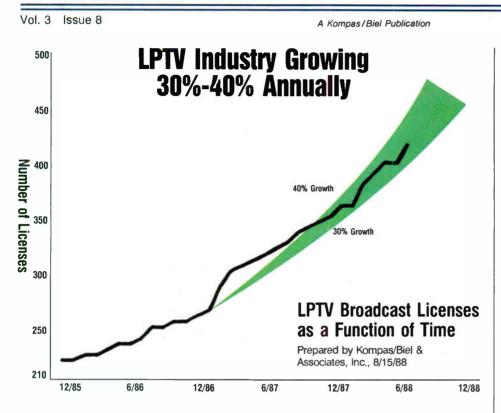
# The LPTV Report

News and Strategies for Community Television Broadcasting



### -by S. E. Bradt

It's no news that the LPTV industry is growing—and growing rapidly, especially in the past year. It's time, however, to look a bit more closely at what "growing rapidly" really means—time to put a number on it.

Our analysis shows that the industry's growth trend since mid-1986 is between 30% and 40% per year. The figure is based on the number of LPTV broadcast licenses awarded each month because we felt that these would be most representative of industry size and growth.

Having determined what to measure, we then had to decide the time period over which to measure; and that question is tougher than it sounds. After considering monthly, quarterly, annual, twelvemonth moving average, and other periods, we concluded that the variation in the growth figures is such that one growth percentage is really not very meaningful. There were large increases at the beginning of 1987 and the beginning of 1988. The summer of 1987 was not very active, but July 1988 showed a nice increase. The

continued on page 27

September 1988

### On-Line With Channel America

An Interview With David Post

### -by Jacquelyn Biel

On August 11, a new public stock closed over the counter. Nearly 500,000 units were sold, netting \$2.7 million for the construction and operation of a new national television network.

The network is David Post's Channel America, which, according to the company's prospectus, plans to become one of the largest owners and programmers of major market LPTV stations in the United States. The concept is different from that of other networks—"viewer involvement programming," according to Post. And in targeting LPTV for its O & O and affiliate base, Channel America is casting its lot with what many still view as an untried industry.

Already twenty months old, Channel America has the foundation in place-it owns two licensed and operating LPTV stations and seven construction permits. It also has options on or purchase agreements with four more licensed stations and eleven CP's, and it has signed up four future affiliates. After all the stations are built and operating, Post estimates that he will be reaching 25 million people-a boon for the advertisers, both local and national, who he hopes will be lured by America's "competitively Channel priced" advertising packages.

The network has already produced several episodes each of two original series—''Runway Club'' and ''Trade Show

continued on page 17

### TTC, the leader in LPTV transmitters, invites you to see us in Las Vegas at the CBA Conference. Booth #209, Caesars Palace Las Vegas, Nevada, Oct. 25-28

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### AN IMPORTANT MESSAGE TO EVERYONE WHO SEES THE POTENTIAL OF LPTV!

On October 25th at Caesars Palace in Las Vegas, the opening session will be held at the first conference ever devoted strictly to LPTV. That same day the exhibit hall will open with an array of products and services directed to the LPTV marketplace.

Throughout the Conference, seminars will be held on topics vital to the station owner and personnel, as well as those who are considering entering the exciting world of LPTV. Manufacturers and programmers who see the potential of this emerging market will show their wares in the exhibit hall.

Under the auspices of CBA, the Community Broadcasters Association, the Conference promises to be the launching pad for an awakening industry.

For details on CBA membership and conference information or information on exhibiting, call this toll-free number:

### 1 800-225-8183





## In Our View

It's **The LPTV Report**'s Second Anniversary!

Yep, folks, this issue marks our second full year of publishing...and what a year it was!

We outgrew our quarters last November and moved into larger offices. Our staff of four has grown to seven—you'll meet them in the next issue.

And we welcomed 25 new advertisers: Acama Films, Adams-Russell, Associated Television International, AVCOM, Center One Video, Children's Television International, Christian TV Consultants, Cinema Shares, Classic Films International, CRL Systems, EC Productions, Family Net, Hemingway Broadcast, Jimmy Houston Outdoors, Panasonic, Receivable Funding, Shop At Home Network, Sony Corporation, TelAmerica, Telemundo, Telepak, The Learning Channel, Trylon Towers, Video Marketing Network, and Woods Communications.

The LPTV industry has also grown—by 111 licensed stations and 871 construction permits since last September. And a second application window this past June added nearly 1,000 applications to the FCC's database.

The Community Broadcasters Association has claimed a place for itself among trade groups. (Did anyone notice that *Television/Radio Age* lists our upcoming convention as a "major event"? Hee, hee!) Lori Wucherer took the reins as administrative director and, with her leadership and under the capable guidance of Eddie Barker Associates, CBA grew its membership to nearly 100 LPTV broadcasters. The first volume of CBA White Papers was, finally, published and sent. And we are looking forward to the celebration of our first Convention and Exhibition next month.

But most important—to our growth, to the industry's growth, to the success of the CBA—has been the grit and commitment of each one of you—the LPTV broadcasters who, day by day, are building your businesses and carving your unique places among the media of your communities and in the understanding of your viewers.

Some of you have let your stories be told in these pages. Many more of you are yet to be featured. But it is your labor that has borne the industry. And it is your success that will feed it and make it grow—until you are truly a force to be reckoned with in the communications of this country.

I can't tell you how exhilarating it is to watch you. Thank you for your inspiration!

achie Kiel

### Kompas/Biel & Associates, Inc.

S.E. Bradt, Chairman of the Board John Kompas, President and Chief Executive Officer Jacquelyn Biel, Executive Vice President and Secretary Richard P. Wiederhold, Vice President-Finance and Treasurer

### The LPTV Report

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#### BON MOT

I believe television is going to be the test of the modern world, and that [in television] we shall discover either a new and unbearable disturbance of the general peace or a saving radiance in the sky. We shall stand or fall by television.

E. B. White, 1938

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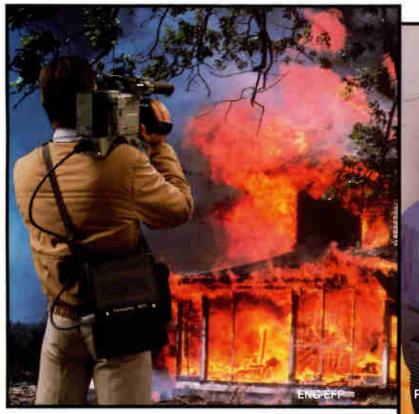
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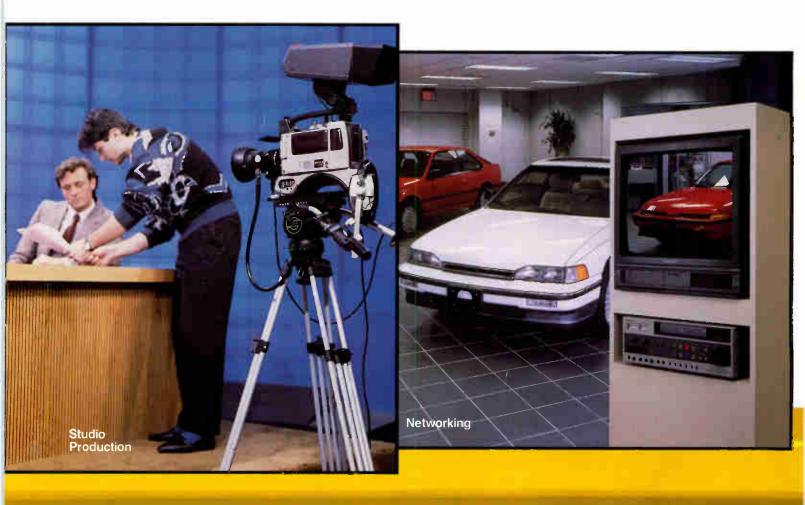
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### LPTV and the LAW LPTV APPLICATION PERILS AND PITFALLS

-by Peter Tannenwald

An LPTV application window has closed, the last minute filing crunch is over, and everyone is settling back to wait for the results. If you filed an application (or maybe a few of them), you are probably hoping that yours is not mutually exclusive with anyone else's, so that you will get a grant in a few months.

Well, it's not quite that simple. There are several pitfalls you could run into that may result in your application being dismissed or a grant being deferred indefinitely.

#### The Letter Perfect Standard

The first thing the FCC does when it receives an LPTV application is to go over it with a fine-toothed comb to make sure that every question is answered fully, the engineering information is complete and consistent throughout, and the proposal would not cause interference to any existing full or low power station or any previously cut-off application. If you make a mistake, the FCC is completely unforgiving. Your application will come back to you shortly in the mail with a notice that you may not amend it or refile it until the next filing window.

Many an applicant, including those with reputable consultants, have made an innocent, tiny mistake of one sort or another and have suffered the fate of being "bounced." The FCC says that it has to be tough because of its limited application processing resources. If the staff advises applicants of errors and has to wait for and process amendments, the application backlog will grow, and applicants who did it right the first time will suffer unfairly.

My own view is that the standard is too tough, and that it adds a substantial amount to the fees attorneys and engineers must charge to complete applications. In my office, for example, we often spend as much or more time carefully reviewing a finished application and assembling the necessary copies in the correct form for filing as we do preparing the application in the first place.

#### **Displaced Stations**

Let me digress for just a moment to talk about efforts to help displaced stations.

We all know that LPTV is a secondary service, which means that an operating LPTV station can be displaced by a new high power station or, in large markets, by a land mobile system authorized to use the UHF television spectrum. Attempts to obtain relief from this risk have been made continuously since the advent of LPTV.

A number of petitions have been rejected by the FCC; but last year, the Commission granted limited relief by allowing displaced LPTV stations to file for new channels without waiting for a general filing window. Thus, if a displaced station can find a vacant channel not blocked by any previously filed application, it can apply to move to that channel without competition from future applicants for new stations.

Not many LPTV stations have faced displacement so far, but some have, and they have tried to take advantage of the opportunity to file before a window opens. In fact, some filed this year just prior to the opening of the June window.

This creates a problem for new applicants. Engineering consultants preparing new station applications for the window would not likely know about applications by displaced stations filed within the last few weeks before the window opened, because those applications would not yet have been entered into the databases used for channel searches. So if your application for a new station conflicts with an application by a displaced LPTV station filed before the window opened, the displaced station will get the grant, and your application will be dismissed.

While dismissal on this basis is disappointing, to put it mildly, most LPTV operators and applicants alike recognize the value of special treatment for displaced stations to reduce the risk that every operator faces of losing his or her channel after investing in building a station.

I also want to say just a word about the FCC's denial of reconsideration of the current rules.

In late July of this year, the Commission ruled on two petitions for reconsideration of the displaced station rule. The first petition contained two proposals. One would have allowed displaced stations to apply for a channel without regard to any pending application for a new station (even one filed in a prior year's window). The second proposal would have bypassed the lottery when a displaced station was involved and would have ordered a hearing among competing applications with a very strong, if not decisive, preference given to the displaced station applicant. Another petitioner asked for special treatment for TV translators displaced from Channels 70-83, which have been turned over to cellular telephones and other land mobile services and are no longer available for new TV or LPTV stations.

Although the FCC turned down these petitions, efforts to help displaced stations are likely to continue. The Community Broadcasters Association is giving this issue high priority, with the help of director Dick Bogner, who has developed some creative proposals for favoring existing LPTV stations based on longevity.

#### Petitions to Deny

Back to LPTV application processing. Assuming that your application does not conflict with one filed by a displaced station, you can expect a grant after several months—if, that is, your application does not conflict with anyone else's. If it does conflict with one or more others, the FCC will hold a lottery to determine which application will be granted.

If you win the lottery, the losing applicants have an opportunity to file a petition to deny your application. What are the bases for petitions to deny? Not many, because the LPTV application form does not request very much information, so there are relatively few grounds for denial. Two areas, however, that have been raised a number of times in petitions involve site availability and real party in interest.

Every LPTV application must include a certification that the applicant's transmitter site is available; and the application must give the name and telephone number of the person controlling the site who said it is available. It is not necessary for the LPTV applicant to own the site or have an signed option or lease, but negotiations must have proceeded to the point where the general terms and conditions have been agreed upon.

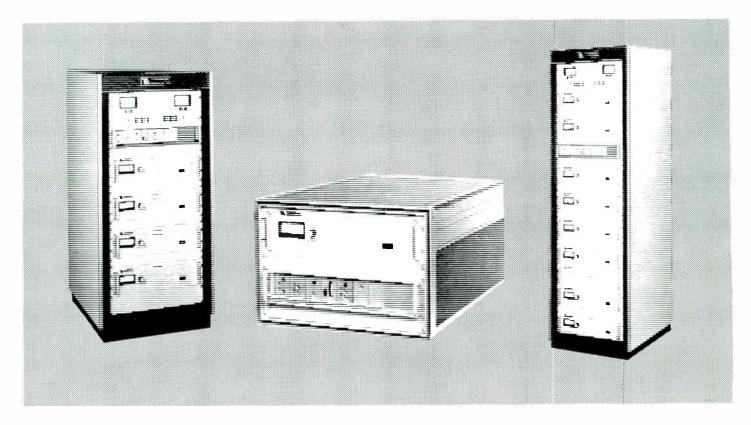
Losers in LPTV lotteries may check the availability of a site by calling the person whose name is given in the winning application. I have run into situations in which we found no tower where one was claimed to exist, or in which the owner of the land said he or she got a call some time ago but never really understood what it was about.

Another issue raised in petitions is real party in interest, which means that the applicant is accused of being a "front" for someone else. That "someone else" is usually a person ineligible to file because he or she filed five other applications during the same window or someone who would have fewer preferences for diversity of ownership and minority group membership in a lottery than the "front" applicant does.

So even if you win the lottery, your application may not be granted if it was not properly prepared or contains misreprecontinued on page 27

# TOWNSEND

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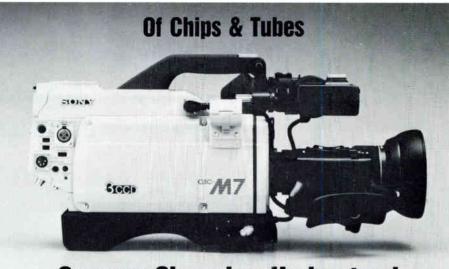
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### **Camera Shopping Understood**

Sony DXC-M7

#### -by Michael J. Havice, Ed.D.

The camera is one of the single most important pieces of equipment a station can have because of the extent to which its technical quality affects the station's image with viewers and advertisers. This article is designed to help non-technical people understand some of the important considerations involved in camera selection. It will provide a basic overview of camera characteristics and electronics.

A camera—which consists of a lens, a pick-up device, and electronics—changes the light reflecting from a physical object (physical energy) into electronic signals (electronic energy), either for storage on a recording medium (video tape or laser disc) or for "live" transmission. In essence, the pick-up device changes physical energy into electrical energy. The camera lens, pick-up device, and camera electronics are responsible for the quality of the picture that will be transmitted or recorded.

A decision as important as camera selection should be made by the general manager, production manager, and station engineer. The general manager may make or approve the final decision based upon budget considerations; however, production and engineering input will dramatically affect how well the camera contributes to the production effort.

#### **Consider Operating Environments**

Proper camera selection is based upon production, recording, and transmission needs; and the station manager, producer, and engineer must decide which camera characteristics fulfill these needs most efficiently and economically. There are three basic operating environments to consider: studio, field, and reporting. Cameras are frequently used in one or WorldRadioHistory more of these environments, even though they may perform best in only one of the three. The operating environment of a camera is important because it may affect the quality of the video and/or audio received by the audience. And quality is important, of course, because the technical quality of sound and picture and the viewer's perception of "quality" television are very closely linked.

When you define your needs, begin by identifying where production will actually take place. Each production area has advantages and disadvantages that affect the quality of the image that the viewer sees.

For example, the best picture quality can be achieved in the controlled environment of a television studio, because in a studio, lighting and sets can be manipulated to meet specific camera needs and production values. In addition, an engineer is usually available to ensure that the best possible production environment is maintained. The camera can perform at its best technical standard.

The field is the second most desirable area for television production. Location shooting, or electronic field production (EFP), requires lots of planning so that lighting and set requirements can be met. And frequently, the location makes compromises necessary that affect the technical quality of the electronic signals created by a camera.

Field cameras must be more durable than studio cameras, yet smaller; and, at the same time, they must compensate for out-of-studio electronic control. For example, a studio camera's electronic performance is controlled by a camera control unit (CCU) located in the engineering area of the studio. During a field "shoot," there may be a CCU located in a "remote" engineering truck or van. In most cases, however, any electronic adjustments to the camera are made to the camera itself. A field camera, therefore, must be easy to adjust in the field.

#### ENG Cameras In The Studio?

In contrast, an electronic news gathering (ENG) camera must be very compact and capable of reproducing news quality pictures under the worst imaginable conditions. ENG production presents the greatest difficulties in meeting technical needs and production values because an ENG crew-usually only one reporter and one camera operator-does not have the luxury of a studio or field producer and director. The two people have to be camera operators, directors, producers, writers, tape operators, and audio/video engineers. Frequently, the camera operator is just that; engineering support is minimal. Consequently, technical picture quality may suffer in spite of overall camera quality.

ENG camera technology is truly a modern day achievement. The high overall quality and performance range of ENG/EFP cameras might lead one to believe that they are all-purpose units. But that just isn't the case! There is no all-purpose video camera, just as there is no all-purpose microphone. The ability of an ENG camera to shoot under low light conditions was developed because a reporter can't stop action in order to light for a particular camera. The "look" of ENG video, because of low light and poor camera positioning, may add to news credibility. But what adds to news credibility usually subtracts from studio or EFP production values.

What about using an ENG camera in a TV studio? Advances in camera technology have made the differences between studio, EFP, and ENG cameras seem less important than they were a few years ago. Today, many production facilities purchase ENG cameras for both studio and news use. But those purchases are made with the knowledge that ENG performance is enhanced at the expense of studio performance. Studio cameras still provide the best picture quality because of the controlled environment and engineering support in a studio. But considerations such as budget and actual in-studio production time may influence the decision to purchase ENG technology for studio use.



Sharp's XC-B20P Mixed Field Plumbicon Broadcast Color Camera.

Your decision to purchase a particular camera should be based upon a clearly defined set of needs. These needs will be different for different production facilities. Some facilities— those doing medical productions, for example—will need better picture resolution and a higher signal-to-noise (S/N) ratio because pictures will have to be sharp. Other facilities, however, will require less stringent resolution and lower S/N ratios because fine detail and sharpness are not as important.

Broadcasters usually strive for very good resolution and signal-to-noise ratios because of the variety of clients seeking production. Defining the operating needs of the camera is a complicated but necessary step in the camera selection process.

#### **Physical Characteristics**

Camera selection is based upon three elements: the lens, the pick-up device, and the electronics. The lens gathers reflected light and focuses it on the pick-up device. The pick-up device transforms the physical image on its surface into electronic energy. The camera electronics manage the electronic energy so that the original image can be either preserved on a recording device, transmitted, or changed back to physical energy.

The quality of a television camera lens will determine the quality of the image focused upon the surface of the pick-up device. The pick-up device and electronics cannot be expected to improve a poor image from a low-quality lens.

Two types of pick-up devices are available for transferring physical energy into electronic energy—the pick-up tube and the charge-coupled device (CCD). The pick-up tube has been the standard device. The CCD is a new one. The pick-up tube meets the broadcast standards of the National Television Systems Committee (NTSC). The CCD, however, is an emerging technology, and while it meets or exceeds NTSC standards, the fact that it is a chip makes comparison to pick-up tubes a bit tricky.

Pick-up tubes and CCD's are arranged in two types of color camera configurations for transferring physical energy into electronic energy: one or three. A one-tube or -chip camera uses one tube or chip to manage the transfer of energy. That is, one tube or chip handles the basic image transfer and the color separation. On the other hand, a three-tube or -chip camera uses mirror-relay optics or a prism to send three simultaneous beams of light to the three pick-up devices-red, blue, or green. Each pick-up device handles its respective color. In both devices the signals are combined to form a complete color frame of the original image.

In general, the three-tube or -chip technology is superior to one-tube or -chip



JVC Model BR-S200U

technology because no compromises are made in the management of the three-color separation process. When one tube or chip has to manage three colors and the video image, sacrifices in picture quality can result. In ENG production, the discrepancies may not be noticeable because of the news value of the images sent to the station. Where content is important, however, visual sharpness and clarity become important to the viewer. Three pick-up tubes will usually give better sharpness and clarity than a single pick-up tube will.

#### Judging Resolution

The pick-up device is responsible for resolution, smear, lag, and burn-in. It also



### LPTV Distribution by State and Territory

### August 15, 1988

Licenses CPs\*

	Licenses	UF 3
ALABAMA	4	20
ALASKA	18	41
ARIZONA ARKANSAS	15 6	47 38
CALIFORNIA	42	58
COLORADO	15	39
CONNECTICUT	0	5
DELAWARE	2	1
WASHINGTON, DC FLORIDA	0 23	1 73
GEORGIA	5	52
HAWAII	4	15
IDAHO	6	45
ILLINOIS	3	28 21
IOWA	4	56
KANSAS	5	69
KENTUCKY LOUISIANA	3	23
MAINE	4	48
MARYLAND	1	1
MASSACHUSETTS	4	11
MICHIGAN	4 18	21 52
MISSISSIPPI	10	13
MISSOURI	8	64
MONTANA	16	57
NEBRASKA	4	28
NEVADA NEW HAMPSHIRE	14 1	22 4
NEW JERSEY	2	7
NEW MEXICO	9	60
NEW YORK NORTH CAROLINA	16 4	41
NORTH DAKOTA	2	28
OHIO	4	34
OKLAHOMA	15	35
OREGON PENNSYLVANIA	19 5	35 19
RHODE ISLAND	0	2
SOUTH CAROLINA	1	24
SOUTH DAKOTA	4	22 41
TEXAS	25	161
UTAH	17	23
VERMONT	1	5
VIRGINIA WASHINGTON	4	23 35
WEST VIRGINIA	4	4
WISCONSIN	10	29
WYOMING	18	58
GUAM PUERTO RICO	- 1	0 9
VIRGIN ISLANDS	ò	9
TOTALS: Licenses: 427 Construction I		
*Construction Permits	onnita. 1,703	
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contributes to the size of the camera because of the space it occupies: Three pick-up devices and a light-splitter require more space than one pick-up device.

Resolution is picture sharpness. We read resolution as horizontal and vertical lines—called scan lines. In a pick-up tube, an image is cast upon the pick-up tube surface, or "target." An electronic beam systematically scans the target area of the tube, electronically copying the picture and erasing it as it goes.

The number of horizontal lines in an American broadcast system is 525. Forty of these lines are reserved for vertical blanking, leaving 485 lines for picture information. An NTSC television image is capable of resolving only about 340 lines.

Vertical resolution is the number of alternating black and white lines that can be seen clearly on a test pattern. It is a function of horizontal resolution. Thus, a picture having a resolution of 340 horizontal lines will have a vertical resolution of 452 lines ( $340 \times 1.33$ ) since the television aspect ratio is 4 by 3.

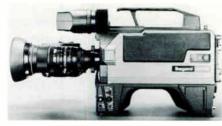
The difference in resolution between a pick-up tube and a CCD is the difference between *scan lines* made up of an electronic beam that changes current as it encounters lighter and darker areas and *pixels* or picture elements that are read one at a time. If an electronic beam is like a flashlight beam scanning a picture surface, pixels are like pellets shot from a shotgun. Pixels allow the CCD to take in the whole picture at once instead of line by line.

Smear, lag, and burn-in result when the pick-up device is overcharged because of too little or too much electronic sensitivity. That is, the image remains on the target area for more than one scanning pass, or is imprinted on the target area. Pickup-tubes are susceptible to lag and burn-in, while CCD's are susceptible to smear.

Regardless of the technology, however, smear, lag, and burn-in can be mediated by appropriate production technique. In most cases, the problem is caused by too much or too little light. Smear in CCD's can be corrected by using "optical low-pass filters" or CCD lenses like those made by Nikon.

Signal-to-noise ratio is also an important consideration in camera selection. In general, the higher the ratio, the more distinguishable the signal is from the "noise" generated by the system. Thus, a high signal-to-noise ratio makes the television picture less "grainy."

To summarize, when selecting a camera for your television facility, first determine your needs and then make your decision based upon the camera's lens, pick-up device, and electronics. These criteria, rather than price, will result in a wiser purchase decision.



Ikegami's Model CCD-770

### TYPES OF PICKUP DEVICES Tubes:

Plumbicon tubes are used in many three-tube color cameras. They provide good tracking between the three primary colors. The tube has particularly good characteristics in the areas of sensitivity, lag shading, dark current, and linear signal output to lighting level.

Saticon tubes have good sensitivity, a low signal-to-noise ratio, and very little lag characteristic.

Trinicon tubes are similar to saticon tubes. However, they are much more sensitive and have better resolution and very good color separation characteristics. The trinicon tube is a very good one-tube color pick-up device.

All three tubes are excellent choices for one- or three-tube cameras.

### CCD's:

Interline transfer chips transfer pixel information from each active pixel through an adjacent storage element.

Frame transfer chips transfer a full field of video into a separate chip storage area.

Hybrid chips transfer information using both interline and frame transfer techniques.

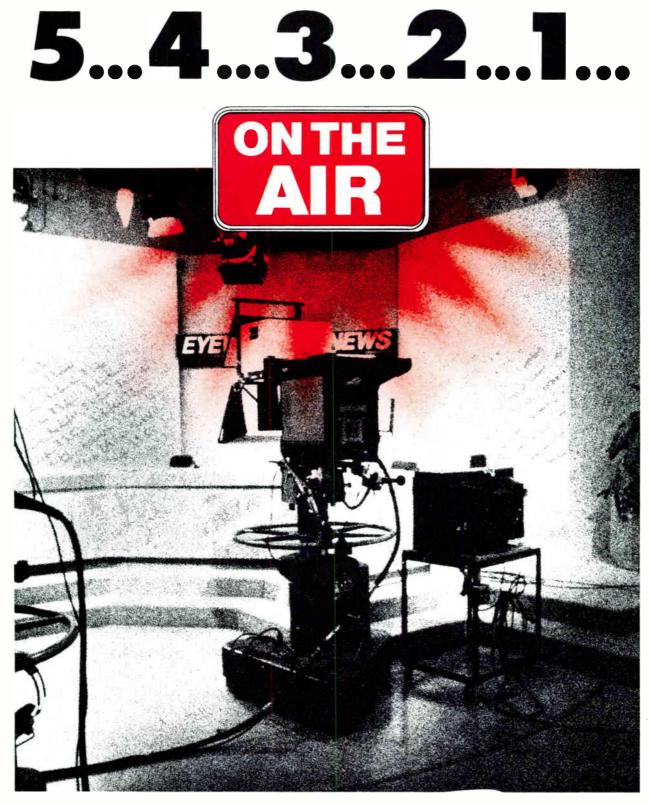
### Comparing CCD and Tube Cameras:

The CCD camera is lighter and more durable because of the size of the chips compared to the size of tubes and because the chips are bonded in place on the beam-splitting prisms. Because they are bonded to the prisms, CCD's don't need to be registered. Right now, however, resolution is still better for tube cameras.

In some production situations, CCD's are a better choice because of the possible interference to tubes from magnetic fields. Chips have no electron beam, and, therefore, there is nothing to distort. The disadvantages of the CCD's include pixels that "die" and sensitivity. In general, however, either the CCD or the tube camera will provide satisfactory service.

### MAKING THE DECISION

So far, choosing a camera has been a matter of deciding between the lens, pick-up, and electronics characteristics of individual cameras. That's fine for an



### You're on the air!

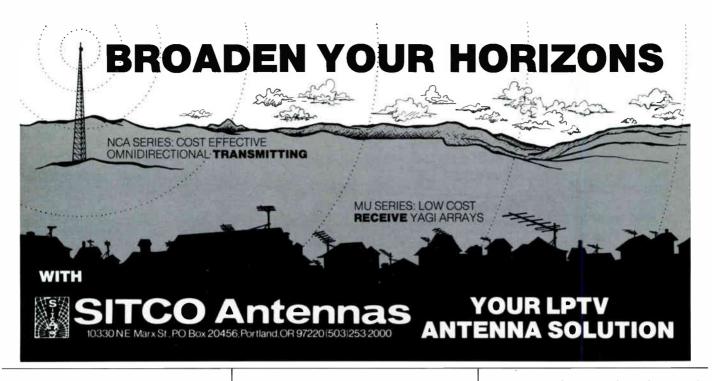
And your dream's come true. Your LPTV station is sending out a signal, loud and clear. Every hour of planning and every piece of equipment is backing that signal, because EMCEE is backing them: site selection, satellite earth station, the selection static earth static ea transmitter, transmitting antennas and line, towers, translators. . .even a complete studio package of cameras, lighting, video switcher, audio console and more. EMCEE's 27 years of experience in low power television guarantee the best equipment, installation, service,

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twx: 510-655-7088 Ans: EM@EERAAGHISHOW



advanced technology systems excellence



independent decision; but the camera must function within a system. So before you go and purchase a camera, consider the following:

1. All of the major camera manufacturers are selling cameras with pick-up tubes and CCD's. While pick-up tubes provide the better picture right now, CCD technology is rapidly catching up. It is likely that the future of camera technology will be influenced strongly by CCD developments, and your decision as to which type of camera to purchase must be made with that consideration in mind.

2. Purchase a camera with your system in mind. Make sure your system does not diminish the quality of the image sent to it.

3. Before you make a purchase decision, narrow your choices to the three best cameras you've looked at. Invite a sales representative to demonstrate the cameras in your studio or with your field gear. No matter how good the cameras may look on paper, they must perform well with your system. So test them where they will be used! Distribute the signal through your system, record the signal generated by each camera, and record the final signal. Evaluate the cameras using your monitors. Those are the monitors you use all the time. If you are integrating a new camera with older cameras, check to make sure that one camera does not make another look bad. Walk through an actual camera set-up procedure so that you can see how complicated or simple the procedure is. Make sure your people can operate the cameras. Compare the output of the cameras against one another and against your existing cameras.

When you make your final decision, choose the camera that will fit in with your existing system, contribute to the technical quality of your productions, and fit your budget.

Michael J. Havice, Ed.D. is assistant professor of broadcast communication at Marquette University. He is a specialist in video production and interactive video technologies.

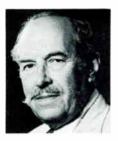
### The dB's Have it A Short Chart for Camera Shoppers

MANUFACTURER	MOOEL	LIST PRICE	IMAGING** Device	LENS †	HORIZONTAL RESOLUTION AT CENTER (TV LINES)	Minimum Illumination † (Lux)	Minimum Sensitivity †	GAIN Switch (db)	SIGNAL TO NOISE RATIO (dB)	WHITE BALANCE	RS-170A Sync	COLOR BARS
Sharp	XC-B10	\$ 8,995	3/S	Bayonet	600	30 Lux at f1.4	2 FC at f1.4	+9, +18	57	Yes	Yes	Yes
Sharp	XC-B20	\$15,495	3/P	N/A	660	24 Lux at f1.4	2 FC at f1.4	+9, +18	57	Yes	Yes	Yes
Sharp	XC-A1U	\$ 7,790	3/S	N/A	750	N/A	N/A	+9, +18	57	Yes	Yes	Yes
ikegami	CCD-770	\$ 5,500	3/CCD	Bayonet	480	40 Lux at f1.6 w/+ 18dB	2000 Lux at f4.0 = 90%	+9, +18	53	Yes	-	E*
lkegarni	ITC-735		3/S	N/A	750	40 Lux at f1.6 w/ + 18dB	2000 Lux at f4.0	+9, +18	58	Yes	Yes	Yes
Sony	DXC-MV	\$14,900	3/CCD		570	26 Lux at f1.8 w/ + 18dB	2000 Lux at f5.6	+9, +18	60	Yes	—	Yes
JVC	KY-10U		1/CCD	11X, or 16X	450	10 Lux at f1.6 w/ + 18dB	2000 Lux at f8.0	+9, +18	50	Yes	No	Yes
JVC	KY-20U		3/CCD	N/A	530	23 Lux at f1.7 w/+18dB	2000 Lux at f4.0	+ 9, + 18	58	Yes	Yes	Yes
JVC	KY-15U	\$ 6,995	3/CCD	N/A	500	32 Lux at f1.4 w/+18dB	2000 Lux at f4.0	+9, +18	58	Yes	Yes	Yes
JVC	BY-110U	\$ 3,590	3/S	Special	600 Green	65 Lux at f1.4 w/+12dB	2000 Lux at f2.8	+6, +12	54	Yes	-	Yes
JVC	BY-210BU	\$ 6,695	3/S	Bayonet	750	32 Lux at f1.4 w/+18dB	2000 Lux at f4.0	+9, +18	58	Yes	Yes	E*
Hitachi	FP-Z31A	\$ 8,240	3/S	Bayonet	800	40 Lux at f1.6 w/ + 18dB	2000 Lux at f4.0 = 90%	+9, +18	60	Yes	Yes	E*
Hitachi	FP-C2		3/CCD	N/A	620	16 Lux at f1.4 w/+18dB	2000 Lux at f5.6	+9, +18	57	Yes	Yes	Yes
Hitachi	FP-C1	\$ 5,800	3/CCD	Bayonet	580	20 Lux at f1.7 w/+18dB	2000 Lux at f6.7 = 90%	+9, +18	56	Yes	Yes	Yes

\*\*S=Saticon P=Plumbicon CCD=Charge-Coupled Device (Chip)

\*EIA "Split-field" color bars

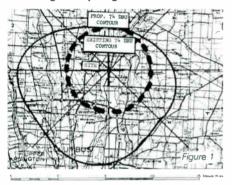
† N/A = Not Available



# Technical Talks

-by John H. Battison, P.E.

Recently I talked about coverage—the many ways of describing it and the even more numerous ways of showing it. I said that many of the LPTV applications filed in the early 80's showed vast areas allegedly within the "service contour" of the LPTV station, but they did not identify the value of the so-called "service contour." Let's look at a typical early '80's LPTV "coverage" map (Figure 1).



The circular pattern shown by the dashed line represents the original service area. It was labeled "service contour" in the original application and was based on an ERP of 941 watts. I doubt that 74 dBu would have been reached at most of the points along that contour line. However, it did serve to obtain a construction permit and to provide a basis for fuller use of the channel in the future.

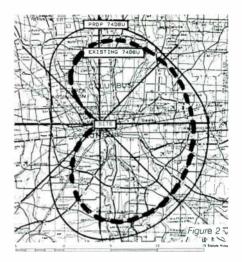
After the CP was sold, the new owner decided to increase the power and change the antenna. Figure I shows the result. The solid line represents the anticipated 74 dBu contour, and the area within which one may reasonably expect to obtain reception with a bow-tie antenna.

You might note here that I am using the term "bow-tie" to indicate an indoor, table top antenna, rather than the customary "rabbit ears." I am doing this because I have encountered cases in which viewers have tried using rabbit ears for UHF reception, and have had little success. Of course, almost anything will work after a fashion, but large VHF rabbit ears are not normally much use for UHF-TV. For one thing, they do not have the directivity necessary to reduce ghosts and to obtain the best reception.

Most indoor bow-tie antennas consist of a stacked pair of bow-ties, one above the other, mounted in a quite attractive stand with a brassy reflector behind. When I was director of engineering of the WOSU stations, I used to recommend the Radio Shack version, which was about \$12 in those days.

Back to the pattern. The increased coverage was obtained by raising the transmitter output power to I kW and changing the antenna to one with a higher gain. The height above average terrain remained the same, thereby avoiding excessive line losses. (There comes a point where the ERP gained is counterbalanced by the losses caused by the longer transmission line necessary when height is increased unless it is possible to avoid long lines by placing the transmitter up on the tower with the antenna.)

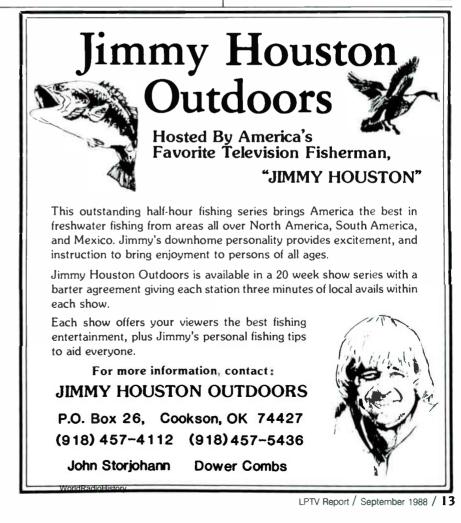
Figure 2 is another radiation pattern. Again, the existing coverage is shown dashed, and the proposed 74 dBu contour is shown solid. Apart from the increased coverage area, which is, of course, important, the main purpose for the power and antenna change was to



improve the coverage to the west.

It will be noted that the original pattern showed a decrease of signal due west to almost zero at 74 dBu (the pattern pulls right into the site). After the CP was issued, however, it became apparent that the protection provided to stations to the west was less than needed, and as a result the new pattern allowed much more signal in that direction. This was particularly important because the area to the west is lower (along a river), as well as an affluent area.

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



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### **CBA Elects New** Board of Directors

The Community Broadcasters Association has elected a board of directors following its recent membership drive. The new directors are William Allonas (W54AF and W22AE, Bucyrus, OH); Richard Bogner (W44AI, Long Island, NY); D. J. Everett, III (W43AG, Hopkinsville, KY); John Kompas (W08BX, Oshkosh, WI); Mark Osmundson (K39AS, Marshalltown, IA); Robert Raff (K06KZ, Junction City, KS); and Lee Shoblom (K45A}, Lake Havasu City, AZ).

The new board takes office immediately. It will elect its executive committee and plan strategy for 1989 at the CBA's First Annual Convention in Las Vegas in October. Associate directors have not been announced.

Current CBA president John Kompas commented, "The new board is a strong group with valuable experience in LPTV station management and a good grasp of the issues facing the industry. Each one has also demonstrated his commitment to serving his fellow broadcasters. I am confident that, with their leadership, the LPTV industry will successfully meet the challenges of the year ahead." Panelists and speakers for the First Annual Convention of the Community Broadcasters Association will include both LPTV broadcasters and industry suppliers, announced CBA administrative director Lori Wucherer. The convention will be held at Caesar's Palace in Las Vegas from Tuesday, October 25 through Friday, October 28.

"The Cable Connection" will be the subject of discussion for Michael Wright, vice president-affiliate relations for the ACTS Network; Roy Sheppard of Cable Services, Inc., a cable and LPTV operator; and Brenton Deschler, general manager of Choice Olean TV (W20AB) in Olean, NY. The panel, scheduled for Wednesday, 2:45-3:45 p.m., will be moderated by Bob Lyons, general manager of W08BV in Columbus and a former Warner Cable executive.

Richard D. Bogner of Bogner Broadcast Equipment and LPTV Report columnist John H. Battison, P.E. will discuss the best way to buy equipment for a new station on "How to Equip Your LPTV Station" (Wednesday, 9:30-10:30 a.m.). Also on the panel will be a representative from Panasonic.

Bob Horner, of the Atlanta-based news consulting firm, Video Relations, will lead a panel entitled, "How to Develop a News Department" (Wednesday, 2:45-3:45 p.m.). He will share the podium with news consultant Jack Hubbard, Dr. Arthur Stamler of Ruarch Associates, Ltd. (W10AZ, Woodstock, VA), and Mark Osmundson, president of MTN Broadcasting (K39AS, Marshalltown, IA).

A Special Session, "The Power of Promotion" (Wednesday, 4:00-5:00 p.m.), will be presented by executive director Lance Webster and other representatives from the Broadcast Promotion and Marketing Executives.

The National Association of Television Program Executives will present a workshop entitled "Programming: From Purchase to Placement" on Wednesday, 9:30-10:30 a.m. NATPE consultant Dick Block and four program suppliers will discuss dealing with distributors, program budgeting, and audience forecasting.

On Thursday, from 9:30 to 10:30 a.m., Richard Wiederhold and John Kompas of Kompas/Biel & Associates, and D. J. Everett, III of W43AG, Hopkinsville, KY will talk about effective station management on a panel entitled "The Business of Running a Business."

Washington communications attorney George Borsari and LPTV Report columnist Peter Tannenwald will be among the speakers examining legal issues affecting LPTV stations during the "LPTV Legal Clinic" (Thursday, 2:45-3:45 p.m.).

Ron Kniffin, president of Uni-Set Corporation, a Rochester, NY-based manu-WorldRadioHistory facturer of modular studio sets, and Bill Coleman, owner and general manager of K45AX in Park City, UT, will discuss lowcost approaches to studio design on "Local Production: Making the Best Use of Your Studio" (Thursday, 9:30-10:30 a.m.).

David Post, CEO of the LPTV network, Channel America, will be among the panelists discussing network programming on "LPTV Networks: Strength in Numbers?" (Thursday, 4:00-5:00 p.m.).

Roger Strawbridge from Adams-Russell and representatives from Channelmatic will conduct a workshop entitled "Automation Systems" at 2:45-3:45 p.m. Thursday.

Friday at 10:15, three pioneer LPTV broadcasters—James Pry, II of Allonas Communications (W54AF and W22AE, Bucyrus, OH), John Wesley Hembree of Good News Television (W61AR and W10BI, Nashville, TN), and John Mielke of Metrocom of Oregon (K25AS, Eugene, OR)—will share their experiences in LPTV station start-up. The panel, entitled "The Real LPTV Success Stories," will be moderated by San Francisco communications attorney and former FCC staffer Michael Couzens.

### Commission Clarifies Election Advertising Rules

In a public notice issued August 4, the Federal Communications Commission reminded broadcasters and cable operators of their obligation under Section 73.1940 of the Rules to charge electoral candidates the "lowest unit charge" for commercial spots, and to maintain a "political file" containing a complete record of all requests for political air time, and a schedule of the time used and the charges made.

Section 315(b)(1) of the Communications Act says that stations must charge legally qualified candidates for public office "the lowest unit charge of the station" for the same class and amount of time for the same period, during the 45 days preceding a primary election and the 60 days preceding a general or special election. Because many stations change their rates from week to week, the "lowest unit rate" may be determined on a week-toweek basis. Outside of the 45- and 60-day periods, a station may charge candidates the same amount it charges others for "comparable use" of the station.

In an attempt to clarify the term, "class of service," the Commission drew two categories—fixed spot time and preemptible spot time. It also explained that the price of "make-good" spots must be considered in calculating the lowest unit charge.

Copies of the four-page public notice (FCC 88-269) are available from the FCC at 1919 M Street, NW, Washington, DC 205**9**4.



## **CBA** Comment

### -by Lori Wucherer

I spent the first week in August sorting, stuffing, stamping, and sending over 1,500 LPTV Conference & Exhibition packets to LPTV operators, permit holders, and recent applicants. As I sealed the envelopes, I couldn't help but wonder what return we'd realize for our first convention effort.

A little research into the early annual gatherings of other trade associations provided encouragement, however. The first conference of the National Association of Television Program Executives in 1964 drew 71 registrants; their 1988 conference attendance was over 8,300! Attendance at the Broadcast Promotion and Marketing Executives' first seminar in 1956 wasn't documented, but they estimate that approximately 175 people were there; this past June they had 1,804 paid registrants. The first INTV convention in 1976 had approximately 100 attendees, while the 1988 convention hosted 1,400!

Our planning committee has set a goal of 200 registrants, which would represent just over 13% of our mailing list. We're confident that, like the other organizations I mentioned, we'll have a quality conference that will start small but grow bigger each year.

Because before there was CBA, there was a need—a need for representation, a

need for information, a need for LPTV broadcasters supporting each other. In its brief existence, CBA has tried to meet those needs; and this first conference is a fine example of that support.

CBA members have volunteered their services as panelists and moderators. Industry-related associations and businesses will be participating in sessions. The trade press will be coming out in force to cover the event. This kind of enthusiasm signifies the credibility of our industry; and when quality people and organizations lend their support, quality sessions are a result.

Eddie Barker Associates is busy soliciting conference exhibitors. They're finding that many manufacturers and suppliers are also eager to take a chance with a first-time effort—because they, too, realize the potential of the fastest growing segment of the television industry.

The planning committee is gratified at the response of industry suppliers. But the most important part of the event is YOU. We certainly can't guarantee numbers, but we *can* guarantee that the First Annual LPTV Conference & Exhibition will be a first class presentation. If you haven't registered yet, there's still time to be part of the action. Call me at (414) 783-5977 if you didn't receive a convention packet...and I'll be happy to sort, stuff, stamp, and send you one.

### **Channel America**

continued from front page

Television''—and there are detailed plans for a dozen more programs. At least some of the strategy is to attract both viewers and advertisers with participatory programming such as game shows that feature merchant- or advertiser-sponsored game cards and pieces.

Still on the drawing boards are a viewer participation game show based on jai alai, a small business phone-in advice program, betting and racing programs, a music series showcasing major artists, video news releases, and magazine shows. The company has also acquired some 400 classic films to help fill up its 24-hour, seven-day program grid.

And to deliver all of that, Channel America has signed a five-year agreement to lease space on transponder 3, channel 5 of GTE Corporation's Spacenet II satellite. It is presently running test programs for its owned and operated stations around the country and soliciting independent affiliates in preparation for the official launch in the fall.

It has indeed been a long road for the industry, and not a few would-be LPTV networks have fallen by the way. Will Channel America be the one to make it? We decided to ask Post.

we decided to ask Post.

LPTV Report: David, what is the idea, the concept behind your network?

Post: The concept for Channel America goes back probably six years. While the company is only eighteen months old, and only one week a public company, our ideas began six years ago.

Many of our ideas are based on what happened in early television, on the television of the 50's. We are an originator of programming. We network our program-



ming. We are essentially a live network in that all of our stations are carrying the same programming at the same time. We are a satellite delivery system. And most importantly we are an owner and operator of LPTV stations.

Many of the companies who were looking at the LPTV business in the past were programmers only; they looked at the industry from the top down rather than the bottom up. We are both sides of the equation. As an owner-operator we have to make money from what we put on the air, and what goes on the air has to be attractive for people to watch.

Our approach is really based on how we can get people to watch. If we get people to watch, we get advertisers. If we get people to watch, the station operators get all the things that they want. The affiliates will look to us to provide them with programming that can allow them to sell advertising locally.

And we want to bring investment into the industry. We're beginning to do that now. Some investors will build and operate stations if there is an umbrella programming services company like Channel America. That's a very important role to us. We see this as an opportunity like McDonald's was in the fast food industry.

**LPTV Report:** I take it that, when you speak of bringing investment into the LPTV community, you are talking about national investors?

**Post:** No, we are talking about investors who will build a station—either local investors or investors from another city—



who will build the station because they can get everything from one company. They can get services, they can get programming, and they can get marketing. And they can operate this thing without having to learn the entire television industry.

We are now looking toward our launch which we think is the next thing that the company has to accomplish. The first thing was to go on the air, to go on to satellite; and we did that on June 6. The second thing was to go public, and we did that—we closed the initial public offering on August 11. And now the third is our launch, and we're looking at that on October 1.

We want the affiliates to participate with us. Our relationship with the affiliates will probably be ironed out in the next week or so but what we're looking at probably is some minimal monthly fee which I think will come out to be less than \$2 per hour for programming.

We are going to be feeding 24 hours a day of programming. Although only a couple of hours will be original programming, we will be feeding 24 hours a day; so if someone wanted to do nothing more than to take our feed and put it on the air and go out and make local sales, they can do it. We won't be feeding only two or three hours a day; we'll be feeding 24 hours a day.

We are most likely looking at an exclusivity situation for the LPTV within its A grade. We want to help our affiliates with their relationship with the cable operators. We know the cable industry because our last company was funded by cable people. We've been talking to cable operators, and we want to try and protect the LPTV stations and help them get on cable rather than promote a competitive situation. And I think a lot of that is going to depend upon building our relationship with the operators, creating a unique programming that the cable operators can't get otherwise.

And the other part that is important is that, like a television network, we will be allowing the LPTV stations to participate in the revenue from programming that they carry. Therefore, any fee that they pay, which will be minimal anyway, should be more than offset by the money they'll be making just from the stuff that *we* sell for them. So if we have a sponsored, prepaid show, where people pay us to get that show on the air, and the LPTV stations carry it, they get paid for carrying it.

So our relationships with affiliates, we hope, will be mutually beneficial ones. But even more, we want our affiliates to make money doing business with us—which is the most important thing.

We also feel that if they're totally passive, that's not the way the industry is ever going to grow. We want people to



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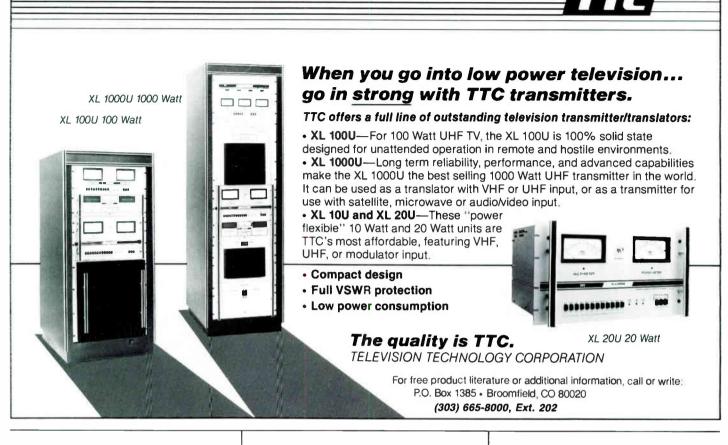
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say, "Here's what we like to do, and here's the kind of show we'd like to see."

We look at Channel America as an entertainment network, and the most important objective of an entertainment network is to get people to watch. When people watch, everything else will fall into place, including the national advertisers. In the last couple of weeks, we have visited all the major advertising agencies, talking to them about LPTV. They only know a little bit about us, but we are trying to educate them about the industry and about us and, most importantly, about how this is a ground floor opportunity for them as advertisers.

### LPTV Report: What has been their response to your visits, and who are their clients?

Post: Because we are a national network, we are looking at national clients. The most obvious ones will probably be of two types: the franchises, like the Midas Mufflers, where there is a national umbrella, and co-op. With co-op ads, there's money that can be tied in with the station's clients—the gasoline stations or 7 Elevens, the soft drink companies and so forth. With them, the station can sell local as well.

If any of us look for miracles overnight, we're going to be very disappointed. But the agencies saw how fast everything happened with cable. The direct response people are banging on our doors right now, and that has happened because cable has dried up for them.

We've gotten some interest from the major advertisers, because this is the opportunity for them to buy inexpensively— to maybe get their name on a show, to be involved in some of the creative aspects of the show as well. We have two shows now that will be on before the end of this year that will be billboarded by a national company.

### LPTV Report: What do you mean by "billboarded"?

Post: "Billboarded" means their name will be on the show; that concept goes back to the early days of television as well.

But what we try to do is sit down with a sponsor and talk about either programming we have or programming they have that we could air—how we can make it work for both them and us but still make it work for television. Again we come back to the most important thing: the viewers have to like it. And if the viewers like it, and the next day at work they're talking about a show they saw on an LPTV station, this industry is going to happen. That's our approach.

We haven't focused on the regional advertisers because to us that doesn't work. My feeling is that before a Harry's Clean-

WorldRadioHistory

ers or a Bob's Luncheonette would buy time on a local LPTV station, they want to see a national company on the station. It's going to be a lot easier to sell with that national backing.

We, as LPTV operators, also see it from that standpoint. You get some big guys in there—and we are talking to some now in pretty serious terms—you tell them LPTV is a building process, as we tell the operators it's a building process. You work together. That's what really happened in the early days of television, and it hasn't happened since. If we all work together toward the same objective, it's going to work.

LPTV **Report:** In the prospectus for your recent offering, you say that the rates for Channel America's ads are lower than the big networks' ad rates are.

**Post:** Yes, there is a very, very big difference in the dollars. Our rate card is going to be significantly less expensive than even the cable networks'.

But, again, the head count is very important. As we get bigger and we begin to get into a reasonable size reach, and as the industry as a whole gets bigger, and the advertisers who look at numbers start to pay attention to us, we'll get more expensive.

Some advertisers use a quantitative approach only, but some use a qualitative

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approach as well. The ones who look at advertising from the qualitative point of view will say, "If I get myself involved in a show that's going to play to the right audience, then I'm interested." The others say, "When you have 15 million homes, talk to me."

**LPTV Report:** How are you proving viewership? How are you handling the question of reach?

Post: We have direct response people now, and direct response is easy to measure. But we are looking to advertisers to be a little bit more creative in their approach to us. A show that has a call-in feature—for a simple example— we'll be able to monitor it. We want to monitor results ourselves until the audience measurement companies get serious about LPTV. Let's do coupon deals. Let's do tieins. Let's do a contest. Something that has a measurement factor, so we can show that people are watching.

I think it's going to be two years before any of these national research companies start to pick up LPTV. They may do it for one market or another here and there, but even now they don't really do it on cable.

Our approach to the advertisers is not like cable's. We are a broadcast television network, and the stations that are carrying our programming are LPTV stations the same as the stations you're getting now except that the radius is smaller. We don't make excuses for LPTV. We say that when 2,000 LPTV stations get on the air, we're going to be a pretty strong industry. And you'd better be looking at us now, because this is not cable, this is free television. And free television still has magic. We aren't defensive out there now; we're offensive.

If we're doing a game show, the viewer has to go to the store and get a card. Here, obviously, we have a measurement mechanism that works. This network has a viewer participation, or viewer involvement, personality. Even "Runway Club"which is not a viewer participation show-is a viewer involvement show, because many of the episodes planned for the next twelve months have come from fan mail that we've received, through suggestions from women about things that they would like to see on "Runway Club." It's not a call-in show or anything like that, but we've asked people to call us or write and tell us what they would like to see on it. So even a show like that can to an extent be responsive to the viewers.

LPTV Report: Can you elaborate on your programming philosophy?

Post: The philosophy is again, to a great extent, seated in the golden age of television. That doesn't mean we're just going to show old television, because

that's not the case. But in the early days of television, many things happened: there was viewer involvement, game show questions were sent in by the viewers, there were call-ins, things like that. Even though the technology did not exist to do the things that we can do today, programming was far more creative.

We also want to be an exciting, creative opportunity for programmers and the talent. So when we go to the agencies, we talk about ourselves as if we were off-Broadway: If NBC is Broadway, then we're off-Broadway. The most successful show in the history of Broadway is *Chorus Line*, and *Chorus Line* started off-Broadway.

Our philosophy is not to imitate the networks. We can't imitate them because we would be unsuccessful. We don't have the budget. Nor do I want to; if I could, I still wouldn't do it. I remember Bill Cosby took years to get his show on the air, and right after his show went on the air and was successful, the other two networks had copies of that show. We want to be the place where people come with new ideas.

Unfortunately, I can't tell you about some of the shows we have in development for next year, because I don't want to give away any secrets. But you will see more and more emphasis on originality, on shows that people haven't really thought of before, on shows that existed in a different form years ago, but worked.

#### LPTV Report: How much network programming will the affiliates be obligated to carry?

Post: There are two types of programming they will have to carry: one is the network's A grid, which is the original programming and programming coproduced with others; and the other is the pre-paid programming where someone has bought time on the network. But in that situation the affiliate is sharing in revenues, so they're getting paid for putting that show on the air.

LPTV Report: You may be buying some programming from Tempo. Can you comment on that?

Post: I think we'll have to leave that alone for a couple of weeks, only because we're talking to them about several things. We're also talking to others.

A lot of things are going on right now. People have been waiting for someone to step up and be a serious player. We raised enough money to be a serious player, and now people are coming to us with things they would like to do.

LPTV Report: Let's move to local programming. First of all...

Post: We are not a player of local programming. Our owned and operated stations for the time being will be mainly transmitters. That doesn't mean we won't change later. Some of the investor-built

stations will air local programming, but we will have nothing to do with that.

**LPTV Report:** In other words, you won't impose any regulations on what kind of local programming your affiliates air?

Post: Absolutely not. We encourage the stations to do local stuff. What we're looking at next year will be maybe local programming tied in with network, so that people are doing things in conjunction with what we're doing. That would be terrific!

**LPTV Report:** What about pre-emption? Can a local station pre-empt your programming in order to offer something else?

**Post:** They will be able to do that, with notification.

In some cases the network might have to pre-empt local programming—if we had, for example, a network show that was a major event. If that were the case, it would be very important to give the network clearance, and we'll be talking to the affiliates about that.

**LPTV Report:** What about airing programming from other sources? Do you impose any restrictions on your affiliates?

**Post:** No, not restrictions. We are trying to serve them and ourselves in the same way. We have some bartered shows, we have bought some programming from

others, there'll be a mixture of original and movies and shows that we've picked up from other producers. The A grid and the sponsored stuff that they know in advance about—these are the shows that we are concerned with. If they don't want to take old movies or other shows we have to offer them, that's fine. We are giving them the opportunity of 24-hour programming.

**LPTV Report:** How will you handle exclusivity? You had been thinking about exclusivity in the A grade.

Post: We are getting lots of calls, and we are trying to deal with that as best we can for our purposes, and the advertisers' purposes and the stations' purposes which is not always so easy. So we figure that we'll begin with an A grade exclusivity and then expand from there and see what happens. Maybe we could have two Channel America affiliates in the same market, but they won't be overlapping.

The key is, if we get the viewership and we get advertisers and we get better programming and we are beginning to improve, then everybody succeeds. You go back to the McDonald's thing. There is more than one McDonald's in the market.

**LPTV Report:** Are you looking for a specific kind of affiliate? I believe your O & O's are all in major markets; is that correct?

Post: Yes, but the kind of affiliate I am

interested in is one who's serious about the business. It doesn't matter what the market is. There are a lot of people thinking about building, but the serious players are the people we want.

**LPTV Report:** Will you be approaching high power TV?

Post: No, we don't plan to do that for a very important reason. While high power stations would enhance the network, they might also detract from what we are trying to accomplish as an industry.

The network will be somewhat hybrid though. If a cable operator stepped up and wanted be an affiliate of ours, we'll do that. If a high power station wanted to and there was no LPTV station in the market, we would do the same thing.

**LPTV Report:** The network representation rule is under review. Does that rule affect Channel America?

**Post:** I don't think it would apply to us. I don't think it's going to apply to this industry. The FCC, from what I sense, would love to see this industry succeed. And they're not going to put any restraints on us. We're not big enough to be important.

LPTV Report: At this point, Channel Amer-

continued

### CORPORATION

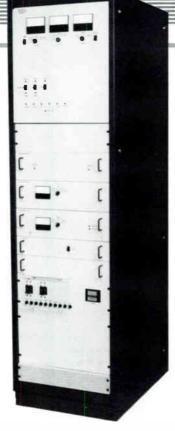
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Acrodyne Industries, Inc. 516 Township Line Road Blue Bell, PA 19422 215/542-7000 800/523-2596 FAX 215/540-5837 ica, 1 guess, doesn't fit the definition of a network as far as the FCC is concerned...

Post: I hope so.

LPTV Report: But you soon will.

Post: Yes, but I think they look at us more as a..., they don't look at the industry the same way as they look at high power. They're looking at the big three, and maybe Fox, maybe Home Shopping Network because they own a lot of broadcast stations. I don't think they're looking at LPTV right now.

LPTV Report: Assuming it was OK with the FCC, would you ever get into ad representation for individual stations?

Post: We are now, because we have A spots and B spots. If a station doesn't want to sell its local avails, then they can bundle them into ours. We are talking to a couple of ad sales companies about the industry, about really working in conjunction with the network.

LPTV Report: Which ones?

Post: I'd rather not say. They're worried about their high power clients. It's not a matter of who they are— they're large companies.

We want the LPTV stations to make money. If they don't make money, it's not going to work for anybody. We need that long-term approach.

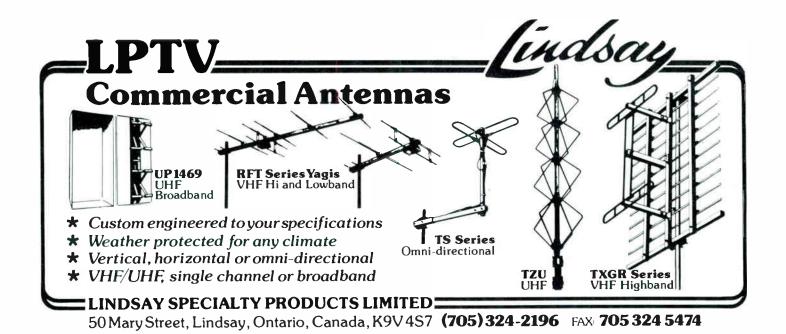
**LPTV Report:** Can you elaborate a little bit on revenue sharing?

**Post:** It all boils down to this: the affiliates will have a certain percentage of network time for local avails, and if they don't want to sell those, we'll sell the time off and they'll get a certain percentage. Then for sponsored shows or paid shows, they can get a percentage of that also. I can't say how much right now because we want to finalize the affiliation agreement first, and I don't want to say something that might change things. But it's a fair distribution of revenues.

LPTV Report: How many O & O's and how many affiliates do you eventually hope to have?

**Post:** We are trying to get over 100 stations on this network. They would be a combination of affiliates, Channel America-owned and -operated, and investor-owned and -operated, that is, people who are under our umbrella—they have gone into the business because we've helped them get there. So you really have three types of players.

What we really want to get to is that magic number of 25 million households. When we get 25 million households—the whole industry, not just us—we really have done something. Obviously we want to get to the 70% number, but that's a long way away.



**LPTV Report:** Can you elaborate on the investor-owned and -operated stations? Is this a franchise concept?

**Post:** Well, I wouldn't call it a franchise. It wouldn't fall into that kind of structure, those rules and regulations. There are people that have come to us who would like to own stations, who would like to operate in an environment in which a lot of things are provided for them. It's similar to a franchise, but it's really not. It's more like the early days of television. You wanted to build a station and there was a network providing the programming, national ad sales, engineering, and services and all the rest. We have been approached by people who would still like to do that.

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We have to build our company and our stations and the affiliates the same way. We should be worthy of getting on the cable operation, because a lot of people are trying to get on.

I can't wait for legislation. I have to do it from another side—if we can build it the way the cable operators want it, then that's the best way to get carriage. It would be nice if there was legislation, but I can't make that happen.

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We've have not had a negative response. But it's early. The credibility is very important to these people. It's very, very important that the operators understand that. The stations, the local networks that started dying in the early days are something that we have to try to overcome. All together.

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LPTV Report: How many initial stockholders do you have?

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LPTV Report / September 1988 / 23

# Supplier Side

**PROSTAR**, a Houston-based company, specializes in encrypted program distribution via satellite. Applications range from sports backhauls and video-conferencing to pay-per-view events. The service may be rented for as little as one day at a time.

Three encryption systems—Oak Orion, Leitch Video, or Scientific Atlanta B-MAC-may be rented on a one-time, monthly, or yearly basis. PROSTAR offers a range of services from encryption only to complete turn-key transmission packages.

Some of the company's pay-per-view credits include the Grateful Dead concert (December 1987), the Hagler/Leonard fight (April 1987), and the Spinks/Cooney fight (June 1987).

Uplink and downlink services are also available.

Contact: Brian D. Haley Director of Marketing PROSTAR 12831 Royal Drive Stafford, TX 77477 (713) 240-2800

Knox Video has announced a four-font upgrade for the K-40 character generator. doubling the K-40's present font capacity by providing an alternate bank of fonts. The new fonts available are:

Cooper: An attractive, styled, serif font, similar to Cooper Black. The set includes upper and lower case letters, symbols, and numerals at 32 scan lines.

Pump: A modern sans-serif font with smooth, uniform curves and balanced weight. Upper and lower case letters. symbols and numerals at 32 scan lines.

Roman: A classic traditional Roman font with broad serifs and wide spacing. Upper case letters at 32 scan lines.

Disclaimer: A small, dense, sans-serif font for fine print applications. Upper case letters at 22 scan lines.

The four-font upgrade is factory installed in the K-40 at a list price of \$275.

Contact: Knox Video 8547 Grovemont Circle Gaithersburg, MD 20877 (301) 840-5805





Knox Video's K-40 character generator

# Supplier Solo

### Trylon's Modular Tower Has Many Applications

Lightweight tower sections that fit a wide range of applications are available from Trylon, manufacturers of the A.B.C. self-supporting tower. The A.B.C. can be extended to a height of 96 feet and is engineered to suit all geographical wind zones, even with exceptionally high antenna loads.

All members are made of pregalvanized sheet steel conforming to ASTM Standard 526, with a minimum specified yield strength of 35,000 pounds per square inch. The tower cross-section is triangular rather than square, eliminating the need for internal bracing and resulting in a maximum "strength-to-tower weight" ratio that reduces costs. The 96foot model, for example, is less than \$1,200.



Trylon's A.B.C. tower.

Member cross-sections are angular -both the legs and the diagonals—and are cut and formed from four different thicknesses of sheet steel. Eighteen different cross-sectional shapes are usedall chosen with the purpose of minimizing costs through mass production.

The A.B.C. is a "kit-form" tower that uses double-plated bolted connections with special star nuts. This allows towers to be shipped as 8-foot factoryassembled sections or knocked down in 8-foot tubular cartons. Knocked down. the tower ships for less than the subassembled sections that nest together but still take far more space.

Bolt sizes are graded on the basis of strength to ensure that bolts are stronger than the attached member. This maximizes structural safety. Sections can be assembled loosely to full height on the ground and lifted into place by crane, then tightened at the connections. Alternatively, the tower may be erected section by section, using the gin pole method.

WorldRadioHistory

Each 8-foot section tapers three inches from base to top. The A-100 tower, a 96-foot model, is 42 inches per face at its base and six inches wide at the top. Another model, the C-200, handles an 18square-foot circular antenna load in a 100 mph wind with a maximum height of 56 feet. The C-200 is 42 inches at the base and 21 inches at the top.

All configurations are achieved with one basic tower. Reducing the height and changing the top section increases wind load capacity. The tower actually is "built" from the top down in 8-foot multiples.

There are six tower configurations: A-100, A-200, B-100, B-200, C-100, and C-200. An A-100 tower has a maximum height of 96 feet and holds seven square feet of antenna. The A-200 is the same tower with the top section removed and a "number 2 top" substituted for the second section from the top. The A-200's maximum height is 88 feet, but it carries 15 square feet of antenna (70 mph wind survival).

The B-100 is the same tower as the A-100 but with the top two sections removed and the third section replaced with the "number 3 top." Its maximum height is 80 feet, and it will carry 22 square feet of antenna. Similarly, the B-200 has a maximum height of 72 feet and carries 34 square feet of antenna, and so on.

Intermediate-height towers are also "built" from the top down. For instance, in the A-100 series, a 56-foot tower would use the first seven of twelve sections. The top would be six inches wide and the base the width of section seven—in this case, 27 inches. The "A" series withstands 70 mph winds, the "B" series, 85 mph winds, and the "C" series, 100 mph winds.

A brochure is available to guide the user in selecting the proper tower. Also available is a computer program that checks tower selections for suitability. The analysis reveals expected safety factors for every eight feet of tower, as well as foundation loads for specified wind velocities. The program works on IBM or IBM-compatible microcomputers.

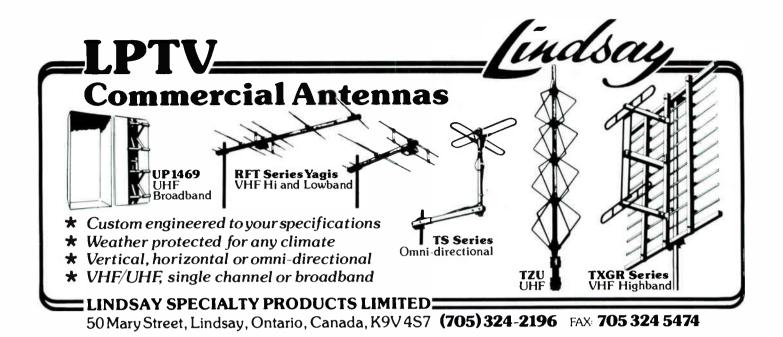
Contact: Trylon Manufacturing Company, Ltd.

- P.O. Box 186
- 21 Howard Avenue

Elmira, Ontario N3B 2Z6, Canada

This article first appeared in the April 1986 issue of Mobile Radio Technology and is reprinted with permission. K/B

"Supplier Solo" is a new column in which broadcast industry suppliers can explain their products in more detail than the usual news story or product vignette allows. For information on how to contribute, call Jackie Biel at (414) 781-0188.



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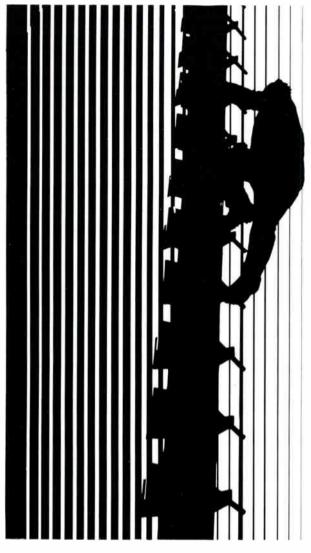
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When you need us we'll be there.



**LPTV Report:** Who were the underwriters for your offering?

**Post:** There were three underwriters. Hibbard, Brown & Co., which is a New York firm; R. C. Stamm & Co., a NYSE firm; and J. W. Gant & Associates, a Denverbased firm. We got retail distribution, which is important.

LPTV Report: Was this a guaranteed or best efforts sale?

**Post:** Guaranteed. A firm commitment, it's called.

LPTV Report: And did you say it was oversubscribed?

**Post:** Yes, the stock is down from the issue price now; it was up in the first day, but it's down now. But there was a lot of interest in the company, a lot of interest. I

think a few affiliates bought some, I'm not sure.

We really were surprised at how much interest there was, because we did the offering in the middle of the summer, which is very rare—most companies go public in October or November or February or March, when the markets very active. In August, people are always away. But we decided that because of the uncertainties of the stock market we didn't want to wait.

**LPTV Report:** What do you attribute that interest to?

Post: A couple of things. One is that it's a very exciting concept in television. Someone starts a cable network and then hopes cable operators will carry them. We're talking about a television network where we own the stations, and we will have affiliates. The story is an exciting WorldRadioHistory story—about the building of a television network.

Secondly, I was an early player in the radio paging and cellular business and had a public company, which I started. A lot of people made a lot of money, so there are people who know that, having lived a young industry before, I am the standard. I think that is a pretty important aspect, at least to my investors.

**LPTV Report:** Let me just ask you your opinion about the whole process of going public. You have done this twice now...

**Post:** ...and before that I was in Wall Street...

LPTV Report: Yes, you have experience from the other end too. Were you pleased with the process? What kinds of things happened that you didn't expect? What advice would you give to people who may be contemplating a public offering?

**Post:** The advice I would give them is that if the market is anxious for new companies, then it's a good time. Right now, it's much tougher because Channel America is a very selective stock.

One of the reasons we got our deal done was that we're a national company. I have built a national company before, so it was a little bit easier for me. But when you go through a process like this, you have to just forget about practically everything else you're doing because it's so time-consuming and it takes so much patience and creates so much anxiety.

But, in the end, I would rather have the public as my shareholders than have one big company or a bunch of banks where if something changes hands, somebody changes jobs, or the company sells out, or something else goes on, you're affected. When you have the public as a stockholder, if you do a good job your stock is going to work out, and if you don't do a good job your stock is not going to work out and you may find yourself looking for a job.

I believe that I understand the responsibility of being a public company. It's a very important responsibility. The company is no longer yours. If someone wants to go public, they have to be prepared to understand that they now have a job and their job is to work for a boss and that boss is the group of people who bought their stock. Therefore, when you go on a trip, you're not taking a limousine, you're taking a taxicab, because you don't spend the stockholders' money like you spend your own.

**LPTV Report:** What has been the resistance, if any, that you've met because of the past experience of the LPTV industry?

Post: The industry had a bad beginning. I try to blame it on its own success. There was so much interest in the business, but then the freeze came, the FCC had the backlog to deal with, and things couldn't happen fast. The early players were building networks, and there were no stations to carry a network.

I think now the time is right. This is going to be the time. What we want to see is enough real players out there to build those stations. We're counting on it.

LPTV Report: David, what is your background? Why did you get involved in LPTV?

Post: I spent ten years in Wall Street— 1967-77. I was a specialist in emerging industries—an investment banker and research analyst. One of the industries I worked on was cable. Then I fell in love with the paging business, and in 1977 I founded Page America, which was really a paging company—a cellular radio company.

The great problem I had at Page America when I started that company was that I couldn't get any licenses because the industry was closed up. You had to fight to have the industry opened at the FCC. Page America was known as the company that created all the new innovations in the mobile communications business.

Mostly the local radio common carriers were making the money. I learned something from that. When I started Channel America, I said, ''I've got to be an owneroperator because, if I don't, everybody else is going to make the money.'' But today, Page America is still one of the largest radio paging companies in the country.

This may sound strange, but the most interesting thing happened to me. About three months ago, I called Page America and asked for Steve Sinn, who's the president of the company, and the person who answered the phone said, "May I tell him who's calling?" and I said, "David Post," and she said, "Does he know you?"

Now there's a company that I started and somebody who works there doesn't know me! I loved it! It made me so happy because that kind of thing means you've created something that's real—it goes on after you. And that's what I hope happens with Channel America.

So I felt that ten years was more than enough for the entrepreneurial part of Page America, so I stepped down in mid-1986—I'm still a director of that company—and started this company which I had really been working on for years.

This was my ultimate dream. A television network. Since childhood. I was married at the Museum of Broadcasting. Bill Paley was my idol all my life. When I met him and told him about my vision for this company, he really smiled. Much of my incentive to do this was based on things that I saw him accomplish.

I just can't believe that all the opportunities in television are dead. And this is something I've been waiting for a long, long time to do.



### 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.

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 COMMUNICA-TIONS, (916) 961-6411.

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**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) 961-5433.

#### SERVICES OFFERED

TURNKEY LPTV CONSTRUCTION: Broadcasting Systems, Inc. can take you from CP to a completely operational LPTV station using either new or used equipment (all or part). We can provide transmitters, antennas, cabling, microwave links, studio and satellite equipment. We also sell used TV station testing equipment. We purchase used transmitters, antennas, microwave links, and studio equipment. 30 years' experience. Post engineering assistance available. Write Broadcasting Systems, Inc., 8341 East Evans Road, Suite 101, Scottsdale, AZ 85260, or call (602) 951-0266.

**FROM CONCEPTS TO AIR:** Let us take you from CP to air with a turnkey operation. We specialize in LPTV and have available multiple sources of quality new, used, and demo equipment. We will design and install your system, train your personnel, and be available after you go on the air. Our engineers are NARTE certified, possess FCC General Radio/Telephone Certificates, are members of the SBE, and are college-degreed in the communications field. Please contact Leon D. Zetekoff, B.A.S., N.C.E., 8372 Garden Gate Place, Boca Raton, FL 33433, or call (407) 487-8930.

#### HELP WANTED

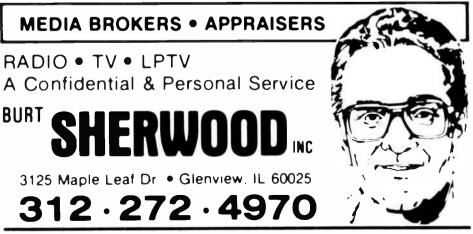
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# Supplier Side

**PROSTAR**, a Houston-based company, specializes in encrypted program distribution via satellite. Applications range from sports backhauls and video-conferencing to pay-per-view events. The service may be rented for as little as one day at a time.

Three encryption systems—Oak Orion, Leitch Video, or Scientific Atlanta B-MAC—may be rented on a one-time, monthly, or yearly basis. PROSTAR offers a range of services from encryption only to complete turn-key transmission packages.

Some of the company's pay-per-view credits include the Grateful Dead concert (December 1987), the Hagler/Leonard fight (April 1987), and the Spinks/Cooney fight (June 1987).

Uplink and downlink services are also available.

Contact: Brian D. Haley Director of Marketing PROSTAR 12831 Royal Drive Stafford, TX 77477 (713) 240-2800

**Knox** Video has announced a four-font upgrade for the K-40 character generator, doubling the K-40's present font capacity by providing an alternate bank of fonts.

The new fonts available are:

Cooper: An attractive, styled, serif font, similar to Cooper Black. The set includes upper and lower case letters, symbols, and numerals at 32 scan lines.

Pump: A modern sans-serif font with smooth, uniform curves and balanced weight. Upper and lower case letters, symbols and numerals at 32 scan lines.

Roman: A classic traditional Roman font with broad serifs and wide spacing. Upper case letters at 32 scan lines.

Disclaimer: A small, dense, sans-serif font for fine print applications. Upper case letters at 22 scan lines.

The four-font upgrade is factory installed in the K-40 at a list price of \$275.

#### Contact: Knox Video 8547 Grovemont Circle Gaithersburg, MD 20877 (301) 840-5805

K/B



Knox Video's K-40 character generator.

# Supplier Solo

### Trylon's Modular Tower Has Many Applications

Lightweight tower sections that fit a wide range of applications are available from Trylon, manufacturers of the A.B.C. self-supporting tower. The A.B.C. can be extended to a height of 96 feet and is engineered to suit all geographical wind zones, even with exceptionally high antenna loads.

All members are made of pregalvanized sheet steel conforming to ASTM Standard 526, with a minimum specified yield strength of 35,000 pounds per square inch. The tower cross-section is triangular rather than square, eliminating the need for internal bracing and resulting in a maximum "strength-to-tower weight" ratio that reduces costs. The 96foot model, for example, is less than \$1,200.



Trylon's A.B.C. tower.

Member cross-sections are angular —both the legs and the diagonals—and are cut and formed from four different thicknesses of sheet steel. Eighteen different cross-sectional shapes are used all chosen with the purpose of minimizing costs through mass production.

The A.B.C. is a "kit-form" tower that uses double-plated bolted connections with special star nuts. This allows towers to be shipped as 8-foot factoryassembled sections or knocked down in 8-foot tubular cartons. Knocked down, the tower ships for less than the subassembled sections that nest together but still take far more space.

Bolt sizes are graded on the basis of strength to ensure that bolts are stronger than the attached member. This maximizes structural safety. Sections can be assembled loosely to full height on the ground and lifted into place by crane, then tightened at the connections. Alternatively, the tower may be erected section by section, using the gin pole method.

WorldRadioHistory

Each 8-foot section tapers three inches from base to top. The A-100 tower, a 96-foot model, is 42 inches per face at its base and six inches wide at the top. Another model, the C-200, handles an 18square-foot circular antenna load in a 100 mph wind with a maximum height of 56 feet. The C-200 is 42 inches at the base and 21 inches at the top.

All configurations are achieved with one basic tower. Reducing the height and changing the top section increases wind load capacity. The tower actually is "built" from the top down in 8-foot multiples.

There are six tower configurations: A-100, A-200, B-100, B-200, C-100, and C-200. An A-100 tower has a maximum height of 96 feet and holds seven square feet of antenna. The A-200 is the same tower with the top section removed and a "number 2 top" substituted for the second section from the top. The A-200's maximum height is 88 feet, but it carries 15 square feet of antenna (70 mph wind survival).

The B-100 is the same tower as the A-100 but with the top two sections removed and the third section replaced with the "number 3 top." Its maximum height is 80 feet, and it will carry 22 square feet of antenna. Similarly, the B-200 has a maximum height of 72 feet and carries 34 square feet of antenna, and so on.

Intermediate-height towers are also "built" from the top down. For instance, in the A-100 series, a 56-foot tower would use the first seven of twelve sections. The top would be six inches wide and the base the width of section seven—in this case, 27 inches. The "A" series withstands 70 mph winds, the "B" series, 85 mph winds, and the "C" series, 100 mph winds.

A brochure is available to guide the user in selecting the proper tower. Also available is a computer program that checks tower selections for suitability. The analysis reveals expected safety factors for every eight feet of tower, as well as foundation loads for specified wind velocities. The program works on IBM or IBM-compatible microcomputers.

Contact: Trylon Manufacturing Company, Ltd.

- P.O. Box 186
- 21 Howard Avenue

Elmira, Ontario N3B 2Z6, Canada

This article first appeared in the April 1986 issue of Mobile Radio Technology and is reprinted with permission.

"Supplier Solo" is a new column in which broadcast industry suppliers can explain their products in more detail than the usual news story or product vignette allows. For information on how to contribute, call Jackie Biel at (414) 781-0188.

### LPTV and the LAW

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sentations and a losing applicant calls these matters to the FCC's attention.

#### Land Mobile Sharing

In 1985, the FCC began a rulemaking proceeding with the object of allowing more sharing of the UHF television spectrum by land mobile radio. Land mobile radio includes everything from police radio to taxicab dispatch systems to delivery truck radios. Land mobile operators already share Channels 14-20 in the largest markets, but they claim that they need still more channels.

The FCC's proposal listed specific TV channels in each of the top ten markets that might be given to land mobile operators. Until the rulemaking is completed, the FCC will not grant any high power TV or LPTV application that would conflict with the listed channels.

If your LPTV station would place a signal within 50 miles of any of these markets, it will not be granted if it conflicts with the land mobile proposals. The lottery will still be conducted, and if you win, you will be protected against any future LPTV application. However, your application will be held in abeyance—it will just sit at the FCC. If land mobile sharing is ultimately allowed, your application will then be dismissed. If sharing is not allowed, your application will then be granted.

### **Industry Growing**

continued from front page

timing of license awards, of course, can be affected by many factors, not the least of which is the workload at the FCC.

As a result, we plan simply to show the actual number of licenses awarded against a trend range of 30% to 40% per year. As long as the actual numbers stay within that range (see graph), we can say that the industry is growing 30% to 40% annually. Obviously, these are healthy growth rates by any business standard.

Will this growth continue? Nobody knows for sure, but we think that it will. We would not be surprised to see 500 operating stations by the end of 1988.

Further, we can extrapolate the 30% to 40% trend range into future years. If that trend remains valid, we will have 1,400 to 1,900 LPTV stations by the end of 1992.

Will it happen? Stay tuned!

S. E. Bradt is chairman of Kompas/Biel & Associates, Inc.

Kompas/Biel & Associates plans to publish updated industry figures in future issues of *The* LPTV *Report* and will provide commentary on trends or changes affecting industry growth statistics.

We welcome your questions and comments.

Further consideration of the sharing proposal has been suspended by the FCC pending at least a preliminary determination as to what spectrum will be used for high definition television in the future. Thus, action in the land mobile proceeding is not imminent, and some LPTV applications that are now being held in suspension may stay that way for a long time.

### Land Mobile Interference from Channels 14 and 69

Leaving land mobile sharing aside, TV channels 14 and 69 are immediately adjacent in the spectrum to frequency bands that are already devoted exclusively to land mobile radio. Since TV stations operate at much higher power levels than land mobile stations do, TV signals so close in frequency often interfere with sensitive land mobile receivers.

The FCC has a rulemaking in progress to address this problem. CBA filed comments in the rulemaking suggesting that the two channels be reserved for LPTV, because LPTV stations are much less likely to interfere with land mobile than high power stations are.

Pending resolution of the rulemaking, the FCC will not grant any new high power TV construction permits on channels 14 or 69. This "freeze" does not apply to LPTV because of LPTV's secondary status. Therefore, if you have applied for channels 14 or 69, your application will be granted if it does not conflict with any other LPTV application or if you win a lottery. However, you will have to shut down if you cause interference to land mobile radio.

While LPTV stations operating at modest power levels are not likely to cause such interference, cellular telephone and other land mobile operators just above channel 69 have been very aggressive in opposing LPTV applications for that channel and have denied LPTV operators access to transmitter sites where land mobile equipment operates. So even if your application is granted, getting on the air may turn out to be very difficult.

#### And You Thought It Was Easy

The LPTV application process is simple, right? Just fill out the form and win the lottery. Well, it is that simple if you are lucky. But for many applicants, the road to getting on the air is much more difficult. Keep the perils and pitfalls in mind, however, and your chances of succeeding will be increased.

Growth is the key to the long range success of our industry. We need you and your station on the air, serving the public and keeping the wheels of our economy turning. Good Luck!

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.

### VJN To Buy LPTV-11 In Orlando

Video Jukebox Network announced recently that it has taken an option to purchase LPTV station W11BM in Orlando, FL from the National Black Media Coalition. The station is the third LPTV property to be added to the company's line-up. The first station to sign on was W10AX in Jacksonville, FL. Operations at K04NL in Des Moines began in August.

The Miami-based Video Jukebox Network is a viewer interactive programming service in which viewers may select a specific music video for airing by using the local telephone company's 976 toll service.



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