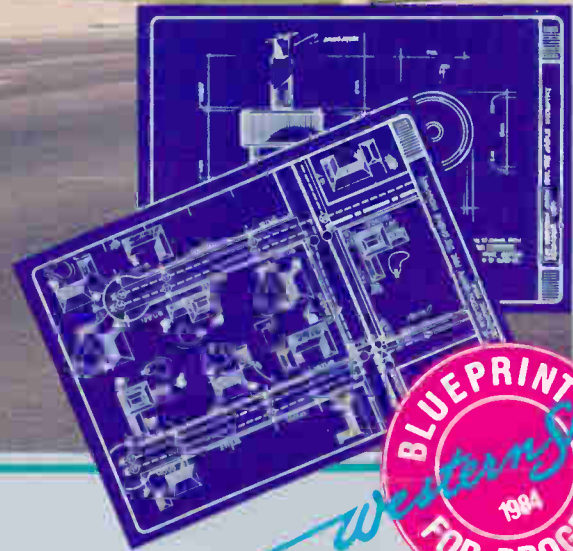
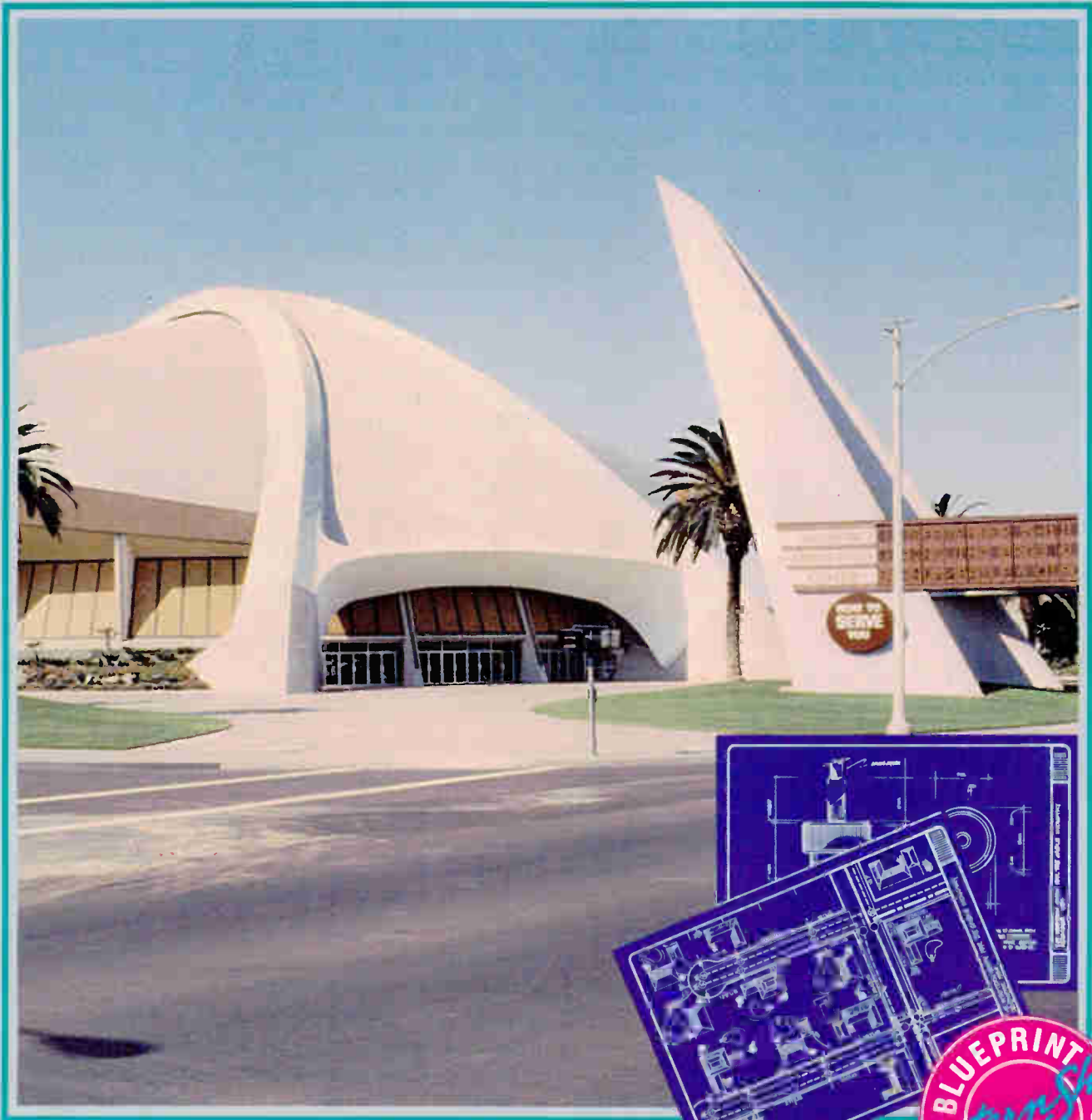


# CATJ

OFFICIAL JOURNAL OF THE COMMUNITY ANTENNA TELEVISION ASSOCIATION  
DECEMBER 1984

A DECADE OF PROGRESS  
**Cata**



BLUEPRINT  
*Western Show*  
1984  
FOR PROGRESS

MINI-HUB II building  
its reputation by being

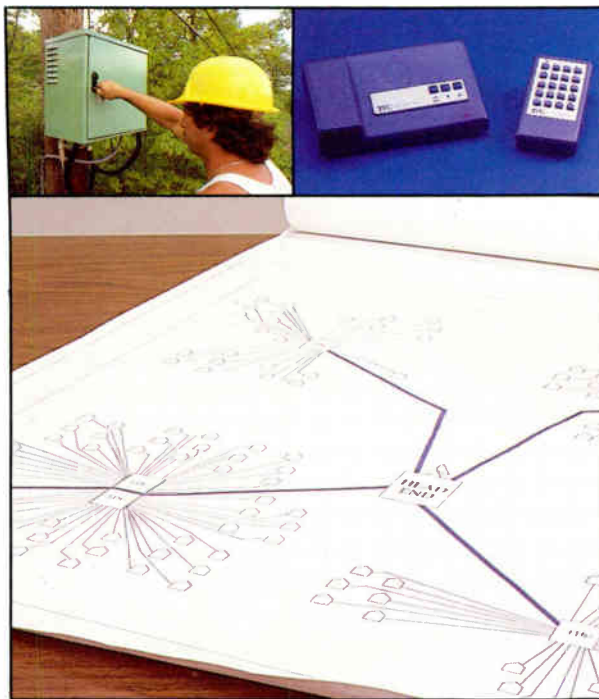
# The Successor to all CATV Systems.

"Watchful waiting" is no longer realistic or wise when it comes to market demands for addressability and pay-per-view.

The number of systems with addressable converters doubled during 1984. Over 50% of general managers are now considering addressability within the next two years, and it is estimated that there will be over 47,000,000 households with addressability by 1990.

And pay-per-view is going to be offered by over 33% of cable operators with addressable systems by 1985.

It was not caution that inspired *Times Fiber Communications* to invest in the development of MINI-HUB II.<sup>™</sup> *It was vision*—with a view toward emerging consumer demands and increasing systems revenues.



Also take a look at other MINI-HUB benefits:

- Eliminates the high costs of in-home servicing.
- Eliminates theft of hardware and service.
- Reduces the high cost of in-home equipment.
- Minimizes initial investment for advanced star-switched technology by having lower trunk and feeder costs and fewer electronics and passives.

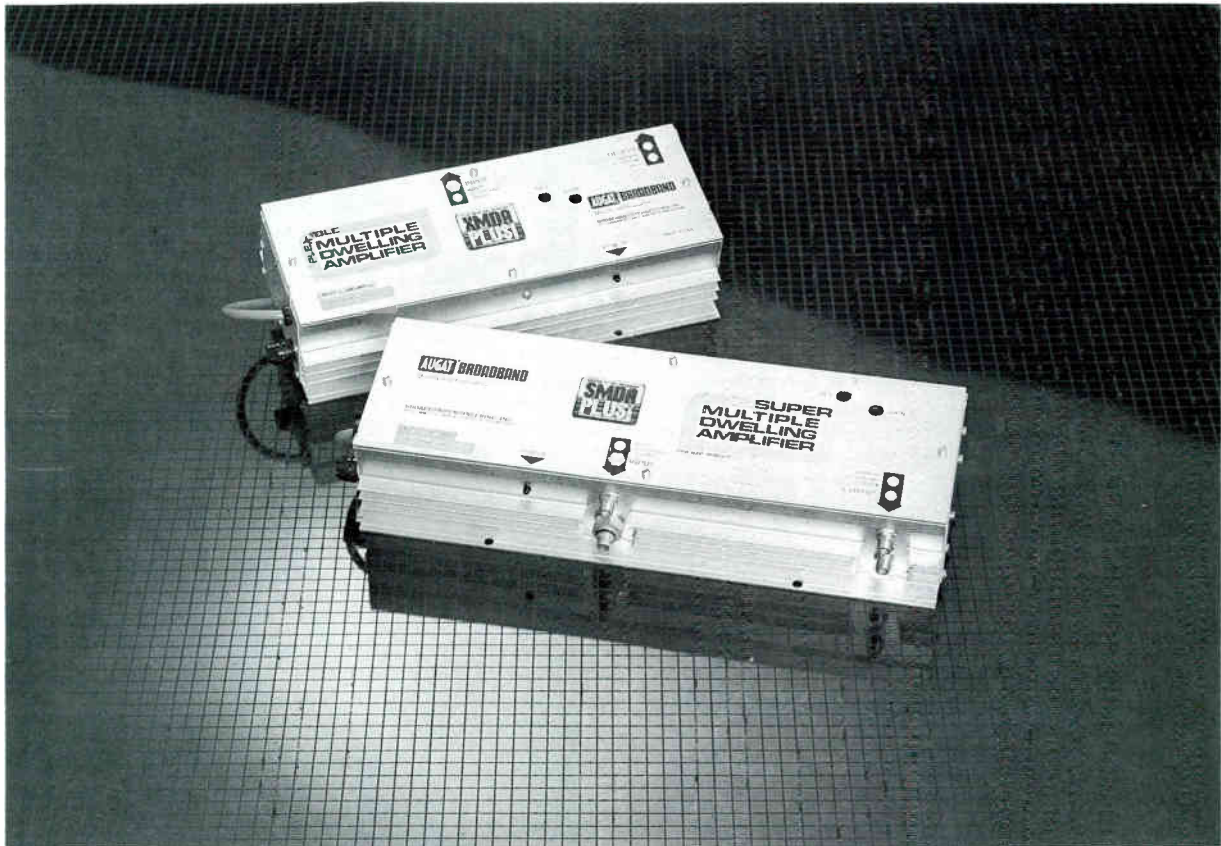
For more information, write or call: Times Fiber Communications, Inc., P.O. Box 384, Wallingford, CT 06492, (800) 243-6904.

## MINI-HUB II



TIMES FIBER COMMUNICATIONS, INC.  
COMMUNICATIONS SYSTEMS DIVISION

See us at the Western Show — Booth #1620



## Now with power-doubler hybrids, Broadband's apartment amps offer lower distortion specs, increased flexibility

Good news! You may now order our Flexible Multiple Dwelling Amplifier (XMDA) and Super Multiple Dwelling Amplifier (SMDA) with Amperex power-doubler hybrids.

Our new XMDA-PLUS and SMDA-PLUS give you these added options in designing your system:

- You can reduce system distortion by 6 dB while maintaining present output levels, or
- You can increase output levels by 3 dB with no change in distortions.

Designed for CATV, SMATV and MATV home-run or branching systems the XMDA-PLUS and SMDA-PLUS are state-of-the-art and meet most requirements for apartment, condominium, hotel and motel distribution systems. Both units feature a wide

range of options and can be customized to your system's requirements.

The SMDA-PLUS has bi-directional capability, while the XMDA-PLUS will fill most current needs. It's not two-way, but has virtually the same options as the SMDA-PLUS and is competitively priced.

Broadband-engineered and guaranteed, both units are capable of full channel loading at the design bandwidth. Tough and dependable, they offer the maximum in flexibility and performance.

For additional information on specifications or pricing, call us toll free at 800-327-6690, or write Broadband Engineering, Inc., 1311 Commerce Lane, Jupiter, Florida 33458-5636.

### Features:

- Power-doubler hybrid circuitry.
- 330 MHz & 450 MHz bandwidths.
- 30 dB & 35 dB gains.
- Plug-in return amp for 2-way operation. (SMDA-PLUS only)
- 120 volt line- and 30/60 volt cable-power options.
- Variable gain & slope controls.
- Plug-in pads & equalizers.
- Power-passing option (XMDA-PLUS, cable-powered version).
- Extruded aluminum housing for excellent heat dissipation.
- Three levels of surge protection.

### Distortion Specifications

Bandwidth	Channel Loading	Signal-to-Distortion Ratio*		
		XMod	CTB	2nd Order
330 MHz	40 Chs.	71 dB	69 dB	72 dB
450 MHz	60 Chs.	69 dB	67 dB	72 dB

\*Based on output of 46/41 dBmV. All distortions are worst case.

### Maximum Output for 57 dB Signal-to-Xmod Ratio:

12 Channels	+57 dBmV
35 Channels	+53 dBmV
40 Channels	+53 dBmV
60 Channels	+52 dBmV

See us at the Western Show. Booth No. 505.

**AUGAT<sup>®</sup> BROADBAND**

Quality and Innovation



**If your cable system needs a reliable Billing/Accounting System, get the computer system most cable operators rely upon\* . . .**

get \_\_\_\_\_  
**SMART<sup>®</sup>**  
by TONER.

If you need instantaneous and accurate financial information, choose the system that most cable operators rely upon. It's a proven performer.

Designed by cable experts, easy to use, SMART replaces cumbersome error prone manual systems or shared data systems that are inflexible and expensive.

©Subscriber Management and Accounts Receivable Tracking

**Modular in design, the SMART Package consists of:**

- Subscriber Billing
- Daily Cash and Accounts Receivable Journals
- Month/Year End Cash and Accounts Receivable Summary Reports
- Outlet Count, Penetration, Churn, and Pay Tier Distribution Reports
- Delinquent Account Identification
- Production of Labels, Coupons, Invoices, Late Notices, and Letters
- Converter Serial Number Reports for Inventory Control
- A Report Generator for Customizing Subscriber Listings
- Homes Passed Listings for System Audits & Marketing Campaigns
- Automatic Account Number Assignments
- Account Recall by Name and Street
- Franchise Breakdowns of all Management Information
- Manual Work Order Scheduling
- Automatic Work Order Scheduling
- Automatic Production of Disconnect Orders for Nonpays
- Automatic Update of Subscriber Data from Completed Work Orders
- Production of Orders by Schedule Date
- Work Order Status Reports



**ADDITIONAL MODULES AVAILABLE**

- Accounts Payable
- General Ledger
- Payroll
- Inventory Control
- Addressable Interface

That's why our SMART<sup>®</sup> computer is the CATV industry's number one choice for in-house data processing. It's backed by toll-free customer hot lines, trained software support specialists, and our own staff of CATV programmers. All with one purpose in mind: to keep your SMART<sup>®</sup> computer running efficiently and trouble-free.

For more information call toll-free: 800-523-5947; in PA, 800-492-2512. SMART comes in configurations to accommodate any size cable company.

**SMART features hardware from Texas Instruments.**

**TONER**  
cable equipment, inc.

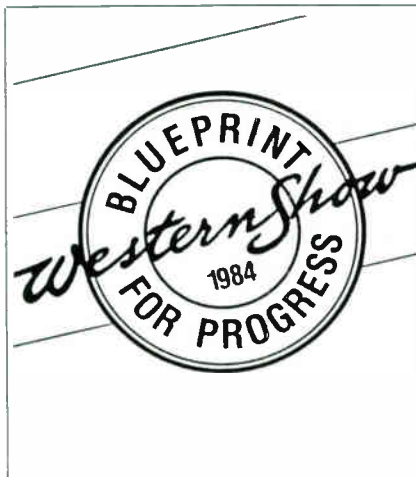
969 Horsham Road/Horsham, PA 19044

\*More stand-alone in-house CATV Billing/Accounting Computer Systems sold by Toner, than any other supplier.

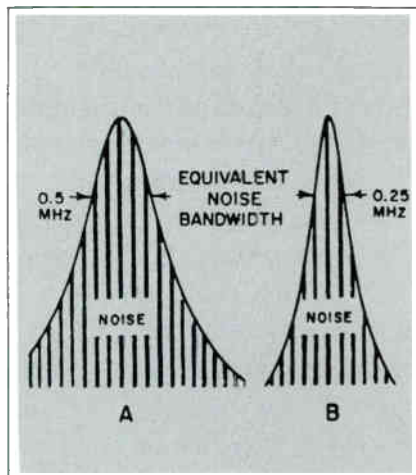
CATJ, The Official Journal for the Community Antenna Television Association is published as a service for Association Members and others providing services to the industry.



See Page 10



See Page 24



See Page 26

## TABLE OF CONTENTS

- 4 CATA-TORIAL - Carl Schmauder, President of CATA, discusses a recent speech given by Eddie Fritts, President of the NAB, concerning the priorities of their association for the coming year.
- 6 THE DROP - by Frank Gates who helps streamline the most consistent cause of service calls — the invisible part of a cable system — the drop!!
- 10 CATA'S DECADE OF PROGRESS - features one of the most colorful and interesting personalities of the CATA membership — John F. Monroe — and with this segment of the year-long series written by Kathleen Sheldon brings to a close this look at the people of CATA and their outstanding contributions to the cable industry as a whole. John F. Monroe, a most intriguing and fascinating story teller, . . . don't miss this tribute to a most remarkable man.
- 24 BLUEPRINT FOR PROGRESS - the 1984 Western Show Schedule
- 26 APPLICATION OF WHITE NOISE FOR CATV SYSTEM MEASUREMENTS- by Harry L. Sadel; white noise will provide a solution to CATV system and SLM measurement problems.
- 2 WASHINGTON UPDATE — you can always depend on Steve Effros, CATA Executive Director, to bring CATA members and CATJ readers the most current and explicit information on legislation and regulations concerning cable operation. This month's issue presents what cable operators need to know NOW concerning the new cable bill. You need this information; don't miss it!!
- 38 PUT YOUR MONEY WHERE YOUR PEOPLE ARE — by Bob Cull, Cable Marketing Services. This article deals with executing a marketing and sales campaign.
- 42 THE CABLE TECH'S FILTER COOKBOOK #20 — Case Signal Leakage of Pay-TV Traps: Some Test Results by Terry Owens and Glyn Bostick of Microwave Filter Company, Inc.
- 46 ASSOCIATES' ROSTER
- 48 CLASSIFIED

### ABOUT THE COVER

The theme of 1984 Western Show, "Blueprint For Progress", is featured on our December cover and certainly verified by the comprehensive program presented on page 24.



## "DEAR EDDIE"

I was reading an article the other day about the recent speech given by Eddie Fritts, the President of the National Association of Broadcasters. The article was headlined "Fritts Draws Battle Lines", and it was all about the priorities the NAB has set out for itself in the coming year. It was one of the most fascinating things I have read in some time.

To begin with, the primary issue for the broadcasters in the coming year is, apparently, to attempt to beat back the growing effort to control, if not totally eliminate, wine and beer advertising on television. Now, from a public policy point of view regarding the alcohol problem in the United States, we could all argue the merits or demerits of such a proposal. Of course, there is the business side of the issue as well — beer and wine advertising is worth an estimated \$500 million each year to broadcasters.

But neither of those points of view is the one focused on by Mr. Fritts, and we happen to agree with him that the real issue is the question of government control of the media. Broadcasters, like the cable industry, argue that we are First Amendment speakers and that, as such, the government should simply not even be considering such things as restricting our freedom of speech in such ways as banning liquor commercials — whether they are good or bad.

Now the effort by the NAB is going to be hard fought, we all know that — especially when \$500 million a year is at stake. The Association is also starting a laudatory education campaign about drinking, and about the responsibility each of us must exhibit when engaging in the use of mind altering drugs such as alcohol. All broadcast stations are being urged to join in the drive. They are also, of course, gearing up for the battle on Capitol Hill with such statements as these, made by Mr. Fritts in his speech;

"...if we were truly free under the First Amendment ... the sacred right to program as the editor

sees fit would be, as it should be, the option and the duty of the station licensee and no one else's. "...Sooner or later, either Congress or the courts will affirm this principle. We will and must proceed on both the Hill and through the courts to make this happen."

Well, I thought, more power to you, Eddie, the cable industry is in the same boat when it comes to governmental entities trying to tell us what we can and cannot carry on our systems — our First Amendment rights are being trampled on every day! Heck, the industry might even join with the broadcasters in their fight over First Amendment rights and getting the government out of the business of programming — after all, given the track record of the broadcast industry lately on Capitol Hill, Lord knows they could sure use the help!

But then I kept reading the article — and you know, I came across one of the strangest mix of sentences and concepts. It came about when Mr. Fritts was commenting that the NAB had many other legislative initiatives, in addition to the primary one of keeping the government out of restricting broadcaster's editorial control. "We were," he noted, "able to get a 'must-carry' bill introduced in the Senate last year." And then, right after that, he said; "We will adamantly oppose any effort to mandate certain amounts of types of children's programming. Clearly, NAB is in favor of quality shows for children. But we will fend off with all our might any intrusion into our right to program as we see fit."

Let me translate that last little bit for you — what he, and the broadcast industry he represents, is saying is that the government has absolutely no business — under the First Amendment, getting involved with telling broadcasters anything about the programming they should or shouldn't put on. But when it comes to cable television, the government should write laws mandating that broadcast stations must be carried on cable systems — regardless of the editorial views of the cable operator or anyone else! The fact that we may have to take off wholesome children's shows like the ones on Nickelodeon, or the Disney Channel, or The USA Network, or Lifetime — programs that have been given awards for their quality, in favor of a duplicating — and sometimes a third or fourth duplicating



network signal, doesn't seem to bother him one bit! The government can tell the cable industry which religions it must favor by mandating the carriage of certain religious programming because the purveyors of that programming happen to have enough money to get broadcast licenses. That is not a violation of editorial rights in the mind of Mr. Fritts and the broadcasters. But let the government even suggest that broadcasters really ought to carry programs for kids, or not carry an overwhelming glut of advertising narcotics that are killing the American population at an alarming rate, and the hue and cry from the broadcast industry is almost deafening.

Sorry, Eddie — you can't work both sides of the street like that and hope to win. Either you support the proposition that all video programmers, including broadcasters and cable operators, should have protection from governmental intrusion under the First Amendment, or you continue to demand your antiquated notion of "must carry" status for the "chosen few" broadcast programmers and concede that what you really want is a governmentally

guaranteed monopoly — one that can be equally controlled by the government. You can't have it both ways.

To be sure, the cable industry, in the near future, is likely to start talking about making "deals" regarding the "must carry" rules in an effort to secure copyright legislation. And to some degree it doesn't really impact that much on the cable industry since if the "deal" relates only to those signals in the community that are significantly watched, then the cable operator would carry them anyway! But it's CATA's view that we probably should structure the political "deals" in a totally different direction in any event.

Does the broadcast industry really want its First Amendment freedoms as the cable industry does? If so, let's make a deal: We'll commit our resources and skills to accomplishing that goal which will logically result in the elimination, not only of a \$500 million dollar a year threat to the broadcast industry, but also the idiocy now contained in the "must carry" rules!

How about it Eddie?

□

CATJ STAFF
<b>Business and Managing Editor</b> Celeste Rule Nelson
<b>Executive Assistant to the Editor</b> Diane Howard
<b>Contributing Editors</b> Glyn Bostick Frank Gates Harry L. Sadel Bob Cull Stephen R. Effros Kathleen Sheldon
<b>Art Director/Marketing</b> Phyllis Crumpler
<b>Assistant Art Director</b> Dianna Johnson
<b>Graphics Designer</b> Joyce Meiki
<b>CATJ OFFICE</b> 4209 N.W. 23rd, Suite 106 Oklahoma City, OK 73107 405/947-4717

**POSTMASTER:** Send address change to 4209 N.W. 23rd, Suite 106, Oklahoma City, OK 73107.

CATJ is a Copyright © 1984 by Television Publications, Inc. All rights reserved. Qudean reservados todos los derechos. Printed in U.S.A. Permission to reprint CATJ published material must be given by Television Publications, Inc., prior to republication.

OFFICERS	
Chairman of the Board President Vice President Secretary/Treasurer	Peter Athanas Carl Schmauder Jim Hays, III Clarence Dow
DISTRICT DIRECTORS	
<b>One</b>	Clarence Dow (Maine) 207-496-4123
<b>Two</b>	Michael J. Rigas (Pennsylvania) 814-274-9830
<b>Three</b>	David Fox (West Virginia) 304-664-9579
<b>Four</b>	John Rhinehart (Tennessee) 615-895-0842
<b>Five</b>	Jeff Krumme (Oklahoma) 918-492-2900
<b>Six</b>	Wayne Sheldon (California) 408-264-2728
<b>Seven</b>	Carl Schmauder (Oregon) 503-994-3111
<b>Eight</b>	Virgil Mehus (Minnesota) 507-864-2298
<b>Nine</b>	Woodrow McHargue (Missouri) 816-748-3855
<b>Ten</b>	Jim Hays III (Kentucky) 606-723-4240

VICE DIRECTOR
Dean Peterson (Missouri-District 5) 417-358-3002
Lee Holmes (Guam-District 6) Charles Haley (Mississippi-District 9) 601-859-2835
Richard Gessner (Ohio-District 10) 216-833-4134

ASSOCIATES' DIRECTORS
Lynn Watson, Showtime/The Movie Channel Ernie Larson, Larson Electronics
DIRECTORS EMERITUS
Gene Edwards (Ohio) Chuck Kee (Oregon) William Ridsen (Kentucky)
CATA OFFICES
CATA (Washington Office) Stephen R. Effros, Executive Director 3977 Chain Bridge Rd. Fairfax, Va. 22030 (703) 691-8875

The Community Antenna Television Association, Inc. is a nonprofit organization formed under Chapter 19, Title 18 of the Statutes of the State of Oklahoma. As such, no part of its assets or income shall be the property of its members, such assets and income shall be devoted exclusively to the purposes of the Corporation.

The Community Antenna Television Journal (CATJ)—ISSN-0194-5963—is published monthly by Television Publications, Inc., 4209 N.W. 23rd, Suite 106, Okla. City, OK 73107. Subscription price: \$22.00 per year, \$26.00 per year Canada, Mexico, and foreign is \$30.00 per year. Second class postage paid at Oklahoma City.

# THE DROP

by Frank Gates

It seems that we are always discussing cable systems in terms of miles of plant, types of converters, homes passed, actives, passives and headends. We monitor and align the headend, balance and sweep the trunk and distribution, but about the only time that the drop becomes of concern is when we get faulty readings from a test point (bad drop). Day in and day out, the only people that seem to notice the drop are the designers or the installers that are hanging them. Maybe that's because it's such a straightforward and simple part of the system that there's not much more that can be said. Yet consistently, this almost invisible part of the system continues to be a major cause of service calls. In most systems, the drop is second only to converters in generating service calls. (I include both drop connectors and attachments when I refer to a drop.)

There are generally two separate types of drops; single dwelling and multi dwelling, but I am adding a third called superdrops.

## SINGLE DWELLING

The single dwelling drop is what most often comes to mind whenever someone mentions the drop. Essentially, this is a single drop that serves a single residence or dwelling.

RG-59 or RG-6 cable is the standard type used for single dwellings. The variation is whether the cable is messengered or not. When drop length averages 100 feet or longer, or if the weather conditions include snow or ice, messengered cable is a must.

The choice between RG-59 and RG-6 is predicated upon the system design parameters. Most older system designs will allow for either until such time as expanded channel capacity is required. During such a rebuild, the drop loss becomes critical to a 'drop-in (electronics)' type upgrade. Prior use of RG-6 could make the difference in requiring a complete drop change-out as part of the rebuild. If increased channel capacity is a real possibility in your system, use of RG-6 for

drop cable now, makes long term sense, even considering the additional cost.

RG-6 becomes desirable in cost effective plant extensions or new builds. This is primarily due to the lower loss drop material resulting in a tighter design which will, in turn, dramatically reduce the amount of active devices required in both trunk and feeder. To see what impact this would have on your system — one using RG-59 and another using RG-6. Then review the BOM (bill of materials) for each design.

Signal leakage (radiation) is another key factor in selecting the drop material. FCC Rules and Regulations are very clear on this subject and should be a major consideration in selecting the drop cable. Conversely, if there exists high ambient (off-air) signal in the system's area, ingress problems present another major consideration in terms of customer satisfaction.

With any of the various amounts of shielding, the F connector is usually the determining factor in preventing both egress and ingress. Even the most effectively shielded drop cable (i.e., dual foil and dual braid, 'quad' cable) is only as effective as the connectorization. Drop cable with 60% shielding can be more effective with properly placed connectors than the highest shielded cable with improperly placed connectors.

For single dwelling drops, AC or DC current carrying characteristics (i.e. loop resistance) are not a factor in drop material selection unless you employ some sort of off-premise tap or active trap or encoder.

## SUPERDROPS

Often times, there is an application that calls for a drop that is something more than a single dwelling drop but not as much as a multi dwelling drop.

The first of these would be the need for a drop that is substantially longer than the system average drop length. Homes that are set on the rear of the property (i.e. flag lots or long mid-spans) do not justify a complete plant extension. An interesting



approach to this situation is the use of RG-11 cable. This lower loss cable could provide the additional signal strength required and avoid a plant extension. Some things to review before you opt for this solution are, would a line extension be preferable in terms of potential customers in the long run, introduction of non-standard cable and connectors and installer/technician training.

Another superdrop application would be those smaller multiunits (8 and below), triplexes, etc.. Whenever the first customer is sold in these types of multiunit dwellings, you are faced with the prospect of either constructing a 100% postwire to serve every unit or to install the single customer as if the structure were a single dwelling. When you elect to do the single install, you initially save the postwire costs and complete the job. The problem arrives during the second, third or fourth install in the same structure. Either the line tap has reached capacity, not permitting any additional drops or the installer has elected to tap into an existing active outlet and split the service to the new customer. Either way you are creating a long term maintenance problem which will probably be finally corrected by a complete postwire of the structure, and you are now back at the beginning only with the additional maintenance and customer dissatisfaction costs.

A superdrop approach is a compromise between the two. It represents additional front end costs but avoids the long term rewire costs. The idea is to **extend** the plant to the dwelling at the time of the initial installation by running a drop to a central location in the structure and enclosing a tap in a lockbox that is capable of providing service to all of the units in the structures. Then, at the time of installation, the installer runs the new drop from the lockbox to the new customer without any change to the feeder.

The problem is to provide enough signal strength (RF) to the lockbox tap. Drop signal source can be provided by tap change out (valve or number of ports), utilizing the thru leg of a terminated tap or cutting in a directional coupler on the feeder. Any of these will depend upon the existing design, potential customers fed from that

location and other design parameters. In any case, a formal review of the situation is required by the design folks prior to installation. Field engineering in these areas will sometimes work initially, but cost you in the long run. (If field engineering is performed, it is essential that the "as-builts" find their way into the system maps.) By utilizing .412 or .500 Figure 8 (self supporting) cable for the drop, you can "extend" the plant into these structures without a major redesign of the system and also avoid the long term maintenance problem of separate drops and insufficient signal strength as each unit is installed.

Commercial or industrial areas might have superdrop application. Often times, these areas require unusually long drops or might have future customer potential which does not initially warrant a plant extension, but does require extremely reliable quality of service.

### MULTIUNIT

In most multiunit (of 9 or more units) applications, there are additional drop requirements that call for actually extending the outside plant into the multiunit complex. This is a result of line powering of apartment house amplifiers and signal strength (RF) requirements of the complex. Use of RG-59, RG-6 or RG-11 would be a problem in these applications. The high-level RF requirements (+20 dB or more) of the drop or the "backbone" would leave real potential signal leakage problems, both egress and ingress, at the F-connector. AC carrying requirements (or potential requirements) would be another reason to avoid these cables. Use of .412 or .500 hardline cable (messengered or not) is highly desirable as the drop in these multiunits.

### CONNECTORIZATION

As I have already noted, the weakest link in the drop is the connector. Not the connector itself, but the installation of the connector. Improper placement of connectors can defeat even the highest quality drop material. Have you ever found an RG-6 connector on RG-59 cable?

As connectors are fairly straightforward in their installation, the challenge is a management job of training and quality assurance.

## DROP ATTACHMENTS

Just as the drop itself often takes a backseat to other areas of plant, training on how to place a connector often is overlooked or assumed to be in place. There are some technicians and installers who can prepare the drop cable for the connector with a pair of "snips" or "wire strippers" and do a good, clean and fast job. But these are exceptions to the norm. Use of these non-standard tools more often result in a very fast job that will work initially, but almost always require the connector to be redressed in the future. This is after trouble shooting the problem and inconveniencing the customer. Like the man said, "There doesn't seem to be time to do the job right the first time, but there always seems to be time to do it over!"

Part of any training effort should include exposing newer installers to the results of faulty connector placement. Often, the newer installer does not realize the impact of their work until they have some hands-on experience correcting the problems. Time spent riding with a technician can be a good investment. Also the "why" factor of proper connectorization is very critical. The installer should thoroughly understand the mechanical and electrical reasons behind the method. Like most training, "You can pay me now or pay me later."

Quality assurance is the key control in providing trouble free service. Unfortunately, when things are going well, this area tends to take a backseat to the more pressing demands of the day. Effective quality assurance or control is an ongoing effort and must be treated as such. Accountability should be a key in this effort, for both the installer or technician whose work is being reviewed, but also sportatically for the individual who is performing the review. This can be achieved without creating a "Big Brother" atmosphere by simply establishing standards and expecting those standards to be met, in a positive and constructive manner. But back to the training, before you can expect standards to be met, the employee must clearly understand what the standards are.

Squirrel chews, tree friction, messenger pulling loose, house attachments dangling free and coax flapping in the wind against the side of the house are just a few of the problems caused by improper drop attachments.

Proper attachment at the pole is critical to the life of the drop. Where to attach the drop is the first (and usually most important) decision. When in doubt, look at the telephone drop. Telephone is almost always in place before we are, and their drop usually has been placed in the most correct location to serve the structure. I'm not saying always to follow the telephone drop, but I am saying that it should be a major consideration when placing the cable drop. Property owners do not want aerial "wires" coming into the structure from every direction. Clearance and pole climbing space are the two key areas that must be observed when selecting the route that the drop will follow. Violating either of these will certainly cause immediate followup in re-doing the drop. Don't run the drop over swimming pools or through the owners' view out the window. Hanging a drop over a swimming pool or across the view from the picture window usually will get you back out there the same day. The shortest route through the trees is not necessarily the best. Avoid trees whenever possible (mid-spans) but if it is necessary to run the drop through the tree, keep in mind that trees do grow and today's route might not be there some time from now.

House attachment is just as critical as the pole. (I can really enjoy a lively discussion on the pros and cons of the "P" hook vs. the "Ramshead".) Remember, now you are attaching an undesirable (but necessary) wire to someone's home. Whether or not you feel that there is "Pride of Ownership" displayed by the upkeep and condition of the structure, you must treat it as if it were your own. Poor installation or shortcuts because you think that no one will care is a losing situation for everybody.

Usually, each system uses their own specifications in this area, the key being that these

*Continued on page 23*

# you can't afford not to Subscribe



NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

- CABLE TV SYSTEM  
 SUPPLIER  OTHER

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

ZIP \_\_\_\_\_ PHONE \_\_\_\_\_

TITLE  MANAGER  CHIEF ENGINEER

- CHIEF TECH  INSTALLER  BUSINESS OFFICE  
 ALL OF THE ABOVE (CHECK PRIMARY FUNCTION)  
 OTHER

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

- \$22.00 Enclosed for 1 Year  
 \$60.00 Enclosed for 3 Years

CANADA/MEXICO SUBSCRIBERS: Add \$4.00 per year to rates given above. All other Foreign Countries add \$8.00 per year to rates given above. Special handling arranged upon request. U.S. CURRENCY ONLY DRAWN ON A U.S. BANK.

Mail to: CATJ Magazine  
Suite 106, 4209 N.W. 23rd  
Oklahoma City, Okla. 73107





Date  
Location  
How Corrected  
Probable Cause  
Remarks

**\$10.00  
FOR  
5 PADS**

Each pad is three hole punched  
for easy insertion into a binder.

## Detection and Correction

# SIGNAL LEAKAGE LOG

This Signal Leakage Log satisfies the requirements of the FCC Rules and Regulations, Part 76, Subpart K, Paragraph 76.610(d). Although the log is intended for recording cable television signal leakages in the Aeronautical frequency bands (108-136 MHz and 225-400 MHz), it may be used by cable system operators to record all system signal leaks and insure an effective on-going signal leakage detection and correction program.

When using this log for recording signal leakage in the Aeronautical Frequency Bands, the log sheet must remain in the file for a minimum of two years.

NAME _____
ADDRESS _____ (cannot accept P.O. Box)
COMPANY _____
CITY _____
STATE _____ ZIP _____
QUANTITY (SETS OF 5) _____
AMOUNT ENCLOSED _____
* Check must be enclosed with order

**CATJ**

4209 N.W. 23rd, Suite 106  
Okla. City, Okla. 73107

# LOW COST ANY CHANNEL STANDBY



**\$450<sup>00</sup>**

**Mod Scan 2**  
*Any Channel up converter*

- 55db out
- -60db spurious
- one button tuning



**\$695<sup>00</sup>**

**Mod Scan**  
*Any channel modulator*

- LED channel read out
- TOTAL crystal control
- 2 year warranty

## New

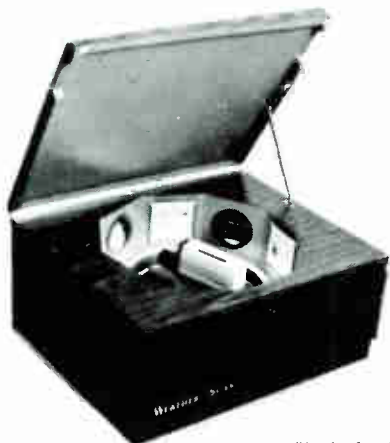
Now with Built-in UHF—VHF  
Demod only \$950<sup>00</sup>  
Model Modscan-3

Distributed by  
WEATHER SCAN

## TELTRAN INC.

316 W. Main  
Azle, TX 76020  
(817) 444-5606

# First In Reliability



Weather Scan III

**Impressive quality . . . surprisingly low price. Just \$3295 for the most reliable unit available (at any price!).**

We have been in the cable television business for 23 years . . . and providing weather information systems for the past 16 years. We know what you need and we know how to manufacture it. For reliability and performance.

The Weather Scan III comes complete with Sony AVC-1400 camera with separate mesh vidicon and 2:1 interlace sync. Includes Time, Temperature, Barometric Pressure, Wind Velocity, Wind Direction, plus four card holders. Compact cabinet is just 28" wide, 23" deep and 14" high. For complete information call or write.



# Weather Scan, Inc.

An R.H. Tyler Enterprise

Loop 132 and Throckmorton Hwy. Olney, Texas 76374 Ph. 817-564-5688

---

---

business enterprises, as do the Monroe grandchildren. About grandchildren, John said they are "eight in number, and I love them all!" When asked to describe himself, he said, "Loved by my wife, worshipped by the children, and respected by my pals — I hope." He says his family is of utmost importance to him, but his faithful friends and associates also rate high.

Not only has John had a successful financial career, but he has experienced many unusual adventures and has a great sense of humor. We talked while sitting at an umbrella table on a terrace under the blue Missouri sky during last summer's CATA convention. Many times as he related an experience, his body would tremble as he tried to hold back the laughter until he reached the punch line so his listener could share in the humor. But John never laughed at others, only at himself, and some of the humorous situations he has found himself in during his nearly eighty-nine years.

He said, "My philosophy is very simple. We are all fools. The other night at that party at (Showtime/The Movie Channel hospitality suite) you saw an old fool dancing his head off. Now if I can't laugh at myself, somebody is going to laugh behind my back. So I'd sooner enjoy the fun myself, and admit that I'm an idiot!" We don't like to disagree with our elders, but what those at the party saw was not a fool or an idiot, but John Monroe, a popular CATA member, dancing the polka with

Arlene Athanas, having a good time, and showing the rest of us how to get some fun out of life!

John entered the cable television business, which he terms an "outstanding plus" investment, because of his radio broadcasting interests. How he got into broadcasting is one of those long, involved stories which John tells with careful attention to details, as he recalls dates, amounts, events, conversations and circumstances. Listening to his narrative, one learns how carefully he considers an investment, some of the requirements and criteria he considers, and the faith he puts into his business associates.

He begins by saying: "One day while I was taking care of the tile roof on our home in Shorewood, a Sunday, the doorbell rang, and it was a total stranger." This "stranger" wanted John to be his partner in the purchase of a radio station. At the time John knew nothing about broadcasting and says, "As a matter of fact, (I thought) radio was a pain in the neck." He seriously considered the opportunity, and upon looking into it, he learned quite a bit about the broadcasting business, but, while this particular partnership was not for him, it was not the end of his interest in radio.

He says, "It may have been six months later that, driving home...from the office, I picked up the radio broadcast of the Milwaukee Journal, WTMJ. The International Paper Company had seen fit to

increase the price of newsprint from \$55.00 a ton to \$75.00 a ton. Well, immediately the thought occurred to me that that's going to increase the advertising rates and maybe subscription rates. While at Marquette (Academy) an old professor of mine (had said that) in case any of you boys in economics get into a manufacturing business, be sure that your raw material costs little or nothing. The thought occurred to me - (for radio) we ... use the air! It doesn't cost us anything. Maybe I made a mistake in bowing out of that (radio) station - I think I'll make a pitch and see what I can find."

He sought advice from experts in the broadcasting industry. He determined the type of location he wanted and found an area in southwest Wisconsin where a frequency was available, obtained his franchise, and studied the merits of the different brands of broadcasting equipment. He obtained a franchise for a thousand watt station in Platteville, Wisconsin. "We gave it the call letters, WSWW, Southwest Wisconsin," says John.

He tells about purchasing the land where the station was to be located. "While I was scouting around that Saturday afternoon, I see this lovely little bungalow on the outskirts. Here's where fate came in. I said to this party, '...Do you know the name of that individual that owns the property down the road four or five blocks?' He said, 'What do you want to know for?' Well, I



could have said, 'It's none of your business,' but I said, 'I'm looking for a nice home on the outskirts of this university town, and I thought he might want to sell it.' He said, 'Well how about my place?' 'Do you want to sell it?' (He said,) 'Yeah. I'm from Iowa, and I want to go back to Iowa. I want to sell it for the price I paid for it seven years

ago.' ...Well, I knew that if I could buy a place at pre-war levels, I couldn't lose any money. So I got this beautiful little bungalow, four acres of land. ...I couldn't tell anyone what my purpose was, for fear they'd sneak in on me. ..."

He hired two young amateurs who were technically qualified to assemble and install the

station equipment. John tells about hiring Bob Bodden to manage the facility. "He came into town and I told him my purpose. He said, 'The only thing is that I've changed so often that I would like to have a piece of the action.' I said, 'Well, Bob, if you're worthy of it, my deal in the investment banking business is that I'll back almost anybody... on a fair deal, if they have something to work for, live for, provided I get my money back.' So the deal was made. He did a beautiful job for me. In due course he got his stock. About 1971 he said, 'John, I have proven (myself) to you. I've made money for you and (your) family ... I've made money for myself, but I want a station of my own.' Well, I said, 'This is virtually your own, Bob. I have not made suggestions to you for the simple reason that I didn't know what suggestions to make. I was trained in one field and you were trained in another. So you are really and truly the boss here. You have the right to hire and fire ...I didn't build the station as a wheeler and dealer. I thought maybe by having a radio station I would be doing some good for the community as well as ourselves.' "

However Bob was determined to have his own station and the outcome was that he bought out John's interest in WSWW.

Through the years John invested in a number of other radio stations. Some of these ventures were more successful than others, some of his associations worked better than others. Comments he made

# THEY SAID IT COULDN'T BE DONE

**(but what they meant  
was they couldn't do it!)**

Equipment repairs in 48 hours? You want it when? Sure. No Problem.

With our "UltraSonic" service, your repaired equipment is on its way back to you within 48 hours of our receipt. Period.

And if you think that's good, ask about our all new 2 YEAR WARRANTY. If the repair is not right, we'll fix it plus a similar piece of equipment - FREE!

Get the details today - and if you think it can't be done - try us.



## COMSONICS<sup>®</sup> INC.

**AN EMPLOYEE OWNED CORPORATION**

1350 Port Republic Road, Harrisonburg, VA 22801

**CALL TOLL FREE 1-800-336-9681**

IN VIRGINIA CALL COLLECT

1-703-434-5965

**48 Hour "UltraSonic" Rush Service  
2 Year Warranty**

illustrate his approach to business which combines hard economic concerns, a desire to benefit the community, a sense of fairness and a willingness to provide opportunity to others. Referring to the manager of one of the less satisfactory operations, he said, "I let him know I was not a philanthropist. I was a businessman and I expected some little return on my money. I said, 'I'm going to give you another year so no harm will be done to you or to me.'" The outcome in this case was that the manager found a buyer for the station soon after.

Another of the Monroe radio stations is WMIR in Lake Geneva, Wisconsin. "By the way," said John, "the MIR was short for my dear Miriam's Christian name. We made her president, probably one of the few females in those days who happened to be, not a vice president, but a president. She paid very little attention to it. As a matter of fact, I don't think she ever visited her station."

At the time that John Monroe agreed to purchase WRCO in Richland Center, he understood that the previous owner would stay on for two years as manager. However John says, "The day we closed the deal, we laid the down payment of \$50,000 in his hand, he said, 'John, when I walk out of this studio, I'm never coming across this threshold again.' Well of course I was a little disturbed. It's a wonder that I didn't immediately rush to the long distance telephone and stop payment on that check, but I

didn't. There were two members of the staff that impressed me. This is important to those who know Peter Athanas. One was an inside worker that had been with the station for some time, and a creditable boy. The other was this Greek, Peter Athanas, the chief engineer. By the grace of God, and not knowing very much about the characteristics of

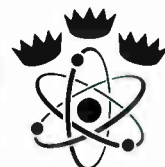
either, I asked Pete if he would take over as general manager of WRCO. He accepted. ...From the beginning it was a very profitable venture. I promised him a piece of the action as an incentive, and he accepted it. Thank goodness, by this time our promise has been fulfilled. **He's an associate of mine, not an employee."**

**S**oon the most joyous of seasons will be upon us.

*It is a time of happiness and cheer; of family and friends; of peace on earth, goodwill to man; a time to celebrate the birth of a new year.*

**W**e at Triple Crown would like to extend the heartiest of holiday greetings to our many friends and wish each and every one a future filled with promise and prosperity!

**TRIPLE CROWN  
ELECTRONICS**



WorldRadioHistory  
DEERFIELD BEACH, FLORIDA – MISSISSAUGA, ONTARIO





Microdyne's New, Lower Priced TVRO Receiver — the LPR

## Answer These Six Questions Before You Buy Your Next TVRO Receiver

### 1. How Good Is the Picture?

Make comparisons. Ask your distributor to set up a side-by-side or A-B comparison test (switching from one receiver to another). Often you can see the difference in picture quality. And if you can see the difference, so can your subscribers.

### 2. How Long Will It Last?

Most TVRO equipment has to run all day, every day, year after year. Marginal receivers that are poorly designed or cheaply made will end up costing you money, and subscribers.

Microdyne takes no short cuts in the design, manufacture or testing of its products. Our equipment is extremely reliable. Typical Mean Time Between Failure rates for our TVRO receivers are in excess of 80,000 hours.

That's over 9 years.

That doesn't mean that every receiver we make will run that long without failure, but it indicates the average expected rate of failure, and that's important.

### 3. Can I Get It Serviced?

No matter how much care has gone into the design and manu-

facture of electronic equipment, failures do occur. So, we offer a 48-hour repair policy. If your receiver is in warranty, we fix it free within 48 hours. If we can't fix it, we replace it. If the unit is out of warranty, we provide the same service, for a nominal flat rate which we quote *before* you send in the unit.

### 4. How About Delivery?

We have nine nation-wide factory authorized distributors who routinely stock our equipment, so it's a pretty good bet that you'll be able to get just what you want, when you want it. And our distributors are selected on the basis of their experience, knowledge and willingness to provide the support you need.

### 5. How Reliable Is the Company?

You have already seen several big, established companies abandon the TVRO market. But not Microdyne. We have been involved in satellite

communications since it all began, and we are here to stay. TVRO isn't a sideline for us; it's our business.

### 6. What Else Can the Company Do For Me?

Right now you may only need a receiver. But some day you will need a lot more, and a lot more *is* what Microdyne can deliver. We make a full range of antennas, downconverters, modulators, demodulators, and related TVRO equipment.

And our Customer Support covers all the bases: site surveys, turnkey transmitting and receiving system installations, customer training, program management of network systems, on-site service, and a 24-hour toll-free phone number for emergency engineering support.

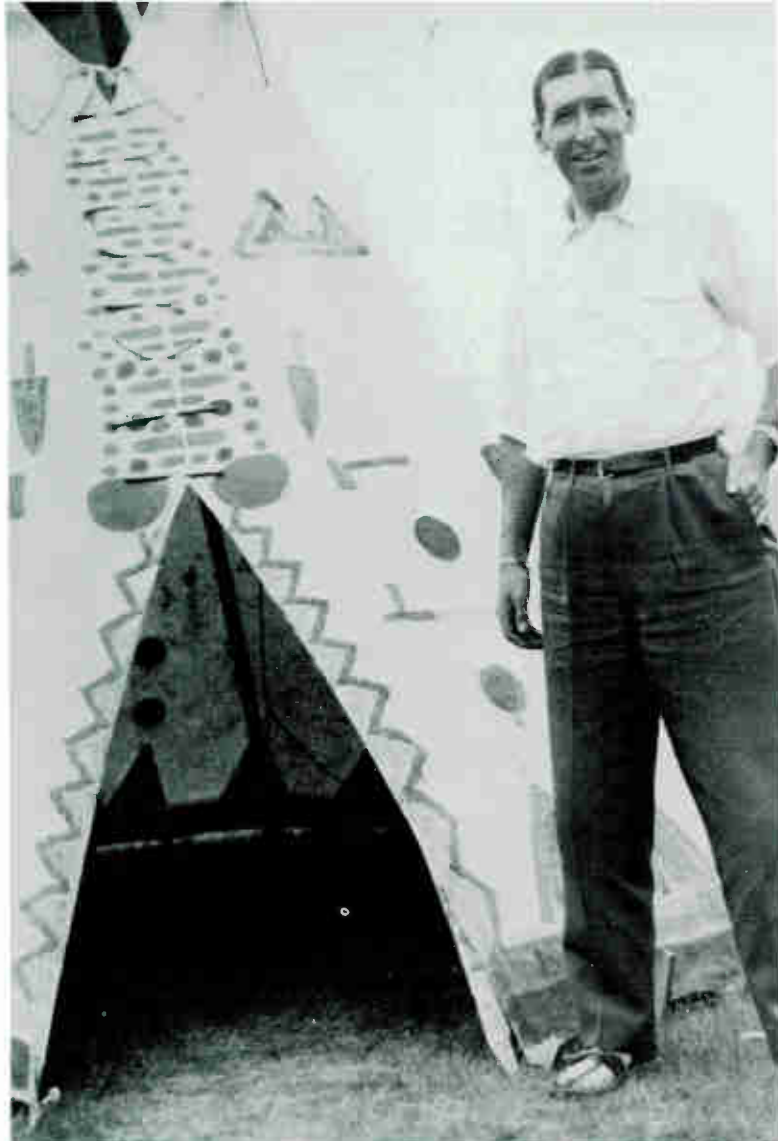
By now you may have one more question — Where is my nearest Microdyne Distributor? For the answer, call our Marketing Department at (904) 687-4633. We'll also send you our new TVRO Systems brochure, free.



**Microdyne Corporation**

P.O. Box 7213 • Ocala, FL 32672 • (904) 687-4633 • TWX: 810-858-0307





*Our Teepee on the No. Saok. River enroute to Jasper 7/46*

grade.” John says that when he finished the eighth grade, the sister superior at his parochial school asked his mother where he was going to go to high school. His mother said they had chosen Marquette Academy, saying, according to John, that for four hundred years this religious community of Jesuits had taught only men, and now that John was a man, he should be thinking like a man. John says his mother was told that John lacked scholastic ability and should take up a commercial course. John’s friends planned to attend Marquette and he says, “At that time I must have been a follower, so I followed the mob

into the classical course. ...I had six years of Latin, four years of Greek, two years of Spanish, two years of German, two years of French, ...to say nothing of mathematics and science.” This educational background is apparent when he tells about some of his subsequent adventures.

One of his favorites is about chasing Francisco, “Pancho” Villa. He says, “As a young lieutenant, I was out with the Wisconsin National Guard, chasing Villa in 1916 after he raided Columbus, New Mexico.”

One of the financial facts John learned at that time concerned the exchange rate of

currency and money between different countries. “It was a tremendous lesson and benefit to me in later life, this survey on moneys. ... We were paid in the Army, at that time, ...\$146.00 a month. That was our pay. Unfortunately we had to pay for our subsistence! (For a) silver Morgan dollar, ...we could get two Mexican pesos of the same size, weight and fineness... I couldn’t make money any faster than to double it overnight on payday!”

Continuing the story about one particular experience while in the pursuit of Villa, John said, “We had an advance reconnoitering party, and they were ambushed one night. ...I was given part of the job to pick up the pieces. While I was going down the main drag, I came alerted to the fact that I was being followed. Well, I didn’t want to place myself in jeopardy, I still had a long life to live. I turned around and I was being shadowed by ...an elderly man. I didn’t think he was going to do me any harm, but I was suspicious notwithstanding. I had my forty-five gat at my side. I knew I could protect myself. He said, *Teniente. (Lieutenant) Ring.*’ Well, in those days, at twenty-one years of age, ...I had no interest in jewelry. I said, ‘*No. No sabe, no sabe.*’ He showed the ring, ...and I said, ‘That’s the coat of arms of the House of Hapsburg.’ (he said.) ‘*Si, Teniente. Maximillo.*’ Well of course I happened to know the history of Maximilian

and Carlotta. ...I said, 'How did you come to get it?' (He said,) 'My pa was on the shooting squad when Juarez defeated Maximilian's loyal troop at the battle of Queretaro, and ... my pa, in the burying squad, took the ring off his finger.' "While telling the story, John reached into his pocket, and at this point, with a flourish, he presented the ring for inspection. John describes it: "It's a silver band with a gold platform and a steel filigree emblem of the House of Hapsburg. The symbolism here is the state and the church under the crown of God. Oh yes, I wore that ring for many years."

It is a heavy piece and the ornament is about an inch and a half long. John adds, "On a fishing trip in Northern Canada one time, I was stopped in Edmonton by the Northwest Mounted Police. They insisted that I take the brass knuckle off my finger!" As John put the ring away he said, "My army career was terminated without capturing Villa."

When World War I was declared, John signed up for officers training. He says, "We were commissioned as 90 day wonders. In August, 1917, I was transferred to the 385th field artillery outfit ...in Battle Creek, Michigan. I served there through the winter, and then they asked for volunteers for aviation. I guess I was a little bit fearful (that while) training as an aviator, the war would be over with and I would see no action, so I hung on, and was

commissioned in due course in field artillery. Then they needed artillery observers. They sent me to ...Omaha, to be an anchored balloon observer. ...I had to report to Balloon Number Three at nine o'clock. (They said to) dress warm (because) we're going up 3,000 feet and to bring (field) glasses. Although it was

as calm as an inside parlor, that balloon was up about one hundred or one hundred fifty feet, and after it made two sways, I was at the bottom of the basket. I didn't even know my name. I was sick to my stomach. They hauled the balloon in. I went to the hospital. Two weeks later I was ready for duty. ►

## TERRESTRIAL INTERFERENCE.



ASTI is the first complete professional handbook on the avoidance, diagnosis and suppression of microwave *terrestrial interference* (TI) at TVRO earth stations. This 250 page comprehensive volume was compiled by an engineering team headed by Glyn Bostick, President of Microwave Filter Company, with valuable input from many

industry leaders such as California Amplifier and Scientific Atlanta. The result of their effort is an in-depth exploration of such topics as equipment selection for minimizing TI susceptibility, use of natural and artificial shielding, system filtering, and many other cost effective techniques! Send this coupon now to receive our free brochure on ASTI, and get TI out of the picture!



## BANISHED.



**YES!** Send me the Free brochure on the ASTI Handbook!

**YES!** Send me the ASTI Handbook. My payment of \$125 is enclosed:  Check  Money Order

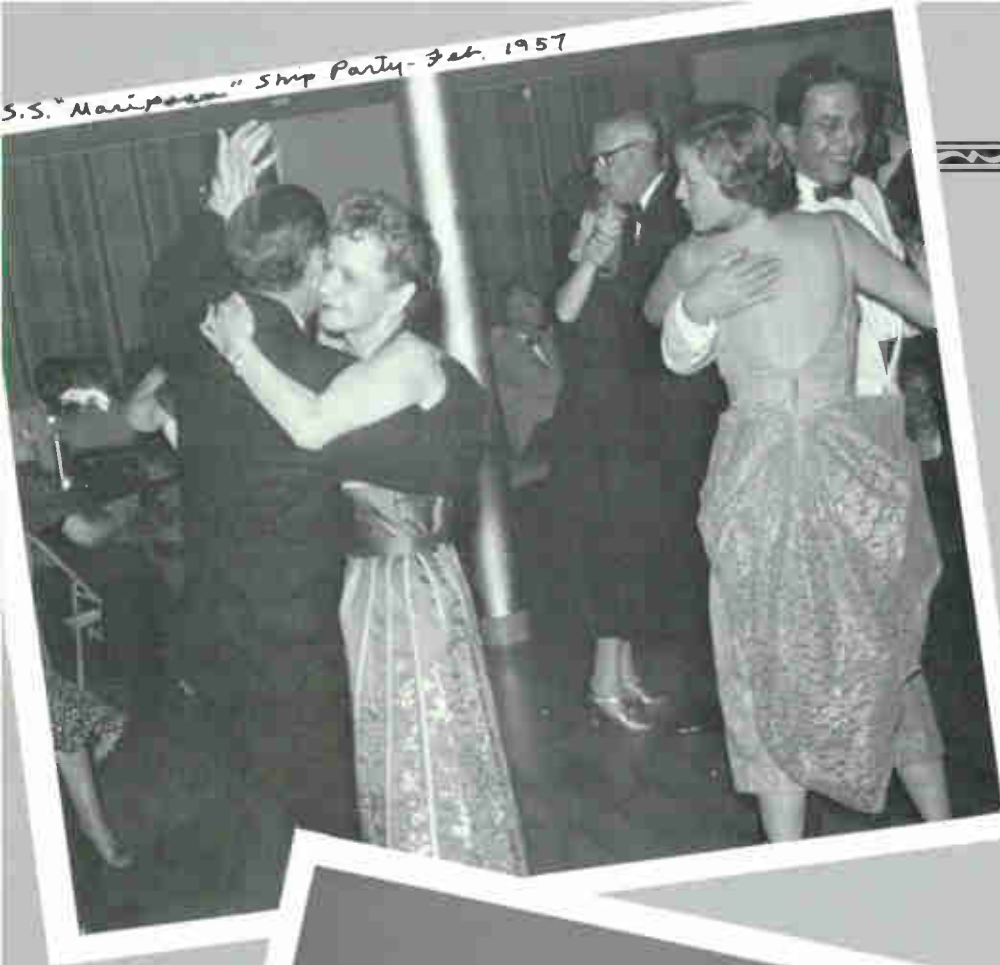
Name \_\_\_\_\_ Phone \_\_\_\_\_

Company Name \_\_\_\_\_

Address \_\_\_\_\_

City State/Zip \_\_\_\_\_

Send to: CATJ Magazine,  
4209 N.W. 23rd St., Suite 106, Oklahoma City, OK, 73107



They gave me another assignment, and on that occasion I went up 300 feet. I became, again, a collapse. It appeared a funny thing, that in all (my wife's and my) ocean travels (in later years) : all oceans except the Indian Ocean, from the Arctic to the Antarctic, the deep Pacific to the stormy Atlantic, across the Gulf of Darien, the English Channel, and ... in and out of the Golden Gate -- (I) didn't get sick. ...But get me into a swing or a hammock, and (after) two, three swings John is fit for the hospital! I can't take that kind of swing."

Putting ballooning behind him, John went on to receive a commission in the Royal Canadian Air Force. For a time he considered a military career, but he says he "really and truly" wanted to be his own boss. "I didn't like the idea that no matter how high up in rank I got, even a five star general was subject to the command of the commander in chief under our constitution. I would always have a boss. ...So I left the military in 1919 and went into the private sector."



Our 35<sup>th</sup> Anniversary Oct. 1958





---

He went to work for Paine Webber. "Everytime I think of the training I received from Paine Webber I hold up my hand in a salute and yell, 'Thank you Paine Webber,' "John said, laughing. Then he leaned forward in his chair and became serious. "October 1929 was a terrible let down. Many, many people were hurt, tragedies all over the countryside. Very fortunately though, notwithstanding the fact that I had a mortgage on our home, two children and a wife that had a little tendency to be a little extravagant, ...we went through the period without disturbance. I have a complaint with the firm, that maybe with their background, they should have been a little more cautious, but I'm not the one to judge.

"So I decided to follow my original intent of setting up our own little business. ...With ten thousand dollars of capital, with an outstanding partner, this little firm of Brown, Monroe and Company was started about six weeks — maybe six months after Roosevelt took over. We did have some problems, but we were both pretty much interested in working. We did work hard. ...It was a successful operation."

It continued until a few years ago when the business became a part of A.G. Edwards and Company. John's son was operating the company at that time, but after he suffered his heart attacks, the Monroes decided it was time to remove some of the stress of running the



business. John says, "We are now functioning as paid representatives, on a commission, with A.G. Edwards and Company." He continues to service accounts for "clients in Sun City (Arizona) as well as some of the old timers that are still alive in the Milwaukee area where I got started. It was my first economic love." He adds, "I'm very proud of the fact that I may be the oldest associate member of the New York Stock Exchange. I still have my ticket." His voice cracks as he tries to hold back the laughter, saying, "I only hope I can continue to maintain the confidence of my clients, because really and truly, I need that extra buck every month 'cause Reagan has cut back on my food stamps!"

John said, "Please don't think I have the touch of Midas. Among these investment firms, my banking firms, a farming operation, electronics, real estate development, a little of

everything, - I also had a couple of instances where I fell flat on my face.

"One I classify as 'The Flaming Adventure.' This was to finance an Indian with his territorial rights, to put in a tax free tobacco shop on the main number five south of Tacoma, Washington. The idea was that anybody that stopped in that strip...could save themselves the standing floor tax of the State of Washington. I believe it was nine cents a package. Anyway we went on to say that, if we succeed in this, we'd ultimately get into the liquor business and the idea of being able to save nine dollars on a proof gallon of booze was tempting. However the state authority caught up with us and on this occasion they seized twenty-five thousand dollars of my cigarettes. We decided to close shop. We wanted to let the Indians go back to the reservation."

After a good laugh over that

---

fiasco, John tells about another time when his investment didn't turn out too well. He said, "Another one was a Camper John outfit. I realized, some fifteen years ago, that more and more people were traveling...taking a family on a vacation when school was out, in the family car, to see Yellowstone, California, Florida. The cost of moving a family into the ordinary, commercial habitation and restaurants would cost them a lost of money. So the thought occurred to me that if I set up a deal where they could attach a trailer as a camper that would sleep four, to their car, they could save themselves, not only the cost of habitation, but maybe could get along (without purchasing) a noon lunch. ...The idea was outstanding, but it was a little premature. The lad that was running this for me absconded with the principal, and I was left holding the bag. Camper John is no longer, except I do have some of the old stationery." As he says these last sentences, John's body trembles with the suppressed laughter. Having finished the story, he leans forward and lets the laughter free.

When he was asked what it takes to achieve business success, he leaned back in his chair, thought it over a minute, and then gave a typical John Monroe answer, disgressing occasionally, tossing in a little humor, but always coming back to the point; "I think it's a really and truly the grace of Almighty

God -- to be in the right place at the right time, for the right dear, whether it's a two legged or four legged creature. I do believe that one has to be trained. You don't have to have a scholastic education, as was proven by Andrew Carnegie, Charlie Schwab of the Bethlehem Company, Henry Ford or any one of the modern captains of industry. I would say that a number of gentlemen that have cable companies were very fortunate, first of all of being in the right place at the right time, with one purpose — the purpose to succeed. That meant work, diligent work. First of all you had to have health. When you have health, you have happiness. ...If you don't have health, there's a gnawing nasty condition that'll tear down your resistance, probably deprive you of the twenty-four hours that you have to work every day to succeed.

"You must also think of one's purpose. Maybe one of the purposes I had was my dear wife. Shortly after we were married (she) told me that because of the circumstances that I had been a motorcycle rider, a newspaper boy, a soldier, (she was asked) 'why do you want to marry that guy when there are so many other east side eligibles that will supply you with a very delightful, comfortable, luxurious life?' She made the remark that one of her aunts said that if (she married) Monroe, (she would probably) wind up living the rest of her life

in a basement apartment. That didn't quite set with me. I knew ... I wasn't going to have my Miriam live in a basement apartment."

Getting back to the specifics of the question, John said, "It is a combination of your basic purpose. Are you willing to make the sacrifice? Do you have complete self discipline? Are you willing to work? Are you happy in your work? You can't succeed unless you're happy. I'm most grateful to think that I was blessed. I don't want to classify it as lucky, that is a material expression."

He adds, "This investment banking business was really and truly an outstanding joy. It wasn't a job, it was a joy. I had the opportunity to meet a lot of good people. And those good people made me! I love them."

John F. Monroe is enthusiastic about the workings of the American marketplace. He has strong conservative values and his business acumen has made it possible for him to build a secure financial foundation for his family. No magazine article can begin to cover the scope of the adventures of this man who "nearly broke his neck kissing the blarney stone," or reveal the extent of his story telling skill. For the most enjoyment, you need to be there and hear it for yourself. He revels in tales that tell a joke on himself, using intriguing descriptive phrases and an early twentieth century oratory style. □

# CORRECTION

*THIS IS A CORRECTION FOR GLYN BOSTICK'S CABLETECH FILTER COOKBOOK #19, NOVEMBER 84, PAGE 26. One line was left out of the copy. We apologize for any inconvenience it may have caused.*

## SOME ADVANTAGES OF THE NARROW VIDEO TRAPS

In many cases, the lower adjacent channel can remain in service if narrow-band traps are used. Smaller adjacent sound loss is purchased by tolerating less trap notch peak loss— somewhere between overkill 70 db and bare minimum 30db. Such traps are feasible for controlled temperature environments or for climates without wide temperature swings. And their cost is much lower.

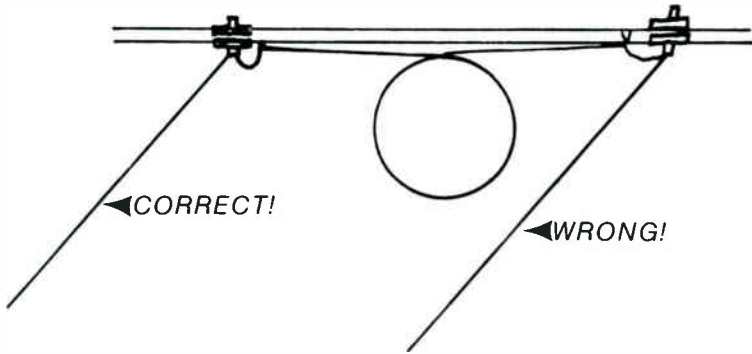
## NARROW NOTCHES FOR TEMPERATURE EXTREMES

For about the same cost as the conventional 70 db trap, separate narrower notches can be placed on both the video and the audio. While extreme temperature swings may result in "just adequate" trapping— no entertainment value, but no wipe-out— the audio remains suppressed due to its dedicated trap. This type trap allows the lower adjacent channel to remain in service in many cases.

## THE DROP *continued from page 8*

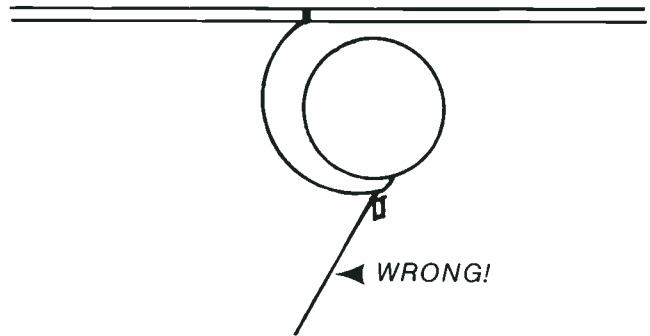
**FIGURE 1**

*Attaching the drop to the wrong side of the pole and bringing it through the climbing space is a common infraction.*



**FIGURE 2**

*Attaching the drop to the pole also infracts climbing space.*



specifications be followed and uniform from drop to drop. Cutting corners in this area can save a few bucks initially and return as a \$25 to \$50 service call.

Overkill is a real possibility also. You must ask yourself if the additional expense of performing a 100%, high quality installation offsets the potential return trips and customer dissatisfaction?

### POLE INFRACTIONS

The most common type of construction violations or infractions are centered upon drop attachment (all types of drops) to the pole, with clearance and climbing space problems being the most repeated. Not only is the required re-do or clean-up costly, but the system's reputation and relationship with the utility and telephone companies might be hampered.

### MAINTENANCE

How do you maintain a drop? Well, 95% of all drop maintenance is performed during the installation. A proper installation will ensure maximum drop life.

There are however some things that should NOT be done to maintain a drop. Splicing a drop (F-81) is almost like scheduling the next service call. If the drop needs continuity repairs, it needs to be replaced. Drop replacement is not as labor intensive as the initial installation due to utilizing the bad drop as a pull rope for the new drop. An analysis of repeat truck trips and customer dissatisfaction would easily support this action.

Moving the span clamp in closer to the tap to redress the connector (or maybe peeling back the messenger a "little bit") is asking for problems.

These and other "shortcuts" account for a large portion of repeat service calls due to drop problems.

### CONCLUSION

Not only does it make long term sense to select the proper drop material but to make sure that that drop material is properly installed. The drop is one example of where it is usually harder to do the job wrong than to do the job right.

Underestimating the importance of the drop to a cable system is like underestimating the importance of tires on a car. □



### Should Operators Go Retail?

A look at the pros and cons of opening your own store. What decisions need to be made before and after the doors are opened?

### Taking Advantage of Your Spectrum Space

With the slower growth of traditional cable revenue sources, what new opportunities exist for maximizing the potential of your facilities?

### Telemarketing: A Hands-On Approach

Using the telephone to effectively market your cable product. How to reach new subscribers, upgrade existing subs, and reduce disconnects.

### VCRs—Competitors or Selling Tool?

How will the continuing and explosive growth of home video cassette recorders impact the cable industry?

### Issues Facing The Cable Manager

Hiring, training, motivating and retaining quality employees.

### Advertising On Local Cable: Choosing The Setup That Works For You

A nuts-and-bolts discussion of the strategies, equipment and personnel needed for a successful advertising program.

### Protecting Your Investment: Preventing Theft Of Service

How to turn today's problem into tomorrow's paying subscriber: how to make technology, public relations and the law work for you.

### Co-Op Media Ventures

When it makes sense to join forces with others in the industry to most effectively use newspapers, television and radio.

Following their traditional "tinsel town" attractions and hospitality, you can be sure that your entertainment will again be second to none — this schedule of seminars and sessions, plus the outstanding hospitality presented will make this 1984 Western Show once again a memorable one!!



## FILTERS

### FOR EVERY CATV/MATV NEED

MFC's Catalog C'80 is now the industry standard. This 40 page volume describes over 400 different filters addressed to specific CATV/MATV problems- from exotic channel deletion filters to lowly video pay traps.

Have a one-of-a-kind problem no one else has been able to solve? We can handle that too, with custom filters designed specially and shipped fast to meet your needs.

Most of our standard filters are available in ten days or less, and our WATS line telephone consulting is free.

Over 3500 cable systems consult us for their operating needs, including **Group W, Cox Cable, Warner Amex, Viacom,** and **ATC,** to name a few. Join them, for fast solutions to your specific problems.

CATV/MATV engineers cannot afford to be without this free powerful problem solver. Write or call for C'80 toll free today.

US WATS toll free: 1-800-448-1666  
AK/HI/NY/CAN collect: 1-315-437-3953

ASK FOR DEPT. J184

Got a problem now?  
Ask for our CATV Consulting Engineer!



**MFC**  
MICROWAVE FILTER COMPANY, INC.

Microwave Filter Co.  
6743 Kinne St.  
Dept. J184  
East Syracuse, N.Y. 13057

Instant Relief From...

## Earth Station Terrestrial Interference

...Is Just a Phone Call Away!



The Victim

Do you have "sparklies" on the pictures—or even "wipe-out"? Don't know what to do next?

We have the solutions. MFC offers the industry the only complete arsenal of products and services specifically designed to combat TI. You're not alone with your problems: we've helped companies such as US Satellite, Star Video, Link Communications, even Showtime clear "impossible" sites.

Call now and ask for the free TVRO literature package, which consists of:

- Catalog MTV/82 — Over 80 Exclusive Filters
- FG/82 — Trouble Shooting Guide
- TIS/84 — TI Seminar Description
- TASP — Quick Office Site Analysis
- FS/84 — On Site Field Service
- ASTI Brochure — a 12 page condensation of our 250 page ASTI interference handbook.

Got a problem right now? Call our WATS line for free consulting.



Some of Our 80 TI Filters



Field Service Team in Action



ASTI TI Handbook

**MFC**  
MICROWAVE FILTER COMPANY, INC.

6743 Kinne St., East Syracuse, NY 13057  
Toll Free 1-800-448-1666 TWX 710-541-0493  
NY/HI/AK/Canada (Collect) 315-437-3953

DECEMBER, 1984 CATJ 25

# Application of WHITE NOISE for CATV System Measurements

*White noise will provide a solution to CATV System and SLM measurement problems.*

(Revised, Reprinted article, published in Cable Television Business)

By Harry L. Sadel

In the early days of CATV, one of the industry's major technical problems was the accurate and fast calibration of signal level meters. The traditional method of checking the flatness of the meter's frequency response was to use a standard carrier wave (CW) signal generator as a calibration reference. The generator was then tuned to a group of selected frequencies, and the signal level meter had to be tuned at the same time.

This turned out to be a rather tedious procedure. The signal generator first had to be tuned to predetermined frequencies. Its output level had to be adjusted, the meter tuned, its response noted and so on. Technicians with four arms would have been a big help.

Checking frequency response flatness at every MHz could take hours, so most technicians settled on making one response check per channel. Even so, calibration was still a slow and tedious procedure.

Now signal level meters are often used for checking amplifiers and other CATV equipment, and of course the highest possible degree of accuracy is desirable.

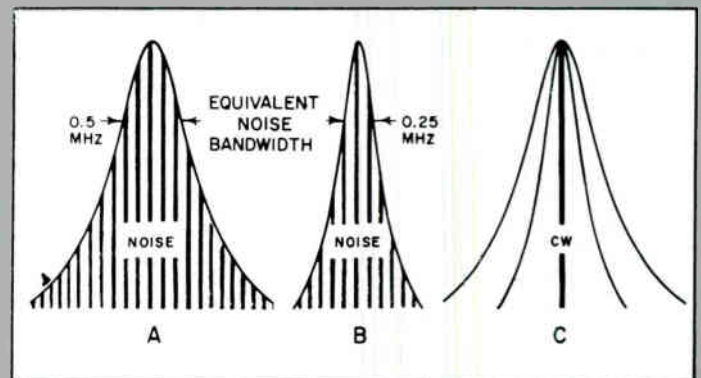


Figure 1

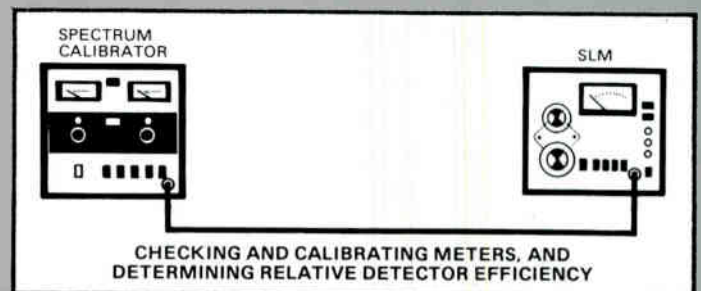


Figure 2

If a continuous spectrum signal over the required frequency range could be substituted for the tunable standard signal generator, a lot of the technician's expensive time could be saved.

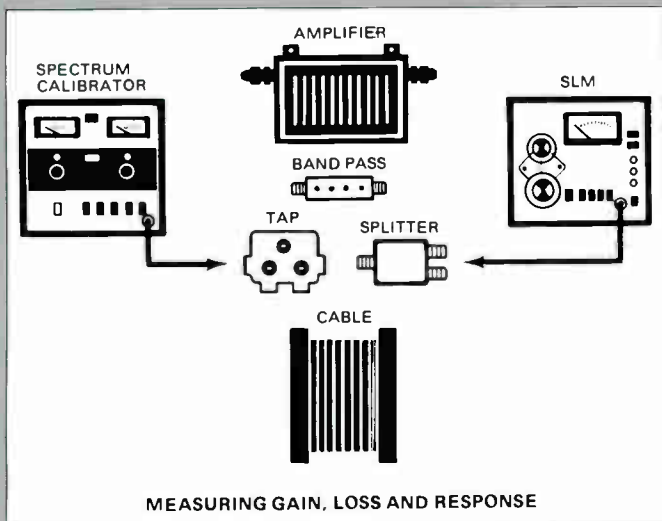


Figure 3

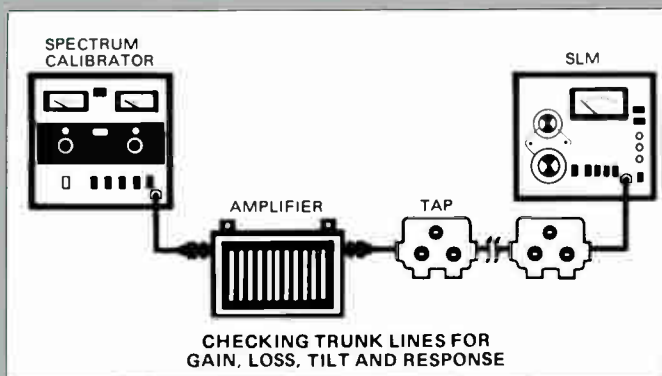


Figure 4

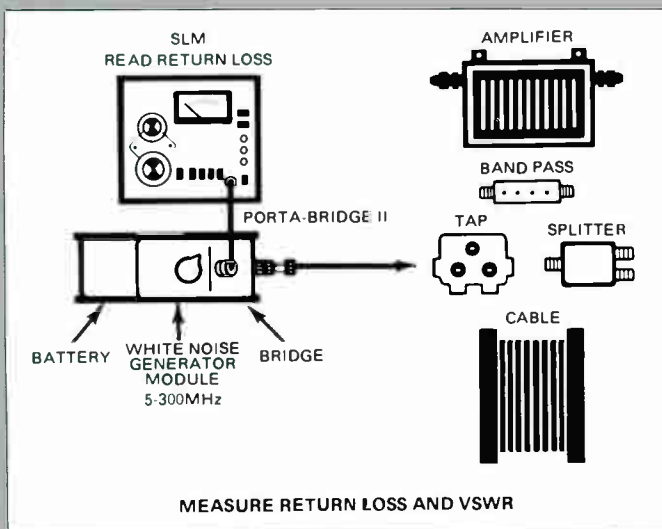


Figure 5

Could a sweep generator be used? Not easily. A swept signal is difficult to read on the average CATV signal level meter. At low sweep rates, the meter needle will vibrate, and most sweep generators are not sufficiently linear over their frequency range. The most common phenomenon is that the sweep generator level, as it is read on a signal level meter, will fall off at the high end.

A comb generator could be used, but it does not give a continuous spectrum signal and its output often does not appear flat due to harmonically related intermodulation products.

The solution may lie in using white noise, defined as "a noise distribution which gives the same noise-per-unit-bandwidth anywhere in the spectrum."

With white noise, every frequency throughout the spectrum would be of the same amplitude. Then, by simply tuning the signal level meter through its range, one would only have to watch the meter needle to determine the degree of flatness everywhere. To make a really useful white noise generator, however, the noise level from conventional noise sources would have to be amplified for a reasonably large deflection on a field strength meter.

If this amplified white noise had sufficient power, it could be used for a variety of other CATV measurements. The fact is that many measurements requiring a sweep generator could also be taken with amplified white noise and a signal level meter (or a spectrum analyzer).

This noise generator's output must also be as flat as possible and it should have the capability of varying its output level. It would be even more useful in the field if it was lightweight, portable and battery-operated.

The noise power available from the noise diodes is approximately 30 dB above the thermal noise of a 75 ohm resistor. So on a typical CATV signal level



meter an average deflection from the diode alone is only about 25 microvolts. It is necessary to have a suitable noise shaping amplifier, giving a full-scale deflection and a noise spectrum flat to within  $\pm 1/4$  dB. If this diode-amplifier combination works with a light-weight battery, the problem of portability is solved.

As more and more uses for the white noise generator are discovered, another problem appears. The effective white noise signal level read on a signal level meter depends on that particular meter's IF bandwidth. For example, in Figure 1, at A on the left, a meter's IF response curve which is  $1/2$  MHz wide is shown. For simplicity, the response of a single tuned circuit is shown.

A meter with half the above IF bandwidth,  $1/4$  MHz, such as the response in the center, would have a deflection 3 dB lower than that of the first meter. This is because the noise power passed through a filter is proportional to the filter's bandwidth.

Experience shows that in a production run of signal level meters which are supposed to have a certain IF bandwidth, no two meter's actual IF bandwidth will be exactly the same. This may not have a significant effect on any of the functions of the meters, except when they are connected to a noise generator for calibration. Then variations of 1 dB or more may show up from one meter to the next. What can be done about this?

It isn't practical to determine the exact effective IF bandwidth of every meter, so another solution is needed. Figure 1, C, shows that if a CW signal is applied instead of noise, the signal amplitude would be independent of IF bandwidth, assuming it is centered in the band pass.

As shown in Figure 2, performing a signal level meter calibration can be simplified by putting a white noise generator and a CW generator in a common housing with a common output terminal. With such a device, it only takes a minute to perform a full flatness check.

The procedure is to apply a known CW level at a suitable frequency, noting the deflection obtained from the CW generator. The white noise is applied, and the noise generator's output adjusted until it gives the same deflection obtained from the CW signal. The white noise will now have the same level

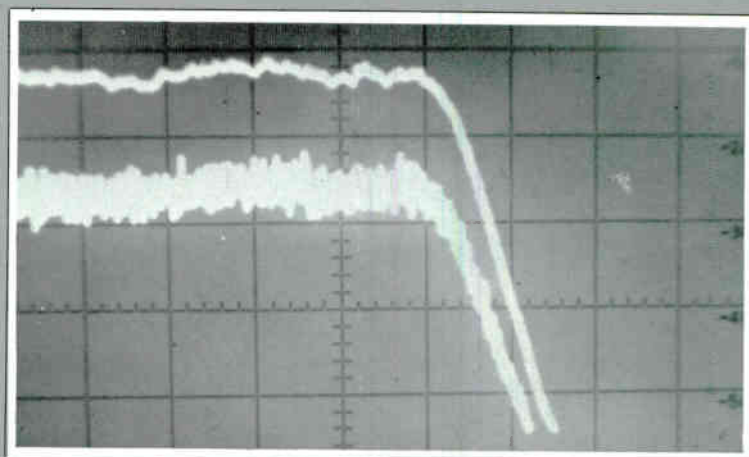


Figure 6

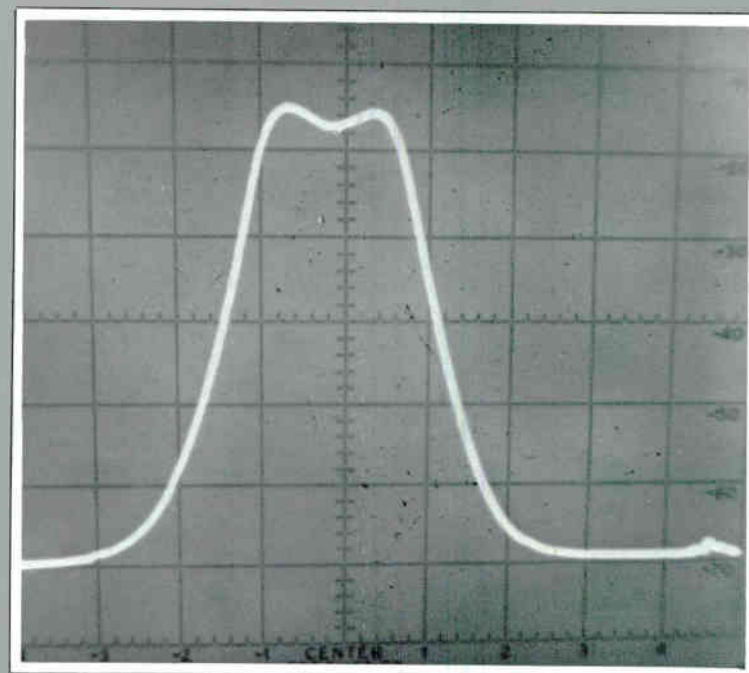


Figure 8



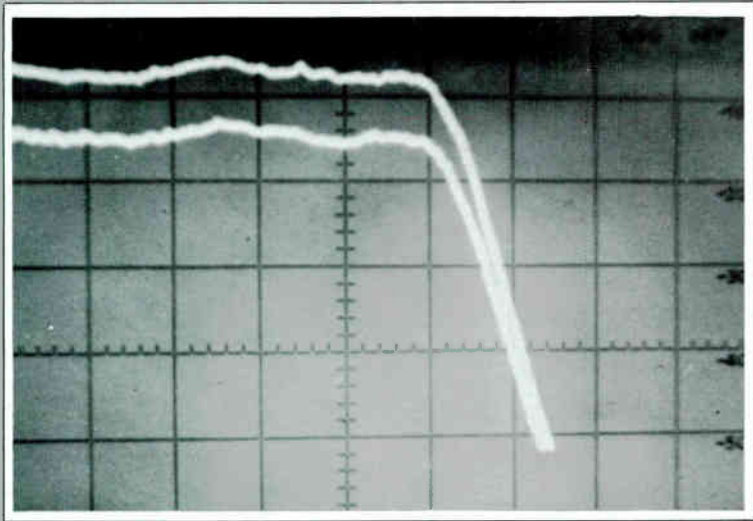


Figure 7

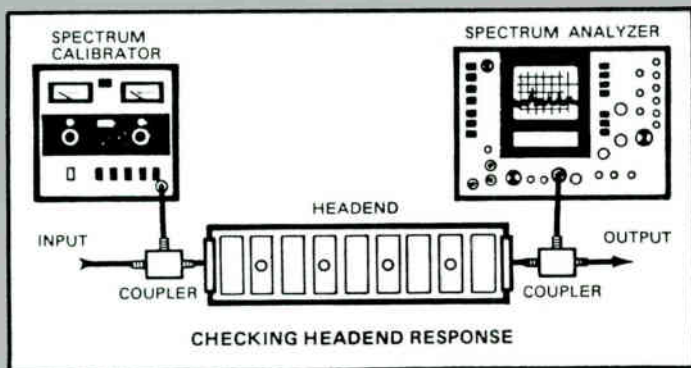


Figure 9



as the CW signal over the full frequency range of this particular signal level meter, and this meter's response can be observed simply by tuning it through its full range.

All this shows that by referencing the white noise with a known CW level, a definitive white noise signal level can be established on any signal level meter.

Using this concept, one can make many measurements normally requiring other types of equipment, such as a sweep generator and oscilloscope. For example, Figure 3 shows how the response of various CATV components can be checked; Figure 4 shows how a complete CATV section can be checked; and Figure 5 shows how white noise can be used to energize a return loss bridge. Figure 6 illustrates white noise as seen on a spectrum analyzer, displaying a 5-300 MHz white noise spectrum. On the lower trace much of the random noise effect can still be seen. By switching more filtering into the spectrum analyzer's detector circuit, one can get the more useful, cleaner response shown at the top.

Figure 7 shows the flatness of a white noise signal from 5-300 MHz. (Currently, white noise generators such as Sadelco's Model SC 450 Spectrum Calibrator can be obtained to cover a range of from 5-450 MHz.) It's obvious that the response deviations are quite small: in this case they appear flat to  $\pm 2/10$  dB.

Many CATV measurements can be made with white noise and a spectrum analyzer. Figure 8, for example, shows a bandpass filter response. The white noise generator performs like a tracking generator in this example.

By inserting white noise at a CATV headend, the headend's response can be observed, as in Figure 9. Figure 10 shows three channels in a typical CATV headend with the TV signals off (see sound notches), while Figure 11 shows a similar situation with the signals on.

It's evident that a battery-powered white noise generator with a built-in CW reference can be a valuable portable instrument for making a large variety of CATV equipment and system measurements.

The versatility of white noise as a CATV measuring tool is further shown on the following illustration, Figure 12.

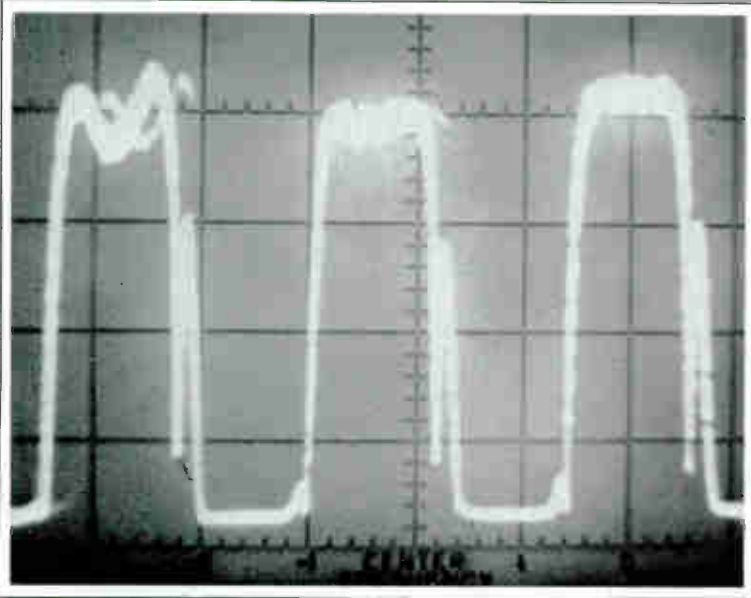


Figure 10

It shows an XY recorder graph that was plotted using the combination of white noise generator together with a Hewlett Packard spectrum Analyzer fed by 58 signals from a Dix Hills multiple signal source.

This combination, as can be seen, facilitates the simultaneous observation of 58 equal amplitude picture carriers from a head end, after they have passed through 16 line amplifiers. The same graph also shows the frequency response (flatness) of this

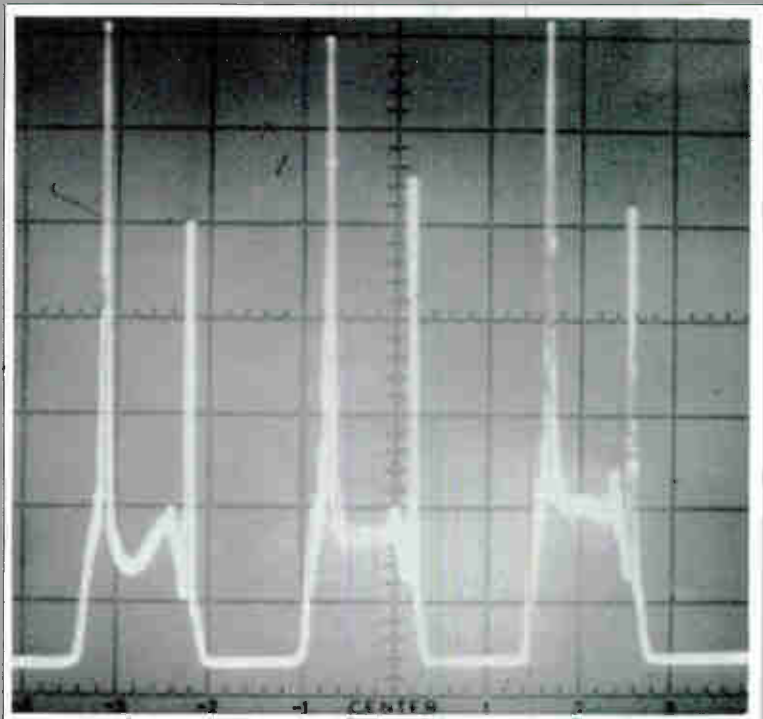


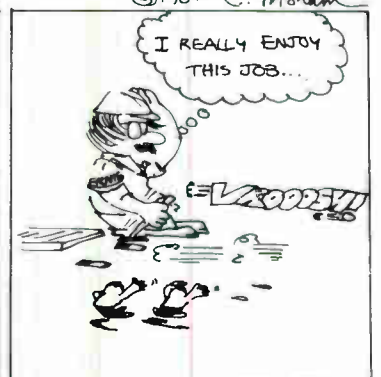
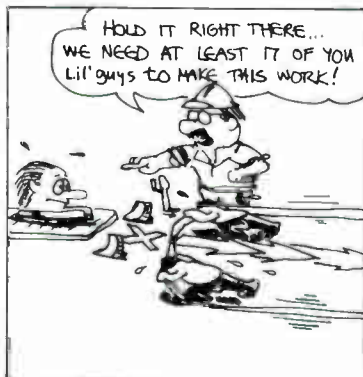
Figure 11

demonstration of a cable system section, by virtue of the addition of the white noise generator signal. This white noise had been set to about 30 dB below the picture carriers. (In an actual working system, the White Noise at this level would give a minimal amount of interference to the subscriber).

It is apparent on this graph that the lowest picture carrier, in this case No. 51, is low partly due to the sagging frequency response of the system at the frequency of the 51st carrier.

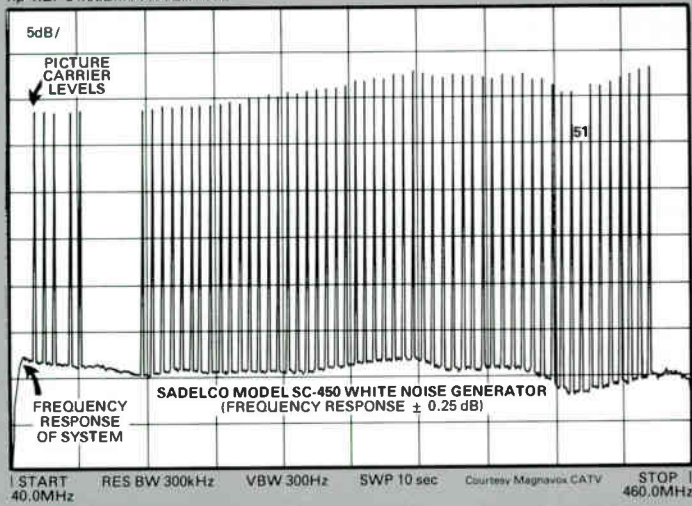
Lit'dB

No. 14



©1984 C. Grisham





58 PICTURE CARRIERS THRU A SYSTEM OF 16 MAINLINE AMPLIFIERS

*CATJ is most appreciative for permission by Cable Television Business Magazine to reprint Harry Sadel's article regarding white noise and SLM measurements as presented above. As a leader in cable television equipment manufacture, Harry Sadel is looked upon as an innovator in the electronics field and CATV measurement technology. The above article is presented to CATJ readers with confidence that the material will be very informative to technicians and engineers wishing to enhance their signal measuring techniques, and will serve as a very useful tool in their continued study.*

# "It's on time or free."

It's a simple promise. And PTS, the world's largest independent electronics repair facility, is the first to make it. On time or free. At any of the 15 PTS Servicenters nationwide.

For your free copy of the PTS Express Service Pak, including terms and conditions of the "on time or free" guarantee and PTS warranty, contact PTS today.



PTS CORPORATION P.O. Box 272  
Bloomington, IN 47402 (812) 824-9331

**42 dB VISIBLE RANGE**  
**72 dB TOTAL DYNAMIC RANGE**

**TRUE PEAK READING METER**

Available at major CATV Distributors  
Call or write for free color brochure

**Sadelco, Inc.** 75 West Forest Avenue, Englewood, New Jersey 07631 201-569-3323  
General Representative for Europe: Catec AG Luzernerstrasse 145, 6014 Littau. Tel.041-559275 Telex: TELFI 78168

**± 1 dB ACCURACY**

By now everyone knows that the cable industry was successful in the final passage of a new cable law through Congress. The Bill (which, for simplicity's sake we will call either "S.66", which is its proper name, or "The Bill") was signed by President Reagan on October 30, 1984. That means the "date of enactment" was October 30, 1984. The "effective date" is 60 days after the "date of enactment", or December 29, 1984. This all becomes very important for lots of reasons that will be obvious in a minute.

One of the biggest problems for cable operators at this point is to try to digest the incredible amount of information that is being thrown at you all at once about this bill. The trade press is busy writing article after article, the lawyers in Washington are sending out 85 page "briefs" on the bill, and so on. Confusion is rampant and misunderstandings are bound to occur. What we intend to do here is put down what you have to consider **RIGHT NOW**, or in the **IMMEDIATE FUTURE** and we will worry about the details of the rest of the bill after the first crucial issues are covered.

## RENEWALS

Let's take an example. There are reams of articles, briefs, etc. being written about the "Renewal" provisions of the bill. That's great except for two things; first, less than one fifth of the industry is concerned about renewal in the immediate time frame, and second, a lot of the

## The New Cable Bill- What Operators Need to Know Right Now!

by *Stephen R. Effros*  
*Executive Director*  
*CATA*



ambiguities in the bill regarding renewals will be settled before most people have to worry about the issue. So don't waste your time reading about all the ins and outs of the renewal section **UNLESS** you either 1) have already started renewal negotiations, 2) are within 36 months of renewal time, or 3) feel that now may be a good time for political reasons to seek a renewal. Why? Because the Bill has an established set of procedures for renewals. In order to take full advantage of the protections in the bill, it is wise for any operator who has between 36 and 30 months left in his or her franchise to invoke the procedures outlined in the bill. The start of that process is supposed to be done in that 36 to 30 month time frame. That **DOES NOT** mean you have to actually go through the entire drawn out process once it is started. The Bill contemplates that most cities and operators will achieve renewals through more friendly procedures and then the "challenge" procedures

can be terminated. But for your safety, if you are within that time frame, start them anyway so that they can be invoked should you need them.

For operators with less than 30 months left before the franchise terminates, and who have not started renewal proceedings yet, the legal safeguards and standard of the bill **DO** apply, based on our reading of the bill. All of the "public" proceedings called for may have to be truncated a little bit, but the legal tests for the city to be able to deny you a franchise are applicable. This is all true as of the date enactment.

If you are an operator who has already commenced renewal proceedings on the date of enactment, then you are out of luck, at least for the moment — the renewal provision does not apply to you. However, there is no real definition so far as we know of what constitutes the commencement of renewal proceedings — further, if it looks like you are in trouble with your renewal, what would prevent

you from terminating proceedings and then reapplying with a new proposal later on, thereby coming under the protection of the rules? As you can see, there are lots of complications, and for those of you not now directly confronted with renewal in the next 36 months we would suggest you wait until the dust settles before trying to figure out renewal strategy. All of the panels, meetings, and articles that are written now will have to be modified as the renewal section is interpreted by the Courts as it inevitably will be. The best advice we can give you — and this applies for just about anything to do with this new law, is if you don't understand something, or are confused, or need help, call CATA! We won't give you legal advice, but we can explain the provisions of the new law and at least get you to the point of knowing whether you better hire a high-priced Washington attorney or not! Suffice it to say several CATA members have already saved more than their annual dues by making use of that offer!

### **RATES**

Again, to explain what we are trying to do in this issue — we are focusing only on the points that require immediate attention by operators regarding the new cable bill — and the rate section has to take **ABSOLUTE PRIORITY! IN ORDER TO PROTECT FUTURE OPTIONS, ALL OPERATORS WHO INTEND TO TAKE ADVANTAGE OF THE**

## **Sold:**

### Cable Television System Serving **LIMON, COLORADO**

Owned By  
**Vern's TV & Radio**

The seller was represented  
by the undersigned.



#### **CHARLES GREENE ASSOCIATES**

A Division of AMCOM, Inc.  
Building E Suite 200  
5775 Peachtree-Dunwoody Road, N.E.  
Atlanta, Georgia 30342  
(404) 256-0228

This notice appears as a matter of record only. November, 1984.



### **COMMUNICATIONS EQUITY ASSOCIATES**

takes pleasure in announcing the appointment of

## **James F. Ackerman**

as

## **Vice Chairman**

December 1, 1984

851 Lincoln Center  
5401 W. Kennedy Blvd.  
Tampa, FL 33609 813/877-8844



**“AUTOMATIC 5%” RATE INCREASE PROVISION OF THE BILL SHOULD DO SO IMMEDIATELY UPON THE “EFFECTIVE DATE” OF THE BILL — DECEMBER 29, 1984!** Here’s why; While you may have read a great deal about the automatic rate increase provisions — that is, we can take 5% per year and then two years from now (December 29, 1986) all rate regulation is eliminated except for special circumstances to be defined by the FCC within the next 6 months, the fact is that the bill simply says that that 5% automatic rate increase can take place “per year”. There are some who would argue that such wording could be interpreted as being CALENDAR year — not “every twelve months” as some folks are writing. Now, since the effective date of the bill is before the end of calendar year 1984, it would appear that you might be able to impose a 5% increase in calendar year 1984 and another one any time in calendar year 1985! There is sure to be some controversy about this, but in order to protect your prerogatives in 1985 it would seem to us that a smart move would be to inform your subscribers (if you intend to take advantage of the 5% provision) that rate will go up on, say, December 30 and that the increase, including increased charges for the last few days of December will be reflected on the January bill if need be. That way you have protected your options. At the very least you know that you can bet on a 5%

increase during the next 367 days after the effective date of this bill — it may be 10%! This should not really be that much of a shock to cable subscribers since the average rate increase that goes before city councils is in the 15 to 20% range.

Again, while we urge you to protect all your options, political and legal situations are likely to be different in every location. Some operators are seeking increases now, and probably will get greater increases through the city council than are contemplated by the bill — you cannot take the automatic increases in addition to what you get from the city, only to the degree you do not get at least 5% per year. From CATA’s point of view the best thing you could do, especially if you are on good relations with your city regulators is to go to them, explain the new bill, forget the “automatic” provisions and get them to eliminate any rate regulations right now. After all, those regulations expire in two years anyway and wouldn’t it be far better for subscribers to experience normal, market oriented rate structures than a sudden rate change after two years of hassles? We think a lot of cities will agree with that logic — especially if it linked to an increase in the franchise fee (which can now be legally passed through to the subscriber and listed separately on the bill). Try it. But in any event, protect your options! Again the mandatory warning: check with legal counsel before you go out on any limb.

## **PRIVACY**

Here’s another one that you probably haven’t heard anything about except from CATA! It could be a real zinger for the local operator or manager who simply overlooks it. The bill has an extensive provision regarding the right of privacy of cable subscribers. “Personally identifiable” information concerning a subscriber may not be collected or used by a cable operator without prior written or electronic consent of the subscriber except to maintain normal business information necessary to render subscriber service (that is, billing, and so on). Disclosure of personally identifiable information for anything other than normal business purposes (for instance, giving names to the billing service), is a no-no. The section on privacy is long and complicated — again, we will not go into the details here except to point out that it **REQUIRES ALL OPERATORS TO GIVE SPECIFIC, SEPARATE, WRITTEN NOTICES TO ALL NEW SUBSCRIBERS AT THE TIME THEY SUBSCRIBE, AFTER DECEMBER 29, 1984, AND TO ALL OTHER SUBSCRIBERS BY JUNE 27, 1985.** From that point on you must deliver the notices at least once a year thereafter to all subscribers. **NOTE! THERE ARE POTENTIALLY VERY HEAVY FINES FOR FAILURE TO PROVIDE THE NOTICES!!!** The worst part of all this is that “any aggrieved party” can bring a suit against

you to get the \$100 a day fine or \$1000 whichever is higher, plus punitive damages, plus attorneys fees! Now we all know at least one disgruntled subscriber in our system who would love to catch us on this one! CATA will later provide a more detailed analysis of this provision in the next Washington Update.

### EASEMENTS

Here's some of the good news. Again, something that hasn't been mentioned very much, but which, from the operating system point of view may be the most valuable provision of the bill. Did you know that S.66 gives you the RIGHT to use all easements in your town that are dedicated to compatible uses, such as telephone, electric, gas, or other utilities? Now of course you have to legally be the cable operator, and you have to pay for any damages, but that's it — that same disgruntled citizen cannot stop you any more from using the telco easement just because he had a provision in there that said it was for telephone only, and not for cable! The bill says such provisions are null and void. A nice little hidden benefit that managed to get inserted into the bill, wouldn't you say?

### HOME EARTH TERMINALS

Speaking of hidden benefits, the entire "home earth terminal" section may be a real beauty for many smaller cable operators. Yes, it is true, as most of the stuff you have read has said, that the provision legalizes the use of home TVRO's, so

**FOR UNDERGROUND HOUSE DROPS**

**L-1**

**CABLE LINE LAYER**

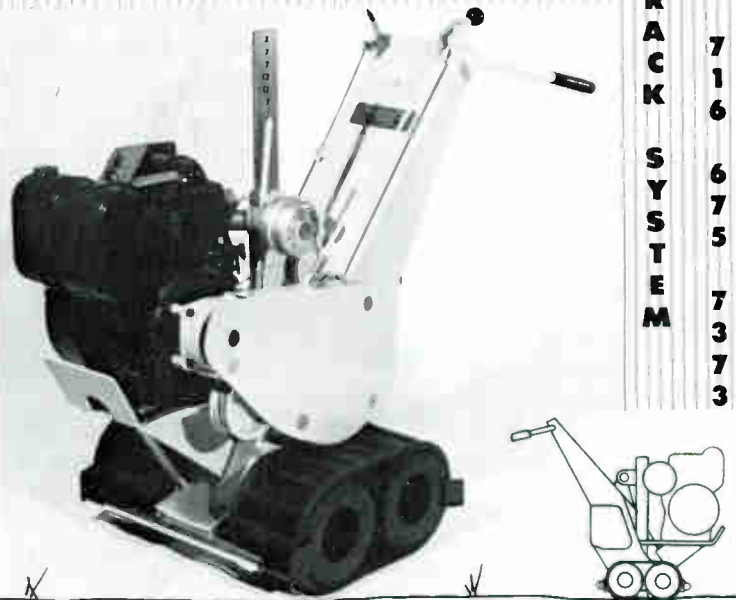
**LINE WARD CORP.**

**10 YRS PROVEN**

**PHONE TRACK SYSTEM 716 675 7373**

**PROVES BIG IS NOT BETTER FOR PHONE CABLE TV**

**800 LBS. WIDTH 24 1/2"**



**NO LAWN RESTORATION**

**157 SENECA CREEK RD., BUFFALO, N.Y. 14224**

October, 1984

**Morgan County Cablevision, Inc. has been sold to a Partnership formed by Paradigm Communications, Inc.**

Serving over 2,800 basic and 1,250 pay t.v. subscribers in Wartburg, Oakdale and Morgan County, Tennessee.

The undersigned represented the seller in this transaction. This notice appears as a matter of record only.



**COMMUNICATIONS EQUITY ASSOCIATES**

851 Lincoln Center  
5401 W. Kennedy Blvd.  
Tampa, FL 33609 813/877-8844

long as the programmer doesn't have a system whereby the TVRO owner can buy the service or so long as the service is not scrambled. But the fact is there was nothing the cable industry could ever do about home users anyway — any law would be unenforceable! But the bill, while "giving away" that limited area, puts HEAVY fines on any non-personal use of TVRO's! And we do mean HEAVY — \$25,000 and up, with jail terms attached. Now admittedly, some federal attorneys will be reluctant to spend their time on such suits, but the kicker here is that once again any "aggrieved party" can also bring suit against, say, the local motel or bar or condo, or trailer park using a TVRO to bring down pay programming and the like! Seems to us that cable operators should be considered "aggrieved parties" in this case — especially if the motel or whatever has dropped your service in favor of stealing signals! Now we have something with teeth to go after them with, and we don't have to wait for the U.S. Attorney's Office to do it!

In order to avoid legal fees, we suggest you take the "Home Earth Terminal" section of the new bill, (it's officially titled "Unauthorized Reception of Certain Communications", and designated "Section 5") and photocopy it a couple of times and send it around to all the folks who will be clearly violating the law upon the effective date of the bill — we

suspect if they have any sense you will be getting some new customers as a Christmas present!

We will continue with more detailed analysis of the new cable bill, S. 66, next month. For now, at least, you know the provisions you must immediately focus on in order to protect your options, or stay in business, or get more business. That's what CATA is all about — helping you with the day to day business of operating a cable television system. Please don't hesitate to call on us.

### **FRANCHISE FEES DECLARED ILLEGAL!**

CATA's Chairman of the Board, Pete Athanas, has won his suit with the City of Ripon, Wisconsin. The Court ruled that a premise CATA has been espousing for a long time is absolutely correct — at least under Wisconsin law. That is, franchise "fees" or license "fees" are only supposed to cover the cost of regulation — they are not meant to be revenue raising devices, and if the city wants to impose taxes, it had to get authority from the State to do so first! The importance of the case (aside from the fact that it looks like Pete will get back most, if not all, of the franchise fees his system, Ripon Cable Company, has ever paid to the city) is that the principles of law that were argued are very general, and ones we believe apply to just about any city franchise authority that has not gotten specific taxing or cable

regulatory authority from the state.

Of course the City can appeal, but given the very firm basis upon which the judge ruled, we are confident that the decision will stand. What does it mean? Well, to begin with, there is no conflict with the new federal law — S. 66 is permissive with regard to the franchise fee issue — that is, it says that IF the franchising authority has the power to impose fees, those fees may be no more than 5% — it does not GIVE that authority to the city if it does not already have it from the State. In this case the judge said fees cannot be revenue raisers, cannot be based on income, and cannot be more than the actual, provable cost of regulating the franchisee unless the municipality has been given specific legal authority from the state otherwise. We think the same holds true for most other states.

### **SHORT TAKES**

\* Watch out for program supplier contract language demanding the right to the entire channel capacity used for transmitting their signal, it would appear that some suppliers may be about to sell data services on the subcarriers without paying us for the carriage. You can always strike out certain provisions of your contracts before you sign them. We will be doing more articles on contract language shortly, but read what you sign carefully — a word to the wise should be sufficient.

\* The "lockbox" manufacturing business should



be booming in the near future. One of the provisions of S. 66 says that all cable operators, as of 180 days from the date of enactment of the bill, must make available "lockboxes" allowing subscribers to block out certain channels the subscriber deems unacceptable. The boxes may be sold or leased by the operator, so it won't cost anything and, in fact, may present a new marketing opportunity.

\* Ralph Haimowitz, formerly CATA's Director of Engineering, has taken a position with American Cable Systems of Florida as their Director of Engineering. We want to congratulate Ralph on his new job and thank him for the excellent job he did in his role as the creator and instructor of the CATA Technical Training Seminars.

\* The folks at the California Cable Television Association have notified us that their registration forms inadvertently give the impression that only CCTA and NCTA members get "member" rates to attend the Western Show. Not true. CATA members get the special rate too. The forms are being corrected. CATA's Executive Director, Steve Effros, will be moderating the Copyright panel at the Western Show, and he has announced that the Board of Directors has approved the creation of a special Copyright Defense Fund (based on voluntary contributions) to prepare for dealing with the copyright issue in 1985 — more on that in the next issue! □



**Kick up your heels!**

It's the 25th Annual Texas Show, January 30th, 31st and February 1st, 1985 in San Antonio, Texas.

Join us for a grand and gala toast to our Silver Anniversary Convention and Trade Show.

- Advanced marketing seminars.
- Best exhibitor's show, ever!
- Great entertainment, festivities and good times.

You know that it'll be a great time . . . so make plans now to join the celebration of a quarter-century of service to the Cable TV industry.

**The Texas Show-Silver Anniversary**

For advanced reservations, contact: 512/474-2082 or write, P.O. Box 13518 Austin, Texas 78711

October, 1984

**Sold**

**First Indiana  
Cablevision Corp.**

Serving subscribers in Jasonville, Indiana.

The undersigned represented the seller in this transaction. This notice appears as a matter of record only.



**COMMUNICATIONS  
EQUITY  
ASSOCIATES**

851 Lincoln Center  
5401 W. Kennedy Blvd.  
Tampa, FL 33609 813/877-8844

startup. We have, with increasing frequency, contracted to plan recruitment programs, interview, screen and hire a staff. This has included sales, telemarketing and CSR staff. Once the staffing process is complete we operate on several different levels:

1. Management training for the individual designated to oversee the campaign.
2. Classroom training on sales techniques for direct sales or telemarketing.
3. Classroom training on techniques to reduce disconnects for sales, customer service and technical personnel.
4. Field or office observation of the application of training information.
5. Establishment of administrative forms and procedures.
6. Evaluation and analysis of early campaign results.
7. Reinforcement and corrective action training at some future point.

Acquisition of these services is not inexpensive when viewed on a cost-per-man-week basis. When viewed in the context of years of field experience being infused into your organization, the enhanced possibility for success makes it not only palatable, but downright attractive. In our own organization, for example, we have yet to use a startup manager/trainer who does not have extensive successful field

experience in the same areas being targeted.

Depending on the size of the system, these services can extend over periods ranging from a few weeks to several months. And there are those clients who wish to contract for, say, a quarterly tuneup visit over the following year. But, regardless of the level of services or how they are scheduled, this approach offers a good mix of a relatively high-cost short-term help coupled with a more productive and lower-cost long-term. The balance is good and may offer one of the better choices available.

As we indicated earlier, the common thread between the two approaches we have discussed is training. Therefore, with the rising industry interest in training, we want to continue with a discussion of training in a general sense.

## Training Overview

As the cable industry has matured, and as we have moved closer to some mythical saturation point, the need for more sophisticated levels of service and understanding have become obvious to all of us. The absence of the ability to achieve these new heights has nothing to do with the people out there desperately looking for answers. Rather, it has to do with the fact that the cable industry has never been at this particular point before now.

There is a need for cable professionals with strong field experience, coupled with a heavy dose of mature market background. It is one thing to live in a world of new-build, hurly-burly, numbers-always-growing, and quite another to attempt holding on to what you have and nudge the numbers a little here and a little there. The

*CMS Manager, Melinda White, readies training for Landmark's Independence, Missouri system.*





two ball games are totally different, and operators have often found that existing staff cannot easily make the transition. This is one of the reasons why the need for training has grown so dramatically. It is also why our company became involved with training at the outset, in anticipation of this growing need.

### Training Philosophy

Certainly, we cannot speak for others, but we do have some basic philosophical guidelines which characterize our programs and approaches. As an operator, you should always want to know not only the underlying philosophy, but something about methods of follow-through as well. It is relatively easy to set grand philosophical goals, but more difficult to translate into hard training approaches and methodology.

In a broad sense, our training philosophy can be characterized in part by the following position:

1. There must be a top-down organizational commitment to the training process. This includes not only the traditional verbal and written support for the training itself, but a specific, measurable program of performance improvement objectives to evaluate organizational effectiveness. Trainees need to understand that training is not just "good" but that their application of training principles will be critical to their success and that of the

organization. This will focus everyone's attention where it should be ...on the improved performance coming out of training, rather than on the beauty of the training experience itself.

2. Wherever possible, training should be custom-designed in order to establish relevance and credibility. We would be highly skeptical of a training group who was unwilling to make field or corporate visits to try to understand market subtleties, your own philosophy, procedures and other unique characteristics. And, if there is one truth, there will always be unique characteristics between markets. Now, let us say that you can't expect a training group to incur \$10,000 worth of travel for a \$5,000 training contract. But, to the extent practical, they should be willing. On major projects, the time spent should be substantial and should result in a training program which speaks to your specific needs.

"...experience was not gained in the classroom, but in the field..."

3. An effective training program should be interactive and participative and should offer opportunities for direct trainee involvement. This can be accomplished in a number of ways and, we are convinced,

adds measurably to the quality of the learning experience. Thus, we feel you should use this as one criteria for selection.

"...the yield on your training investment will continue to manifest itself in the future."

4. A complete management information system needs to be developed which will measure, directly or indirectly, changes in the post-training environment. Accomplishing this is a good deal more difficult than it sounds since there are so many variables involved in both positive and negative subscriber activity. But the attempt must be made, otherwise we are unable to measure the value received for the training dollar.

The overriding philosophy can be critical to success and you should be skeptical of anyone either unable or unwilling to share theirs with you.

### Appropriate Use

Bear in mind that almost all training effort should be aimed at either the acquisition or retention of subscribers. While the most obvious training audiences would be customer service, sales and telemarketers, there may be others as well. We

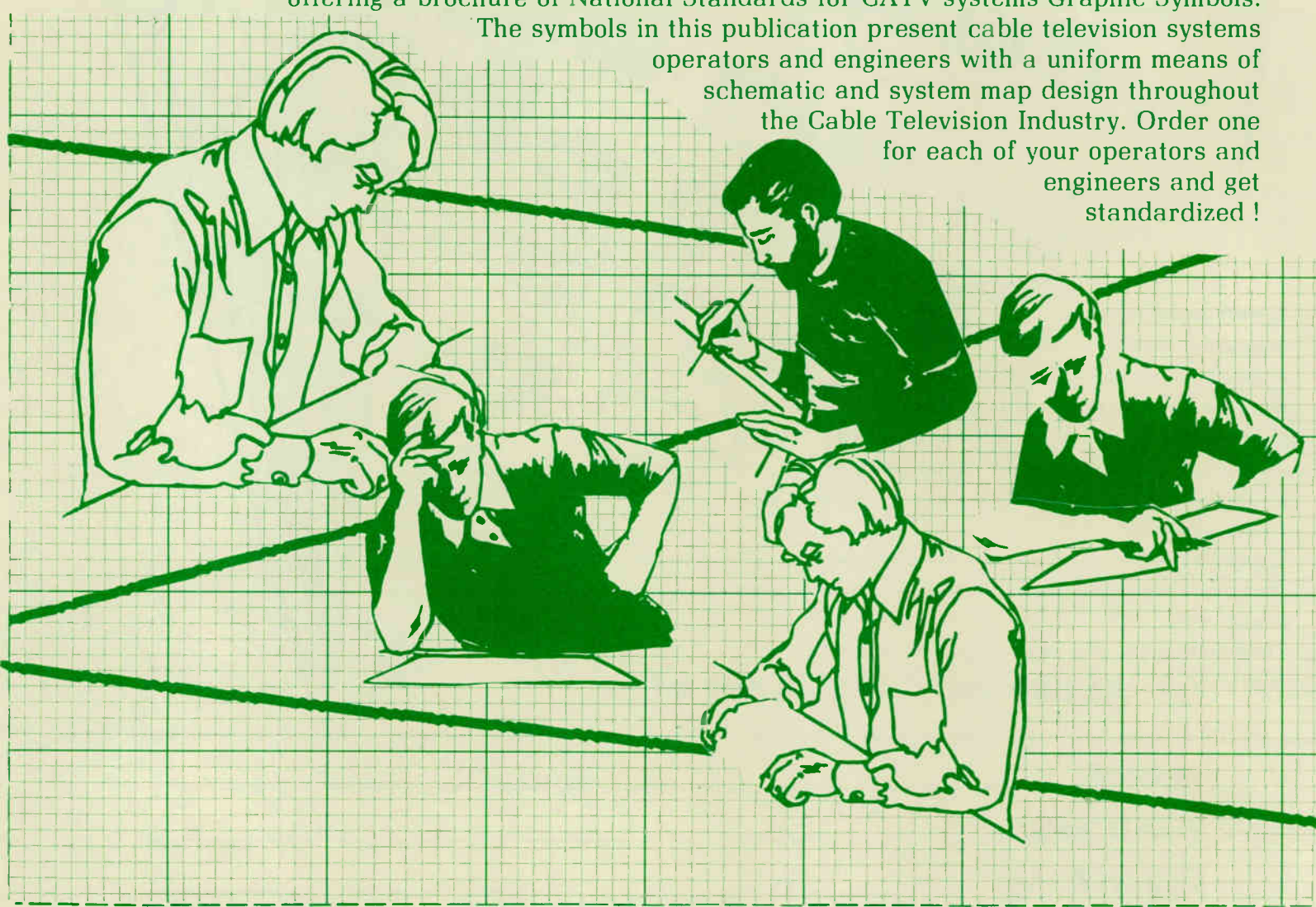


# STANDARDIZE

## WITH THE NATIONAL STANDARDS FOR CATV SYSTEMS — GRAPHIC SYMBOLS

In order to help you standardize your grid and map preparation Television Publications is now offering a brochure of National Standards for CATV systems Graphic Symbols.

The symbols in this publication present cable television systems operators and engineers with a uniform means of schematic and system map design throughout the Cable Television Industry. Order one for each of your operators and engineers and get standardized!



YES! I WANT THE NATIONAL STANDARDS FOR CATV SYSTEMS — GRAPHIC SYMBOLS GUIDE  
SEND TO:

NAME	SYSTEM NAME	
ADDRESS	PHONE	
CITY	STATE	ZIP

PRICES  
5.00 each  
40.00 for 10 guides  
90.00 for 25 guides

PLEASE SEND \_\_\_\_\_ SYMBOLS GUIDES. ENCLOSED IS \$ \_\_\_\_\_ FOR MY ORDER.

MAIL TO: TELEVISION PUBLICATIONS, INC. SUITE 106 4209 NW 23 OKLA. CITY OKLA. 73107 405/947-7664  
WorldRadioHistory

# COMMUNITY ANTENNA TELEVISION JOURNAL

## CBIC

### CITIZENS BAND INTERFERENCE COMMITTEE DIAGNOSTIC WALL CHART

**Diagnostic Wall Chart Instructions**

The Diagnostic Wall Chart prepared by the Citizens Band Interference Committee is a valuable tool for all Citizens Band operators. It will help you identify and solve the most common Citizens Band interference problems. The chart is divided into four sections: (1) Recognize the Problem, (2) Possible Video Distortions, (3) Possible Transmission Distortions, and (4) Your Role.

**Recognize the Problem**

Virtually every form of interference which can be observed on a television set can be traced to a specific cause. The following chart is designed to help you identify the cause of the problem. It is divided into four sections: (1) Recognize the Problem, (2) Possible Video Distortions, (3) Possible Transmission Distortions, and (4) Your Role.

**Possible Video Distortions**

**Excessive Video Level**

**Low Video Level**

**Inverted Video**

**Possible Transmission Distortions**

**Loss of Low Frequency Response (Promblem Only)**

**Loss of High Frequency Response (Promblem Only)**

**Loss of Stereo Separation Phase Lock**

**Your Role**

### FCC COMPLIANCE TESTS SUBJECTIVE EVALUATION SYSTEM WALL CHART

### HEAD END SIGNAL QUALITY EVALUATION COMPARISON CHART

#### FM VIDEO TRANSMISSION WALL CHART

This chart gives you a basic introduction to FM transmission, helping you to recognize particular distortions or set up problems, whether observed with a waveform monitor or a video monitor.

**HEADEND/INTERFERENCE WALL CHART** — has more than 20 off-the-screen photos of typical (and not so typical) off-air headend type problems. Each is identified, and with this chart you can zero in on headend problems in one big hurry. Explains what headend interference looks like and leads you to solutions to eliminate it.

**FCC TESTS WALL CHART** — is the industry's best training tool for teaching system employees how to recognize everything from cross-mod to NumMod. Has more than 60 off-the-screen photos of typical plant problems; things like Num Mod (with calibration), signal to noise, co-channel and more.

**CB INTERFERENCE WALL CHART** — leads you quickly and painlessly to cures to CB interference.

**COST FOR EACH IS:**  \$10.00 or  \$35.00 set of 4.

**NAME** \_\_\_\_\_

**ADDRESS** \_\_\_\_\_

**CO. NAME** \_\_\_\_\_

**ADDRESS** \_\_\_\_\_

**CITY** \_\_\_\_\_ **STATE** \_\_\_\_\_ **ZIP** \_\_\_\_\_

I am enclosing a check for \$ \_\_\_\_\_ for the items marked below.

- A — F.M. Video Transmission Chart**
- B — CBIC — Citizens Band Interference Committee Diagnostic Chart**
- C — FCC Compliance Tests Subjective Evaluation System Chart**
- D — Head End Signal Quality Evaluation Comparison Chart**

Mail to: **CATJ Magazine**  
 Suite 106, 4209 N.W. 23rd  
 Okla. City, Okla. 73107



have taught community relations and sales skills to technicians and management skills to managers. We have incorporated retention concepts, for example, in all training modules in the hope of developing a "cradle-to-the-grave" organizational mentality regarding our subscribers.

Our point here is to say that some audiences and some content are more obvious than others, but don't be misled into thinking they represent the total universe.

#### **Cost or Investment?**

About any way you slice it, the cable product is so complex, and the skills required to support

**"...these bodies must now be attached to informed and skillful minds..."**

it are so much more sophisticated that it's no longer enough simply to fill positions with bodies. Rather, these bodies must now be attached to informed and skillful minds...if acquisition, retention and profit are to be present and meaningful.

We believe absolutely that well-conceived, professional training programs are an investment in the productivity and profitability of the people in your organization. If you were to evaluate hardware which reduced cost or expanded productivity, you would

certainly consider it an investment with some anticipated future return. A training program must be viewed in exactly the same manner... and that is why it is so important to establish some measurable post-training performance criteria.

#### **Selection**

The concept of training as an investment also speaks to another issue-selection. Using the equipment example cited above, failure to discover excessive down-time as a problem in the equipment you purchase could wipe out whatever gains you anticipated. So it is with your training group. Check them against the criteria we have mentioned, check their references, and check the backgrounds of the principals. You want to be certain that they are not only training-experienced in general, but cable-experienced as well. If you are judicious in this area, the chances for training success are much greater.

#### **Summary**

We wanted to approach cost in the article, but we know the variables are so great that someone could be misled. We have attempted to cover those areas of major concern and hope it is worthwhile in assisting you with your training decision. Remember that talking to a training group unable or unwilling to discuss specifically any of the above points is a little like shaking hands with a frog...it just doesn't feel right. □

# HELLO! HELLO!

Does  
Your  
Tele-  
marketing  
Campaign  
Seem  
To Be  
Off The  
Hook?



Let CMS  
Make Your  
Telemarketing  
Connection



Cable Marketing  
Services, Inc.  
P.O. Box 13676  
Arlington, Texas 76013  
(817) 429-2737



# Case Signal Leakage of Pay-TV Traps:



**SOME  
TEST  
RESULTS**

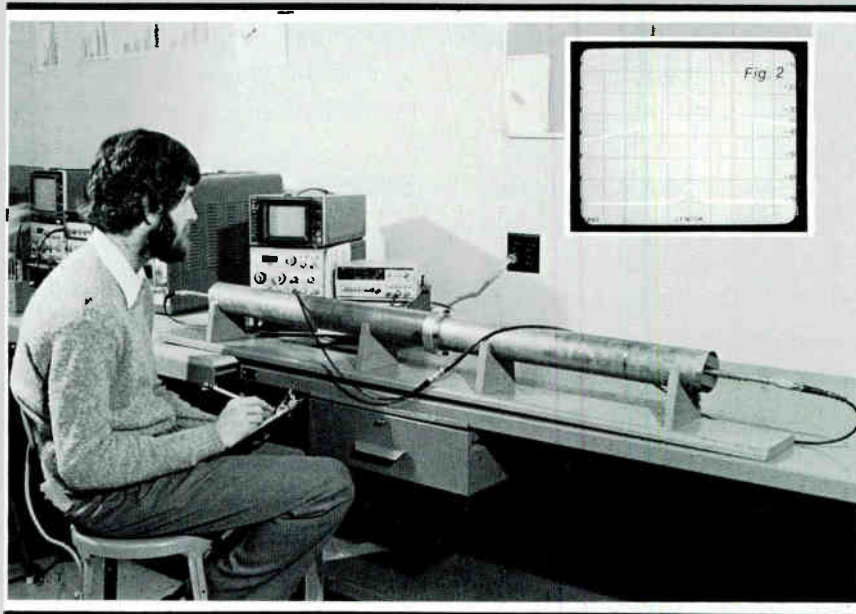
By: Terry Owens  
Glyn Bostick  
Microwave Filter Company, Inc.

## SUMMARY

Leakage tests were made on PAY-TV traps from seven different manufacturers. Results showed variations from 15 db worse to at least 5 db better than the proposed standard of -65 db relative to drop level. The leakage source was traced to the parting line between outer sleeve and connector block at each end of the assembly.

## TEST METHOD

An earlier installment (*CATJ*, September 1984) proposed a leakage standard for pay-tv traps which appeared consistent with the FCC leakage allowance of 20 microvolts/meter at 10 feet from the cable. Proposed leakage (at point of leakage) was -65 db relative to drop level.



*FIGURE 1: Resonant cavity for testing trap signal leakage. Dimensions result in resonance in the aeronautical range (115 MHz). (See schematic drawing in CATJ, September 1984)*

*FIGURE 2: Spectrum analyzer sweep of measurement cavity resonance. The upper trace is adjusted to make it read -20 db. The scope is now calibrated in absolute leakage. The bottom trace shows resonance of pay-tv trap and its leakage is read directly as -62 db (relative to drop level).*

A test fixture was also described which would permit measurement leakage voltage relative to the drop level.

**Figure 1** is a photo of the test in operation and **Figure 2** is a spectrum photo indicating how the leakage of a given trap is evaluated.

## TEST MODELS AND TEST FREQUENCY

The models tested were obtained from seven different manufacturers. The test fixture was built to resonate in the aeronautical band

(approximately 115 MHz).

The typical trap was tested as follows:

- (1) The 20 db leakage standard was inserted in the fixture, the apparatus adjusted for resonance and the output response "zeroed" at -20 db. This calibrated the scope.
- (2) The standard was replaced with the specimen trap and the fixture again adjusted to resonance. The leakage level is indicated by the location (relative to 0 db) of the resonance peak.

**TABLE I**

**RESULTS OF CASE LEAKAGE TESTS OF PAY-TV TRAPS AND FILTERS**

*(Standard round cylinder)*

Manufacturer's Code	Number of Samples	Filter Type and Channel	Leakage (1)	
			Min.	Max.
A	5	Channel A Video Trap	-68 db	-70 db (2)
A	5	Channel 7 Video Trap	-62 db	-70 db (2)
B	5	Channel 3 Video Trap	-70 db	-70 db (2)
C	1	Channel 5 Video Trap	-70 db	-70 db (2)
C	1	Channel A Video Trap	-70 db	-70 db (2)
D	1	0-216MHz LP Tier Filter	-70 db	-70 db (2)
E	5	Channel 5 Video Trap	-62 db	-70 db (2)
E	5	Channel A Video Trap	-60 db	-70 db (2)
E	5	Channel 7 Video Trap	-56 db	-70 db (2)
F	5	Channel A Video Trap	-68 db	-70 db (2)
F	5	Channel 7 Video Trap	-62 db	-70 db (2)
G	6	Channel 5 Video Trap	-50 db	-70 db (2)
G	6	Channel A Video Trap	-55 db	-68 db
G	6	Channel 7 Video Trap	-52 db (3)	-68 db

**Notes:** (1) *Relative to drop signal level*

(2) *Limit of measuring apparatus was -70 db*

(3) *Retested -70 db or better after soldering sleeve parting lines. See text.*

**CONCLUSIONS**

As a batch, the traps showed leakage in the range from -50 db to better than -70 db, relative to drop level, with some samples better and worse than the proposed -65 db standard. As a stand alone leakage source, no sample would violate the FCC maximum permitted leakage of 20 microvolts/meter at 10 feet from the cable. To leak this much, a specimen would have to show a test leakage of -35 db. However, remember that we added -30 db, to give a recommended number of -65 db to provide a margin for cumulative

leakage of many traps in the same general vicinity.

All units were cylindrical, with a metal sleeve forced over the end-plugs mounting the connectors. This was proved to be the leakage source by remeasuring one specimen (**see table**) after soldering along the parting line, between sleeve and end plug at each end. In this case, the initial leakage figure of -52 db became too weak to measure (less than the measurable limit of -70 db).

Variation up to -20 db between samples from the same manufacturer were noted in one case,

with lesser variations from other manufacturers.

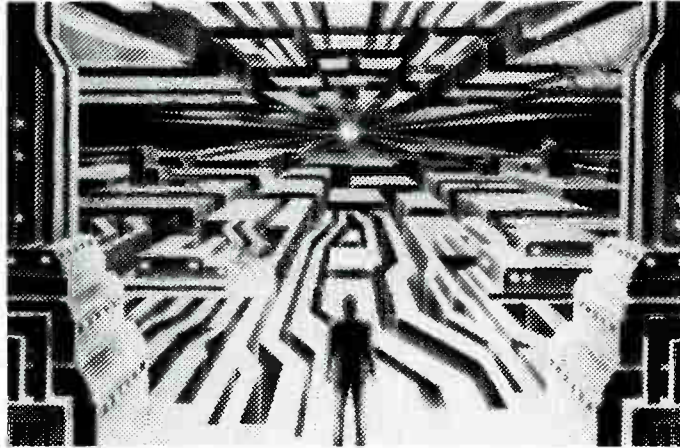
**NEXT TIME**

We'll tabulate the performance of the same trap population after exposure to moisture — using the forced air-water immersion fixture described earlier (*CATJ, October 1984*).

**ACKNOWLEDGEMENTS**

Thanks to the same old competent crew who drew, photographed, designed, developed, tested, and edited this data: Carol Ryan, David Skeval, Steve McIntosh, Chris Bostick.

## Setting The Standard...



## In Broad-Band Challenges

Intel achieved its reputation for technological leadership through vision and the pursuit of excellence, resulting in the microelectronics revolution. The professionals at Intel will determine the future by continuing to expand the limits of hardware and software technology... by setting the standard.

### **BROAD-BAND ENGINEER/PROJECT LEADER**

You will develop broad-band based Local Area Networks products in this position. Responsibilities will include definition, design and transfer of the product to manufacturing. You will also set the strategic broad-band product direction for Intel and will be the chief technical negotiator with broad-band vendors. Familiarity with the different modulation schemes presently used in the marketplace is required, as well as 5-10 years' experience in designing RF products, ideally in broad-band based Local Area Network or CATV products. Experience in product planning and project management will be considered a plus.

If you're looking for projects that call for leadership, make Intel your first choice. You'll earn an excellent package of benefits and compensation. For immediate consideration, call Sam Williams at (408) 987-7900 or send your letter/resume to: Intel Employment, Dept. 90639, P.O. Box 2190, Santa Clara, CA 95051. An Equal Opportunity Employer, M/F/H.

**intel**<sup>®</sup>



# Associate Roster

**Alpha Technologies**  
1305 Fraser St. D-G,  
Bellingham, WA 98225  
206-671-7703  
(M9, Standby Power  
Supplies)

**AMCOM, Inc.,**  
Bldg. E, Suite 200,  
5775 Peachtree-  
Dunwoody Rd., N.E.,  
Atlanta, GA 30342  
404-256-0228  
(S9, Brokering &  
Consulting)

**Anixter Communications,**  
4711 Golf Road,  
Skokie, IL 60076  
312-677-2600  
(D1)

**Arts & Entertainment  
Network**  
555 Fifth Avenue  
New York, NY 10017  
212-661-4500  
(S9)

**The Associated Press**  
50 Rockefeller Plaza,  
New York, NY 10020  
212-621-1513  
(S9 Automated News  
SVC)

**Automation Techniques,**  
1550 N. 105th E. Ave.  
Tulsa, OK 74116  
918-836-2584  
(M9)

**Av-Tek, Inc., Inc.,**  
Box 188,  
Aurora, NE 68818  
402-694-5201  
(M8)

**Blonder-Tongue Labs, Inc.,**  
1 Jake Brown Rd.,  
Old Bridge, NJ 08857  
201-697-4000  
(M1, 2, 4, 5)

**Broadband Engineering,  
Inc.**  
P.O. Box 1247,  
Jupiter, FL 33458  
1-800-327-6690  
(D9, M4, S9)

**Budco, Inc.,**  
4910 East Admiral Place,  
Tulsa, OK 74115  
1-800-331-2246  
(D9, Security &  
Identification Devices)

**CATEL,**  
4800 Patrick Henry Dr.,  
Santa Clara, CA 95054  
408-988-7722

**Capscan, Inc.**  
P.O. Box 36,  
Adelphia, NJ 07710  
1-800-CABLETV or  
222-5388  
(M1, 3, 4, 5)

**CBN Cable Network,**  
CBN Center  
Virginia Beach, VA 23463  
804-424-7777  
(S9)

**C-Cor Electronics, Inc.,**  
60 Decibel Rd.,  
State College, PA 16801  
814-238-2461  
(M1, 4, 5, S1, 2, 8)

**CWY Electronics**  
405 N. Earl Ave.,  
Lafayette, IN 74904  
1-800-428-7596  
(M9, D1)

**Cable Graphic Sciences**  
7095 N. Clovis Ave.  
Clovis, CA 93612  
209-297-0508  
(M9 Character  
Generators)

**Communications Equity  
Associates,**  
851 Lincoln Center,  
5401 W. Kennedy Blvd.,  
Tampa, FL 33609  
813-877-8844  
(S3)

**ComSonic, Inc.,**  
P.O. Box 1106,  
Harrisonburg, VA 22801  
1-800-336-9681  
(M8, 9, S8, 9)

**Electron Consulting  
Associates,**  
Box 2029,  
Grove, OK 74344  
918-786-5349  
(M2, D1, S1, 8)

**The Disney Channel**  
500 S. Buena Vista  
Burbank, CA 91521  
213-840-5080  
(S4)

**Ditch Witch,**  
P.O. Box 66,  
Perry, OK 73077  
1-800-654-6481  
(M9)

**The Drop Shop Ltd., Inc.,**  
Box 284,  
Roselle, NJ 07203  
1-800-526-4100 or  
1-800-227-0700 (West)  
(D3, 4, 5, 6, 7, 8, 9,  
M5, 6, 7, 8, 9 Plastics)

**Durnell Engineering Inc.,**  
Hwy 4 So.  
Emmetsburg, IA 50536  
712-852-2611  
(M9)

**Eagle Com-Tronics, Inc.,**  
4562 Waterhouse Rd.,  
Clay, NY 13041  
1-800-448-7474  
(M9, Pay TV Delivery  
Systems & Products)

**Eastern Microwave, Inc.,**  
3 Northern Concourse,  
P.O. Box 4872,  
Syracuse, NY 13221  
315-455-5955  
(S4)

**Electroline TV  
Equipment, Inc.,**  
8750-8th Ave.,  
St. Michel,  
Montreal, Canada  
H1Z 2W4  
514-725-2471  
(M4, 5, 7, 9, D7, 9)

**ESPN,**  
ESPN Plaza,  
Bristol, CT 06010  
203-584-8477  
(S9)

**Gardiner Communications  
Corp.,**  
3506 Security St.,  
Garland, TX 75042  
214-348-4747  
(M9, TVRO Packages, S1  
2, 8)

**Gilbert Engineering Co.,**  
P.O. Box 23189,  
Phoenix, AZ 85063  
1-800-528-5567 or  
602-245-1050

**Group W Satellite  
Communications**  
41 Harbor Plaza Dr.,  
P.O. Box 10210,  
Stamford, CT 06904  
203-965-6219  
(S4)

**Harmon & Company**  
5660 S. Syracuse Circle  
Greenwood Plaza,  
Englewood, CO 80111  
303-773-3821  
(S3)

**Heller-Oak  
Communications**  
105 W. Adams St.,  
Chicago, IL 60603  
1-800-621-2139 \* 7600  
(S3)

**Home Box Office, Inc.,**  
12750 Merit Dr.  
Dallas, TX 75251  
214-387-8557  
(S4)

**Ind. Co. Cable TV, Inc.,**  
P.O. Box 3799  
Hwy. 167 N,  
Batesville, AR 72501  
501-793-4174  
(D1)

**Jerry Conn Associates,  
Inc.,**  
P.O. Box 444,  
Chambersburg, PA 17201  
1-800-233-7600  
1-800-692-7370 (PA)  
(D3, 4, 5, 6, 7, 8)

**KMP Computer  
Services, Inc.,**  
135 Longview Dr.,  
Los Alamos, NM 87544  
505-662-5545  
(S4, 5)

Note: Associates listed with \* are Charter Members.

Distributors	Manufacturers	Service Firms
D1—Full CATV equipment line	M1—Full CATV equipment line	S1—CATV contracting
D2—CATV antennas	M2—CATV antennas	S2—CATV construction
D3—CATV cable	M3—CATV cable	S3—CATV financing
D4—CATV amplifiers	M4—CATV amplifiers	S4—CATV software
D5—CATV passives	M5—CATV passives	S5—CATV billing services
D6—CATV hardware	M6—CATV hardware	S6—CATV publishing
D7—CATV connectors	M7—CATV connectors	S7—CATV drop installation
D8—CATV test equipment	M8—CATV test equipment	S8—CATV engineering
D9—Other	M9—Other	S9—Other

**Katek, Inc.,**  
215 Wood Ave.,  
Middlesex, NJ 08846  
201-356-8940

**Klungness Electronic Supply,**  
P.O. Box 547,  
107 Kent Street,  
Iron Mountain, MI 49801  
1-800-338-9292  
1-800-682-7140 (Mich)  
(D1, 8, S2, 8)

**LRC Electronics, Inc.,**  
901 South Ave.,  
Horseheads, NY 14845  
607-739-3844  
(M7)

**Larson Electronics, Inc.,**  
311 S. Locust St.,  
Denton, TX 76201  
817-387-0002  
(M9 Standby Power)

**Lifetime**  
1211 Avenue of the  
Americas  
4th Floor  
New York, NY 10036  
212-719-7230  
(S9, Programming)

**Lindsay America, Inc.**  
P.O. Box 15775  
1202 B West 19th St.  
Panama City, FL 32405  
904-769-2321

**MA/COM Cable Home Group**  
P.O. Box 1729  
Hickory, NC 28603  
1-800-438-3331  
(M2, 3, 7, S2)

**Magnavox CATV Systems, Inc.**  
100 Fairgrounds Dr.,  
Manlius, NY 13104  
315-682-9105  
(M2, 3, 7, S2)

**McCullough Satellite Equipment,**  
Route 5, Box 97,  
Salem, AR 72576  
501-895-3167  
(M2, 9, D3, 4, 6, 7)

**Microdyne Corporation,**  
471 Oak Road,  
Ocala, FL 32672  
904-687-4633  
(M9 Satellite TV Receivers)

\* **Microwave Filter Co.,**  
6743 Kinne St., Box 103,  
E. Syracuse, NY 10357  
1-800-448-1666  
(M9 Bandpass Filter)

**Oak Communications, Inc.**  
16935 West Bernardo Drive  
Rancho Bernardo, CA 92127  
619-485-9880

**Panasonic Industrial, Co.,**  
One Panasonic Way  
Secaucus, NJ 07094  
201-392-4109

**Power and Telephone Supply Company, Inc.**  
530 Interchange Drive  
N.W.,  
Atlanta, GA 30336  
1-800-241-9996  
(D1)

**Quality RF Services, Inc.**  
825 Park Way, Suite 3,  
Jupiter, FL 33458  
305-747-4998  
1-800-327-9767  
1-800-433-0107 (In Florida)  
(M4, S9)

**RMS Electronics**  
50 Antin Place  
Bronx, NY 10462  
1-800-223-8312  
1-800-221-8857 (Poleline)  
(M4, 5, 6, 7, 9)

**Sadelco, Inc.,**  
75 West Forest Ave.,  
Englewood, NJ 07631  
201-569-3323  
(M8)

**Showtime/The Movie Channel, Inc.**  
1633 Broadway,  
New York, NY 10019  
212-708-1600  
(S4)

**Satellite Syndicated Systems, Inc.,**  
P.O. Box 470684  
Tulsa, OK 74147  
918-481-0881  
(S9)

**Telstar Marketing & Consulting**  
C.T.H. "F" 2930  
Blue Mounds, WI 53517  
608-437-5460  
(S9)

**Tele-Wire Supply Corp.,**  
7 Michael Ave.,  
East Farmingdale,  
NY 11735  
516-293-7788  
(D1, 2, 3, 5, 6, 7, 8, 9)

\* **Texscan Corp.,**  
3102 N. 29th Ave.,  
Phoenix, AZ 85017  
602-252-5021  
(M9 Bandpass Filters)

\* **Times Fiber Communications,**  
358 Hall Avenue,  
Wallingford, CT 06492  
1-800-243-6904  
(M3)

**Tocom, Inc.,**  
P.O. Box 47066,  
Dallas, TX 75247  
214-438-7691  
(M1, 4, 9 Converters)

\* **Toner Cable Equipment, Inc.,**  
969 Horsham Rd.,  
Horsham, PA 19044  
1-800-523-5947  
In PA 1-800-523-492-2512  
also 1-800-523-5947 (PA)  
(D2, 3, 4, 5, 6, 7)

**Triple Crown Electronics, Inc.,**  
4560 Fieldgate Dr.,  
Mississauga, Ontario,  
Canada L4W 3W6  
416-629-1111  
Telex 06-960-456  
(M4, 8)

**Turner Broadcasting System,**  
1050 Techwood Dr.,  
Atlanta, GA 30318  
404-898-8500

**TV Watch, Inc.,**  
1819 Peachtree Rd. N.E.  
Atlanta, GA 30309  
1-800-554-1155  
(S9)

**United Press International**  
220 East 42nd St.,  
New York, NY 10017  
212-682-0400  
(S9 Automated News SVC)

**United Video, Inc.,**  
3801 South Sheridan Rd.,  
Tulsa, OK 74145  
1-800-331-4806  
(S9)

**USA Network**  
303 East Ohio Street  
Time & Life Bldg. Suite 2701  
Chicago, IL 60611  
312-644-5413  
(S9)

**Viewstar, Inc.,**  
705 Progress Ave.,  
Unit 53,  
Scarborough, Ontario,  
Canada M1H 2X1  
416-439-3170  
(M9 Cable Converter)

**Vitek Electronics**  
710 Narragansett Park Dr.  
Pawtucket, RI 02861  
401-724-4400

**Walsh, Walsh, Sweeney & Whitney, S.C.**  
P.O. Box 1269,  
Madison, WI 53701  
608-257-1491  
(S9)

**Warner Amex Satellite Entertainment Corporation**  
1211 Avenue of the  
Americas,  
New York, NY 10036  
212-944-4250  
(S4)

\* **Wavetek Indiana**  
5808 Churchman,  
Beech Grove, IN 46107  
1-800-428-4424  
TWIX 810-341-3226  
(M8)

**Weatherscan,**  
Loop 132,  
Throckmorton Hwy.,  
Olney, TX 76374  
817-564-5688  
(D9, Sony Equip. Dist.,  
M9 Weather Channel Displays)

**Western Towers**  
Box 347  
San Angelo, TX 76901  
915-655-6262/653-3363  
(M2, 9 Towers)

**Zenith Radio Corp.,**  
1000 N. Milwaukee Ave.  
Glenview, IL 60025  
312-391-8195  
(M1, 6) □

# Classified

## TECHNICAL

Does your system do its own repair?

If so, this will interest you.

Quality RF Services is a *quality* source for replacement components.

- Extensive, quality-controlled inspection procedures
- Huge inventory — same day shipping
- **FREE** Technical Assistance — 35 years CATV experience
- Our Own Repair Lab — keeps our parts and technicians honest
- Friendly Staff — individualized service

Looking to increase your channel capability?

Ask about our Hybrid P.C. Boards

Call: (800) 433-0107

In FL (305) 747-4998

All the Quality you will ever need!

Quality RF Services, Inc.

825 Park Way, Suite #3

Jupiter, FL 33458

### GENERAL MANAGER — FLORIDA PROPERTY

We are looking for someone with a proven track record of experience in managing suburban systems in a high growth area. A well rounded cable executive with demonstrated skills in marketing and operations is needed immediately. Particular attention will be given those who understand commercial marketing.

If you are looking forward to a career with a dynamic team and not afraid of bottomline incentive, reply in confidence to:

CATJ

4209 N.W. 23rd, Suite 106

Oklahoma City, Oklahoma 73107

Box 115284

### ENTREPRENEURIAL ENGINEER

Ready for more than just a paycheck? We are looking for a very special person, a technical expert in cable with an entrepreneurial personality, a self starter who would enjoy working with a dynamic small team of colleagues. You must be technically proficient in state-of-the-art cable equipment, but of equal importance, a real understanding of rebuilds, including capital budgeting. You also must be a motivator of people.

If you are interested in learning more about this opportunity and our nationally respected company, send in confidence a copy of your resume to:

CATJ

4209 N.W. 23rd Suite 106

Oklahoma City, Oklahoma 73107

Box 11584

### FIRST CALL FOR TECHNICAL SPEAKERS AND PAPER SUMMARIES

Outlines and summaries are invited on communications engineering topics that address real-life cable system needs. Greater preference will be shown to proposals giving practical solutions to daily operations problems and needed background for today's tough business decisions. Only non-commercial, original (pre-

viously unpublished) proposed papers will be selected by an NCTA engineering committee subcommittee for inclusion in the technical program and conference proceedings. Decisions will be based on short outlines or paper summaries of about 250 words submitted by prospective authors to:

Wendell H. Bailey

VP - Science & Technology

National Cable Television Assn.

1724 Massachusetts Ave., N.W.

Washington, D.C. 20036

## Help us get to the heart of the problem.

Write: National Committee for Prevention of Child Abuse, Box 2866, Chicago, IL 60690



National Committee for Prevention of Child Abuse

CATJ classified advertising is offered as a service by CATA for its membership.

ANY member of CATA may advertise in the CATJ classified section FREE of CHARGE (limit of 50 words per issue—3 issues per year.)

CATA offers three types of memberships:

- 1.) Systems—paying regular monthly dues based on number of system subscribers.
- 2.) Associate Members—pay an annual fee.
- 3.) Individual Members—pay an annual fee.

NON MEMBERS may also use the Classified section at the rate of 50 cents per word with a minimum charge of \$20.00. Add \$2.00 for blind-box. Non-members should include full payment with the ad insertion.

Deadlines for all Classified Advertising is the 1st of the month for the following month's issue.

Address all Classified material to: CATJ, Suite 106, 4209 N.W. 23rd, Oklahoma City, Okla. 73107.