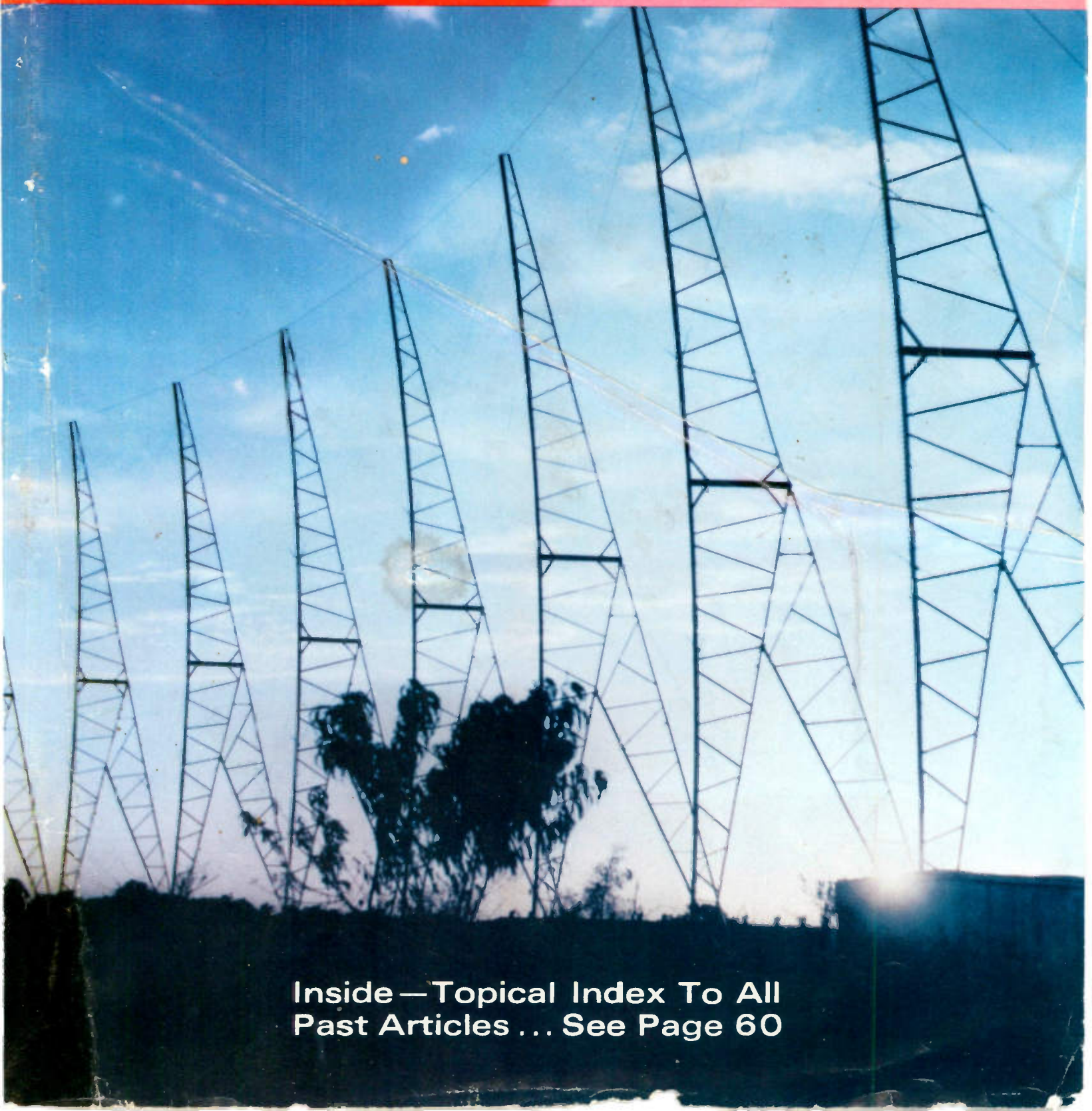
JANUARY 1967

TV Communications

The Professional Journal of the Cable Television Industry



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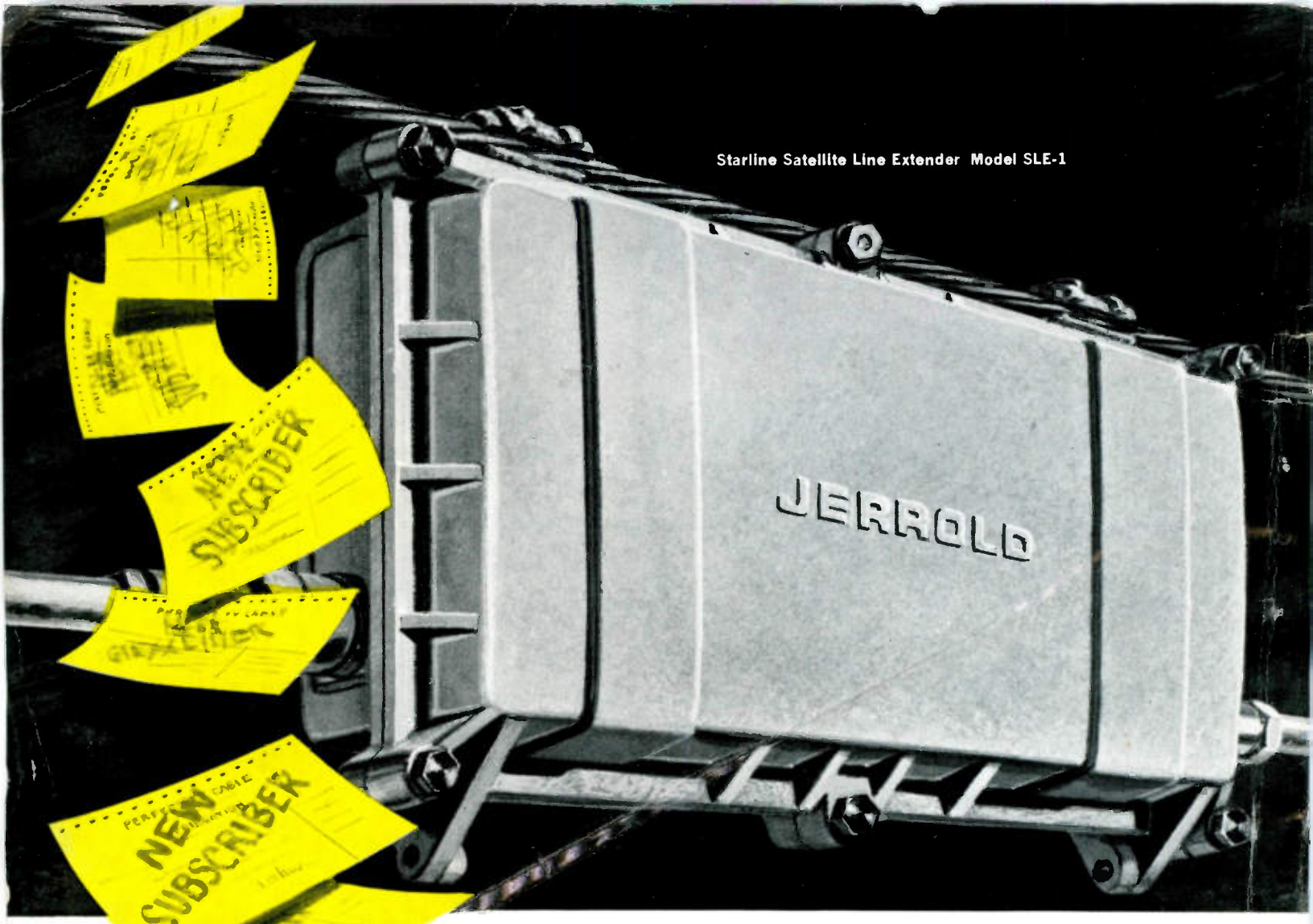

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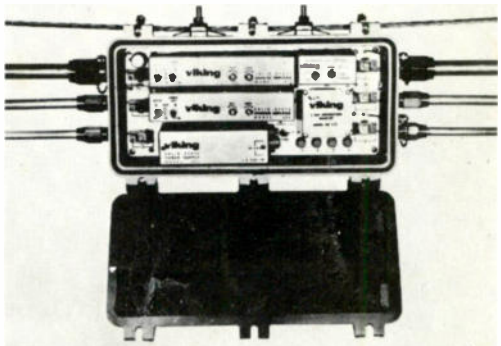

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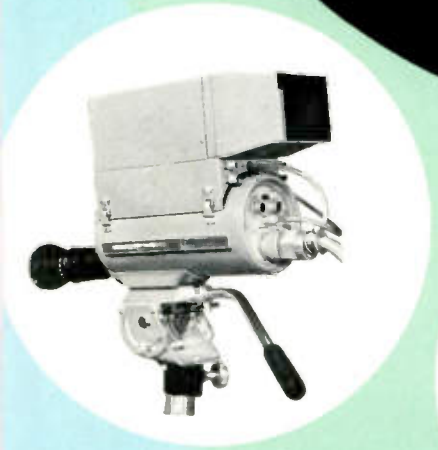

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IN THIS ISSUE

OUR COVER: This month's cover, courtesy of Jack Threadgill, features the tropo-scatter installation serving the Marlin, Texas system. The antenna system was installed by Space Diversity Engineering Company, of Ft. Worth, Texas.

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CATV TECHNICIAN SECTION

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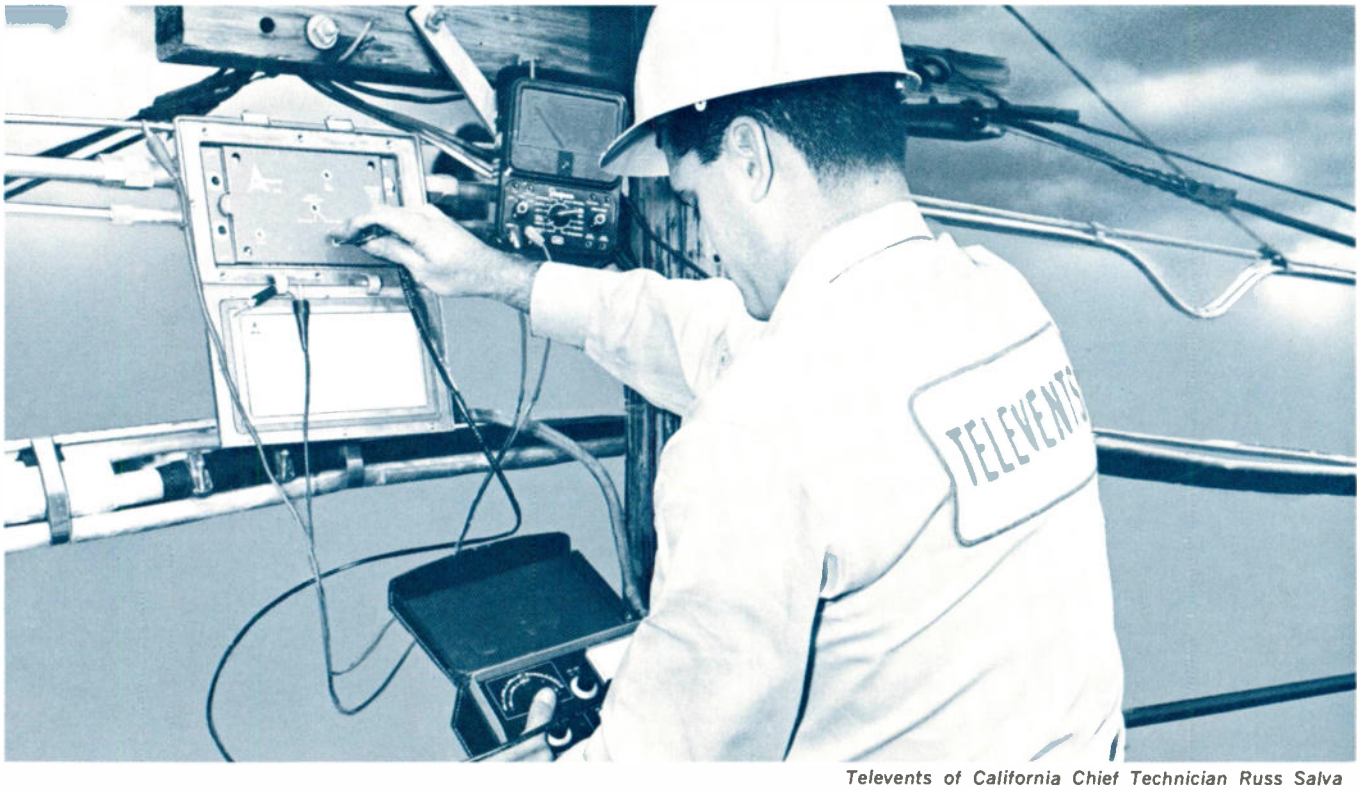

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EDITORIAL

By Stanley M. Searle

The Hundreds of "Top 100" Markets

The fact that the Federal Communications Commission imposes substantial restrictions on CATV activity in the "Top 100 markets" is well known. Not so well known is the basis for determining just which communities are to come under the dubious "top 100" label.

Actually, the *several hundred* separate communities included in this group constitute approximately 90% of the total television audience! Consequently, the FCC's treatment of CATV in these "markets" is of enormous importance to cable operators . . . and a matter of considerable interest to the viewing public, as well.

The most conspicious weakness in the FCC's "top 100" policy lies in the very determination of which cities are to be included. Who decided, for example, that homes located 110 miles apart in Springfield and Danville, Illinois are all part of the same "market"? And whose opinion constitutes the basis for the FCC contention that Springfield, Decatur, Champaign and Danville should be combined and designated the 75th television market? By whose definition do these communities constitute a "market"? The answer, of course, is ARB.

The American Research Bureau (ARB) is a private firm engaged in the business of breaking the radio and television audiences down into so-called "markets", and ranking these segments according to "net weekly circulation" based on "total viewing homes". Advertisers, agencies and stations are the customers for whom this information is compiled.

For purposes of evaluating a community's need for CATV or assessing the possible effect of cable television on a community, the ARB ranking is only remotely and occasionally applicable. Certainly the ARB concept of a "market" does not necessarily have any bearing on the public interest, convenience or necessity of a CATV system!

ARB says, for example, that Atwater, Monterey, Pacific Grove, Seaside, Carmel and Santa Cruz, California are all included in what they call the "Salinas-Monterey-Santa Cruz market"; number 55 in their ranking. However, from a standpoint of economic interdependence, these communities do not constitute a "market". Nor do they even remotely resemble a single "market" geographically. Atwater is 90 miles from Monterey, isolated from the other communities by a range of mountains, and is, in fact, a suburb of Merced —which is not included in the ARB 55th "market." Santa Cruz lies northwest of Carmel, Pacific Grove and Monterey, across a 30 mile expanse of Pacific Ocean!

Just how valid can be the Commission's adoption of special rules for such arbitrarily established "top 100 markets"? Even if the idea of special restrictions for major markets made sense, the carte blanche adoption of ARB's market definition and ratings wouldn't hold water. Nor is the Commission's imposition of its "top 100" rules fair to the residents of the affected communities.

Apparently the lumping together of these hundreds of communities into "100 major markets" was simply a convenient device used by the Commission staff in fashioning an obstacle to the construction of new CATV facilities. Certainly, the incorporation of a private corporation's arbitrary ratings into government regulation of an important industry seems a bit irregular at best.

Hopefully, the CATV Task Force will seek a revision of the rules, deleting this unwarranted inclusion of ARB ratings in FCC regulations. And in the likely event that Congress again addresses itself to CATV legislation, we urge the Commissioners to let the Task Force speak for the FCC in recommending that the "top 100" nonsense be avoided in any proposed laws.

National Cable TV Week

National Cable TV Week, which the CATV industry is preparing to observe from Jan. 30 through Feb. 4, is an event of considerable significance—both immediate and long range. It is a well-merited salute to the industry's past achievements and to the hardy Twentieth Century pioneers who have discovered and explored, as it were, a new frontier in communications. More, it is a call to arms for battles yet to come.

In rallying support from the grass roots of the industry, NCTA has used the theme: "Promote to Protect . . . Your Industry and Its Future". There can be no doubt that some of the most critical times in the history of cable TV still lie ahead. They can be dealt with effectively only through a unified all-industry effort.

The Cable TV Week committee, headed by Sanford Randolph, has taken great pains to make the upcoming event just such an all industry project, not one exclusivly for NCTA members. As a result, non-NCTA operators have responded in a rare and encouraging spirit of cooperation. TV COMMUNICATIONS is pleased to add its support and best wishes for National Cable TV Week.

Stan Searle

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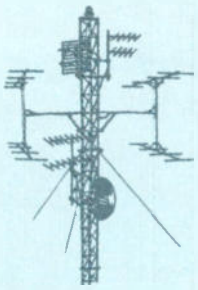

CATV Industry PERSPECTIVE

Year of decision for CATV? Here's the lineup of CATV issues and questions that may be resolved during 1967.

(1) CATV legislation. (Controversy-plagued Staggers Bill died in committee during 89th Congress--to the great relief of cable operators.) New proposals will be introduced this year; could become law during 1967, altering FCC controls significantly. Wary of a hot battle on the floor, Congressmen may shy away from any new bill which incorporates language as restrictive as the Staggers Bill.

(2) Copyright Revision Law. Hopelessly complex and obscurely phrased, the CATV section of the Copyright Revision Bill will be taken up once again by the Subcommittee on Patents, Trademarks and Copyrights of the Senate Committee on the Judiciary. The bill (S. 1006) would give television stations and copyright owners a share of the cable systems' income. But main thrust of the law as presently worded is to give local broadcasters broad discretionary authority over CATV program carriage and to place strong economic sanctions on cable systems originating certain types of programming. Bill could pass with or without revisions to CATV section or legislators may decide to expedite passage of a separate law dealing with hot CATV copyright issues. All factors considered, chances for copyright bill passage this year are less than 50%. Failure to enact new law would greatly amplify impact of United Artists v. Fortnightly decision and current appellate action on that decision.

(3) Waivers of FCC rules. CATV Task Force, energetically directed by Sol Schildhause, could largely shape cable television future growth unless and until Congress redefines Commission jurisdiction or regulations. Big question revolves around whether FCC will permit residents of so-called "top 100 markets" to view programs of distant stations. If Task Force continues apparent efforts to expedite handling of waiver requests, and shows a tendancy to grant waivers, the suspected "five year de facto freeze" on major market entry may be prevented.

(4) Tight money. The lack of adequate acquisition and expansion funds for cable television, a major source of concern for both operators and manufacturers, will be lessened during the spring months. In spite of the economic demands of Viet Nam war, the expanding productivity and healthy economy will produce an increasing amount of capital for industries. Continuing prosperity and the appetite of the American people for more and better entertainment will make cable television systems an increasingly attractive investment. Prospects of money market's returning to "normal" this year, however, are slim. So cable operators and manufacturers will search out new sources of capital. Total volume of new system construction and plant rebuild will continue to increase despite myriad problems.

(5) Telephone company CATV activity. Current FCC hearings on Bell Telephone participation in CATV will have tremendous impact. Chances are that Bell will be significantly restricted from operating (leasing) cable system plant in a manner that gives telco tight controls over operation. Independent telephone companies, meanwhile, continue to enter CATV business at a rapid rate. 1967 will see several dozen systems built or acquired by independent telcos.

Where does Kaiser-Cox fit into your CATV plans?

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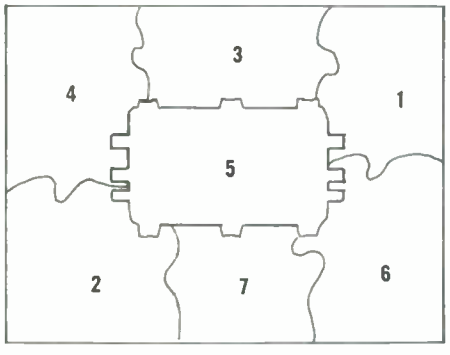

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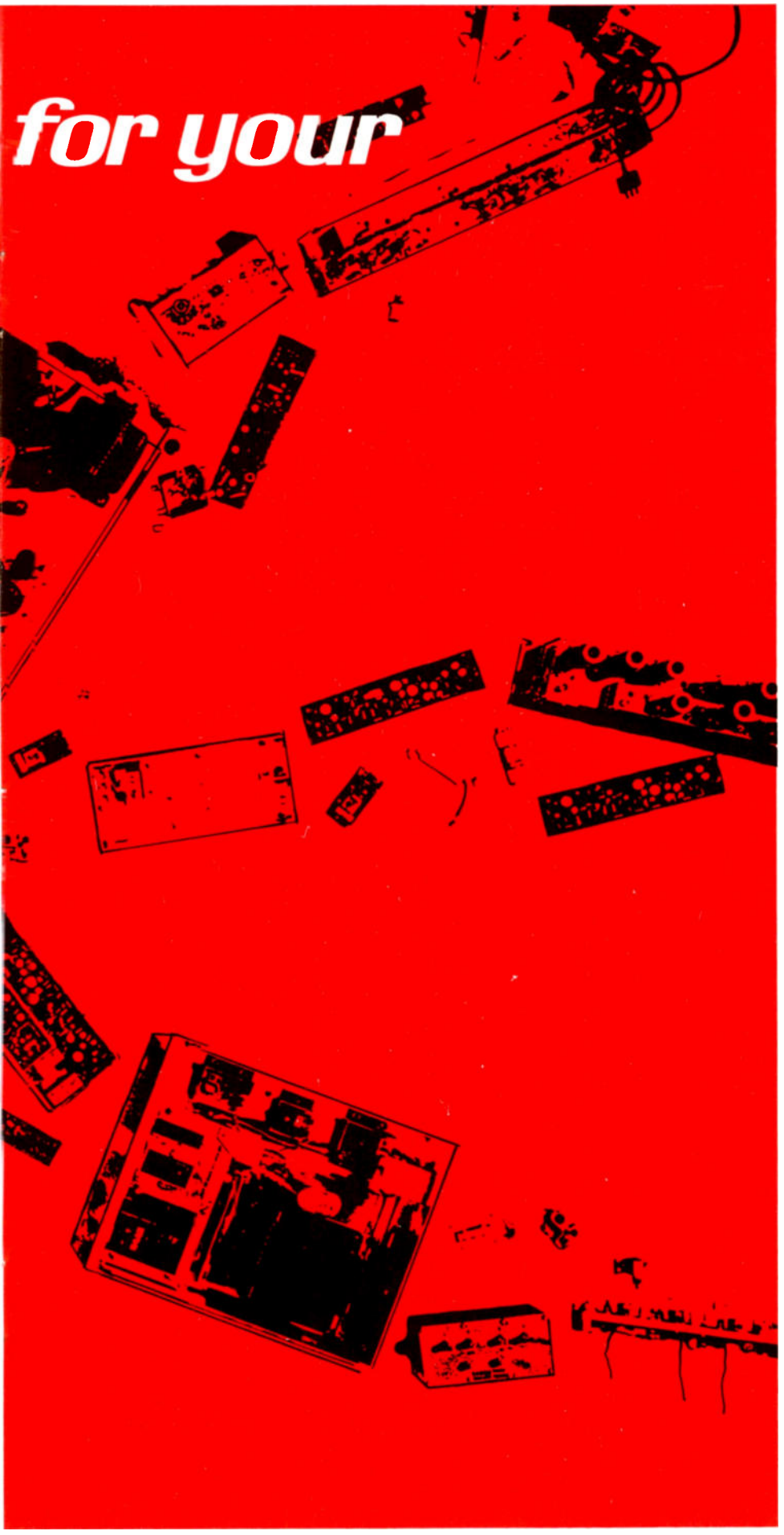

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CATV Legal VIEW

BY JOHN P. COLE, Jr.

FCC's Top-100 Policy Will Tumble

The FCC's prohibition upon implementation of new CATV services in the Top-100 television markets in the United States, as such commercial markets are designated by American Research Bureau, has now been in effect for almost a full year. The Commission's policy in this regard was first announced upon adoption of the *Second Report and Order* in February 1966. The rule [§ 74.1107] and the policy which underlies it are a model of simplicity and clarity: Without prior FCC approval, no new CATV service shall be instituted in any community which is encompassed within the predicted Grade A contour of any television station which operates from one of the Top-100 TV markets in the United States if the new service contemplates reception of any television station which does not encompass the CATV community within its predicted Grade B contour. Carriage of "local" stations [stations which place a predicted Grade B or better service over the town] is permissible and must be preceded only by the "notification" requirements of § 74.1105 of the FCC Regulations; but carriage of "distant city" [stations which do *not* encompass the CATV community within their predicted Grade B contours] stations is forbidden unless of course such distant city stations were being carried on the CATV on or before February 15, 1966 in which case they may be continued under a "grandfather" clause.

It is to be observed preliminarily that approximately 90 percent of the population of the United States reside within the Top-100 markets as defined under the Commission's regulations. Therefore, the policy places in effect a regulatory freeze upon CATV growth or system expansion throughout the principal portions of the United States.

Refinements of the policy evolved through the process of precedent-making decisions by the FCC have established that a CATV system serving one geographical area [political subdivision] may not extend its services into an adjoining area without violating the rule. Thus, situations arise where persons residing on one side of a street, the center of which serves as a political boundary, may avail themselves freely of CATV services while those that reside on the other side are denied access to this important medium of communication. Circumstances are artificially created where it is lawful and permissible for one's neighbors to receive "distant city" signals on their television sets because they happen to reside on the right side of the tracks while others are deprived of these rights.

The FCC has justified the enactment of these novel regulations —which openly purport to restrict public access to available communications—on the basis that they serve the "public interest." We believe, however, that these policies are clearly and demonstrably unlawful since they infringe directly upon substantial rights protected by the First Amendment to the Constitution. On the one hand, the FCC rule infringes upon the CATV entrepreneur's constitutionally protected right to distribute; and, on the other hand, it infringes, perhaps even more clearly, upon the public's right to receive, by means of its choice, all available communications. There simply is no precedent in modern American law to support a proscription upon the public's right of access to communications of the type applied upon CATV reception by the FCC.

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

Why then has the FCC, through enforcement of this patently unlawful regulation, been permitted to administer successfully for nearly a year now its policy of CATV retardation? The answer to this perplexing question is neither clear nor certain. But we are willing to venture some opinions of our own.

First, the CATV industry itself has been beset with so many contemporary problems of genuine magnitude as to have been compelled, by sheer necessity, to wage war simultaneously on several different fronts. The resources of the CATV industry to conduct legal, administrative and legislative battles have been thinned as of late through necessary confrontations on copyright, telephone company matters, economic impact, etc. Probably, the greatest testimonial to the potential of CATV is the identity of its most dedicated oppressors. For CATV numbers among its most vigorous detractors some of the strongest and most entrenched powers in the nation. And because of its many conflicts, CATV forces have, we believe, become just a little battle weary and disorganized. As a result, CATV interests have been unable to muster an organized, major campaign challenging the lawfulness of the FCC's prohibition upon normal CATV growth.

More significantly, however, the very regulation of radio and television by the FCC is, at first glance, an immensely complicated undertaking. The inherent nature of radio communication and its technical intricacy serve to compound this superficial complexity. The continuing development of technical innovation and the pervading use of industry jargon and technical-sounding terms only adds to the mysterious environment under which the Commission conducts its regulatory business. As a normal and natural consequence of this phenomenon, the courts, which have review powers over actions of the FCC, have been understantably reluctant to interfere with basic regulatory policies enacted by the agency. Busy courts and the judges which sit upon them, as a practical matter, can neither reasonably nor realistically be expected to achieve expertise in all of the myriad subjects coming before them. It is natural for any judge to attach great weight to an action taken by a govern-

(Continued on page 58)

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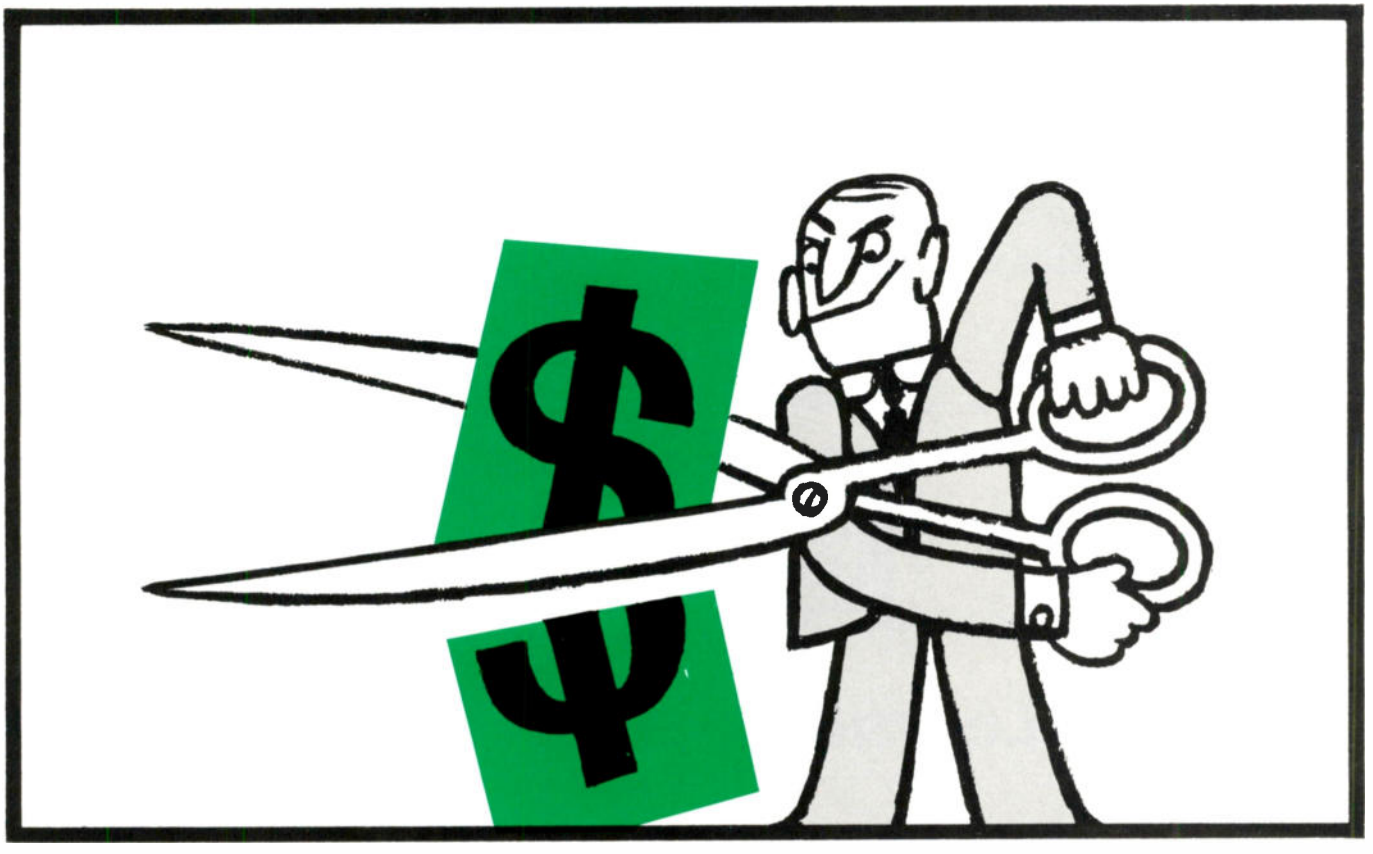

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Direct Sales Pointers

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1. Know the product. The salesman who is thoroughly familiar with cable service never has to misrepresent its advantages.

2. Have faith in the performance of the system. The more you believe in your product, the more conviction you will have in selling it.

3. Time your calls to suit the habits of your prospects. Calling when the customer is most receptive may not give you a banker's hours, but it will give you an enviable sales record.

4. Sell the benefits that CATV offers—not the gimmick. Tell the prospect convincingly what cable service will do for him, and he will become a subscriber.

5. Look on each sales objection as a sales opportunity. Know the objections to CATV service, and the answers.

6. Ask for the order. This is the No. 1 rule of selling, yet a surprising number of salesmen never get around to closing the sale.

7. Don't stop your sales talk too soon. You should never let go of any prospect until you are sure he thoroughly understands every benefit that cable TV can offer him.

8. Practice your sales story—from the approach to the signed order. The more rough spots you smooth off before calling on the prospect, the easier is the road to the sale.

9. If your company gives you sales aids, use them—and don't hesitate to try out your own ideas.

10. Don't let the prospect get your goat. Salesmen must keep their tempers in the face of the roughest conditions.

11. Don't be a softy. The voice with the smile wins, but behind the smile must be the purpose and conviction.

12. Talk the customer's language. If you understand his needs, you are bound to talk his language.

13. Patience, persistence, and enthusiasm are three character ingredients for which salesmen can find no substitute. Take away any one, and the other two become much less valuable.

14. It is an important sales principle to put the product in the hands of your prospect if possible—to let him hold it, feel it, use it. Since you are selling an intangible, try to find something tangible, like a booklet or other sales aid, that will give the prospect a feeling of possession.

15. Finally, don't duck the hard sale. Every successful salesman will tell you he learned more from the tough ones than he did from the easy ones. The path to sales success isn't the line of least resistance. □

News SPECTRUM

Tariff Battle Culminates

CATV-telco conflict continued to rage last month, as the two interests traded blows in preparation for the forthcoming clash before the FCC. CATV groups pressed for a coherent, non-contradictory policy on tariffs, while the telcos argued for dismissal of charges by the NCTA and other CATV associations.

The industry's complaints are based on the long-disputed tariff activities of telephone companies regarding CATV. The NCTA request before the Commission asked for an investigation and hearing, and charged the telcos with "unlawful, unjust, and unreasonable" tariff activities. The association filed complaints aimed at AT&T, General Telephone and Electronics, and United Utilities. Complaints by the separate associations were similar. Most of the petitions alleged that the telcos are, among other abuses, violating the antitrust laws in their CATV dealings. Shortly after the petitions were filed, the FCC, on its own motion, ordered an investigation of CATV tariffs filed by the Bell System Telephone Companies.

AT&T answered the charges in no uncertain terms: the corporation told the FCC that the NCTA complaint had no foundation, and should be dismissed as "a confused hodgepodge of allegations and arguments." The dismissal request denied "categorically . . . any allegations or implications of any wrong doing on their (AT&T's) part which may be contained in NCTA filing." The filing, said Bell, "gives no specification of any facts to support any claim of action contrary to the Communications Act. Upon analysis of the document it is clear that any such supporting facts are completely lacking."

AT&T said that agreements between CATV operators and Bell companies on pole attachment arrangements are not a tariff matter under the Communications Act, and "have no relevancy to the issues raised . . ." The telco restated its position that CATV channel service is not subject to regulation by the FCC, but rather by state and local authorities.

General Tel and United Utilities also asked that the complaint be dismissed for lack of legal basis. GT&E said the NCTA filing was a "series of rambling, disjointed paragraphs, containing many argumentative assertions but few, if any, factual allegations." United said the camplaint "mixes arguments of fact, suppositions of fact and allegations of unlawfulness both within sentences and within paragraphs."

Denying all NCTA allegations of wrong doing, United dismissed NCTA charges of antitrust implications in the tariffs: "There has been no showing, the telco stated, "that United has in any way impeded an independent CATV operator from constructing and operating its facilities." The NCTA compaint, it said, was based on the possibility "for one CATV operator obtaining a franchise to compete with another one and thus make less secure what may appear to be a practical monopoly even where exclusive franchises have not or may not lawfully have been granted. If there be any monopoly of the CATV business in any particular area, it results from the economic facts of life of the CATV business and not from any plan or effort on the part of a United Company. In short, NCTA's alleged implications of antitrust exist, only in NCTA's imagination, not in fact."

Petitions to intervene in the FCC Bell investigation were filed by several CATV associations, including: Community TV Association of New England, Illinois-Indiana Cable Television Association, Michigan Cable Television Association, New York State CATV Association, Ohio Cable Television Association, Pacific Northwest Community TV Association Inc., and the West Virginia Community Television Association.

AT&T immediately asked the Commission to deny the organizations' petitions on the basis that their arguments would be "an unnecessary and unjustified redundancy." The Bell System said that excluding them would result in no loss of "proper evidence," and noted that they did not object to NCTA's earlier petition to intervene.

The associations blasted back with arguments that "Bell's reasons for opposing the petitioners' intervention are completely unwarranted." The Pacific Northwest Community Television Asso-

Waterville Takes Stand

The city of Waterville, Maine, rebelled last month to the Bartell Media-New York Telephone plans to provide CATV service there. Waterville, the largest of several cities which would be affected by the agreement, announced plans to initiate steps which would lead to the granting of an exclusive cable franchise. The action would, reportedly, culminate in the filing of an injunction against Bartell by the franchised firm.

Initially reported by *Cable Television Review*, the Bartell plan calls for providing CATV service without benefit of a city franchise. Maintaining that CATV in Maine is a telephone service, Lee B. Bartell, president of Bartell Media, told staff reporters that the firm does not "plan to seek a permit, because we are not using the public highways or public street." He added that the firm planned to "confer with the cities in order to provide the best possible service." Bartell later sent a telegram to the Waterville Assembly, informing it of his firm's plans to operate a leaseback system without a franchise from the local government. He stated that the franchise currently held by New England Telephone was sufficient to allow it to distribute television signals on its poles.

Other communities involved include Fairfield, Winslow, Rockland and Rockport, Maine. Upon learning of Bartell's intentions, municipal officials from the communities took their objections to the Maine Municipal Association, which in turn announced plans to present two CATV measures to the forthcoming state legislature.

ciation Inc. and the Ohio Cable Television Association joined in arguing that "while NCTA represents the general interest of the community antenna television industry on a national basis, because the tariffs are effective on a statewide and area wide basis, participation of individual associations which are directly affected by the tariffs is essential to a complete and thorough investigation and hearing. Additionally, not all members of every state and regional association are members of the national association." The two organizations stated that they plainly will be affected by the case, and should be allowed to participate.

NCTA later asked the Commission to consolidate the Bell System hearings with hearings on General Telephone and United Utilities tariffs. The association asked that the consolidated hearing be held in "two phases: the first such phase to cover the lawfulness of all aspects of the tariffs in question except those matters specifically relating to justification of the rates for tariff services; the second phase to cover justification of the rate for CATV tariff service." The association said that the philosophy behind the tariffs and whether they should even be legal should be decided before turning to the specifics of rates.

Noting all the separate complaints and possibly separate hearings that could be scheduled on the telco tariffs, NCTA said that, "the basic lawfulness of all those tariffs . . . should be the subject of an expeditious consolidated hearing. The terms and conditions of all of those tariffs are quite similar and in many instances identical."

The Bell hearings were set to begin February 27, with initial exhibits to be filed by February 13, except for cost figures, which were scheduled to be filed after May 1.

Mississippi Association Elects Officers

The Mississippi CATV Association held its annual meeting last month in Jackson, Mississippi. The meeting's business agenda included the selection of officers, which resulted in the election of Doug Gardner, Greenville, as president and Thomas A. Diachiara, Aberdeen, as vice president. Mrs. Lucille Fennell, Clarksdale, was reelected to the post of secretary-treasurer. Mailing address for the association is Box 1106, Clarksdale, Mississippi.

Comtel Ordered To Show Cause

Comtel, Inc. came face to face with the City of New York last month in a legal skirmish over the firm's right to provide unfranchised service to Manhattan residents. The city's intention to initiate legal proceedings became apparent when Justice Aurello of the New York Supreme Court, Borough of Manhattan, signed a show cause order against Comtel, instructing the firm to "show cause why it should not be enjoined from using city streets and conduits for CATV business without a franchise."

New York Telephone Co., which is providing the leaseback facilities to Comtel, also received its share of criticism, when two firms franchised by the City of New York filed at the FCC, complaining about the activities of Comtel. The joint petition was directed at New York Tel, and requested an immediate order to show cause.

The complaining firms, TelePrompTer Corp. and Manhattan Cable TV Services, argued that "... Defendent New York Telephone Company has undertaken, or will undertake, the construction and installation of new cables and lines over which it now furnishes, or intends to furnish, interstate carrier services to Comtel ..." without applying or obtaining from the Commission "a certificate that the present or future public convenience and necessity require, or will require, the construction, or operation, or construction and operation of said new line or lines of communication." Without certificates, the firm said, the CATV operations of Comtel are unlawful.

The petition asked the Commission to issue a cease and desist order and to "issue an order providing for reimbursement and recovery by complainants of all reasonable attorney's fees and costs in connection with the maintenance and prosecution of this action." TelePrompTer and Manhattan Cable said that when and if an application for certification is submitted to the Commission it "will present the first occasion to consider the substantial issue of whether the 'lease-channel' service constitutes, in the pertinent circumstances, a lawful, proper, necessary or desirable common carrier activity, and whether the public convenience and necessity will be served by the authorization thereof."

Described as a "pilot run" cable television system, Comtel operates under a "special arrangement" with the New York Telephone Company, and utilizes conduits of Empire City Subway Co., Ltd., an AT&T subsidiary which handles the AT&T understreet communications in New York City. The "telephone cable TV" firm itself is a subsidiary of Bell Television, Inc., a New York City MATV firm.

New York Telephone replied to the cable firms' filings by asking the Commission to dismiss the complaints "without further consideration." The telephone company said that the TelePrompTer and Manhattan Cable filings "might well be considered as a tactic of irresponsible harrassment and an abuse of the Commission's procedures." The telco said that Comtel is its only such customer, and that it uses less than one mile of New York Telephone Company cable to connect its master antenna television system. New York Tel argued that since, according to the law challenged, at least 10 miles of cable must be involved, the cable firms' joint filing did not even manage a basic relevance.

Court Upholds Cities' Right To Franchise

Illinois cities have the right to issue CATV regulatory and license ordinances, according to a ruling by Circuit Judge Frederick Green. Judge Green's 8-page opinion rejected the arguments of Illinois Broadcasting Co. of Decatur, Ill., which attested that: 1. the city has no right to authorize the use of public streets for private uses (such as CATV transmission lines); 2. The city may not charge a fee for such use of streets; 3. Appropriations made by the city to cover the cost of administration of CATV ordinances illegally increase the tax burden of all taxpayers; 4. The CATV ordinances, as written, would require the Illinois Broadcasting Co. to obtain a CATV license in order to continue broadcasting.

The broadcasting firm filed the petition last January in an attempt to nullify city regulatory ordinances, which require a license for CATV operations. The ordinances, passed by the Decatur city council last year, also authorize a specific franchise grant to General Electric Cablevision Corp., and specify standards for system installation and operation. Illinois broadcasting officials reported earlier that the suit was lodged in order to bring about some clarification of state laws.

CATV Issued Cease And Desist

Three CATV systems felt the wrath of the FCC when the Commission ordered Back Mountain Telecable, Inc. to cease and desist operation in violation of Commission CATV rules. Back Mountain operates systems in Dallas Borough, Dallas Township and Kingston Township, Pennsylvania. The proceeding, which was started last September, was originally also directed against systems in Lehman Township, Lake Township and the "Harveys Lake" area, but the Commission did not include these systems, which were not yet in operation, in the order.

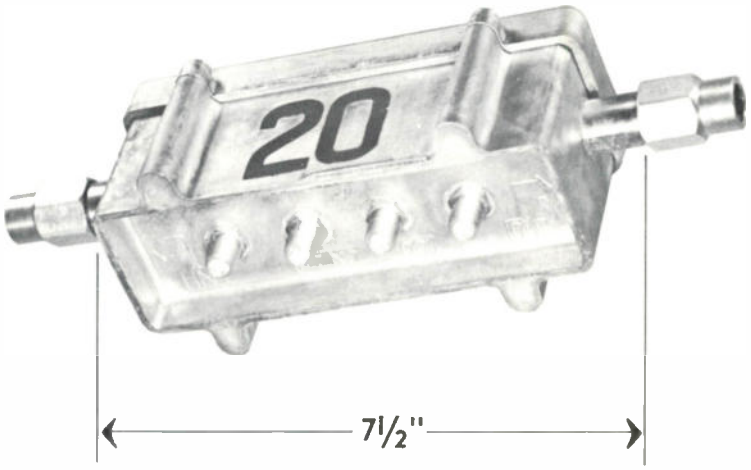
The Commission said the Back Mountain systems violate the top 100 market rule, which requires FCC permission before carriage of signals beyond their grade B contour into one of the top 100 markets. The FCC based their decision on arguments that (1) the systems did not give sufficient notice to area TV stations about their eminent operations; and (2) carriage of distant signals.

The Commission also denied the joint request by the CATV and Kingston Township for an oral argument before the Commission en banc. The denial was based on the contention that "no purpose would be served by oral argument." Commissioner Lee Loevinger and Nicholas Johnson dissented.

Vermont PSB Will Try Again

The Vermont Public Service Board is again turning its attention toward gaining regulatory authority over CATV. Reports from Ernest W. Gibson, III, chairman of the board, indicate that the group will seek authoritative legislation for a third time. Previous attempts by the board placed bills before the state legislature in 1965 and 1966, but both were unsuccessful.

Cascade Electronics Directional Tap . . .



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12	4	2.5	2.5	25	25	20	20
16	4	1	1.5	25	21	20	13
20	4	.5	1	25	22	22	12
24	4	.5	1	25	20	20	11
28	4	.5	1	23	20	20	8
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FCC Answers Petitions

The mountain of waiver applications currently under the consideration of the Federal Communications Commission is still growing steadily, and last month saw the number increased by several. However, the Commission plowed through the petitions weekly, and came up with a few decisions which may influence future judgments.

In one case, the Commission ordered a hearing on the petitions of Taft Broadcasting Co. and WLEX-TV Inc., operators of WKYT-TV and WLEX-TV, respectively. The petitions asked for relief from the proposed operations of four Kentucky CATV systems. The systems, Berea Cablevision Co., Gregg Cablevision Inc., and Mt. Sterling Antennavision Co., proposed to carry not only the Lexington stations, but also to import distant signals from Louisville, Ky.; Cincinnati, Ohio; and Huntington-Charleston, West Virginia.

The Commission denied a joint petition filed by Mission Cable TV Inc., Pacific Video Cable Inc. and Trans-Video Corp., all operators of systems in the San Diego, California, area. Mid-West Television, Inc., a broadcaster, had asked the Commission for relief from the systems carrying Los Angeles signals, and the systems' joint petition was to enlarge the issues involved into more general areas.

In an important West Coast proceeding, the Commission granted a petition by Midwest Television Inc.—licensee of KFMB-TV in San Diego, California—and consolidated into the general San Diego market hearing the proposals of Escondido Community Cable, Inc., for a system at Escondido, California. The Commission also designated for hearing the application of American Television Relay Inc. for a microwave relay station to supply Los Angeles television signals to Escondido. Added as parties to the proceeding were Escondido Community Cable, the City of Escondido, and American Television Relay. The Commission ruled that pending the outcome of the hearing, the Escondido system can carry local signals of KFMB-TV, KOGO-TV, KAAR, KJOG-TV and KETV in nearby Mexico.

The Commission granted a request for a waiver of the nonduplication requirement for Wilmarth's Television, which operates systems in New Milford and Hallstead, Pa., but denied a similar request by Durfee's TV Cable Co., operator of a system in Parkersburg, West Virginia. A similar denial was given to Lee County TV Cable Co., which operates a system in Opelika, Alabama. A temporary waiver of the nonduplication requirement was granted to Florida TV Cable Co., which operates systems in Ormond Beach and Melbourne-Eau Gallie, Fla.

The Commission reaffirmed its grant of microwave facilities to bring the signals of seven Los Angeles stations to a system in Desert Hot Springs, California, and at the same time denied a petition for reconsideration of the grant that was filed by an applicant for a UHF television station in Palm Springs, California.

The FCC also acceeded to the request of Greater Television, Inc. which operates systems in a number of Pennsylvania communities, for a waiver of the top 100 market rule to permit the importation of the distant signal of WIBF-TV in Philadelphia, an independent UHF.

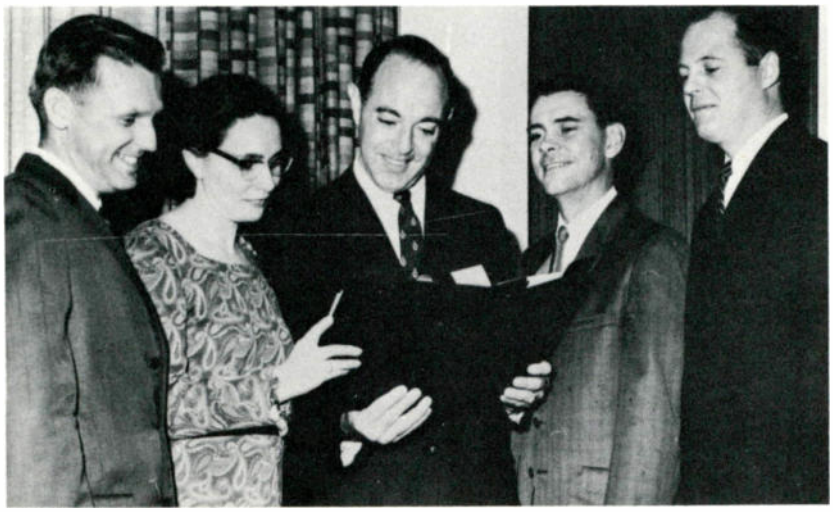
PCATA Meets In Pittsburgh

Public service program origination by CATV systems, copyright issues, relations with the FCC and with the broadcasting industry, and the election of officers highlighted the annual meeting of the Pennsylvania Community Antenna Television Association, held at Pittsburgh's Hilton Hotel.

Key speaker for the 2-day event was Federal Communications Commission staffer Stanley Kaufman, who discussed the new role of the FCC with regard to CATV. Conveying a positive attitude throughout his speech, Kaufman told operators that the staff's CATV efforts "will to the best of our ability to prompt, and they will be fair."

More than 100 association members attended the convention, which offered an agenda packed with informative speakers. Washington attorneys Tom Shack, Lew Cohen and Jack Cole spoke of industry legal and regulatory matters, while Lyle O. Keyes of TeleMation discussed local origination. In addition, Pennsylvania operators Frank Dobias and John B. Roskowski offered the pros and cons of their respective ventures into program origination.

PCATA members elected James R. Palmer, State College, as president; Joseph Gans, Hazelton, as vice president; George Gardner, Carlisle, secretary; and Arthur Regan, Sayre, treasurer. Immediate past-president is Frank Nowaczek of Glenside. New board members elected include Walter Kinash, Paul Flickinger, Miss Yolanda Barco and James Durham.



Clarifying point in Stan Kaufman's presentation at the Pennsylvania Community Antenna Television Association meeting were (left to right): Joe Gans, Yolanda Barco, Kaufman, James R. Palmer and Frank Nowaczek.

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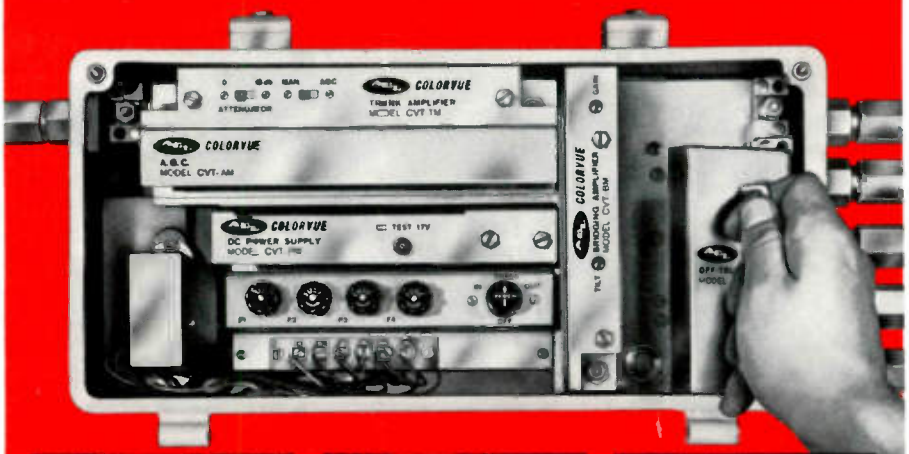

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Beisswenger Views Year Ahead

Jerrold Corp. President and Chief Executive Officer Robert H. Beisswenger, in a statement released exclusively to Cable Television Review, *outlined the problems and challenges of the cable television industry. Beisswenger summarized his predictions for the forthcoming year as follows:*

"Despite new legislation and governing actions which have attempted to put a lid on the progress of CATV, the strong public needs for better television reception and wider programming choice have proven, in balance, to be forces which have guaranteed a continued growth to the industry. It is no longer a question of whether CATV will spread throughout the nation. It is now simply a question of how quickly the benefits of CATV—the communications industry's new 'unlimited-channel pipeline to the home'—will come to be fully realized."

"1. *Modernization of existing CATV systems should accelerate,* generating increased demand for CATV hardware and system construction. Many systems which now provide up to five channels are considering expansion to twelve channels.

"2. *More leading American companies will diversify into operation of CATV systems.* We have already seen scores of major broadcasters, publishers and manufacturers enter our industry after careful analysis of the consumer benefits and the business potential of CATV.

"3. *The great surge of color television sales will continue to generate increasing consumer interest in CATV.* CATV technology and equipment provide color reception far superior to that which is possible with an ordinary rooftop antenna in many areas.

"4. *The pace of new system 'starts' will quicken.* Strong public need for CATV exists in hundreds of communities that are without such service; further the Federal Communications Commission is organizing itself to process applications for new systems more rapidly. In the past year, new system construction has contributed to the doubling of Jerrold's backlog, due to increasing numbers of 'turnkey' CATV construction contracts and orders for CATV hardware.

"5. *During this period of rising prices, monthly charges for CATV service will remain stable.* For more than fifteen years, the monthly charges to the CATV subscriber have remained under $5.00 and we see no indications that there will be an increase.

"6. *The CATV and broadcasting industries will learn better to live together and to derive benefits from each other.* We see signs of a continuing thaw in the diplomatic freeze between the two industries, with an increasing number of broadcasters enthusiastically entering the CATV venture. Significantly, many broadcasters who view CATV as an opportunity rather than a problem will find new means for fulfilling their public service functions via the cable. With CATV, not merely one channel is available for broadcasts to the community, but rather many additional channels.

"7. *Speculation about direct satellite-to-home broadcasting systems will continue.* But these systems will not pose any threat to CATV in the foreseeable future. There are complex technical problems which must be solved before the first satellite is placed in use; however, these technical problems will be overshadowed by the political problems concerning control and distribution of available frequency spectrum.

"It is no longer a question of whether CATV will spread throughout the nation," he added. "It is now simply a question of how quickly the benefits of CATV—the communications industry's new 'unlimited-channel pipeline to the home'—will come to be fully realized."

System Asks For Relief

A Warrensburg, Missouri cable system whose case has been pending before the FCC since August has asked the Commission to grant immediate temporary relief pending "ultimate disposition." The cable firm told the Commission that in the spring of this year it was granted a non-exclusive franchise to build a CATV system in Warrensburg, Mo. Subsequently, the cable firm told the FCC, United Transmission also was granted a nonexclusive franchise there. Warrensburg Cable noted that, "thereafter, United Telephone filed a tariff with the Commission covering a proposed 'leaseback' arrangement whereby virtually all equipment necessary for the operation of a CATV system would be built by United Telephone and leased to interested parties." Then, said Warrensburg Cable, "United Telephone and its CATV subsidiary entered into an agreement for the use of United Telephone's facilities. At the same time, United Telephone refused to lease pole space to Warrensburg Cable, or to deal with Warrensburg Cable" in any way other than specified by the tariff.

Warrensburg Cable said that since August it has been involved in formal and informal complaints at the Commission over the telco actions, but that the case has yet to be decided. "It should be emphasized that there is no dispute between the parties as to the facts insofar as they relate to Warrensburg Cable's formal complaint," the independent cable operator, said, pointing out that the squabble is over United Telephone's legal obligations. In asking for the immediate temporary relief, Warrensburg Cable said it has learned that "United Telephone has instituted service over its new system of lines," and is ready to serve about 100 customers. "Every day which passes more severely and irreparably injures complainant," Warrensburg Cable said, "and each expansion of service by United Telephone further erodes the Commission's ability to consider Warrensburg Cable's complaint with the complete flexibility required for a meaningful public interest determination."

Kaiser Acquires Cox Interest in CATV Firm

Kaiser Aerospace & Electronics Corp. has announced the acquisition of 100% ownership in Kaiser-Cox Corp. through purchase of Cox Broadcasting Corp.'s one-half interest in the jointly-owned company. Clay P. Bedford, president of Kaiser Aerospace, made the announcement.

Kaiser-Cox Corp. was formed in October, 1965, to manufacture and sell CATV equipment, and was owned 50% by Cox and 50% by Kaiser. Kaiser Aerospace & Electronics Corp. is a wholly-owned subsidiary of Kaiser Industries.

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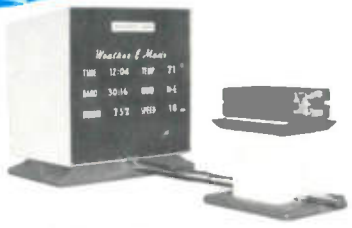

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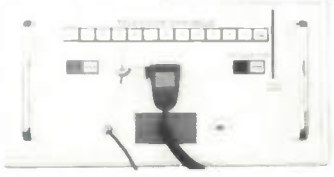

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MODEL 202-X AUTO VIDEO LOSS DETECTOR
If loss of video or sound occurs, the crystal-controlled solid state Model 202 automatically switches the Model 600 Emerg-Alert from a standby condition to display a message and provide music (if available). Upon corrective action, the Loss Detector and Emerg-Alert automatically switch back to standby. Switching time is adjustable. The Model 202 also provides contact closures for triggering an alarm system, and can be obtained as a tunable unit for channels 2-13 (Model 202-T). **Model 202-X $520 Model 202-T $575**

MODEL 300-X VIDEO DEMODULATOR
This is the first CATV crystal-controlled solid state demodulator to provide both picture *and* a waveform display for monitoring quality of picture, sync level, composite signal, color burst identification, and sound for any channel. This inexpensive instrument also provides test points for video and waveform signal analysis, and is equipped with a front panel video output voltmeter. Can be obtained as a tunable unit, channels 2-13 (Model 300-T).
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Industry Reacts To Westinghouse Proposal

Pro and con interests are gathering forces in response to Westinghouse Broadcasting Co.'s request for consolidation of CATV applications from a single community. The procedural change as requested by Westinghouse calls for the adoption of a thirty-day cut-off for CATV applications in a given top 100 market, as well as the consolidation of all applications into one proceeding thus eliminating duplication of effort.

Protesting soundly, the CATV interests told the Commission that the Westinghouse plan would virtually freeze CATV growth inthe top 100 markets. The statements—similar in context and submitted by the same lawyers—were filed by Cox Cablevision Corp. The Jerrold Corp., New Channels Corp. and Cosmos Cablevision Corp.

Jerrold's statement opined that "the Group W. proposal is primarily an obvious attempt to delay and frustrate CATV system operators," while Cox's petition stated that "to require individuals to make substantial decisions involving financial, engineering, civic and programming arrangements within a thirty-day restricted time period invites slipshod planning to the eventual detriment of the public."

But broadcasting interests, too, voiced opinions: Kansas State Network, Inc. and Taft Broadcasting Co. both filed petitions in favor of the proposal. Kansas State noted that, while "individually, CATV's are often relatively small and . . . have relatively slight impact on local broadcasting," their "total impact" can be harmful. The filing added that the procedure should apply to all CATV applications, not just those in the top 100 markets.

Westinghouse defended its proposal by arguing that the consolidation of cases is common practice in other Commission hearings, and in such consolidated hearings the Commission "has never had any particular difficulty in considering the individual merits of the various proposals consolidated in the hearing and there is no reason to think that it will have any greater difficulty here." While conceding that the cut-off proposal of 30 days might pose some problems for the CATV applicants, Westinghouse said the proposal "nevertheless represents a reasonable and necessary compromise of the interests of CATV entrepreneurs in pursuing their proposals and the interests of this agency in disposing of its business with dispatch and efficiency."

300 Attend California Meet

The California Community Television Association fall convention at Palm Springs' El Mirador Hotel boasted a registered attendance of over 300. Thirty-five manufacturers exhibited at the 4-day meet, which resulted in one of the largest and most successful conventions ever staged by a state association.

Featured speakers included representatives of major manufacturers, key association members and NCTA directors. Dr. Lawrence T. Frymire, Educational Television Coordinator for the State of California, spoke on the importance of cooperative discussions between CATV-ETV people. Panel discussions were held on public service program origination, the money market and CATV-telco relations. James DeChaine, administrative assistant to the city manager of Newport Beach, California, addressed the operators on the city's position toward the CATV franchise application; A. C. R. Stone spoke on broadcaster-CATV relations. The operators also heard reports on local and national industry developments.

Ameco Announces Marketing Plans

Ameco's vice president-marketing, R. Duane Hall, has announced details of a marketing approach with which the firm "plans to capture a significant share of the vast 1967 CATV business." Predicting an upswing in overall CATV activity, Hall described a streamlined and realigned Ameco marketing department featuring consolidation of contract and product sales under a national sales manager, and aggressive pursuit in specific major markets internationally. Hall named Charles M. Rice as national sales manager, effective Jan. 9.

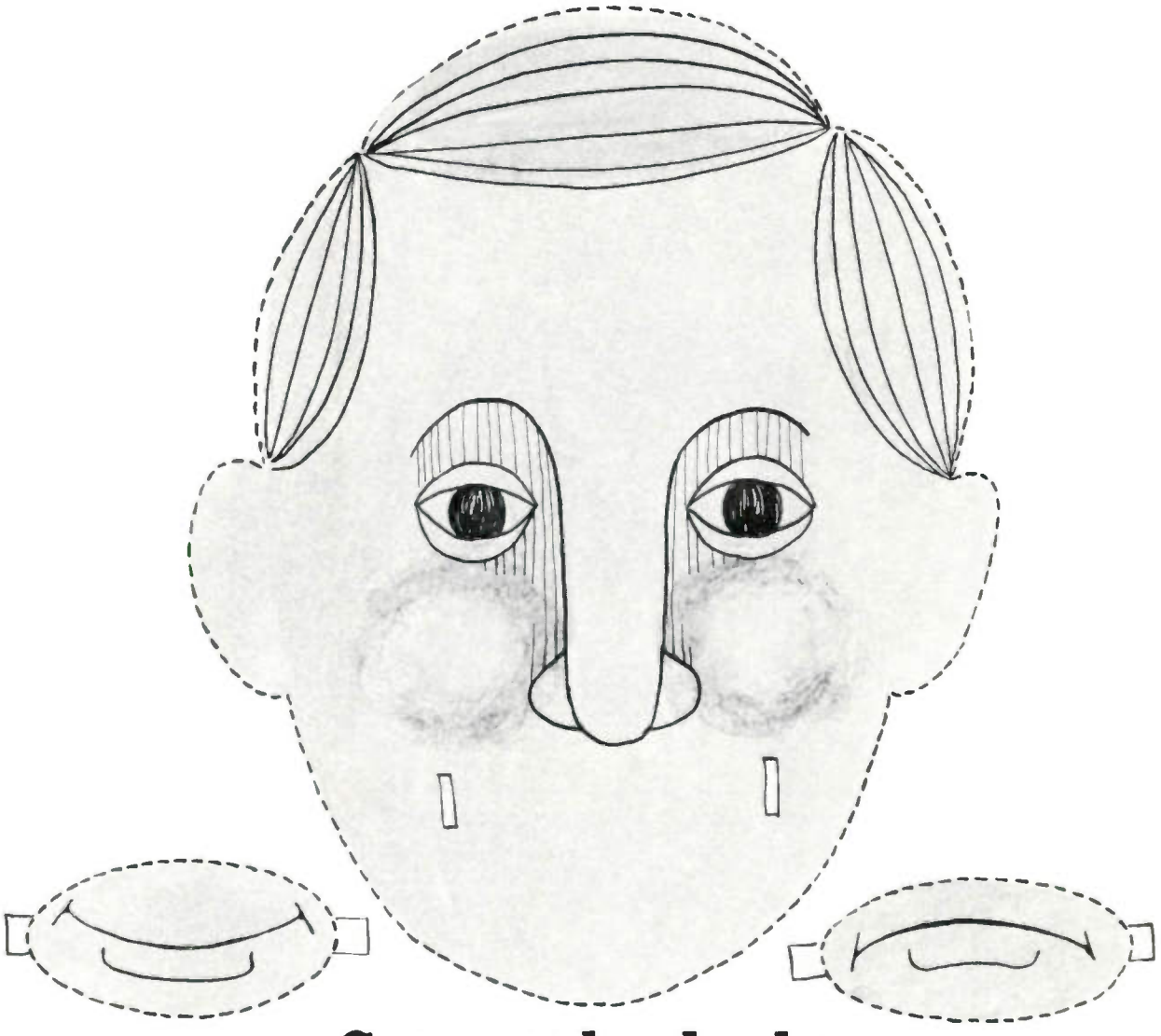
Hall also announced the establishment of a marketing services and administration unit which will provide planning support and market research to all marketing efforts, both here and abroad.

NAB Head Cautions Broadcasters

National Association of Broadcasters President Vincent T. Wasilewski, speaking before the International Radio and Television Society at the Waldorf-Astoria Hotel in New York City, made one of the strongest statements of his term as NAB president. Wasilewski revived some of the disagreements between broadcasters and the CATV industry, stating that "community antenna television, is a bomb many thought had been defused some time ago."

"We may be in danger of losing all we have gained . . ." he said, referring to recent decisions in favor of broadcasters. ". . . in danger of having all of these favorable de-

Can a CATV operator be happy with Plastoid aluminum sheathed cable?



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We know hundreds of CATV operators who are happy with Plastoid aluminum sheathed cable. In fact we know so many that we can give you the name of one near you, someone who has faced geographic or climatic conditions similar to yours, someone who probably started with Plastoid cable and is now extending his system with more of the same.

Plastoid's specs are equal to—or better than any other cables ever made. As cable making pioneers, we helped to establish industry standards. And we continue to set them with our half-inch and .412-inch feeders plus our ¾ths-inch trunks. We build, as we always have, for lower attenuation, longer life. And we run constant tests to see that we meet our own high standards.

The best tests, however, are in the field, in working CATV systems. That's where we've helped to create hundreds of happy success stories. At least one of them is taking place right now near you.

Call us whether you want special technical, pricing or delivery information. Or call us to learn about a CATV operator who is happy with Plastoid cable. The next one could be you.

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FBI Seeks Assistance

In the interest of cooperation with the United States Department of Justice, TV Communications Magazine offers the following information concerning one Lewis Milton Stevens, also known as L. M. Stevens, Lewis Stevens, Milton Stevens, and Steve Stevens, who is being sought by the Federal Bureau of Investigation as a fugitive for the violation of fraud by wire. This fugitive is known to have been employed by various cable firms throughout the United States.

The following is a description of Stevens:

Sex—Male
Race—Caucasian
Claimed Dates and Places of Birth—3/3/23, 4/8/23, 6/3/23, 6/16/23, 6/16/25, Kingsville, Texas; 6/16/22, Brownsville, Texas (none verified)
Height—5'9"—5'10"
Weight—185-195 lbs.
Hair—Black or brown (short and curly)
Eyes—Blue or hazel (wears glasses)
Peculiarities—Dresses in Western style, wearing cowboy boots and hat.

If you have any information concerning this person, please contact your local FBI Office, the telephone number of which can be located on the first page of your telephone directory.

velopments run through our fingers—leaving us empty-handed unless broadcasters, too, are willing to make a stronger effort."

Wasilewski noted that for the past few months there has been a feeling that the CATV war has been won and that the parties "are now sitting at the negotiating table merely ironing out the details of a surrender agreement. That attitude is not surprising." He recited the recent series of setbacks to the CATV industry: The adoption of CATV rules by the FCC, the passage of "a bill which generally supported broadcasters' views on the further proper regulation of CATV" by the House Commerce Committee, the New York court decision that would make all CATV systems liable for copyright payments and the fact that the House Judiciary Committee reported out a copyright bill "which reflected more closely the views of broadcasters than those of the CATV operators."

The NAB head, however, went on to note that in spite of the fact that the FCC has adopted CATV rules, "there is a disposition on the part of the Commission to grant waivers from those rules. Further, FCC staff members talk of granting *mass* waivers from the rules. If that view prevails, it is obvious that the rules—arrived at after long and exhaustive debate and based upon public interest considerations—will be seriously compromised." □

System Sales

Newport Cable TV Co., Inc., operator of systems in Newport, Orleans and holders of franchises in several other nearby locations in Vermont, has been sold to **Newport Cablevision, Inc.** The buying corporation is owned by a group headed by Frank Nowaczek. The transaction was handled by Edwin Tornbert & Co.

Mansfield Telvue and **Multi-Channel Cable TV,** both of Mansfield, Ohio, have merged into a single firm using the Multi-Channel name. 50% of the stock of the merged company is owned by United Transmission, Inc., a subsidiary of United Utilities, of Kansas City. The other 50 per cent is owned by the Mansfield Journal Co. and Ohio Radio, Inc.

Pellin Enterprises acquired majority control of **Communicable, Inc.,** serving Cocoa Beach, Fla., and **Five Beaches Cable TV, Inc.,** serving Canaveral City and environs. Frank E. Pellegrin, president of Pellin, purchased the stock interests formerly held by the Employees Profit-Sharing Trusts of H-R Representatives, Inc. and H-R Television, Inc., as well as all the stock held personally by Frank M. Headley, Dwight S. Reed and Edward P. Shurick.

Boston Capital Corporation, a business investment company, has announced the purchase of 50% of the Spencer-Kennedy Laboratories, Inc. subsidiary, **Consolidated Cable Systems, Inc.,** through the purchase of new stock and notes issued by Consolidated. Malarkey, Taylor and Associates helped arrange the purchase.

United Transmission, Inc. has purchased all of the stock of **Chambersburg (Pa.) Television Antenna Service, Inc.** The company, which has more than 3,000 CATV customers, had been owned by a group of Chambersburg businessmen, with John S. Booth as president of the organization.

Pat Maguire, general manager of **Continental Transmission Corp.,** has announced the purchase of that firm by **Storer Cable TV, Inc.** Transfer of the Company, serving Victorville and Wrightwood, California was effective November 1.

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- Cast aluminum housing guarantees maximum weather and RF seal, reliability and performance.
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- Systems-proven
- Modular in design
- New exclusive circuitry
- Direct feed and directional coupler feed

NOVACOR TRUNKS

- 10 db more output than other CATV amplifiers
- Low noise figure . . . 8 db
- Fully ALC'd
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- Temperature compensated
- Cable powered

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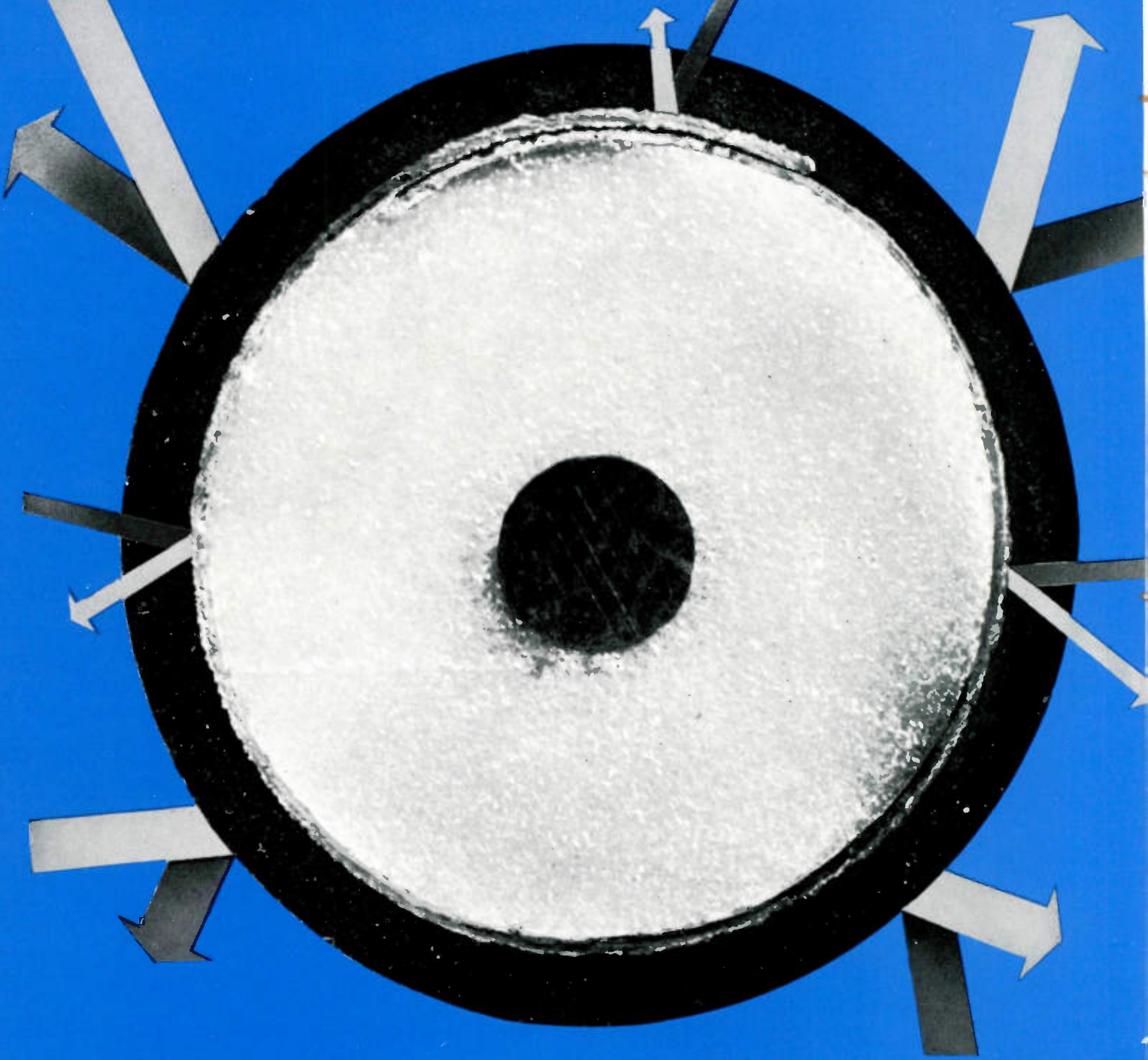

SEALMETIC® CATV COAXIAL CABLE

CATV system operators know the problems and effects of moisture on cable. Performance degradation means costly correction and maintenance, lower profits and subscriber dissatisfaction. ● Sealmetic cable, developed for Anaconda Astrodata from the experience of Anaconda and Dow Chemical Co., positively guarantees protection from moisture. ● Sealmetic cable has a core conductor of annealed copper. Surrounding it there's a thick insulation of cellular polyolefin dielectric. Next, the longitudually-applied outer conductor of impregnable Zetabon*, a plastic-clad aluminum. Finally, the outer jacket of pure polyethylene is completely bonded to the outer conductor. ● Here's how the impervious seal works. The Zetabon laminate — developed by Dow Chemical Company — has a copolymer coating which is chemically active during the extrusion process. When the cable runs through a cold bath, a molecular weld fuses the plastic-clad aluminum to the outer polyethylene jacket. Thus, the dielectric and copper core are hermetically sealed from outside moisture. ● Sealmetic cable means reliable, uniform electrical characteristics — for years. Moreover, it's flexible — installs quickly, easily. It will withstand bending of 2 x O.D. from +50°C to −40°C. And it's available immediately in 412, 500, 625 and 750 sizes, for aerial, duct and burial applications. Write us for the Sealmetic story — and other benefits offered by the total capability company.

*Trademark of The Dow Chemical Company

PERSPECTIVE
in CATV

From the Total Capability Company !

Anaconda Astrodata's total capability brings a broad new perspective to the CATV industry. New in name, unique in approach, Anaconda Astrodata combines a heritage of cable development with wide experience in advanced electronics systems design. Reliability and performance standards far transcending the traditions of CATV equipment are part of this broad new perspective. Consider these factors in **your** CATV system.

Electronic Equipment and Test Instruments
All solid-state reliability, a prime criterion of space age technology means dependable low-maintenance hardware. Anaconda Astrodata's new XDR line features state-of-the art performance.

Coaxial Cable
New Sealmetic coaxial cable offers the first true moisture-proof seal. Flexible, dependable, electrically excellent cable, guaranteed and available immediately.

System Design
Engineering assistance to design your particular CATV system for optimum efficiency. Systems planning forestalls obsolescence, assures income-producing longevity — a service of Anaconda Astrodata's total capability.

Feasibility Studies and Financing
Enlist experience in establishing feasibility and profitability of your potential system. A thorough technical and financial analysis checks the soundness of your investment. Helps finance it, too.

Engineer, Furnish and Install
Choose any aspect, or all. Design, build and put on the air — Anaconda Astrodata's total capability offers you partial or total responsibility.

For more information on how Anaconda Astrodata's broad new perspective can help solve your CATV problems, write or call us.

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FINANCIAL REPORTS

The Jerrold Corp. reported consolidated sales for November in excess of $5 million, the highest level for any month in company history. Previous record sales were reported for the month of October, 1966, which posted sales of $4.6 million. Comparable sales figures for November, 1965, barely exceeded $3 million. The firm also announced the first in what is expected to be a series of stock dividends to be paid twice yearly, in December and June, after consideration by the board of directors. The first dividend was equal to 3% of the common stock held by each shareholder as of December 6, 1966.

H&B American Corp. operations for the first three months ended October 31, 1966, of the current fiscal year resulted in a net profit of $143,279 as against $135,629 for the corresponding period of the preceding fiscal year. Net profit per share for the first three months was 6 cents on 2,581,528 shares outstanding as against 5 cents per share on the same number of shares outstanding at the end of the first three months of the preceding fiscal year. Gross revenues of the firm for the first three months rose to $1,387,470 from $1,238,001 for the corresponding period of the preceding year.

Famous Players Canadian Corp. Ltd. reported a net income of $958,350 for the quarter ending October 1, 1966, compared with $716,133 for the same period a year ago. Earnings per share for the period were 55 cents, compared to 41 cents per share last year.

General Television, Inc., operator of systems in Salisbury, Maryland and Southern Delaware, reported a 24% increase in cash flow for the fiscal year ended June 30, 1966. Frederick J. Warren, president of the firm, reported a cash flow increase from $221,072 during 1964-65 to $278,784 this year. Net revenue for the period totalled $503,086, compared to $422,173 for the corresponding period last year. Net income for the period was $56,121, up $5,600 from last year. Total assets were set at $2,209,449, compared to $1,218,717 at the same time last year.

Storer Broadcasting Co. directors declared a regular quarterly dividend of 25 cents per share on its common stock, payable to stockholders of record November 25, 1966. The board also declared a quarterly dividend of 12½ cents per share on its class "B" common stock, which is not listed.

Collins Radio Co. reported earnings of $2.9 million, or $1.06 per share, on sales of $99.2 million for the three months ended October 28, 1966. Last year's first quarter earnings were $1,438,000 or $.64 per share, on sales of $81 million. The number of shares on which the per share earnings are based increased from 2,257,300 for the first quarter of fiscal 1965 to 2,724,000 in the most recent quarter.

International Telephone and Telegraph Corp. directors increased the quarterly dividend on the common stock to 37½ cents per share, equivalent to an annual rate of $1.50. The quarterly dividend since January 15, 1966, had been 33¾ cents per share, equivalent to an annual rate of $1.35. The dividend is payable January 15, 1967 to shareholders of record at the close of business on December 22, 1966.

Get both in one package and make your investment go farther.

Design and construction of a CATV system involves hundreds of interrelated details. Total coordination is essential. That's why Communication Systems Corporation provides professional system design engineering for every turnkey project.

Professional CSC engineers are backed by extensive design experience in every detail. This experience includes design of both CATV and telephone outside plant, both aerial and underground. CSC construction crews are full time, permanent personnel. Surveyors . . . linemen . . . technicians . . . all are CATV specialists with nation-wide system construction experience.

The direct benefits of combining engineering and construction functions? More efficient handling of the smallest details . . . shorter construction time . . . cost savings from smoother coordination. And . . . completely objective equipment selection by an experienced, independent contractor. In total, a CATV system that's built better to last longer.

Learn more about the advantages of CSC's combined engineering/construction service. Write or call us for full information.

Let CSC handle your turnkey project . . .
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...On Progress

Systems

Samuel Schulman has been promoted to senior vice president of National General Corp. Schulman is in charge of the firm's CATV division. Dan A. Polier and **William H. Thedford** have been appointed vice presidents of the firm.

William M. Collins has been elected president of Penn-Mar CATV, Inc. **Leland B. Hallet** has been named vice president, and **Richard J. Guerin** has been elected secretary-treasurer.

Leo A. Calistri has been named manager of the Corning Community Television Division of NewChannels Corp. Prior to joining NewChannels, Calistri was assistant to the president of Williamsport (Pennsylvania) TV Cable Corp.

George B. Storer, Jr. has resigned as vice-chairman of the board of Storer Broadcasting Co. He plans to establish his own firm in the near future.

Wayne A. Aylward has been appointed northwest regional manager for H&B Communications Corp. Aylward will remain as manager of the Walla Walla, Washington, system, and has appointed **Jack Schick** as manager of the Richland, Washington system.

Fred W. Dowdy has been appointed manager of Jerrold Electronics Corp.'s new Alice (Texas) Cable TV Co.

Joe Nevenson has been appointed manager of Suburban Cable TV's recently-completed system in Downingtown borough, Pa. Nevenson will also be regional manager of the firm.

Carroll Thompson has been named manager of the Jefferson-Carolina Corp. systems in Charlottesville and Waynesboro, Virginia.

Anthony R. Canniff has been appointed executive vice president and general manager of General CATV, Inc., Salisbury, Maryland.

Jack W. Schick has been promoted from technician to general manager of Richland (Wisconsin) TV Cable Co. Schick replaces **Wayne Alward**, who has been appointed northwest region manager for H&B Communications.

Jerry S. Mitchel has been appointed manager of Manistee (Michigan) Television System.

Arthur O. Barnes has been appointed local manager of Harbor Television Corp., a division of Cox Cablevision.

Bernard M. Holladay has been appointed resident manager of Community Television, Inc., of Riverton, Wyoming.

Robert Stevens has joined the staff of Televue of Fort Stockton (Texas) as technician. He succeeds **Dave Gaunder**, who has been promoted to chief engineer of both the Pecos and Fort Stockton systems. **David Fricks** has been appointed technician for the Pecos system.

Howard L. Schooley has been named engineer for the Midwest Cablevision Inc. system under construction in Joplin, Missouri.

Wayne O'Dell has been appointed manager of Uniloy Community Antenna, Inc.'s Bogalusa, Louisiana system. O'Dell was formerly manager of National Trans Video's Jacksonville, Illinois system.

Jack Weber, former manager of the Robinson, Illinois radio station, has joined the staff of Robinson TV Cable Co. Weber will supervise local programming for the system.

O. E. Brillante, manager of Florida TV Cable, Melbourne, Fla., has been awarded the "President's Award" by Jerrold as the most outstanding individual in the Jerrold organization. Florida TV Cable has also won the semiannual sales-management award for the second time in succession.

Richard H. Hammersley, 42, manager of the Peru, Illinois Television Cable Co., died unexpectedly of a heart attack in his home December 1.

Earle S. Nelson, 71, president of Television Transmission Co. and Midwest Microwave Co., of Peru, Illinois, died November 4. In 1926, Nelson founded W9XAO, the world's first commercial television station, which operated in Chicago on an experimental basis.

Max Miller, a partner in the Oswego (New York) TV Cable Co., died October 17 while on a business trip to Lykens, Pennsylvania.

Joseph Albert Faust, 56, general manager of City Cablevision Co., Fredericton, Ontario, Canada, died October 4.

Suppliers

Paul A. Garrison has been appointed vice president-operations of The Jerrold Corp. Garrison previously served as president of the Technical Appliance Corp. (Taco) subisidiary of the firm.

John G. Russell has been appointed vice president and general sales manager of Entron, Inc. Prior to joining Entron, Russell was national sales manager of TeleMation, Inc. **Donald L. Wyckoff** has been appointed western regional manager for Kaiser-Cox Corp.

Walter E. Baxter has been promoted to general sales manager for Kaiser-Cox Corp. Baxter joined the firm in May, 1966, from Entron, Inc.

Gary Langseth has joined Anacanda Astrodata Co. as regional manager. In his new position, Langseth will work out of Denver, Colorado. He will also handle special CATV sales assignments on a national basis. Langseth has been active in the industry for over six years; he previously held sales positions for Kaiser-Cox Corp. and Ameco, Inc.


Paul Garrison


John Russell


Gary Langseth


Walter Baxter


Jack Beever


Charles Wigutow

Frederick H. Tribolet has been named antenna sales manager for the government and industrial division of Jerrold Electronics. Tribolet is responsible for sales and product management of the Taco government and industrial antenna line. **John R. O'Neill** will direct the new midwestern sales office of Jerrold Electronics' communications systems division.

Judd C. Nicholas has been named manager of production engineering at Ameco, Inc. **Lester J. Krause** has joined Ameco as cost analyst. **Ted F. Akins** has joined the firm as sales engineer at Dallas, Texas.

Edward A. Jarzebowski has been appointed manager of quality assurance for Viking Industries, Inc. **Joseph F. Monette** has been appointed director of personnel for the firm. **Cliff Beyersdoerfer** has been named Viking field application engineer for the Ohio and Indiana area. **Robert Vandergrift** will cover the West Virginia area, and **Ronald Schultz** will cover the Illinois, Wisconsin and Minnesota areas.

George M. Gamble, Jr. has been appointed manager of advertising and public relations for General Cable Corp. Gamble succeeds **Charles L. Wiley**, who recently retired.

Copperweld Steel Co.'s wire and cable division office has been moved to Suite 736, Wells Fargo Building, San Francisco, California 94104, ph. (415) 433-3587.

Jack Stratton has been named salesman for the state of Georgia for the Lindsay communications sales division of Anaconda Wire and Cable Co. **James Christian Smith, Jr.** has been named salesman in the Birmingham, Alabama area.

Wallace Adler has been named vice president-manufacturing of Preformed Line Products Co. Adler is succeeded as director of the firm's foreign operations by **W. Frederick Corkran.**

Benco Television Corp.'s U. S. factory service department is now operational at 724 Bugbee Street, Jacksonville, Florida 32207.

R. J. Modersohn has been promoted to product sales supervisor of the dielectric materials and systems division of 3M Company. **D. C. Elliott** has been promoted to product sales manager for the division.

Thomas J. Lyons has been appointed north-central district sales manager for Superior Cable Corp. **Maurice F. Strobel** has been named representative for the north-central sales territory. **Ronald N. Kahill** will represent the firm in the Southeastern district.

James R. White has been appointed corporate controller for Preformed Line Products Co.

Grady Duckett Sales Co. has been named sales representative for the Universal Audio division of Studio Electronics Corp. The firm will service the states of Alabama, Georgia, Florida, North and South Carolina, and eastern Tennessee.

Edward Wallerstein has resigned as executive director of The Center for Research in Marketing, Inc., to become president of Communications and Media Research Services, Inc.

Robert G. Owens Inc. has been formed as a wholly owned subsidiary of Cal-Tel Construction Co., Inc. The new firm will construct CATV and telephone systems throughout the U. S. **Gerald F. Haisman** has been appointed general manager and vice president of construction for the firm.

Jack H. Wyatt has been appointed to the midwest sales organization of the Brand-Rex division of American Enka Corp.

Jack Beever, 51, pioneer of the electronics industry, died of a heart attack at his home Friday, November 25, 1966. Well-known for his accomplishments in the fields of CATV, MATV and ETV, Beever had been with Jerrold Electronics since 1951. He was serving as Jerrold technical director at the time of his death.

Professional

Charles Wigutow has announced the opening of his new management-consulting offices at 78 Jane Street, New York, New York 10014; Ph. CH 3-0142.

Travis E. Garrett of Garrett Electronics has announced the opening of offices at 519 Broadway, Cape Girardeau, Missouri 63701, Ph. (314) ED 4-2612. The firm offers CATV field engineering and associated services.

Robert E. Bricker, has been elected to the board of directors of Henkels & McCoy, Inc. **Edward J. Tierney** has been elected treasurer; **Robert Farmer** has been named manager of the E. H. Staples Construction Co., and **Stanley A. Woodman** has been promoted to pacific coast vice president. **Kinnan Engineering Co.**, Camas Valley, Oregon, has recently been acquired as a subsidiary of the firm.

Fred Korth, former Secretary of the Navy, has been elected to the board of directors of Fischbach and Moore, Inc., a communications contracting firm.

Compton Jones, Bethesda Maryland, has been appointed advertising and public relations counsel for Entron, Inc., Silver Springs, Maryland.

CALENDAR

JANUARY 11-12. The NCTA Executive Committee will meet at the Madison Hotel in Washington, D.C.

JANUARY 13-14. The Florida CATV Association will hold its annual meeting at the Hawaiian Inn, 2301 South Atlantic Ave., Daytona Beach, Florida. Contact William F. Hemminger, Box 6008, Sarasota, Florida, for more information.

JANUARY 23. The Illinois-Indiana Cable TV Association will hold a business meeting at the Ramada Inn, 41st and Walnut Sts., Terre Haute, Indiana.

JANUARY 27-28. The Society of Motion Picture and Television Engineers and the University of Michigan will sponsor a technical conference on color TV broadcasting at the Rackham Memorial Building, Detroit, Michigan. Contact Howard W. Town, NET, Inc., 2715 Packard Road, Ann Arbor, Michigan.

FEBRUARY 1. The Alabama CATV Association will meet at the Guest House, Birmingham, Alabama, unless members are otherwise notified. Contact Milton Underwood, Muscle Shoals TV Cable Co., 121 S. Court Street, Florence, Alabama.

FEBRUARY 2. The New York State Community Television Association will meet at the Country House, Syracuse, New York. Key speaker will be Stan Kaufman, Deputy Chief of the FCC Task Force.

APRIL 16-18. The Southern CATV Association will hold its annual meeting at the Grove Park Inn, Asheville, North Carolina. For further details, contact Fred J. Stevenson, Rogers TV Cable, Inc., Box 190, Rogers, Arkansas 72756.

MAY 8-9. The NCTA Executive Committee will meet at the Madison Hotel in Washington, D.C.

MAY 15-19. The National Community Antenna Television Association of Canada will hold its 1967 Convention at the Chantecler Hotel, Ste. Adele, Quebec. For more information, contact Convention Chairman Jean Beauchemin.

JUNE 25-29. The National Community Television Association will hold its 16th Annual Convention at the Palmer House in Chicago, Illinois

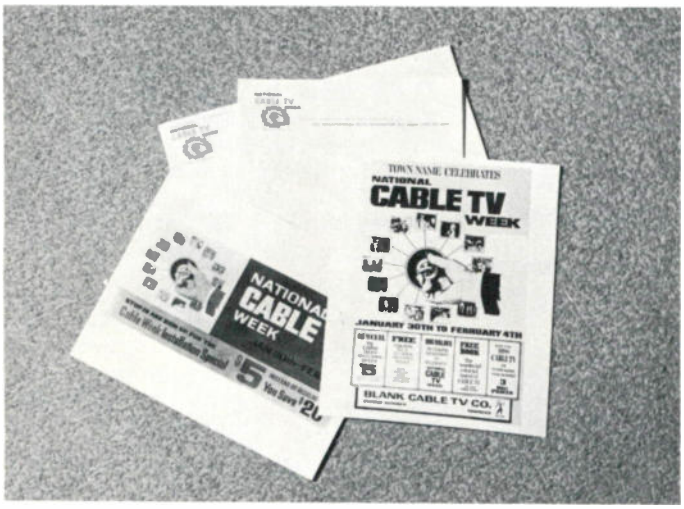
National Cable TV Week

By Barry Crickmer
Director of Information, NCTA

At the end of this month, cable TV operators will undergo a new experience: joining together for a week of coordinated industry promotion on a scale never before attempted. Cable TV Week will also mark a new experience for many Americans, who will hear of the industry for the first time.

Through newspaper supplements, stories, ads, proclamations, speeches, slides and awards the word will go out from operators, manufacturers, and the NCTA itself—assuming that everyone cooperates.

Pulling together for a common goal is nothing new to the members of this industry—it's been the rule from the start. We have the ambition of an Alexander the Great, though unfortunately not the wealth of a Croesus (public utility commission opinion notwithstanding). And that means we have to make up in individual effort and initiative for the funds we lack to buy the attention of the consumer.



The "road to Cable TV Week" is paved with mats, flyers, supplements, releases, ads, buttons, stickers, keychains, Bulletins, brochures and cooperative effort.

The NCTA can show the way and provide the raw material, but that material will have the desired effect only if it is used to maximum advantage in every town, village and hamlet where cable TV is now, or is in prospect.

That philosophy of cooperative effort has guided the fledging PR program from its birth at the June, 1966, Chicago board meeting. A young Association struggling under the weight of several critical court tests while fighting for the life of the industry in Congress could not simply reach into the till and come up with a saturation advertising program in major national media. Yet, the very nature of those conflicts made it imperative that the CATV story be told. The solution was to involve the CATV operator in such a way that he could expect a direct, subscriber-building return for his support of the program.

On August 2, 1966, the foundation was laid. Richards Associates of Washington officially joined the team as PR counsel, and Irving Gould Advertising of Philadelphia as advertising agency. On August 10, representatives of the NCTA staff and PR committee met with these two firms for the first time as a working group.

Six months later, the Association and its members are looking forward to National Cable TV Week, and back on: a New Year's and holiday mat promotion kit; a Christmas promotion of two premiums, two mat kits, banners and direct mail pieces; a fall-winter mat selection kit for new-show promotion; a national institutional ad in *Time* magazine, the *New York Times* magazine, and seven major metropolitan newspapers (with reprints and mats available to members); a comprehensive brochure on cable television; a better-looking, more concise NCTA Bulletin; a series of editorials on the industry; a ghost-written weekly TV column for local use; the monthly planner-calendar; and increased attention by the consumer press.

Future

Two more major local promotional packages are scheduled in the current series—one on direct mail advertising and the other on door-to-door sales to further replenish stocks of seasonal and special-purpose promotional materials.

ABOUT THE AUTHOR

Barry Thomas Crickmer has served as director of information for the National Community Television Association since June, 1966. Barry came to NCTA from the position of publicity and promotion editor for the American Research Bureau; prior to that, he served as congressional correspondent and stoff writer for Broodcasting Magazine.

A new NCTA feature publication will make its debut in January and continue at regular intervals. In a single-fold "newsletter" format, it will be oriented primarily to the general public, with a view toward interesting congressmen, councilmen, investors, businessmen and other "influentials," and then keeping them informed of our problems and progress.

That same publication will form a continuing link with the communications departments of our major universities—a framework around which to build a "University Program" ultimately designed to encourage the choice of CATV as a career. The NCTA is now informally providing materials and guidance to about 25 graduate students each academic year.

Many operators are doing their own promotions with a degree of ingenuity and expertise that deserves recognition (and, it never hurts to spread a good idea around!). As a service to them and to their agencies, the NCTA membership Bulletin will feature a "Promotion of the Month" chosen from submissions from the field. Eventually, the twelve monthly winners will become the finalists for Halo Awards at the annual convention.

But beyond that, the NCTA has been looking for ways to notify members of the many excellent private promotional services available. As a result of that search, a new program is being designed which should prove to be of great benefit to both the member-operators and the advertising and PR firms operating in the cable TV field.

First, new promotional services will be reported to operators as they are announced, on a first-come, first-served basis. Then, all promotional service firms meeting NCTA standards of quality will be included in a special catalogue, which will list products categorically and by firm. This catalogue will be distributed to NCTA members every six months.

Finally, the NCTA maintains a large stock of useful publications covering virtually every aspect of the cable industry. Most of them are available to members and the general public. For example: the pamplet "So You Want To Be A CATV Operator," a guide to the problems and pitfalls to be avoided on entering the business; the transcripts of the New York Financial Seminar and the Dallas Accounting Conference, which contain what is probably the most comprehensive treatment of these two subjects available to the CATV industry, and the "Million Dollar Idea Treasury," a complete handbook on public relations, from launching an advertising program to dealing with the city council. In addition to these, there are many special-purpose memos dealing with such critical subjects as franchise terms and telephone company relations. And, of course, the entire NCTA staff is always available to members for advice and consultation.

Problems

There is a type of motorcycle designed for drag racing that is so specialized it has no clutch. Its engine is started with the rear wheel off the ground on a stand. When the wheel is turning at full speed, the stand is removed and the cycle goes from a dead stop to full steam ahead in a remarkably short space. *If* the rider holds on tight, he goes along with it.

Like that motorcycle, the NCTA public relations program accelerated from a standing start to full speed in a very short space of time, and like the motorcycle riders, there have been moments when those of us involved with it wondered if it were going to get out from under us.

The first three promotional campaigns (Fall-Winter, Christmas, New Year's) were issued to members about a month before their contemplated use. That, we all realized, was slicing it pretty thin for the advance planning that must go into utilization of ad-

Popular "hand" theme from the cover of "Tune In On The Wonderful, Colorful World of Cable TV" became the hallmark of Cable TV Week promotional materials.

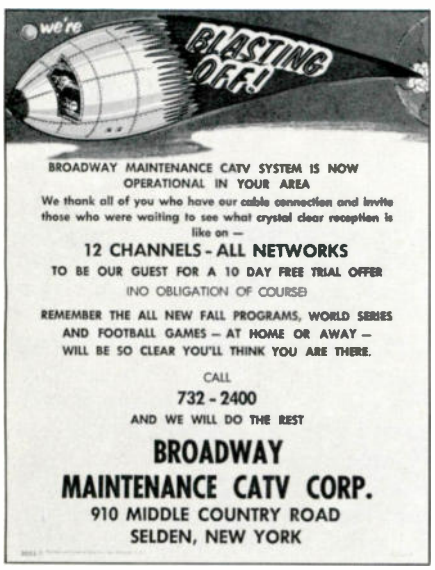
vertising materials. But we faced a rough choice: In order to get the Christmas materials out two months in advance, we would have had to ignore the new fall programs—traditionally one of the best selling seasons in the industry.

So, the decision was made to take a calculated risk and run a little late with the first three promotions in hopes they would: 1. Still be immediately useful to some people, and 2. Find a place in system's permanent files of promotional materials.

We have learned and adapted. The machinery is now well broken-in, and functioning fairly smoothly. There is time now for thoughts of the convention and even for planning next fall's campigns, and the exciting feeling that with nine months to prepare, "You ain't seen nothin' yet!" □

CATV In A 6-Channel Market

When Broadway Maintenance CATV Corp. undertook the operation of a system to serve residents of the Selden, New York, area, company officials realized that they were up against some unusual obstacles. The prospective system would be located a scant fifty miles from metropolitan New York City, an area abundant with television stations. Consequently, residents already enjoyed off-the-air reception of six to eight good channels. Another deterring element was the economic status of the area, which is in the lower-income bracket. These factors, coupled with a solid lack of interest from the community itself, prophesied a pretty bleak future for a cable endeavor.



Four-color card at left was mailed to all area residents in Broadway Maintenance Corp.'s promotion. At right is 16-page booklet used to explain CATV in general.

Determined to overcome these unique circumstances, system personnel managed to come up with some profitable solutions. "It didn't take much to figure out that the key was good promotion," said Arthur Gusow, director of marketing for the firm. "The question was, how to promote a system with so many strikes against it?"

Broadway found the answer. "We decided that our promotions had to be directed to the major objections of the community," Gusow continued. "So we hit the most obvious objection first. Since the number of channels already on the air wasn't likely to become any less, we supplemented them by adding our own offerings." Utilizing a closed circuit channel for program origination, Broadway Maintenance launched a series of local-interest features that would be available only to cable subscribers. "We inaugurated live and filmed programs," said Gusow. "The local high school cooperated by allowing us to film football games and other school functions. We also filmed semi-professional hockey games."

With the appeal of local sports pretty well covered, the firm turned to education. "We installed a direct line to our studio," continued Gusow, "so that students could call in each evening between 7 and 9 p.m. to talk with an educational major from the local college. When a student asked for help with a particular problem, it was explained to him on a blackboard while he watched on the cable channel." During weekday mornings the system offered subscribers the advice of experts in various fields, such as employment, psychology, travel, do-it-yourself projects and home economy. The direct line was made available, so that subscribers could call in and speak to the guests while watching them on the closed-circuit channel.

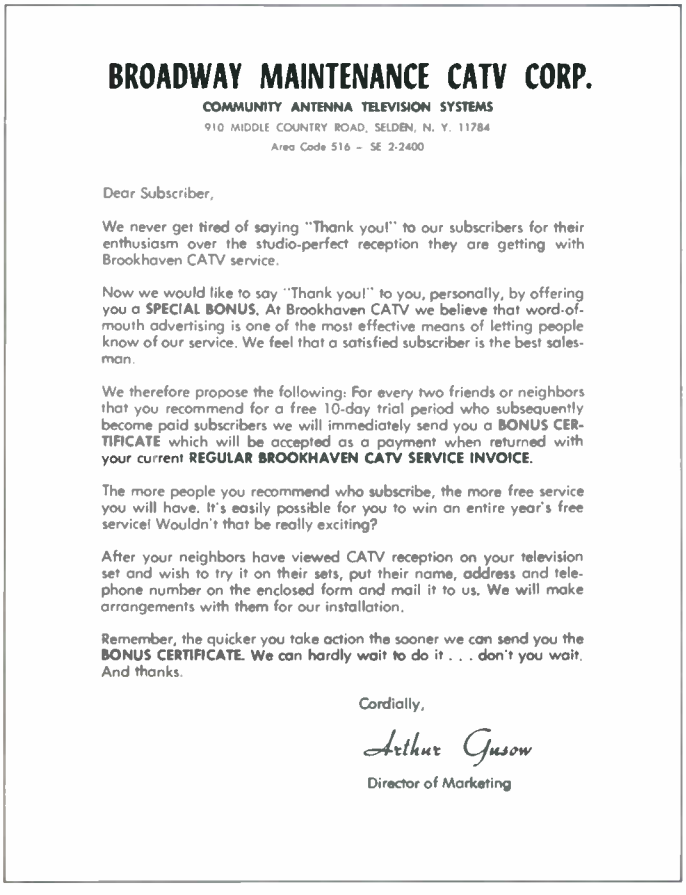
The second step, overcoming the "too much money" objection, entailed a bit of ingenuity, which eventually evolved into a two-part plan. Enlisting the cooperation of approximately sixty local businesses, the cable firm inaugurated "the 5% Plan," an idea which, according to Gusow, "helped tremendously to promote people who otherwise could not afford CATV. The stores—we call them 'participating stores' —range from drugs to dry cleaners, gas stations to gift shops, meat markets to floor waxing services, restaurants to bicycle shops and lawn mower to hobby shops. Each cable subscriber is issued an identification card and a directory listing the 'participating stores.' When they make a purchase in any of these stores and produce their identification card, they receive a whopping 5% discount. When this plan was introduced, residents could not afford *not* to subscribe to the cable!"

The second plan involved sending a letter to each subscriber, after connection, advising him to send in the names of friends and neighbors who might like to try CATV. When those recommended were connected, the initial subscribers received one month's free service for each two names received. Self-addressed, printed and stamped postal cards were issued for the recommendations.

In order to economize on advertising—and yet use it more frequently and effectively—the firm now publishes its own newspaper, 'The Direct Line.' Circulation of the paper is not limited to subscribers, and the mailing list is derived from a cross-index telephone book. Features include local origination programming schedules, fund drives, community announcements and special promotions, such as free turkeys at Christ-

mas with every connection during the month of December. Promotional drives continue throughout the year. A local bank cooperates with the cable firm by displaying a demonstration television set, and a free cable connection is offered with every safe-deposit box subscription and Christmas Club membership.

Energized August 1, 1965, this Broadway Maintenance CATV system today serves residents of Selden, Centereach and Medford, New York. In addition to Gusow, other executives include Norman Lipkins, president, and Al Cummings, project engineer, who is largely responsible for most of the local programming. Under Cummings' direction, the system has expanded



BROADWAY MAINTENANCE CATV CORP.

COMMUNITY ANTENNA TELEVISION SYSTEMS

910 MIDDLE COUNTRY ROAD, SELDEN, N. Y. 11784

Area Code 516 – SE 2-2400

Dear Subscriber,

We never get tired of saying "Thank you!" to our subscribers for their enthusiasm over the studio-perfect reception they are getting with Brookhaven CATV service.

Now we would like to say "Thank you!" to you, personally, by offering you a **SPECIAL BONUS.** At Brookhaven CATV we believe that word-of-mouth advertising is one of the most effective means of letting people know of our service. We feel that a satisfied subscriber is the best salesman.

We therefore propose the following: For every two friends or neighbors that you recommend for a free 10-day trial period who subsequently become paid subscribers we will immediately send you a **BONUS CERTIFICATE** which will be accepted as a payment when returned with your current **REGULAR BROOKHAVEN CATV SERVICE INVOICE.**

The more people you recommend who subscribe, the more free service you will have. It's easily possible for you to win an entire year's free service! Wouldn't that be really exciting?

After your neighbors have viewed CATV reception on your television set and wish to try it on their sets, put their name, address and telephone number on the enclosed form and mail it to us. We will make arrangements with them for our installation.

Remember, the quicker you take action the sooner we can send you the **BONUS CERTIFICATE.** We can hardly wait to do it . . . don't you wait. And thanks.

Cordially,

Arthur Gusow

Director of Marketing

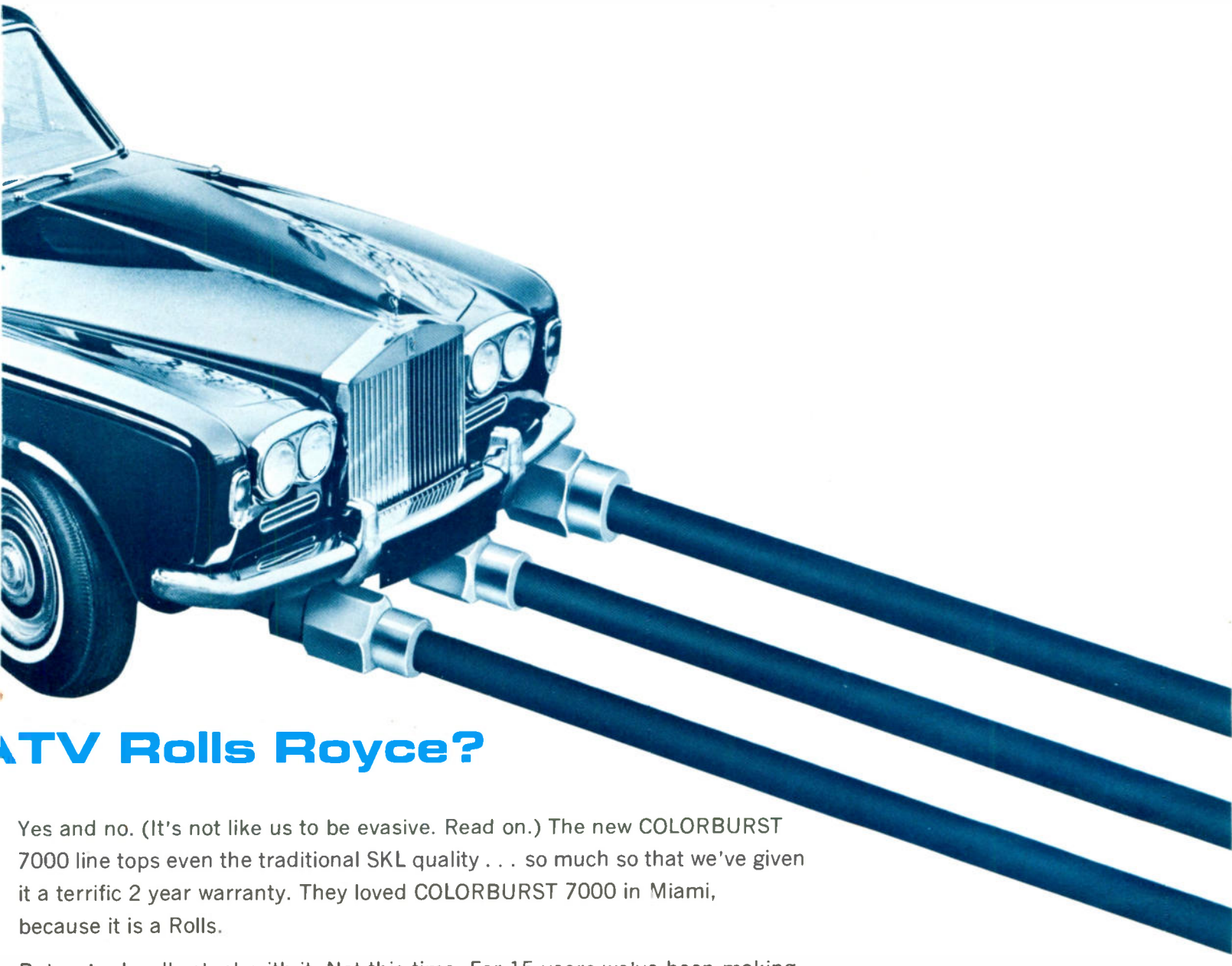
"Bonus Certificate" promotion was kicked off with this letter to system subscribers.

its presentation of local interest features to an even wider variety—ranging from fashion shows to Karate exhibitions. Two weeks prior to Christmas, hidden CATV cameras tape local children's interviews with Santa Claus in a downtown department store for evening playback over the cable channel. Early this year, the firm cooperated with the county welfare and health association in providing informative programs on drug addiction. New features are being added constantly. "The spontaneity of our programming created an interest in community, and a desire to subscribe to CATV," concluded Gusow. "Our subscribers take an active part in the cablevision activities; we encourage suggestions from them."

Selling a system in a multi-station area isn't easy—but it isn't impossible. Ask the men from Broadway Maintenance's Selden system. They've signed up over 2,000 subscribers—and the system has yet to be completely energized! □

Is SKL stuck with another CA

COLORBURST 7000



ATV Rolls Royce?

Yes and no. (It's not like us to be evasive. Read on.) The new COLORBURST 7000 line tops even the traditional SKL quality . . . so much so that we've given it a terrific 2 year warranty. They loved COLORBURST 7000 in Miami, because it is a Rolls.

But we're hardly stuck with it. Not this time. For 15 years we've been making Rolls Royces while CATV operators snapped up the Chevys. We've had enough of that. We figured that almost everybody would buy a Rolls if it were Chevy priced. So that's our plan. Sell Rolls Royces at Chevy prices!

It's working. Since Miami, more systems have gone SKL than ever before. How about you? Call the Telephone Service Bureau in Boston (617/254-5400) or Phoenix (602/264-2775) and the nearby pro from SKL will be by with COLORBURST 7000 and his Chevy dealer's pencil.

SKL

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A Cooke's Recipe For CATV

By S. S. Street
Director of Membership Services
National Community Television Association

Take a handful of well-trained men, put them in two office suites in the Beverly Hilton Hotel in Beverly Hills. Give them 21 CATV systems in the key areas of the United States, and you will end up with one of the most dynamic and efficient companies in CATV.

Two years ago last August, Jack Kent Cooke started to build American Cablevision Company by buying CATV Inc. Since then, Mr. Cooke has been able to gather about him a highly respected staff, and has multiplied the original 14,800 subscribers to over 85,000.

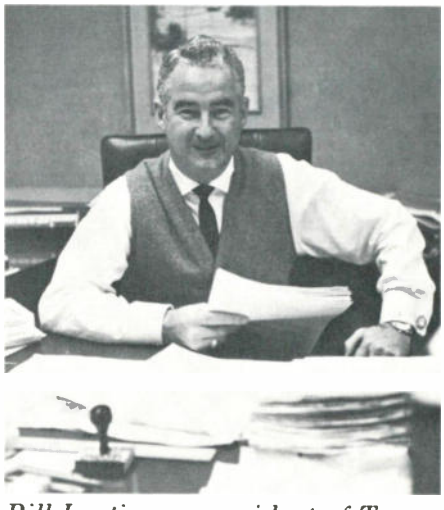
Fast—Very Fast

How does he do it? The answer, of course, is the man himself. He saw the potential of CATV and decided to get into it—fast. He saw the potential of Frank Thompson, mid-west CATV pioneer; of Boots Cousins, the pro from West Virginia; and Jack Bradshaw, an ex-telephone company manager from Aspen, Colorado. He made them regional managers. He saw energy in young Bill Bresnan, and made him Executive Vice President. Fred Weber, another CATV professional came on board to increase subscribers. Cooke's son John came into the CATV business and started from the ground up—climbing telephone poles.

Fred Weber and Bill Bresnan discuss the opening of one of American Cablevision's systems.

Professionalism

The result at the end of two years is a CATV company which has systems from Keene, New Hampshire to Laguna Beach, California. The co-result is a truly professional organization. This is the essential ingredient to Mr. Cooke's recipe—and to his genuis. There is strong local management in each of the 21 systems along with strong regional management in each American Cablevision area. There is also strong central management in Beverly Hills, California. When new stations and extra services are to be added, Mr. Cooke's organization works as a team to get the job done.



Bill Lastinger, president of Trans-American Microwave, Inc. now operating relays between Los Angeles and San Francisco.

Jack Kent Cooke, creative businessman, sportsman, president of Jack Kent Cooke Inc.

Look at highlights of the last four months. September. Fred Weber, the Vice President in charge of Sales, made a trip to all the regional offices of American Cablevision to outline his 1966 Direct Sales Campaign. It had taken months of preparation. In ten days it was in full operation and in eight weeks, American Cablevision added another 3,500 subscribers on its systems. This was teamwork—from Fred Weber to the girl who knocked a door in Palestine, Texas and said, "Good morning, I'm from American Cablevision . . ."

Take October and the start of the Iron Mountain, Michigan conversion to highband. Complete plans of the system were prepared at the beginning of the year. Supplies were ordered, and the project began to take shape under the watchful eye of Bill Bresnan.

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Asks... How do you rate a tower when the stories all sound the same?

There is a one-word answer to that question — PERFORMANCE;

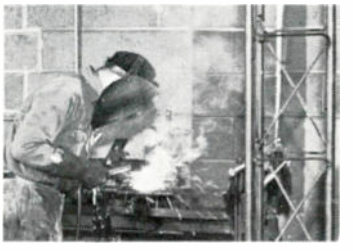
The performance of ROHN TOWERS has built for this pioneer in tower manufacturing the top reputation in the industry. Wherever you go — **worldwide** — you find ROHN TOWERS . . . CATV, microwave, communications, broadcast, home TV and amateur towers . . . with complete accessories, lighting, microwave reflectors and equipment.

In other words, ROHN TOWERS have become an accepted standard, recognized as the tower that provides **all** the wanted characteristics of strength, durability, ruggedness, appearance, design, adaptability and prestige.

ROHN POPULARITY RESTS UPON THESE FACTORS:

ENGINEERING Created for strength, durability, service

FINISHES Hot-dipped galvanizing after fabrication



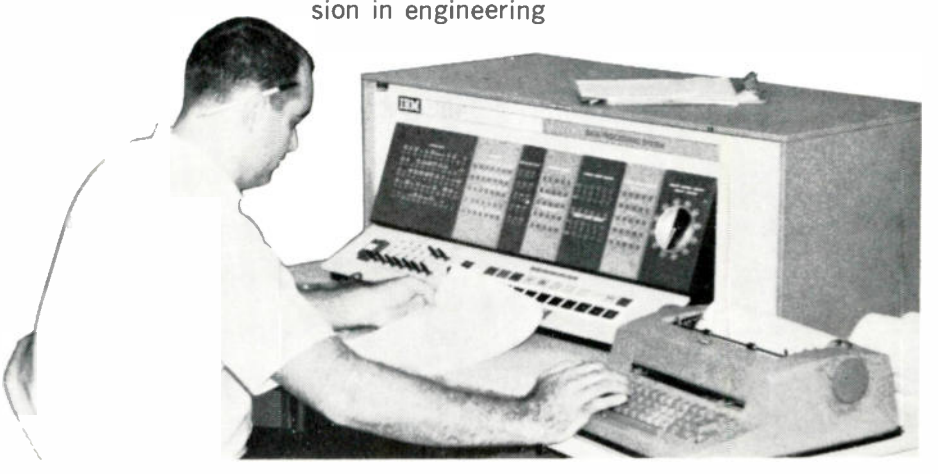
MANUFACTURING Complete, extensive modern facilities

SYSTEMS
Complete turnkey tower installation service

DESIGN Function, attractiveness, utility

WAREHOUSING
Convenient locations to serve you better

COMPUTER ANALYSIS
Maintains absolute precision in engineering



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November. James Lacher, the company's Secretary-Treasurer, must get the 1967 budgets out. What additional stations can be

James Lacher, a CPA and secretary-treasurer of Jack Kent Cooke, Inc., keeps track of company's financial division.

brought to Morgantown, West Virginia? When is the best time to have the open-house in the Lewiston, Idaho system's new building? Can the Barstow, California extension be completed by June?

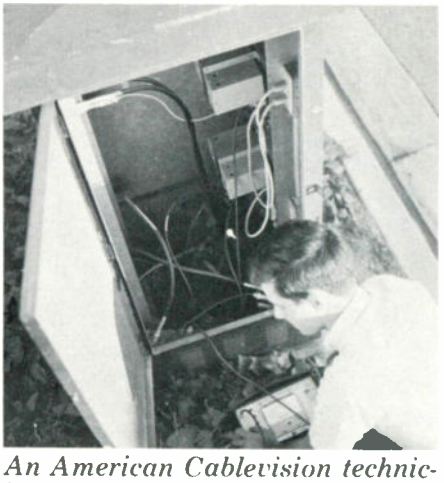
December. Tucson Application. Bill Bresnan meets with the City Council. American Cablevision proposes, with the use of conver-

An American Cablevision salesgirl giving pitch to potential subscriber—note the small bottle of spray perfume used as "thank you" gift.

ters, a 20 television channel, 20 FM station system. When will this decision be made? Probably next Monday. Bill Bresnan will be there.

Two Short Years

Two years of such smooth operation saw 15 of the 21 systems highbanded—a large percentage, by the way, of all systems over 5,000 subscribers. Three more, Rochester, Minnesota, Iron Mountain and Escanaba, Michigan, are presently being done. In these two years, highly rigid technical standards were set for American Cablevision. All the equipment is solid-state, and system layout is ultra conservative. The laboratory in which these standards were set is probably among the most complete of any group CATV owners with equipment valued at about $30,000. These two years were also time enough to establish company



An American Cablevision technician checks the levels on the firm's underground system in Trusdale, California.

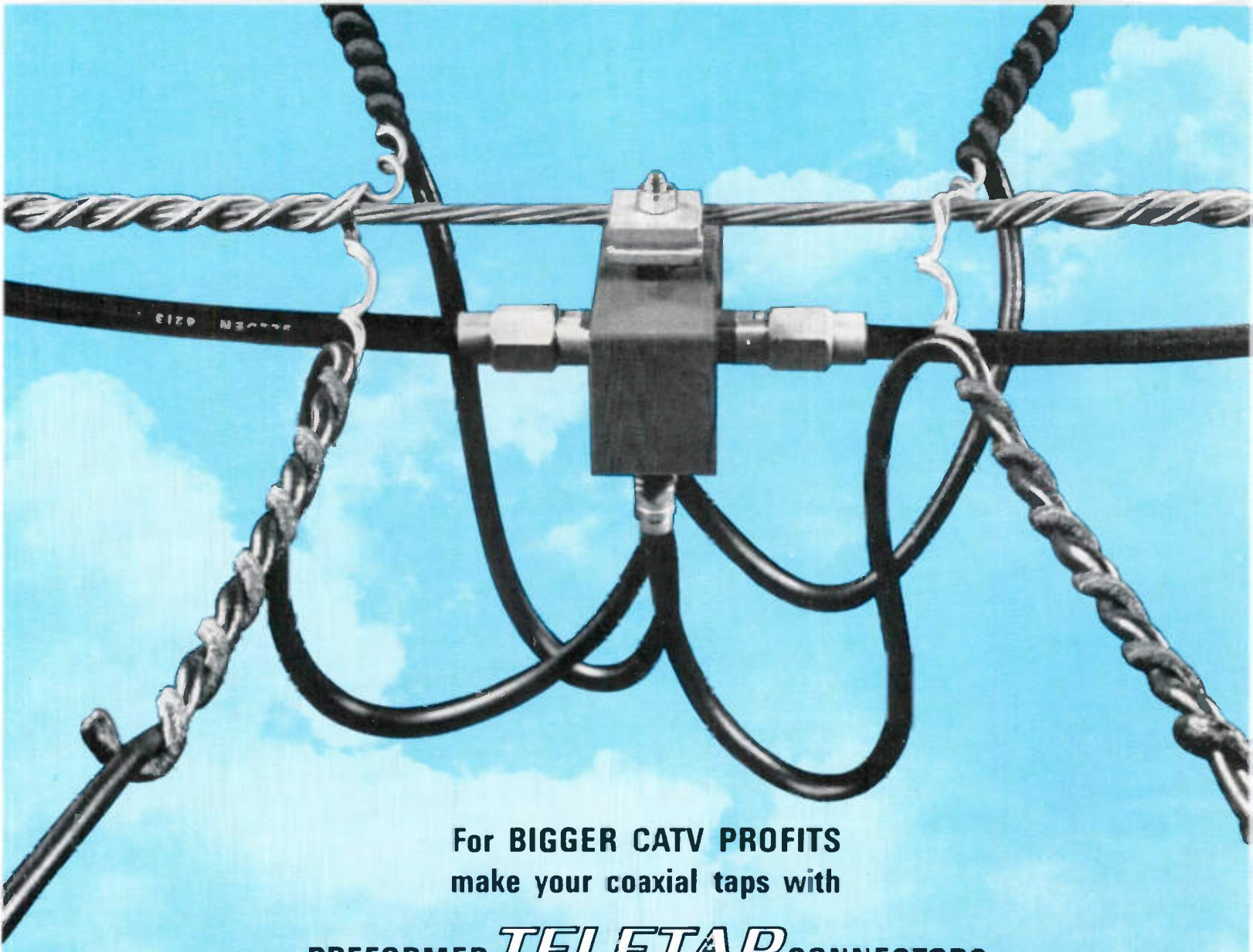
policy into a 150 page manual—it is a difficult feat to make 21 system procedures into one.

Expansion

Two years was also time enough for Mr. Cooke to found Trans-American Microwave, Inc., which is headed by microwave expert Bill Lastinger. This company is in competition with major common carriers between Los Angeles and San Francisco. Mr. Cooke also found time to form American Cable Electronics which has made a digital weather information machine, and the "Emerg-Alert" warning system for the cable television industry. American Sales Promotion Company was also organized. This company sells Fred Weber's Direct Sales Promotion nationally.

Dynamic, efficient, professional. That is American Cablevision Company. Mr. Cooke's CATV recipe is a winner! □

Editor's note: Sam Street, Director of Membership Services, NCTA, is currently traveling the country attending regional association meetings. For the next few months, he will be visiting system owners and bringing the story of these systems to our readers.



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PREFORMED *TELETAP* CONNECTORS

Here's the payoff:

APPROXIMATELY 30% SAVINGS ON MATERIAL COST ALONE. Priced below any other tapping combinations now available.

LOWEST INSTALLED COST. Easily applied by hand in seconds. No tools, no loose parts.

LIGHTEST WEIGHT. One-piece unit, wrap-on helical design.

LEAST MAINTENANCE. No nuts, bolts or other fittings to become loose in service.

COMPLETELY DEPENDABLE PERFORMANCE. Maintains full RBS of RG 59/U coaxial cable, assures safe support with no crushing or kinking.

Send for CATV Data Folio on Teletap, Telegrip, GUY-GRIP® dead-ends, False Dead-Ends, Strand Splices, Plastic Guards and Lashing Rods. PREFORMED LINE PRODUCTS COMPANY, 5349 St. Clair Avenue, Cleveland, Ohio 44103; dial 216-881-4900.

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In the WEST	*In the MIDWEST*	*In the SOUTH*
		
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CATV—A New Research Tool

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

Marketing research, during the past 15 years, has grown into a sophisticated discipline. In fact, there is hardly a national advertiser or major advertising agency in the country today which does not have a marketing research department.

Interestingly enough, although telvision is the most important and most expensive medium, relatively little is known about the way in which television commercials operate in the market place. Prior research has amply demonstrated that simply reaching into the homes of millions of people is often not sufficient to sell a given brand. In fact, a poor television commercial may actually reduce sales.

Unfortunately, even though basic research in understanding television commercial effectiveness is still in its infancy, the marketing researcher is constantly and urgently faced with many important questions which require immediate answers such as:

How effctive will a given television commercial be in creating sales?

How will a new commercial compare with a current commercial, or which one of a group of recently produced commercials will be the most effective?

Which will be more effective for a given brand, a 30 second commercial or a 60 second or longer commercial?

What will the effect be upon a given brand if television advertising expenditure is increased or decreased?

These are some of the typical questions which heretofore have largely been unanswered. Strangely enough, television commercial research represents one of the least sophisticated aspects of marketing research. This is so, because of the unrealistic environment of most testing.

For example, people are often taken from their homes and into a theatre to observe the test commercial, or are interviewed by telephone and know they are being questioned about a television commercial. Furthermore, almost all current testing is based upon the single exposure of a test commercial, whereas in reality a client hopes his commercial will be seen many times.

In order to begin to overcome these problems the Communication And Media Research Services, Inc. developed a testing procedure called Split Cable* (*patent pending) which operates in conjunction with CATV systems.

Two basic modifications are made in the CATV system for use of "Split Cable" techniques.

(A) The main trunk line emanating from the head-end is split in such a fashion that there are two or more cable lines, each of which goes to a different segment of subscribers who, after careful study, have been matched demographically.

(B) Special electronic gear, which we have developed, is installed at the head-end. This gear permits the blocking out of any television commercial on any channel, at any time and simultaneously allows for the substitution of a test commercial. The screen is never permitted to be blank.

Three types of insertions are possible:

(1) The same test commercial can be substituted for the entire community.

(2) One sample group can be exposed to the on-the-air commercial, while the other sample group receives the test commercial, or

(3) The on-the-air commercial can be blocked out for the entire community and two or more test commercials simultaneously substituted, each going to a different group of subscribers.

These cut-ins utilize client time and are made with their permission. The cut-in procedure is done so smoothly that viewers are completely unaware of any alteration of commercial exposure.

The advantages of "Split Cable" lie in two important basic areas:

(a) Test commercials are viewed under absolutely normal conditions, and

(b) Exposure to test commercials is accomplished over time (rather than single exposure) thus making it possible to measure sales effectiveness.

Split Cable* is now completing its third year of operation and hopes to become one of the most important television testing methods yet devised.

However, controlling television input is but one phase of the research. Of equal importance is the measuring of the effect of the change in television exposure. This is accomplished by interviewing techniques, diary panels, couponing, etc.

"Split Cable" cities are usually not publicly identified for two reasons, namely:

Client security—advertisers and their agencies are constantly on the look out for competitive activities. Therefore, clients prefer that their competitors not be made aware of their activities in advance.

Bias—in almost all research activity (psychological, sociological, medical or marketing) the interviewer and interviewee are usually not made privy to the real objectives of the research in order to minimize personal bias.

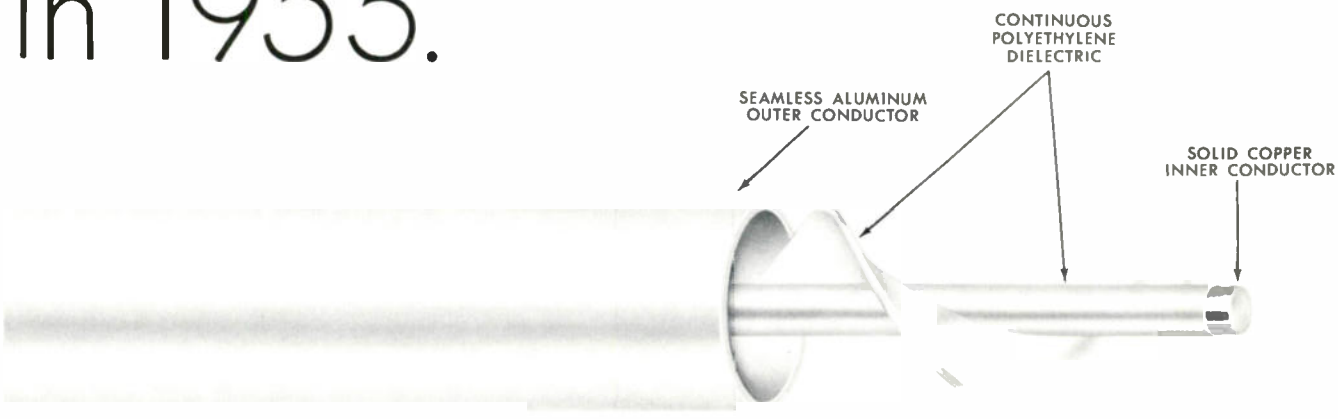
Research in any field is not a toy and success is dependent upon great skill and understanding.

"Split Cable" has opened up a vast new area to CATV not only for commercial research but also in many non-commercial areas such as education, public health and even psychiatric usage.

As additional procedures are developed, we will acquaint the CATV fraternity with them. □

SPIRAFIL® II

The first significant breakthrough in coaxial cable design since we introduced Foamflex in 1955.



Lower Attenuation 32 db Return Loss
Fewer Amplifiers Less Maintenance

■ What makes Spirafil II so radically different is a solid polyethylene helix which completely covers the solid copper center conductor without interruption. Among other things, this means great mechanical stability and an absolutely non-collapsible helix. Add to this the advantage of unusually attractive electrical characteristics (attenuation at Channel 13 .412" 1.27 db/100', .500" 1.02 db/100', .750" 0.75 db/100') and a system cost competitive with conventional foam cable systems.

Spirafil II comes plain or jacketed in .412", ½" and ¾" diameters, 75 ohm impedance, in 1000-foot reels.

For a complete listing of Sales Service Stocking Centers plus up-to-the-minute technical data, write, TWX or telephone: Phelps Dodge Copper Products Corporation, 300 Park Avenue, New York, N. Y. 10022 (212) 751-3200, TWX (212) 865-7455.

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Crisis In Communications

A Plea For Awareness And Response

". . . It may be useful to broaden our concept of 'communications' beyond our conventional thinking about broadcasting . . . Cable television may very well eliminate the scarcity of television broadcast channels . . . Cable television (has) implications for . . . improvement in programming. The FCC spends most of its time as little more than a 'Federal Broadcasting Commission' . . . Our communications challenges surely pose need . . . for sweeping new strategies. . ."

The ideas expressed above certainly touch on several key concerns of most CATV operators. The fact that the newest member of the FCC thinks along these lines, strongly enough to express his views publicly, gives them very significant importance to everyone involved in communications — not the least CATV operators. For that reason, Mr. Johnson's remarks are reprinted here in full.

Remarks By Honorable Nicholas Johnson, Commissioner, Federal Communications Commission, Prepared for Delivery to the Federal Communications Bar Association.

"Communication" touches every fiber of our lives. It is the coin of human understanding, the fabric of a free society.

The American communications mosaic includes a Defense Department "hot line" to a distant air base, a tranquilized child before a TV set, a ringing telephone, a campaigning politician's radio spot announcement, a fog-bound ship's radar, a news service teletype, a hidden microphone in a "secret" business meeting, a radio dispatched taxicab, airline reservations with the aid of computers and microwave towers, satellites and laser beams.

A Broader Concept

The seriousness and scope of the communications problems confronting our nation have already left their mark upon my thinking as a new FCC Commissioner. This brief experience prompts me to pause to develop and share two thoughts. The first is that it may be useful to broaden our concept of "communications" beyond our conventional thinking about broadcasting. The second is that a vastly expanded and coordinated national effort at research and analysis of our communications system appears warranted. In illustrating these points I will set forth at random particular areas of interest that seem to me worthy of attention. You may find the mere listing of a horizonfull of dimly perceived shadows sketchy and frustrating, for each would warrant full description and development. But let me emphasize that I now pretend to few, if any, new solutions to specific problems, and that I retain an open mind on most, if not all, of the issues. Moreover, I seek to provide neither the ephemeral relief of entertainment nor the shocking headlines of exposé. My intended contribution is modest: soberly to share my own current conceptual framework, to provide an illustrative agenda to go with it, and to sound a call to forceful response to what I see as communications crises of substantial proportions.

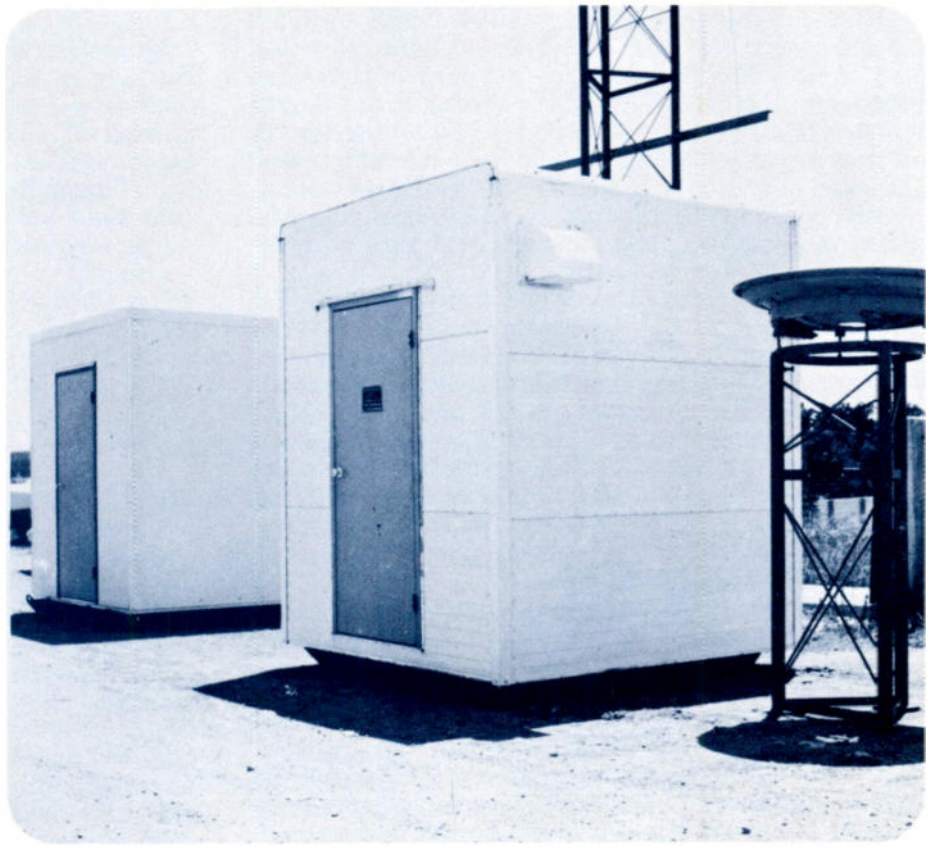
Technological and institutional innovations in communications are crashing upon us with ever greater intensity, like the waves of a stormy sea. And each leaves behind a debris of problems—legal, economic, social, philosophical, engineering and aesthetic—whose solutions require the talents of the best men, institutions and financial resources that America can bring to bear. Yet I do not see evidence of such a national response.

America is today confronting communications challenges which FCC Chairman Rosel H. Hyde has characterized as "awesome indeed." Here are but a few examples of their breadth and range. Electronic technology threatens the sanctity of the most private conversions in business room and bedroom—not to mention the telephone. Yet few workable solutions have been offered. Present management of our scarce radio frequencies impedes police and fire protection, and robs us of millions of dollars in gross national product by denying expanded use of business radio. At a time when an informed electorate is increasingly dependent upon the integrity of television news, and our children spend more time with the "tube" than the teacher, we know very little of the impact of broadcasting on our society. We don't even have a national center to preserve the radio and television tapes necessary to such a study. Nor do we know much about the structure of the industry—conglomerate corporations and concentrations of control of diverse media—and its implications for a free society.

Cable TV May Eliminate Scarcity of Channels

We have the barest knowledge and anticipation (let alone control) of the rate of introduction of new electronics technology, with its accompanying social and economic upheaval: cable television, computer communications systems, the home communications center, satellites, and the laser beam—to name but five current innovations. Each presents the possibility of greatly expanding the available supply of one or several communications facilities. Lasers, for example, may conceivably carry telephonic messages so effi-

Protect your head-end equipment the way manufacturers recommend . . . with Fort Worth



FACTORY-FABRICATED BUILDINGS

Designed expressly to house CATV and microwave electronic equipment, Fort Worth FACTORY-FABS withstand any climate or location problem . . . house electronic equipment according to the most rigid standards. FACTORY-FABS are available in popular sizes or custom-built to your design . . . yet they are surprisingly inexpensive.

INSTALLED IN MINUTES

Your FACTORY-FAB can be ready to work for you in minutes. You have no rig-up delays on arrival because your building comes with supporting I-beams. Simply drop on your site, connect the service inlet, and you're in business.

REDUCED COST AND WAITING TIME

FACTORY-FABS save you time and money because complete wiring is installed at the factory. Unlike conventional buildings, equipment can be delivered with it rather than installed on location.

QUALITY CONSTRUCTION

FACTORY-FABS are designed expressly to house electronic equipment. Result? Problems like inadequate tightness, poor ventilation and improper sealing of doors are non-existent. And . . . an absolute minimum of maintenance is required.

FAST DELIVERY

No matter what the weather conditions, site or local labor situations, FACTORY-FABS offer fast delivery and uniformity. We promise delivery on time.

Many options are available in size, outside finish, wiring and ventilation. You owe it to yourself to write for full specifications on these rugged, versatile head-end buildings. You'll find one exactly suited to your needs . . . at an economical price.

Write or call today . . .

FORT WORTH TOWER CO.

P. O. Box 8597 **Pho. (817) JE 6-5676** **Ft. Worth, Tex.**

ciently that the price of long distance calls could be more like that for local calls today. Cable television may very well eliminate the scarcity of television broadcast channels. Each of these threats to scarcity is also a threat to an economic interest which thrives on that scarcity—lasers to equipment manufacturers, and cable television to broadcasters. Passive nineteenth century public concepts may be of questionable adequacy in promoting the most efficient rate of introduction of the new technology.

The needs for a second, non-commercial broadcasting service, though coming to public realization, are far from adequately met. Broadcasting contributes heavily to the economic burdens of political campaigning (roughly 40% of the cost), and is producing results we scarcely comprehend. The implications of our instantaneous electronic "village of the world" lie unknown before us ("live war" and other international news; satellite to home broadcasting in the lesser developed countries; inter-connection of hundreds of millions of private telephones).

The topics differ—and many more could be added—but for each similar questions spring to mind. What is the impact on our society? How can this new force most effectively be channeled to human good? Are unrestrained market forces, or some form of government regulation most appropriate? Are new, or amended laws or regulations necessary? What is the most economic and efficient way to achieve the ends sought? What are the forces regulating the development and rate of introduction of the new technology? Are they effective in serving interests beyond private economic gain? How can government be most effectively structured and administered to deal with the problem in question? What additional data, analysis, or other research is called for? Who is asking these questions? Who answers back? What price do we pay for this placid comfort of silence in a boat none dare to rock nor cares to navigate?

CATV's Potential—Improved Programming; Additional Services

A major stumbling block is a conceptual one: our communications problems seem myriad rather than unitary—just as our "transportation system" problems used to be seen as problems of trains, ships and planes. Let's look at diversity of programming as a very limited example. Communications satellites, cable television, UHF development, direct satellite broadcasting in the upper UHF channels, pay television, regulation of network program ownership, alternative funding for non-commercial broadcasting, encouragement of local programming, copyright protection in broadcasting, duplication of AM radio programming on FM, and alternative uses for educational stations can most comfortably be considered in isolation from one another. My message is simple. We must forsake this comfort. Our core communications problem, and opportunity, derives from a burgeoning technology. In order most profitably to harness this technology we must, in the initial stage, view its various ramifications as parts of a whole. Satellites, UHF television, and cable television have implications for television transmission, the number of channels available, and hence for possible improvement in programming. Satellites also have implications for frequency management and telephone and other home communication transmission, as does the cable network supplying cable television. Thus, it is difficult to treat alternative approaches to program diversity without raising even more wide-ranging communications issues. But my point for now is merely that it may be exceedingly unwise (even for purposes of program diversity) to deal with each alternative in case-by-case isolation.

Throughout all our communications problems runs the need for awareness, anticipation, and long range forecasting. Where are we headed if we "do nothing"? What are the implications and trends? What alternatives are open to us? What are the consequences—cost and benefits—of each? What must we do—today—to prepare for the future?

These are the central questions in our numerous communications crises; questions we as a nation appear ill prepared to address.

The "Federal Broadcasting Commission"

The fact is that the federal government has no coordinated administration of communications, and virtually no long range planning efforts or research and development program whatsoever. America's communications industries add substantially to our gross national product—at least $20 billion a year from broadcasting related activities alone. And yet the FCC's share of our $100 billion federal budget is only $17 million (less than 2/100ths of 1%)—all but $2 million of which goes to salaries. It's understandable that the agency's activities would be limited almost entirely to granting licenses and resolving disputes between private parties. But the result is that the FCC spends most of its time as little more than a "Federal Broadcasting Commission," dealing on an ad hoc basis with the increased power, station log, antenna location and other day-to-day problems of 7,000 U. S. television and radio stations. Even such little frequency management responsibility as the agency exercises is divided between the FCC and DTM (the Office of Director of Telecommunications Management in the Executive Office of the President) —an able but small group attempting to coordinate allocation of frequencies to the Defense Department and other government agencies. Neither FCC nor DTM has a very substantial laboratory capability. The largest run by the government—the highly specialized Institute for Telecommunication Sciences and Aeronomy at Boulder—reports to the Secretary of Commerce.

The author of a recent investment letter commented upon the FCC's prevailing regulatory philosophy in arguing that broadcasting properties are a prime acquisition for growing conglomerate corporations. The article appears in *Mergers & Acquisitions* and is entitled, "The Broadcasting Industry: a profitable acquisition area." The author says of government regulations: "the overwhelming majority of radio and TV licenses have been repeatedly renewed, period after period, without the slightest difficulty or problem." Perhaps the agency should take pride in the author's conclusion that "the FCC has never imposed regulations which materially impaired management's ability . . . to maximize the station's profit . . ." Perhaps not. For it just could be that those who believe "what's good for General Sarnoff is good for America" are, in fact, serving neither very well.

For example, almost all social and technical research in communications is done outside government. In view of government's rather clear and substantial

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public responsibilty, one would think it profitably could invest in a degree of planning and research at least comparable to that of, say, AT&T—a single, FCC-regulated communications company with revenues over $11 billion last year, and a 15,000-man laboratory effort. There is little question such an effort would do as much for corporate profits as for the public interest. At this time, however, it is not clear anyone in government is even collecting, let alone reading, interpreting and utilizing, the results of the research done elsewhere. Most technical research is done by private corporation, such as the Bell Laboratories of AT&T. And the major research in the social sciences and public policy areas is scattered among numerous institutes, centers, foundations, private associations and universities around the country. There have been occasional outbursts of excellence. Yet scanning the total output of our great universities and foundations I see but few stirrings in that barren tundra adjacent the "vast wasteland."

Three hypotheses seem warranted: (1) duplication and inefficiency result from this lack of coordination, (2) many vital areas of communications research and application are overlooked entirely, and (3) investing substantially greater private and public money would return handsome dividends indeed.

One clear point of beginning in communications research and analysis is the gathering of data and the creation of standards for measuring performance. The principle of accountability has spawned a profession. Financial accounting serves, in large measure, as a means of informing shareholders about performance—against a standard of profit. The Securities and Exchange Commission requires such accounting to better inform investors.

Government can play a useful role in the process of social and economic accounting. Much critical research would be impossible were it not for information gathered by the committees of Congress and the agencies within the executive branch. We cannot begin to resolve an "unemployment" or "crime" problem, for example, until we gather the relevant statistics—indeed, the problem, in one sense, does not even exist without the statistics. Likewise the constructs of "gross national product" and "consumer price index" are central to the very conceptualization of some of our most basic economic and social problems.

How Much Local Programming Is Being Provided?

Public accountability, of some kind, is obviously necessary for meaningful consideration of the various problems I have sketched. But what standards and data are most relevant? Is profit alone enough? I think not. Here are some examples of additional data which might be useful. Congressional investigations have given us much information on eavesdropping technology, but perhaps we should institutionalize the process, so that the public can continually be made aware of the current threats to its privacy. Public disclosure of cost analysis of new telephonic technology also might be useful. That way consideration could be given to what the public pays for having new equipment—and what it pays in doing without. The benefits of "local programming" lie at the heart of much FCC regulation: the interference-ridden AM

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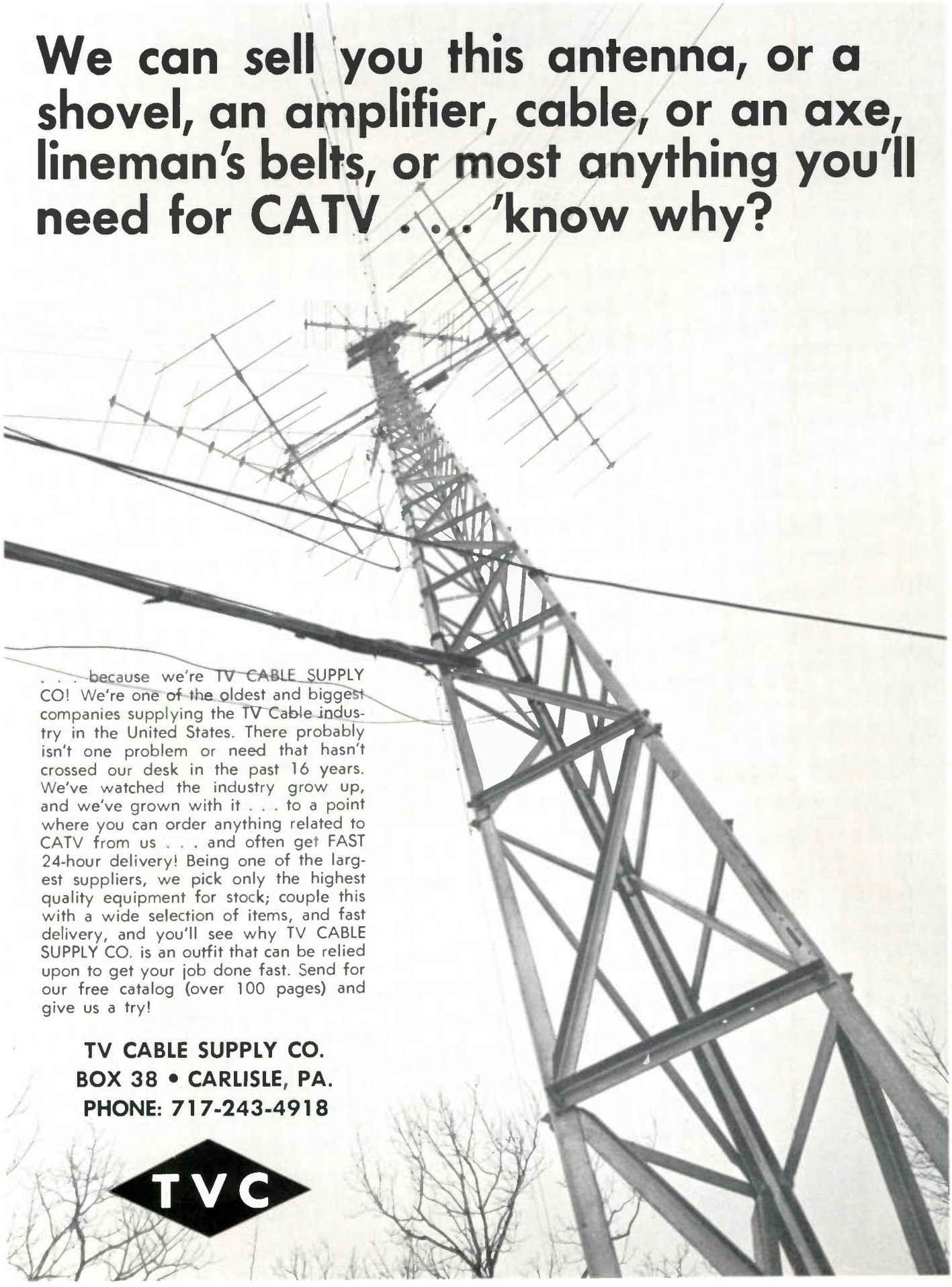

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radio band, and allocation of 420 extremely valuable megacycles to UHF television, to name two examples. Programming of popular music and the television fare of three networks could be provided at much lower cost. How much "local programming" is being provided, in fact, by our 7,000-station broadcasting industry? Or take comparative broadcast license allocation hearings. They cost the public, and the industry, millions of dollars annually. For what? Is there evidence the public receives better programming from the performance of the winner (as distinguished from his promises) than from a licensee who purchases a station and avoids the expense of hearings?

Broadcasting standards and information are especially important, because regulation of program content encounters undefined statutory and constitutional limitations on "censorship." But such limitations cannot totally frustrate the public's search for standards and the desire for information, for the programming product obviously lies at the heart of broadcasting's public accountability. Measuring programming performance has troubled the FCC for decades, with the result that, to my knowledge, not a single station's license has been revoked or failed of renewal for programming reasons alone during the past 30 years.

Surely all would agree that audience and critic response, properly measured, are relevant to program evaluation. Central to meaningful analysis of media is accessibility of its product: newspapers, magazines, radio and television tapes or films. The news coverage of two newspapers easily can be compared in hundreds of newspaper libraries. To compare the news coverage of two networks is extraordinarily difficult and expensive; it is often literally impossible. Television's coverage of the Army-McCarthy hearings came within a hairsbreadth of being forever lost. The president of a major national television network recently told me he was unable to find President Kennedy's inaugural address in the network's library. There are many reasons for establishing national libraries of broadcasting's creative product, but comparative evaluation is obviously one.

What else should the public know? What of stories that were not covered in news or documentaries, or were covered and killed? How about changes in entertainment programming—or even news—brought about by advertisers, or through other economic forces? Should the public know the ownership of broadcast properties, including the full range of media and other interests of the conglomerate corporate owners? Would more financial information be useful regarding individual shows' costs and profits? Of course, to be of use such programming material and financial information would have to be analyzed and reported by some competent group. Perhaps a privately funded, independent group—suggested occasionally over the years by broadcasting leaders, legislators and academicians—would be preferable to the FCC.

Would more comment from the public be useful? All agree the ratings systems could be improved. Would it be desirable, as the British do, to poll more viewers more often, and measure the intensity of their involvement and response, as well as whether the television set is on? How do we measure how they might have responded to what has not been offered?

The "letters to the editor" column offers meaningful appraisal of many of America's print media. How about broadcasting? Should efforts be made to obtain more public participation in the FCC's examination every three years of a station's service to its local community? Should radio's "open mike" programs be used to this end, and possibly be extended to television, to allow public comment on the performance of the very station receiving FCC evaluation?

Sweeping New Strategies Needed

Crises bring public awareness, and therein lies my hope for 1967. It will be a year in which America will be forced to focus as never before on one of mankind's most fundamental needs: an understanding of what our communications systems can do for us—and to us. Satellites (domestic and international), noncommercial broadcasting (the Ford and Carnegie Commission proposals), cable television and copyright law revision, the use of the reserved upper UHF TV channels, the AT&T rate investigation, congested mobile radio frequencies, technological innovations—these and more involve issues that must be resolved and will provide the headlines that capture our awareness. What will be the response?

Hopefully, we will be charting planning efforts and research programs, looking for talent, and bringing kindred souls together in conferences and seminars. Every profession has some special talent to contribute. There is little in our lives, and intellectual disciplines, that does not relate to communication problems in some way.

Speaking at Brookings' Fiftieth Anniversary observance recently, President Johnson spoke of these needs in more general context. "The enormous complexity of modern living," he said, demands "something better than a visceral, emotional response." He urged that "the critical faculty . . . constantly . . . challenge the accepted wisdom . . . /and/ be concerned at least as much with analyzing the terrific complexity of modern problems as . . . with devising sweeping new strategies for social advances."

Our communications challengs surely pose need both for analyses of complex modern problems and for sweeping new strategies. In challenging the accepted wisdom we must sometimes ask hard, embarrassing questions. What are the economic and institutional rigidities impeding the development of communications systems that might serve man with greater economy and satisfaction? How much better to ask such questions now than to reflect back in later years upon an America that might have been. □

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Originating Election Coverage

Election coverage in Vandalia, Illinois, took on new perspective when the local cable system and radio station joined forces to provide citizens with record election returns. Utilizing a video tape recorder and a two-way radio, the public service programming provided such extraordinary coverage that the results were instantaneous: the cable firm received a minimum of 12 new hook-up requests the morning following the election! John Kirby, president of Vandalia Cable TV Co., Inc. relates the technique behind this profitable local programming venture:

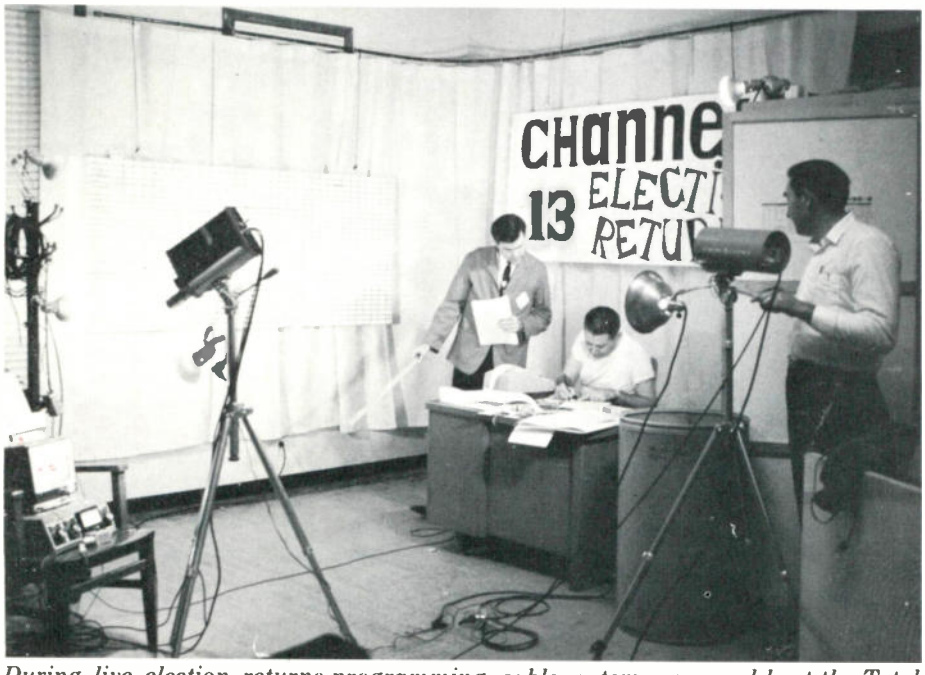
Vandalia Cable TV Company employees use Ampex VTR at poling places on election day, taping interviews to fill in election returns program that evening.

Preparation for the coverage began the Monday before the election, when we began taping fill-in material. This included interviews with the County Clerk and members of his staff, as well as interviews with each county candidate. In order to publicize our efforts, we solicited the cooperation of local TV dealers, and ran a temporary line into the Court House, where citizens usually gather to await the returns.

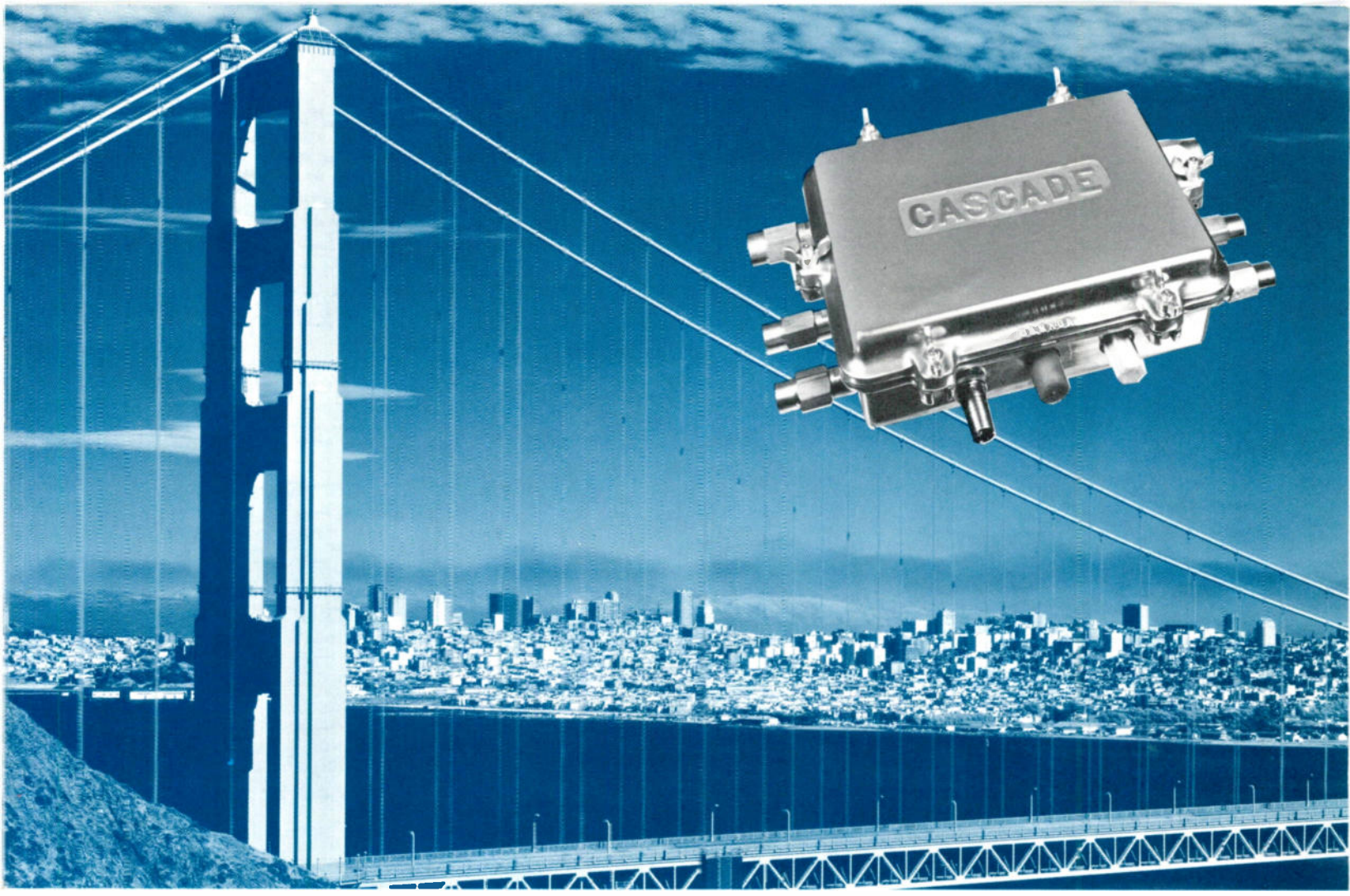
On election day we hauled the video tape recorder around to several different polling places, and made tapes of people entering and leaving the polls. We also held a few interviews with voters. We later used this for additional filler during the actual election coverage program.

We started the live coverage of the election returns at 7 p.m. election night. Radio WPMB announcer Fred Thoman was stationed in the County Court House with a two-way radio, while other cable and radio station employes manned the radio on the other end. Fred got the precinct totals as soon as they came in: he merely looked over the shoulder of the County Clerk as he entered the count on his tally sheet! Fred relayed the totals to the cable studios, our girls totaled them, and they were posted on our 'Total Board.' This method proved so speedy that cable viewers in the County Clerk's office saw the results on TV before the Clerk could give them out!

Much of Vandalia Cable TV's success with programming has been due to the cooperation and efforts of radio station personnel. When we at the cable system decided to give local origination a try, our first act was to discuss the venture with WPMB manager Neil Clark. Assured that Channel 13 would not be after any of his advertising dollars in Vandalia, Mr. Clark became interested in the



During live election returns programming, cable system personnel kept the Total Board up to the minute. Note use of two cameras for studio work.



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idea. He explained that he would like to participate in the programming, and offered us studio space in his radio station. He also offered to come on our Channel 13 at 6 o'clock for a live newscast.

The arrangement seems to be working well for both WPMB radio and the cable company. Wayne Clark, the station engineer, has been a tremendous help to us. Wayne is an experienced engineer, and has had five years experience with a TV station. Clem Effland, our technician, works day and night for the betterment of our system. Through the combined knowledge and efforts of these two, we have managed to cut the cost of our origination by several hundred dollars. Our equipment at present consists of:

(1) Viking Weatherama with GE Camera
(2) Ampex Video recorder
(3) Ampex Camera with turret lense
(4) Zoom lense for either camera
(5) Audio mixing board with 5 audio inputs
(6) Gates AM-FM multiplex tuner

At this writing, Channel 13 has been programming for only six

Good lighting and some ingenuity make an attractive studio backdrop.

weeks, and our firm has already received over one hundred requests for installations. Programming to date includes a style show, live coverage of the Home Coming and Halloween Parades, interviews, and Bingo every Saturday morning at ten o'clock. The system does not sell advertising, but local merchants receive mention over Channel 13 in return for subscriber sales. As a result, we are being invaded by new customers! □

CATV Legal View

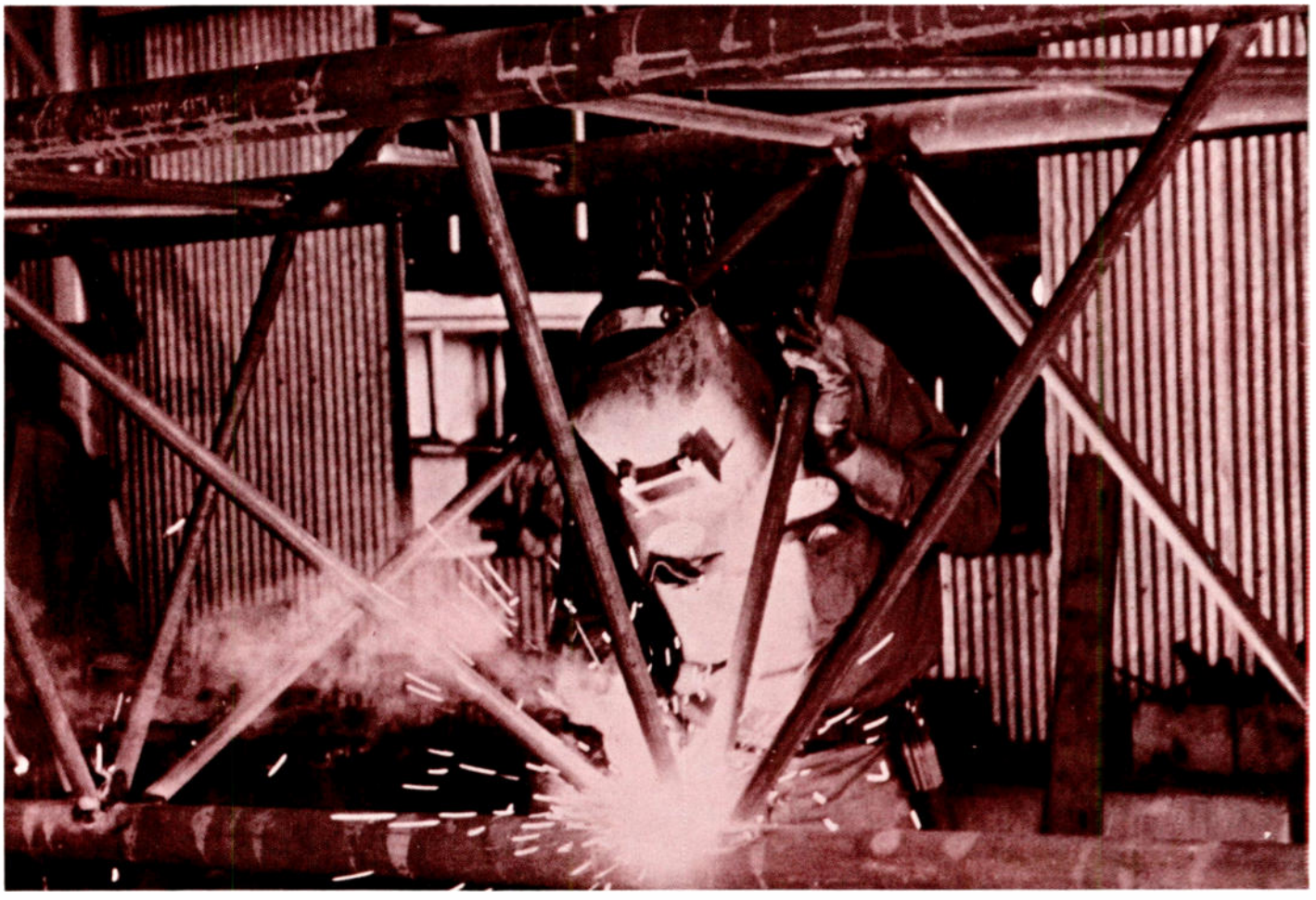
(Continued from page 14)

mental administrative agency; and where the agency deals with complex subject matter in which the court has little real knowledge, much less expertise, the tendency is to confer even more weight upon the decision of the agency charged with the day-to-day regulation of an industry.

The regulation of a dynamic radio and TV industry is not an easy nor simple task. This fact is obviously appreciated by courts; and, accordingly, they have demonstrated considerable patience and restraint in permitting the FCC to exercise a high degree of discretion in its efforts to achieve regulatory solutions to the many problems with which the agency is consistently confronted.

In the function of station "licensing" particularly, the courts have universally adopted the principle of "being slow to interfere" with the FCC. In virtually all of the FCC's actions involving CATV, the question of microwave licensing has been at issue, and the reviewing courts have observed that the Commission is conferred by the Communications Act with the power to license use of radio frequency only where it determines that the "public interest" will be served thereby. And on this basis, courts have generally concluded that they would not interfere to reverse the Commission. We believe that where microwave licensing is involved, courts will continue to be reluctant to interfere with FCC determinations.

However, in the case of outright proscription of public reception of TV programs via the medium of non-microwave CATV, we believe the courts will find it necessary to interfere in order to preserve and protect fundamental rights guaranteed by the First Amendment to the Constitution. We fully expect to see in 1967 either the voluntary or involuntary elimination of the FCC's "Top-100" market policy. □



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January, 1964 Through December, 1966 Issues of TV COMMUNICATIONS

The following index includes all articles carried in TV COMMUNICATIONS in its three year history. The articles are broken out into general subject areas, and listed in alphabetical order by title under those headings. Special Sections and Supplements to the magazine are also listed in a separate section. An addendum to this Topical Index will be published each year, to bring this index up to date. Back issues in supply are available from the publisher at $1.00 ea.

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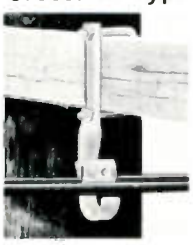

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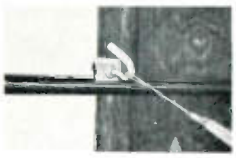

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A No-Panic Approach to . . .

Finding Shorts and Opens

By John S. Warner
Service Electric Company

Take a night like Jan. 14, 9:30 pm, during a snow storm. You're answering service calls and a cheery voice informs you that all of Finksville is without pictures. One hour later, after the usual level checking, you suddenly develop that sickening feeling and realize the worst has happened. Somewhere on your mountain run the aluminum trunk is goofed. So what do you do, kick a field goal? Don't panic, there is a very easy way to get you back to the comfort of your living room, quickly and with a minimum of effort.

It doesn't matter if a center conductor has pulled back, the aluminum sheath has cracked, or a tree has squashed the trunk into a dead short. The trunk line is hanging there telling you, right to the foot, where the problem is. All we have to do is learn to talk trunk line language.

If we stop and think a little it will dawn on us that a short or open somewhere in a piece of cable actually makes it resonant to some frequency. Find that frequency, convert its wavelength to feet and there is your fault.

Let's look into this theory a little deeper. Take your problem at the moment and assume your trunk is shorted. Immediately we have the prettiest standing waves we can get. The length of cable from the point you are checking to the short is resonant to some frequency. For the sake of using figures, let us assume it is ½ wave length long at 1 MHz.

We know, or should know, that our standing waves on a shorted line will produce maximum current, minimum voltage, and minimum impedance at even multiples of ¼ wave length at the fundamental frequency.

That is, we will expect to see a very low impedance, actually a series resonant circuit, at all even multiples of ¼ wave at 1 MHz. Since ½ wave at 1 MHz is equal to 4/4 wave at 2MHz, 6/4 at 3 MHz, 8/4 wave at 4 MHz etc. we will see our very low impedance appearing at these frequencies.

Now, how do we measure these low impedance points? Simple; with a neat hand-held Grid Dip Meter. We take either end of our shorted cable, in this case the end we are still holding with our numb fingers, and screw on our adapter, which we just happened to have along. This adapter is simply a piece of RG-59 with a fitting to mate with our trunk at one end and the other end having a three or four turn pick up coil, soldered from center conductor to shield. Make the RG-59 short, but take no patience with the coil as it is not critical. It is just a very convenient way of loosely coupling our grid dip to the trunk.

In the grid dip is an oscillator whose frequency depends on the tank coil in use and the setting of the calibrated vernier control. A meter on its face gives us a relative reading of the oscillator's grid current or voltage.

If we hold our adapter near the tank coil of the grid dip and slowly rotate the vernier knob we will observe a series of pronounced sharp dips on the meter.

The low impedance presented by our shorted cable at these points have loaded the oscillator to such a degree that it tends to stop oscillating. With the proper tank coil in place we will see our dips appearing at say, 2 MHz, 3 MHz, 4 MHz etc. just as predicted.

However, to get an accurate reading of frequency is difficult, therefore we use one of the coils supplied with the grid dip that gives us at least ten dips, the more dips the more accurate. What we are after is the difference frequency between two dips. The difference between each dip will be the same, but by taking ten dips, subtracting our starting frequency from the frequency of our tenth dip and then dividing by ten we have averaged our difference frequency and have a more accurate result. Do not count the first dip, it is merely our starting frequency, take ten more dips and read the frequency of the tenth dip.

The averaged difference frequency is the actual frequency, based on ½ wave, at which our shorted cable is resonant. For example, suppose we had chosen a tank coil marked 13.5 MHz to 26 MHz. Our first dip would appear at 14 MHz, next at 15 MHz, with the tenth dip at 24 MHz. Subtract 14 from 24 equals 10 MHz. We took ten dips so the difference is 1 MHz.

Now let's see how far we have to walk down this mountain and convert 1 MHz into feet. Our basic formula is wavelength = 984/freq. MHz. We want ½ wave so we use 492/fMHz.

As it is obvious our 1 MHz divided into 492 gives us 492 feet.

But, don't get too happy yet. We forgot something. The formula is for free space and our signals travel slower in cable. In fact cables having foam dielectric have a propagation factor of .82. So let's multiply our answer by .82 and really find that short. We come up with 403.4 feet. That is where our short exists.

For an open cable the same procedure is used, except we deal with odd multiples of ¼ wave. The difference between dips would still be the same.

Now that we understand the theory let's do it the easy way. Get your ten dips, average out your difference, and just remember two numbers. They are 405 and 325. For foam dielectric divide your difference into 405 and that is your distance in feet. In our example it comes out to 405 feet instead of 403.4. Close enough? For solid dielectric just divide into 325.

This procedure is also useful for finding the length of cable left on a partially used reel, the length of distribution lines, or the spacing of amplifiers.

Feel good to be back home so soon? □

Output Capability and Gain In CATV Amplifiers

By Jacob Shekel
Director of Research
Spencer-Kennedy Laboratories

Introduction

One of the most important specifications of a CATV amplifier is its *Output Capability*. It is defined as the output level at which, under certain given conditions, the cross-modulation is guaranteed not to exceed a level of −57 dB (or .14%). It can also be interpreted in the following fashion: If the output level is raised to the point where the amplifier does have −57 dB cross-modulation, the level is at least equal to the output capability. The conditions under which this cross-modulation is measured (number of channels, flat, sloped or block-tilted output, etc.) are spelled out in the specifications, or may be understood from other specifications or from general practice.

Cross-modulation is the transfer of the modulation of one carrier onto a second carrier. It is measured in percentage, as the ratio of the transferred modulation to the original modulation present on the first carrier. The percentage ratio can be converted to dB in the same way as voltage ratios are converted to dB. For example, 1% cross-modulation is −40 dB, and .1% is −60 dB.

Output capability of an amplifier is usually specified at full gain. In this article we want to discuss the effect of gain reduction on the output capability. In Part I we shall discuss what can be expected as a result of the mere fact that the gain of the amplifier is reduced. We shall see that the output capability, in principle, *has* to decrease as the gain is reduced, and that this is just in the nature of things. In Part II we shall have a closer look at actual devices which are used for controlling the gain of the amplifier. We shall see that some devices decrease the output capability even further than the unavoidable minimum outlined in Part I, while other devices do not add any cross-modulation of their own, and therefore do not degrade the output capability beyond the unavoidable minimum described in Part I.

The reduction of output capability by gain control, and the distinction between the two types of degradation—the unavoidable reduction inherent in gain control and the added reduction because of control devices used—is very important when reading specifications and comparing competitive products.

Before going into detailed explanations, let's first summarize the exact points we are trying to make. Detailed justification of these points will follow.

Summary

(1) Every transistor in the amplifier adds some cross-modulation, and the total cross-modulation limits the output capability.

(2) In general, most of the cross-modulation is produced in the output transistor, and the contributions of the previous stages are a minor part of the total.

(3) As the gain of the amplifier is reduced, the contributions of the previous stages become larger in proportion, the total cross-modulation increases, and the output capability decreases.

(4) Some components used for gain control are non-linear and contribute to the total cross-modulation. While the non-linearity in the transistor is generally unavoidable, the contribution of the control elements can be eliminated by the choice of the right method of control.

Part I. Output Capability and Gain

The limitation of output capability can be traced to cross-modulation effects generated by various components in the amplifier.

Most components (resistors, capacitors, inductors, wires) are linear, which means that they do not add any spurious signals to the TV signals introduced into the input of the amplifier. However, the components which produce the gain, the transistors (or vacuum tubes), also introduce non-linear effects, which means that there are signals in the output that were not present in the input of the amplifier. Of the many types of spurious output signals, the one that most seriously limits the output capability is that caused by cross-modulation.

Suppose an amplifier is designed for a gain of 24 dB, with 3 amplifying transistors, each providing a gain of 8 dB. Suppose also, that each of these transistors, if used by itself, would have an output capability of 50 dBmV. That is, if the transistor output were 316 mV (150 dBmV), the cross-modulation would be .14% or −57 dB.

When the complete amplifier is tested, an output signal of 50 dBmV will really cause .14% (−57 dB) of cross-modulation in the transistor in the *third* stage, and in addition, the other two transistors will also contribute some cross-modulation. Of course, since the levels at these transistors are lower than 50 dBmV, their contribution to cross-modulation would be much less. A detailed computation for this example is shown in Table I. The computation is based on the fact that a 1 dB reduction of output level reduces the cross-modulation by 2 dB.

The total cross-modulation produced by this amplifier is .167%, rather than .14%, which means the cross-modulation is −55.5 dB at an output of 50 dBmV. This cross-modulation is 1.5 dB higher

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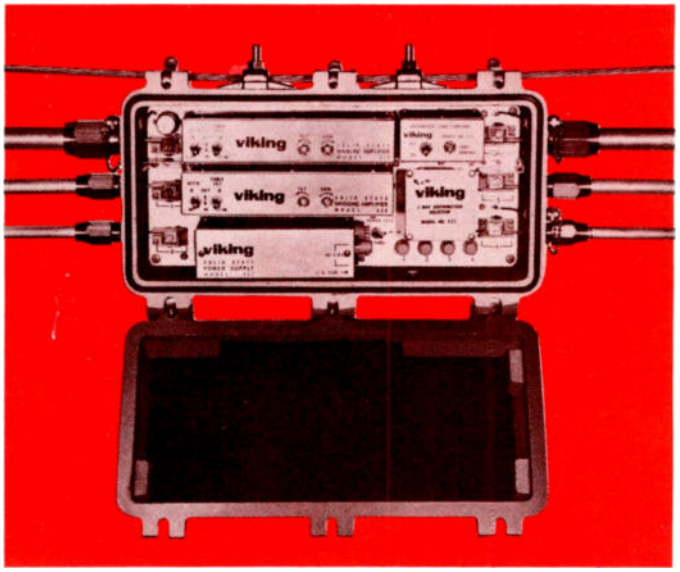

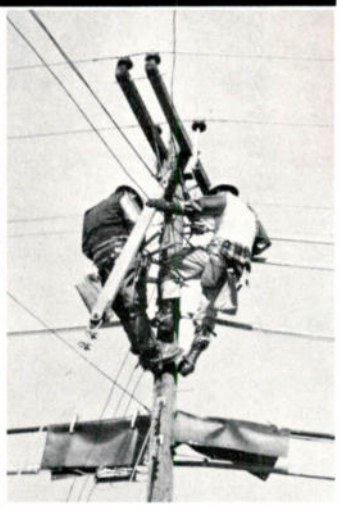

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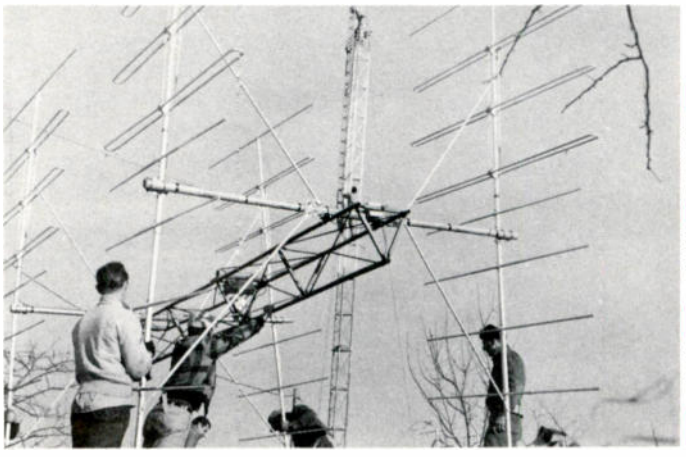

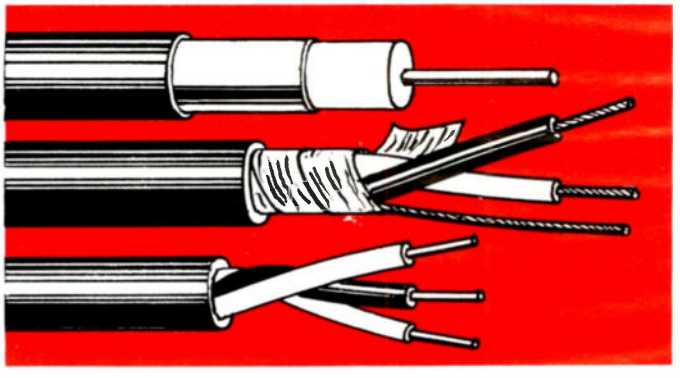

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than that of the standard definition, and to bring it back to −57 dB, the output levels have to be reduced by half the difference, that is, by .75 dB. The output capability of the complete 3-stage amplifier is therefore 49.25 dBmV rather than the 50 dBmV that we started with.

This reduction may not be too catastrophic, but it does illustrate the principle involved: the cross-modulation that limits output capability is produced in all the stages of amplification, not just in the output stage. The results will be more spectacular if we introduce gain control in the amplifier.

It is true of almost all transistor amplifiers now on the market, that gain control is achieved by some type of variable attenuation between amplifier stages. (In tube amplifiers, the practice was to change the actual gain of the tube by changing some of its bias voltages. However, this method is undesirable, and sometimes even impractical, with transistor circuits.)

Suppose the gain of the amplifier we discussed above is to be reduced by 6 dB. This can be done by introducing an attenuator with a 6 dB loss between any two stages of the amplifier. The location of this attenuator has a pronounced effect on the results, as will be shown in the following examples.

Assume the attenuator is introduced between the first and second stages of the amplifier. The signal is amplified by 8 dB in the first stage, then attenuated by 6 dB before going to the second stage. The second and third stages have gains of 8 dB as before, and to produce a 50 dBmV level at the output of the amplifier, the outputs of three stages will be 40, 42 and 50 dBmV, respectively. Table II shows the accumulation of cross-modulation under the new conditions.

The total cross-modulation at a 50 dBmV output is now .178%, or −55 dB. This is 2.0 dB above the standard −57, so the output capability is reduced by 1.0 dB, to 49 dBmV.

Note that while the amplifier gain has been reduced by 6 dB, we have kept the output level at 50 dBmV as a reference for purposes of comparison.

Table III shows the effect of placing the attenuator between the second and third stages of the amplifier.

In this case, the accumulated cross-mod is .244% or −52.2 dB. This is 4.8 dB too high, and the output capability is reduced by 2.4 dB to 47.6 dBmV.

In our discussion of cross-modulation, we have seen that output capability increases as the gain control is placed nearer to the input of the amplifier. It may then seem that the best place for the gain control is as "early" in the amplifier as possible; but this is not quite true. If we were to consider also the noise figure, we would find that the closer the gain control is to the input, the worse the degradation of noise figure. The actual placement of the gain control is decided, therefore, by a compromise between its effects on noise figure and output capability.

What is important is the fact demonstrated here that in any amplifier, the output capability will be reduced as its gain is turned down, whether manually or by ALC action. This is inherent in any amplifier that has more than one stage of amplification, because as the gain is turned down the contributions of the previous stages come more and more into play.

TABLE I.

Stage	1	2	3
Gain, dB	8	8	8
Output, dBmV	+34	+42	+50
Output below 50 dBmV	−16	− 8	0
Cross-mod relative to −57 dB	−32	−16	0
Cross-mod, dB	−89	−73	−57
Cross-mod, %	0035	.0224	.1413
Total cross-mod	1672% or −55.5 dB		
Excess over −57 dB	1.5dB		
Reduction of output capability	0.75dB		
Output Capability	49 25dBmV		

TABLE II.

Stage	1	(atten.)	2	3
Gain, dB	8	− 6	8	8
Output, dBmV	+40	+34	+42	+50
Output below 50 dBmV	−10		− 8	0
Cross-mod relative to −57 dB	−20		−16	0
Cross-mod dB	−77		−73	−57
Cross-mod %	0141	0	0224	1413
Total cross-mod	1778%, or −55 dB			
Excess over −57 dB	2 0 dB			
Reduction of output capability	1 0 dB			
Output Capability	49 dBmV			

TABLE III.

Stage	1	2	(atten.)	3
Gain, dB	8	8	− 6	8
Output, dBmV	+40	+48	+42	+50
Output below 50 dBmV	−10	− 2		0
Cross-mod relative to −57 dB	−20	− 4		0
Cross-mod, dB	−77	−61		−57
Cross-mod, %	.0141	.0891	0	.1413
Total cross-mod	2445%, or −52.2 dB			
Excess over −57 dB	4.8 dB			
Reduction of output capability	2.4 dB			
Output Capability	47.6 dBmV			

ABOUT THE AUTHOR

Jacob Shekel is a graduate of the Technion (Israel Institute of Technology) where he received the B.S. degree in 1943 and the E.E. Diploma in 1949. He was employed by the Israeli Government from 1949 to 1961, with a break for graduate studies at M.I.T. where he received the Doctor of Science degree in 1957. From 1957 to 1961 he was head of the Electronic Division of the Scientific Department in the Israeli Ministry of Defense. Dr. Shekel joined SKL in 1961, and was appointed Chief Engineer in 1964, and later V.P. of Engineering. His present position is Director of Research. He is a Senior Member of IEEE and former Chairman (1960) of the Israel Section.

Part II. Gain Control

What do we mean by "linear devices?"

Let's look at the line shown in Figure 1. This is a plot of output-vs-input (which could mean output signal level-vs-input signal level, current-vs-voltage, or any other appropriate combination). Line "a" is a straight line through the origin, and it is obvious that the output is prportional to the input, and that equal changes of the input will result in equal changes at the output. Line "b" does not go through the origin and, in this case, the output is not proportional to the input, but it is

still true that equal increments of the input will result in equal increments of the output. Both lines characterize a linear element. If the input varies in the form of a sine wave, then the output will

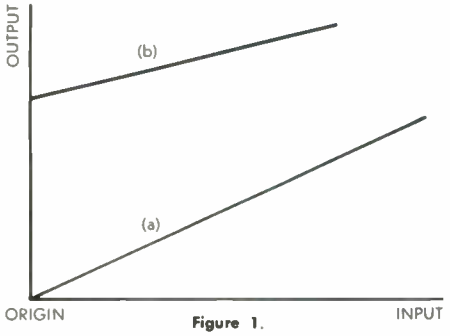


Figure 1.

vary in the same manner. The output may have a different magnitude from the input, but the pure sine wave characteristic is preserved. It is generally true that a device with a linear characteristic does not distort the signal, whereas an element with a non-linear or curved characteristic does produce many distortion products.

In contrast with those in Figure 1, the characteristic of Figure 2 is a curved line. With this non-linear characteristic, equal increments of the input will, in general, result in unequal increments of the output, because the slope of the characteristic varies from point to point. An input in the form of a sine wave, for example, will cause an

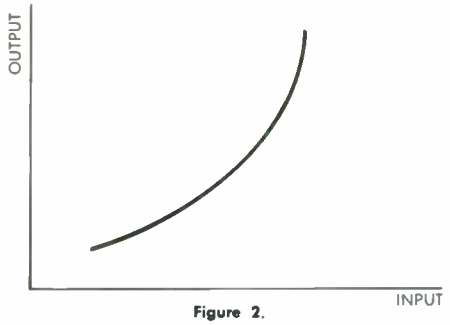


Figure 2.

output which is not a pure sine wave, but is stretched or compressed, or otherwise distorted. In other words, the output will contain harmonics which were not present in the pure sine wave input. A single TV signal applied to an amplifier with a characteristic like Figure 2 might suffer compression (or stretching) of the sync pulses, and a distortion of the dynamic range of its grey scale, the latter resulting in a reduction in the number of reproducible shades of grey. However, the non-linearity and signal amplitude would have

to be very much greater than normal for a CATV system to produce a visible effect.

Let's look again at Figure 2. Suppose there is only one signal in the input. This signal would be located at some section of the horizontal axis, and its output will be determined by the part of the curve which is just above this section. If another signal is added to it, the combined signal will, of course, be larger and more to the right on the horizontal axis. This will bring into play another part of the characteristic which has a different slope, and therefore, the input-output relation will be different from that which was obtained with only one signal present. It follows, then, that in a non-linear device the input-output relation existing for one signal is altered by the presence of a second signal. If the latter were varying in amplitude we might expect the amplitude of the first signal to vary also. In this example of cross-modulation, the modulation of the second signal is being transferred to the first signal. This would not happen if the characteristic were linear, for no matter where the signals appear on the horizontal axis, the slope of the characteristic is always the same. Cross-modulation is just one of the types of distortion produced by non-linear characteristics.

To summarize:

(1) In a linear element, each signal is treated separately, and the output generated by any signal does not depend on the presence or absence of other signals. A linear network will produce an output signal which is a replica of the input signal, and does not produce any distortion products.

(2) In a non-linear network, the treatment of any signal may depend on the presence of other signals. The output will contain distortion products, which are the result of interactions between signals.

What has this to do with gain control?

A variable gain amplifier, such as a trunk amplifier with automatic or manual gain control, handles not only the TV channel signals, but also receives an additional signal which controls its gain. This signal may be a voltage, a current, or possibly a mechanical signal (for example, a rotation of a knob). It is required that the output level of the TV signal depend on the control signal, which means that the amplifier (which includes the amplifying transistors and the gain control devices) has to exhibit properties of a non-linear network. This point is sometimes lost, but in principle, any network whose gain can be changed is, in effect, a non-linear network; otherwise, it would be impossible to change the level of one signal by the presence of another control signal. This means that the devices which change the gain of the amplifier will, in general, introduce distortion products (including cross-modulation), in addition to the distortion caused by the amplifying elements (transistors) themselves. To some extent, this may be inferred from an earlier statement to the effect that in a *non-linear* device the presence of one signal affects the level of a second signal.

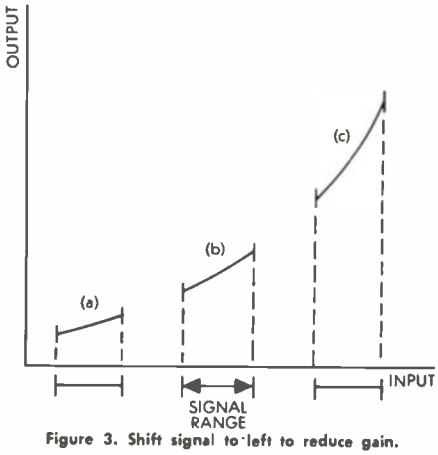


Figure 3. Shift signal to left to reduce gain.

Any control element that has only two terminals, so that signals and gain control effectively have to be applied to the *same pair* of terminals, is inherently non-linear. This is true, for example, if the gain control is achieved by varying the currents through a diode, or a triode transistor, or by varying the voltage across a varicap.

Figure 3 shows the principle which underlies the operation of most gain control elements. Somewhere in the path of the signal there is an element with a curved characteristic. At one value of gain the input signal may lie in the portion of the horizontal axis below the section marked "a." To increase the gain, a steady current or voltage may be added, shifting the signal to the right until it lies under the portion of the curved marked "b." Since portions "a," "b," "c," etc., have different slopes, then the complete characteristic must be curved, and consequently must introduce some distortion.

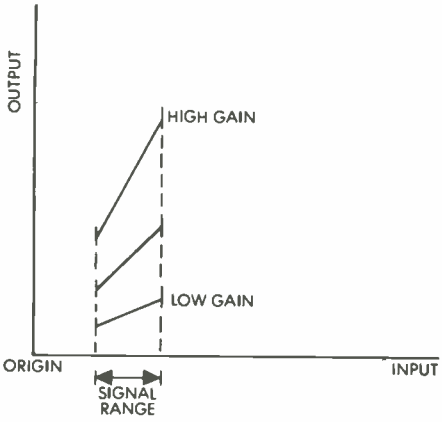


Figure 4. Rotate characteristic clockwise to reduce gain

If this curvature is to be avoided, it must be by means other than using different sections of one characteristic. This would be realized by a control element having a linear characteristic which, in effect, is *rotated,* as in Figure 4, to obtain different slopes (and gains). This rotation cannot be done by a control signal *added* to the input signal but has to be effected by other means, applied to the control element in a different way or at different terminals than the TV signal. If this were possible, then at any given value of gain the element operates with a completely linear characteristic.

One possibility is using a potentiometer in the path of the signal. The signal appears in the potentiometer as a voltage or current while the gain control is applied as a turning of the shaft. For any position of the shaft, the potentiometer is a completely linear element, and any rotation will change its slope but does not affect its linearity.

Another possible device is the Photomod, which is used in the SKL Series 7000 amplifiers. The Photomod has four terminals, one pair for the RF signals and the other pair for the control current. The resistance between the signal terminals is always a linear resistance, but its value depends on the control current flowing through the other pair. In this case, we see that non-linearity is avoided by presenting the TV signal and control signal to different terminals. □

Thoughts On System Safety; Serious and Otherwise

The Safety Amplifier

By Dennis Marmon, Technician
Mission Cable TV, Inc. Chula Vista, Calif.

This new idea in a CATV amplifier is designed like none other in our system. Yet, it is quite necessary to greater system performance. It is designed with ideas and circuitry easy to understand, so that all employees may work with it. This amplifier not only provides quality reception, but improves the system in many ways, as follows:

A. It reduces lost man hours due to accidents, thus increasing employee capabilities.
B. It reduces cost of damaged equipment due to accidents.
C. It will reduce insurance claims, thus maintaining low insurance rates for all employees.
D. It also proves that safety in a company helps public relations.

One other important fact is the elimination of pain caused by accidents, and the possible grief and suffering of loved ones that may be affected. Now that you have the basic theory and functions of this amplifier, let's go into the circuitry and operations.

Input-CATV Employees

The inputs are first coupled with common sense, a necessary function of the safety amplifier. From there they pass through a blocking network that blocks all previous bad safety habits. Next is the combining network of good safety habits and ideas. Next we are linked to an external switch called a refresher switch which must be switched periodically by safety instructors, maintaining constant and new safety habits.

Now we enter the section that senses the cost of lost man hours and damaged equipment, and causes the inputs to be cost conscious. This section has a regulator that determines if the company has saved enough money on accident prevention so that there will be more money for employees wages.

Every amplifier needs a power supply and in this one we see the power production possible with a minimum of lost man hours and damaged equipment.

In conjunction with power we have a revolutionary "No Blow Fuse." It is impossible to blow, thus permitting full twenty-four hour operation.

Our tilt control tilts eight hours of job safety, and sixteen hours of off-the-job safety, with an A.G.C. to give or take several hours each way, depending on the workload.

Our gain control is always at full gain, with no distortion on the theory that there is never too much safety.

Next we enter a section full of filters and reflectometers to reflect and see poor safety of those around you and give correcting advice.

And finally we have our output, consisting of: A Safety Minded CATV Employee! !Why don't you buy yours today? All it costs is a little effort.

Climbing Safety

A. Proper climbing tools
(1) Body belt of leather or canvas with "D" rings
(2) Safety strap
(3) Hooks with good gaffs and leg pads
(4) Hard hat
(5) Leather gloves
(6) Device for testing, listed in B
  (a) Maintenance
    (1) Check belts and straps frequently for rotted sewing, loose rivets, etc.
    (2) Sharpen gaffs periodically with fine file and wet stone.
    (3) Plain test should be made after every third usage on piece of pine, or simular wood.

B. Methods of Pole Testing
(1) Pike Pole
(2) Drill and Plug (one inch below surface) three-eights inch bit
(3) Ten foot climb and shake
(4) Physical inspection for defects:
  (a) Numerous knots
  (b) Nails, etc.
  (c) Posters (campaign and etc.)
  (4) Curverature or bends of pole
  (e) Shell rot

C. Direction of Ascent or Descent
(1) Always on high side
(2) Consideration given to direction and velocity of wind

Climbing Methods

A. Two Point
(1) Two points of contact with pole at all times.
B. Three Point
(1) Three points of contact with pole at all times.
  Examples:
  (a) One hand, two feet
  (b) Two hands, one foot
  (c) One hand, one foot & safety
  (d) Two feet and safety
C. Adjust size of safety
(1) Belt off at base and lean to natural position, place elbow to stomach with fingers extended toward pole. The proper distance is the forearm extended with fingers out.
(2) Belt off same as above and without bending waist forward, you should be able to reach around the pole and touch fingertips.
D. While climbing, gaffs should be aimed toward center of pole.
E. Length of steps:
(1) Steps up a pole should be six to twelve inches.
(2) Steps down a pole should be twelve to eighteen inches.
F. Circling a pole:
(1) To circle around a pole, you should belt off at desired location. To circle right, you should take four to six inch steps with the right foot, six inches above the left. To circle left, reverse the procedure.
G. When belting off on a pole, one foot should be approximately six inches higher to provide better balance.
H. Points of interest:
(1) Never carry heavy objects up a pole. Use HANDLINE!
(2) Never pull wire up on belt that is across any thoroughfare or where it may get hung up on obstacles. USE HANDLINE!
(3) When working on a pole keep legs straight without locking knees.
(4) **Always** keep knees away from pole
(5) One ounce of prevention is worth ten pounds of cure.

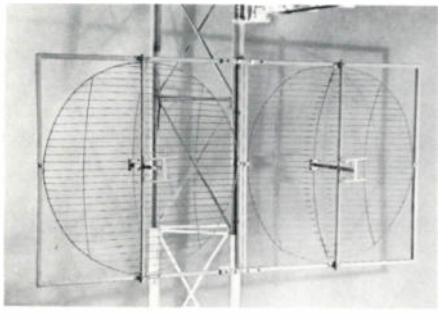
A pole is as safe as **you** make it—one ounce of prevention is worth ten pounds of cure! □

PRODUCT REVIEW

NEW COMPONENTS FOR CABLE TELEVISION SYSTEMS

NEW PARABEAM UHF ANTENNAS

Jerrold has introduced a new series of high gain UHF antennas for CATV head-end reception. Designated "Parabeam," the basic antenna models feature a modular design which allows stacking for increased gain requirements. Models are available in single, dual, and quad arrays—in six- and eight-foot diameters. According to the



manufacturer these offer 1/10th the wind-load of solid-surface dishes of equivalent gain—allowing installation at high tower elevations where UHF signals are usually greater and most uniform.

Parabeam antenna models are available for all UHF channels 14 through 83. Complete data is available from Jerrold Electronics Corp., Government & Industrial Division, Box 1467, Philadelphia, Pa. 19105.

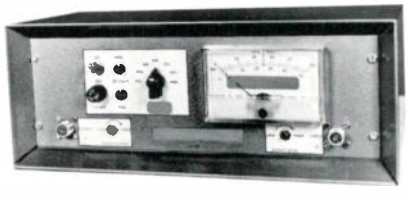
AMPLIFIER IN CAST ENCLOSURE

C-Cor Electronics, Inc., has announced that their high output bridging amplifier is now available in a cast enclosure. The casting

is aluminum for aerial installation or cast iron with hot dipped galvanized finish for underground usage. The bridging amplifier is a plug-in module, the Novacor Model BA-4 and BA-2, with output of 50 dbmv on each of four legs, or 53 dbmv on each of two legs. In typical systems, use of the high output bridger is said to result in fewer bridger amplifiers and approximately on half the line extender amplifiers normally used. According to the manufacturer the units have a gain of 36 db and 39 db respectively, with low noise figure of 13 db maximum. The new casting allows for improved weatherproofing, as well as RF tightness. The amplifier is also available with directional coupler feed. Price is $495.00 and delivery is from stock. For further information contact C-Cor Electronics, Inc., 60 Decibel Road, State College, Penna. 16801.

NEW HEAD-END UNIT

A new solid-state head-end unit complete in one package is being offered by Jacobsen Electronics.



The HE-99 Pea Shooter is a transistorized single channel head-end package including conversion from any VHF channel to any other VHF Channel. A one watt high level output will drive up to 2 and ½ miles of low loss cable on antenna runs without additional amplification. According to the manufacturer. Separate controls enable control of audio levels for adjacent channel operation. Rigid automatic gain control stabilizes output at 40db for 2 db output variation of 30 db for 1 db output variation. The single channel units are priced at $1,200.00. For further information contact Jacobsen Electronics, P.O. Box 427, Rapid City, S.D.

NEW CORRUGATED CABLE

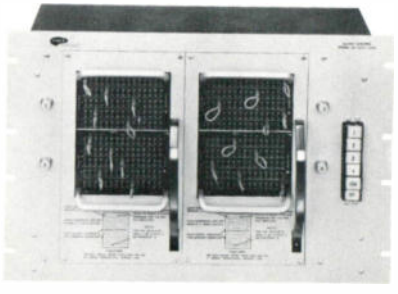
A new seamless, metal-jacketed corrugated coaxial cable, called .'Coro-Flex" has been introduced by Amphenol Cable- Division of Amphenol Corporation for use in the CATV industry, and variety of other applications. Coro-Flex seamless corrugated cable is available in both 0.500-in. and 0.325-in. O.D. The product is said to be completely moisture-proof. Com-

pression tests are said to prove it to be 30 percent stronger than non-corrugated solid-jacketed cable because the impact stress is spread evenly over a wider area instead of causing a sharp bend or kink.

Amphenol's new corrugated cable is also said to be 50 percent more flexible than the solid-jacket type. Electrical characteristics are: 80.0 percent V.P. and 75 ohms nominal impedance. It can be terminated with standard type F connectors. Available dielectrics for "Coro-Flex" include: Teflon, polyethylene and Polyfoam. Further information may be obtained from Amphenol Cable Division, 6235 S. Harlem Ave., Chicago, Ill. 60638.

DYNAIR'S NEW CONTROL UNIT

Dynair Electronics, Inc. has introduced a new control unit designed to facilitate the manual or automatic programming of CATV systems. The Salvo Control Unit allows the operator to pre-select five inputs on each of four 15-input, 5-output program boards. The selected five inputs of a given board may then be switched to the five program output lines by depressing a related pushbutton. Actual switching is accomplished through



a Dynair solid-state switching frame controlled by DC voltages directed through the four computer-type patch boards of the Salvo Control Unit. The unit may be controlled locally by use of four interlocked pushbuttons on the front panel. For more information contact Dynair Electronics, 6360 Federal Boulevard, San Diego, California.

NEW PRODUCTS FROM CRAFTSMAN

Placed in national distribution by Craftsman Electronic Products, Inc. is the Vu-sharp modulator directional tap for community television systems. Benefits provided by the new Su-Sharp modular directional tap are the elimination of reflections due to TV set feedback and cable mismatch. Shielding

against RFI leakage is provided by the unit's die-cast housing. It is also protected by moisture resistant strip-line construction. According to the manufacturer the tap has a tilt design for each of eight values from 6db to 34db, insertion loss is said to be less than 0.3db for the 18db model. The unit can be used with both .412 and .500 cable with pedestal mounting available. Cost of the standard .412 model is $7.90. Outlet plates range in cost from $1.58 to $5.80.

Another tap announced by Craftsman is the new model MAT-8 Modular Amplifier Tap. Within a die-cast housing is a two-transistor, two-stage, all-channel amplifier to overcome losses in long drop cables and gives extra signal strength for multiple outlets. Provision is made for one, two, three or four tap outlets with interchangable module plates. The tap contains separate and adjustable gain and tilt controls for signal balancing. The unit is powered remotely by low voltage A.C. and is fully shielded against RFI leakage.

Cable mismatch is said to be reduced with the use of Craftsman's new Sure Grip connectors. Conceived originally for use with Craftsman's Vu-Sharp modular directional tap, Sure Grip connectors can also be used with other trunk and feeder line CATV distribution equipment. For further details on equipment mentioned above contact Craftsman Electronic Products, 133 West Seneca Street, Manlius, New York 13104.

DIGGER-DERRICK INTRODUCED

Pitman Mfg. Co., has introduced a new digger-derrick to its line of medium and heavy duty polecats. The digger-derrick has been designated the Pitman "55" series Polecat. The new model is said to have a maximum lifting capacity of 8000 pounds at a 4 foot radius and a maximum sheave height of 30 feet. It is available in three models: cornermount, centermount, and bridgemount. Continuous rotation is a standard feature on all Series "55" Polecats. For additional information write: Pitman Mfg. Co., Grandview, Mo. 64030.

TRAILERS OFFER STANDARD EQUIPMENT

Standard equipment now available on all Baker cable reel trailers include: I. C. C. specified lighting (dual stop and turn signals, side marker and clearance lights, six reflectors), fenders with flaps and landing gear. Trailers are painted safety yellow. Standard features of the HWSC-8 and HWSC also include electric brakes and safety brak-away switch. The HWSC-8 and HWSC are equipped with a double-acting hydraulic hand pump that raises reel to travel position. Pump also raises height of tongue to coupling position behind truck. Numerous trailer accessories are available optionally. Baker cable reel trailers are designed to handle job requirements of the utility, communication and construction industries. Baker trailers also can be modified for use as pole hauling carriers. For further information contact Baker Equipment Manufacturing Co., 1710 High Point Avenue, Richmond, Virginia 23230. □

ADVERTISER INDEX

THE CATV CLASSIFIEDS

Reply to Dept. ... , TV Communications, 207 N.E. 38th, Oklahoma City, Okla.

Rate for classifieds is 25 cents per word for advertising obviously of a non-commercial nature. Add $1.00 for Box Number and reply service. Advance payment is required; minimum order is $4.00. Classified rate to commercial advertisers is $30.00 per column inch (2¼" col.). Deadline for all classifieds is 1st of preceding month.

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CATV DIRECTOR

Former developer-owner-operator of several CATV systems now seeks to associate with large firm or new group to develop and operate same. Wide experience in advertising, broadcasting and sale promotion.

Age 39 with college education. If you need an aggressive executive with the full range of management skills from financial to technical to sales in the CATV field, write immediately to Dept. T14, TV Communications.

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CATV System with cash flow. Will offer stock of public corporation for good system. Write Dept. T122, TV COMMUNICATIONS.

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REGIONAL SALES REPRESENTATIVES WANTED

Outstanding manufacturer of CATV cable has several openings for Regional Sales Representatives. Must know the CATV business. Sales experience desirable, but not necessarily required. Substantial base salary plus commissions, outstanding fringe benefits. Growth potential unlimited. Please send detailed resume in confidence to Dept. T18, TV Communications.

EXPERIENCED CATV ENGINEER WANTED

System to begin construction located outside of Pittsburg area. Send resume to Dept. T13, TV Communications.

WANTED

Two VHF Crystal Control Converters, Channel 8 to Channel 6 Conversion. Must be in good condition. Write Antenna Systems Corp., 67 Main St., Massena, N.Y. 13662.

TECHNICAL OPPORTUNITY

Wanted—Chief Technician for new expanding 100 mile CATV system. Must know Jerrold head end and plant maintenance. Good salary and advancement opportunity. References and resume required. Reply Dept. T16, TV Communications.

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DYNAIR has an immediate opening for a sales-minded technician to specialize in CATV head-end equipment. Will be assigned initially to engineering department on final tests of new solid-state CATV head-end equipment. After orientation, will transfer to sales department as application specialist. Some field work anticipated. An outstanding opportunity to grow with DYNAIR Electronics Inc., 6360 Federal Blvd., San Diego, California.

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Multiple system owner in metropolitan New York area requires CATV technician/engineer to manage Engineering Department. Must be fully experienced in system layout, installation, maintenance, and technical personnel supervision. Must be knowledgeable with pole make-ready requirements and have negotiation experience with utility company representatives. Knowledge of microwave preferred. Excellent opportunity for challenging career. Salary range to $13,000, based on qualifications. Send resume to Dept. T15, TV Communications.

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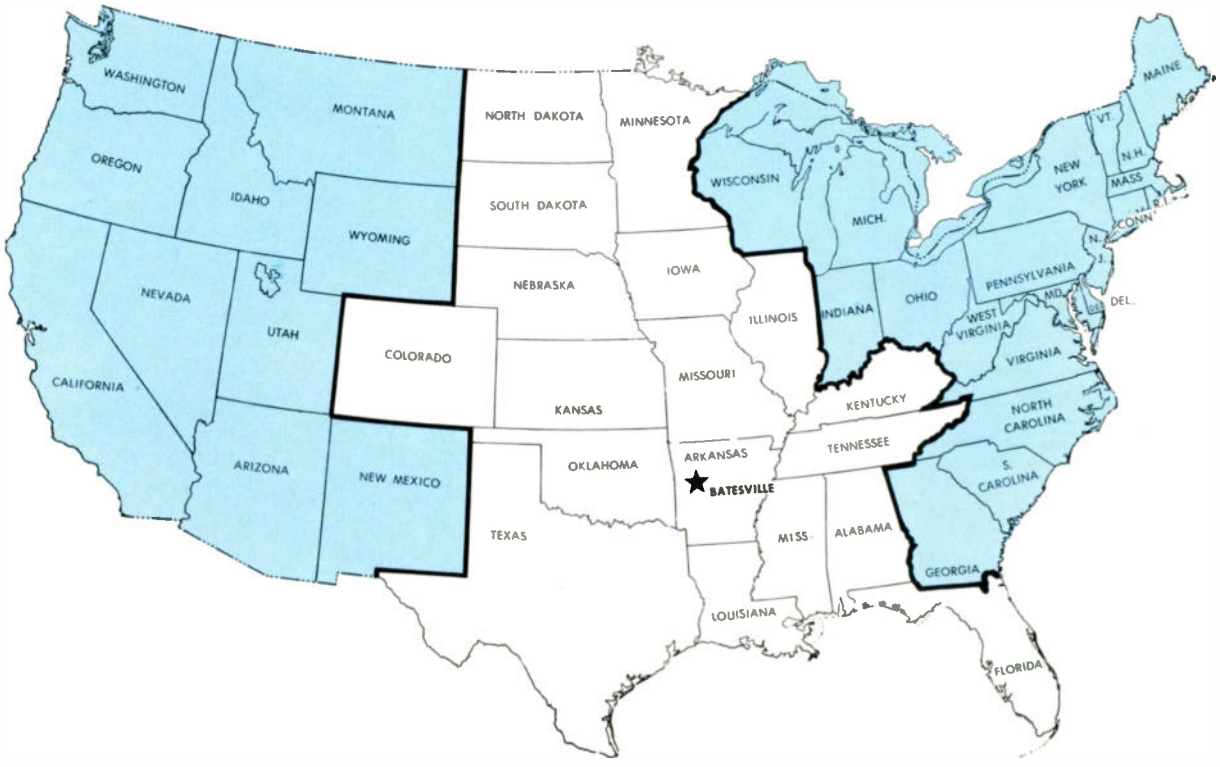

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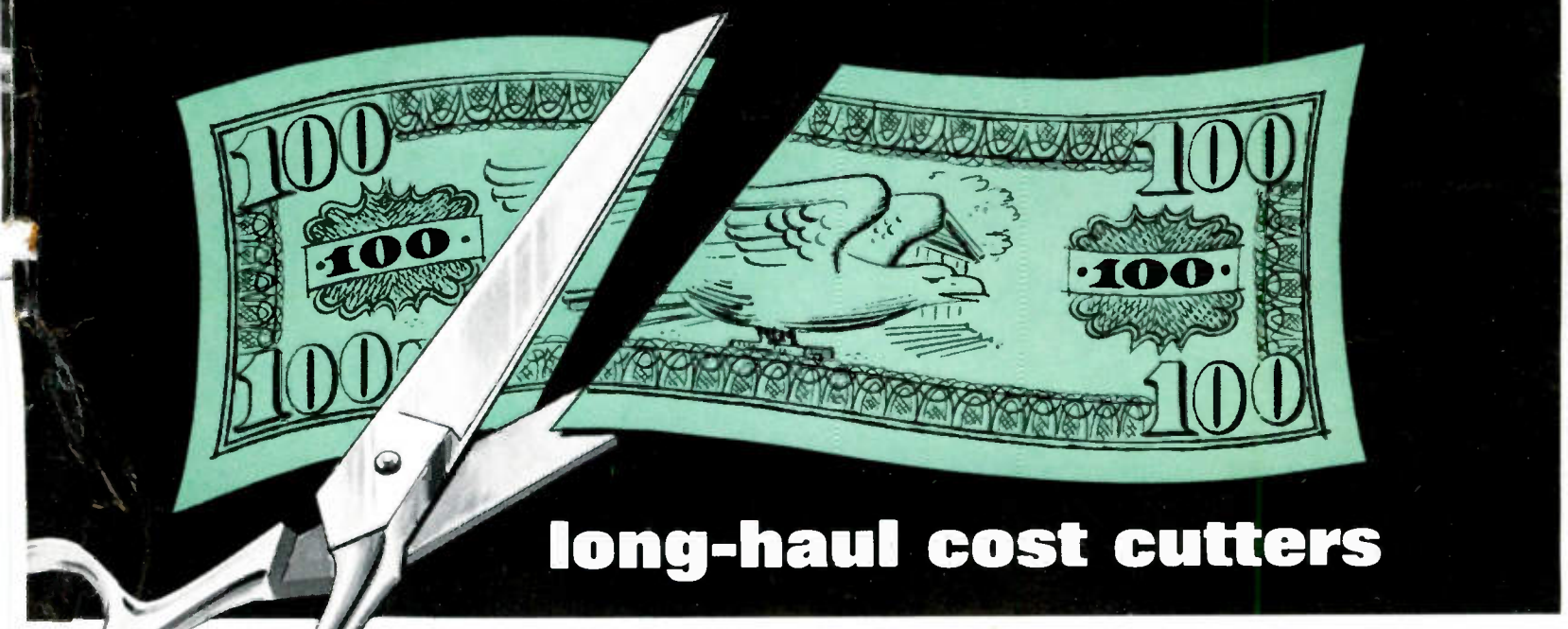

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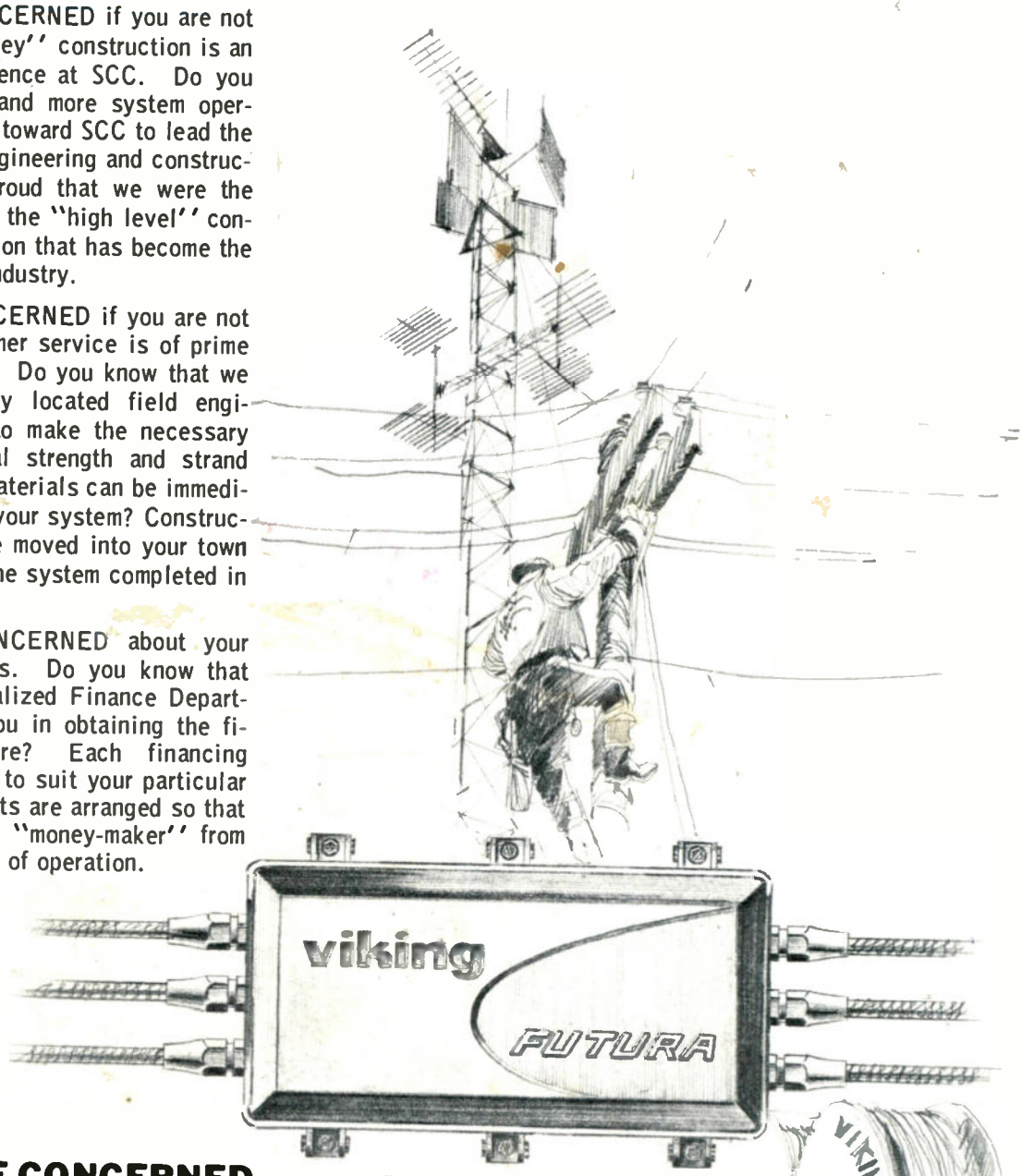

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