

## **“My original 20-channel system now passes 36 channels and will pass 54 next year - all without rebuilding!”\***

*Jonathan Lippitt, Signal Master - San Diego, California*

**“I operate a small cable system. With only 1,100 customers I have to watch every penny. I can't afford a staff of technicians, racks of test equipment or a large inventory of repair parts.**

**“Yet when it's time to re franchise and the city asks, ‘Is your system truly state-of-the art?’, I can tell them ‘Absolutely!’**

“We use Jerrold Starline 20® equipment. Since 1977 we've been sending our amplifiers to Broadband for repair. Each month we ship them our defective amplifiers — sometimes we add a few working spares.

“But instead of repairing them, Broadband installs new electronics. This year they've been installing their BMK-53 modules in our SLE line extenders, BMK-60's in our bridgers and BMK-62's in our distribution amps. All have 400 MHz, 54-channel capability.

“When I get the upgraded units back, I plug them into my system. I have been replacing my trunkline amps in sequence, starting at the headend. My original shakey 20-channel system now passes 36 channels with flying colors. Last year, when we expanded our service from 12 to 23 channels, all we had to do was adjust a few equalizers.

**\*Your ultimate channel capacity and bandwidth will depend upon your present amplifier spacing.**

“Right now one-third of my system has been upgraded to 54 channels, and its reliability is much better than the original equipment. It may be a long time before there are 54 channels available, but my system will be ready for it next year.

“This is the best way I know to compete with the major systems while working on a shoestring. I have a system that is always state-of-the-art and for not much more than the cost of normal repairs. The little extra expense of having Broadband install replacement electronics has been truly cost effective.”

Whether you're an MSO or operate a smaller system like Jon's, Broadband's replacement electronics can work wonders for your system's performance and profitability.

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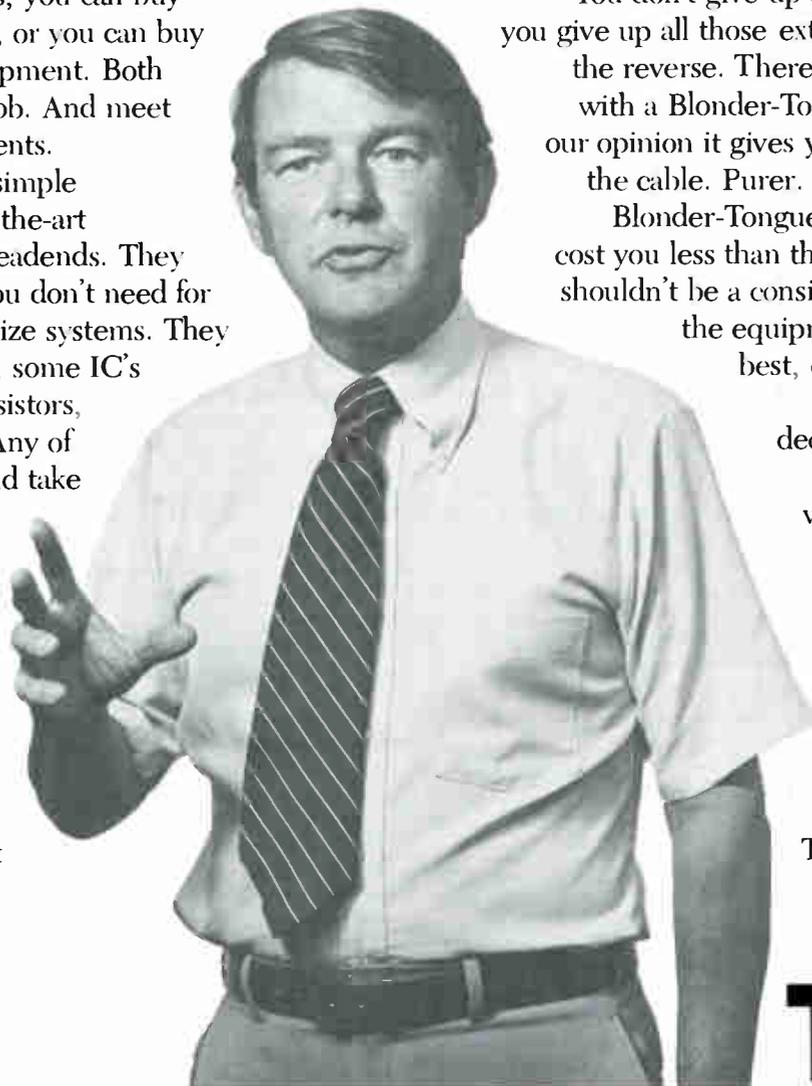
**When you're starting out,  
or expanding, remember:**

**SIMPLE IS BEST.  
AND NOT JUST BECAUSE  
IT COSTS LESS.**

For your headends, you can buy simple equipment, or you can buy very complex equipment. Both types will do the job. And meet all FCC requirements.

We handle the simple headends: state-of-the-art Blonder-Tongue headends. They don't have what you don't need for small-to-medium size systems. They lack two IF stages, some IC's and countless transistors, diodes and such. Any of which could fail and take the channel off the cable — if we had put them in there. But we didn't.

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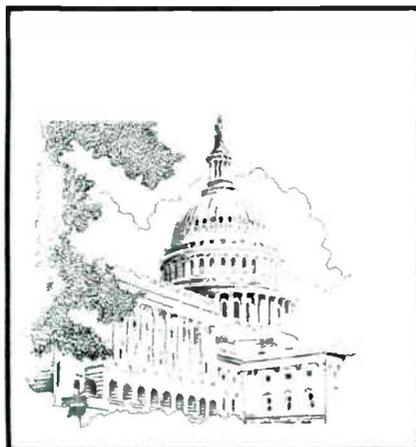
CATJ, The Official Journal for the Community Antenna Television Association is published as a service for Association Members and others providing services to the industry.



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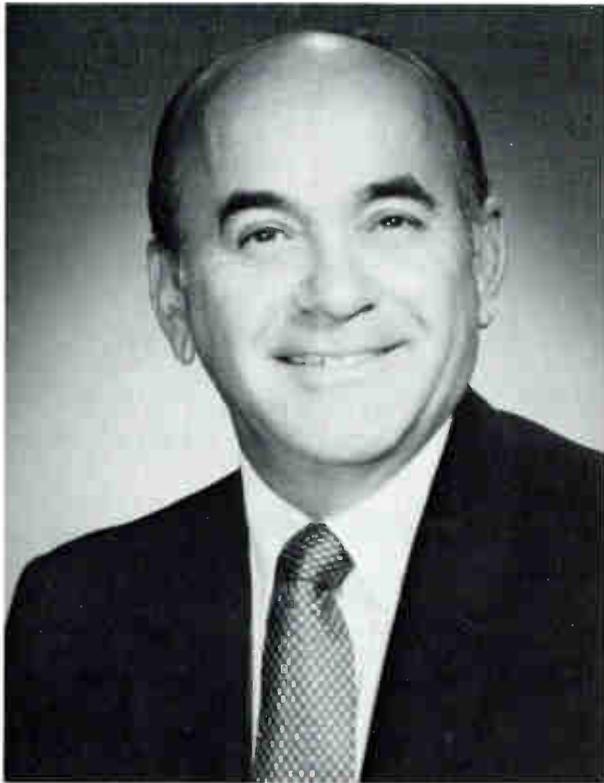
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### ABOUT THE COVER

Our attention in CATJ this month is directed to our nations capitol where there are important and critical issues on copyright being formulated. Don't miss Steve Effros' Washington Update this month!



*Peter Athanas*  
*PRESIDENT OF CATA*

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## “Wire-less” Cable?

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**T**hat’s what they are calling it in the advertisements—“wire-less” cable. What, I wondered, could they be talking about? Well it turns out that (and I guess we can consider this a compliment to the cable industry) in order to try to sell the “new” services, such as Direct Broadcast Satellite (DBS) and Multichannel Multipoint Distribution Service (MMDS), the folks selling them have to explain what they are to the public. The best way they have found to do that is by referring to cable.

This all leads to one of the most basic problems that the cable industry has faced over the years: our public identity. You may remember CATatorials in the past regarding our image problems. It started quite a while ago when the “pay” services, particularly HBO, started advertising on their own. Within a very short period of time, all you heard was that people in your community wanted to “hook up to HBO” or whatever. There was no appreciation that Home Box Office, or Showtime, or any of the other programmers were actually just program suppliers to the cable system, and that the cable

system was a unique entity in and of itself—providing lots of programming and service other than whatever was being advertised.

This basic misconception, that cable is the programming haunts the industry today. We are at fault for not differentiating cable service from its component parts. And now what is happening is that some of those component parts are being offered by other delivery mechanisms. It is only natural that in the promotion of those other program deliverers they refer to cable and simply say they are “cable” without the “cable” since most consumers relate cable with particular programmers, not with the totality of cable service. The bottom line here is that we have unwittingly aided and abetted our own competition. We have made virtually no effort at defining cable television service as a whole, and therefore we will find our competitors nibbling around the edges of our service with some success.

Of course, we have other “image” problems as well. Distinguishing a “traditional” cable system—one that offers television programming, including pay, and possibly tiered programming, maybe even on an addressable basis, from the major urban area franchise dreams, is another one. What can you say to the folks in a suburban or more rural area, who are used to cable television service as it has been for many years, when they read that some new systems in the very big cities are being planned with “interactive two way” programming, computer terminal hookups for banking and shopping at home, alarm services, data retrieval capabilities, and all the rest of the bells and whistles? Never mind the fact that those systems don’t really exist in the streets. Never mind that they have been experimented with on more than one occasion and the experimenters have already concluded that they will not work. They are either technically or economically not viable, and fur-

ther the subscribers don't evince an overwhelming amount of interest in using all the extra goodies—especially if they have to pay for them! The fact is the “traditional” subscribers have READ about those systems—the popular press has touted them. There are best-selling books on the market right now that say that those types of capabilities will soon be in every home in the nation! How are our subscribers supposed to know what to think? It is no wonder that just about any snake-oil salesman can come into town and promise one of these supercalifragilisticexpialidocious systems and threaten your long-standing business! Again, it's our fault that things have gotten to this point.

What should we do about it? Well, to begin with the cable industry, especially at the local level, the local managers, regardless of who owns the system, or how big the MSO is, must get out in public more. The local folks must learn how to represent themselves and the industry in the best light. We must all spend a certain amount of time each week explaining to the local regulators, legislators, Lion's Club, Church groups, women's organizations, school children or whoever what cable is—that it is one of the most efficient and technically competent delivery mechanisms for video, audio, and data information into the home. The fact, of course, that we CAN technically do something does not

mean that we WILL do it at any given time. That is, it is up to us to also explain that we will not put something like “interactive” services into folks homes if they don't want it (some people, after all, are still afraid of that concept)—or it is not yet economically sensible to do. We must let the public know and understand more of what and who we are, and why we are, or are not doing particular things that they may be reading about.

There are other ways to get this message across. One that is being intensively investigated right now is a national information campaign that would be linked with efforts in the local community. This initiative is being undertaken by the Council for Cable Information (CCI), and CATA supports that effort. Needless to say, this is not an easy task. Everyone in the cable industry has a different idea of how best to promote cable television. We are hopeful, however, that the work now being done, and redone will bear fruit. The ultimate task, however, can only be accomplished at the local level. No matter how good the national campaign is, it is the local cable operator who is going to make the difference when it comes to your subscribers knowing what the cable business is all about. It will be increasingly important in this era of so-called “wire-less” cable that you, and they are very familiar with the multi-faceted benefits of cable television. □

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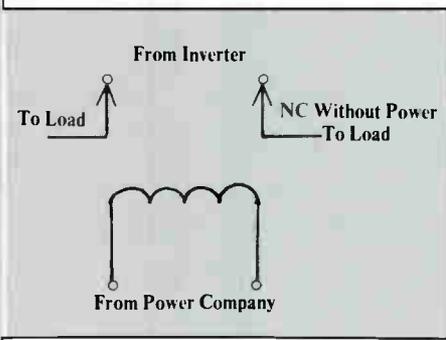
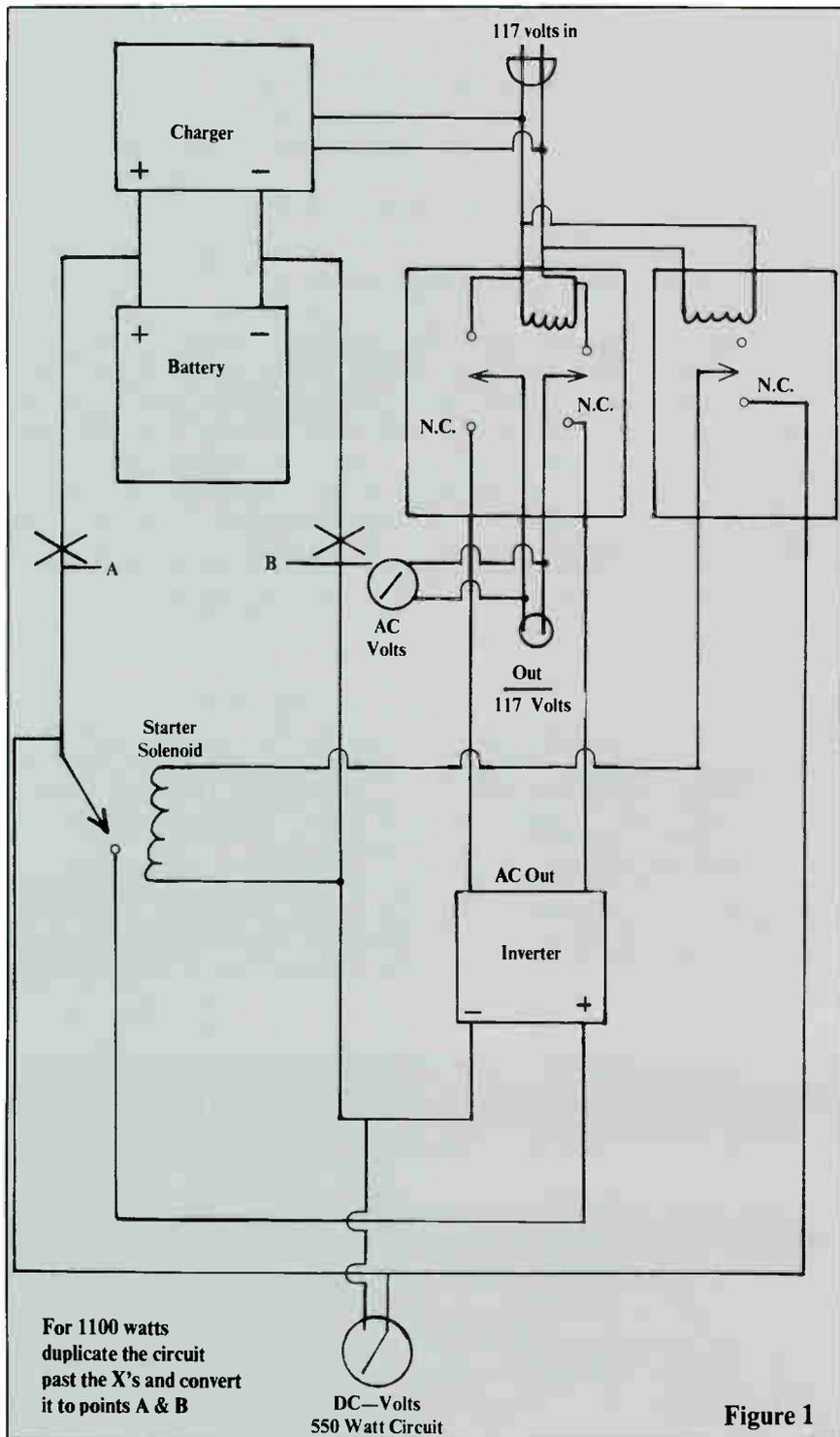
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# HEAD END START BY POWER

By Steven K. Richey and  
Brian Farris  
Teltran, Inc. Azle, Texas

When we decided that Head End Back Up power was a necessity in our new Lakeside, Texas, system we started looking at the various backup supplies available and found that the best we could do was about \$900.00 for 500 watts with batteries. It was at that point that the Scottsman in me said "build your own".

The first thing we did was to obtain (borrow) an AC Ammeter and

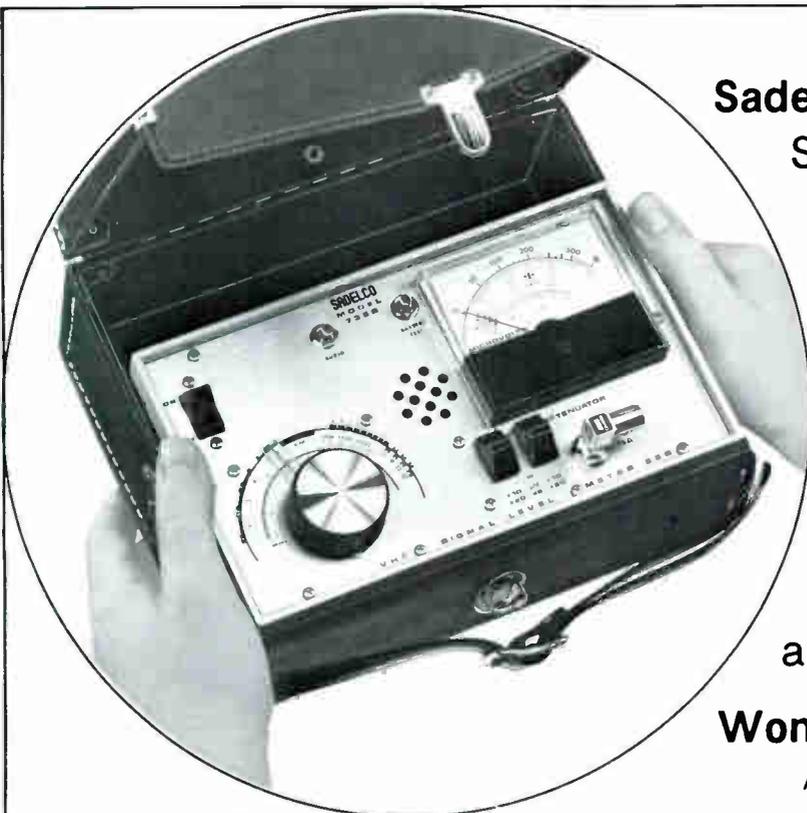


determine the amount of current that was drawn by each of two AC Circuits we have feeding on the Headend. The first circuit drew 3.65 amps and the second 3.4 amps. Simple math from ohms law  $P = IE$  or  $3.65 \times 117 = 427$  watts and  $3.4 \times 117 = 397$  watts told us that we needed two 500 watt supplies to put our entire Head end on standby.

The second problem was how to switch the AC when the Power Company failed. This turned out to be a simple problem to solve. **(Figure 1)** If you use a Double Pole Double Throw relay and connect the output (Load) to the center or switching poles, then connect the inverted supply to the inputs that are normally closed under no power conditions and the power line input and the coil to the normal open inputs. When there is AC available from the Power Company, the relay is energized and the contacts are closed; they draw power from the

*(continued on page 8)*

Figure 1



**Sadelco's tough little 733B**  
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## QUICK, CALL THE DOCTOR!

Your system has developed a strange illness...the ailment is confusing and quickly becoming worse! You must get immediate professional help, but who to call? Of course, the new Triple Crown HELPLINE.

In a short time, you're outlining the sickness to one of our staff. He consults with other specialists. They study the symptoms, evaluate the condition and prescribe a suitable treatment. In this case the problem is not too serious and the remedy, not too hard to swallow. A few minor adjustments and the picture begins to brighten; another potential crisis averted by Triple Crown.

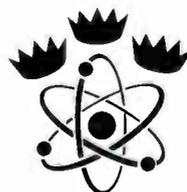
This type of call is part of our routine. Some systems suffer from seemingly terminal disorders, often requiring major

surgery or even complete head end transplants. Even our most difficult cases have completely recovered... we never lose a patient.

Don't let your system reach an untimely end...call the Triple Crown Doctors...NOW!

**TOLL FREE HELPLINE**  
**1-800-387-3205**

It's our dime...so take the time!

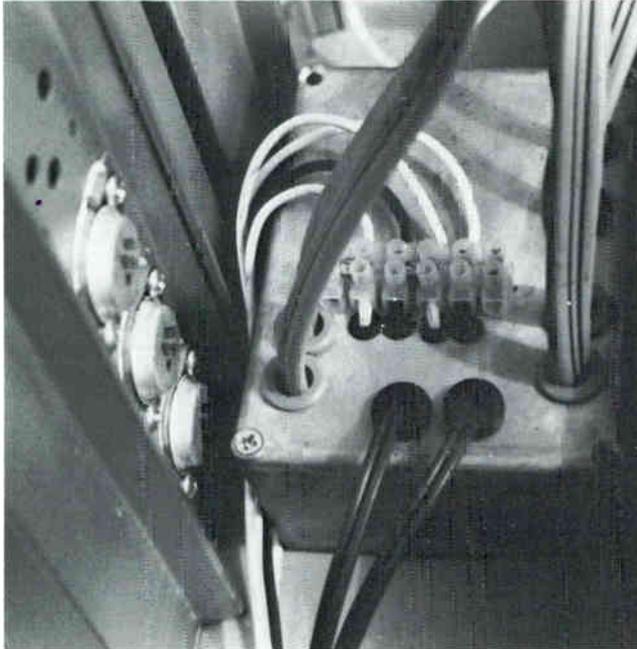


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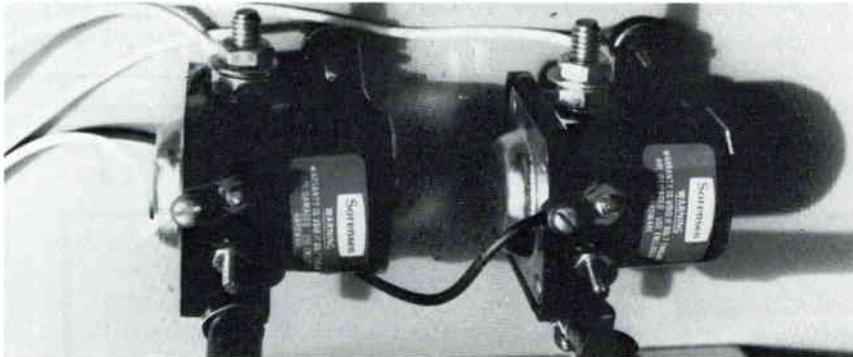
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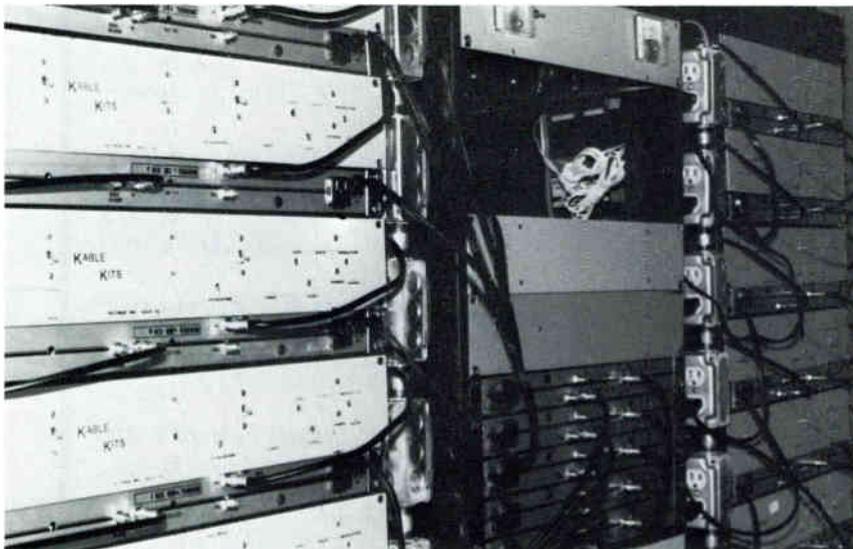
Relay Enclosure



Batteries



Starter Solenoids



Installed in Rack

line; however, when the AC fails, the relay returns to its normally closed position and connects the load to the inverter output.

To switch the inverter on and off, we used the same idea-only we used the absence of AC to cause a relay to return to its normally closed position where it switches 12 volt from the battery to activate a starter solenoid which connects the battery to the inverter and starts the system. The heavy starter solenoid is necessary because under full load, the inverter draws 49 amps per inverter from the battery; this also necessitates the use of #1 copper cable connecting the batteries together and to the inverter.

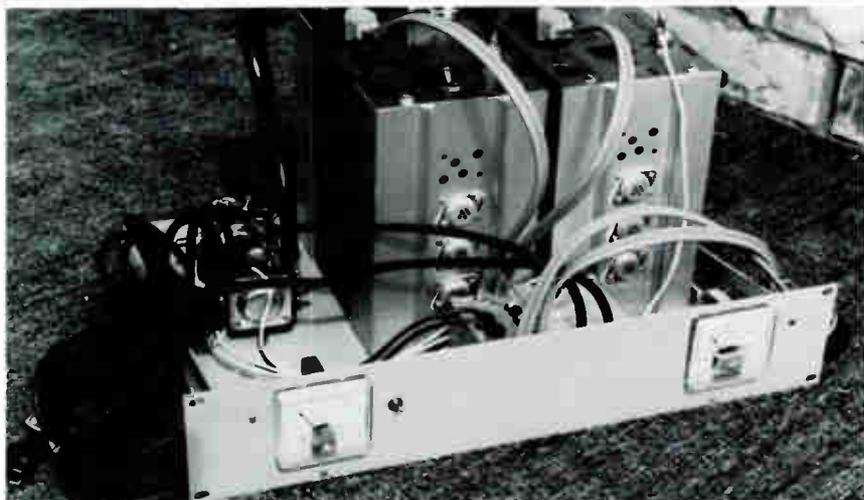
For batteries, we found some 80 amp Deep Discharge Batteries on sale at our local K-Mart for \$50.00 each; these batteries will give us a little over two hours of standby time.

The inverter we chose was a 550 watt Triplite which we purchased for \$189.00 from Allied Electronics in Fort Worth, Texas.

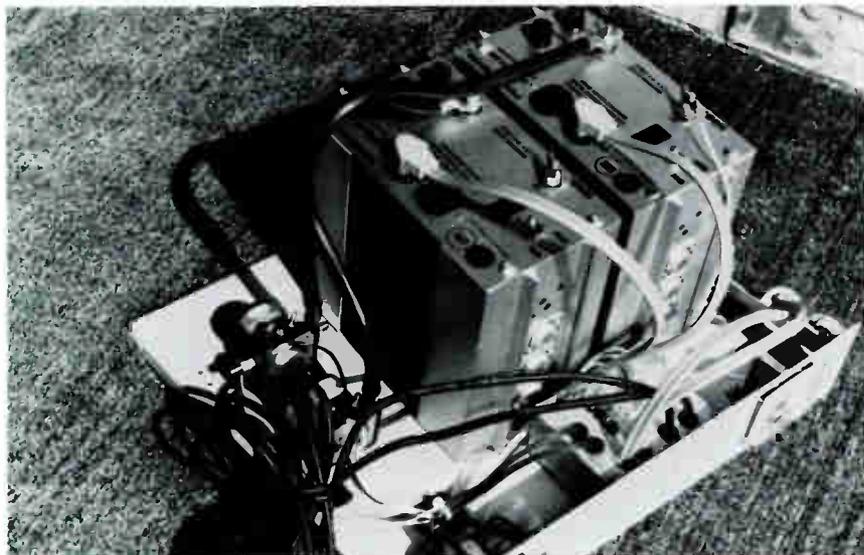
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### Total Cost For 1100 Watt System

Quantity	Description	Vendor	Price	Ext	Part
4	Relays DPDT	Radio Shack	5.49	21.96	275-217
2	Solenoid Auto Starter	Ford	7.62	15.24	
2	Inverter 500 watt	Tripilite	189.00	378.00	
3	Deep Discharge 80 Amp	Batteries	50.00	150.00	
1	Battery Charger	Automatic	50.00	50.00	
1	150 volt Voltmeter	AC	13.95	13.95	
1	25 volt Voltmeter	DC	12.15	12.15	
50 Ft.	Cable #1 Cooper		.78 Ft.	39.00	
1	Chassis		9.75	9.75	
1	Bud Box		9.88	9.88	CU-234
20	Crimp type #1 Cooper	Connecters	.68	13.60	
<b>TOTAL</b>				<b>713.53</b>	



Front View



Top View

This is the list of materials needed for a 1100 Watt System.

The schematic we have drawn only shows one half of the 1100 watt system; to make a full system, all you need to do is duplicate the circuit past the X's.

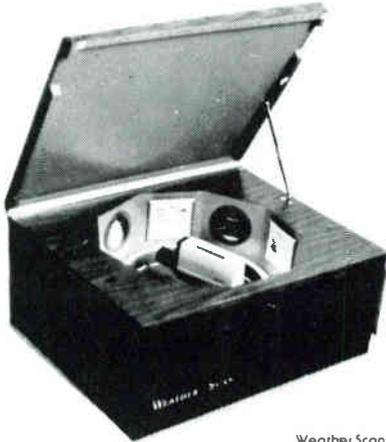
The Charger is a 10 amp automatic charger which will keep the batteries under 1-2 amp maintenance charge and up to 10 amps after use and can bring the batteries up to full charge in 24 hours from a total discharged state.

If you build the 1100 watt system, you need to add a spot switch to be able to switch the AC voltmeter between the two outputs.

The only other caution is to make sure **before** you plug the system in that the plug is properly polarized; ours wasn't and we ruined two relays because of this.

By constructing our own Power Supply we saved about \$1,100 and were able to construct the entire unit in two days. □

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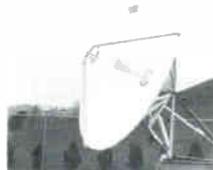
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cess is in selling and in the service she's rendered to the customer."

The woman behind all this praise and appreciation is pleasant, outgoing and energetic. Marian's home is in the area northwest of Lake Michigan where Wisconsin and Michigan meet - a scenic countryside of rolling hills, farm lands, lakes and rivers. She says, "I can go a mile in any direction from my house and be in the deep woods," where she finds pine, white birch and maple trees and several varieties of wild berries.

She grew up surrounded by a large and loving family. The family household included her brother and two cousins. During the summers, everyone liked to congregate at her grandmother's house in Florence. There was a baseball lot across the road and, "We played baseball and we played baseball," she says. Sometimes at night they would put away the baseball bat and "play kick the can, hide and go seek and all that good stuff. . . We really got excited (when) we. . . (found) a couple old golf balls at the golf course, and we'd take an old broom stick and nail a piece of wood on the end of it and have a golf club and play golf like that."

Although today back surgery has forced Marian to become a spectator of the sport, for many years she enjoyed playing on softball teams and once had a chance to play with a professional team, but declined. Another exciting event was when she was elected to represent her team as an entry in a beauty contest in Houston, Texas.

Telling more about her childhood, she says, "My grandpa was a logger, and he would take all us kids, my ma and all her brothers and sisters, fifteen, twenty of us at a time, and take the logging truck and pack the lunch and head for the blueberry fields." They made a day of it, and picked blueberries by the wash bucket full. Today Marian still enjoys picking the wild strawberries, raspberries, blueberries and black berries that grow profusely in the woods near her home.

The town of Florence, with only a few hundred residents, is a family

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February, 1984

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Tampa, FL 33609 813/877-8844

oriented community where everyone cares about their neighbors and are quick to pitch in and help out whenever there is a problem or trouble. If there's a community event, everyone turns out. Marian has been active in the Chamber of Commerce and has recently become involved with some local political issues.

Family is the most important aspect of Marian's life, but her dog, a Schnauzer named Misty, comes in a close second. She says Misty keeps her active and alert, and someday, when she retires from work, she would like to raise Schnauzers. When asked why she is partial to Schnauzers, Marian answered, "I've always like them. They don't shed hair for one thing. They're

some of her famous Italian recipes. Lasagne is her specialty, but you can be sure that whatever she prepares will be delicious. She is partial to Italian dishes because of her Italian heritage, but her international repertoire includes excellent Chinese egg rolls and "mean enchiladas."

Marian spent three years in the United States Air Force. Most of the time was at Cape Cod, Massachusetts, where her primary duty was in supply, particularly in inventory control. During the time she was there, they changed from a manual posting system to an IBM system so she learned a good deal about how to keep track of supplies. She was an Airman First Class. Her other duties included being barracks

supply company in Chicago. All of her working career has been in inventory control and in sales, and these experiences have built a strong base for the good job she does for her customers today. Perhaps her natural mechanical aptitude has been most helpful when it comes to understanding customers' problems. She says that being single, she has had to do things for herself, such as repairing sinks and taking care of things around the house. "I take after my mother," she says, "cause there's nothing she can't do. She can fix sinks . . . and electrical, and up on the roof and wall papering. I guess that's where I get my ambition, from her."

Suppliers like Klungness Electronic Supply, Inc. and their representatives such as Marian Gammey, have played an important part in CATA's decade of progress. They share the same spirit of independence and entrepreneurship that is native to most CATA cable operators, and they have encouraged and supported them by their genuine interest in the success of the industry as a whole and in the particular needs and concerns of the independent operators.

KES sends Marian to CCOS and to regional trade shows to meet directly with the independent cable operators and technicians, the people who make technical and purchasing decisions. Because quality products and dependable service are important to KES, Marian knows when she makes a promise to a customer, KES will stand behind her. This confidence in her own company and in the products she handles, results in the customer's having confidence in her.

Between shows, she keeps in touch by telephone. Pleasant, straightforward and honest, she is well liked by her customers and others in the cable industry. This is a mutual admiration, as Marian says, "I enjoy the cable industry. . . Everybody is nice. I've yet to come across a bad guy." She adds that she hopes to be a part of the cable industry for years to come. Many cable operators hope she will be, too. □



*Admittedly a nature lover, Marion has feeders for the countryside rabbits and birds and from this view spends time watching from the back of her house.*

very loving dogs and also a good watch dog."

Since Marian spends some of her work time traveling to trade shows, she likes to spend her vacations close home, walking in the woods or working in her garden. She is proud of her vegetable garden where she raises onions, parsnips, tomatoes, cabbage, broccoli, potatoes, beans and beets. In another area of her yard, she grows herbs such as oregano, sweet basil and parley. An excellent cook, she uses these in

sergeant, in charge of a housing unit of about sixty women.

Always one to care about others, while in the Air Force, Marian was active with the church and took part in a project which included some work with orphans. She took the children on outings to the base and to other sites. For this service she received some special commendations.

Prior to going to work at KES, she worked as a customer service representative for a fire chemical

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# 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.

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**cata**

Community Antenna Television Assoc.  
4209 N.W. 23rd, Suite 106  
Oklahoma City, Okla. 73107

# LETTER

Mrs. Celeste Rule Nelson, Mg.  
Editor  
CATJ  
4209 N.W. 23rd, Suite 106  
Oklahoma City, OK 73107

Dear Celeste:

Have been interested in your articles on marketing and advertising and wanted to add my "two cents".

Many CATA members and CATJ readers, like myself, operate Classic CATV Systems where basic penetration reaches close to 100%. Over the years we have not been faced with the problem of selling cable TV, the customer has come to us for service. However, with the proliferation of pay programming and tiering, selling has become the name of the game.

Selling can take many forms and endless variations — direct mail, direct door-to-door, newspaper, radio, TV, airplane-pulled signs, roadside billboards, balloons, etc. A case can be made for any or all of these approaches and in fact none should be overlooked.

However, when your system is close to 100% penetrated with basic service, you already have virtually every potential customer of a pay service on the end of your wire. You can reach these customers with very little out-of-pocket expense through his TV set. The use of a pre-view promotion has yielded exceptionally good results for our systems. We use either a direct mail flyer or a monthly bill stuffer to alert the basic subscriber that during a specific time period HBO, Showtime, or whatever programming you want to promote will be provided on a basic channel for the customer to sample. Patching the program into a basic channel can usually be done simply at IF with a jumper from one modulator to a processor or other modulator.

Initially we experimented with this approach on a pay service that

had been on the system for some time with a pay to basic penetration of about 10-12%. After a year with four Preview Promotions our penetration has more than doubled to 25%. Recently we introduced a 5 channel tier. As part of the launch, the same type of promotion was used with exceptional results. Notifying the basic subscribers by direct mail of the new service, and summarizing briefly the type of programming, five days were set aside for one program to be previewed on a basic channel each day. The mechanics were as simple as having a technician stop by the head-end each morning and move a jumper cable from one modulator to another.

The services selected for promotion must be chosen with care. They must be of high caliber with subscriber appeal. They have to be capable of selling themselves. One problem, I believe the whole industry has had, is trying to sell a subscriber multiple pay programm-

ing that is essentially the same product. A great deal of hard sell has been done to sell a subscriber two or three movie services (HBO, Showtime, Movie Channel) that the subscriber soon realizes are similar products. The net result is that in a few months time the subscriber realizes that a majority of the programming is the same on all three services and he begins to drop one or two of them, resulting in churn. This costs us in man-hours and in customer dissatisfaction.

With good programming selection, a Preview Promotion that allows your subscribers to sample programming at their leisure over a 24 to 48 hour period is a powerful sales tool that can yield excellent results with little expenditure of time and money.

Sincerely,

J. Richard Kirn  
Wire Tele-View Corp.  
Pottsville, PA 17901

□

February, 1984

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# Standard's Agile 24:

**“If it wasn't the best receiver for the money, we wouldn't use it.”**

*American Television & Communication Corporations (ATC)*

ATC is not the kind of company to pass out comments like this lightly.

One of the oldest cable operators around— 1968—with more than 135 systems nationwide, ATC can afford to be extremely picky when it comes to choosing the types of equipment specified for their systems.

Which is why they took a long hard look at Standard's Agile 24 receiver, putting it through its paces in such diverse environments as Columbus, Ohio; Two Rivers, Wisconsin; Kissimmee, Florida; and Raleigh, North Carolina.

ATC also liked the Agile 24's specifications, and price. But it was nearly a year before they would let us say it. They wanted to be sure, and we respect them for it.

Our relationship with ATC is no different than any other customer. They expect quality, reliability and service —and we're becoming known as a company that delivers this and more.

In addition to the Agile 24 stand-alone, 24-channel receiver, our TVRO product line also includes MSO quality low noise amplifiers/block down converters, microwave interference filters, and earth station antennas, plus full system design service and field technical support.

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# PHASING OUT WIDE BAND OFF-AIR INTERFERENCE



By: Jean Dickinson  
Glyn Bostick  
Microwave Filter Company,  
Inc.

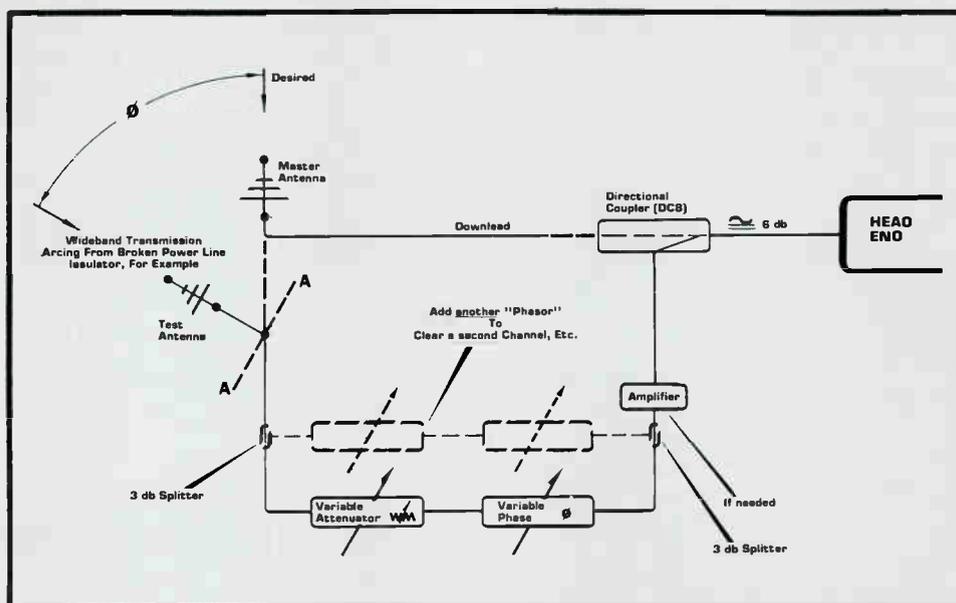


Figure 1  
SCHEMATIC OF INTERFERENCE PHASE OUT METHOD

## Summary

We demonstrate how the phasing method can remove channel interference due to wide band noise sources such as power line insulator arcing, and similar sources, in the immediate vicinity of the cable system.

## Last Time

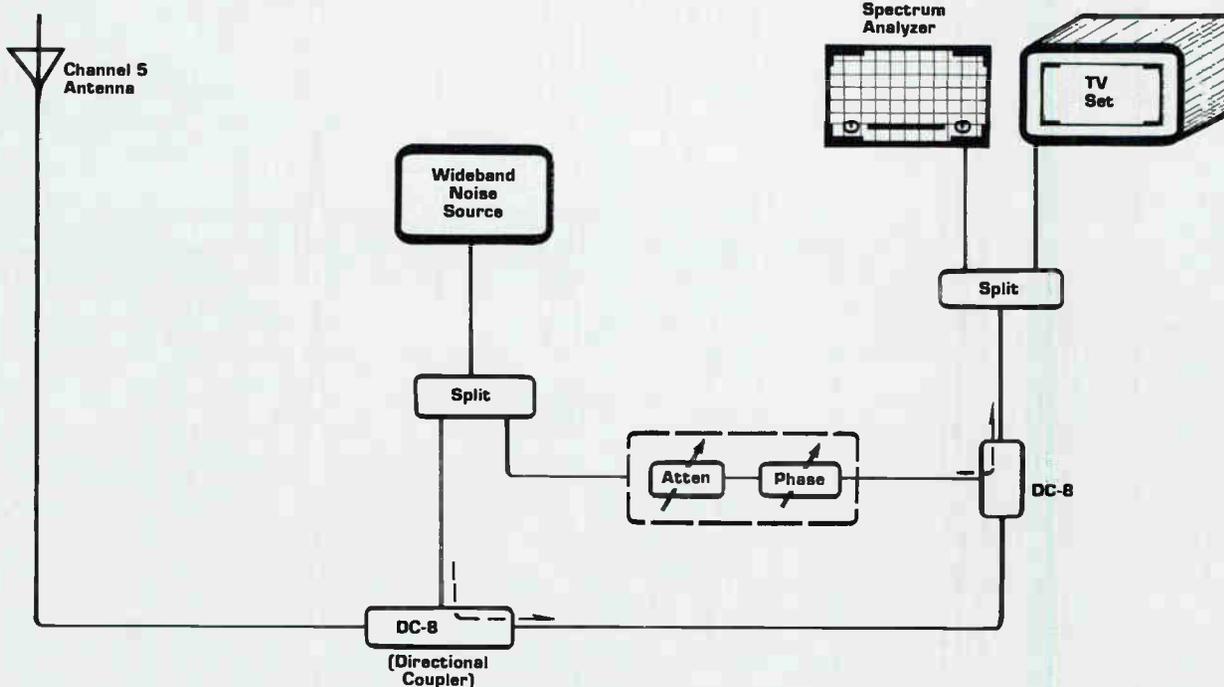
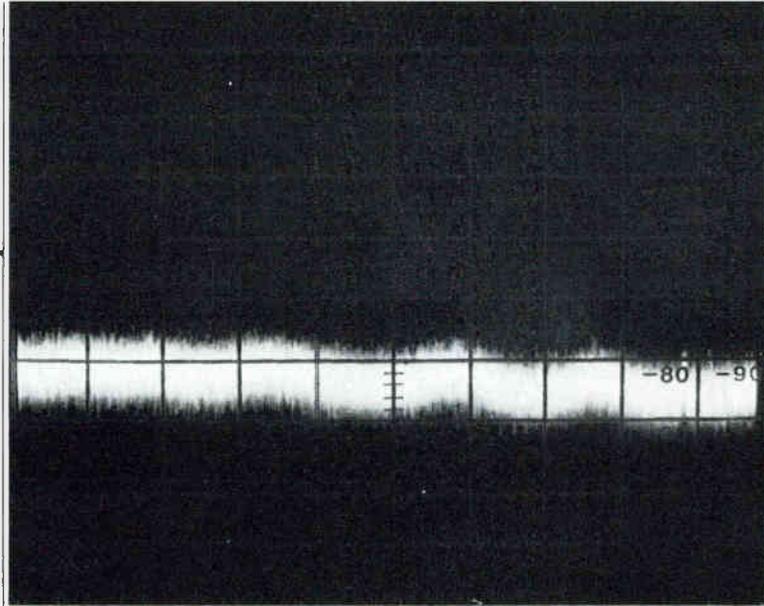
We demonstrated how the phasing method can be used to remove an unwanted carrier right in the middle of the channel—where we can't use a trap without removing a lot of desired information.

## Wide Band Noise

Following is a partial list of sources which can create wide band transmission and create interference to TV reception:

- Arcing of a nearby transmission line insulator
- Faulty utility company power transformer

**Figure 2A**  
Spectrum sweep of  
wideband noise  
source (sweep is  
from 5 MHz to  
100 MHz)



**Figure 2B**  
**SIMULATION OF UNDESIRABLE INTERFERENCE TO  
DEMONSTRATE THE PHASE-OUT REMOVAL METHOD**

Large, elaborate neon signs  
Rotating electrical machinery  
Automotive ignition

The noise generated is sometimes called "impulse noise": these sources create periodic or regular, sharp electrical discharges which throw off RF transmissions from only a few MHz to as high as 1000 MHz. Since they have a continuous

noise spectrum, they can cover a series of continuous channels. The amplitude of the noise trails off as frequency increases, so they are more likely to disturb the lower channels 2-6.

Since the noise is **continuous** across a disturbed channel, even at the video carrier, a trap won't work: you'll trap out the desired video.

So, we have to convince the owner to fix or remove his contraption, or use the phasing method to remove the interference.

#### Back to the Phasing Method

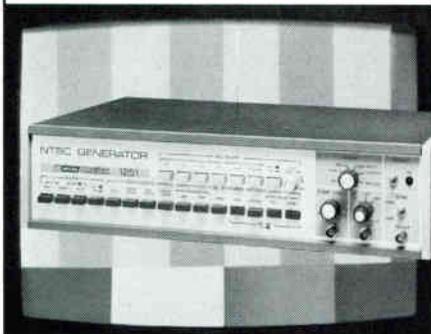
Figure 1 shows the situation schematic. With minor modifications, this looks just like the schematic shown last month for

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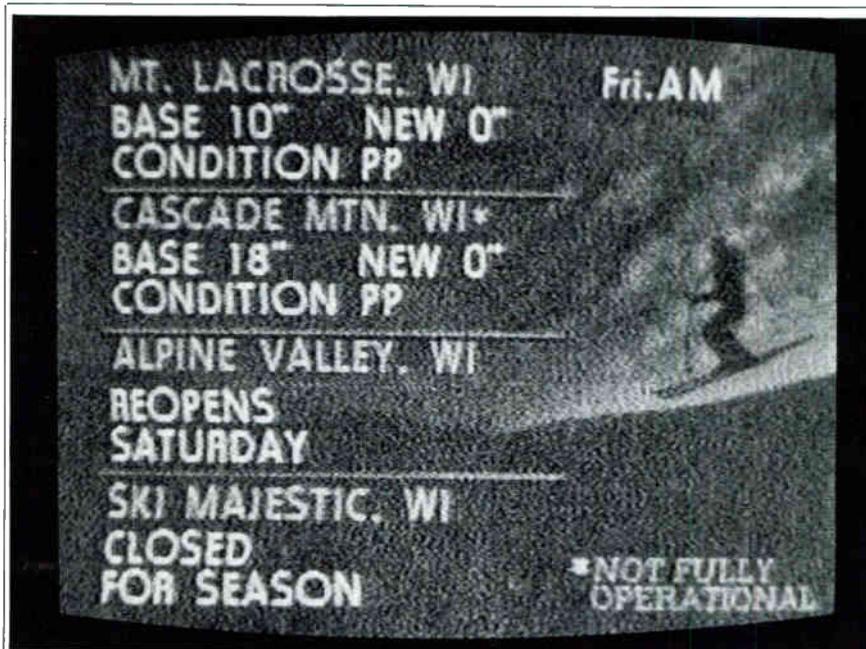
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PHASOR DISCONNECTED



C



F

**CHANNEL 4 PHASOR TUNED TO CHANNEL 3 ONLY**

enough, at this adjustment, to do as good for the adjacent channels.

**What if We Want to Clean Up Several Channels?**

If we need to clear several channels, all of which are affected by the same noise source, we must add a separate phasing branch for each channel as indicated by the dashed lines in Figure 1. But we'll need only one antenna and patch-in coupler for the composite network.

**Next Time**

We'll apply the phasing method to

the FM band and show how it can suppress a nearby undesired strong channel, even if it is the next adjacent!

**Acknowledgements**

Ho Hum. Carol Ryan's magnificent performance with the word processor is becoming routine. But thanks, anyway! Thanks go to Bob Arnold who arranged the wide band interference simulation, to Dave Skeval and Steve McIntosh for the excellent photos, to John Greatrex for this month's illustrations and to Chris Bostick for the sketch. □



## Washington Update

Steve Effros, Executive Director, CATA

# Copyright

There is a possibility that Congress will act THIS SESSION on legislation to modify the 3.75% penalty fee imposed on cable systems by the Copyright Royalty Tribunal. You read that right—it's possible we could get a bill this year. This is not to say that it is going to be easy, or that we have much time to accomplish what lots of folks consider to be the "impossible", but we do have a shot at it and we are going to make an all-out effort to see that the industry gets some much-needed relief.

As usual, none of this is very easy to explain. It is important, however, for you to wade through it anyway because it may end up being up to the individual cable operators, contacting their representatives, which will make or break this effort later on.

Here is what has happened; As you will remember, there are several bills in Congress right now to deal with the overall inequities created by the Copyright Royalty Tribunal's decision to reimpose, economically, the FCC's distant signal restrictions. The Commission had eliminated those rules in 1980 because they found there was no reason for them—that broadcasters did not need the protection that the rules provided. Once those regulations were eliminated it triggered a provision of the Copyright rules that gave the power to the CRT to determine the appropriate Copyright rate that

cable systems should pay for the signals they were now allowed to add to their systems. The CRT was charged with determining a "reasonable" rate under the provisions of the law. Instead, they decided to create a "market-place" rate. That rate was 3.75% of gross basic revenue for all added signals. There were several problems with this approach. First, Congress, in the Copyright law, had never indicated it was trying to create a "marketplace" rate for cable carriage of broadcast signals. On the contrary, it created a formula that fell somewhere between no copyright liability, which is where we had started, and full liability. Suddenly the CRT has changed the intention of the law and is imposing full liability. Further, because the CRT could not apparently figure out its own mandate, it decided to simply mimick the discarded FCC rules in imposing the new fees. But that resulted in smaller television market audiences continuing to suffer under "second class citizen" status because the fees were imposed disproportionately on the smaller market cable systems.

Why, it has been asked, did the FCC do that in the first place, and is there a good reason to continue this discrimination against viewers outside the major urban areas? The answers to those questions are simple. The FCC imposed the restrictions—limiting the number of

distant television signals that a cable system could bring into a market based on market size, because they intuitively assumed that the smaller the market the less likely the local station would be able to succeed against competition. Now there is a totally separate question of whether it was appropriate at all for the Commission to intentionally impose barriers to competition in order to protect broadcasters—but we need not fight that one because the Commission itself decided that the pro-

tectionist rules were based on erroneous assumptions and that the facts indicated they were not needed in the first place! So the reason the Commission originally imposed the restrictions—a limit of 3 distant independent signals in the “top 50” markets (that was cut down to 2 if the market already had a local independent signal), 2 imported distant independent signals in the “Second 50” markets, and one imported distant independent signal in all other television markets—was to

protect broadcasters who proved not to need any federal protection.

It’s interesting to note that the whole theory of protectionism with regard to broadcast signals was really backwards. To begin with there has never been any economic evidence that local broadcast stations needed protection from competition. The whole bugaboo was created by the theory of “localism” which said that if there was too much imported television fare folks would not watch the local signals, and the local television station, losing its advertising base, would therefore not be able to produce local programs and, of course, the Commission saw its mandate as protecting and fostering “localism”. Thus, the theory went, if you add competition you threaten the economic base necessary for “localism”.

The entire theory proved wrong. To begin with, the local stations, regardless of how many distant signals were brought into the market by cable, could never show a significant economic impact on their revenues. If the local station was a good one people watched it, and advertisers paid to be on it regardless of how many imported signals there were on cable. Naturally the entire premise falls even further once you realize that while the Commission tried to restrict the importation of distant television signals, they encouraged the production and distribution of direct-to-cable programming. Eventually people will begin to understand that the viewing audience doesn’t really care who creates the programming—or who or how it is delivered for that matter—all they care about is watching the programming they want to see! Anyway, a lot of local broadcast stations began to realize just that—they were forced, by the introduction of competition from cable in the form of imported distant independent signals as well as other cable programming, to actually look at what the local advertisers could offer that would attract the local audience. Low and behold—they got a great idea—local programming! Especially local

## 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

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A block of hotel accommodations has been set aside for each seminar at the hotels indicated. Please make your own reservations directly with the hotel by completing and mailing in the hotel reservation form below to the appropriate hotel. For telephone reservations, be sure to include the information that you are attending the CATA CATV Technical Training Seminar to receive the special room rates as indicated. Hotel reservations must be received two weeks prior to seminar start date to guarantee rates shown.

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## GENERAL INFORMATION

All technical sessions begin at 8:00 am and end at 5:00 pm each day. Morning and afternoon coffee breaks and all of the required materials for the technical seminars are provided by CATA. Hands-on laboratory sessions will be held from 7 to 10 pm on the first and second days of the Advanced seminars.

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news! It was unique, it was fresh—and since no matter how many other signals are imported in it is something local viewers want to watch, local advertisers pay a bundle for it! Local news has become the most competitive area for local television stations. That is exactly what the FCC wanted to happen—the fostering of local programming. But it did not come about by restricting competition—on the contrary. The more competition, the more importation of distant signals, the more the local station is forced to stress its unique localism! The Commission, after years of study, finally realized all this, and eliminated the limitations on distant signal importation by cable systems. Systems all over the country added distant signals and the local broadcasters certainly did not go out of business.

Then, of course, came “Black Tuesday”. The day the CRT rules went into effect, reimposing the old FCC rules by forcing anyone who had added signals to pay 3.75% of gross revenue for each such additional signal. On an average basic cable subscription fee of \$10.00 per month that meant that the cable system had to pay almost \$.50 per month per subscriber for each of those additional signals (\$.38/mo. for copyright, and \$.10/mo. for the delivery of the signal). The price was well over double the cost of any other advertiser-supported cable programming. It should come as no surprise that cable systems all over the country began dropping the signals their subscribers had gotten used to and wanted to watch rather than continue to carry them at those outrageous fees. This is especially true since a lot of cities continue to impose rate regulation on cable television systems and they were unwilling to let cable rates go up to cover the unexpected added cost (that’s one of the reasons why we also need Congress to pass H.R. 4103).

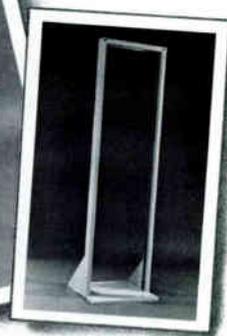
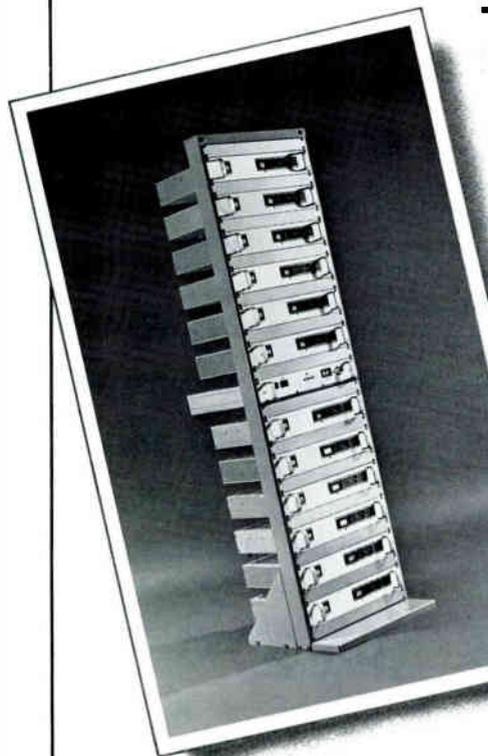
The unconscionable part about all this is that the fees were not imposed on the cable systems and subscribers equally. While we could go on for quite a while arguing that the CRT was mistaken in interpreting their mandate in the first instance—that

they should not have sought to impose “marketplace” rates, and that even if they were correct in that aspect, the price they set was and is demonstrably too high, (after all, if you don’t have a willing buyer—the cable system—at the rate you set, then the rate is not a “marketplace” rate) we will not dwell on all that. Those are issues for another day. What we are trying to correct now is the fact that in imposing the penalty fee the CRT chose, for no stated reason, to follow the FCC’s discard-

ed rules. The result was that smaller market, and some “Second 50” market systems and subscribers have to pay the penalty fee before they are allowed to see the same amount of programming that the folks in the top markets enjoy without penalty!

Why should folks in “East Over-shoe, Ks.” be required to pay extra for programming that the folks in New York get at the normal, Congressionally mandated rate? The simple answer is that they

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shouldn't! The CRT made an error in the way it imposed the new fees and the result is that there is a gross inequity against the smaller television market subscribers around the country. H.R. 2902 (The Synar Bill)

significant fashion, and it would most certainly help cable operators and subscribers in the non-major-urban-market areas. That's still where most of the cable systems are today.

tempting to accomplish the possible. Seeking anything more would simply accomplish nothing.

Even if we get an agreement with the MPAA would that guarantee success? No, not really. But it would go one heck of a long way in that direction. We could still expect opposition from the broadcasters even though another part of the proposed modified bill would give them some relief they have asked for—we'll get to that in a minute. Their opposition, as usual, would have nothing really to do with copyright law, or even be relevant to the jurisdiction of the Copyright Subcommittee, but they can be expected to raise it anyway. You see, the broadcasters don't like competition. They still believe that, even though they can't show any numbers to prove it, the more distant signals we import the more difficult it is to maintain their monopoly on the local viewing public (actually, that's true—we are finally making them work for their audience - but all indications are that when they do, they still get the audience!). Copyright law, especially when it is imposed on a basis that effectively forces cable operators to delete distant independent signals, is a convenient way for broadcasters to maintain their audience monopoly without having to work for it. They like the unequal imposition of

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***If the cable operator is forced to pay 3.75% for that distant signal, as we pointed out before, it is unlikely that he will carry the signal.***

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is designed to create equality in television viewing across the United States. It is a bill that, once modified to reflect the latest thinking on this issue, would allow all television market cable systems to import the same number of distant independent television signals as those in the so-called "Top 50" markets. That is, the system could import three distant independent commercial television signals unless there was already one such signal in the market, in which case they could only import two more. In cable shorthand this is known as the "Three-but-if-one-then-two" rule. All cable subscribers in the United States would thus be treated equally regardless of whether they lived in an urban center or a rural area. Put simply, it is fair.

While we can't guarantee anything, we are hopeful that we can reach an agreement with the MPAA on this legislation. That is, we are at least trying to get them to say they will not actively oppose a modified bill. If an agreement is reached, there is every indication that quite a few more members of the Copyright Subcommittee in the House will join in supporting the bill. Also, such a change in attitude would be the catalyst for introduction of a companion bill in the Senate. Again, no promises—but we have a shot at it and we are working hard to accomplish that result for the industry. The NCTA, by the way, has already stated its support for the original bills and is being

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***Why should folks in "East Overshoe, Ks." be required to pay extra for programming that the folks in New York get at the normal, Congressionally mandated rate?***

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CATA maintains that the copyright holders—represented for the most part by the Motion Picture Association of America, should not have too many qualms about this proposal. Why? Because it really does not impact the larger television markets where the MPAA members make a vast percentage of their profits. Something like 80 to 90 percent of their profit in gross dollars comes from the top 25 television markets. Those markets are not affected in any way by the modified Synar bill as explained here. That bill, insofar as the additional distant signals allowed to be carried without the 3.75% penalty is concerned, would primarily affect smaller markets and about 24 of the "Second 50". It would not hurt the MPAA members' pocketbooks in any

kept well informed of our progress.

Is this legislation all we are seeking in the way of copyright reform? Of course not. There are not still some underlying problems that must be dealt with by Congress. The whole question of the mandate and the standards for the CRT for instance, and the appropriate treatment for tiered broadcast signal carriage need to be addressed. But they will not be dealt with this session of Congress. That would be a totally unrealistic expectation. We are at-

the CRT penalty fee. They really don't get a significant portion of the copyright royalties in any event, but they don't view this from the copyright aspect. They simply want to keep the competition out. They like the reimposition of the protectionism that the FCC eliminated in 1980. The response to that argument is simple: If you want the reimposition of protectionism, go to the FCC or to the correct committees of Congress (Mr. Wirth's Telecommunications Subcommittee in the

House for instance)—it is not appropriate for the Copyright Law to be used for policy purposes other than copyright!

Finally, we can expect the sports folks to object to just about anything and everything. Again, this has precious little to do with copyright fees for broadcast programming. If the sports folks have their way there will be little, if any, sports left on broadcast television for cable to carry—they want to put everything on a premium basis and force us to sell it to our subscribers on a “pay” channel. Frankly, we could probably make more money doing it that way, but we think cable subscribers should have the ability to watch sporting events on “Basic”, without having to pay extra. H.R. 2902 would equalize the ability of all cable subscribers, wherever situated, to see sporting events on imported distant television broadcast signals.

Now, what was that we said earlier about “giving something to the broadcasters” in this bill? Well, it was their idea, and they presented it in testimony before Mr. Kastenmeier’s Subcommittee a couple of weeks ago. It seems that some of the independent television stations around the country have finally wised up to the fact that cable television carriage actually helps them. And they want to be carried. This is particularly true of the new UHF independents that are springing up. They are presently at a disadvantage because the copyright rules—and especially the CRT’s 3.75% decision, track the old FCC rules. Those rules defined what a “local signal” was in 1972. In essence, a television station was and is considered “local” for the purposes of copyright if the cable system is either 1) within the “35 mile zone” of the station, 2) within the station’s “Grade B” signal contour, or 3) in a county whose residents “significantly viewed” that signal according to FCC measurements in 1972. Now that is all well and good except that for the purposes of advertising sales, television stations throughout the United States use a different measurement. They use something called the

## IMPORTANT DATES TO REMEMBER

N.C.T.A.  
**JUNE 3-6, 1984**  
**Las Vegas, Nevada**

CCOS  
**JULY 16-18, 1984**  
**Osage Beach, Missouri**

*Convention Update*

### Sold:

## SATELLITE COMMUNICATIONS COMPANY OF NEBRASKA, INC.

Cable Television Systems serving Correctionville,  
Danbury, Holstein, Kingsley, Lawton,  
Merville and Whiting, Iowa

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. February, 1984.

“ADI”—the Area of Dominant Influence (or the Nielson equivalent “Dominant Market Area” [DMA]). ADI’s are determined by a complicated formula calculated by Arbitron. Almost all counties in the United States are assigned to one ADI, and one only. That is, the County residents are either considered the natural audience area for one market or another (Washington, D.C. or Richmond, Va., for instance) but never both.

Now the problem comes that there are some ADI areas that are not within the “local” definition used for copyright. Thus there are some stations that, for copyright purposes, must be considered “distant” by a cable system that is actually within the ADI of that broadcaster! Naturally they don’t like that. The reason is simple. If the cable operator is forced to pay 3.75% for that distant signal, as we pointed out before, it is unlikely that he will carry the signal - it is too expensive, particularly for a new UHF independent. The operator may want to carry the signal, but the economics are prohibitive. The broadcasters understand that and want to change the rules to say that FOR COPYRIGHT PURPOSES ONLY a cable system may consider any broadcast station as local if the cable system is within that station’s ADI. This would mean we would not have to pay the 3.75% penalty for those stations and it is likely that we would then carry them, which is what they want.

Now we have to stress that this “ADI modification” is for

copyright purposes only. It has nothing to do with the “must carry” rules, and these signals would not then be considered “must carry” stations. The entire “must carry” issue is not a copyright issue and has no bearing on Copyright law.

We told you this was going to be long-winded, but it is so complicated that there really is no other way to explain it to you. You are now fully up to date on H.R. 2902, and what is happening in the negotiations to modify it, and try to achieve some agreement with the MPAA and give some relief to the broadcasters. All we can say is stay tuned on this one. If an agreement is reached and the bills start to move in the House and the Senate, you can bet we will be urgently seeking your active participation.

What, you might ask, has happened with the other Copyright measure—H.R. 3419 in the House, and S. 1270 in the Senate? These are the bills that would create a new category of “national cable broadcast network” and eliminate that category from those which trigger the 3.75% penalty fee. To be honest, those bills are getting a bum rap at the moment, and we are trying to correct that. CATA, as you know, fully supports those bills as well.

The problem is that since, at the moment, WTBS is the only station that would qualify for the new category, the bills are being maligned by being called “private interest” legislation for Ted Turner. That’s neither true nor fair. To begin with, Turner should not be penalized for the fact that he is the only one so far

to have the guts to go out and publicly work for national coverage of his station. He also pays the copyright holders based on that acknowledged national audience, and he gets advertising fees commensurate with that audience. It is for those reasons that the bill makes so much sense. Why should cable operators have to pay a special fee to the copyright holders for the importation of a signal whose owner has already paid them based on the fact that the signal is being imported by cable systems? The new category is logical, and is the first step toward acknowledging that a new marketplace is slowly evolving centered on distant signal carriage. As broadcasters other than Turner evolve toward that marketplace, they too would qualify. But none other than Turner does now—and that is not his fault. Further, the cable industry gains a lot more from this bill than Turner does. After all, WTBS is already seen in almost 82% of all cable homes. Turner gets a maximum increase of 18% of the subscribers whose the other 82% get the right to see an additional distant signal without the penalty fee other than WTBS! The cable subscriber would be the ultimate winner in this one, and that is the message we must send to Congress. If we don’t, we fear there will be very tough sledding for these bills because those who oppose them have an easy time “smearing” them with the “special interest” label. Again, we are working hard to correct that erroneous image and you can certainly help! It is in the interest of every cable operator to do so! □

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... a continuing lesson in cable TV signal No. 6





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

## PLANT OPERATIONS

"Lean and mean!" with "More bounce for the ounce!" are the cable slogans for the Eighties. While the industry is making dramatic moves in marketing and financial control, plant operations remain a stubborn cost center. The ongoing effort to minimize the cost of plant operations and, at the same time, strengthen its revenue producing capabilities can become a major influence on the system's bottom line. Although not as obvious as theft of services or disconnect rate, accurate tracking of productivity is the first and most essential step in cutting the cost of plant operations.

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# Tracking Productivity Cuts Costs

by Frank Gates

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## ACCURATE REPORTING IS ESSENTIAL

Controlling and minimizing costs in plant operations is difficult at best when you consider the numerous variables involved. The introduction of newer technology, demands for increased skill levels, new builds, rebuilds, marketing fluxuations and franchising continue to place heavy demands upon the daily operations. For even the best organization to cope with these outside factors in an effective manner, production of plant personnel must be well structured and firmly in place. Critical decisions which affect the entire system are made on a daily basis with the assumption that the daily production is reliable and under control.

Too often, the only employees that really have a thorough understanding of the daily production, are those employees who are actually performing the job. This production information has a difficult time moving up through the various levels of the organization without becoming distorted in the process. Inaccurate or delayed reporting means major problems.

Almost all of the computerized billing systems have incorporated some method of production reporting into the system. Some of these are very thorough and accurate while some are superficial add-ons to the system. But even with the best, they are only as accurate as the data that is input. Very often, there are departmental problems or interdepartmental conflicts that prevent good initial formatting of the reporting system and ongoing review and upgrades of the system.

Only after all of the system problems have been eliminated, and there is confidence in the accuracy of these reports, can the production reports become a strong tool in cutting costs.

## EMPLOYEE INVOLVEMENT

A good reporting system incorporates several checks and balances. The information generated by one department should be complimented by the information generated by other departments. For example, the number of connects reported by Installation should agree with the Marketing's net gain numbers. Only by reconciling the data from several sources, will you see a true picture of the activity.

Employee involvement at each level will accomplish two things. First, this will ensure that each individual has a thorough understanding of the reporting process and the impact that these production reports will ultimately have on the day-to-day operations. Secondly, each installer or technician will sense their individual role and their importance within the organization, crew chiefs can compare their crew with others just as department heads can compare departments. This competitive environment should lead to better performance and increased self-satisfaction for all those involved.

## TAILORED TO YOUR SYSTEM

What works for a plant operations staff of six is not necessarily something that will work for a staff of ninety. Geographic considerations, varied levels of technology or customer requirements are only a few of the factors that should be placed under consideration in formatting your production reports. Any 'off-the-shelf' reporting system must be modified to your needs. Trying to 'fit' your activities into an inappropriate reporting system, simply becomes more unnecessary paperwork.

## SAMPLE PRODUCTION REPORTS

Here are three production reports that work in my system. This is a large cable system with over 65,000 customers and 100 employees in plant operations. With a large volume of activity, these reports are essential.

Each report is designed to reflect all of the activity that comprises the daily production of the individual department. Each report sums up into a Productivity Index. This type of summation enables departmental comparison without dealing in 'apples and oranges'.

A deficiency reported within any of the areas covered in the individual report will be reflected in a lower Productivity Index. It is then relatively easy to identify the problem area and take appropriate action to put it back on track. This minimizes the need to constantly review each and every activity on an individual basis by all levels of management. As these monthly reports are summaries of daily activity, all areas are being monitored by the appropriate supervisor. When this system is in place, problem areas surface at early stages, allowing immediate fine-tuning type of actions. This translates into cost reduction by reducing 'crisis' management.

These reports incorporate the best of all of the manual and computer generated reports that work for this system. Although I have formatted these with the aid of a computer, the same thing can be done manually. If you do have access to a computer, any spreadsheet

program (i.e., VisiCalc or Multiplan) will work. If you are using a manual method, keep in mind that if an excessive amount of time is required to generate the report, you might be losing more than you are gaining.

### PRODUCTIVE UNITS

As part of the 'apples and oranges' comparison, it is necessary to establish a common denominator for all of the various tasks or jobs that are happening in plant operations. It is a common practice to assign a specific or projected amount of time to each separate activity and then convert this amount of time into units. This unit becomes the common denominator. You can see that these units are used on both the sample Installation and Service department reports.

It is important that you note that the allotted amount of time for each different task **does not** include non-productive time such as driving time, warehouse time, daily start-up time or other non-productive time. It reflects productive time converted into units, or productive units. This system is based upon the concept that a certain portion of the workday is spent producing completed work and a certain portion is spent in non-productive activities (driving, etc.). With this system, 100% production is not the goal but rather, the highest % of production possible, typically 70-80% for the field environment.

On the System Maintenance Report, the activities are not broken down into specific time assignments. Actual time spent is used. This is due to the large amount of

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MAINTENANCE DEPARTMENT SYSTEM MAINTENANCE MONTHLY PRODUCTIVITY REPORT			
year to date		monthly	
<hr/> SYSTEM OUTAGE ACTIVITY <hr/>			
27	100%	# of OUTAGES (3 or more subs)	27 100%
*****			
94.5		EQUIVALENT CUSTOMER MINUTES (subs affected / total # of subs X minutes off)	94.5
*****			
CAUSE OF OUTAGE;			
0	0%	HEADEND	0 0%
3	11%	TRUNK/PASSIVE	3 11%
2	7%	TRUNK/ACTIVE DEVICE	2 7%
0	0%	DISTRIBUTION/PASSIVE	0 0%
3	11%	DISTRIBUTION/ACTIVE DEVICE	3 11%
9	33%	MULTI-UNIT PROJECT	9 33%
1	4%	POWER PACK	1 4%
2	7%	POWER SUPPLY	2 7%
7	26%	POWER COMPANY	7 26%
*****			
242		ACTUAL MANHOURS SPENT	242
			*heavy storm
<hr/> RADIATION ACTIVITY <hr/>			
PROBLEMS (%)		CAUSE OF RADIATION;	PROBLEMS (%)
10	7%	CONNECTOR/TRUNK	10 7%
25	18%	CONNECTOR/DISTRIBUTION	25 18%
5	4%	CABLE/TRUNK	5 4%
101	72%	CABLE/DROP	101 72%
0	0%	OTHER	0 0%
*****			
141	100%	NUMBER REPAIRED	141 100%
*****			
110		ACTUAL MANHOURS SPENT	110

variables involved in this type of activity. I have used specific time assignments for this type of activity before but I have discontinued that for this cable system as being unrealistic. In the area of System Maintenance and performance, the goal is more often quality as opposed to quantity.

The System Maintenance Report logs actual time spend performing the various tasks. It does not reflect non-productive time such as driving, start-up, etc., only that time that actually produces completed work.

To transfer this time into units, it is necessary to convert the total hours spent into whatever unit standard you might employ. In this case, I use one (1) hour equals ten (10) units.

Total **PRODUCTIVE UNITS** for the reporting

period is simply the sum of all the productive units.

**GROSS PAID UNITS**

This is the total amount of paid manhours, converted into units, for the same reporting period. This includes straight time and over time for all employees who were working on the tasks in the report. Supervisors are not included as they are considered overhead costs.

**NET PAID UNITS**

- This is the total gross paid units less;
- a) Vacation & Holiday
  - b) Sick Time
  - c) Training
  - d) Time spent in other departments

approved						JAN 1984	
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INSTALLATION DEPARTMENT INSTALLATION ACTIVITY MONTHLY PRODUCTIVITY REPORT							
year to date						monthly	
INSTALLATION ACTIVITY				(1 HOUR=10 UNITS)			
JOBS	UNITS-%of	CALLS		JOBS	UNITS-%of	CALLS	
484	5808	10%	NEW INSTALLS (12u)	484	5808	10%	
737	4422	15%	RECONNECTS (6u)	737	4422	15%	
1635	6540	34%	UP/DOWNGRADES (4u)	1635	6540	34%	
1086	3258	22%	DISCONNECTS (3u)	1086	3258	22%	
871	3484	18%	DISPOSITIONS (4u)	871	3484	18%	
45	180	1%	INSPECTIONS (4u)	45	180	1%	
4858	23692	100%	*****TOTAL*****	4858	23692	100%	
INSTALLATION PRODUCTIVITY INDEX (%)							
HOURS	/UNITS	GROSS PAID UNITS (pd hrs X 10)		HOURS	/UNITS		
5782	57820			5782	57820		
368	3680	[Vacation & Holiday Units]		368	3680		
352	3520	[Sick Time Units]		352	3520		
902	9020	[Training Units]		902	9020		
0	0	[Dept Xfer In Units]		0	0		
328	3280	[Dept Xfer Out Units]		328	3280		
0	0	[Units]		0	0		
*****							
3832	38320	NET PAID UNITS (A)		3832	38320		
*****							
2369	23690	TOTAL PRODUCTIVE UNITS (B)		2369	23692		
*****							
62%	62%	PRODUCTIVITY INDEX (B)/(A)		62%	62%		

It is necessary to back out these different activities to accurately reflect actual time (or units) spent on the job. Net paid units is gross paid units less these activities.

### PRODUCTIVITY INDEX

You now know how many productive units were produced, **TOTAL PRODUCTIVE UNITS**, and the cost in manhours to produce those units, **NET PAID UNITS**. By dividing the **TOTAL PRODUCTIVE UNITS** by the **NET PAID UNITS**, you arrive at the **PRODUCTIVITY INDEX**.

This productivity index is the standard for the department. Each individual department can now be compared in a similar manner. After there is a history for each department, and positive or negative changes

within the department will be reflected in the productivity index by upward or downward movement.

### SUMMARY

After you have established a reporting system that tracks the productivity index (and you have confidence in the accuracy), management will have a very powerful tool. The benefits and usefulness of this tool include;

- 1) With this reporting system in place, every employee is very involved. There is a clear understanding of individual importance and effect.
- 2) Problems are quickly identified and action is indicated at the earliest stage.
- 3) Interdepartmental checks and balances are in place. Much confusion is eliminated.

approved					JAN 1984
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MAINTENANCE DEPARTMENT SERVICE CALLS MONTHLY PRODUCTIVITY REPORT					
year to date					monthly
<hr/>					
GENERAL STATISTICS					
<hr/>					
4487	# of SERVICE CALLS WRITTEN				4487
230	# of S/C's CLEARED BY DISPATCH				230
4257	# of S/C TRIPS COMPLETED (A)				4257
AVG 63331	# of CUSTOMERS (B)				63331
1.68%	WEEKLY AVG % OF S/C's				1.68%
<hr/>					
SERVICE CALL ACTIVITY			(1 HOUR=10 UNITS)		
<hr/>			<hr/>		
CALLS-UNITS-% of CALLS			CALLS-UNITS-% of CALLS		
184 0 4%	CANCELLED	(0u)	184 0 4%		
606 0 14%	NO ACCESS	(0u)	606 0 14%		
207 0 5%	RESCHEDULED	(0u)	207 0 5%		
415 2075 10%	TV/VCR/CUSTOMER	(5u)	415 2075 10%		
490 1960 12%	CONVERTER	(4u)	490 1960 12%		
1923 13461 45%	DROF/HOUSE	(7u)	1923 13461 45%		
378 3780 9%	DISTRIBUTION	(10u)	378 3780 9%		
43 430 1%	TRUNK	(10u)	43 430 1%		
11 33 0%	HEAD END	(3u)	11 33 0%		
4257 21739 100%	*****TOTAL*****		4257 21739 100%		

- 4) As problems are corrected and efficient methods are introduced, the results can be easily monitored.
- 5) When bringing on major projects (i.e., marketing launch, rebuild, addressability etc.), you have a better position for decisions as you know what plant operations real capabilities are.

The most important benefit from this type of reporting system, is that you have made the first step to controlling and reducing costs in one of the most difficult areas within the cable system.

## ABOUT THE AUTHOR

*Frank Gates is presently Manager of Plant Operations for Group W Cable in Santa Monica, California, their third largest; his experience also includes activities in new builds and re-builds, testing, and establishment of standards of several systems in California. His military service provided additional electronic experience, and additional studies and seminars have all included advanced work in the field.*

*CATJ is appreciative to Mr. Gates for the preparation of this article and looks forward to additional material from him.* □

PREVENTITIVE MAINTENANANCE ACTIVITY				
AMOUNT	(%)	DESCRIPTION;	AMOUNT	(%)
8	19%	EVALUATE HEAD END OUTPUT	8	17%
10	23%	EVALUATE SYSTEM TEST POINT	10	23%
18	42%	ADJUST/REPAIR TRUNK AMPLIFIER	18	42%
7	16%	ADJUST/REPAIR DIST. AMPLIFIER	7	16%
0	0%	POWER SUPPLY INSPECTION	0	0%
		*****		
43	100%	TOTAL ACTIVITIES PERFORMED	43	100%
		*****		
132		TOTAL MANHOURS SPENT	132	

SYSTEM SWEEP				
MILES/AMPLIFIER (%)			MILES/AMPLIFIER (%)	
540		MILES OF PLANT, ENTIRE SYSTEM	540	
90		PROJECTED MILES TO BE SWEEP	90	
20	4%	ACTUAL MILES SWEEP	20	4%
48		NUMBER OF AMPLIFIERS SWEEP	48	
5.3		ADV AMPLIFIERS PER 8hr/DAY	5.3	
		*****		
145		ACTUAL MANHOURS SPENT	145	

PRODUCTIVITY INDEX (%)			
7920		GROSS PAID UNITS	UNITS 7920
0		[Vacation & Holiday Units]	0
330		[Sick Time Units]	330
40		[Training Units]	40
0		[_____Dept Xfer Out Units]	0
0		[_____Dept Xfer In Units]	0
25		[_____CWA_____Units]	25
		*****	
7525		NET PAID UNITS (A)	7525
		*****	
6290		TOTAL PRODUCTIVE UNITS (B)	6290
		*****	
84%		PRODUCTIVITY INDEX (B)/(A)	84%

SERVICE CALL PRODUCTIVITY INDEX (%)					
HOURS /UNITS			HOURS /UNITS		
4221	42210	GROSS PAID UNITS (pd hrs X 10)	4221	42210	
352	3520	[Vacation & Holiday Units]	352	3520	
228	2280	[Sick Time Units]	228	2280	
112	1120	[Training Units]	112	1120	
16	160	[_____Dept Xfer In Units]	16	160	
112	1120	[_____Dept Xfer Out Units]	112	1120	
3	30	[_____DISPATCH_____Units]	3	30	
		*****			
3430	34300	NET PAID UNITS (A)	3430	34300	
		*****			
2174	21740	TOTAL PRODUCTIVE UNITS (B)	2174	21740	
		*****			
63%	63%	PRODUCTIVITY INDEX (B)/(A)	63%	63%	

**Distributors**

D1—Full CATV equipment line  
 D2—CATV antennas  
 D3—CATV cable  
 D4—CATV amplifiers  
 D5—CATV passives  
 D6—CATV hardware  
 D7—CATV connectors  
 D8—CATV test equipment  
 D9—Other

**Manufacturers**

M1—Full CATV equipment line  
 M2—CATV antennas  
 M3—CATV cable  
 M4—CATV amplifiers  
 M5—CATV passives  
 M6—CATV hardware  
 M7—CATV connectors  
 M8—CATV test equipment  
 M9—Other

**Service Firms**

S1—CATV contracting  
 S2—CATV construction  
 S3—CATV financing  
 S4—CATV software  
 S5—CATV billing services  
 S6—CATV publishing  
 S7—CATV drop installation  
 S8—CATV engineering  
 S9—Other

# Associate Roster

Note: Associates listed with \* are Charter Members.

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

**Avantek, Inc.,**  
 481 Cottonwood Dr.,  
 Milpitas, CA 95035  
 408—946-3080  
 (M8, 9 TVRO  
 Components)

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

**Cable-Text Instruments,**  
 Div. of Telpar, Inc.  
 P.O. Box 796  
 Addison, TX 75001  
 214—233-6631  
 (M9 Generators)

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

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

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

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

**BEI**  
 P.O. Box 937,  
 Olathe, KS 66061  
 800—255-6226  
 (M9 Character  
 Generators)

**CCS Cable**  
 P.O. Box 14710,  
 Phoenix, AZ 85063  
 602—272-6855  
 (M3)

**Comm/Scope Company,**  
 P.O. Box 1729  
 Hickory, NC 28603  
 1-800—438-3331  
 (M3)

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

**Ben Hughes  
 Communications**  
 P.O. Box AS,  
 Old Saybrook, CT 06475  
 203—388-3559  
 (M6, 9)

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

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

**Apple/Store**  
 Rte. #1, Box 156,  
 Beaver Dam, WI 53916  
 414—885-6249

**Blonder-Tongue Labs, Inc.,**  
 1 Jake Brown Rd.,  
 Old Bridge, NJ 08857  
 201—679-4000  
 (M1, 2, 4, 5)

**CableBus Systems,**  
 7869 S.W.  
 Nimbus Avenue,  
 Beaverton, OR 97005  
 503—543-3329  
 (M1)

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

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

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

**Comprehensive Cable  
 Enterprises**  
 206 Westminster Ct.  
 Madison, WI 53714  
 608—249-3442  
 (S1, 2, 4, 5, 7, 8, 9)

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

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

**Cable Health Network,**  
 1950 Spectrum Circle  
 Suite B-310  
 Marietta, GA 30067  
 404—952-4620  
 (S4)

**Computer Video  
 Systems, Inc.,**  
 3678 W. 2105 S. Unit 2,  
 Salt Lake City, UT 84120  
 1-800—453-8622  
 (M9)

# Associate Roster

**COMSEARCH INC.,**  
11503 Sunrise Valley  
Drive,  
Reston, VA 22091  
703-620-6300  
(S8, S9, Earth station  
placement frequency  
coordination)

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

**DF Countryman Co.,**  
1821 University Ave.,  
St. Paul, MN 55104  
612-645-9153  
(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)

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

**Elephant Industries,**  
P.O. Box 3626  
N. Ft. Myers, FL 33903  
813-995-7383  
(M9)

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

**Franey & Parr of Texas,  
Inc.,** (Formerly Doherty &  
Co.),  
One Turtle Creek Village,  
Suite 524,  
Dallas, TX  
214-528-4820  
(S9, Insurance)

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

**General Cable Corp.,**  
1 Woodbridge Center,  
P.O. Box 700  
Woodbridge, NJ 07095  
1-800-526-4385  
(M3)

**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)

**H & R Communications,**  
Rt. 3, Box 102G,  
Pocahontas, AR 72455  
1-800-643-0102  
(M2, D1, S2, 3, 8)

**Harris Corporation,**  
P.O. Box 1700,  
Melbourne, FL 32901  
305-724-3401  
(M2, 9, S2)

**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.,**  
703 Central Ave.,  
Los Alamos, NM 87544  
505-662-5545  
(S4, 5)

**Karnath Corporation,**  
2001 Westridge,  
Plano, TX 75075  
214-422-7981 or 7055  
(S1, 2, 8, 9)

**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)

**Lash-Ade Company,**  
P.O. Box 147,  
Guntersville, AL 35976  
205-582-6333  
(M9 Cable Protector,  
S9 Equipment Repair)

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

**Lemco Tool Corporation,**  
Box 330A,  
Cogan Station, PA 17728  
1-800-233-8713  
(M8, 9 Tools)

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

**Lindsay Specialty  
Products, Ltd.,**  
50 Mary Street West,  
Lindsay,  
Ontario, Canada K9V 4S7  
705-324-2196  
(M1, 2, 4, 5, 7, 9)

**M/A Com Prodelln, Inc.,**  
P.O. Box 100  
Claremont, NC 28610  
704-459-9782  
(M2, 3, 7, S2)

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

Note: Associates listed with \* are Charter Members.

**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)

**Mullen Communications Construction Co., Inc.,**  
P.O. Box 1387A,  
Green Bay, WI 54305  
414—468-4649  
(S2)

**National Farmers Union Property & Casualty Co.,**  
12025 E. 45th Ave.,  
Denver, CO 80251  
303—371-1760  
(D9, Insurance Service)

**Octagon Scientific, Inc.,**  
4 Adler Drive,  
East Syracuse, NY 13057  
315—437-4405  
(M9)

**Phasecom Corp.,**  
6365 Arizona Circle,  
Los Angeles, CA 90045  
213—641-3501  
(M1)

**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  
(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)

**Scientific Atlanta, Inc.,**  
3845 Pleasantdale Rd.,  
Atlanta, GA 30340  
404—449-2000  
(M1, 2, 4, 8, S1, 2,  
3, 8)

**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)

**Superior Electronics Center,**  
2010 Pine Terr.,  
Sarasota, FL 33581  
813—922-1551  
(M4, S9)

**TVC Supply Co., Inc.,**  
1746 E. Chocolate Ave.,  
Hershey, PA 17033  
717—533-4982  
(D1, 2, 3, 4, 5, 6, 7, 8)

**Teledac, Inc.,**  
1575 Taschereau Blvd.,  
Longueuil,  
Quebec, Canada J4K 2X8  
514—651-3716  
(M9 Character Generators)

**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—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

**Tyton Corp.,**  
P.O. Box 23055,  
Milwaukee, WI 53223  
414—355-1130  
(M6, 7)

**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)

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

**Vitek Electronics, Inc.,**  
4 Gladys Court,  
Edison, NJ 08817  
201—287-3200

**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)

**Winegard Company,**  
3000 Kirkwood Street,  
Burlington, IA 52601  
1-800—523-2529  
(M1, 2, 3, 4, 5, 7)

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

## APPLE/STORE ANNOUNCES NEW PASCAL VERSION OF CABLE TV BILLING SYSTEM FOR APPLE, IBM, RADIO SHACK AND OTHER MICRO-COMPUTERS

Apple/Store Computer Services has introduced a pascal version of its cable billing software. The new software is said to be transportable to almost any micro-computer including the IBM PC, IBM XT, APPLE II, IIE, & III, Radio Shack Models II, 12 & 16, and Xerox 820 II, as well as most other micro-computers.

The revised software offers many new features including more rate codes, faster processing and greater flexibility in billing schemes.

Depending on the floppy disk or hard disk capacity, the software will accommodate cable systems with as few as 100 subscribers or as many as 10,000 subscribers.

Apple/Store reports there are many unique features offered, but that their real attraction is the extensive training available, coupled with the telephone support maintenance program.

The company notes that their original version has been used successfully by many system operators for more than two years which has made possible the development of this enhanced version.

Apple/Store does not sell the hardware, rather, customers are urged to buy their computer equipment locally to assure prompt local service, when needed.

The software package sells for \$2,000 to \$2,500 depending on the customer's hardware configuration and the on-site requirements, and includes a comprehensive array of support materials.

Renee Rosado, owner of Apple/Store Computer Services states that her experience in the cable TV field over the past 18 years has enabled her company to develop a computer billing system that is not only affordable but one that is easy to use and provides accountants with the information they need in an easily read format.

While the Apple/Store cable billing system is not right for all applications, it is the most economical, reliable and flexible solution to the billing problems for most small and medium size system operators. ●

## COMSONICS OFFERS FAST REPAIRS, FREE SHIPPING TO WESTERN CATV OPERATORS

Long equipment repair turnaround and expensive shipping problems that plague many Western and Midwestern CATV operators have been solved by ComSonics, Inc.

One of the nation's largest and best known cable equipment repair facilities, ComSonics announced today it has initiated a Priority Repair Service for

operators in the Western half of the United States.

Warren Braun, ComSonics president, said the new program was developed in two parts.

"We now have a special system in our customer service/receiving computer that automatically prioritizes repair orders received from operators in the West and Midwest," he said. "This enables us to reduce our turnaround time an average of 2-to-3 days."

To eliminate the problem of lengthy and expensive return shipping, Braun said his firm has contracted with Federal Express Air to handle Western operator needs.

"By using Federal Express, operators are guaranteed of two-day service," he noted, "which means an additional time savings of 2-to-4 days."

To introduce its new Priority Repair Service, ComSonics will pay all return shipping on orders received from the West and Midwest through February 14.

After that, a maximum charge of \$10 per shipping container will be applied. "Based on an average 30-pound package, this ceiling price will save most operators \$20 per container," Braun said.

All repairs are backed by ComSonics' standard 90-day warranty and one-year warranty on extended bandwidth equipment.

"We are excited about this program because it allows us to provide the same fast service, professionalism and economical shipping advantages Eastern operators have known for over 11 years," Braun said.

Full details on the new service can be obtained from ComSonics. Operators are invited to call the company toll-free at 1-800-336-9681. ●

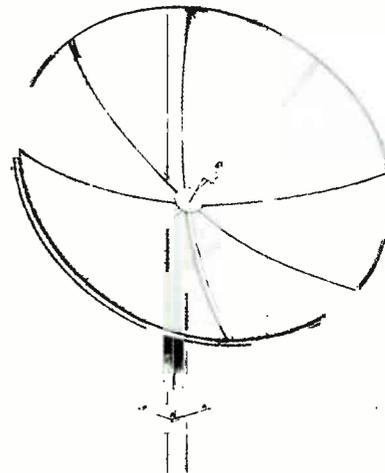
## WINEGARD PREMIERS NEW PERFORATED ALUMINUM 10-FOOT SATELLITE DISH

Combine the good looks of a mesh dish with the rugged strength of a solid dish, and you have Winegard's new 10-foot perforated aluminum satellite TV antenna.

Winegard's Model SC-1018 antenna delivers powerful 39.5dB gain to provide quality reception in most parts of the continental U.S. It complies with FCC two-degree spacing requirements, with a beamwidth (at -3dBi test points) of 1.6 degrees. (All specifications compiled from actual test results at the McDonnell-Douglas test range in St. Louis.) Design patents are pending.

More durable than standard expanded-metal mesh dishes, Winegard's .040-gauge perforated aluminum unit also uses extruded aluminum in its eight support ribs and rim for extra strength.

Though rugged, the dish is lightweight



(just 92 pounds) and is designed for quick set-up. Shipped in four quarters, the dish can be assembled by two men in 20 minutes.

A special antenna feature is Winegard's exclusive anodized finish, which makes it impervious to all weather conditions and corrosion.

Included with the dish is a heavy-duty, pedestal-type polar mount. Wind survival is rated at 125 MPH.

The antenna is available for delivery beginning in April in one of two complete Winegard packages - the SC-5020 or SC-5020S (motorized) system. The packages include the 10-foot antenna, Model SC-7035 or SC-7035S receiver, 100-degree LNA, Polarotor, 150' cable (and SC-7700S Satellite Selector and 150' cable with motorized version). The SC-1018 dish is also available separately.

For more information, contact Gil Cunningham, Winegard at 3000 Kirkwood Street, P.O. Box 1007, Burlington, Iowa 52601, or call (319) 753-0121. ●

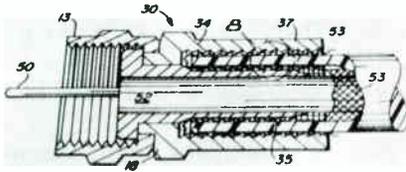
## GILBERT ENGINEERING GRANTED PATENT FOR PLENUM CABLE CONNECTORS

Gilbert Engineering of Phoenix, Arizona, has recently obtained a U.S. Patent for a "F" Male connector for PLENUM cable.

The connector is for use with the new Teflon type cables produced by Phalo Corporation, Times Fiber Communications and Millibride Division of Beldon Corporation, for use in return air plenums.

Gilbert has designed an "inside-out" F connector with a smooth, very thin mandrel to easily slide between dielectric and braid. This is necessary because these cables have very stiff jackets and resist installation of "ordinary" F fittings.

We have achieved the necessary



mechanical functions by threading and broaching the inside diameter of the integrated crimp ring. This results in sharp tetrahedrons to push aside (without cutting) the "folded back" braid, and penetrate the Teflon jacket to allow the necessary connector retention.

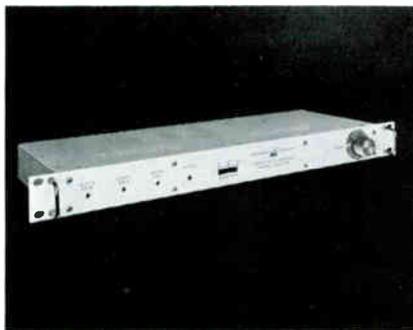
The Plenum cable connectors are priced at .46¢ each for RG 59, and .49¢ each for RG 6 in low quantities.

For further information regarding Gilbert's "F" Male connectors for Plenum cable, contact Customer Service, Gilbert Engineering, P.O. Box 23189, Phoenix, Arizona 85063; or call TOLL FREE: (800) 528-5567.

**MICRODYNE'S LOW COST,  
HIGH PERFORMANCE RECEIVER  
NOW HAS AUTOMATIC POLARITY  
SWITCHING AND REMOTE  
TUNING CONTROL OPTION**

Microdyne's 24-channel 1100 LPR Satellite TV receiver now is available with automatic polarity switching and remote tuning control.

This new option makes it even more economical for small cable television and SMATV operations to improve their programming flexibility and to make the most of a limited number of receivers through transponder time-sharing.



The remote tuning is accomplished through a rear panel mounted binary coded decimal (bcd) terminal that accepts switching instructions from a computer or any standard switching device. Dual RF inputs (one for each polarity) assure that the proper polarity is selected for each channel.

First announced in mid-November,

1983, the 1100 LPR has proved to be a very popular and highly reliable receiver. Earl Currier, Microdyne Sales Manager, says that orders for the new receiver are already approaching an impressive 2,000 units. The automatic polarity switching and remote tuning option is expected to enhance the LPR's already established reputation as the first truly high performance, low cost video receiver.

Designated the 1100 LPR (R), this receiver is the latest addition to Microdyne's full line of uplink and downlink equipment for the broadcast and cable television markets.

Full specifications for the 1100 LPR and 1100 LPR (R) video receivers are available from Microdyne. Phone Earl Currier (904) 687-4633 or write to Microdyne Corporation, P.O. Box 7213, Ocala, FL 32672.

**THE MOVIE CHANNEL JOINS  
SHOWTIME IN OFFERING CLOSED  
CAPTIONED PROGRAMMING**

**Both Services Will Present "48 HRS."  
to Hearing Impaired Subscribers in March  
Through an Agreement Between Tribune  
Cable and The National  
Captioning Institute**

Beginning last month THE MOVIE CHANNEL will join SHOWTIME in offering closed-captioned programming when "48 HRS." premieres on both services, it was announced today by Mike Weinblatt, President, SHOWTIME/THE MOVIE CHANNEL Inc.

One of the most popular and successful films of 1983, Paramount Pictures' "48 HRS." stars Nick Nolte and Eddie Murphy in his film debut. Described by director-writer Walter Hill as an urban thriller, "48 HRS." follows the adventures of the highly unlikely team of Jack Cates (Nolte), a mean-talking white cop and Reggie Hammond (Murphy), a young hip black convict. In this action-packed, witty and warm-hearted film, Nolte gets Murphy out of prison for "48 HRS." to help him track down two killers.

SHOWTIME, the only cable programmer to present a variety of quality entertainment to the hearing impaired, has made available such films as "Flashdance," "An Officer and a Gentleman," "Reds," "Rocky III," "Poltergeist" and "My Favorite Year" through an agreement between Tribune Cable and The National Captioning Institute (NCI). Effective with the March 1984 schedule, any closed-captioned versions of future titles originally prepared for airing on SHOWTIME will not be available to hearing-impaired subscribers when the titles are scheduled on THE MOVIE CHANNEL.

SHOWTIME's commitment to closed-

captioned programming also extends to original productions. Two current stand-outs include the hit comedy series "Bizarre," which has been closed captioned since its second season in 1981, and pay cable's most honored series, Shelley Duvall's "Faerie Tale Theatre."

SHOWTIME and THE MOVIE CHANNEL's program guides and on-air promotion will designate the showing of all closed-captioned productions with the official captioning symbol.

**MICROWAVE FILTER**

Sooner or later, every CATV Chief Tech wakes up some morning and finds that he needs some PAY TV TRAPS—NOW!!

With Microwave Filter's *Project Fas Trap*, you can have them now - order them today and you can have up to 100 traps tomorrow.



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