

MODERN

1963 "WSBP"  
Award Winner



# electronic service dealer

THE OFFICIAL PUBLICATION OF THE CALIFORNIA STATE ELECTRONICS ASSOCIATION

VOL. 4, NO. 8

DECEMBER, 1964

## One Solitary Life

*On Christmas Day we commemorate the birth of a baby in an obscure village, the child of a peasant woman. He grew up in another village. He worked in a carpenter shop until he was thirty, and then for three years he was an itinerant preacher. He never wrote a book. He never held an office. He never owned a home. He never had a family. He never went to college. He never put his foot inside a big city. He never traveled 200 miles from the place where he was born. He never did one of the things that usually accompany greatness. He has no credentials but himself.*

*While he was still a young man, the tide of public opinion turned against him. His friends ran away. He was turned over to his enemies. He went through the mockery of a trial. He was nailed to a cross between two thieves. While he was dying, his executioners gambled for the only piece of property he had on earth, and that was his coat. When he was dead, he was laid in a borrowed grave through the pity of a friend.*

*Nineteen centuries wide have come and gone, and today he is the central figure of the human race and the leader of the column of progress. I am far within the mark when I say that all armies that ever marched, and all navies that ever sailed, and all parliaments that ever sat, and all kings that ever reigned, put together, have not affected the life of man upon this earth as has that one solitary life.*

The author of this widely quoted tribute to our Lord Christ is unknown. It has been credited to Phillip Brooks, O. Henry, Mark Twain, and to many others. Reprinted by popular request.



Left to right: New! Trans-Lux, Model 6547, 12" x 9½" x 5½"; New! Small Talk, Model 6473, 5¾" x 3¾" x 2¼"; Lodestar, Model 6546, 6½" x 3½" x 1¾"; Tape-Along, Model 6545, 8" x 10" x 2¾".

## Look! Channel Master puts you in the tape recorder business in a big (and little) way.

**Big way.** That's our new Trans-Lux lightweight portable with Automatic Level Control. This sleek dual speed AC solid-state tape recorder has a combination of professional features seldom found in a model at this price. 2 speeds—7½ and 3¾ IPS Capstan drive. Takes up to 7" tape reels. Plays up to 6½ hours. 3-stage audio amplification, a big 4" x 6" speaker, plus an ultra-sensitive recording head, provide accurate, noise-free playback with maximum volume. (Signal-to-noise ratio is actually better than 40 db.) Fully transistorized, no warm-up. Excellent for music.

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**Little way.** That's our new Small Talk—a transistorized compact miniature anyone can afford. The ideal take-along recorder for parties, picnics, auto trips—great fun anywhere. Remarkably light. CONTACT ANY OF THE FOLLOWING DISTRIBUTORS:

Surprisingly good playback. Color-calibrated sound level control. Quality engineered, handsomely styled, and low priced—the perfect price leader. \$39.95 list.

**Another big way.** The Tape-Along. Solid-state table portable has 2 speeds, 1⅞ and 3¾ IPS. Plays up to 3 hours. Constant-speed Capstan Drive. Superb for musical reproduction and for picking up phone conversations (contains phone pick-up cord). Weighs only 5 lbs. without batteries. The finest battery-powered tape recorder made! \$124.95 list.

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Yes, Channel Master gives you a full line of tape recorders—with more to come. And look at this exclusive: *If any of our battery-operated tape recorders prove defective within 120 days—we will replace\* it instantly—free of charge.* That's a guarantee. Call your distributor for details on high-profit structure.

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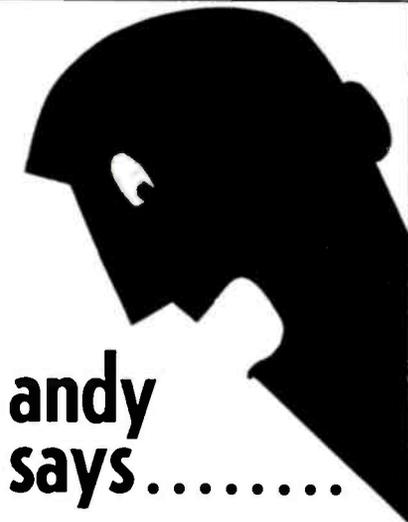
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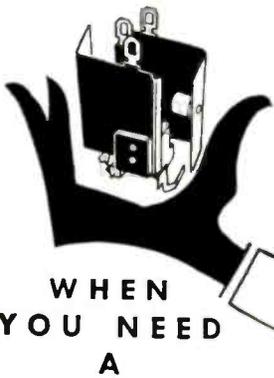
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andy  
says.....



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## LETTERS TO THE EDITOR

### VICTORY FOR FREE-TV

To Ralph Johannot:

Well, the grass roots campaign paid off! Many thanks to you and the members of CSEA. Because we had local workers throughout the state, we were able to overcome the daily press and the big city chambers of commerce. It was a wonderful victory in which you played a major part.

William B. Ross

Citizens Committee For Free-TV

**Editor's Note:** It is interesting to note the mixed reactions of different people in our industry over the defeat of STV. It certainly did pose a threat to the service dealer and when it can be regulated by the F.T.C. and use over the air transmission instead of a public utility to side step the law our industry may be all for it.

Dear Don:

In the June issue of MESD, under "Tip o' the Hat to Distributors, you note Alameda County distributors as giving support to MESD. Then you state that this is a list of who's who of the dealer oriented distributors in California who are willing and anxious to work with the dealer trade. You note Miller's and Styles and Englemen. That's quite correct. They certainly are "dealer oriented" and support this association. But there is a third here in Alameda County that also is "dealer oriented" and does support us. The firm is the Cass Altschuler Co., 801 7th Avenue, Oakland, and it also has earned the support of service dealers up here. It may or may not advertise in MESD; perhaps has not as yet had an opportunity of doing so but our point is this concern deserves mention as being a clean distributor from the point of view of the service dealers. It not only wants to but does work with the dealer trade and we would appreciate its name being included in that effort.

Phil Fisher, Exec. Sec.  
ACTRA Chapter of CSEA

**Editor's Note:** Thanks, Phil, for the note and we are very much aware of the fine work done by the Cass Altschuler firm. Our editorial was only meant as a means to introduce the new distributor advertiser list that is now found in each issue of MESD and does contain the names of basically dealer distributors throughout the State. I am sure there are others who do not advertise with us that are good dealer firms and I hope this note will act as an apology to them also.

### AMEN TO CORNELIOUS LETTER

Dear Don:

I have just finished reading "letters to the editor" and, in particular, the Ralph Cornelious open letter to the TV manufacturer should have been written long ago. I very much agree with his feelings on manufacturer's and distributor's policy on cut throat dealings such as this type involves. The members of the TV industry are the ones that suffer and yet start the distributors in business. In the first place we agree to sell their products and service them in good faith and they sell all around us directly to the consumer. It is getting to be a sad situation when the distributor gets to the point of direct selling to the consumer to make that extra

buck. I agree with Mr. Cornelious to stay away from those products sold by that type of distributor. This same type of treatment should be given to the wholesaler of TV parts that practices dual selling also. I wonder if these distributors realize who helped them to get started in business. Have they forgotten?

Al Munger, Al's Service Co.  
Campbell, California

Dear Sir:

Bravo, Mr. Cornelious, you have hit the nail on the head and I for one would be quite interested in the platitudinal answer you get from that "unnamed" manufacturer. Two other items of interest in this area are: 1. The manufacturer, and there are several who sell this way, often sell to motels, hospitals, etc. at prices way under those given to dealers; and 2. Many sets are leased for a period of five years with a built-in service warranty thus stealing much service from the local dealer who sells their product. I have had experiences where I will call a distributor for a "quote" for supply of sets on a given job and had those distributors turn the lead over to their motel division to undercut me with. This is no problem as they know my costs first-hand.

Dick Linebarger  
Construction Electronics,  
Menlo Park, Calif.

### NO HELP

I receive your magazine "Electronic Service Dealer" probably with the hope that I would take an interest in your organization. I can think of a hundred articles that could help me in my business. Unfortunately, none of yours did. I did find your editorial interesting, though. Can you, please, tell me how another police force, another tax, and another endless set of rules and regulations is going to help me and my business as you have so stated, and please tell me how another Bureau when Bureaus are noted for their dishonesty and favoritism, will add to the "Elimination of dishonest competition? Speaking of honesty, isn't it a little ambiguous for you to claim you represent California's electronic dealers and you fight for this law when out of your own mouth you admit most dealers in California are against it?

Norman Swindell, Owner  
Electronic Service Co.,  
Fullerton, Calif.

**Editor's Note:** I honestly believe, when given a chance, that this law will be of benefit to the service industry in California. As for the contents of MESD I would like to say that if we can provide one article of interest to every dealer in the State in any one of the twelve issues we produce each year we will have accomplished our purpose. It is impossible to please everyone all the time but we hope to please everyone at some time during the year. Thanks so much for your comments.

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COLOR TV  
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New, COLOR BRIGHT 85 picture tube increases monochrome brightness by 43%\* and brings more natural color to television.

Black and white performance of Sylvania's new color picture tube is far better than you've ever seen before in a color tube. This fact is overwhelmingly attested to in a recent impartial test of 9789 viewers, 76.1% of whom chose Sylvania brightness over all three competitors. These same people also noticed the improved contrast, in a sharper, more vivid picture. Color performance is *ne plus ultra*

with the tube's new, truer red phosphor. EUROPIUM RED, developed at GT&E Laboratories, is the brightest red known to the industry. And, to match it, now the full brightness of blue and green is used. The result is a color picture tube that gives the entire television industry a boost.

Because the COLOR BRIGHT 85 tube is really bright, dealers can demonstrate Color TV effectively in nor-

mally lighted showrooms. As the set's brightness is adjusted, the colors remain true—not shifting to unnatural tones in the highlights of the picture.

The new, exciting COLOR BRIGHT 85 picture tube is a product plus from Sylvania for the entire color television industry, and particularly for dealers. In color, as in black and white, you know it's good business to handle the Sylvania line.

\*Tests show the COLOR BRIGHT 85 tube is 43% brighter, on the average, than standard color picture tubes.

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**EDITORIALLY SPEAKING**

By **DON MARTIN**

**HOW ABOUT A  
MINIMUM SERVICE CHARGE?**

In a recent conversation I learned that the barbers, under the same Bureau of Business and Professional Standards as the Electronic Repair Dealer, has a minimum charge set by the State of about \$1.75. This, of course, does not mean that all barbers must charge \$1.75 for a haircut but it does mean that no barber shall charge under \$1.75 for a haircut.

Why this figure of \$1.75? Why not \$1.50 or \$2.00? The reasoning is this: 1. A survey was taken of all the barbers registered under the State Law to find out the average cost of a haircut. This included overhead costs, health and safety costs, etc. With this survey they were able to determine that the average barber must charge at least \$1.75 per haircut in order to operate a legitimate business. 2. With this figure a petition was sent out to all the barbers in the state whereby they would regulate this minimum price for a haircut. When 51% of all the barbers in the state agreed that a minimum of \$1.75 should be charged, it was made a regulation of the Bureau and that is why no one can advertise haircuts for less than \$1.75. Actually, I believe, the price is \$1.76 and I have often wondered why certain shops advertised haircuts at the odd price of \$1.76 . . . now I know.

What has haircuts got to do with TV service? I am sure the flash bulb went off in your mind as it did in mine. We know that a legitimate dealer must charge a minimum of around \$5.00 for a service call. The big problems we have had over the years is the \$1 service call, no fix, no pay, etc. These type of "leaders" are basically what caused an industry cry for a license bill that turned into a registration law. The honest service dealer cannot compete with this type of competition and, it is hoped, this new law will go a long way towards eliminating the problem of unfair, unethical, misleading, and dishonest television service.

The local barber is a small businessman supplying a service very much like the TV service dealer. It takes skill, training, knowledge of a special nature, etc., and so does the service dealer. Does the industry want a minimum price for a house call that might be supplied through regulation or would they "rather do it themselves"? I don't know and I am not advocating either approach just supplying a small piece of information that came across my desk a few weeks ago.

Over the past few months I have received many letters voicing this concern or that in regards to the Registration Law in California. I am just as much against the move towards more and more government as anyone else is. All I am trying to do is to present both sides of a problem and offer the medium for an exchange of ideas. One thing we have learned is that our publication is well read and does offer a means of communication that would not be available without it. There is only one reason why the service dealers in California are fully aware of what is going on and that is because of MESD.

**COLOR RENTAL ADS HIT BY BBB**

We recently received a communication from the Los Angeles Better Business Bureau concerning the ads now appearing in Los Angeles newspapers advertising color TV set rentals at \$3.50 per week. We would like to suggest that

every dealer make his customers aware of just what this rental involves. According to the BBB letter: 1. the rental set is not available on a weekly basis. 2. A 12-month minimum contract must be signed. 3. Payment is on a monthly basis, not weekly, basis. 4. No mention of a necessary deposit is made. (\$90.00 deposit and first and last month's rental cost totals \$120.74 and is not returned to the customer). 5. Service contracts must be purchased at additional cost. These costs will not apply to purchase (the ad states rental costs can apply to purchase). 6. On one occasion the company advertised a Packard Bell color TV, but the BBB shopper was told that only RCA color TV was available. 7. The shopper revealed that "bait and switch" sales techniques are being used to sell color sets and to avoid renting them.

**PROMOTION, A NEW DIRECTION  
FOR SERVICE ORGANIZATIONS?**

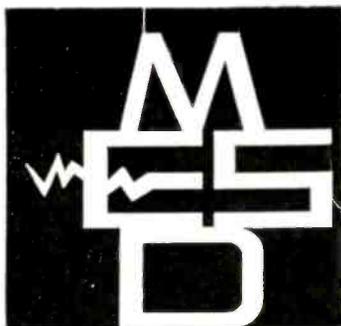
It seems to me that the time is right for service organizations and associations to take a look at themselves and consider the possibilities of new approaches and new directions. There is always a need for trade associations. I believe it was Teddy Roosevelt who said, "every man should give a little back to the industry that provides him with a livelihood." The only thing that bothers me is that maybe a direction of promotional leadership should be considered.

As an industry we could promote such things as "Spring TV Tune-ups," "preventive maintenance for slow months," color picture check-ups, etc. Many people have color sets and don't know if they have a good picture or not. The only guy that really knows is the service technician who knows what to expect. I am sure that many manufacturers would be anxious to prepare color banners, counter displays, hand-out booklets, etc. to help promote a general theme that would create business for the dealer. For those who sell product maybe a spring portable TV promotion and, later on, a color TV promotion.

One of the best programs for an Association such as CSEA, is a referral exchange. The legal profession, medical Association, etc. have this service and it works real well. CSEA could set up, or have the chapters do it, a telephone answering service. The object of this service is to have a list of member shops and when a call comes in the operator simple offers three names nearest the caller. Each chapter would also have to take the responsibility of running ads in their local papers on a co-op basis or use direct mail to get across the integrity of CSEA to the general consumer. Every time any of the CSEA members are on any local radio program the calls flood into the local office for referrals. Why not use this natural need for participating members?

When people learn that I am in the TV service publishing business the first question they ask is where can I get a dealer I can trust. My stock answer is that about 90% of all the dealers you can trust; but deal with the local merchant since he is in business to stay in business.

This answering service might cost the local chapter \$10 to \$20 dollars per month but it would be offering the members something for their money besides legislative action. We need a fresh approach to what kind of help a dealer needs and provide it. Business is at the top of the list.



The California State Electronics Association

## NEWS WIRE

### APPRENTICESHIP

APPRENTICESHIP seems to really be generating interest this month as the Zone "B" Council adopted the idea of sponsoring an apprenticeship program on a zone wide basis. In San Bernardino the local chapter has completed their organization of an apprenticeship program and are now underway. An 8-page document of purpose, policy, application, organization, functions, etc has been finalized and copies may be obtained by writing the chairman of the Zone "F" Council, Bob Reynolds, in San Bernardino. This is a complete program and complys with the rules and regulations of the California apprenticeship council and the Federal Committee on Apprenticeship.

### ASSOCIATION INFORMATION

A PROGRAM OF ASSOCIATION INFORMATION is being planned with a series of articles to start in the January Issue of MESD. The idea behind this program is to make every dealer in the State aware of the complete programs being conducted by CSEA and available to them as members. We will publish this material as a public service to the industry and reprints will be made available to the Association for binding into a leadership and information manual.

### CATV

CATV WAS OF MAIN CONCERN AT THE SANTA ROSA meeting last month as members discussed the City ordinance that prohibited all CATV firms from any repair, service, rental or sales of TV operations. The group is now at work to obtain a similar law on a county wide basis.

### ELECTION OF OFFICERS

CHAPTERS ARE BEING ASKED TO ELECT NEW OFFICERS in January according to the new by-law enacted last year by the Association. This means that every chapter should elect a Delegate and Alternate Delegate to the Zone, a President, Vice President, Secretary and Treasurer and that these officers shall take over not later than February 1st with the State office being informed immediately as to who the new chapter officers are.

### INSURANCE

THE LOSS RATIO ON INSURANCE CLAIMS is not good according to a recent report to the CSEA Board of Directors. Insurance claim increases last year demanded an increase in cost to members beginning last June and, it is hoped tthat the next six months will make it possible to hold the line for the 1965-66 year.

### ACTRA DINNER DANCE

ACTRA AGAIN HELD A HIGHLY SUCCESSFUL dinner-dance last month according to reports by Lee Hoy. Always a social highlight of the year, members, guests and many suppliers enjoyed an evening of fun and relaxation.

### EXECUTIVE SECRETARY

SAN RAFAEL CHAPTER MEMBERS are looking into the possibility of an executive secretary to take care of billing, meetings, minutes, membership and general association activities. Members feel that the only way the chapter can progress is through this type of solid organization that will encourage new members and retain old ones.

### TUBE STICKERS

STICKERS FOR PICTURE TUBE TYPES will be made available by CSEA, as soon as possible. As an aid to their members, the Association feel that the sticker method will enable them to fulfill the requirements of the new Picture Tube Grade regulations and protect them from the re-builder who refuses to markhis tube.

### CHAPTER MERGE

LOS CERRITO CHAPTER BECOMES PART OF LONG BEACH CHAPTER as a result of the recent CSEA Board of Directors action. The chapter had applied for permission to join with the new Long Beach group and this request was o.k.'d.

## NEWS WIRE . . . continued

### NEWS ROUND-UP

ZONE "F" CHAPTER NEWS ROUND-UP INDICATED that last month the Glendale Burbank Chapter had as their guest an antenna design engineer who tested several UHF types. Ventura members hosted State President Ralph Johonnot and zone secretary Glen Logan. L.A. members covered the new regulations and appointed two members to the apprenticeship committee. South Bay held a general business meeting. Pasadena discussed UHF converters and the Riverside and San Bernardino chapters held a joint meeting with George Bussman of BERDR and Cy Barnes of the BBB as guest speakers. It was also pointed out that the current apprenticeship program initiated by the San Bernardino Chapter had nine currently in the program.

### NEA INTEREST

CSEA BOARD STILL SHOWS INTEREST IN NEA as they asked for 75 members to join this Association of State Associations in order to provide CSEA with full NEA membership standing. The cost is \$1 per month and applications are available from the State office in Fresno.

### DEALER WINS SUIT

THE UNSATISFACTORY REPAIR OF TV CASE against an Oakland service dealer was decided in favor of the dealer late last month according to a report from the ACTRA chapter of CSEA. This was a case where a customer filed a law suit against Hicks, an Oakland dealer, for unsatisfactory repair. The suit was filed in small claims court for \$200 and threatened to set a precedent for future such claims against the TV service industry. The Actra chapter went right to work and obtained enough evidence, through their complaint committee, to warrant a decision in favor of the dealer. This demonstrates the importance of an Association in building up a reputation that is recognized by local authorities as in the best interests of the dealer and the consumer.

### QUARTERLY DUES

THE QUARTERLY DUES structure of CSEA is under committee consideration for a possible change. Although dues delinquency is minor throughout the State many feel that the liberalization of an annual dues payment to quarterly has resulted in a time lag period of several month before action can be taken. A proposal of each chapter paying a full year's dues in advance and billing their members as they wish seems to have merit and is part of the plan being considered.

### CHRISTMAS PARTY

FINAL REMINDER ON THE ZONE "F" CHRISTMAS PARTY is that it will be held December 12th at 7:30 p.m. at the Cabrini Club Banquet Room, 134 S. Glen Oaks Blvd., Burbank. The event is under the sponsorship of the Glendale-Burbank chapter and everyone is invited to attend. The cost is \$5 per person and includes dinner, dancing and prizes.

### SEARS SERVICE

THE QUESTION OF THE MONTH IS, "How can Sears and Roebuck have 55 or so different registration numbers and all at the same address?" RCA, for example, has a total of about 10 registered service operations and all at different addresses.

### SIGNS FOR DISTRIBUTORS

A SUGGESTION TO POST SIGNS IN EVERY DISTRIBUTOR'S FACILITY concerning the new registration law has been advanced by Howard Singer of the Los Angeles Chapter. The idea is that some 3,000 dealers are not registered and that they should be advised of their responsibility. Distributors will be asked to cooperate with this program when it is completed.

### CHAPTER CHARTER

THE NEW LONG BEACH CHARTER OF CSEA was formally chartered at a special meeting held November 24th at Hody's Restaurant in Long Beach. The occasion was also marked by the joining of the Los Cerritos Chapter as part of the new Long Beach group and the all out welcome by the members of nearby San Antonio chapter.

# .... all in a days travel...

BY RALPH JOHONNOT

PRESIDENT CSEA



It has consistently been said that the problems of television dealers in all areas throughout the United States are the same. Yes basically the major problems of extended warranties, wholesale parts distribution, captive service, etc., are the same. But here are some new ones and quite refreshing because they are different. On November 16, I went on a fast trip to the North of our vast state to examine some of the problems and conditions of the northern dealers. Six meetings were arranged for me to attend in a three day period. The first was Sacramento, then Marysville, Orville, Redding, Chico and finally, Reno, Nevada. I was surprised to find that the large city problems are not the worry of the rural city mentioned above. A few had some distribution problems but mainly the topic of conversation was lack of stations giving enough color programming. Color sets were prominently displayed on everybodys showrooms in fair to large quantities, however, I was told in most towns, with the exception of Sacramento, that the area had slightly over one thousand color receivers in use and about 28 to 30 hours of color per week.

This now brings up the topic I most wish to discuss. We found that one cable company had signed franchises in four of the six towns mentioned. The franchise guaranteed ten stations be micro-waved in from San Francisco and other metropolitan cities. Here in Southern California we would normally fear and fight any advancement of a cable system without it serviced a fringe area community shadowed by multiple signals but there in Northern California they are looked forward to with great anticipation and justly so. Most of these rural towns receive one or two channels with fair to good reception and a handful more on the border line and in most cases using a 40 to 50 foot mast with the largest antenna and rotor available. It was felt by almost all dealers that what they would lose in revenue from antenna work would be gained by color sales and more repairs because of the added hours of set usage. In Reno we held an evening meeting with about a dozen of their finest dealers and I am quite sure

that the Nevada State Electronics Assn. will soon be formed patterned after our state association.

An installation dinner of the new Long Beach Chapter on Nov. 24th and the Burbank-Glendale hosted Christmas party on Dec. 12th fill my agenda for the balance of 1964. Those of you in Southern California I hope you will attend the Christmas party and climax the year with the friendship of your comrade.

For those of you who so cordially invited me to your cities and states I thank you for your hospitality and look forward to another visit in the near future.

To all members and non-members a very Merry Christmas and a better and prosperous New Year.

*The following is a letter I received last month from Dick Glass, President of N.E.A. I felt that its contents would be of interest to all members and therefore included it in this month's column.*

## OPEN LETTER TO: CALIFORNIA TECHNICIANS AND SERVICE DEALERS:

It's good that many of you have chosen to become members of N.E.A. We would go on and try our best, but without California and your excellent state organization, we would be so much less effective, and less than perfect.

While N.E.A.'s months of formation and first year of existence as a corporation have now proven to all of the member states that the idea of a national association of state associations is the best and most desirable among TV men, and now the enthusiasm is at an all-time high, the fact that we have California with us makes the enthusiasm ever so much greater.

To you who are not familiar with our construction: N.E.A. has an executive committee made up of a president, vice president, secretary, treasurer, and immediate past president, as with most

organizations. This year, to be most effective, with the smallest cost, we have an executive staff of association members who live close to the president, who handle many of the tasks and act as advisers. These men collect the ideas and desires of the individual state presidents, who set the policy and direction of action, as you the individual member and local association want. At present, 17 committees with 33 committee members carry out these individual projects. So rather than National District governors, vice presidents etc., N.E.A. is led by state presidents. We think this is healthy. The officers of N.E.A. and the committee chairmen and members, who work to solve the problems in the different categories, are responsible to, and servants of, the state associations.

Your state president and members of your state who are members of the staff of N.E.A., all have details of N.E.A. action, in the mill and proposed. To be most effective, we are going to need your help. We want men from California on each committee. We need individual service shops to stand with us in our desire to eliminate our problems of unfair competition, price discrimination, extended warranties and others. To stand up and say no, may seem greedy to many, but to preserve the ability of the independent TV/Electronic sales and service shop to remain a part of the business community and hold its head high, doesn't seem to me to be anything but honorable.

With the millions of B and W TVs, Color, solid state phonos, auto radios and other complex gear being sold, and requiring more technical minds to service them, I believe we have a lot of business ahead of us. We've got to do our share in keeping pace with the equipment, and also to see that we don't let someone *take* it away without at least trying to prevent it. You know what we want. And I know. If we all make action our byword, do it now out motto, and let me do it instead of George, a reality, next year will find a change for the better. Let's go!

Dick Glass, President.

# ANTENNAS NOW BIG BUSINESS ... SAYS LONG BEACH DEALER

"Yes, antennas are big business to us," stated George Irwin, partner in Signal TV in Long Beach, California. "Like most dealers we didn't really think much about it until we were all but forced into the antenna system business by local Hotels, Motels, Hospitals, commercial buildings, Co-ops, etc. Now this business has become the bread and butter winner for us and we are going all out to do an even bigger job in the future."

Signal TV is not an ordinary service operation. To be able to do over \$200,000 last year in service alone and another \$300,000 in sales you have got to be uncommon.

Signal is not a big discount operation . . . it is not a fast buck service operation with \$1 service calls . . . it is not a service mill that only creates unhappy customers. Why then is Signal successful?

The answer is really a simple one. The firm was started by Mel Mattox in 1929 and was later joined by Lou Walton. In 1950 the two men were joined by another partner, George Irwin. Each of these three men have their own responsibilities and operate different departments. With this type of solid management the firm has grown to where it has over 30,000 customers in an active file, and the bulk of this has been developed over the years from one customer to another.

The antenna system business is growing by leaps and bounds and Signal TV right with it. The service department has 10 trucks and 15 technicians with special trucks for sound and antenna installations.

A real close tie has been developed over the years with the local contractors and this has led to an outstanding record of TV antenna system installations. Using basically the Jerrold

equipment and Channel Master antennas the firm is now installing about 200 antennas per month with no let down in sight. The installation of these systems has also brought plus business since many of the buildings in which Signal does the installation work have ended up as service customers. In one case, the customer tie-in to the system is done on an individual unit basis whereby when a new tenant moves into a co-op apartment Signal is called to make the Television installation tie-in. This has often led to set service work with these new tenants.

In some cases a special price has been worked out whereby Signal will charge them \$6 for the service call plus the parts cost. If they must remove a set from an apartment the charge is a minimum of \$17.50 plus \$5.00 for pick-up and delivery. Color sets the price is usually about \$30.00.

The antenna specialty is not the only one at Signal. The owners have found that specialization has really paid off and each of the 15 technicians are usually performing one service operation. Tape recorders, transistor radios, car radios, etc., are all done by different individuals. This system has paid off so well that, for example, one of the top bench men actually produced over \$10,000 in business, by himself, last year.

The service operation is separated from the main sales store by almost a full city block. This is done so that there is no overlap of business function and helps eliminate time consuming walk-in trade for the service store. The facility for product sales is very attractive and provides separate viewing and hearing rooms for color TV and Stereo. The firm holds a Magnavox franchise, but also sells RCA color TV, Sony and Channel Master Products, etc.



Bill Wesenberg, of Kiesub Corp., left, and George Irwin of Signal TV, in Long Beach, are shown here outside the Park Avenue Apartments. Signal TV installed a master antenna system in these units by using 55 Channel Master 3604 antennas and 4-set couplers to supply 220 individual apartments.



Pictured here are Bill Wesenberg of Kiesub, George Irwin of Signal TV and Max Webb, executive vice president of S and S Construction Co. in Beverly Hills. The entire installation of the Park Avenue Apartments were completed with the use of Jerrold amplifiers for power boosters.

# JFD ELECTRONICS

## SOUTHERN CALIFORNIA DISTRIBUTORS

**ANDREWS ELECTRONICS**  
1500 W. Burbank Boulevard  
Burbank, California

**DEAN'S ELECTRONICS**  
2310 Long Beach Boulevard  
Long Beach, California

**HURLEY ELECTRONICS**  
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Oceanside, California

**HURLEY ELECTRONICS**  
1429 So. Sycamore  
Santa Ana, California

**HURLEY ELECTRONICS**  
390 Mount Vernon  
San Bernardino, California

**HURLEY ELECTRONICS OF INGLEWOOD**  
210 East Hardy Street  
Inglewood, California

**MARCUS ELECTRONICS**  
5751 W. Pico Boulevard  
Los Angeles, California

**MARTIN DISTRIBUTING COMPANY**  
2509 East Florence Avenue  
Huntington Park, California

**PAPEL BROTHERS**  
4652 E. Third Street  
Los Angeles, California

**POMONA VALLEY ELECTRONICS**  
222 West "B" Street  
Ontario, California

**RADIO PRODUCTS SALES**  
1501 So. Hill Street  
Los Angeles, California

**RADIO TELEVISION SUPPLY**  
151 No. Vermont  
Los Angeles, California

**WHOLESALE ELECTRONIC SUPPLY**  
265 So. Laurel Street  
Ventura, California

**WESTERN RADIO & T.V.**  
1415 India Street  
San Diego, California

**VALLEY RADIO SUPPLY**  
1134 33rd Street  
Bakersfield, California

## NORTHERN CALIFORNIA DISTRIBUTORS:

**CASS ALTSHULER**  
801 Seventh Avenue  
Oakland, California

**DUNLAP ELECTRONICS**  
1800 - 18th Street  
Sacramento, California 95809

**QUEMENT ELECTRONICS**  
1000 South Bascom Avenue  
San Jose, California

**REDWOOD ELECTRONICS SUPPLY COMPANY**  
711 Summer Street  
Eureka, California

**WHOLESALE RADIO & ELECTRIC SUPPLY COMPANY**  
1348 El Camino Real  
San Carlos, California

**WHOLESALE RADIO & ELECTRIC SUPPLY COMPANY**  
1116 Folsom Street  
San Francisco, California 94103

# Compare

## WHAT JFD LPV LOG PERIODIC TV & FM ANTENNAS OFFER YOU AGAINST ALL OTHERS!

### Compare COMPLETENESS OF LINE!

Only JFD offers you the most *complete* line of all...in step-up models...in VHF (ch. 2-13)...in UHF (ch. 14-83)...in FM/Stereo...in VHF/UHF/FM bands.

### Compare ENGINEERING!

JFD leadership in antenna design is an acknowledged fact. JFD Champaign, Illinois R & D facilities include the world's newest and most advanced antenna laboratories. Here a team of scientists, graduate engineers and technicians, under the direction of Dr. Paul E. Mayes, are revolutionizing the state of the antenna art. This priceless scientific know-how and integrity stand behind each JFD Log Periodic you see.

### Compare PERFORMANCE!

JFD LPV's are the first and only antennas based on the geometrically-derived *Logarithmic Periodic* scale developed by the Antenna Research Laboratories of the University of Illinois and used in satellite telemetry. Result: frequency-independent performance that de-

livers a combination of superior gain, 300 ohm impedance match, pinpoint directivity, and front-to-back ratio never before possible across the *entire* band.

### Compare COLOR RECEPTION!

JFD Log Periodic response is *flat* across each channel for true, crisp color picture resolution.

### Compare CONSTRUCTION!

Life-time stainless-steel take-off terminals that can never corrode, "tank-turret" element brackets, non-breakable heavy-wall Implex A acrylic insulators, twin U-bolts with 6 inch mast grip span; supple, permanently riveted aluminum drive line rod, electrically conductive gold alodizing, plus a host of other exclusive mechanical improvements.

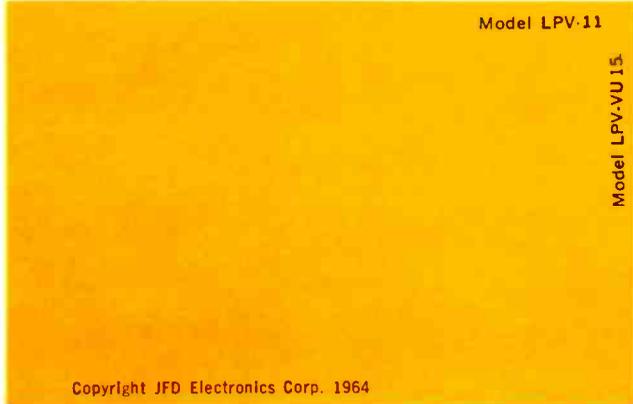
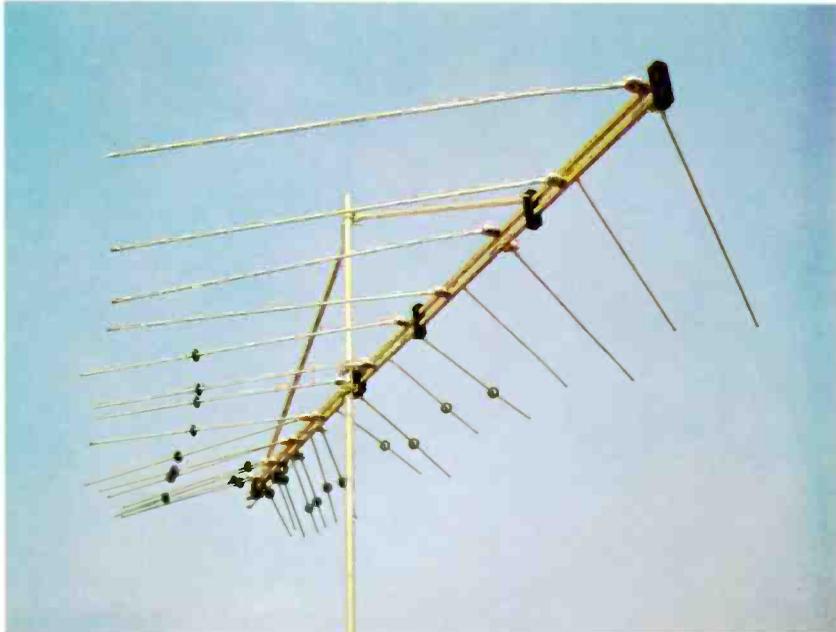
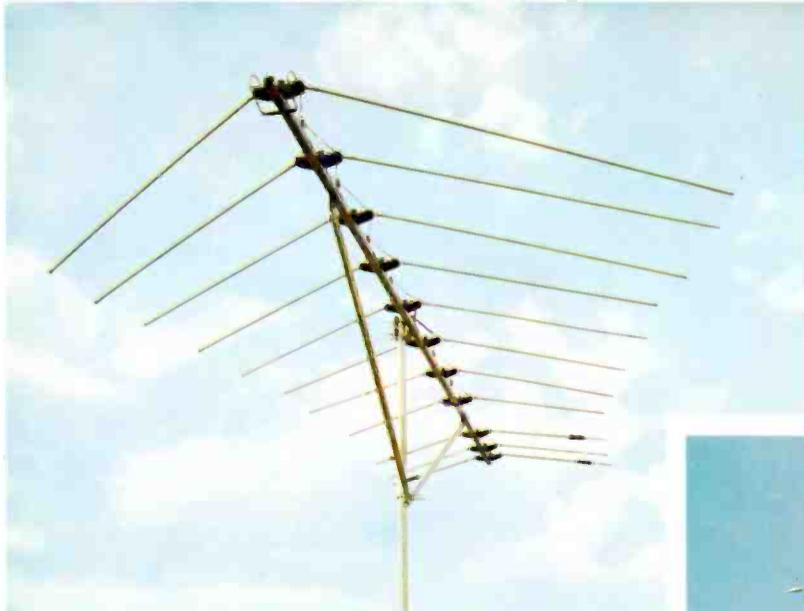
### Compare ADVERTISING AND PROMOTION!

A versatile selection of indoor and outdoor sales helps... advertisements in LOOK, SUNSET and other national and local consumer publications... in newspapers... on television... that sell your best prospects.

CALL YOUR JFD DISTRIBUTOR TODAY — AND SHARE IN THE PROFITS  
AND PRESTIGE THAT ONLY JFD LPV LOG PERIODICS CAN BRING YOU!

LICENSED UNDER ONE OR MORE OF U.S. PATENTS 2,959,081; 2,985,879; 3,011,166; 3,108,280; 3,150,376 AND ADDITIONAL PATENTS PENDING IN U.S.A. AND CANADA. PRODUCED BY JFD ELECTRONICS CORPORATION UNDER EXCLUSIVE LICENSE FROM THE UNIVERSITY OF ILLINOIS FOUNDATION.

ADVERTISED IN  
**LOOK** / *Sunset*



# You Can Rely on JFD Log-Periodic\* TV COLOR and

**NEW**—from the famous JFD R&D Laboratories in Champaign, Illinois — the authentic Log-Periodics with the engineering advances that outperform all others in **COLOR**, black and white—on VHF, UHF, VHF/UHF/FM!

**WHY MORE JFD LPV LOG-PERIODICS ARE BEING INSTALLED THAN ANY OTHER VHF ANTENNA . . .** The JFD Log-Periodic is a revolutionary new concept in antenna design. Its frequency-independent performance does not sacrifice gain, directivity, bandwidth or impedance match as other conventional antennas must on certain frequencies to achieve all-VHF-channel reception. Harmonically resonant V-elements operate on the patented Log-Periodic cellular formula  $\frac{L(n+1)}{L_n} = \tau$  to provide the same superb performance on every VHF channel—color or black and white—plus FM/Stereo.

**STOUTLY BUILT OF HEAVY WALL GOLD ALODIZED ALUMINUM . . .** Inch for inch, ounce for ounce, JFD LPV Log-Periodics deliver more mechanical

strength in less mass. Gleaming gold alodizing (the same used by NASA and the military services) does not insulate vital contact points as does anodizing. Instead, electrically conductive gold alodizing improves signal continuity.

**DEVELOPED FROM RESEARCH PERFORMED AT THE UNIVERSITY OF ILLINOIS ANTENNA RESEARCH LABORATORIES . . .** The JFD Log-Periodic is the commercial end result of six years of electronic research. No other design has undergone such intensive research and development by leading antenna scientists.

**INSTALLED BY MORE WORLD'S FAIR PAVILIONS THAN ANY OTHER BRAND . . .** The New York World's Fair House of Good Taste, Formica House, New York City Pavilion, House of Japan, Eastman Kodak exhibit, Florida and Hawaii Pavilions installed JFD Log-Periodics to assure best possible performance of their color TV sets. Millions of Fair visitors will remember and ask for the JFD Log Periodic LPV, paving the way for more sales by you.



**THE ONE AND ONLY ORIGINAL LPV LOG-PERIODIC FOR VHF CHANNELS 2 TO 13 & FM/STEREO**

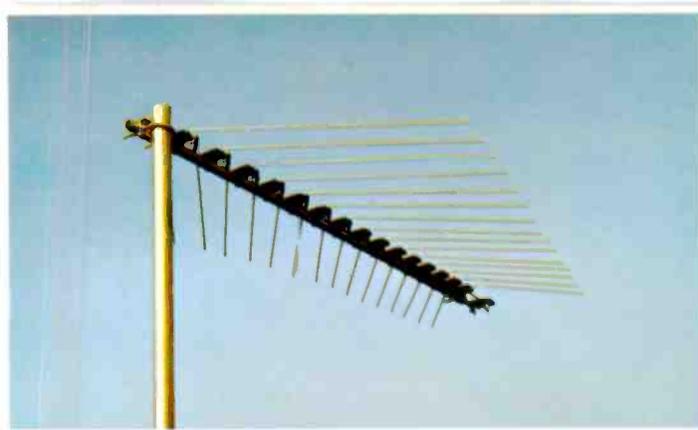
model	description	list
LPV17	18 Cells Directors	\$59.95
LPV14	15 Cells Directors	49.95
LPV11	11 Cells Directors	39.95
LPV8	8 Cells Directors	29.95
LPV6	6 Cells	21.95
LPV4	4 Cells	14.95

**NEW! THE FIRST COMBINATION VHF/UHF/FM/STEREO —THE LOG PERIODIC "ALL-VU"—WITH SINGLE LEAD-IN**

model	description	list
LPV-VU18	18 Cells	\$69.95
LPV-VU15	15 Cells	\$59.95
LPV-VU12	12 Cells	\$49.95
LPV-VU9	9 Cells	\$39.95
LPV-VU6	6 Cells	\$27.50

**NEW! LOG PERIODIC ZIG-A-LOG FOR PROBLEM "UHF" AREAS**

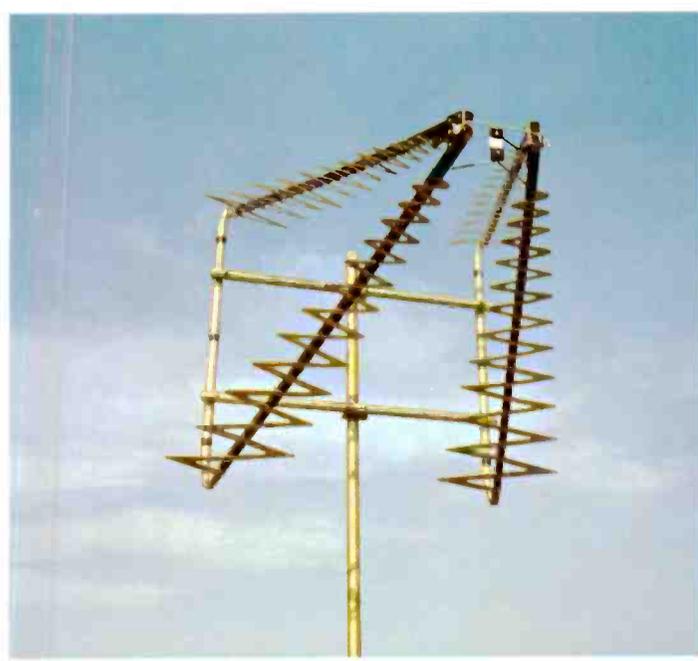
model	description	list
LPV-ZU20	E-Plane Stacked	\$37.50
LPV-ZU10	1-Bay	\$17.95



Model LPV-U15

Model LPV-ZU20 ZIG-A-LOG

Model LPL-FM6 FM/STEREO



# antennas for the Finest Pictures In Sight-Black/White!

JFD FREQUENCY-INDEPENDENT LPV LOG-PERIODIC BREAKS THROUGH THE BANDWIDTH BARRIER FOR

**GAIN:** As high as 14 db (in model LPV17)—with extra gain on the high band where it is needed most.

**BANDWIDTH:** Frequency-independent log periodic design delivers broad band performance never before possible. Does not discriminate against any channel—or frequency.

**RESPONSE:** Consistently flat ( $\pm 1/2$  db) across both low and high bands for the finest color reception.

**DIRECTIVITY:** No need to give up directivity to obtain bandwidth as other antennas do. Log-Periodic backfire horizontal radiation patterns, for example, are the narrowest of any all-channel antenna. Reject noise, ghosts, interference and other unwanted signals more effectively because: sharpness of beamwidth affects directivity more than any other factor.

**VSWR:** As low as 1.2 to 1 for maximum transfer of signal to line across the full bandwidth. Low VSWR's are typical of JFD LPV Log-Periodic antennas because of their constant 300 ohm impedance characteristic.

EVERY LPV YOU BUY EARNS YOU VALUABLE FAIR FESTIVAL POINTS . . . Each JFD Log-Periodic VHF, UHF, VHF/UHF/FM, or FM/STEREO you install includes Fair Festival certificates which you can trade in for FREE World's Fair tickets, trips or cash.

Whether it's VHF, UHF, VHF/UHF/FM, or FM/STEREO, JFD HAS THE LOG PERIODIC TO HELP YOU MAKE THE SALE OTHERS CAN'T!

SEE WHY AT THE MOMENT OF TRUTH, THE PICTURE IS THE PROOF—THE JFD LPV LOG-PERIODIC WORKS BEST!

"Don't gamble on Log-Periodic "look-alikes" and imitations! Insist on the genuine LPV by JFD—exclusive producers of the pace-setting Log-Periodic antenna developed from research performed by the Antenna Research Laboratories of the University of Illinois.



**JFD ELECTRONICS CORPORATION**  
 15th Avenue at 62nd Street, Brooklyn, N. Y. 11219  
 JFD Electronics-Southern Inc., Oxford, North Carolina  
 JFD International, 64-14 Woodside Ave., Woodside 77, N. Y.  
 JFD Canada, Ltd., 51 McCormack Street, Toronto, Ontario, Canada

**NEW! LOG PERIODIC LPV FOR UHF CHANNELS 14 TO 83 & VHF 7 TO 13**



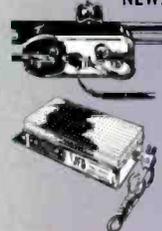
model	description	list
LPV-U21	21 Cells	\$27.95
LPV-U15	15 Cells	\$18.95
LPV-U9	9 Cells	\$12.50
LPV-U5	5 Cells	\$ 6.95

**NEW! LOG PERIODIC LPL-FM STEREO**

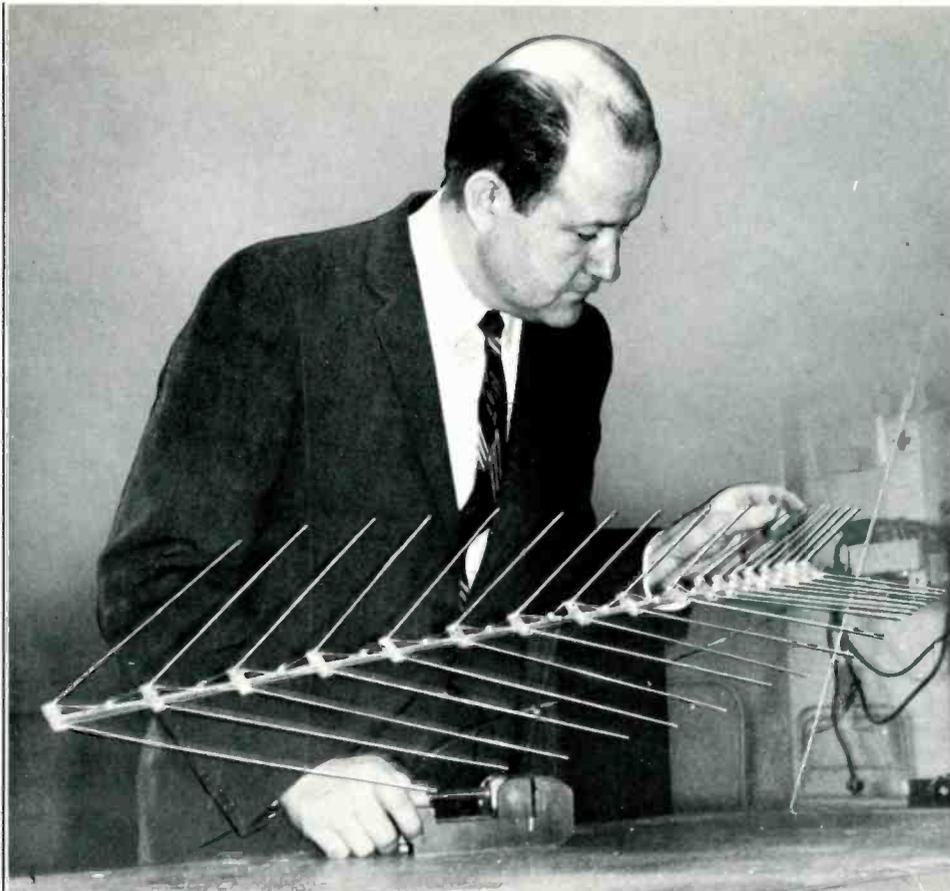


model	description	list
LPL-FM10	10 Cells	\$49.95
LPL-FM8	8 Cells	\$39.95
LPL-FM6	6 Cells	\$29.95
LPL-FM4	4 Cells	\$19.95

**NEW! TELE-AMP ANTENNA AMPLIFIERS FOR VHF, UHF & FM**



model	description	list
VUT-3	3-Transistor VHF/UHF/ FM Amplifier	\$49.95
VN-2	2-Nuvistor VHF Amplifier	\$39.95
VT-2	2-Transistor VHF Amplifier	\$39.95
VT-1	1-Transistor VHF/ FM Amplifier	\$34.95
UHT-1	1-Transistor UHF Amplifier	\$39.95
FT-1	1-Transistor FM Amplifier	\$34.95



News-Gazette Photo by Ian Ingalls

Dr. Paul E. Mayes inspects and checks out one of log-periodic family.

\* \* \* \* \*

# UI's Mayes, Team Develop Better TV Antennas

By **HANK HOKAMP**  
News-Gazette Staff Writer

Remember how you used to shake and pound your radios, trying to "get the darn things" playing again? That was then ... but how about now?

Yes, you've found a new culprit to cuss and perhaps shake ... and to top things off, it's usually the most popular piece of furniture in the house ... the television set.

Thanks to the efforts of such men as Dr. Paul E. Mayes, professor of electrical engineering at the University of Illinois, and his associates, this situation may well become a rarity instead of commonplace.

"For many years no attempt was made to achieve a constant pattern regarding the development of VHF, UHF, VHF-UHF, and FM antennas," Dr. Mayes said. "Today there exists a need for antennas which will cover a number of isolated frequency bands rather than covering continuously the entire spectrum between the lowest and highest frequencies of interest," he said.

Dr. Mayes and his colleagues have done just this .. developed

a number of TV antennas which are presently being sold to the consumer public by electronic parts companies throughout the nation.

Another series of antennas, this time a family of four designed for FM Stereo radios, were released for production July 1. These antennas were developed by Mayes and Ron Grant, chief engineer at the JFD Antenna Laboratories located at 714 So. Randolph, C.

The JFD Electronics Corporation, Brooklyn, N.Y., manufactures these antennas and is licensed by the UI Foundation. JFD extends exclusive rights to the UI Foundation for its patented log - periodic - antenna concept.

Regarding the TV antennas developed by Mayes and his associates the largest log-periodic antenna in this family is the JFD Log-Periodic LPV antenna. This antenna can conquer the super fringe area up to 175 miles from a transmitter. It's considered to be the best for color and black and white reception regarding the capability

of the "family."

The smallest LPV antenna reaches out to 50 miles from the transmitter. This is all one needs to attain local reception.

The second antenna in this family is the LPV-U, or the first UHF antenna design based upon the patented LPV formula by the laboratories at the UI. This antenna is used for high band performance on channels 14 to 83. Four models are now available and range up to 80 miles regarding reception.

No commercial antenna has had uniform high gain over the complete VHF television band. The log-periodic V, the third antenna available in this series, takes care of this unique situation. Out of various experiments led by Prof. V. H. Rumsey and Prof. J. D. Dyson, both members of the electrical engineering department at the UI, this log spiral antenna became available.

What is called the strongest antenna developed for UHF is the Zig-A-Log antenna, a new concept for local or long distance reception on channel 14 to 83.

This Zig-A-Log antenna is said to offer much less wind resistance, much less ice and snow loading area, and better directive gain.

Log-periodic or logarithmic antennas make-up a family that have a unique fundamental design. These designs have been developed by Mayes and his associates since 1954 at the UI and include the presence of a three-fold purpose.

These antennas have been and are presently being used for satellite tracking at missile range locations at points along the Atlantic and Pacific Oceans as well as at Cape Kennedy.

Secondly, the log-periodic antennas are used by communication networks of the Armed Forces. These new type designs can be made to cover any range of frequencies.

The third use of the antennas are found in commercial circles mentioned before. The TV log-periodic antennas have been developed since 1954 with the four FM Stereo antennas to be placed on the market in the near future.

Where does this antenna research take place? Largely at the JFD Laboratories where 12 undergraduate, graduate and post-graduate students are engaged in this basic research in log-periodic type antennas for television, FM, amateur and military application.

The new JFD Antenna Laboratory is located in the Interstate Research Park northwest of Champaign with the construction scheduled to be completed by Sept. 1. Operations at the new laboratory will not begin until Oct. 1. The facilities will be used for the development of new antenna designs for all-channel VHF and UHF reception.

According to a survey paper recently published by Profs. E. C. Jordan, G. A. Deschamps, J. D. Dyson and Mayes, it was noted that some of the earliest broadband antennas were long wire types designed to operate in the high frequency or short-wave band or perhaps in the low frequency band. Among these antennas the well-known rhombic or equilateral parallelogram shaped antenna has held a high place since the days of radio. The log-periodic antenna is a revolutionary development in design.

Other information gathered during the survey was presented for the express purpose of providing the nonspecialist with a basic understanding of the remarkable advances which have taken place over the past decade in the field of broadband antennas.

Since the law now requires all TV sets to come from the factory with a UHF "hook-up", perhaps this need for antennas to cover a number of isolated frequency bands could open more interesting doors to interested parties such as Dr. Mayes and his associates.

# UHF Distribution Systems --- A New Profit Market

By Dan Devine  
Jack Berman Company

The impact of the FCC decision requiring that all new TV receivers be all-band sets has already brought a demand for Master Antenna Distribution Systems at UHF frequencies. If you haven't been called on to "split" UHF for your customers, it won't be long before you will. If you are enterprising, you can propose UHF distribution systems. You'll find the field wide open and profitable.

Many service dealers are experienced at installing VHF distribution systems. They know that the rule of thumb basis for laying out a system is simple: figure the cable, splitter, and tap losses, and select the antenna(s) and amplifier(s) with gain enough to compensate for these losses. The result is a TV signal at each of many outlets which is equal or stronger than the off-the-air signal at the antenna.

These same rules apply to UHF distribution systems, but one factor forces us to use new equipment and new techniques of installation: the frequencies in-

involved. UHF carrier frequencies (170 to 896 mc.) cause our system losses to rise sharply and require new amplifiers to supply the needed offsetting gain. Because this equipment is designed around much higher frequencies than VHF, it is impractical to make a workable VHF-UHF distribution system on one set of feeder lines. To distribute UHF we must "start all over again," so to speak.

The simplest system at UHF is a two-set coupler connected to an antenna, splitting its signal along two 300 ohm feeder lines. Most manufacturers of VHF splitters have a UHF "version" which might well be a modification of the VHF design, or even the same splitter which works with greater losses at UHF. Jerrold's M-2 is an example of a VHF splitter that will work at UHF, but its loss of 9db on each leg make it usable in strong signal areas only. The Jerrold UF-2 (see photo UF2) is a new design for greatest efficiency at UHF, and works as well at these frequencies as a good VHF coupler does at Channel 2-13.

Should you be working in a weak signal area, or should you want to put in a system with some signal "to spare" (to accommodate new channels that

might be weaker), you must amplify before you split. The first amplified 2-set coupler at UHF will be available this month. Called the Jerrold TAU-12 (photo appeared in Sept. ed.) it will provide almost twice the signal at each of two sets.

An inexpensive 4-set UHF system can now be made up by adding two UF-2's to a TAU-12, thus splitting two amplified outputs into four. The total system loss will be small. This system can be preamplified by UHF antenna amplifiers such as Jerrold's ULP-104 or UPM-104. (See photo ULP104 & photo UPM104.)

What do we do for larger UHF systems? Here the going gets rough. Such systems are still on the drawing boards and probably will require amplification in series with every few taps on a line. The only practical way to handle up to 50 units today is to use multiple UHF antennas, tying up to four sets to each antenna as described above.

(Continued page 20)



Jerrold Model UPM-104

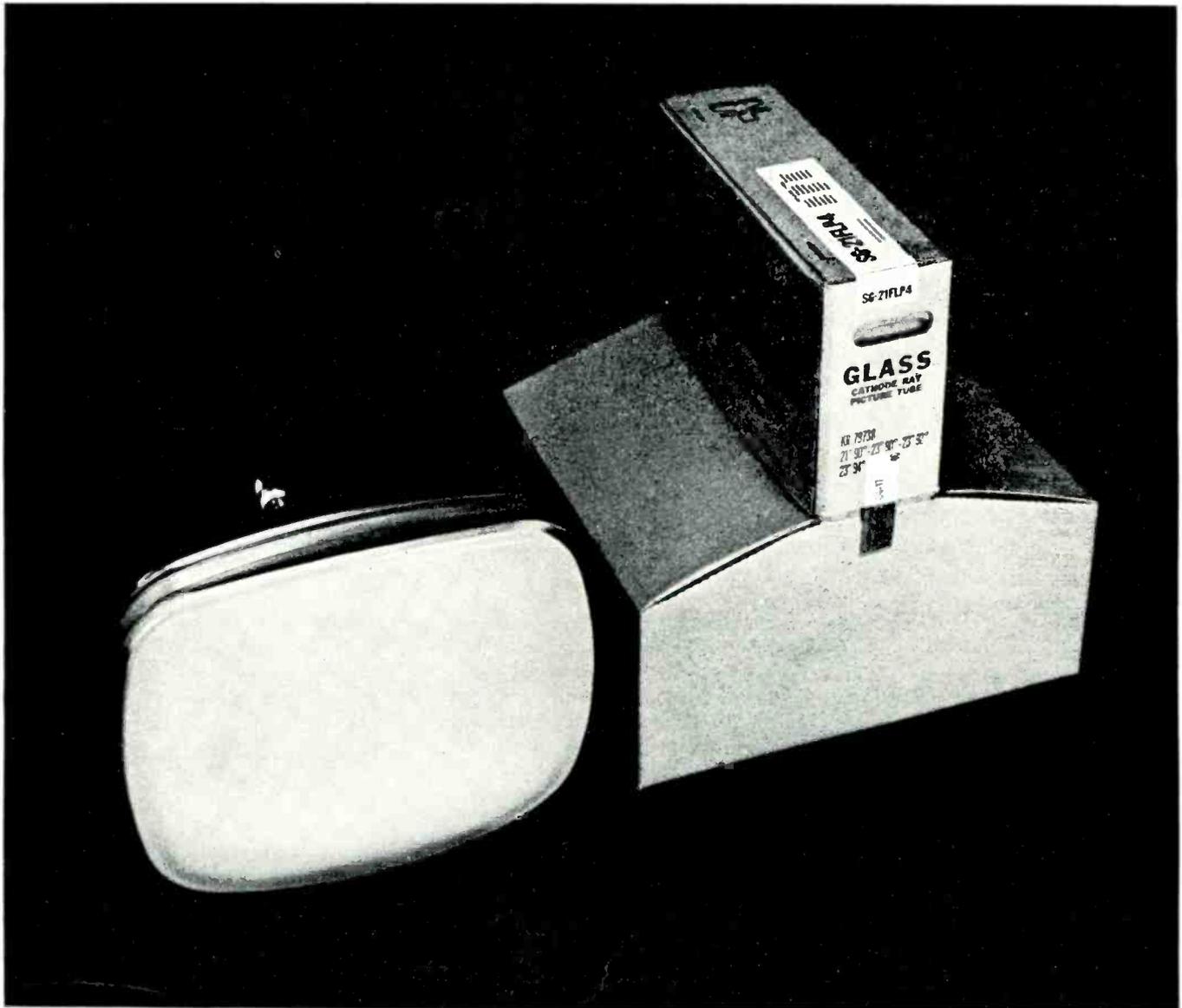


Jerrold Model UF-2



Jerrold Model ULP-104

# A better tube deserves a better box



*(a T-Box)*

The G-E "SG" straight-gun picture tube\* comes in a new package that's more than just a box—it's custom-tailored tube protection. Easy to carry, easy to open, the new T-Box minimizes tube breakage and is really handy for dud return.

As always, G. E. is placing the "Accent on Value" by manufacturing the best straight-gun tube—that doesn't need an ion trap. With only 25 G-E "SG's," you're ready to replace 250 other picture tube types and provide faster service. Fewer call-backs! No ion trap nuisance!

A perfectly resolved picture . . . up to 80% brighter.

Your reliable G-E distributor is waiting for your order now. He has the best replacement tube yet—and the box to put it in. Call him today.

*\*All new parts and material in a reused envelope.*

*Progress Is Our Most Important Product*

**GENERAL  ELECTRIC**

CONTACT ANY OF THE FOLLOWING DISTRIBUTORS:

**MILLERS RADIO &  
TV SUPPLY, INC.**

530 East 8th St., Oakland, Calif.  
7076 Armory Dr., Santa Rosa  
1263 Arroya Way, Walnut Creek  
785 S. First St., San Jose

**ANDREWS ELECTRONICS**  
1500 W. Burbank Blvd., Burbank

**EDISCO, INC.**  
5901 Mission Street, San Francisco

**HURLEY ELECTRONICS  
OF INGLEWOOD**

210 E. Hardy St., Inglewood

**KIESUB CORP.**

311 W. Pacific Coast Hwy., Long Beach  
1162 Industrial Ave., Oxnard  
14511 Delano St., Van Nuys  
910 - 11th St., San Bernardino  
318 - 21st St., Bakersfield  
725 N. Los Angeles St., Anaheim



## TRADE / TALK

### ZENITH EXPANDS LINE

The Zenith Corporation has just announced the expansion of its distributors parts and accessories line to a full line of high efficiency universal loudspeakers, heavy duty antenna rotors, and packaged wire and cable for VHF and UHF TV transmission lines, antenna rotors, loudspeakers, microphones and other uses. These products, combined with previously announced line additions provides Zenith distributors with a complete line of parts and accessories.

### SAN DIEGO PREPARES FOR UHF STATION ADDITION

The Electronics Division of the Bureau of Home Appliances in San Diego recently held a meeting of sales and service dealers, technicians, distributors and representatives of UHF to take a look at the coming of UHF to the San Diego area. Main speaker of the evening was Larry Shushan, who has been granted the first construction permit, and he outlined his station plans. Other applicants for UHF stations in that area include: Jack Gross who brought Channel 8 to San Diego, Calwestern University and San Diego State College.

### MOTOROLA COLOR HIGHLIGHTS SRTT NOVEMBER MEET

A run down on Motorola Color Television was presented on Wednesday, November 11 by Tee Yakura of Craig Electronics to the members of the Society of Radio Television Technicians Inc. in the San Fernando Valley. The program included a demonstration of Motorola's color mock-up and a question and answer period.

### OPERATION COLORAMA PROGRAM HELD IN SACRAMENTO

The Sacramento Valley Electric League in cooperation with KCR A-TV and the California State Electronics Association presented "Operation Colorama" last month. This program featured John E. Moss, Congressman 3rd district who outlined the "Problems facing Independent Businessmen Today." Parts of his presentation were recorded for presentation on the news broadcasts of KCR A-TV.



Milt Dienes, Sales Manager, explains Harman-Kardon new ad-merchandising program to dealers in meeting at Los Angeles. Standing by are Walter Goodman, Manager (far left) and Selman Kremer, Ad Manager.

### HARMAN-KARDON SHOWS NEW LINE IN L.A.

In an effort to give their new lines a good send-off in the Los Angeles area, Harman-Kardon staged a three-day Sound Seminar. The week-end activities included meetings for high fidelity dealers, commercial sound dealers, and influential audiophiles. Technical features as well as selling features were discussed. **MILO ELECTRONICS TO ACQUIRE ECI SAN DIEGO**

The Milo Electronics Corporation of New York has agreed in principal, according to reports, to acquire the assets of Electronic Components, Inc. of San Diego. Better known in San Diego as Radio Parts Company, the basic agreement is for an exchange of stock. Milo is said to have agreed to paying 95,000 shares of a new Milo class of \$10 par, 6½ per cent convertible preferred stock for the assets of ECI.

### RCA PRODUCES THREE MILLIONTH COLOR TUBE

A recent report indicated that RCA has just manufactured its 3 millionth color picture tube. The landmark color tube, made at the firm's plant in Lancaster, Pa. was a new rectangular 25-inch, 90-degree type tube. This version of the widely used RCA shadow-mask design is now in commercial production. **TRANSISTOR TROUBLE. SHOOTING COURSE AVAILABLE FROM G.E. DISTRIBUTORS**

General Electric is pioneering an advanced approach to field service training for full-time dealer and independent service technicians who will be servicing transistorized home entertainment products. For the first time, General

Electric will publish a "programmed Instruction" Manual on basic transistor troubleshooting in television, phonographs, and radios. The three volume course is being sold as a package to all practicing servicemen, regardless of business affiliation, through GE Radio Receiver Department field service representatives and Product Service sections of GE Television and console phonograph distributors. Volume I will be delivered in December, with the other two available shortly thereafter. The course may be ordered at a special price of \$12 until December 15, after which the price will be \$14.25.

### WESTINGHOUSE ANNOUNCES BREAKTHROUGH IN COLOR TV PHOSPHOR

Viewers of color TV may enjoy immensely improved pictures as the result of a significant breakthrough in TV picture tube phosphors by Westinghouse scientists. The new phosphor is said to be 100% brighter than the standard red phosphor used in the past. The news of this breakthrough follows closely the news of a 30% brighter tube by another manufacturer but, according to Westinghouse, their new formula far exceeds this claim.

### HOFFMAN CONSUMER/INDUSTRIAL DIVISION MOVES TO COMMERCE

Hoffman Electronics Corporation has announced the moving of its Consumer/Industrial Division to 5550 Harbor Street, City of Commerce. According to an announcement by Ray Cox, vice president in charge of the division, the move to this new 32,000 square foot building will provide the division with top facilities for future advancement of Hoffman products.

### IRV STERN WINS H-K NAME CONTEST

Representative Irv Stern, who covers the Southern California territory, has won the Harman-Kardon "Sound Unbound" name contest. He was presented with his prize of a Model SR900 FM stereo receiver at the recent San Francisco Hi Fi Show.

Faced with the problem of choosing a name for their new line of all-transistor FM stereo receivers, Harman-Kardon went to their reps with a naming contest. Mr. Stern won over all others, suggesting the name "STRATOPHONIC."

# ACTRA CHAPTER ACTS TO AID DEALER SUED FOR "UNSATISFACTORY SERVICE"

By Phil Fisher, Actra Exec. Sec.

Recently a customer in our area sued a dealer for the sum of \$200.00 for "Unsatisfactory Repair of T.V.". (We understand that \$200.00 is the limit for which one can sue in Small Claims Court. Bear that in mind.)

It was brought to our attention by the service dealer, who was greatly perplexed and worried. Dealer is not an ACTRA Chapter member. But we saw something in the suit (for that limit of \$200.00 . . . for, let's repeat it: "Unsatisfactory Repair of T.V." . . . that greatly disturbed us. And should disturb every TV service dealer in California, probably throughout the country as well. We also brought it before Zone B Council of CSEA, comprising eleven Bay Area counties. The Council felt as did we. Asked ACTRA to carry on. A dangerous precedent might be set.

We contacted dealer. He claimed not to have had a complaint in his 13-14 years of operation. We checked with Better Business Bureau . . . no complaint against him during his many years of

operation. (How many dealers can truly say that!)

We wrote presiding judge in Small Claims Court for two week's extension of time on the hearing. We called attention to ACTRA's years of self-policing our industry in our country; that our investigatory program had approval of District Attorney, Better Business Bureau, Attorney General, Consumer Counsel, and so on. The extension was granted.

We sent our "Complaint Advisory Committee's" forms to both customer and Dealer who filled his out immediately. Customer refused to do same. Our committee made an appointment to meet with customer. Customer failed to appear.

Dealer, on the return form, claimed customer had originally asked him to put in a new switch. Nothing else, just that. Dealer had the work done, but had to include one small tube and a couple capacitors. Customer came for set, complained of the bill. Dealer knocked off

\$5.00. (Customer had come to him for work before, and dealer wanted to keep him. Perhaps foolish in that, but he did). Customer saw set worked nicely, paid the bill and took set away with him.

Few days later customer came again. Had set in his car. Said there now was something wrong with set's linearity. Dealer said that was an entirely different operation; that it had not shown up during the original repair and check up. Told customer he would have to pay for the new situation. Customer refused, drove away with set, and two days later dealer was served with the court summons . . . in which, as noted twice above, the customer sued in the sum of \$200.00 for "Unsatisfactory Repair of T.V."

The customer's (Plaintiff's) allegation stated that he had demanded payment of the \$200.00, and that dealer (Defendant) had refused to pay that amount or any part thereof, was made "under penalty of perjury". The dealer gave us a sworn affidavit that no such demand had been made.

All right, fellow dealers. A lot of other papers were gotten together.

At the court hearing, we had three character witnesses present on behalf of the dealer, including this writer. And the papers. And the dealer (Defendant) took the stand and testified as noted above.

The judge was keenly interested in the customer's (Plaintiff's) demand for exactly \$200.00. How had he arrived at that figure, etc., etc.???

Judge took matter under advisement.

A week later his judgment was rendered: "THAT PLAINTIFF TAKE NOTHING FROM DEFENDANT." (What might have happened if we hadn't stepped in?)

Now ACTRA Chapter brings the above to all CSEA members for what it believes to be good reason. In it is a warning. This kind of suit could be made against any service dealer. Even the best and most conscientious. And if one is, GET YOUR LOCAL ASSOCIATION BEHIND YOU. (If you feel the suit is unjust, of course.)

And, as the headline of this story notes, ACTRA ADVISES that every association watch for such suits as well. And even if the dealer being sued is not a member, GET BEHIND HIM AND FIGHT. You'll be fighting for every dealer in California.

Believe us . . . this is NOT much ado about nothing! Don't you agree?

**FAST ▶ FAST ▶ FAST ▶ FAST ▶**

**IF YOU NEED  
A PHILCO PART  
YOU CAN GET IT  
FAST!**

THERE'S A FULLY STOCKED  
PHILCO PARTS CENTER NEAR YOU

Whatever you need . . .  
just dial your Philco Parts Distributor

1. A nationwide network of Parts Distributors.
2. Backed by Parts Warehouses with millions of dollars in parts.
3. Parts for new models shipped automatically!
4. Orders handled by experienced parts specialists.
5. Emergency orders transmitted fast . . . processed within 24 hours.

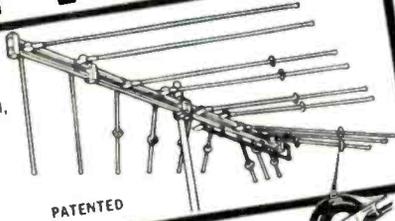
PARTS & SERVICE OPERATIONS  
**PHILCO**  
A SUBSIDIARY OF *Ford Motor Company*

**FAST ▶ FAST ▶ FAST ▶ FAST ▶**

See all\* L.A. UHF/VHF Channels 2 to 83!

**JFD LPV LOG PERIODIC ANTENNA**

shown: model LPV-VU9  
(one of 5 JFD models for local, suburban and fringe areas)  
VHF — up to 100 miles  
UHF — up to 40 miles  
FM — up to 40 miles



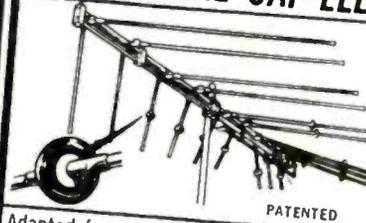
PATENTED

Install the powerful new JFD LPV Log Periodic with Cap-Electronic Dipoles for the best color or black and white TV on channels 2 to 83 (plus FM). The secret of its superior performance is in the capacitor-coupled dipoles that work electronically to provide more picture power on every channel. Only the JFD Cap-Electronic Dipole works like a super-sensitive satellite tracking antenna to pull in extra-sharp reception on every station—now and in the future. Developed from research performed at the University of Illinois Antenna Research Laboratories.

In Southern California call Western Union Operator 25 for the name of your nearest JFD dealer!

WHY USE 2 WHEN 1 WILL DO?

INSTALL THE new **JFD LPV LOG PERIODIC ANTENNA WITH THE CAP-ELECTRONIC DIPOLES!**



PATENTED

features amazing new capacitor-coupled dipoles that work electronically for more picture power!

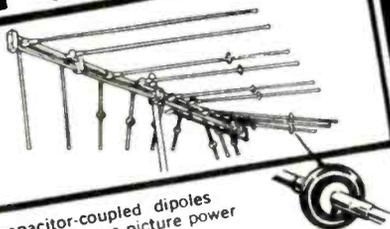
—ENJOY ALL LOS ANGELES UHF/VHF CHANNELS 2 TO 83— AND FM STEREO WITH ONE POWERFUL ANTENNA \*Including the new UHF channel 28.

Adapted from antennas used in space-craft research, the JFD LPV Cap-Electronic Dipole Log Periodic gives you brilliant reception in COLOR, black/white TV—FM Stereo, too. So why use two outdated antennas when one modern JFD Cap-Electronic Log Periodic will do? — on all channels 2 to 83! Developed from research performed at the University of Illinois Antenna Research Laboratories. In Southern California call Western Union Operator 25 for the name of your nearest JFD dealer!

Enjoy new UHF Educational Channel 28 plus All other VHF/UHF channels 2 to 83, (and FM/Stereo) with One Antenna

**THE NEW JFD LPV LOG PERIODIC ANTENNA**

shown: model LPV-VU9  
VHF — up to 100 miles  
UHF — up to 40 miles  
FM — up to 40 miles



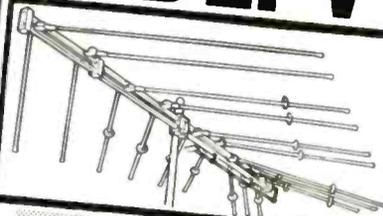
Features amazing new capacitor-coupled dipoles that work electronically to provide more picture power on channels that need it most. The first and only all-channel (2 to 83) VHF/UHF/FM/Stereo antenna—the JFD Cap-Electronic Dipole Log Periodic is here! Why gamble on clumsy, troublesome antenna hodge-podes, when one JFD Cap-Electronic Dipole LPV Log Periodic does the job—beautifully! Developed from research performed at the University of Illinois Antenna Research Laboratories.

In Southern California call Western Union Operator 25 for the name of your nearest JFD dealer!

Tuning in on new UHF Channel 28?

Why gamble on clumsy, ineffective antenna hodge-podge? Get the new UHF educational channel 28 plus all other VHF/UHF channels 2 to 83, (FM/Stereo, too!). INSTALL THE NEW

**JFD LPV LOG PERIODIC ANTENNA**



shown: model LPV-VU9  
VHF — up to 100 miles  
UHF — up to 40 miles  
FM — up to 40 miles

features super-sensitive new capacitor-coupled dipoles that work electronically for more picture power on every channel. The new JFD Cap-Electronic Dipole LPV Log Periodic is the first and only single antenna that works on all channels 2 to 83, (and FM).

It is based on the same design as that of satellite-tracking antennas to give you brilliant reception in COLOR, black/white TV—even FM Stereo. So if you are converting your set or buying a new all-channel 2-83 UHF/VHF TV, a new JFD LPV Log Periodic with Cap-Electronic dipoles is a "must." Developed from research performed at the University of Illinois Antenna Research Laboratories.

In Southern California call Western Union Operator 25 for the name of your nearest JFD dealer!

STARTING DECEMBER 6 IN THE TV TIMES SECTION OF THE SUNDAY LOS ANGELES TIMES & SUNDAY SAN DIEGO UNION

**JFD KICKS OFF ITS TREMENDOUS LPV-VU WESTERN UNION OPERATOR 25 ADVERTISING PROGRAM**

Yes, right through the holiday season (from December 6 to January 10), a Western Union Operator will be calling in hot JFD LPV-VU antenna leads to you! See your JFD distributor and stock up. Be ready to profit on Southern California's biggest TV Antenna bonanza—the JFD LPV-VU Cap-Electronic All-Channel Log Periodic!

# DUNBAR PICTURE TUBES

— Manufactured in the West's Newest Most Modern Tube Factory!

## BONDED FACE PICTURE TUBES

They said it couldn't be done . . . but DUNBAR is doing it! The first independent tube plant to de-laminate and laminate bonded face picture tubes. Old plates removed, new plates replaced. Tubes processed electrically. 1 YEAR GUARANTEE.

SPECIAL ANY 23" BONDED TUBE **\$29.50** EX.

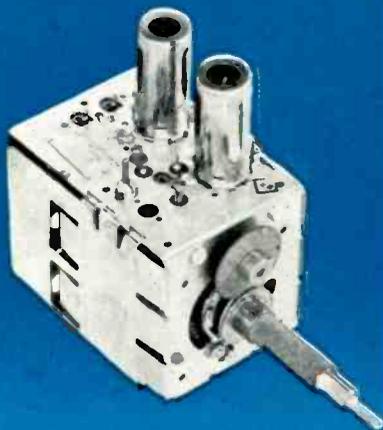
WRITE FOR PRICE LIST

Shipments anywhere in California. Free delivery in Los Angeles area.

## DUNBAR SALES CO.

2033 Venice Blvd.  
Los Angeles, Calif. RE 5-1104

# TUNER REPAIRS



# \$9.50

## FOR COMPLETE OVERHAUL

Includes ALL parts (except tubes)  
ALL labor on ALL makes

24-HOUR SERVICE with  
FULL YEAR WARRANTY

Sarkes Tarzian, Inc., largest manufacturer of TV and FM tuners, maintains two completely-equipped Service Centers to serve YOU. Both centers are staffed by well-trained technicians in this specialized field and are assisted by engineering personnel to assure you of FAST, DEPENDABLE service.

⊕ Tarzian-made tuners—identified by this stamping—received one day will be repaired and shipped out the next. A little more time may be required on other makes. Every channel is checked and re-aligned per manufacturer's specifications, not just the channels which might exist in any given area.

You get a 12-month guarantee against defective workmanship and parts failure due to normal usage. Cost to you is only \$9.50 and \$15 for UV combinations, including all labor and parts except tubes. No additional costs. No

hidden charges. All tuners repaired on approved, open accounts. You pay shipping. Replacements on tuners beyond practical repair are available at low cost.

When inquiring about service on other than Tarzian-made tuners, always send TV make, chassis and Model number. Check with your local distributor for Sarkes Tarzian replacement tuners, parts, or repair service. Or, use this address for fast factory repair service.



**SARKES TARZIAN, INC.**  
TUNER SERVICE DIVISION

See your distributor,  
or use this address

10654 Magnolia Blvd.,  
North Hollywood, Calif.  
Tel: 769-2720

MANUFACTURERS OF TUNERS... SEMICONDUCTORS... AIR TRIMMERS... FM RADIOS  
AM-FM RADIOS... AUDIO TAPE... BROADCAST EQUIPMENT

## UHF ANTENNA SYSTEMS

(Continued)



U3V and U4V

In larger buildings with coaxial cable VHF systems, we resort to a convertor at the head end to distribute a UHF channel at VHF. Any one UHF channel can thus be converted to any one VHF channel. It takes a separate convertor for each additional conversion. These have to be ordered by channel numbers, both for the UHF and VHF channels. For example, the Jerrold U3V (unamplified) or U4V (with transistorized post amplifier) requires the notation 28-6 for that particular conversion.

The basic convertor consists of two units, a mixer "head" and a local oscillator (See photo U3V & U4V). The mixer head is an assembly of three cavities and a crystal, using coaxial connectors, and is weatherproof and mountable on a regular antenna mast. The local oscillator is on a separate chassis with its own power supply for indoor use. The conversion must be made to an unused VHF channel and this signal is then joined into the master system. This is not true UHF distribution, but it does have other benefits. Pro rated over 50 or more taps in a coax VHF system, the reasonable cost of installation is economically feasible to building owners. The occupant gets UHF programs on a VHF channel without the need of a top-of-the-set convertor or an all-band set. Since such system conversions tend to keep in use existing VHF receivers, the installer should take advantage of his access to these receivers (through maintenance of the system) to solicit service business on these aging sets.

By taking advantage of the market, the products, and the free technical assistance available, a service dealer can make extra profits in this growing field of UHF installations.

MODERN ELECTRONIC SERVICE DEALER

# Winegard

brings you the first low cost all-channel UHF antenna amplifier (channels 14 to 83)



## look at what the UHF-110 will do!

### ADDS MANY MILES TO RECEPTION DISTANCE.

- Improves over-all signal-to-noise ratio as much as 12 DB
- Practically Eliminates Snow for better pictures
- Works perfectly on color and black and white

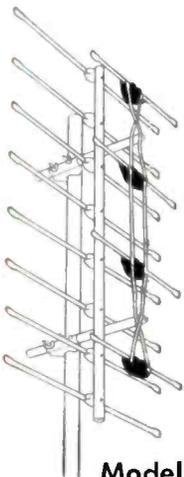
Never before has an all-channel antenna amplifier been available for UHF. Now, at a price that everyone can afford, the new Winegard Model UHF-110 brings to UHF the same sensitivity and low noise reception as VHF! This means you can clear up snowy UHF pictures, get distant stations,

and new clarity to color and black and white TV!

Model UHF-110 employs a new, ultra low noise RF transistor that amplifies UHF signals on all channels 14-83. It works on any UHF antenna and can be mounted on the antenna boom, mast or remote. Has balanced 300 ohm input and output, lightning protected circuit—no transistor burn-out, comes with an all AC power supply. No polarity problems.

For your next UHF installation, try the new Winegard MODEL UHF-110. Ask your distributor or write for spec. sheets.

other UHF products by Winegard . . .

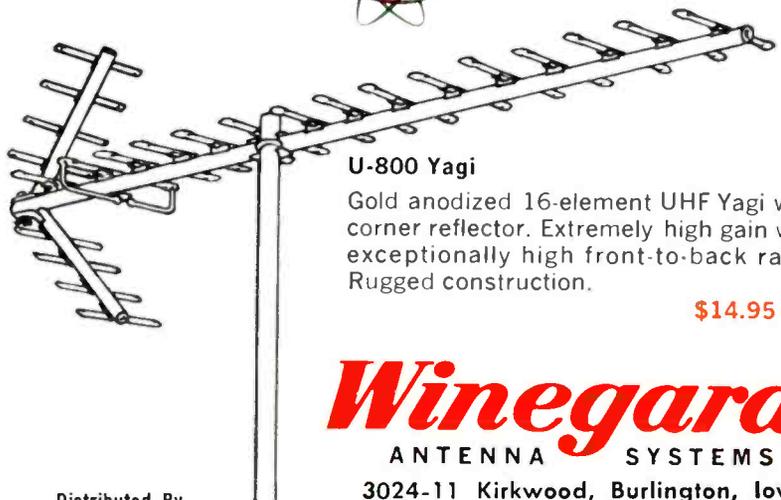


### "Ultra-Beam" Antenna

Gold Anodized colinear UHF antenna for all areas including deep fringe. As much gain as an expensive parabolic.

\$12.50 list.

Model U-730



### U-800 Yagi

Gold anodized 16-element UHF Yagi with corner reflector. Extremely high gain with exceptionally high front-to-back ratio. Rugged construction.

\$14.95 list.

Distributed By

**QUEMENT  
ELECTRONICS**  
1000 S. Bascom Ave., San Jose  
CY 4-0464

**HURLEY  
ELECTRONICS**  
1429 S. Sycamore Ave., Santa Ana  
KI 3-9236

**DUNLAP  
ELECTRONICS**  
1900 18th St., Sacramento  
GL 2-3171

**RADIO PARTS  
COMPANY**  
2060 India Street, San Diego  
232-8951

# Winegard

ANTENNA SYSTEMS

3024-11 Kirkwood, Burlington, Iowa

## DISTRIBUTOR ADVERTISING INDEX

### SAN FRANCISCO-OAKLAND

Associated Radio Distributors, 1583 Howard St., S.F. HE 1-0212  
 Calctron Corp. of Calif., 33 Gough St., S.F. 621-3400  
 Edisco, Inc., 5901 Mission St., San Francisco UN 6-7087  
 Miller's Radio & TV Supply, 530 East 8th St., Oakland TE 4-9185  
 Styles & Engleman, Inc., 25354 Cypress Ave., Hayward 352-1933

### SACRAMENTO-CENTRAL CALIF.

Dunlap Electronics, 1800 18th St., Sacramento 444-8070  
 Norcal Electronics, 1115 "R" Street, Sacramento 442-9041  
 Quement Electronics, 1000 So. Bascom Ave., San Jose CY 4-0464

### LOS ANGELES, LONG BEACH, SO. CALIF.

Andrews Electronics, 1500 W. Burbank Blvd., Burbank TH 5-3536  
 Dean's Electronics, 2310 Long Beach Blvd., Long Beach GA 7-0955  
 Electronic Supply Riverside, 2486 Third St., Riverside OV 3-8110  
 Figarts Radio Supply, 6320 Commodore Sloat Dr., L.A. WE 6-6218  
 Hurley Electronics, 1429 S. Sycamore Ave., Santa Ana KI 3-9236  
 Hurley Electronics of Inglewood, 1210 E. Hardy St., Inglewood OR 8-7644  
 Kiesub Corp., 311 W. Pacific Coast Highway, Long Beach HE 6-9697  
 Philco Corp., 6393 E. Washington Blvd., L.A. RA 3-0345  
 RCA Victor Dist. Corp., Inc., 6051 Telegraph Rd., L.A. RA 3-6661  
 Western Electronic Supply Corp., 229 S. Orange, Glendale CH 5-4764  
 Wholesale Electronic Supply, 265 S. Laurel, Ventura MI 8-3163

### SAN DIEGO

Radio Parts Company, 2060 India St., San Diego 232-8951  
 RCA Victor Dist. Corp., Inc., 820 West "F" St., San Diego 234-6316  
 Southland Electronics, 3610 University, San Diego AT 3-3941

**2 YEAR  
WARRANTY**

**ALL NEW**  
*Rauland*  
**PICTURE TUBES**



Rauland Quality, Performance and Completely New Construction has made it possible for us to offer dealers a full two-year, full value warranty.

**THE CHOICE IS YOURS—WHY  
NOT SELL THE FINEST?**

MFG. BY THE RAULAND CORP.  
A subsidiary of Zenith Radio Corporation

**Dean's Electronics**  
*Long Beach*

**2310 LONG BEACH BLVD.**  
GA 7-0955 TE 5-0256 VA 7-5660



**CLASSIFIED ADS**

BUY, SELL, TRADE, HIRE HERE

### WRITE YOUR OWN WANT AD

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Blind Box No.? \_\_\_\_\_ Run for \_\_\_\_\_ times.

How large do you want ad? \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

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

Signature \_\_\_\_\_

Clip Out and Mail to GRAYCE KENNEDY, 4041 Marlton Ave., L. A. 8, Calif.

**HOW TO WRITE YOUR AD.**  
Figure approximately 6 words to the line.

**RATES:** \$.95 Per Line. Minimum five lines.

**DISCOUNTS:** Less 10% 2nd & 3rd times; less 15% thereafter.

**BLIND BOX NO'S:** Add 50c.

**POSITIONS WANTED:** Less 15% cash with order.

**GRAYCE KENNEDY**  
Classified Ad Manager  
Phone (Los Angeles)  
AXminster 2-0287

### POSITION OFFERED

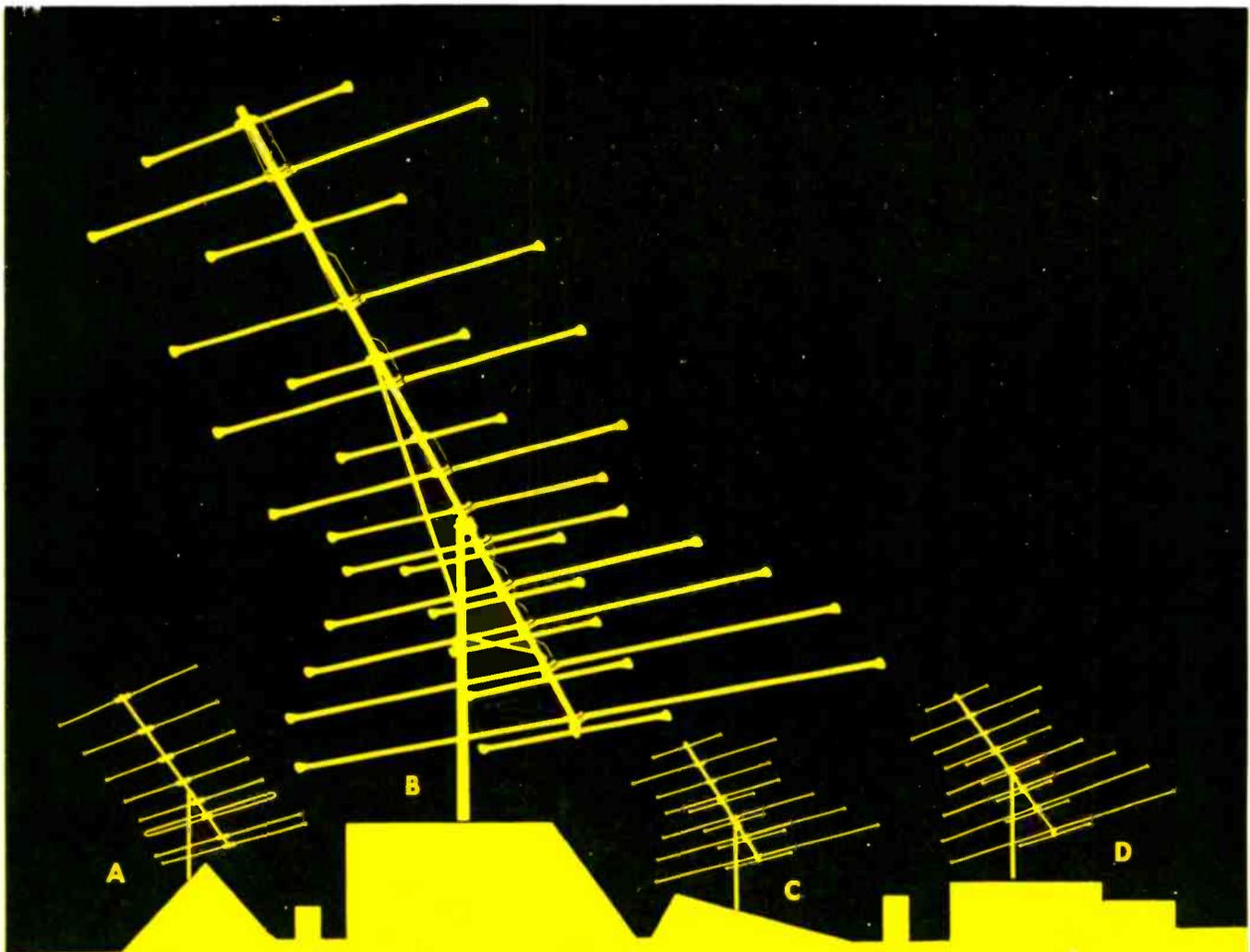
**T.V. SERVICEMEN**  
EXPERIENCED ONLY  
**RCA SERVICE CO.**  
2814 No. Naomi, Burbank  
TH 2-5181  
An equal opportunity employer

### USED TV'S FOR SALE

**USED TV'S**  
**WORKING—**  
**LATE MODEL**  
**THINLINE**  
**PORTABLES**  
LOW SHIPPING COSTS  
TV BROKERS—WE 1-6622  
4920 W. Pico, L.A. 19, Calif.

### EQUIPMENT FOR SALE

NEW CONDENSER microphones complete with cables and power supply made in Sweden. One cardioid and one variable pattern remotely controlled, microphone size is shape of cigar. Net \$155-\$195. LOUROS, 46 E. San Antonio St., San Jose, Calif. 13.



# RCA OUTDOOR ANTENNAS

the name... the features... the line that sells

Now you can select the best model for your customer's location from this new RCA outdoor antenna line that combines all-channel yagi and multiple cross-driven types. Satisfy them with the sharpest color and black-and-white pictures.

Explain the RCA *exclusive* feature in customer language. Only RCA antennas feed energy directly into the transmission line from low band driven elements. These are capacitively coupled, positioned directly above high band driven elements. RCA, of course, phases low and high band directors for best high band performance.

A. RCA 500 FM antenna. Eight-element yagi. Acute directivity. 88 to 108 MC. VSWR 1.25:1. Average eight db gain.

B. RCA 400 antenna. 19 elements, for fringe area or distant reception.

C. RCA 200 antenna. 11 elements, for local reception.

D. RCA 300 antenna. 13 elements, for suburban and near fringe area locations.



**CAPACITIVELY COUPLED**

In addition, RCA's electro-lens director system absorbs maximum incoming signal power, gives extremely high gain across the VHF band, offers excellent forward gain on the front end.

More customer interest! A gold anodized finish protects every RCA antenna from weather corrosion. Wrap-around mast clamp aligns antenna on mast, prevents boom crushing.

Just call your RCA Victor distributor. Look at and learn about RCA 200, 300, 400 antennas... from the color TV pioneer! From there on... sell!

RCA PARTS AND ACCESSORIES, CAMDEN, N.J.



THE MOST TRUSTED NAME IN ELECTRONICS

**RCA VICTOR  
DISTRIBUTING CORP.**

820 WEST "F" STREET, SAN DIEGO  
234-6316

**CALECTRON CORP.  
OF CALIF.**

33 GOUGH STREET, SAN FRANCISCO  
MA 1-3400

**RCA VICTOR  
DISTRIBUTING CORP.**

6051 TELEGRAPH ROAD, LOS ANGELES  
781-6501, RA 3-6661, 521-6960

**Now,  
JERROLD's  
great new  
line of**

# 12 POWERMATES

**gives you a transistor amplifier for every job**



Leave it to Jerrold! We've expanded our fast-selling line of Powermate transistorized antenna amplifiers and indoor amplified couplers to give you a Powermate tailored to every VHF, UHF, and FM stereo reception problem you're likely to run into, from deepest fringe to suburban and

metropolitan areas . . . for every need and every budget. For complete information on the indoor and outdoor Powermates described below, ask your Jerrold distributor or write Jerrold Electronics, Distributor Sales Division, Philadelphia, Pa. 19132.

## INDOOR POWERMATES



**Model TA-24**  
List price \$24.95

**Two-transistor four-set VHF coupling**—original Indoor Super Powermate offers highest gain/overload capability, low noise.

**Model TA-66**  
List price \$34.95

**NEW!**

**Two-set VHF, suburban to fringe**—economical Indoor Powermate Special amplified TV/FM coupler.

**Model TA-12**  
List price \$17.95  
Available November

**NEW!**

**Four-set VHF coupling, suburban to fringe**—economical one-transistor Indoor Powermate for TV and FM.



**Model SRX**  
List price \$29.95

**NEW!**

**FM stereo indoor amplification**—new Stereo Range Extender brings in distant FM stations, splits signal from TV on same antenna.

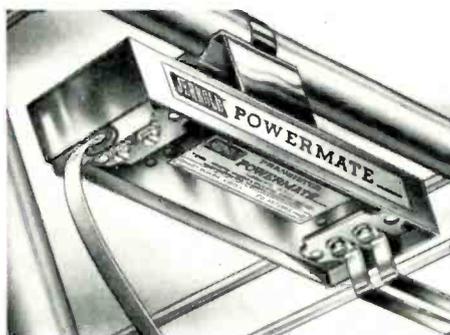
**Model SRX**  
List price \$29.95

**NEW!**

**UHF two-set indoor coupling**—UHF Indoor Powermate Special amplifies and isolates signals to two UHF sets from same UHF antenna.

**Model TAU-12**  
List price \$29.95  
Available October

## OUTDOOR POWERMATES



**VHF TV and FM amplification where overload is no problem**—original popular Powermate with exceptional gain throughout VHF and FM band. Dual outputs.

**Model APM-102**  
List price \$39.95

**High gain (VHF) without local-signal overload**—famous Super Powermate, with industry's best gain/overload capability.

**Model SPM-102**  
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