Cable Television Association, the MST, the American Film Institute, the Brookings Institute (a Washington think tank specializing in economics, government, and foreign policy), the Public Broadcasting System, Home Box Office, the National Association of Broadcasters, the

Grass Valley Group, Sony Corporation, and the David Sarnoff Research Center.

We believe that LPTV should also be represented.

First, as a practical matter, LPTV broadcasters will be greatly affected by ATV systems—if not by competing stations, then by viewer demand. Many LPTV stations are automatically installing stereo audio capability; certainly, construction and market research time is the time to think about the potential of a high definition system, even though practical implementation may still be several years away.

Secondly, we should be involved as a matter of the public interest. The newest broadcast television service—one whose specific function is to serve the unmet needs of small communities—cannot afford to be silent while television engineering undergoes a revolution comparable in impact and scope to the color television revolution of the late 50's and early 60's.

Recently, Cosmopolitan Broadcasting suggested to the FCC that LPTV stations be allowed to broadcast experimental HDTV signals (see the March **LPTV Report**, page 7). We agree—as long as Cosmopolitan's caveat is observed: LPTV broadcasters would be free to say whether or not, and for how long and under what conditions, to permit such an experimental use of their stations. Certainly this is one way that we can make a contribution to the television industry as a whole.

But we cannot ignore the rapid changes that are occurring today. And we must have a voice in deciding the policies that we all will have to live with ten years from now. We urge the Community Broadcasters Association to appoint a representative for the LPTV industry to work with the Test Center and to serve on the Advisory Committee.

WorldRadioHistory

Our Readers' Comments

Your magazine is extremely useful to me as I begin to learn about the LPTV industry. You are serving a very real need.

In a future issue, I would like to see how some of the existing stations are staffed. The January 1988 issue had a very interesting article about TV-43 in Hopkinsville, KY, and also listed their equipment. Of additional interest to me would be TV-43's organization chart and job descriptions. This would answer many questions about staffing different stations according to size and age. Those stations leasing time are obviously different than those with extensive local programming.

Keep up the good work.

Stephen C. Schmidt
Holmes, PA

I thought you should clarify for your readers that the equipment survey that appeared in the January 1988 issue was actually a sample of the equipment used by the 55 respondents among the 215 LPTV broadcasters that were mailed surveys.

As a result, certain types of equipment in use may not show up in the report.

We noticed immediately that our 1 kW UHF LPTV transmitters did not appear. Acrodyne has built over 70 1 kW UHF systems which are now being used by many LPTV broadcasters (including some of the more prominent and successful broadcasters such as Kris Harvey at K49AZ-TV in Twin Falls, ID) as well as full service broadcasters and TV translator users.

Thank you for this interesting and useful report. However, we should keep in mind that samples do not present all the facts.

Joe Wozniak
Sales and Marketing Manager
Acrodyne Industries, Inc.

You can tell your entire staff that, in my opinion, the monthly report is an outstanding production for such a small organization. Keep up the good work.

Robert J. Murley
President
Video Marketing Network, Inc.

As you point out, low power television is indeed a promising new industry. I do hope to monitor its progress and I look forward to receiving your magazine.

Trent Lott
Republican Whip
U. S. House of Representatives



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The SVHS format behind the Panasonic® Pro Series will change the way you look at half-inch recording systems. Because it delivers over 400 lines of horizontal resolution. At an affordable cost. So you can get a sharper image even as you sharpen your pencil.

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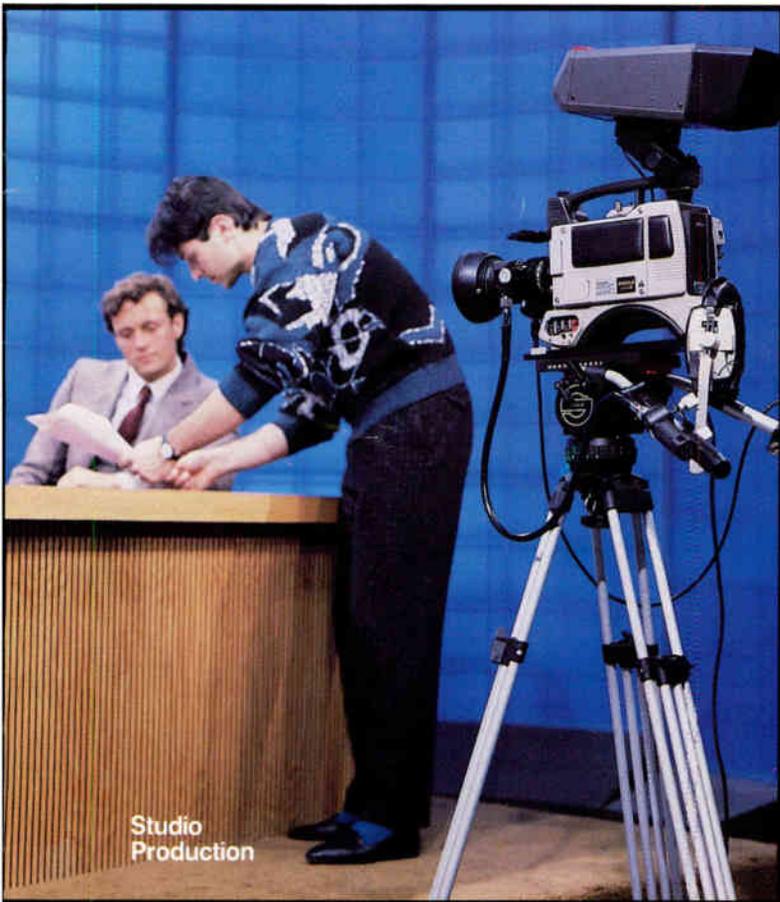
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Whether it be a small or large operation.

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Pro Series VCRs also incorporate a number of features designed for network automation. Such as video sensor recording. So you can transmit video programs to your network locations during off-peak hours. And save on both transmission and personnel cost. You can even interface Pro Series VCRs with computers for interactive training programs.

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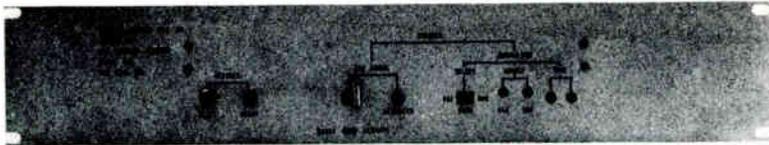
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More (And More) On Must-Carry

On February 22, the U.S. Court of Appeals for the DC Circuit recalled its mandate striking down the FCC's cable television must-carry rules, thus reinstating the rules temporarily.

The action was a response to a motion filed on February 9 by Century Communications and other cable interests who earlier had asked the Court to review its original, December decision striking down the interim must-carry rules (see "LPTV and the Law," in the February 1988 LPTV Report).

Also on February 9, the Court had issued the mandate making its December decision effective, and in the mandate it clarified that it had *not* struck down the rules concerning input selector (A/B) switches and consumer education requirements.

(Pending clarification by the Court, the FCC had stayed the input selector and consumer education rules, as well as its Order late last year extending its technical regulations to include A/B switches. The Order, which resulted from a proceeding initiated last April in response to complaints of A/B switch interference to aeronautical navigation equipment, had required that both stand-alone switches and switches built into television receivers provide at least 80 dB of isolation in the 54 to 216 MHz frequency range and 60 dB of isolation in the 216 to 550 MHz range between the antenna and cable inputs.)

However, Century's motion stated that it intended to file a "Petition for Rehearing" of the Court's position on the A/B switch and consumer education requirements. Century argued that the Court's December decision should be interpreted to invalidate these requirements as well as the must-carry rules.

On February 22, in response to Century's motion, and before Century filed its petition on February 23, the Court recalled its mandate.

In early March, FCC chairman Dennis Patrick told a Congressional panel that the FCC was not considering a new attempt to impose the interim must-carry rules. Instead, at the request of Representatives John Dingell (D-MI) and Ed Markey (D-MA), and Senators Ernest Hollings (D-SC) and Daniel Inouye (D-HI), the Commission was gathering information about the impact of the Appeals Court decision on broadcasters.

The lawmakers chair the House Energy and Commerce Committee, the House Telecommunications Subcommittee, the Senate Commerce Committee, and the Senate Communications Subcommittee, respectively.

The Word Is BUY

—by Burt Sherwood

You've been hearing for a long time that LPTV is on its way.

Well, it is!

Are you going to be in on it?

You certainly couldn't buy at a better time.

Those of us who remember yesterday have noticed already that the LPTV industry is much like FM used to be some twenty years ago. I remember hearing people make disparaging comments about FM stations—"Who needs it? We have enough radio." "Why would anyone want two channels?" "This industry isn't going anywhere—there are just too many obstacles."

But if you look at what happened to FM then, and what is starting to happen to LPTV today, you will begin to get the picture. New LPTV stations are being built all over the country. People are even starting to collect them into networks. Remember, there is no limit on how many you can own. It all depends on your economic wherewithal.

As a broker who deals in LPTV, I work daily with both buyers and sellers. So many questions come up with each sale, it would take more time than we have here to make you aware of them all. But I seriously recommend that you use a broker in buying or selling (he or she can be hired to do either or both). The reasons are obvious to me, but maybe not to you.

First, confidentiality. A broker can hunt for you, feel out the market without letting the market know who you are. This is especially important in a new industry such as LPTV where there is no transaction history and prices can fluctuate at whim.

Second, negotiation. A broker can negotiate the best deal for you, without the normal anxieties that always seem to oc-

cur when buyer and seller meet head on. The broker is a deal maker. His or her bargaining experience and knowledge of the product can make a big difference in your ultimate profit from a transaction.

Third, oversight. A properly executed deal may require the services of other parties such as appraisers and attorneys. The broker can coordinate these efforts efficiently, leaving you free to concentrate on your primary business.

Yes, you should hire an attorney. I cannot stress enough how important that is. The broker and the attorney assist each other in making the transaction happen, and the deal will close much more smoothly. Attorneys may cost money up front, but in the end they should save you money.

I also highly recommend that you use FCC counsel, as few local attorneys know their way around the Commission. For local lease and tower contracts, however, you will probably want to use a local attorney.

While you are reading this very brief article, deals are being made. I personally know of stations being sold for figures that range in the low thousands to multiple millions. Will you be the first to offer your community a new television service? Not if you sit there and wait!

Burt Sherwood operates Burt Sherwood, Inc., an Illinois media brokerage and appraisal firm.

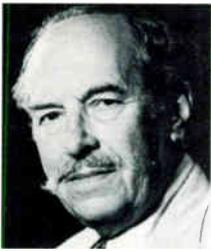
K/B

BON MOT

Perfections of means and confusion of goals seem—in my opinion—to characterize our age.

Albert Einstein, 1941

K/B



Technical Talks

Predicting Coverage

—by John H. Battison

One of the most common questions new broadcasters ask is, "How far will my signal be received?" The answer, unfortunately, has to be somewhat vague, and qualified by "conditions." This month I'll try to remove some of the mystery from coverage predictions.

First, let's consider FCC Form 346—Application for LPTV Construction Permit. Presently, this form does not ask for a coverage map showing the distances to the protected, or service, contour. The actual value of the service contour is 62 dBu for channels 2 through 6, 68 dBu for channels 7 through 13, and 74 dBu for channels 14 through 76. Thus, you can see that each LPTV channel range has a different contour value which is required for "city grade," or protected, reception.

The reason for the different values is that attenuation (diminishment) of the signal increases as the channel number (or frequency) is raised: VHF channels 2-6 require a level of only 62 dBu, while UHF channels require 74 dBu. And receiver sensitivity—the ability to detect weak signals—decreases as the channel number is raised.

On the other hand, as the channel number is increased, smaller antennas are required (in terms of length of the antenna elements), and it becomes easier to construct a high-gain antenna (one with a large number of elements). Similarly, it is much easier for the transmitter operator to increase his/her effective radiated power (ERP) by increasing the gain of the antenna. (See the June 1987 *LPTV Report* for an explanation of antenna gain.)

HAAT

Another piece of very important information that the FCC does not require in the LPTV application is the height of the center of the transmitting antenna above average terrain. This information is required for all FM and high power TV station applications; and it is my considered opinion that, before long, it will be required on LPTV applications as well.

The present form asks for Effective Radiated Power (ERP) and for height of radiation center above mean sea level. With these figures, and its own computer program, the Commission's engineers can calculate the actual distances to interference contours and determine if the appli-

cation conforms to FCC rules.

So what does all this mean to the LPTV applicant or operator in terms of how many people his/her signal covers?

Let's go back a long way in FCC history. When the original rules for TV and FM were written, the presumption was that listeners and viewers would use outdoor antennas and mount them 30 feet above ground at about roof top level. So all the distances to "service" contours assumed that the receiving antennas would be mounted high in the air. (As you should have gathered by now, height is one of the most important elements in obtaining good coverage.)

When an FCC distance/field intensity curve says that the signal strength will be, say, 64 dBu at 15 miles (for a VHF LPTV contour), it means what it says. It assumes, however, that the receiving antenna is 30 feet above ground, so that all of the signal is intercepted by the antenna.

Loops and Bow-ties

On the other hand, if the receiving antenna is just a simple loop or bow-tie on top of the television set, the signal that gets to the set is very different. The walls and other objects near the antenna, as well as trees and buildings outside, attenuate the signal.

So what happens? The 64 dBu signal level is still there in the clear air above the house, and would, theoretically, be there on the ground, if there were nothing at all between the site and the transmitting antenna. But inside the house, the signal level could easily be as low as 32 dBu, or even worse. In addition, ghosts can be produced by reflections from objects near the television set. The result is that the viewer says, "This signal isn't worth watching," and he or she is lost.

For UHF LPTV, the highest ERP one can reasonably expect is between 30 and 40 kW with an antenna height above average terrain of, say, 300 feet. This translates to a 74 dBu contour at a distance of about 11.4 miles for 600 MHz. At this distance, a viewer should be able to receive good signals on an indoor antenna.

"But 11 miles isn't much!" complains the anxious LPTV operator. "Why can't I get better coverage?"

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Affiliations: **CBA** *The LPTV Report* is the official information channel of the Community Broadcasters Association.

The LPTV Report, ISSN 0892-5585, is published monthly by Kompas/Biel & Associates, Inc., 5235 124th Street, Suite 22, Butler, WI 53007, or P.O. Box 25510, Milwaukee, WI 53225-0510. © Copyright 1988 by Kompas/Biel & Associates, Inc. All rights reserved.

Subscription price: 1 year, \$25.00; 2 years, \$45.00. Outside USA: 1 year, \$31.00; 2 years, \$57.00. POSTMASTER: Please send address changes to: *The LPTV Report*, P.O. Box 25510, Milwaukee, WI 53225-0510.

NAB Walk-Through

continued from front page

the broadband slot and dipole antennas featuring the simple Bogner single slot per bay design, standard radiation patterns, and modular construction. Antennas with any of 13 horizontal patterns, and a choice of vertical patterns, gains, and power input ratings up to 30 kW can be delivered very shortly after order. Custom designs are also available.

Channelmatic will be introducing two new products at the NAB show, the ADCART 2+2, an automated, fully random access ad insertion system, and the BROADCASTER II, an automatic video cassette changer. The automation these two products offer can relieve some of the operational and maintenance burdens of a small LPTV operation.

The ADCART 2+2 offers fully automatic, two-channel stereo ad insertion operated from a user-friendly CRT terminal. The software features uncluttered screens, and its commands are entered with single keystrokes from logically arranged menus written in plain language. Error reporting is integral to the system; any system error is immediately noted and displayed on the CRT screen.

The BROADCASTER II is the successor

to the highly successful Broadcaster video cassette changer. In addition to its normal use as an automated programmable random access playback device, the new BROADCASTER II can function as an automatic cassette duplicator. If a VCR with record and playback capability is installed, built-in software in the BROADCASTER II permits the unit to control an external playback machine while recording on its own internal VCR. See the BROADCASTER II and the ADCART 2+2 in Booth 1339.



Broadcast Electronics, Inc. will be showing their Model TZ-30 TV stereo generator, as well as the SAT-16 and Control 16x program automation systems. Also featured will be rotary stereo audio consoles, from four-mixer models to the deluxe 10 mixer Model 10S250A and the 10 mixer vertical stereo console Model 10S350A.

Also on display will be BE's single deck, three deck, and five deck cartridge ma-

chines, including the Phase Trak 90 record/playback cart machine with exclusive tape learn mode feature. All in Booth 303.

Andrew Corporation will be displaying the HJ12-50, a new 2-1/4" diameter HELIAX coaxial cable. This air dielectric cable fills the gap between 1-5/8" and 3" cables in terms of electrical performance, ease of installation, windload, and cost. It is ideally suited for long antenna feeder runs, and provides power handling capability midway between that of 3" diameter and 1-5/8" diameter HELIAX, but with attenuation almost as low as the larger 3". Its rugged black polyethylene jacket makes it suitable for direct burial or for installation in corrosive environments.

Comprehensive Video Supply will be showing cable assemblies and connectors for JVC and Panasonic S-VHS VCR's and monitors in Booth 3174. Comprehensive's off-the-shelf and custom cable assembly offerings include 4-pin plug to 4-pin plug, 4-pin plug to 7-pin jack, 4-pin plug to 7-pin plug, and 7-pin plug to 7-pin jack dubbing cables in a variety of lengths from 6 to 50 feet. The 4-pin/7-pin combinations allow cross-connections between JVC and Panasonic equipment.

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system, and stray sync leakage into audio is trapped by an input Fh filter. A dual 10-segment LED display makes set up a snap. Become the best sounding station in the market for only \$1,695.

For more information on the BAP-2000, call or write us at CRL. We have a two week trial program so you can audition one at your station. If you're going stereo, we have a complete MTS generator/audio processor package available for under \$6000. Better sounding audio is just a call away at (800) 535-7648.

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Ikegami will be showing the CCD-770 and ITC-735 cameras in Booth 2320. The ITC-735 is a high-performance ENG/EFP camera for budget-conscious professionals. It features a high-speed F/1.4 prism optical system for quality color reproduction, high sensitivity and excellent resolution; Saticon IV tubes; 750 TV lines resolution; and micro-computerized automatic functions.

The company will also be displaying its compact, three-chip ENG color camera, the CCD-770, a high-performance, lightweight camera that offers significant improvements over conventional CCD cameras in the areas of vertical smear, panning distortion, moire, and other problems.

NAB '88 will mark the premiere expansion of **Chyron's** innovative SCRIBE product line. Featured in Booth 3556 will be new members of the SCRIBE family as well as several new software and hardware packages for the current SCRIBE. Included in these are advanced font utilities such as glows, beveling, chiseling, embossing, 3D texture mapping, and neon effects.

Also check out the Chameleon Paint System, a high-resolution, low-cost video paint system with an icon-oriented menu, as well as the VP-1, Chyron's popular low-cost, high-resolution character and graphics generator, and the VP-2 PLUS with MULTIFONT.

Sharp Electronics will be introducing the XA-2500S S-VHS VCR in Booth 4316. The unit features a jog/shuttle dial and flying erase heads for clean and precise editing, as well as digital video processing and stereo hi-fi audio.

The company will also be showing its S-VHS compatible 20" color monitor/receiver and color video printer with S-VHS input terminal.

For the camera buyer, there will be the XC-B20P professional broadcast Plumbicon tube video camera, featuring "automatic white knee" highlight compression, and such standard automatic features as white/black balancing, centering, iris and beam optimization, and the unique new auto contrast function that continuously adjusts master black.

Aston Electronics, a leading European supplier of character generators, will be kicking off the Aston World Sweepstakes at Booth 5725 in the Las Vegas Hilton. The grand prize is round-trip airfare for two to any country that has an Aston CG.

While you're at the booth, check out the Aston 4 CG or the new Caption character generator, which is billed as the "most affordable full featured CG on the market." Standard features are software anti-aliasing, two independent text display planes, and comprehensive background graphics over a range of 16 million color gradations.

Gorman-Redlich will again be showing their Emergency Broadcast System encoders and decoders, as well as their weather radios. Check out the Model CEB encoder/decoder, a complete two-frequency EBS system that meets all FCC requirements. The unit features gold contacts on all switches and relays, a self-testing decoder, barrier strip interconnection, CMOS digital circuitry in the encoder, and precision engineering on the decoder for low power drain.

The Model CRW weather receiver is a highly sensitive and selective receiver for National Weather Service transmissions. It can automate the recording of weather forecasts and emergency alert messages, and its three channels make it possible to market your audio for commercial services. See both the CEB and the CRW in Booth 1200.

Shure Brothers will be displaying a variety of audio products, including their full line of hand-held wireless mics and SM Series professional microphones. Also on display in Shure's Booth 203 will be the FP Series of portable mixers and amplifiers for ENG and EFP applications, the PDP-1000 professional compact disc player for broadcast—billed as a "first" in the broadcast industry, and the SM84 supercardioid condenser lavalier mic that rejects unwanted sound from the sides and rear.

Just building your station? Check out Booth 5331 for **AVCOM's** COM-66T satellite receiver with international capabilities and such standard features as tunable audio with wide and narrow audio IF filters, vertical/horizontal output for automatic polarity switching, normal or inverted video switch, and precise signal strength metering for antenna optimization.

Also take a look at the COM-96 Ku and C Band receiver, a high performance dual conversion system with tunable audio, and optional threshold peaking and dual IF filters.

AVCOM will also be exhibiting the PSA-35A portable spectrum analyzer—little brother to their PSA-35, the first spectrum analyzer designed for the satellite communications industry. The PSA-35A has a standard center frequency band calibrated from 1250 to 1750 MHz, frequency coverages of 10 to 1750 MHz and 3.7 to 4.2 GHz for checking signal strength, inband attenuations, terrestrial interference, feedhorn isolation, and other attributes at all commonly used satellite communication frequencies. Billed as basic enough to begin with and sophisticated enough to grow with, the PSA-35A is versatile and simple to use.

Landy Associates, Inc., exhibiting in Booth 2677, will be featuring an RCA TK-60 monochrome camera (circa 1962!), along with a couple of Ikegami cameras

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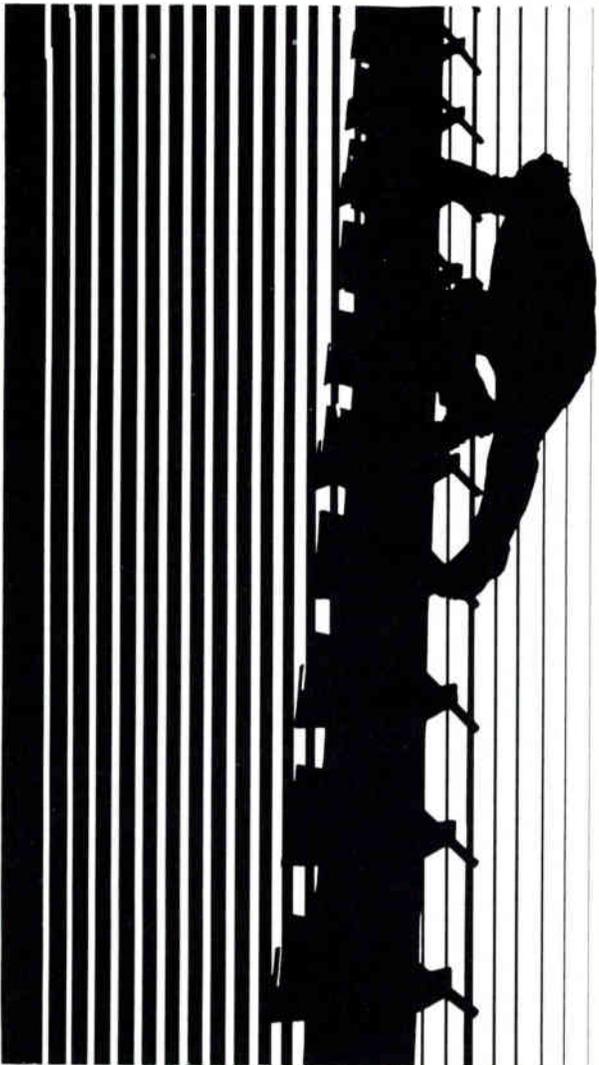
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Bogner antennas come in every power range and with the largest number of standard patterns in the industry. In addition, Bogner offers hundreds of custom patterns plus special designs to meet particular requirements.

Find out more. Call or write: Bogner Broadcast Equipment Corp., 603 Cantiague Rock Road, Westbury, New York 11590, (516) 997-7800.

When you need us
we'll be there.

BOGNER
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Lenco Electronics will be displaying their PGE-843 in Booth 3956. The unit is a professional quality graphics encoder incorporating an NTSC RS-170A sync generator. It has been designed to fulfill the need for a device capable of encoding RGB to an NTSC composite signal suitable for taping on an ordinary consumer-grade VCR. Alternatively, it is entirely compatible with professional quality VTR's.

Also take a look at the Starflex™ main-frame and audio/video modules, including the 3520 video distribution amplifier, the 6500 audio DA, and the 4500 digital frame synchronizer/TBC.

A trendsetter in the video test and measurement arena, **MAGNI Systems** will be displaying several units, including the 1510A test signal generator, which produces over 40 NTSC test signals; the 1515, the industry's first composite + component test signal generator; the 1527, an integrated measurement package uniting vectorscope, waveform monitor, and test signal generator capability; and the 500 Series of waveform monitors and vectorscopes. See them in Booth 5105.

Acrodyne Industries will be displaying their TLU/1KAC 1kW UHF LPTV transmitter, as well as the TLU/100 100 watt solid state UHF LPTV transmitter in Booth 3833. The company "invites all LPTV broadcasters who visit the show to stop by and see us."

In Booth 109, **Shively Labs** will be showing the Model 2320 isolation unit, the only AM isolation unit designed specifically for LPTV. The AM voltage rating of 10 kV exceeds most models currently available. Low insertion loss, low VSWR, and protection against lightning damage are additional pluses.

3M will be showing character generators at two ends of the CG price range in Booth 2305. The first is the D-2200, a new CG, totally software driven and designed as a low-priced, all-purpose unit for small facilities. The unit operates from dual 3 1/2" disk drives with 2,000 pages of extended memory playback and is easily updated from software. Simple to use, the D-2200 has a built-in keyer that will lock to virtually any composite video signal, eight on-line fonts with other fonts downloadable from the 3M Font Library disk, 512 colors, 70 ns resolution and 63 character heights.

On the other end of the spectrum is the D-6000 "Panther" Graphics generator, which combines the features of an advanced CG with those of a paint system. Two of its major features are logo animation and camera grab. Animation can be done in the traditional way, cell by cell, or generated automatically by using zoom, spin, and flip, or any combination. Dy-

and Landy's new custom-built interformat editing system.

Landy Associates offers LPTV planning and design services, as well as installation and training throughout the Northeast and Middle Atlantic states.

Compu-Cable USA, Inc. will be displaying four character and graphics generators—the Spectra-View I, the Spectra-View II, the Star System, and the Elite 1000. Features shared by the Spectra-View units include 640 x 400 pixels resolution; a 100-page memory expandable to 5,000 pages; adjustable vertical window; 4-speed scroll, wipes, italics, outline, bold, underline, flash, and shadow. The 3 1/2" disk drive can be expanded with a second drive or a hard disk. See them in Booth 5925.

Lake Systems Corporation, a turn-key builder of teleproduction facilities, will exhibit a custom-designed component

video editing system. The equipment, which will be housed in an ergonomically designed console, includes a synchronized, multitrack audio-for-video system. See it in Booth 1039.

In Booth 3962, you can check out **Laird Telemedia's** character generators, video enhancers/processors, video and stereo/ audio distribution amplifiers, audio and video routing switchers, and telecine equipment. All products are available in NTSC format; some are also available in PAL.

Gray Communications Consultants, in Booth 2242, will be happy to discuss your needs for equipment, systems, engineering, design, and installation of all types of broadcast equipment. Gray supplies equipment and specializes in systems design, engineering, and documentation. Complete turnkey services are available for all systems, including mobile vehicles.

dynamic features can be pre-programmed and run from a 20 megabyte hard drive.

The ITS-230 1 kW UHF transmitter will be on display at **ITS Corporation's** Booth 1113. The ITS-230 is a high-performance transmitter featuring single cabinet construction and containing an exciter with multi-channel sound capability, a solid state driver, and a 1 kW amplifier with all the necessary power supplies and control logic. Standard features include full remote control/telemetry interface, linearity and ICPM correction, extensive front panel metering, and stereo readiness.

A new and complete television mounting equipment package containing a pan and tilt head, tripod with spreader, and soft carrying case suitable for CCD cameras will be introduced by **Vinten Equipment** in Booth 1425. The new Vinten Vision 5 is the company's latest addition to the Vision range of lightweight camera mounting equipment specifically designed for ENG/EFP applications. The complete package weighs only 14.5 pounds.

Also of interest is Vinten's joystick-controlled MicroSwift remote control camera system, which makes possible interesting and varied camera work in a one-person studio. According to the company, "News studios and local discussion

programs are two of the many programs that will benefit from this major cost-reduction in floor operating overhead."

To celebrate its new system, Vinten will hold a drawing for a complete Vinten Vision 5 System—a \$2,250 value.

Sony Broadcast Division will be displaying the latest video cassette decks in the Betacam-SP series; the BVP-50, the latest entrant in the ENG/EFP array; the new CCU-350 camera control unit for full remote control of the BVP-50 CCD camera; the new 19" line monitor, the BVM-1910; and the BVU-950 U-Matic recorder/player/editor.

From the **Sony Professional Video Division** comes the VO-7600 and VO-7630 player/recorder units, successors to the popular VO-5600 and 5630 units. In addition to the capabilities of their state-of-the-art predecessors, the new 7600 and 7630 offer improved picture quality and computer interface capability. See Sony products in Booth 2902.

Fuji Photo Film USA will be displaying its complete line of professional videotape products in Booth 4307. Among the offerings are the H621E 1" video tape in both C and B formats, the H521E Series U-Matic video cassettes, the M401 1/2" metal video tape featuring Super Metallix magnetic particles and dense uniform coating, the H321B and H421M 1/2" vi-

deocassettes, and the new PRO-S, S-VHS video cassettes.

Panasonic, in Booth 2938, will be showing the AU-650 studio record/playback VTR with dynamic tracking and built-in 8-bit TBC; AU-620 playback only studio VTR; AU-550 field record/playback VTR; AU-A50 field edit controller; AU-MX50 field audio mixer; AK-400 3-CCD color camera; AU-400 camera recorder; AU-500 portable field recorder; AU-505 field playback only VTR; MARC systems automatic cassette recorder/player; the S-VHS line of VTR's, monitors, and cameras; industrial VHS equipment; optical disc recorders; instrumentation products including audio analyzers, audio test generators and oscilloscopes; and RAMSA audio equipment.

Television Technology Corporation, Booth 1801, just in front of the East Entrance, will be introducing a new 10 kW air-cooled transmitter and a 300-watt UHF transmitter. In addition, there will be a 30 kW UHF transmitter, a 1 kW UHF transmitter and a 100 watt UHF transmitter. Also on display will be various models of low power VHF translators.

The Telepak, from **Telepak, Inc.**, will be shown in Booth 4569. The company's soft, protective carrying cases are de-

When you go into low power television... go in strong with TTC transmitters.

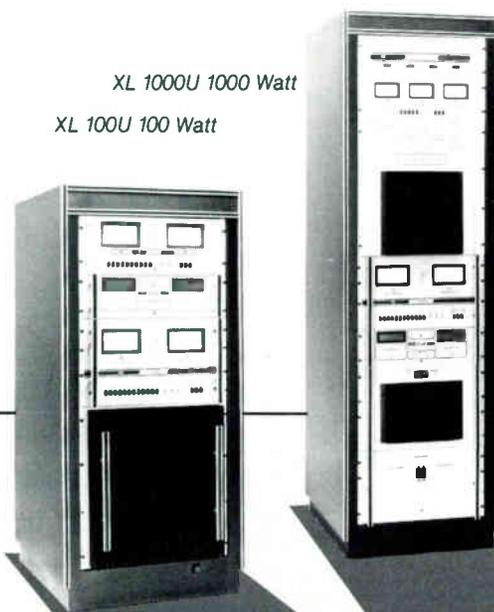
TTC offers a full line of outstanding television transmitter/translators:

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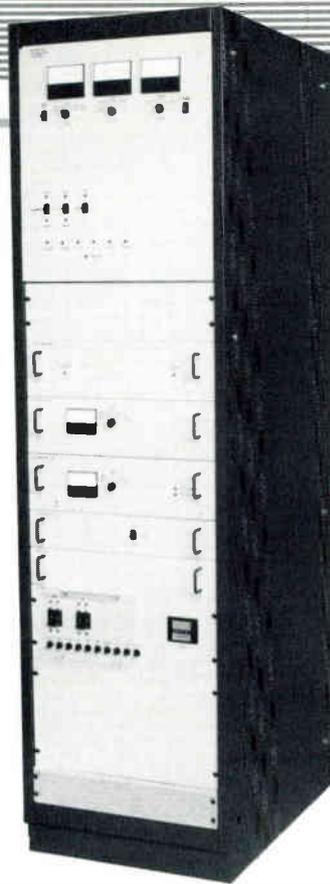
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Along with these superior products, we offer top-notch field support. Over 100 full service customers value this service — we think you will, too.

If you'll look closely and compare, you'll agree that ITS looks better and better.



ITS-230 1kW UHF Transmitter

PERFORMANCE: standard broadcast (*not cable TV*) modulator/processor is FCC type accepted under both part 74 (LPTV) and part 73 (full service).

FEATURES: many full service features such as IF processing, stereo aural, interactive control circuits, and extensive remote control are standard.

QUALITY: totally designed and manufactured by ITS.

OPERATING COSTS: Low power consumption and designed for easy maintenance - final amplifier uses RCA 9017 tetrode (approximate replacement cost \$1,900).

PRICE: very competitive.

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signed and constructed for field use. New items at the show include the T-80, for the Sony EVM 8010, 8020, and 8021; the T-74, for Panasonic's AG-7400; and the T-UCP universal camera pack.

EMCEE Broadcast Products, in Booth 3053, will be showing new, low-cost UHF and VHF transmitters for LPTV. Also on display will be Panasonic's new S-VHS AG-7100 recorder/player and 25" monitor.

EMCEE, which has taken on the Panasonic S-VHS line, invites LPTV broadcasters to look into their new turn-key station construction service. Financing information is available.

Don't walk past Booth 1834 without taking a look at **Uni-Set's** Modular Studio Staging System. Design your set using Uni-Set's miniature planning modules and then assemble the full-sized modules from your model. This low-cost staging system can be assembled in dozens of different ways for a new studio look whenever you want.

Townsend Broadcast Systems will be displaying their transmitters, antennas, and accessories for LPTV in Booth 4356. The solid state broadband design stages require no tuning, and the compact design makes installation easy.

Stop at Booth 2469 for a look at **Lowel-Light's** ViP kits, high-output, low-cost,

low-wattage little halogen lights for today's fast films, lenses, video cameras, and multiple power sources.

Hitachi will be showing their new Z-31 and Z-31P Plumbicon ENG/EFP cameras. The Z-31P features low capacitance, diode gun MS Plumbicon tubes. Both cameras are versatile and easy to operate. Both feature a built-in microcomputer for completely automatic set-up, and both can be equipped with a full range of studio accessories, an economical triax system, and a wide selection of lenses. With Hitachi's plug-in component board, the cameras adapt to Betacam or M-format VTR's. See them in Booth 3324.

Leader Instruments, Booth 3472, will be displaying the LBO-5860B half-rack waveform monitor and the LVS-5850B half-rack vectorscope. Both are easy to use and can be mounted together. Standard features of the LBO-5860B include 4 sweep speeds, flat response, IEEE and chroma filters, switchable DC restorer clamps blanking at zero IRE, and switchable internal/external sync. The LVS-5850B features electronically generated CRT targets and error limits. The electronic targets eliminate parallax, and readout is independent of centering controls.

Check out Booth 2216 for **Associated Production Music's** BROADCAST ONE, a

package of ten new compact discs containing over 100 cuts of music in full-length, :29 and :59 second versions suitable for commercials, promos, news themes, sports and weather.

Fort Worth Tower will be displaying in Booth 3066. See their guyed or self-supporting towers in angle, solid, or tubular structures. Fort Worth also offers a variety of transmitter buildings for every kind of use and weather condition.

Fortel will be displaying the DHP-525S, a full-frame digital time base corrector that operates in heterodyne and S-VHS mode. The unit has a signal to noise ratio of 57 dB, an internal drop-out compensator, freeze field or frame, luminance noise reduction, and horizontal image enhancement. See the DHP-525S in Booth 3576.

The Professional Video Division of JVC, Booth 2656, will be showing their new component series, including the KY-20U three chip color production camera, the VM-R190U 19-inch multi-format color monitor, the KZ-800U MII editing VCR, and the KM-3000U component post-production switcher. The component-compatible products make it possible to maintain a single format from initial field recording right up to the edited master. At the heart of the series are MII format VCR's that deliver picture quality comparable to 1" Type "C" format units. 

NAB '88

Selected Booths, by Company

3M	2305
Acrodyne Industries, Inc.	3833
Andrew Corporation	1811
Associated Production Music	2216
Aston Electronics, Inc.	5725-27
AVCOM of Virginia, Inc.	5331
Bogner Broadcast Equipment Corp.	2666
Broadcast Electronics, Inc.	0303
Channematic, Inc.	1339
Chyron Corporation	3556
Circuit Research Labs, Inc.	133
Comprehensive Video Supply Corp.	3174
Compu-Cable USA	5925
EMCEE Broadcast Products	3053
Fort Worth Tower	3066
Fortel, Inc.	3576
Fuji Photo Film	4307
Gorman-Redlich	1200
Gray Communications Consultants	2242-46
Hitachi-Denshi	3324
Ikegami Electronics	2320
ITS Corporation	1113
JVC	2656
Laird Telemedia, Inc.	3962
Lake Systems Corporation	1039
Landy Associates	2677
Leader Instruments	3472-75
Lenco Electronics	3956
Lowel-Light	2469-71
Magni Systems, Inc.	5105
Panasonic Industrial Company	2938
Sharp Electronics Corporation	4316
Shively Labs	0109
Shure Brothers, Inc.	0203
Sony Corporation of America	2902
SS Telepak, Inc.	4569-70
Townsend Broadcast Products	4356
Uni-Set Corporation	1834-42
Vinten Equipment, Inc.	1425

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Aston Electronics, Inc.	5725-27
Compu-Cable USA	5925



You Asked!

—by Kathryn G. Tesh, N.C.E.

I just got my CP, and now I find that my site is unavailable. What can I do?

In the rush to apply for LPTV permits, some early applications were not engineered very well, the thought being that they could be easily modified after grant. Also, sites that were available four years ago may no longer be available. Thus, some new CP holders are finding that they need to locate a new antenna site.

If you cannot build to match the terms of your construction permit, you must apply for a modified CP. The FCC will not grant extensions of time on a construction permit because of changes to the original proposal, however, leaving few options for people in this situation. Unless you have time to wait for a new filing window, the application for modification must be a minor change application.

Unfortunately, the FCC's rules severely

limit the changes that may be made. The new site must be very close to the old one, and the new proposal must not serve any people that the old one didn't. This usually means that you'll need a new site that is less than a mile away from the old one. Your technical consultant can prove invaluable in analyzing your specific situation.

If I do need to relocate my antenna, where can I look for suitable sites?

LPTV antennas can be located many places. Typically, the first places to look are the FM and TV towers in your area. But these may be too far from the population centers to be useful to you, because you use a lower power than they do. Don't rule out AM towers; they can be economically converted to a grounded tower (see Ron Chaffee's article, "LPTV and the AM Broadcast Tower," in this issue).

continued

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Often there are two-way or business radio towers in good locations, whose owners do not see LPTV as competition the way some broadcast owners do. And the owner of a tall building may be willing to lease space on its roof for your communications facilities.

Of course, you could also build your own tower. Whatever your choice, remember that height, which maximizes coverage, is very important to an LPTV station.

What is RFR? What is all the fuss about?

The Environmental Protection Agency has determined that excessive exposure to radio frequency radiation (RFR) can be harmful to living things. They have set an exposure limit for workers and the general public. This limit is contained in ANSI Standard C95.1-1982.

There are two problems here relevant to LPTV operation. One is that the FCC may require an environmental assessment if they believe that the combined radiation from all users of a tower, or from towers in close proximity to one another, will exceed the limit. At this time, the assessment is required in the initial application stage. Those licensees and permittees who did not perform an assessment, because it was not a requirement when their application was processed, may have to provide such a study

before their license or license renewal is granted.

The second problem involves station liability, if the public perceives damage due to excess exposure. The problem is more pronounced if your antenna is low on a tower shared by other users and you have a directional UHF antenna. If there happen to be high power UHF stations very near your tower, your tower workers might be exposed to excessive RFR and you might discover that you have unwittingly violated OSHA guidelines. Again, an examination of your unique set of circumstances is required to determine if you have any potential problems.

I keep hearing about directional and non-directional antennas. What does this mean?

A "non-directional," or ND, antenna radiates the same amount of signal in all directions. A "directional," or DA, antenna has been modified so that it suppresses signal in certain directions and enhances it in others. We normally refer only to the horizontal plane when we discuss ND and DA antennas, because all television antennas are directional in the vertical plane.

Directionality increases the maximum gain of an antenna. The effect can be illustrated with a loop of string. If you lay the loop down in a circle, then squeeze part of it in towards the center, the other portions can extend further from the cen-

ter. In the same way, a directional antenna gives higher gain (more signal per watt of input power) in some directions at the expense of others.

A directional antenna might be used to suppress signal towards a station that must be protected, or increase signal towards a populated area. A sharper directionality in one direction will result in a higher maximum effective radiated power in this direction and, thus, increased coverage.

If your site is in the center of your coverage area, you probably want as broad a pattern as possible, or even a non-directional one. However, if sites are cheaper or better on one side of town, or you are located between two population centers, a directional antenna will permit you to put more signal over the people you want to serve. Alternatively, if you must suppress sharply to protect a high-power station, you would like to be able to radiate more signal over your service area, and you'd elect to use a DA antenna.

Kathryn G. Tesh, N.C.E. is an LPTV technical specialist with Lawrence Behr Associates, Inc. in Greenville, NC. 

Do YOU have questions on LPTV transmission systems or FCC technical matters? Send them to Kathryn Tesh, c/o The LPTV Report, P.O. Box 25510, Milwaukee, WI 53225.

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Channel America To Sign On June 1

Channel America, an LPTV station and programming network, will begin broadcasting June 1, according to chairman and CEO David Post. During its first phase of operation, the network will air three hours per day of original programming, augmented by syndicated fare for a total broadcast schedule of 18-24 hours daily. By fall, it expects to be supplying programming to 21 owned and operated LPTV's and 30 independent affiliates.

Channel America's programming, according to Post, will be "highly interactive." Game shows, for example, will join studio guests with pre-selected contestants playing by telephone from local areas. At home, viewers can participate by betting on combinations of winning players.

A new "info-tainment" format called "Runway Club" will show new products from locations around the world and will tell viewers which stores in their area carry the products. On "Kennel Club," viewers will bet on national and local greyhound races. Also part of the format will be direct response broadcasting, new and classic films, and single sponsor programming.

"People watching Channel America won't just be sitting there with soda and chips," said Post. "They'll have their phone, game card, or guide book, and those that want to will be participating."

"Our business strategy also centers on interaction. We're not simply delivering an audience to advertisers, we're creating a relationship among consumers, retailers, manufacturers, and service vendors."

In early 1989, original programming will be increased to six hours daily. Post projects that by then the network will have 30 owned and operated stations and 50 independent affiliates. K/B

World Wide Bingo Adds New Sponsors

World Wide Bingo, Inc. recently announced a commitment from Taco John's International to co-sponsor the company's new "\$10,000 Bingo!" program in ten metro markets.

Taco John's joins the National Basketball Association's Utah Jazz, who began sponsoring World Wide Bingo programming in December. The Jazz report that a large number of women are playing the Bingo games, adding a new dimension to their audience. Women were a group that the Jazz had trouble reaching in the past, according to World Wide Bingo, Inc. K/B

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Model TLU/1KAC
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Write or call today for details on our 1kW UHF TV Transmitter/Translator, or on any of our other TV transmitter products and services.

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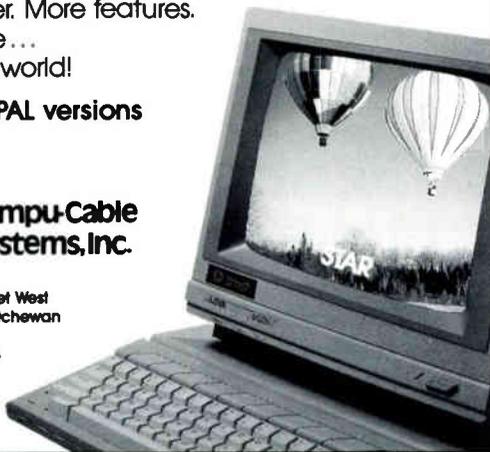
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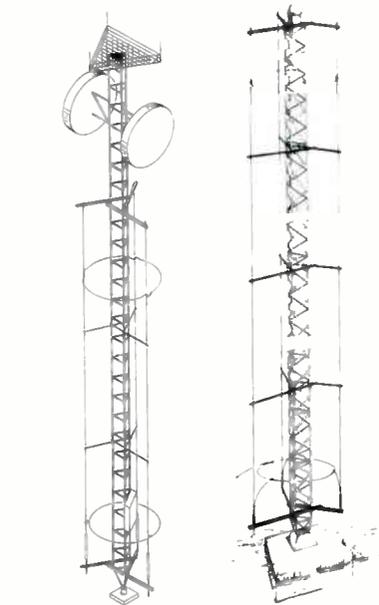
LPTV And The AM Broadcast Tower

—by Ronald C. Chaffee

As you evaluate transmitter sites for your LPTV station, don't overlook the potential of AM towers as antenna platforms. AM towers are generally conveniently located, close to the centers of population of the communities they serve. In fact, many have been in place for so long that large communities have grown up around them.

Despite this convenience, however, many LPTV operators have stayed away from them because of technical and economic concerns. For one thing, AM towers are generally series-fed radiators with base insulators. Antennas mounted on series-fed towers must be isolated from the tower ground system with isocouplers which represent an additional initial expense and require continuing maintenance by both the AM and the LPTV station. Furthermore, an improper LPTV installation on a series-fed AM tower tends to interfere with the radiation efficiency of the tower, a prospect not likely to make the tower owner happy.

For the technically minded, the series-fed AM radiator is one-half of a dipole (i.e., a monopole) stood on end and insulated from its ground system. The complete tower radiates energy and is electri-



The LBA Technology "Folded Unipole" is an example of a commercially manufactured folded unipole.

cally active. Many people call AM towers "hot towers" because they cannot be safely touched when the power is on.

In contrast, FM, TV, and communications towers are simply platforms upon

which other antennas may be mounted. Instead of being electrically active, these towers are grounded (in electrical terms, at ground potential). LPTV antennas and associated transmission lines may be bonded directly to such towers, crossing the tower base without the use of isolation devices. Naturally, because the towers are grounded, static electricity build-up and lightning strikes will discharge directly to ground, protecting attached transmission equipment.

What is a Unipole?

Fortunately for those who have access only to AM towers, there exists the folded unipole. This type of AM tower does not have a base insulator; LPTV and other antennas may be mounted directly, without isocouplers and without AM interference.

Standard series-fed towers can be converted to folded unipoles conveniently and at minimal cost. This approach gives the LPTV licensee an excellent location for his/her antenna, provides the AM licensee a new source of much-needed revenue, and usually improves the AM signal. Everybody wins!

The folded unipole is not a particularly mysterious device, and it is being installed in dozens of AM stations across the country. In typical AM broadcast applications, the folded unipole is a standard steel tower with attachments that support a down lead, or "fold," from several inches to a few feet off of each corner. The base of the tower has no insulator but is tied directly to the station ground system. The fold wires attach to the tower at the top, and to the antenna tuning unit at the bottom. Transmitter energy travels from the tuning unit into the fold wires, up to the top of the tower, and down to the base where it completes its circuit into the ground system. In doing so, the antenna system radiates the signal that listeners receive.

The folded unipole is electrically equivalent to a dipole antenna which has been cut in half and stood upright on a ground system. Several studies have shown that the folded unipole has the radiating characteristics of a dipole antenna and is as good as or better than a series-fed tower.

Advantages of the Unipole

Furthermore, there are major advantages inherent in grounding an AM broadcast tower and making it a folded unipole. One of the first advantages broadcasters noticed years ago was that lightning bolts went right into the ground system, giving much lighter jolts to antenna technical equipment. The AM station sound is also improved, because folded unipoles generally have much better bandwidth and transmit cleaner AM signals. Most important, you don't have

continued on page 18

LPTV Distribution by State and Territory

April 1988

	Licenses	CPs*
ALABAMA	4	16
ALASKA	12	23
ARIZONA	11	34
ARKANSAS	5	25
CALIFORNIA	27	42
COLORADO	11	32
CONNECTICUT	0	5
DELAWARE	1	2
WASHINGTON, DC	0	1
FLORIDA	14	59
GEORGIA	4	39
HAWAII	1	10
IDAHO	6	28
ILLINOIS	2	17
INDIANA	5	20
IOWA	4	35
KANSAS	4	55
KENTUCKY	3	17
LOUISIANA	2	34
MAINE	3	12
MARYLAND	1	1
MASSACHUSETTS	3	6
MICHIGAN	2	18
MINNESOTA	14	47
MISSISSIPPI	9	11
MISSOURI	4	56
MONTANA	12	50
NEBRASKA	4	23
NEVADA	13	12
NEW HAMPSHIRE	0	2
NEW JERSEY	2	3
NEW MEXICO	7	47
NEW YORK	14	29
NORTH CAROLINA	3	32
NORTH DAKOTA	1	20
OHIO	3	26
OKLAHOMA	13	25
OREGON	16	29
PENNSYLVANIA	4	17
RHODE ISLAND	0	1
SOUTH CAROLINA	0	17
SOUTH DAKOTA	1	21
TENNESSEE	7	27
TEXAS	23	123
UTAH	15	22
VERMONT	1	3
VIRGINIA	4	19
WASHINGTON	5	21
WEST VIRGINIA	1	3
WISCONSIN	10	20
WYOMING	18	48
GUAM	1	0
PUERTO RICO	1	4
VIRGIN ISLANDS	0	1

TOTALS: Licenses: 333
Construction Permits: 1,290

* Construction Permits

Kompas/Biel & Associates, Inc.



LPTV and the LAW

Call Signs And Station ID's

—by Peter Tannenwald

I get questions every so often about those peculiar call signs the FCC gives to LPTV stations, how and when they must be used, and what related promotional activities are permissible. Because LPTV is so new, the law in the area of promotional activities is not well developed. The rules are not very strict, however, except for an hourly station ID requirement.

Every licensed radio transmission facility, broadcast or otherwise, has a unique call sign made up of letters and sometimes numbers. The first letter denotes the nation that has licensed the station. The United States may use all or part of the available combinations starting with A, K, N, and W.

Aircraft pilots and Amateur Radio operators know about "A" and "N," which are not used in any broadcast service. In broadcasting, the FCC assigns "W" calls to stations east of the Mississippi River and "K" to stations to the west. It proposed to eliminate geographic segmentation last year but dropped the proposal in the face of overwhelming industry opposition.

LPTV stations and TV translators have a common call sign scheme: "W" or "K" followed by two digits corresponding to the station's TV channel and then two letters. The first LPTV or translator station on Channel 66 east of the Mississippi is assigned W66AA, the second W66AB, and so on up to a theoretical limit at

W66ZZ (at which point there will be so many LPTV stations that we will undoubtedly own the world).

Unlike the case with high power stations, where call signs are made up of four (or occasionally three) letters chosen by the broadcaster, the fixed scheme for assigning LPTV call signs does not permit selection by the licensee. You get the next sequence in line, whatever that is, at the time your construction permit is granted.

A Few Rules

As for ID's, any station that originates its own programming, whether a full time LPTV or a hybrid LPTV/translator, must follow the high power broadcast rules during all hours of program origination. ID's may be visual or aural (they need not be both). The rules during origination periods are as follows:

1. An ID must be broadcast at the beginning and end of each period of operation. A period of operation is a broadcast day for a full time LPTV. For a hybrid LPTV/translator, I recommend an ID at the beginning and end of each origination segment. ID's are also required once an hour; they should be as close as feasible to the top of the hour, but a station may wait for a natural break in programming.

2. An ID must consist of the call sign first, followed by the station's community of license. No words may be inserted between the call sign and the community

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except for the licensee's name and/or channel number.

Good:

W66AA, Canton

W66AA, Channel 66, Canton

W66AA, Jones Broadcasting, Canton

Bad:

W66AA, your local voice in Canton

3. A station is permitted to identify itself with additional communities without permission from or notice to the FCC, and regardless of the strength of the station's signal in the additional community or how far away it is from the city of license. However, the licensed community must always be named first. For example, if a station is licensed to Canton, Ohio:

Good:

W66AA, Canton-Akron

W66AA, Canton-Akron-Euclid-

Cleveland-and the world

Bad:

W66AA, Akron-Canton

A pure translator station, which only repeats the signal of a high power station, may identify itself with a Morse Code insert or by a visual or aural ID broadcast by the primary station. ID's are required four times a day—twice between 7 and 9 a.m. and twice between 3 and 5 p.m. They should be aired approximately one hour apart.

Licensees Have Broad Latitude

There used to be many other call sign regulations, but no longer. Apart from

sign-on/sign-off and hourly ID's, the FCC takes a hands-off attitude. Both of the "bad" examples above are permissible, as long as a "good" ID airs on the hour. Indeed, the community of license may be ignored altogether ("W66AA, Akron") in non-required ID's. And you may also do as you like with promotional materials that are not broadcast on your station, such as print advertising, sales brochures, stationery, and advertisements on other electronic media.

Some LPTV's wish to promote themselves with ID's that do not include numbers, because the public is not accustomed to numbers and some computer programs serving broadcasters or their vendors cannot accept anything but a four-letter call sign. Apart from the FCC mandatory ID's, there is no explicit rule that prohibits any kind of promotional identification format on or off the air, including a traditional sounding four-letter call.

There are some caveats, however. You should not do anything that might confuse FCC enforcement efforts in locating a signal found to be violating the rules. Thus it would be highly risky for W66AA to identify as W66KO, because the alternate call sounds too much like an FCC-assigned call and could lead an FCC inspector off the track. Also, call signs may be registered with the U.S. Patent and Trademark Office as service marks and thus protected against infringing use by

others to the extent permitted by the service mark laws. You may register your own call sign or other promotional slogan, but you must be careful if you want to use a call or slogan that is someone else's registered trademark.

What about using a four letter call on an LPTV station all the time except on the hour? As I said above, this is an area where the law is not well developed. If there is no high power station with that call anywhere near your station, so that you could not confuse an FCC inspector, and if the call is not a registered service mark, you might be able to do it. I would not try something like "WABC" or "WCBS," even if you are far from New York, but less notorious letter combinations might work out without problems.

Peter Tannenwald is a partner in the Washington, DC law firm of Arent, Fox, Kintner, Plotkin & Kahn. He is general counsel to the Community Broadcasters Association. K/B

Unipoles continued from page 16

to take special precautions when mounting other antennas on a folded unipole. LPTV transmission lines or those for other antennas come directly across the base of the tower without need for any sort of isocouplers or isolation devices.

Properly installed, additional antennas and lines have little or no effect on the AM station operation. This makes it entirely feasible for an AM station to develop a new profit center by leasing space on its tower. An additional benefit is that AC lines for tower lighting or TV antenna de-icing no longer need isolation coils. This can mean significant savings when these antennas are installed initially, as well as continuing savings on maintenance.

Officially, the Federal Communications Commission classifies the folded unipole as a "shunt fed" antenna system. This means that the FCC will license folded unipoles on all AM towers. Furthermore, in most cases, the Commission permits broadcasters to convert series-fed antenna systems to folded unipoles without prior authorization. Aside from following certain procedures during construction, all that is necessary is to file FCC Form 302 when construction and testing is complete.

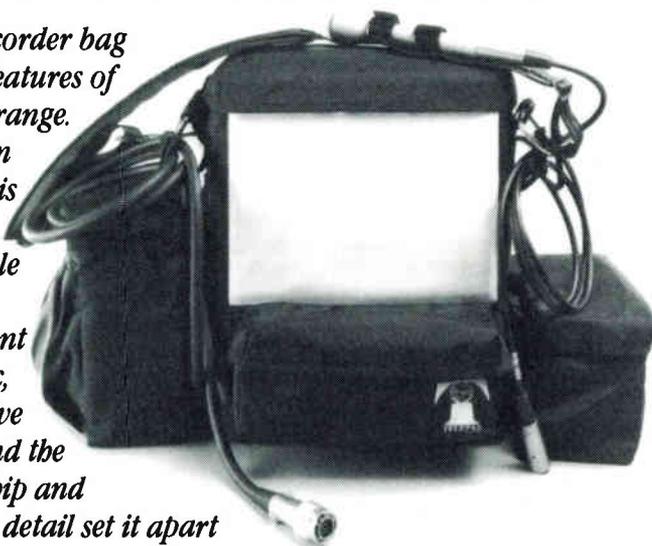
If there's a new LPTV transmitter site in your future, take a look at AM towers. With modern folded unipole installations, both AM and LPTV operators can benefit. The technology is proven, cost effective, and easy to implement. It can give you the advantage of the choicest LPTV antenna site in town!

Ronald C. Chaffee is general manager of LBA Technology, Inc., a division of the LBA Group, specialists in broadcast and telecommunications technologies. K/B

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Milwaukee's TV-55

continued from front page

spective advertisers on his daily "Stock Market Observer." TV-55 beams a sharp signal into the business and financial towers of the City, many of whose occupants keep a constant eye on the New York and American Stock Exchange tickertapes crawling across the bottom of their office television screens.

On the top half is live programming: announcers read UPI stories and report stock market statistics—detailed market index breakdowns, updates on the leading sellers, and regular reports on a variety of commodities.

Interspersed with these are half-hour interviews called "Ask the Expert." Hosted by Ben Larson, whose witty persona has been described as the "shrewd but naive country bumpkin," the call-in programs feature business leaders who answer questions from viewers on everything from new products to international trade.

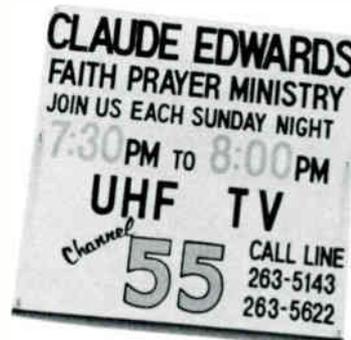
More than 8,500 guests have appeared on "Ask the Expert" since its debut. Most are from Chicago and Milwaukee, but there have been occasional bigger names, among them the late Senator Adlai Stevenson; John Filer, chairman of Aetna Life & Casualty; General Motors president Elliott "Pete" Estes; Charles L.

Brown, president of A T & T; Colonel Harland Sanders of Kentucky Fried Chicken; and Bob Guccione, publisher of *Penthouse*.

• • •

On Sunday evenings, TV-55 airs a one-hour interview and call-in program called "The Jeannetta Robinson Show." Robinson describes her independently produced and sponsored program as "functional Oprah," by which she means that she focuses, not on entertainment, but on helping her largely Black audience build positive and productive relationships with the community.

Her subjects range from politics to prisons. Her guests have included Jesse Jackson, cookie mogul Famous Amos, and the late Chicago mayor Harold Washington, as well as local Milwaukee politi-



cal candidates and community leaders. Although TV-55's present studios are too small to house an audience, invariably people show up at air time hoping to squeeze in behind the camera for a close-up look at this lady whose program is watched avidly by Black and white viewers alike.

The show is only one facet of a large and growing community outreach effort that Robinson founded with her mother out of their home eighteen years ago. Now her agency, Career Youth Development, Inc., is a multi-service organization encompassing education, drug and alcohol abuse counseling, prisoner rehabilitation, child abuse prevention, health services, and job training.

Robinson, who is a recognized national expert on youth gangs, targets high-risk

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juveniles with her rehabilitation efforts. In 1986, CYD was saluted by Congress as the number one program in the nation for kids in serious trouble. Just this March, Robinson received a citation from the White House Conference on a Drug-Free America for her work with youth, and she now works nationally to help develop similar programs in other cities.

"The Jeannetta Robinson Show" is just one part of this wide-ranging community service effort. But it is an effective one. "The program involves the total community," Robinson says over and over. "We don't just interview the [Waupun, WI] state prison warden, we talk to the prisoners, and we talk to their families. We try to show the whole picture.

"We get the community involved in production. Three times a year, the show is done entirely by senior citizens. They produce it, they're the guests, they do the interviews, they even sell ads. We've done that concept with teens and also with young children. The idea is to get the total community involved, sharing their ideas, their problems and solutions. 'The Jeannetta Robinson Show' belongs to the community."

• • •

"Pushing for Excellence," a community affairs, call-in talk show, also focuses on positive solutions for social problems. Host Monica Parchia does street interviews, gathering random opinions to which program guests and viewers later respond.

Recent subjects have included welfare recipients training for careers, and teen mothers who finished high school and are now in college. Other programs highlight figures and events in the community — Hansberry - Sands, a

Milwaukee-based Black theater group, fashion shows, scholarship programs, the efforts of a local man to establish a Black history museum in the City, and— soon—a telethon to raise money for a Central City YMCA.

"'Pushing for Excellence' has been aired only since January, but it's already a very, very popular program in the [Black] community," says executive producer Bill Rogers. "We get 25-30 calls from viewers every time we do it—which I'm told represents about 1% of the total audience of the show."

A Milwaukee warehouse food store puts up the \$150 fee Channel 55 charges for the air time each week. Use of the station's studio is free, although Rogers hopes soon to be able to invest in a camera that he can take to the streets for on-the-spot interviews.

• • •

Milwaukee has a large Latin sector right under Channel 55's tower atop the First Wisconsin Center on the lakefront, a por-

tion of the City's population that has almost doubled in the past eight years. "Most of the Spanish we talk to watch the station," says Shapiro, an assertion borne out by several station-sponsored studies which show shares of 50%-70% among Spanish households.

Telemundo provides some of the Spanish programming. Much is done locally. One popular production is "Yolanda Ayubi Presenta," a community-action program whose most recent focus has been getting Spanish citizens acquainted and comfortable with the voting process. According to Ayubi, her show is the only Spanish-language public affairs program that deals with community events, and it was the first Spanish language program to be originated in Wisconsin.

Ayubi speaks to a diverse and rapidly growing Hispanic community of Mexicans, Central Americans, and Puerto Ricans, half long-standing U.S. citizens and half new immigrants. Many are refugees from the Central American political turmoil. Many are unfamiliar with American systems and values. A great many speak only Spanish.

"One of the things that the show tries to address is the unique problems of newcomers to the United States," says Ayubi. "The whole process of learning what is there in the community is very difficult if you don't know the language.

"But we don't direct ourselves just to the Hispanics. We also try to inform and educate Americans about Hispanics. It's a two-way communication."

A recent program introduced Latin citizens to American voting procedures. "One of the barriers that inhibits Hispanics from voting is their lack of familiarity with the American voting process. We brought a voting machine into the studio and taught guests how to use it."

Studio Equipment:

W55AS, Milwaukee, WI

- Hitachi Z-31 ENG/EFP camera
- Shure M-267 audio mixer
- Panasonic WV-5410U line monitor
- Videotek AVM-135 color monitor
- 3 Panasonic WV-5200 line monitors
- Tektronix 528-A waveform monitor
- Microtime T-120 TBC
- 3 Sony VO-5800 recorder/players
- Sony VO-5850 editing VTR
- Panasonic WJ-5600 switcher
- 3M 40X switcher
- Smith Victor lighting

Dear manager of channel 55,
 my sister and I are ages
 12 and 6 years old. We were
 on the Despretta Robinson show
 and we enjoyed it. We hope
 her show stays on a long
 time and more kids will have
 an opportunity to be on your
 show like we did. I feel
 that her show is doing a lot
 for the community. I have
 all of my classmates to
 watch you at our every Sunday
 night.

Then Ayubi took a camera and an armful of voter registration forms to the registration sites and taped the procedures to show how easy they were. "Everyday people love to be in front of the camera, and they like to feel they're teaching somebody something," she said of her volunteer, on-the-spot demonstrators.

Ayubi is proud that her efforts have made regional and state news headlines nine times in the past year. "What we're doing is 'advocacy journalism,'" she explains. She's proud also that the Hispanic community knows her and feels comfortable enough to call her at home to invite her to attend a wedding, or share a meal. She laughs about how her male viewers objected when she cut her hair.

"The viewers have a right to possession of their show. We come to them in their most intimate surroundings, their living rooms. We're very conscious of that."

...

Addendum: Cable carriage? Channel 55 is on the Viacom system in Milwaukee's southern suburbs but has not been carried on the City's Warner Cable since July 1986 when Warner bumped the sta-

tion. The MSO offered to reinstate it—at a charge of 10¢/subscriber—but Shapiro refused, declaring that it was unfair to charge his station for carriage when the City's five high power stations were carried free.

Shapiro says, however, that the lack of carriage is more insulting than economically harmful. Most of the station's viewers either do not have cable or can pick up the broadcast station with an A/B switch.

"We have an excellent signal in the Central City. Since Warner dropped us, our business has gone only straight up. Our advertisers know we're reaching the viewers they want to reach, so they don't care. In fact, one advertiser just doubled his business with us."

A compromise of sorts was reached in early March when Milwaukee alderman Mary Anne McNulty met with Shapiro and Warner officials. At the meeting, Warner agreed to print a notice in English and Spanish in its March 16-31 channel guide telling viewers how to tune the LPTV station in. Said McNulty, "It's critical that programs of interest to the community be received with minimum difficulty. This notice simplifies the procedure for people."

Congress To Meet LPTV At CBA Panel

"Congress Meets the LPTV Industry" is the title of a Community Broadcasters Association panel to be held during the NAB Convention on Sunday, April 10 from 5 p.m. to 6:30 p.m. in Room B-2, East Meeting Room Complex, of the Las Vegas Convention Center.

A reception for LPTV broadcasters and the speakers will follow the seminar. Panasonic and EMCEE will sponsor the reception.

NCTA Independent Operators Board Opposes Gore Bill

The National Cable Television Association's Independent Operators Board unanimously voted in February to oppose S.889, legislation sponsored by Senator Albert Gore, Jr. (D-TN) to regulate cable satellite programming.

It also voted unanimously to oppose an amendment expected to be offered by Senator Larry Pressler (R-SD) to regulate the wholesale price of cable programming services.

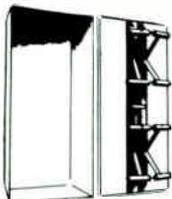
Call For CBA Convention Panelists

Panels are now being formed for the Community Broadcasters Association Convention and Exhibition to be held in Las Vegas in October. The CBA welcomes suggestions for panel topics and/or speakers.

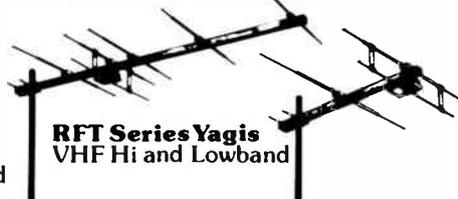
What do YOU want to know about? Send your suggestions to Lori Wucherer, Administrative Director, CBA, P.O. Box 26736, Milwaukee, WI 53226. Or call (414) 781-0188.

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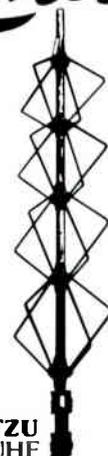
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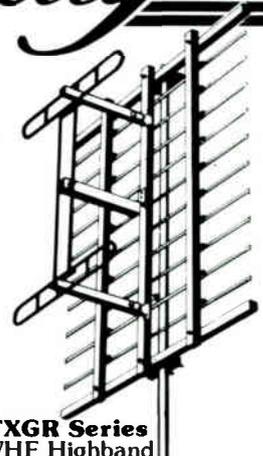
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... at the FCC

NEW LPTV LICENSES

The following LPTV stations received licenses on the dates shown. Station call sign, location, and the name of the licensee are also given.

K39AA Ninilchick, AK. State of Alaska, 1/29/88.
K13RR Tok, Tanacross, AK. State of Alaska, 1/29/88.

K42BS Fayetteville, AR. Brooks Broadcasting, Inc., 1/29/88.

K47BE Boise, ID. Trinity Broadcasting Network, Inc., 1/29/88.

W62BH Hopkinsville, KY. Trinity Broadcasting Network, Inc., 1/29/88.

W08CH Hyannis, MA. Harvard Broadcasting, Inc., 1/29/88.

K42BG Scottsbluff, NE. Seven Star Television, 1/29/88.

K34BQ Las Vegas, NV. Trinity Broadcasting Network, Inc., 1/29/88.

W30AJ Syracuse, NY. Connecticut Home Theatre, 1/29/88.

K33AG Bend, OR. Trinity Broadcasting Network, Inc., 1/29/88.

W05BD Madison, WI. Weather Center International, Inc., 1/29/88.

LICENSE RENEWALS

K14AT China Lake, Sky Place, CA. Indian Wells Valley TV Booster, Inc., 3/1/88.

K55CN Bakersfield, CA. Trinity Broadcasting Network, Inc., 3/1/88.

K53BM Alamogordo, NM. Corinne Galt Acosta, 2/18/88.

K15AL Winnemucca, NV. Humboldt County Public TV Department, 2/26/88.

ASSIGNMENTS AND TRANSFERS

K20AG Anchorage, AK. Voluntary assignment of license from Alaska Baptist Media Ministries, Inc. to Alaska Broadcast Television, Inc. on 2/16/88.

K18AO Oroville, CA. Transfer of control granted from Chico Broadcasting Corporation to Coltrin Communications, Inc. on 2/12/88.

W25AL Oakland Park, FL. Voluntary assignment of permit from Taft Television and Radio Company, Inc. to TVX of Miami, Inc. on 2/16/88.

W42AO Athens, GA. Voluntary assignment of permit granted from Barbara Dilley to Georgia Regional Community Television on 2/29/88.

K49BP Sioux City, IA. Voluntary assignment of permit from Mark VII Broadcasting to Russell Communications on 2/16/88.

K27BD Thompson Falls, MT. Voluntary assignment of permit from Mountain TV Network, Inc. to Thompson Falls TV District on 2/17/88.

K28CD Fort Benton, MT. Voluntary assignment of permit granted from Rural Television System, Inc. to Fort Benton Community Improvement Association on 2/29/88.

K27CD Boulder, MT. Voluntary assignment of permit granted from Town of Boulder to Boulder TV Translator Association on 2/29/88.

W64AZ Kinston, NC. Assignment of license granted from Joyce C. McCune to Local Television Associates, Inc. on 2/23/88.

W12BS Lakewood, OH. Voluntary assignment of permit granted from Karen Klaus to TV 12, Inc. on 2/29/88.

W29AI Akron, OH. Voluntary assignment of permit granted from Virginia Klaus to TV 29, Inc. on 2/29/88.

W39AQ Marion, OH. Voluntary assignment of permit from Charles Hutchinson and Richard Riggs to Central Ohio Association of Christian Broadcasters on 2/16/88.

K44BQ Ardmore, OK. Voluntary assignment of permit from David H. English to Trinity Broadcasting Network, Inc. on 2/22/88.

K65DR Portland, OR. Voluntary assignment of permit from Residential Entertainment, Inc. to Channel America LPTV Holdings, Inc. on 2/16/88.

W12BR Altoona, PA. Voluntary assignment of permit granted from Leon A. Crosby to Victoria D. Royster and Silas F. Royster on 2/23/88.

W67BD Chattanooga, TN. Assignment of license granted from Sur Este Broadcasting Corporation to D. Stephen Hollis on 2/29/88.

W17AO Staunton, VA. Voluntary assignment of permit from Moneta Associates to Mary Baldwin College on 2/17/88.

K26BE Sheridan, WY. Voluntary assignment of permit granted from Jeffco Broadcasting to Central Wyoming College on 2/29/88.

NEW LPTV CONSTRUCTION PERMITS

The following parties received LPTV construction permits on the dates shown. Station call sign and location are also given.

W23AJ Gadsden, AL. Impact Television Group, Inc., 2/12/88.

K69FB Sacramento, CA. Mintelco, Inc., 2/12/88.

K28CI Atwater, CA. Control Design Service, 1/29/88.

K22CB Montrose, CO. Telemedia, Inc., 2/12/88.

W50AT Sessoms, GA. Community Television, 1/29/88.

W53AP Sea Island, GA. William T. Conner, 2/8/88.

K48CT Storm Lake, IA. Mountain TV Network, Inc., 1/29/88.

W11BV Indianapolis, IN. White River, Inc., 1/29/88.

K45CF Cedar Vale, KS. Winfield Publishing Co., Inc., 2/8/88.

K32CB Hopkinsville, KY. Black Media Associates, 1/29/88.

K45CE Morgan City, LA. Mountain TV Network, Inc., 1/29/88.

K45CG Tallulah/Vicksburg, LA. Vicksburg Printing & Publishing Co., 2/8/88.

W69BU Casco, ME. Samaho, Inc., 1/29/88.

W48AV Detroit, MI. Glenn R. and Karin A. Plummer, 2/1/88.

K34CG Bay Lake, MN. Mountain TV Network, Inc., 1/29/88.

W23AN Morganton, NC. James Brown, 2/12/88.

K65DY Forman, ND. Mountain TV Network, Inc., 1/29/88.

W29AL Albany, NY. American Christian Television System, 1/29/88.

W52AO Boardman, OH. WFMH Television, Inc., 1/29/88.

W59BP Ashland, OH. Ashland Broadcasting Corporation, 2/12/88.

W56CC Florence, SC. Florence Christian Television, Inc., 1/29/88.

W14AR Crossville, TN. William T. Connor, 1/29/88.

K40CE Spearman, TX. Mountain TV Network, Inc., 1/29/88.

K16BL Pampa, TX. Mountain TV Network, Inc., 1/29/88.

K48CI Kerrville, TX. Mountain TV Network, Inc., 1/29/88.

K53CT Huntsville, TX. Janet Roberts, 2/12/88.

K27BZ Wellington, Dodson, TX. Greenbelt TV Translator System, Inc., 1/29/88.

K16BK Quanah, TX. Mountain TV Network, Inc., 1/29/88.

K56DT La Grange, TX. Mountain TV Network, Inc., 1/29/88.

W28AL Front Royal, VA. E. Warren Denton, Jr., 2/8/88.

W50AU Mauston, WI. Community Communications, Inc., 1/29/88.

LPTV LOTTERY WINNERS

The following are tentative selectees of the LPTV/translator lottery held on February 26, 1988. If no petitions to deny the selectees are filed, and if they are otherwise qualified, they will be granted construction permits.

Ch. 14 Tucson, AZ. K. Sandoval Burke.

Ch. 69 San Luis Obispo, CA. Alegria Broadcasting Corporation.

Ch. 47 Redding, CA. North American Television Network.

Ch. 54 Storm Lake, IA. Millard V. Oakley.

Ch. 62 Iowa City, IA. Kim Mooney.

Ch. 51 Garyville, IN. Educational Broadcasting Foundation.

Ch. 64 Alexandria, LA. James E. Still.

Ch. 67 Shakopee, MN. G-F-I Broadcasting, Inc.

Ch. 35 Windom, MN. Worthington Daily Globe, Inc.

Ch. 35 Forman, ND. Mountain TV Network, Inc.

Ch. 48 Tucumcari, NM. Juan Ramon Ortiz.

Ch. 22 Jackson, TN. American Christian Television System, Inc.

Ch. 69 Plainview, TX. B & B Broadcasting, Inc.

Ch. 49 Odessa, TX. Brooks Broadcasting, Inc.

Ch. 30 Austin, TX. Austin Television.

Ch. 28 Brownwood, TX. Tel-Radio Communications Properties.

Ch. 54 Roanoke, VA. Continental Satellite Corporation.

Ch. 35 Frederic, WI. Community Communications, Inc.

Ch. 63 LaCrosse, WI. Walton, Bauer & Company.

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Lori Wucherer Joins CBA As Administrative Director



Lori Wucherer has joined the Community Broadcasters Association as administrative director in charge of memberships, promotion, and general business management.

Lori's career experience includes fifteen years in broadcast television promo-

tion, advertising, and marketing. Most recently she was director of programming and promotion for Milwaukee's WVTW, Channel 18.

"The pioneering aspect of LPTV is very exciting," said Lori. "I started right out of college with WVTW when it was a relatively new independent back in 1972. LPTV is facing some of the same challenges now that we faced back then, and I'm going to enjoy being in on the ground floor again."

Lori is a graduate of the University of Wisconsin-Whitewater, with a B.S. in secondary education and emphasis in speech and English. She is a member of the Broadcast Promotion and Marketing Executives, the National Association of Television Programming Executives, and American Women in Radio and Television. She also serves on the Board of the Bay View Community Center.

Technical Talks

continued from page 7

The answer is, you can! But at this point, better coverage depends on how much the viewer wants to see your signal.

Your viewer can put up with an increasingly snowy picture the farther away he or she is from the transmitter, or he/she can erect a better antenna. An indoor antenna mounted in the attic may produce good pictures—if the viewer is close enough to the 11-mile range. But twenty miles away or more will usually require an outdoor antenna. (But not always! That's the unknown factor of television propagation. In some cases—especially in a high area—the viewer may be able to use an indoor antenna and still get a good signal.)

So how do we calculate our coverage area? In the next column, we'll look at some reasonable solutions.

John H. Battison, P.E. is president of John H. Battison & Associates, Consulting Engineers, in Columbus, OH. 

Classifieds

WANTED TO BUY

LPTV CONSTRUCTION PERMITS OR LICENSES. If you have an LPTV license or CP for sale, we have interested buyers. Confidentiality assured. John Kompas, Kompas/Biel & Associates, Inc., (414) 781-0188.

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USED TRANSMITTERS AND ANTENNAS. We will buy your used Bogner/Scala antennas, UHF & VHF transmitters and transmission line. Video/audio microwave transmitters and studio equipment also wanted. Call us first, before you buy new equipment, for maximum trade-in value! KIDD COMMUNICATIONS, (916) 961-6411.

FOR SALE

COMPLETE RF TRANSMITTING SYSTEMS, Bogner antennas, Television Technology transmitters, Cablewave low loss transmission line. We welcome your trade-ins. Buy from the knowledgeable company that has the ability to deliver promptly! KIDD COMMUNICATIONS, (916) 961-1433.

SERVICES OFFERED

TURNKEY LPTV CONSTRUCTION: Broadcasting Systems, Inc. can take you from CP to air with just one phone call. We specialize in LPTV construction using either new or used equipment. 30 years' experience makes the difference. We also purchase quality used equipment. Write Broadcasting Systems, Inc., 14605 N. Airport Drive, Suite 306, Scottsdale, AZ 85260, or call (602)951-0266.

CLASSIFIED RATES: All classified ads are payable in advance. When placing an ad, indicate the exact category you desire *Help Wanted, Situations Wanted, Services Offered, Business Opportunities, Wanted to Buy, For Sale, Miscellaneous.* The publisher reserves the right to abbreviate, alter, or reject any copy.

Classified advertising is sold at the rate of 50¢/word. There is a \$15.00 minimum charge for each ad. Count each abbreviation, initial, single figure, or group of figures or letters as one word each. Symbols such as mm, C.O.D., P.O., etc., count as one word each. Telephone numbers with area codes, and ZIP codes, count as one word each.

Business Card ad rates are \$35.00 per insertion. For Classified Display rates, call John Kompas at (414) 781-0188.

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BPME/BDA Seminar Set For June 8-12

The 32nd Annual Seminar of the Broadcast Promotion and Marketing Executives/Broadcast Designers Association is scheduled for June 8-12 at Los Angeles' Bonaventure Hotel.

Among the activities will be the International Gold Medallion Awards presentation on June 11 at the Dorothy Chandler Pavilion, longtime site of the Academy Awards.

For registration information, contact Jodi Goalstone at (213) 465-3777 (Los Angeles) or Charlie Jules at (212) 684-1255 (New York). 

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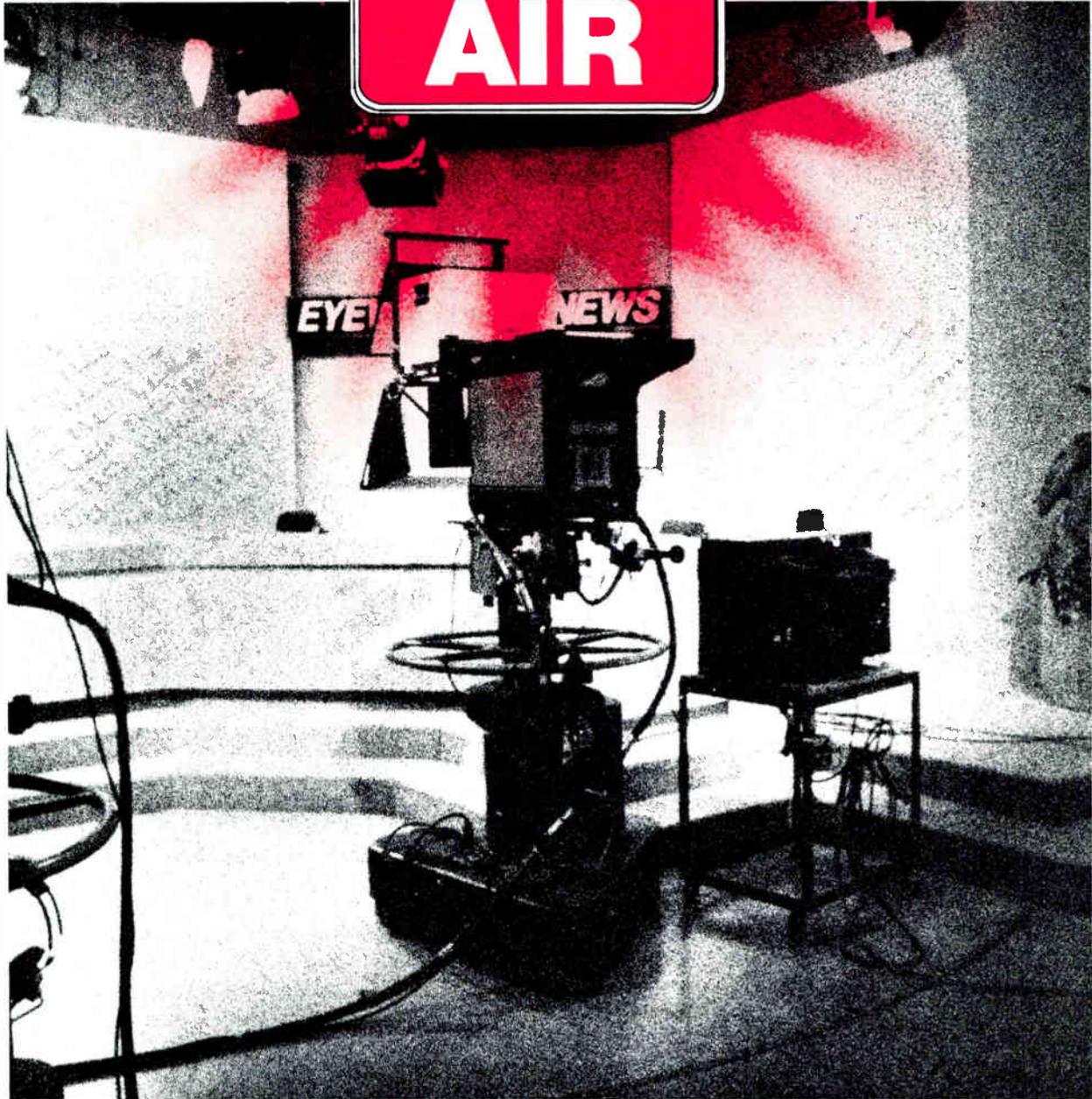
The Federal Communications Commission, in a *Report and Order* released in February, has abolished what is generally known as the *Carroll doctrine*, under which an existing broadcast licensee may request a hearing if it can prove that a proposed new broadcasting operation will cause it economic hardship and result in a net loss of service to the public.

Although the *Carroll doctrine* has been raised in numerous licensing proceedings, the Commission has never denied an application for a new license based on its principles.

Also abolished was the UHF impact policy, in force since 1960, under which applications for new or upgraded VHF services could be considered contrary to the public interest if they posed an economic threat to existing UHF stations. 

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