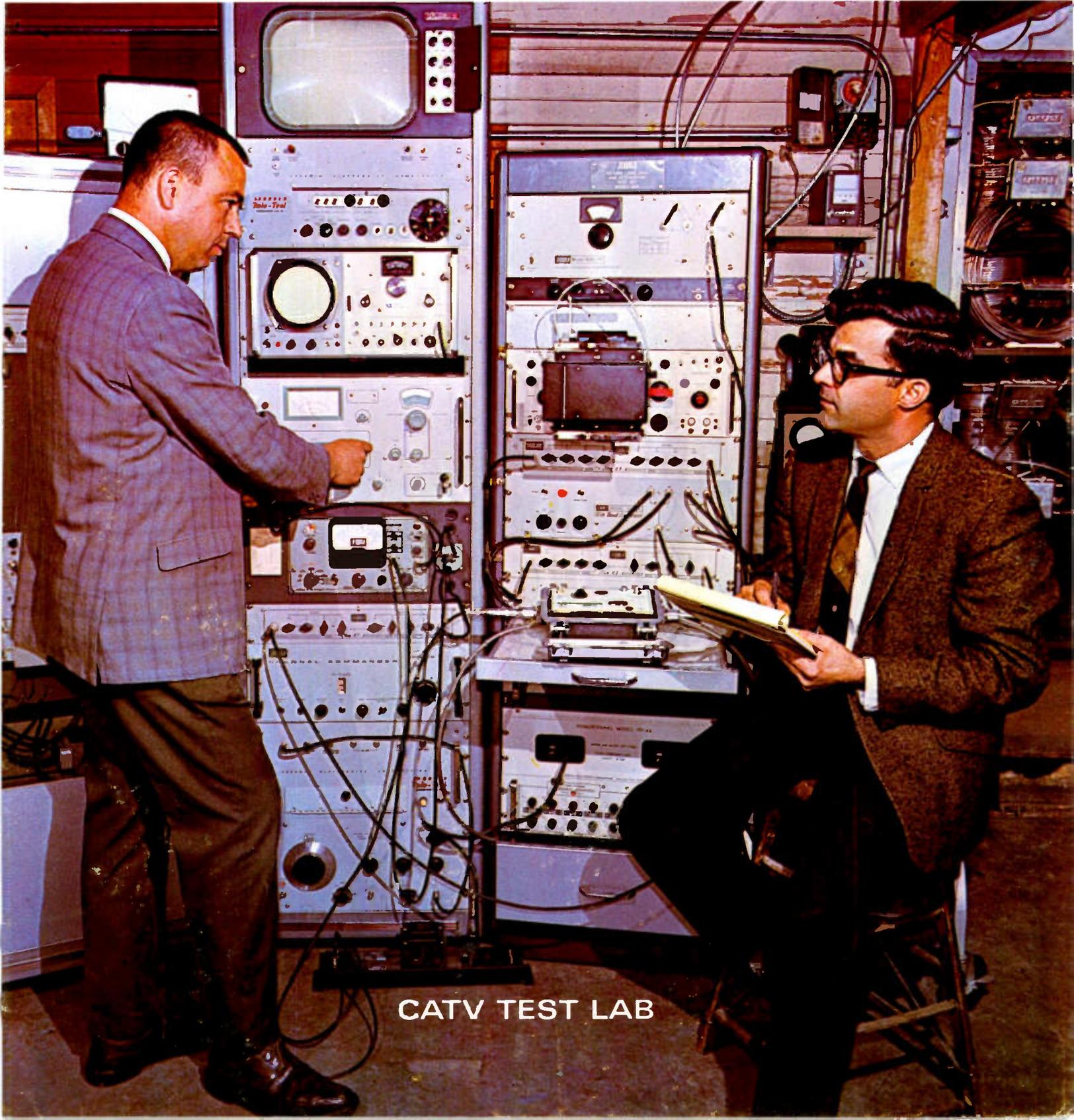
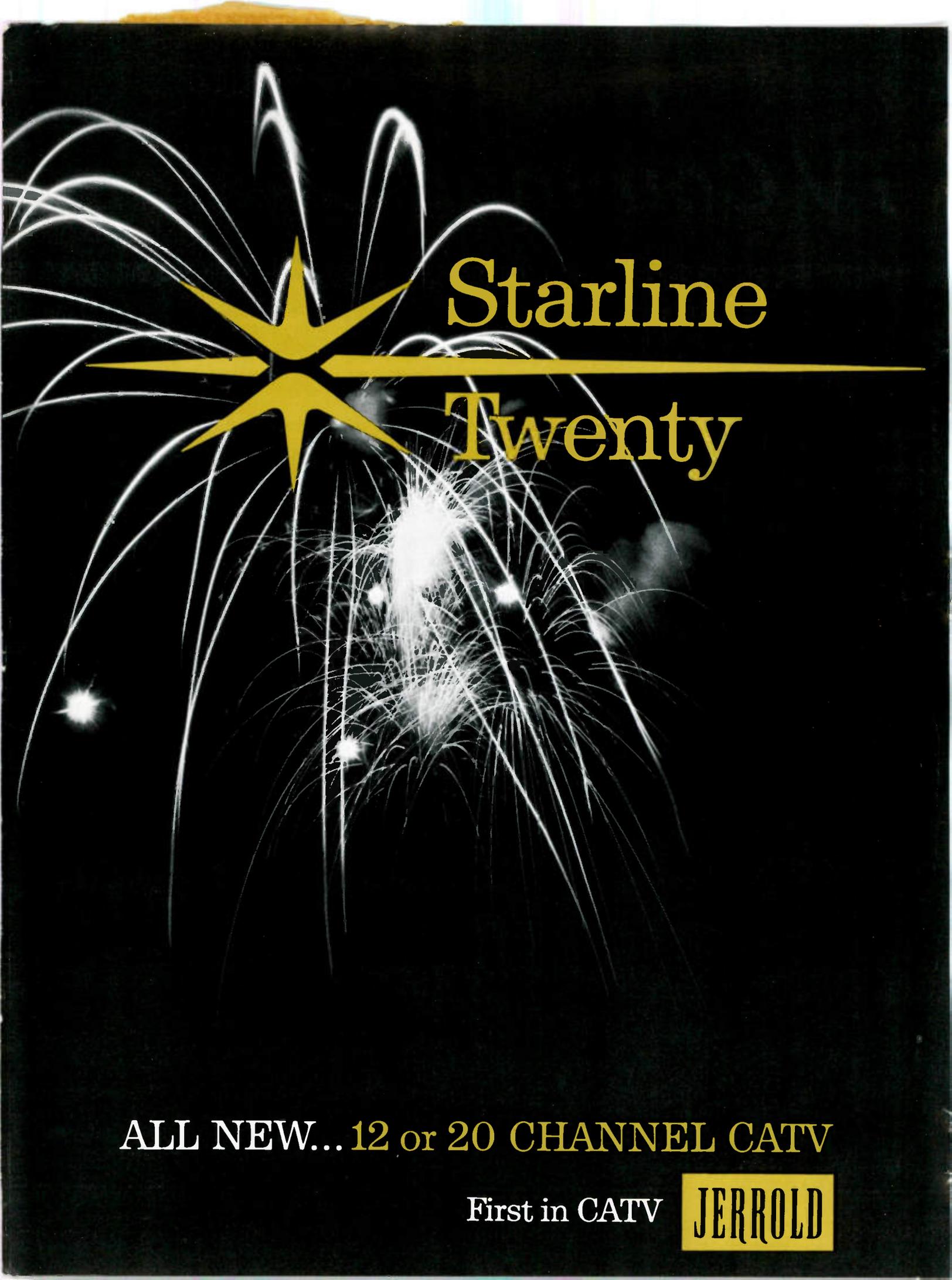


TV Communications

The Professional Journal of Cable Television



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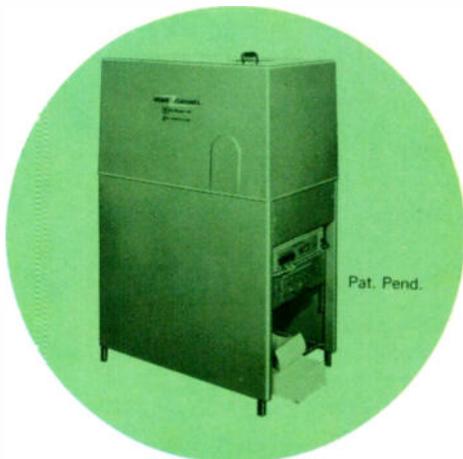
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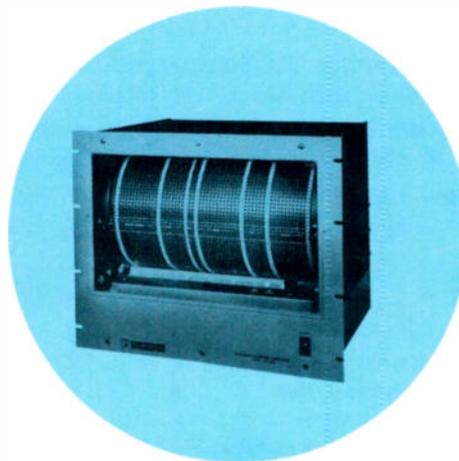
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ETV Round-Table Discussion

Two Penn State University educators and group cable operator/maker James Palmer exchange views on the ETV-CATV relationship in the special feature beginning on page 40 of this issue. Moderated by TVC publisher Stan Searle, the round-table discussion was conducted exclusively for presentation to TVC readers. Also included in this feature is a summary of the NCTA ETV Survey results as recently released by the national association. Don't overlook this most informative article.

Cover Story: CATV Test Chamber

Televue Systems' engineering vice-president Bob Brown talked his firm into installing a comprehensive CATV equipment test facility which enables construction of a complete cable system within a "climate chamber." Beginning on page 44, read complete details of the construction and operation of this \$30,000 test lab, as reported and photographed by TVC technical associate I. Switzer. Test racks of the lab facility are shown on the cover of this issue, with Bob Brown (right) and Telecable's Jerry Laufer at the controls.

Nuts and Bolts of Management

When it comes to properly spending your firm's money, there is no substitute for tight-fisted and control-minded management — especially on the "small things," says author Robert Huston in the article starting on page 51. Successful system managers, and those looking for jobs are often separated by simply the handling of "routine" management chores . . . such as keeping tabs on hand tool replacements, or limiting use of long distance calls to occasions when an airmail stamp won't suffice.

Stanley M. Searle, Patrick T. Pogue: Publishers

Staff

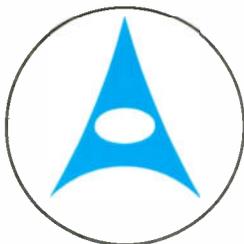
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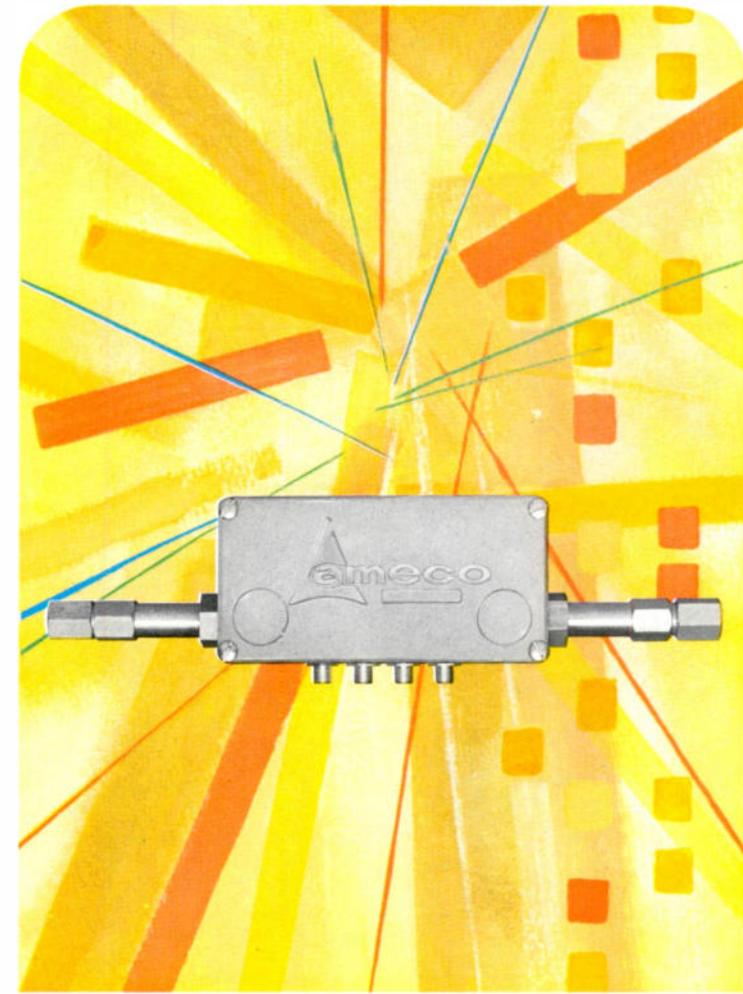
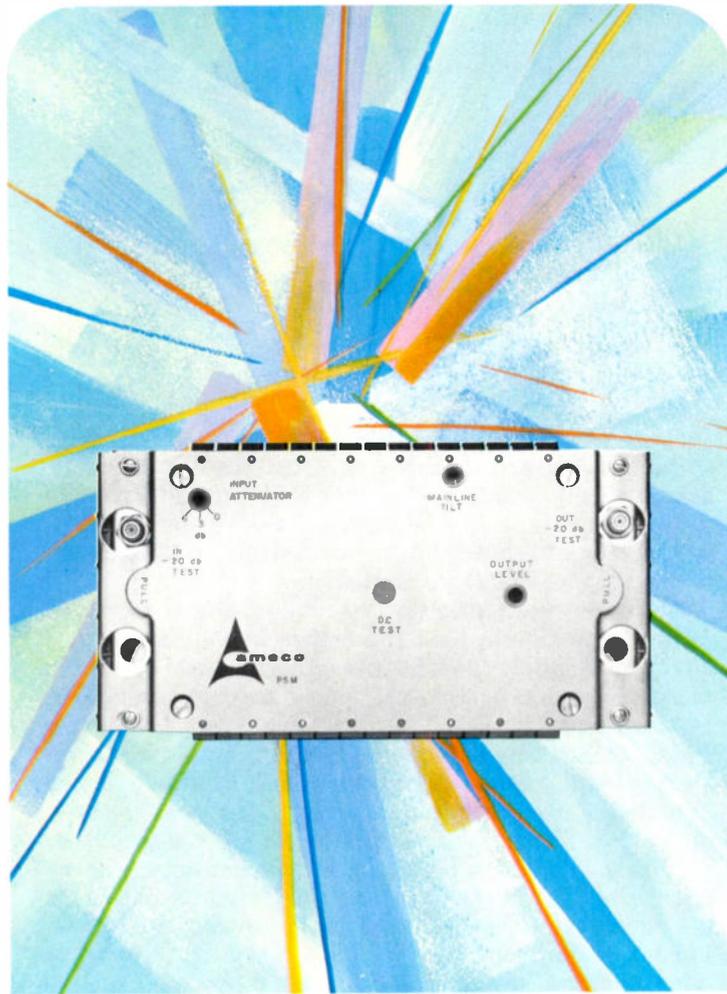
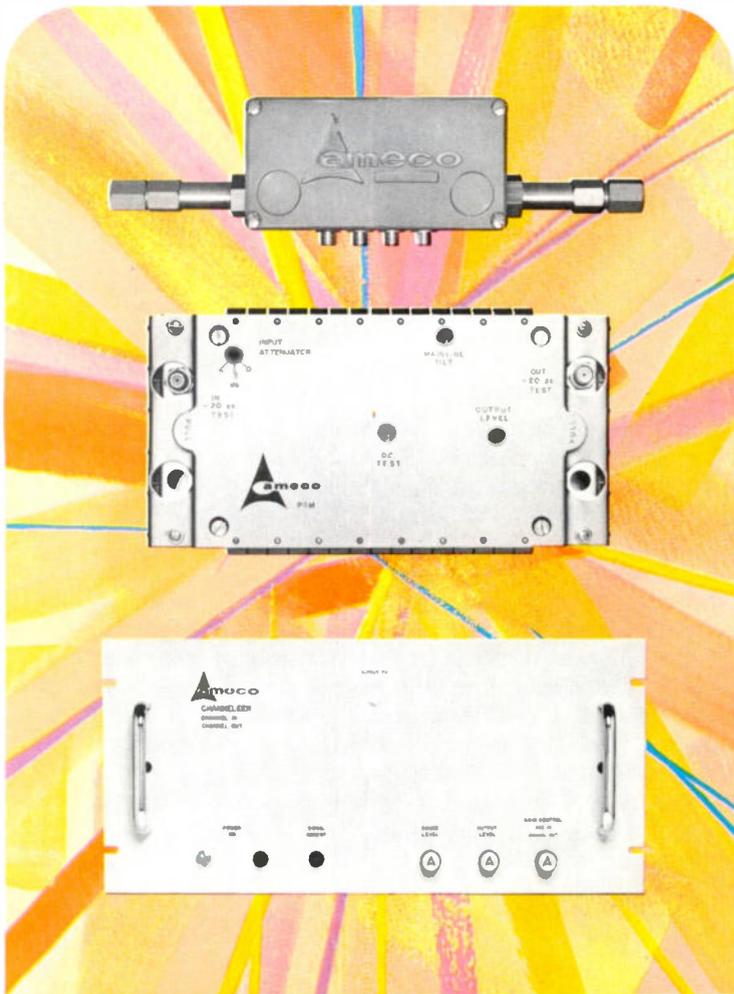
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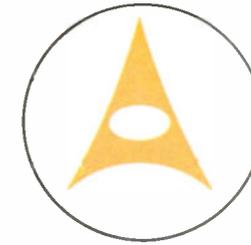
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EDITORIAL

By Stanley M. Searle

ETV Needs CATV

When Congress decides on the CATV copyright liability issue, the dependence of ETV upon CATV may well be the factor that immunizes cable television against the efforts of the "broadcasting establishment" to hamstring the cable industry.

Anyone questioning the vitality of the CATV-ETV relationship should read the article beginning on page 40 of this issue. It contains the remarks made in a round table discussion by two prominent men in educational broadcasting and by a group cable system operator. Floyd B. Fischer, Director of Continuing Education at Pennsylvania State University and Marlowe Froke, Director of Broadcasting at Penn State and manager of WPSX-TV, candidly discuss all of the negatives regularly voiced by educational broadcasters who are critical of CATV. But, in the final analysis, their experience with cable operators is summed up by Mr. Fischer's comment that "We need the cable system cooperation, and we have had the cable system cooperation — for which we are very grateful. We can't say enough about the good relationships we've had." The signals of 73% of the country's ETV stations are extended by CATV carriage.

Are you (and your elected officials at both state and Federal levels) fully aware of the vital link between

titled, "ETV's Best Friend," if you wish to send reprints of the article to legislators, broadcast executives, local school officials, or others, please contact our Reprint Department. By helping to spread the truth — and dispelling the false propaganda which has pitted cable TV against ETV — you will be performing a worthwhile public service.

The use of television in education, both in-school and in-home, is extremely important to our nation. We have only begun to explore the potentials of television for educating and informing people of all ages. Mr. Fischer foresees "Cables providing feedback in many ways that we do not now know of . . . new opportunities for testing impact in specific ways and situations."

It will be a matter of very great importance to the cable television industry that both legislators and regulators are made fully aware of this attitude of educational broadcasters toward cable television.

Viewer Mail Unwelcome

The FCC recently directed an order to show cause why a cease and desist order should not be issued to Bluefield Cable Corp., which operates in Bluefield, West Virginia. At issue is program exclusivity protection of WCYB-TV in Bristol, Virginia, the advance notification of local television stations, and the hearing requirement for importing distant signals into one of the "ARB top 100 Markets."

In many ways it appears to be a routine case, but an interesting aspect is that the Commission has raised an *ex parte* issue in a most extraordinary way. The CATV system placed an ad in a local newspaper asking the cable subscribers to write to the Commission and to their Congressmen — urging that cable service be allowed to continue.

Apparently a number of citizens took the suggestion and now the Commission has complained that this constitutes an *ex parte* contact. Not only would that ruling appear to prohibit the public from complaining to the FCC about a current case, but there is another unique facet to the developments. Enough people complained to Rep. Harley Staggers (D.-W. Va.) and Sen. Robert Byrd (D.-W. Va.) that they wrote to the Commission, so the FCC seems to be accusing both Staggers and Byrd of *ex parte* contacts, too. Since Staggers is Chairman of the House Commerce Committee, which holds sway over matters concerning the FCC, that implication could come back to haunt the Commission.

Stan Searle

<p>GUARANTEE FOR CATV</p> <p>Big subscriber demand through detailed listing in ALL regional editions of TV GUIDE and leading area newspapers.</p>	<p>Don't your subscribers deserve # 1?</p> <p>Send them WVIA-TV Channel 44, EVERY DAY Your community wants 44 # 1 in educational television.</p>
--	--

Booklet produced by million-watt educational station WVIA-TV, Wilkes Barre, Pa., aggressively promotes cable system carriage of the ETV's signal. Daily programming is begun and terminated on precise schedule, as an aid to cable systems using automatic time clock switching.

cable television and educational/instructional television? A thorough understanding of this interdependence is urgently important to the leadership of both ETV and CATV.

After reading the exclusive report in this issue en-



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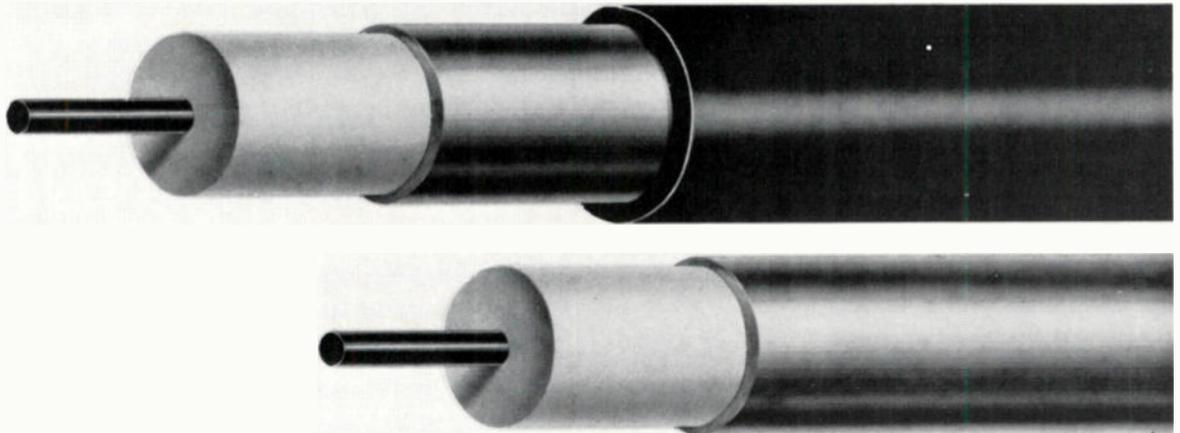
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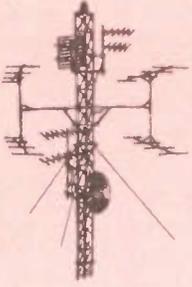
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CATV Industry PERSPECTIVE

Copyright liability for cable television companies will probably be spelled out by early 1968, if not sooner. A formula for the amount and method of payment is sure to be authored by Congress unless the Supreme Court reverses the lower courts' decision in the United Artists vs. Fortnightly case. This unlikely occurrence would, in the absence of new legislation, leave CATV free from copyright obligation.

Substantial grounds for such a reversal are in the trial record. But even if the high court accepts the case, in spite of impending congressional action, and rules favorably for cable TV interests--urgent pressure would be brought on Congress by the same broadcast interests responsible for the anti-CATV section of the bill currently in the Senate. Nothing short of a change in attitude toward cable television by the broadcast industry leaders, or an even less likely erosion of broadcasters' political influence, will ultimately exclude cable TV from copyright payments.

Principle effects of copyright liability on the operation of most cable companies will be to complicate record keeping, necessitate automatic switching equipment and raise charges to subscribers. Costs based upon gross revenue--taxes and franchise fees--will be proportionately increased. Personnel costs for program planning, coordination and the negotiation with stations, bookkeeping, and maintenance of the additional equipment will add to the burden. Copyright liability totalling 2% of gross revenues could increase the monthly service charge of a typical 1,000-tap system from \$5.00 to \$5.90. Additionally, the programs available to viewers would, in all likelihood, be diminished while their fee would necessarily be increased.

The President's advisor is predicting that certain communications services presently using the broadcast spectrum will have to be transferred to wire. Allocation of the various communications users to wire or radio spectrum is "a question of economics," according to James D. O'Connell, Director Telecommunications Management and special assistant to the President. Considerable pressure is being brought by mobile radio user organizations and by elements within the FCC to make additional UHF spectrum available for two-way radio. Channel sharing of VHF television frequencies on a case by case basis has already been tried experimentally and the two-way communications people are pressing for relief via that route, also. Ultimate transfer of television broadcast services to coaxial cables is the theoretical goal of some two-way communications users. However, such a transfer would face extreme odds and would only be possible at such time as broadcasters find ways to profit from such a rearrangement. This is at least a few years away.

A domestic satellite system, mentioned by some as a possible successor to traditional broadcast television, faces the same enormous obstacles as a mass transfer to coaxial cables. Defense of the economic empires of broadcasting, a traditional deterrent to CATV, will succeed in preventing the creation of a system which would obsolete broadcast stations, and possibly cable systems at the same time. And as long as the present commercial and educational television systems prevail, their inherent basic limitations require the extension of signals through cable television.

15

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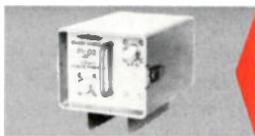
3 Modular Intermediate Bridging Amplifier B-3—Inserted in the trunkline, provides up to four distribution outputs. Variable pads

on input for flexibility of installation. Operating level is 37 dbmv on four outputs.

4 Distribution/Terminating Amplifier D-2—Single input, up to four outputs. Used at end of distribution or trunk line for additional feeder lines. Operating level is 37 dbmv on each of four outputs.

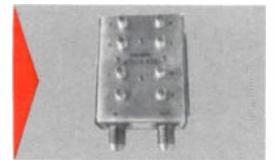
5 Low-cost Line Extender Amplifier E-6C—27-db gain, operating level is 42 dbmv.

6 Extender Amplifier E-22—Deluxe extender amplifier; plug-in module includes both amplifier and power supply. Gain is 24 db, operating level is 42 dbmv.



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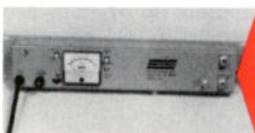
8 UHF/VHF Converter C-200—Crystal-controlled, 100% reliable solid-state. Aligned to buyer's specified channel. Mast-mounted, half the size of competitive units.



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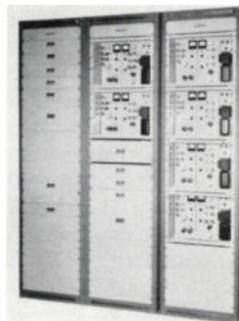
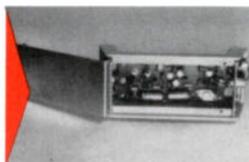
9 Remote Power Supply RPT-3120C—12-amp, weatherproof housing, includes lightning arrestor and magnetic circuit breaker.

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LETTERS

ARTICLE LEADS TO ARREST

● You will be pleased to know that the article concerning Lewis Milton Stevens which you published in a recent issue of TV COMMUNICATIONS resulted in his apprehension by FBI agents in Harlana, Kentucky. The public-spirited cooperation which you extended on this occasion resulted in a considerable saving in investigative effort, and I wanted you to know that the valuable assistance you rendered is deeply appreciated.

J. Edgar Hoover
Director
Federal Bureau of Investigation

COX ANSWERS EDITORIAL

● Thank you for sending me the advance copy of your (June TVC) editorial. As you might have expected I have a number of comments. In the first place, while many of my comments about broadcaster-CATV relations are necessarily cast in terms of protections which I think the Commission's rules afford broadcast stations, I think it should be emphasized that the purpose of the rules is not to promote any private party's financial interests, but rather to serve the public's interest in the best possible television service at the lowest possible cost. It is true that television broadcasters, by and large, do pretty well financially, though... I hear some figures quoted by CATV industry people themselves indicating a percentage of cash flow which any broadcaster would like to have.

You undertake to point out a number of comments contained in my speech at the Annenberg School of Communications which you feel to be in error. You first seem to dispute my suggestion that the position taken by the cable industry with respect to copyright legislation in the House of Representatives grew out of a desire to avoid limitation on the ability of CATV systems to originate programming and to sell commercials. I take it you don't dispute the suggestion that unrestricted ability to originate, coupled with the right to sell time to advertisers, would bring cable operators in direct competition with broadcasters for programming and for advertiser support. I also assume that you agree that Section 111 of the proposed copyright legislation was deleted as a result of CATV industry efforts... It seems clear to me that the cable industry objected both to the limitations on origination and to the prohibition against the carrying of commercial or

political advertising—certainly I never saw any indication that they would accept either of these restrictions.

While the Commission is on record as believing that the limitations on CATV origination are too restrictive—a view in which I concur—it is my understanding that cable interests have not tried for a more broadly framed right of origination, but rather objected to any restriction at all. It seems to me that this clearly implies a desire to present substantial programming, presumably largely entertainment and sports, in addition to the categories the Judiciary Committee's draft would have allowed. Such programming would either be supported through increased flat rate charges to subscribers, or per program charges to subscribers in the classic pay television form, or through the sale of advertising... I would be interested in any inside information you may have which would give this Commission and the public assurance that the cable industry does not propose, in the long run, to provide the kind of programming for which it would compete with broadcasters and that it has no desire to support such programming through the sale of advertising.

You next refer to my suggestion that the CATV forces were apparently able to eliminate Section 111 from the copyright bill. You then say that I overestimate cable operators' "intentions, ambitions, political influence and technical and economic capabilities." If you are suggesting that cable operators did not intend the elimination of Section 111, and that they were not able to exert sufficient political influence to achieve that result, I would appreciate clarification on that score. It seems to me that NCTA has indicated that it fought for and achieved exactly that result.

As far as overestimating cable operators' "intentions, ambitions, political influence and technical and economic capabilities," I have been much impressed with the expansion of cable technology and I read with interest the wonders projected for the future. I have also heard cable operators talk of the time when 85 to 90%—if not 100%—of American homes will be hooked up to cable systems as well as suggest that such wired operators can provide 30 to 40 separate television channels. I don't dream these things up—I hear about them from those active in the CATV industry.

You suggest that no cable operator is going to try to present programming which will seriously compete with the commercial television channels which he carries... Yet the fact remains that CATV operators keep adding channels, even when their existing service provides more choice than is available in

most major markets with no cable service. I presume that this is done in order to achieve a still higher percentage of subscribers, and that... the operator doesn't really worry whether what he has put on a vacant channel competes effectively with Johnny Carson or not.

You repeat, as do many other spokesmen for the CATV industry, the argument that we are occupied with fears rather than facts, and that after nearly two decades of cable operations, no one has proven a single case of economic impact. It all depends on your standards of proof. I will agree that the Commission ducked consideration of these matters in the early days when it might have developed a record in this regard. I think the *Carter Mountain* case involved proof of imminent economic impact. I think that cable operations contributed in a large way to the demise of stations in Kalispell and Fairmont. I think they have stunted or foreclosed the development of stations in other communities. In any event, we are now faced with a significantly different situation than in the mid-1950's. Cable operations were expanding at such a rate at the time we adopted our rules that by the time we had documented cases of economic impact, it might well have been too late to salvage much of our existing television service, except in the very largest markets.

It may be, as you suggest, that I and others at the Commission are misinformed about CATV. I think you are in error, however, in suggesting that this is due to bombardment by the broadcast lobby with misinformation and assumption as well as facts. By and large I have been concerned about this problem longer than the leaders in the broadcast industry, and so I am afraid that if I have the facts wrong, it is more my fault than theirs. In any event, if any of your readers are motivated by your editorial to try to correct my misinformation, I will be happy to hear from them. My doors have never been closed to representatives of the cable industry, and I talk to a number of them rather regularly. If any more would like to undertake my education, I would be glad to have any information they care to supply.

Kenneth A. Cox
Federal Communications
Commission

We appreciate your readiness to listen to cable operators, and hope that some will be motivated to visit your office or send you information about their plans and problems. Incidentally, we do not advocate a "shift from an over-the-air system to a wired system... to one which would require direct payment by all." Cable systems are dependent upon a strong, healthy broadcasting industry



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NCTA Convention



CATV Legal VIEW

BY JOHN P. COLE, Jr.

Progress and Problems

Since first participating a short decade ago in the 1958 Annual Convention of the National Community Television Association at the Mayflower Hotel in Washington, D.C., attendance for this writer has been an annual and quite pleasurable occurrence. The dramatic growth of this intriguing and still relatively young industry, with such a fantastic potential for public service, can literally be measured by the swelling attendance and emerging maturity of its annual convention. This year, as has consistently been the case, the NCTA's convention looms bigger and more interesting than ever.

If one word could capsule my own observations over this 10-year span of conventions, that single word would have to be *PROGRESS*. In fact, the by-words of the CATV industry could well be "Progress and Problems." For the industry's brief history is dominated by phenomenal growth in the face of a myriad of imposing problems.

Every annual convention of the CATV industry — and 1967 is clearly no exception — has been marked by old, new and continuing problems, many of considerable magnitude and most of the created quasi-regulatory, governmental breed. But while impeding progress, these problems have never discouraged, much less defeated, the will of the industry to maintain itself and even to prosper against its very substantial opposition.

As an industry, CATV is certainly distinguished by the wealth, power, and great influence of those forces which have literally dedicated themselves to its destruction. But for the split — some call it a mutiny — in the ranks of the broadcasting industry, and the rush of those more enlightened broadcasters to join in this exciting new communications opportunity, it is quite possible, even likely, that CATV could not have survived a unified, frontal attack by such uniquely powerful forces.

The war for survival and continued growth are by no means over. Some battles have only begun; and others must surely come. But with every additional subscriber, the CATV industry becomes better armed to engage those who would ordain its destruction for their own demonstrably selfish economic ends.

The two principal battlegrounds marking this 1967 Convention are: First, the question of CATV's ultimate responsibility for copyright royalties must be decided. Secondly, but virtually as important, is the manner of industry regulation to be applied by the Federal Communications Commission.

The Congress of the United States must soon come to grips with both of these important issues. Various subsidiary and related problems, such as state public utility regulation and the intrusions of major telephone carriers directly and indirectly into the business affairs of the industry, continue to weight heavily upon the future course of CATV. However, all of these other problems, in this observer's view, will ultimately be determined, or at least be very substantially affected, by the abilities of the CATV industry to gain fair and reasonable legislation from the Congress in the important areas of

copyright and Federal regulation. Needless to observe, this will require tremendous effort by CATV and more than just a little bit of luck.

The one major mistake which must be avoided by the industry, whatever be the cost, is that of underestimating the vast power and influence of those interests dedicated to preserving the *status quo*. Those established interests are waging what should be a losing battle; but the stakes are high and the financial rewards are great for every year which passes in which the public's appetite for more television via CATV can be retarded by application of artificial regulatory restraints.

If the tremendous power and influence of the anti-CATV forces can be doubted, one need look only to a contemporary history of events where an agency of the Federal Government, theoretically dedicated to the regulation of communications in the "public interest," has literally been led around by the nose into a position of openly protecting the economic interests of those who manifestly require no such protection. For once the membrane-thin veneer of so-called public interest reasoning is penetrated, it is clear that the "public interest" is generally synonymous with the private economic interests of the established landed gentry in the telecasting business.

These same powerful interests were able literally to compose their own CATV copyright legislation for a committee of the House of Representatives which rather than being a genuine "copyright" provision was in reality a broadcaster-protectionist measure which, if enacted, would have permanently stunted CATV development. And but for a relatively petty jurisdictional dispute between two House committees, the CATV copyright clause as written by the House committee would have almost certainly been approved by the entire House membership.

All of this merely evidences what is already obvious. Broadcasters are influential; and broadcast lobby groups, effectively organized and led, constitute the very epitome of effective, efficient political pressure

(Continued on page 98)



John P. Cole, Jr. is a member of the Bar of the District of Columbia and the States of Maryland and Georgia.

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The Freedom to Make Mistakes

It is part of a manager's responsibility to help his subordinates develop; to create the climate in which they will progress at the maximum rate. One important way we can contribute to this environment is by allowing subordinates greater *freedom to make mistakes*. This does not mean that we should advocate, or even tolerate, any sort of comedy of errors. Some mistakes can be extremely expensive; all are wasteful. But we do want creative people who can come up with new ideas, experimentation, different approaches, and unconventional solutions to conventional problems. The man who innovates is likely to make some mistakes. But isn't it more desirable to assure him a reasonable measure of freedom to spark some fresh, imaginative thinking, than to slap him down when he commits his first error, and perhaps discourage him from trying again?

Let's be practical: We can't do everything ourselves. How much better it is, then, to give our subordinates our confidence. In return for this confidence we must require strict accountability. There is a point somewhere along the line where a man can destroy the confidence you have placed in him if his errors in judgment prove him unworthy of it. But too many companies overpenalize the mistake and undercredit the fresh and new. Consider the manager who says, "Here's the way we handled our Fall promotion last year and the year before, and we'd better handle it the same way this year." What he's actually saying is, "It's the safe old way; therefore, it's the only good way."

Young people in particular have fertile minds. The things young people *do not know* are frequently valuable contributions to accomplishment. To borrow from a familiar saying, "A lot of knowledge is a dangerous thing," particularly when this store of information concerns all the reasons certain things "can't be done." CATV management today is faced with plenty of old problems, old frustrations, old fork-in-the-road decisions. Most of them are probably disposed of in some way or other. New problems lie ahead; management has never faced them before. If you relegate a man to his own little box of conformity, and forbid him because of fear of an error to move outside that box, there is little chance that he will bring anything new to bear on these problems.

Maybe one of your system's personnel has an exciting new idea. Maybe he's itching to take a crack at putting it into practice. Great. If you can, give him the chance. But what if the idea doesn't work out? If there's a reprimand, what happens? One manager was asked whether or not he permitted his subordinates the freedom to make mistakes. He replied: "The people in my operation don't make mistakes. They come up with some pretty harebrained ideas, some of them simply not workable. But when they do, we don't kill their creativity by telling them they've made a mistake. Rather, they are advised tactfully to try again and use a different approach."

"And it's a funny thing," he added as an afterthought. "Some of those ideas we once thought were a little far out have now become part of our standard operating procedure. Certainly, our employees have the freedom to make mistakes, how else would the system progress?" □



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Fortnightly Loses Appeal

Scarcely a month after the CATV industry claimed victory in the House copyright battle, the U.S. Second Circuit Court of Appeals handed down its decision on the celebrated copyright case involving Fortnightly Corp. and United Artists Television, Inc. The decision which came almost a year after the initial district court ruling, upheld Judge William B. Herlands' ruling that CATV is fully liable for copyright payments. Termed by attorneys as a "landmark decision by an appeals court," the 35-page ruling specifically made Fortnightly Corp. liable for picking up and relaying more than 1,000 United Artists feature films.

Only a month before, the industry had gained a "breathing spell," when the House of Representatives sliced out the section on CATV before approving the House version

of the copyright revision bill. The limited victory, which came by way of an overwhelming 279-29 vote, was more than likely the result of a strong debate on the House floor between the Judiciary Committee and the House Commerce Committee. The action gave rise to a general feeling that less stringent copyright provisions would be worked out by the Senate.

In agreeing with the district court ruling, the appeals court found that Fortnightly's CATV operations in Clarksburg and Fairmont, W. Va. had no "implied license" to retransmit United Artists' programs by cable, thereby constituting "unlicensed public performance." It added that, "A fundamental purpose of the exclusive right of public performance is to protect copyright proprietors against dilution of the market for

their works." Noting Fortnightly's argument that picking up a signal simply extended and simultaneously reproduced it, the higher court said that "The result produced by the defendant's systems constitutes a public performance, and . . . the technical means by which the result is produced are irrelevant to this issue." Fortnightly has three months from the date of the latest ruling in which to seek appeal.

Although the decision would indicate that the industry had "won the battle, but lost the war," the appeals court ruling was not unexpected. An appeal to the U.S. Supreme Court has long been envisioned by industry leaders, although the opinion, if upheld could economically effect the entire CATV industry. It is with the Senate, which is still considering its version of copyright legislation, that most operators' hopes rest. There is still the possibility, however, that the House Commerce Committee, headed by Rep. Harley Staggers (D-W. Va.), will work out a compromise, as promised when the controversial CATV section was stripped from the House bill. At any rate, it is indicative that CATV's most promising hope for equitable relief lies with the legislature.

AMST Charged With Ex Parte

Former NCTA general counsel Robert D. L'Heureux has filed a brief at the Federal Communications Commission which alleges *ex parte* contacts by the Association of Maximum Service Telecasters — a powerful broadcast industry lobbying group. The charges were filed on the basis of reports that several AMST members had visited Commissioners Hyde, Cox, Lee and Johnson and complained that the CATV rules are being "eroded" through the granting of waivers to CATV systems to bring distant signals into major markets. Filed on behalf of Multivision Northwest Inc. of Dalton, Georgia, the brief charged the AMST officials with "unlawful *ex parte* representation" and argued

that unless corrective steps are taken, "these efforts to influence unlawfully the thinking processes and the independence of the Commission will continue unabated and will make a mockery of the quasi-judicial function of the Commission."

Multivision opined that "It is inconceivable that AMST and its officers, officials and members who have succeeded in obtaining crippling relations against the CATV industry through the Second Report and Order should not abide now by the usual administrative process and allow the Commission, in its unfettered discretion, to decide adjudicative cases upon the merits." It further charged that ". . . arguments against the waivers to CATV

systems by their very nature (are) equally applicable to adjudicative cases involving CATV and to cases that (are) not of an adjudicative nature," and stated that "Such arguments, if presented at all, should have been presented in a petition for rulemaking to which interested CATV operators could have replied and in which reply comments they could have stated the arguments against the adoption of whatever rule AMST was advocating, or AMST should have asked to be made a party to restricted adjudicative proceedings now pending."

L'Heureux suggested that such situations could be remedied if all written *ex parte* contacts were made public and put in a public file, and if the Commission would specifically bring them to the at-

tention of the parties now involved in CATV cases. Any unauthorized oral *ex parte* presentation should also be publicized, complete with names of contacts, time and circumstances in which the presentations are made, along with all other relevant detail. The filing further asked that "AMST, its officers or members, or any person making the unauthorized presentation who is a party to a restricted proceeding involving a CATV system be disqualified from further participation in that proceeding or that additional sanctions be imposed as the public interest requires."

AMST executive director Lester W. Lindow promptly issued a statement saying that "the charges are wholly without foundation." He claimed that the "meetings with Commissioners were for the purpose of discussing basic CATV policy questions. We made it clear at the outset to each Commissioner that our discussions were intended to be limited to questions of overall policy and that we did not propose to discuss the merits of any pending case and we did not do so." He added that "a full response to the charges" would be filed immediately, and that AMST would clearly show that the meetings were "fully consistent with the letter and spirit of the Commission's rules."

The AMST group — composed of Jack Harris; C. Wrede Petersmeyer; Laurence E. Richardson; Ernest W. Jennes and Lindow — reportedly left with the Commissioners at least two papers expressing concern over the recent distant-signal rule waivers and noting that the waivers were being granted before any of the cases in the hearing had been completed. This "erosion," one paper said, "must be curbed, or the damage to existing and future free broadcasting will be beyond the power of the Commission, or even Congress, to repair."

Johnson Calls For New CATV Policies

FCC Commissioner Nicholas Johnson, in a recent speech before the Iowa Association of Broadcasters' convention in Waterloo, Iowa, reiterated his increasingly strong views that the Commission needs to rethink its broad policies,

and he specifically cited CATV as one of the major fields for reconsideration. Noting the "The Commission's CATV rules, whatever their effect, were at least intended to aid in the stable integration of cable television with the existing radio and television services, Johnson pointed out that CATV is one of the "communications issues presently before our nation that affect you, and all other Americans." He stressed that "Cable television could become not just an entertainment medium but the technological network for the home communications center of the future. What ground rules ought there to be for ownership, pricing, and programming?" In arguing for rethinking broad policy issues, Johnson said that, "The UHF system of the 1970's could have been yours in the 1950's—and the lives of 200 million Americans, and the profit and loss statements of some of you, are poorer as a result. We don't even have enough information to know what we are doing to cable television today, but there is no reason to believe our day-to-day decisions are producing any wiser results than during the early days of UHF."

New England Association Meets

Operators attending the New England CATV Association meeting in Pittsfield, Massachusetts, elected Richard Blais of Berlin, New Hampshire to serve as president for the next year. Other officers are Edward Robinson, Springfield, Vermont, vice president and Barry Stigers, Pittsfield, Massachusetts, secretary-treasurer. Speakers included NCTA directors Albert Ricci and Albin Malin, who told the audience that they were encouraged by the apparent reluctance of Congress to impose "crippling restrictions" on CATV operations. George Sisson, along with Ricci, gave reports on association campaigns against moves to place CATV systems under state regulation in the various New England states, and members voted to "redouble resistance to proposed government restrictions that would impede development of the cable television industry."

NCTA Board Recommends Name Change to "Cable"

In a major decision late in May, the NCTA board of directors recommended that the association's title be changed to "National Cable Television Association." The decision, which was reached at the Lake Tahoe directors' meeting, follows a suggestion made more than a year ago by Denver broker Bill Daniels. The proposed name change was a subject of some interest before and during last year's convention, but was shelved by NCTA leadership at that time. The modified name, which would preserve the initials "NCTA," is seen as more descriptive of the business it represents.

Illinois House Studies CATV Bill

Currently before the Illinois House of Representatives is a bill which could considerably limit the franchising powers of that state's municipalities. Introduced in the State Municipality Committee by Rep. Robert G. Day (R-Peoria), the bill defines a CATV system as "any facility which is constructed in whole or in part in, on, under or over any highway or other public place and which is operated to perform for hire the service of receiving and amplifying the signals broadcast by one or more television stations and redistributing such signals by wire, cable, or other means to members of the public who subscribe . . ." Exempted from the bill are systems which serve fewer than fifty subscribers or which serve "only the residents of one or more apartment dwellings under common ownership, control or management, and commercial establishments located on the premises of such dwellings."

The original bill was reportedly aimed at empowering "the corporate authorities of each municipality" to "license, franchise, tax and regulate the business of operating a community antenna television system. . ." However, an amendment to the bill provides that "The municipality shall not regulate rates or conditions of service in those instances where the Illinois Commerce Commission has exercised jurisdiction as to

the rates and conditions of service." Therefore, while the bill does empower the cities — and not the Commission — with the right to franchise, it also insures future Commerce Commission's precedence over local authority.

Illinois operators report that they were not invited to participate in the drawing up of the bill, and expressed concern over the ambiguous wording of the Commerce Commission amendment. Another amendment, which was submitted by representatives of Illinois Bell Telephone Co. provides for the telco's exemption from municipal taxes on profits from leaseback operations. It does not exempt the leaseback operator.

Senate Passes Public Broadcasting Bill

The Public Broadcasting Act of 1967, by a substantial majority, has passed the scrutiny of Senate legislators and moved on to face the House. The bill, which is aimed at establishing an organization for distributing quantities of Federal aid to educational television, was passed by a voice vote with virtually no opposition. The bill also contained another minor change: The original bill specifically noted that the corporation could not own radio or television stations. The new bill retains the clause, but will also forbid ownership of CATV systems.

The bill sets up a Corporation for Public Broadcasting (changed from the original Corporation for Public Television) and authorizes it to receive an initial \$9 million of Federal money for network operations and local and national programming. The Corporation would consist of fifteen men, nine appointed by the President and the rest elected by those nine. The bill also authorizes \$10,500,000 for the Department of Health, Education and Welfare (HEW) to distribute to ETV stations for construction and improvement. It sets aside \$500,000 for a thorough study of instructional (classroom) television.

Under the bill, CATV's service capacity is limited, for although CATV systems will be allowed to carry public television programming, none of the HEW grants can go to schools who might want

equipment to put educational shows over a free CATV channel. However, the section authorizing the \$500,000 grant to instructional television states that, "The secretary of health, education, and welfare is authorized to conduct, directly or by contract, and in consultation with other interested Federal agencies, a comprehensive study of instructional television and radio (including broadcast, closed circuit, community antenna television, and instructional television fixed services and two-way communication of data links and computers) and their relationship to each other and to instructional materials . . . and such other aspects thereof as may be of assistance in determining what Federal aid should be provided for instructional radio and television and the form that aid should take, and which may aid communities, institutions, or agencies in determining whether and to what extent such activities should be used."

Ford Emphasizes CATV Potential

Before the bill left the Senate Communications Subcommittee, NCTA president Frederick W. Ford had made a powerful appeal that the possibilities of CATV be considered. In a letter to Senator John O. Pastore (D-R.I.), chairman of the subcommittee, Ford pointed out that Robert Beisswenger, president of The Jerrold Corp. and Irving Kahn, president of TelePrompTer Corp., had both testified at the subcommittee's hearing. Ford then revealed the results of an NCTA survey which indicates the extent of CATV industry promotion of ETV.

For the survey, NCTA sent out ETV questionnaires to 1,800 operating CATV systems. The association also went through FCC records to find out information about CATV systems carrying ETV signals, and discovered that there are at least 719 CATV systems in 45 states which pick up the signals of 94 educational TV stations. Of the 719 total, 641 carry one ETV station, 72 carry two ETV outlets, five carry three ETV signals, and one carries a total of four ETV signals. 73.4 percent of all ETV stations are carried by one or more systems.

Ford also pointed out that "swift-

ly, quietly, and without subsidy of any kind, the cable television industry has become a major factor in the distribution of educational programming, perhaps even more significant, there are clear signs that it is becoming an important source of educational material." He noted that "where there is no local educational television station, CATV is stepping in to fill the breach." The facts, he concluded, indicate two things: "First, that the cable operator undertakes those public service projects to which his business is technologically adaptable; and second, that beyond any doubt CATV has proved its ability to make a major contribution to the distribution of educational programming."

NCTA, NAB Request Filing Extension

Both the National Community Television Association and the National Association of Broadcasters have requested delays in their filing dates on the FCC's inquiry into CATV ownership. The NCTA's filing pointed out the complex nature of the Commission inquiry in "seeking information on the present ownership and probable future ownership and control of the CATV industry, including questions as to the propriety and desirability of applying Commission rules on multiple ownership, duopoly, concentration of control and diversification of mass media, the continued filing of CATV ownership information reports," and other matters. The job of preparing the filing is too great to be processed rapidly, the NCTA said, noting that because CATV systems are widespread, much of the information would have to be gathered at the annual NCTA convention.

NAB suggested that the deadline should be extended to enable the submission of "meaningful information on the complex questions raised." General Counsel Douglas A. Anello said the FCC, in announcing the inquiry, "indicated an interest in, or an uneasiness about, the development of CATV systems as a significant force in our national communications policy . . . CATV

(Continued on Next News Page)

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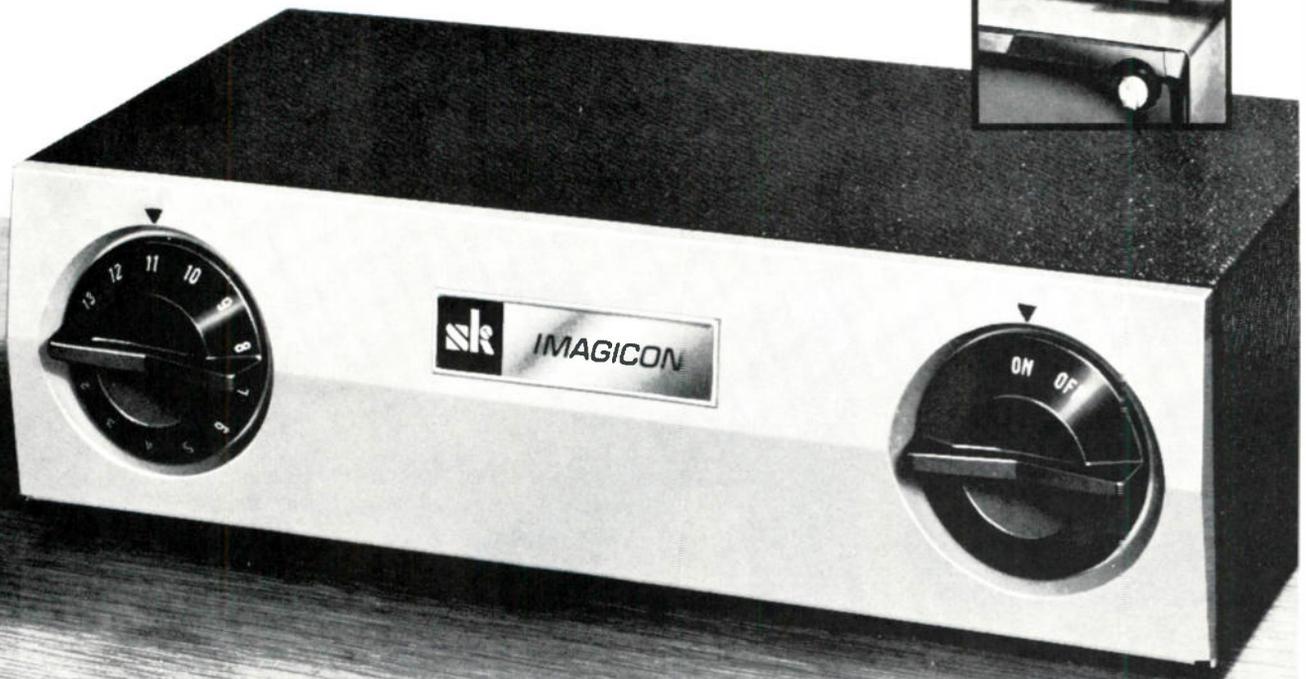
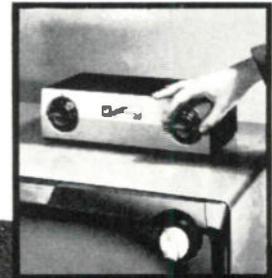
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has undergone a marked change in its pattern of growth and development . . . We have witnessed the assertion of jurisdiction over all CATV systems by the Commission . . . We have observed an increasing trend toward program originations, which indicates that CATV can no longer be considered a passive receptive device; and finally, the emergence of big-city CATV with the importation of signals over vast distances as the dominant force in the industry rather than the historic concept of improved service in rural areas."

"Accordingly," the filing concluded "the present inquiry has been greatly expanded, and will include such matters as the applicability of the present rules and policies relating to multiple ownership, duopoly, concentration of control, and diversification of mass media and whether rules and policies should be adopted regarding ownership and control of CATV systems. Of pertinence also is the question of program originations and its relationship to over-all diversification problems."

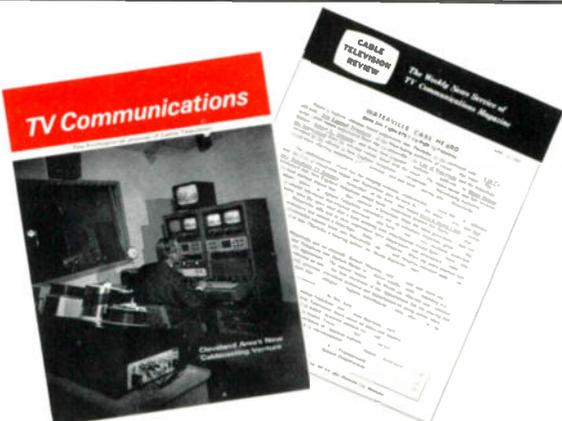
NAB Wants in Telco Hearing

National Association of Broadcasters attorneys Douglas A. Anello and Kenneth W. Gross have filed with the FCC for permission to intervene in the consolidated CATV/telco tariff hearings. Pointing out that the initial question to be decided is whether local, branch or terminal lines not exceeding 10 miles in length should be exempt, the filing noted that "The ultimate disposition of this question is closely entwined with over-all Commission CATV policy for at the root of the proceeding lies the determination of who will have the ultimate control over CATV expansion and under what circumstances will such expansion occur . . . The nature of the outcome of this proceeding is such that Commission regulation of CATV could be vitiated or at least seriously compromised in this area . . . in which the broadcasting industry has a direct, substantial and continuing concern."

Noting that no party to the proceeding purports to speak for the broadcasting industry, they said

NAB can "assist the Commission in the determination of this issue because of the research it has undertaken and the information it has obtained . . . throughout the formulation of CATV policy." "Information not likely to be otherwise brought to the Commission's attention will be presented," they said. "The NAB has no desire whatever to broaden the issues, but rather is seeking to provide further information within the context of the proceedings."

An objection to the NAB intervention request was immediately filed by United Utilities Inc., one of the parties to the giant hearing, which also includes tariff studies of the associated Bell System companies, California Water and Telephone Co., and General Telephone Corp. United's petition pointed out that the NAB filing was late — and that no justification was given for the lateness, that NAB interests can't possibly be affected by the outcome of the hearing, and that the NAB has not shown the Commission how it could be of any help in the hearing. The National Com-



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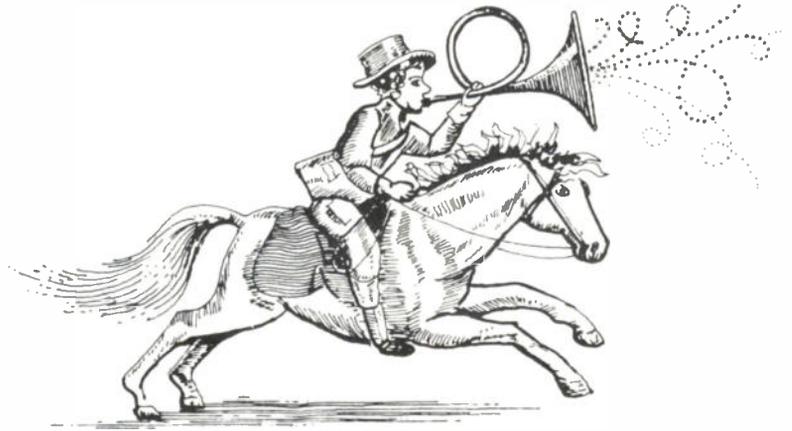
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munity Television Association has also opposed the NAB petition, on the basis that the intervention would only serve to enlarge the issues needlessly and confuse the problems.

NAB Renews Objections To ATR Proposals

The National Association of Broadcasters has renewed its objections to a CATV system proposed in Texas by American Television Relay, Inc., and again has asked the Federal Communications Commission to consolidate ATR's various applications for a full hearing. NAB has opposed the 22-hop microwave system proposed by ATR to relay signals of four independent Los Angeles television stations on the grounds that it poses "a direct potential threat to all stations through whose service areas. . . (it) might pass." Noting that the system would meander through Texas and pass near or through numerous communities with existing CATV systems, NAB said FCC approval could result in a Pay TV network interconnecting the Southwest, Far West, most of the Midwest and part of the South. NAB's renewed opposition was contained in reply comments filed by Douglas A. Anello, NAB general counsel, and Kenneth W. Gross, NAB attorney, to ATR's request that the FCC dismiss NAB's original filing.

The NAB counsel said ATR's pleadings "address themselves mainly to procedural matters and do not touch on the substantive material" set forth by NAB in its initial (April 17) document. "ATR cannot lightly dismiss the points raised concerning the impact of such an undertaking upon effective CATV regulation or the real possibility of a network for pay television operation which would be established should the applications be granted," they said. Stating that ATR "has not demonstrated" that it is entitled to approval of its applications, the NAB counsel renewed the Association's request that "the Commission consolidate the above-captioned applications for a full evidentiary hearing to determine the broad public interest considerations raised."



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Commission Clarifies "Drop" Rule

The FCC has decided to send to all microwave licensees that serve cable systems a letter designed to clarify Commission policy on authorizing CATV service at relay points. Noting that each "fixed video" authorization designed to feed CATV systems has the word "drop" after it on the FCC approval form, the FCC stated, that "since it has been brought to the Commission's attention that such abbreviated terminology may be subject to misinterpretation," such authorizations in the future will spell out that "delivery to subscribers is authorized only at points designated as drop." The Commission added that "If any service is being operated so as to provide service contrary to these limitations as indicated on its authorization, appropriate applica-

tion to cover such service should be promptly filed. Provided application is filed within 30 days of the date of this letter, such service may continue to be supplied on an interim basis and without prejudice to any action the Commission may take on the application. Otherwise, the service is unauthorized and should be immediately terminated."

Reinsch Predicts CATV Progress

Cox Broadcasting Corp. president J. Leonard Reinsch, speaking before the May meeting of the Association of Electronic Manufacturers-Eastern Division, discussed current communication trends and business possibilities in CATV. Indicating that there is a "bright and broadening future" for CATV equipment manufacturers and operators, Reinsch described how home television receivers may

soon complete any number of transactions, from banking to shopping to bill paying.

Stating his conviction that "The next five years will present more revolutionary developments in the communications industry than we have seen in all previous history," Reinsch noted that "One of the fastest growth areas in our field today is CATV. . . In the last five years CATV has developed to the point where it is a full grown member of the electronic communications family. . . In the last 4 years alone the number of CATV homes in this country has doubled, from just under 1 million in 1963 to over 2 million today. The number of systems has grown from 1,000 in 1963 to over 1,800 today." He added that "A noticeable shift in ownership indicated by the entry of large national firms into the CATV business is another feature of the trends in the industry."

Reinsch challenged the audience to consider "both the problems and the opportunities available in CATV. Speculating on the possible future of the industry, he stated that "It is not considered 'stargazing' in our industry today to speak of the time, not too distant, when the home television receiver . . . will be a communications terminal capable of sending as well as receiving intelligence."



New officers and directors of the West Virginia and Mid-Atlantic Associations are (l to r): Boots Cousins, secretary; John Rannels, director; Jim Vickers, director; Bill Cadle, director; William Adler, president; John Lewis, director; Carl Gainer, past president; Sanford Randolph, director and William Turner, vice president.

W. Va., Mid-Atlantic Meet

Twenty-nine members and guests of the West Virginia and Mid-Atlantic CATV Associations met at the Heart O'Town Motor Inn, Charleston, W. Va. for the annual business meeting and election of officers. Appearing on the program were Robert D L'Heureux of the law firm of Smith, Pepper, Shack and L'Heureux; Jack Cole of the

law firm of Cole and Zylstra and Tom Whyte, general counsel for the associations. New officers for the association are: M. William Adler, Charleston, W. Va., president; William Turner, Welch, W. Va., vice president and Bert Cousins, Fairmont, W. Va., secretary. The fall meeting of the associations is scheduled to be held at the Greenbrier Hotel in White Sulphur Springs, W. Va.

FCC Proposes local Carriage Changes

In an attempt to foster equality of competitive opportunity between television stations in the same market, and particularly to give UHF stations a better competitive crack at their VHF big brothers, the FCC has issued a notice of proposed rule making to ease the section of its CATV rules having to do with local carriage. Under the new plan, a system in a community within the predicted Grade B contours of any television station in an American Research Bureau market area would be allowed to carry the signals of any other station assigned to any of the communities within that ARB market area.

In essence, the proposal is designed to allow a CATV system to



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It puts an end to ghost images and beats caused by direct pick-up in TV receivers. The heavy shielding used in FOCUS 12 offers better than 100 db isolation against outside signals.

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FOCUS 12 the ghost breaker by **ITC**

carry an area UHF signal even if it isn't as strong a signal as the area VHF's have, because the VHF's therefore reach the CATV subscribers while the UHF suffers neglect because the CATV system can't carry it. The Commission notice of its proposal said it believes "The proposal would lessen the technological disadvantages now incident to UHF stations, thereby placing on competitive footing all stations in a given market, and would ease the administrative burden involved in considering waiver requests."

California Operators Hold Spring Meeting

The California Community Television Association, meeting at the Senator Hotel in Sacramento, discussed telephone company relations and better rapport with state legislators. A luncheon meeting was held as a means of better acquainting the legislators with the cable television industry. Governor Ronald Reagan appeared briefly to greet delegates. He emphasized that the industry had "barely scratched the surface" in its growth and potential service, particularly in the area of educational television. During the luncheon, it was pointed out that since 1963, the California industry has grown from 100,000 subscribers to 1,200,000. In past months, it has been confronted with the problems of a burgeoning industry, not the least of which are the current attempts to legislate control by the Public Utilities Commission.

A major resolution was passed which authorized a complete study of telco pole rearrangement charges and other costs. Purpose of the discussion was to determine equitable costs for such jobs as placement of down guys, guard arms and anchors. Such charges by telcos have tripled, even quadrupled in the past six months. Underlying this action is a move to achieve better coordination and more equitable relationships with telcos in all areas. The major telco problems plaguing California operators have been the arbitrary establishment of rearrangement and other costs; confusion as to exactly what guidelines to follow during system construc-

tion; and the excess time usually involved in completing negotiations with telcos (in one case, 21 months to get a transfer contract approved).

Officers elected at the meeting were: W. A. "Bill" Hargan, Salinas, president; A.C.R. Stone, Los Angeles, vice president; Kester K. Krieg, Santa Cruz, vice president-technical; Keith Burcham, Palm Desert, secretary; and William L. McPheeters, Carmel, treasurer.

Kentucky Association Meets

The Kentucky Association of Community Antenna Television, meeting at the Continental Inn in Lexington, Ky., heard Washington attorney Robert D. L'Heureux predict that current copyright law revisions should be resolved within a year, and that after the new copyright law goes into effect, certain regulations will probably be relaxed. Attorney Lewis Cohen discussed the current status of CATV actions now being brought before the FCC, and Frankfort attorney Ben Fowler described the efforts of that city's CATV firms to continue to present eight different channels of television, over the opposition of the Lexington television stations. Banquet speaker was Jack Maher, a member of the FCC CATV Task Force. Newly-elected officers are: Tom Gullett, Winchester, president; Howard Norrell, Frankfort, 1st vice president; Everett Akers, Martin, 2nd vice president and Joe Simmons, Glasgow, secretary and treasurer.

Shapp Re-enters CATV

Milton J. Shapp of Philadelphia, Pa. has re-entered the CATV business. In a joint announcement with Joseph L. Lecce of Williamsport, Pa. Shapp recently announced that the Citizen's Cable (Citca) Corp., of which they are both major stockholders, has purchased the Williamsport Television Cable Co. from National General Corp. of California. The transaction is the first CATV venture for Shapp since he and his wife sold their interest in The Jerrold Corp. last July.

In announcing the purchase, Shapp stated that he is "glad to be back in the CATV business, especially in Williamsport. I instal-

led the old Williamsport Jerrold Cable Co. in 1952 and operated this company until 1955. Along with Mr. Lecce and my other new associates, including Grit Publishing Co., I am confident the operation of CATV in Williamsport can be improved and television enjoyment increased for all residents of this city."

UHF Challenges CATV Operators

The UHF television field, martyr of anti-CATV broadcasters, has received a vote of confidence from at least two prominent CATV system operators. Robert H. Beisswenger, president of The Jerrold Corp., has announced the company's plans to apply for UHF Channel 23 in Philadelphia, if that channel is made available to new applicants. Beisswenger reported that Jerrold has already filed a letter with the Federal Communications Commission, urging that new applications be considered, since the holder of a construction permit granted five years ago has never constructed a station. "The channel has been lying fallow . . . to the detriment of the interests of the residents of Philadelphia," Jerrold said. The corporation, which now has no broadcast interests, stated that it is "vitaly concerned with and optimistic about the future development of UHF in Philadelphia." It added that "The company's strong interest, financial resources and long familiarity with the community would enable it to construct a station with maximum facilities, to afford attractive programming, to sustain operating expenses for a considerable time . . . and to respond to local needs and circumstances."

The second announcement of UHF television plans came from Leon N. Papernow, president of Community Cablecasting Corp., Pacific Palisades, Calif., has announced plans to enter the field in a joint venture with Jack F. Matranga, president of Camellia City Telecasters, Inc., which holds an FCC permit to serve the 27th-ranked Sacramento-Stockton, Calif. market. An application for consent to the transfer of control has been filed with the FCC. Under the terms



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of the agreement. CCC will initially acquire 60% of Camellia with an option on an additional 15% interest. Matranga will continue as president of the firm. The new station, which will cost an estimated \$1.5 million to construct, will be affiliated with the recently-formed United Network. Targeted air date is December, 1967. An application for consent to the transfer of control has been filed with the FCC. In commenting on the proposed venture, Papernow noted that, "With this substantial investment in a new broadcasting facility we affirm our faith in the future of both UHF television and CATV. Scores of prominent broadcasters have recently entered the CATV field. We are happy to reverse that trend with what we think is the first instance in which a CATV company has taken a major position in a top market UHF venture."

Ampex Offers Videotape School

Ampex Corp. has announced that it is now offering a closed circuit television school offering instruction in all phases of CCTV and videotape recording. The school

has been established by Ampex at its consumer and educational products division in Elk Grove Village, Illinois. John H. Trux, division marketing manager, said the new Ampex Video Institute will train both users of Ampex equipment and dealer sales and service personnel. Persons not presently using video equipment may also enroll. Classes will be conducted in a newly completed section of the company plant, which includes fully-equipped CCTV studios, lecture halls and service training rooms. Tuition is \$100. Hotel accommodations and meals are covered by the tuition. For more information about the school contact Charles E. Pipher, Ampex Corporation, 2201 Lunt Avenue, Elk Grove Village, Illinois.

Viking Becomes Vikoa Inc.

Viking Industries Inc., Hoboken, New Jersey-based manufacturer of cable and electronic equipment for the CATV industry, has changed its name to Vikoa Incorporated. The new name was recommended by the corporation's board of directors and approved at the annual stockholders meeting. In announcing the name change, executive

vice president Ted Baum said, "We changed our name to avoid confusion with other companies using the name 'Viking'."

Connecticut PUC Has Franchise Problems

The Public Utilities Commission of Connecticut, which last March granted a series of franchises to cover specific areas of the state, has issued a show cause order to one of the franchised firms. The Commission has ordered The Outlet/BT Co. of Providence, R.I. to show cause "why its award of a CATV certificate should not be rescinded, revoked or altered." The franchise in question covers areas of Groton, Stonington, Ledyard and North Stonington, Conn. — a populus of approximately 60,000.

The PUC stated that examination of record had revealed that The Outlet Co. "has a substantial interest in a TV broadcasting facility whose signals would compete in the area which it has been granted a franchise. Accordingly, it appears that (the franchise) award is inconsistent with the principles . . ." expressed in a PUC opinion that "the public interest is best served when news and entertainment media are subject to the varied and vigorous challenges of a truly competitive communications market place. Any substantial interest in a television broadcasting facility whose signals would compete in the franchised CATV area should be eliminated from consideration for a CATV franchise."

Denver Area Franchise Goes to Daniels Group

The first cable system franchise in the greater Denver, Colorado area was granted recently to Mountain States Video, Inc. — a Denver-based firm headed by CATV broker/operator Bill Daniels. The 15-year permit was unanimously approved by the county commissioners of Jefferson County, and provides for cable service in unincorporated areas of that Colorado county. Directors of Mountain States Video are, in addition to Daniels, Robert M. Clark, Shelby F. Harper, Edward Hirshfeld, Benjamin F. Stapleton, and Robert L. Stearns. □

President's Cable System Rebuilt

Installation of a new 300-ft. tower and the rebuilding of the five channel LBJ Ranch cable system have recently been completed. President Lyndon Johnson, his family, guests and staff will enjoy much improved reception delivered by a two-mile buried trunkline to the approximately 20 outlets at the Johnson residence, guest houses, homes of ranch hands and other buildings.

The original cable system at the LBJ Ranch was built four years ago using Entron amplifiers and a 100-ft. tower. Under the direction of the White House Communications Agency, the extensive redesign and rebuild incorporated a new 8 x 12 ft. head-end building and 300 ft. tower built by Fort Worth Tower

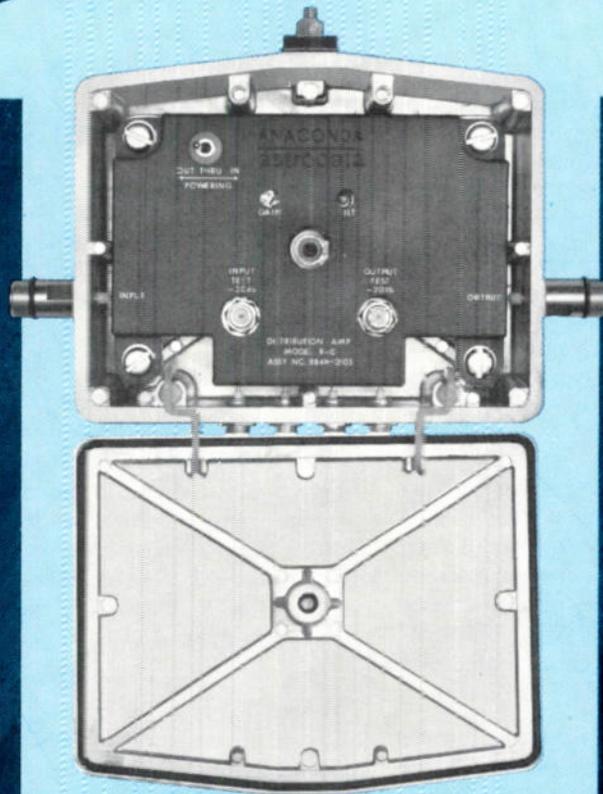
Company. TACO single channel quad-stack yagis are used for the four VHF channels and a TACO parabolic picks up the UHF station. Five Entron mainline amplifiers are installed in the trunkline. The television tower also mounts a base station antenna for the Motorola FM two-way radio system used on the ranch.

Channels carried on the President's private system are KTBC Channel 7 and KHFI Channel 42 Austin; KENS Channel 5, KLRN Channel 9 and KONO Channel 12 San Antonio.

It is no coincidence that the President insists on good television reception at the ranch, since he is well aware of the advantages of CATV. Texas Broadcasting Corp., formerly LBJ Co., owns 50% of the Austin, Texas system which serves 12,000 subscribers.

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TV Communications

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Systems

Alex E. Dworkin has been appointed vice president and general manager of North West Community Video, Ltd. of North Vancouver, B.C., Canada. Dworkin was formerly president and chief executive of Jerrold Electronics (Canada) Ltd.

J. Fred Weber has joined American Cable Television, Inc. as promotion director. Weber formerly was vice president-sales for American Cablevision Co. of Beverly Hills, Calif.

Thomas R. Winter has been named director of marketing for Manhattan Cable TV Services. Winter was formerly general sales manager for WGNV, Newburgh, New York.

Lloyd Wetenkamp has been named manager for the R&B Cable TV Inc. system serving Cody and Powell, Wyoming. Wetenkamp, who formerly served as manager of the Worland, Wyoming, system, replaces E. T. "Brick" Melbraaten.

Russell G. Bambarger has been appointed manager-foreman of Steel Valley Cablevision, Inc., the Centre Video Corp. subsidiary which will operate in Glassport, Port Vue, Dravosburg, Liberty, Lincoln, Elizabeth and West Elizabeth, Pa. Bambarger has been associated with Centre Video since 1962.

Donald W. Phillips has been named manager of the recently-acquired GT&E cable system in Charleston, Ill. Phillips was formerly division sales manager in Columbia, Mo. for General Telephone of Missouri.

Daniel K. McAlister has joined the staff of the Jefferson Standard Broadcasting Co. as assistant to Robert H. Koonts. McAlister was formerly a member of the Charlotte, North Carolina law firm of Kennedy, Covington, Lodbell and Hickman.

Larry Gunn has joined Belmont (Calif.) Cable Television as an engineer. He was formerly with Cable TV of Santa Barbara.

Edward Blaschka has been re-elected president of Paxton (Ill.) Community Antenna System Association.

Suppliers

Edward J. Regan, former editor of *Electronic Engineer*, has joined Anaconda Astrodata Co., Anaheim, Calif. as general manager. Regan had been in the field of engineering publications for 17 years.

George Green, vice president-marketing for Spencer-Kennedy Laboratories, Inc. has announced his resignation due to personal reasons. Robert Brooks has been appointed vice president-sales for the company. Brooks began his business career at SKL in the capacity of chief system engineer. He has previously served as CATV marketing manager for Anaconda Astrodata Co.

Ben H. Tongue, president of Blonder-Tongue Laboratories, Newark, N.J. will assume the position of chief executive officer. Tongue, who has been closely associated with the engineering department, will direct the activities of all major departments. Jerry I. Cohn has been named national sales manager for the

company. He was formerly product manager-distributor products. Ernest Sission and Graham Sisson have been named eastern and western regional sales managers, respectively. Irving Solotoff has been named assistant sales manager.

Richard H. Whitehurst has been named assistant vice president-product sales at Ameco, Inc. Whitehurst moves up from manager of manufacturing.

The Pete Collins Company has moved into new offices, located at 835 Delaware St., Denver, Colorado, phone (303) 534-5267.

Electra-Tronics, Inc. of Sarasota, Florida has announced the formation of a new Automated CATV Products division, which will offer both products and promotional services.

Gene Francis has been named distributor sales manager for Rohn Manufacturing Co. Francis is responsible for traveling with all factory sales personnel and manufacturer's representatives on distributor items. J. M. (Mike) Fleissner has been named factory distributor customer service coordinator. Paul Bradley has been named industrial field representative, working out of Birmingham, Ala.

Mary White has joined Ameco Cable, Inc. as sales administrator. She was formerly with Spencer-Kennedy Laboratories, Inc.

Professional

J. W. Loader of Victoria, British Columbia is the newly-elected president of the National Community Antenna Television Association of Canada. Other NCATA officers are: Omer Girard, Magog, Quebec, vice president; L. Langlais, Asbestos, Quebec, treasurer and K. J. Easton, Toronto, Ontario, secretary. Directors are: L. Gartell, Penticton, B.C.; Syd Welsh, Vancouver, B.C.; I. Switzer, Lethbridge, Alberta; C. Boucher, Port Arthur, Ontario; S. Cassin, St. Thomas, Ontario; N. Currie, Hamilton, Ontario; H. Young, Peterborough, On-



Fred Weber



Richard Whitehurst



Mary White



George Green



Robert Brooks



Casey McCulley

rario; G. Allard, Montreal, Quebec; J. Beauchemin, Quebec City, Quebec; J. Delliveau, Cap De La Madeleine, Quebec and M. Cliche, Ste. Georges De Beause, Quebec.

Casey McCulley and Robert D. Lee have joined the staff of TV COMMUNICATIONS and CABLE TELEVISION REVIEW. McCulley, who assumes the position of art director for the publications, comes to Communications Publishing Corp. from KOCO-TV, Oklahoma City, where he held the position of assistant art director and illustrator. He previously served as production manager for a large printing firm in the city. Lee, who has been named advertising production coordinator, was formerly employed as public relations director for the Pharmaceutical Corporation of America, Inc. Prior to that, he held advertising posts with newspapers in several Oklahoma communities.

Richard Blais of Berlin, New Hampshire has been named president of the New England CATV Association. Other newly-elected officers are: Edward Robinson, Springfield, Vermont, vice president and Barry Stigers, Pittsfield, Massachusetts, secretary-treasurer.

W. A. "Bill" Hargan of Salinas, Calif. has been elected president of the California Community Television Association for the forthcoming year. Other officers include: A. C. R. Stone, Los Angeles, vice president; Kester K. Krieg, Santa Cruz, vice president-technical; Keith Burcham, Palm Desert, secretary, and William L. McPheeters, Carmel, treasurer.

M. William Adler of Charleston, West Virginia will head the West Virginia and Mid-Atlantic CATV Associations for 1967-68. Other new officers include: William Turner, Welch, W.Va., vice president and Bert Cousins, Fairmont, W.Va., secretary.

Tom Gullett of Winchester, Kentucky will serve as president of the Kentucky Association of Community Anten-

na Television for the next year. He will be assisted by 1st vice president Howard Norrell, Frankfort; 2nd vice president Everett Akers, Martin; and secretary-treasurer Joe Simmons, Glasgow.

Otto Miller of Tuscaloosa, Alabama has been elected president of the Alabama Cable Television Association. Other new officers include Carrol Eddins, Cullman, vice president; Jimmy Ballentine, Russellville, secretary-treasurer; and directors: Milton Underwood, Florence; Bill Neal, Huntsville; Asa Goldman, Demopolis; Mary DeArman, Florence; and Alton Elliott, Huntsville.

Obituaries

Robert Ashby, director of advertising for Cascade Electronics, Ltd., died last month after being hospitalized because of heart trouble. Ashby, 41, was born in Catlin, Illinois. He began his CATV career in 1965 with Ameco, Inc., after considerable broadcasting experience in Illinois, Michigan and Colorado. He joined Cascade in February of 1966.

Lorin David Grignon, operator of Tahoe (Calif.) Systems Cable, died early in May of a heart attack at his home in Kings Beach, Calif. □



CATV EQUIPMENT CLOSURES

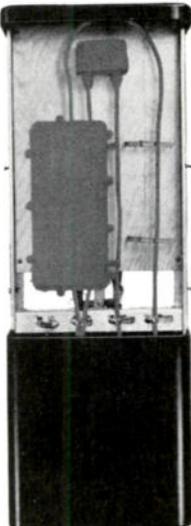
TV-600



2360 Cubic inches

Backboard can be used to mount CATV components on one side, telephone termination on other side. Separate entry for either CATV or Tel. Termination.

TV-1600



4320 Cubic inches

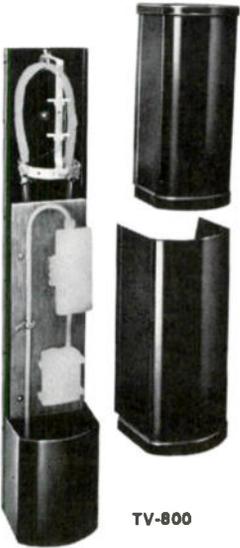
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Mounting Bracket furnished for multi tap mounting.

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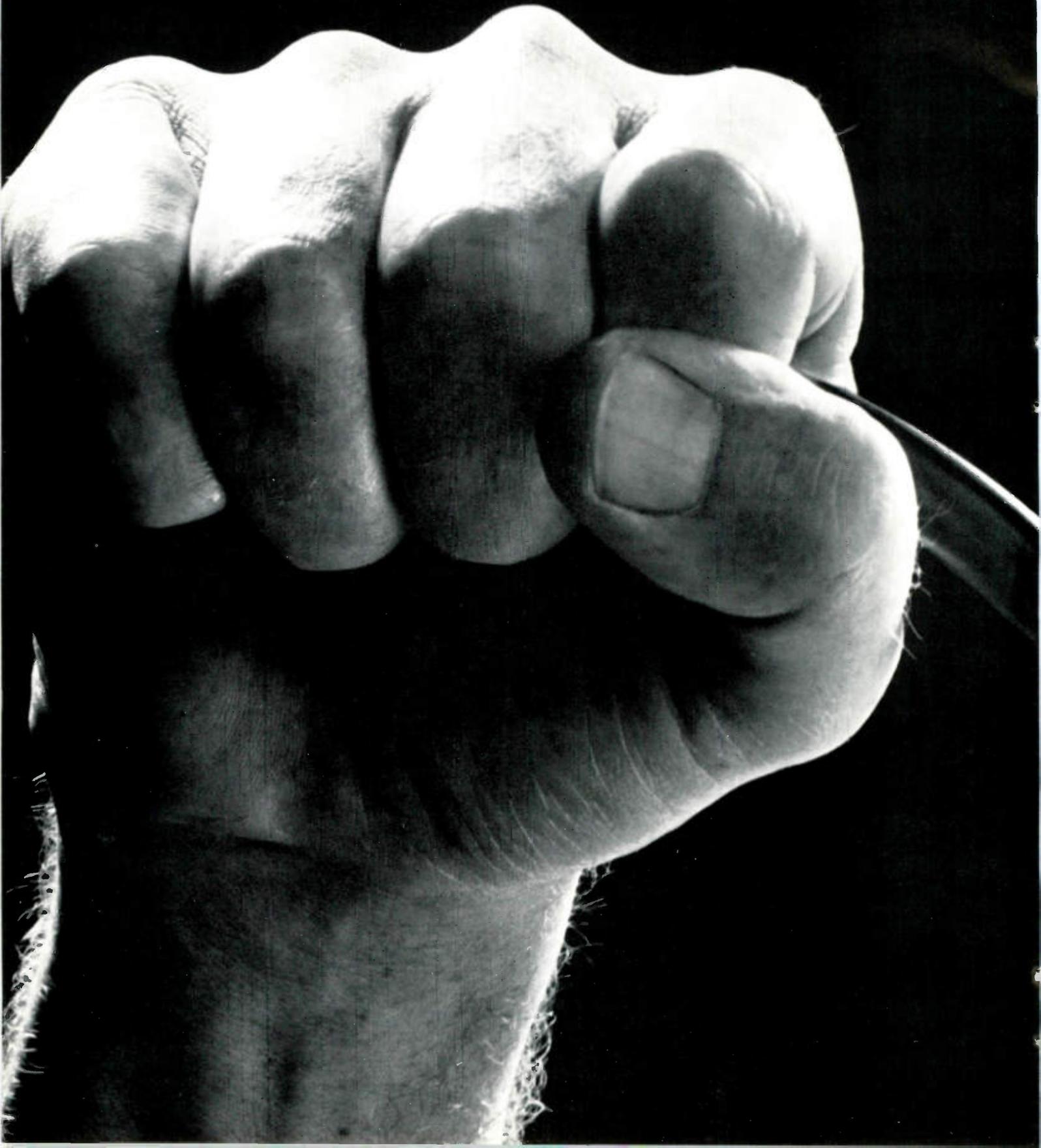
Robert Lee



Robert Ashby

Somebody had to make a coaxial cable like this.

A coax CATV engineers could really bend. And rebend. Form drip loops, expansion loops and spirals. All without mandrels or straighteners. All without kinking, cracking or rupturing the sheath.



Somebody had to make a coax so flexible and easy to install, it's practically foolproof.

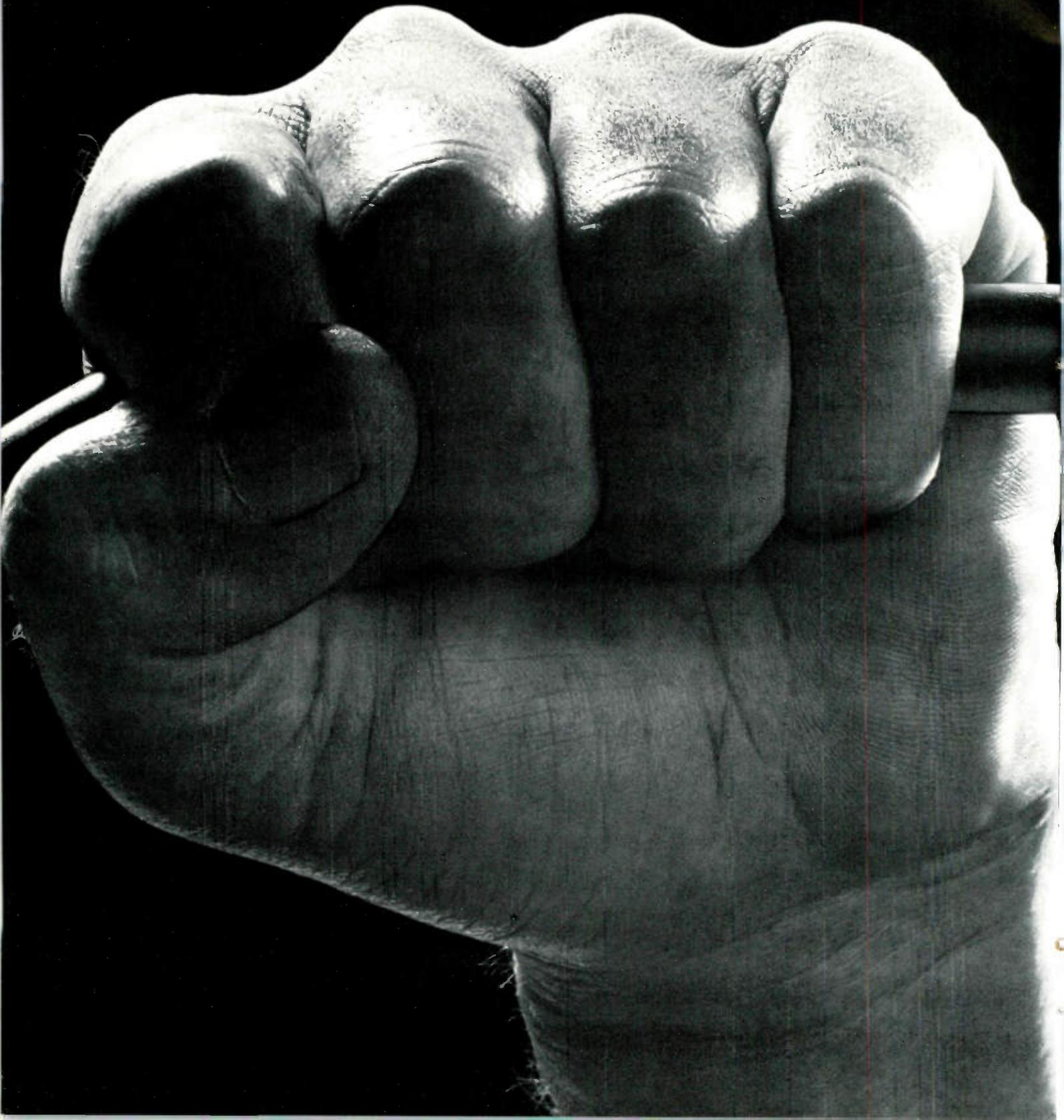
But a coaxial cable that was also moistureproof. Absolutely. And Anaconda did it, with a special sealing and bonding design called



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“Sealmetic®.” This special Anaconda construction hermetically seals the cable sheath at the shield overlap. It also bonds the entire outer conductor to the polyethylene jacket to form a unitized sheath. A sheath so strong the cable core is completely protected from moisture and humidity.

A sheath so strong it guarantees permanent electrical excel-

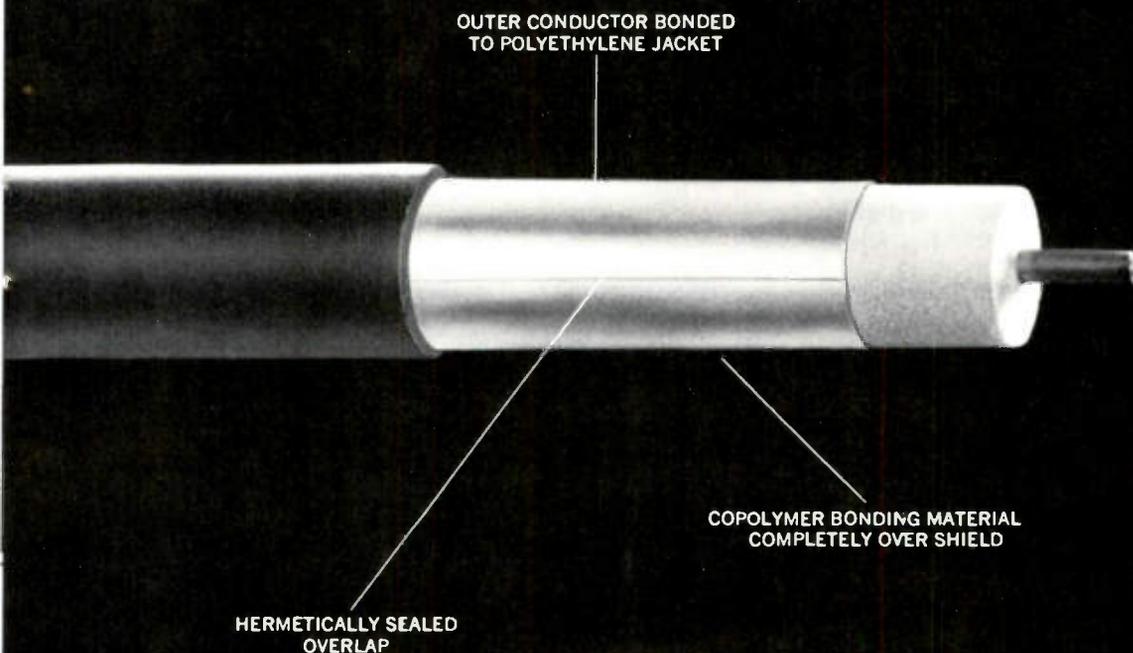


lence: signal integrity, low attenuation. And a structural return loss of 26 dB or better.

Somebody had to make a coaxial cable like this: exceptionally flexible, electrically excellent.

Anaconda did: Sealmetic Coaxial Cable.

Anaconda Wire & Cable Co., 605 Third Ave., N.Y., N.Y. 10016.



Round-table discussion at Pennsylvania State University produces clear evidence that Cable Television is...

ETV's Best Friend

Two well known educators and a cable television executive took part last month in a candid exchange of views on the role of CATV in educational and instructional television. Participants were: Floyd B. Fischer, Director of Continuing Education, Pennsylvania State University; Marlowe Froke, Penn State's Director of Broadcasting and manager of WPSX-TV; and James R. Palmer, President of Centre Video Corporation and C-Cor Electronics, Inc. and a Director of the National Community Television Association. The session was moderated by TVC publisher Stanley M. Searle, and was conducted exclusively for summary presentation to the readers of TV Communications.*

Mr. Searle: Approximately 28% of the educational television stations are not presently carried by any cable television system. Is it the responsibility of the cable systems to risk incurring the wrath of their subscribers by arbitrarily preempting commercial channels in order to distribute signals of this remaining minority of ETV stations?

Mr. Fischer: Aside from FCC requirements for carriage of ETV stations, I also think that ETV services have to be mean-



Marlowe Froke (left), Director of Broadcasting at Pennsylvania State University and manager of WPSX-TV, and Floyd B. Fischer (right), Director of Continuing Education for Penn State, preview some of the questions to be posed during round table discussion by TVC publisher Stan Searle.

ingful to the audiences. Ultimately, if educational television doesn't deliver sufficient meaningful audience services to warrant being carried on a cable system, then I'm for taking them off. I think that the cable operator is, for the most part, an enlightened citizen of the community, and is willing to carry ETV stations.

The state of the art might have something to do with the 28% of the stations which aren't carried on cables. Maybe the cable systems themselves aren't able to add another channel at this stage of their growth and development. Lots of other factors might enter into individual instances. It isn't all unwillingness, I'm sure.

Mr. Froke: One point that might be made is that ETV station managers sometimes have been hesitant to talk to cable operators. And I believe it is also working the other way — cable operators are hesitant to talk to ETV station personnel especially about the limited channel capacity of the cable systems. Part of this is associated with the climate of CATV being under attack from many different corners, not the least being the evolving FCC regulations and interpretations on cable distribution. So everybody is a little bit touchy, and everybody is a little bit uneasy. I think that it would be very helpful for a cable operator to look at the Grade B contours of the educational stations in his area. Then go in and talk with the ETV station personnel, and say, "How can we generate the grass-roots support? How can we work together to bring educational TV to our subscribers? How can we work together to better serve the audiences?" This approach would lead to much better relations between the ETV station and the cable operator.

Grass-roots demand

Mr. Palmer: Our company has a five channel system in Towanda. It had carried five commercial signals for the past seven years. An educational station recently came on the air in a community forty miles away. The cable system is not required by the FCC to carry this ETV signal; however, community interest developed in the educational station, as evidenced by discussions at the school board, the Lions Club, and other service clubs. Then, as a response to the desires of the community, our system placed this signal on the cable — without greatly disturbing those who were used to watching a particular program at a particular time. However, cable system operators frequently have been placed in an adverse position by demands from the educational station, irrespective of the wants of the people of the community. There is a responsibility for improving the services to the community. But this may mean the creation of grass-roots demand — so that the cable system can respond to it instead of forcing a particular service on the community.

Mr. Searle If we waited for grass-root demand, we might never have educational television at all. I wonder how many cable systems have waited for public demand that never materialized.

Mr. Palmer: As the cable system operator, we act as citizens in the community, and as leaders we can certainly work to generate the grass-roots support. The signal that I mentioned has been on about a month, and we're getting letters of appreciation from our subscribers. Under exactly the same circumstances, without the grass-roots approach, the cable operator has sometimes been condemned and, in fact, forced to take the educational signal off!

Mr. Fischer: Probably nowhere in the country does an educational television station need cable system cooperation more than in central Pennsylvania. And probably nowhere is there better cooperation than from the systems in this part of the state. We happen to be in a mountainous terrain, and I know that we're carried by many cable systems. The principle contribution of these systems is the principle contribution of cable television, generally, to ETV. And that is to extend the signal to locations that could not otherwise be reached by the station. The impact of it is



Mr. Fischer

especially important here. In central Pennsylvania we would be hard hit if it weren't for the cooperation of cable systems. To my mind they have been most generous in their time and effort.

I really don't agree with Marlowe when he says that maybe the impetus ought to come from the cable operator. Maybe it ought to originate with the educational stations across the country having something to offer that will excite and interest the public and the cable operators. I think our station here has done that, but I would hate to wait for the cable operators to come to me if I were an ETV station owner.

Mr. Palmer: Your station has a man who has the responsibility to coordinate and work with the cable system operators.

Mr. Fischer: Right. But the main reason we're carried on cable systems, in my opinion, is because we have programming that is worthwhile. The cable operators have been more than willing to present this kind of programming to their audiences.

Mr. Palmer: Furthermore, your station has never written a threatening letter to any cable system.

Mr. Searle: How about the claim by some educational television people that CATV represents some sort of financial threat?



Mr. Palmer

Mr. Froke: There truly is a financial threat. With the in-school service as it is presently structured—and I'm not saying that the present structure is the way that it should be—the stations get some of their money from local school systems on a per pupil assessment basis.

Now, if other channels are available, local school systems have a perfect right to accept two, three, or four channels and utilize them because the whole thrust of education

is local choice, local use of educational materials. But if schools start using the second channel or third channel, they might tend to withdraw support from the first channel that was set up to supply them in the first place. There is a possibility then that revenue would be drained off from the support of that station.

Also, many of the ETV stations have public fund-raising

campaigns, and they feel that if a second or third channel is made available in a given community through CATV this will tend to reduce public subscriptions to the first channel.

There is also an educational explanation for some of their claims of financial threat. For each television lesson there is a great deal of supporting material which goes along with it—a lesson plan, a study guide. ETV people make the claim, and I think it is a valid one, that unless all of these supporting materials are used well in conjunction with the television lessons, then ETV is not being properly utilized. So if you have two or three channels in a community offering an in-school service, perhaps in one case they are getting the supporting material and in another case the school is pirating off the air. So are they really doing an injustice to what educational TV should be, simply because of the availability of the signal. So it is partly financial and partly related to an attempt to maintain the educational integrity of in-school programs on ETV. Importation of a "distant" ETV station then, is a decision that should be made with educational authorities and the ETV stations concerned.

CATV a whipping boy?

Mr. Searle: Jim, would you like to comment on this alleged "economic impact" of CATV on ETV?

Mr. Palmer: With reference to the support from the secondary school systems, the educational community must solve the problem of which station they are going to support and how they are going to support it. They should not use the cable television system as a whipping boy or as a tool in their negotiations and maneuvering between themselves within the educational community.

The cable system's purpose is to provide multiplicity of service. If more than one educational signal is available, it is our responsibility as cable system operators to provide the



Mr. Froke

schools with a choice of signals. The problem of public support and the fund-raising campaigns is a little broader. It is my opinion that, in general, people will support their local station even though they are watching multiple educational television signals. This is logical. They would certainly support a local hospital fund-raising drive even though they might use a big city hospital for speciality care.

Mr. Searle: Is the per pupil assessment, which seems to be at the root of some of these financial prob-

lems, the most widely used method of funding ETV?

Mr. Froke: For the in-school service, yes, for the most part. You find some state systems in the South, however, where the total ETV program is carried out through state funds. I think that as a long-range solution, this probably is the answer. The system of per pupil assessment has grown up as a means by which educational television stations can obtain revenue to support a needed service. But is it really a sound means of financing in-school television? Once the alternate means of financing the instructional service are developed—perhaps something comparable to what local school districts already get from the state government—then the problem of "economic impact of CATV on ETV" will not exist to the degree that it now does.

Only one book in the library?

Mr. Palmer: It would seem that once the school system has purchased the distribution system—the television receivers and perhaps auxiliary equipment such as tape recorders—they really require a multiplicity of signals to justify the expenditure.

Mr. Froke: Education should operate from the premise of

availability of resources. And saying that only one ETV station should be available is almost like saying that there should be only one book in the library. So from the philosophical point of view, Jim is on very sound ground. But not necessarily from the practical points of view. In a sense, it's the same problem as with a commercial broadcaster. He is afraid that local advertising support for his station will be jeopardized by the importation of distant signals. If support is lost, then CATV will not have a commercial—or non-commercial service—to distribute.

Mr. Fischer: My position in our own area is that any cable system that has the technical capacity for adding other educational systems is perfectly free and welcome to do so. The only time I'll get really concerned about it is if they happen to delete our educational station in order to do so. But I'm not for keeping any of the others out; I'm for adding all the books to the library that we possibly can add.

Mr. Palmer: In the case of a CATV system carrying multiple educational television signals, it might behoove the cable system operator, as a citizen in his community, to work hard to raise funds in support of the closest ETV station.

Mr. Searle: Recent testimony by Robert H. Beisswenger before the sub-committee on communications of the Senate Commerce Committee referred to the future "vital role" of CATV in educational television due to "its character as a local service with so many different channel capabilities." The Carnegie Commission report also referred to the "great potential significance," of systems which deliver television programs to the user "by coaxial cable rather than by broadcast." Do you believe that community cable systems will be a meaningful part of America's expanding educational television system?

Cables can provide feedback

Mr. Fischer: I do. I think they are meaningful parts now, and I'd like to keep emphasizing that this is especially true in our neck of the woods in central Pennsylvania. We need the cable system cooperation; we have the cable system cooperation for which we are very grateful. We can't say enough about the good relationships we've had. I do think the cable systems have an important part to play, probably even more so as the state of the art in the cable business improves, and

new techniques and new equipment and new developments are under way.

I can see, for instance, that cables may provide feedback from our audiences in new ways that we do not know now; and this is an important part of good instructional television or educational television. It may provide new opportunities for testing impact of specific educational services. So, I look forward to increased activity as the number of cable systems and educational stations increases.

Mr. Searle: Even with the Carnegie Commission's proposed 240 stations within four years—or the NAEB's projected 364 ETV stations within 5 years—will there not remain hundreds of communities and millions of citizens with no locally adapted educational television services?

Mr. Froke: The number of cable systems in the area with which we have some contact totals 101. Obviously we can't do a detailed job in programming for those 101 distinct communities. Here then, I think, the local cable operators have a great role that they could play in conjunction with the local school districts. Perhaps they could set up a production studio to provide assistance to the schools, coverage of local school board meetings or the city council meetings or sports events. Here then you would have the grass-roots local programming service.

I think the same thing can be said about most of the commercial stations; the level of detail and depth that they can get into in the individual community is limited. To be really local you have to get much more specific. So if we are working with 101 cable systems in our area, we can program to one level of need. But those 101 cable systems could program to a much more specific level of need—a different type of need.

Mr. Searle: Is it possible that 5000 CATV systems which will presumably exist 5 years from now will be able to provide multi-channel ETV/ITV services in virtually every one of the 5900 communities which have a population of 2500 or more—whether or not a particular community happens to lie within the coverage area of an ETV or ITV station?

Mr. Palmer: In addition to supplying multiple off-the-air signals, the CATV systems are in a good position, due to technological knowledge, to link schools together on a multi-channel basis, to distribute the signal services between

(Continued on page 92)

CATV-ETV STUDY

According to a recent NCTA survey, there are 719 CATV systems located in 45 states which receive the signals of 94 educational television stations located in 36 states and the District of Columbia. Of these 719 CATV systems, 641 carry 1 ETV signal; 72 carry 2 ETV signals; 5 carry 3 ETV signals; and 1 system carries 4 ETV signals.

73.4% of all ETV signals on the air (128) are carried by CATV systems, in comparison to 1964 when 39.7% of all ETV signals on the air (83) were carried. Since 1964 there has been a 54% increase in the number of ETV stations on the air and a 673% increase in CATV systems carrying ETV signals. The following figures were tabulated from the 416 systems responding to the NCTA postcard questionnaire:

301 or 72.4%	now serve schools
20 or 4.8%	plan to serve schools in near future
95 or 22.8%	do not serve schools
416 100.0	Totals

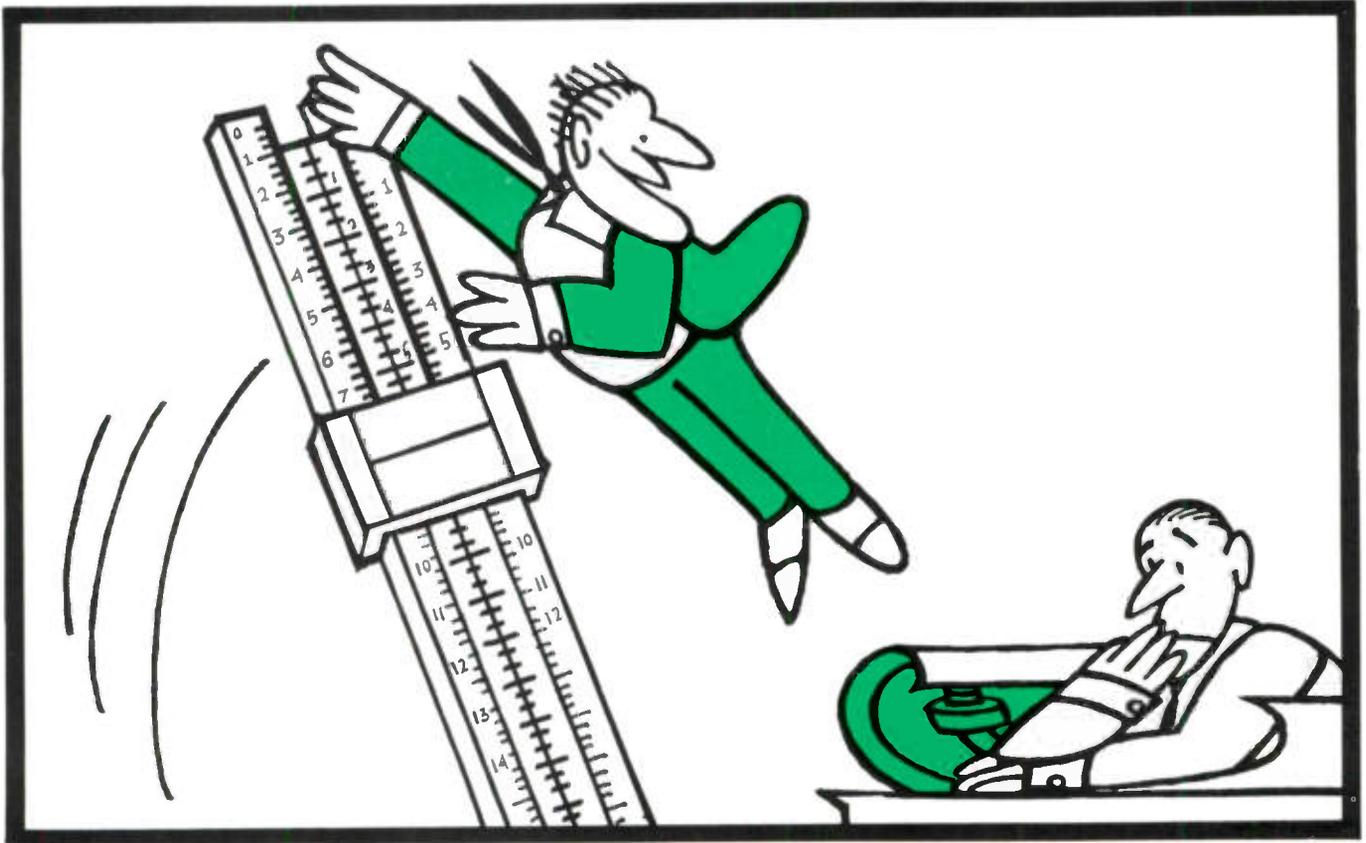
Of the 416 systems reporting, 44 or 10.6% now originate ETV programs and 18 or 4.3% plan to originate

ETV programs in the near future. The total number of hours per week of educational programs originated over CATV systems is 422. The average number of hours per week for a system originating educational programming is 16. (Programs are produced by local educational institution, either in its own studio or CATV studio, and fed directly to schools and homes through coaxial cable system.) Of the 416 respondents, 301 cable systems reported some form of service to schools in the following categories:

Category	No. of Schools	No. of Students
Elementary	1,318	440,453
Jr. High School	295	154,575
Sr. High School	323	200,951
Jr. College	29	26,392
University	39	118,407
TOTALS	2,004	940,778

The average number of schools served by these 301 systems is 6.6. The average number of students served by each of the systems is 3,126.

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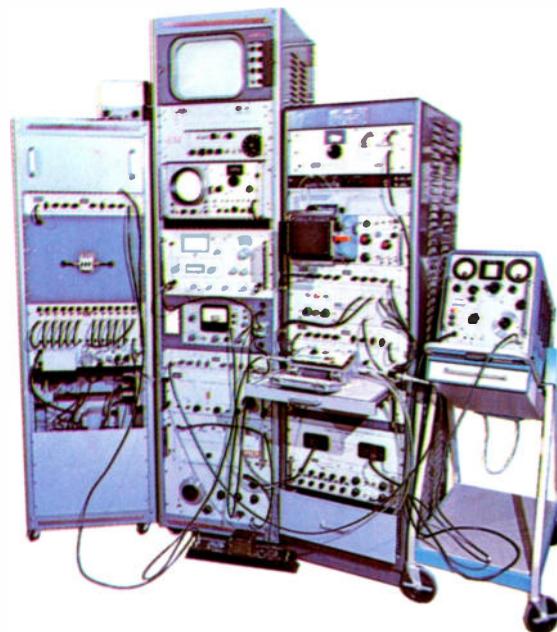
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Cable System Test Chamber

By I. Switzer
TVC Technical Associate

Robert "Bob" Brown, general manager of Everett Cablevision of Everett, Washington, will assure you that he is a native Northwesterner — a true-blue Washingtonian. CATV equipment sales-managers, however, will assure you that he is the original "man from Missouri." Bob is also chief engineer for Televue Systems, Inc., the Seattle based company which controls Everett Cablevision and some 20 other systems in the western states. (Televue is also associated with CATV Equipment Company, a major distributor of CATV equipment located in Seattle.) Brown developed his "show me" attitude after a number of disappointing experiences with the performance of some new solid-state equipment, particularly in large systems for which high performance standards had been set. Televue systems were being extended into areas in which picture quality



Shown above Everett Cablevision's test set up which includes (left to right) 12-channel signal source, showing patch panel and level adjustment pots; cross modulation and beat measurement rack; sweep testing rack; and signal generator for field strength meter calibration.

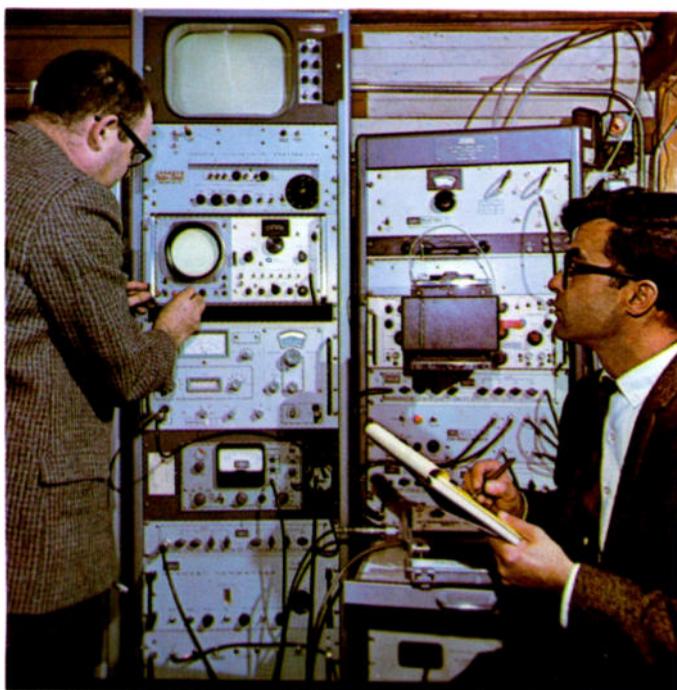
was the main sales feature and the solid-state systems were just not delivering the anticipated picture quality and reliability.

Bob soon found that other systems were having similar experiences and after comparing notes with Jerry Laufer, engineering vice president of Telecable, Inc., another Seattle-based group operator, decided that the problem was the failure of the new solid-state equipment to live up to the glowing promises made for it.

Brown "sold" his company on the idea of building a comprehensive equipment testing facility at Everett, and obtained Jerry Laufer's personal assistance in developing the facility to its present operating state.

At the time that investigation of the problem started, Televue had, at Everett, the usual complement of CATV test equipment — field strength meter, sweep generator, marker generator, oscilloscope. This permitted testing gain and alignment of amplifiers, but really nothing more. A thorough understanding of the performance of equipment in actual operating systems required a far more elaborate set up. Brown decided that the system problems could only be understood, and equipment properly evaluated, by being able to build a complete system right in his own shop, and by having the equipment to test the system for all significant operating features.

It was believed that the main problem encountered in system operation was failure of the system to meet that of an actual system, therefore, required a climate chamber capable of reproducing the wide range of temperature conditions experienced in the Pacific Northwest. Brown built a 10'x8'x8' freezer room in his Everett shop and equipped it with cooling and heating equipment that permitted a temperature range of 30 degrees below zero to 140 degrees above zero. The chamber was big enough to accommodate ten lengths of cable and racks



The author (left) and Everett Cablevision general manager Bob Brown are shown using the CATV firm's comprehensive equipment testing facility.

were installed for mounting up to 10 amplifiers and associated equipment for testing. Temperature measuring and recording equipment was also installed. Ten lengths of .412" size aluminum sheathed cable (22 db loss at 70 d.e.g. at channel 13) were installed with provision for adding additional lengths if required. Next, the associated test instrumentation had to be assembled and tested.

It appeared that system noise and cross modulation performance would be the most difficult parameters to measure. At the time of initial development, around January of this year, the NCTA technical sub-committee was beginning to publish recommendations on the wording of output capability specifications. Since it appeared that these recommendations would soon be adopted by equipment suppliers, it was decided to build a test set that would permit measurements of cross-modulation according to NCTA's recommended techniques, and permit direct checking of manufacturers' specifications. Noise measurement instrumentation was also added to permit noise figure checks on individual amplifiers and on the complete system. When NCTA made further recommendations on specification of undesired beat products, instrumentation was added to detect and measure these undesired distortion products. A laboratory quality sweep generator and attenuators were installed to permit checking response and gain stability of the system being tested. Every effort was made to put together an instrumentation set that would permit accurate, repeatable measurements on the system being tested in the climate chamber. Since substantial future equipment orders and modifications of existing systems would be based on results from the "torture chamber" it was decided that no reasonable expenditure should be spared to make the facility the equal of any in the CATV industry.

The following description of the test facility may be of interest. (Manufacturers of the test equipment used will be named without implying an endorsement of that particular instrument. In nearly every case alternate instrumentation of comparable quality is available.)

Frequency Response Test Set

This is a rack-mounted set consisting principally of a Jerrold 900 Series sweep generator, precision step attenuators, high speed co-axial switch, Tektronix oscilloscope with Polaroid camera, and precision impedance bridge. The equipment is arranged in a conventional configuration using the high speed co-axial switch to permit gain or insertion loss checks by comparison with precision attenuators. The oscilloscope camera is an important part of this test set since it permits permanent photographic records of the tests performed. Multiple exposures permit recording system response against a number of calibrated reference lines. This test set is used to check gain and response of individual amplifiers or the complete 10-amplifier system under test in the cold room.

Noise Figure Measurements

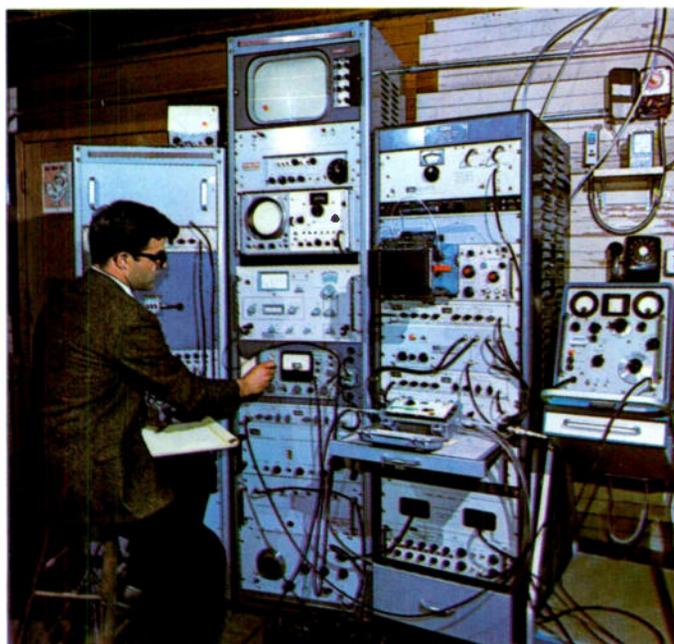
A Kay Electric noise source is used for noise figure checks in conjunction with a standard attenuator and

Jerrold 704B field strength meter. Noise figure measurements are presently being made manually. Automatic noise figure measurement equipment will be installed soon as part of a system for displaying noise figure on a "swept" basis; i.e. an oscilloscope display of noise figure against frequency.

Cross Modulation and Beat Measurement Test Set

This test set required considerable development and took the most time to assemble and check out. A block diagram is shown in Figure 1. The test set consists of two parts — a 12-channel signal source, and a cross modulation and beat measurement set.

The 12-channel signal source at present consists of a Jerrold TM modulator operating on channel 6. The modulator is modulated by 15.750 KHz square waves from a Hewlett-Packard square wave generator. Depth of modulation is checked and adjusted by observing the IF output of a Jerrold TD demodulator tuned to the channel 6 output. The TD IF is displayed directly on



Bob Brown, shown here using his test set up, planned and built the \$30,000 facility with the assistance of Jerry Laufer, engineering vice president of Telecable, Inc., another Seattle-based group CATV operator.

a high frequency Tektronix scope. The modulated channel 6 carrier is suitably attenuated and converted to IF frequency by a Jerrold Channel Commander, tuned to channel 6. The IF output is split down into 12 outputs using hybrid splitters and made available at a co-axial patch panel. The patch panel also connects to the inputs of 12 Jerrold CCV up-converters, which convert the IF to the 12 standard VHF TV channels. The CCV outputs are combined in a filter network adapted for antenna mixing networks into a single 12 channel output. A final output step attenuator provides output level control. Individual level control on each channel is achieved by individual level control on each channel is achieved by individual bias controls for each CCV unit. These are mounted on the patch panel. The signal substitution oscillator provides an unmodulated

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carrier at IF frequency. This unmodulated carrier is made available at the patch panel. Use of BNC connectors at the patch panel makes it possible to substitute modulated and unmodulated carriers quickly on any desired channel.

Output signal levels are measured with a Jerrold 704B field strength meter. A Hewlett-Packard 608C signal generator is available for calibrating the field strength meter before and after tests.

The cross modulation and beat distortion measuring section is contained in a separate rack. A step attenuator controls input levels. A hybrid splitter splits the incoming signal. A Jerrold 704B field strength meter

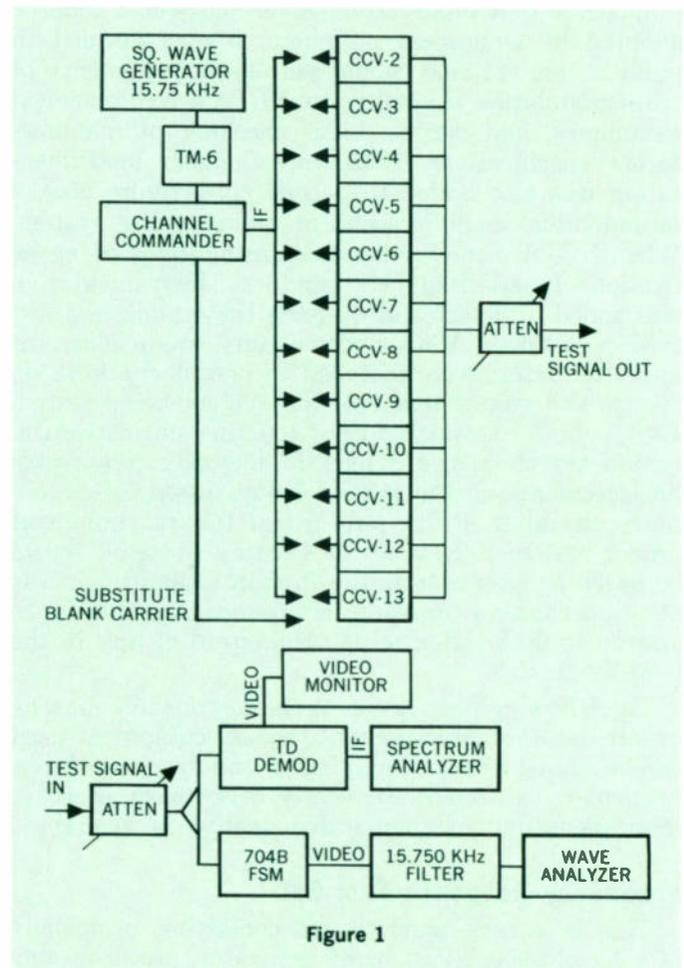


Figure 1

serves to measure levels and as a demodulator for the cross modulation measurements. The video output from the field strength meter goes through a passive 15.750 KHz pre-selector filter into a Sierra wave analyzer which acts as a tunable voltmeter with wide dynamic range. The wave analyzer is capable of separating the 15.750 KHz cross modulation fundamental and measuring it at microvolt levels. The cross modulation ratio is the ratio of 15.750 KHz fundamental when carrier is modulated at standard level to 15.750 KHz level when unmodulated carrier is substituted. This test set is capable of measurements down to about -75 db cross modulation. Accuracy at this level is improved and range extended to still lower cross modulation levels (-100 db) by use of a pre-selector filter in front of the 704B. Use of the pre-selector permits higher input levels



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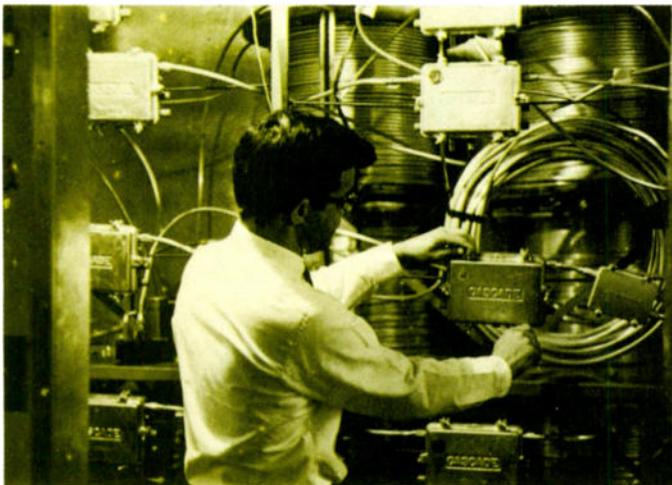
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to the 704B without generating excessive distortion in the 704B itself. The higher input levels are required to overcome noise which becomes a limiting factor at these low cross modulation levels.

A Jerrold TD demodulator is used for beat checks. The video output drives a conrac video monitor for visual observation of cross modulation and beats. The IF test point feeds a Nelson Ross spectrum analyzer which scans the demodulator IF for undesired spurious beats. Very low level beats at low frequency might be



Bob Brown is shown placing an amplifier in the climate chamber for testing. The Everett Cablevision test lab allows him to construct an entire cable system in his shop.

missed by this IF scan. If these are suspected they are checked with a low frequency wave analyzer examination of the video output. A low frequency spectrum analyzer will soon be installed for this function. The spectrum analyzer permits a 60 db dynamic range measurement of beats to be made, when used with the TD as a pre-selector. Precision level and frequency measurements are made by using the spectrum analyzer to compare test signals with reference signals from the H-P 608C signal generator or other standard sources such as marker generators.

Development of the complete test facility took almost six months and cost more than \$30,000. It has been used to check the products of nearly every major CATV equipment manufacturer. The experience with the test facility has given Televue a unique insight into the problems of operation of CATV systems under varying temperature conditions and under cascaded amplifier conditions.

Results in the test chamber confirmed the disappointing results of actual field use. Some amplifiers exhibited a 40% failure rate during temperature cycling. Other amplifiers exhibited a 3½ db change in tilt during temperature cycling *without* any cable effects. In general it was found that amplifier performance did not fully live up to published specs. Most amplifiers had trouble maintaining equalization over wide temperature ranges. Level control problems were also quite common. Brown is unwilling to name names, but sums it up this way, paraphrasing Orwell: "All amplifiers perform poorly, but some are poorer than others."

Part of the problem seems to be optimism on the

part of equipment sales managers and individual salesmen. Some manufacturers apparently are not equipped to give their equipment the rigorous tests that Brown has performed at Everett, or are not familiar with the test and measurement techniques. Brown does concede that the synchronous modulation in this technique is a very harsh test of amplifiers, and is a harsher operating condition than the usual random synchronization found in operating systems. Synchronous modulation is now the industry standard for testing and will permit comparison of competing amplifier types. Some equipment failures and deficiencies are explained by the manufacturer's "Production gap"—that is, amplifier performance depreciated between the lab development prototypes and final production version.

Manufacturers have been most co-operative in providing amplifiers for testing and are taking measures to correct deficiencies brought out in the tests. The tests being performed at Everett and the probability that similar test facilities will soon be installed by other major CATV equipment purchasers has apparently had a tremendous psychological effect on manufacturers. Some customers, at least, are now buying on the basis of rigorous quality tests and detailed specifications, and are swayed more by the reading on a test meter than by anything else. Bob Brown had to be shown, and in finding out for himself, he has made some big waves in the CATV equipment sales picture.

The test facility is undergoing almost continuous refinement. The 12 channel signal source will soon be



The climate chamber used in the equipment testing facility protrudes into the garage area of the Everett Cablevision offices. The freezer room has an operating range of 30 degrees below zero to 140 degrees above zero.

expanded to 20 channel for testing new multi-channel systems. The eight extra channels will be adjustable over a wide range so as to accommodate almost any proposed arrangement of additional channels. Precision frequency checking equipment (counter) will be added. Basic channel sources will be changed to pulse modulated oscillators to assure 100% modulation and to facilitate changes in frequency. Cable arrangement in the climate chamber will be changed to permit faster temperature stabilization. The author assisted Mr. Brown in some of the cross modulation and beat measurement instrument problems. Televue's Everett test facility is available on a daily rental basis for special equipment testing. □

WATERVILLE CASE HEARD

Maine City Fights AT&T For Right To Franchise

Maine's highest tribunal heard arguments last Thursday in the landmark test by AT&T's affiliate, New England Telephone, of the franchising authority of cities in that state. The six judge court heard arguments from the co-plaintiffs--the City of Waterville and the franchise holder, Robert E. Drapeau--and from New England Telephone. In addition, the Maine Municipal Association filed an amicus curiae brief with the court. The Association last fall became incensed at the efforts of New England Telephone to circumvent the franchising authority of cities when offering leaseback CATV service, and has been a strong ally of Waterville.

The confrontation, which has far ranging national implications, between the AT&T affiliate and the City of Waterville began last September (see Review Sept. 26) when the telco and Bartell Telephone TV Systems, a subsidiary of the New York-based Bartell Media Corp., jointly announced that New England Telephone would build a leaseback system for Bartell. At that time both parties stated that, in their opinion, a franchise from the local government was not necessary, since New England Telephone contended that its telephone franchise granted it the right to extend television distribution services to any firm it--not the city involved--selected. At the same time the telco said that a firm seeking pole attachments would have to have a city franchise. Waterville officials at once expressed their displeasure and proceeded to pass a franchise ordinance and extend a franchise to Robert E. Drapeau. When the telco started construction and extended coaxial lines into Waterville, the city and Drapeau initiated legal steps which resulted in last Thursday's hearing before the Maine Supreme Court.

City's Position

The City of Waterville and co-plaintiff, Robert Drapeau, told the court last week that the action of New England Telephone and Bartell Media is in direct conflict with an enabling statute passed by the 1965 legislature. The statute states: "The municipal officers may contract on such terms and conditions as are in the best interests of the municipality for the placing and maintenance of community antennae television systems and appurtenances along public ways." They pointed out to the court that the alleged "telephone distribution facility" which New Eng-

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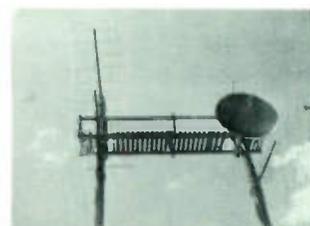
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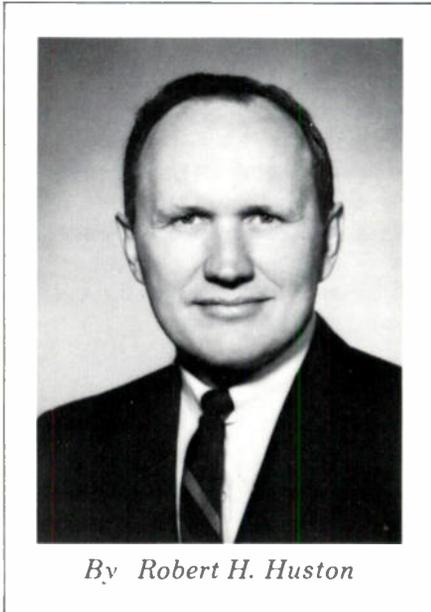
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A System Manager's Success



All of us have a way of rationalizing when it comes to spending money. If you don't think this is true, just ask your wife for an explanation of the pair of new shoes she bought last week when you just stumbled over something like twenty other pairs in the closet. On second thought, *don't* ask her. There's little doubt but what she will sell you completely and might even end up hitting you for another twenty dollar bill to buy a hat to match the shoes you didn't think she needed in the first place!

That's the way it is with rationalization. It soothes the soul and calms the conscience. But the really successful cable system manager... the one who is getting top money and managing a top system... is the manager who refuses to even listen to rationalization. This manager is ever vigilant of every penny spent and acutely and accurately aware of the amount of material needed. Or to put it another way... get cost-conscious and control-crazy! Don't trust someone else when it comes to spending money.

You, as manager, keep a tight rein on this chore.

For one of the most common ways of rationalization is the well-known, subconscious passing of ye' old buck. Justifying purchases by saying that the bookkeeper or technician should know best as to what they need, how much they should spend, and how many items are required, may get you off the mental hook, but it can sure as shootin' put you in a financial bind before too many moons go by. As Harry Truman once said of the Presidency... "The buck-passing stops here." In your cable system, the buck passing stops with you, the manager.

And don't, above all else, decide that you will okay the major purchases and let the bookkeeper or technician okay the minor items. It's the small purchases that will nickel-and-dime you to death and close out the year with a loss instead of a profit.

So let's have an honest, heart-to-heart discussion of some of the common problems facing a system manager. Problems that can cost money and affect what could otherwise be termed an efficiently run plant. And please don't kid yourself by saying, "Problems of this type don't apply to my operation." Maybe it won't apply 100% to your system, but chances are that at least part of the following will apply:

Problem: General Operating Expenses

In this group, let's lump office supplies, janitorial material, gasoline for the trucks, telephones, office equipment and small tools. This will give a well-rounded "per example" picture of how money can be wasted. (All examples, incidentally, are actual case histories.)

(1) *Office supplies:* Let me show

you how purchases of these so-called nickel-and-dime items got out of hand in one system I visited. A field audit revealed that this system was averaging nearly \$150 a month on office supplies alone, and I am talking about office supplies that were purchased locally. The home office was furnishing another \$150 worth of supplies. And when the manager of this system of 3,000 hookups was confronted with these out-of-line expenditures, he was first asked to give a "guesstimate" of how much was being spent each month on office supplies. His guess was "twenty five or thirty dollars!"

Nearly \$300 a month is a lot of pens, pencils, scotch tape, staples, etc. in anybody's book. All nickel-and-dime items it would seem, yet closer observation revealed that the pens were \$20 desk sets (eight of them — even the apprentice installer had one!) the pencils were 69¢ ballpoint pens (that were obviously being carried home because who can use or lose an average of three pens per day?) and there were \$45 desk lamps and \$15 desk pads and \$12 desk trays and numerous other items that the manager didn't even realize had been purchased... because he had left the purchasing of nickel-and-dime items to the chief bookkeeper! A poor manager? Yes, in this one respect. Yet he was an excellent manager in every other way. He stayed on.

(2) *Janitorial material:* Another item that can quickly get out of hand. A study of another system revealed that someone was obviously buying enough soap powder, toilet tissue, paper towels, and mops and brooms for half a dozen families. This someone turned out to be a janitorial service that had received *carte blanche* instructions from the manager to charge anything they needed at a local store. This they were doing... in fact,

they were charging all the material they needed for seven other businesses they were servicing. A poor manager? Yes, and he didn't stay on. He was weak in other ways, too.

(3) *Gasoline for the trucks:* This, of course, is a big item in even a small system. Two different cable systems just 78 miles apart revealed an amazing comparison. Both were driving Ford Econolines purchased within a month of each other. There the similarity ended. System "A" was averaging 3½ miles to the gallon. System "B" was averaging 13 miles to the gallon. It never occurred to the manager of system "A" to check on this. The manager of system "B" not only checked the gas mileage carefully each month, he let the technicians know he was checking. The manager of system "A" was replaced (he was weak in other ways, too). System "A" is suddenly averaging 12½ miles to the gallon with the same trucks . . . but a new manager. This will amount to quite a savings at the end of the year.

(4) *Telephones:* A necessary evil at best! One group owner gasped in amazement when he looked at the annual report on a small system of 541 customers. The telephone bill was averaging over \$800 per month! Investigation revealed that a long-time bookkeeper had been using the company telephone for the past ten months to call her boyfriend in Alaska several times a week. Each call averaged an hour or so . . . but the crowning blow was when she threatened to cause the company trouble because they weren't backing the boys in the service! Fantastic? Yes, but true. And there were a few people who actually wrote the home office complaining when the \$375 a month bookkeeper was discharged for running up telephone bills of over \$800 a month. The manager of the system as well as the accounts payable clerk in the home office also found employment elsewhere.

And while we are on this subject, airmail, instead of long distance calls from the field, saved one group owner over \$25,000 last year. No, you will never be able to eliminate long distance calls altogether, but a firm and fast policy that limits

long distance calls to emergencies only will have saved a great deal of money at the end of the year.

(5) *Office equipment:* Another drain that can be curbed through a tough-line policy. Electric typewriters that top the \$800 mark are nice, but not necessary in the average system. Ditto on \$300 calculators. \$100 rebuilt typewriters and new \$69.50 adding machines will do just as well. The same goes for file cabinets that are filled with junk instead of important papers. And why buy \$250 desks for part-time help when a \$20 table will do just as well?

(6) *Small tools:* This is a subject in itself. Since system policies vary so drastically, we won't attempt to go into the subject in depth, however, it is safe to say that the CATV industry in general has probably contributed more to the stocking of home workshops than any other single industry in recent years. Electric drills, bits, extension cords, plastic tape, etc. have a way of straying if the manager is lax. And why not? If the manager doesn't keep a close check and perpetual inventory on these items . . . in other words, if the manager obviously doesn't give a damn . . . why should the technicians and installers?

But many a cable system owner could buy a new car each year just from the money spent on equipment that disappears. As a *good* manager, it is your job to see to it that this equipment doesn't stray.

Solution to Above:

Come alive. Find out what is going on in the system you manage. Ask questions. Probe. Challenge *all* of the money being spent (even that coming out of the petty cash drawer). Don't be satisfied with merely hearing "why" your people need to spend money. Make them prove to your satisfaction that they can't possibly get by without the purchase.

Don't become known as an easy mark. You're getting paid to manage the system. You aren't running for any office . . . you already have the job . . . so don't worry about your popularity. Look after the company's interest and the company will look after you.

Problem: Collection of Delinquent Accounts

This is another subject that will require an entire chapter at a later date, but there are certain basics that should be mentioned at this time because this is one problem that can get serious in a hurry.

Customers that are on the cable have a way of talking. Let them ride several months in arrears and they not only will not pay *their* bill on time, but will also brag to *everyone they know* and encourage them to not be in any hurry to remit payments. "You mean you pay your cable bill on time? Man, I ride several months past due all the time and they don't cut me off!" Common braggadocio that spreads like a prairie-fire in October and will soon have you running short on operating money.

Solution to Above:

Set a policy that fits your town and system . . . then don't waiver or bend for anyone or anything. If you have a policy of cutting them off when they are 30 days past due . . . stick to it. It is just as easy to cut them off then as when they are 120 days past due and you are only out one month's bill instead of four.

Problem: Too Many People

Here is a common problem that many, many systems face — but a good manager can soon straighten this problem out. Again, we will go into this in detail in another chapter, but here are a couple of guidelines to help you evaluate the people who work for you:

(A) One bookkeeper should be able to handle a minimum of 1,000 subscribers. Depending on the bookkeeping system, I have seen bookkeepers handling as many as 1,500 accounts. So if you have a bookkeeper who can't take care of 1,000 accounts without putting in overtime or needing part-time assistance, better check on the bookkeeping system or the bookkeeper, or both.

(B) One installer should be able to handle a *minimum* of six hookups a day. I have seen men who can take care of as many as ten and twelve hookups, and while they may be the exception to the rule, get one experienced man like this on your

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crew and it gives the others something to shoot for.

Solution to Above:

If you have a bookkeeper or installer who can't make the above average minimum figures . . . you have a couple of people who are taking money under false pretenses because you really don't have a bookkeeper or installer. You are kidding yourself if you think you do . . . worse yet, you are wasting money. Money that should go the people on your staff who are carrying their share of the load. "Get rid of the deadwood and reward the worthy." is another way of saying it.

Problem: Overtime

This is a problem that has to be watched carefully and continually. It is like the proverbial bad penny . . . it keeps showing up again. Overtime must be handled with a degree of finesse. Like, get yourself a two-by-four and start hitting the offenders over the head. This is the only language they understand!

In all seriousness, this is a problem that will cost you a good many thousand dollars over the period of a year if you don't watch it carefully.

Solution To Above

Make any employee turning in overtime give you a *full* and *detailed* report on why it was absolutely necessary that overtime be involved. Make it clear in advance that this report must be in writing and that you will accept nothing short of a *real* emergency as an excuse for overtime. Then proceed to outline what you consider an emergency and post it on the bulletin board. Then stick to your policy until something comes along that proves you need to alter the policy to include an emergency you hadn't anticipated.

Of course, there are other problems and other solutions involved in running a successful cable system. But these are some of the general problems that seem to plague every manager — at least every manager who lets them exist. The good ones soon stamp out these problems with firm policies and efficient people. □



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General Electric Cablevision Corporation
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In Cable System Management— Nice Guys DO Win Ballgames!



By S. S. Street

How many times have you heard the saying, "He's a nice guy, but nice guys don't win ballgames?" Or, "they finish last," or "they can't close a sale." Or, many other reasons why if you're pleasant to people, they take advantage of you.

Sometimes people will take advantage of you — that's human nature. But, at the same time, people respond to people and reflect feelings and attitudes.

In cable TV, the most important asset of your system is the *manager*. He is a reflection of your company's image. He becomes Mr. Cable TV in your town. He is a technical authority, a public servant, a well-known personality and he is deeply involved in the community.

A good manager knows what the people of his town like. He is in close liason with the mayor and town council. He is familiar with all the civic clubs and knows their purposes and direction. *Mr. Manager is a nice guy*. He has to be. He is part of the town just as he is an essential part of your system.

Mr. Manager can win ballgames, too. He can put out fires in the city council before they start. He can

push through a rate increase or franchise renewal quickly and effectively. He is "Johnny on the spot" when it comes to the CATV business in his town.

A good CATV Manager should be a popular personality. He must be able to speak before service clubs and educational groups. He must be able to think on his feet and always be completely informed about his business.

As a nice guy, he knows all the TV dealers in town and can get them to participate in cable TV specials and commission arrangements. Other cooperative advertising efforts are a snap. The media people like and respect him. He's fair but firm in dealing with utilities. Understanding both sides of the coin enables him to reach sound business judgments. If he doesn't know the answer to a problem, he tells you so, then finds the answer. He doesn't wait until tomorrow — he does it today.

How do you train your manager to be a "nice guy"? First, let him know what you expect — and when he does a good job, tell him so. Better yet, make sure he understands you know he's doing a good job. Good compensation and a clear vision of his future will make him a loyal employee — who is interested in being a "nice guy." The feeling of self accomplishment is a *commodity* money cannot buy.

Communications

How is your manager's image *inside* the company? One of the biggest problems in any company is communicating. Poor communications can hurt your operation more quickly than any other internal factor. Does your manager relate your attitude and desires to other employees? What feedback do you get from employees? How do

you receive reports — orally or written? Your manager, as a nice guy, *must still communicate*. A smile is not enough. Good management reporting will save you and him valuable time for other important duties.

Do managers *become* nice guys? Most good cable system managers like their job. They're happy in their environment and they thrive in a challenging situation. Cable television is a challenging industry. Consequently, managing a CATV system demands a special kind of man. There are many organizations and training programs that will help develop good managers. Programs like the Dale Carnegie Course are a must for every manager. Clubs like the "Toastmaster International" will develop his speaking and thinking skills. Any appropriate college courses available in your locality should be a mandatory part of your managerial development program. Membership and participation in the local Chamber of Commerce is essential. Good managers are "joiners." They like people, and they relate to the community.

Winning a Ballgame

I know several "nice guys" who have played the franchise ballgame — and won! They have overcome multimillion dollar corporations, and slick presentations by simply being, in the words of one Mayor, "the kind of people we like doing business with." They are honest, clear in their presentation, and come on like the local gangbusters. So you see, in running a successful cable television business, nice guys can finish first!

Train your men in this philosophy — and help them learn the special skills of a "nice guy." It's good business! □

Is it worth 2¢ a day to make sure your technician or manager is fully informed?



Impressive and profitable things will happen when you supply your key technical men with their own personal copies of TV Communications. By having his own copy, an engineer or technician will be able to spend his off-duty hours exploring exclusive TV Communications articles on system design, servicing techniques, basic electronic theory, safety procedures, plus information on new components and test gear.

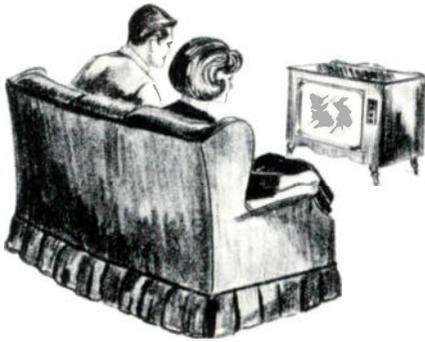
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Split Cable — an Innovation in Television Commercial Testing

By Edward Wallerstein, President
Communication & Media Research Services, Inc.

Our article, "CATV — A New Research Tool," (January, 1967) elicited a number of requests for further information. Therefore in this article we present the theoretical background of Split Cable*, its commercial need and some experimental results.

Market research, almost from its inception, has been pre-occupied with determining media effectiveness. While many unsolved problems in measuring print media and/or radio effectiveness remain, the problem has been further complicated by the advent of television which has added new problems to the researcher's task. Therefore, over the years, researchers have been progressively attentive to trying to find a satisfactory and realistic way in which to measure television effectiveness.

In 1966 the top 100 television advertisers spent approximately \$2,000,000,000 for television time alone. When the costs of the creative and production efforts involved in the development of television commercials are included, the figures are truly staggering. Television is without doubt the most important advertising medium and the most costly. However, the prime problem of determining media effectiveness remains since, even after the fact, it is almost impossible to determine precisely what value is being received for each television dollar spent. Are increases or decreases in sales directly attributable to television, or are there a multiplicity of factors involved? Are these factors interrelated and, if so how?

Of course, it would be highly advantageous to know beforehand how effective or ineffective a television commercial will be in the market place. Unfortunately, the implements for such determinations have, up to now, been relatively crude. More importantly, before you can measure "effectiveness" you must first define it. Unfortunately, even at this elementary level controversy exists. One school of thought claims that television commercial effectiveness should be measured by sales. Another school claims effectiveness should be measured by attitudinal changes which can then be presumed to be reflected in sales. Still others, claim that there is little positive correlation between advertising impact and sales.¹

The assumption that changes in attitude precede changes in behavior is a logical one. But all too often, attitudinal changes are not a prelude to behavioral changes. Clearly, advertising which produces only attitudinal changes, and not behavioral changes, will not, in the long run, be regarded as "effective" advertising. Most current television research methods do not attempt to measure sales, primarily because the research design usually covers only a brief period. In fact, often, only a single exposure is utilized. Therefore, the only real measures available are attitudinal (i.e., recall, impact, believability, etc.). The basic problem for researchers then is not what you should measure—but what you can measure! An excellent analysis of this problem is to be found

in the article by Professor Kristian S. Palda: "The Hypothesis Of A Hierarchy Of Effects: A Partial Evaluation."²

If we are to approach the question of measuring television commercial effectiveness scientifically, it is necessary for us to ask: "How does a television commercial operate in the market place?" The most honest reply would be: "We do not really know!" One of the reasons for this lack of knowledge is that there has been relatively little basic experimentation with television commercials. Furthermore, up to now, it has been virtually impossible, in most experimental designs, to isolate the prime variable—television.³ Therefore, a methodology which permits the isolation of the variable of television in its purest form is of major importance. Such a technique is Split Cable which not only lends itself to basic television research but also to the predetermination of the relative effectiveness of alternative television commercials and campaigns.

How Split Cable* Operates

Split Cable, of course, operates in conjunction with a CATV system. In the Split Cable system, specially designed electronic gear is installed at the head-end which makes it possible to: (1) Block out any television commercial coming into the CATV community at any time, on any channel, and, (2) Simultaneously substitute a test commercial.

In addition to the special electronic blocking and substituting equipment, Split Cable operates by actually splitting the trunk lines so that each branches out to specific sections of the community. Thus, by using Split Cable it is possible to simultaneously block out and replace television commercials differentially to either one or both sample groups, as indicated in the following diagram.

DIAGRAM A		
	SAMPLE A	SAMPLE B
Procedure 1	On-The-Air Commercial	Test Commercial
Procedure 2	Test Commercial	On-The-Air Commercial
Procedure 3	Test Commercial # 1	Test Commercial # 1
Procedure 4	Test Commercial # 1	Test Commercial # 2
Taking Procedure 4, the following occurs:		
TIME	SAMPLE A	SAMPLE B
9:00:00 P.M.	Station ID	Station ID
9:00:05 P.M.	Program X	Program X
9:05:00 P.M.	Billboard	Billboard
9:05:30 P.M.	Test Commercial # 1	Test Commercial # 2
9:06:30 P.M.	On-The-Air Commercial R	On-The-Air Commercial R
9:07:30 P.M.	Program X	Program X

The test commercials may be of any duration, i.e., from a 5 second promo to a 2 minute or longer commercial. The splitting of the community is planned in advance in order to



Whose hues?



They're Collins', of course. Yours, too, when you relay color programming via Collins' new 5-watt, i-f heterodyne microwave system. Perfect color hues require low differential phase and gain. For the best color TV long-haul performance in the industry, specify Collins' new MW-109E microwave system.

The MW-109E is the most advanced microwave video system available today. In addition to excellent color performance provided by i-f heterodyne repeater techniques, a high-powered traveling wave tube provides superior propagation reliability and signal-to-noise ratio. Rack space and power consumption have been greatly reduced by all solid state circuitry (except TWT's) to ensure equipment reliability and low maintenance costs.

For technical information call write or wire Collins Radio Company, Microwave Marketing, Dallas, Texas Area Code 214, AD 5 9511.



provide segments of approximately equal size and socio-economic composition. These segments are also well matched as to brand and product usage. In the one city where Split Cable* is currently operating there are approximately 1,000 households in each of the two sample groups.

The Major Advantages Of Split Cable*

(1) The test commercial is exposed to its normal audience complement. The subscribers represent 90% or more of the households in the test community. Therefore, there is no need to recruit an audience.

(2) The test commercial is exposed under normal conditions, that is, in the privacy of the respondent's own home, over his own television set, and in the normal family situation.

(3) The respondent is not aware that commercial manipulations are taking place. No respondent permission is necessary and of course no gadget is attached to the respondent's television set.

(4) The test commercial appears on the same channels on which it would normally appear.

(5) The television screen is never permitted to remain blank.

(6) The test commercial appears within normal program contexts, time slots, etc., as would be found in the market place.

(7) The competitive commercial situation is also normal, thus providing a realistic situation rather than an unrealistically favorable one.

(8) When interviewing is conducted, it is so structured that it never directly relates to television exposure specifically and, therefore, there is no awareness on the part of the respondent that his responses are in any way relevant to television. Thus, no "accommodation bias" is introduced.

(9) The measurements are undertaken *over time*, based upon multiple exposures of the commercial.

(10) Because measurements are based upon multiple exposure, over time, sales as well as attitudinal changes can be measured.

Succinctly, exposure takes place under the realistic, normal, competitive conditions which exist in the market place. Therefore, the responses can be assumed to be based upon a real life situation.

The two sample groups are each subjected to the same stimuli such as print media, radio, general television, point-of-sale promotion, packaging, shopping experience, and even to such an extraneous factor as weather. The only differential between the two sample groups is that of television exposure which is absolutely controlled. Therefore, the assumption can be made that any changes in either attitude and/or behavior, over time, are attributable to the differences in the controlled television exposure between the two sample groups. Only those respondents who are interviewed both prior and subsequent to the test are considered in the study sample, thus minimizing sampling error. Statistical reliability of better than $\pm 5\%$ at the 95% Confidence Level is usually obtained.

The Testing Procedure

At present three steps are involved in Split Cable* testing. They are: The pre-exposure interview; The cut-in period; and, The post-exposure interview.

(1) *The Pre-exposure Interview.* Prior to any commercial manipulation, a pre-exposure interview is conducted among subscribers to the CATV system. We may want to know, in precise terms, the levels of usage, awareness and attitudes of the two sample groups toward a test product. Such basic measurements are required if the results are to be examined as changes from the pre-exposure period to the post-exposure period. In some instances, such as the introduction of a new brand or product, pre-exposure measurements may not be necessary.

(2) *The Cut-In Period.* The next step is the cut-in period during which the commercials are manipulated in any of the

previously described manners. The exact manipulation, of course, is determined by the research design. It may involve the testing of two different television commercial approaches such as a 30 versus a 60 second commercial, etc. The test period may continue for as long a time as desired. Prior experience has indicated that a minimum of 6 weeks is often necessary to obtain measurable differences.

(3) *The Post-Exposure Interview.* Having determined pre-exposure levels of usage, attitude, etc., and immediately following the commercial manipulation period, it is then necessary to measure the "affect" of the experiment. This is accomplished by conducting a post-exposure interview among the same respondents previously interviewed in the pre-test period. The post-interview is usually similar, if not identical, to the pre-exposure interview.

In most research designs, changes are measured from pre- to post-exposure, comparing Sample A versus Sample B. A number of test procedures have been employed. For example:

(a) Attitudinal Measures

- (1) Rating Scales, image of product
- (2) Satisfaction measurements
- (3) Purchase intention measurements, etc.

(b) Knowledge Measures

- (1) Awareness
- (2) Level of knowledge
- (3) Recall of slogans
- (4) Copy points

These attitudinal and knowledge measures are of value since they permit the measurement of changes which may occur during the test period and which can then be related to other data the client may have available.

Attitudinal and knowledge measures are employed in many television testing procedures. However, one of the major advantages of Split Cable* is that it can not only measure attitudinal and knowledge changes but also permits the measurement of behavior. In other words, Split Cable* can determine the degree to which a given television commercial works in the market place in changing purchase habits. The behavioral measures which can be employed with Split Cable* are:

(c) Behavioral Measures

(1) *Usage And Purchase Measurements (Including Pantry Audits).* By comparing the results of the two sample groups, both prior and subsequent to television exposure, it is possible to determine whether the exposure to two differential television complexes (differences in commercials, weight, timing, etc.) actually affect the purchase patterns of respondents.

(2) *Coupon Measurements.* Coupons can be and have been mailed to every household subscribing to the CATV system. These coupons are numbered so they can be easily identified not only as to sample group, but even individual subscriber household. Coupons may be distributed at any point of the project, i.e., before, during or after the cut-in period. The coupon usually allows a certain "amount off" from the list price, either for the test brand, or for a specified number of brands, or any brand in the product category. The coupons are redeemable at all of the local stores.

(3) *Offer Of A Free Sample.* Another feasible behavioral measurement employed is that of the offer of a free sample. This may be done in several ways. For example: At the time of the post-exposure interview, after the questioning is completed, the respondent is told: "We want to thank you for your cooperation. We would like you to have a package of Product X. Here are a number of brands, will you please choose the one brand that you would like to have."

The respondent is then shown an actual display of competitive brands and asked to choose one brand. The brand chosen is given to the respondent gratis on the spot and the interviewer duly notes the choice. A second choice is then offered from among the remaining brands. A variation of this procedure may be employed in a telephone interview and the

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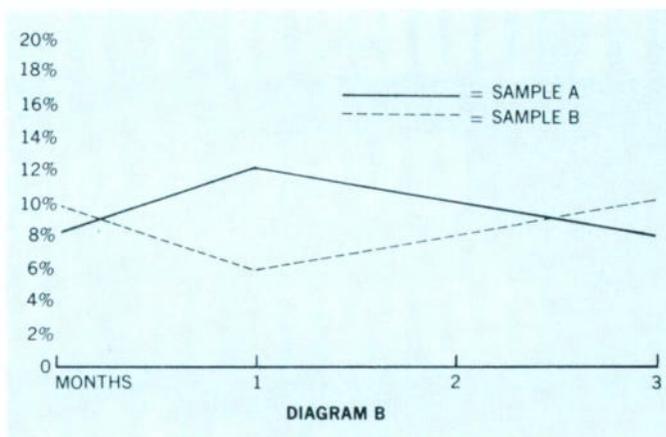
samples chosen mailed to the respondent. Again, comparing the responses in the two sample groups, we have a somewhat realistic behavioral measurement of response.

(4) *Diary Panel*. Although a Diary Panel has not as yet been employed in conjunction with Split Cable*, such a panel is contemplated. The Diary Panel would be made up of an equal number of respondents from each sample group and would be of sufficient size to provide a high degree of statistical reliability. These groups would report their weekly purchases, and/or weekly usage patterns, not only for the test product areas, but also for non-test product areas which would serve as controls. The use of a Diary Panel would obviate, in part, the necessity of interviewing. It would also provide a behavioral curve of response rather than simply pre and post-measurements.

Let us assume that in a pre-exposure interview we find that the test brand is used by 8% of the respondents in Sample A and by 10% of the respondents in Sample B. Following a 3 month cut-in period, the post-exposure interview indicates the same exact level of brand usage for each sample group (8% and 10%, respectively). What are the implications? Can it be said that the difference in television exposure for each sample group produced no appreciable difference, over time, in brand usage? This may possibly be true, however, we cannot be certain that this is so.

Theoretically, it is possible that the following sequence may have occurred (see Diagram B). After the first month, Sample A brand usage may have risen from 8% to 12%, then declined to 10% after the second month and continued to decline to the 8% level after the third month.

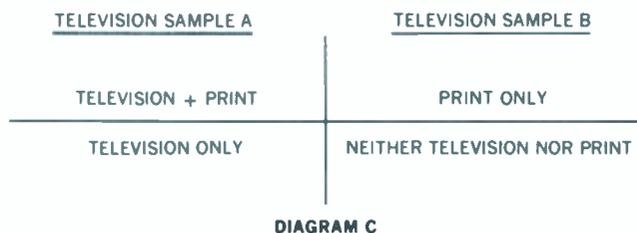
On the other hand, the Sample B group, which started out with a 10% usage level, may have dropped to 6% after the first month, then may have gradually returned to the 10% level during the second and third months. If the latter explanation is true, it is a most important factor to note and understand.



Kinds of Studies Applicable to Split Cable*

Split Cable* may be employed for many research designs. Among them are:

- (1) A test of the relative effectiveness of two commercials and/or campaigns, over time.
- (2) The changes which would be evoked by increasing or decreasing television weight and/or other media weight.
- (3) The changes which would be evoked by differences in time slots, networks, programming contexts, etc.
- (4) Differences in response between a 30 versus a 60 second commercial.
- (5) Differences in response between color and black-and-white commercials.
- (6) Commercial "wear out."
- (7) The effect of clutter and/or clustering commercials.
- (8) Test marketing.
- (9) Intermedia studies in which the print media is split, run in the opposite direction of the television, as indicated in Diagram C.



Sensitivity Of Split Cable* Measurements

The best way to demonstrate the sensitivity of Split Cable* measurements is to examine some actual experiences with the facility. Often the real differences between two test commercials are subtle and occasionally no differences emerge (sometimes to the client's consternation!). Let us examine some of the actual Split Cable* experiments. (Some details are altered or concealed for client protection.)

Example 1

The Problem — To determine whether response to exposure of a television commercial during daytime hours would differ from response to exposure to the same television commercial exposed during evening hours, in creating brand awareness and a request for a coupon for the test brand.

The Produce — A lady's apparel product.

Research Design — Respondents in the A Sample group had an opportunity to be exposed to the test commercial 10 times during evening hours, while respondents in the B Sample group had an opportunity to be exposed to the same commercial 18 times during daytime hours, over a two month period.

Measurements — Brand awareness and coupon request.

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hair clippers, food blenders and air purifiers.



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RESULTS	Figures in %	
	SAMPLE A	SAMPLE B
Changes in brand awareness Coupon requested for test brand	+ 7 33	+ 9 51

Conclusions — The time differential exposure of these commercials produced no appreciable difference in increased brand awareness between the two sample groups. However, daytime exposure evoked a statistically significant difference (at the 95% Confidence Level) between the two sample groups, in that the respondents in the B Sample requested a coupon for the test brand at a much higher level (51%) than did the respondents in the A Sample (33%).

Example 2

The Problem — To test the relative effectiveness of two different television commercials for the same brand.

The Product — A woman's toiletry product.

Research Design — Each of the two test commercials was exposed to its respective sample group simultaneously. Each sample group had the opportunity to see the test commercial 51 times during a two month period.

Measurements — Brand usage and coupon redemption.

RESULTS	Figures in %	
	SAMPLE A	SAMPLE B
Changes in brand usage—test brand Coupon purchase—test brand purchased with coupon	+ .8 8.3	- 2.4 0.0

Conclusions — The commercial exposed to the A Sample was not sufficiently effective to produce an increase in sales. The commercial exposed to the B Sample produced a slight decrease in sales. However, at midpoint in the test a coupon was mailed to each household in both sample groups. There was a clear positive response in the A Sample where 8.3% of the respondents who redeemed a coupon, redeemed it for the test brand. Not one respondent in the B Sample redeemed the coupon for the test brand. It was concluded that although there was some positive response to the commercial exposed to the A Sample, there was clearly a negative response to the commercial exposed to the B Sample.

Example 3

The Problem — To determine the relative effectiveness of two different television commercials.

The Product — A new woman's toiletry product.

Research Design — Each sample group had 143 opportunities to be exposed to the test commercials. Test Commercial 1 was exposed to the A Sample and Test Commercial 2 was exposed to the B Sample simultaneously, over a 5 week period.

Measurements — Many measurements were employed, including aided and unaided awareness, trial of the test product and intention to purchase.

RESULTS	Figures in % & M.S.S.*	
	SAMPLE A	SAMPLE B
Aided awareness	33.2	32.9
Aided and unaided awareness	63.4	64.0
Tried test product	2.8	2.8
Intention to purchase (M.S.S.)	- .19	- .26

*Figures in Mean Scores— Range from -3.00 to +3.00

Conclusions — Exposure of the test commercials at this heavy intensity, over a 5 week period, was unable to produce any appreciable difference between the two test commercials, on any of the measures employed.

Example 4

The Problem — To determine the relative effectiveness of two different television commercials.

The Product — A packaged, proprietary drug item, retailed in both drug stores and supermarkets.

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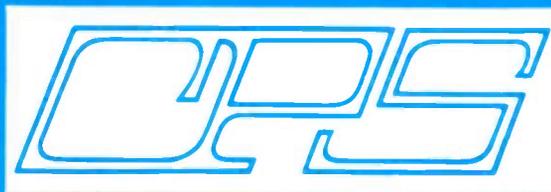
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Research Design — Sixty commercial cut-ins were employed over a 9 week period. In each instance, the respondents in the A Sample had an opportunity to see one test commercial, while simultaneously the respondents in Sample B had the opportunity to see the other test commercial.

Measurements — Primary share of mind (brand which first comes to mind), secondary share of mind (other brands mentioned), purchase intention (the brand will purchase next) and coupon redemption for the test brand were used.

In addition, loyalty to the test brand was measured, i.e., users of the test brand who said they would not purchase a different brand if their current brand was not available.

RESULTS	Figures in %	
	SAMPLE A	SAMPLE B
Primary share of mind (test brand)—change	- 0.3	- 1.0
Secondary share of mind (test brand)—change	+ 3.9	+ 0.1
Purchase intention (test brand)—change	+ 7.2	+ 7.0
Coupon redemption for test brand	9.2	5.0
Test brand loyalty	28.6	0.0

Conclusions — There was almost no difference between the two commercials in their ability to increase primary share of mind or purchase intention. However, a more positive response for secondary share of mind appeared in relation to the commercial exposed to the A Sample as did the A Sample group response via the coupon redemption.

A more positive reaction to the test commercial among the A Sample was further demonstrated by the fact that not one of the respondents in the B Sample would *refuse* acceptance of a substitute brand, whereas 28.6% of the respondents in the A Sample would accept *no brand other* than the test brand.

These examples, chosen from among many available, demonstrate the sensitivity of Split Cable* measurements. It should be remembered that Split Cable* is still in its infancy. Further developments into new markets, new techniques, etc. will enhance this methodology considerably.

Limitations Of Split Cable*

There are a number of areas in which Split Cable* is either not applicable, or has limitations.

(1) *Big Ticket Items*. It would seem unlikely that Split Cable* could be utilized for such items as a Cadillac car. Split Cable* is more advantageous for low cost, frequently purchased products.

(2) *City Size*. At the present time at least, Split Cable* can be operative only in CATV communities. These cities are smaller than the major marketing cities. Interestingly, since CATV is now being established in large cities (New York City, for example) it may be possible at a later date to expand Split Cable* to such metropolitan centers.

(3) *Store Audits*. Direct sales measures via store audits are not feasible since we do not know whether the purchaser is in the A or B Sample group, or outside the CATV community.

(4) *Time*. Often television commercial research requires a faster decision than is possible with the present Split Cable* operation.

(5) *Frequency*. Split Cable* studies involving interviewing cannot be conducted too frequently in order not to condition the respondents.

Some of these limitations will be eliminated as the Split Cable* operation expands into larger cities, where interviews can be conducted with a fraction of the CATV subscribers in a given wave. In addition, the establishment of a Diary Panel in new Split Cable* cities will largely obviate the necessity of interviewing and may provide much more rapid responses to the test commercials than the interviewing procedure.

Summary

Market researchers, working in the television field, almost

universally agree with the need for developing new and more sensitive measurements for testing television commercial effectiveness, particularly using sales as the measure of effectiveness. Television research operates within a very complex framework. Each brand and each product category present different kinds of problems. Similarly, the content of the advertising, its differentiation from other advertising, the media employed, media weight, program context, physical surroundings and other such factors make for differences in the response to advertising.

Specifically, in the case of television commercials, the element of time is a most vital one in several directions. What should the duration of the commercial be (10 seconds, 30 seconds, or 60 seconds)? How long should a particular commercial be employed? How long does it take for commercial exposure to create a sales effect? The isolation of many individual variables is now possible employing the facility of Split Cable*. However, having answered the questions noted above, other new and important questions arise.

No one would challenge the statement that advertising can affect sales, and since television represents a most important advertising medium we can rephrase this statement by saying that television advertising can affect sales. Thus the logical question that follows is: "Do differentials in television advertising create differentials in sales?" Even without adequate scientific data, researchers would almost universally respond in the affirmative.

The question, therefore, which requires major exploration is: "What kind of television commercial differentials create greater or lesser sales?" If we first determine the kind of differentials in television commercials which create differentials in sales, we can then begin to explore, in a much more scientific manner, the nature of these differentials and how they operate.

Since the development of Split Cable* in 1964, many non-commercial research applications have been called to our attention by educators, sociologists, etc. Although the non-commercial application of Split Cable* is still in its infancy, it is the subject of major focus since it presents many advantages in a wide range of disciplines.

We hope, perhaps in the Fall, to write a follow up article describing the opportunities which exist for the CATV operators to employ their systems in non-commercial research.

¹Trendex Report, *Ad Age*, May 9, 1966

²*Journal Of Marketing Research*, Vol III, February, 1966, pp. 13-24, Published by the American Marketing Association

³*Ibid.*, "As a concluding remark, it is suggested that the only satisfactory and lasting answer to the doubts or unwarranted assertions concerning the hierarchical hypothesis would be a well designed experiment

.....

"Is it, on balance, really more difficult and expensive to investigate the direct link between advertising expenditure and sales, than it is to undertake research into each step of the hierarchy — even if the existence of a hierarchy were actually established?"

* Patent Pending

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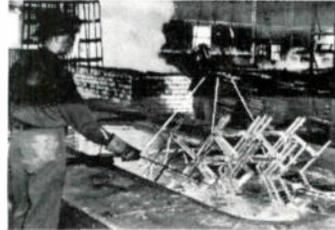
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Profile: BRUCE E. LOVETT

The General Counsel of the National Community Television Association has to know the problems of the small CATV system operator, discuss broad industry problems with Congressmen and Senators, file briefs at the FCC in competition with some of the highest-priced legal talent in Washington, and, in short, must master the intricacies of a variety of legal fields, each one of which often commands a lawyer's entire professional life.

The NCTA had such a man in Robert D. L'Heureux; following L'Heureux's recent retirement to limited private practice, it has found a worthy successor in Bruce E. Lovett.

Lovett, 39, joined the NCTA in November, 1965 as Assistant General Counsel, and in that position he became acquainted with the broad spectrum of legal problems facing the CATV industry. Has his new position with NCTA's embattled forces given him a new perspective? "The thing that has had the biggest impact, besides moving up a big notch on the firing line in terms of responsibility," Lovett told *TV Communications*, "is that you really begin

to realize the myriad of problems that arise on a day-to-day basis among our many members." He said he gets 35 to 40 requests per week for general legal guidance from individual CATV systems alone, and each has its particular difficulties arising from the many complexities of Federal, state and municipal regulations. The NCTA doesn't act as a law firm for the systems, of course, but it is often able to supply advice and help the system operator put his legal questions in perspective.

Tall and dark, Bruce Emory Lovett was born in Winchester, Virginia, on August 28, 1927. His voice still has the soft drawl of his native state, and it's not surprising that he commutes to NCTA's Washington headquarters from a suburban home in Arlington, Virginia, rather than living in the District of Columbia or nearby Maryland. His wife, Junella Lovett, was also born in Winchester, and the town is "loaded with relatives of mine," says Bruce. He and Junella have three children. Golf helps him keep in shape, but, states Bruce, "I have to admit that I'm not very good at it, as much as I enjoy the game."

Having obtained his bachelor of arts degree from Lynchburg College in Lynchburg, Virginia, Lovett got his law degree from Georgetown University Law School

in Washington. After graduation, he went into private practice for two years with Judge William Finley in Falls Church, Virginia, and then served as a trial attorney for three years with the Federal Trade Commission's Division of General Trade Restraints. Employment in the office of the Solicitor General of Western Electric Company followed, and his New York City office in that position represented his only professional wandering of any distance from his native state.

Lovett finds his job as General Counsel, which he has occupied since February, enormously challenging. He points out that "in an industry that is expanding the way the CATV industry is, and that is as unique as the CATV industry is, you have new legal problems constantly arising."

The NCTA General Counsel is an expert of long standing in one of the fields of prime importance to the industry — the relations between CATV systems and the telephone companies. Before moving to the NCTA, his work for Western Electric gave him an invaluable background, and under Bob L'Heureux he master-minded NCTA's current telco strategy. His out-

standing work is acknowledged as a major factor in convincing the FCC to hold its current consolidated CATV-telco hearing. Lovett also noted that he now has an able assistant of his own, Gary Christensen, previously a key attorney with the CATV Task Force.

"The CATV field's major problem," Lovett says, "is that it has been a jurist's paradise. We have a problem with over-regulation. We have FCC regulation, municipal regulation, and attempts to impose state Public Utility Commission regulation. A lot of it is inconsistent, as for instance in Connecticut, where they used a state-wide approach diametrically opposed to FCC policy on CATV ownership. Over-regulation of an industry as small as CATV is — and CATV only reaches about 4.5 percent of the nation's television viewers — can retard development and keep the industry from expanding so it can reach its potential. There should be more of an attempt to let the public decide." The average CATV system has about 1,500 subscribers, he points out, and is truly a small business. A CATV owner can handle the local legal problems that arise, he continues, but over-regulation is "an enormous burden" with which the small system is finding it increasingly difficult to cope.



Bruce E. Lovett

"Copyright, of course, is the number one CATV issue right now," Lovett concludes. "It is extremely important. If Congress believes that we must pay, we're going to try to make sure that we're treated equitably, according to the nature of our industry. If we are treated fairly, and I think we will be, the CATV industry should be able to live with the copyright law and not only survive but prosper. One thing is certain: No aspect of the copyright law should be permitted to impair CATV's ability to continue to supply a diversity of programming, because if that ability were impaired, it would impose a major penalty on the American public."

The current FCC consolidated hearing on the CATV tariffs of the telephone companies probably will last one to three years, Lovett predicts, but the important Section 214 issue — the dispute over whether telephone companies should have to apply for service certificates from the Commission before constructing CATV plants — should be decided sometime this summer, he says.

"This is an extremely significant part of the hearing," Lovett explains, "because it focuses on a fundamental problem — the degree to which telephone company utilities are attempting to own or control non-telephone communications services by constructing vast amounts of coaxial cable — in areas where private industry is ready, willing and able to do the job and has proven its capability to do so." He adds: "Since in-home communication service technology is developing rapidly, this question should be answered now, especially considering the enormous size and power of the telephone companies." He points out that the integrated Bell System now grosses about \$12 billion annually. Lovett feels that the government must seriously weigh the question of how much it can let American Telephone and Telegraph Corporation expand and exert its influence.

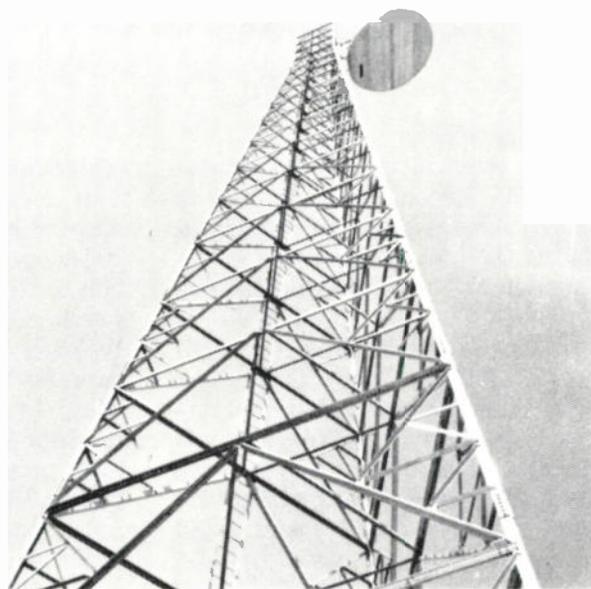
What are the NCTA General Counsel's long-term goals? "I hope we can achieve a stable legal climate for the CATV industry by accomplishing fair resolution of the broad, unsettled questions such as copyright, regulation, and telephone company relations. Then, we can all get to the business at hand, which is serving the American public." Everyone in the CATV business will have to agree with that ambition, and with Bruce Lovett acting as NCTA General Counsel, that goal is nearer than ever. □

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We haven't given you the whole story . . . about how many dollars and days are saved in installation and maintenance, but if we've aroused your curiosity, *write us for more information*. While you're in the mood, also ask about Microflect's billboard *passive repeaters* and quality *tower* lines.



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Analysis of Appeals Court Ruling on Cable Operator's Copyright Liability

A Special Report reprinted from the weekly CATV newsletter Cable Television Review

Last month the United States Court of Appeals for the second circuit, handed down its opinion in *United Artists Television, Inc., v. Fortnightly Corporation*, affirming a decision of the United States District Court for the southern district of New York. That court ruled that two community antenna television systems in West Virginia infringed United Artists' exclusive right conferred by the copyright act to perform in public copyrighted motion pictures broadcast by television stations under licenses from United Artists, by receiving the station's television signals and transmitting them by cable to their subscribers. This opinion is of far-reaching importance to every CATV system and, unless reversed by the United States Supreme Court or modified by Congress, it will change the economic basis upon which the industry operates. Specifically, the case presented the question whether the systems operated by defendant, Fortnightly Corp., in Clarksburg and Fairmont, West Virginia, infringed the exclusive rights of United Artists Television, Inc., to perform its copyrighted motion pictures in public, by receiving and delivering by coaxial cable to subscribers, the signals of the television stations broadcasting the copyrighted motion pictures. The impact of the decision however, goes much beyond the question of whether and how much CATV may have to pay for the right to receive broadcasts of copyrighted programs for its subscribers, and reaches more fundamental questions of the power of copyright proprietors to prohibit reception by means of CATV notwithstanding ability and willingness to take out licenses.

The court conceded that there is nothing in the legislative history of the Copyright Act to indicate that Congress intended the exclusive right to perform in public to

include operation of CATV systems. The court, however, found "substantial guidance" in a decision of the Supreme Court of the United States in *Buck v. Jewell-Lasalle Realty Co.* (1931), which the Court believed was closely analogous. The Lasalle Hotel in Kansas City, Missouri, provided loudspeakers or headphones in each of its public and private rooms over which guests could hear the programs being received on the hotel's master radio. The Supreme Court in that case held that the guests of the hotel hear a reproduction (performance) brought about by the acts of the hotel in (1) installing, (2) supplying electric current to, and (3) operating the radio receiving set and loudspeakers. The Court of Appeals also relied upon a similar case, *Society of European Stage Authors & Composers, Inc., v. New York Hotel Statler Company, Inc.*, (SESAC) which involved similar facts in the southern district of New York. In SESAC, which involved the Hotel Pennsylvania in New York City, it was held that when the owner of the hotel does as much as is required to promote the reproduction and transmission within its walls of a broadcast program received by it, it must be considered as giving a performance within the principle laid down by the Supreme Court in the 1931 Lasalle Hotel case.

The Court of Appeals concludes that CATV systems do far more to bring about the viewing of television by their subscribers than the Lasalle and the Hotel Pennsylvania did to provide radio programs for their guests. Thus, the Court said "the expense and effort required to install, operate and maintain the CATV systems' antennas, head-end equipment, many miles of cable, and connection to subscribers' television sets, clearly exceeded that involved in wiring master radio sets to loudspeakers in hotel rooms."

The court went on to say that the operation of a CATV system did far more to dilute the market of copyright proprietors for their works than a hotel which offers the same program to a constantly changing group of guests. The CATV contention that it is not similar to the hotel cases since the audible and visible programs appear on privately owned television receivers and headphones on which the performance takes place in a public commercial establishment was completely rejected. The court stated that it was persuaded that when a CATV system enabled several hundred of its subscribers to view a program simultaneously, it is engaging in one public performance, not several hundred private ones.

It would be anomalous, the court said, to hold that the operation of a CATV system is not a public performance because the subscribers furnished their own television sets in view of prior decisions which establish that a television broadcast from a studio which is received on home television sets, constitutes a public performance; and expressed the view that a television broadcast of a copyrighted program harms the copyright holder, not because a handful or roomful of persons sees the work performed at the studio, but because thousands of viewers watch in their homes. Here, the court seems to be equating "public performance" with injury to the copyright owner.

The court disposed of the industry contention that it is a master antenna and United Artists' argument that CATV is similar to a broadcast station by saying: "Our conclusion that the defendant's CATV systems publicly perform the television programs they made available, rests upon the result which they produced and which defendant clearly intended, the simultaneous

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CATV systems seeking the improved reception demanded by COLOR TV — face co-channel or other signal interference problems. But not when Taco COLOR CAPTAIN Diamond-4 Arrays are specified.

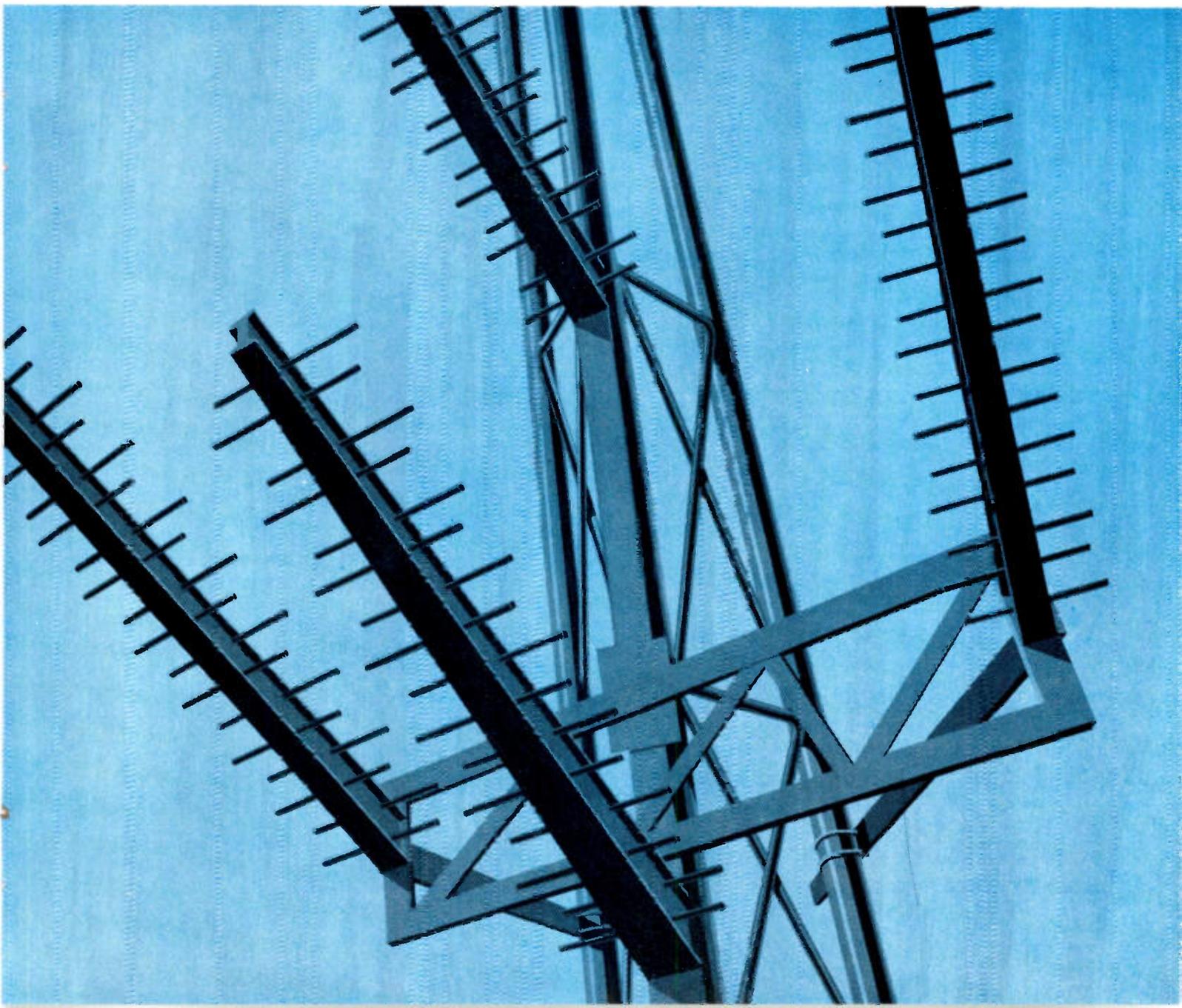
Color-perfect pictures to delight CATV subscribers are a reality, even with 12 Channel systems. Color Captain Arrays reject co-channel interference for sharp, clean VHF reception. These rugged antennas — built in the tradition of famous Taco Ruggedized Yagis — provide many years of trouble-free operation. Picture quality starts at the antenna! Technical data yours on request.



TECHNICAL APPLIANCE CORPORATION
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ENDS INTERFERENCE PROBLEMS

COLOR CAPTAIN



viewing of the programs by its subscribers, rather than upon the technical characteristics of the systems which both sides have urged upon us."

The systems had advanced two additional defenses. One was that even if CATV performed the copyrighted motion pictures by receiving the broadcast signals, a license was implied in law which permitted the reception on behalf of subscribers. Essentially, this argument is that since the copyright proprietor licensed the television station to broadcast the program for reception in private homes, the viewing of the programs in the homes was intended by the copyright proprietor and a license to receive, therefore, is implied.

The second additional contention of the CATV systems was that to impose copyright liability on CATV would conflict with the National Television Public Policy found in the Communications Act to secure the maximum benefits of television to all of the people of the United States. Citing the FCC's First and Second Report and Order, the Court states that the Communications Act was not intended to preempt or repeal the Copyright Act and refused to attempt to harmonize the public policies of these two acts.

Conceding that CATV raises many serious problems under the Copyright Act, the Court said that

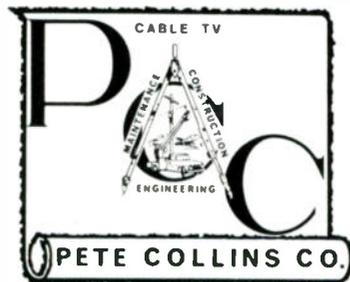
it could not undertake the fashioning of detailed rules such as those contained in the Second Report and Order and in the Copyright Revision Bill in Congress. Apparently, however, the Court was disturbed by the sweeping impact of its decision. In spite of its disregard of the argument that the copyright owner would be paid twice for the same broadcast performance, at least for subscribers within the Grade B contour, and its rejection of the master antenna concept, the court qualified its findings sufficiently to raise serious doubts as to whether its decision is applicable when subscribers can receive one or more of the signals available on CATV off-the-air. Thus, while discussing the public policy of the Communications Act, the Court said: "...it is clear that, at least where the defendant's subscribers could not receive the licensed broadcaster's signals satisfactorily by normal antennas, the Federal Communications Act, which lacks a comprehensive scheme of regulatory powers and private remedies, was not intended to preempt the application of the Copyright Act..."

The implication appears to be that the Communications Act may have preempted the Copyright Act where one or more signals can be received off-the-air. Also, notwithstanding its rejection of the CATV argument that it has license implied

in law to receive authorized broadcasts, the Court also stated in the same context: "A different case might be presented, which we do not decide, if a CATV system's subscribers could receive one or more of the stations carried satisfactorily by normal antennas, as it might then be contended that a copyright holder licensing a broadcast of a work over such a station must be held to have licensed their viewing of the work."

There can be little doubt but these excerpts from the opinion will occasion considerable controversy among attorneys on opposing sides of the issue. The opinion will not finally dispose of the case. Fortnightly Corporation plans to file a *Petition for Certiorari* with the United States Supreme Court. If has 90 days in which to do so. If the Supreme Court denies *Certiorari*, the Circuit Court opinion becomes final. If *Certiorari* is granted, briefs will be submitted and the case will be argued before the Supreme Court probably in early 1968 with a final decision before June 1968.

The ability of the people to enjoy via CATV the broadcasts of copyrighted programs appears to be seriously jeopardized by this opinion. Most motion pictures and many syndicated programs are subject to long-term exclusive licenses granted to broadcasters and may not be available for licensing to many CATV systems for as much as three-five years. Also, the Court provides no machinery for licensing, assuming each CATV operator will make his own arrangements for dealing with the copyright owners. The lack of information concerning future broadcast schedules and identity of the copyright owners makes it extraordinarily difficult, if not impossible, for CATV effectively to negotiate clearances. In addition, there is no limitation on or court review of the amount of fees the copyright proprietor may demand. Although the case is of such extreme public interest that the Supreme Court may wish to grant *Certiorari* and a reversal is possible, leaders are urging all operators to unite immediately behind realistic copyright legislation to preserve CATV's ability to continue to serve the public. □

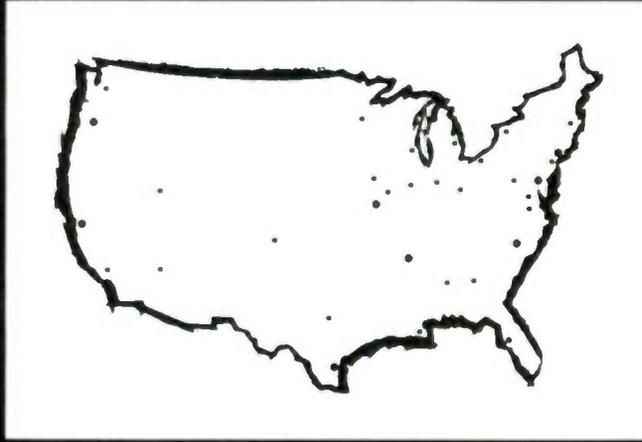


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**"Restricted Stock Purchase" plans are better
for key employees than qualified stock options or
"Phantom Stock" plans for...**

Long-term Compensation Packages

*By Herbert A. Huene, Partner
Lybrand, Ross Bros. & Montgomery
Certified Public Accountants, New York, N.Y.*

The most important problem facing any company today is how to attract, and retain, capable executives. As in other aspects of business, the search for employees has become very competitive. It has become necessary for each company to offer an employee compensation package that is as shiny and attractive (if not more so) than a competitor's package. The presence of a "seller's market" for employees has led to concentration on maximum employee benefits, rather than on the aspect of minimum cost to the corporation. The additional compensation element of a new program is usually considered worth the cost, if it attracts and retains the best available personnel.

There is now more emphasis on employment attributes, other than straight dollar compensation, which are attractive to this young generation. These include such intangibles as the challenging nature of the work, opportunities for rapid advancement, prestige in the community, and personal prestige and satisfaction. An aggressive personnel program today must be tailored to the ideals and psychological motivations of young executives in their 30's or 40's. The emphasis on cash compensation which was attractive in the 1930's and 1940's to executives with a background in the depression years does not as greatly attract men who have grown up through the post-World War II boom.

Cash compensation is, of course, still the primary "carrot" for key employees, but a well-rounded compensation package must be offered to compete effectively in today's employee market. In every compensation package, however, there are generally both "carrots" to attract the potential employees and "sticks" to result in an economic detriment if employment is prematurely terminated voluntarily by the employee.

Additional direct cash benefits are not overly attractive, beyond a certain point, to key employees, since the U.S. taxes the cash income of top personnel at very high rates (although not at as high rates as many foreign countries). A good deal of emphasis is placed, therefore, on alternative compensation arrangements which produce the maximum *after-tax* benefit to key employees. Quite often, increased compensation benefits have been related to increases in company stock market value, thereby increasing management incentive to benefit the shareholders. These "stock-related" compensation plans also may offer certain tax advantages to the employees, thereby increasing their after-tax benefits.

The usual compensation arrangements which are related to

increased market value of company stock are qualified stock option plans and "phantom stock" plans. The purpose of this article is to compare briefly the "carrot" and "stick" economic qualities of these plans and of a relatively unused concept, restricted stock purchase plans. It is my belief that restricted stock purchase plans are more attractive to employees than most other types of employee benefit plans, and can have substantial "stick" qualities included at the discretion of management. This article will not discuss the somewhat varied accounting/financial statement treatments often applied to these different employee benefit plans.

The major advantages under a restricted stock purchase plan are a more guaranteed value to the employee; greater ease of financing; capital gain upon stock appreciation after award; long-term capital gain on stock appreciation after only a six-months holding period; and a higher after-tax return on the employee's investment.

Qualified Stock Options

Under qualified stock option plans, no taxable income to the employee arises when an option is issued or exercised. Gain on eventual sale of the stock is taxed as long-term capital gain, if the stock is held for three years after receipt. To be "qualified," the option must be at 100% of market when the option is granted, cannot extend for over five years, and cannot be transferable during the employee's lifetime. No tax deduction is allowed to the corporation in connection with qualified stock options, unless the employee makes a disposition of the stock within the three-year period.

Qualified stock options have a number of practical disadvantages which interfere with the objective of attracting and retaining capable personnel. The option has absolutely no value to the employee if the stock does not appreciate. Even if the stock does appreciate, such appreciation generally must be fairly substantial before the employee will exercise and risk holding the stock for the three-year holding period required for long-term capital gain. The exercise of stock options is often difficult to finance under the present margin rules, especially in view of the three-year holding period, unless the stock has more than doubled in value up to the date of exercise. The financing of stock acquisitions under qualified options represents a major problem to executives without large sums of capital to invest.

The options only run for five years; therefore, it is usually necessary to give an employee new options at the end of such period. However, if the first options were successful from the employee's viewpoint, the stock has substantially appreciated. Since the new options must be at 100% of market at the date of grant, the new option price is much higher than the first, thereby compounding the financing difficulties encountered under the first option. Many executives, therefore, are forced to sell stock acquired under earlier options in order to exercise later options, although this tends to defeat the corporate purpose of encouraging employee investment in company stock. In addition, top executives must be careful to avoid

Mr. Huene has been requested to write a periodic column for TV COMMUNICATIONS about tax, accounting, financial, and or economic matters affecting the CATV industry. It is planned that these columns will occasionally encompass personal planning suggestions relating to income and estate taxes, in addition to discussing business taxes and economics. Suggestions as to subjects for future columns will be welcomed. Comments, suggestions and questions should be directed to Mr. Huene, in care of TV COMMUNICATIONS.

selling stock within six months before or after option exercise, or they would run the risk of forfeiting all or part of the indicated profit on the sale and purchase (under the SEC "insider profit" rules). This, again, complicates financing of the stock acquisition.

With limited exceptions, qualified stock options do not provide a substantial incentive for an employee to remain with the company, especially if the options are immediately exercisable upon grant. If the employee leaves prematurely, he may forfeit only his right to profit from some (unknown and problematical) stock appreciation over the remainder of the five-year option period, and he can realize all past appreciation by exercising the option prior to leaving. Many companies have attempted to create more "stay put" incentive by not allowing the option to be exercised in full until near the end of the option period, but it is questionable whether this has much practical effect as a termination deterrent.

"Phantom Stock" Plans

Under a "phantom stock" plan, the executives will benefit if the corporate stock appreciates, but the corporation actually issues no stock at the date of employee award. The employee is granted a theoretical number of shares of stock (hence, "phantom stock") but will be paid cash at a later date equal to the then value of the theoretical shares, — therefore, the more the phantom stock appreciates, the more the employee later receives in cash. Some of the many variations of such plans would include theoretical dividends on the phantom stock in the computation of the ultimate cash payout to the employee, would pay out cash currently equivalent to dividends on the phantom stock, would allow the employee to share only in the appreciation of the stock (and not the value at the date the shares are theoretically granted), would allow the employee to defer part of his current compensation so as to "buy" more phantom stock, etc.

The entire cash payment, including the (theoretical) appreciation, is ordinary income to the individual when received, and the corporation receives an equivalent tax deduction at the same time. This lack of a possible capital gain element is the major drawback to phantom stock plans, although many plans are based on the (often erroneous) assumption that the ordinary income tax impact will be less because the key executives will be in a lower tax bracket after retirement. The employee puts up no cash for the phantom stock, and there is, therefore, no financing problem.

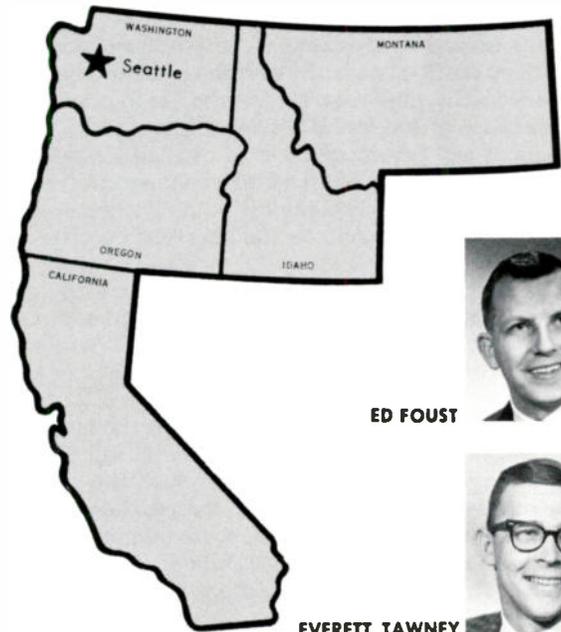
Since there are no tax rules as to the time at which the phantom shares must vest in the employee, management can build into the plan any desired restrictions on employees. A substantial, potential economic benefit can thus be credited to an employee's account to be paid only at retirement and to be forfeited in the event of premature termination. Such forfeiture provisions could provide a deterrent to voluntary termination to take another job. However, this deterrent is not substantial unless the unpaid amount credited in the employee's account under the plan is very large, since a top executive may be able to keep only 30% of such amount upon distribution.

Restricted Stock Purchase Plans

The *issuance* of stock to an employee at a price below market value, but subject to a restriction which has a significant effect on its value, does not create taxable income to the employee when he acquires the stock. Taxable income arises later at the time when the restrictions lapse or when the stock is sold, whichever occurs earlier. A significant restriction might be a requirement that the stock be resold to the corporation at its purchase price if employment terminates within a specified period.

The amount of ordinary taxable income to the employee at such later date is the *lesser* of (a) the excess of the fair market value of the stock at the time of its acquisition, valued with-

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out the restrictions, over the price paid, or (b) the excess of the fair market value of the stock at the time the restrictions lapse (or the stock is sold, if earlier) over the price paid. Any stock appreciation above the value at issuance will be taxed at capital gains rates when the stock is sold, if the stock is held over six months from initial receipt. The corporation gets a tax deduction at the same time and in the same amount as the employee realizes ordinary taxable income.

This type of plan is of maximum benefit to an employee, since he can realize the future appreciation in stock value at capital gains rates, as in the case of qualified stock options, and has less capital at risk than if he purchased the stock under qualified stock options. In addition, the stock produces some benefit to the employee, even if the stock does not appreciate, because of the initial discount from market (which discount can be any percentage desired by management). The employee's holding period for the stock commences when the stock is issued, even though subject to restrictions, and he can get long-term capital gain on the appreciation after holding the stock more than six months (unlike qualified stock options). In addition, if the executive dies owning the stock, no income tax at all will be payable, under current tax law, on the appreciation. The corporation receives, of course, less cash than under qualified stock options, but this is partly offset by the tax deduction benefit.

If the discount is large enough (e.g., 70%), the employee's required cash investment can generally be easily financed. If the stock pays dividends, the dividends on the stock will often pay interest on a 100% loan for the purchase price. In effect, the employee may have little, or no, economic risk on the restricted stock purchase, especially if the restrictions permit sale of the stock if the value drops to 120% of original purchase price. The plans often have, therefore, the financing simplicity of phantom stock plans, while retaining the potential capital gain element upon stock appreciation inherent in qualified stock options.

The following schedule indicates the comparative results of restricted stock purchase plans and phantom stock plans on an example situation:

Assumed Facts

Alternative 1: An executive is issued stock worth \$50, in lieu of a \$50 bonus. Significant restrictions are placed on the stock, which restrictions lapse ten years later when the stock is worth \$200. The employee is in the 60% bracket in all years.

Alternative 2: An executive is currently awarded a share of "phantom" stock, when the company's stock is selling at \$50. After ten years, the stock (or equivalent cash) is issued to the employee, when the stock is worth \$200. The employee is in the 60% tax bracket in all years.

	Alternative 1	Alternative 2
Ordinary income in year of initial issuance or award	None	None
Ordinary income in year restrictions lapse	\$ 50	
Ordinary income in year stock is issued		\$200
Capital gain if shares are later sold for \$300*	\$250	\$100
After-tax benefit to employee from entire transaction (assuming capital gains tax is paid)	\$207	\$155
Cash benefit of deduction to corporation (assumed 50% tax rate)	\$ 25	\$100

*This gain (and related 25% tax) will be completely avoided, under current tax law, if the employee dies owning the appreciated stock.

Under a recent restricted stock plan of a major corporation, stock is to be sold to employees at 50% of current market value. All the stock must be resold to the corporation if the employee terminates employment before five years. After five years, restrictions on 5% of the total number of shares will lapse each year for the next ten years, or 50% of the total stock award. The restrictions on the remaining 50% will lapse at retirement or after 25 years of service, whichever is earlier. The plan includes provisions for partial vesting, in the discretion of corporate management, of the remaining restricted shares in the event of termination after five years and prior to full ownership. This particular plan did not include a discretionary right of management to waive the restrictions on remaining restricted shares in the event of employee hardship, although some plans do include such provision.

This plan indicates the mechanics of a restricted stock purchase plan, but the restrictions in this plan need not necessarily be included in similar plans for other corporations. Various restrictions upon the stock can be imposed by management, as desired, and can be designed to produce a balance of "carrot" and "stick." The restrictions will, of course, have to be sufficient to have a significant effect on the value of the stock at issuance, in order to achieve the desired tax effect.

The potential detriment (deterrent) to a prematurely-terminating employee under a restricted stock purchase plan is far greater than under phantom stock plans or qualified stock option plans. Under the restricted stock purchase plan, the high-bracket employee and/or his family would forfeit 75%-100% of stock appreciation, rather than the 30%-40% retainable under phantom stock plans.

Restricted stock purchase plans may be, of course, more expensive in cash cost than other types of compensation arrangements. Corporate management must weigh the cash cost of the various available arrangements with the intangible benefits to be derived from attraction and retention of qualified executives.

Desirability of a Tax Ruling on Restricted Stock Plans

It is advisable to ask the Internal Revenue Service to give an advance ruling on a restricted stock plan. It is extremely desirable to know that a plan entails no constructively received income which might be taxable to the employee when the stock is issued. It is also important to know that the restrictions are sufficient to defer tax consequences until the restrictions are removed. The IRS ruling policy on such plans is not clear at this time.

SEC and Other Legal Implications of Restricted Stock Plans

Since SEC and/or other legal implications may be involved in any executive compensation plan or arrangement, any proposed plan should be reviewed with legal counsel prior to adoption. Many corporations obtain shareholder approval for restricted stock purchase plans.

Summary

Restricted stock purchase plans appear extremely beneficial to top executives. Such arrangements might be advantageously utilized as a key employee stock purchase plan, under which employees contribute some funds, or as a deferred compensation arrangement. In the latter situation, a part of an employee's cash compensation might be set aside and invested in restricted stock, and appreciation from the date of investment could then later be taxed at long-term capital gains rates. These plans appear far superior, from an employee's viewpoint, to any other compensation arrangement based upon appreciation of company stock market value.

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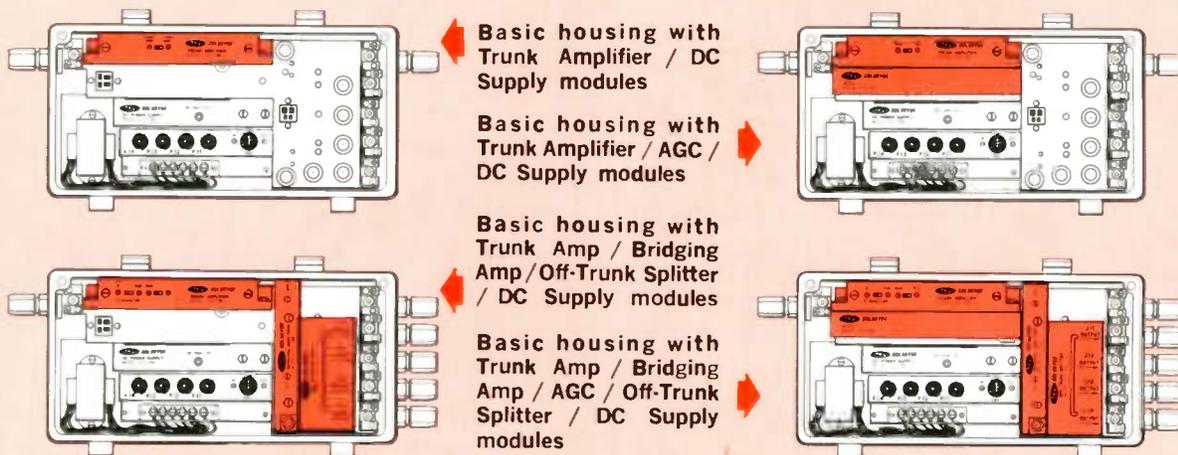
A high-output repeater type amplifier, the CVT-1LE features the same hybrid micro-circuitry as trunk-line and bridging amplifiers. Variable gain attenuation and tilt equalization. 10db noise, 1.38:1 VSWR and ± 0.5 response flatness assure clean color signals.



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Over 350 Operators and Guests Attend NCATA's 1967 Canadian CATV Convention

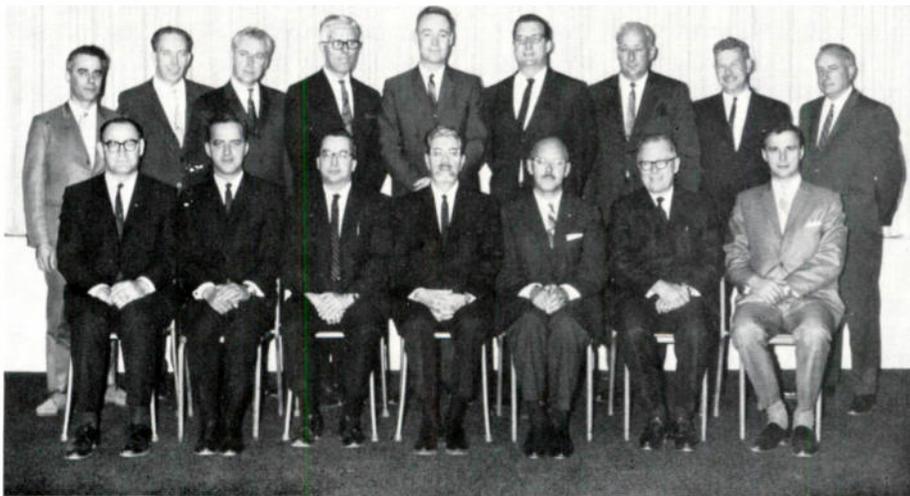
Meeting at the Chantecler Hotel in Ste. Adele, Montreal, Quebec, Canadian operators and guests turned out in a force that numbered over 350 for the annual convention of the National Community Television Association of Canada. Chaired by I. Switzer, H. R. Young and T. Small, the first two days' meeting sessions featured speakers: James Palmer, C-Cor Electronics; E. R. Jarmain, London TV

speakers included: W. E. Jarmain, Jarmain TeleServices Ltd.; D Aiten, Cable TV Ltd.; C. Tourginy, Andre Trottier & Co. and K. J. Easton, Famous Players Canadian Corp. Ltd. Special luncheon speaker was J. C. Munroe, M. P., Parliamentary Secretary to Minister of Manpower and Immigration, who stressed the "complex pattern of development" of pending legislation which is expected to result in a

the growth and development of cable TV, "is a social and political problem as is the whole television field." "It seems to me," he continued, "that under these circumstances, and taking into account the many other developments in television . . . it is extremely essential that the Board of Broadcast Governors have responsibility for the development of cable systems in Canada. It is most unlikely . . . that they would see the need to alter present arrangements. But cable must be considered as very likely to be vital in the future development of television operations in the Canada of the future." He concluded by saying that "To divorce broadcasting and reception is an academic exercise in 'nit-picking.' Both are of equal importance and both must be considered together in any television system of national scope."

Stern Speaks On U.S. Problems

Alfred R. Stern, chairman of the National Community Television Association, reported on CATV problems and progress in the United States. Stern charged that American broadcasters who fear CATV as a "sleeping giant of communications" are seeking to stifle its growth, particularly in large metropolitan areas, by confusing copyright liability with regulatory issues in Congress. He said attempts to link the two issues led the House of Representatives to eliminate CATV provisions completely from the recently-passed House copyright revision bill. However, he added that the Senate is expected to include an acceptable CATV section in its version of the bill because it is "unthinkable" that Congress would "allow the slow death of this new and valuable communications medium" by not spelling out the extent of its copyright liability.



New officers and directors of the NCATA shown above are: (left to right standing) C. R. Boucher, T. Kennan, L. Beliveau, M. Cliche, H. R. Young, F. E. Cassin, N. Curry, D. L. Gartrell, all directors, and J. Chevalier, manager. Seated are (left to right) I. Switzer, G. A. Allard, both directors; O. Girard, vice-president; J. W. Loader, president; K. J. Easton, secretary; L. Langlais, treasurer; and J. Beauchemin, director. Not shown are directors S. Welsh and D. A. Shackelford.

Cable Service Ltd.; Archer Taylor, Malarkey, Taylor & Associates; C. E. Harmon, Entron Inc.; J. Thomas, Lindsay Specialty Products Ltd.; K. J. Easton, Famous Players Canadian Corp.; J. Milligan, Fergus Cable Television; Philip D. Hamlin, The Hamlin Corp.; Omer Girard, Transvision Magog Inc. and J. F. Weber, American Cable Television Inc.

G. A. Allard served as chairman of the administrative session, where

new Broadcast Act for Canada before the end of the year. "When we began in Canada to delve into the television situation many months ago," Munroe said, "we were debating the relative merits of a broadcasting system that was already out of date . . . We find ourselves now discussing . . . an entirely new field of human technological achievement, and our old definitions do not hold true now."

Munroe told the assembly that

Marketing CATV...

The Insurmountable Opportunity?

By John E. Lewis

The attractiveness of cable television — and the incredible future of this young industry — may be closely related to our personal feelings about togetherness.

A journey — any journey — is a lonesome thing. However long or short, it inevitably involves the traveler in experiences that are not shared by those he left behind. Whatever he may have been when he left, the traveler returns — to some extent — a stranger.

But, even the vehicle itself is a capsule of loneliness; its passenger carrying ability limited by the capacity of its power train. The people who take a trip together are never quite the same as those who did not take it — and their number is always limited by the size of the vehicle itself.

When man began to travel in vehicles — whether by horseback or dugout canoe — he began the process of separation which, amplified over the years by advances in vehicular technology to include our present jet aircraft, broke society into pieces and made us all strangers.

Americans have always engaged in a frantic love affair with their vehicles. From horses to trains to automobiles to jets, the romantic involvement has always been the same. But perhaps we have finally begun to reap the harvest of our affair with the vehicle. We are

coming to the end of this long and lonely journey ... and we may just embark upon quite a different one.

Our new electronic technology offers us, at least in theory, the incredible possibility that all of us can share in the same experience simultaneously. The glow of the television tube may weld our fractured world together. It may well offer us the opportunity to restore identity, process, and continuity to our inner lives.

It may just be that this is the road we will take together. Someone has referred to this as an *insurmountable opportunity*. Perhaps it is. But if we tie together the long stretches of the past and the future, and knot them together at the point of the present, it may not be so insurmountable, after all.

The application of *existing* electronic technology to vehicular development could help us achieve, during the next twenty years, a super-transportation system that could move each of us from experience to experience as smoothly and easily as schools of fish move through water. But the law still stands; every action causes *reaction*.

The reaction, in this case, is the increasing ability of our technology to move the *experience* itself — in sound, color and full-dimension — to you and to me. The interplay

between these two developments, moving the body towards the experience, and the experience toward the body, will create much of the excitement of our next twenty years.

Certainly the pattern of our workaday lives will undergo profound transformations. And our social, political and economic worlds, as well as our basic marketing philosophies, will undoubtedly be reshaped by our technological capabilities.

Does all of this sound *way out*? Okay, then, let's imagine a space and time circa 1987. A man is sitting in the middle of his circular living room, in Denver or Omaha. On the curved walls around him he can see the ocean, the surf breaking over the rocks and foaming up the beach. Across from him sits another man, and the two of them are talking to each other. Once in awhile, the boom of the bursting surf and the cry of a sea gull intrude upon the conversation.

Let us now say that the room is underground and has no "real" view at all; that what is experienced on the curved walls is an image on a flat wall television screen, pre-recorded in Hawaii, and now being replayed electronically. Let's further say that the first man is "real", but that the image of the second man is being transmitted by laser beam via satellite and through a cable system. It is being recreated in color and in full dimension—you could walk around his image and see the back of his head by holography — so that though he is "there" in that room in Mid-America at the moment. But he is in reality sitting in his living room in London, England!

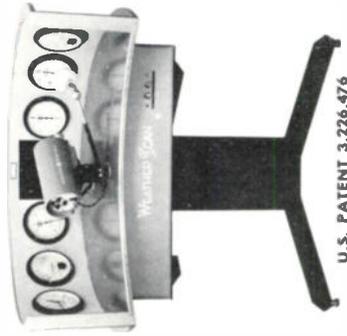
There is nothing in this hypothetical situation that does not appear to be perfectly feasible within the next ten to fifteen years.

ABOUT THE AUTHOR

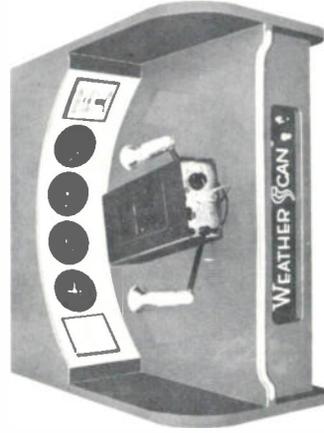


John E. Lewis qualifies as a marketing authority by any measure. For the past five years he has been president of Marketing Factors, Inc. of Minneapolis. Living on his cattle ranch in Arizona, Lewis says he "literally moves between the cattle industry of the 19th century and the hyper-sophisticated world of marketing and product development already concerned with the problems of the 21st century." Prior to co-founding MFI, whose clients include many of the nations' largest corporations, Lewis spent two years as marketing director of J. Wolter Thompson Advertising, and was managing editor of *Progressive Grocer Magazine* for six years, following several years as product manager of Scott Paper Company.

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ORIGINATOR OF TIME/WEATHER EQUIPMENT FOR CATV.

You see, we have *already* entered a new world of experience. It all began about a hundred years ago, but what it comes down to is the advent of television. And this thing called television has within it the power to decide what kind of people we become. Nothing less.

No product has ever captured the American fancy the way television has. In 1940, the number of television sets in American homes could be counted on the fingers of one hand. By 1947, 14,000 families had television. In 1948, there were 172,000 families with television, or one household in each 2,000. By 1960, nine out of ten families owned a set. And by 1964, fully 93% of our families had television. In 1967, we see a spiral of multi-set families and the strong upsurge of color set sales.

Sometime in the 1950's, the American people made a commitment; something like the decision to migrate westward a hundred or so years earlier. They began a mass trek toward electronic experience. No other single phenomenon in American life has ever met with such acclaim as television. It took 80 years for the telephone to be installed in 34 million homes. It took 62 years for electric wiring, 49 years for the automobile, 47 years for the electric washer to reach the same number of homes. Television made that giant stride in just short of ten years.

All of this shows the great force and momentum of television in its broadest sense of acceptance. But what about the other forms of television? In the long run they could further transform our lives.

For instance, closed-circuit television with its potential as a person to person, firm to firm media that could annihilate space and time. It can make the corporation president as close to his regional manager, 3,000 miles away, as if they were in the same room. It has the potential of bringing the economic and business life of our country into full, instantaneous sight and sound communication. Even as I speak, the paper memo commences to become a paper dodo. Tomorrow, it is possible, that the blizzard of corporate paper will melt against the immediacy and warmth of the televised experience.

And what about *community antenna television*, the brash "intruder" that's knocking on broadcasting's status quo? Today it is an industry of weed-like growth with the normal trials and tribulations of any great and significant innovation. What it may become tomorrow has frightened or flipped, bedeviled or beguiled a great many people in the communications industry. It has even been suggested that such a great number of the nation's TV sets will be connected to a cable that the networks may affiliate exclusively with the cable system.

There really is no limit to Cable TV. Certainly, it is possible that a marketing service will evolve from it. Let's assume it grows and develops into a two-way communication proposition where something advertised on a television program is followed by a code number. If a viewer wanted to order it, all he'd have to do is go to his television set, dial a number or insert a credit card and the merchandise would be delivered the next day. What I'm suggesting as a future possibility is a TV-order system, a contemporary answer to the mail-order system—and that system was so successful that it spawned the single largest retailer in the history of retailing, Sears Roebuck.

Now, what does all this history and "blue-sky" have to do with marketing CATV? *Everything!* The very first and primary point of orienting oneself to the marketing opportunity is to fully understand where you have been and where you might go. By looking briefly at the history of television and projecting its future, we are able to place *cable television* in dimension and perspective to the past and the future. These elements comprise the *long-range marketing potential* of the services CATV operators sell and will continue to sell.

In any business we become so immersed in the day to day problems surrounding our product that we tend to fall into a marketing myopia and lose sight of our objectives. Perhaps the classic case in point were the railroads. They thought they were in the *railroad* business. They weren't. They were in the business of transporting people and goods. When they were

encouraged by government to use their wealth to get into air transportation—they declined. They said they were in the railroad business. They had *marketing myopia*.

CATV operators are in the communications business in the broadest sense. So am I in a more limited way. For although my company is in the primary business of developing, merchandising and marketing strategies for literally hundreds of products, nothing really happens until we communicate those ideas. First to the client and then to the retail food industry at large.

In the super market industry that can be quite a problem. For this is the largest single industry in the world.

Certainly, the super market industry's achievement in devising a system so superior to the costly food distribution of the 1920's and 1930's has won for the super market a permanent place in the distribution hall of fame.

This is not to say, however, that the super market industry doesn't have problems. It does! In spite of food being the biggest bargain in all retailing history, the industry has not sold this idea effectively to the American housewife. (You may remember the housewife's boycotts of super markets last fall.) These same housewives, protesting the high cost of food, spend an average of 18% of their families' take home pay to buy that food. In 1960 they were spending 20%, and in 1947 25%. But they're still not convinced of the value they're getting!

Now, the point of this example is—what does *your* consumer think about the value characteristics of the service *you* provide? I would make every effort to find out, if I didn't know.

This isn't hard to do. Nor is it expensive. Let's assume, for the purposes of illustration, that you have 1,000 subscribers on your cable system.

When you send out the monthly statement, include a questionnaire that asks no more than five questions that are pertinent to providing better service—or questions that could define problems and explore potentials. The letter of explanation, accompanying the questionnaire, should indicate the importance

of the subscribers to the cable system.

Make the subscribers and their opinion important. Let them feel that they have a voice in the service. You don't have to send out a thousand questionnaires all at once. Just send out 100 per month on a selected basis. At the end of the year you'll have not only a valid sampling of your subscribers' opinions, but you will also have indicated your desire to constantly do a better job.

Now, we're commencing to deal with the day to day aspects of how to better market your product—the *short-range* marketing objectives. But don't get me wrong; there are no experts in this field of marketing. And I don't want to appear to be telling you how to run your CATV business. But, perhaps, it's good to have an outsider's objective viewpoint. With this in mind, let me offer just a few observations on my limited exposure to the cable television industry.

As a highly important service industry, CATV has *not* sold itself to the American public as an integral part of the nation's communications system.

Most people simply do not understand its function. Being no exception, I knew what CATV was but didn't really have a thorough understanding of its total role. So to learn about cable TV, I started talking to people. All kinds of people—wherever I went. Most of them didn't have a glimmer of what I was talking about. I thought perhaps I was talking to the wrong people. So I asked some of our own personnel, as they were traveling around the country on airplanes, to ask this question of people at random—“*What is CATV or Cable TV?*”

This certainly can't be considered formal research, nor was the sample a very large one. It did, however, include well over one hundred people from all walks of life—and people who would be a little more sophisticated and better informed than most.

Only 11% *actually* knew what CATV or Cable TV is. And a little over half of those who knew what it was thought it was strictly for fringe area reception. Most people thought it was the coaxial cable

system that links the networks together.

Even this limited sampling indicates the urgent need to inform and educate the American public about Cable TV.

Certainly a strong institutional effort should be made on a market by market basis to sell the need and importance of Cable TV. I'm not a media expert, but it would seem to me that publications like *TV Guide* would be the natural format for such a program. And what about *television itself* as an effective means of communicating your story. In either case, make a strong bid for editorial support to supplement such a campaign. What I am suggesting, in effect, is a national campaign on a selected market basis as the umbrella, with a strong bag of promotional and educational tools provided at the local level. I haven't studied cable system statements but I can't imagine less than 5% of your gross revenues going into such an effort.

Now, I'm really going to get into trouble. You need an effective symbol to portray CATV. One man's opinion, but I don't think that “Abel Cable” is it. He tends to convey the same image as the power company's “Redi-Kilowatt.” They even look alike. Now, remember, I did say one man's opinion, but animals almost always do a more memorable job. I don't know if it's true or not, but cats have always been credited with supernatural qualities of vision. It would seem a more natural symbol of your service and one that would be easier to dramatize. I guess what I'm saying is why not “*put a tiger in your antenna?*”

At the local level I would encourage seasonal promotions where and when a strong effort is made to sign up new subscribers. Perhaps the “hook-up” charge would be \$4.99 rather than the regular price of \$15.00. Or maybe a premium like a set of snack trays would be offered as an incentive. These are obvious, tried and true methods of stimulating sales. And they do work.

It would also seem that highly effective tie-ins could be made with television dealers for a free or reduced cable hook-up charge. Or maybe the dealer could be given the incentive to pre-sell the advan-

tages of your cable service. This certainly becomes increasingly important and logical with the surge in color set sales.

There are literally hundreds of ways to stimulate sales activity. Very often when we don't have strong competition, we tend to forget the basics of marketing. Few cable systems have a competing cable system in the same market and this tends to breed complacency. Don't let it. Stir up your own promotional pot!

The fact that most cable systems are locally owned and operated gives them a distinct advantage in identifying with the community. Certainly those cable operators who are willing to accept the role of leadership, those who define their problems and opportunities at the community level, those who attempt to find the better way will emerge the victors in the competitive battle of communication services.

The feeling that all of us have about the future has one great advantage for us. The fact that it is *ahead* gives us hope. It helps us compensate for the mistakes of the past—and the discomforts of the present. Without it, our aspirations and efforts would surely become impossible. The entire goal of our problem solving must necessarily be oriented towards a better tomorrow.

It behooves all of us to study, to understand, and to capitalize on the dynamic changes that *are* taking place in nearly every industry today. We must have the depth and the intellectual ability to recognize and deal with the changing relationships as they are happening. We must have the maturity to understand and face our problems. For it is in their solution that we find the ultimate expression of the free enterprise system.

The next twenty years will see us enter an era of dynamic change in the *American Dream*. All of us, especially those in the exciting business of wired television—must remain flexible, and be prepared to change our methods, and even our corporate philosophies.

Let's make sure that the opportunity isn't so *insurmountable*—after all. □

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Developing Local Press Relations

By Joy Diegel
Publicity Manager, Ameco, Inc.

The CATV system operator has many reasons for wanting a friendly climate with the local press. Some of the reasons are short-sightedly selfish: to use the friendship for "free" advertising or to have some unfavorable news about the system withheld from publication.

The friendship can become strained — even slain — over the fact that it is a many-faceted relationship, in which the system operator is advertising customer/news source/fellow citizen and service club fraternity brother of the newsman. This is why cultivating a friendly climate with the local press for "selfish" reasons is short-sighted.

A newspaper is a free enterprise, thank goodness. It conducts its business as it sees fit, much the same as any other sound business. While some of its readers may disagree with the paper's editorial policy, they read the news with a reassurance of its truthfulness based on an intuition that advertisers — or anyone else — cannot pressure the news content. If the readers lose that faith, circulation falls off, advertisers are uninterested . . . the newspaper is in trouble.

No wonder then the local newsman takes offense when someone tries to make "advertiser noises" about news content or editorial policy. How would the system operator like having a fellow-Rotarian and/or subscriber dictate his construction technique, collection policy, channel selection or rates?

An ad appears in newspaper space *bought* by the system, and generally: (1) seeks additional CATV subscribers by aggressive salesmanship of cable advantages, or (2) announces special promotions or extended services. Since the ad is paid for, it appears exactly as submitted to the newspaper. In this instance, the system operator is a customer. A news story, on the other hand, is free — and is the result of the system performing a service for the newspaper. The system manager offers newsworthy items.

The item may concern system expansion and improvement, service conditions, a year-end report, subscriber gain or personnel. Editors recognize that "people" stories have best readership, and they sprinkle them liberally among developments on all news fronts.

An eager system operator may become discouraged if the first couple of "hot" news releases he gives to the local paper are not published. He shouldn't be discouraged, for these reasons:

• First of all, he's already accomplished part of his objective — maintaining a friendly climate with the press. The

more news an editor has to choose from, the better the issue — and he is grateful.

• The system operator is an expert in running a CATV system, but not necessarily in recognizing significant news. The editor has a trained "nose for news." He is the expert at selecting items that have reader interest, and which are worth *his* expense to set in type. However, since 90% of newspaper content is the result of news releases, the editor is glad to receive them — *provided there are no strings attached*.

• Perhaps the system manager has "goofed," inadvertently making the newsman feel there are strings. Maybe the editor was asked (or worse, told) *when* the item will appear and on what page and even what position on the page. The newsman's attitude is: "If he wants it in that badly, why should I give away what I can sell?" He offers you an ad.

All right, then what is the best procedure to get system news into the local paper and, more important in the long run, maintain good press relations?

(1) Put the facts on paper, typewritten and double-spaced for easy editing. Use either narrative form or fact sheet outline, but be sure there are answers to the "Five W's": Who, What, When, Why and Where. (Sometimes there's a How, but no school of journalism ever figured out how to spell it with a W to make it fit this rule of thumb.)

(2) Add your name, title and company, and telephone number at the top of the page so the editor may reach you if he has questions. Remember, there are almost *no* news stories that cannot be put on a single page. A three-pager probably will go into the wastebasket unread.

(3) If you send the same release to more than one newspaper, do not send any carbon copies. If you rate a story important enough for an original, the editor may too.

(4) If you include a photograph, do not ask that it be returned. Some newspapers will do this on their own, but be prepared to sacrifice the picture. Most newspapers are happy with a 5x7 glossy print; some will accept Polaroid shots if the image is sharp and the print isn't sticky. Often, however, the newspaper prefers to take its own photographs for a significant news story.

(5) Hand delivery to the newspaper office is better than mailing if there is a time problem; news is perishable. But do not insist on sitting down to discuss your release with a busy newsman fighting a deadline. After all, your phone number is on the release in case he has questions. If you interrupt him too often, he may toss out your news stories just to discourage you from coming back!

(6) Do not thank the newsman for running your release. He ran it because it was news, not as a favor. Next time you see him, you might tell him you think he did a good job of handling it.

(7) Sometimes the newsman will call *you* about a news item you'd just as soon not see in print, maybe about a service outage. Do not appear reluctant to help him get his story. Give him the facts unhesitatingly — and then your side of it. In the case of an outage, it might include how it happened, the number of subscribers affected, what's being done about it and when service will be restored. The printed article will cause you less grief than one that simply announces local cable TV is "kaput" and the system manager "unavailable."

Press relations, after all, consist of the respect for another local businessman and the job he has to do.

ABOUT THE AUTHOR



Joy Diegel

Joy Diegel has served as publicity manager for Ameco Inc. for the past year and one half. She also edits the Company's house publication, *The Ameco Roadrunner*. The mother of three teenagers, Joy also is serving on the board of directors of Arizona Industrial Editors, and Arizona Press Women, Inc. She holds a degree from the University of Illinois School of Journalism, and previously served as information supervisor in Mountain States Telephone Company's PR department for 10 years, and as news editor for Phoenix radio station KOY for 2 years.

Market Preference Studies Produce New CATV Services

When cable operator John S. "Sam" Booth retired to Sarasota, Florida he found that there was no CATV in the county. Soon he was back in the harness again, actively pursuing a county permit to operate a cable system. His cable system operating experience in Chambersburg, Pennsylvania and Martinsburg, West Virginia made him a well qualified applicant — and soon he had gained approval for the launching of Sarasota Cablevision.

The Chambersburg system had authored the idea that all 12 notches on the dial should offer something to the viewer — even if you had to "do it yourself." Sam was quick to recognize a local market potential for continuous presen-

tation of the New York Stock Exchange quotations and convinced the Stock Exchange to try it out last September. Booth followed this innovation with a series of additional local origination devices.

He called on a small but aggressive local firm, Electra-Tronics, Inc., to make the equipment necessary for the CATV presentation of the market quotation ticker.

The equipment worked so well that Electra-Tronics president H. H. Morgan formed a subsidiary, Automated CA-TV Products, to produce local origination equipment. He asked Booth to serve as vice president for new products and public relations man Gil Waters, who brought them together, to be

vice president for marketing. Morgan arranged with Shearson-Hammill, a giant in the brokerage field, to sponsor an explanatory brochure on the quotation ticker, specifically for CATV subscriber use. Automated CA-TV Products has found the brochure to be such a popular mailing piece that it has made it available to other system operators.

New products and marketing ideas have flowed since then. A Sarasota marketing firm, Suncoast Surveys, did an in-depth study of local programming preferences six months after the debut of the stock ticker channel on cable TV. The study of a 10 per cent sample of Sarasota Cablevision subscribers showed that the favorite local origination programs were: local news - 47%, weather - 26% and stock market quotations - 16%.

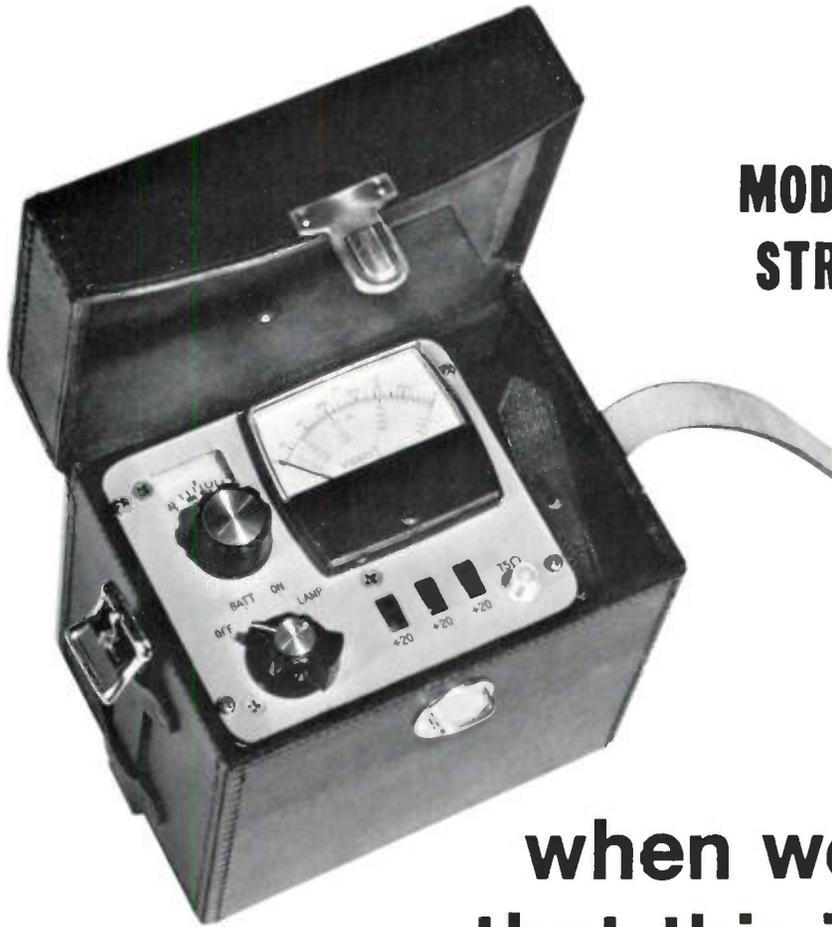
Among other types of programming, AP News showed a 40% popularity, local sports programs scored 28%, weather information was appreciated by 18%, locally produced talent and variety was approved by 10% and, surprisingly, civic programming was encouraged by only 4½%.

It is of interest that 12% of the respondents said they developed new interests in the stock market through watching the pioneering stock market channel on Cablevision: 5½% became more interested in world affairs and 5½% became more interested in sports. A total of 40% of the survey recipients responded, according to Suncoast.

Other questions asked by the poll elicited the information that 45% of the subscribers own one TV set, 32% have two, and almost 18% own three or more sets. The remaining 5% declined to answer.



Automated stock ticker unit is examined by John Booth, Jr. (left) of Sarasota (Florida) Cablevision, and H. H. Morgan, president of Electra-Tronics, Inc.



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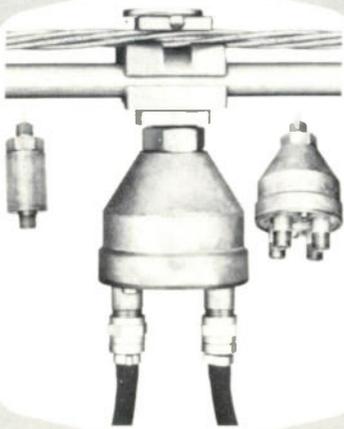
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In order to confirm everybody's knowledge of why people sign up for CATV, the question was asked. As usual, a majority of subscribers listed the wider range of channels available, better reception and no need for antennas. With the area being on the fringe of reception from ABC's channel 10, a large number of subscribers merely listed Lawrence Welk as the reason that they are on the cable!

For the next project, Cablevision wanted a simple public service display for local announcements. The result was a variable speed drum onto which photographs, announcements and schedules can be affixed. It provides 2 to 3 minutes of announcements and can be set up once a day and then allowed to run continuously.

Following up on the audience preference for news as revealed by the survey, Automated CA-TV Products is modifying its "Public Service Display" so that it can be used to present local news, with or without a commentator.

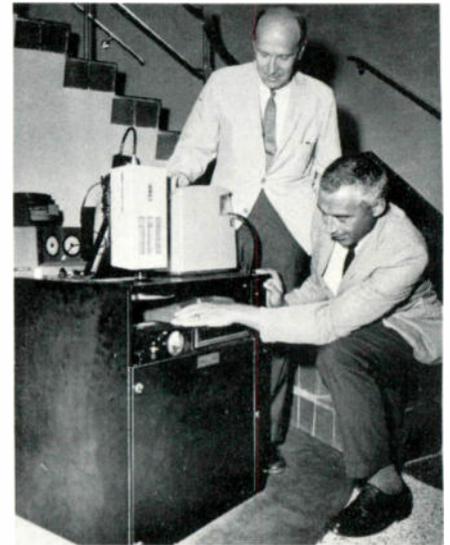
This public service channel display can be made available to the



Shown with one of the stock ticker units are Charles Bishop, manager of SCAN system in the city of Sarasota, and John S. Booth, president of Sarasota Cablevision, which serves adjacent areas. Both systems carry the service.

local high school or junior college journalism classes on a scheduled basis. The channel can also be used for videotape presentation of local sports or political events, as well as presenting schedules and announcements.

The Stock Market channel has proved to be a solid winner, says John S. Booth. It ranks third in local origination popularity in the Sarasota area. This is not surprising, he notes, in a city of moderate



Bob Huntsman, regional manager of systems in Bartow and Lake Wales, Florida, is shown with the Electra-Tronics "Programmer" in Bartow.

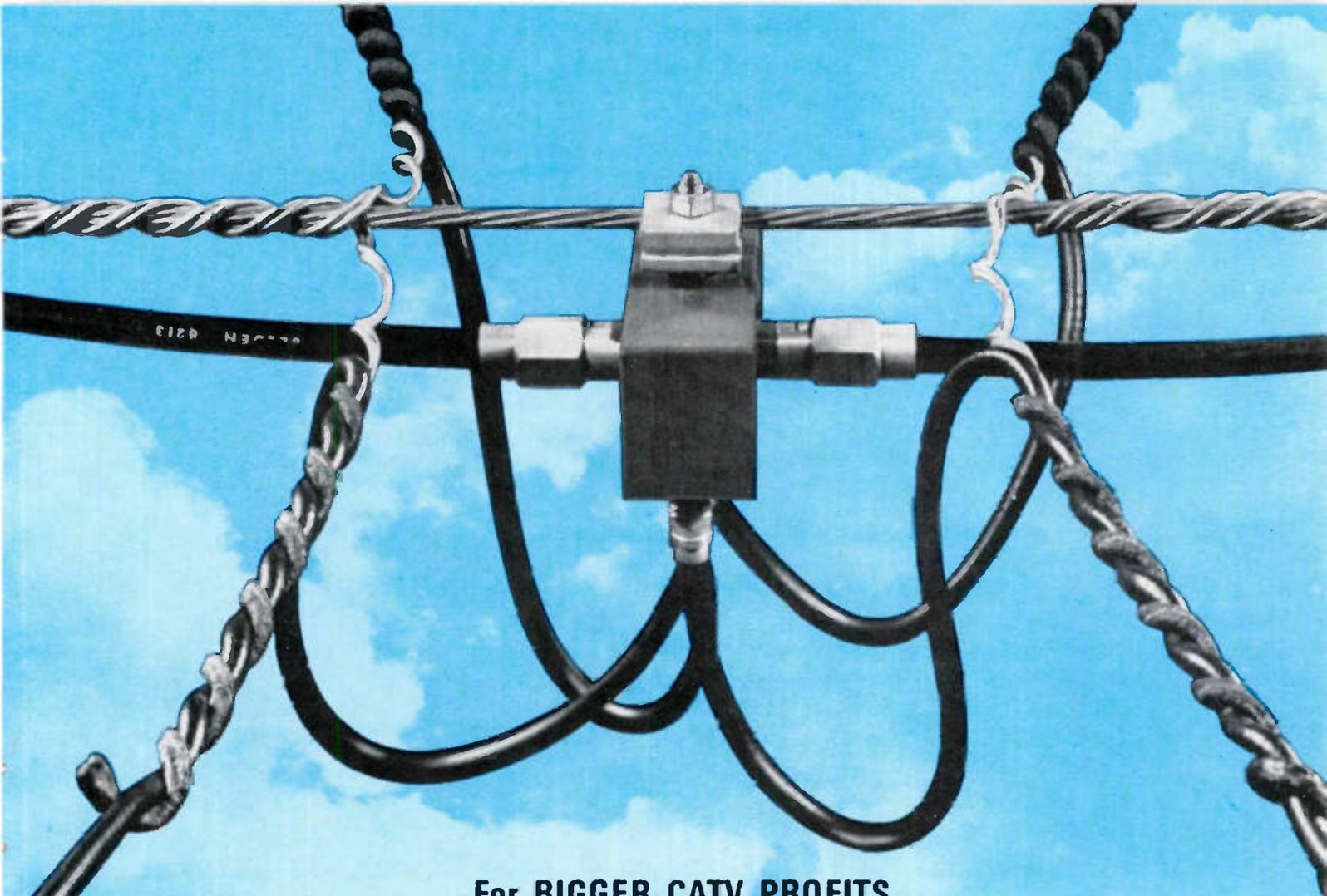
incomes to wealthy retirees, where 61 per cent own stock.

"We sure know about it when the tape breaks — the phone rings off the hook." Booth says

Booth also suggested another simple, useful device now manufactured by Electra-Tronics. It is a "Programmer," an easy-to-prepare schedule of evening programs on each of the system's other 11 channels. It uses the daytime stock market channel and makes it easy for subscribers to learn what's on the cable at any time. The Programmer is preset to automatically advance every 15 minutes or half hour.

Automated CA-TV Products are being marketed by Trans-Lux, Corp., a pioneer in projection of stock market quotation information and a recent entrant into the CATV industry.

New ideas for CATV automation, developed with the aid of market preference studies, are being thoroughly tested by the new Florida firm. And the results provide food for thought, even in an industry characterized by new ideas. Unquestionably, Sam Booth's "retirement" has produced some meaningful advances for the cable television industry. □



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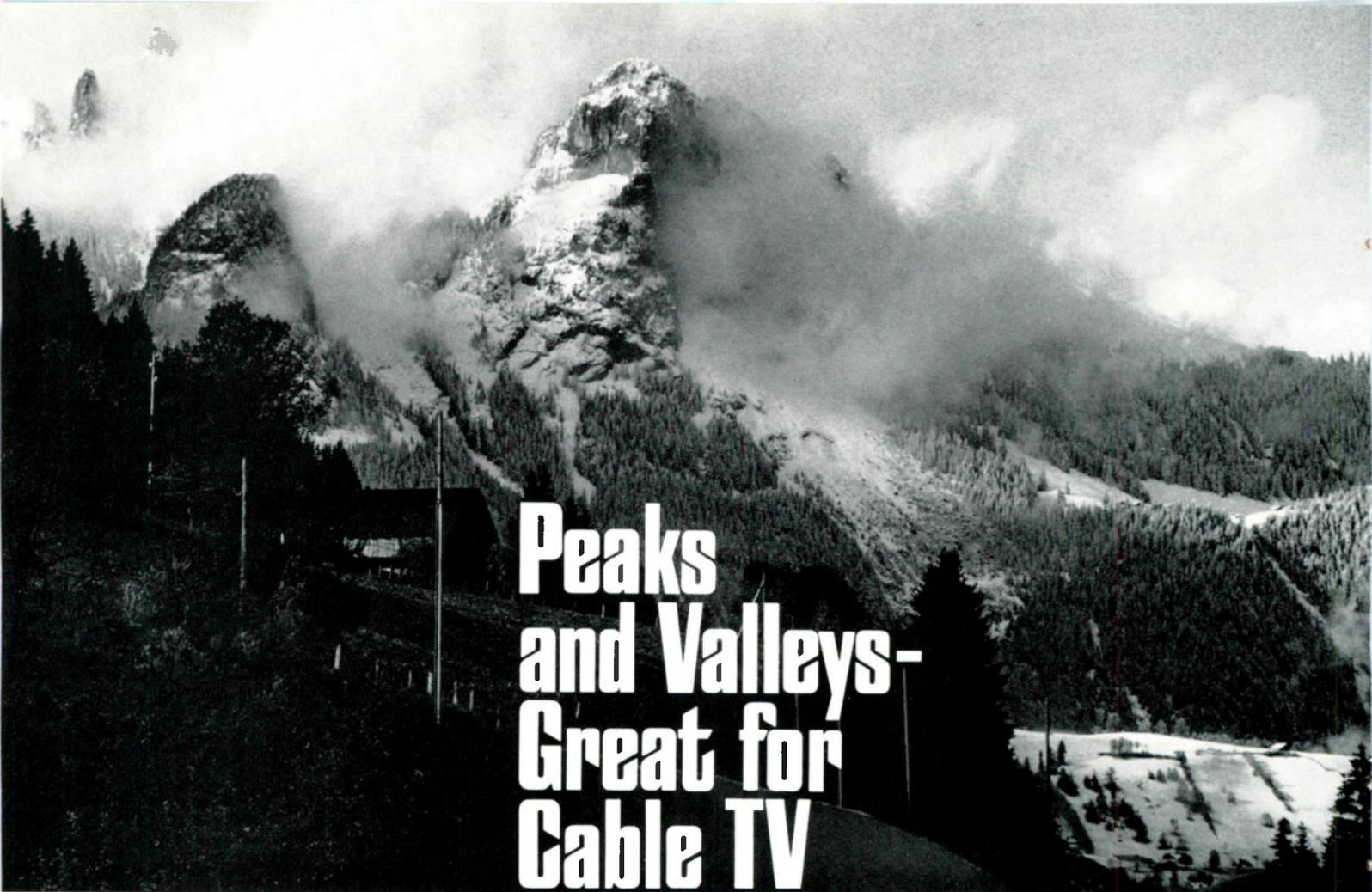
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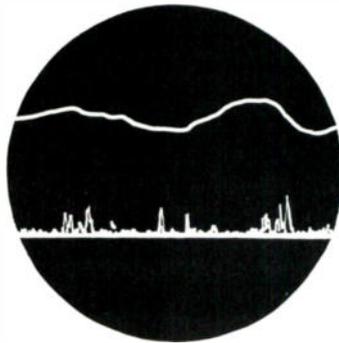
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The World of Finance— It's Attitude Toward CATV

By Horace I. Poole, President
Term Capital for Business Inc.

In the world of finance there is one question more common than any other: "What is the security for the loan?" This is why real estate loans have an advantage over any other loan. The security is tangible even to the average layman. He is convinced that the land has a certain market value and, of course, he can always feel secure if tenants on his leases are dependable. Even the other loans the financing world is accustomed to usually have very tangible security such as machinery, accounts receivable, etc.; thus, in CATV financing our first problem is convincing the lending institution or the private lender of the safety of his loan.

The second obstacle we run across is how to gauge the actual value of each system. In the industry we hear very often that a system is worth so much per subscriber — usually in the range of \$250 to \$350 for each house-drop. Systems are also sold at a price equivalent to a certain multiple of cash-flow. However, these are really not fair rules of thumb to go by. Taking, for example, a system that has 1,000 subscribers with a potential of 10,000 subscribers as compared to a system that has the same 1,000 subscribers but has a potential of only 2,000 subscribers, it is quite obvious that there is no comparison between the values of the two systems. However, the CATV operator may find it hard to obtain higher financing for the system with the bigger potential. This is where the person with experience in financing can be of substantial assistance to the operator.

The money market is complex and there are various kinds of financial houses, private investors and other sources of capital and long term loans. Each institution has its own objectives: thus its particular requirements should be determined before discussions begin. The financial negotiator who day-in and day-out is contacting these institutions can often save the borrower a great deal of time. To bring the borrower to the right source of funds requires a study of the company's needs as well as a knowledge of the financial marketplace.

To design the proper capital structure for a company is a complex task. No one formula is available but this writer has found that, with sufficient financial data, certain ratios of debt to invested capital and the acceptable ratio of earnings to income and interest requirements can be formulated.

The small businessman frequently has difficulty in making the type of presentation of his business that will allow the financial institution to easily determine whether it is the type of enterprise in which they wish to invest. It is quite time-consuming to examine a business. The compiling of a descriptive brochure as well as the presentation of it to the right source of funds are matters which are usually best left to the professional.

A survey to be used for such a presentation must include adequate financial data and information portraying the system's market potential and operating costs. Growth statistics and the basis of growth potential must be carefully and fully brought out if a loan application is to succeed.

Generally the following information is also required:

(1) Brief history of company nature of business and main descriptive literature about service offered (number of channels offered, local origination features, etc.).

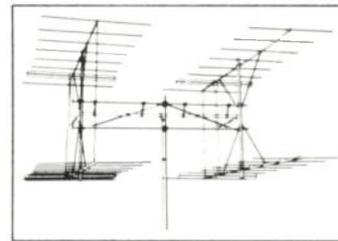
(2) Biographical sketches of executives, directors and major stockholders.

(3) Financial statements (preferably audited) for company and principals.

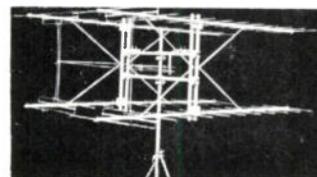
(4) Amount and proposed use of funds requested - detailed schedules.

Most cable system operators give too little importance to the value of a plan or program of financing. Historical data should be presented where available. Important points of the systems which present business strength should be thoroughly covered. A detailed projection of future revenues, expenses and profits (cash-flow projection) must be included.

In the final analysis, having a well thought out, comprehensive plan is the basic element of a request for cable system financing. □



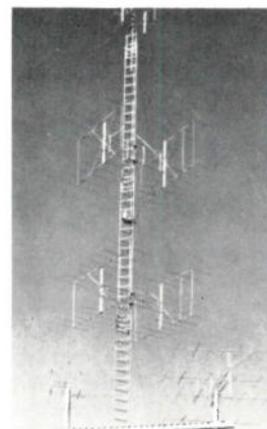
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(Continued from page 42)

schools, from the school studio, or perhaps from a joint community school studio and from tape facilities.

So much time spent with hardware

Mr. Froke: As a person working with an educational system, I think that we are less interested in distribution than we are in providing educational programs as such. Within certain limitations, if the whole problem of distribution were taken off the shoulders of educators, they could apply their efforts to the production of educational materials and organizing of educational programs—leaving the “building of the roads” to CATV operators or others. The whole matter of educational TV might be clarified as a result. So much time is spent with hardware by educators that I think sometimes we lose sight of programming.

Mr. Searle: Do you believe the function of coaxial cable systems as a two-way communications link between student and teacher—or student and computer—will become as important to the public as the traditional function of CATV of extending and upgrading television reception?

Mr. Fischer: Sometimes I think we tend to think of educational television as primarily a link with the schools. I'd like to think for a minute about the continuing education of adults. One of the exciting things to me is expanding educational technology. Maybe in some ways this is hardware, but it is also new techniques for expanding service to adults or young people. Educational television is one technique, but computer-assisted instruction, dial-access systems, and audio-visual tapes for home use are becoming more important. And the increasing need for continuing education of adults is going to make the function of cable systems as a two-way communications link even more important. The necessity for feedback, for two-way communications, is a key to good educational television.

Knock down our broadcast towers

Mr. Froke: There is a lot of far-out thinking about communication centers developing in each home where you push a button and you get 12, 24, or 50 different program resources, including college credit courses, informal instructional materials, symphony concerts—a wide variety of programming resources directly available to the home. Here again, I think we get back to the matter of distribution. When technology is available, I hope a college or university or local school system never has to build this distribution system. Institutions such as Penn State can provide programming for these channels.

Yes, I think in-home instructional television is on the way. Then perhaps we can knock down our broadcast towers and feed through a national system of lines. There is no particular reason why everything has to stay the same way as it is. There is no particular reason why an ETV station has to have a broadcast tower with a signal radiating from it. The signal might just as well come out from a studio into a system of land lines.

Mr. Fischer: The real contribution that educators or educational television stations can make is in originating a variety of programs, not in operating the station technically. So I would like to see a situation develop in which we would be able to use our resources strictly for programming through a network of cable systems.

Mr. Palmer: You provide the programming and we'll distribute it.

Mr. Froke: It was suggested earlier in the discussion that educators should solve their problems, which is a good idea. Perhaps the distribution people should then solve their problems. So, whether it be CATV or the common carriers, this is a problem that would have to be resolved.

Mr. Fischer: It wouldn't be surprising if they did. The CATV people have solved a lot of problems to date. I never thought

we'd see the day when they could have 12 channel operation on a cable system, for instance. But they do it all the time now.

Mr. Searle: In testimony before the Senate Commerce Subcommittee on S1160, the Public Television Act of 1967, TelePrompTer's Irving Kahn noted that CATV systems can reach small audiences—down to “each neighborhood, ethnic, social, and civic segment within each community”—in a manner that no television broadcaster utilizing a single channel can do. Jim, would you comment on Mr. Kahn's analysis—relative to educational television?

Practical limitations

Mr. Palmer: One of our problems in CATV is to distribute the signals to everyone. Of course, the Theta-Com proposal for 18 GHz distribution does make it possible and probably practical to distribute signals to small neighborhoods that may be remote from population centers. This is a multi-channel service, of course. There are also cable transmission systems that are being worked on by various manufacturers that also may aid in a solution to this problem. However, some people live in isolated rural areas because they like to be in isolated rural areas. They do not get the morning paper delivered, they do not get milk delivered. They have chosen, in many cases, to be isolated. We cannot really expect to provide these people with the same quality of service, the same multiplicity of signals, that someone who has chosen to live on Manhattan Island receives. There are valid practical limitations

Mr. Fischer: By 1975 about 75% of our population will be in urban areas, Jim. To extend rural service, perhaps there could be a Federal program for TV distribution comparable to the REA which brought electricity to sparsely settled areas.

Mr. Froke: CATV has fantastic potential for distributing higher education programs which might originate from a combine of colleges and universities. In adult education, I can envision a possibility of the cable systems getting together with Penn State—or any other educational institution—to originate adult education directly through your cable systems—without being broadcast at all.

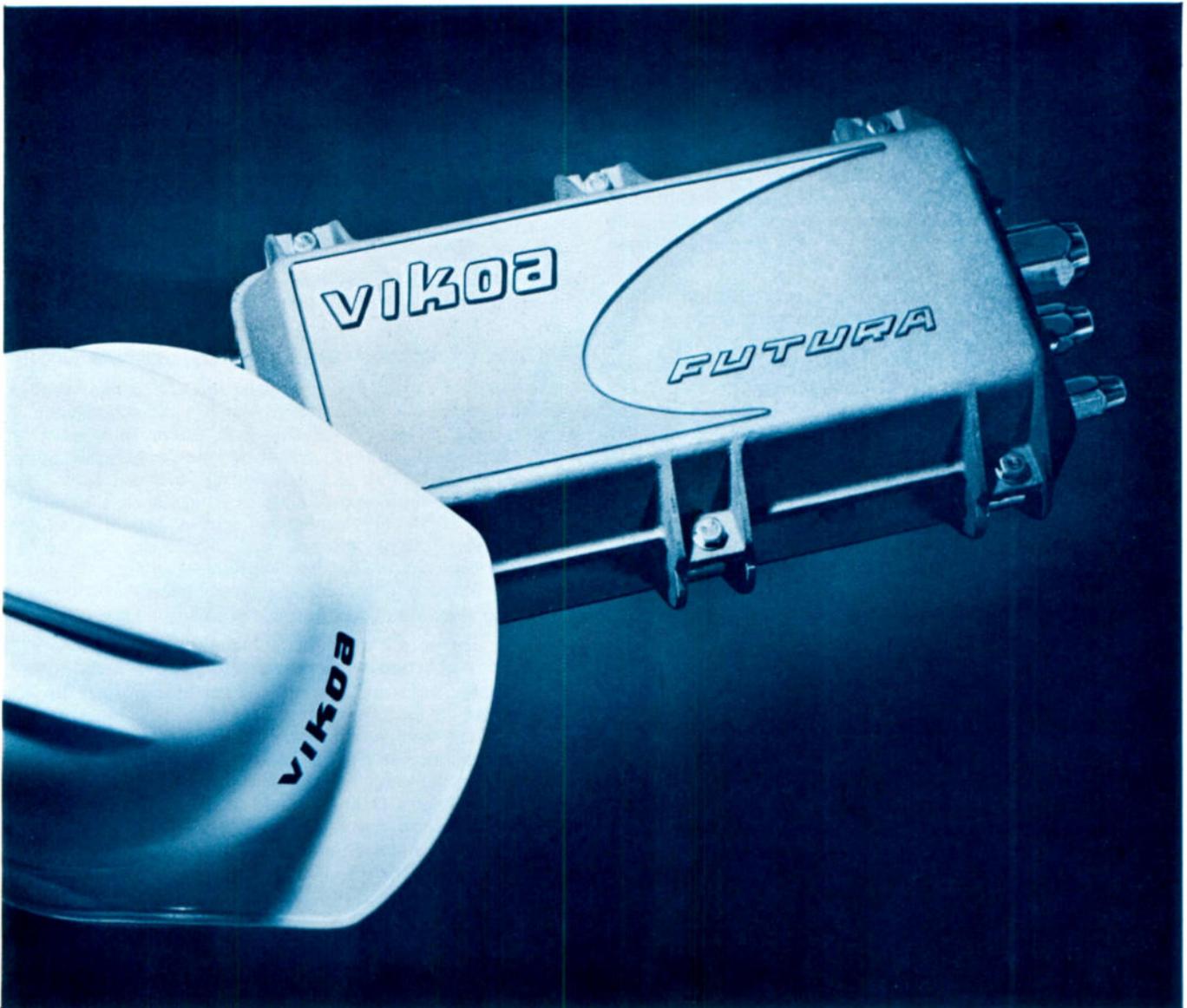
The Department of Public Instruction might make some sort of arrangement with the state cable operators. They could conduct a program for in-service training for teachers directly out of Harrisburg, for example. Perhaps other state agencies could use such a network for material originating from a central point.

Mr. Fischer: That is not going to be very difficult to do technically, either. I don't think basically that's any more difficult than tying in tele-lectures in a dozen communities as we do now in many programs for adults.

Mr. Searle: In view of these exciting potentialities, why do you suppose cable system owners frequently note a lack of enthusiasm among educational broadcasters where CATV is concerned? Have cable system operators and their organizations failed to sell the benefits of cable TV to the educational broadcasters?

Mr. Palmer: It takes time for our educational systems to change and sometimes it will be the cable system operator who is in the forefront; other times it will be the educational system. In our own case in an enlightened community, we have provided limited free cable service to the schools for the last thirteen years—although not always with the full appreciation of the school system. We've had orders for cable service for school buildings where the cable service was already being provided on a free basis, and they weren't even aware of it.

Mr. Searle: Do you think that there may be a need for cable operators to be a little better informed about the needs and objectives of the educational television people in order to better relate what they can do to what the educators are trying to do?



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at ch. 13 (switches): 10 db, 17 db
cable at ch. 13

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Mr. Fischer: This is a two-way street. My own experience is that cable companies are contributing greatly to educational television. I doubt that there are any unenlightened station operators who don't realize the advantages of cable television operation in extending their service to otherwise low impact areas or helping in many other ways. We've failed yet to find a cable system operator who wasn't cooperative to the extent of his resources and system technology. Maybe education has to do a little selling. And maybe the cable operators shouldn't take such a quiet approach. Perhaps they ought to tell a little more about what they are doing for educational television now.

Mr. Froke: Incidentally, an interesting thing came up with a cable system in our area. The Olean cable system got curious like you, Jim, about how many people are watching ETV. So it sent out a questionnaire. They serve 4800 households and sent questionnaires to 3000. Their percentage breakdown was: 68% watching educational TV on a regular basis and 70 some percent wanted a copy of the program guide so they would know better what programs were coming up.

Mr. Searle: Of course, cable systems put all of the ETV stations on the VHF television dial. How has this effected ETV audiences in your area?

Mr. Fischer: I would say that it is certainly one important factor. In our area we had about 30% weekly circulation and we were real pleased with this. But on the cable I'll bet it is at least double that right here in our own locality. This is because the signal is there; it's a good signal, it's on a VHF basis; it's quality. These are important things to educational television at this stage of the game.

Mr. Searle: Why haven't NAEB and NCTA developed a sort of "national policy" for ETV/CATV cooperation and joint effort?

Mr. Palmer: A few years back the NCTA did develop an ETV

policy for cooperation which is probably still quite valid. It said, in part, that the CATV industry should not engage in programming; that they should simply make the facilities available. There have been no joint meetings between the NCTA and the NAEB for about two and a half to three years. I guess such joint meetings occur only when there are problem areas instead of when there are other things proceeding on a constructive basis.

Mr. Searle: In view of the negative comment sometimes made by educational broadcasters, such as the attack on CATV at a recent NAEB conference, there seems to be a problem.

Mr. Palmer: I think there is—and it is time for some joint meetings between committees from both organizations.

Without broadcasting apparatus

Mr. Froke: CATV in its emphasis and the whole context in which it operates is related to the broadcast industry. The sooner you de-emphasize this and move into what your capabilities really are—distribution—you're going to be much better off. Why carry 12 broadcasting stations? I don't think that with the limited production resources on a nation-wide level, it is worth carrying 12 commercial broadcast stations. Why don't you limit yourself in CATV to distribution of the local network channels, whatever legal requirements you may have for independents, and an educational TV station or two, provided they are diversified in the services they offer.

Then use your other channel capacity as a distribution agent for non-broadcast services. I would just love to have an opportunity to work in an experimental project in which continuing education programs could be distributed via cable direct to the homes, without even going through the broadcasting apparatus. Or, as another idea, you could make a channel available for the use of the community in educating municipal judges. Or in the field of marketing, you could fill a role. You could, for example, get all the grocery stores to go together on one channel to provide information on the marketing of groceries. I don't think you have to stay with broadcasters. And I don't think that you should limit your perspective there.

Mr. Palmer: At the present we do have some restrictions and problems in the national arena which we all hope will be solved soon. Perhaps then we can get on with our job and with our capabilities as a distribution service.

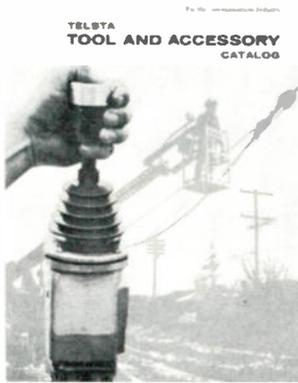
Mr. Searle: What is the central need—or course of action—at this time, to fully utilize the capabilities of cable television in extending the outreach of educational and instructional television?

Confidence in the capabilities

Mr. Fischer: Fully utilizing cable television to extend the outreach of educational and instructional television is a problem for educators at this point because programming is the key word. If we don't have good programming and sufficient quantity of programming to do this job, then all the technical capabilities that might be available aren't going to be utilized effectively. My personal concern is that our first and central need is to further develop our efforts to produce good programming—on videotapes or whatever else is required for direct feed-in—to provide materials that are worth sending through cable systems.

I have confidence in the technical capabilities of the CATV industry, generally. And I believe that when educational television has the material ready to distribute, they will have the technology to do the job. I think that our course of action is pretty clear.

*The editors express special appreciation to Barash Advertising of State College, Pa., representing the Pennsylvania Community Antenna Television Association, for assisting in arrangements for this discussion.



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CATV Serves State Institutions Via Submerged Cable Crossing

When J. D. Brance took over operations of Hill Country Cablevision, Kerrville, Texas in 1965, one of the first requests the company received was to provide service to two nearby state hospitals for the senile and elderly. Although the payout would probably run many years—or maybe never materialize—the decision was made to go ahead and provide service to the two state institutions. But before Hill Country Cablevision, which serves some 3,200 subscribers, could provide the service, they encountered a construction problem most land-locked systems never face; a submerged cable crossing.



In order to serve the larger hospital unit it was necessary to secure a crossing of the Guadalupe River. The local telephone company was abandoning a crossing which it had been using for forty years. Hill Country Cablevision bought the right-of-way, poles, guys, and strand. The trunk lashing was installed and things were looking good—when an attorney for the owner of the property which was being crossed, advised the company they were trespassing and submitted a claim for damages. Upon appealing to the local telephone company and after a search by Hill Country attorneys of county records, it was determined that there had never been an easement or right-of-way granted. Rather than fight with an elderly lady, Hill Country removed its line and then made a settlement with the telephone company. The reason the

telephone company was abandoning the crossing; dove hunters kept shooting the cable!

While the aerial line was still up, negotiations were in process for a submerged river crossing. After eight months the final right-of-way was secured. Engineering studies then began regarding installing the cable under the river. No problems being indicated that could not be overcome, it was decided to begin the submerged installation.

An additional 1200 feet of trunk line was needed to reach the crossing, which was from 1000 to 1200 feet wide. The stream, at the time, was about 10 feet wide and 3 feet deep. Management also knew that once or twice during the year the river floods, filling the river bed with about 35 to 40 feet of very turbulent water which pretty well cleans the bed.

In order to secure against moisture and corrosion, jacketed VK-1500 aluminum cable was inserted inside one-inch polyethylene tubing. This was done by placing the jacketed coax on top of the ground and 100 foot pieces of tubing were cut and put over the coax at one end and pulled to the other end. After 12 pieces of tubing were put on in this manner, the joints were sealed with a larger piece of tubing and taped with Scotch 33.

Using a backhoe, an eight foot ditch was dug across the crossing with the exception of the last thirty feet. This was dug by hand. After the ditch was dug, a two-inch tube was filled with cement and lashed to the one-inch tube. This was done to insure against floating, in case the cable were ever washed out. It also helped protect the cable during backfilling.

An extension to the hospital annex required an additional 2500 feet of cable but did not require an additional river crossing.

“Knock on wood,” replied J. D. Brance, president and general manager, when asked how the river crossing was faring, “no trouble yet.”

Assisting Brance in the operation of the Kerrville system are R. B. Kennedy, as chief technician and John Waggoman, company treasurer and sales manager. All three feel the time and effort put into providing this service was well worth it. They state that any public company has a civic responsibility; and that they only did what they felt obligated to do.

A physical problem was dealt with and conquered by Hill Country Cablevision in bringing cable service to the two state institutions for the senile and elderly. However, the real contribution was summed up in a statement by Luther Ross, Superintendent of the State hospital. “The elderly patients certainly enjoy the good TV reception now furnished.” □



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FINANCIAL REPORTS

Jerrold Corp. president Robert H. Beisswenger announced new records in gross revenues and earnings for the second consecutive year. The company reported gross revenues for the fiscal year ended February 28 of \$50,106,218—a 30% increase over the \$38,112,024 record of last year. Net income was \$4,272,591 or \$1.90 per share on 2,249,759 average shares outstanding, compared with \$2,623,276 or \$1.19 per share on 2,196,052 average shares outstanding for the same period a year ago.

TelePrompTer Corp. reported record first-quarter earnings of \$107,489. Before-tax earnings of \$132,489 were 26 percent over the first-quarter profit of \$105,520 in 1967. On a per-share basis, earnings for the 1967 period were 16 cents before Federal income taxes, and 13 cents after Federal taxes, compared to 13 cents and 9 cents in the previous year. TelePrompTer's gross revenues for the first quarter of 1967 were \$1,964,643, an increase of 20 percent over last year's \$1,639,331 in the corresponding period.

H&B American Corp. chairman William M. Jennings and president Harold R. Sugarman announced a record net income from operations for the 9-month period which ended April 30, 1967. Income for the period, after Federal income tax provisions, was \$424,115 as compared to \$410,505 for a like period of the preceding fiscal year (during which no tax provision was required). Gross revenues for the period were \$4,276,820 a record high compared to \$3,750,486 for the 1966 period—an increase of 14%.

Reeves Broadcasting has reported that share earnings for the quarter ending March 31 were \$.10 up from last year's share earnings of \$.08. Gross revenues for the two years were \$2,533,000 and \$2,025,000 respectively. Net income for the quarter in 1967 was \$181,500. 1966 net was \$127,100.

Collins Radio Company has reported that net income for the 9 months which ended April 28, 1967 was \$8,937,000—an increase of 67% over net income of \$5,357,000 for the first 9 months of the previous fiscal year. Based on the average

number of shares outstanding in the 1967 period, net income was equal to \$3.27 per share, compared to \$2.37 per share for the same period of fiscal 1966. Sales for the 9 months were \$322,274,000—an increase of 18% over the corresponding period of 1966.

Anaconda Company has reported that first quarter earnings rose 38 percent to \$36,007,000, or \$3.29 a share, from \$26,023,000 or \$2.38 a share, a year earlier. Sales climbed to \$309,058,000 from \$280,896,000.

Continental Telephone Corp. has reported that share earnings for the quarter ending March 31 were \$.24 as compared to share earnings of \$.21 for the same period last year. Sales and revenues for the quarter were \$35,735,637 compared to last year's quarterly report of \$29,122,894. Continental officials also reported that the telco plans to file a registration statement with the SEC preparatory to making an offer to acquire Trans-Continental Telephone & Electronics, Dallas, Texas—a firm which also operates several cable systems.

Rochester Telephone Corp., which operates a Warsaw, New York CATV leaseback, showed operating revenues for the first quarter ending March 31 at \$12,362,708. This compares to last year's revenues which were \$11,397,521. Net income for the quarter in 1967 was \$1,929,233 as compared to \$1,730,644 in 1966. Share earnings for 1967 were \$.44 up from 1966's share earnings which were \$.39.

International Telephone and Telegraph Corp. reported record sales and earnings for any first quarter in the company's history. Consolidated net income for the first three months of 1967 reached \$21,718,000 compared with \$19,108,000 for the same period a year ago. On a per share basis, earnings were equal to 97 cents per average common share outstanding, an increase of 12.8% over the 86 cents per share for the first quarter of 1966. Total sales and revenues amounted to \$495,844,000 an increase of 5.7% over sales of \$469,248,000 in the similar period a year ago. □

CATV Legal View

(Continued from page 16)

groups. No sane politician, with a yen for re-election wants to incur the disfavor of broadcasters as a group in his state or locale. Any normal public official, who must periodically subject himself to the whim of the electorate, can be expected to go to considerable effort to please those who, like telecasters, are possessed with the great capacity to assist or hinder their ambitions.

Any sage, seasoned politician knows well that his dynasty depends not so much upon the friends he makes but rather upon the enemies he can avoid making. And where broadcasters or publishers are involved there is generally a very special effort to avoid any affront.

It is well for CATV interests to know the strengths of its adversary — and, believe me, they are formidable. They will require the application of extraordinary effort by CATV forces *now* if reasonable treatment by the Congress in these sensitive areas is even to be expected. Since fair and reasonable consideration by Congress is so essential to the continued progress of the industry, and since the next twelve months are certainly a vital stage in the maturing process of CATV, we urge an all-out effort in the area of political action. This is a must.

There are several major weaknesses in the Establishment's armor; and they should be exploited with vigor: First, those privileged to operate commercial television stations are engaged in a productive pursuit which demonstrably needs no special governmental protections. Second, the public wants and is willing to pay for CATV service. Third, the inordinate influence exercised by a few powerful broadcasters can be markedly diluted by making a larger number of diverse program sources available and perhaps the politician can thereby be freed from the bonds which literally indenture him to those who control mass-media communications.

Now is the time for CATV to pour all of its resources into a unified, coordinated and energetic legislative campaign. The industry cannot afford a limited effort now. Let's pull out the big guns; they are certainly needed. Learn from your adversary and begin to emulate his proven formula for making friends and influencing the right people. □



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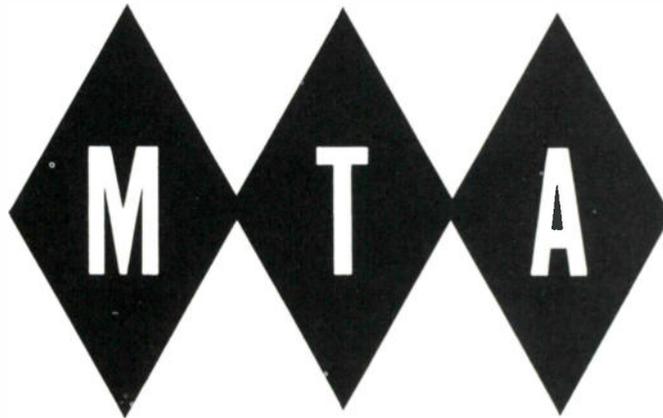
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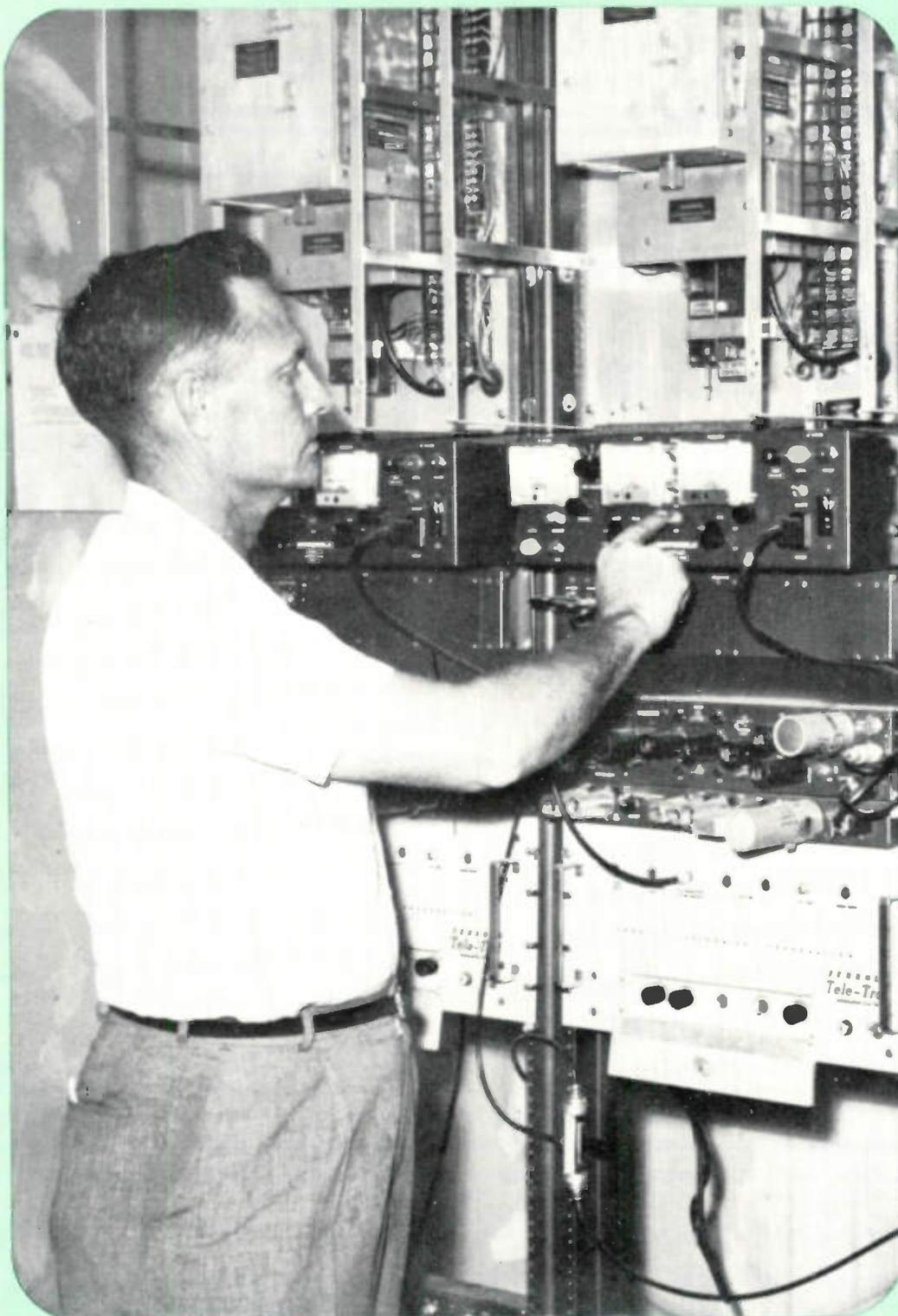
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Weather Radar

For CATV System Organization



One of the big attractions on New York City's Channel 4 (NBC) is telecasting a view of the screen of the U.S. Weather Bureau radar as it scans the metropolitan area skies. It's dramatic, interesting and different. A CATV system can do the same thing and even better.

All that is needed is a long-range marine radar and a vidicon camera (or a scan converter) at the head-end. The radar screen is viewed by the camera the video output of which is fed into the CATV system on a vacant TV channel through a modulator. A CATV subscriber simply flips his channel switch to that channel to get a view of the skies within a 100-mile diameter circle centered at the head-end location.

A mask can be placed over the radar screen to display a map of the area covered by the radar.

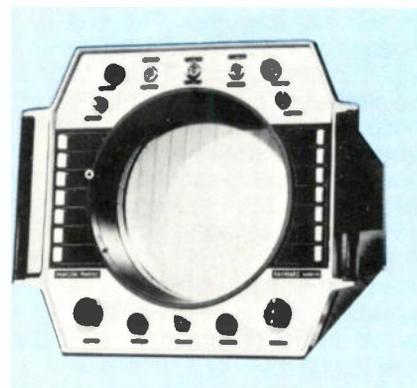
a continuous tape on which is recorded an explanation of what to look for on the radar screen. Commercial or public service messages can be sandwiched in.

When the head-end is within receiving range of one of the U.S. Weather Bureau VHF/FM broadcasting stations, the Weather Bureau broadcasts can be fed into the sound channel. All that is required is a crystal-controlled FM communications receiver and a vertically-polarized antenna.

The radar antenna should be mounted at the top of the antenna tower. The radar transmitter-receiver can be mounted lower down or at the base of the tower, and the radar indicator (screen) can be installed inside the head-end building, or both can be inside the building, depending upon the distance from the radar antenna to the transmitter-receiver.

marc radar which cost less than \$5,000, installed. (The same kind of radar, manufactured by Kaar's parent firm, Canadian Marconi Company, is being used on the liners Queen Elizabeth and Queen Mary.)

The radar antenna rotates con-



Indicator of Kaar Raymarc radar of the type used for weather observation.

tinuously at the rate of 24 RPM. It is connected to the radar transmitter-receiver through waveguide which in turn is connected to the display unit through a cable. Power consumption is only 500 watts.

A CATV radar channel can be operated continuously, (unmanned) or can be turned on and off at certain hours by a timer. Automatic switching arrangements can be provided for alternately cable-casting a view of the radar screen and weather board.

This is another locally-originated program service a CATV operator can offer. And, over a CATV system, weather information can be made available at all times, something a TV broadcaster cannot do for obvious reasons. □

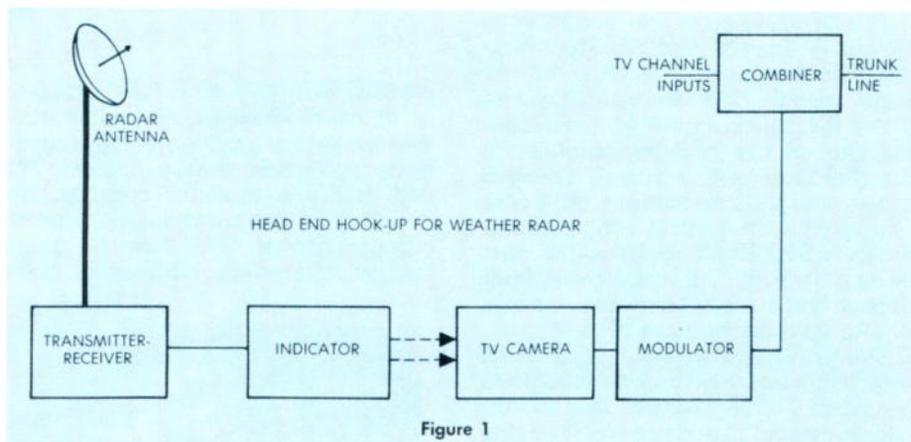


Figure 1

Cloud formations and rain can be seen on the screen and their locations identified.

If a sound channel is considered necessary, it can be a playback of

Electric power companies are currently using radar for monitoring the skies for storms. The Wisconsin-Michigan Power Company, for example, is using a Kaar Ray-

PRODUCT REVIEW

NEW COMPONENTS FOR CABLE TELEVISION SYSTEMS

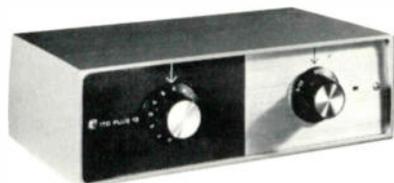
INTERNATIONAL TELEMETER SHOWS NEW CATV PRODUCTS

Three new products are to be shown for the first time at the NCTA convention by International Telemeter Corporation. The "Gamut 25" is a 25-channel converter which makes possible carriage of up to 25 video channels on a cable system, according

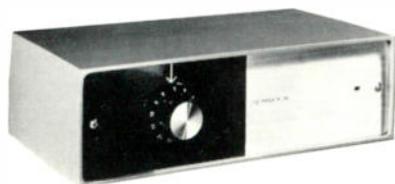


to the manufacturer. The unit is described as a heavily shielded converter which receives up to 25 channels and converts them to Channel 2 or 3 for output to the television receiver. The unit, which installs between drop wire and subscriber's set, is said to have better than 100 db isolation against all broadcast signals.

Another converter unit to be introduced in Chicago is the "+13" which is said to make possible the addition of up to 13 channels to an allband CATV system. The shielded unit converts the extra channels to Channel



2 or 3 for output to the subscriber's receiver. Input channels are received in the 120 to 174 MHz and 216 to 240 MHz bands. The unit also utilizes a bypass switch so that all normal VHF channels can be received directly.



The third new International Telemeter unit to be shown at the NCTA show is the "Focus 12" for applications

where local signals produce ghosting problems in CATV subscribers' sets. The heavily shielded unit is said to provide over 100 db isolation from outside signals. Installation is between drop wire and receiver.

For more information on these new products, visit convention booth L11, or contact international Telemeter Corp., 2000 Stoner Avenue, Los Angeles, California 90025.

NEW SKL UNITS

Spencer-Kennedy Laboratories, Inc. has announced two new solid-state amplifiers with two-pilot closed-loop control for automatic level and slope control. One pilot at 205.25 MHz controls the flat gain, while the second pilot at 73.5 MHz, controls the slope. Over its operating range the SKL/7027K output level is said to be constant to within plus or minus 0.5 db for a flat level variation of plus or minus 4 db and a slope variation of 3.5 db. Plug-in fixed pads (SKL/7216) are available for the 7027K in 0, 3, 6, 9, and 12 db values. Two plug-in dual equalizers (SKL/7217) are available, one with equalization of 8 or 17 db (cable equivalent) and the other with 0 or 12 db (cable equivalent). The high or low equalization is selected by a toggle switch on the unit. The SKL/7027K is said to have a minimum full gain of 26 db and a bandwidth of 50-220 MHz, flat within plus or minus 0.25 db.

The SKL/7037K trunk amplifier is similar to the SKL/7027K. The bridging amplifier taps a fraction of the trunk signal, with an insertion loss listed at 1 db, maximum. The minimum full gain of the bridging amplifier is listed at 18 db, with a 5 db gain control range, and plus or minus 4 db (cable equivalent) tilt control range. Bandwidth is 50-220 MHz, flat within plus or minus 0.5 db. The bridging amplifier output feeds a splitter which derives one to four distribution lines.

The firm has also announced three new trunk and distribution amplifiers — models 7050K, 7070K, and 7075K which are said to utilize a trunk-quality amplifier with Model 7216 0-3-6-9-12 db plug-in pads, Model 7217 0-8-12-17 db plug-in equalizers, 26 db minimum full gain, 50-220 MHz bandwidth, flat within plus or minus 0.25 db, Series 7160 plug-in splitter for 1 to 4 distribution lines, and 5 amp AC

bypass. The 7050K amplifier output connects directly to the splitter. Model 7070K has a built-in tap with 1 db through-loss and 12 db tap loss before splitting. Model 7075K is the same as the 7070K with the addition of ALC.

For more information on these new products, visit NCTA convention booths L14-L17, or contact Spencer-Kennedy Labs, 1360 Soldiers Field Road, Boston, Mass. 02135.

VIKING WEATHERCASTER

Featured at Vikoa's NCTA exhibit will be the Viking Weathercaster time/weather unit. In addition to six weather gauges and a clock, the unit displays six separate display cards in a rotating sign holder. Three of the card positions are viewed on each



cycle of the unit. In addition, the GE TE20 Vidicon camera utilized on the Weathercaster can be detached for live studio use.

For more information on this new product, visit NCTA convention booths 2-12, or contact Vikoa, Inc., 830 Monroe Street, Hoboken, New Jersey 07030.

AMECO CHANNELEER FEATURED

Ameco's NCTA display will feature that firm's new solid-state, heterodyne signal processor, the Channeleer. The unit features modular construction, designed for ease of changing input or output channel. The new head-end control unit offers 12-channel oper-



ation with adjacent channel rejection listed as 50 db minimum and spurious outputs down more than 60 db. Full

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color reproduction is said to be achieved with IF bandwidth flat within plus .25 db from 41.57 to 46.5 MHz. Operating output level is listed as +54 dbmv with a noise figure of 7 db maximum. Minimum dynamic AGC range is 50 db, according to the manufacturer.

For more information on this new product, visit NCTA convention booths 69-74, or contact Ameco, Inc., P.O. Box 13741, Phoenix, Arizona 85002.

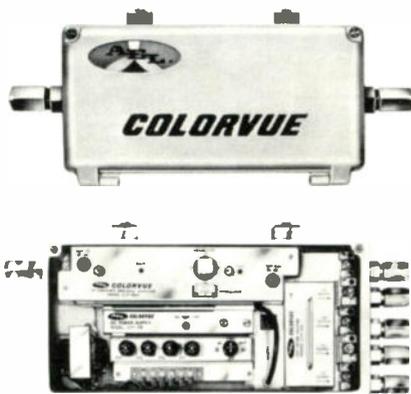
TELEMATION CABLECASTER

Featured at TeleMation's NCTA exhibit will be that firm's new TMV-6000 "Cablecaster", a video control center with a synchronous switching system for switching of local origination video sources. The system uses 2:1 interlace sync derived from one "master" system camera. Horizontal and vertical drive pulses are fed from this source to all other cameras in the system. The unit has six video inputs, three outputs, a video processor for reshaping sync pulses, and provides level control for composite waveform output. The inputs can also be adapted to accept non-synchronous sources such as a VTR and tuner.

For more information on this new product, visit NCTA convention booths 61-64, or contact TeleMation, Inc., P.O. Box 15068, Salt Lake City, Utah 84115.

TWO NEW AEL AMPLIFIERS

American Electronic Labs has introduced two new CATV amplifiers: the CVT-ILE line extender and the CVT-IRB intermediate bridger. The new line extender features hybrid micro-circuitry and incorporates a plug-in amplifier module and a line-powered DC power supply module



housed in a weather and radiation-proof housing (strand-mounting). The new addition to the Colorvue line is said to provide plus or minus 0.5 db response flatness over a bandwidth of 50 to 220 MHz. Tilt and gain controls allow adjustment for operating gain of 24 db and a tilt equalization of up to 21 db of cable. Output capability is

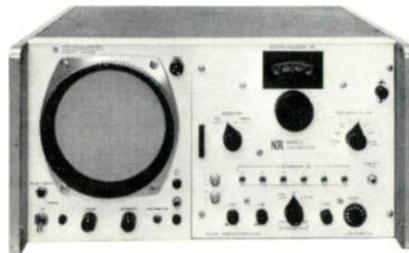
listed at 48 dbmv with -57 db cross modulation at 5 db block tilt; noise figure at 6 db; VSWR input/output match at 1.33:1 maximum.

The CVT-IRB Colorvue intermediate bridger is for use where trunk amplification is not required. It can feed up to four feeder lines, and employs hybrid micro-circuitry in the plug-in amplifier module. Specifications are listed as: 39 db maximum gain in bridging mode and 47 db maximum in terminating mode; plus or minus 0.5 db response flatness over 50-220 MHz bandwidth; 1.25 db nominal insertion loss for feeder lines; 51 dbmv output for 12 channels with -57 db cross modulation (at 5 db block tilt); and 16 db maximum noise figure at full gain.

For more information on these new products, visit NCTA convention booths 219-220, or contact American Electronic Labs, P. O. Box 552, Lansdale, Pa. 19446.

CATV SPECTRUM ANALYZER

Nelson-Ross Electronics has announced availability of its Mark I spectrum analyzer as the first in a line of test instruments for the CATV in-



dustry. The unit is of a plug-in, modular design, and is used with a Hewlett-Packard 140A/141A oscilloscope. The unit covers a bandwidth of 1 to 300 MHz. Price is listed as \$1500.

For more information on this new product, contact Nelson-Ross Electronics, 5-05 Burns Avenue, Hicksville, New York.

TOWER SERVICE AVAILABLE

Andrews Towers has announced the availability of tower rental service in several southwestern locations—with capability of furnishing the service in other areas also available. Towers can be obtained on a rental basis where there are at least four users desiring the service. Tower heights of up to 500 feet are available.

For more information on this service, contact Andrews Towers, Inc., 1420 Layton Avenue, Fort Worth, Texas.

DIRECTIONAL COUPLERS

Craftsman Electronic Products has introduced a 600A Series of directional couplers. The back-matched unit is said to have high isolation between the

tap and the output port with excellent VSWR. Available in tap attenuations of 10, 14, 18, 22, 26 and 30 db, the insertion loss between the input and output is said to range from .08 db at an attenuation of 10 db, to .25 db at an attenuation of 30 db. Craftsman



also makes available the 600A directional coupler in a package with the Craftsman 2WDW-SF two-way splitter and F-71 connector, and also with the 4WDW-F four-way splitter.

For more information on this new product, visit NCTA convention booths 91-93, or contact Craftsman Electronic Products, Inc., 133 West Seneca Street, Manlius, N.Y. 13104.

NEW INSTALLERS' FSM

A new miniaturized pocket solid state signal level meter combined with a DC Voltmeter, AC Voltmeter, and Ohmmeter has been introduced by Jacobsen Electronics. The new unit, called a Mini-All-Meter, is designed for house drop installers use in selecting and checking tap inserts while "on the pole," and for trouble shooting installations and house drop malfunctions.



The unit operates on a standard 9-volt transistor radio battery. Price is \$75.00.

For more information on this new product, contact Jacobsen Electronics, P. O. Box 427, Rapid City, South Dakota. □

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System Sales

American CATV, Inc. has purchased the Salamanca (N.Y.) TV Cable Corp. system from Lamb Enterprises, Inc. of Toledo, Ohio. The Salamanca system currently has over 1,000 subscribers. LaRue Media Brokers, Inc. handled the transaction, in which no sale price was disclosed.

Storer Cable TV, Inc., a subsidiary of Storer Broadcasting Co. has purchased the Jack Kent Cooke, Inc. (American Cablevision) system in Laguna Beach, Calif. which has some 5,530 subscribers and an estimated potential of 7,400. Selling price was not disclosed.

Citizens Cable (Citca) Corp. principals Milton J. Shapp of Philadelphia and Joseph L. Lecce of Williamsport, Pa. have announced the purchase of Williamsport (Pa.) Television Cable Co. from National General Corp. The operations will be combined with the system Lecce is currently operating in Williamsport. The con-

solidated firm will have over 20,000 subscribers.

Seagraves (Tex.) Cable TV has been purchased by Don Mansell and Charles Carter of Seminole, Texas. The system offers seven video signals and one FM channel. A local origination channel is planned by the new owners.

Bob Gordon of Kooskia, Idaho has purchased the Harpster, Idaho system from Gene Ringen.

Carbon Cablevision Inc. has announced the purchase of the Slatington, Pa. system from Vincent Kern of Kern's Electric & TV Antenna, Inc. The transfer became effective May 1. The system will reportedly be converted to all-band. Carbon also operates systems in Palmerton, Bowmanstown, Parryville, Weissport, Lehighon, Jim Thorpe, and adjoining Pennsylvania areas.

Ottawa (Ontario, Canada) Cable Television Ltd. has announced the acquisition of Pembroke (Ontario) TV Enterprises Ltd. The transaction was finalized April 30.

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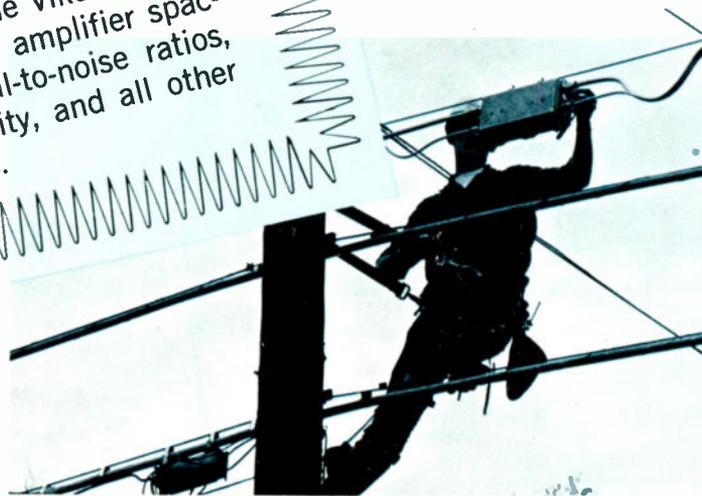
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