



February 1965

# TV & Communications

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Los Angeles, Cal.

**1965 ANNUAL  
DIRECTORY**





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BIGGEST  
SINGLE  
EQUIPMENT  
PURCHASE  
IN  
CATV  
HISTORY**

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THIS  
PAGE FOR  
THE EXCITING  
STORY**

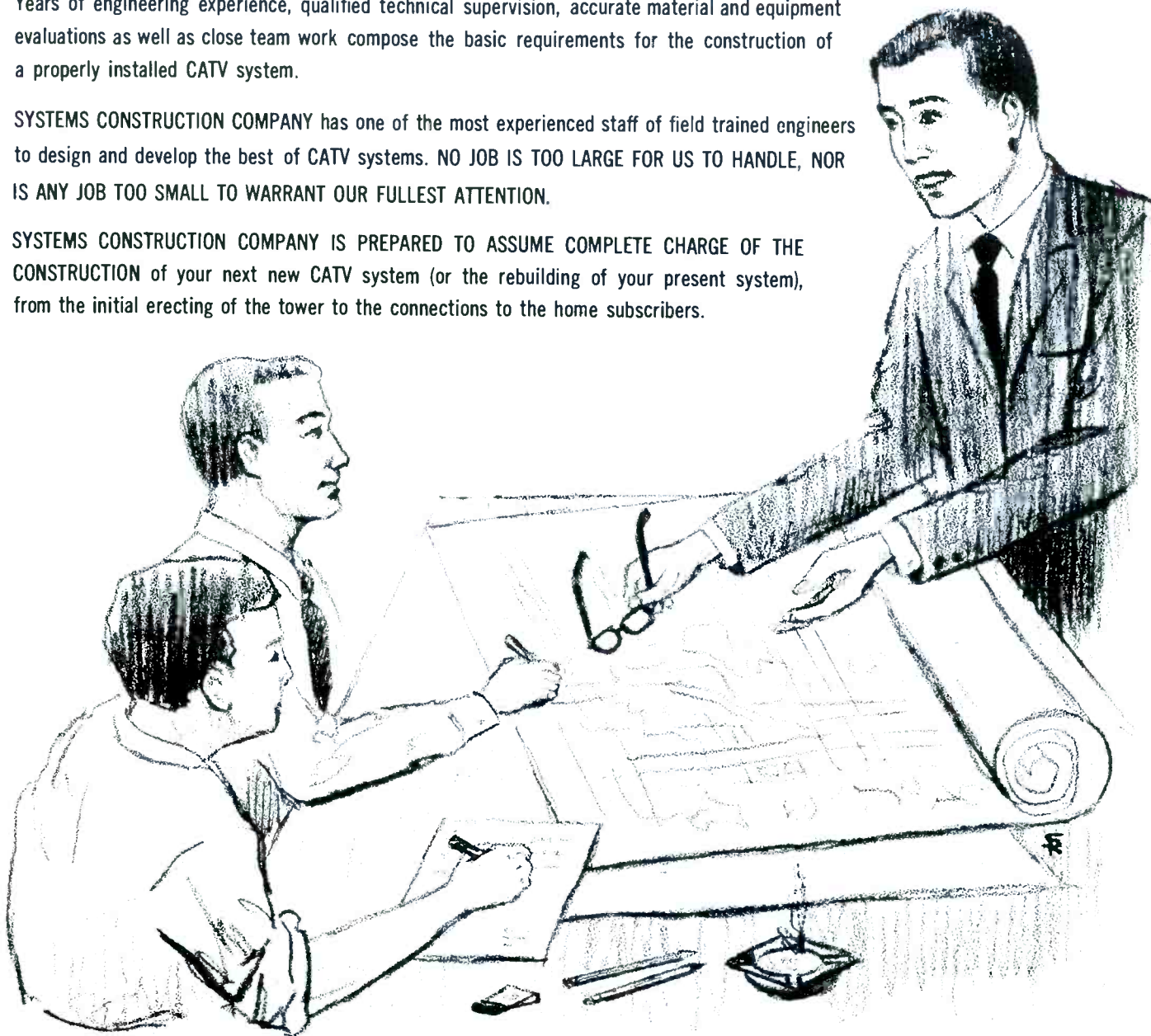
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Q A - 190

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SIZE 3/4 75 Ohm  
 TYPE UNF No Jacket  
 DATE 12/3/64

R. F. Cable Inspection Report

F. D. No. 23959  
 C. D. No. \_\_\_\_\_  
 CUSTOMER \_\_\_\_\_

TRACE NUMBER	LENGTH	50KV			CORONA LEVEL	INSULATION RESISTANCE	CAPACITANCE		ATTENUATION				V <sub>p</sub>	Z <sub>0</sub>	Sweep Attenuation		
		1 Min					meas	pt	100		220					MCS	
		meas	pt	ft					meas	100 ft	meas	100 ft				meas	100 ft
225 B.9	1195	OK	OK	OK	OK	20300	17.0	6.7	.612	10.6	.888			79.8	74.8	OK	
224 C.11	1205	"	"	"	"	20000	16.6	6.6	.547	10.4	.863			80.7	75.9	OK	
225 C.7	1197	"	"	"	"	19900	16.6	6.7	.558	10.3	.86			80.7	75.8	OK	
225 B.12	1197	"	"	"	"	20000	16.7	6.4	.535	10.4	.87			80.4	75.7	OK	
225 B.2	1207	"	"	"	"	20100	16.65	6.7	.535	10.4	.862			81.3	75.3	OK	
225 B.10	1185	"	"	"	"	19800	16.8	6.5	.548	10.3	.87			81.0	74.7	OK	
225 B.8	1215	"	"	"	"	20300	16.7	6.7	.552	10.5	.864			80.6	75.7	OK	
224 C.8	1225	"	"	"	"	20000	16.3	6.6	.538	10.4	.85			82.3	75.7	OK	
225 B.4	1210	"	"	"	"	20300	16.7	6.7	.553	10.5	.868			80.4	75.7	OK	
224 A.3	1190	"	"	"	"	20000	16.8	6.6	.55	10.4	.875			80.2	75.5	OK	
225 C.2	1208	"	"	"	"	20100	16.65	6.6	.548	10.4	.863			81.2	75.2	OK	
225 A.24	1198	"	"	"	"	19900	16.6	6.5	.542	10.3	.862			80.8	75.8	OK	
223 A.5	1195	"	"	"	"	19600	16.4	6.6	.552	10.2	.854			81.5	76.0	OK	
224 E.10	1185	"	"	"	"	19600	16.5	6.5	.548	10.3	.868			81.2	75.8	OK	
225 B.6	1207	"	"	"	"	20200	16.7	6.6	.547	10.4	.862			80.6	75.5	OK	
224 C.10	1218	"	"	"	"	19900	16.3	6.7	.55	10.3	.846			81.8	76.2	OK	
225 B.5	1210	"	"	"	"	20300	16.7	6.7	.553	10.4	.862			80.5	75.6	OK	
225 B.7	1210	"	"	"	"	20300	16.7	6.8	.562	10.5	.868			80.3	75.8	OK	
225 A.8	1215	"	"	"	"	20300	16.7	6.7	.552	10.5	.868			80.6	75.5	OK	
224 C.7	1215	"	"	"	"	20200	16.6	6.6	.543	10.6	.872			81.5	75.2	OK	

Remarks: *Perf. Punct. Duffly Maycock. et*

Inspector: *T. M.*

**Eyebrows are raised whenever engineers see the outstanding performance data on Rome Unifoam\* cable. In view of Rome's rigid manufacturing specifications, it's no wonder.**

Take this test sheet from a recent production run of 1/2-inch cable, for example. It's like hundreds of others to come out of our Inspection Department, where every reel of Rome Unifoam is examined.

**Record of each length** The first column on this sheet gives the "Trace Number," which appears on the shipping tag and thus gives each length of cable an individual identity, both to our customer and to us. It gives us complete traceability of the length back through every manufacturing operation right from the beginning. From this trace number we can identify and locate the complete manufacturing history of the length, including drawing and inspection of the copper conductor, extrusion of the foamed polyethylene insulation, complete strip-chart records of extrusion conditions, application of the seamless aluminum sheath, and all of the test and inspection data on the finished cable. We are so sure this length is up

to standard or better that we print our name on the surface once every foot.

There are a couple of columns for recording the continuity test on the conductors. This isn't much (and a broken conductor is admittedly a remote possibility) but, after all, the validity of the electrical measurements is based on the assumption that the conductor is continuous. So why not be sure?

**Checked inside and out** The column marked "Visual and Dimensional" means just what it says. And an "OK" here means that the copper is smooth, bright, and clean; that the two are essentially concentric with each other; that the cell size of the foamed polyethylene is within tolerance; that all dimensions are correct. We tell you this is all true on every reel of Rome Unifoam CATV cable and we mean it. If the Inspection Report doesn't say "OK" here, the length won't be shipped to you. The same goes for the dielectric strength test and the insulation resistance test. Just because we never see a failure doesn't mean we should stop spending time on the test.

Capacitance, attenuation at 100 and 220 mc, velocity of propagation, and characteristic impedance are carefully

checked and recorded. You are interested in having these values within tolerance, so we have to be. Every length is given a sweep test, and is only given an "OK" if the deepest "hole" between 54 and 220 mc is less than 2.5% below the smooth curve.

**Put it to the test** Really, you don't need to test our cable before you put it up, because if it isn't right we won't ship it. But if you've got the time and are curious, we'd love to have you run your own tests. We promise you will be real happy with the results. While you are looking at this test sheet, don't overlook the uniformity and low level of attenuation values. Would Rome Unifoam CATV cable let you eliminate two or three repeaters in your system design? It's something to think about.

**Get the word** For a copy of our folder on Rome Unifoam CATV Cable, call your nearest Rome/Alcoa representative or write Rome Cable Division of Alcoa, Dept. 40-25, Rome, N. Y. 13440.

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# TV & COMMUNICATIONS



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# A Timely Reinforcement

The cable television industry has for some time been reluctantly resigned to the inevitability of CATV legislation. But if any cable operator has believed that fair and equitable federal regulation would be established as a smooth and uneventful process, developments of the last few weeks should fully dispel such illusions!

On page 13 of this issue you can learn in detail how the National Association of Broadcasters has "backed out" of an apparent agreement on proposed CATV legislation. NAB and NCTA sub-committees had submitted a compromise proposal, reached after several months of conferences and deliberation. But NAB's television board summarily dismissed the proposal which, in fact, contained major compromises in the original CATV Association position.

Instead of the simultaneous nonduplication protection for local stations, which the sub-committees had agreed to, the NAB inflexibly reverted to its old demands for 15 day before-and-after nonduplication. NCTA and the NAB's Future of Television in America Committee had agreed on simultaneous nonduplication by FCC rule making. That is, stations would get such protection simply by asking for it. Delayed nonduplication, on the other hand, would be granted only on a case-by-case basis by the Commission.

The NAB, in its official proclamation emanating from the television board's January 25 Palm Springs meeting, has demanded automatic delayed nonduplication for all local stations in CATV-served markets. This is the type of duplication protection now being required by the FCC of all community antenna systems which are fed by microwave.

It should now be apparent to every cable system operator and investor that their industry spokesmen are not dealing with moderate, predictable opposition. NCTA represents a young, dynamic industry. Consequently the Association leaders are, as a rule, constructive and creative in their efforts for peaceful settlement of differences with broadcasters. But the NAB leadership, representing an older, entrenched industry, reflects firmly established patterns and prejudices.

In fairness, however, it should be pointed out that there are considerable differences of opinion among broadcasters and among their representatives in the NAB. An increasing number of station owners are acquiring interests in CATV and a great number of broadcasters have for many years been capitalizing on the added exposure which community systems afford their programs. And, of course, there is a possibility that the naming of Mr. Vincent T. Wasilewski as NAB president may herald a new spirit in the NAB attitude toward CATV.

Although we remain hopeful of an improving NAB/CATV relationship, we would be naive to count on its advent. The indications are that the CATV interests face an unyielding and sometimes unreasoning foe, in the broadcaster's Association. We view it, therefore, as extremely fortunate that the National Community Television Association now has Frederick W. Ford in its presidency. With Ford's mature hand on the helm, the chances of achieving rational, practical controls for CATV are substantially improved.

Since the industries' representative associations have been unable to agree on compromise legislation, the NCTA has essentially tossed the ball back to the Federal Communications Commission. As a former Commissioner and Chairman of the FCC, Ford is singularly qualified to work constructively and harmoniously with the Commission. His concern for fair and orderly management of CATV long since established him as a man who knows and understands cable television.

Although he has just recently joined the ranks of the cable television industry, and that in the midst of battle, NCTA president Fred Ford exerts experienced and knowledgeable leadership. The respect and influence which Ford brings to the top NCTA post augment his proven ability for diplomatic and effective dealings with broadcasters, FCC officials and legislators. We join with the cable television industry in welcoming Mr. Ford, a timely and reinforcement to the cause of cable television operators across the land.

*Stan Searle*





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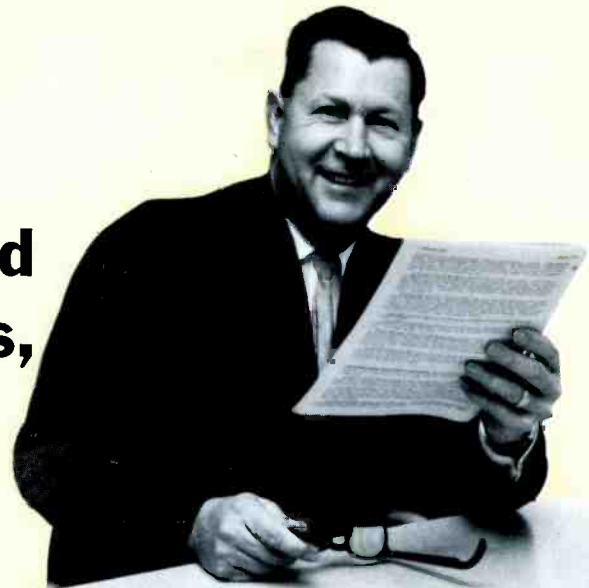
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THE WEEKLY NEWS SERVICE OF TV & COMMUNICATIONS

# News SPECTRUM

## FREDERICK W. FORD FORMALLY NAMED NCTA PRESIDENT

Concluding several months of speculation, on January 25, FCC Commissioner Ford was formally named President of the National Community Television Association.

Actually Mr. Ford had assumed NCTA Presidential duties on January 1, 1965. However, confirmation of his resignation from the FCC, effective December 31, 1964, was not made by the White House until January 16.



In announcing the appointment of Fred Ford to lead the CATV Association, NCTA Chairman Bruce Merrill stated that "Mr. Ford brings to NCTA qualities of leadership, fairness, and intimate knowledge of both the CATV and broadcasting industries. His long experience with regulation and administration in the communications field, and his leading role in the formulation and execution of some of the Commissions most significant programs, make him uniquely qualified to assume the duties of President of NCTA."

## NAB NAMES WASILEWSKI

The National Association of Broadcasters late last month named Vincent T. Wasilewski as its new president. An NAB veteran, he joined the association's legal staff more than 15 years ago and has most recently served as executive vice president. He has been

chief executive officer since the resignation of LeRoy Collins from the NAB presidency.

NAB also announced plans to have a full-time chairman. The job will initially be occupied by Williard Schroeder, Michigan broadcaster. A new NAB chairman is to be elected in June when Schroeder's term will expire.

Wasilewski's salary will be \$50,000 per year. The chairman's job is understood to carry a salary of not more than \$50,000.

## FORD DENOUNCES NAB REJECTION OF NCTA/NAB LEGISLATIVE PROPOSALS

In response to CATV legislative proposals approved last month by the Television Board of the National Association of Broadcasters, NCTA President, Frederick W. Ford has charged that NAB has rejected "the understandings so long and laboriously worked out by the sub-committees" of the NCTA and NAB. Departures of the compromised legislation proposed by the NCTA and NAB committees "unnecessarily and injuriously penalize community antenna television systems with no corresponding benefit," Ford said.

Meeting in Palm Springs, California on January 26, NAB's TV board made major alterations in the NCTA/NAB sub-committee recommendations. Recommendations. Representatives from both industries had previously agreed to give protection to local television stations against simultaneous program duplication for fifteen days before and after local broadcast.

In a statement issued by NCTA, Ford declared that "NCTA agreement to the legislative proposals was predicated on the simultaneous duplication protection as written in the understandings approved by the NAB and NCTA committees.

"The sub-committee understandings contain compromises, some of which were reluctantly agreed to by NCTA but we agreed to them in good faith in an effort to afford adequate recognition and protection to local television stations. We believe that CATV systems should receive local stations,

and should respect their integrity which we feel would be adequately accomplished through protection against simultaneous program duplication," Mr. Ford stated.

The most recent action by NAB's TV board was the second occasion on which NAB had rejected the proposals submitted by the two representative sub-committees. Apparent understanding had been reached in a meeting held in Dallas, Texas on January 5 by the NAB and NCTA committees.

"We are still hopeful that the National Association of Broadcasters will adopt a more progressive attitude toward the understandings agreed to by its committee," the NCTA executive indicated. "Of course, NCTA stands ready to meet with representatives of the NAB at any subsequent meeting requested by NAB, in an effort to reach an agreement on these understandings. This would be a step forward in the orderly development and unification of both cable and broadcast television."

Mr. Ford has also released the text of a motion unanimously approved by the NCTA board of directors at its January 25 meeting held in Dallas, Texas. The motion reads, in part:

"Now, therefore, be it resolved that in the event the Board of Directors of the NAB agrees to such understanding (of CATV legislative proposals) in accordance with the NCTA committee's explanation of intent, the NCTA negotiating committee is authorized to work with the FCC and others in the drafting of legislation implementing the understanding in the public interest—upon the competition of which the draft legislation should be resubmitted to the NCTA Board for its concurrence.

"In the event the Board of Directors of the NAB will not agree to the above understanding the committee is authorized to inform the FCC and to resume discussions with it looking toward, at this session of Congress, legislation on CATV designed to best serve the public interest."

## MUIR ANNOUNCES PURCHASE

John S. Muir, Jr., President of Marin Cable Television, Inc., Mill Valley, California, and Robert Rose, proprietor of Sausalito Community TV System, have announced that Marin Cable Television, Inc. has purchased Sausalito Community TV in Sausalito, California. Broker in the transaction was Daniels & Associates, Inc. With this acquisition, Muir is establishing residence in the Sausalito

area where he will actively direct the operation and expansion of the cable television system.

#### UNITED ARTISTS BATTLES N.Y. CATV

The scramble for community antenna franchise contracts in New York City has been complicated by the allegation that the city could become liable for as much as \$6.8 million annually on the basis of copyright infringements. Attorneys for United Artists Television submitted a 76-page memorandum contending that CATV is an "electronic transmission system," rather than a master antenna; that copyright infringement is involved in the distribution of programs without consent by CATV's; and that the city could become liable along with system operators since the city would be sharing in the proceeds from signal distribution.

The memorandum, prepared by the legal firm of Phillips, Nizer, Benjamin, Krim and Ballon, suggests that the city require a community antenna franchise holder to carry a liability insurance policy to protect the city from a "potential multi-million dollar liability."

Further, it is suggested that systems operating in the city be limited to simultaneous distribution and that only signals broadcast in the New York market be carried. Another suggested condition is that cable operators be required to obtain the consent of the "owners or authorized distributors" of program material.

#### KAISER ENTERS CATV MANUFACTURING

The first in a line of CATV low-band and all-band trunk line and distribution line amplifiers is being manufactured by the CATV division of Kaiser Aerospace and Electronics plant in Phoenix, Arizona.

J. E. Hickman, manager of the Phoenix electronics firm, says two of the outstanding Kaiser amplifiers are the models KAA-25 and KMA-25, featuring high gain and high output. These all silicon-transistorized trunk line amplifiers are designed especially for service in CATV systems with up to 12 channel TV and full FM band capability. Convenient AC cable powering and weatherproof mesenger-mounted housing permit flexible application in a variety of trunk and distribution line situations.

"We have decided to concentrate



Hickman



Kley Kamp

our efforts in the design and manufacture of equipment for CATV," Gay C. Kleykamp, marketing manager for the firm said, "and do not plan to compete with our customers in the ownership and operation of CATV systems."

In addition to the amplifiers, a program has been instituted by Kaiser to develop a complete line of CATV equipment utilizing solid state circuitry techniques and engineering and production skills acquired in Kaiser's electronic development under military contracts.

#### COX BROADCASTING EXPANDING CATV, MICROWAVE INTERESTS

Jay Leonard Reinsch, President of Cox Broadcasting Corporation, has recently announced substantial expansion plans in the community antenna television and microwave fields. Two of the acquisitions are through Cox Cablevision, a wholly owned subsidiary, which operates CATV systems in Pennsylvania, Ohio, Oregon mately 30,000 subscribers

Through an agreement with Trans-Video Corporation, Cox will acquire an interest in that company's present holdings. In addition, Reinsch and Lee Druckman, President of Trans-Video, have announced that the agreement also makes provision for joint development of CATV systems by the two firms in other areas of the country

In Cleveland, Cox Cablevision and the Cleveland Plain Dealer have announced the formation of a new corporation Cleveland Area TV, Inc., which proposes to operate community antenna systems in the greater Cleveland area. In a joint statement Reinsch and Thomas Vail, editor and publisher of the Cleveland Plain Dealer, have indicated that permits to operate CATV's are currently being filed with mayors and city councils in Cleveland and surrounding communities. Vail is Board Chairman of the new firm, with Reinsch serving as President.

Plans are to provide nine undupli-

cated television channels, including the local Cleveland stations, to viewers in the Greater Cleveland Area. Systems will also carry the new ETV channel allocated for Cleveland.

In a third expansion move for Cox Broadcasting Corporation, Leonard Reinsch also announced the purchase of a common carrier microwave system running from Chicago to Lafayette, Indiana. Video Service Company, a Cox subsidiary, will acquire the operation from Microwave Communications, Inc., a subsidiary of The Jerrold Corporation. The acquisition is subject to approval by the FCC.

Reinsch stated that the microwave system will serve community antenna companies in Peru, Logansport, and Lafayette, Indiana. Future plans, he indicated, call for extensions to serve other CATV customers in the same areas.

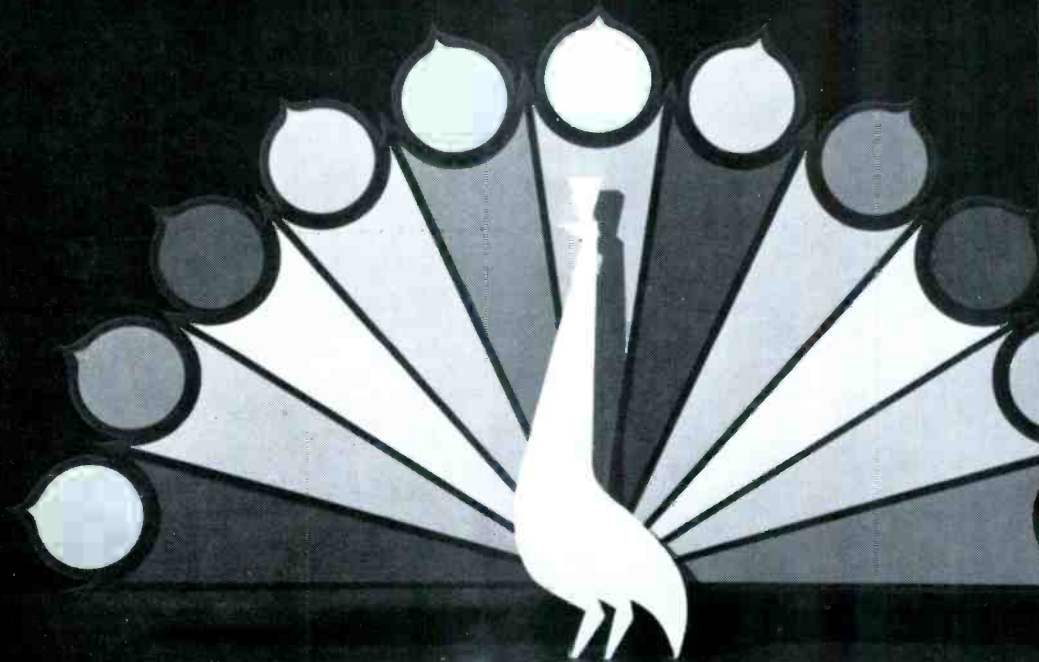
#### H & B AMERICAN MAKES RECORD EQUIPMENT PURCHASE

H & B American, the nation's largest operator of CATV systems, has announced a major modernization program involving more than 500 miles of plant. Five systems will be completely rebuilt, another will be partially rebuilt, and one new system will be installed. All systems will use new Jerrold solid-state trunk line amplifiers, distribution amplifiers, line extenders and AGC units.



Leon Papernow (l), H&B is congratulated on record purchase by Jerrold's Elmer Metz.

According to Leon Papernow, H & B Vice-President of Operations, this modernization is being undertaken to provide subscribers with more program variety and better picture quality. Once the change-over is completed, all seven systems will be capable of carrying 12 video channels, plus 20 FM stations. H & B has contracted with Jerrold Electronics for the larg-



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And yours. Here's Lenkurt's brand new 75A Microwave Heterodyne Repeater System. It relays monochrome or color video over backbone routes at *better than* CCIR specs.

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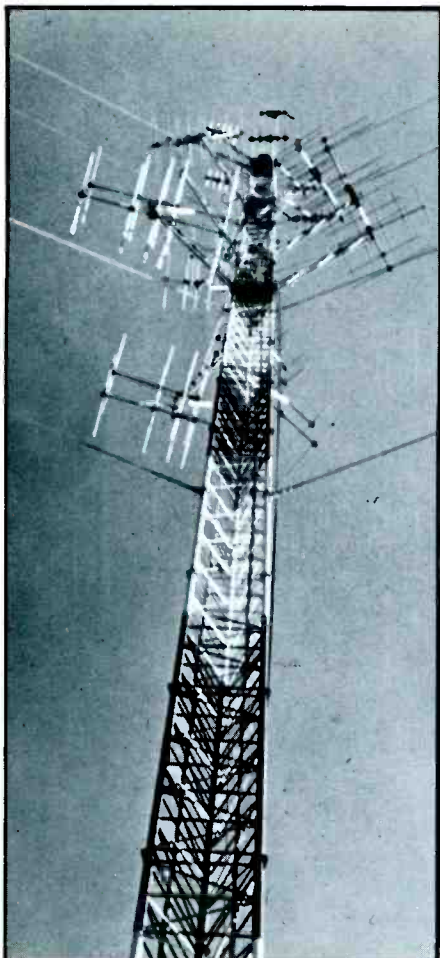
Heterodyne repeaters don't demodulate and remodulate, yet the video program is available for distribution at any repeater point without affecting through signals. And you get 3 to 4 db improvement in distortion noise, increased level stability and

only 0.5 db differential gain. Differential phase: less than 0.5°.

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### T.C.A.

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est single equipment purchase contract in the history of CATV.

"This tremendous investment," said Mr. Papernow, "is an expression of H & B's confidence in the future of CATV." The five systems to be rebuilt are Ukiah, California; Reno, Nevada; Margate, Ventnor and Longport, New Jersey; Dubuque, Iowa; and Wenatchee, Washington. Dothan, Alabama will be equipped with new solid-state trunkline amplifiers, and, a completely new system will be installed in Santa Ynez Valley, California.

#### 1965 CONVENTION PREVIEW

According to Bill Daniels, Chairman of the 1965 NCTA National Convention, the July 18-23 meeting will be unprecedented in its diversity of entertainment and enlightenment. Anticipating a registration of 1,500-1,800, Daniels advised *TV & Communications* that his committee is finalizing plans for colorful and "exciting entertainment" programs for the whole family.

Anticipated highlights include the attendance of all seven FCC Commissioners, the Governor of Colorado, the Mayor of Denver, and well known television entertainers. A "Ranch Party," Chuck Wagon Breakfast, and special excursions for wives and children will supplement the program of highly interesting discussions, speeches and technical presentations.

Daniels pointed out that the 1965 Convention is being held a month later than previous conventions to accommodate the attendance of wives and children, without conflicts with the school term.

#### ARIZONA CATV MEETING



Bruce Merrill

Cable system operators attended the Winter meeting of the Arizona Community Television Association January 22 and 23, at the Bali Hi Motor Hotel in Phoenix. Some 50 persons took part in a well planned program which included sessions for technicians as well as managers.

Featured speakers included Bruce Merrill, National Chairman of NCTA; Franklin Williams, President of the California CATV Association; and Educational Telecasters, Charles Allen

and Ben Markland. Robert Cowley, manager of the H & B Flagstaff system, spoke on problems faced by operators at a local level. "Doc" Hamilton of KVOA-TV, Tucson, gave a favorable report on CATV from a broadcaster's standpoint. Hamilton said he is "pleased with CATV" and reports that community systems which he has visited supply "a good signal" to their subscribers.



Broadcaster Hamilton (r) jokes with ACTA President Arlo Woolery.

Other speakers and participants in the Convention were Bill Close, KOOL-TV; John Saeman, Reuben H. Donnelly Corp.; Robert Ashby, Duncan Jennings, Ray Stofer, Donn Nelson, Milford Richey, Ray Holelaw, Bill Daniels and Arlo Woolery.

In his report to ACTA members Mr. Merrill discussed NCTA efforts to reach some sort of agreement with broadcasters, indicating that considerable progress has been made toward mutual understanding. Although some broadcasters' attitudes are softening, Merrill indicated that there are those "who would like to strangle us." TAME, he reported, is still "spreading poison and lies about us." NEDA has, on the other hand, been convinced to "maintain a neutral stand" on CATV, he said.

"The major accomplishment for the past year" has been the obtaining of Fred Ford as NCTA President, according to the Chairman.

Outgoing ACTA President Arlo Woolery presided over the meeting. In an election held on Saturday, officers were named for the coming year. They are: President, Allen B. Dean, Vumore, Winslow, Ariz.; Vice-President, Earl Hickman, Kaiser CATV and Douglas Cable TV, Douglas, Ariz.; Secretary-Treasurer, Eddie Furman, Ameco, Phoenix.

#### AMECO PREDICTS \$20 MILLION YEAR

According to Bruce Merrill, president of Ameco, Inc. Phoenix-based cable equipment manufacturing company, indications are that the total volume sales for 1965 will be around \$20 million. The forecast is for the

manufacturing corporation, Ameco, and does not include Merrill-owned cable systems or Antennavision Service Company, the microwave common carrier complex owned by Merrill.

To serve as a gauge for Ameco's phenomenal growth during the past year, as recently as 1962 Ameco's total volume was just a little over one million. Now Ameco is reaching this figure on a monthly basis. Expansion of manufacturing facilities have increased six-fold during the past year and there are now 400 production people working in three shifts around the clock at Ameco.

**CROSLY BROADCASTING AND MEREDITH-AVCO HOLD SEMINAR**

Mr. John T. Murphy, President of the Crosley Broadcasting Corporation and a director of Meredith-Avco, Inc., hosted a seminar for officers and representatives of the Crosley Broadcasting Corporation and Meredith-Avco, Inc., last month at Crosley headquarters in Cincinnati. The day-long seminar was held to discuss community antenna television systems and the future plans of Meredith-Avco in the CATV field.

In his remarks, Murphy outlined the reasons for the meeting, saying: "We are here today so that both Meredith and Crosley might assist Meredith-Avco activities in market studies and persuing CATV permits." He also noted, "We expect that as a result of this seminar, Crosley's representatives will be able to extend valuable assistance to the Meredith-Avco effort."



Standing from left to right are Raymond Schneider, John T. Murphy, and Mr. James Frost.

The seminar was conducted by Raymond V. Schneider, vice-president and general manager of Meredith-Avco, Inc. James Frost, administrative assistant to Frank Fogarty, executive vice president of Meredith Broadcasting Co., represented Meredith at the seminar.

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KDA-23



KAL-30/KML-30



KCP-3



KCP-12

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## W. W. BEMIS JOINS SKL

*Spencer-Kennedy Laboratories Inc.* has announced the appointment of *W. W. Bemis* as Sales Manager-Television Equipment. For the last five years, Mr. Bemis has been Vice President-Operations of Image Instruments, Newton, Massachusetts.



Win Bemis is well known to the CATV industry. From 1952 to 1959 he was Chief Television System Design and Field Engineer at SKL. During that period he designed and supervised the installation of many CATV systems, including over 80 per cent of the wide band systems then in use. The Company anticipates that his appointment as Sales Manager will greatly strengthen SKL's ability to serve the rapidly growing cable television industry.

### OUR COVER

The striking tower photograph on this month's cover depicts the new 8-channel (plus FM) system in Blackwell, Oklahoma. Owned by Fidelity Cables Inc., the system is managed by Harold Phillips. The system is an SKL all-band, 400' TCA tower, Phelps Dodge Cor-O-Foam trunkline and Plastoid feeder. It feeds four Oklahoma City stations (including one educational), two Wichita, Texas stations and two Tulsa.

Mr. Bemis holds a B.S. degree in electrical engineering, is a member of I.E.E.E. and a Director of Image Instruments, Inc. and Brattleboro T.V., Inc., the oldest wide band CATV system in the U.S.

## ENTRON, INC. NAMES ED WHITNEY

*Edward P. Whitney* has been appointed vice president of *Entron, Inc.*, according to *Robert J. McGeehan*, president. Whitney is also general sales manager in charge of the marketing and field operations department.

An eight-year veteran in CATV, Whitney served for four years as executive director of NCTA. More recently he was national sales manager for Ameco Inc., in Phoenix, Arizona.

Prior to entering CATV, Mr. Whitney was an airline sales and public relations executive for 16 years. He is a graduate of Texas A & M University and a Lt. Colonel in the Air Force Reserve.



"Mr. Whitney's appointment was a long contemplated move to strengthen the company's position in a highly competitive field. His broad background in CATV is expected to increase our sales which are already far ahead of last year's, at this time." Mr. McGeehan stated.

## EMPLOYEE OF THE MONTH

*Bruce Merrill* (left), President of *Ameco, Inc.*, 2949 West Osborn Road, Phoenix, Arizona, is shown presenting a wrist watch to *Floyd Bapp*, chosen by the company as Employee of the Month. Bapp, who has been with Ameco since February, 1958, is an analyst and expeditor for the production department. He was chosen because of outstanding accomplishments, ability to get along with fellow employees and his loyalty to the company.



Merrill (l) awards watch to Bapp

Bapp, who is 31 years old, started with the company in metal fabrication where he was the only one in the department. From there he went into test and alignment as a technician. Next he became a solder and assembly supervisor. On his present job he helps to analyze the production records, making them meaningful for management decisions. He is also active in scheduling and follow-up in the event of a parts shortage.

## RICHARD MUNSKE JOINS NCTA STAFF

*Richard E. Munske*, 31, has been named to the staff of the *National Community Television Association*, it was announced by NCTA Chairman Bruce Merrill.

Mr. Munske will assist NCTA's Director of Information, Don Andersson, in the Association's information services to its members and the public. His duties will include the editing of NCTA's weekly membership news bulletin.

For the past four years, Mr. Munske was associated with "Undersea Technology" magazine—a monthly publication in oceanography and underwater defense — serving as editor for three years. He was formerly an elec-



tronic engineer and technical writer in the fields of radar and antenna design, photogrammetry, and sonar systems for the Avion division of ACF Industries, Alexandria, Va., Melpar, Inc., Falls Church, Va., and John I. Thompson & Co., Washington, D.C.

He attended Texas A&M University and The American University in Washington, D.C. where he graduated with a degree in mathematics in 1957.

## AMECO ANNOUNCES PERSONNEL APPOINTMENTS

### ROBERT ASHBY

New assistant advertising director for *Ameco, Inc.*, is *Robert D. Ashby*, a graduate of the University of Illinois. He took graduate work in journalism, advertising and TV Production at Northwestern Graduate School.

In 1953 Ashby worked for a small UHF station in Illinois where one man "did everything." Later he was continuity and production manager for a station in Saginaw-Flint Bay City, Michigan. In 1959 he went into sales service and continuity for KKTU, Pueblo, Colorado.

### ROGER KLEINT

In Phoenix, *Ameco, Inc.*, has announced the appointment of *Roger Kleint* as field engineer.

Kleint is a graduate of the University of Arizona where he majored in electronic engineering. Prior to joining Ameco he worked for Motorola in Phoenix for 7 years as a design engineer, test engineer and production engineer. He has also had 8 years of experience as a radio-TV serviceman.

Kleint and his wife, Laura, have two children, Craig, 6 and Glenn, 3.

### JAN HERRMAN

*Jan Herrmann* recently joined the staff of *Ameco, Inc.*, Phoenix, Arizona as an electrical engineer. Born in Indonesia, Herrmann moved to Amsterdam, Holland when he was 15 years old. He obtained a bachelor's

### RODDAY GETS BRAND-REX POST

The appointment of *Robert J. Rodday* to General Manager of the *Brand-Rex Division of American Enka Corporation* has been announced by *P. B. Stull*, president. The Division's executive headquarters are in Concord, Mass. with plants in West Acton, Mass. and Willimantic, Conn.

Mr. Rodday had been Executive Vice President of the Rex Corporation

degree in electronics at Hilversum College in Holland, after which he joined the Dutch Royal Air Force. In 1958 Herrmann was sent to the United States to receive training as a jet pilot.

During his stay in the United States Herrmann was so impressed with the opportunities this country afforded that he returned here in 1961 to make this country his permanent home.

Prior to joining Ameco, Herrmann operated a business of his own which serviced and designed audio equipment and medical equipment. He also started a second company, Alpha Research, manufacturing wireless microphones and FM tuners. He was secretary-treasurer and general manager. He sold both businesses in August and came to work for Ameco. In addition to his background in electronics he is a law student.

### JACK STONE

*Jack Stone* has recently rejoined the staff of *Ameco, Inc.* as tech-rep with Salesmobile No. 2, traveling Texas, Oklahoma and Louisiana.

Stone was with Ameco in 1963 with the company's first salesmobile. Prior to joining Ameco he was a bush pilot and a radio technician in Alaska. He set up camp radio transmitters for oil company camps. Stone was in this work six years working out of Anchorage, Alaska.

prior to its acquisition by Enka. Since 1960, when the Division was formed, he has been Director of Administration and Development, Director of Manufacturing, and Director of Sales and Marketing. Mr. Rodday was most recently Assistant General Manager.

Mr. Rodday received his A.B. degree from Dartmouth College and his M.B.A. degree from the Amos Tuck School of Business Administration.

### ALPHA WIRE MOVES TO TORRANCE

The Alpha Wire Corporation, Pacific Division located its new factory and office facility at 2815 Columbia Street, Torrance, California.

Mr. Donald Rappaport, Vice President and General Manager of Alpha said, "This new building is Alpha's third expansion on the West Coast since 1959. The move is indicative of the growth of Alpha's Pacific Division."

The Pacific Division's new headquarters are in a brand new building with Alpha occupying 25,000 square feet.

Alpha Wire Corporation manufactures and distributes a diversified line of electronic wire and cable, insulation materials, and coaxial cable serving the 13 Western states.

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Stone

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**ADLER ELECTRONICS, INC.**—One Le Fevre Lane, New Rochelle, New York  
**AERO TEST EQUIPMENT CO.**—8401 Chancellor Row, Dallas, Texas  
**ALL PRODUCTS CO.**—Box 520, Mineral Wells, Texas  
**ALPHA WIRE MANUFACTURING**—180 Varick Street, New York, New York  
**AMECO**—2949 West Osborn Road, Phoenix, Arizona  
**AMPEX**—401 Broadway, Redwood City, Calif.  
**AMPEREX-ELECTRONICS CORP.**—230 Duffey Avenue, Hicksville, L. I., N. Y.  
**AMPHENOL CABLE**—6235 South Harlem Ave., Chicago, Illinois  
**ANDREW CORPORATION**—Box 807, Chicago, Illinois  
**ANDREWS TOWER**—1420 Layton Ave., Fort Worth, Texas  
**ARMADILLO MFG. CO.**—847 E. Colfax Ave., Denver, Colorado  
**BECKMAN INSTRUMENTS, INC.**—2200 Wright Ave., Richmond, California  
**BENCO TELEVISION ASSOCIATES**—27 Taber Road, Ontario, Canada  
**BENDIX CORP.**—Baltimore, Maryland  
**BLACKBURN & CO.**—RCA Building, Washington, D.C.  
**BLONDER-TONGUE**—9 Alling Street, Newark, N.J.  
**BRAND REX**—31 Sudbury Road, Concord, Mass.  
**CABLE TV CONSTRUCTION CO.**—P.O. Box 94, Iola, Kansas  
**CANNON CAMERA CO.**—554 Fifth Avenue, New York, N.Y.  
**CAS MANUFACTURING CO.**—P.O. Drawer B, Mineral Wells, Texas  
**CATV EQUIPMENT CO.**—144 Lakeside Avenue, Seattle, Washington  
**C-COR**—Box 824, State College, Pennsylvania  
**COHU ELECTRONICS**—San Diego, California  
**COLLINS RADIO CO.**—Dallas, Texas  
**COLUMBIA WIRE & SUPPLY**—2850 W. Irving Park Road, Chicago, Illinois  
**CONRAC**—Glendora, California  
**CRAFTSMAN ELECTRONIC PRODUCTS**—133 West Seneca, Manlius, New York  
**CUSHCRAFT**—621 Hayward St., Manchester, N.H.  
**DAGE DIVISION**—455 Sheridan Avenue, Michigan City, Indiana  
**DANIELS & ASSOCIATES**—2930 East Third Avenue, Denver, Colorado

**DAVCO**—P.O. Drawer 861, Batesville, Arkansas  
**DU MONT LABS**—750 Bloomfield Ave., Clifton, N.J.  
**DYNAIR ELECTRONICS**—6360 Federal Blvd., San Diego, California  
**ECONOMY FINANCE**—108 East Washington Street, Indianapolis, Indiana  
**ELECTRONIC SPECIALTY CO.**—4561 Colorado Blvd., Los Angeles, Calif.  
**ENGINEERED PRODUCTS**—Box 1185, San Jose, Calif.  
**ENTRON, INC.**—2141 Industrial Parkway, Silver Springs, Maryland  
**E-Z WAY PRODUCTS**—P.O. Box 17196, Tampa, Florida  
**FINCH LIMITED**—246 W. Broad St., Falls Church, Va.  
**FORT WORTH TOWER**—6404 Brentwood Drive, Fort Worth, Texas  
**GC ELECTRONICS**—400 S. Wyman Street, Rolford, Ill.  
**GENERAL PRECISION LABS**—Pleasantville, New York  
**HEWLETT-PACKARD CO.**—1501 Page Mill Road, Palo Alto, Calif.  
**HICKOK ELECTRICAL INSTRUMENT CO.**—10514 Dupont Ave., Cleveland, Ohio  
**HILL ASSOCIATES**—Society Hill Bldg., Philadelphia, Pennsylvania  
**HOLT ELECTRONICS**—105 E. Spruce Street, Mahanoy City, Pennsylvania  
**INTERNATIONAL WIRE & CABLE**—1665 N. Milwaukee, Chicago, Illinois  
**JAMES MILLEN MFG. CO.**—150 Exchange St., Malden, Mass.  
**JAMPRO ANTENNA CO.**—6939 Power Inn Rd., Sacramento, Calif.  
**JERROLD ELECTRONICS**—Philadelphia, Pennsylvania  
**KAISER AEROSPACE & ELECTRONICS**—P.O. Box 9098, Phoenix, Arizona  
**KINGS ELECTRONICS**—40 Marbledale Road, Tuckahoe, N.Y. 10707  
**LENKUR**—1105 County Road, San Carlos, California  
**MARK PRODUCTS**—1801 W. Belle Plaine, Chicago, Illinois  
**MICROFLECT CO.**—3450 25th St., S.E. Salem, Oregon  
**MICROLINK**—1355 Marconi Blvd., Copiague, L.I., New York  
**MICROMEGA CORP.**—4134 Del Rey Ave., Venice, California  
**MINNESOTA MINING & MFG.**—2501 Hudson Road, St. Paul, Minnesota  
**MIRATEL ELECTRONICS**—3600 Richardson St., New Brighton, St. Paul, Minn.  
**MOTROLA**—4501 Augusta Blvd., Chicago, Illinois  
**OBARSKI & ASSOCIATES**—2441 Hillsboro Ave., Dallas, Texas  
**PACKARD BELL ELECTRONICS**—1920 S. Figueroa St., Los Angeles, Calif.  
**PENNSYLVANIA GROWTH INVESTMENT CORP.**—Two Gateway Center, Pittsburgh, Pennsylvania  
**PHELPS-DODGE**—60 Dodge Ave., No. Haven, Conn.  
**PLASTOID**—42-61 24th St., Long Island City, N.Y.  
**PREFORMED LINE PRODUCTS**—5349 St. Clair Ave., Cleveland, Ohio.  
**PRODELIN, INC.**—Highstown, New Jersey  
**PRUZAN (JACK) CO.**—1963 First Ave., South, Seattle, Wash.  
**RADIO CORPORATION OF AMERICA**—Camden, N.J.  
**RAYTHEON**—411 Providence Turnpike, Westwood, Mass.  
**ROHN MANUFACTURING**—6718 W. Plant Road, Peoria, Illinois  
**ROME CABLE**—Rome, New York  
**SADELCO, INC.**—601 W. 26th St., New York, N.Y.  
**SAXTON PRODUCTS**—215 North Route 303, Congers, N.Y.  
**SITCO**—2850 North Mississippi, Portland, Oregon  
**SIMPSON ELECTRIC CO.**—5200 West Kinzie Street, Chicago, Illinois  
**SPENCER-KENNEDY LABS**—1320 Soldiers Field Road, Boston, Mass.  
**SUPERIOR CABLE**—P.O. Box 489, Hickory, N.C.  
**SURFACE CONDUCTION**—1501 Broadway, New York, N.Y.  
**SYLVANIA ELECTRIC PRODUCTS**—730 Third Ave., New York, New York  
**TACO**—Sherburne, New York  
**TAPE-ATHON**—523 So. Hindry, Inglewood, Calif.  
**TELCO**—Box 472, Lewistown, Pennsylvania  
**TELEGLOBE**—400 Madison Ave., New York, N.Y.  
**TELEMATION**—2275 S.W. Temple, Salt Lake City, Utah.  
**TELEPROMPTER**—311 W. 43rd St., New York, N.Y.  
**TELESYSTEM SERVICES CORP.**—Glenside, Pennsylvania  
**TELSTA CORP.**—1700 Industrial Road, San Carlos, Calif.  
**TIMES WIRE & CABLE**—358 Hall Avenue, Wallingford, Connecticut  
**TOWER COMMUNICATIONS**—505 Sixth St., Sioux City, Iowa  
**TRIPLETT ELECTRICAL INSTRUMENT CO.**—Bluffton, Ohio  
**TUTORTAPE LABS**—777 Lexington Ave., New York, N.Y.  
**TVC**—Box 38, Carlisle, Pennsylvania  
**TV GUIDE**—Radnor, Pennsylvania  
**UTILITY TOWER CO.**—3140 N.W. 38th Street, Oklahoma City, Oklahoma  
**VIDEO COMPONENTS**—200 West 57th Street, New York, N.Y.  
**VIDEO SYSTEMS OF AMERICA**—445 Park Ave., New York, N.Y.  
**VIKING CABLE CO.**—830 Monroe St., Hoboken, N.J.  
**VISUAL ELECTRONICS**—356 W. 40th St., New York, N.Y.  
**VITAL INDUSTRIES**—3614 S.W. Archer Road, Gainesville, Florida  
**WESTBURY CATV CORP.**—212 South Fulton Ave., Mount Vernon, New York  
**WOLFE TOWER**—222 North St., Cleveland, Mississippi

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# 1965 ANNUAL DIRECTORY

This special 1965 Annual Directory Issue has been compiled as a permanent reference manual for equipment and services used in CATV, MATV, microwave and CCTV applications including Educational and Instructional Television and industrial systems. Current information has been supplied by manufacturers and most major suppliers, however, a few were not able to provide prices and information for this special issue. (Listings for products or firms marked with an asterisk\* have been taken from previous listings and may not reflect current prices or specifications. "PNS" indicates that the manufacturer did not supply a pricing schedule for his product.)

For your convenience, an Index of Products appears on page 79. A complete list of manufacturers and suppliers with their addresses is reproduced on page 20. Readers are invited to contact individual firms for complete product specifications and price information.

While this Special Directory is the most complete and accurate compilation of products and services available to the cable TV (microwave and closed circuit television industries, *TV & Communications* cannot assume liability for the content or accuracy. Every effort has been made to provide accurate information and any errors or omissions brought to our attention will be corrected in a subsequent issue.

EDITOR

## BROADBAND EQUIPMENT

### HEAD-END AMPLIFIERS

#### BLONDER-TONGUE

**Low noise, mast-mounted amplifier, Model AB-3.** Provides 25 db minimum gain on all VHF channels plus FM. Choice of 300 ohm or 75 ohm output. Stripless terminals for 300 ohm twin-lead; solderless "quick-disconnect" terminals for 75 ohm co-ax. Amplifier uses low noise frame-grid tubes. Complete with remote power supply. Net: \$78.50.

**Low noise amplifier, Model HAB.** 25 db minimum gain. Both 300 ohm inputs and outputs. Separate high and low band gain controls. Uses frame-grid tubes. Maximum output (across 75 ohms): 0.9 volts for less than 1% cross-modulation (low band); 0.6 volts for less than 1% cross-modulation (high band); 2.5 volts for less than 3% cross modulation (low band); 1.0 volts for less than 3% cross-modulation (high band). Net: \$49.65.

#### DAVCO ELECTRONICS CORP.

**12-Channel functional design head-end.** Custom designed head-end completely controls channels 2-6 and 7-13 plus all the FM channels available and closed circuit weather channel. Regulated primary AC power, electronically regulated DC voltages. Built-in remote power supplies for antenna mounted preamplifiers. Hi-Q and band pass filtering for elimination of adjacent channel interference. Equipment is mounted in slanted bench type racks which are bonded together. Comes fully aligned and ready for service. All connecting cables are pre-assembled. All conversions are crystal controlled. Price is available on request.

**Head-end amplifier, Model MBT/213-75.** Low noise, mast mounting, solid state high output. Gain of 18 db on all TV channels. Available with 75 or 300 ohm input, 75 ohm output. Complete with remote power supply. List: \$32.50.

**Solid state FM band amplifier, MBT/FM.** Low noise, mast mounting. Covers entire FM band. Gain 12 db. 300 or 75 ohm input, 75 ohm output, complete with remote power supply. List: \$29.95.

**BA. 24/75 split-band amplifier.** Low noise, frame grid tube model. Gain 20 db Hi and Lo band. Noise figure 5.5 db average. Maximum output 46 db with 7 channels. List: \$32.50.

**Super 36 split-band amplifier.** High gain, low noise frame grid tube type. Gain 36 db high grid tube type. Gain 32 db Hi and Lo band. Noise figure 5.5 db average. Output 500,000 microvolts per channel maximum with 7 channels. List \$42.50.

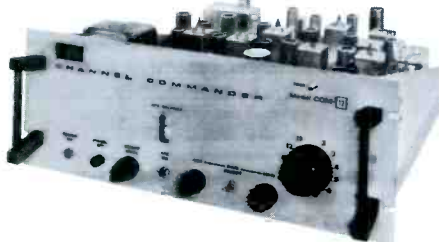
**Super 36 split-band amplifier.** Gain 36 db high and low band. Noise figure average 5.5 db. Output 0.5 volts per channel maximum with 6 channels. List: \$60.00.

#### DYNAIR ELECTRONICS

**Head-end modulator systems.** Up to 12 VHF channels for systems fed by microwave and local weather channel. Proven color capability. Carrier levels independently controlled. Carrier continuously supplied for system AGC. Crystal multiplied direct to channel to eliminate extraneous frequencies. Spare mixer inputs for FM band. Regulated power supplies. Includes cables, filters and mixers. Write for further information. Photo shows Model TX-1B, 10-channel unit.

#### JERROLD ELECTRONICS CORP.

**Unitized head-end for completely controlling any VHF channel, Model COM\*.** Unit controls signals in such a way that adjacent channels on both



high and low bands can be fed to a distribution system. Compatible with existing system equipment, the unit may be used to supply an additional VHF channel, to replace obsolete equipment, or as a spare head-end for any VHF channel. Covers VHF channels 2 to 13. Has IF AGC; automatic frequency control circuitry to keep the tuner "on-the-button"; automatic sound

control circuitry to maintain the desired relationship between sound and video carriers. Highly selective IF amplifier incorporates specially-designed traps and filters to eliminate adjacent channel interference. Output of IF amplifier is fed to a crystal-controlled converter for off-channel conversions. When on-channel conversion is desired, the crystal-controlled converter-oscillator is switched out and the tuner oscillator is used. Unit also incorporates a standby carrier oscillator which is energized after a specific time delay to provide a replacement carrier. Has built-in regulating transformer. Stacked multi-channel rack mount provides complete head-end installation at minimum space requirements. PNS. (\*Specify channel.)

## LINE AMPLIFIERS

#### AMECO

**Transistorized all-band line extender, Model ATM-20C-HS.** Average gain, 20 db. Maximum output, 40 db. Noise figure, 10 db, measured at 220 mc.



Tilt control, 10 db. Gain-tilt control is tilt compensated. AC/DC cable powered. Regulated power supply. 75 ohm impedance. Cascadeable, 10 units at 30 db. Strand, in-line mounting. 26 db variable input pad and internal gain control, 10 db range, available. Unit is hermetically sealed. Price: \$84.95.

**Transistorized trunkline AGC amplifier, Model ATAL-35.** Low band. One input, 40-110 mc. Two outputs: one trunk; one 10 db bridger. Average gain, 35 db. Maximum output, 50 db. Noise figure, 10 db, measured at 110 mc. 5 db tilt control; manual and AGC gain controls, minus 15 vdc adjust potentiometer. Powered by 28 vac, regulated power supply. 75 ohm impedance. Cascadeable. Pole or strand mounting. Special 1:8 db AGC action temperature compensated plus or minus 1 db minus 50 degrees F. to 160 degrees F. Price: \$263.95.

**Transistorized low band trunkline amplifier, Model ATML-35.** One 40-110 mc input. Outputs as above. Average gain, 35 db. Maximum output, 50 db. Noise figure, 10 db. Gain control tilt compensated. Powered by 28 vac or 115 vac. Regulated

power supply. Cascadeable, 40 units at 35 db output. Pole or strand mounting. Price: \$202.50.

**Transistorized mainline all-band amplifier, Model ATM-60.** One 50-220 mc input; outputs as above. Average gain, 30 db. Maximum output, 50 db. Noise figure is 10 db measured at 220 mc. 5 db tilt control. Tilt compensated gain control has 15 db range. 28 vac or minus 115 vac powered. 75 ohm impedance. Recommended for remote cable powered cascade. Cascadeable with 40 units at 32 db out. Pole or strand mounting. Price: \$295.00.

**Transistorized low band line extender, Model ATL-30.** One 40-110 mc input; one 40-110 mc output. Gain is 30 db at 110 mc. 45 db maximum output. Noise figure is 10 db at 110 mc. Gain-tilt control has 20 db range. Tilt compensated for cable. AC/DC powering. Regulated power supply. 75 ohm impedance. Cascadeable, 8 units at 35 db. Strand or pole mounting. Price: \$95.50.

**Transistorized all-band trunkline amplifier and bridger combination, Model ATMB-60.** One 40-220 mc input, one trunkline and 4 bridger output. Average gain: trunk 30 db, bridger 7 db. Maximum output: trunk 50 db, bridger 45 db. Noise figure, 10 db measured at 220 mc. 10 db tilt control. Mainline gain control and tilt control has AGCP adaptor jack; bridger gain control and tilt control. Cable powered AC/DC; regulated power supply. 75 ohm. Can cascade 40 units. Pole or strand box mount. Price: \$375.00.

**Transistorized trunkline amplifier, Model ATM-70.** High level, cascadeable amplifier with cast alumi-



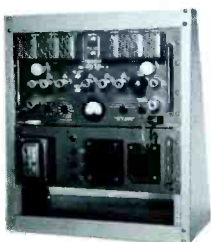
num housing, hermetically sealed. Low noise, stable temperature, for frequency range 50-220 mc. Input impedance is 75 ohm; output is tapered. In-line strand mount design with 1/2", .412 aluminum and "AM" connectors. Price is \$338.50.

**Solid state all-band trunkline amplifier, Model ATM-60.** Cascadeable and temperature compensated from -50 degrees to 150 degrees F. In-strand cabinet mounting; 75 ohm input and tapered output impedance. Connector types are aluminum or matched. Price is \$295.

**Trunkline distribution & bridging amplifier, Model ATB11-C.** Solid state, high output (45 db) amplifier that is temperature compensated and operates on all channels. 75 ohm. Has insertion loss of .4 db; 15 db average gain per output. AM matched, 75 ohm or UHF connectors and sells for \$135.15.

**ATM20-C transistorized line extender amplifier.** Unit is cascadeable, compact, weather resistant for outdoor strand or pole mounting. Features 20 db gain; all-band; 75 ohm. Output impedance is tapered to 75 ohm at channel 2. Type "F" connector. Price is \$69.50.

## BENCO



**"Trident" trunkline repeater.** Multipurpose broadband unit with regulated power supply; also use as distribution amplifier. Operates 54 to 108 and 174 to 216 mc; maximum gain on low band is 40 db, high band 64 db. Will provide channel 13 picture carrier with 8 amplifiers cascaded; has AGC and AOC built in. Price is \$768.75. Model number is BB-1000.

**Multipurpose amplifier, Model BB-500.** Trunkline amplifier with gain control and self-contained power supply. Has provision for AOC; can be used as distribution amplifier. 54-108, 174-216 mc operation; 75 ohms. Gain is 40 db (LB) and 50 db (HB). Functions as Channel 13 picture carrier with 8 amplifiers cascaded plus 4 hi-channels. Priced at \$146.45.

## BLONDER-TONGUE

**Trunkline amplifier, Model 1232.** Flat response, neutralized triode input for excellent noise figure and wide band stability. Automatic individual tube bias control compensated to equalize variations between tubes. 75 ohm impedance with 26 db minimum voltage gain. Features manual gain control with connection for automatic level control or thermally activated gain control. CATV \$326.00.

**Line amplifier, Model 1217.** "Powerhouse" amplifier has two separate sections; one for low and one for high band. Bandpass response is flat within plus or minus 1.0 db. Gain is greater than 19.0 db low band 54-108 mc; greater than 17.0 db high band 174-216 mc. Tube life extender switch adds gain reduction of 3.5 db avg. low band and 4.0 db avg. high band. Impedance is 75 ohm in and out. Unit also features full wave silicon rectifier power supply plus regulated bias supply. Net: \$224.00.

**Line amplifier, Model MLA-C.** Provides at least 40 db gain on all VHF channels. Separate gain controls for channels 7-13 and 2-6. Separate tilt



controls. Maximum output (across 75 ohms) 2.0 volts per band for less than 1% cross-modulation. 3.5 volts per band for less than 3% cross-modulation. Net: \$94.85.

**Line amplifier, Model MLA-FM.** Similar to MLA-C, except covers entire FM band. Gain ch. 2 FM: 33 db min.; ch. 7-13: 40 db min. Net: \$107.50.

## CAS MFG. CO.

**Line extender, Model TR-100-EX.** Covers 40 to 110 mc. Gain, 12 db min. across bandwidth. Single input and output. Remote powered from 20 to 30 vac or 1 DC source. Size 1" x 3".

**Trunkline amplifier, Model TRA-220S.** Wide bandwidth, cable powered, flat stable response, separate controls for low tilt, mid-band, high tilt, over-all tilt, gain, 3 position pad. Easy access to controls, cascadeable to 10 amplifiers without AGC. Strand mounting, weatherproof housing. List: \$285.00.

**Combination trunk and distribution amplifier, Model TRA-220D.** Same outstanding features as TRA-220S plus high-level, built-in distribution amplifier. The down-swing door on the aluminum housing may be locked for safety. This unit and the TRA-220S features exceptionally high output capability, equal to or exceeding most good tube units. The TRA-220D can be used with all cables and requires no fittings. List: \$375.00.

**Line amplifier, Model TRA-217.** This unit compares with most trunk amplifiers in low noise and practical output capability of plus 40 db (with at least 6 db reserve). As an extender, it gives unequaled high-level performance. List: \$108.00.

**Line Extender, Model TRA-215.** A highly regarded unit with proven field reliability. 20 db gain. Cable powered. List: \$85.00.

## CRAFTSMAN ELECTRONIC PRODUCTS, INC.

**Transistorized all-band line extender, Model MD-2100.** Pole or messenger strand mounting unit with high output of 40 db; frequency range 10 to 220 mc. 75 ohm. Has connector types of "F", UHF, .412 and .500. Price is \$62.50.

## DAVCO ELECTRONICS CORP.

Distributor for Entron line amplifiers. Write for detailed information.

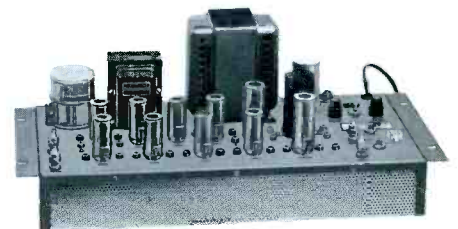
## DELTA ELECTRONICS LTD.

**Solid state amplifier, line extender type TEX 40.** Split band circuitry obtains high output level with low intermodulation. 54-108 mc, 176-216 mc. Gain 24 db at Ch. 13. Separate gain and tilt control on each band. Plug-in pads set input level. Switch through or forward power. Internal voltage regulation. Accepts 12-30 volts AC or positive DC. Output monitor 20 db. Recommended level for channel operation. Input plus 16 db, output plus 38 db. List: \$69.95.

**Line amplifier type 4200.** Gain of 40 db on all TV channels. Separate gain and tilt controls on high and low band. Low band 54-100 mc. High band 174-216 mc. 2.0 volts output per band for less than 1% cross modulation distortion. List: \$89.95.

**Line amplifier type 4300 covers 54-108 mc. and 174-216 mc 40 db high band gain. 30 db low band gain, otherwise as for 4200. List: \$99.75.**

**Trunkline amplifier type ABHL/60B.** Split band high level, for long cascaded trunk lines. Flat response through 40 db of cable. Incorporates



separate gain and tilt controls for high and low band. Automatic level control available as separate plug-in module. Regulated power supply. Gain, high band 47 db, low band 37 db. Output level 46 db per channel for 12 channels at cross modulation distortion of 0.14%. List: \$325.00.

**Trunkline amplifier type ABHL/60B.** Split band high level cascader amplifier. Same features as the ABHL/60 with reduced gain for more cascadeability. High band gain 40 db. Low band gain 30 db. High and low band sections cover one octave for lowest cross-modulation. List: \$325.00.

**Low band cascader amplifier type ABBL/40.** Covers channel 2 to 6 and the FM band in one broadband amplifier with a gain of 40 db. Manual gain control and tilt control with provision for external automatic level control. Recommended amplifier spacing 35 db. Maximum gain of amplifier 40 db. List: \$120.00.

**High band trunk line cascaded HBC.** Gain 45 db. Features low noise input and high level output. Recommended output level 50 db per channel for 4 channels. Has built-in gain and tilt controls

with provision for external transistorized level control ALC/THB. Incorporates regulated power supply. Used to modernize low band system. List: \$195.00.

**RF distributed amplifier type DLA/30.** Covers frequency band from 6-220 mc. Flat response with plug-in equalizer. Gain: 28 db at 216 mc. Manual gain control has 8 db range. Noise figure 9 db low band, 10 db high band. Output plus 42 db maximum per channel for 12 channels, at a cross modulation of .14%. Automatic gain control type AGC/DLA available. List: \$275.00.

## ENTRON

**Low band trunkline amplifier, Model LRA-40D.** Utilizes 10,000 hour tubes. Gain control range, continuously variable 0 db to full gain of amplifier. Gain, 32 db. Output, plus 52 dbmv. Mounts any position on pole crossarm. Price: \$170.00.

**High band trunkline amplifier, Model HRA-400B.** 10,000 hour tubes. Serves as high band repeater amplifier. Incorporates ALC circuit. Gain, 32 db. Max. output, plus 44 dbmv. Gain control range, 32 db. Tilt: 3 db. Flat response. Pole or indoor mounting. Price: \$270.00.

**All-band trunkline amplifier, HRA-406B.** Low and high band repeater. Used as trunkline midspan compensator. Adjustable tilt. Flat frequency response. Average gain: 2 db, low band; 32 db, high band. Maximum output levels: plus 32 and plus 44 dbmv for low and high band respectively. High band gain control. High band ALC maintains 1 db change in output level with 10 db input variation. 10,000 hour tubes throughout. Self-contained power supply. Mounts indoor or on pole crossarm. Price: \$287.50.

**Low band line extender amplifier, Model DLX-26.** Extends lines up to 2000 additional feet. Gain, 20 db. Maximum output, 41 dbmv. Noise figure, 8 db. Self-contained power supply; local or remote powered. 10,000 hour input tube. Mounts built-in or with mounting bracket Model QAB. Price: \$75.00.

**Transistorized extender amplifier, Model E-1.** High gain, high output unit that is remotely powered for strand mounting. Operates 25 to 220 mc; 75 ohms. Has ER-300 connector types and sells for \$72.50.

**Transistorized extender amplifier, Model E-2.** Similar to E-1 except operates 50 to 220 mc and fittings are ER-301 type. Price is \$109.00.

**Line extender amplifier, Model E-2B.** Remote



transistorized unit similar to E-2 except has matched input-output. Lists for \$114.00.

## HOLT ELECTRONIC RESEARCH

**Transistorized all-band line extender, remote.** Gain: 20 db. Output: 33 db. 75 ohm input and output.

**Transistorized all-band line amplifier, AGC equipped.** Gain: 40 db. Output: 33 db. Separate low and high band tilt controls and gain controls. Low and high band switches, 75 ohm input and output.

**Transistorized all-band chain amplifier.** Manual gain control. Delay line adjustment, 75 ohm input and output.

**Transistorized all-band remote line amplifier.** Gain: 38 db. Output 33 db. Manual. Low and high band tilt and gain controls, 75 ohm input and output.

**Transistorized low band remote line extender.** Gain: 38 db. Output: 33 db. Tilt and gain controls, 75 ohm input and output.

**Transistorized low band manual remote line amplifier.** Gain: 38 db. Output: 33 db. Tilt and gain controls, 75 ohm input and output.

**Low band line extender amplifier, Model LEA.** 5 to 8 db variable tilt. Manual gain control. Output: 40 db. Gain overall: 40 db at Channel 6. 75 ohm input and output. Self-contained power supply.

**Low band line amplifier, Model LBB-MAN-40.** 4 to 9 db variable tilt. Manual gain. Output: 40 db. Gain: 40 db at Channel 6. Utilizes an electronic regulator to minimize output changes with changes in line voltage. 75 ohm input and output. Self-contained power supply.

**Low band line amplifier, Model LBB-MAN-50.** 4 to 9 db variable tilt. Manual gain. Output: 45 db. Gain: 50 db at Channel 6. Utilizes electronic regulation. 75 ohm input and output. Self-contained power supply.

**Low band line amplifier, Model LBB-AGC.** Manual or automatic gain control. Output: 40 db. Gain: 40 db at Channel 6. Tilt variable from 4 to 9 db. 75 ohm input and output. Self-contained power supply.

## JERROLD ELECTRONICS CORP.

**Low band amplifier, Model AOC-26B.** Has automatic overload control. Covers channels 2-6 and FM. 75 ohm input and output. Gain: 32 db at Channel 6. Output: 46 dbj for 1 AOC-26B at IML of -.57 db. Noise figure: 9 db. Manual gain control adjustable over 10 db range. Plug-in pads for additional gain reduction. Can be used in-line or for line-bridging applications. Built-in power supply. Uses P.I.P. or B.T.C. pads. PNS.

**Line extension amplifier, Model WLA-88.** Covers channels 2 thru 6. Minimum gain of 23 db on Channel 6 and 17 db on Channel 2. Maximum undistorted output: .1 v rms for three channel operation. Voltage regulating transformer and



built-in power line filter. Cabinet is weatherproof with iridite finish. Quick mount back plate and twist lock AC disconnect plug. PNS.

**RF distributed amplifier, Model SCA-213.** Covers 6 to 220 mc. Plug-in equalization. Flat response. Regulating transformer. Gain: 28 db at 216 mc. Output: 42 dbj (maximum) per channel for 12 channels at cross modulation distortion of 0.14%. Manual gain control has 8 db range. Noise figure: 9 db, low band; 10 db, high band. Self-contained power supply. Order AGC-213 for model with AGC. PNS.

**All-band main trunk line amplifier, Model TML-1.** All transistorized, provides unsurpassed cascadeability, extraordinary stability and long-term trouble-free performance. Significant characteristics include: bandwidth of 54-216 mc with plus or minus 0.25 db flatness; gain of 22 db; max. output capability (at -.57 db cross-mod.) of 44 dbj (per ch. for 9 ch.) and 43 dbj (per ch. for 12 ch.); recommended operational characteristics (9 ch.), input of 5 dbj (lo-band) and 8 dbj (hi-band) (12 ch. operational inputs and outputs are 1 db less); and noise figure of 10 db max. (ch. 2 full gain) and 11 db max. (ch. 13 full gain). The TML-1 includes two switchable cable equalizer sections and a 3-transistor internal power supply.

**Line extender amplifier, Model TLE-1.** All transistorized, extends feeder run and enables clear pictures even at end of feeder. Significant char-

acteristics include: bandwidth of 54-216 mc with plus or minus 1.5 db flatness (aligned thru 18 db of cable at ch. 13); gain of 18 db; max. output capability (at -.57 db cross-mod.) of 33 dbj per ch. for 12 ch.; and recommended operational characteristics (9 ch.) for one TLE-1, input (ref. ch. 13) of 16 dbj, and output of 31 dbj (lo-band) and 34 dbj (hi-band). The TLE-1 includes printed circuitry and built-in constant current/constant voltage regulation.

## KAISER AEROSPACE & ELECTRONICS

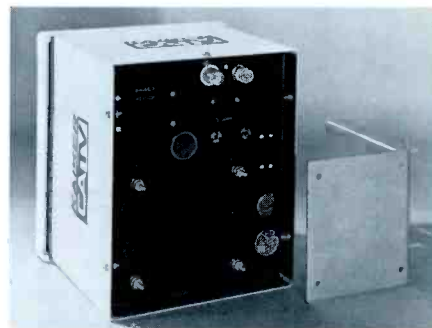
**Model KAA-25 & KMA-25 amplifier.** Mainline all-band amplifiers, Model KAA-25 (automatic gain control) and KMA-25 (manual gain control) have high gain, high output, and are all silicon-transistorized. Provides up to 12 channel TV and full



band capability. AC cable powering and the weatherproof messenger-mounted housing for unit is \$400.00; MGC is \$300.00.

**Model KAL-30 & KML-30 low band amplifier.** Provides low-band plus FM service. Model KAL-30 (automatic gain control) and KML-30 (manual gain control) are mainline low-band amplifiers. High output level and flexible mounting. Strand-mounting weatherproof housing, with special devices for lightning protection and a full-wave transformer power supply to eliminate all DC in the cable. AGC unit is priced at \$265.00 MGC is \$205.00.

**Model KCP-3 cable powering unit.** Provides two (2) amperes of 26 volt AC for cable powering.



Weatherproof housing, bracket for pole mounting and knockout for 115 volt line conduit. Supplied with customer specified coaxial connectors; VSWR of less than 1.2 to 1.0.

**Model KCP-12 cable powering unit.** Regulated, 30 volt, 8 ampere unit for AC cable powering. Provides constant output with line variation from 90 to 130 volts; for either crossarm or pole mounting in weatherproof housing. A low VSWR coupling filter provides matched connection through customer specified coaxial connectors.

## SPENCER-KENNEDY LABS.

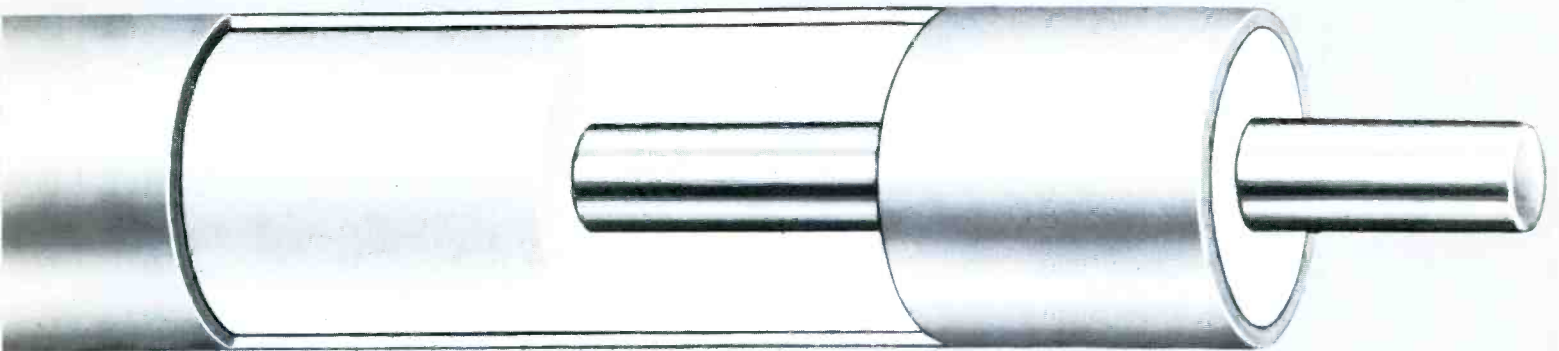
**Low band amplifier, Model 211C.** Covers 10-100 mc. Gain: 33 db at 88 mc. Choice of gain control, either manual or automatic using external 830 ALC or thermatic using external 832A Thematic gain control. Regulated, self-contained power supply. Cup core type transformers at the input and output provide excellent impedance match to the line. Rack or cabinet mounting.

**All-band amplifier, Model 222A.** Covers 40 to 216 mc. Sloped response to square root of fre-

# FOAMFLEX

SEMI-FLEXIBLE, ALUMINUM SHEATHED, AIR DIELECTRIC  
**COAXIAL CABLE**

**FIRST... TO MEET ALL THE NEEDS OF CATV**



■ Now, the availability of 75 ohm Foamflex coaxial cable in four diameters — .412", 1/2", 3/4" and 1 5/8" — fills the needs of all-band CATV systems for rugged, high-performance cable in all required sizes. Foamflex, the original foam polyethylene dielectric cable, offers unequalled low loss for superior operation in community antenna and closed circuit television. Foamflex has a proven record in demanding applications in telemetry, missile guidance and microwave in addition to CATV.

Excellent uniformity of impedance with an average VSWR of 1.05 over all channels, and low attenuation, result in remarkably good video reception for tomorrow's color TV and auxiliary service. Surprisingly, this semiflexible, air dielectric cable is competitively priced with cables covering only the low-band frequencies.

Construction consists of a copper inner conductor, foamed polyethylene dielectric, and thin wall aluminum outer conductor providing a permanent moisture vapor barrier. Foamflex is superior on the basis of operational characteristics over long use and under extreme environmental conditions. For underground use, a Habirlene jacket can be furnished.

■ average VSWR of 1.05 on all channels ■ uniform electrical properties over wide temperature variations ■ low loss, no radiation, high phase stability ■ stable attenuation at high band frequencies ■ lighter weight for easy installation ■ modified pressure taps or multi-tap distribution may be utilized ■ long term operating life

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Send for new Foamflex CATV Bulletin CA Issue 1 with full engineering data.

**PHELPS DODGE** ELECTRONIC PRODUCTS  
NORTH HAVEN, CONNECTICUT



quency. Gain: 28 db at 216 mc. Two position slope control switch. Choice of gain control, either manual (12 db), thermatic (3 db) using external 832A thermatic gain control or 830 ALC unit. Regulated power supply. Cascadable mainline unit. Rack or wall mounting.

**All-band line extension amplifier, Model 209B.** Frequency range: 20 to 216 mc. Gain: 27 db at 216 mc. Cabinet mounting. Noise figure under 14 db over entire band. 10 db manual gain control. Low cost distribution amplifier with mainline dependability. 115 vac powered.

**Solid state wide band line extension amplifier, Model 223.** Messenger mount amplifier for feeder lines; 50 to 230 mc operation. 75 ohms. Has 22 db nom. gain and flat response within plus or minus 1 db. Type "N" connectors. Price is \$94.00.

**Long line amplifier, Model 215.** Hybrid type amplifier with ALC; operates in 20 to 100 mc



range. 75 ohms. Connectors are "N" and BNC. Has gain of 28 db; flat frequency response. Has ALC and nets for \$773.00.

### TELESYSTEM SERVICES CORP.

**Trunkline amplifier, Model TAD-500.** Distributed type wide band design with built-in equalizer, manual switches, 4-step positions plus incremental in or out. Gain, 28 db at 216 mc in 3 db equalizer position. Noise figure, less than 12 db. Frequency response is flat within 1/2 db. Band width, 40-220 mc. Maximum output, 42 dbmv for TV channel operation for maximum intermodulation of .14%.

### VIKING

**All-band amplifier, Model 940.** See under Distribution Amplifiers.

**All-band solid state line extender, Model 560.** See under Distribution Amplifiers.

**All-band amplifier, Model 946.**

**All-band amplifier, Model 947.**

**All-band amplifier, Model 940.**

**Transistorized silicon trunkline amplifier, Model TLA.** Cascadable to forty units; split band construction, separate gain, tilt controls and AGC for low and high channels. Matched output as well as input, single unit capability plus 50 db/mv, gain 26 db, powered by 115 volt line or 24 vac via cable. F connectors standard. Other types optional. Price: \$330.00.

**Transistorized silicon all-band line extender amplifier, Model LEX.** Gain: 20 db, maximum output 42 db and noise figure of 10 db measured at 220 mc. 75 ohm impedance. Separate gain and tilt controls. Messenger cable mounted. Cascadable with 4 units 8 channels, at plus 36 dbmv. LEX-PLP is 117 vac line-powered. LEX-ACC is 24 vac cable powered. Prices: LEX-ACC \$99.95. LEX-PLP \$104.95.

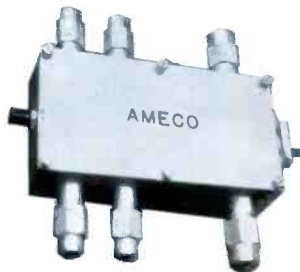
## BRIDGING AMPLIFIERS

### AMECO

**Transistorized all-band bridger amplifier, Model ATB-11.** Two 40-220 mc inputs; four 40-220 mc outputs. 15 db average gain with maximum output of 45 db. Noise figure 10 db measured at 220 mc. Tilt control, 15 db. AC/DC cable powered, regulated power supply. 75 ohms—input and output impedance. Cascadable. Pole or strand mounting. PNS.

**Transistorized low band bridger amplifier, Model ATBL-20C.** Two inputs, four outputs, 40-110 mc. 20 db average gain. 45 db maximum output. 10 db noise figure measured at 110 mc. Tilt control, 20 db. Changeable pads for adjustment of input level. Cable powered, AC/DC. Regulated power supply. 75 ohm. Cascadable. Pole or strand mounting. Price: \$130.00.

**Solid state bridging amplifier, Model ATB-70.** Four outputs, 50 to 220 mc. 75 ohm. Hermetically



sealed unit with 15 db gain. Insertion loss is 1/2 db. Inline strand mounting for outdoor use, received up to 3/4" connectors on trunk, up to 1/2 on bridging outputs. Price available from manufacturer.

**Transistorized bridging amplifier, Model ATB-75.** Four bridging outputs with average 25 db gain. Operates 50-220 mc. 75 ohm. Outdoor type for inline strand mounting; has insertion loss of 1/2 db. Contact manufacturer for price.

### CAS MFG. CO.

**Bridging amplifier, Model TR-4Way.** Covers 30 to 110 mc. Gain 14 db across bandwidth on 4 outputs. Remote powered from 20 to 30 vac or 1 DC source. 20 db variable pad on input for gain control. Maximum of 1 db thru loss. Weatherproof aluminum housing. Price available from manufacturer.

**Bridging amplifier, Model TR-95B.** Covers 54 to 95 mc. Gain: 30 db at channel 6. Gain and tilt is temperature compensated, thus reducing the need for AGC. Remote powered from 20 to 30 vac or 1 DC source. Weatherproof aluminum housing. Two inputs and two outputs for line bridging or cascaded runs. Write CAS for price.

### DAVCO ELECTRONICS CORP.

Distributor for Entron bridging amplifiers.

### DELTA ELECTRONICS LTD.

**All-band bridging amplifier, type DA. 40.** Covers all VHF channels including FM. Rack mounting with self-contained power supply. Gain: 14 db



to 4 outlets. Flat response. Low loss bridging input, switchable from bridging input to a single input. Uses plug-in pads on high and low band to set input level. Separate high and low band gain controls and tilt controls. List: \$110.00.

**High level output bridging amplifier type Super 60B.** Output 1 volt per channel for 9 channels. Gain 40 db. Covers all VHF channels including FM. Includes plug-in pads to set input level. Manual gain control and tilt controls for high and low band. 19 in. rack mounting. Self-contained power supply. List: \$195.00.

### ENTRON

**Low band bridging amplifiers, Model BA-254R.** Two inputs, four outputs, 50-88 mc. Gain: 20 db. Output, plus 42 db non-cascaded; plus 39 db cascaded. Gain control range 3 db. Attenuator plugs in 3 db steps. Built-in regulated power

supply. 75 ohm. Mounts any position. Price: \$139.95.

**All-band bridging amplifier, LHB-254R.** Two inputs, 4 outputs. Gain: 25 db; Tilt control. Gain control range: low band 25 db continuous; high band 14 db switchable. 75 ohm. 10,000 hour tubes used throughout. Mounts on trunk or distribution lines. Regulated power supply. Price: \$220.00.

### HOLT ELECTRONIC RESEARCH

**Low band bridging amplifier, Model BA-1-4.** Low output loss, transformer coupling on output,



variable tilt. Gain: 3 db at channel 6. Self-contained power supply. Output: 45 db, channel 6. Designed to drive 4 sub-trunk lines.

**Low band bridging amplifier, Model BA-2-2.** Low output loss, transformer coupling on output, variable tilt. Gain: 21 db at channel 6. Self-contained power supply. Output: 46 db, channel 6. Designed to drive two sub-trunk lines.

**Low band bridging amplifier, Model BA-2-4.** Same characteristics as BA-2-2 except has gain of 17 db and designed to drive four sub-trunk lines.

**Low band bridging amplifier, Model BA-3-4.** Same characteristics as BA-2-2 except has gain of 25 db and designed to drive four sub-trunk lines.

**All-band bridging amplifier, Model LH-BA-4-4.** Covers channels 2-13. Variable tilts, low and high band. Designed to drive 4 feeder lines. Gain: 8 db at channels 6 and 13. Output: 40 db, channel 6; 47 db, channel 13. Self-contained power supply.

### JERROLD ELECTRONICS CORP.

**Bridging amplifier, Model TBA-1.** All transistorized establishes four feeder lines at main trunkline amplifier locations. Significant characteristics include: bandwidth of 54-216 mc with plus or minus

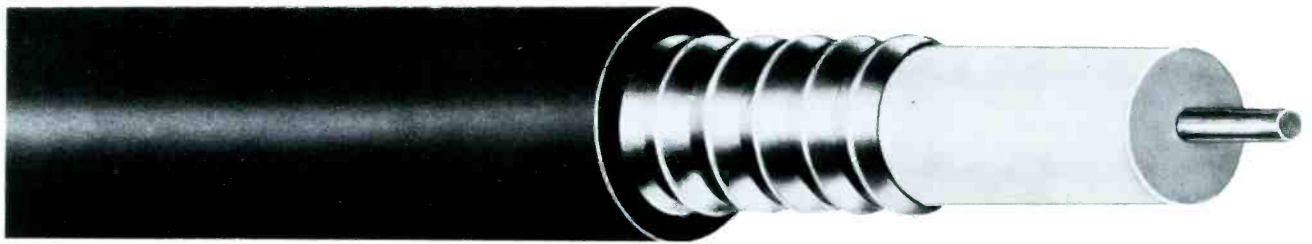


0.5 db flatness; gain of 11 db; max. output capability (at -57 db cross mod.) of 41 dbj at each of 4 outputs (per ch. for 9 ch.) and 40 dbj at each of 4 outputs (per ch. for 12 ch.); and recommended operational characteristics (9 ch.), input of 27 dbj (lo-band) and 30 dbj (hi-band), and output of 38 dbj (lo-band) and 41 dbj (hi-band). (12 ch. operational inputs and outputs are 1 db less.) Price available from manufacturer.

**Intermediate bridging amplifier, Model TBA-2.** All-transistorized, provides feeder lines between two TML-1 Main Trunkline Amplifiers. Significant characteristics include: bandwidth of 54-216 mc with plus or minus 0.5 db flatness; gain (min. full) of



20-26 db (each of two outputs); max. output capability (at -57 db cross-mod.) of 43 dbj (per ch. for 9 ch. using block tilt) and 42 dbj (per ch. for 12 ch. using block tilt); and recommended operational characteristics (9 ch.), input of 23-17 dbj at ch. 13, and output of 40 dbj (lo-band) and



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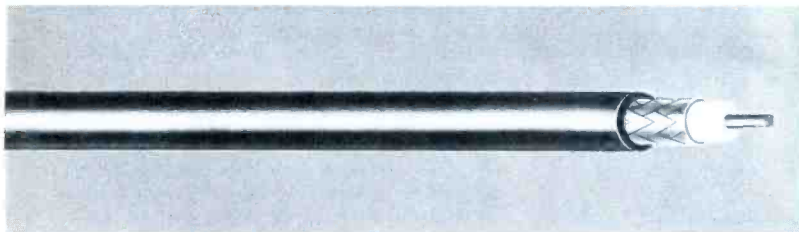
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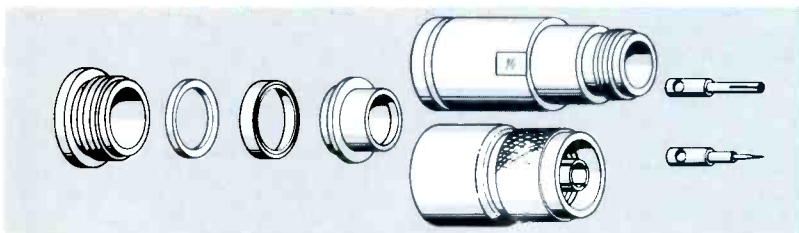
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43 dbj (hi-band). (12 ch. operational inputs and outputs are 1 db less.) Check manufacturer for price.

## VIKING

**Viking 947 trunkline amplifier.** High power, high gain with transistorized AGC. Matched 75 ohm "RF" connectors separate low and high band controls. Flat frequency response with avalanche silicon rectifier. Low, FB and high bands have separate continual manual gain controls. Price is available from Viking.

## WESTBURY CATV CORP.

**Transistorized silicon all-band bridging amplifier, Model SBA.** Average gain of 20 db. Four isolated outputs. Maximum output, plus 40 dbmv, each with 8 channels. Gain control, tilt control, built-in attenuators, regulated power supply. 75 ohm impedance. Performance temperature independent. High output; maintenance free. SBA-PLP is 117 vac power line powered. SBA-ACC is 24 vac cable powered. Price: \$174.50.

## DISTRIBUTION AMPLIFIERS

### BENCO

**High-low "Pacemaker" distribution amplifier.** Operates 54-108 and 174-216 mc. 75 ohm. Provides 35 db gain in low and high bands; 30 db gain in FM. Will mount indoors or outdoors on wall



or panel. Has separate inputs with link to combine high and low inputs for use with all-band antenna. 117 volt, 60 cps, 0.4 amp power. Power supply is built-in. Price is \$63.

**"Pacemaker II" amplifier for MATV and line extender for CATV.** High and low band operation with 37 db gain; 30 db gain FM. Has manually adjustable gain; 10 db range, and link provided for separate low/FM and high-band inputs. Specifications same as "Pacemaker." Net: \$67.45.

**"Pacemaker Junior" TV/FM amplifier.** High and low band operation. Has 10 db gain hi, low; 8 db on all FM. 75 ohms. For surface or panel mounting. 117 volt power, self-powered. Will mount outdoors in unicast. Net price is \$26.40.

### BLONDER-TONGUE

**Models MLA-C, MLA-FM and 1217** are suitable for use as distribution amplifiers. See listing under Line Amplifiers.

**Mast-mounted broadband preamplifiers, Model CMA-U.** Low-noise, solid-state broadband preamplifiers cover entire band. Response of preamplifiers flat plus or minus 1/4 db across band. Input is 300 ohms, output 75 ohms (type F connector). Sensitivity: 350 uv (average) for TASO grade 3 picture. Available with optional 75-ohm inputs. CMA-U-14-59 (Ch. 14-59). Net: \$36.95, CMA-U-53-83 (Ch. 53-83) Net: \$36.95.

### DELTA ELECTRONICS LTD.

**Output distribution amplifier Super 60.** Split band delivers 1 volt per channel on 9 channels. Gain 50 db. Amperex 10,000 hour S.Q. 8233 tubes. Manual gain control range 16 db. Tilt control 6 db. Equalization by external LEQ where required. Designed for large distribution systems and long feeder runs. List: \$195.00.

**Output distribution amplifier Super 60M.** All the features of the Super 60 plus a back matched output for minimum reflections in the feeder cable. List: \$215.00.

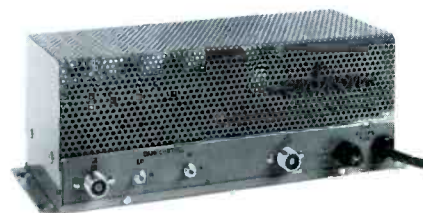
**Distribution amplifier type 4300.** Covers high and Lo band separately. Hi band gain 40 db. Lo band 30 db. Has separate gain and tilt controls for each band. Output 0.5 volts per channel for 9 channels. With less than 1% cross-mod. distortion. List: \$99.75.

**Line powered, high band extender type HBX 25.** Covers channels 7-13. Gain 25 db at 216 mc. Built-in Hi-Lo mixer network. Manual gain control range 10 db. Supplied in weatherproof housing, complete with remote power supply. List: \$69.50.

**Drop line extender amplifier type DLX.** Gain 12 db. Covers channel 2 to 13 plus FM. Powered from remote power supply to amplify extended drop line run in rural areas with low loss tap from feeder line. Complete with power supply. List: \$35.00.

### ENTRON

**Broadband amplifier, Model FA-283B.** Covers channels 2 thru 13 plus FM. Noise figure 8 db. Separate high and low band gain controls. Gain: 38



db high band and low band, 32 db FM. 75 ohm input and output impedance. Built-in power supply. Price: \$110.00.

**Broadband amplifier, Model SA-23B.** Covers channels 2 thru 13. Noise figure 7.5 db. Gain: 38 db on both high and low band. Separate high band and low band gain controls. Flat frequency response. Built-in power supply. Impedance 75 ohms. Price: \$100.00.

**High-low distribution amplifier, Model LHD-404R.** One input, four outputs. Gain: 42 db on low band; 46 db on high band. Maximum output high band plus 53 dbmv; low band plus 49 dbmv. Noise figure, 9. Plus or minus 2 db tilt control. Gain control range, 0 to 18 db, 4 db continuously. 75 ohms. 10,000 hour tubes and highly reliable compactrons. Mounts on four rubber bumpers. Plug-in attenuator. Price: \$375.00.

**Distribution line amplifier, Model ABX-40R.** Gain, 38 db. Maximum output plus 46 dbmv. Noise figure, 8.5 db. Tilt control: low plus 1.5 to plus 3.5 db; high plus 1 to plus 3 db. Gain control range 20 db. Self-contained regulated power supply. 10,000 hour tubes throughout. Price: \$163.75.

**Distribution line amplifier, Model ABX-640B.** 32 db



gain. Maximum output 46 dbmv. Tilt control: low band plus 1 to minus 2 db; high band plus or minus 1 db. Gain control range, 32 db for low band, 20 db for high band. Self-contained power

supply remotely powered. 75 ohm. 10,000 hour input tubes. Mounting clamp for strand suspension. Price: \$170.75.

**Line terminating amplifier, Model TDA-114R.** Low band unit with four outputs. 29 db gain. Local or remote powering. Linear frequency response. 10,000 hour tubes throughout. Regulating transformer. Maximum output 51 dbmv. Noise figure, 9 db. 13 db gain control range. 75 ohm. Mounts any position. Price: \$143.00.

**Low-FM-high repeater amplifier, Model LHR-45R.** High gain, high output repeater with ALC for 53-108, 173-216 mc operation. 75 ohm. Has 10,000 hour tubes; long life silicon rectifiers. Flat frequency response; separate low and high band gain and tilt controls and input attenuators. Maximum gain is 30 db low; 40 db high. Output level (16 amplifiers cascaded) at channel 6 is plus 38 dbmv; plus 48 dbmv at channel 13. Price is \$450.00.

### JERROLD ELECTRONICS CORP.

**High output distribution amplifier, Model SDA-4.** Covers all VHF channels plus FM. Low-loss bridging input (under 1 db). Rack mounting with self-contained power supply. Gain: 14 db (four outlets). Flat response. Maximum output: 44 dbj per channel for 12 channels 4 outlets. 75 ohm input and output impedance. Separate high and low band gain controls with 4 db range. Price available from manufacturer.

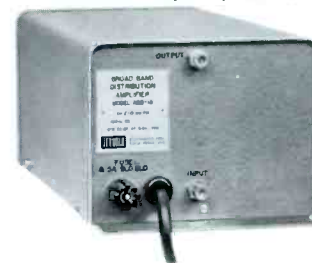
**All-band amplifier, Model 2880.** Designed for distribution service in apartment building, hotels, schools and similar installations. One volt output on both low and high band. Gain: 41 db (minimum). Manual gain control and receptacle for plugging in automatic overload control, Model OC-238. Plug-in pads. Covers all VHF channels and FM. Manual gain control has 14 db range. Built-in 4 db low band cable equalization and 3 db high band equalization. Relay rack mounting. Self-contained power supply. PNS.

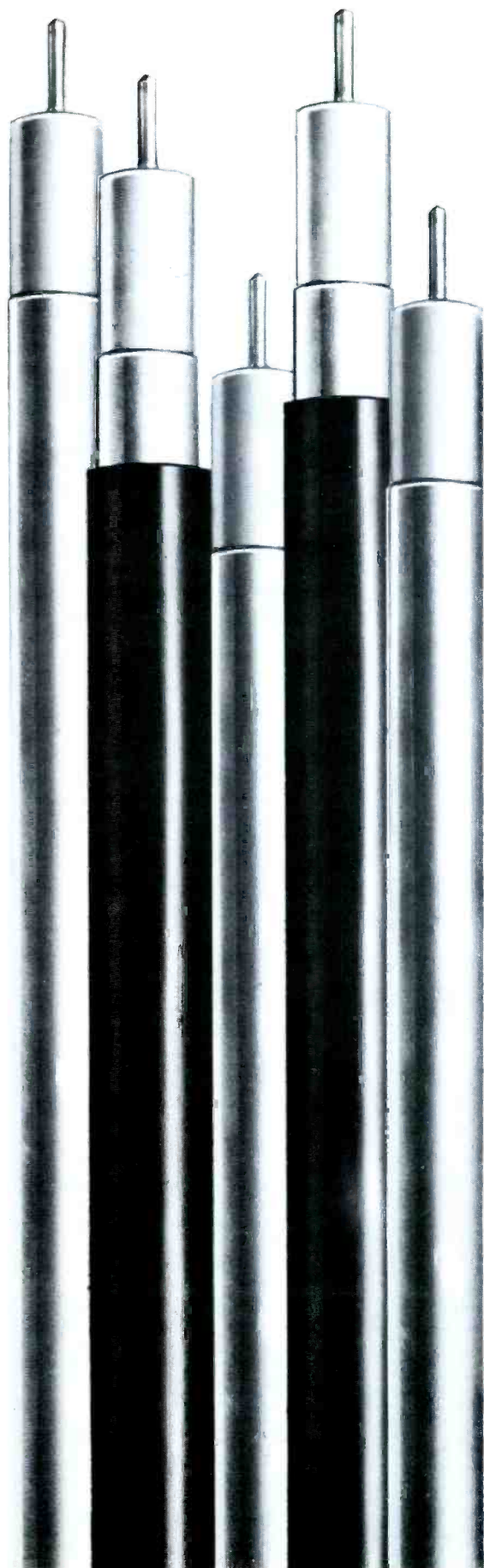
**All-band bridging distribution amplifier, Model BDA-213.** Covers all VHF channels plus FM. Matched-line bridging or single-ended input. Two-way output. Insertion loss: 1 db maximum. 5 db gain control range and 1.5 db tilt control range. Plug-in pads. Gain: 18 db minimum, low band and 25 db minimum, high band. Amplifier contains two separate amplifier strips for low band and high band fed from self-contained power supply. Output: 44 dbj (maximum) both low and high band. 75 ohm input and output impedance. PNS.

**Accessory pads for BDA-213, Model BTD-OL to 15L for the low band amplifier and Model BTD-OH to 30H for the high band amplifier.** Attenuation range at Channel 6 is 0, 3, 6, 9, 12 and 15 db for BTD-OL to 15L and 0, 5, 10, 20, 25 and 30 db for BTD-OH to 30H. Insertion loss is 1.0 db maximum. PNS.

**All-band distribution amplifier, Model 2300-A.** Designed for service in apartment buildings, hotels, schools and similar installations. Self-contained power supply. Low and high band gain controls with 14 db range. Low band equalization provision. Output: .3 v (50 dbj). 70 ohm input and output impedance. Flat response. Covers all VHF channels plus FM. Gain: 39 db, low band; 40 db, high band. PNS.

**All-band distribution amplifier, Model ABD-1A.**





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Heavy duty construction. Output: .3 v (50 dbj). 75 ohm input and output. Response flat within plus or minus 1.25 db. Self-contained power supply. Gain: 22 db, low band; 20 db, high band. Covers all VHF channels plus FM. Ideal for small systems. PNS.

**All-band distribution amplifier, Model ACL-200.** Ideal for dealer showrooms and deluxe home installations. High overload capability. 75 or 300 ohm output selected by a slide switch. Gain: 20 db, low band; 19 db, high band. 300 ohm input impedance. Response within 1 db. Self-contained power supply. Output: .15 v, low band; .10 v, high band (at 75 ohms). PNS.

**Line-bridging distribution amplifier, Model UBC-26B.** Covers low band plus FM. Gain: 30 db minimum. Flat response. Maximum output: 47 dbj\* for 5-channel operation. Less than 0.3 of 1% distortion, single unit. Noise figure: 9 db or less. 3 db manual gain control range and plug-in pads (either P.I.P. or B.T.C. series). 75 ohm input and output impedance. Self-contained power supply. Can be used for line-bridging or cascading. PNS.

(\*0 dbj equals 1,000 uv into 75 ohm load)

**Line-bridging distribution amplifier, Model MDA-4.** Covers channels 2 thru 6. Response flat within 2 db. Gain: 4 db. 75 ohm input and output impedance. Less than .5 db insertion loss. Gain control obtained by use of capacitive plug-in pad in the input circuit. Output .3 v/channel for 5 channels (maximum). Self-contained power supply. PNS.

## KAISER AEROSPACE & ELECTRONICS

**Model KDA-23 amplifier.** High output, combined with low VSWR, noise figure and cross-modula-



tion. All-band distribution amplifier for trunk, sub-trunk or distribution line use. Combination tilt/gain control permits adjustment for cable spacing from 20 db to 26 db of cable attenuation at 216 mc. Net: \$150.00.

## TELESYSTEM SERVICES CORP.

**All-band distribution amplifier, Model MLA-b-5.** Special modified unit meets requirements of all-band CATV systems. Features ruggedized tubes throughout. Covers channels 2-13 plus FM. Accepts "F" B-T and enconnectors. Separate gain and tilt control for high and low band makes unit ideal for use as distribution amplifier. Gain, 30 db min. on low band; 37 db min. on high band. Two units can be used in cascade on feeders. Companion AGC unit can be used at cascaded feeder stations to improve output level stability.

## VIKING

**Solid state line extended - "The Mustang" No. 560.** Separate gain and tilt controls. Gain: 22 db at channel 13 minimum. With inline fittings for all types of cable. Power to run the amplifier is remotely supplied from a 24 vac source. \$69.50 net.

**Hi-Low distribution amplifier, Model 946.** Gain, 42 db on low band; 46 db on Hi band; maximum hi-band output plus 53 dbmv; low band plus 49 dbmv. Noise figure 9 db average in band pass; tilt control plus or minus 2 db; gain control plus or minus 4 db continuous gain control range 0 to 18 db in 3 db step. 75 ohms, 10,000 tubes. Price on request from manufacturer.

**All-band distribution amplifier, Model 940.** Separate low and high band gain controls. Low and high band tilt controls. Gain: 40 db (minimum). Covers all VHF channels plus FM. Output: 64 dbm (1.7v) total per band for less than 1% cross-modulation. Available with either F or UHF fittings at no extra cost. Add \$10.00 to price for 10,000 hour tubes. Price: \$65.00.

**All-band distribution amplifier, Model 950.** Separate low and high band gain controls. Low and high band tilt controls. Gain: 36 db minimum. Covers all VHF channels plus FM. Available with either F or UHF fittings at no extra cost. Price: \$48.00.

**All-band distribution amplifier, Model 955.** Separate low and high band gain controls. Low and high band tilt output for 1% distortion. 1.5 volt

band flatness, 1 db maximum. 75 or 300 ohm impedance on input and output. Price: \$29.00.

**Transistor amplifier-booster No. 953.** Increase signals in subscriber's house up to four sets. Designed for low level system use as an individual subscriber amplifier. Gain: 10.5 db minimum all-band. Price: \$16.65.

**Power booster and multi-set coupler, No. 954.** Excellent for color TV and stereo FM. 8 db gain on high and low band. Allows for up to 3 TV sets or FM sets to be operated from a single antenna. \$10.00.

## VITAL INDUSTRIES

**Transistorized distribution amplifier, Model V1-10A.** Features self-contained regulated power supply, low differential gain and phase. Has four 75



ohm outputs. Gain is adjustable from -6 db to plus 6 db; frequency response within 1/4 db to 20 mc. Connectors are UHF coaxial. Price is available from manufacturer.

## UHF AMPLIFIERS

### BLONDER-TONGUE

**UHF mast-mounted amplifier, Model UB.** Six standard models cover specific UHF channels from 14 to 83. Uses two low-noise EC88/6DL4 frame-grid tubes. Gain of 14 db. Remote AC power supply. Stripless 300 ohm terminals. Net: \$66.00.

**UBP.** Similar to UB but 300 ohm input, 75 ohm output. Net: \$106.50.

**UBC.** Custom UB. Choice of frequency ranges and connectors. Net: \$147.90.

**UHF mast-mounted amplifiers, Model CMA-U-14-59 and CMA-U-53-83.** Information and price available from manufacturer.

## MIXERS

### AMECO

**Combining filter, Model CN-3.** Frequency response: 50 to 90 mc. Isolation: 27 db average. Insertion loss: 7.5 db average. Permits 3 channel mixing. AMECO will provide price.

**Model CN-5 combining network.** Passive type for low band operation that allows 6 channel mixing. 50-90 mc; 75 ohm. Insertion loss is 7.5 db av.; 27 db av. isolation. Price is \$35.00. Also available in broadband models (25-220 mc) with 10, 12 and 16 inputs.

### BENCO

**Model CM-2-75, all-channel and single channel combining network.** 75 ohm. Insertion loss is 1.5 db (lo-band); 2 db (hi-band). Isolation is 14-20 db. Net: \$7.15.

**Model CM-2-75/FM.** Same as Model CM-2-75 except for FM and all TV channels.

**UNIMIX, combining or splitting network.** To combine or split 3 lo-band and 4 hi-band (non-adjacent) TV channels. Also equalizes with use of LAT attenuators. 75 ohm. 1.5 db maximum insertion loss on any single channel. Can substitute FM for channel 6 on request. Price is \$44.10.

### DAVCO ELECTRONICS CORP.

Distributor of Entron electronic and passive mixers. Write for literature and specifications.

### DELTA ELECTRONICS LTD.

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low VHF channels. MDN-HI will combine or divide four non-adjacent Hi-band channels. MDN-7 will combine or divide 7 non-adjacent TV channels. Impedance 75 ohms input/output. "F" connectors. Low loss. 0.5 db low band. 1 db high band. MDN-7 \$35.00. MDN-HI \$19.95. MDN-LO \$17.95.

**Mixing network AC-2/75.** Will separate or combine two non-adjacent channels with minimum loss. 75 ohm impedance. "F" connectors. List \$7.50.

**Injector network type SI-75F.** Unit will add a single channel to all-band system or select one channel from all-band system into a separate line. Incorporates trap for selected channel in all-band section. Impedance 75 ohms. List: \$8.00.

**Cross over network HI-LO-75F.** Low loss unit used to split or combine high and low VHF bands. Band pass 0-110 mc, and 170-216 mc. Insertion loss less than 0.5 db. Cross over 138 mc. 75 ohms. Weatherproof version HI-LO-75/FW. List HI-LO-75/F \$6.95. HI-LO-75/FW \$7.95.

#### ENTRON

**Electronic low band mixer, Model MUE-5.** Mixes 5 low band channels. Nominal gain of 9 db. 75 ohm input and output. Maximum output level of 1.0 v per channel. Fits standard 19" rack. Output test points for FSM and TV monitor. Price: \$225.00.

**High-low-FM mixer, Model MUP-41.** Passive mixing device, flat response. Will mix up to 4 non-adjacent VHF high band channels with up to 5 VHF low band channels plus the entire FM band. High band insertion loss: 2.5 db. Low band insertion loss: 1 db. 75 ohm input and output impedance. Price: \$136.00.

**Electronic high band mixer, Model MUH-4.** Mixes low band signals fed into low VHF input from a suitable low band mixer such as the MUE-5 with 2 FM signals coming into FM inputs of the MUH-4. Low band and FM signals are combined passively with the electronically mixed high band in one composite output. Insertion loss: 2.5 db, low band; 15 db, FM band. Gain: 6 db (high band). Output level each high band channel: plus 57 dbmv. Price: \$200.00.

**Electronic all-band mixer, Model MUE-11-A.** Mixes 1 FM, 4 high band and 5 low band channels. Gain, low band and high band: 6 db (2 db FM). FSM jack and TV monitor test jack. 10,000 hour tubes. Frequency response: plus or minus 0.5 db. Price: \$360.00.

#### JERROLD ELECTRONICS CORP.

**Mixing networks, Models AMN-Lo and AMN-Hi.** Low loss mixing network (AMN-Lo) for low VHF channels. Will combine up to three non-adjacent channels from 75 ohm inputs into a single 75 ohm output. AMN-Hi is designed for mixing high TV channels. Low loss and will combine up to four non-adjacent channels from 75 ohm inputs into a single 75 ohm output. PNS.

**Wide-band frequency mixer/splitter, Model FCO-47.** Low loss unit for mixing or separating frequencies in the 0 to 47 mc range from those in the 54 to 220 mc range. Unit features 30 db minimum rejection between these bands with insertion loss of 1 db. 75 ohm impedances. PNS.

**Cross-over network, LHS-76.** Used to split or mix VHF hi-lo bands. Insertion loss less than .6 db. Band pass: 0 to 110 mc and 170 to 216 mc. Cut-off: 140 IM. 75 ohm impedance. PNS.

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## AGC UNITS

### AMECO

**Solid state AGC trunkline unit, Model AGCP.** Temperature compensated adaptor for ATM-60 series amplifier. Provides plus or minus 1 db output change for plus or minus 8 db input change. For 170 to 220 mc operation; has Jones adaptor. Price is \$95.00.

### BLONDER-TONGUE

**Automatic gain control, Model MAC-FM.** For use with any broadband VHF/FM amplifier having more than 16 db gain and producing an output between 0.6 volts and 2.5 volts per band. It will maintain the output at a constant level (less than 1 db change in output level for a 10 db change in input). In addition to providing AGC, the MAC-FM can deliver up to 10 db additional gain. CATV: \$131.00.

**Automatic level control, Model 1518.** For use with VHF amplifiers such as B-T Model 1232. Used in conjunction with pilot carrier generator B-T Model 1522 to maintain amplifier output at a constant level (less than 1 db change for a 20 db change in input level). Pilot carrier input level 20 to 40 dbmv. Factory tuned for 73.5 mc pilot carrier; other frequencies on request. \$210.00.

### DELTA ELECTRONICS LTD.

**Automatic level control, Model ALC/TSL.** Transistorized plug-in module to control level of split band amplifier ABHL/60. Sets level of amplifier from composite sum of signals in amplifier. Separate high band and low band controls. Powered from parent amplifier. Regulated low consumption supply. List: \$150.00.

**Transistorized automatic level control ALC/TLB.** Level control for low band amplifiers such as ABBL/40. Powered from parent amplifier. Will hold output level constant within 1 db for a change of 10 db in the input of the amplifier. List: \$84.00.

**Transistorized automatic level control ALC/THB.** Level control for Hi-band amplifiers such as HBC. Powered from parent amplifier. Will hold output level constant within 1 db, for a change of 10 db in the input of the amplifier. List: \$84.00.

**Transistorized automatic gain control AGC/DLA.** Gain control designed for all distributed line type amplifiers which use a pilot carrier for reference. Maintains a stabilized signal level throughout the system correcting for tube aging and temperature changes. Change in the input to any amplifier of 5 db will produce less than 0.5 db variation in the output level. Built-in, input level switch and AGC level control. List: \$120.00.

### JERROLD ELECTRONICS CORP.

**Automatic gain control, Model AGC-213.** Designed to operate with Super Cascader, Model SCA-213. Gain control voltage is derived from constant carrier located at the head-end site. Unit stabilizes and maintains signal levels throughout the system to correct minor variations in system levels due to tube aging, temperature changes, etc. Provides only 1/2 db variation in output level with input change of 5 db. Has input level control and AGC level control. Price from Jerrold.

**Crystal controlled carrier generator, Model CCG-73.5.** Provides constant-level carrier at the system head-end for automatic gain control regulation. Low VSWR. Output constant with plus or minus 11 db for line variations between 90 and 135 volts. Designed for shelf or rack mounting. Plug-in attenuation. Manual gain control. Bridging output. Operating frequency: 73.5 mc. Output: 45 dbj (65 dbj on special order). PNS.

**Carrier generator stand-by unit, Model CGS.** Designed to provide artificial video and sound carriers for a TV distribution system. Crystal

controlled carriers. Video carrier modulation control. Accessory function switches. Triggered on and off by horizontal sync pulses only. 30 second, built-in, time delay. Output: above 50 dbj. Available for channels 2, 4, 6 and sub-channels. Powered by RPS-150B or 150N; WMC-5; RPS-300B or RPS-300N. PNS.

### SPENCER-KENNEDY LABS

**Pilot carrier generator, Model 448.** Used at head-end to provide pilot carrier signal for system level control. Fixed frequencies, 31.75 mc, 34 mc, 74.25 mc, 77 mc, 182.25 mc. Mounts on Model 452 power supply. Variable output from 35 to 40 dbmv. Net: \$1450.00. (Add \$200.00 for voltage stabilized power supply.)

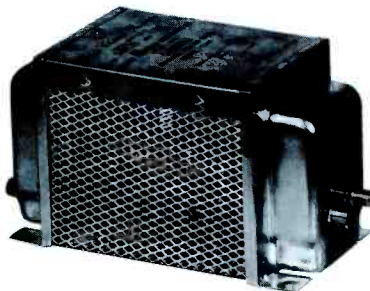
**Automatic level control, Model 830B.** Mainline ALC unit for pilot carrier frequencies 74.25, 174.25 and 182.25 mc. 75 ohms. DC output voltage range is -1 to -15 v; power required is 105 to 125 vac. Type "N" connectors. List: \$215.00.

## SINGLE CHANNEL

### VHF

### BENCO

**Single channel amplifier, Model SPM.** Designed for MATV systems. 40 db gain on lo and hi-band;



FM is 28 db. Manual gain control range is 14 db down from maximum. Unit has dual output; self-contained power supply. Response is 4.5 mc flat within plus or minus 0.5 db. 75 ohms. Price is \$46.90.

**AGC line amplifier, Model CA-A.** Unit provides 60 db (with AGC disabled) gain. Operates on any VHF channel. Response is 4.5 mc flat within 0.25 db; output is plus 50 dbmv with 20 amplifiers cascaded. Has self-contained power supply. Lists for \$131.95.

**Low noise AGC pre-amp., Model PA-LN.** 66 db gain (with AGC disabled); noise figure of 3 db (lo-band) and 4 db (hi-band). Self-contained power supply. Frequency response is 4.5 mc flat within 0.75 db. 75 ohms. \$298.30 net.

**Model PAA, single channel AGC preamplifier.** Has 65 db gain when AGC is disabled and a noise figure of 4 db (lo-band), 6 db (hi-band) maximum. 4.5 mc flat response within 0.25 db. 75 ohms; self-contained power supply. 117 volt operation. Available for channels 2 through 13 plus FM. Net price is \$150.15.

### BLONDER-TONGUE

**Single channel preamplifier, Model CMA.** Low-noise solid state single channel preamplifier. Available in CMA-FM for all FM channels. Flat bandpass plus low VSWR input. Gain of 22 db minimum, 2 through 13; bandpass 6 mc plus or minus 3/8 db; noise figure (2 through 6) better than 3.8 db, and better than 5.5 db for 7 through 13. Provides both 75 and 300 ohm input connectors plus transistor circuitry which results in low power drain. Also incorporates a special filter circuit to minimize overload susceptibility. Net: \$46.15 (ch. 2-6 plus FM); \$51.10 (ch. 7-13).

**AGC controlled amplifier, Model MCSc.** For single channel usage except for MCScFM which covers

the entire FM band. Gain at least 46 db (low band); 38 db (ch. 7-10); 35 db (ch. 11-13). Maximum output; 1.0 volts for less than 1% cross-modulation; 1.5 volts for less than 3% cross-modulation.

Self-contained AGC with separate adjustment control. Built-in power supply. Built-in mixing networks so that the output of each MCSc may be plugged into the next MCSc; at the final output all of the channels are fed into one coaxial cable. Net: MCSc—\$90.75; MCSc-FM—\$180.00.

**Mast-mounted preamplifier, Model CB.** Completely weatherproof, single channel amplifier. Low noise with a 21 db (minimum) gain on low band and 18 db gain (minimum) on high band (when one output is used). Maximum output is 0.5 volts for less than 1% cross-modulation. 300 ohm input; two 75 ohm mixing outputs. Net: \$38.85.

### C-COR ELECTRONICS

**VHF cascode preamplifier, Model 1001.** Ultra low noise amplifier with 40 db gain for 6 megacycle bandwidth. Flat response with 3 db noise figure on channels 2 through 6, and 4.5 db noise figure on channels 7 through 13. 75 ohms and UHF connectors standard, with other impedances or connectors on request. Ceramic triode type 7077 used in input. \$295.00 net.

**Model 2001.** Same as Model 1001 except is weatherproofed with 117 volt, 50-60 cps power. Price is \$295.00

**Model 2001-CP.** Similar to Model 2001. Weatherproof for cable powering from 24 volt AC source. Requires 1 power feed box (Model 24-PS-1). Sells for \$295.00.

### DAVCO ELECTRONICS CORP.

Distributor for all Entron single channel amplifiers. Write for detailed information.

### DELTA ELECTRONICS LTD.

**Single channel solid state mast mounting amplifier, type MBT/SC.** Low noise amplifier with universal mounting weatherproof housing. 6 mc bandwidth. Average noise figure: low band 3.5 db, high band 5.5 db. Average gain: low band 16 db, high band 13 db. Min. input 50 microvolts. Max. input 70,000 microvolts. Complete with remote power supply. List: \$35.00.

**Ultra-low noise solid state preamplifier MBT/SC-LN.** Transistorized single channel mast mounting unit using selected transistors for extra low noise and high gain. Supplied in special weatherproof housing. Gain: Low band min. 22 db. High band 4 db typical. Frequency response plus or minus 0.2 db. Minimum input 35 microvolts, maximum input 70,000 microvolts. MBT/SC-LN 300 ohm input and 75 ohm output. MBT/SC-75-LN 75 ohm input and 75 ohm output. List less power supply \$95.00. Power supply \$9.50.

**Mast mounting tube type amplifier type MB/SC.** Tube type amplifier for high gain on a single channel. Gain 40 db. Noise figure low band 4.5 db, high band 6.5 db. Input 300 or 75 ohm, output 75 ohm. Complete with remote power supply. List: \$49.95.

**Single channel AGC amplifier, Model SCA-70.** Low noise cascade input uses high gain AGC



section. Can be used down to 50 microvolts. Dual output for interconnection of other units. Gain: 70 db less gain used to develop AGC. Maximum output 50 db. Includes built-in power supply. List: \$120.00.

**Single channel manual gain control amplifier SCA-45.** Low noise single channel frame grid



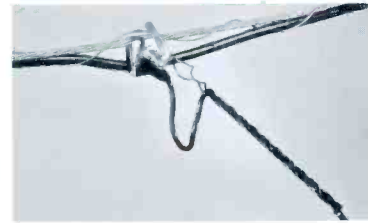
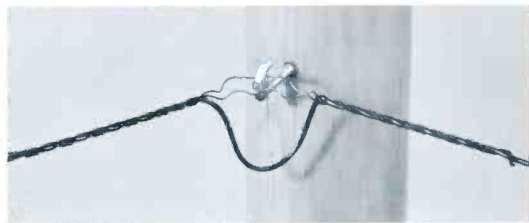
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tube amplifier. Covers all VHF channels and F. M. band in strips. Gain 45 db. Max. output 1 volt at each of 2 outlets. Input 75 ohm. Output dual 75 ohm for connection to other amplifiers. Gain control range 6 db. Supplied with 10,000 hour 7308 tubes. List: \$45.00.

**Single channel line amplifier with AGC ALL/60.** For re-amplification and distribution of single channel television signals. Gain 60 db. Output 1 volt. Has high gain built in AGC. Six mc bandwidth. Low band channels ALL/60. List: \$105.00. High band channels ALH/60. List: \$110.00.

## ENTRON

**Single channel amplifier, Model SB.** Minimum input level: plus 10 dbmv. Output level: (maximum) TV channels plus 60 dbmv. All TV channel models incorporate ALC. FM model input level (minimum):



plus 5 dbmv. Output level: (maximum) plus 45 dbmv. Gain: (all models) 40 db. 1.35 db average output variation with 15 db input variation on all TV channel models. Price: \$100.00.

**Single channel preamplifier, Model DRPB.** Weatherproof amplifier designed for head-end service. Gain: 30 db. Noise figure: 6.5 db, low band; 7.5 db, high band. Maximum output level: plus 54 dbmv. Will operate from 115 vac or can be remote powered by using RPS-B power supply. Price: \$75.00.

**Single channel head-end amplifier, Model APL-D.** Low band VHF amplifier with 7 db noise figure. Utilizes ALC circuit to maintain output within 1 db with input variation of 20 db. Gain: 60 db. Maximum output level: plus 54 dbmv. Output level range: plus 40 to plus 54 dbmv (picture carrier). Sound carrier adjustable 0 to 25 db below picture carrier. Price: \$189.50.

**Single channel head-end amplifier, Model APH-D.** High band VHF amplifier utilizing 10,000 hour tubes. Gain 60 db (max.). Noise figure, 7 db. Output level control: manual and ALC switch. External power supply. Entron Model PSR2 or PSR3. Mounts any position. Price: \$199.50.

## HOLT ELECTRONIC RESEARCH

**VHF preamplifier, Model VHF-C1.** Designed to

amplify weak signals at low noise and high gain. Incorporates B plus standby switch. Gain: 18 db (2-6) and 15 db (7-13). Input and output impedance 75 ohms. Noise figure: 3.5 db.

**VHF preamplifier, Model VHF-C2.** Same characteristics as VHF-C1 except gain is 40 db (2-6) and 30 db (7-13). Noise figure: 4 db.

**Single channel VHF amplifier, Model HES-AGC.** Designed for head-end service. Has mixer output, AGC and power supply built in. Also includes sound traps and is more than adequate for color. Bandwidth: flat from picture to color. Gain: 60 db (15 db down on sound). Input and output impedance 75 ohms. Output level: 60 db. Available for any of the 12 VHF channels.

**Single channel VHF amplifier, Model HES-AGC-Super Deluxe.** Designed for head-end service. Has standby oscillator, mixer output and power supply built in. It also has sound traps and is designed for color. Excellent for continuous commercial service. Bandwidth flat from picture to color. Gain: 60 db. Sound 15 db down. Input and output impedance 75 ohms. Maximum output level: 60 db.

## JERROLD ELECTRONICS CORP.

**Single-channel amplifier, PMA series.** Consists of single-channel strips, Models PMA-2 through PMA-13 inclusive and an FM strip Model PMA-FM. Utilizes "StabiLife" circuit to maintain the gain of the amplifier independent of tube variations. Designed for larger hotel, motel and apartment distribution systems, also CATV systems. Gain:



35 db, low band; 30 db, high band; 20 db, FM band. Flat response. 75 ohm input and output impedance. Output: 1 v (60 db). Dual outputs. Plug-in pads for gain control. Pads available in 3 db steps from 0 to 21 db of attenuation. Uses RPS-150B or RPS-300B power supplies. PNS.

**Single-channel amplifier, Model HPM.** Designed for head-end use in all types of TV-FM distribution systems. Self-contained power supply plus

convenience outlet. Relay rack or surface mounting. Gain: 46 db, low band; 46 db, high band; 42 db, FM models. Two 75 ohm outputs and one 75 ohm input. Output: 4.0 v at .5 db sync compression. AGC range of 20 db. FM model has delayed AOC with 10 db gain range. PNS.

**Single-channel preamplifier, Model 401A, 406A and 501 A.P.** Model 401A is equipped with an iridite finished weatherproof cabinet and is operated from a remote 24 vac power supply (Model 405P). Model 406A is equipped with a light gauge, perforated steel housing and is designed for continuous indoor service. 406A also contains its own internal power supply for powered by 28 vdc. Can be mounted in down unit containing a Model 401A pre-amp and a Model 405P power supply. Gain: 28 db minimum. Flat response. Noise figure: 5 db, low band; 8 db high band. Output: .6 v rms, low VHF channel; .5 v rms, high VHF channel. 300 or 75 ohm input and 75 ohm output. (Weatherproof housing available for Model 406 complete with hardware for outdoor antenna mounting). PNS. (See Power Supplies.)

**Single-channel preamplifier "channel champ," Model TPR.** Designed for use at head-end. Takes maximum advantage of signal strength at antenna array, and compensates for down-lead losses without degrading system noise figure. Available in two types—low-band (ch. 2-6) with one transistor and high-band (ch. 7-13) with two transistors. Both units have: 6 mc bandwidth, flat within 0.5 db; hi-Q preselectors; gain of 18 db min. (low band) and 20 db min. (high band); noise figure of 4 db max. (low band) and 5.5 db max. (high band); and output (at 0.5 db sync compression) of 40 dbj (low band) and 50 dbj (high band). Price available from manufacturer.

## SPENCER-KENNEDY LABS

**Single-channel preamplifier, Model 450B.** Operates from 105 vac to 125 vac. Frequency range: any standard 6 mc VHF channel. Gain: 35 db, low band; 35 db, high band. Noise figure: 6 db, low band; 9 db, high band. Rack, cabinet or bench mounting. Gain is controlled automatically when used with 451B control amplifier.

**Single-channel preamplifier, Model 271.** Gain: 16 db minimum on low or high channels. Cable



powered by 28 vdc. Can be mounted in down lead from antenna to head-end equipment. Output: 36 dbmv at 1% intermodulation distortion.

## VIKING

**Single channel amplifier, Model 945.** Matched, bridging outputs; optional remote power supply, hi-gain with 17 db of gain control, ultra low noise cascade circuitry, connectors 75 ohm, type "F". Price: \$39.00; with 10,000 hr. tubes \$43.00.

## WESTBURY CATV CORP.

**Transistorized low-noise preamplifier, Model AP-4.** For single channel in range (ch. 2 to ch. 6). Average gain, 20 db. 3.5 db noise figure. Cable powered from AC or battery. Weatherproof, pole mounting. Price: \$70.00.

**Transistorized low noise preamplifier, Model AP-5.** For single channel in range (ch. 7 to ch. 13). Same as above except for 26 db average gain. Price: \$74.50.

## UHF

## AMECO

**Solid state strip amplifier, Model ASA.** Operates single channels 2 through 13 plus FM at head-end. Has 50 db gain; 66 db maximum out. 25 db AGC action and temperature compensated. 75 ohm. Rack mount. Priced at \$250.00.



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## C-COR ELECTRONICS

**UHF cavity preamplifier, Model 1002.** Ultra low noise, ceramic triode amplifier for any single UHF channel. Noise figure is 4.5 db at low channels to 6.5 db at channel 83. Gain is 10 db (single stage); 20 db (double stage). Impedance is 50, 75 or 300 ohms, per customer specification. Type N or UHF connectors. Price available from manufacturer.

**Model 1003.** Same as Model 1002 except provides 12 db single stage and 24 db double stage. Panel or rack mount. Price from C-COR.

**Model 1012.** Same as single stage Model 1002 in weatherproof housing. \$295.00 net.

**Model 1013.** Same as single stage Model 1003 in weatherproof housing. Lists for \$345.00.

**Model 2002.** Same as two stage Model 1002 in weatherproof housing. Net price is \$395.00.

**Model 2003.** Same as two stage Model 1003 in weatherproof housing. Priced at \$495.00

## HOLT ELECTRONIC RESEARCH

**UHF preamplifier, Model UHF-D2.** Designed to amplify weak signals at low noise and high gain.

## JERROLD ELECTRONICS CORP.

**UHF preamplifier, Model UPM-104.** Super-gain (13.7 db average). UHF band (ch. 14-83) 300-ohm input preamplifier for fringe and deep-fringe locations. Also, Model UPC-1 same gain as UPM-104, with 75/300 ohm inputs, and available with 75 ohm output. Price from manufacturer.

## CONVERTERS - VHF-FM

### BENCO

**VHF to VHF, Model COPM.** Functions as lo or hi to lo converter for MATV. 4.5 mc bandwidth; has self-contained power supply. 75 ohms. Flat response within 0.5 db. 117 volt power. Price is \$78.95.

**VHF to VHF converter, Model CO-2.** Crystal controlled television unit with self-contained power



supply. Operates on any VHF television channel and provides flat response (4.5 mc) within 0.5 db. Gain varies between 0 and 6 db. Net: \$219.90.

### BLONDER-TONGUE

**VHF low to VHF low converter, crystal-controlled, Model MLC.** Converts specified low channels (2-6). Gain: 20 to 40 db depending upon conversion. Stability (oscillator) .01%, 0 to 110 degrees F. 75 ohm input, two mixing 75 ohm outputs. Net: \$277.50.

**VHF hi to VHF low converter, crystal-controlled, Model MVC.** Converts specified VHF hi channel (7-13) to specified VHF low channel (2-6). Oscillator stability .01%, 0 to 110 degrees F. 75 ohm input and two 75 ohm mixing outputs. Net: \$277.50.

### CAS MFG. CO.

**Converter, Model 58-FMC.** Converts 5.8 mc signal from microwave equipment to standard FM signal. 19" rack mounting and self-contained power supply. Net: \$160.00.

### DAVCO ELECTRONICS CORP.

Distributor of Entron crystal controlled CLH-D low to high converter and CHL-D high to low converter. Write for specifications.

### DELTA ELECTRONICS LTD.

**Complete solid state VHF converter type CV-1.** Incorporates stabilized free running oscillator for low to high or high to low channel conversion. Minimum input plus 6 db. Maximum input 26 db. Input/output impedance 75 ohm. Bandwidth 6 mc. Built-in regulated power supply. List: \$79.50. **Solid state crystal controlled VHF converter TC-1.**

Matched input and output. Converts VHF to VHF with single or double conversion. Built-in band pass filter in input and output. Incorporates hi-Q traps to eliminate spurious frequencies. Regulated power supply. Oscillator stability .005%. Nominal input 6 db. Maximum input 26 db. Impedance 75 ohm. Gain: Nominal 3 db. List: \$150.00.

### ENTRON

**High VHF to low VHF converter, Model CHL-D.** Converts any high band channel to any low band channel. Utilizes ALC system referenced to video



carrier and a sound carrier level control. ALC will maintain output within plus 0.5 db for input variations of 10 db. Crystal controlled oscillator. 10,000 hour tubes. Gain: 60 db. Stability: plus or minus .005%. Price: \$225.00.

### JERROLD ELECTRONICS CORP.

**VHF to VHF converter, crystal controlled, Model WCON.** Conversion gain from unity to plus 3 db. Stability: .005%. Input and output 75 ohms. Self-contained. Regulated power supply. Most conversions available.

**Sub-channel to high VHF channel converter, Model CDX-713.** Converts signals in the 4 thru 47 mc range to channels 7 thru 13. Stabil-Life feature. Bridging input. Plug-in equalization pads. Gain: 15 db. Gain control range: 3 db. Noise figure: 10 db. 75 ohm input and output. Obtains power from BDA-26. Output (operating): 44 dbi. PNS.

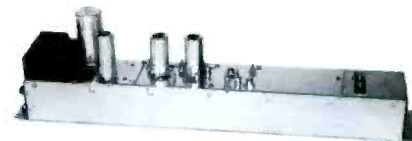
### SPENCER-KENNEDY LABS

**Channel converter, Model 446.** VHF to VHF for composite television signal conversion. -3 db maximum gain; flat response within 1.0 db over 6 mc bandwidth. 75 ohms in and out. Priced at \$145.00. Also has voltage stabilized power supply available for \$200.00.

## CONVERTERS - UHF

### BENCO

**UHF to VHF converter, Model CO-3.** Crystal controlled unit with 7.9 db noise figure and self-contained power supply. 75 ohms in and out.



Frequency response is 4.5 mc flat within 0.75 db. Gain is 3 db. Power requirement is 117 volts. Incorporates built-in preamplifier with ceramic triode. \$274.70 net.

### BLONDER-TONGUE

**Tuneable UHF to VHF converter, Model BTU-2T.** Tunes channels 14 to 83. For fringe and primary areas. Gain 5 to 8 db. Output on channel 5 or 6. Stripless 300 ohm terminals, speed and fine tuning. Net: \$26.95.

**Tuneable, UHF to VHF converter, Model 995.** Tunes channels 14-83. For primary areas. Converts to VHF channel 5 or 6. 300 ohm stripless terminals and drift-compensated circuitry. Net: \$19.50.

**All-transistor UHF to VHF converter, Model BTX-11.** For fringe signal areas. Tunes channels 14 to 83. Output on channel 5 or 6. 300 ohm terminals. Gain 8-13 db. Incorporates 100:1 fine tuning system. Net: \$31.20.

**All-transistor UHF to VHF converter, Model BTX-99.** For prime signal areas. Tunes channels 14 to 83. Output on channel 5 or 6. 300 ohm terminals. Net: \$19.85.

**Tunnel-diode UHF to VHF converter, Model BTD-44.** For prime signal areas. Tunes channels 14 to 83. Output on channels 5 or 6. 300 ohm terminals. Net: \$13.20.

**UHF to VHF converter, crystal controlled, Model MUC.** Converts specified UHF channel to specified VHF channel. Gain: 15 to 30 db depending upon conversion. Stability .01% over temperature range of 0 to 110 degrees F. 300 ohm input and two 75 ohm mixing outputs. Net: \$239.00.

**UHF to VHF converter, Model UC-3.** High stability, solid state converter, LC type oscillator. Built-in regulated power supply. Two 75 ohm mixing outputs. Gain: 4-13 db, depending on conversion. Net: \$131.50.

### DAVCO ELECTRONICS CORP.

Distributor of Entron, Model CUL converter. Specifications and price supplied upon request.

## 32 db GAIN with ENTRON's CATV Transistorized E-2 EXTENDER AMPLIFIER

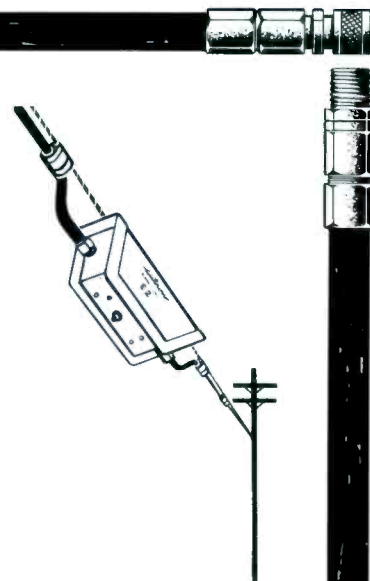
■ The E-2 high gain-high output extender is the best performer in the industry. Easily installed anywhere on the strand, it accepts remote power from input or output terminals and will feed power in either direction. Built with high quality silicon semiconductors the transistorized E-2 is housed in a weatherproof aluminum casting.

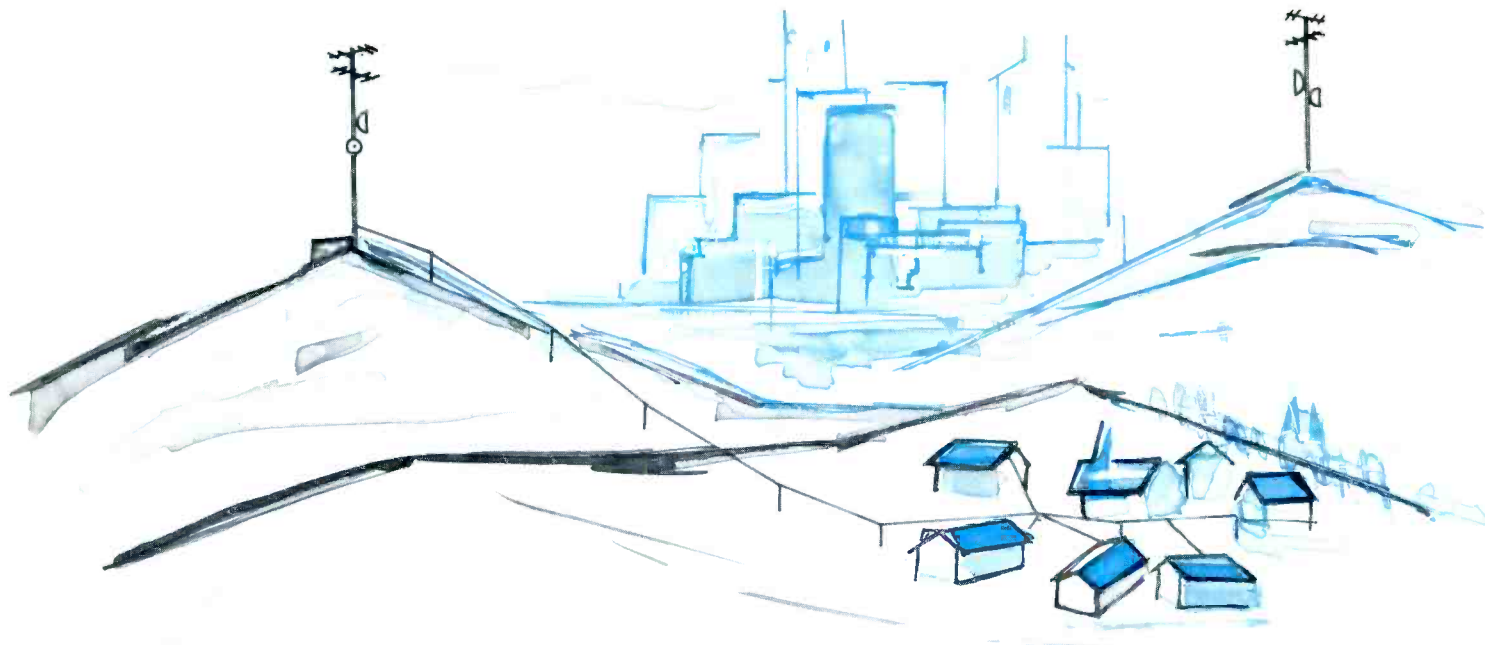
■ For super input and output match, Entron's Model E-2B Extender Amplifier is available.

■ E-2 and E-2B . . . ask Department 465 for details.

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## DELTA ELECTRONICS LTD.

**Solid state UHF to VHF converter type TC-3.** Converts any specified UHF channel to specified VHF channel. Fully crystal controlled. Has built-in low noise UHF preamplifier converter and VHF amplifier. Nominal noise figure 4.5 db. Gain: 26 db. Input impedance 75 ohm or 50 ohm. Output impedance 75 ohm. Crystal stability .005%. Built-in fully regulated power supply. Custom to order incorporating hi-Q traps as required to eliminate spurious response. List: \$310.00.

## ENTRON

**UHF to VHF converter, Model CUL.** Converts any specified UHF channel to any specified channel



from 2 thru 6 depending upon conversion needs. Input RF amplifier is ceramic, coaxial type UHF triode. Incorporates 5 amplifiers in cascade and an ALC stage. Plus or minus 1 db output variation for 40 db input change. Gain: 94 db. Operates with PSR-2 or PSR-3 power supplies. Price: \$495.00.

## HOLT ELECTRONIC RESEARCH

**UHF to VHF converter, Model UHF-2.** Converts UHF channel to either a high or a low VHF channel. Crystal controlled. Unity gain. 75 or 300 ohm input and 75 ohm output impedance. Self-contained power supply.

**UHF to VHF converter, Model UHF-3.** Converts UHF channel to either a high or a low VHF channel. Crystal controlled. Gain: 12 db. 75 ohm input and output. Low noise. Self-contained power supply. Has built-in UHF preamp stage.

**UHF to VHF converter, Model UHF-4.** Converts UHF channel to either a high or a low VHF channel. Crystal controlled. Gain: 24 db. 75 ohm input and output. Low noise. Self-contained power supply. Has built-in 2 tube UHF preamp.

## JERROLD ELECTRONICS CORP.

**UHF to VHF single channel crystal controlled converters, Model 503 HZ.** Hi-Q, cavity tuned, mast-mounted head and remote tube oscillator for weak signal areas. Features mast-mounted VHF preamplifier (5-7 db gain). Typical noise figure is 10 db. Price available from manufacturer.

**Model 503 HY.** Similar to Model 503 HZ; for local signal areas. (Does not include preamplifier.)

**Model 504 ST.** All transistorized, for weak signal areas. Either mast or indoor mounting. Same characteristics as 503 HZ. Supplied with 20 vac remote power supply.

**Model 504 SS.** All transistorized, for local signal areas. Same characteristics as 503 HY.

## RF TUNERS

### DAVCO ELECTRONICS CORP.

**Model 1200 FM tuner.** Rack mounted Model 1200 is designed for continuous operation 24 hours a



day. Tuneable 88 to 108 mc, receiver may be changed to a fixed frequency crystal controlled receiver. Crystal is custom-made for FM station frequency. Net price: \$74.50.

**Newcomb Models AM-500-875G AM and AFM-750-875G FM.** Rack mounted tuners also carried in stock at DAVCO. Write for information.

## JERROLD ELECTRONICS CORP.

**AM/FM tuner, Model AFT-300.** Designed to operate in conjunction with Model AT modulator. FM section has 3.2 uv sensitivity with frequency response of 15-15,000 cps within 1 db. Incorporates gated beam limiter. AM section has 10 kc bandwidth. Self-contained power supply.

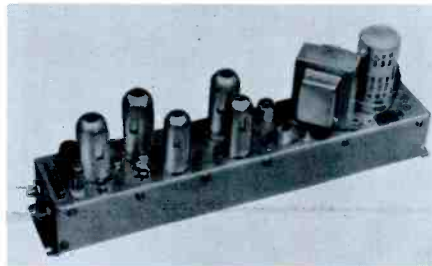
## MODULATORS

### ADLER ELECTRONICS, INC.

**Modulator, audio and video, Model AVD-1.** Produces modulated audio and video carriers on any one of 12 channels from audio and video sources. Crystal controlled. Switch for insertion of 400 cps tone or external audio. Audio carrier level adjustment provided so that the audio carrier may be adjusted for 10 to 90% of the visual carrier. Output level: .1 rms across 75 ohm load. Video input impedance: 75 ohms. Input level: 1.0 v p-p (video), + 10 dbm (audio). 75 usec. pre-emphasis. PNS.

### BLONDER-TONGUE

**TV sound originator, Audio Master.** Originates TV signal for any specified VHF channel. Provides crystal controlled unmodulated video carrier



plus sound carrier which may be modulated by any audio source. Audio carrier is 4.5 mc above video frequency (TV Standards). Output impedance is 75 ohms. Net: \$179.25.

### CAS MFG. CO.

**Sound modulator, Model M-58.** Produces 5.8 mc, AFC controlled, FM carrier from various audio sources such as tape, tuner, mike, etc. 19" rack mounting and self-contained power supply. Useful for feeding microwave system. Price from CAS. **Stereo FM and tape converter.** Consists of two basic units, the FM-107 and 107-FMC. Will handle up to 4 channels. Rack mounted with self-contained power supply.

**Video modulator, Model TVM.** Input: video and 4.5 mc audio. Output: composite TV channel with sound channel (max. video, 55 dbm; Max. audio, 40 dbm). Output impedance: 75 ohm. 4 tubes and self-contained power supply. Vestigial sideband filter and RF amplifiers. Low band RF output.

**FM modulator, Model M-45.** Supplies AFC controlled 4.5 mc, FM carrier. Audio input: Mike, tape, etc. M-45 produces TV sound in conjunction with TVM. 19" rack mounting with self-contained power supply.

**FM modulator, Model M-107.** Supplies AFC controlled 10.7 mc FM carrier. Audio input: mike, tape, etc. M-107 produces FM sound in conjunction with 107-FMC. Rack mounting with self-contained power supply.

### DAVCO ELECTRONICS CORP.

Distributor of Dynair and Entron modulators. Write for specific information.

### DYNAIR ELECTRONICS, INC.

**Aural separator, Model AS-1A.** Accessory to the TX-1B transmitter when operating from a combined video/4.5 mc aural signal input. Separates the two signals and allows independent control of each signal. Price: \$120.00.

## JERROLD ELECTRONICS CORP.

FM signal (88-108 mc) and R-F carrier frequency FM signal (88-10 mc) and RF carrier frequency (specified by system operator). Audio, or standard 10.7 mc IF from an FM tuner such as Jerrold Model AFT-300) can be used as source of modulation. With 10.7 mc input, AFM-2 has a min. full gain of 55 dbj (dual output), max. noise and hum at full gain at least 40 db below full of signal, and max. audio distortion at full gain of 1.5%. Price available from Jerrold.

**Modulator, Model AT.** Designed for hotels, motor courts, hospitals, apartments, schools, etc. Provides an unmodulated crystal controlled video carrier and an FM sound carrier which is held at 4.5 mc separation from the video carrier. Output on any VHF TV channel (specify). Uses any suitable sound source such as AFT-300 tuner, etc. RF output: up to 55 dbj, each carrier, separately controlled, at 75 ohms, at each of two terminals. Spurious signals: down 50 db. Built-in power supply. Standard pre-emphasis. PNS.

**Industrial television modulator, Model TM.** Provides standard vesigal sideband transmission of any low band VHF channel, 2 through 6, for both black-and-white and NTSC color. Accepts standard 1 v p-p, black negative, video signals from cameras, microwave terminals or demodulator. (See Model TD, demodulator.) 75 ohm video and audio input. Visual carrier stability: .005%. Modulation variable from 0 to 100% (visual). Response: 30 cps to 4 mc, within .5 db. Rack mounting. Regulated power supply. Audio input: 1 v p-p (4.5 mc). Aural carrier modulation capability is plus or minus 25 kc when used with the accessory FM modulator, Model TAM. Output level: 57 db above 1 millivolt across 75 ohms (visual) and 51 db above 1 millivolt across 75 ohms (aural). PNS.

**FM modulator, Model TAM.** Auxiliary unit for the TM unit. Converts any audio source into 4.5 mc FM signal. Output level: 3 v p-p across 75 ohms. High input. 75 usec. pre-emphasis. Deviation: plus or minus 25 kc. PNS.

**Video-audio separator, Model TVA.** Auxiliary unit for the TM unit. Permits sound duplexing when operating the Model TM with microwave equipment. Unit receives the microwave output signal and separates the video and 4.5 mc sound components, restores the sound level to equal that of the video, and supplies both signals to the Model TM. Gain: 20 db. PNS.

## EQUIPMENT & ACCESSORIES

### ATTENUATORS

#### AMECO

**Precision switch type attenuator, Model AA-2.** Used in level measurements. Frequency range, 12-250 mc. VSWR 1.2:1. 75 ohm impedance. "F" or "UHF" type connectors. For bench use. 62 db attenuation in seven steps.

**Fixed pad, Model PDF-3.** Weatherproof series to pass AC or DC power. Provides excellent match and available in 3 db steps. Has "F" or UHL connectors. \$4.65 net.

**PF series.** Similar to PDF.

#### BLONDER-TONGUE

**Fixed attenuator, Model FA.** Specify 3 db, 6 db, 10 db or 20 db. "QD" connectors. Net: \$3.20.

**Variable attenuator, Model SA-3.** 0 to 38 db. Laboratory accuracy. Steps of 6 db, 12 db, and 20 db. 75 ohm input and output. QD connectors. Net: \$12.00.

**Variable attenuator, Model MAT.** 0 to 45 db in 3 db steps. 75 ohm input and output. UHF type connectors. Net: \$15.60.

**Variable attenuator, Model SA-7.** 0 to 62 db in 1 db steps. UHF-type connectors; 75 ohm input and output. Net: \$22.05.

## CRAFTSMAN ELECTRONICS, INC.

Write manufacturer for data on attenuators and associated equipment and accessories.

## DAVCO ELECTRONICS CORP.

Fixed BNC and UHF types are available from stock. Other types available on request. Write for literature and prices.

## DELTA ELECTRONICS LTD.

Fixed value 75 ohm impedance tubular attenuators. Available in values of 3, 6, 10 and 20 db. Resistive pads flat from 0-220 mc. "F" fittings. List: \$3.50.

AV-21. Variable step attenuator 75 ohm impedance. 0-21 db in 3 db steps. Flat from 0-250 mc. Surface mounting blister can. "F" fittings. List: \$12.75.

AV-82. Variable step attenuator, 75 ohm impedance. 0-82 db in 1 db steps. 0-250 mc. "F" type connectors. List: \$59.95.

## JERROLD ELECTRONICS CORP.

FA. Fixed attenuator series. Frequency: DC to 1200 mc. Accuracy: within .3 db on each model. 50 ohm impedance. Available with attenuation values of 1, 2, 3, 6, 10 and 20 db. BNC fittings. PNS.

PDL. Fixed attenuator series. 75 ohm impedance. Available in 3, 6, 10, 20 db values. 0 to 220 mc. F-61 fittings. PNS.

AV-50. Variable attenuator for lab use. Has 0 to 62.5 db attenuation in 0.5 db steps. Low insertion loss (.25 db at 250 mc, .5 db at 500 mc). Uses shielded, rotary coaxial switches. 50 ohm impedance. 0.5 watts average dissipation. Cast aluminum case for bench use. PNS.

AV-50R. Same as AV-50 except designed for relay rack mounting. PNS.

AV-50-2. Same as AV-50 except designed to provide attenuation values from 0 to 82 db in 1 db steps. PNS.

AV-50-2R. Same as AV-50-2 except designed for relay rack mounting. PNS.

AV-75. Same as AV-50 series except 75 ohm impedance. Models available are AV-75, AV-75R, AV-75-2, or V-752R. PNS.

A-500. Variable attenuator with a range of 0 to 82 db in 1 db steps. Uses 8 slide switches for selection of attenuation values. Housed in slanted front cabinet. Available with "BNC" connectors, "N" connectors (Models A-50B and A-500N respectively). 50 ohms impedance. Frequency: 0 to 250 mc. PNS.

A-750. Same as A-500 except 75 ohm impedance. Connector types: "BNC" (order A-750B), "F" (order A-750F), "N" (order A-750N), and Swiss type (order A-750S). PNS.

A-21. Variable attenuator. 75 ohm impedance. 0 to 21 db in 3 db steps. 0 to 250 mc. Surface mounting. "F" series connectors. PNS.

A-72. Variable attenuator. 75 ohm impedance. 0 to 82 db in 1 db steps. 0 to 250 mc. "F"

## PLASTOID CORPORATION

Slope pads. Available in values of 6 db, 8 db and 10 db. Used to equalize difference in loss in cable between channels 2 to 6 and FM. PNS.

## SPENCER-KENNEDY LABS

493. Sound attenuator. Available for all VHF channels. Insertion loss: less than 1 db up to .75 mc below sound carrier. Attenuation of sound carrier: 6, 9, or 12 db selected by switch.

## VIKING

904F. Fixed attenuator pads complete with F fittings. Attenuation values of 3, 6, 10 and 20 db. VSWR less than 1.2:1, 0-220 mc. \$2.50.

904. Same as above with push on type fittings, \$2.00.

## EQUALIZERS

### BLONDER-TONGUE

ME-1. Equalizes all VHF channels for long cable runs. Attenuation ranges from 1 db at channel

13 to 17 db at channel 2. 75 ohm UHF connectors. CATV: \$10.65.

ME-2. Equalizes low VHF channels only. Attenuation ranges from 1 db at channel 6 to 9 db at channel 2. 75 ohm UHF type connectors. CATV: \$10.65.

### DAVCO ELECTRONICS CORP.

Distributor of Entron LEF and ECE models. Write stating your requirements.

### DELTA ELECTRONICS LTD.

Fixed line equalizers type LEQ. Broadband fixed slope equalizer compensates inversely for cable loss. Frequency from 20-220 mc. Equalization at 54 mc. 6, 8, 10 and 12 db. "F" type fittings. List: \$10.50.

Variable line equalizer type LEQ-V. Broadband equalizer compensates inversely for cable loss. Available in steps of 8, 10 and 12 db. Each value variable plus and minus 1 db for exact equalization of cable loss. "F" type fittings. List \$10.50.

Reverse loss line equalizer type LEQ-R. Line equalizer with reverse equalization to reduce the input level to an amplifier. Available with tilts of 3, 6 and 12 db. Covers the frequency band from 20-216 mc. List \$10.50.

F.M. signal equalizer type FME-4. An F.M. equalizer for head end use to level the strength of 4



received F.M. stations. Maximum attenuation per F.M. frequency, 30 db. Adjacent channel loss 200 kc away, 6 db. Impedance 75 ohms. Tuning range of 4 controls 87-93 mc, 92-98 mc, 97-103 mc, and 102-108 mc. List \$45.00.

### JERROLD ELECTRONICS CORP.

Automatic Temperature Compensator, Model TOM-2. For use with Model SCA-213 All-Band Distribution System (tube type). Equalizers for 21 db of cable at channel 13. Compensates for temperature tilt variations thru 64 db of cable. Messenger mounting. Compensates for solid or foam dielectric cable. Write manufacturer for price.

Automatic Temperature Compensator, Model TOM-4. For use with Model TLM-1 All-Band Distribution System (transistorized). Equalizes for 16 db of cable at channel 13. Compensates for temperature tilt variations thru 54 db of cable. Messenger mounting. Compensates for solid or foam dielectric cable.

Plug-in variable equalizer, Model PVE. Provides cable equalization for one Model SCA-213 amplifier. Two controls, located at the top of the device, permit plus or minus 1 1/2 db adjustment of the equalizer from its given attenuation value to compensate for variations in distances between amplifier locations. Available in 12, 15, 18, 21 and 24 db values.

### KAHN RESEARCH LABORATORIES

Superior Symmetra-Peak SP-63-1A. Unit to distribute unequal positive and negative peak energy of audio waves. 600 ohms, balanced or unbalanced. Nominal operating level is plus 10 dbm maximum; 0 dbm minimum. Insertion loss is approximately 2 db. \$435 F.O.B. Freeport, New York.



Symmetra-Peak SP 58-1A. Similar to SP 63-1A. Has approximately 4 db insertion loss. Sells for \$295 F.O.B. Freeport.

## PLASTOID CORP.

Slope pads. Available in values of 6 db, 8 db and 10 db. Used to equalize difference in loss in cable between channels 2 to 6 and FM. \$3.95.

## SPENCER-KENNEDY LABS

Thermatic equalizer, Model 49. Thermally controlled line equalizer for 30 to 220 mc operation 75 ohms in and out. Cable loss equalized (constant slope): 13 db at 125 degrees F. Type N connectors. Full step equalizing. Price from factory.

Model 499. Same as Model 498 except one-half step equalizing. 8 db cable loss equalized at 125 degrees F.

Automatic slope control, Model 880. For mainline;



pilot operated slope equalizer. Operates 40-216 mc; 75 ohms. Type N connectors. Pilot frequency is 50 mc. Net: \$498.

## FILTERS

### AMECO

Band pass filter, Model BP-1. Functions on either channel or offset for channels 2 through 6. 75 ohms. Insertion loss is 1 db. Fittings are UHF or F-61 type. Net: \$53.90. (High and low pass filters also available.)

### BENCO

Single channel rejection filter, Model BR-75. Rejects on specified channel 20 db. Use for non-adjacent channel installations. 75 ohms. Inser-



tion loss is 1.5 db maximum. Price is \$7.65. For pole or surface mounting.

Filter Network, Model AN-2-75 SUB. Will compensate hi and lo-bands or by-pass lo-bands at hi-band amplifiers. Minimum rejection of stop band is 30 db. 75 ohms. Indoor type. Priced at \$9.20.

Filter Network, Model AN-2-75 SUB. Will combine or separate TV channels and sub-channels; where sub-channels have to be fed in reverse direction to head-end. Lo pass 3-45 mc; high-pass 54-220 mc. 41 db isolation of stop band. For indoor mounting. 75 ohms. Net: \$24.90.

Band pass filter, Model BPF-B. For lo and hi-bands. Multi-stage HI-Q filter plus 2 HI-Q bridged T traps. Permits in excess of 60 db rejection. Loss for low channel is 4.5 db; 6 db for high. Price is \$104.10.

### BLONDER-TONGUE

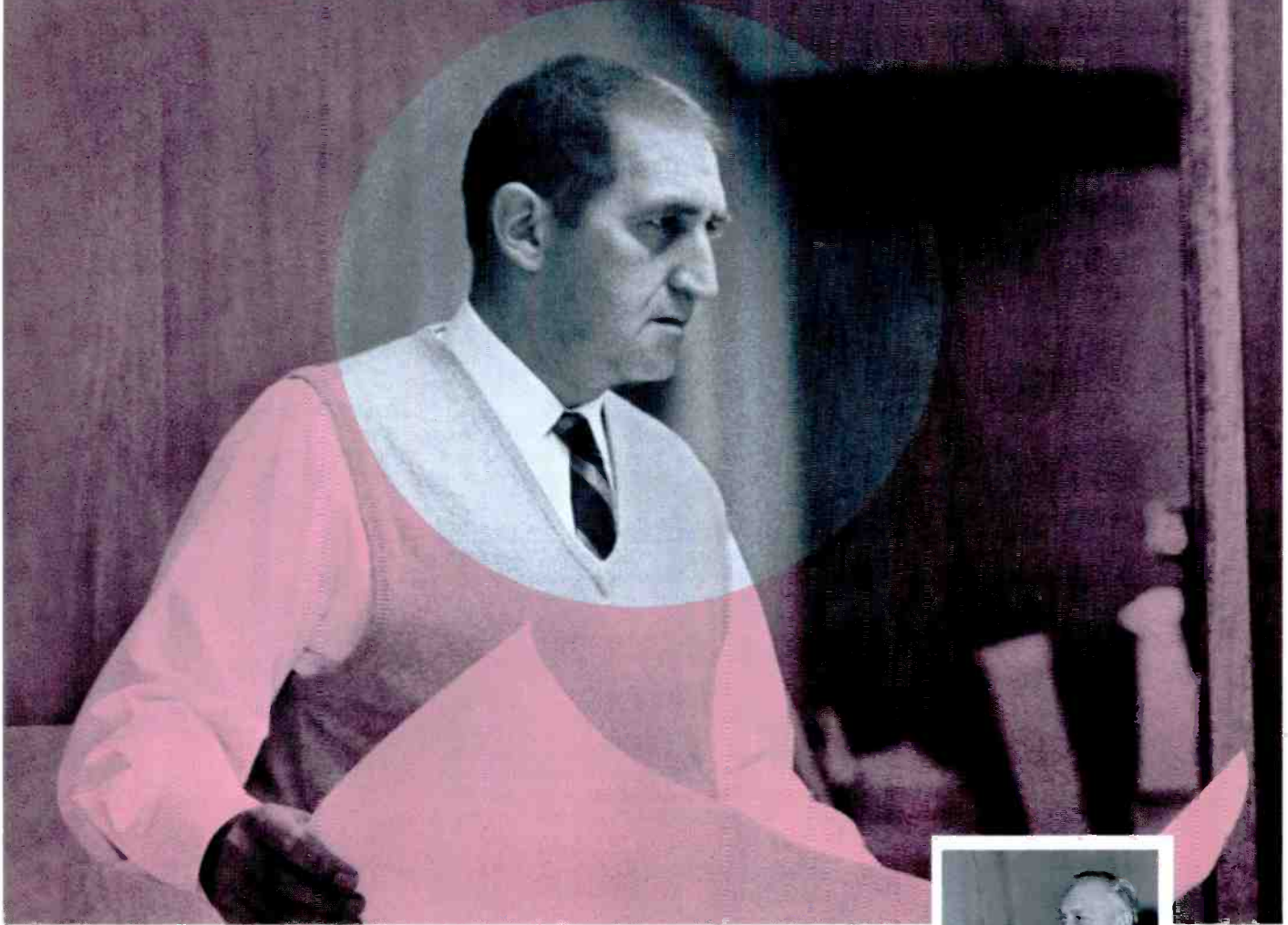
MX Series—MX2 thru 13. Bandpass filters pretuned to one of 13 TV channels. Used either separately or with MX mixing bases to form mixers or splitters. 75 ohm input and output. At least 6 db down 9 mc from center of channel. Net: \$6.70.

MX-FM. Same type as MX-2-13, pretuned to pass entire FM band. At least 8 db down 12 mc from center of channel. Net: \$6.70.

MX-LB. Lo band mixing base for mounting MX series filters. Accommodates up to 4 low band filters. Up to three hi based filters can be mixed; insertion loss increases with more than two hi band filters. Net: \$13.30.

MX-HB. Hi band mixing base mounts up to 4 hi band filters only. Net: \$13.30.

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*Serving CATV Systems in Engineering, Construction, Equipment, Promotion and Management*



## TELESYSTEMS CORPORATION

113 South Easton Road, Glenside, Pennsylvania • 215 TU4-6635

**MX-M.** Used to mix or split hi band and low band signals. Can be also used without MX series filters. 20 db minimum isolation between branches. Net: \$7.20.

### DAVCO ELECTRONICS CORP.

Distributor of Entron models DBR-26 and HQ. Information and prices sent on request.

### DELTA ELECTRONICS LTD.

**Single channel band pass filter BPF. 175.** Includes a band pass filter to improve selectivity of wanted channel. Available in blister can with 75 ohm fittings. List \$6.50.

**Single channel band pass filter BPF. 735.** Specifications as for BPF. 175 but available in weather-proof housing. List \$10.00.

**Single channel band pass filter BPF. 735 mast** mounting band pass filter with built in exact match balun for 300 ohm input and 75 ohm output. Specify the channel. List \$10.00.

### ENTRON

**Tuneable filter, Model DBR-26.** Provides two 40 db reject bands, 3.5 mc wide on each side of a channel. Each notch is tuneable over the complete



range. As a single notch filter, typical adjustment provides a 25 db, 6 mc notch; a 75 db, 1 mc notch; or a 600 kc notch width having 90 db minimum attenuation. Price: \$175.00.

**Tuneable filter, Model HQ.** Provides a means of improving edge-of-band response of broad-band filters or amplifiers. Used to eliminate narrow band co-channel interference caused by spurious signals or beats without affecting picture quality. Phase and attenuation characteristics held to close tolerances. Price: \$70.00

**600 watt load center, Model LPB-5B.** Six rugged outlets. Excellent power line filtering. Shielded to reduce radiation; fully magnetic circuit breaker. Overload/off indicator light visible from front and sides. Price: \$42.50.

### SPENCER-KENNEDY LABS

**496.** Channel pass filter. Insertion loss: 2.5 db. Rejection of unwanted signals: 40 db. minimum (6 mc from band edge). Flat within 2 db. Wall or rack mounting.

**492A.** Rejection trap. Over 45 db rejection of unwanted carrier. Both pix and sound traps available for all VHF channels. Insertion loss: less than 1 db.

### PLASTOID CORP.

**Low band pass filter, Model LBF-1.** Compact unit with 75 ohms in and out. Waterproof; brass housing and connectors. \$2.95.

### VIKING

**RF filtered power center.** Provides 10 amper service while eliminating RF from the AC power lines over the 20-220 mc range. Enclosed low pass filter which attenuates RF leakage or spurious power line radiation by over 60 db. \$12.00.

**Protected power filter** with built in Lightning Arrestor. Provides both full overload and lightning protection minimum of 60 db. of RF filtering. Magnetic circuit breaker protects both loads and filters from excessive voltage in less than 1/10 second while providing a 3 second delay for 125% overload. \$33.00.

## TRAPS

### AMECO

**High Q trap, Model HQ-1.** Provides 40 db rejection at any frequency from 50 to 220 mc. 1 db insertion loss; 75 ohms. Connectors are UHF or F-61. Indoor type that sells for \$26.75.

### BENCO

**Bridged T trap, Model HI-Q-75.** Filter network to suppress unwanted TV carriers. Provides minimum of 60 db attenuation of trapped carrier. 75 ohms; 3.5 db (max.) insertion loss. Priced at \$25.70.

### BLONDER-TONGUE

**MWT-2.** Low band FM trap. Can be tuned to attenuate any frequency from 54 thru 108 mc. Less than 0.25 db loss. Net: \$41.25.

**MWT-3.** Hi band trap. Can be tuned to attenuate any frequency from 174 thru 216 mc. Less than 0.25 db loss. Net: \$41.25.

### DELTA ELECTRONICS LTD.

**HI-Q bridge T trap type HI-Q-75.** Provides minimum attenuation of 60 db to unwanted CW carrier. Insertion loss 1 db to desired signal. Ad-



justable plus and minus 0.5 mc. Order by frequency. Available in indoor mounting case with "F" type connectors for 75 ohm impedance. List \$25.00.

### JERROLD ELECTRONICS CORP.

**High "Q" bridged "T" Traps, Models TLB-1, TFM-1 and THB-1.** Minimum attenuations: 60 db to undesired carriers. Insertion loss: 1 db to desired signals. Tuning range TLB-1, 59.75 to 83.75 mc; TFM-1, 88 to 108 mc; THB-1, 197.75 to 211.25 mc. 75 ohm impedance. F-61 fittings. PNS.

## DUPLEXERS

### AMECO

**Power inserter, Model PI-1.** Duplexes power with RF from remote power supply. Hermetically sealed inline strand unit with insertion loss of less than 1/4 db. Connectors are UHF, .412 and 1/2". Price is \$9.95.

### BLONDER-TONGUE

**MDX-75.** Duplexer for carrying AC to amplifier on same 75 ohm cable used to carry RF. (2 needed) May be used to combine or split frequencies in 0.2 mc band with the 54-216 mc band. Net: \$9.60.

**MDX-300.** Same as MDX-75 except for 300 ohm line. Net: \$9.60.

**MDX-275 Double Duplexer** for bypassing low frequencies around a wide-band amplified (such as model 1232) and to insert AC or telephone signals onto a 75 ohm RF cable. UHF-type connectors. 15 amp capacity; fused. CATV: \$41.85.

## AC LINE FILTERS

### BLONDER-TONGUE

**RF power-line filter, Model MLFb.** 2 AC outlets for 3 prong plugs. RF isolation greater than 60 db at VHF and UHF frequencies. Rated at 5 amperes. Net: \$12.75.

### DAVCO ELECTRONICS CORP.

Distributor of Entron model LPB-5 and LPB-10. Send for specifications and price.

### ENTRON

**AC line filter, Model LPB-5B.** Has 6 AC power outlets. Removes unwanted power line interference and prevents RF feedback from amplifier to power line. Ruggedly constructed. Write for full details. Price: \$42.50.

### JERROLD ELECTRONICS CORP.

**RF power line filter, Model ACF-1.** Has 4 AC power outlets. RF attenuation: 60 db minimum, 50

to 250 mc. Maximum load: 1 kw total on all four outlets. PNS.

### TELESYSTEM SERVICES CORP.

**Pofoer line filter, Model PFC-4. Power pack, Model PFC.** Power line filter with circuit breaker and pilot light. For direct attachment to secondary AC service. No external fuse box. Replacement plug-in filter module. 10 to 220 mc application.

## HOUSINGS

### BLONDER-TONGUE

**BH-1.** Indoor. Fully ventilated. Perforated mounting surface. Keyed slots for vertical and horizontal mounting. Provision for locking 20" x 27" x 10 1/2". Net: \$36.60.

**BK-1. Outdoor conversion kit for BH-1 housing.** Net: \$25.20.

**MWH-2. Outdoor housing. Weatherproof.** 18 1/4" x 14" x 6". Net: \$33.70.

**MRH-A.** Outdoor, radiation proof housing. Provision for locking. Perforated mounting surface. 18 1/4" x 14" x 6". Heavy duty cadmium plated steel. Net: \$42.20.

### DAVCO ELECTRONICS CORP.

**Model EQ-2.** Complete with mounting hardware, ready to install. 31 1/2 x 18 x 10 inches deep, will accommodate all-band equipment — heavy



24 gauge steel, phosphoried, then painted white. Latch, provision for lock — die-cut louvres for ventilation and spun glass insulation between walls of double lid for cooler operation. Bottom and side vents are screened. Holes and plugs are included for any combination of trunk and feeders. Reversible lay-out. No drilling at installation site. \$39.75, F.O.B. Batesville, Arkansas.

### DELTA ELECTRONICS LTD.

**DEH/1 weatherproof housing.** For blister can type splitter or directional coupler. List \$3.50.

**DEH/2 weatherproof amplifier housing.** 15" x 12" x 6". List \$19.95.

**DEH/3 weatherproof amplifier housing.** 24" x 12" x 8". List \$27.50.

**DEH/4 weatherproof amplifier housing.** 30" x 16" x 8". List \$37.50.

**DEH/6 weatherproof amplifier housing.** 30" x 24" x 8". List \$47.50.

**DEH/19 weatherproof amplifier housing.** For 19" centres. 20"x16"x10". List \$50.00.

### JERROLD ELECTRONICS CORP.

**EH-40. Deluxe equipment housing.** EH-40 is a deluxe 19" relay rack with standard E.I.A. drilling of its mounting centers. Made of heavy-gauge steel and has matching perforated cover. Knock-out holes are included for standard BX fittings. Cabinet can be locked with standard padlock. 29 1/4" x 20 3/4" x 12 3/4". Wall or bench mounting.

**WC-400.** Weatherproof utility cabinet. Heavy gauge steel. Heavy galvanized finish. Hardware and cable connector holes are pre-punched. Cabinet can be locked with standard padlock. 10" x 18 5/8" x 24 1/4". Crossarm or bench mounting. PNS

**HB-1.** Weather protective, umbrella housing for outdoor mounting of 1500 series splitters. Housing can be mounted on messenger, or on antenna masts. PNS

**MR-4.** Mounting rail set for wall mounted instal-

lations of relay rack mounted equipment. Supplied with lag screws and expansion bolts. 24½" x 3" x 6". PNS

### TELESYSTEM SERVICES CORP.

**Outdoor splitter housing: Model HOS-1.** For pole or strand mounting. Provides for mounting of blister cans, splitters or directional couplers.

**Outdoor amplifier housing: HOX** for single or double arm mounting. Prepunched holes for Tele-System's PFC-4 circuit breaker filter, and also for a variety of cable bulkhead fittings. Screen covered. Dimensions: 24" long, 19½" wide, 10" deep. Top opening with locking hasp. Galvanized stel. Basic price: \$22.50.

Also available, at extra, painted inside and out.

### VIKING

**570.** 24½" x 18½" x 9". 15/16 outside dimensions, fabricated from 18 ga (.47) steel, resistance welded with 4 louvres on 4 sides plus ventilation holes in bottom covered with galvanized screening, hinged cover. Phosphate coated followed by prime and finish. Price: \$36.45.

**571.** 30" x 20" x 9-15/16". Same as above but with additional air passage under lid with Rotron fan for cooling. Price: \$53.20.

## POWER SUPPLIES

### AMECO

**Heavy duty power supply, Model ATPS-3.** 115 v source for cable powering. 36 vac output at 4½ amperes. Unit is fused and regulated. Insertion loss is ¼ db. Can be used in cable lines or remote controlled with Model PI-1. Check manufacturer for price.

### BLONDER-TONGUE

**Power supply, Model 1514.** Supplies -18 volts a 9 ma to power one CMA (or CMA-U) preamplifier or equivalent. Power is duplexed on signal download. Uses 75 ohm Benconnector (compatible with type F). Net: \$20.95.

**Power supply, Model 1515.** Supplies -20 volts, 100 ma total, line and load regulated, for 3 CMA (or CMA-U) preamplifiers, or equivalent. Power is duplexed on signal downloads. Uses 75-ohm Benconnectors (compatible with type F). Net: \$83.95.

**Power supply, Model 1516.** Supplies -20 volts, 200 ma total, line and load regulated, for six CMA (or CMA-U) preamplifiers or equivalent. Power is duplexed on signal downloads. Uses 75 ohm Benconnectors (compatible with type F). CATV: \$181.00.

### CAS MFG. CO.

**Power supplies, PW-2000 and PW-6000.** (2 amp. & 6 amp.) are equipped with automatic reset overload protection. Price available from manufacturer.

### CRAFTSMAN ELECTRONICS, INC.

**Remote power supply, Model CPS-4.** Provides power for up to 4 MM-2100 line extender units in 4 different directions. Also provides power for up to 15 MC-2100 units in cascade. Use for outdoor mounting in amplifier housing. 110-115 vac; "F" type connectors. Price is \$39.95.

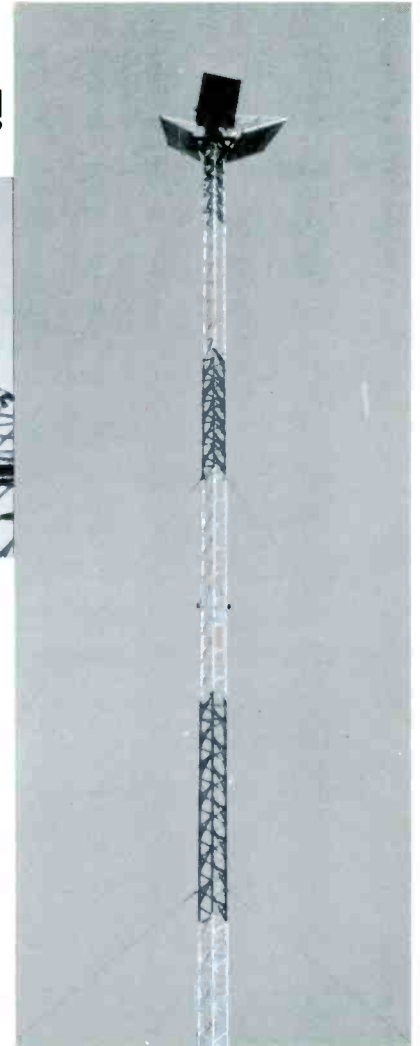
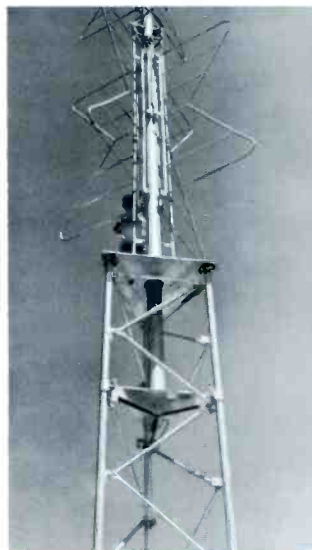
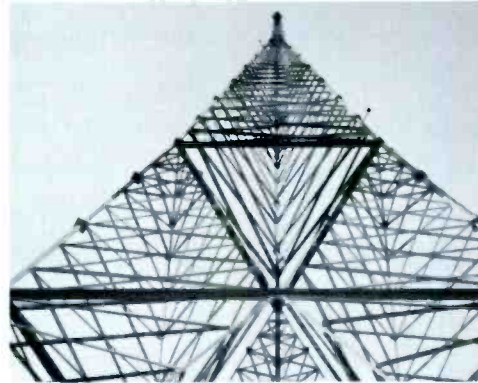
### DAVCO ELECTRONICS CORP.

Distributor of all Entron power supplies. Write for literature and prices.

### ENTRON



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- ✓ Complete installation service available to take care of the entire job—professionally and to save you money.
- ✓ Complete line of microwave reflectors and tower lighting equipment available.
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## **ROHN Manufacturing Co.**

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# Let's Talk About Trunk Lines ...

Trunk lines produce no revenue. They are never tapped. It is the feeder lines that serve the customer and the only purpose of the trunk line is to get the signal to the input of the feeders.

Good CATV system design today and maximum economy in first cost of plant and low future maintenance, calls for the least possible amount of trunk and the maximum amount of feeders. In compact communities, typical of CATV systems of the past, trunk lines were short, three to seven miles.

However, Spencer-Kennedy today thinks of seven miles as an ultra short trunk line. As the size of wired communities increases as it has been doing, or where the conformation of the town is elongated, longer trunks with high quality transmission characteristics are a *must* technically and a *saving* financially.

Our industry seems to be amazingly unaware of the practicality and feasibility of longer trunks. By *longer*

we mean 12 to 50 miles, with a delivered signal quality at all points capable of satisfactory service to the distribution areas. System operators and chief technicians are increasingly bringing us long trunk line problems that should be *no* problem at all. Other systems are developing three or four costly antenna sites for adjacent communities which could easily be served by one site. Still other system designers are breaking up larger towns into three or four pockets of service, each with a separate head end. This is done to accommodate the limitation of ultra short trunks; designers have to resort to microwave with its consequent high cost and numerous other disadvantages.

Such patch-work remedies really aren't necessary today. The table below lists the maximum feasible lengths of trunk lines in db and miles, with various technology and equipment; it evaluates the quality of signal delivered at an arbitrary point with each technique.

### CATV TRUNK LINE TABLE

Equipment	Maximum Length		At end of 6 miles		Power Attachment per mile
	In db	In Miles	Distortion	Signal to Noise Ratio	
All Solid State	600	7 (1)	.43%	40.7 db	0.85
SKL Modular Trunk	To be announced in April				
SKL Model 222A Amplifier	1250	14 (1)	.21 %	43.7 db	3.5
SKL Model 215 Amplifier	2900	50 (2)	.06%	49.2 db	1.8

NOTE: (1) With 1/2" Aluminum sheathfoam dielectric cable carrying channels 2 through 13  
 (2) With 1/2" Aluminum sheathfoam dielectric cable carrying channels 2 through 6

Typical SKL "long lines" are: 26 miles in Washington County, Maryland closed circuit ETV low band and sub channel; 11 miles in Southern California full wide band; 14 miles in upstate New York full wide band. These are with standard cable and standard SKL 211 and 222A Amplifiers. The advent of the 215 Long Line Amplifier will double or triple the feasible length of trunks.



**SPENCER-KENNEDY LABORATORIES, INC.**

1320 SOLDIERS FIELD • BOSTON, MASS. 02135 • TEL. 617-254-5400



# Long Line Troubles?

If you have any long line troubles in your system, SKL may have the answers. With the new SKL Model 215 Long Line Amplifier, you can carry a high quality signal with 6 channels and FM up to 100 miles on low loss cables; 50 miles on standard cables. You can improve end-of-line signal quality and open up new service areas. Model 215 is ideal where maximum cascaded lengths of point-to-point lines are desired with minimum distortion characteristics at their terminating outputs.

With Model 215 Long Line Amplifier, SKL has brought a new and important innovation to RF transmission. In developing the Model 215, SKL engineers, employing the best characteristics of both *solid state devices* and *vacuum tubes* achieved low distortion and a good signal-to-noise ratio.

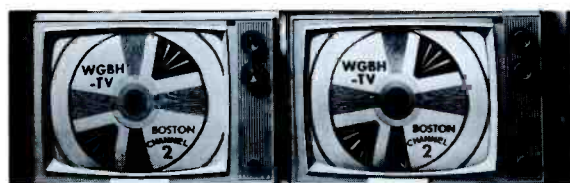
Particular emphasis was placed on reliability and fail-safe operation in designing the SKL 215 Amplifier. For example,



SKL Model 215 Long Line Amplifier

failure of any vacuum tube does not result in signal interruption. The power supply components are of the most reliable solid state types available and are extremely unlikely to fail. The power supply is well regulated and will provide constant output voltage in the face of either line voltage or load variations. The SKL 215 can be mounted either in a standard rack or in the SKL cabinet.

## IN AND OUT OF 1200 DB OF TRUNK LINE



INPUT

OUTPUT

This is a cascade of *forty* Model 215 Long Line Amplifiers set in a simulated trunk line, spaced at 30 db between amplifiers. Total gain 1200 db equal to 38 miles of 3/4" solid sheath foam dielectric cable at channel 6. Unretouched photo shows two Zenith TV receivers: one with test pattern direct from air, the other after the *forty* amplifiers. Test pattern reproduced with permission of WGBH, Boston, Mass.

## SKL MODEL 215 LONG LINE AMPLIFIER SPECIFICATIONS

- GAIN:** Maximum 33 db., Spaced at 28 db., Control range 10 db, typical, 6 db minimum.
- BANDWIDTH:** 20 to 100 mc (useful gain is present below 20 mc).
- RESPONSE SHAPE:** Amplifier alone flat,  $\pm 0.25$  db. Plug-in equalizers available for various cable losses and frequency assignments.
- IMPEDANCE:** Input and output,  $75\Omega$  unbalanced. Return loss, 20 db with plug-in equalizer.
- NOISE FIGURE:** At maximum gain, 8 db nominal. Variation with gain approximately 0.3 db increase for each 1 db reduction of gain.
- RECOMMENDED OUTPUT LEVEL:** + 40 dbmv.
- DISTORTION:** Cross-modulation, - 100 db at + 40 dbmv.
- AUTOMATIC LEVEL CONTROL:** Each amplifier ALC'd, operates from modulated pilot carrier. May be one of picture carriers on system. Pilot filter plug-in and tunable. Automatic idling operating for pilot signal failure.
- MONITOR POINTS:** Input and output panel mounted,  $75\Omega$  impedance. 26 db below signal.
- EFFECTS OF TUBE FAILURE**  
**Gain:** Less than 2.5 db decrease with loss of tube in output stage; about 6 db decrease with loss of driver tube. This loss in gain will be compensated for by stabilizing action of ACL circuit.  
**Response Shape:** Smooth change of slope of  $\pm 1$  db at 90 mc depending on particular tube.  
**Cross-Modulation:** Negligible change with loss of any tube.
- METERING:** Single meter, 8-position switch for — (a) All DC supply voltages. (b) Pilot carrier modulation indication. (c) Push-pull balance indication on amplifier tubes and emission check.
- POWER SOURCE:** 95 to 130 volts, 60 cycle.
- POWER CONSUMPTION:** 130 watts at 117 V AC.
- POWER ENTRANCE:** 3-wire cord set (case grounded), shielded and filtered entrance.
- FUSING:** Line 1 1/4 Amp. Slow Blow  
Blower 1/16 Amp.  
B+ 1/2 Amp.
- DIMENSIONS:** 19" x 6" panel, 12 5/8" deep.
- WEIGHT:** 28 lbs.

Call or write for technical bulletin and prices of Spencer-Kennedy Model 215 Long Line Amplifiers and other SKL CATV systems equipment.

**Regulated power supply, Model PSR-2.** Output 160 vdc at 400 ma. maximum regulated. 6.3 vac at 8.5 A. maximum unregulated. Minimum load 100 ma., regulation plus or minus 1%. Takes 6" of rack space in 19" standard rack. Tubes: (1) OA3, (2) 6AS7GA, (1) 6CB6, (1) 5AU4. Price: \$180.00.

**Regulated power supply, Model PSR-3.** Output 160 vdc at 800 ma. maximum regulated. 6.3 vac at 20 A. maximum unregulated. Minimum load 0 ma., regulation plus or minus 3%. Takes 8 3/4" of rack space in 19" standard rack. Tubes: (1) 5651, (4) 6080, (1) 5654. Price: \$260.00.

### JERROLD ELECTRONICS CORP.

**Power supply, Model CPS-4.** Designed for powering a single HDX-713 unit in each of up to four feeder lines. 24 vac output. PNS.

### VIKING

**Remote power supply AC/RF power duplexer, Model 561.** Power supply for Viking Model 560 (solid state line extender). Input 117 vac, plus-minus 10%, 60 cps; output 2 amps.; AC power filter -60 db from 20-220 mc; fittings "F" type or UHF. "KLIXON" automatic self-resetting thermal circuit breaker. Price: \$30.00

**Remote power supply, Model 949.** Power supply for Viking single channel amplifier, Model 945. Price: \$23.50.

## DISTRIBUTION EQUIPMENT

### COUPLERS

#### BLONDER-TONGUE

**Hi-Lo antenna coupler, Model A-105.** Coupler combines high and low band VHF antennas, or provides separate high and low outputs from a common line or antenna. Features isolation of 21 db minimum and loss of less than 1/2 db. Net: \$3.10.

**UHF-VHF antenna coupler, Model A-107.** With 15 db minimum isolation and less than 1/2 db loss, the A-107 will combine UHF and VHF antennas or provide separate VHF/UHF outputs from a common line. Net: \$3.15.

**4-set coupler, Model A-104.** Directional coupler with flat response from 50 to 220 mc. Feeds 4 receivers from one antenna, or mixes 4 antennas into one line. Isolation: 12 to 20 db. Net: \$3.00.

**4-set coupler, Color-4.** Deluxe 4-set coupler. Low loss, excellent isolation. No deterioration of color signals. Net: \$6.85.

**2-set coupler, Model A-102.** Isolation: 10 to 20 db. Net: \$2.00.

### CRAFTSMAN ELECTRONIC PRODUCTS

**Hybrid directional coupler.** Outdoor type that is available with .412 and .500 aluminum, F, or UHF fittings in and out. Attenuations of 8, 12,



16, 20, 24 db taps. Minimum of 30 db isolation. Flat response 54 to 216 mc. Housed in all-weather container for pole or messenger mount. Price from manufacturer.

### DAVCO ELECTRONICS CORP.

Distributor of Entron, Model DF-10. Information sent on request.

### ENTRON

**Directional coupler, Model DF-10.** Provides excellent isolation, 30 db. 54-220 mc. Permits advanced system installation techniques through physical and electrical isolation of distribution amplifiers from trunkline. Strand mounting clamp enables easy installation. Waterproof. 75 ohm. VSWR of 1:1. Price: \$12.00.

### KAISER AEROSPACE & ELECTRONICS

**Power coupler, Model KRP-239.** Provides method for coupling AC power to coaxial cable. Complete with weatherproof housing and ready for pole mounting. Matched for 75 ohm cable. Price is \$12.50. "UHF" connectors.

**Model KRP-250.** Same as Model KRP-239 with 1/4" connectors. Price: \$16.50.

**Model KRP-375.** Same as above with 3/8" aluminum connectors. \$17.50.

**Model KRP-412.** .412 connectors. \$16.00.

**Model KRP-500.** 1/2" connectors, aluminum. \$17.00 net.

**Model KRP-750.** 3/4" connectors. \$22.00.

**Model KRP-875.** 7/8" \$25.00.

**Model KRP-1625.** 1 5/8" connectors. \$30.00.

**Model KRP-480.** .480 corrugated copper. \$17.00.

**Model KRP-655.** .655 copper connectors. \$18.00.

### VIKING

**932. 2-way hybrid coupler.** Impedance all terminals 75 ohms, unbalanced VSWR. All terminals 1.2:1 in., 1.3:1 out, max., thru low 3.5 db max.; isolation between all outputs 30 db min., 174-216 mc, 35 db min., 54-88 mc "F" type fittings, zinc die cast, capacitive AC-DC isolation. Price: \$4.00.

**933. 4-way hybrid coupler.** Impedance, all terminals 75 ohms, unbalanced VSWR all terminals 1.2:1 max., thru loss 6.5 db, isolation between all outputs: 30 db, min., 54-216 mc, "F" type fittings, zinc die cast case, capacitive AC-DC isolation. Price: \$7.00.

## MATCHING TRANSFORMERS

### FLUSH

#### BLONDER-TONGUE

**TF-731 matching transformer.** Mounts flush in outlet for indoors. Matches 75 ohm input to 300 ohm output. Net: \$2.85.

**V-1SMT matching transformer for indoors.** Mounts flush in outlet box. Matches 75 ohm input to 300 ohm output (stripless screws). Net: \$3.10.

#### CAS MFG. CO.

**WP-75.** Flush mounted plastic telephone cover with phone jack, mates CAS CT-series transformer cable. 75 ohm resistor terminates line when phone plug disconnected. Prices available from CAS.

**WB-75.** Same circuit as WP-75 (can be mounted on telephone cover).

**WBT-4.** Choice of 4 taps (10, 15, 20, and 25 db) by removing paralleled capacitors. Mounts on telephone wall plate. Phone jack mates with CT-series cable transformer.

**WBT-FM.** Same as WBT-5 except has low-loss FM tap-off circuit.

#### DAVCO ELECTRONICS CORP.

**TF-731.** Flush mounted 75 ohm to 300 ohm matching transformer. Stripless screw terminals provide fast easy installation. Ivory color. Net: \$2.85.

#### DELTA ELECTRONICS LTD.

**WPSL/373 flush mounting matching transformer.** 75-300 ohms. Ivory finish. B. 59 connectors for line. 300 ohm terminals on face. AC. Isolated. List: \$1.95.

**WPQC/373 flush mounting matching transformer.**

Specifications as for WPSL/373 but uses quick connect saddle strap for line. List: \$1.95.

### TV CABLE SUPPLY CO.

**Matching transformer, Model 114155.** 72 to 300 ohm matching with 6 db voltage gain. Flat response from 50 to 220 mc. Supplied with F-59 connector. Price is \$1.19.

### VIKING

**913 matching transformer.** 6 db voltage step-up.



75 ohm to 300 ohm. Flush mount, wall type. Bandpass: 2 to 13. Standard RG59 coax connector supplied with unit. Price: \$1.75.

## MATCHING TRANSFORMERS SURFACE

#### BENCO

**Broadband antenna matching transformer, Model AMT.** 300-75 ohm symmetrical circuit. 54-216 mc range; less than 1 db insertion loss. 300 ohm solderless plug. Price is \$5.15.

**Set matching transformer, Model SMT.** Symmet-



rical circuit; high AC isolation. 75 to 300 ohms with voltage gain of 6 db. Sells for \$2.00.

**Terminating transformer, Model SURF-300P.** Outlet for 4.5 to 220 mc. 75 ohms input impedance; 300 ohms out, stripless. Insertion loss is \$.25 db average. 30, 25, 20, 16, and 12 db branchline attenuations. \$1.90 net.

**SURF-75P.** Same as SURF-300P except 75 ohm impedance in and out. 30, 25, 20, 16, 12 and 8 db ("8T") branchline attenuations. Net \$2.50.

#### BLONDER-TONGUE

**TS-731 matching transformer.** Surface mounted box for indoor use. Matches 75 ohm and 300 ohm connections. Net: \$2.65.

**Cablematch matching transformer.** For indoor use. Matches 75 ohm to 300 ohm. For VHF and FM. Net: \$1.90.

**MB-B-2M weatherproof matching transformer.** For outdoor or indoor use. Matches 300 ohm to 75 ohm. UHF connector. Net: \$6.15.

#### CAS MFG. CO.

**CT-series.** 75 to 300 ohm se. matching transformer on length (4', 8', 15') RG/59U cable, phone plug.

#### CRAFTSMAN ELECTRONIC

#### DAVCO ELECTRONICS CORP.

Distributor of Entron Models WBF, WBC, WBL, WBM, and OF-320. Write for information and prices. Also Craftsman T-10. Price: \$1.00.

#### DELTA ELECTRONICS LTD.

**WPSM/372 surface mounting matching transformer.** For indoor use. Uses B. 59 type connectors for line. Ivory finish. List: \$1.95.

**Mini match set mounting matching transformer.** 300-75 ohm. Enclosed in metal can, "L" mounting

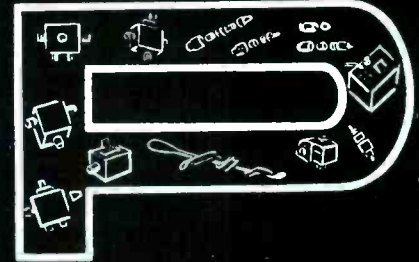
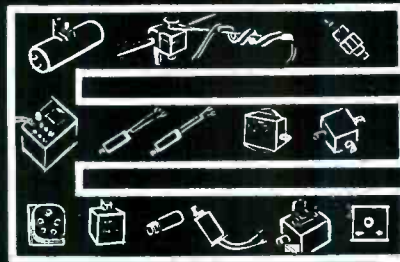
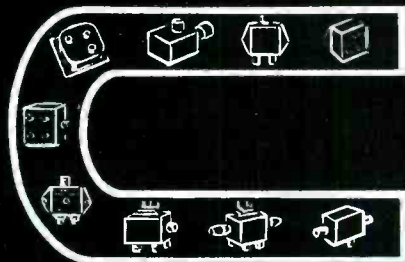
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Send your resume today, to Personnel Department, CRAFTSMAN Electronic Products, Inc., 133 W. Seneca Street, Manlius, New York 13104. Be certain to state in detail all your experience in the CATV Field.



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ELECTRONIC PRODUCTS, INC.**

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bracket, 300 ohm lead with spade terminals. Voltage gain of 2:1. List: \$1.85.  
**Mini match "C" set mounting matching transformer.** Specifications as for mini match. Includes AC isolation from line. List: \$1.85.  
**Switch match, set matching transformer.** Has switch to second input. List: \$3.25.  
**DMT directional matched type.** Available in 8, 12, 16 and 20 db isolation. Through loss from .25 to 1 db. Isolation at least 30 db between tap and output. 4 - 216 mcs. "F" type fittings. List \$7.00.

## ENTRON

**WBF matching transformer.** Surface mounting. Ivory finish. 75 ohm input, 300 ohm output. TV signal transfer plus 6 db. FM signal attenuated 20 db. Complete AC isolation.  
**WBC. Matching transformer.** Surface mounting. Push-on fitting input and terminal strip on output. Useful for apartment use or other situation wherein different TV receivers might be connected to a permanent installation at different times.  
**WBL matching transformer.** Mounts on rear of TV receiver. Equipped with push-on connector with pin vise and twin lead with spade lugs.  
**WBM matching transformer.** Mounts on rear of TV receiver. Equipped with push-on connector with screw terminal and twin lead with spade lugs.  
**OF-320 FM subscriber connection device.** Surface mounting. Ivory finish. FM tapoff attenuated 20 db. Push-on thru line fittings. 75 ohm input (thru line) and 300 ohm output (FM).

## JERROLD ELECTRONICS CORP.

**MTU-372 matching transformer for indoor service.** Surface mounting. Flat response over the entire UHF band. Insertion loss: .6 db at 470 mc and 1.2 db or less at 890 mc. F-61 connectors. PNS.  
**MTUO-374 matching transformer for outdoor applications.** Flat response over the entire UHF band.



Insertion loss: .6 db at 470 mc and 1.2 db or less at 890 mc. Unit passes AC at 1.0 amp. maximum. F-61 connectors. PNS.  
**MTU-374A matching transformer.** For outdoor applications. Mounted in weather resistant, indite finished case. Matches 300 ohm broadband or yagi antenna to 75 ohm line. Passes AC.

## PLASTOID CORP.

**Model T-10 matching transformer.** Symmetrical circuitry; 75-300 ohms. 4 to 300 mc bandwidth. Standard connectors. \$1.10.  
**Model T-5 transformer.** Capacitor type with positive isolation. \$1.25 each.  
**Model WT-5 matching transformer.** Wall mount; capacitor type for positive isolation. \$1.75 net.

## TELESYSTEM SERVICES CORP.

**MTC.** Matching transformer. 75 ohms to 300 ohms. Surface mounting. Quick mount "L" bracket and screw. 6" leads with spade lugs. Voltage gain 2:1. Has DC blocking capacitors on input side.  
**MT.** Matching transformer. Same characteristics as MTC except does not have blocking capacitors on input but has isolation type transformer for set protection and safety.

## VIKING

**910 matching transformer.** 6 db voltage step-up. 75 ohm to 300 ohm. Surface mount. High impact case with internal aluminum shielding. Bandpass:

channels 2-13. Standard RG59 coax connector supplied with unit. Can be mounted on back of set. Price: \$1.00.

**910F.** Same as above with F type fittings.

**911.** Same as 910 except for baseboard mounting. Price: \$1.00.

**Matching transformer 72-300 ohms, No. 971.** Indoor metal cases with push-on fittings. Bandpass: channels 2-13. For use with all types of 59U cables. Attenuation values of 10, 16 and 24 db available. Cream color case. Excellent for color. Price: \$2.10 each.

**Matching transformer 72-72 ohms, No. 972.** Same as above.

**Flipswitch, No. 979.** Combination switch and matching transformer. Switches from direct feed for home antenna 300 ohms to matching transformer for community system signals. Isolation between CATV and home inputs: 35 db min. Insertion loss less than 1 db. VSWR less than 1.25:1. Full AC-DC isolation on community operation by ferrite transformer. Price: \$2.50 each.  
**980 super matched transformer.** 10:1 all-aluminum metal case with snap-on back.  
**980C** with push-on fittings, \$1.25.  
**980F** with push-on fittings, \$1.35.

**928 TV/FM matching transformer.** Full 6 db voltage step-up for TV band. TV on spade lugs. FM on screw terminals. High impact case with internal aluminum shielding. Standard RG59U coax connector supplied with unit. \$1.45.

**927 super matched transformer.** Round metal can. Complete with F fittings \$1.35 each.

## SPLITTERS - INDOOR

### BENCO

**Hybrid splitter, Model 2-SPLIT-75MP.** Two-way splitter that is backmatched. 4.5 to 220 mc frequency range. 75 ohms. 20 db isolation with 3.3 db loss per output. Price is \$4.45.

**4-SPLIT-75P.** Four-way splitter similar to Model 2-SPLIT-75MP. 12 db isolation; 6.6 db loss. Net: \$5.85.



### BLONDER-TONGUE

**4-way splitter, Model TSb-774.** Indoor, surface mounted. Can split four 75 ohm cables. 6½ db loss. Net: \$5.00.

**2-way hybrid splitter, Model TS-772.** Indoor, surface mounted. Can be used to split or combine two 75 ohm cables. 3½ db loss. Net: \$3.55.

**UV-2 UHF-VHF 300-ohm 2-way splitter.** 13 db isolation and low loss. Net: \$2.00.

### CAS MFG. CO.

**Indoor splitters.** Midget 2-way or 4-way back-matched. VSWR 1.25 or better. Price from manufacturer.

### CRAFTSMAN ELECTRONIC PRODUCTS

**CEP/500 series line splitters.** Available in 2, 3 and 4-way splitters for indoor and outdoor. (Also function as trunk couplers.) Frequency: 10-220 fc; 75 ohm impedance. 20 db isolation. Connectors: C, F, UHF, .412 and .500. Prices vary with requirement.

### DAVCO ELECTRONICS CORP.

Distributor of Craftsman and Entron splitters. Write for literature and prices.

### DELTA ELECTRONICS LTD.

**2 x 75 two-way transformer type splitter.** 20 db

isolation. 54-216 mc. Uses B. 59 connectors. List: \$2.95.

**2 x 75F back matched two-way splitter.** Isolation 20 db. 3½ db splitting loss. 54-216 mc. Uses DF. 59 connectors. List: \$3.95.

**3 x 75F three-way back matched splitter.** 6 db splitting loss. 18 db isolation. Uses "F" connectors. List: \$4.50.

**4 x 75F four-way back matched splitter.** Splitting loss 7 db. Isolation 20 db. 54-108 mc. Uses "F" type fittings. List: \$4.95.

**1275 back matched hybrid transformer splitter.** 4 mc to 216 mc 3 db splitting loss. Isolation 26 db. "F" type fittings. List: \$6.95.

**1375 three-way back matched hybrid splitter.** Splitting loss 6 db. Isolation 24 db. 4-216 mc. "F" type fittings. List: \$7.25.

**1475 four-way back matched hybrid splitter.** 7 db splitting loss. Isolation 24 db. "F" type fittings. List: \$7.50.

## ENTRON

**Passive line splitter, DL series.** For line branching. Excellent frequency response, low loss. Inexpensive, suitable for multiple in-building connections. Choice of threaded or push-on fittings. Choice of 2 or 4 outputs. 50-220 mc. 75 ohm. Prices: from \$4.95 to \$7.25.

## JERROLD ELECTRONIC CORP.

**1592 2-way splitter.** Response flat from 4 to 220 mc. Surface mounting. Isolation: 20 db, low band; 15 db, high band. 75 ohm impedance. F-61 fittings. 3.5 db maximum insertion loss. PNS.

**DC-8, -12 and -16** are back-matched directional coupler type high-isolation tap units with the following respective characteristics—Bandwidth 7-216 mc, 6-216 mc, and 6-216; insertion loss (max.) and 8 db (min.); 12.5 db (max.) and 12 db (min.). Also, Models DC-8W, -12W, and -16W, same characteristics as shown above, but contained in weather-proof housing and by-pass ac.

**MTP-2. 2-way splitter.** Designed to match the trunk line in and out as well as the tap. Insertion loss: 2 db. Tap loss: 20db. F-61 fittings. Bandwidth: 0 to 216 Mc. PNS.

**1502—2-way resistive splitter.** Bandwidth: 0 to 220 Mc. 75 ohm impedance. 6 db isolation between outputs. 6 db splitting loss, F-61 fittings. PNS.

**1562—2-way transformer type splitter.** 20 db low band and 15 db high band isolation. Fittings come out around edges of "blister-can." B-59 fittings. PNS.

**G-1518—8-way splitter.** Has push-on "Gamma" chassis fittings. 75 ohm impedance. Isolation: 17 db minimum between outputs of opposite end groups; 14 db minimum between outputs



of same end group in the low band; 7 db minimum between outputs of same end group in the high band. Splitting loss: 9 db nominal. Covers 54 to 216 mc. PNS.

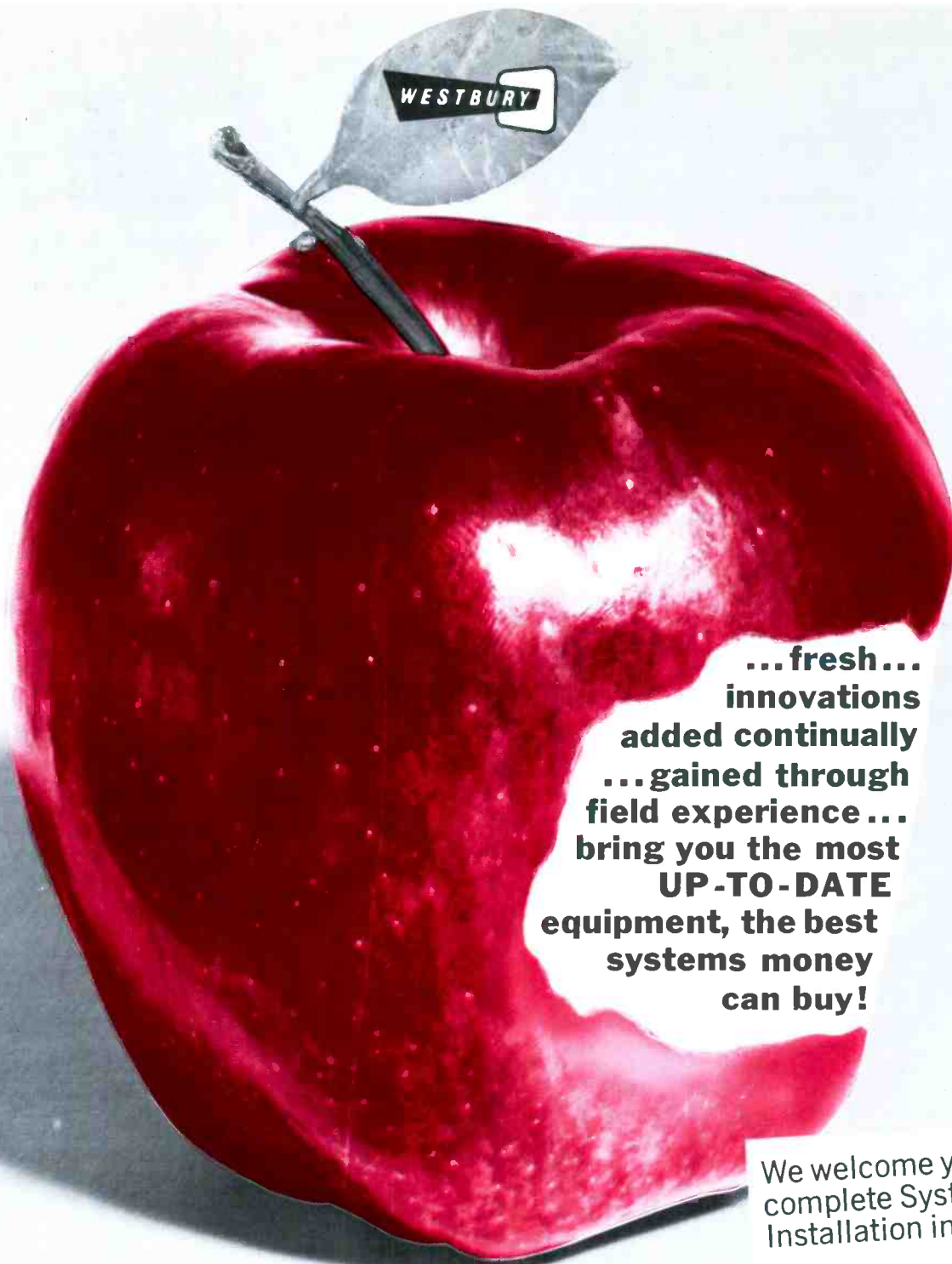
**1514 4-way transformer type splitter.** 12 db isolation. 6-7 db splitting loss. F-61 fittings. Covers 24 to 216 mc. PNS.

## PLASTOID CORP.

**2-way splitter, Model 2WD-W.** All-band, hybrid type. 3.5 db loss for each outlet; high isolation. Waterproof. "For C" fittings; \$2.95.

**Model 2WDW-5-F.** Same as 2WD-W with matched 75 ohm input to two matched 75 ohm outputs. 20 db isolation between outputs. \$2.95 each.

**Model 4WD-59-F.** Same as above for 4-way splitting. Isolation of at least 15 db between outputs. \$6.75 net.



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## TELESYSTEM SERVICES CORP.

Two-way and four-way splitters. Same as indoor models except weatherproofed.

## TV CABLE SUPPLY CO.

**Cascade two-way hybrid splitter, Model 2F.** 4-216 mc. 3.5 db loss, matched input and output. 20 db isolation and flat response. "F" connectors. Requires DEH-1 or HB-1 housing for outdoor use. Price: \$3.40 including connectors but less housing. (100-over) \$3.20.

**Cascade four-way hybrid splitter, Model 4F.** Similar to 2F. 6.5 db loss. VSWR is 1.22:1. 4-216 mc. Provides 20 db isolation; 75 ohms. Price: \$5.95, including connectors but less weatherproof housing. (100-over) \$5.75.

**Cascade two-way resistive splitter, Model W-124.** Ideal for taking signal from trunkline to feed distributor amplifier. May be used to divide signals or as a test point. 1.25 db through loss. 1.1:1 VSWR. 4-220 mc. 24 db isolation. Price: \$4.50, including connectors but less weatherproof housing. (100-over) \$4.25.

**4F splitter, Model 138946.** Four-way splitter with flat response; 4-216 mc operation. 75 ohm. 20 db minimum isolation; 6.5 db loss per output. Indoor type with "F" connector. Price is \$5.95.

**2F splitter, Model 138846.** Two-way splitter. Flat response. 4-216 mc frequency range; 75 ohm impedance. 20 db minimum isolation and 3.5 db loss per output. "F" connectors. Net: \$3.40.

## VIKING

**930 2-way splitter.** All-band design. Radiation proof. Low VSWR. Fittings: 59U type. \$2.50.

**931 4-way splitter.** All-band design. Radiation proof. Low VSWR. Fittings: 59U type. \$5.00.

**936 Back matched 2-way hybrid coupler indoor type.** Capacitive AC-DC isolation. Impedance all terminals 75 ohms unbalanced, VSWR. All terminals 1.2:1, 1.3:1 out, max., thru loss: 3.5 db max., isolation between all outputs 30 db min., 174-216 mc, 35 db., 54-88 mc. "F" type fittings with ferrules. Price: \$3.75.

**937 back matched 4-way hybrid coupler indoor type.** Capacitive AC-DC isolation; impedance all terminals 75 ohms, unbalanced; VSWR all terminals: 1.2:1 max. Thru loss 6.5 max. Isolation between all outputs: 30 db min., 54 to 216 mc. Fittings: "F" type. Price: \$6.75.

**526 back matched "Y" coupler.** Same specs as Model 936. Price: \$4.00.

**533 back matched 3-way hybrid coupler.** Impedance all terminals 75 ohms unbalanced, VSWR. All terminals 1.2:1, max. Thru loss on 3 db outlets 3.5 db max.; on 6 db outlets, 6.5 db max. Isolation between all outputs: 28 db, min. Fittings "F" type. Price \$5.75.

## SPLITTERS - OUTDOOR

### BENCO

**Two-way hybrid, Model 2 SP-75MP.** Back matched unit for 4.5-220 mc frequency range. 75 ohms. Better than 20 db isolation; 3.3 db loss per output. Priced at \$5.60.

**Three-way splitter, Model 3 SP-75MP.** Hybrid, back matched for all-band operation. 75 ohms. Same as Model 2 SP-75MP. Price: \$7.10.

**4 SP-75MP.** Same as Model 2 SP-75MP for four-way splitting. Better than 25 db isolation. Costs \$8.20.

**Asymmetrical splitter, Model 2 ASP-75MP.** Available with 8, 10 and 12 db branchline attenuation. Back matched; all-band. 22 db minimum isolation. \$7.35 net.

### BLONDER-TONGUE

**2-way, hybrid splitter, Model MDC-2b.** Can be used to split or combine two 75 ohm cables. 26 db isolation; 3½ db loss. Net: \$9.55.

**Four-way hybrid splitter, Model MDC-4.** Can be used to split or combine four 75 ohm cables. 18 db minimum isolation; 6½ db loss. UHF-type connectors. Net: \$20.00.

## CAS MFG. CO.

**CAS-2W 2-way splitter, UHF fittings.** Max. 3.2 db loss with 14 db isolation. Switch controls line powered voltage to both outputs. Strand mounting, weatherproof housing. Price from factory.

**CAS-4W 4-way splitter, UHF fittings.** 6.2 db loss and 20 db isolation across 4 legs. Switch controls line powered voltage to two legs. Strand mounting, weatherproof housing.

**Splitters for aluminum cable.** Inline splitters for .412, .500 or .750 aluminum. Passes power, VSWR 1.20 or better. (Specify size cable.)

**Distribution splitters.** (Follows TRA-220D.) Employs automatic reset overload protection (2-amp.). UHF fittings, weatherproof housing, strand mounting. (2-way or 4-way).

## DAVCO ELECTRONICS CORP.

Distributor of Craftsman and Entron splitters. Write for literature and prices.

## DELTA ELECTRONICS LTD.

**2 x 75FW.** Specifications as for 2 x 75F but in weatherproof housing. List: \$4.50.

**3 x 75FW.** Specification as for 3 x 75F but in weatherproof housing. List: \$5.95.

**4 x 75FW.** Specifications as for 4 x 75F but in weatherproof housing. List: \$6.95.

**6 x 75FW.** Six-way hybrid transformer type splitter. 54-216 mc. Isolation between outputs 18 db. Weatherproof housing. "F" type fittings. List: \$9.95.

**1275W.** Specifications as for 1275 but in weatherproof housing. List: \$7.95.

**1375W.** Specifications as for 1375 but in weatherproof housing. List: \$8.20.

**1475W.** Specifications as for 1475 but in weatherproof housing. List: \$8.50.

**DMT/FW.** Specifications as for DMT but in weatherproof housing. List: \$7.95.

## ENTRON

**Two-way line splitter, Model LS-211.** Divides one incoming signal into two outgoing signals of equal amplitude—or two signals may be combined to make both available on one common terminal. Wide band design, excellent VSWR of 1.2:1, in and out. Flat frequency response, minimum insertion loss. Fully weatherproof and easily installed. Price: \$11.50.

**Model LS-311 line splitter.** Passive divider for one incoming to three out or reverse. 10 to 250 mc frequency range. 75 ohms. 3.5 db insertion loss; 30 db isolation. Loss per output is 3 db. Connectors are ER-304 (UHF); weatherproof strand mounting. Price is \$12.65.

**LS-411 line splitter.** Divides one signal into four outgoing signals or combine 4:1. All-band; 75 ohms. 6.8 db insertion loss; 30 db isolation. Weatherproof; strand mount. Price: \$13.80.

## JERROLD ELECTRONIC CORP.

**1593 2-way splitter.** Splits one 75 ohm line into two 75 ohm lines with only 3.5 db loss in each leg. Passes 24 vac for line extenders. Mounts on messenger cable. 23 db minimum isolation. F-61 fittings. PNS.

## KAISER AEROSPACE & ELECTRONICS

**Two-way line splitter.** (Weatherproof.) Model with "F" connectors \$7.95. With UHF \$8.95; with .412 aluminum \$12.50; with ½" alum. \$14.50; ¾" alum. \$15.50; .480 corrugated copper \$13.00 and .655 copper \$13.50.

**Three-way line splitter.** (Weatherproof.) Model with "F" connectors \$8.25; UHF \$12.00; .412 alum. \$13.50; ½" alum. \$15.00; ¾" \$16.50; .480 corrugated copper \$15.00 and .655 \$15.50.

**Four-way line splitter.** (Weatherproof.) Model with "F" connectors \$8.50; UHF \$15.00; .412 aluminum \$15.50; ½" \$17.50; ¾" \$18.50; .480 corrugated copper \$16.00 and .655 copper \$16.00.

## PLASTOID CORP.

**2-way splitter for trunk or feeder, Model 2WD3.** All-band; mounts on messenger strand. 3.5 db thru loss; 20 db isolation between outputs. UHF fittings. \$5.95 each.

**Model 3WD3.** Three-way splitter for trunk or feed line. Mounts on messenger. 1 output 3.5 db thru loss; 2 outputs 7 db thru loss. Net: \$6.50.

**Model 4WD3.** Same as above for four-way dividing. \$7.50.

## TELESYSTEM SERVICES CORP.

Two-way and four-way splitters. Same as indoor models except weatherproofed.

## VIKING

**Two-way splitter, Model 2WD1.** All-band hybrid type for RG59/U. Completely waterproof unit for feeding two sets from one drop line. Matched 75 ohm input to two matched 75 ohm outputs. 3.5 db through loss. Isolation 20 db between outputs. Three connectors supplied with unit. PNS.

**Two-way splitter for trunk or feedline, Model 2WD3.** All-band type. For splitting trunk or feeder lines. Mounts to strand with bracket. 3.5 db through loss. 20 db isolation between outputs. Uses "UHF" type fittings. PNS.

**Three-way splitter, Model 3WD3.** Similar to above. One output with 3.5 db through loss; two outputs with 7 db through loss. "UHF" type fittings. PNS.

**Four-way line divider, Model 4WD3.** For trunk or feeder line. All-band type. Similar to above. Strand mounting. PNS.

**Four-way line divider, Model 4WD-59.** All-band hybrid type for RG-59/U. Surface mounting. Provides isolation of at least 15 db between outputs when fed from a 75 ohm source. 7 db through loss.

**Two-way hybrid splitter, No. 932.** Use for either pole or mast mount. Weatherproof zinc case. VSWR of 1.2:1 in and 1.3:1 out. 25 db minimum isolation between all outputs for 174-216 mc and 35 db minimum for 54-88 mc. "F" type fittings included. Price: \$4.00.

**Four-way hybrid coupler, No. 933.** Similar to above. VSWR of 1.2:1. Isolation between all outputs is 30 db minimum for 54-216 mc. Complete with "F" type fittings. Price: \$7.00. (See also Models 930 and 931 under Splitters-Indoor.)

**525 and 528.** Trunkline couplers will pass up to four amps with thru loss of 3.25. Designed for inline use and available with all fittings for all cables including the new SuperMatch series.

## TAPOFFS-INDOOR (FLUSH)

### BENCO

**Branchline attenuators, Model PL-300P.** Transformer type wall plate television outlet. All-band. 75 ohms input; 300 ohms out, stripless. 0.25 db average insertion loss. Net: \$1.75.

**PL-75P.** Same as Model PL-300P except 75 ohms in and out. \$2.20.

### BLONDER-TONGUE

**TF-771B flush mounted plate.** Single 75 ohm output from 75 ohm thru line. 17 db isolation. 0.7 db thru loss. Net: \$2.55.

**TF-771BS.** Same as TF-771B except with stainless steel plate. Net: \$2.95.

**Versa-Taps.** Indoor tapoffs for flush mounting in standard outlet boxes. For RG-59 or RG-11 type thru lines (except V-1PFT). Available with various isolations and connector arrangements, as indicated below. May be ganged.

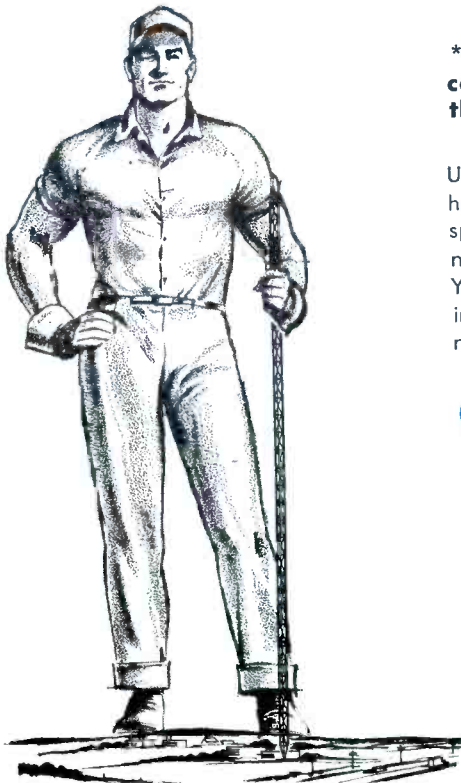
**V-1S12-X stripless.** 300 ohm, 12 db isolation, DC-isolated output. Also available as V-1S17-X (17 db isolation) and V-1S23-X (23 db isolation). Net: \$2.00.

**V-2S12-X, V-2S17-X, V-2S23-X.** Same as V-1S series above, except with two sets of stripless 300 ohm terminals. Net: \$3.25.

**LJ-1.** Tumbler lock cover that fits over any Lock-

# GOING UP!

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Utility Towers are available in several designs to meet diversified requirements. All have Quality Certified engineering and workmanship and always meet or exceed EIA specifications. In the seven standard models, round members are welded together in numerals 20-foot sections except for top section which is made to your measurement. Your choice of hot dip galvanized or rust-inhibitive primer finish. All models available in knocked down design for compact shipping. Call us for a complete quotation on your next CATV, microwave or other tower requirement.

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Jax unit or standard single wall plate. Net: \$6.00.  
**LJ-2.** Blank wall plate with direct connection for thru line. Net: \$4.05.  
**LJ-6.** Video thru unit for video camera, amplifier or monitor, with shorting switch. Net: \$9.30.  
**LJ-11.** Single 17 db tapoff with toroidal ferrite transformer. Net: \$7.45.  
**LJ-12.** Double 17 db tapoff similar to LJ-11. Net: \$10.45.

#### DELTA ELECTRONICS LTD.

**WPQC/300 flush mounting.** 300 ohm outlet wall plate. Ivory finish. Choice of isolation value. List: \$1.49.

**WPQC/75.** Flush mounting 75 ohm output from 75 ohm line. Choice of isolation. List: \$1.79.

**WPSL/300.** Flush mounting 300 ohm. From 75 ohm line wall plate. Ivory finish. Choice of isolation. List: \$1.95.

**WPSL/75.** Flush mounting 75 ohm output from 75 ohm line. Ivory finish. Choice of isolation. List: \$2.50.

#### SAXTON PRODUCTS, INC.

Information and pricing available from manufacturer.

#### TELESYSTEM SERVICES CORP.

Write manufacturer for detailed information and prices.

#### VIKING

**914. Flush mounted wall plate.** 75 ohm, 17 db isolated outlet from 75 ohm cable. "C" type connections. Price: \$1.80.

**Tapoff, Model 912.** Comes with attenuation values of 10 db, 16 db and 24 db. Equipped with push-on fittings. Easily mounted into standard wall box. Price: \$1.45. Wall plate, \$0.20.

**530 flush mounted wall plate.** 75 ohm. With attenuator values of 10 db, 17 db, 24 db. Tapoff tilt: Lo band 2.5 db, max., Hi band 1.5 db, max. Fitting "F" type. Price: \$5.00.

### TAPOFFS-INDOOR (SURFACE)

#### BENCO

**Single tapoff, Model 1-TAP-75P.** Transformer type in 12, 16, 20, 25 and 30 db branchline attenuation values. All-band, 75 ohms. Insertion loss ranges 0.33 to 0.15 db. Net: \$4.35.

**2-TAP-75P.** Similar to Model 1-TAP-75P except for dual use. Loss is 0.7 to 0.2 db. Price is \$5.15.

**4-TAP-75P.** Similar to Models above except for four-way use. 0.7 to 0.25 db insertion loss. Price is \$7.30.

#### BLONDER-TONGUE

**TO2-75.** Surface mounted box. Two 75 ohm outputs from 75 ohm thru line. Jacks for auto-type plugs. 17 db isolation. 0.35 db thru loss per output. Net: 4.80.

**TO-774A.** Surface mounted box. Four 75 ohm outputs from 75 ohm thru line. 12 db isolation. 0.6 db thru loss per output used. Net: \$8.65.

**TO-2-300.** Surface mounted box. Two 300 ohm outputs from 75 ohm thru line. Stripless terminals. 17 db isolation. 0.35 db thru loss per output used. Net: \$4.80.

**TS-731B.** Surface mounted box. Single 300 ohm output from 75 ohm thru line. 17 db isolation. 0.7 db thru loss. Net: \$2.75.

**TS-771B.** Surface mounted box. Single 75 ohm output from 75 ohm thru line. 17 db isolation. 0.7 db thru loss. Net: \$2.70.

**TS-771A.** Surface mounted box. Single 75 ohm output from 75 ohm thru line. 12 db isolation. 0.7 db thru loss. Net: \$3.55.

#### DAVCO ELECTRONICS CORP.

Write for information and prices.

#### DELTA ELECTRONICS LTD.

**WPSM/300.** Surface mounting ivory finish 300 ohm output for 75 ohm line. Choice of isolation. List: \$1.95.

**WPSM/75.** Surface mounting ivory finish wall plate. 75 ohm output from 75 ohm line. Choice of isolation. List: \$2.50.

**TO-1 75 ohm.** Surface mounting line tap. Isolation values 12, 16, 20 and 24 db. "F" type fittings. List: \$4.50.

**FMT/FM tapoff.** Surface mounting. Tuned selective network to tap off FM signals from TV line. Through attenuation to TV signals .5 db. 88-108 mc to tapoff. List: \$3.25.

**TO-2/F surface mounting blister can.** Two 75 ohm outputs from 75 ohm line. Through loss to .6 db. Isolation values 12, 16, 20 and 24 db. List: \$5.95.

**TO-4/F.** Specifications as for TO-2/F but with 4 outlets and through loss of 1.2 db. List: \$7.95.

#### JERROLD ELECTRONIC CORP.

**FMT-2.** Provides for connection of one FM set to line. Surface mounting. Isolation: 8 db minimum, 17 db maximum. Less than 1 db insertion loss. 75 ohm impedances. PNS.

**UT-22.** Tapoff unit, Ultra-Tap series. Choice of three isolation and feed-thru values. For TV or FM. Can be flush mounted by using 2" x 4" wall box. Accepts 75 or 300 ohm push-on plugs (G-59 or G-300). PNS.

**UT-33.** Tapoff unit, Ultra-Tap series. Available in the same isolation and feed-thru values as Model UT-22. Additional isolation to separate TV and FM signals for simultaneous connection of a TV receiver and FM receiver. Flush mounts in same manner as UT-22. Accepts G-59 or K300 plugs. PNS.

**UT-12.** Special wall terminal unit. Without isolation or feed-thru. Size and shape is same as UT-22 or UT-33. Accepts G-59 or G-300 plugs. PNS.

**UT-5H.** Surface housing for UT-22, UT-12. Single outlet, ivory surface mounting box. PNS.

**UT-PI.** Flush cover plate. Single outlet ivory cover plate. PNS.

**UT-PS.** Flush cover plate. Single outlet cover plate, brushed stainless steel. Other finishes and double-sized cover plates are available on special order. PNS.

#### PLASTOID CORP.

**Line tap, Model 1401.** Surface mounting for MATV applications. Color coded attenuation values permit use with highest gain amplifiers. Complete with mounting bracket. 72 ohm. PNS.

#### VIKING

**Tapoff, No. 971.** 72-300 ohm. Features push-on fittings. Attenuation values of 10, 16 and 24 db. For use with all types of 59-U cable. Band pass ch. 2-13. \$2.10 each.

**Tapoff, No. 972.** Same as above except 72-72 ohm. \$2.10 each.

**FM tapoff, Model No. 977.** Passes all frequencies from 0 to 220 mc but taps off FM only. 11 db isolation at 88-108 mc, TV band: 20 db low and 24 db high. 1.15 max. VSWR. Push-on fittings. \$3.00 each.

**531 indoor directional tapoffs.** Insertion loss 10 db, tap 0.7 db insertion loss 17 db tap 0.3 db; insertion loss 24 db tap 0.25 db. Complete with "F" type fittings. \$5.00 each.

### TAPOFFS-OUTDOOR (SINGLE)

#### AMECO

**Directional tap, Model DTI-1161.** For feeder cable; excellent back match, low insertion loss (1/2 db), flat response. 75 ohms. Strand mounting. In 11, 14, 17, 22, 26, 30 db attenuation. Price is \$7.25. Minimum of 16 db isolation between taps.

#### BENCO

**Single tapoff, Model IT-75MP.** Has toroidal transformer; 75 ohms. 13, 16, 20, 25, 30, 35 and 40 db branchline attenuation values. Back matched; 1 to 0.25 db isolation. \$6.25.

**ST4-75MP, dropline tapoff.** 13, 16, 20, 25, 30, 35,



40, 45 and 60 db attenuation values. Solderless, pressure type with toroidal transformer; back matched 75 ohms. 1 to 0.2 db insertion loss. Net: \$5.35.

#### BLONDER-TONGUE

**MTO-11.** Single 75 ohm output from RG-11/U cable. Pressure tap. 17 db isolation. Net: \$5.70.

**MT-11.** Single 75 ohm output from 75 ohm thru line. Choice of 12 db, 17 db, or 23 db isolation. Net: \$4.50.

**Stinger-series.** 75 ohm back matched pressure tap insert. Available with 12 db and 15-50 db (5 db steps) isolation. Does not require pre-drilling of cable. Moistureproof seal. Type F connector. Net: \$1.84 (12 to 25 db models). Net: \$1.55 (30-50 db models).

#### CRAFTSMAN ELECTRONIC

**Series CEP/600, directional taps.** 10 to 220 mc operation; 75 ohms in and out. Insertion loss 14, 18, 22, 26 and 30 db isolation. Connectors are F, UHF, .412, .500. Net: \$4.35.

#### DAVCO ELECTRONICS CORP.

Distributor of Entron fasteets, FTC, FTR, and FTT inserts and FTB-405, FTB-412, FTB-460, and FTB-480 blocks are stocked for immediate shipment. Write for specifications and prices.

#### DELTA ELECTRONICS LTD.

**STO-11.** Clamp on solderless line tap for RG-11/U type cable, body only. List: \$1.20.

**PTO-11 pressure tap block.** Includes messenger clamp for RG-11/U type cable. List: \$1.45.

**PTI/C pressure tap insert capacitive.** Stinger for line tap. Specify W-R-Y-G. List: \$1.95.

**PTI/R pressure tap insert resistive.** Specify 45, 40, 35 or 30 db. List: \$1.95.

**PTI/T transformer type insert.** Specify 24, 20, 16 or 12 db. List: \$2.50.

**PTI/MT back matched transformer insert.** Specify 16-54 db. In 4 db steps. List: \$3.50.

#### ENTRON

**FTB-405.** For use with single shield cables. 75 ohm output from 75 ohm thru line. Choice of attenuators (capacitive FTC series or resistive FTR series, or transformer FTT series). Price: \$2.70.

**FTB 460.** For use with double shield cables. 75 ohm output from 75 ohm thru line. Choice of attenuators (capacitive FTC series, resistive FTR series, or transformer FTT series). Price \$2.70.

**FTB 480.** For use with corrugated copper shield cable.

#### PLASTOID CORP.

**Models MT 404 and MT 408 pressure taps.** For single and double shield cable. Comes complete with boot, attenuator and fittings for \$2.25.

#### TELESYSTEM SERVICES CORP.

**TTPR Outdoor tapoff.** Resistive type. Single or double shield cable. Uses F-59 connector (included). Button type hook for housedrop support. Isolation unit can be installed in inverted position. Choice of attenuators.

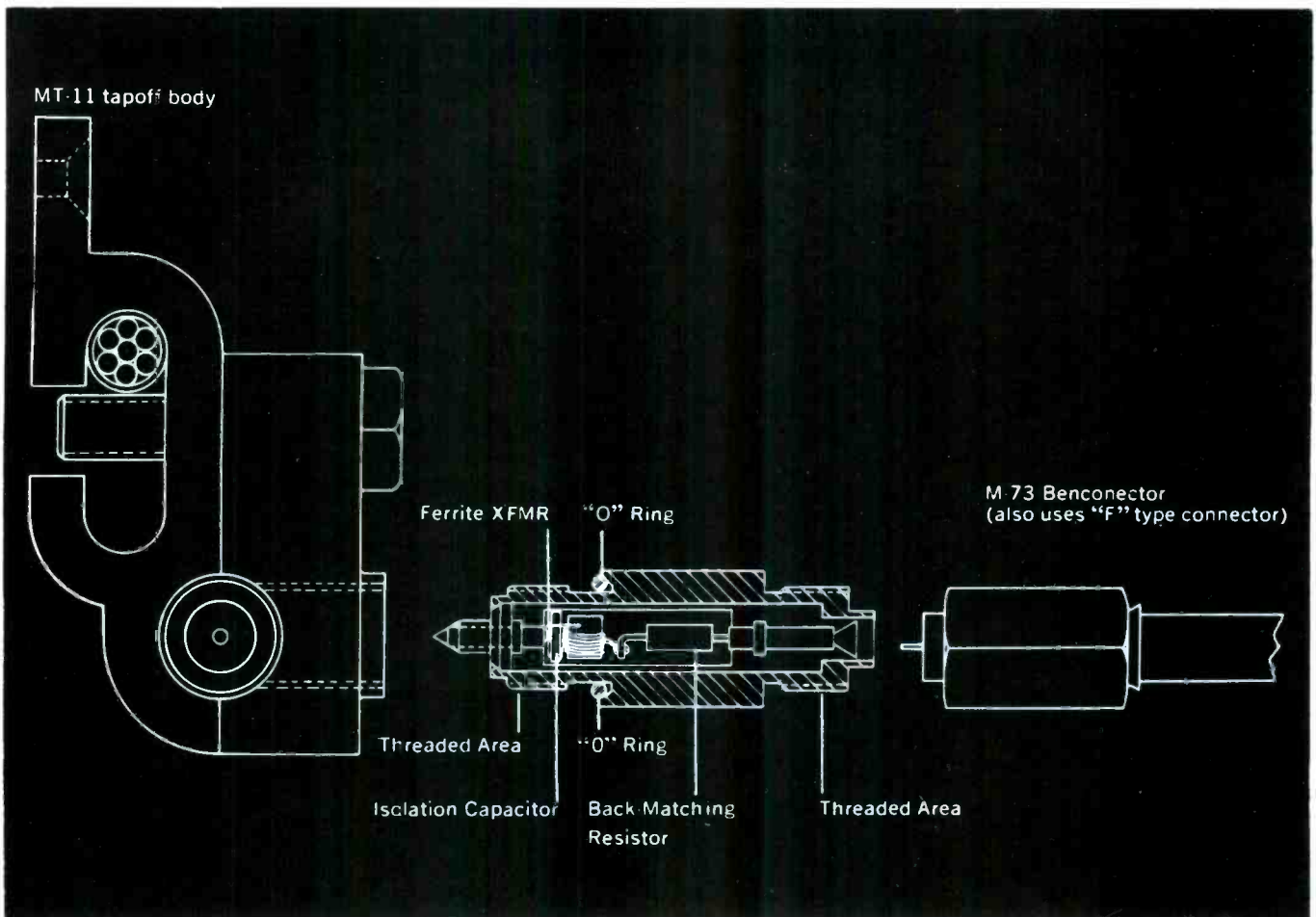
**TPTI Outdoor tapoff.** Same as TTPR except inductive type. Choice of attenuators.

**TTPC Outdoor tapoff.** Same as TTPR except capacitive type. Choice of attenuators.

#### TV CABLE SUPPLY CO.

**Cascade all-weather pressure tap.** For .460-.480 OD cables. Heavy protective plating. Stainless steel grounding pins. Available with capacitor, resistor or transformer type interchangeable units.





## Protect your investment in the rest of the system. New Blonder-Tongue "Stinger"

The purpose of a good CATV system is to deliver superior black and white and color reception to its subscribers. The new Blonder-Tongue "Stinger" VHF back-matched pressure taps helps achieve this objective.

Designed for insertion in the Blonder-Tongue MT-11 tapoff body or the bodies of other tapoff makes, these VHF taps cover channel 2 through 13, sub-channels & FM. They provide excellent results when installed in new systems, or when used as replacements in low band VHF systems being converted to full band VHF. Transformer and resistive models are available in these isolation values: 12, 15, 20 and 25db, transformer type; 30, 35, 40 and 45 and 50db, resistive type. "Stingers" are back-matched to protect

against line mismatches — cause of suck-outs, traps and other problems that deteriorate TV reception. An extremely low VSWR, low insertion loss, flat frequency response assure ghost-free, smear free black & white and brilliant color on all VHF channels from 2 to 13. The "Stinger" offers top quality, maintenance free performance. A weather-proof seal between the tapoff block and the body of the "Stinger" is accomplished by a neoprene "O" ring which, under pressure, completely fills all voids between the tapoff and the "Stinger" body. This minimizes the need of a rubber or plastic boot which tends to collect moisture. Increased attenuation caused by moisture creeping up the threads to the cable conductor is eliminated.

Another vital consideration in CATV and MATV installations is ease of installation. With the "Stinger", no pre-drilling of the coax cable is necessary except where metallic sheathed cable is used. A stainless steel corrosion-proof prod bites through the cable easily. This prod is insulated to prevent loose strands of the sheath from working their way into the cable and causing shorts.

The "Stinger" is designed for universal connection to the drop lines with either a Benconnector or type "F" connector. Further, the connector socket of the "Stinger" accepts the center conductor of regular or foam RG-59/U cable creating a positive spring type connection. Protect your investment with the Blonder-Tongue "Stinger".



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# PICTURE QUALITY IS AUTOMATIC ...with DYNAIR Head End Systems!

You, as a CATV operator, have only one thing to sell — quality TV pictures which equal or surpass those of local off-air channels. Competitive performance and more channels means more new subscribers!

Provide the clear, crisp pictures and additional channels TV viewers demand with a DYNAIR head end system incorporating the tried-and-proven TX-1B Modulator — the work-horse of the CATV industry.

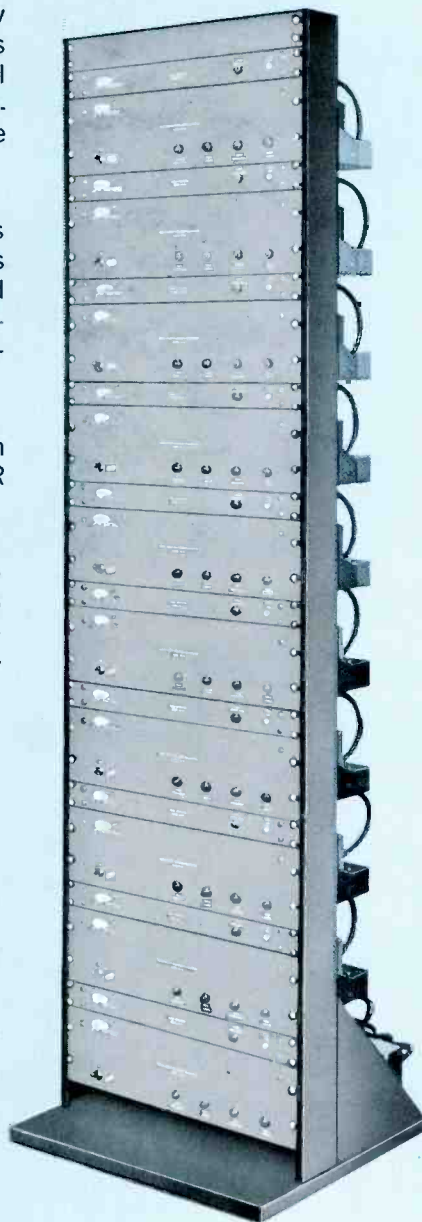
Adjacent-channel and color operation presents no problem to DYNAIR equipment — it's designed for it!

DYNAIR has had full 12-channel modulator systems in operation for over 3 years providing constant top performance . . . no other equipment manufacturer can make this statement!

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6360 FEDERAL BOULEVARD • SAN DIEGO, CALIFORNIA 92114 • TELEPHONE (714) 582-9211

PT/11D. Tap body (block). Price: \$1.15.  
 PT1/(C). Capacitive insert (color). Price: \$1.15.  
 PT1/R. Resistive insert, 30, 35, 40. Price: \$1.15.  
 PT1/T. Transformer insert, 12, 16, 20, 24. Price: \$1.80.  
 3200 back matched resistor inserts. Values: 30, 35, 40, 45 and 50 db. Price: \$1.95 net.  
 3200 back matched transformer inserts. Values: 12, 15, 20 and 25 db. \$1.95 each.

## VIKING

900. Pressure tap for .410 cable (11U, VK11, & VKD11). Hook type. 75 ohm output from 75 ohm thru line. Choice of capacitive taps. Add 25c per unit for resistive taps. Price: \$2.25.  
 901. Same as 900 except for .465 cable (strip braid single-double VK108-VKD108, and double shielded and double jacketed 11U types). Price: \$2.25.  
 902. Pressure tap for .410 cable (11U, VK11, & VKD11). Button-hook type. 75 ohm output from 75 ohm thru line. Choice of capacitive taps. Add 25c per unit for resistive taps. Price: \$2.25.  
 903. Same as 902 except for .465 cable (strip braid single-double VK108-VKD108, and double shielded and double jacketed 11U types). Price: \$2.25.  
 915. Underground pressure tap for .410 cable (11U, VK11, & VKD11). 75 ohm output from 75 ohm thru line. Choice of capacitive taps. Add 25c per unit for resistive taps. Price: \$2.25.  
 916. Same as 915 except for .465 cable (strip braid single-double VK108-VKD108, and double shielded and double jacketed 11U types). Price: \$2.25.  
 T12. 12 db transformer insert. .25 db insertion loss. Frequency response: 8-220 mc. PNS.  
 T16. 16 db transformer insert. .1 db insertion loss. Frequency response: 8-220 mc. PNS.  
 T20. 20 db transformer insert. .1 db insertion loss. Frequency response: 8-220 mc. PNS.  
 T24. 24 db transformer insert. .1 db insertion loss. Frequency response: 8-220 mc. PNS.  
 T30 30 db transformer insert. 1 db insertion loss.



Frequency response: 8-220 mc. PNS.

515 back matched transformer tap. Frequency response 8-220 mc tapoff flatness plus or minus .25 db band. Tap output is AC/DC isolated. Tap VSWR 1.2:1 max. Low insertion loss. 12 db, 16 db, 20 db, 24 db, 30 db, 36 db, 40 db, 50 db. Price: \$3.00.

520 back matched transformer tap. Same as 515 but with thread to fit all Entron blocks. \$3.00.

500, 501, 502 pressure taps. For .412 D cables. Hook, button and underground types. Available with capacitive, resistive inserts. Price: \$2.25; with transformer tap insert \$2.75. With back matched tap (Viking No. 515 insert) \$4.25.

503, 504, 505 pressure taps. For .480 cables. Hook, button and underground types. Same prices as for 500-501-502 pressure tap series.

506-507-508 pressure taps. For .500 OD cables. Hook, button and underground types. Available with capacitive, resistive inserts, price \$2.25; with transformer tap insert \$2.75; with back matched tap \$4.25.

518-519 pressure taps. For .580 OD cables. Hook and button types. Available with capacitive resistive inserts. Price \$4.50; with transformers tap insert \$5.25; with back matched tap \$6.50.

516-517 pressure taps. For .655 OD cable. Hook and button types. Same prices as 518-519 pressure tap series.

542 underground pressure tap. For .655 cable.

With resistive or capacitive inserts \$3.95; with transformer tap \$4.65; with back matched (No. 514 insert) \$5.95.

**547 underground pressure tap.** For .580 OD cable. Same price as 542 tap.

**549 underground pressure tap.** For .480 OD cables. Same price as 542 tap.

**550 underground pressure tap.** For .407 cables. Same price as 542 tap.

**551 underground pressure tap.** For .465 cables. Same price as 542 tap.

## TAPOFFS-OUTDOOR MULTIPLE

### AMECO

Directional tapoffs with two and four taps plus choice of connectors available.

**Dual tapoff, Model 2T-75MP.** In 12, 16, 20, 25, 30, 35, 40, 45 and 60 db attenuation values (branchline). Toroidal transformer; 75 ohms in and out. 22 to 45 db isolation with insertion loss 0.7 to 0.3 db. Price: \$7.35.

**Four-way tapoff, Model 4T-75MP.** Toroidal transformers; back matched. All-band range; 75 ohms. 10, 15, 20, 25, 30, 35, 40 db branchline attenuation. 3.5 to 0.25 db insertion loss; 16 to 35 db isolation. \$13.35 net.

**6T-75MP.** 6-way tap; back matched. Toroidal transformers. All-band. 75 ohms; 3.5 to 0.4 db insertion loss, and 16 to 50 db isolation. 13, 20, 25, 30, 35 and 40 db branchline attenuation values. Weatherproof. Price is \$26.60.

**Solid state active tap, Model APT-O.** Features unity gain with maximum output of 32 db at all four taps. Operates 50 to 220 mc; 75 ohm. For bridging or UHF. Isolation is 15 db average between outputs and loss per output is plus 1/2 db. Designed for outdoor strand mounting. Price is \$21.95.

### BLONDER-TONGUE

**MIT-4.** Four 75 ohm outputs from 75 ohm thru line. 17 db isolation. 0.35 db thru loss per output used. Net: \$18.60.

### CRAFTSMAN ELECTRONIC PRODUCTS

**Series CEP/600.** Hybrid directional taps. Specifications listed in single tap category.

### DAVCO ELECTRONICS CORP.

Distributor of Entron Model MT multtee. Request information and price.

### DELTA ELECTRONICS LTD.

**TO-2/FW weatherproof 2 line tapoff.** Available in isolation values of 12, 16, 20 and 24 db. "F" type fittings. Through loss of .6 db. List: \$7.50.

**TO-4/FW.** Specifications as for TO-2/FW but with 4 outlets and through loss of 1.2 db. List: \$8.95.

### ENTRON

**Multtee tapoffs, MT series.** Combines extremely flat frequency response with low VSWR for VHF high and low band operation. Adapts to any type 75 ohm coaxial cable up to .560" OD. Four



tapoff outlets. Tapoff attenuation, for various models, 16, 20, 24, 28, 32 and 36 db. Throughline losses vary from 0.1 to 3.5 db. Write to manufacturer for full particulars and prices.

### SPENCER-KENNEDY LABS

**Multitaps, Series 400.** Subscriber line tap for 54-216 mc frequency range. 75 ohms feed-through connectors. Insertion loss is 1.5 db maximum; isolation is 23 db minimum and loss per output varies with unit. Mounts outdoors (messenger). Model 410, Model 416 and Model 422 multitaps

all sell for \$6.60. Models 402 and 404 are 2 and 4 output tap adders that sell for \$3.90 and \$5.90 respectively.

### VIKING

**Directional line tap, No. 935.** Specifications: VSWR 1.15:1 input, 1.31:1 output and tap. Insertion loss: 10 db tap, 0.7 db max.; 17 db tap, 0.3 db max.; 24 db tap, 0.25 db max. Frequency response: 54-220 mc. Isolation: 30 db min. Fittings included. Mounts to messenger or pole. Price: \$4.50.

**935/308.** Fittings for .480 OD corrugated cables. Price: \$4.50.

**935/412.** Fittings for .412 OD aluminum cables. Price: \$7.50.

**935/500.** Fittings for .500 aluminum cable. \$8.50. Also available with new Super Match series of connectors in all sizes.

**522 four-way flattap, directional multi-tap.** Flat directional tap combined with four-way hybrid splitter. Desired signal coming from the amplifier is selected by the tap and reflection from the tap lines are blocked by over 30 db to the out line.

**522/F.** \$10.00.

**522/308.** \$10.00.

**522/412.** \$12.50.

**522/500.** \$13.50.

Also available with new Super Match series of connectors in all sizes.

**935T.** Same as 935 shown above, with terminator.

**935T/F.** \$5.00.

**935T/308.** \$5.00.

**935T/412.** \$7.00.

**935T/500.** \$8.00.

**511 four-way directional tap.** Designed to give maximum signal at the taps with extremely low line insertion loss. All taps are isolated by over 30 db from each other and by over 40 db from the out line.

**511F.** \$10.00

**511/308.** \$10.00.

**511/412.** \$12.00.

**511/500.** \$13.50.

Also available with new Super Match series of connectors in all sizes.

**510 four-way directional vari-tap.** Variable outputs. For medium-to-high level systems. Combinations of up to four attenuators, capacitor, resistor or transformer type, of desired value may be used.

**510F.** \$13.00.

**510/308.** \$13.00.

**510/412.** \$16.00.

**510/500.** \$17.00.

Also available with new Super Match series of connectors in all sizes.

**532 directional tap.** Pedestal mount for underground systems. Low loss .25 db insertion loss for 24 db, .3 db for 17 db, .7 db for 10 db.

**532/F.** \$4.50.

**532/308.** \$4.50.

**532/412.** \$7.50.

**532/500.** \$8.50.

Also available with new Super Match series of connectors for all cable sizes.

## TRANSMISSION LINES

### COAXIAL CABLE

#### AMPHENOL CABLE

**621-149-101.** Feeder cable; double shielded with copper foil and braid. Sweep tested; 75 ohms. Polyfoam dielectric. \$84.90/1M feet.

**621-412.** Feeder cable with aluminum jacket. Polyfoam dielectric. Loss per 100 feet at channel



6 is .93 db; at channel 13 is 1.55 db. Cable can be buried and is available with black polyethylene jacket. Price is available from manufacturer. OD.1412.

**621-500.** Same as above except .500 OD; .75 db loss/100' at channel 6, 1.27 at channel 13.

**621-750.** Same as above except .750 OD; .54 db loss at channel 6 per 100 feet; and .92 db loss at channel 13.

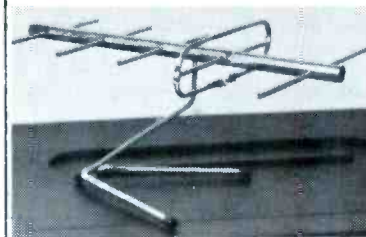
**21-973.** RG59/U cable with galvanized steel mes-

Best For Black and White . . .

. . . Ideal For Color

# SITCO UHF YAGIS

## QUALITY SOLID BAR CONSTRUCTION



**SOLID BAR** means strength and ruggedness no rolled tube antenna can match.

**SITCO** means the finest engineered performance obtainable.



Sitco Model MD U5 is an indoor UHF 5-element yagi cut to channel for maximum gain and other desirable operating characteristics. Available in chrome-type finish or soft gold anodized finish.

Sitco Model MD U12 is a wide spaced UHF 12-element yagi cut to channel and can be stacked. Both are specifically designed for indicated channels. Frequency response is adjusted for center of specified channel and will have flat response over entire 6 mc.

Ask about SITCO  
Heavy Duty Quads and Yagis.  
Free catalog.

**SITCO** Antennas

10330 N. E. MARX ST. • P. O. BOX 7691  
PORTLAND, OREGON 97220

senger. Solid polyethylene dielectric; braided copper shield. 10.5 db/100 feet loss at 400 mc. For house drop. Price is \$33.05 per 1000 feet at 50M.

### ANACONDA WIRE & CABLE CO.

Manufacturer of various transmission cables with aluminum or copper shield, cellular plastic dielectric and sealmetric polyethylene jacket. Price from factory.

### ANDREWS TOWERS CO.

Contact manufacturer for complete listing and prices.

### ANDREW CORPORATION

Foam heliax coaxial cable. Available with or without jacket. Outer conductor corrugated for greater flexibility. Inner and outer conductors of solid copper.

**FH4.** 1/2" with foam polyethylene dielectric; 50 ohm impedance; 1.0 db attenuation (db/100 ft.) at 150 mc. \$500.00/M.

**FHJ4.** Same as FH4 with jacket. \$700.00.

**FH5.** 7/8" with foam poly dielectric; characteristic impedance is 50 ohms; 0.6 attenuation at 150 mc. \$1,250/M.

**FHJ5.** Same as FH5 with jacket. \$1,550.00/M.

### BELDEN MFG. CO.

Sweep tested CATV cables for all VHF channels. Comes in solid copperweld or solid copper stranding material. Contact manufacturer for price. Polyethylene jacketed.

**8211.** .242 OD; 80 ohms. 2.4 db attenuation/100' at 50 mc; 6.7 at 400 mc. Foam core.

**8212.** Same as above except 75 ohms; 2.3 db attenuation/100' at 50 mc and 6.3 at 400 mc.

**8217.** Same as above with white poly jacket.

**8213.** .405 OD; 75 ohms. Foam core. 1.0 db loss/100' at 50 mc; 3.4 at 400 mc.

**8215.** Inner shield type; .332 OD. 75 ohms; 2.0 db loss/100' at 50 mc and 6.5 at 400 mc.

**8232.** .315 OD cable; 75 ohms. 2.3 db loss/100' at 50 mc; 6.3 at 400 mc. Inner shield type.

**8233.** .475 OD with inner shield. 100 db attenuation/100' at 50 mc; 3.4 at 400 mc. 75 ohms.

### BENCO

Delay line, Model 4107-2M. Precision transmission line for VSWR measurements. Line is 1/2 wavelength at 5 mc. Coverage is DC-900 mc; return loss is 26 db minimum. 75 ohm type "F" connectors. CATV: \$150.00.

### BRAND REX

Copperfoam coaxial cables. Foamed polyethylene dielectric; corrugated copper shield longitudinally applied with overlap. Cables are available with 1/4" or .109" integrated messenger.

**T-179.** Coax with bare solid copper center conductor. Foam dielectric; non-contaminating poly jacket. 1.05 db/100 ft. nom.

**T-180.** Foam poly dielectric, poly jacket. Corrugated copper shield; 1.05 db/100 ft. nom.

### CAS MFG. CO.

Manufactures a full line of transmission cables for CATV applications. Contact CAS for catalog and pricing.

### COLUMBIA WIRE & SUPPLY

Manufacturer of transmission lines. Write factory for list of cables available.

### DAVCO ELECTRONICS CORP.

Distributor of Plastoid and Superior brand cables. Contact DAVCO for information and prices.

### PHELPS DODGE ELECTRONICS

"Foamflex" coaxial cables for all-band operation. Provides average VSWR of 1.05 on all channels, low loss, stable attenuation. Semi-flexible, aluminum sheath with copper conductor. Write manufacturer for prices.

**FXA 41-75.** .412 OD; 0.75 db/100' nom. attenuation at channel 2 and 1.55 at channel 13.



**FXA 12-75.** .500 OD; 0.61 db/100' at channel 2, 1.27 at channel 13.

**FXA 34-75.** .750 OD; 0.42 db/100' at channel 2, 0.92 at channel 13.

**FXA 158-75.** 1.625 OD; 0.22 db/100' attenuation at channel 2, 0.52 at channel 13.

### PLASTOID CORPORATION

Broadband and all-band cables for CATV. Swept and thoroughly tested at factory. Cable available with or without poly outer jacket and inner jacket of either solid aluminum sheath or flat/wire braid and copper or copperweld conductor.

**CT-48.** Corrugated coaxial cable. Shield is longitudinally applied 15 MIL corrugated copper. Foam poly dielectric with poly jacketing. Nominal db per 100 ft. at channel 13 is 1.40.

**TA4.** Solid aluminum sheath coax with foam dielectric. Semi-flexible for easy handling. 1.60 nominal attenuation on channel 13.

**TA4J.** Same as TA4 with overall poly jacket.

**TA5.** Foam poly dielectric; solid aluminum sheath for trunkline use. 1.26 db/100 ft. at channel 13.

**TA5J.** Solid sheath, foam poly dielectric with outer jacket of black poly. 1.26 db/100 ft. at channel 13.

**PP 20420.** Trunkline with flat braid shield, black poly jacket, foam dielectric and copper conductor. Db per 100 feet at channel 13 is 1.3.

**PP 20421.** Double shielded with flat broad, black poly jacket and copper conductor. 1.3 db channel 13; .77 db, channel 6.

**PP 15075.** Black poly outer jacket on trunkline with bare copper (solid) conductor; wire braid shield, foam dielectric. Channel 13, 1.49 db.

**PP 15076.** Double shield/double jacket trunk; foam dielectric, outer and inner jacket of black poly; outer and inner shield of wire braid. 1.49 db/100 ft., channel 13.

**PP 20423.** Trunk or feeder line with flat braid shield, foam dielectric, solid copper conductor. 1.01 db at channel 6.

**PP 20395.** Double shielded trunk or feeder. Black poly jacket; inner/outer shield flat braid. 1.6 db/channel 13. Foam poly dielectric and solid copper conductor.

**PP 21429.** Trunk or feeder with messenger of 2M lb. breaking point steel. Foam dielectric, black poly jacket, flat braid shield. Db/100 ft. at channel 13 is 1.6.

**PP 21493.** Integrated messenger on double shielded trunk of feeder. Shields of flat braid, foam dielectric, poly jacket. Channel 13, 1.6 db.

**PP 20351.** Single shielded/jacketed feeder with foam dielectric, copper conductor. Shield is flat braid; jacket black poly. Channel 6, 1.18 db.

**PP 20422.** Double shielded feeder line. Both shields of flat braid; jacket of black poly. 2.08 db at channel 13.

**PP 14145.** 11/U feeder. Poly jacket; foam dielectric; wire braid; copper conductor. 1.36 db at channel 6.

**PP 15077.** Double shielded/jacketed 11/U. Jackets of black poly; shields are wire braid. 2.3 db at channel 13.

**PP 15259.** 59/U house drop with .025" copperweld (solid) conductor; foam dielectric, wire braid shield and black PVC jacket. Channel 13, 3.93 db/100 ft.

**PP 15080.** House drop 59/U, foam dielectric .032" bare copperweld conductor; 3.64 at channel 13.

**PP 15079.** Double shielded/jacketed 59/U house drop. Outer/inner jacket black poly; outer/inner shield wire braid. Foam dielectric; copperweld conductor. 1.92 db at channel 6.

**PP 16387.** 59/U house drop with integrated messenger of steel with 350 lb. breaking point. 3.64

db at channel 13. Jacket of black PVC; wire braid shield; copperweld conductor, foam poly dielectric.

**PP 423.** 59/U house drop. .025" solid copperweld conductor; solid poly dielectric; wire braid shield; black PVC jacket. 5.58 db at channel 13.

**PP 15091.** Same as PP 423 except black poly jacket.

**PP 16334.** House drop 59/U with integrated messenger. Black PVC jacket, wire braid shield, solid poly dielectric, solid bare copperweld conductor, 350 lb. steel messenger. 5.58 db at channel 13.

### PRODELIN

**Spir-O-Foam coaxial cable.** High conductivity copper inner conductor. Cellular polyethylene dielectric foam; aluminum sheathed. 50 or 75 ohm impedance. Either plain or jacketed.

**53-375.** 3/8" OD, \$229/M ft.

**54-375.** 3/8" OD, \$257/M ft. With jacket.

**55-375.** 3/8" OD, \$210/M ft.

**56-375.** 3/8" OD, \$238/M ft. With jacket.

**53-500.** 1/2" OD, \$308/M ft.

**54-500.** 1/2" OD, \$358/M ft. With poly jacket.

**55-500.** 1/2" OD, \$227/M ft.

**56-500.** 1/2" OD, \$277/M ft. With jacket.

**53-875.** 7/8" OD, \$763/M ft.

**54-875.** 7/8" OD, \$889/M ft. With jacket.

**55-875.** 7/8" OD, \$648/M ft.

**56-875.** 7/8" OD, \$774/M ft. With jacket.

**Spir-O-Line coax cable.** For feeding 6 kmc antenna systems. In either aluminum sheath or poly jacket. Dielectric is six polyethylene tubes in tangential contact with copper inner conductor. Price ranges from \$530/M feet to \$2,540/M feet. Contact manufacturer for specifications.

### ROME CABLE

"Unifoam" coaxial cables for CATV. Available with or without poly jacket. 75 ohms. Copper conductor; seamless aluminum sheath. Prices are available from Rome.

**R075-038-1.** 3/8" OD, .82 db/100 ft. at 54 mc; 1.68 at 220 mc.

**R075-412-1.** .412 OD, .72 db/100' at 54 mc; 1.54 at 220 mc.

**R075-012-1.** 1/2" OD, .59 db/100' at 54; 1.25 at 220 mc.

**R075-034-1.** 3/4" OD, .40 db/100' at 54 mc; .88 at 220 mc.

**R075-078-1.** 7/8" OD, .35 db/100' at 54 mc; .77 at 220 mc. (Order "U" for unjacketed or "J" for jacketed.)

### SAXTON PRODUCTS, INC.

Manufactures various cables for CATV industry. Write factory for specifications and prices.

### SUPERIOR CABLE CORP.

Coaxial cables, expanded or solid polyethylene dielectric, available in standard or messenger types.

**4910 coaxial feeder.** 14 AWG conductor; "Cell-O-Air" dielectric; .005" corrugated copper shield; polyethylene jacket. Nom. OD .405". Nom. attenuation channel 6, 1.09; channel 13, 1.85.

**4920 coaxial feeder.** 12 AWG conductor; "Cell-O-Air" dielectric; .005" corrugated copper shield; polyethylene jacket. Nom. OD .480". Nom. attenuation channel 6, 0.89; channel 13, 1.50.

**4920T coaxial trunk.** Same as 4920 except with jacket marked by monofilament poly stripes for trunkline identification.

**5020 coaxial feeder with integral messenger.** Same as 4920 except with 1/4" 7-wire EHS galvanized steel messenger.

**5120 coaxial feeder with integral messenger.** Same as 4920 except with .134" solid EHS galvanized steel messenger.

**5220 coaxial feeder with integral messenger.** Same as 4920 except with .148" solid EHS galvanized steel messenger.

**4930 coaxial trunk.** 9 AWG conductor; "Cell-O-Air" dielectric; .005" corrugated copper shield; polyethylene jacket. Nom. OD .650". Nom. attenu-

# ***DO THE JOB RIGHT!***

## **... With A Fort Worth Tower**

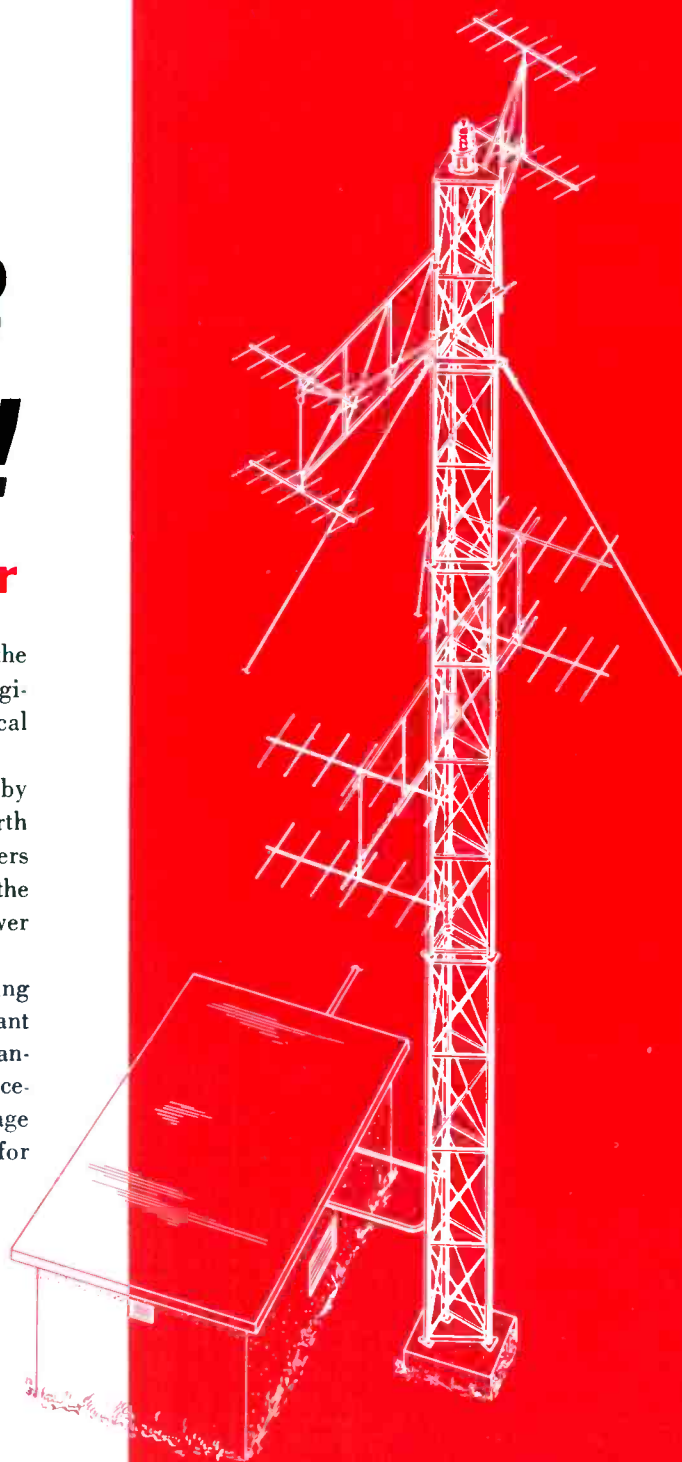
Years of successful tower construction have given us the necessary experience to provide you with the best qualified engineering, the most reliable construction and the most economical purchase or lease plan in the CATV industry.

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ation channel 6, 0.65; channel 13, 1.15.

**5030 coaxial trunk with integral messenger.** Same as 4930 except with 1/4" 7-wire EHS galvanized steel messenger.

**5230 coaxial trunk with integral messenger.** Same as 4930 except with .134" EHS galvanized steel messenger.

**5230 coaxial trunk with integral messenger.** Same as 4930 except with .148" solid EHS galvanized steel messenger.

**4059 extra high strength coaxial drop.** .023" copper-covered steel conductor; solid dielectric; copper-covered steel flat strip braid shield; polyvinyl chloride jacket. Nom. OD .242". Nom. attenuation channel 6, 3.0; channel 13, 4.7.

**4900 extra high strength coaxial drop.** .032" copper-covered steel conductor; Cell-O-Air dielectric; copper-covered steel flat strip braid shield polyvinyl chloride jacket. Nom. OD .242". Nom. attenuation channel 6, 3.5; channel 13, 4.0.

**6020 direct burial coaxial feeder.** 12AWG conductor; solid polyethylene dielectric; .005" corrugated copper shield; black polyethylene jacket. Nom. OD .665". Nom. attenuation channel 6, 0.87; channel 13, 1.48.

**6030 direct burial coaxial trunk.** 9AWG conductor; solid polyethylene dielectric; .005" corrugated copper shield; black polyethylene jacket. Nom. OD .885". Nom. attenuation channel 6, 0.64; channel 13, 1.13.

## SURFACE CONDUCTION CO.

Manufactures "G-Line" UHF/VHF transmission lines. Includes low power launchers and receivers. Single-wire design. Nylon string support; for trunk or antenna feeder. Loss per 100 feet is .162 at channel 7.

**Model TVL.** Consists of two launchers and 150 feet of wire. Price is \$56.00. Additional wire is available at \$40/100' reel.

## TIMES WIRE & CABLE

Standard and special purpose coaxial cable. Complete cable assemblies. Transmission system design and engineering. Times' CATV cables are available for immediate delivery.

**Coaxial cable for drop line service**

**JEL-105.** Solid polyethylene dielectric. Long life Xelon jacket. Copper braid.

**JEL-105-MS.** Messengered cable. Solid polyethylene dielectric. Long life Xelon jacket.

**JT-205.** Foamed polyethylene dielectric. Long life Xelon jacket. Copper braid.

**JT-205-M5.** Messengered cable. Foamed polyethylene dielectric. Long life Xelon jacket.

**RG-59/U.** Solid polyethylene, dielectric. PVC jacket. Color, black. Copper braid.

**RG-59/U-M5.** Messengered cable. Solid polyethylene dielectric. Copper braid.

**Semiflexible, seamless aluminum sheath cable.**  
**JT-11625.** 15/8" seamless aluminum sheath cable for special problem areas. 30 db/mile at channel 13. 16 db/mile at channel 6. Guaranteed 26 db\* return loss. Average VSWR of 1.05 on channels 2 through 13. Trunk line.

**JT-1750.** 3/4" seamless aluminum sheath cable for lowest loss trunk. Permits larger system with reduced number of amplifiers in cascade. Guaranteed 26 db\* return loss. Average VSWR of 1.05 on channels 2 through 13.

**JT-1500.** 1/2" seamless aluminum sheath cable. The all-purpose trunk/feeder cable. The best db/dollar cable buy. Guaranteed 26 db\* return loss. Average VSWR of 1.05 on channels 2 through 13.

**JT-1412.** .412" seamless aluminum sheath cable . . . the low cost, low loss feeder. Guaranteed 26 db\* return loss. Average VSWR of 1.05 on channels 2 through 13.

All types available with long-life non-contaminating Xelon jacket. Can be buried.

\*Weighted by attenuation factor of 3 db/octave.

## TELESYSTEM SERVICES CORP.

**Aluminum cable:** all sizes subject to highest qual-

ity and standards. Held to most rigid specifications.

## TV CABLE SUPPLY CO.

Distributor of all types of coaxial cables.

**201070.** Service drop cable with solid dielectric and non-contaminating vinyl jacket. 3.6 db loss/100' at channel 6. Price: \$27.95/M feet.

**202470.** Service drop cable with foam dielectric. Non-contaminating vinyl jacket; 3.9 db loss/100' at channel 13. \$30.95/M feet.

## VIKING

Swept and thoroughly tested coaxial cables. Available in standard and messenger types and in single and double shields.

**59/U.** Available in single and double shielded types for house drops.

**RG-59/U.** Single shield. Non-contaminating poly jacket. Loss: 5.6 db at channel 13. Price: \$27/M.

**59UDS.** Double shield. Non-contaminating double poly jacket. Loss: 5.6 db at channel 13. Price: \$50/M.

**F59.** Single shield. Foam dielectric. Low loss. Price: \$26.50/M.

**FD-59.** Double shield. Foam dielectric. Low loss. Price: \$50/M.

**11U.** Available in single and double shielded types for main line distribution cable, foam and strip braid types.

**RG-11U.** Single shield. Non-contaminating jacket. Price: \$80/M.

**RG-11UD.** Double shield. Non-contaminating jacket. Price: \$110/M.

**F11.** Single shield. Foam dielectric. Non-contaminating jacket. Loss: 2.35 db at channel 13. Price: \$63/M.

**FD11.** Double shield. Foam dielectric. Non-contaminating jacket. Loss: 2.35 db at channel 13. Price: \$105/M.

**VK11.** Single strip braid shield. Foam dielectric. Non-contaminating jacket. Loss: 2.2 db at channel 13. Price: \$65/M.

**VKD11.** Double strip braid shield. Foam dielectric. Non-contaminating jacket. Loss: 2.2 db at channel 13. Price: \$85/M.

**VK300.** Single strip braid shield. Low loss foam cable. (Lowest loss of the series.) Price: \$175/M.

**VKD300.** Double strip braid shield. Low loss foam cable. (Lowest loss of the series.) Price: \$205/M.

**VK308.** Single strip braid shield. Foam dielectric. Non-contaminating jacket. Loss: 1.65 db at channel 13. Price: \$85/M.

**VKD308.** Double strip braid shield. Foam dielectric. Non-contaminating jacket. Loss: 1.65 db at channel 13. Price: \$105/M.

**Coaxial cables with built-in messenger cable**

**59UM.** 59U cable with built-in messenger. Price: \$36/M.

**F59UM.** Foam 59U cable with built-in messenger. Price: \$36/M.

**F11M.** Foam 11U with built-in messenger. Single shield. Price: \$83/M.

**FD11M.** Foam 11U with built-in messenger. Double shield. Price: \$103/M.

**VK308M.** Same as VK308 shown above, with built-in messenger. Price: \$105/M.

**VKD308M.** Same as VKD308 shown above, with built-in messenger. Price: \$125/M.

**VK1500.** Solid sheath seamless aluminum cable. Low loss foam center with attenuation characteristics of .84 on channel 6 and 1.40 on channel 13. Price: \$161/M.

**VK1500JM.** Same as above with built-in messenger. \$233.30.

**VK1412.** Solid sheath seamless aluminum cable with foam center dielectric. Low loss on channel 6 of 1.05 and channel 13 of 1.65. Price: \$116/M.

**VK1412J.** Same as above with long life non-contaminating polyethylene jacket. Price: \$153/M.

**VK1412JM.** Same as above with built-in messenger. \$177.

**VK1750.** Solid sheath seamless aluminum cable. Low loss foam center with attenuation characteristics of 1.00 on channel 13 and .57 on channel 6. Price: \$316.00.

**VK1750J.** Same as above with long life non-contaminating polyethylene jacket. Price: \$369.00.

**CF480.** "Coppa flex" copper corrugated cable. 480 OD with low loss loam center dielectric. Attenuation characteristics of 1.01 on channel 6 and 1.65 on channel 13. Price: \$105/M.

**CF655.** "Coppa flex" copper corrugated cable. .655 OD, with low loss foam center dielectric. Attenuation characteristics of .65 on channel 6 and 1.05 on channel 13. Price: \$150.00.

## WAVEGUIDE

### ANDREW CORPORATION

Complete selection of waveguide bends, twists, gas barriers, for WR 137 size. Write for information.

### ELECTRONIC SPECIALTY CO.

Flex-O-Twist flexible waveguides.

**TFT-75.** 4.90-7.05 gc range; 120 degrees/ft. twist.

**TFT-72.** 5.85-8.20 gc; 140 degrees/ft.

**TFT-68.** 7.05-10.0 gc; 180 degrees/ft.

**TFT-66.** 7.0-11.0 gc; 240 degree/ft.

**TFT-64.** 8.2-12.4 gc; 240 degrees/ft.

**TFT-60.** 10.0-15.0 gc; 240 degrees/ft.

**TFT-57.** 12.4-18 gc; 300 degrees/ft.

Also available: rigid waveguides.

### RF SYSTEMS, INC.

Manufacturer of a complement of waveguides and waveguide components.

## FITTINGS

### AMECO

**AM408 connector for CATV cable.** (AM series) For UF, 408, 411, 1/2" and 3/4" cable. 75 ohms. 1.05:1 maximum VSWR. Price \$1.15.

**TR412 terminator.** RF and DC terminator with UHF, 408, 412, F or C connectors to provide 75 ohm termination. \$2.75.

Ameco also manufactures UHF and F series connectors for type 408, 4920, 4930, RG-11 and RG-59 cable.

### ANDREW CORPORATION

**41U.** UHF Jack, female that mates with PL-259A. For 1/4" cable.

**42U.** Same as above for 3/8" cable.

**41P.** UHF plug, male that mates with SO-239A. For 1/4" cable.

**42P.** Same as above for 3/8" cable.

**41N.** "N" jack, female. 1/4" cable.

**42N.** Same as above for 3/8" cable.

**44AR.** 7/8" flange for use with copper cable.

**44AR-3.** Same as above for aluminum cable.

**44AZ.** Copper cable splice.

**44AM.** Male copper cable LC plug.

**44AL.** Female copper cable jack.

**44AP.** Male plug for copper cable. Use -3 for aluminum.

**44AU.** Female UHF jack for copper cable. Use -3 for aluminum.

**44AW.** "N" plug, male, for copper, 50 ohm. -75 is 75 ohm; -3 is for aluminum cable.

**44AN.** "N" jack, female, for copper. Use -3 for aluminum.

Similar fittings are available for 7/8" copper and aluminum cables.

### BENCO

**M-100.** Female Chassis Receptacle. Mates with all male type Benconnectors.

**M-63.** Male Coupler. Mates with M-60, M-64, & M-100 Benconnectors.

**M-64.** Female Coupler. Mates with all male type Benconnectors.

**M-65.** Terminator 1/2 watt. Mates with M-60, M-64, & M-100 Benconnectors.

**M-66.** Terminator 2 watt. Mates with M-60, M-64, & M-100 Benconnectors.

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TO**

# **PLASTOID**

**FOR CO-AX FROM HEAD-END TO DROP-LINE:**

**ALUMINUM SHEATH**



**CORRUGATED COPPER SHIELD**



**DROP-LINE**



**GET LOWER ATTENUATION THAT LASTS!**

**Now...tailor your system for top economy at the same time you assure top performance.**

Start with new Plastoid  $\frac{3}{4}$ " aluminum cable at the head-end, keep attenuation at an absolute minimum. As your system spreads, take your choice of aluminum sheathed or corrugated shielded cables for trunks and feeders...  $\frac{1}{2}$ " will do nicely. Tap off with one of our 59U-type drop-lines. You can specify cable for your whole system—from a single source—assured of sweep-tested reels every inch of the way.

With Plastoid you get top-notch cable, backed by rigid quality control in manufacturing—plus years of experience in supplying coaxial cable for CATV.

Every day... every month more CATV operators look to Plastoid for systemwide installations because they get lower attenuation with lower cost, top performance with lasting quality from head-end to drop-line.

For more details, call collect or drop us a line.

# **PLASTOID**

**CORPORATION**

42-61 24TH STREET / LONG ISLAND CITY 1, N. Y. / ST 6-6200

M-67. Female Terminator. Mates with all male type Benconnectors.  
 M-68. Connector Adaptor. Benco M-60 and M-100 to type "N" female.  
 M-171. Male Cable Connector. For RG11/U Single Shield cable.  
 M-171F. For Foam cable.  
 M-172. Male Cable Connector. For RG11/U Double Shield cable. M-172F. For Foam cable.  
 M-73. Male Cable Connector. For RG59/U cable. Mates with M-60 and M-100 type Benconnectors.  
 M-174F. Male Cable Connector. For Aluminum Sheathed BAL-11F cable. Mates with M-60, M-64, M-67, & M-100.  
 M-75. Female Cable Connector. For BAL-14F Aluminum Sheathed cable. Mates with all male type Benconnectors.  
 M-76. Coupling Connector. For BAL-14F Aluminum Sheathed cable.  
 M-77. Male Cable Connector. For RG59/U Double Shield cable. Mates with M-60, M-64, & M-100 Benconnectors.  
 M-78. Male Cable Connector. For Strip Braid Shielded cable. Mates with M-60, M-64, M-67, & M-100.  
 M-180F. Male Cable Connector. For BAL-1/2 Cable. Mates with M-60, M-64, M-67, & M-100 Benconnectors.  
 MJ-300. Solderless Male Plug for 300 ohm Twin Lead.  
 MP-300. Solderless Female Plug for 300 ohm Twin Lead.

### BLONDER-TONGUE

CL-5959. Couples 2 RG-59/U cables. Net: \$1.90  
 CL-1111. Couples 2 RG-11/U cables. Net: \$1.90.  
 CL-1159. Couples RG-11/U cables to RG-59/U cable. Net: \$1.90.  
 MC. Couples 2 UHF type male plugs. Also may be used as a feed thru bushing. Net: \$1.80.  
 P-115. RG-11/U UHF type male plug. Solderless. Net: \$1.10.

P-595. RG-59/U UHF type male plug. Solderless. Net: \$1.10.  
 P-755. Solderless 'automobile' plug. Designed for RG-59 type cables. Net: \$0.42.  
 POU-59. Solderless push-on plug for SO-239 female UHF connector and RG-59 type cables. Net: \$2.25.  
 POB-59. Solderless push-on plug for type F or Benconnector female receptacle and RG-59 type cables. Net: \$1.45.  
 TC-5975. For QD connectors. 75 ohm 1/4 watt. Net: \$0.98.  
 V-1P12. 75 ohm autoplug connector. 12 db output isolation. Also available as V-P17 (17 db isolation) and V-1P23 (23 db isolation). Net: \$1.70.  
 V-2P12, V-2P17, V-2P23. Same as V-1P series above, except with two autoplug connectors. Net: \$3.15.  
 V-1U12 SO-239. 75-ohm UHF connector with 12 db isolation. Also available as V-1U17 (17 db isolation) and V-1U23 (23 db isolation). Net: \$2.50.  
 V-2U12, V-2U17 and V-2U23. Same as V-1U series above, but with two UHF connectors. Net: \$3.85.  
 V-1M12 type-F. 75-ohm connector with 12 db isolation. Also available as V-1M17 (17 db isolation) and V-1M23 (23 db isolation). Net: \$2.65.  
 V-1PFT. Solderless 75-ohm autoplug for feed-thru connection. Net: \$1.70.

### CAS MFG. CO.

CAS manufactures complete line of fittings for CATV applications.

### DAVCO ELECTRONICS CORP.

Independent distributor of adapters, splices and BNC, C, F, and UHF connectors. Write for complete information and prices.

### ENTRON

F5 series connectors. Line of flare connectors for 412 and 1/2" aluminum jacketed coaxial cable. Approximately \$3.

FUF series. Flare adaptors from aluminum cable to UHF female. 412 and 1/2" cable use. Also use as bulkhead connector. Approximately \$3.  
 FUM series. Flare adaptors from aluminum to UHF male. For 412 and 1/2" cable. \$3.25.  
 Model CW-59E. UHF male push-on plug. Nickel plated; for RG-59/U. Price: \$2.5.  
 Models SC-6 and SC-11. Solderless male plugs for RG-6 and RG-11 cable. \$70 each.

### JERROLD ELECTRONIC CORP.

**Aluminum quick-mount connectors.** Models F-412, F-500, F-750. No loss, quick-mount connectors for aluminum sheath cables. Permit introducing cable directly into weatherproof housings. Have excellent electrical match characteristics and exhibit VSWR of 1.04:1 or better at 200 mc.  
**Splice connectors.** Models SC-412, SC-500, SC-750. Physically similar to cable connectors.  
 C-52. Fits RG-59 type cables. Male plug. Fits C-61, C-62 or C-81 fittings. PNS.  
 F-59. Fits RG-59 type cables. Male plug. Fits F-61 or F-81 fittings. PNS.  
 F-56. Fits RG-6/U cable. Male plug. Fits F-61 or F-81 fittings PNS.  
 AF-101. Fits RG-11 type cables. Male plug. Fits F-61 or F-81 fittings. PNS.  
 AF-404. Fits JT-201, 204, 301, 304, 404 cables. Male plug. Fits F-61 or F-81 fittings. PNS.  
 AF-408. Fits JT-408 cables. Male plug. Fits F-61 or F-81.  
 F-404-59. Fits JT-201, 204, 301, 304, 404 cables. Female plug. Mates with F-56, F-59 or any AF-series connectors. PNS.  
 F-408-59. Fits JT-408 cable. Female plug. Mates with F-56, F-59 and any AF-series connectors. PNS.  
 F-200. Fits JT-200 cable. Female plug. Mates with F-56, F-59 and any AF-series connectors.  
 F-412. Adapts JT-1412 cable to F-59 fitting. Thread barrel and lock-nut for securing connector to bulkhead or wall of weather cabinet.  
 F-500. Adapts JT-1500 cable to F-59 fitting. Same physical characteristics as F-412.  
 F-750. Adapts JT-1750 cable to F-59 fitting. Same physical characteristics as F-412.  
**Splices, Model SC-24.** for splicing two sections of either JT-201, 204, 301, 304, or 404 cable.  
**Model SC-48** for splicing two sections of JT-408 cable. Also **Model AF-712**, a reducing splice, for cables JT-1750 or JT 1412.

### KAISER AEROSPACE & ELECTRONICS

KSP-250. 1/4" Aluminum splice. \$3.00.  
 KSP-375. 3/8" Aluminum splice. \$3.50.  
 KSP-412. .412 Aluminum splice. \$2.75.  
 KSP-500. 1/2" Aluminum splice. \$3.75.  
 KSP-750. 3/4" Aluminum splice. \$9.00.  
 KSP-875. 7/8" Aluminum splice. \$12.50.  
 KSP-1625. 1 1/8" Aluminum splice. \$19.50.  
 KSP-480. .480 Corrugated Copper splice. \$3.75.  
 KSP-655. .655 Corrugated Copper splice. \$5.00.  
 KBA-250. 1/4" Aluminum bulkhead adapter. \$2.75.  
 KBA-375. 3/8" Aluminum bulkhead adapter. \$3.25.  
 KBA-412. .412 Aluminum bulkhead adapter. \$2.45.



KBA-500. 1/2" Aluminum bulkhead adapter. \$3.50.  
 KBA-750. 3/4" Aluminum bulkhead adapter. \$8.75.  
 KBA-875. 7/8" Aluminum bulkhead adapter. \$12.25.  
 KBA-1625. 1 1/8" Aluminum bulkhead adapter. \$19.00.  
 KBA-480. .480 Corrugated Copper bulkhead adapter. \$3.50.  
 KBA-655. .655 Corrugated Copper bulkhead adapter. \$4.75.  
 KCH-250. 1/4" Aluminum chassis jack. \$2.75.  
 KCH-375. 3/8" Aluminum chassis jack. \$3.25.  
 KCH-412. .412 Aluminum chassis jack. \$2.45.  
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**For economy, quality and easy mounting  
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Because of the growing demand for CAS all-transistorized, all-band CATV equipment — most reliable in the industry — we are now moving into a new and larger plant, specifically designed to manufacture the finest CATV equipment at economy prices. Our new location is 3301 Royalty Row, Irving, Texas (just outside of Dallas).

*Write for free brochure describing the complete CAS line of CATV equipment — transistorized from Head End to TV set.*



**Our new mailing address: P. O. Box 47066 Dallas, Texas**

KCH-750. 3/4" Aluminum chassis jack. \$8.75.  
 KCH-875. 7/8" Aluminum chassis jack. \$12.25.  
 KCH-1625. 1 5/8" Aluminum chassis jack. \$19.00.  
 KCH-480 .480 Corrugated Copper chassis jack. \$3.50  
 KCH-655 .655 Corrugated Copper chassis jack. \$4.75  
 KUH-250. 1/4" Aluminum UHF male connector.  
 \$3.00.  
 KUH-375. 3/8" Aluminum UHF male connector.  
 \$3.50.  
 KUH-412 .412 Aluminum UHF male connector  
 \$2.75.  
 KUH-500. 1/2" Aluminum UHF male connector.  
 \$3.60.  
 KUH-480 .480 Corrugated Copper UHF male con-  
 nector. \$3.60.  
 KUH-655 .655 Corrugated Copper UHF male con-  
 nector. \$5.25.  
 KTR-250. 1/4" Aluminum line termination. \$3.25.  
 KHR-375. 3/8" Aluminum line termination. \$3.75.  
 KTR-412 .412 Aluminum line termination. \$3.00.  
 KTR-500. 1/2" Aluminum line termination. \$3.75.  
 KTR-750. 3/4" Aluminum line termination. \$9.50.  
 KTR-875. 7/8" Aluminum line termination. \$13.00.  
 KTR-1625. 1 5/8" Aluminum line termination. \$20.00.  
 KTR-480 .480 Corrugated Copper line termination.  
 \$3.75.  
 KTR-655 .655 Corrugated Copper line termination.  
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## PLASTOID

Connectors and Fittings for Aluminum

### Jacketed Cables

8-BA-11/75. 1/2" Cable Adaptor "UHF" Female.  
 \$3.95.  
 6-BA-11/75. Same, except for 3/8" cable. \$3.75.  
 8-SP-75. For 1/2" cable splice. \$4.25.  
 6-SP-75. Same, except for 3/8" cable. \$4.00.  
 8-A-UHFM/75. 1/2" cable adaptor "UHF" male.  
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 8-BA-FF/75. 1/2" cable adaptor "F" female. \$4.25.  
 8-A-FM/75. 1/2" cable adaptor "F" male. \$4.25.  
 8-CH-75. Chassis mount connector. \$3.75.  
 Connector for .412" diameter & 3/4" Diameter  
 Aluminum Jacketed Cables.  
 412-BA-FF/75. Adaptor, .412 Aluminum Cable &  
 "F" Series female. \$1.95.  
 412-A-FM/75. Adaptor, .412 Aluminum Cable &  
 "F" Series male. \$1.95.  
 412-SP-75. Inline splice for .412. \$2.65.  
 412-BA-UHFF/75. Adaptor, .412 Aluminum Cable  
 & "UHF" Series female. \$2.55.  
 412-A-UHFM/75. Adaptor, .412 Aluminum cable  
 & "UHF" Series male. \$2.85.  
 412-CH-75. Chassis mounting connector with sol-  
 der terminal. \$2.45.  
 12-BA-UHFF/75. Adaptor, 3/4" aluminum cable &  
 "UHF" series female. \$8.50.  
 12-A-FF/75. Adaptor, 3/4" aluminum cable &  
 "F" series female. \$8.50.  
 12-SP-75. Inline splice for 3/4". \$9.75.

## PRODELIN, INC.

Prodelin manufactures a complete line of Spir-o-  
 lok fittings. 50 ohm adapters and couplings for  
 Prodelin Spir-O-Foam cable.

75-380. 3/8" type N female. \$4.50 ea.  
 75-580. 1/2" type N female. \$4.50 ea.  
 75-880. 7/8" type N female. \$6.85.  
 76-380. 3/8" type N male. \$4.50.  
 76-580. 1/2" type N male. \$4.50 ea.  
 76-880. 7/8" type N male. \$7.30.  
 84-380. 3/8" UHF female. \$5.50.  
 84-580. 1/2" UHF female. \$4.00.  
 84-880. 7/8" UHF female. \$6.85.  
 87-380. 3/8" UHF male. \$6.00.  
 87-580. 1/2" UHF male. \$5.00.  
 87-880. 7/8" UHF male. \$7.30.  
 79-380. 3/8" coupling. -580, 1/2" -880, 7/8". \$6.00.  
 75 ohm adapters and couplings for Spir-o-Foam  
 cable.  
 76-581. Type N male, 1/2". \$4.50.  
 87-581. Type UHF male; 1/2". (Mismatched.) \$4.50.  
 144-581. USF female; 1/2". Bulkhead mismatch-  
 ed. \$5.00.  
 79-581. 1/2" coupling. \$5.00.

97-581. Type U female bulkhead. 1/2". \$5.00.  
 146-581. Bulkhead, 1/2". To F-61 female. \$5.00.  
 147-581. 1/2" bulkhead to F-59 male. \$5.00.

## SAXTON PRODUCTS, INC.

Produces BNC connectors. Write for details.

## SUPERIOR CABLE CORP.

75 ohm Captive Contact Connectors. Nut Retainer  
 Type For 4920 Coaxial Cable:

492. "N" Plug. 2.50.  
 492F. "F" Plug, \$2.50.  
 492UF. "UHF" Plug, \$2.50.  
 BH492J. "N" Jack, Bulkhead, \$3.00.  
 For 4930 Coaxial Cable:  
 493. "N" Plug, \$6.00.  
 493F. "F" Plug, \$6.00.  
 493UF. "UHF" Plug, \$6.00.  
 493J. "N" Jack, \$6.00.  
 BH493J. "N" Jack, Bulkhead, \$6.00.  
 Full Crimp Type For 4920 Coaxial Cable:  
 C42N. "N" Plug, \$2.75.  
 C42UF. "UHF" Plug, \$2.75.  
 C42NJ. "N" Jack, 2.75.  
 C42S. "N" Splice, \$5.00.  
 For 4930 Coaxial Cable:  
 C43N. "N" Plug, \$4.00.  
 C43UF. "UHF" Plug, \$4.00.  
 C43NJ. "N" Jack, \$4.00.  
 C43S. "N" Splice, \$6.00.  
 3-Stage Connector Crimping Tool  
 CRT-2. For use with 4930 Coaxial Cable. \$30.00.  
 CRT-3. For use with 4930 Coaxial Cable. \$30.00.

## TELESYSTEM SERVICES CORP.

Complete line of aluminum connectors, bushings,  
 splices, terminators and ferrules.

## TV CABLE SUPPLY CO.

Weatherproof cable splice housing. For use with  
 all conventional type splice connectors.  
 442099. .375-.500" O.D. \$3.75.  
 442199. .500-.625" O.D. \$6.75.  
 CF490FM. F Male Connector for .490" Cable \$4.35  
 CF-490FF. F Female Connector for .490" Cable \$4.50  
 CF-490S. Splice Connector for .490" Cable \$5.90  
 CF-650FM. F Male Connector for .650" Cable \$6.95.  
 CF-650FF. F Female Connector for .650" Cable \$6.25  
 CF-650S. Splice Connector for .650" Cable \$6.55.  
 105439. F59 type male connector with ferrule.  
 \$3.20.  
 130855. F81 double female. F splice. \$4.5.  
 104322. C81 double female. C splice. \$4.00.  
 104239. C52 male connector with ferrule. \$2.00.  
 130455. F61 female chassis fitting. \$3.35.

## VIKING

Fittings for corrugated copper shielded cables.  
 VK-308BAF. Female cable adaptor. Fits 480 size  
 corrugated & 308 strip braid. \$1.27.  
 VK-480BAF. Female adaptor for 480 corrugated and  
 308 strip braid. \$1.90.  
 VK-480M. Male counterpart of CF-480-BAF above.  
 \$1.95.  
 VK-480SP. Heavy duty matched splice for 480 size  
 corrugated or 308 strip braid. \$2.35.  
 VK-655BAF. Adaptor, 655 O.D. corrugated copper  
 and strip braid cables. Female. \$4.50.  
 VK-655FFA. Adaptor for CF655 corrugated copper  
 cable to "F" female connector. \$4.95.  
 AU-308. UHF series cable end for 308 strip braid  
 and CF 480 size corrugated cable. \$5.9.  
 308SP. CF480 corrugated copper cable to CF480  
 corrugated cable or 308 strip braid to 308 strip  
 braid inline splice. \$1.70.  
 924. CF480 corrugated copper cable or 303 strip  
 braid to "F" type cable fitting. \$1.00.  
 918/308. CF480 corrugated copper cable or 308  
 strip braid cable female cable terminator. \$1.25.  
 923. CF480 corrugated copper cable or 308 strip  
 braid cable to "F" type chassis female fitting.  
 \$1.00.  
 Fittings for aluminum cables.

412 SPA, 500 SPA, 750 SPA. Inline splice for .412,  
 .500 and .750" cables. Prices: \$2.50, \$3.75, \$9.75.

412 FFA, 500 FFA, 750 FFA. Cable to F type male  
 fitting. \$1.85, \$3.75, \$8.50.

412 FMA, 500 FMA, 750 FMA. Cable to F type  
 female. \$1.85, \$3.75, \$8.50.

412TA, 500TA. Terminators. \$2.60 and \$3.00.

"Super Match" series. New line of connectors  
 for 75 ohm feed through with UHF thread. For  
 1/2", .412 and 3/4" cables. Write manufacturer for  
 specifications.

## CATV LINE CONSTRUCTION MATERIALS

### MESSENGER STRAND & GUY WIRE

## DAVCO ELECTRONICS CORP.

Complete line of poleline hardware, messenger  
 strand, and lashing wire is carried in stock for  
 immediate shipment. Request information and  
 prices.

## JACK PRUZAN COMPANY

Galvanized steel guy strand. Short lengths avail-  
 able in all sizes and grades. All strand in stock  
 on 5000' reels except as noted.

1/16"-Gal. TV guy strand  
 4 x 20-1000' spools  
 6 x 20-1000' spools.  
 3/16"-Galv. common strand; Utilities 2.4M  
 in 5000' reels and 250' coils.  
 1/4"-Common strand, 2500' reels; Siemens  
 Martin strand, 2500' reels; High strength  
 4.7M.  
 9/32"-Utilities 4.6M.  
 5/16"-Common; Siemens Martin, 1000' reels  
 and 500' coils; Utilities 6M; High strength.  
 3/8"-Common; Siemens Martin, 500' coils;  
 High strength; Utilities 10M.  
 7/16"-Common; Siemens Martin; high strength;  
 Utilities 16M  
 1/2"-Siemens Martin; High strength 25M.  
 1/4"-Copperweld 7 strand.

## VIKING

1/4" high strand messenger strand, 7 strand grade  
 A-double galvanized 4750 lb. test. \$32.95 per  
 M ft.

## POLE LINE HARDWARE

## JACK PRUZAN COMPANY

Complete stocks of galvanized bolts, anchors,  
 pole bands, braces brackets, bushings, caps,  
 clamps, clips, connectors, crossarms, dampers,  
 eyelets, eyes, grips, guards, guy attachments,  
 hangers, hooks and the many-many other supplies  
 necessary for pole line construction or attach-  
 ment. Comprehensive catalog available.

## PREFORMED LINE PRODUCTS CO.

Plastic guy guards. Provides positive protection  
 for down guys. Tamper-proof. Impact-resistant.  
 Weather-proof. Economical. Available in Green -  
 Yellow - Gray.

Dead-ends for Figure 8—cable. Provides low dis-  
 tribution of holding stresses to prevent premature  
 fatigue breakage.

False dead-ends. For Cable Television installations.  
 Stainless steel dead-end. Designed for use on  
 RG-59/U coaxial cable.

Telegrip. Apply at pole, house or tap. Flexible  
 single-leg design. Will hold 100% of the rated  
 breaking strength of RG-59/U television coaxial  
 cable.

Guy-grip deadends. Holds full rated breaking  
 strength of all popular sizes and types of strands.

## TV CABLE SUPPLY CO.

Distributor of a complete line of pole line hard-  
 ware. Contact TVC for listing.

## TOOLS & SAFETY EQUIPMENT

### BLONDER-TONGUE

CR-1. QD crimping tool and cutting pliers.  
S-1. Rotary cutter and stripper.

### DAVCO ELECTRONICS CORP.

Stock of construction and line tools are maintained in Batesville warehouse. Portable AC generators, portable power drills, hoist, nut drivers, screwdrivers, measuring wheels, cable lashers, climbers, safety belts, tool pouches, soldering irons, pliers, and other tools are available from stock. Lines include Arrow, Coffin, Everlite, General Equipment, General Machine Products, Klein, Miller, Rolatape, Vaco, and Weller. Write for catalog.

### JACK PRUZAN COMPANY

All tools available to outfit any lineman from belts to buckets. General tools such as snatch blocks, block and tackle, drawbars, cable grips, and all forms of hand tools. Bashlin line of safety equipment available including climber pads and aluminum adjustable climbers. Complete, comprehensive catalog available.

### TELSTA CORPORATION

Manufactures complete line of tools and equipment for coaxial cable installation. Write for details.

### TV CABLE SUPPLY CO.

Distributor of a complete line of construction tools.

### VIKING

E-Z Spread Tool 9078. Spreads all 59U type cables for easy application of "C" and "F" type fittings. Price: \$4.00.

- 800. Alligator clips for back of set mount.
- 985. Aluminum cable cutter.
- 986. E-Z messenger stripper. For use on all messengered cables.
- 538. Hanger bracket for mounting distribution equipment on strand.
- 509. C span clamp for adding additional snubber grips to systems.

## CABLE LASHING WIRE & ACCESSORIES

### ABERDEEN COMPANY

Stainless steel, 0.045 diameter—type 430. Wax coated finish. 6 coils per carton. Competitively priced, with freight paid on orders of 18 or more coils. Prompt delivery from either coast.

### DAVCO ELECTRONICS CORP.

Stainless steel .045 diameter, type 430, waxed, 1200' per coil, 6 coils per carton.

### JACK PRUZAN COMPANY

Cable lashing wire in stainless steel and galvanized. Also associated accessories such as cable lashers, bonding, slack pullers, rubber blankets, cable blocks, lashing wire grips, aerial cable guides, cable blocks, etc.

#### In stock cable lashing wire—stainless steel:

- .045 Straight hub
- .045 Cone hub
- .065 Straight hub
- .065 Cone hub

#### In stock cable lashing wire—galvanized:

- .061 Cone hub
- .091 Straight hub

### PREFORMED LINE PRODUCTS CO.

Spiral vibration damper. A one-piece helically formed unit that inhibits vibration, thus preventing premature wire fatigue damage. Price from manufacturer.



Lashing rods. To secure cable to the messenger; eliminate need for clamps, slips or spinners.  
Plastic spacer. Eliminates mid-span hits. Reduces maintenance on existing wires. Made from PVC plastic for long endurance.

### TV CABLE SUPPLY CO.

Distributor of a complete line of cable lashing wire and accessories.

## TAPES & SPLICING MATERIALS

### DAVCO ELECTRONICS, INC.

Waterproofing materials such as Dow-Corning DC-4 Silicone, Scotchkote, and Synco. Tapes include Blue Cross black cloth tape, Bishop-Bi-Seal, Scotch 33, Scotch 88 and assorted other plastic tapes.

### JACK PRUZAN COMPANY

All forms of tapes available from bi-seal to electrical filler, electrical vinyl, high voltage, friction, neoprene, splicing, rubber, paper and aluminum. Solders, sleeves and Scotchcast splicing kits plus other splicing accessories to fill all needs and requirements.

### PREFORMED LINE PRODUCTS CO.

Strand splices. To restore the full mechanical strength and electrical conductivity of the strand. Price on request.

# NOW . . . .

# BENCO

## provides: Direct Sales-Service in the United States

Benco Television Associates are pleased to announce the opening of new sales-service facilities in Buffalo, N.Y. Effective Feb. 1st, Benco will provide fast, prompt shipment to customers in the United States by shipping direct, FOB customs duty paid, Benco Television Corporation, Buffalo, N.Y.

Benco Television are manufacturers of community antenna television, translator and related products.

*Distributor Inquiries Invited.*

**BENCO**

TELEVISION ASSOCIATES, LTD.

27 Taber Road, Rexdale, Ont.

**BENCO**

TELEVISION CORPORATION,

1051 Clinton St., Buffalo, N.Y.

## TV CABLE SUPPLY CO.

Distributor of a complete line of tapes and splicing materials.

## GROUND MATERIALS & WIRES

### DAVCO ELECTRONICS, INC.

Materials for proper grounding of strand, cabinets, equipment, etc. are carried in stock.

### JACK PRUZAN COMPANY

Complete stock of materials for proper grounding of wires, lines, cable, etc.

### SAXTON PRODUCTS, INC.

Manufactures complete line of grounding materials.

## TV CABLE SUPPLY CO.

Distributor of a complete line of grounding materials.

## VIKING

920. Grounding block. Stainless steel pins. Simple, protected installation for RG59 co-ax. No coring or splicing required. Price: \$.50.

925. All-weather grip-tite, with extra grit for tight adhesion. Made of strong hot dipped galvanized steel to insure longer life and extra durability. Welded joints. Cost/unit, \$.20.

## ANTENNAS

### BROADBAND ANTENNAS

#### ALPAR MANUFACTURING CORP..

Manufactures a variety of antennas. Listing available from manufacturer on request.

#### ALL PRODUCTS CO.

Complement of antennas available. Write for catalog.

#### CUSHCRAFT

**Proline Heavy Duty antennas.** Available in 5 and 10 element units for all channel operation. Gain at channel 2 is 9.6 db (5 element) and 12.5 db (10 element). Features include end caps and vibration dampers on elements; stainless steel hardware. Prices range \$49.60 to \$145. Stacking kits are available.

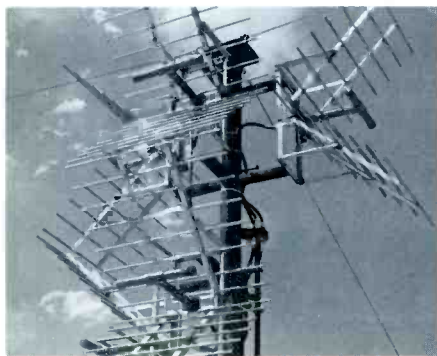
#### DAVCO ELECTRONICS CORPORATION

Distributors of rugged Cushcraft, Sitco, and Taco antennas for CATV. Write for descriptive literature and prices.

#### GC ELECTRONICS

Model A-2012, A-8985, A-1000. Broadband antennas for 54-216, 460-900 mc. For color and monochrome reception. Write GC for prices and details.

#### JAMPRO

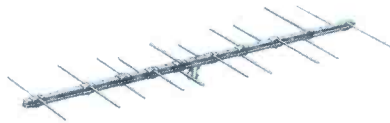


Corner reflector array. Wide band pickup antenna for CATV, for channels 7, 9 and 13.

#### JERROLD ELECTRONICS CORP.

**Multi-channel 5-element yagis, Y-53 series.** 50 to 500 mc with models broad-banded to cover wide ranges within TV and communications spectrum. Especially applicable for multi-channel use for either high or low TV channels. Construction features include 1 1/2" square heliarc welded crossarm with 1/2" diameter elements reinforced with 5/8" sleeves. Gain at channel 2 is 7 db; at channel 6, 7 db and 7.5 db at channel 13. Three driven elements. Hermetically sealed terminal boxes. 50 ohm impedance.

**Broadband VHF TV antennas, J-Series.** True logarithmic design assuring extremely flat response



and matched output over the entire band. Front-to-back ratio of 22 db. High gain of 8 1/2 db on high band and 8 db on the low band. 75 ohm impedance. Specify J55-LO for low band model; J105-HI for high band.

#### TACO (TECHNICAL APPLIANCE CORP.)

See listing under Jerrold.

#### TELESYSTEM SERVICES CORP.

Distributors for ruggedized commercial antennas.

### SINGLE CHANNEL ANTENNAS

#### ALL PRODUCTS CO.

**Ruggedized yagi, model YG-1000.** Designed for single or multiple-stacked yagi antenna systems.



Unique attachment method of elements allows use of tubular boom for rigidity with minimum wind resistance. Withstands winds in excess of 100 knots in temperatures of minus 50 to plus 130 degrees F.

#### CATV EQUIPMENT CO.

Distributor of full line of SITCO antennas for community television systems.

#### CUSHCRAFT

**Ruggedized Proline.** Machined all-aluminum ruggedized construction for MATV and CATV applications. Elements are 1/2", booms 1 1/4" round, heavy wall seamless hard-drawn aluminum tubing. No holes in booms or elements. Direct 52 or 72 ohm coaxial feed, available with all type connectors. Internal vibration dampers. Element and boom ends sealed; stainless steel fasteners. Lo-channel model has 5 elements; Hi-channel models with 5 or 10 elements. Supplied for entire VHF-UHF spectrum. Gain: 9.6 db at ch. 2; 9.6 db at ch. 6; 12.5 db at ch. 13. Prices: \$14.60 to \$105.

#### DAVCO ELECTRONICS CORP.

Distributor of full line of SITCO antennas and mounting hardware for CATV.

#### JERROLD ELECTRONICS CORP.

**Cut-to-Channel and FM yagis, J-Series.** Ruggedized single-channel models precisely cut for channels 2-6 and 7-13. Have high gains of 10.5 db over reference dipoles on the high channels and 8 db on low channels 2-6. 75 ohm impedance. Order by channel.

#### Screen reflector yagis, SY-41 and SY-42 Series.

For single-channel, high band, applications. Screen type yagis have high front-to-back ratios and high gain. All models feature heavy-duty welded construction. Will mount easily to tower mounts. SY-41 models consist of a single 4-element yagi on a screen reflector. Yagi elements are 1/2" aluminum alloy with 5/8" reinforcing sleeves. Reflector is made with 1 1/4" aluminum frame and 3/8" reflecting rods. SY-42 models have two 4-element yagis on a screen reflector and are supplied with combining lines providing a single coaxial input. (Specify high band channel.)

**5-element multi-driven yagis, Y-51 series.** Selection of two or three driven elements enables the design engineer to select narrow or broad band response with impedance, pattern and gain characteristics to obtain highest possible efficiency. 50 to 112 mc. Features narrow bandwidth and sharp patterns. Relatively flat response over the frequency range and sharp drop-off outside the desired band. Standard models to cover each VHF TV channel and the FM band. 8 db gain. Constructed with 1 1/4" square crossarm and elements of 5/8" diameter with 3/4" reinforcing sleeves. Hermetically sealed terminal boxes. 50 ohm impedance.

**5-element multi-driven ruggedized, yagis, Y-54 series.** 30 to 88 mc. This series is more ruggedly constructed than Y-51, to provide additional strength required in areas subject to exceptionally high winds and very heavy ice loading. Crossarms are 2" square and elements are 3/4" diameter with 7/8" reinforcing sleeves. Hermetically sealed terminal boxes 8 db gain. 50 ohm impedance.

**8-element multi-driven yagis, Y-81 series.** 50-66 mc. Two models available with standard ruggedized yagi construction. Three driven elements. 10 db gain at channel 2. Heliarc welded crossarm is 1 1/4" in diameter. 5/8" elements are reinforced with 7/8" sleeves. Hermetically sealed terminal boxes. 50 ohm impedance.

**Triple-driven dipoles Y-101 series.** 8 and 10 element low-band yagis. Three driven elements. Same construction features as Y-81 series. 11.2 db gain at channel 6. Available for 66-88 mc. 50 ohm impedance.

**10-element high-band yagis, Y-102 series.** Utilizes two or three driven elements. Same ruggedized construction as above. 112-163 mc. 50 ohm impedance.

**10-element high-band yagis, Y-103 series.** Two driven elements. For television channels 7-13. Provides 12 db gain at channel 13. Construction same as preceding listings. 50 ohm impedance.

#### RF SYSTEMS, INC.

**Ruggedized yagis.** Circular cross section, full retention of vibration dampeners; full feedpoint protection. Constant impedance type "N" connectors. Specially designed support systems. Write for spec sheets and prices.

#### SITCO ANTENNAS

**Low band, quad yagi array, Model SHD32-4.** Designed for off-air pickup in extreme fringe areas. Available for all of the low band channels. Quad array has a total of 32 elements. Boom length varies from 157" (Channel 6) to 230" (Channel 2). 8 elements per single yagi, 4 yagis per configuration. Forward gain: 20 db as measured in reference to a single dipole in free space. Front-to-back ratio: 12.7 to 1 as measured on relative field strength basis. 300 ohm feed impedance. \$306 and up.

**High band, quad yagi array, Model SHD48-4.** Complete 48 element array. Used for off-the-air pickup in extreme fringe areas. Available for all high band channels. Boom length varies from 97" (Channel 13) to 116" (Channel 7). Forward Gain: 20 db, as measured in respect to a single dipole in free space. 17 to 1 front-to-back ratio. 300 ohm feed impedance. Net: \$181.50.

**Single-channel high band yagi, Model SHD12-1.** Designed for extreme fringe areas. Ruggedized heavy-duty construction. Antenna has 12 elements. Boom lengths vary from 97" (Channel 13) to 116" (Channel 7). Forward gain: 15 db. Front-to-back ratio: 15.7 to 1. 300 ohm \$29.95.

**Single-channel, high band yagi, Model MD8-1.** High band, cut-to-channel yagi designed for off-the-air pickup in extreme fringe areas. 8 element antenna with a forward gain of 13 db. Boom length varies from 64" (Channel 13) to 76" (Channel 7). Ruggedized, heavy-duty construction. Front-to-back ratio: 12.3 to 1. 300 ohm feed impedance. Net: \$16.95 for all models.

**Low band, single-channel yagi, Model SHD 8-1.** Ruggedized heavy-duty construction. Forward gain: 14 db. 8-element antenna with boom length that varies from 157" (Channel 6) to 230" (Channel 2). 9.2 to 1 front-to-back ratio. 300 ohm feed impedance. Net: \$49.95 up.

### TACO (TECHNICAL APPLIANCE CORP.)

**Y-03 Series.** Omnidirectional antennas for channels 2 through 13 (low power transmitters). Ruggedized, 6 element type with 4.5 gain at channel 2, 6 and 13. Antennas are also available for high power (Y-03A).

Also see listing under Jerrold.

### ANTENNAS — FM

#### B & K MFG. CO.

MARK Stereo 7 FM Antenna. Horizontally polar-

ized, omnidirectional 7-element array for FM. 30" wide, 22" high, 5 1/2" deep. Antenna is supplied complete with all hardware for easy mast mounting.

### JERROLD ELECTRONICS CORP.

**Ruggedized yagi for FM, Model Y104 series.** 10-element low-band multi-driven yagi also used for communications and special purposes. Ruggedized design features heliarc welding, square crossarms, hermetically sealed terminal boxes. Available for frequencies from 43-88 mc. 50 ohm impedance.

**J-Series broadband and cut-to-channel antennas.** (See Broadband and Single Channel listings.) Highly directional ruggedized units. Model J55-FM. Provides high gain, flat response. 75 ohm impedance.

### ANTENNAS --- UHF

#### BLONDER-TONGUE

**Golden Dart.** High-gain, 11-element periodic UHF broadband antenna. Response plus or minus 1 db over entire band; plus or minus 1/2 db within any channel. 20 db minimum front-back ratio. Finished in MIL-spec zinc-plated iridite. Pre-assembled. Net: \$3.55.

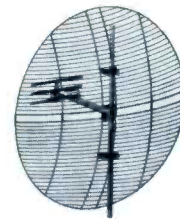
**Golden Arrow.** 10-element indoor version of Golden Dart. Net: \$2.70.

#### DAVCO ELECTRONICS CORP.

Distributor of full line of SITCO antennas and mounting hardware for CATV.

### JERROLD ELECTRONICS CORP.

**UHF screen antennas, SB-series.** Designed to withstand the most adverse weather conditions. Used for off-air reception for community or MATV systems. In MATV not incorporating electronic amplification, the very high gain of these antennas makes possible signal distribution through dividing networks with satisfactory results. Units are ruggedly constructed, factory assembled, ready-to-install. When 75 ohm coaxial input is



desired, order SB-304B tapered line balun. Model SB-16 consists of 16 bow-tie elements on 39" x 66" screen. SB-32 has 32 bow-tie elements on 7" x 66" screen. SB-64 has 64 bow-tie elements on 78" x 132" screen. SB-16 series provides gain of 17 db, SB-32 gain is 20 db, and SB-64 provides gain of 23 db. All three series are for television channels 14-83 (specify channel when ordering). 300 ohm impedance.

**Heavy-duty UHF parabolic, J3065 series.** Designed to meet the need for highly directional rugged antenna for fringe and super-fringe reception of UHF stations, channels 14 to 83, including MPATI channels 72 and 76, 75 or 300 ohm models.

### SITCO ANTENNAS

**Single-channel, UHF yagi quad-array, Model SHD-U48-4.** Ruggedized array, designed for minimum torque twist and built to withstand heavy icing or winds. Has a forward gain of 20 db and a front-to-back ratio of 14 to 1. Beamwidth at half-power points (horizontal plane) is 18 degrees. Ultimate in extreme fringe area usage. Features a total of 48 elements (12 elements per yagi).

### MICROWAVE ANTENNAS

#### ADLER ELECTRONICS, INC.

**Microwave antenna, Model JF2KM.** Light weight corner reflector type for use in the 2000 mc range. Gain: 9 db over isotropic, 60 degree horizontal angle at half-power point.

## A NEW HELPER ... The UHF Adaptor, UA-1

Here is your chance to expand your facilities into UHF . . . NOW! This high performance, low-cost, solid state instrument has been designed to meet your requirements for UHF TV field strength measurements • Accuracy plus or minus 2 db • Input 75 ohm UHF Ch. 14-83 • Output 75 ohm, 64 Mc or mid-channel 3 • Semi-conductors: 3 transistors, 2 diodes • Weighs only 18 oz. • Tunable plug-in probing antenna • UHF 300 to 75 ohm matching transformer • Holding Bar for quick snap-on facility • Built-in battery condition meter.

## WILL WORK WITH ANY FIELD STRENGTH METER

Your present field strength meter has been taken into account in the design of the UA-1, to make a universally compatible adaptor-field strength meter combination. Strong emphasis on physical compatibility down to the last detail, such as the inclusion of a universal mounting bracket, allows the UA-1 to become an integral part of your VHF meter.



BOX 38, CARLISLE, PA.  
PHONE: 717-243-4918

The place to buy EVERYTHING for your CATV System



\$120.00 NET

## ANDREW CORPORATION

**Dual polarized parabolic series.** Models PX4-59, PX6-59, PX8-59 and PX10-59, 4 to 10 ft. diameters. Designed for propagating orthogonal signals in relay or stl. applications. 5.9 - 6.4 gc. Utilizes horn feed. Welded and riveted aluminum construction; pipe or roof mounts optional. Connector type UG343A/U. VSWR of 1.1:1 or less. 4' dia., \$475; 6' dia., \$560; 8' dia., \$870; 10' dia., \$1,125.

**Plane polarized parabolic series.** Models P4-59, P6-59, P8-59 and P10-59. Used as radiators for relay and stl. specifications same as PX series. 4' dia., \$230; 6' dia., \$315; 8' dia., \$625; 10' dia., \$975.

## ANDREWS TOWER COMPANY

Manufactures complete selection of passive microwave reflectors. Write company for details and prices.

## FORT WORTH TOWER COMPANY

Manufactures complete line of passive microwave reflectors. Write factory for sizes, price, specifications.

## JERROLD ELECTRONICS CORP.

**2500-2700 mc ITV Antenna.** New lightweight microwave antenna for educational television in Instructional Television Fixed Service. Available in 2, 4 and 6 ft. diameters parabolic antenna design produces gain, relative to linear isotropic radiator, of 21, 27 and 30 db respectively. Total weight, including mount, is less than 50 lbs. Withstands winds to 100 m.p.h. Cast dipole element requires no guying. Provisions are made for installing the feed for either vertical or horizontal linear polarization. Models EPA-2, EPA-4 and EPA-6.

Also, cylindrical parabolic model ECPA-1, and transmitting model EOA-H15 (15 db omnidirectional).

## MARK PRODUCTS DIVISION

Aluminum parabolas for 1700 to 2200 mcs; 5800 to 7750 mcs; 12,200 to 12,700 mcs. Grid parabolas for 1700 to 2200 mcs 450 mcs and 900 mcs. Parabolas for the 5800 to 7750 mcs range except for the 2 ft. dish, utilize circular waveguide feed, driven from a transition which converts the rectangular waveguide to circular feed. Specially designed transition section allows fast polarization change. Termination is UG-343A/U broadband choke flange. Aluminum parabola for the 1700 to 2200 mcs range and grid parabolas for this range utilize a 7/8" E.I.A. swivel flange as the termination. Mounts are available for all antennas except for the 5800 to 7750 mcs 2' dish which comes complete with a ball and socket swivel mounting.

## MICROFLECT CO.

**Passive repeaters, flat, bill-board type.** Reg. TM-"Microflector". Designed for 160 MPH survival, for operation in systems to 13 gc. Available in standard sizes from 8' x 10' to 30' x 40'. Adjustable in all planes. Designed for any specified face angle and site slope. Simple erection without special equipment.

## MICROLINK CORPORATION

**2500-2700 mc ITV Antenna.** New microwave receiving antenna for Instructional Television Fixed Service. Compact, mast-mounted unit is supplied with receiving converter and power amplifier. Write for complete details.

**Passive reflectors and microwave antennas.** Current data not supplied; write manufacturer for information.

## PRODELIN

**Spun aluminum parabolic antennas** for the range of 400 to 7425 mc. Antennas provide azimuth and elevation adjustment of plus or minus 7 degrees. Adapted to four point mounting. All

parts made of steel are hot-dipped galvanized after fabrication. All aluminum parts are painted and brass parts are plated. Write for complete information on microwave dishes and reflectors.

## ROHN MANUFACTURING CO.

**Microwave passive reflectors.** Made of Reynolds aluminum interlocking extrusions. Three standard sizes; 6 x 8', 8 x 12' and 10 x 15'. Weight of reflectors is 140, 280 and 438 pounds respectively. Easy field assembly.

## RF SYSTEMS INC.

Manufacturer of parabolic microwave and radar reflectors.

## TACO (TECHNICAL APPLIANCE)

**2500-2700 mc ETV Antenna.** New lightweight microwave antenna for educational television in Instructional Television Fixed Service. Available in 2, 4, 6, 8, and 10 feet diameters parabolic antenna design produces gain, relative to linear isotropic radiator, of 21 through 35 db. Total weight, including mount, is less than 50 lbs.



Withstands winds to 100 m.p.h. Cast dipole element requires no guying. Provisions are made for installing the feed for either vertical or horizontal linear polarization. Models EPA-2, EPA-4, EPA-6, EPA-8, and EPA-10.

## TRI-EX TOWER CORP.

Manufacturer of a line of passive microwave reflectors. Write for details.

## UTILITY TOWER CO.

**"Microflector" passive microwave reflectors.** Newly designed for ruggedness, maximum versatility and ease of installation and shipping. Wind loading of psf with 1/2" ice loading is carried without complicated and costly network of back-up bracing. Available in one piece or completely knocked down. Constructed of 12" wide 6063-T6 aluminum alloy. Hot-dip galvanized steel support structure. Adjustable curved face attachment can be left in neutral position for flat face. "Quality Certified" 5-year guarantee. All sizes available from stock. For installation in corrosive atmosphere, aluminum parts anodized at slight additional cost.

## ANTENNA ACCESSORIES

### AMECO

**Model POI-1.** Power overload indicator with visual flasher and automatic reset. VSWR is 1.15:1, unit comes in 1 and 3 amp sizes. 75 ohms in and out; for inline strand mounting. Accepts 1/2", .412, AM and UHF connections.

**PP3.** Power protector from 115 vac source. Features 600 watt self healing lightning arrester; automatic reset overload relay and 60 db RF filter. In strand box for indoor or outdoor use. \$32.50 net.

### BENCO

**Antenna balun, Model ACMT.** Matching type for any TV channel VHF to UHF. Has insertion loss of less than 1/2 db; 300 ohms input and 75 ohms out. Accurately cut to channel specified at \$5.90.

## CUSHCRAFT

**"Blitz Bug" lightning arrester.** Inserts in coaxial cable to eliminate static buildup. Discharges through sealed air chamber with machined discharge points. 52 or 72 ohm. UHF or "N" type connectors. LAC-1, type 83 connectors, 1 male; 1 female for direct to equipment installation. \$3.85. LAC-2, type 83 connectors, 2 female for insertion in cable, \$4.45 LAC-2N, "N" connectors, 2 female for insertion in cable. \$5.95.

## JERROLD ELECTRONICS CORP.

**Antenna mounts.** A series of antenna mounts for all types of Taco spun and mesh reflectors is available. The series includes: pipe mounts for standard service; heavy-duty pipe mounts for areas with severe wind loading; roof mounts of the three point type with adjustment of plus or minus 5 degrees; tilt mounts for sloping roofs or where an antenna cannot be located directly below a passive reflector; special mounts for specific requirements. Write for additional details.

**Anti-icing Equipment.** Radomes for all size dishes. Are available for applications where antenna must perform under adverse conditions. Heater units are available to prevent the accumulation of ice and snow on the radome-dish assembly. Individual heaters are available also to heat the dish and feed units where the use of a radome is not desired.

**Ruggedized yagi antenna accessories.** Write for complete catalog.

## MARK PRODUCTS DIVISION

**Radomes for spun parabolas** available in sizes from 2 ft. to 10 ft. to exactly fit the full line of MARK antennas. Radomes are obtainable in either heated or unheated models. Heated units use a spiral wound heating element molded into the radome and an air sensing thermostat for actuation of the heater.

**Solid parabola mounts** for various sizes and configurations are available including special mounts for peculiar installations. Also, two standard kits are available for mounting grid parabolas. All components are fabricated of steel, hot-dipped galvanized, and are shipped with detailed mounting instructions. Consult manufacturer for kind and type of kit necessary.

## MICRO-LINK CORPORATION

**Antenna mounts.** Current data not supplied.

## PRODELIN

**Parabolic antenna radomes.** Molded fiberglass reinforced resins provide inexpensive protection against adverse climatic conditions, ice and snow accumulation. No signal attenuation through the 10,000 Mc/S signal range. Features simple high strength aluminum clamp assembly. Also available in heated models. Heated radomes include thermostat, relay and junction box. Write for prices on heated models.

## TACO (TECHNICAL APPLIANCE CORP.)

Consult Jerrold listing above.

## VIKING CABLE COMPANY

**Outdoor 72-300 ohm balun, Model 934/F.** Mast or wall mount. Provides excellent match and signal transfer. Waterproof zinc case. Full 6 db step up. True symmetrical transformer circuit. Bandpass 2-13. "F" connectors. Unit price \$1.85.

**Hi-Low coupler, Model HLB.** For high band antenna and low band antenna to set. Unit price: \$1.35.

**Two antenna coupler for same band, Model TAC3.** For either two high band VHF antennas to set. Unit price: \$1.35.

## WESTBURY CATV CORP.

**MT-1.** Weatherproof balun, 300 ohm to 75 ohm for RG-59/U cable. Outdoor.

**MT-2.** Weatherproof balun, 300 ohm to 75 ohm for RG/U cable.

**WB-1.** 75 to 300 ohm balun with A102 connectors. Connects drop-line into set. Surface mounted.

# EVER CONSIDER THE PROFITS YOU CAN MAKE on VACANT CHANNELS?



By supplying background music to local merchants over a vacant channel, the CATV operator can add a big plus figure to his P & L statement — and do it with a minimum of capital outlay. The Tape-Athon LIBRARIAN tape player is just the ticket for supplying **real** professional background atmosphere. No vocals, no commercials, no interruptions for station breaks. It's fully automatic and built for 24-hour-per-day operation. Available right now under a convenient lease-purchase plan.

And under Tape-Athon's exclusive lease exchange program you can be assured of a continuing supply of fresh new music — music designed for the greatest listener appeal — music you can profitably sell to industrial plants, supermarkets, department stores, professional offices and a broad variety of commercial customers.

Write or call today for details on the LIBRARIAN Background Music System.

## Tape-Athon, Corp.

523 South Hindry • Inglewood, California  
ORegon 8-5359

TV & COMMUNICATIONS

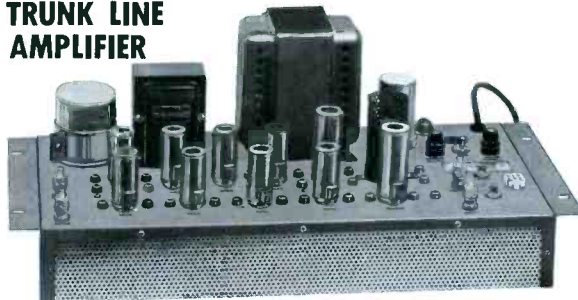
## DELTA ELECTRONICS LTD. 70 RONSON DRIVE • REXDALE • ONTARIO SUPER 60 HIGH LEVEL DISTRIBUTION AMPLIFIER



### SPLIT BAND DELIVERS ONE VOLT PER CHANNEL ON NINE CHANNELS

Gain ..... 50 db  
Manual gain control range ..... 16 db  
Tilt control ..... 6 db  
Output tubes, 2 Amperex S. Q. 8233  
List ..... \$195.00 ..... Delivered

## ABHL 60 TRUNK LINE AMPLIFIER



### SPLIT BAND HIGH LEVEL CASCADER

Flat response through 40 db of cable. Out put 46 db per channel for 12 channels. Separate gain and tilt. Hi and Lo band.  
List ..... \$325.00 ..... Delivered

## TC-1 SOLID STATE CRYSTAL CONTROLLED CONVERTER



Converts any VHF channel to any other VHF channel with single or double conversion. Built-in band pass filter in input and output. Hi-Q traps eliminate spurious frequencies. Regulated power supply. Gain nominal 3 db. Nominal input 6 db. Maximum input 26 db. Oscillator stability .005%.  
List ..... \$150.00 ..... Delivered



**DELTA ELECTRONICS LTD.**

TORONTO - ONTARIO - CANADA

WB-3. 75 to 300 ohm balun with crimp-type connectors. Connects drop-line into set.

## TOWERS

### ALL PRODUCTS CO.

**Steel Towers, 2410 model.** Triangular bolted construction with special "X" type cross bracing with braces welded together at the cross. Bolting permits completely knocked down shipping at reduced cost. All tubular steel, all parts hot dip galvanized. 10 ft. sections, jam-fit joints; steps provided. 290' tower, \$1823.23.

**Steel towers, 1810 model.** Triangular bolted construction as above. Designed for tower heights to 300 ft. 10 ft. sections, jam-fit joints; steps provided for climbing. 250' tower \$917.24.

### ALPAR MANUFACTURING CORP.

Contact manufacturer for specifications and prices of towers available.

### ANDREWS TOWER COMPANY

Manufactures CATV, VHF, ETV and microwave towers. Free-standing towers include types A-360', B-340', C-320' and D-300'. Guyed towers include types 250 320', 250-T 320' triangular, 350 and 350-T 400', 24 560', for CATV, 450 550', 30 630', 550 and 550-T 700', types 650 and 650-T 800', 44 1000' and type 96 2000'.

### DAVCO ELECTRONICS CORPORATION

Supplier of Utility Tower Co. towers. Utility towers used in systems constructed by DAVCO. Special antenna arrays, brackets, photo cell lighting to rigid specifications. Write for quotation.

### DRESSER-IDECO CO.

Manufacturer of standard and tall towers. Write factory for details.

### E-Z WAY PRODUCTS INC.

Complete line of communications towers and antenna supports. Contact factory for listing and prices.

### FORT WORTH TOWER CO.

Manufactures tubular towers for CATV, microwave, MATV, ETV, etc. Towers are designed to meet individual requirements and specifications. FWT also provides engineering, construction, financing and leasing services.

### JAMPRO

Manufactures variety of towers. Contact factory for prices.

### MICROFLEET COMPANY

Complete line of towers. Includes round and roof mounted self-supporting towers; range up to 150'. Write for price.

### RF SYSTEMS INC.

Manufacturer of special support structures for antennas, reflectors, etc.

### ROHN MANUFACTURING CO.

Manufacturer of communication towers, for CATV and microwave. Services include complete installation of towers. Complete engineering service is provided both for tower installation and for systems. Complete lighting kits and passive microwave reflectors also available.

### TCA RADIO TOWER COMPANY

Manufacturer of complete selection of towers. Corporation provides engineering data for customer or potential buyer. Towers carry 5-year warranty and meet EIA specifications.

### TOWER COMMUNICATIONS

Complete line of towers is available. Write manufacturer for details and pricing.

### TRI-EX TOWER CORP.

**T-9 fixed tower.** 30 to 100' galvanized finish with diagonal face. \$17.85 in 10' sections (FOB Tulare, Calif.)

**T-15.** 10 to 300' galvanized. "W" bracing; tubular legs.

**T-20.** Available in 10 and 20' sections.

**T-26.** Height to 600 feet. "W" bracing; galvanized. Company also manufactures portable crank-up trailer mounted towers ranging 20 to 148 feet. Free catalog on request.

### UTILITY TOWER COMPANY

Catalog of CATV towers and booms and microwave towers available from manufacturer.

### WOLFE TOWERS BY MODERN ELECTRONICS

**Steel triangular towers.** All welded construction. Unique "Z" bracing, with climbing steps. Elevator available for installation and maintenance. 300, 400H and 400M series. Write for details.

## TEST EQUIPMENT

### AMECO

**Variable RF attenuation, Model AA-2.** 62 db; 1% carbon film precision resistors, 7 switch steps and excellent VSWR. For 10 to 300 mc; 75 ohms. Connectors are AM matched or UHF.

**Alignment & VSWR detector, Model AAD-1.** Function: voltage doubling, has built-in markers for 50 mc and 220 mc. Direct chassis mount or for inline sweep. 10 to 300 mc frequency range.

### BECKMAN INSTRUMENTS INC.

**Model 6120 and 6121, frequency meters.** Designed to check and monitor frequencies to 1000 mc. Pro-



vides direct measurement to 350 mc. Accepts plug-in modules to increase reading. 6120 is \$1,750; 6121 is \$1,950.

### BENCO

**Field strength meter, Model FSP-3B.** All transistor unit with rechargeable batteries and charger. Has 5 section built-in attenuator. Includes MT-FS matching transformer for use with 300 ohm balanced transmission line. Frequency range is 52 to 220 mc in one range. \$395.65.

### BLONDER-TONGUE

**Field strength meter, Model FSP-3b.** Portable, rechargeable, battery powered for field or lab use. Frequency range: 52-220 mc in one range. Sensitivity: 5 uv. minimum readable signal and 60 uv. full scale. Percentage Modulation Ranges: 0 to 5% and 0 to 50%. Measurement Range: 0 microvolts to 3 volts in 18 ranges, also micro-watts to 10 watts in 10 ranges. Input impedance 75 ohm unbalanced and 300 ohm balanced.

**High speed solid state switcher, Model 4102.** Can be used to compare any two signals from 0 to 900 mc. Switch rate: 30 cps. VSWR: 1.08 max. 0-216 mc; 1.15 max. 216 to 90 mc. Isolation: 0 to 216 mc - 40 db min.; 216 to 900 mc - 27 db minimum. CATV \$230.

**Transformer, Model 4103.** Transformer is 50-75 ohm (10 to 216 mc). It features toroidal circuitry. VSWR is 1.14 maximum. Comes with 75 ohm coax push-on connector, POB-59; 50 ohm coax B.N.C. connector, Type UG-88/U. Net: \$32.00.

**75 ohm detector, Model 4104.** Features voltage

doubler circuit with frequency range of 10-900 mc, maximum VSWR 1.1 and impedance of 75 ohms. Sensitivity of approximately 0.1 vdc out for 100 mv input (CW); plus or minus 1 db over frequency range. Band pass is 3 db down at 100 kc with 100 mmf. Total capacitance connected to output. Net: \$40.00.

**75/300 ohm balun, Model 4105.** "Lab-Line" series features toroidal circuitry and frequency range of 10-216 mc. 1.14 is maximum VSWR. Comes with 75 ohm coax push-on connector, POB-59. Net: \$28.00.

### DAVCO ELECTRONICS CORPORATION

Complete selection of test equipment for CATV installation and maintenance work. Field strength meters, sweep generators, oscilloscopes, volt-ohm-milliammeters, tube testers, and line testers are available from stock. Sadelco, Simpson, Kay, Entron, Mercury, and Triplett are among lines carried. Write for complete catalog and price information.

### ENTRON

**Line tester, Model LT-1.** Provides a simple means of isolating common trunk and distribution line troubles with a direct reading, portable meter. Battery operated. Tests for: line termination, line splitter termination, open line and shored line. Price: \$35.00.

### HEWLETT PACKARD

Manufactures a complete line of oscilloscopes, analyzers, measuring instruments. Short form catalog is available on request.

### HICKOK ELECTRICAL INSTRUMENT CO.

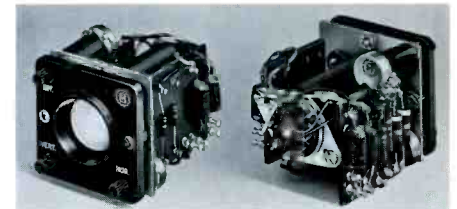
Manufacturer of complement of test instruments. Write Hickok for details.

**615 sweep and generator marker.** For 2.5-5, 19-50, 54-108 and 108-216 mc. \$359.50 net.

**235A field strength meter.** Portable unit for 10 to 100,000 microvolts VHF; 30-50K microvolts UHF (Channels 2-6-7-13 and 14-83. Impedance is 75/300 ohms. \$229.50.

### JAMES MILLEN MFG. CO.

**Oscilloscope, Model 90901.** Miniature monitor



scope, panel mounting module. Has CRT plates available. \$23.10 (less CRT).

### JERROLD ELECTONICS CORP.

**Field strength meter, Model 704B.** Portable unit covering the range of 54 to 220 mc. Range of the instrument is 5 uv to 3 volts in eight ranges. Six of the ranges are fundamental and two are selected by accurate RF attenuators, built into the circuit. Accuracy: plus or minus 3 db, Phone and video jacks are provided on the front panel. Sensitivity: 5 uv. 75 ohm input impedance (300/75 ohm matching transformer provided). Adjacent channel rejection: 45 db down from received signal. Aluminum cabinet with carrying handle and shoulder strap. PNS.

**Sweep generator, Models 601 and 602.** Designed for test and alignment of RF circuits. Each generator has 11 overlapping ranges. Sweepwidth in any range is continuously variable from a minimum of plus or minus 1/2% of center frequency, to a maximum of approximately plus or minus 60% of center frequency. Means are provided for complete phasing of horizontal output through



360 degrees Switch control of return trace blanking is provided. Incorporates a detector tilt control for matching external detectors to the frequency characteristics of the internal AGC detector for accurate oscilloscope presentations. Model 601 covers 12 to 225 m and Model 602 covers 4 to 112 mc. RF output response (601) is 1.0 volts rms, within .5 db and 2.5 volts rms (602), within .5 db. Portable, rugged case. PNS.

### SADELCO

**TV and FM Field Strength Meter, Model FS-2.** Completely transistorized printed circuit construction. Battery operated. Calibrated from 10 microvolts to 1 Volt and minus 33 db to plus 60 db on 5 easy to read meter scales. Accurately—plus or minus 1.75



db or better. Input impedance — 75 ohms. Frequency coverage from 54-108 and 174-216 mc. Can be extended to cover UHF 470 to 900 mcs with snap-on UHF adaptor Model UA-1. The FS-2 comes complete with batteries and carrying case. Price \$295.00.

**UHF Field Strength Meter Adaptor, Model UA-1.** The UA-1 is a low noise UHF Receiver, individually calibrated for field strength measurements. Completely self-contained with its own regulated battery supply. Will work with any VHF meter. Special Features include tunable plug-in probing antenna, UHF 300 to 75 ohm matching transformer, Holding Bar for quick snap-on facility, Built-in Battery Meter and can be used as a remote signal probe. Price: \$120.00.

### TV CABLE SUPPLY CO.

Distributor for Sadelco field strength meter, Model FS-2 and FS adaptor (UHF), Model UA-1.

## MICROWAVE EQUIPMENT

### DEMODULATORS & AMPLIFIERS

#### CAS MFG. CO.

**Demodulator, Modified Conrac AV 12 E.** Converts complete TV channel to video and 4.5mc sound. With all-channel tuner. Net \$320.00. With Crystal controlled tuner, Net \$395.00.

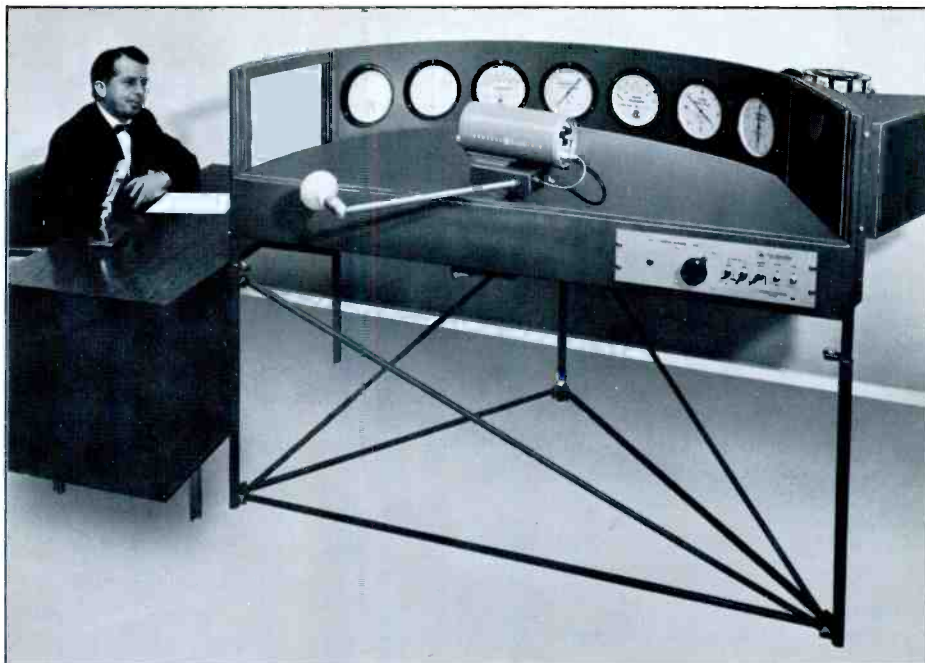
#### CONRAC

**Demodulator, AV12E.** Designed for monitoring, video recording or rebroadcasting applications. Supplies composite video and separate audio from "off-the-air" signals. Uses high-gain keyed AGC system to hold the video output constant within plus or minus 1 db over a 60 db change in input signal. Especially suited for reception of NTSC color signals. Video bandwidth is flat within plus or minus 1 db to 4.1 mc.

#### JERROLD ELECTRONICS CORP.

**Demodulator, Model TD.** Designed for CATV head ends; demodulator for TV microwave; off-the-air reception of TV broadcasts. Has all-channel tuner with lock-in oscillator feature (optional). Unit has high-Q co-channel traps. High rejection to adjacent carriers. Automatic

TV & COMMUNICATIONS



## WEATHER CHANNEL YOUR PROFIT\* CHANNEL

### Versatility—

Exclusive Live Telecasting and automatic slide features make public relations, community service projects, and system promotions a revenue building part of your system.

### Acceptance—

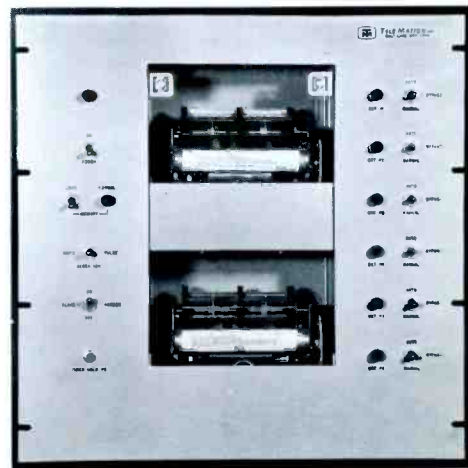
TeleMation's **WEATHER CHANNEL** is now PROFITABLY in use by over 100 CATV installations . . . more than all other types of auxiliary installations combined.

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## NON DUPLICATION SWITCHER

This New Pre - Programmed switcher provides these exclusive features:

- Automatically repeats up to 480 program changes weekly.
- Integral six channel video switcher that allows multiple source substitution.
- Accurate switching on any selected minute throughout the week.



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or manual gain controls. Noise suppression circuit. Video attenuator in output allows maximum of 21 db of attenuation in 3 db steps. **Single channel preamplifier, Model TPR.** Engineered for 12-channel system.

**Remote transistorized power supply, Model PPS-8.** Off-trunk amplifier, Model TOT-1. High output, all band.

**Remote transistorized power supply, Model OPS-416.**

### MICRO-LINK CORP.

**Traveling tube amplifier, Model WA-5.** 10 watt portable unit. 5.9 - 7.1 gc. Gain (small input) 35 db. Input level 0.1 to 1.0 watt. RG-50 waveguide. Regulated power supply, 105-125 vac. Helix overload protection, time delay circuitry and power supply all solid state for reliability and long life. Weight, 55 lbs. Price, \$4,750.00.

**Receiving converter, Model CE-5.** Receives, converts 2500 mc to any VHF channel for ITV. Will receive up to five alternately spaced channels. 75 ohms out from 50 ohms in. Includes antenna mast-mounted converter and associated indoor power supply. Power gain is 13 db nominal. Unit is completely solid state. Price: \$800.

### MICROMEGA CORP.

**RF preamplifiers.** Low noise, low signal level. Eliminates fades and permits greater spacing between microwave repeater stations. Price range \$3,250 to \$3,900.

**U-1000/1.** 750-1000 mc; 10 mc bandwidth. UHF tuning range.

**R-1000/1.** 1700-2500 mc; 15 mc bandwidth. Range 300 mc.

**C-1000/1.** 6875-7125 mc; 25 mc bandwidth. Range to 250 mc.

## TRANSMITTERS & RECEIVERS

### ADLER ELECTRONICS, INC.

**Microwave system, RT-3A.** Operates in the 2 kmc range. Useful for educational television relay or remote pickups. Can receive local station or camera video and audio. 10 watts output. Meets FCC, NTSC and proposed EIA color standards. Vestigial sideband transmission and crystal controlled stability. PNS.

### COLLINS RADIO COMPANY

**Microwave video relay system, Universal Microwave Group.** Transistorized 6-gc and 12-gc equip-



ment utilizing standard, plug-in etched circuit modules, aperiodic tuned i-f strips (15-mc or 25-mc). The equipment features temperature stabilized (ebullator) and linearized 1-watt klystron. Crystal referenced afc for 6-gc systems provides transmitter stabilities of 0.002%.

Robert L. Cowart, Theodore Baum and Robert E. Baum who presented the informative article on "Installing Aluminum Sheath" in January "TV & Communications" are executives of Viking Cable Company, Hoboken, New Jersey.

**MW-108C.** Operates in 5.925 to 6.425 gc common carrier band; 1-watt. Can be readily arranged for frequency diversity, space diversity, hot standby, or nonstandby operation.

**MW-109.** 5-watt unit may be used in the same system with the MW-108C. Powering from 24 vdc float charged batteries, with 48 vdc, or 115 vac powering also available. Prices on request. **MW-408C and MW-409.** Cover STL band from 6.825 to 7.125 gc.

**MWV-604 and MWV-704.** Provide 50-mw output powers in the 11 and 12 gc bands, together with the 500-mw MWV-605 and MWV-705 equipment.

### ENTRON

**Television transmitter, Model TVT-5000.** For use with microwave systems to provide low band modulated video and audio carriers suitable to feed to a coaxial line. Input to the video section may be from a TV camera or from a broadcast signal which has passed thru a demodulator. Audio input for suitable audio signal. Maximum RF output: 9 volts (video), 6 volts (aural). Output may be fed to a coaxial line for closed-circuit applications also. Ultra-stable RF carriers. Audio input: 600 ohms. Video input: 75 ohms. Price: \$1,320.00.

### LENKURT ELECTRIC

**Microwave transmitting/receiving equipment, Model 76TV.** Completely transistorized, except for single



klystrons in transmitter and receiver. Plug-in modular construction. Convenient push button test facilities. Frequencies include 6 and 12 kmc. Excellent equipment for CATV microwave relay systems. \$5000.00.

**Model 76E.** Same as Model 76TV except for 12.2 to 13.25 gc operation.

**Model 75A, microwave radio.** For 5925 through 6425 mc common carrier band. Meets CCIR and NTSC requirements for monochrome and color. Solid state design, the unit features frequency stability of plus or minus .002% less than 1 degree differential phase and less than 0.5 db differential gain.

### MICRO-LINK CORPORATION

**Fixed Microwave link, Model 600.** A complete 0.1 watt system operating between 12.0 to 13.6 kmc for point-to-point FM transmission of sound, data, black-white or color TV signals in the new FCC business operational fixed and STL frequency allocation.

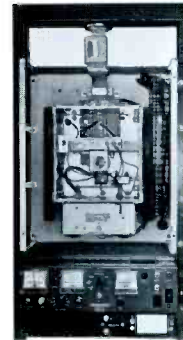
Price dependent upon requirements—\$6000.

**Portable microwave link, Model 420A.** Designed to operate in the new FCC business microwave and STL bands, the 420A is a 100 mc, 10.5 to 10.7 kmc portable microwave relay link. The transmitter and receiver are each self-contained in their own weatherproof case requiring no additional cumbersome control units. Full 7 mc video bandwidth for high resolution black-white or color TV transmission. The small size, ease of portability and low cost permits its use to link scattered locations economically, permitting the transmission of data, remote control functions, sound and television picture data between them. Net: \$5000.00.

**Transmitter, Model ME-1A.** ITV (2500-2685 mc) unit with provisions for attended and remote control operation. Solid state circuitry except at power amplifier stage. Can provide separate composite visual and aural carrier output for standard VHF channels 7 through 13. \$11,000.

### MOTOROLA

**MV-30 Color microwave relay.** Transmitter for 5925-6425 mc common carrier and 6875-7125 mc STL. Designed for 75 ohm unbalanced video input and output for color or black and white.



Optional equipment will provide balanced input and output. Transmitter/receiver provides differential gain of .5 db maximum (average picture level); 1.5 degrees differential phase with 6 db pre-emphasis. Price is available from manufacturer.

### RADIO CORP. OF AMERICA

**TV microwave relay system, Type TVM-1B.** High power (1-watt) conduction cooled transmitter klystron. Frequency range: 5925 to 7425 mc. Video frequency response flat within 0 to 0.5 db from 60 cycles to 7 mc. Less than 0.3 degree differential phase and 0.1 db differential gain using 12 db pre-emphasis. Wide IF bandwidth provides ultra-stable system—minimizes effects of tube aging. Removable sub-chassis construction and numerous circuit test points for easy maintenance. Provision for multi-plexing high quality sound channels. Video input: 0.75 to 4.0 v p-p composite (adjustable by modulation level control). PNS.

**TV microwave relay, Type TVM-3B.** Operates in 10.5 to 13.25 gc microwave band with full color capability. Unit is modular construction designed for rack or portable use. Provides nominal power output of 350 milliwatts and has flat response over 30 mc bandwidth. Noise figure is 12 db overall. Write RCA for pricing.

**Type CW-60V.** Solid state unit with heterodyne repeaters. For color or monochrome and is

## CATV Electronic Engineer CAREER OPPORTUNITY

We want a top circuit designer working in solid state RF. CATV experience desirable, but RF experience is mandatory. If you feel qualified to join a new and expanding organization, heading a department, at a high salary, Write . . .

**Management Sciences Associates  
1133 Arch Street, Philadelphia,  
Pa. 19107**

(All inquiries held in strict confidence.)

# Now, for Stringing CATV Systems The Tel-Lasher\*



The Tel-Lasher is the answer for Community Antenna Television Systems . . . for closed circuit television systems . . . for placing all coaxial cable. And in the bargain, you get the perfect aerial lift for stringing figure 8, strand, and any size cable.

The Tel-Lasher by Telsta makes pre-lashing an economical method of construction because strand

and cable can be strung in one pass, under tension. The whole operation is done with one vehicle, equipped with strand, cable, and lasher.

To find out more about the Tel-Lasher and the complete stringing capabilities of the Telsta Electric Lift, write to Telsta, the leader in aerial plant construction equipment.

\*TM TELSTA CORPORATION



**TELSTA CORPORATION**  
1700 industrial road · san carlos, california

powered directly from 48v battery. Receiver provides 13.5 db gain before mixing. Unit is multi-channel, terminal type.

### RAYTHEON COMPANY

KTR II microwave relay. Solid state components; produces 1.0 watt transmitter output. Operates



in 5925-8400 mc range for color TV and program audio. Operating temperature range is -30 to plus 55 degrees C. 75 ohms in and out  
KTR III. 5 watt (heterodyne) repeater. 5.0 to 7.6 gc frequency range. Transistorized.

## VIDEO EQUIPMENT

### AMPLIFIERS

#### DYNAIR ELECTRONICS

Manufactures Modular 1000 Series amplifiers. Four modules plus power supply.

DA-1060B. Video distribution amplifier module. \$175.00.



CL-1050B. Clamper module. \$350.00.

DA-30P-B. Video distribution amplifier. \$340.00.

#### RAYTHEON COMPANY

Clamper amplifier, Model 10255. Portable Type BB unit to remove low frequency interference and distortion from television signal. Solid state de-



sign. Also available in rack mount. \$937.00 portable or \$966.00 rack.

### VITAL INDUSTRIES

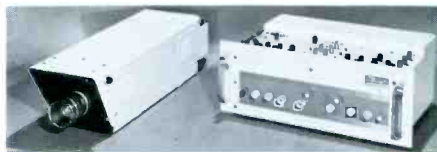
Model VI-10A. Transistorized distribution amplifier with individual regulated power supply; four isolated outputs. For color or monochrome. Price for rack mounting frame and 4 amplifiers is \$1,100.00.

Model VI-20. Pulse distribution amplifier; solid state. Provides four isolated outputs from one compensated loop-through input. \$1,100.00 for 4 amplifiers and rack mounting frame.

## CAMERAS

### BENDIX RADIO DIVISION

Model BX-8 CCTV camera. Image orthicon type; transistorized (except image-converter). Operates



on 117 vac, single phase 50, 60 or 400 cps, 150 watts. 30/s frame rate: 1023 lines per frame, maximum (Scans at 875 unless specified). \$20,000.

### BLONDER-TONGUE

Vidicon camera, Model TC-1. Completely self-contained camera. Camera adjusts automatically to meet changing light conditions. Lens opening and focus are the only controls that the operator normally adjusts. Net: \$855.00.

Automatic transistorized camera, Model TTVC-1-1. Self-contained, rugged, portable (15 lbs.), this camera transmits high definition (650 line resolution, 2 to 1 interlace) pictures. Has built-in automatic light compensator that adjusts for continuously changing light over a 4000 to 1 range. Net: \$1950.00.

Model TTVC-1(2-6). RF version of the TTVC-1-1.

Output 50 millivolts, channels 2 thru 6 available. Net: \$2,010.00.

Model TTVC-1R. Same as TTVC-1 but equipped for remote control of electrical focus, beam, target, video gain and power. Net: \$2,520.00.

Model TTVC-15N. Same as TTVC-1 but accepts studio net pulses. Allows common synchronization for multi-camera operation. Net: \$2,450.00.

Model TTVC-15NR. Same as TTVC-15N but equipped for remote control. Net: \$2,735.00.

Viewfinder camera, Model EV-1-1. Compact, portable camera/viewfinder combination. Can be mounted on heavy-duty tripod and friction head. Camera is built together with an 8" electronic viewfinder. HT-10 turret for up to 4 C-Mount lens. 1" F/1.9 lens supplied. Provision for optional intercom and remote control. Net: \$3,440.00.

Model EV-1(2-6). Same as EV-1 except has RF output: Channels 2 through 6 available. Net: \$3,440.00.

Model VE-1-SNR. Same as EV-1 but accepts studio net pulses and is remote controlled. Net: \$4,160

### COHU ELECTRONICS

2000 Series cameras. Miniaturized TV cameras designed for televising from fixed or moving camera positions. 3" outside diameter with 4:1 zoom; solid state circuits; 9 mc bandwidth; vidicon protective circuit.

2000-011. Exposed lens.

2000-012. Internally Mounted lens; 11.875 housing.

2000-013. 12.950 housing with internal lens.

2000-014. 13.900 housing with internally mounted lens.

2000-015. Internal lens; 14.850 housing.

2000-016. 14" housing with internal lens.

2000-017. 16.75" housing with internal lens.

Cameras also come complete (without vidicon) in 2001 series and with vidicon in 2011 series.

3000 series COHU TV cameras. Rugged, solid state circuitry to protect vidicon in case of sweep or cable failure. Available with 4 combinations of vertical/horizontal resolution: 375x800 lines; 500x 500 lines; 600x850 lines; 700x800 lines.

3000-011. External mounted lens in 9.98" housing.

3000-012. Sealed 14.19" housing.

3000-013. 15.99" sealed housing.

3000-014. Enclosed 15.99" housing with extender.

3000-015. Sealed 12.99" housing.

3100 series. Self-contained, high resolution with bandwidths of 10 to 20 mc. 525-945 line scanning. Solid state plug-in circuitry; automatic light level compensation. Adjustable white peak clipper. Permits manual or automatic remote control. Prices start at \$2,380.00.

### DAGE TELEVISION COMPANY

520 Broadcast Camera Chain. 800 line resolution camera and control console with related audio and switching modules and cross-pulse master monitor for program control. System is designed for professional and educational usage with functional design and integrated features for optimum performance. Camera and control priced under \$5,000.00.

RGS-11 Industrial Camera. 800 line lightweight transistorized camera available in choice of self-contained random interlace, self-contained 2 to 1 interlace or EIA sync driven version. Options include heavy duty housing and choice of zoom lens kits. Camera priced under \$2,000.00.

### FAIRCHILD-DUMONT LABS

Complete line of television cameras designed for closed circuit use. Available with or without viewfinder; single or turret lens.

TC-200-RM. Transistorized miniature camera head.

TC-200-RS. Ruggedized camera with subminiature tubes.

TC-200-RT. Transistor camera (ruggedized).

TC-110 and TC-110-V/A. Remote vision camera; transistorized with random interlace.

TC-175. Transistorized CCTV camera. Self-contained, regulated power supply; ALC. \$899.00.



## DESIGNED for LARGE AREA COVERAGE

- You'll use fewer of these amplifiers because the Entron Model LHR-45R is designed for today's high level system, and for tomorrow's many hundred mile networks.
- Complementing the highest output level and gain in the industry is a fully automatic level control circuit for both low and high bands, including full FM.
- The LHR-45R has separate gain and tilt controls for both bands, separate input attenuators for easy line equalization, and a regulating transformer to compensate for fluctuations in line voltage. ■ LHR-45R . . . ask Department 565 for details.

**entron**  
INCORPORATED

2141 INDUSTRIAL PARKWAY, SILVER SPRING, MD. — AREA CODE 301/622-2000

**TC-350.** 775 lines resolution; transistorized, self-contained unit for 10 mc bandwidth.

**TC-605.** 3 lens turret; transistorized circuitry; portable vidicon with 600 lines horizontal resolution.

### FINCH LIMITED

**FL-1C.** CCTV camera is fully transistorized. Housed



in aluminum case — modular construction — fan cooled. Horizontal resolution in 800 lines; 2:1 interlace. \$2,450.00.

### GENERAL PRECISION (GPL)

**Precision 700 Camera.** A solid state, self-contained, highly reliable camera designed for continuous round-the-clock operation. Operates at 525 line standard with random or full 2:1 interlace. Also accepts external EIA pulses.

**Precision 800 series.** Studio type camera chain for open or closed circuit use. System includes viewfinder and portable or rack-mounted camera control unit (CCU). Designed to accept external EIA pulses or operate independently from its internal sync generator. 525 line system interlaced 2:1.

### MOTOROLA

Complete line of closed circuit television cameras including transistorized indoor camera in aluminum case with 650 lines horizontal resolution. Motorola also has all-weather cameras with low height and sloping sides to minimize wind vibration.

### PACKARD-BELL ELECTRONICS

**Model 920.** Self-contained transistorized TV camera featuring all plug-in transistors, 12 mc bandwidth, 650 lines horizontal resolution, video output, automatic light compensation. \$779.00.

### RADIO CORP. OF AMERICA

Manufactures a complete selection of cameras for studio, CCTV, ETV use. Also portable units.

### TELEMATIION

**GE TE-14 camera.** Compact solid state construction, 700 line picture resolution. Combines with TMV-101 camera control to provide complete camera chain.

### VIDEO SYSTEMS OF AMERICA

**Model V500.** A closed circuit TV camera with vidicon tube with plug-in solid state circuitry. Offering video resolution of 500 lines, the V500 measures 9 x 6 x 3 inches and weighs less than 6 pounds. Completely self-contained camera features random interlace and automatic light control.

## FILM CHAINS

### BLONDER-TONGUE

**16mm film chain, Model FC-1.** Converts 16mm film into video signals. Includes 16mm projector, TTVC-1 camera and all necessary lenses, mountings, controls, etc. Net: \$6,750.00.

**Model FC-1R.** Same as FC-1 but equipped for remote control (TTVC-1R camera). Net: \$7,475.00.

**Model FC-1SU.** Same as FC-1 but accepts studio net pulses (TTVC-1SU camera). Net: \$6,885.00.

**Model FC-1SNR2.** Same as FC-1SN but equipped for remote control. (TTVC-1SNR camera). Net: \$8,700.00.

**Model FC-2.** 16mm film chain console remote controlled. Complete 16mm film chain for studio net use. Includes FC-1SNR, WFM-5, 17" studio net monitor and all remote control panels in compact console. Video polarity reversal switch for film negatives. Net: \$11,825.00.

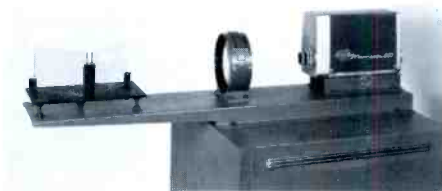
### DAGE TELEVISION COMPANY

**Type FC-11 vidicon film chain.** Unit features 4 input prism multiplexer. Has film camera and

provisions for 35mm or 16mm projectors. Film camera is transistorized model.

### GENERAL PRECISION (GPL)

**Precision 580.** Vidicon film chain includes everything for video origination from 16mm and 35mm



film and 2" x 2" slides. Chain includes Base Cabinet, Multiplexer, Precision 800 Camera and rack Control Unit, Camera and Vidicon.

## MODULATORS

### ADLER ELECTRONICS, INC.

**Modulator, audio and video, Model AVD-1.** Produces modulated audio and video carriers on any one of 12 channels from audio and video sources. Crystal controlled.

### BLONDER-TONGUE

**Audio Adder, Model 2303** For addition of sound to any RF camera. Generates sound carrier located 4.5 mc above any picture carrier (VHF channels 2-13). Sound carrier may be modulated by microphone, tuner, or other audio source. Net: \$138.00.

### COHU ELECTRONICS

Listing of modulators and related equipment available by writing. List includes Model 2362 RF modulator that provides carrier signal for modulation by 20/20 camera. Available for channels 2, 3, 4, 5, or 6.

### PACKARD-BELL ELECTRONICS

**Model MP5-15.** Transistorized CCTV modulator for conversion of video to RF on TV channels 2-6, crystal controlled; microphone input allows adding of sound on TV channel. Specify channel 2-6. \$125.00.

## MONITORS

### AMPEX CORPORATION

**CN88.** 8-inch monitor for continuous duty; flat response to 10 mc. 117/234 v. 700 line resolution.

**CLD14.** 14-inch rack mount unit. 800 line resolution. Also available in cabinet model (CKD14).

**CFD17.** 17-inch regulated model. High and low voltage regulation; 800 line resolution.

**CMC Series.** 14, 17, 21-inch monitors. High resolution (excess of 800 lines).

**CZB Series.** 8, 14, 17-inch professional style. Dual, matched inputs; local-remote switcher.

**CYA17.** 17-inch color monitor. Mounts in 19-inch rack or cabinet. High impedance; flat response to 5 mc (black and white).

### COHU ELECTRONICS

**KIN TEL monitors** feature precision deflection systems and video response up to 10 mc. Accepts composite video-sync signals; operates from video line with a separate sync line furnishing either industrial or EIA pulses. Locked interlace circuit. Available in picture tube sizes from 14 to 27 inches. Model GRM-14, -14R, 17-17R, -21, -24, -27 designed to exceed standards of 700 lines H, 350 lines V resolution. Models FRM-14, -14R, -17, -17R, -21 have square resolution of 500 lines vertically and horizontally with "Fineline" sweep/scan.

### CONRAC DIVISION

**CZB series.** 8, 14 and 17-inch monitors for professional signal analysis. Units are tube and transistor type. For mounting in 19" rack; dual

matched inputs provided. 8" \$720.00; 14" \$745.00; 17" \$745.00.

**CN88 series.** 8" monitors in either cabinet or two-unit relay rack. Provides flat (to 10 mc) video response; 700 lines. \$595.00 per pair.

**CPA series.** 14, 17 and 21" picture and pulse-cross monitors. Features three position switch for normal picture, pulse-cross with video inverted and delayed sweeps, and pulse-cross with vertical sweep expanded. Flat response with resolution in excess of 800 lines. Price: \$605.00.

**CYA 17RS.** Rack mounted color monitor. Professional type; uses both tube and solid state circuitry. Incorporates a precision decoder. Available in cabinet model. \$2,450.00.

### DAGE TELEVISION COMPANY

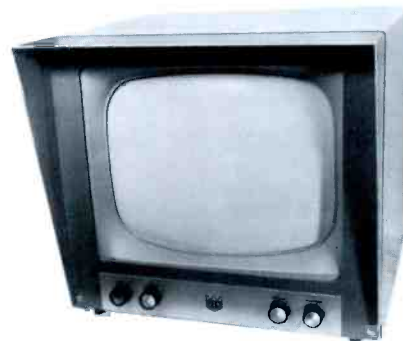
Listing of monitors available on request.

### FAIRCHILD-DU MONT LABS

Video monitors for continuous operation.

### FINCH LIMITED

**FLS CCTV monitors.** Available in sizes from 8" to



27". Horizontal resolution is 800 lines. Write for complete specifications. \$345.00 up.

### GENERAL PRECISION (GPL)

Write for complete details on 3" and 5" waveform monitors 8" to 27" display monitors.

### MIRATEL ELECTRONICS

**LV series.** General purpose monitors, 8" and 14". Features regulated power supply and solid state rectifiers; 10 mc bandwidth.

**LV8C.** Custom chassis. \$280.00. (LV14C is \$290.)

**LV8R.** 19" rack mount. \$310. (LV14R is \$320; -17R is \$325.)

**LV8M.** Metal cabinet. \$289.00. (LV14M is \$325.00; -17M is \$330.00.)

**LV8RT.** Twin monitors for 19" rack. \$592.00.



**T series.** Transistorized monitors with modular plug-in construction. In 8, 14 and 17 inches. 800 lines resolution.

**T8CP.** Custom chassis. \$525.00. (-14CP, \$585.00; -17CP, \$615.00.)

**T8RP.** Single rack mount. \$565.00. (-14RP, \$635.00; -17RP \$725.00.)

**T8RPO.** Rack mount with space for Tektronix scope. \$655.00.

**T8RTP.** Two monitors for 19" rack. \$1,097.00

**T8RCP.** Rack mount for custom installation. \$595.

T8MP. Metal cabinet. \$569. (-14MP \$625; -17MP \$695).

## MOTOROLA

Manufactures a complete line of broadcast monitors. Write factory for specifications.

## PACKARD-BELL ELECTRONICS

Model 17VM5. 17" video monitor, 800 lines horizontal resolution capabilities, 20 KV high voltage, complete front controls, pilot light, handsome professional design, and regulated power supply. \$345.00.

## RADIO CORP. OF AMERICA

Video monitors, 24 and 27 inch, MI-36120 series. General purpose picture presentation units for use in broadcast and CCTV applications. Video amplifier has a frequency response flat to 8 mc, plus or minus 2 db which provides for a horizontal resolution in excess of 600 lines. Video and external sync inputs are of the bridging type so that the signals can be looped past the monitor or terminated in 75 ohms. PNS.

## SYLVANIA ELECTRIC PROD., INC.

Monitor receiver, Model 23E01 (VHF) and Model 23E01U (UHF). 23" television receiver primarily for educational uses. Has built-in tuner with balun for 75 ohm cable feed.

## VIDEO SYSTEMS OF AMERICA

VSA monitors are specifically designed for use with closed circuit television cameras.

Model VM108. 8-inch monitor.

Model VM114. 14" screen; minimum resolution 500 lines center.

Model VM117. 17-inch picture screen.

Model VM121. 21" screen.

Model VM124. Monitor screen is 24 inches.

Model VM127. 27 inch picture screen.

## ACCESSORIES

### COHU ELECTRONICS

Remote control iris and focus unit, Model 2411. Permits remote control operation of standard fixed focal length lenses used on .1995 series cameras. Used with Model 2375 remote lens control. Drive kits available are 2411-K1A, K2A, K5A and K8 for use with various COHU lenses.

Model 2359 synchronizing generator. 2:1 interlaced scan with 525 lines per frame.

Model 2360 sync generator. 2:1 interlaced with 729 lines per frame.

Model 2361 auto target. Auto adjustment of vidicon target voltage. Plug-in assembly can be switched out for special light conditions.

Model 2363 light filter-remote control. Provides selection of neutral filters with 0.0, 0.7 and 2.0 densities.

Optical focus remote control, Model 2364. Remote control operation of optical focus on 20/20 cameras.

Lens turret, Model 2365. Permits remote control of lens turret.

Model 2370 rain hood. Corrosive resistant metal housing with plate glass viewing port; optional wiper and defroster available.

### DAGE TELEVISION COMPANY

Type 1518 broadcast camera control. Control unit for series 520 vidicon camera; fully transistorized with self-contained regulated power supply. Slide rack mount.

### FINCH LIMITED

Synchronizing generator, Model S-501. Provides EIA timing impulses for broadcast and CCTV applications. Features computer type logic, modular design. Can be locked to line, external driven pulse, allowed to free-run or operate with internal crystal control. Price: \$2,095.00.

### GENERAL PRECISION (GPL)

Offers complete line of GPL equipment and ac-

cessories including rack slides for CCU, control panel kit, special housings and pan-and-tilt units, EIA sync generators, switcher/faders and flexible hood.

### TELEMATION

RE-575 viewfinder. Specifically manufactured to mount on GE TE-14 and TE-15 television cameras, extremely reliable solid state construction, 5" screen, 450 line picture resolution, converts GE camera for professional studio operation.

TMP-204 non-duplication switcher. Pre-programmed model that automatically repeats up to 480 program switches per week. Incorporates integral 6-channel switcher, manual override.

TMV-101 camera control. To adapt GE TE-14 industrial camera to meet EIA and FCC specifica-



tions. 100% solid circuitry; regulated power supply. \$995.00.

### VIDEO COMPONENTS, INC.

Universal wall mount, Model SM101. Camera mount that allows pan and tilt via single handle control. Holds up to 25 pounds.

Model SM 200. Same as above except designed to hold 60 pounds.

VET 5040. Complete set of extension tubes for vidicon cameras. Available in 5, 10, 20 and 40 mm.

### VISUAL ELECTRONICS CORP.

Video switcher, Model LS-2. All solid state. Modular plug-in construction. High input impedance, identical multiple outputs. Maximum output isolation; simple stable circuitry. Reliable, low cost per output. 10 inputs, 2 outputs. 75 watts power requirement. Unit is portable. Price: FOB New York, \$3,200.00.

## VIDEO TAPE

### AMPEX CORPORATION

VR-1500 videotape recorder. Designed for CCTV use; sells for \$14,500. 3.7"/s speed; standard tape.

VR-2000. Color compatible VTR with s/n ratio of 45 db. Equipped with electronic editing. Available in 525 (60 cps) or 625 (50 cps) line. \$62,500.00.

VR-1100. Compatible VTR for 7/8" or 15"/s. Self-contained will accept accessories. CCTV version is \$30,550.00.

VR-660 VTR. Mobile or studio recorder; all solid state. Available in 60 or 50 cycle versions. \$14,500.00.

### DAGE TELEVISION COMPANY

DV-200 VTR includes facilities for slow motion, stop frame, convenient editing, two inputs, solid state reliability, separate audio, video record. Built-in monitor is optional. Price \$12,450.00.

### MINNESOTA MINING AND MANUFACTURING CO.

Manufactures complement of video tapes for broadcast, general and special purposes.

Video tape, 377. Designed for use on video recorders for closed-circuit, industrial and educational applications. Longitudinally-orientated. This provides optimum output for the long sweep of record and playback heads on this equipment. It otherwise possesses the same qualities of dependability and consistency found in 379 tape. Price dependent upon needs.

### RADIO CORP. OF AMERICA

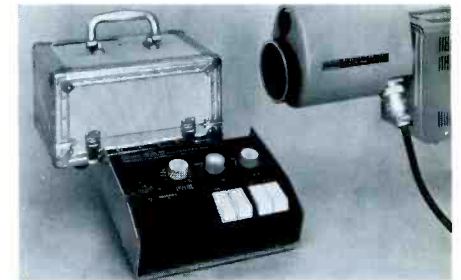
Type TRT-1B. Television type recorder features 4-track range phase adjustment, 55 db limiting demodulator, foot release-brake control, solid state

DC power supplies, built-in monitor and oscilloscope.

## LENSES

### CANON CAMERA CO.

Motorized zoom lens, Model TV-16. 25-100 mm zoom; 1:1.8 speed. Type A for vidicon cameras.



Color corrected. Features push button operation of iris, zoom and focus control, f1.8. \$995. Also available in electric eye model (TV-16E) for \$1,150; manually operated lens \$450.

C-16 standard lenses. Available in 13 mm/f1.5 \$129; 25 mm/f1.4 \$62; 50 mm/1.4 \$120; 75 mm/f3.2 \$70, and 100 mm/f2 \$135.

Zoom lens, Model TV-153. Ratio is 1:4, range is 50-200 mm. Lens opening is f4 maximum. Color corrected.

TV-IF4 zoom lens. For image orthicon cameras. Accepts relay lenses for 55-370, 80-540, 150-1000 and 300-2000 mm zooming. Aperture varies with relay lens.

TV 800 mm and TV 2000 mm. Extra long focus lenses for image orthicon. Mirror type. 800 mm lens speed is 1:3.8; 2000 is 1:11.

### COHU ELECTRONICS

Lenses for KIN TEL Closed Circuit television cameras are standard with 16mm "C" mountings.

Model AL-1-13mm; f/1.5. Model AL-1A-12.5mm; f/1.4. Model AL-2-25.4mm; f/1.5. Model AL-2A-25mm; f/1.4. Model AL-4-50mm; f/1.5. Model AL-4A-50mm; f/1.4. Model AL-5A-75mm; f/1.4. Model AL-7-101.6mm; f/4.5. Model AL-7A-101.6mm; f/2.7. Model AL-8-152.4mm; f/4.5. Model AL-8A-152.4mm; f/2.8. Model AL-12-304.8mm; f/5.6. Model AL-13-5.7mm; f/1.8. Model AL-14-10mm; f/1.6. Model AL-15-25.4mm; f/0.95.

COHU Also has complete line of zoom lenses available.

### DAGE TELEVISION COMPANY

Zoom lens kit, focal range 60-300mm-101393. Zoom lens kit, focal range 30 to 150mm-101392.

### FAIRCHILD-DUMONT LABS

Complete complement of lenses covers a wide range of viewing angles extending from 53 degrees to 5 degrees. Lenses available in wide angle, Type L-13-1; normal, Type L-25-1; high speed, Type L-25-2; telephoto, types L-50-1 and L-75-1; long telephoto, L-100-1 and L-150-1.

### GENERAL PRECISION (GPL)

GPL has lenses of all types including zoom models -listing available on request.

### RADIO CORP. OF AMERICA

Manufactures complement of TV lenses.

### SYLVANIA ELECTRIC PROD., INC.

Manufactures complete line of lenses for TV equipment.

### VIDEO SYSTEMS OF AMERICA

VSA Lens data include Model V-1001, 25mm; V-1005, 25mm; V-1008, 12.5mm; Model V-1010, 12.5mm; V-1015, 15.8mm; V-1018, 50mm; V-1020, 50mm; V-1025, 75mm; V-1028, 75mm; V-1030, 75mm; V-1035, 150mm; V-1050, variable zoom; Model V-1075, electric zoom.



## CATV SERVICES

### CATV BROKERAGE

#### BLACKBURN & COMPANY

Provides media brokerage services for both selling and acquisition of systems.

#### DANIELS & ASSOCIATES, INC.

Negotiators, consultants and appraisers and brokers for the CATV industry. Offering a wide range of interested buyers for CATV properties, this firm is normally retained by a CATV owner desiring to sell his property or commissioned by a buyer to purchase CATV properties. Appraises CATV properties for banks, other lending institutions, estates and owners. Offers a consulting service on any facet of the CATV industry. On sales of property, the firm works on a straight 5% commission, payable by seller. On appraisals, work on a flat fee basis, depending on size of system. Consulting fees are negotiated. More than 80% of all CATV systems sold have been handled by this firm. Principals include Mr. Bill Daniels, president, Mr. Alan Harmon, Mr. Monroe Rifkin, vice presidents. Established in 1958.

#### NATIONAL CONSUMER SERVICES

Division of The Reuben H. Donnelley Corporation that provides complete marketing service for CATV. Sales campaigns are designed and executed by trained, professional personnel.

### CATV ENGINEERING & CONSTRUCTION

#### AMECO

Constructs CATV systems. Provides thorough survey, engineering and planning and installation. Specializing in complete "turnkey" completions. Ameco also assists with financing and leasing programs.

Complete design of CATV systems from customer maps. Bill of materials provided with bid price, including all necessary components to build a CATV system on a turnkey basis. Construction representatives provided on all turnkey quotations. Ameco also provides technical assistance for design of head end, including tower information. Ameco makes tower site survey using helicopter and contour mapping to determine availability of signals to be used for the TV cable company as to their ability to satisfy the potential cable customers. Where microwave is involved Ameco designs microwave systems for the purpose of getting pictures to the tower site.

Requirements for all head end equipment is determined. By use of the specifications available a layout is made of a system capable of fulfilling these requirements.

#### ANACONDA WIRE & CABLE

Provides complete turnkey engineering for CATV systems.

#### BLONDER-TONGUE

Complete engineering service available to handle any type of installation.

#### CAS MFG. CO.

Experienced engineering and construction personnel for turn-key contracts on any size systems. Consulting on problems of adapting microwave and/or FM Signals to cable systems.

#### CATV EQUIPMENT CO.

Specialists in all-band systems. Providing complete service: layout, equipment and installation. Many years of successful CATV construction and operation. Firm handles small projects or large "turnkey" systems.

#### COLLINS RADIO CO.

Established leader in the design and manufacture of microwave radio relay equipment. Provides a complete system service for transmission of multi-channel video program information. An experienced systems engineering function performs path surveys, microwave systems, engineering and systems installation to meet any microwave communication requirement.

#### DAVCO ELECTRONICS CORPORATION

Complete services include consulting engineering, feasibility analysis, signal surveys, system layout, equipment and installation. Experienced line crews and technicians are ready to aid in getting a new system underway or to modify an existing one. Complete warehouse stock of all necessary components and supplies.

#### ENTRON

Will provide engineering services for potential systems. Includes actual on-site signal surveys with recording instruments; utility pole make-ready studies; strand surveys and map preparation, and detailed system layout.

Wholly owned subsidiary Systems Construction Corp. provides professional construction of entire system to full satisfaction of customer. Also will provide engineering services for partial system construction, rebuilding and extension.

Provides theoretical engineering analysis of TV reception in a community. Study is made from detailed topographical maps, TV station projected signal contours, etc. Cost of the service is voided if turnkey contract is awarded to Entron.

## STAINLESS STEEL CATV LASHING WIRE



**THE  
BEST  
PRICE**

*F.O.B. Destination*  
on orders of 18 or  
more coils in a single  
shipment.

6 coils per carton.

**.045 Diameter Wire — Type 430**  
Wax Coated Finish

**PROMPT DELIVERY From East Coast or West Coast**

*Aberdeen Company*

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## CATV FINANCING

*...gives you room  
to grow and the  
POWER to expand*

**MONEY** • For purchasing systems

**MONEY** • For new equipment

**MONEY** • For expansion

**MONEY** • For turn-keys

Phone us collect—Area Code 317,  
MELROSE 8-1331. Ask for:  
Harold Ewen, Gail Oldfather,  
or Jim Ackerman.

## ECONOMY

**FINANCE CORPORATION**

108 East Washington St., Indianapolis 4, Indiana



### **RICHARD D. OBARSKI & ASSOCIATES**

Engineer and manage the construction of CATV systems. Write for details.

### **JERROLD ELECTRONICS CORP.**

Offers "turnkey" construction, engineering and surveys. Jerrold is engaged in systems management and participates in ownership of several CATV operations. Complete services available anywhere in the country.

### **ROHN MANUFACTURING CO.**

Complete engineering service is available from Rohn for tower installations and complete systems.

### **SPENCER-KENNEDY LABORATORIES**

Staff of TV systems engineers maintained to perform signal and pole line surveys, strand mapping, system layout and design plus installation supervision for antenna site and distribution plant construction.

Complete turnkey construction and installation contracts let. Includes initial system design, materials and equipment supply, building of plant.

### **SURFACE CONDUCTION, INC.**

Engineering construction and installation of VHF or UHF transmission line systems employing low loss, light weight broadband G-Line, a proprietary product of Surface Conduction, Inc..

### **TELESYSTEM SERVICES CORP.**

Makes surveys of communities where CATV service would be desirable. Develops and procures equipment for CATV companies. Provides a national sales organization for cable, electronics equipment, and engineering services for the CATV industry. TSC is engaged in system ownership and management.

### **VIKING**

Complete facilities to construct CATV systems including surveys engineering, planning. Complete turnkey operations. Viking assists in obtaining financing and leasing programs.

### **WESTBURY CATV CORP.**

Complete turnkey services available including system design and field engineering.

Design and field engineering services provided in connection with new systems, extensions, or upgrading of existing systems, both headend and cable plant.

Complete source for 2500 Mc. Instructional Television (Master Classroom TV) equipment, engineering and installation services, including feasibility surveys.

## **CATV MANAGEMENT**

### **AMECO**

Feasibility studies are made by Ameco in order to supply the customers with basic information as to their practical ability both from a technical and a financial point of view. Qualified men are sent out to evaluate the situation. The Taso Method of door-to-door survey is also used to obtain detailed information which can be applied directly to the ability of the system to provide information from which the potential customer can directly determine the length of time required before he can receive a return on his investment.

### **DANIELS & ASSOCIATES, INC.**

Complete consultation and special management services.

## **CAPITAL FOR THE Community Antenna Television Industry**

- for:
- 1 Plant Purchase**
  - 2 Equity Purchase**
  - 3 Acquisitions**



*pennsylvania growth investment corporation*  
Two Gateway Center, Pittsburgh, Pa. 15222  
A SMALL BUSINESS INVESTMENT COMPANY

Andrews has the experience and know how to take complete care of any tower need. At Andrews SIMPLICITY in design means SIMPLICITY in erection . . . this give you more tower for less money. Before installation, your tower is completely assembled and tested. In this way, your tower can be built to be installed in any location your system calls for. Write or call today for free descriptive literature.

### **ANDREWS TOWER COMPANY, INC.**

1420 Layton Ave.  
Fort Worth, Texas 76117  
TE 1-1222 - Area Code 817

FINANCING AND  
LEASING AVAILABLE

## **CORRECTLY ERECT!**

500' TOWER  
16' x 25' PLATFORM  
KILGORE, TEXAS



### **RICHARD D. OBARSKI & ASSOCIATES**

Will provide management services for community television operations.

### **TELESYSTEM SERVICES CORP.**

Provides management for present and future CATV companies. Provides advertising and sales promotion services for CATV. Technical direction and assistance for CATV companies. Operates systems in 32 cities.

### **TRIANGLE CIRCULATION COMPANY**

"TV Guide" Magazine informs subscriber of programs available on all channels.

### **VIKING**

Complete management services, consultations, etc. for all CATV companies. Technical direction and assistance, advertising and sales promotion services.

## **PROMOTIONAL SERVICES**

### **AMECO**

A wide variety of promotions have proved very successful for Ameco in securing new customers. Various forms of mailings have been used, post-cards, brochures, TV Guides, offering special prizes, introductory prices and special bonuses. Some special teenage promotions have proved quite successful, also. Promotional ideas mailed monthly as a free service to interested cable systems.

### **HILL ASSOCIATES, INC.**

Provides publicity, press conferences, public relations, advertising, literature, mailings, etc. for system openings, subscriber promotions, and corporate publicity.

### **TELESYSTEM SERVICES CORP.**

Direct to public selling campaigns, advertising and mat services. "The Cable TV View," a weekly column for local newspapers, signed by local manager to build system prestige.

### **S. S. STREET ADVERTISING**

Complete advertising and promotional consultation. Franchise proposals.

## **CONSULTATION**

### **AMECO**

Qualified engineering personnel is available for consulting purposes from the practical to the theoretical.

### **ENTRON**

Consulting services are available for prospective systems owners. Personnel

providing the services have experience in all phases of CATV from its inception.

### **RICHARD D. OBARSKI & ASSOCIATES**

Provides consulting services for cable television operators and entrants.

### **S. S. STREET ADVERTISING**

Financial evaluations; market studies; franchise procurement assistance.

### **TELESYSTEM SERVICES CORP.**

All phases of management consulting: public relations programs, advertising, business building methods, etc.

## **FINANCING & LEASING**

### **AMECO**

Provides complete financing service to present and prospective cable system owners including all types of firm financing, leasing and conditional sales contracts, written on a competitive basis. Skilled financial counseling is provided both existing systems and new systems by a staff with extensive experience in this field. A cash flow analysis is provided. Ameco offers a leasing program for rebuilds, line extensions or complete turnkey jobs.

### **BLACKBURN & COMPANY, INC.**

Arrange financing for acquisitions.

### **DANIELS & ASSOCIATES, INC.**

Assistance in obtaining financing, including counseling on tax considerations. Complete advisory service.

### **ECONOMY FINANCE CORP.**

Provides financing for new systems, new equipment, expansion, "turnkey" installations. Contact Harold Ewen, Gail Oldfather or Jim Ackerman.

### **ENTRON**

Will provide budgetary and financial planning including arrangements for construction funds. Also prepare pro forma to show system costs and estimated rate of return on funds invested.

### **FT. WORTH TOWER CO.**

Towers leased or financed at bank rates to CATV operators. Contact Mr. T. W. Moore for information.

### **PENNSYLVANIA GROWTH INVESTMENT CORP.**

Equity and Capital financing of new and/or established systems.

### **SPENCER-KENNEDY LABORATORIES**

Will provide system financing for CATV systems.

## **AN EMPLOYMENT SERVICE FOR CABLE TELEVISION?**

# **IT IS HERE NOW!**

**ARE YOU A CABLE TV  
OPERATOR LOOKING FOR A MAN ?**

**OR A MAN LOOKING FOR A ?  
CABLE SYSTEM JOB**

We can bring you together for both your mutual benefit. An employment service, exclusively devoted to the interest of the cable television, has been needed. TeleSystems Corporation is filling a genuine need in the CATV Industry by providing this service.

CATV has been growing fast. Ownership can benefit by the years of experience we have had in staffing CATV systems. We have established significant criteria by which to judge whether a prospective employee is the right person for the job.

To men with Manager of Chief Technician potential who may have pushed past the limits of their present opportunities and are seeking advancement in the exciting industry, we offer our service.

TeleSystems Corporation will help bring you together: System Owner—and job seeker.

**ALL INQUIRIES ARE HELD IN STRICTEST CONFIDENCE. WRITE OR CALL:**



**EMPLOYMENT SERVICE DIVISION**

**TELESYSTEMS CORPORATION**

**113 South Easton Road, Glenside, Pennsylvania • 215 TU4-6635**

**TAPE-ATHON CORP.**

Background music library available to CATV systems on lease exchange plan. Psychologically programed and recorded for specific use. Periodic rotation of library. (See Auxiliary Services Equipment.)

**VIKING**

Provides assistance in obtaining financing for old and new systems, including expansion, turnkey operations, counseling and advisory services.

**AUXILIARY SERVICES & EQUIPMENT**

**AERO-TEST EQUIPMENT CO.**

"Weather-Tel" weather station. Standard equipment includes indicators to report rainfall, temperature, wind velocity, wind direction, relative humidity atmospheric pressure and local time. Fixed display card for sponsor's message. Slide projector optional.

**AMECO**

Complete package for providing weather service

**CAS MFG. CO.**

Direct view weatherboard. Displays local temperature, humidity, barometric pressure, rainfall, wind direction, wind speed and time all readable at once in large bold print.

**DAVCO ELECTRONICS CORPORATION**

Distributor of Telemation TMW-2B "Weather Channel." Write for information and prices.

Distributor of Tape-Athon "Librarian" and other tape players. Write for catalog. **FM Antenna Preamplifier, Model DRPB-FM.** Covers the entire FM band, 88 to 108 Megacycles. Gain is 14db. Operates from either 117 VAC or 19 VAC.

**MODEL FMRT-2, FM SYSTEM** pre-wired package delivers two FM channels. Includes two variable FM Tuners which can be crystal controlled on any FM channel. Plus two crystal controlled Entron FM Transmitters on specified frequency from 88 to 108 megacycles.

The unit contains rack mounted remote power supplies for antennae pre-amps (DRPB-FM) along with a multiple outlet. Price for the complete unit is \$897.00 FOB Batesville, Arkansas.

**MC-1100 Music Channel** Rack mounted head-end unit. Includes tape deck with



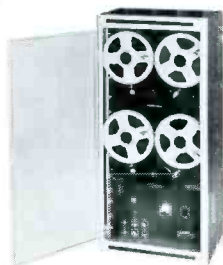
10" reel capacity, preamplifier and Entron FMT FM transmitter. Open rack model is 21" x 32" - Price \$848.00 Deluxe cabinet model shown above is 28" x 21 3/4" x 15 1/4" - Price \$868.00.

Distributor of Programmer I tape player. Continuous 3 hour tape cartridge for background music systems. Write for information.

**ENTRON**

**FM transmitter, Model FMT-1100.** Accommodates multiplex or monaural audio input. FM RF output. Standard 75 usec. pre-emphasis. Factory aligned to any one of 28 FM channels. Maximum output level: 0.2 volts. Level control range: 25 db. Stereo channel separation: 35 db. Hum and noise: down 55 db at 75 kc deviation. 10,000 hour tubes. Price: \$299.50.

**TAPE-ATHON CORP.**



**Tape player, console type "Librarian."** Has two tape decks with 8-hour 10 1/2" reels. Feeds background music to head-end equipment. Self-contained 15 watt amplifier monitor speaker and 7-day timing clock. Uses exclusive intersperser for complete CATV programming control. Complete library of tapes provides finest taped backround music available. Available in both lease and outright sale plans. Price: \$1600.

**TELEMATION, INC.**

**TMW-2 "Weather Channel."** Fully automatic unit for installation at head-end. Mounts on floor, ceiling or wall without modification. GE transistorized

TV & COMMUNICATIONS

**WHAT  
A  
LINE!**



of  
**ALUMINUM CABLE  
CONNECTORS**

<p>INLINE SPLICE FOR 3/4"</p>		<p><b>CEP/75 Series</b></p>
<p>SPLICE FOR 1/2" CABLE</p>	<p>1/2" ALUM. CABLE &amp; 'F' MALE</p>	<p>1/2" ALUM. CABLE 'UHF' FEMALE</p>
<p>3/4" ALUM. CABLE 'UHF' FEMALE</p>	<p>.412 ALUM. CABLE 'UHF' FEMALE</p>	<p>INLINE SPLICE FOR .412</p>

PARTIAL LINE SHOWN HERE. . . .

We speak of the CEP/75 Series of Connectors. With their excellent impedance match . . . and designed for use with cables typically used in CATV, (which vary in impedance from under 70 ohms to over 75 ohms), we feel that the CATV operator should look no further. **CEP/75 IS THE ANSWER.**

With the new CEP/75 Series, joining various cable sizes, the maintenance of impedance match is made possible through these new connectors by internally transforming various cables up or down to a nominal 72 ohms at interface.

The CEP/75 Series connectors have a large pin size to provide current carrying efficiency in cable-powered systems. This large pin size is an example of the standard of quality maintained by Craftsman's Quality Control Department in all of our products.

*WRITE TODAY for complete catalog and price lists . . . .*

EXECUTIVE OFFICES and MANUFACTURING . . . .

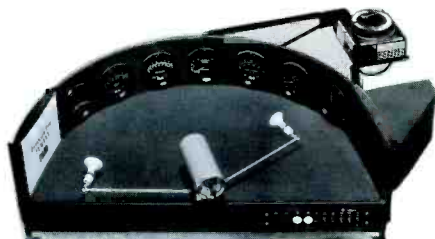
**CRAFTSMAN  
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133 WEST SENECA ST. MANLIUS, N.Y. 13104  
Area Code: 315 Phone: Overbrook 2-9105

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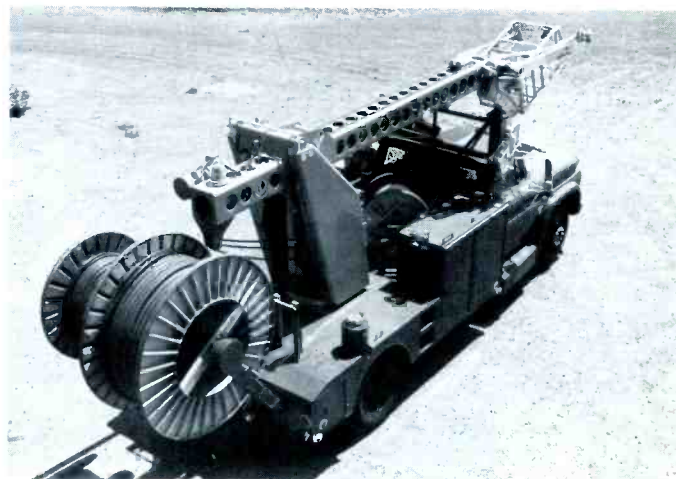
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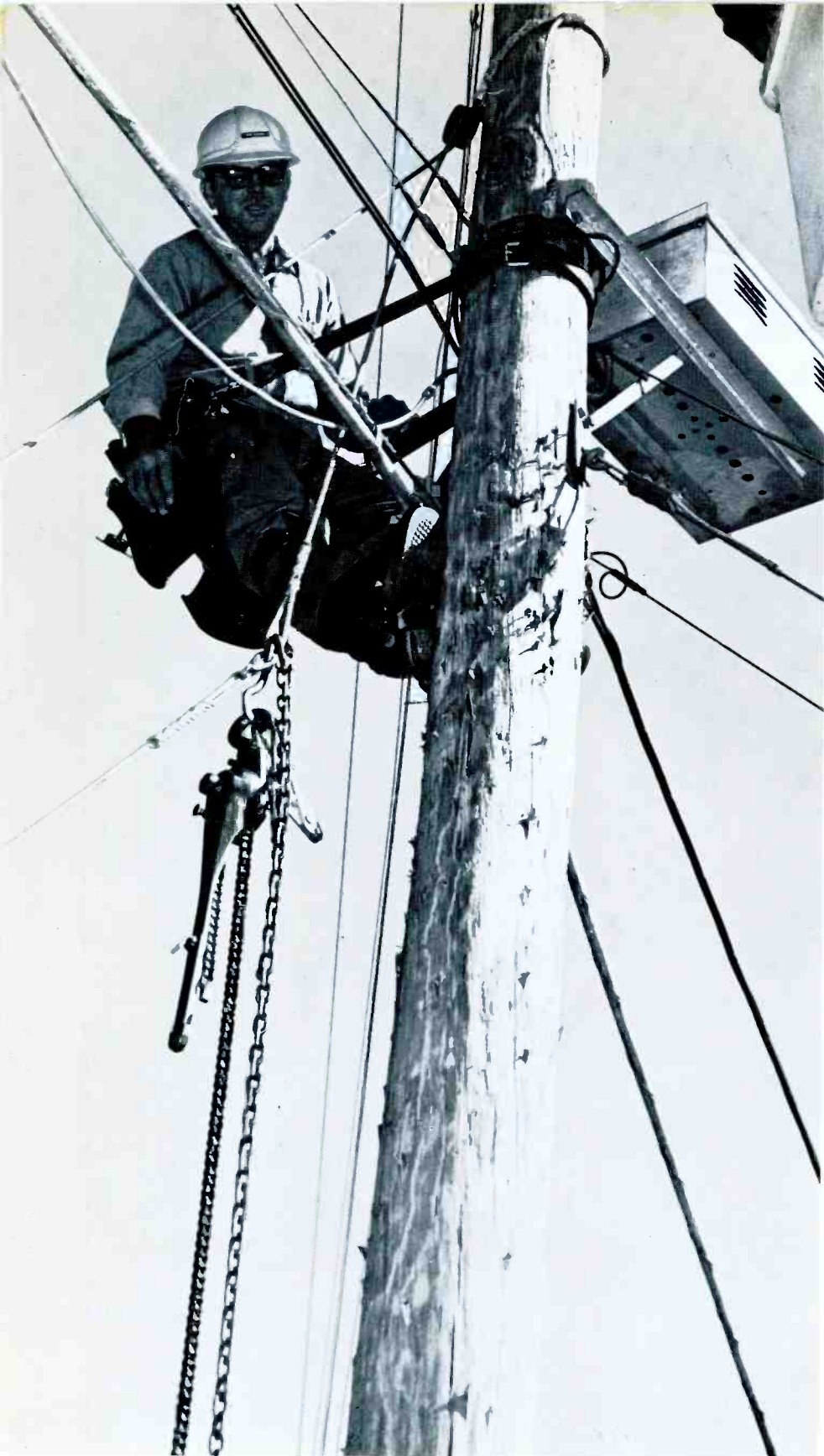
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P.O. Box 63992, Okla. City, Okla.

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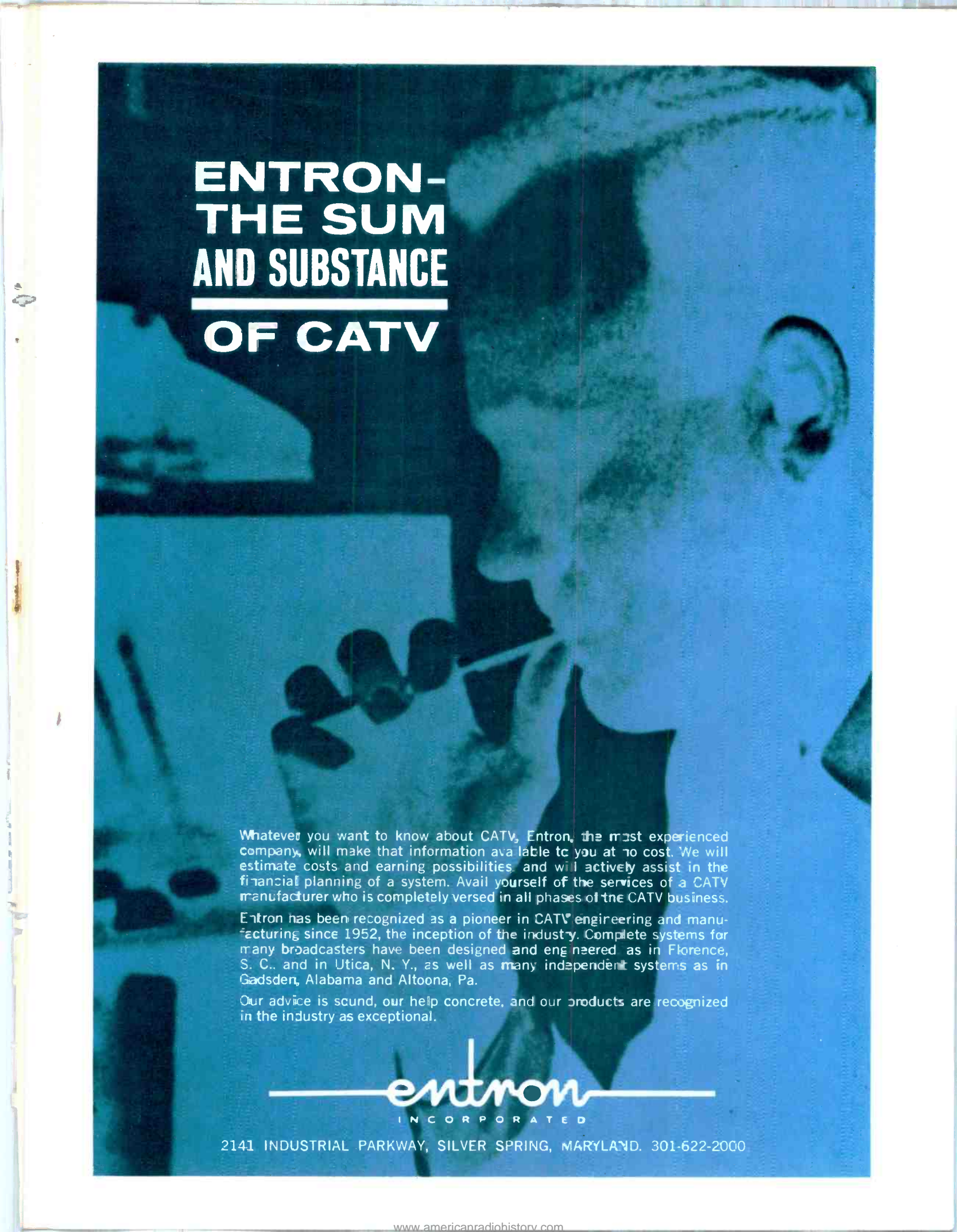
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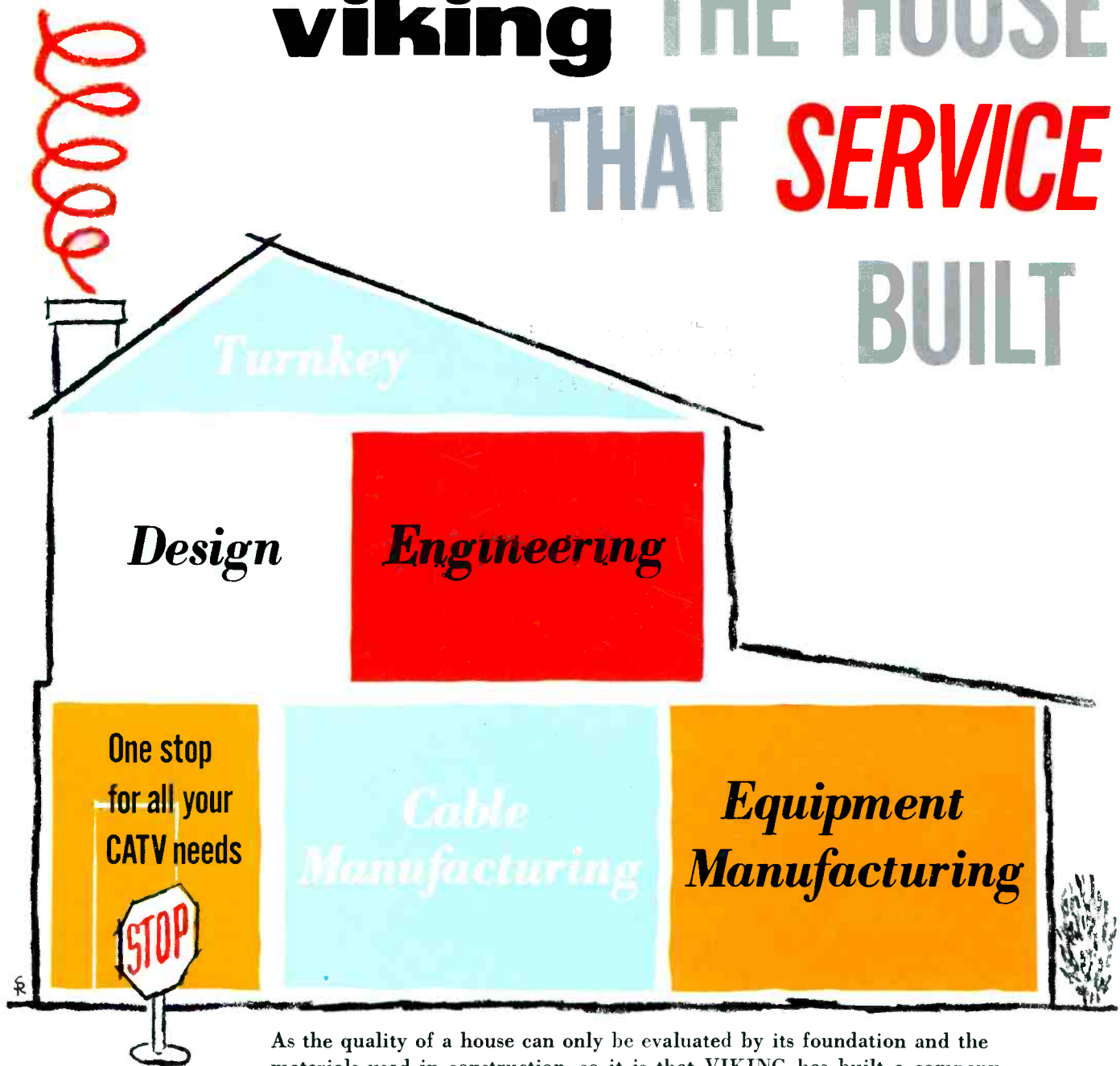
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