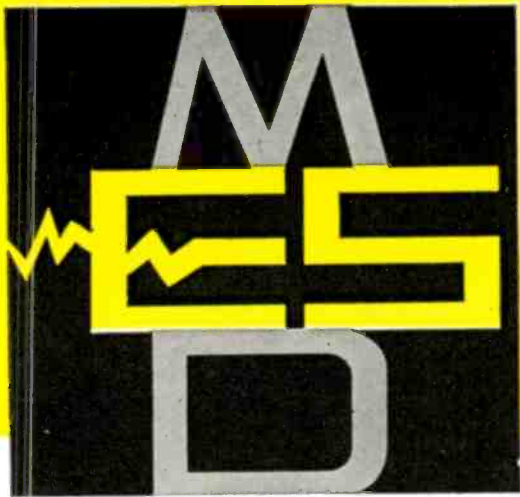


MODERN

1963 "WSBP"
Award Winner



electronic service dealer

THE OFFICIAL PUBLICATION OF THE CALIFORNIA STATE ELECTRONICS ASSOCIATION

VOL. 4, NO. 5

SEPTEMBER, 1964

Channel 28 Plans Hard Hitting Sales Campaign

Dealers Arise! The Revolution In TV Antennas Is Here

UHF CONVERTER BONANZA IN CALIFORNIA

UHF - Its Effect On Antenna Sales Now And In The Future

The "How To" Story Of Built-In Converters

How To Sell Converters To Your Present Customers

UHF Shapes and their Influence on the Market

you get **PRODUCT PLUS** from your *Sylvania Distributor*



The value of a name Dealers have long found that SILVER SCREEN® 85 picture tubes move off the shelves fast. Why? One big reason is the tube's precision-engineered features. Another is that through the years these same features have created the guaranteed acceptance of a *name*—SILVER SCREEN 85. ■ In picture tubes no brand name approaches the assured recognition of SILVER SCREEN 85 tubes. To your customers, the name means built-in quality and long life dependability. To you, SILVER SCREEN 85 picture tubes mean sales, profits, fewer callbacks, better satisfied customers. ■ Sylvania values that acceptance and safeguards it by applying every new research and development technique for product improvement. That's why the newest SILVER SCREEN 85 picture tubes have longer life and greater product uniformity. ■ Stay with the *quality* name in TV picture tubes—SILVER SCREEN 85. See your Sylvania Distributor.

SILVER SCREEN 85 picture tubes are made only from new parts and materials except for the envelopes which, prior to reuse, are inspected and tested to the same standards as new envelopes.

SYLVANIA
SUBSIDIARY OF
GENERAL TELEPHONE & ELECTRONICS **GTE**

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TWIN TRANSISTOR SUPER COLORTRON

Not 10 DB, not 15 DB but a whopping
33 DB gain on the low band and FM—
33 DB gain on the high band actually
amplifies the signals 45 times



TWIN TRANSISTOR STANDARD COLORTRON

18 DB gain on the low band and FM—
18 DB gain on the high band



NEVER BEFORE —33 DB gain!

NEVER BEFORE —Same gain on every channel 2—13 plus FM!

NEVER BEFORE— 3.5 DB noise figure or less on all channels!

POTENT **NEW** PRE-AMPS

from Winegard with Super High Gain

- First Pre-amps That Have Same Gain on Both TV Bands plus FM.
- Will Take Highest Signal Input of Any Twin Transistor Antenna Amplifiers Made.
- Have Lowest Noise Figure Ever Obtained on TV Antenna Pre-amps.
- Can Be Used on Any TV Antenna for Black and White, Color or FM.

Up to now there have been two serious drawbacks to *all* antenna pre-amps (including our own)—

First—there have never been antenna pre-amps that had enough gain for *every* application. Second—all antenna pre-amps have had from 4 to 6DB gain less on the high band. This is unfortunate because the high band channels normally need pre-amplification more than the low band due to greater reception losses at the higher frequencies.

NOW Winegard has created two big solutions to this problem—the Super Colortron with a flat 33 DB measured gain on all channels 2—13 and the Standard Colortron with a flat 18 DB gain on all channels 2—13. For example, the Super Colortron will blow up a 50 microvolt signal to 2250 microvolts even on 13, the highest channel. Compare this with the best twin transistor pre-amps previously available where a 50 microvolt

signal would be amplified only to 175 microvolts—a tremendous difference in signal power. This increase in amplification will cover *all* applications—particularly for *fringe* area color. (See comparison charts to the right).

Of equal importance to gain is the noise figure of a pre-amp. Winegard engineers have lowered the noise figure on these new pre-amps as much as 2 DB over any other TV pre-amp available. They will bring perfect color even to deep fringe areas.

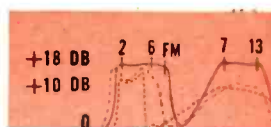
Compare these new Winegard antenna pre-amps with any others on the market today. Compare construction—totally weather-proofed polystyrene case, even the terminals are protected . . . convenient, rugged mounting bracket that snaps-on boom. Compare performance—highest gain . . . lightning protected circuit . . . lowest noise! Then try a new Twin Transistor Colortron and see it in action!

The Super Colortron (AP75T) uses a 75 ohm system with RG59U Coaxial cable. Has three RG59U Connectors. For runs of over 70 ft., RG11U is recommended. The AP75T supercedes the AP215N. Model AP75T lists for only \$79.95.

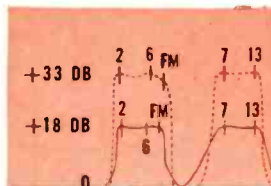
SPECIFICATIONS: GAIN: +33 DB per band. BAND PASS: 54MC-108MC, 174MC-216 MC. RESPONSE $\pm \frac{1}{4}$ DB per 6 MC channel. VSWR: Input 1.5:1. Output: 1.75:1. MAX. SIGNAL INPUT: 55,000 MV. MAX. SIGNAL OUTPUT: 2,000,000 MV. INPUT IMPEDANCE: 300 ohm. DOWNLEAD IMPEDANCE: 75 ohm. OUTPUT IMPEDANCE 75 or 300 ohm. 117V 60 CPS 1.8 watts.

The Twin Transistor Colortron Antenna Amplifier (AP220T, 300 ohm) lists for only \$44.95. The AP275T (75 ohm) amplifier lists for \$49.95.

SPECIFICATIONS: GAIN +18 DB per band. BANDPASS: 54 MC-108 MC, 174 MC-216 MC. RESPONSE $\pm \frac{1}{4}$ DB per 6 MC channel. VSWR: Input 1.5:1. Output: 1.75:1. MAX. SIGNAL INPUT: 80,000 MAX. SIGNAL OUTPUT: 660,000 MV. INPUT IMPEDANCE: 300 ohm. OUTPUT IMPEDANCE: AP-220T—300 ohm, AP275T—75 ohm. 117V, 60 CPS. 1.8 Watts.



COMPARE THESE GAIN CURVES AGAINST COMPETITIVE MAKES. CURVES TAKEN FROM SCOPE PHOTOS.
 - - - - BRAND J
 - - - - BRAND B
 ——— WINEGARD COLORTRON (AP220T)

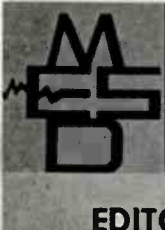


ACTUAL MEASURED CURVES PROVE A FLAT 18 OR 33 DB GAIN . . . HIGH BAND, LOW BAND, FM, TOO.
 - - - - WINEGARD AP75T
 ——— WINEGARD AP220T

<p>COLORTRON TWIN NUVISTOR ANTENNA AMPLIFIER (AP220N). 300 ohm. Input: 500,000 microvolts . . . highest of any amplifier, tube or transistor. List \$39.95. AP275T (75 ohm) List \$44.95.</p>	<p>TWIN NUVISTOR FM AMPLIFIER ONLY. (AP320). 18 DB gain. 180,000 Microvolts Input. List \$39.95. AP375—same, but coax. List \$44.95.</p>	<p>REDHEAD SINGLE TRANSISTOR ANTENNA AMPLIFIER (RD300) Most reliable, highest gain single transistor model available. Input: 20,000 microvolts. 300 ohm Input and output. List \$29.95.</p>	<p>UHF 212—Twin Transistor UHF antenna amplifier has 12 DB gain on all UHF channels 14-83. Noise figure 8 DB at 900 MC. List \$44.95.</p>	<p>UHF 110X Single transistor UHF antenna amplifier has +8 DB gain on channels 14-72. List \$34.95. UHF 110T (transistor model) —same, but has 12 DB gain on channels 72-83. List \$34.95.</p>
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Winegard Co.
 ANTENNA SYSTEMS

3009-A Kirkwood, Burlington, Iowa
 World's most complete line of TV&FM reception equipment.



EDITORIALLY SPEAKING

By DON MARTIN

OPEN LETTER TO CBS

On July 29, 1964 during a segment of the BIG NEWS at 6:00 p.m., the Television Service Industry was brought to the attention of the viewing public. The subject matter involved a customer of a particular service business in Los Angeles.

At the end of this program the commentator stated that, to the effect, it looks as if the consumer should fix the set himself rather than trust a Television Serviceman. An exact transcript of this program is in the hands of the officers of the California State Electronics Association and, through their public relations chairman Howard Singer, have asked for a meeting with CBS officials to discuss this program and to give them a better understanding of what is being done and what has been done to create a better industry.

It seems to me that the greatest boon to public information, the Television broadcasting Industry, is biting the hand that feeds them. When the monster isn't operating the Television ratings aren't working and commentators can go out of business. Why is there such a lack of understanding by the Stations of the importance of the Television Service Industry. Why can't they recognize the Serviceman as an independent businessman that is doing his best to earn a living and to up-grade his industry to the level it deserves. If these people would take the time to learn more about the Associations, the new laws, and how these achievements were accomplished they wouldn't come up with such immature statements as "you had better fix it yourself." With some 20,000 volts of power this commentator could be inviting the death of a viewer.

Every profession and industry has its bad ones and the Television Industry has had more than its share. Through years of work a great change has taken place. Television repair bills are no longer at the top of the B.B.B. complaint list . . . they are not even in the top ten . . . so why should this continual reaction of placing all Television Servicemen in the category of crooks? A television Serviceman receives \$5. if he is lucky, for a service call whether on Sunday, Holidays or at night. When that set goes out it is a major problem in most homes, especially when they have children, and they want it fixed now. A plumber, to fix a plugged toilet, using a snake gets anywhere from \$25 to \$45 for about 30 minutes of work. An electrician receives \$10 for putting in a new light switch that takes about five minutes. They are not called crooks, on a major Television Station News Programs, so why must the Television Service Industry be so mis-judged?

To my way of thinking, CBS is not too big that it doesn't need the goodwill of the Service Industry. Instead of knocking it why not point out some of the things that have been accomplished, over the past five years, that will help build consumer confidence in the Television Service Industry?

CBS, at this date, have not acknowledged receipt of the letter sent by CSEA asking for a meeting to discuss what has been done and what is being done. I can not conceive of their ignoring this communication as a crack pot letter by some thin skinned servicemen in dirty shirts. Our Industry continues to grow in stature and it is time that the Television Broadcasting Industry recognize this fact and work for the betterment of all segments of the Industry. This editorial is being sent to every major Television Station in California in an effort to prevent any

further occurrence of such adverse "OPINION" being expressed over the air. If it is news then by all means report it but don't voice an opinion that this is a common occurrence.

CRUSADE AGAINST UNETHICAL ADVERTISING

Today, after almost four years of work, most law enforcement agencies, along with the new Bureau of Electronic Repair, recognize the fact that it is impossible for a service dealer to advertise \$1 house calls, and other such gimmicks, legitimately and make a profit. For years this type of operator went unmolested and continually bilked the consumer on the installation of unnecessary tubes and parts. The buck got them inside the door but, as we all know, the additional five or six had to be picked up through another means.

Now, after the work of several dealer organizations over a period of years, the \$1 house call has left the main stream of advertising but can still be found in throw-away newspapers, direct mail circulars and hand bills. This type of advertising is very difficult to trace and is becoming more and more popular.

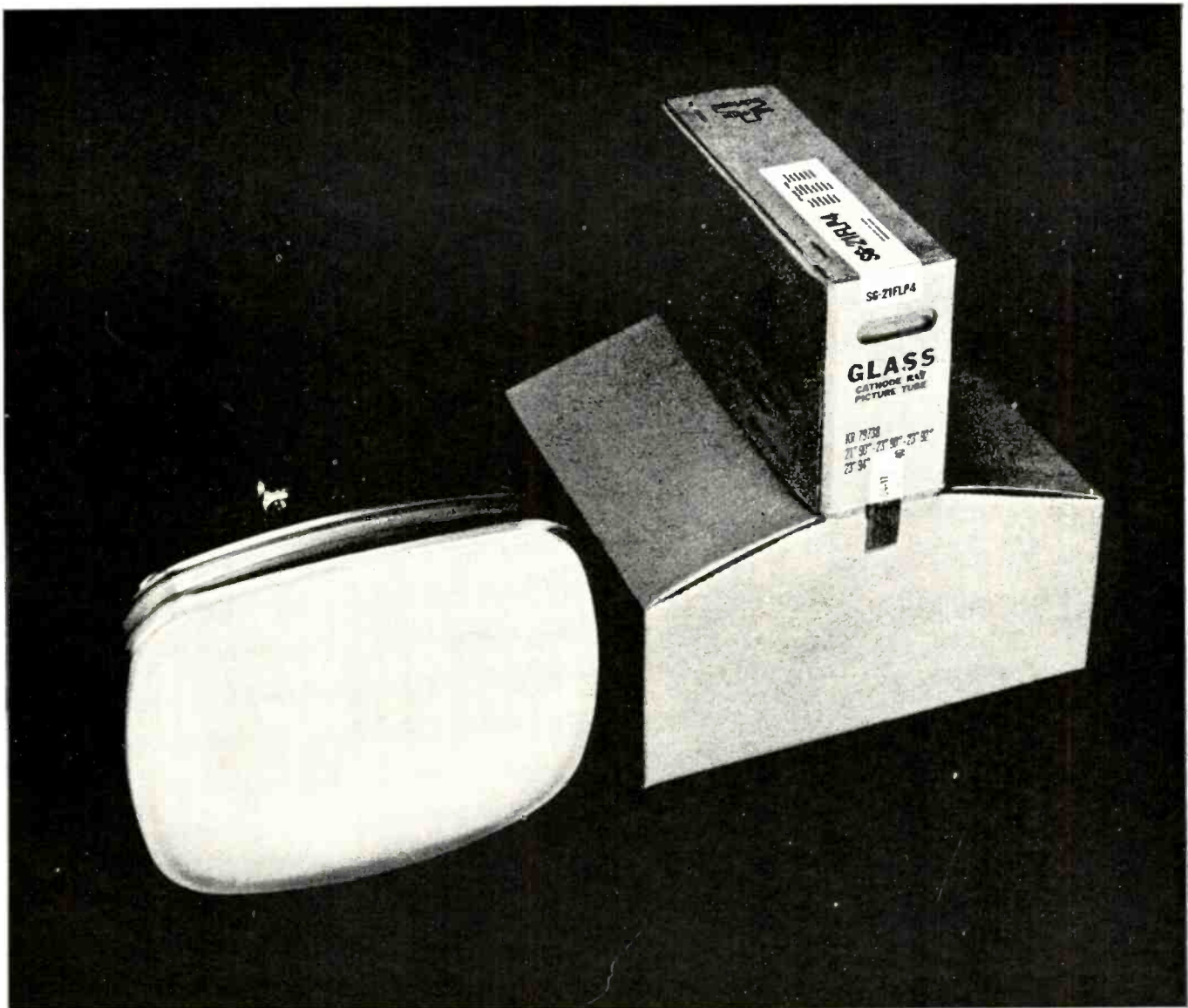
Of course, many of these same shops are not registered under the new law and also refuse to leave shop address, etc. as required. In a recent speech before the California State Electronics Association in Fresno Dan Weston, Chief of the Bureau, stated that this type of unfair competition, as well as phoney work, must be stopped and his office will do everything possible to bring it under control. He felt that until it is stopped the Television profession will never reach the high plan of consumer acceptance that it deserves.

In an all out effort to uncover this type of operator the California State Electronics Association is starting a "Crusade against unethical advertising." Under this program, you do not have to be a member to participate, every legitimate service dealer is asked to be on the lookout in his local newspapers, in his mailbox and at his home for any advertising being placed. The clippings or leaflets should then be placed in the mail to the California State Electronics Association, 5154 No. Palm Ave., Fresno, California. This material will then be checked and all non-registered shops will be turned in to the Bureau for further action. The Bureau is in the process of contact investigation as more and more time is becoming available. The real value of their work is yet to come and it needs the cooperation of the industry in order to make it work.

BUREAU'S FIRST SIX MONTH RECORD REVEALED

The Bureau of Electronic Repair Dealers Registration has just finished their first six months of operation and have released some interesting statistics. The total number of dealers registering under the new law hit a total of 6,803 with renewals already hitting over 4,000. As for cases the Bureau has received over 672 for the first six months with 342 being completed and 330 still under investigation. During the same period they received 754 complaints on registered shops, and 1,674 on non-registered shops for a total of 2,428. Of these complaints 2,050 are still pending and 378 have been closed. This action resulted in the prosecution of one shop owner and his conviction. The result of the other complaints was the compliance of the law for 350, 8 were not under the jurisdiction of the Bureau, 9 made informal adjustments and 10 were dismissed for insufficient evidence.

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

WHOLESALE ELECTRONIC SUPPLY
265 So. Laurel, Ventura
209 W. Cannon Perdido, Santa Barbara

HURLEY ELECTRONICS OF INGLEWOOD
210 E. Hardy St., Inglewood

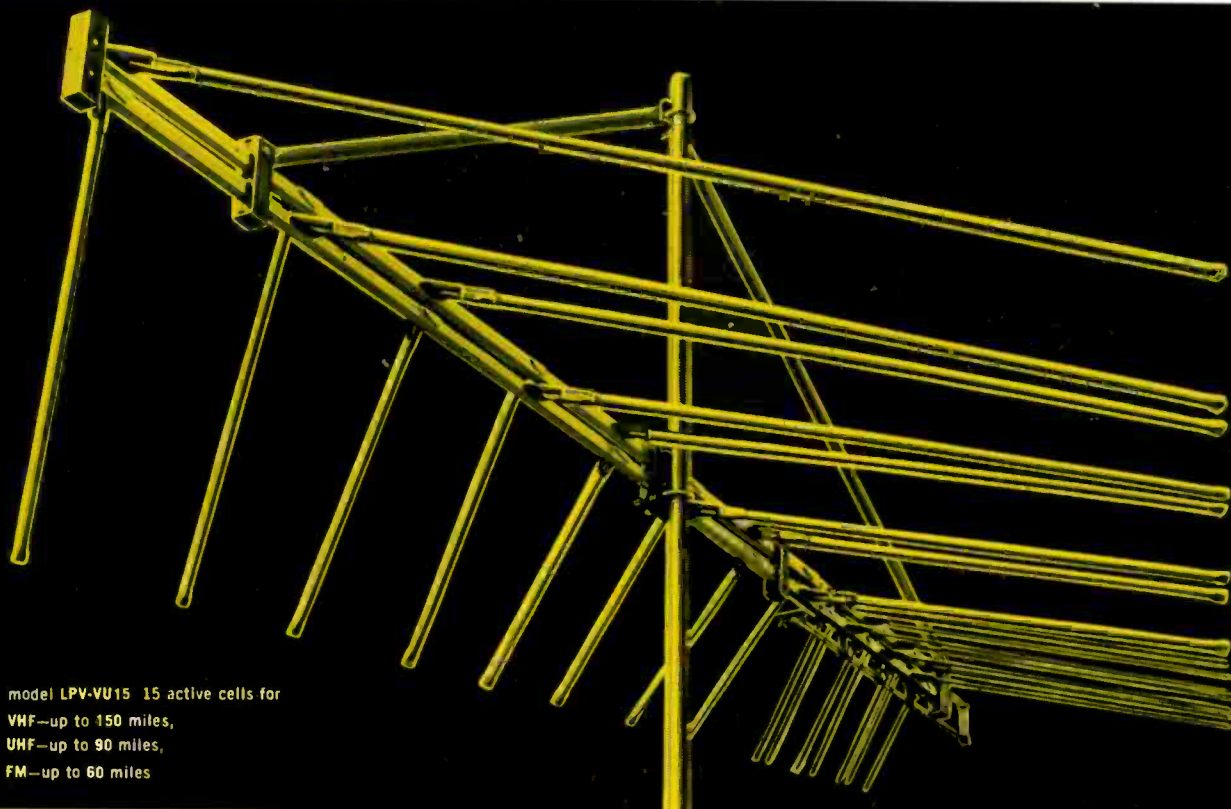
EDISCO, INC.
5901 Mission Street, San Francisco

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

NEW... FROM THE JFD CHAMPAIGN, ILLINOIS LABORATORIES

JFD LPV-VU LOG PERIODIC

—the world's first all-channel VHF/UHF/FM antenna with single down-lead!



model LPV-VU15 15 active cells for
VHF—up to 150 miles,
UHF—up to 90 miles,
FM—up to 60 miles

space-age engineered for finest COLOR and B/W TV... FM/STEREO reception!

Two years ago, JFD made history with the revolutionary new Log Periodic LPV antenna for VHF/TV and FM. Now, the totally new JFD LPV-VU Log Periodic—the world's first VHF/UHF/FM antenna—will make new history for JFD dealers and distributors!





Engineered by the JFD R & D Laboratories, the LPV-VU is today's most advanced application of the patented log periodic concept of the Antenna Research Laboratories of the University of Illinois because:

1. The JFD LPV-VU is the first and only truly all-channel antenna to receive all FCC authorized VHF and UHF TV channels 2 to 83, plus all FM/Stereo frequencies.
2. Frequency independent log periodic design provides an unprecedented combination of remarkable gain... flat, full bandwidth response... sharp directivity... high front-to-back ratios... matched impedance and low VSWR on all TV and FM bands.
3. Only one downlead is required (a JFD AC80 splitter is included so lead-ins can be run to VHF, UHF and FM set terminals).
4. Unique low-impedance twin crossarms (in place of usual crossed feeder harness) help effect maximum distribution of all VHF/UHF TV and FM signals without variance.

The JFD LPV-VU offers a host of new mechanical advances, too, such as the twin square aluminum crossarms, stainless steel terminals, oversized unbreakable Celanese "Fortiflex A" insulators, solid aluminum bus bar transformers—plus handsome, electrically-conductive gold alodizing.

Get the JFD LPV-VU from your local distributor today.

Why sell today's VHF/UHF/FM markets with yesterday's antennas? Rely on the JFD LPV-VU Log Periodic to make the sales others can't—in color, black and white, and FM stereo!

Model	Description	List
 LPV-VU18	18 Active Cells VHF—up to 175 miles UHF—up to 90 miles FM—up to 75 miles	69.95
 LPV-VU15	15 Active Cells VHF—up to 150 miles UHF—up to 90 miles FM—up to 60 miles	59.95
 LPV-VU12	12 Active Cells VHF—up to 125 miles UHF—up to 65 miles FM—up to 50 miles	49.95
 LPV-VU9	9 Active Cells VHF—up to 100 miles UHF—up to 40 miles FM—up to 40 miles	39.95

Write for brochure 701 for details regarding FREE N. Y. World's Fair trips for JFD Log Periodic dealers.

Whether the location calls for VHF...or UHF...or FM...or VHF/UHF/FM—there is a JFD Log Periodic antenna to suit your installation needs—perfectly.

LICENSED UNDER ONE OR MORE OF U.S. PATENTS 2,958,081; 2,985,879; 3,011,168; 3,108,280 AND ADDITIONAL PATENTS PENDING IN U.S.A. AND CANADA. PRODUCED BY JFD ELECTRONICS CORPORATION UNDER EXCLUSIVE LICENSE FROM THE UNIVERSITY OF ILLINOIS FOUNDATION.



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

JFD ELECTRONICS

SOUTHERN CALIFORNIA DISTRIBUTORS

ANDREWS ELECTRONICS

1500 W. Burbank Boulevard
Burbank, California

DEAN'S ELECTRONICS

2310 Long Beach Boulevard
Long Beach, California

ELECTRONICS PRODUCT SUPPLY

1030 So. Cleveland
Oceanside, California

HURLEY ELECTRONICS

1429 So. Sycamore
Santa Ana, California

MARCUS ELECTRONICS

5751 W. Pico Boulevard
Los Angeles, California

PAPEL BROTHERS

4652 E. Third Street
Los Angeles, 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

LETTERS TO THE EDITOR

Dear Don:

After reading your comments about "May Parts Show" in your June issue—maybe we were not so far off the beam out here in trying to establish a functional local interest show.

I want to thank you for continuing to send me MESD. It is one more of the several ways for me to keep informed on trade goings on and believe me I miss the gang and the excitement of the competition and even the pressures.

I've just completed reading the June issue and I find myself more content that I'm not in this rate race anymore. Your various editorials and letters to the Editor show wide variety of opinions and no easy solutions. Give my best wishes to all.

Charley Sullivan

Nice to hear from you, Charley . . . I'm still holding out for a Dealer type show. it doesn't look like 1965, but we will still keep trying.

Gentlemen:

Your Association being the prime mover in achieving the TV Repair Law, soon to be one year old, it is right that you should have a few barbs sent your way to pin up with the compliments, most of which it appears are self-inflicted. The following impressions, I'll wager, reflect the opinion of a majority of the repairmen.

First off are the penalties. The law calls them "register fees." Actually they are fines. To date I've been fined \$70.00. For what??? Have they improved my service? Benefited my neighbor? Certainly not unless you call the bureaucrats, who will certainly descend upon us all too soon with myriad forms to fill out, neighbors. Oh that I had the funds to test the Act's constitutionality! It is labeled a Vocational & Professional Act. Is it too pertinent to suggest that an Auto Mechanic, a Doctor, a Realtor, etc., etc. are incapable of dishonesty?

Yet the Act singles out as suspect one class of citizens and infers, by statute, that you are not trustworthy and must pay at least \$35.00 per year whether you commit a crime or not. I tell you many repairmen harbor a savage resentment over this premise. Their first reply is something like this—"political gravy for the deserving, etc."

Since when did a law deter a crook? If that were so, seeing that our law libraries are stacked high, crime should be unknown. Locks are for honest people.

In conclusion: The Act should be repealed. It is a mistake. You folks helped make it. I suggest that you and your readers chip in a fund to Bob Marshall TV at Riverside who is the first victim of this monstrous Act.

One who detests penalties where no offense has been committed.

Allen Hughes

The war on unfair competition in the Television repair business as reported in another article in the June issue might be a start in the right direction. It shows a desire and a recognition of our problems from the new Bureau and all we can hope for is that the future will bring some changes. By the way, Doctors must also be registered under this same department of vocational and professional standards as the TV repair man. Actually, this law is the first recognition of the Television Repair Business as a profession.

Dear Don:

Just today received the June edition of MESD and read Bill Tanner's letter and I

agree with Bill wholeheartedly.

Bill is a thinker and usually analyzes a problem quite well and has a rational solution. I have dealt with Bill as a customer and myself as a wholesale salesman.

Tube discounts, to say the least, are murder on the wholesale level and my personal belief is the dealer who gets 50%-10% is getting all the budget allows, but as some people on the wholesale level get carried away, the discounts have gone to 50-20 and 60-5 put together with a premium on each tube worth anywhere from 5¢ to 7¢.

The wholesaler is now operating too close to the pocketbook before the discounts, I believe if these discounts were passed on to the customer the wholesaler should revert back to the standard 50-10. The additional discount was not for the customer but to help the dealer defray the cost of all those tubes out of code date, to say nothing of the increase in inventory due to the fantastic amount of new tubes coming out each month with each new chassis change.

I believe the reason I'm writing this letter is to get rid of wholesaler-retailer. In Bakersfield we have several in this position, and it creates the service dealer a problem. I think Bill is correct in assuming the customer would rather pay list on tubes without an increase in labor although it's hard to really analyze.

I would like to see the State Electronics Association put an exerted effort together to rid the business of this faction. As long as the customer can run down the street and pick up tubes wholesale, the service dealer is going to have a problem which compounds the situation he is already in. Take your tube discounts and put them to use in this direction, clean up your industry and the service dealer will profit, customer education is a big factor also, feuds in this field would also help.

Thanks for your ear and I'll leave you to your problems which incidentally are now mine, if I find a good solution I'll let you know.

Sincerely yours,
Rod Kimball
Round Hill TV
P.O. Box TV
Zephyr Cove, Nevada.

Your comments are always welcome, Rod . . . Judging from some other comments and calls you have some agreeers. Solving these problems we can not do, but making them public is our job. At least we have some thinking going on.

Dear Don:

I attended a meeting with the Santa Rosa Radio & Television Association last evening and they like your article on Pay TV in the magazine and would like your permission to reprint it, or excerpts from it, for the local newspapers. Please send this permission if given to: Ed Zyduck, President, 1025 Petaluma Hill Road, Santa Rosa, Calif.

Lee Hoy.

O.K. with me—anytime!—D. J. Martin.

Dear Don:

Mr. Jack Phillips of San Francisco (President of the Chapter) called today and asked that two copies of MESD be sent immediately to Assemblyman Charles Meyers, 579 Wildwood Way, San Francisco, California.

Sincerely,
Jim Wakefield.

Happy to do so.—D. J. Martin.

Continued on Page 29

Surefire Winners



surefire
SCRATCH
REMOVING
COMPOUND

...for mar-free plastics

Surefire quickly buffs away hairline scratches from any rigid plastic surface. It is a fast surefire repair for plastic TV screens, radio and TV cabinets, testing equipment dials, plastic TV tube masks and aircraft or marine windshields. Surefire is a must for every dealer, repair shop and serviceman's tool caddy. Ask your dealer or distributor for Surefire #956—it's packed 12/5 oz. jars to the case.



surefire
ANTI-STATIC
PLASTIC
CLEANER

...static free,
dust repellent

Surefire cleans and polishes any plastic surface while removing the static electric charge, thus rendering the surface *dust repellent!* Since Surefire

will clean and polish glass as well...TV servicemen find it indispensable for cleaning all TV screens—used on plastic instrument dials it insures true static-free readings—It is a must for cleaning aircraft and marine windshields and is recommended for final polishing after Surefire Scratch Remover has been used. Ask for Surefire #950, the handy 8 oz. refillable dispenser flask—Surefire is also available in pint and 1 gal. sizes for economy.

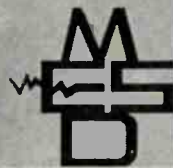


WILCLEAN
HAND CLEANER
...Hot or Cold

Wilclean, in any weather, cleans soiled or greasy hands in a flash—*with or without water!* Wilclean contains Hexachlorophene and soothing lanolin to protect the skin and is economical, too! Servicemen carry Wilclean #30, a 1# can, in their trucks and can clean their hands any time, anywhere, *even without water!* For the Repair Shops, Wilclean #30-2 is available, packed 2-5# cans with a handy wall dispenser. Ask for Surefire Wilclean Hand Cleaner from your favorite distributor.

Write Wilco Co., Dept. AID, 4425 Bandini Blvd., Los Angeles, California, 90023, or call your local distributor today!

surefire



MODERN
electronic
service dealer

PRESIDENT'S MESSAGE



RALPH JOHANNOT

The fall season will once again set the hectic pace of color TV sales. For the service dealer who has no sales department where does the future lie?

Practically every color set sold by the chain operator is sold with factory installation and service policy. The public is fed a line by the salesman that without such service that the product is practically useless and then pockets the commission for selling the warranty. Now, where with the first strike against him, does the independent get a chance at this consumer. Usually the user sticks with factory service until the value of the product prohibits the annual cost of such service. At this point when the repairs become costly and repetitious the dealer finally has his chance which is usually short lived and goes from dealer to dealer until the product is finally discarded.

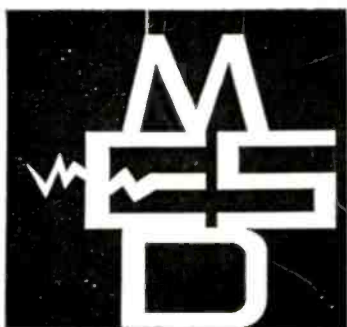
Now lets look at another side of the color story. One large manufacturer only allows dealers who have been schooled and authorized, to purchase their product at a price less the service and installation fee and if they have a proper service department. Fine you say! What happens to the sets that are sold to dealers without this servicing agreement? Have you ever tried to get some of this installation and service business for yourself? You are told that if you are a selling dealer (even if it is their own product) that you cannot do this work because it would interfere with the dealer who sold it. If you are a service dealer only you are told they are sorry but they already have a contractor for your locality. This often turns out to be a large service company that is far from being in your area and cares less of how the customer is treated and how long it takes to complete the job. The customer usually goes along with this poor service since they were told this was a factory authorized agency. Again I ask where does the independent dealer fit into the picture? Little by little there will be fewer and fewer sets for the independent to service as the roots of captive service get deeper and deeper. Also, what is left of the older black and whites sets the public is going to be willing to spend less on repairs. Portables are a "walk in" product that after a few years become more expensive to repair than replace.

Just how many portables that need picture tubes do you repair? I often wonder what happens to all these sets that have reached the end of the road.

Since "Quality Stabilization" has been shelved, what can be done to stop the "Percenter" from advertising sets, both Black and White and Color for five per cent above cost? These catalogue houses must always sell "Factory Service." Then, lastly, there is the manufacturer who has put merchandise on the floor on consignment. Many dealers have found that this product is so "footballed" that they can no longer give it floor space.

If the future is to have a "buck" left in it, the only way to hold our ground is to make a stand and to appeal, businessman to businessman, to the other segments of our industry—that the "Independent Dealer" must survive or there will be no one to sell or service his merchandise. Can we buy drugs "wholesale"? The answer was NO when a drug distributor was given a bonafide order of several hundred dollars—Yet this same distributor, distributes radio and TV receiving tubes to his many drug store customers—not to mention a line of vibrators, fuses, rabbit ears, etc! Who is to be blamed for the situation to be such as it is? This drug distributor? The Manufacturers who supply him with this "non-drug" items? Perhaps it is just the 20th century way of life—but one thing is very apparent and that is that if we, the small independent businessman, want to survive, we must show a united front and have the strength to deal openly and honestly with these other segments.

Many of the critics of C.S.E.A. have openly stated that it is an organization of technical meetings, social functions, and gab-fests. Admittedly this is true that these are three of the activities of a well rounded organization. But in all fairness they must also admit that the legislative, promotional, legal, business, organizational, and many other functions that are performed by C.S.E.A. for the Television Industry, directly benefit them whoever they may be—a non member dealer, a non-member distributor, a non-member manufacturer, or just a non-member. Why not learn all the facts by contacting any local C.S.E.A. office.



The California State Electronics Association

NEWS WIRE

An All Industry meeting has been called by the California State Electronics Association for Monday, September 14th in Sacramento at the Business and Professions Building, Room 102, 1020 "N" Street at 10:00 a.m. The purpose of this meeting is to bring together all segments of the Electronic Repair Dealer Industry to look at the "Current Trends and Future Outlook of the Television Service Industry." To date the discussion panel will include CSEA Prexy Ralph Johnnot, Bureau of Chief Dan Weston, Mrs. Helen Nelson of the State Consumer Council and Irv Tjomsland of Hurley Electronics in Inglewood. Others, yet to be named, will represent different segments of the industry and everyone is invited to attend.

CSEA has reaffirmed its opposition to Pay TV in California and are calling upon their members to participate in the program by distributing leaflets to their customers. In a direct communication to all Board of Director and Board of Delegate members Executive Secretary Jim Wakefield stated, "free folders in opposition to Pay TV are being made available to any person in the Service Industry who wishes to distribute them to their customers. The reason for making these available is the stand taken by both the Directors and the Delegates at past meetings, and which stand was re-confirmed at the Annual Meeting. Admittedly, in some areas, members are backing the proponents of STV, and as we are a democratic organization, we condemn no person or Chapter for taking a stand on their own. However, due to the uncertainty of the Television Serviceman's position in the STV picture (Sales are also included in this), we must make a stand. Your cooperation is asked in getting the orders for leaflets from your members and seeing that they are sent into the State Office in Fresno." Anyone can participate and, if they wish, may obtain these leaflets from the Committee for Free TV or write CSEA in Fresno.

Under the direction of Bob Reynolds of San Bernardino the first Unilateral Trade Advisory Committee has been formed to begin an apprenticeship program for the Television Service Industry. The first meeting was attended by Emmett Mefford and John Larson of Riverside and Gene Van House, Morrie Plante, Ralph Pacheco, Frank Alford, Austin Lewis and Bob Reynolds all of San Bernardino. When formally created the committee will have six members from this group acting in behalf of management and labor will be represented by four employees of the State Department of Apprenticeship Standards. There will be no representative of any organized labor union. Initial work included the setting of a journeyman's wage at \$3.00 per hour. All apprentices will receive 50% of this as a starting wage and will receive an additional 5% for every six months of completed training until they have reached 80%. At this point the wage will increase ten percent until the journeyman rating is achieved. At the present time there are 40 to 80 applicants for this apprenticeship training in the Riverside-San Bernardino area and the next step is the creation of the testing proceedings that will include oral as well as written examinations.

CSEA Credit Union has hit a couple of snags when it was learned that only principals of a firm could participate and no employees. The next move is to present the program to the State Board of Directors for further action as a State wide operation.

what PARALOG brought to VHF...

NEW

PARACYL

BRINGS TO UHF TV



...UHF all-channel antenna with fantastic vertical directivity

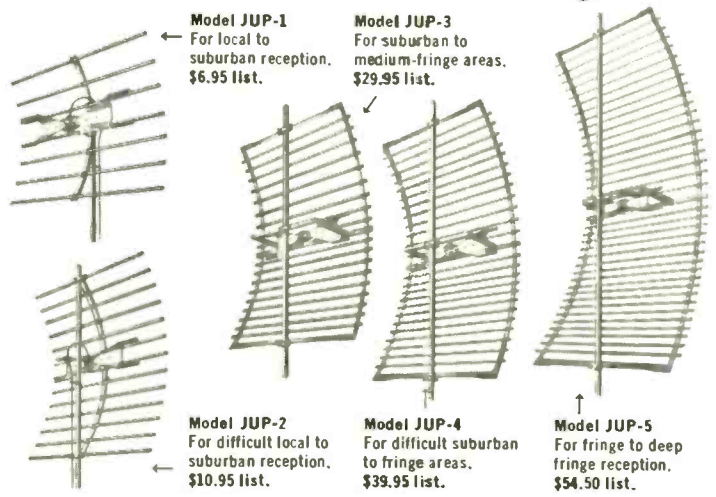
Good news! The new Jerrold-Taco PARACYL antenna combines cylindrical-parabolic construction with an exclusive "Extended Resonance" driven dipole* to deliver superior TV reception throughout the entire UHF band (channels 14 through 83).

Cylindrical-parabolic configuration assures the wide vertical interception area so necessary to capture elusive UHF signals, protect against "dead spots", and provide the greatest directivity. The "Extended Resonance" dipole driver actually changes its electrical length to present a half-wave appearance at the low and high ends of the UHF band, giving optimum gain and match all the way from 470 mc to 890 mc.

See your Jerrold-Taco distributor now, and learn how PARACYL antennas can open the door wide to big UHF sales for you.

*Patent pending

Distributor Sales Division, Philadelphia, Pa. 19132



Model JUP-1
For local to suburban reception.
\$6.95 list.

Model JUP-3
For suburban to medium-fringe areas.
\$29.95 list.

Model JUP-2
For difficult local to suburban reception.
\$10.95 list.

Model JUP-4
For difficult suburban to fringe areas.
\$39.95 list.

Model JUP-5
For fringe to deep fringe reception.
\$54.50 list.

CALECTRON CORP. OF CALIF.
33 GOUGH STREET, SAN FRANCISCO
621-3400

STYLES & ENGELMAN, INC.
25354 CYPRESS AVENUE, HAYWARD
352-1933

DUNLAP ELECTRONICS
SERVING ALL OF CENTRAL CALIFORNIA

WESTERN ELECTRONIC SUPPLY CORP.
229 S. ORANGE, GLENDALE
CH 5-4764

FIGARTS RADIO SUPPLY
6320 COMMODORE SLOAT DR., LOS ANGELES
WE 6-6218

SOUTHLAND ELECTRONICS
3618 UNIVERSITY ST., SAN DIEGO
AT 3-3941

Why should I convert to
ULTRA HIGH FREQUENCY?



**NON-COMMERCIAL
CHANNEL TWENTY-EIGHT**

It's the only way you'll get to see this new look in television, unless you have an all-channel set. Programs for everybody. Shakespeare and Ibsen. The London Philharmonic, Dizzy Gillespie, Art, Ballet, Science. All these uninterrupted by commercials, starting September 28.

It's simple to convert your present TV set to receive UHF and Channel 28...and inexpensive. For information, see your TV dealer or serviceman, or write

1313 North Vine
Hollywood 90028
HO 6-4212



An affiliate of National Educational Television

CHANNEL 28 PLANS HARD HITTING SALES CAMPAIGN

**New Los Angeles Metro Area UHF
Station Due On The Air September 28
—Ad Campaign To Feature TV Service
Dealer For Concerters.**

On September 28, the long awaited non-commercial or educational television station, Channel 28-KCET, will begin broadcasting in Southern California, with stated power of 120,000 watts ERP, enabling its programs to reach San Bernardino county to the east, San Diego County to the south, and Santa Barbara and Southern Kern counties to the north.

Although Los Angeles has had one UHF station, Channel 34, for several years, there are relatively few people who have converted their present sets, because of the language barrier. Last month, the owners of radio station KPOL announced that they have received FCC approval of their purchase of KPIX, Channel 22, and hope to be on the air about November 1. Add to this the fact that Channel 28 goes on the air in September and you suddenly find that instead of only one reason for buying a converter, there are three.

UHF is growing throughout the nation with strong FCC and industry backing. As you know, Federal law now requires that all TV sets, manufactured for interstate sale in the United States or imported for sale here, must be capable of all-channel reception—that is, Channels 2 to 83. Naturally, not everyone will be buying a new TV set within the next few months or even years, so you will have to sell converters as essential accessories to viewers who want to broaden their selection of home reception.

Channel 28's test pattern is already on the air, to be used as a guide to acquire perfect adjustment of newly converted sets. To help you sell the converter, you will have to sell

by
VERA SERVI
KCET-28

the superior programming which will be available on Channel 28. Southern California viewers can expect to find a new kind of television on Channel 28. Non-commercial television, also called Educational Television, comes to Los Angeles eleven years after the first station began operating in Houston. There are now almost 100 such stations throughout the United States.

The programming of Channel 28 can be divided into two separate kinds. School districts in eight Southern California counties will use Channel 28 from 1 to 3 p.m. to broadcast instructional programs to an estimated 1,000,000 elementary and junior high school students.

The rest of the time—from 11:45 am to 1:00 pm and from 4:00 pm to 10:30 pm—will be dedicated to programs for pre-schoolers, young children, teen-agers and adults. These programs will include intelligent children's programs; BBC productions of the short stories of Saki and de Maupassant; the dramas of Shakespeare, Ibsen and Chekhov; operas filmed by Italian Television; full-length concerts by such orchestras as the Royal Philharmonic of London and the Boston Symphony; modern jazz by Dave Brubeck and Dizzy Gillespie; traditional New Orleans dixieland; studies of social issues and contemporary problems; a 10-part documentary on the circus, ranging from the Ringling show to one-ring tent shows; science programs to interest all ages, and instruction in everything from spoken Russian to French gourmet cooking and Japanese brush painting. At no time are commercials ever shown on Channel 28.

To help you increase your income through the sale of converters, Channel 28 and converter manufacturers are planning extensive advertising and publicity campaigns.

Channel 28 has been running weekly ads in the Calendar section of the Los Angeles Times. On August 16, the entire ad dealt with UHF and conversion. Blonder-Tongue is planning an advertising push on converters and they will plug Channel 28 and the other stations available on UHF. In addition, both Blonder-Tongue and Jerrold are printing brochures and fact sheets on conversion. This material will be distributed by the manufacturers and by Channel 28.

Channel 28, KCET, has promotional spots running now on KFWB, twenty-four hours a days, once an hour. These spots were donated to Channel 28 by KFWB and they will run until Channel 28 goes on the air in September. The tag line on each of these promo spots is "Watch for the Channel 28 banner in your local TV dealer's window." These banners and literature on UHF and Channel 28 will be distributed to dealers in the Southern California area. In addition to the above spots on KFWB, there will be similar spots on the majority of the television and radio stations in Los Angeles. In fact, by the time this issue reaches you, they will probably be on the air already and you may have the banner in your window!

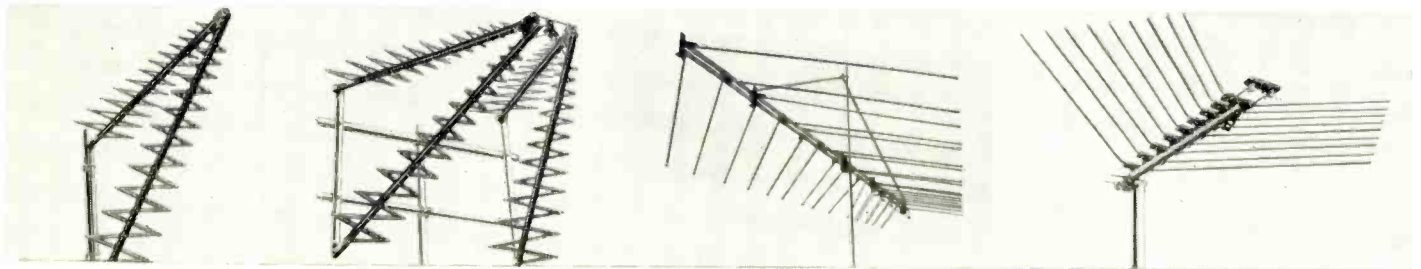
To further acquaint viewers in Southern California with Channel 28 and its programming, other promotional projects of Channel 28 includes distribution of specially-printed book marks to libraries and book stores, bumper stickers and window decals for automobiles, special mailings of Channel 28 and UHF brochures to civic and community organizations

and staffers for the various utilities, whose monthly statements reach approximately 5,000,000 people.

To run a proper merchandising campaign, you should put up signs and display converters in your window so that UHF and your store become synonymous. Besides running a special on converters, you might start a direct mail campaign to local residents.

As you know, converters vary greatly in price, from \$12 for a single-channel model to \$50 for some models of the all-channel converter. We feel there is no one best method of conversion, as television reception varies according to geographic location and terrain. You should stress the importance of a proper antenna and proper adjustment of that antenna. Since the quality of reception on the home screen is determined by the amount of signal being "absorbed" by the antenna, proper adjustment of that antenna is of prime importance. Also since Channel 28's coverage area is so vast, it should be recognized that those sets farthest from the point of origination may receive better with a two-transistor or tube model. It is of course up to the individual purchaser to determine which model he wishes to buy. But it is up to you to help them choose a model which will give them maximum reception in the area in which they live.

As we've pointed out, Channel 28 and the converter manufacturers are planning this all-out campaign to help you sell converters. We want to help you and we hope you'll do your best to help us.



JFD's full line of antennas include (left to right) the ZU10 Zig-a-log, a UHF log periodic-planar helical in axial mode for up to 60 miles; the ZU20 Zig-a-log "E" plane stacked array for up to 90 miles; the VU18 All-Channel VHF/UHF/FM log periodic for up to 150 miles VHF, 75 miles for UHF and 75 miles for FM; and the LPV U9 log periodic UHF antenna with 9 cells for up to 40 miles overall dimensions of 26" x 30".

Dealers Arise! The Revolution In TV Antennas Is Here!

Indeed, the dealers who will capitalize on the forthcoming TV Antenna installation boom will be those ready for it with the antennas and the programs to merchandise them.

Yes, there has been a revolution brewing in the last twelve months: a revolution in antenna design that will upset traditional methods of TV antenna selection and installation.

Gone are the days when a conical or a "vee" antenna often turned the trick in primary signal areas—and a multi-element yagi-type array pulled in the picture in the fringe. The All-Channel Receiver bill which became law on April 1, 1961 pulled the plug on all such conventional TV antenna technology. The antenna dealer and installer who best understand the consequences of this change will reap the greatest rewards in the new All-Channel TV age.

KNOWLEDGE IS POWER

The first step is to become aware of the eccentricities of UHF signals. The most conspicuous of these differences

By

Jim Sarayiotis

JFD ELECTRONICS

CORP.

according to R.C.A. Review's Comparative Study of low-VHF, High-VHF and UHF Television Broadcasting in the New York City area by Donald W. Peterson: states that some of these differences (which favor the VHF end of the spectrum) are:

1. Shadow loss due to hills increase with frequency.
2. UHF system noise performance is inferior to that of VHF.
3. The considerably higher gain transmitting antennas required for UHF create the following difficulties:
 - A. Picture degradation resulting from multi-path propagation produced low resolution and ghost images.
 - B. Excessively critical orientation of high gain UHF receiving antennas because of extreme field distortion in high built-up smooth terrain.

The next step is to exercise the meticulous care a properly performing UHF antenna installation demands. Here are a few suggestions:

1. Probe thoroughly for the best antenna location.

2. Orient the antenna precisely, using a portable UHF set alongside you.
3. The best position of the antenna may not necessarily be in the direction of the transmitter.
4. Use high quality parts and accessories.
5. Install the proper signal couplers and splitters, when combining UHF and VHF antennas, to keep number of lead-ins to a minimum.

HOW NEW ANTENNA ADVANCES AFFECT ANATOMY OF INSTALLATION

Within the next ten years almost all of 60 million sets now in use will be converted to all-channel reception or replaced with all-channel receivers. Each new set or converter sold during this time represents a potential UHF antenna sale. This adds up to thousands of dollars of possible new business in your own immediate trading area.

The next question is *which* antenna and *where* and *when* do you install it?

Don't settle on selling merely a UHF antenna. A new UHF set or UHF conversion presents a good opportunity to sell (1) a UHF antenna replacement, (2) a UHF and a VHF antenna, (3) or a UHF/VHF/FM antenna combination—at a better profit.

In selecting the antenna, many installers would fall back on the bowtie. However, as the directivity of a simple bowtie antenna was not very sharp, stacked bowties and parabolic reflectors frequently become necessary to obtain clear all-UHF-channel reception. But while these antennas provided improved gain and directivity, their bulks also presented detrimental wind, ice and snow loading conditions.

The above considerations were a few of those that necessitated the development of a new antenna concept: the UHF log periodic.

Preliminary research in early 1963 had indicated that it was possible for a log periodic antenna design to bring to UHF, the same unique frequency independent log-periodic performance of the original JFD VHF-LPV log periodic. The research paid off this spring when four new JFD UHF LPV log periodic antennas were introduced.

The advantages offered by log periodic UHF antennas over bowtie-screens and parabolic dishes were sharper directivity and higher gain, flatter response, and greater front-to-back ratios across the entire UHF spectrum—in considerably less bulk and weight.

Further research produced another new UHF antenna concept—the Zig-a-Log log periodic based on microwave telemetry antenna design. Used by the space sciences, the Zig-a-Log's inclined geometrically-tapered elements achieved a long-sought effect—the rotator-less reception of TV sta-

tions up to 48° apart.

Another problem remained: the necessity for the mounting of individual UHF and VHF antennas on the same installation in all-channel areas. Such jobs were often needlessly laborious and expensive.

In answer to his need, a new LPV-VU-FM Log Periodic antenna is now being made available. It saves installation, labor and cost. Using only a single downlead, it is less prone to the usual troubles of multi-antenna installations.

HOW TO PLAN THE INSTALLATION

When confronted with a customer or prospect requiring an outdoor antenna, ask yourself these questions and the right answers will easily follow.

NEW INSTALLATIONS

1. If VHF is now on the air, are any new UHF stations now within range or will UHF soon be available?

If the answer is YES, the obvious antenna solution is one all-channel VHF/UHF/FM log periodic, with a rotator, if stations are scattered.

EXCEPT—if there is a substantial disparity in the gain levels of the VHF and UHF signals received. This calls for a coupled VHF-UHF pair of antennas capable of supplying the set with watchable pictures on the channels desired.

If it's NO, then a suitable VHF antenna should suffice.

2. If UHF is being received, can distant VHF stations be picked up with a more powerful antenna?

If the answer is YES, see recommendation No. 1.

UHF CONVERSIONS

1. Why stop at just a UHF antenna? Perhaps a new VHF antenna can be installed at the same time as cheap insurance against possible future breakdown of the old VHF antenna.

Better yet, a combination VHF-VHF-FM log periodic might make the viewer happier.

ANTENNA REPLACEMENTS

1. Why not replace the old VHF or UHF antenna with a combination all-channel log periodic here, too, if conditions call for it?

Don't overlook the possibility of selling a rotator and other accessories such as couplers, splitters, lightning arresters and wave traps here, as well as with the other aforementioned alternatives.

To sum up, the technician who learns to plan, select and install the antenna intelligently is the one who will profit from today's antenna revolution. Whether it's a "boom" or "bust" depends on how you apply your antenna know-how.

By applying the few suggestions presented here, you will have taken the first all-important step towards happier customer relations and heftier profits.

UHF...

UHF...

UHF...

(Continued page 16)

UHF CONVERTER BONANZA IN CALIFORNIA

By
Robert McDonald
GAVIN INSTRUMENTS, INC.

andy
says

WE HAVE
THE AREA'S
**LARGEST
SELECTION
OF ORIGINAL
SERVICE PARTS**



- RCA
- ZENITH
- GENERAL ELECTRIC
- DELCO AUTO RADIOS

PLUS—THE BEST LINES
OF GENERAL
REPLACEMENT PARTS



ANDREWS
ELECTRONICS

1500 W. BURBANK BLVD.
BURBANK, CALIF.

TH 5-3536
ST 1-3120
VI 9-6014

In traveling around the country from one UHF area to another I've heard a lot of comments pro and con on UHF. The comments and the problems are the same in every area. It usually begins . . . "UHF is only a fad."

Yes that's true, and so is the automobile and the airplane and the television itself for that matter. And like the other fads mentioned, UHF is here to stay. Because of the new law, all TV sets produced after April 30 of this year must be equipped to receive UHF. So come on and get in on the UHF bonanza going on now in Southern California.

"But everyone who wants a converter bought it when that other station came on the air last year."

Yes, a lot of converters have been sold in the area; about 63,000 as near as we can figure. And considering the sale of all channel sets and strips that leaves only a little over 1,000,000 sets now in use which need to be converted. In dollars and cents that's about \$35,000,000. How much of this do you want?

"OK, so there is a market, but how can an independent service dealer like me compete with these discount stores?"

That's easy; first choose a quality line of UHF converters, antennas and boosters. A line that's nationally advertised,

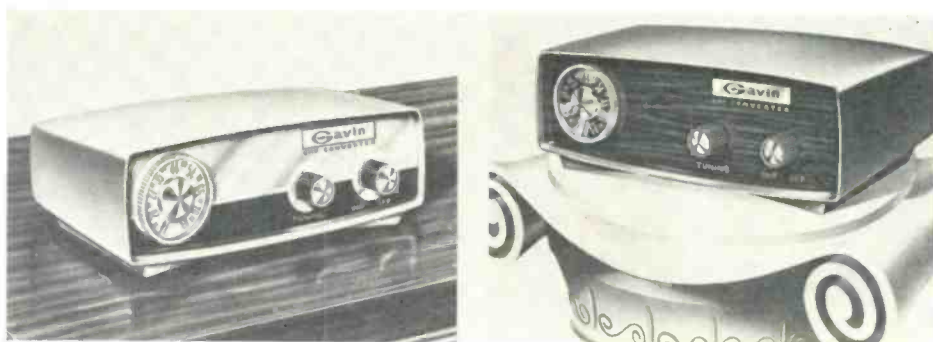
backed by a strong warranty and which gives dealer price protection. Then take advantage of every sales aid made available by the manufacturer. Let it be known that you are a UHF information center. Use ad allowances and dealer listing ads that are made available. Selling UHF is mainly a job of educating the customer, and what better time and place to do it than in his home when he sends for you to solve some other TV problem. A converter should be carried into the home on every service call and demonstrated on the customer's set after it is repaired.

Another plus to this UHF bonanza is the booster business. Because of the shorter range to power ratio with UHF many all channel set owners will need boosters for good UHF reception.

Available now are powerful two transistor mast mounted boosters which provide gain of from 6 to 15 db across the full UHF band.

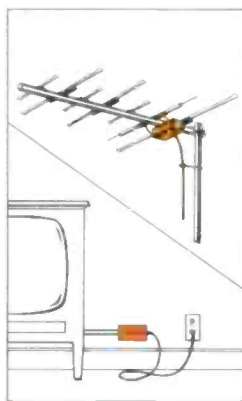
The booster itself is mounted on or near the antenna while the power supply is attached to the back of the TV set.

Yes there is a UHF bonanza coming up in Southern California this fall. Be ready to get your share.



Pictured here are two of the latest Gavin Instrument Converters that are now available on the market. With a greater number of consumers becoming interested in UHF, manufacturers continue to build more and more attractive instruments to complement the present television set.

a world apart in quality



More power for less cost... from antenna to living room. Signal amplified at antenna for snow-free picture and maximum gain. Power supply mounts at TV set.

GAVIN UHF AND VHF-TV BOOSTERS

Now bring in sharp, clear pictures—even in the deepest fringe areas. Gavin boosters increase the range and performance of any TV set. No tuning needed. Compact, easily installed booster features world's most advanced solid state pre-amplifier. Complete with safe AC power supply.

MODEL GBV (CHANNELS 2-13)
MODEL GB-10 (CHANNELS 14-70)
MODEL GB-11 (CHANNELS 70-83)



6 METER MAVERICK

Again in 1965, only Gavin offers the filter designed especially for 6 meters. No reflections, no transmitter loading problems. Exclusive composite filter combines 5 complete filter stages in one unit. Matched tuning assures maximum power. (Output power indicator optional).



TUNABLE BAND-PASS FILTER

Trust Gavin leadership to eliminate TV interference problems. Designed exclusively for 2 meter transmitters, the BP-144 with tunable input and output stages, assures optimum match for greater power.



TUNABLE CB FILTER

Now Gavin brings you more power at your antenna—with no more TV interference. CB-T multi-section filter circuit suppresses unwanted second harmonics. Adjustable tuning trimmers provide peak output and reception.

Insist on genuine Gavin factory replacement equipment in electronic transmission lines...color TV yokes...patch cords. Each bears the famous Gavin guaranty of quality.

...new look for the leader

This new Gavin trademark symbolizes a new era in UHF-VHF engineering. Now Gavin research opens a wonderful new world of TV enjoyment...backed by new, ultramodern testing and manufacturing facilities...new, decorator styling by internationally famous Banka-Mango...plus an enviable reputation for integrity and workmanship unsurpassed in the industry.

GAVIN INSTRUMENTS, INC.
General Offices:
Somerville, New Jersey



® opens a new world of v
with the world's fin



GAVIN "SATURN" UHF CONVERTER

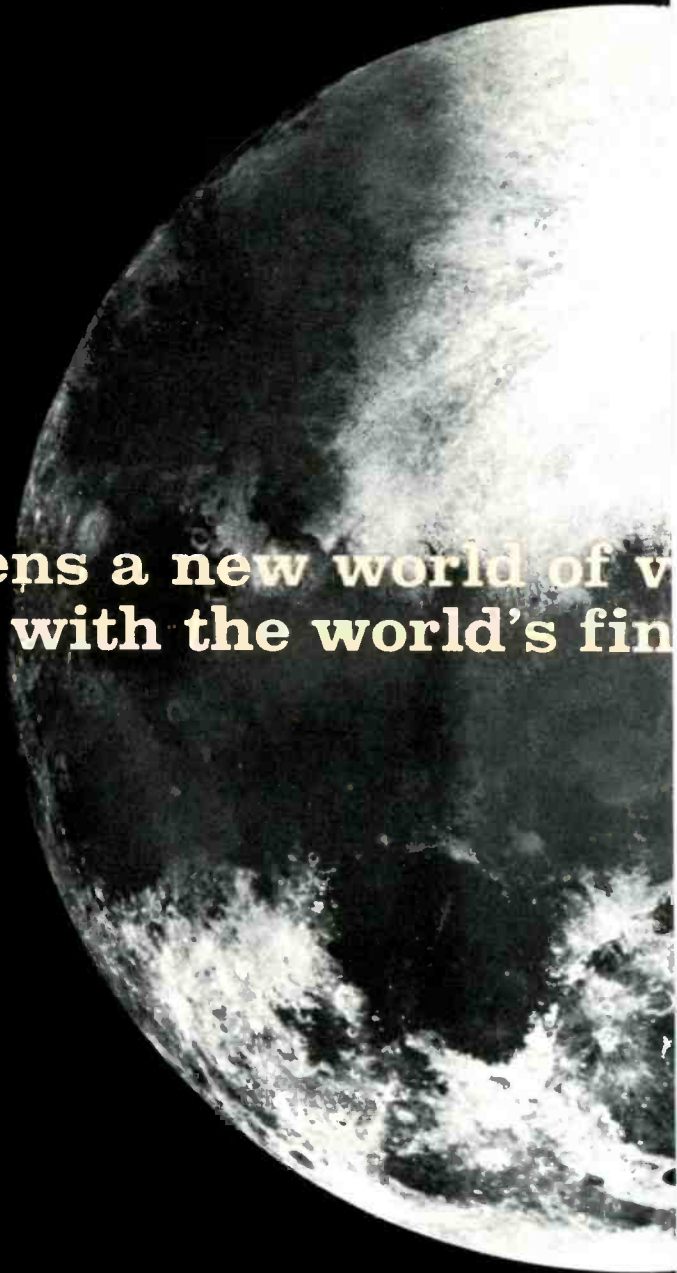
Warm, mellow walnut is featured in this fashion-right converter... yet only the look is expensive! Saturn converts any VHF set into exciting all channel reception. Same fine features as Venus converter, with powerful new solid state circuit designed for metropolitan locations. Model 502.



GAVIN "JUPITER" ECONOMY CONVERTER

Look... dramatic brass in the new shape of TV sophistication. Clear, bright all-channel reception. The price? New and nice. Model 501.

ALL GAVIN CONVERTERS ARE CERTIFIED TO BE IN COMPLIANCE WITH FCC REGULATION PART 15 SUB PART C.



GAVIN "VENUS" DELUXE UHF CONVERTER

The ultimate in style and performance. Handsomely styled decorator cabinet is accented in soft, subtle gold. Enhances every decor. Inside, high gain built-in amplifier and years-ahead Gavin transistor circuitry assure peak all-channel reception in every area. Exclusive Ultrascope® fine tuning with "Luminaire" dial insures easy channel selection. For all areas, including deepest fringe, specify Model 503.





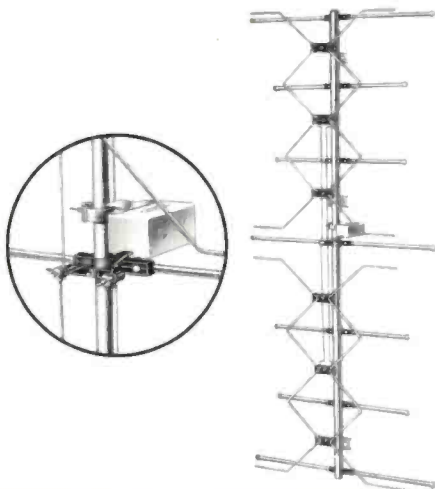
Quality and performance
UHF converter



NEW ZONE CENTERED ANTENNAS
for custom-tailored UHF reception

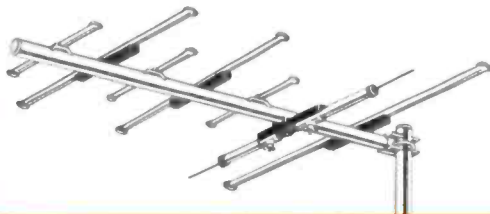
DEEP FRINGE
TWIN IMPERIAL
BOOSTER/ANTENNA
COMBINATION

Improves all UHF-TV sets and converters. Factory integrated and mounted 2 transistor UHF pre-amplifier guarantees trouble-free installation. Complete with safe AC power supply.
MODEL TW-10 (CHANNELS 14-70)
MODEL TW-11 (CHANNELS 70-83)



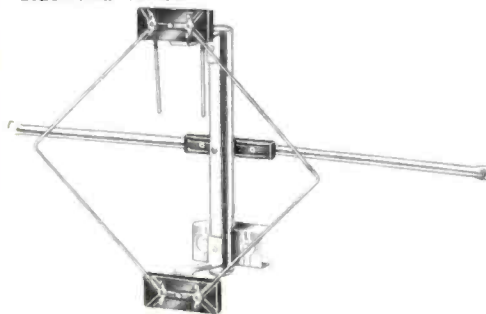
NEAR FRINGE
JAVELIN ALL CHANNEL
UHF "YAGI"

The power-performance of the "yagi" design, leader in VHF, now assures ghost-free UHF reception. Unsurpassed gain and match.



SUBURBAN
"CAVALIER"
UHF-TV ANTENNA

Now at last—a small, low priced outdoor UHF antenna with every big performance feature. Factory assembled. Guaranteed for color and black and white.

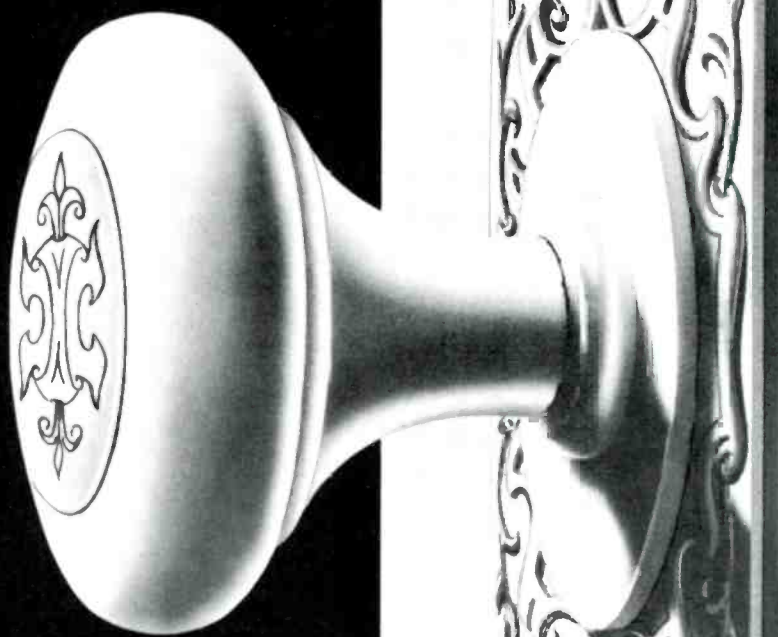


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The finest antenna in its class, designed for performance and compliments. Ideal where outdoor antenna installation is impossible or inconvenient.



ALL GAVIN ANTENNAS
IN LIFETIME
DURA GOLD FINISH



for 1965...



opens a new
world of TV
performance

UHF

... IT'S EFFECT ON ANTENNA SALES NOW AND IN THE FUTURE

In April of this year, an order by the Federal Communications Commission went into effect requiring TV set manufacturers to include both UHF and VHF tuners in all sets produced henceforth.

by
Robert M.
Fleming, Jr.
Sales
Manager
WINEGARD CO.

Many service dealers across the country have been asking us, "what's going to happen to antenna business when UHF comes to our area?"

Their primary concern seems to be that they foresee much lower priced sales volume than they have been enjoying with VHF antenna sales. When the popular price range of VHF antennas today is in the \$30 to \$40 bracket, they visualize an abrupt switch to UHF antenna sales a unit price of \$10 or so with a corresponding shrinking of profit.

We think these fears are largely unfounded. Let's see why.

Since the FCC decision on all channel TV sets (channels 2-83) was announced in 1963, several new UHF stations have gone on the air, mostly in metropolitan areas. In each case this has meant "plus" business for the TV service-dealer. He has been selling UHF antennas, UHF converters and UHF antenna amplifiers *in addition* to this normal VHF antenna and amplifier sales. In fact, during the past two years

there has been a definite increase in sales of VHF reception equipment.

Many dealers who have never sold a UHF antenna seem to think only in terms of cheap bowties and yagis which sell for a low unit price. They tend to overlook the larger, more expensive UHF antennas such as parabolics which are right up in the good all-channel VHF antenna price range. New UHF antenna designs are beginning to appear and you can be sure there will be many more in the future. The aggressive service-dealer who is making money on VHF antenna sales will undoubtedly be able to retain the same gross profits on UHF antenna sales.

UHF antenna amplifier sales will play a big part in future business, too. Keep in mind that a UHF "fringe" area is almost always closer to the transmitter source than is a VHF "fringe" area. This means that the sales potential for UHF antenna amplifiers will be even greater than it is at present for similar VHF amplifiers . . . and many, many dealers can attest to the "plus" profits that VHF amplifiers have brought.

UHF converters, too will provide "extra" sales when UHF comes to your area. Unlike UHF antenna sales, however, it is expected that some day, separate converters will disappear from the market as all present VHF TV sets are junked and replaced with new all-channel VHF-UHF receivers. Even this is a long way off as many of your customers will keep the old VHF receiver for a "second set" and will need a UHF converter anyway.

The reason for this is that in most cases, you now find "mixed" markets,

with both VHF and UHF stations in operation.

It is likely that this situation will continue in the foreseeable future. As new UHF stations gradually go on the air, most of them will be in the major population areas. Some, of course, will go up in smaller communities that formerly did not have a TV station. This doesn't mean that set owners will stop watching the VHF they have been receiving from other cities. It means they will be *adding* a UHF antenna and *adding* a UHF converter to those sets not equipped to receive UHF frequencies.

A complete nationwide switch from VHF transmission to UHF will take many, many years to accomplish and it is possible that we will always have both types in operation in most areas. No one can say at this time just how fast and how complete conversion to UHF will be.

But what about UHF antenna sales volume? Even though VHF antennas have always been available at a consumer cost of \$10 and less, the average VHF antenna sold today is in the \$30 to \$40 bracket, with many of these being sold in primary and suburban areas. Over the years, both consumers and service-dealers have raised their sights to be improved reception which comes with the larger (and more expensive) antennas.

In short, we feel that service-dealer antenna profits will not decline with the advent of new UHF stations. On the contrary, VHF antenna business should continue high and new UHF reception equipment business should provide a handsome "plus" in service-dealer profits.

HOW TO SELL CONVERTERS TO YOUR PRESENT CUSTOMERS

About two years ago at this time we were discussing on these pages the arrival of UHF in Los Angeles via Channel 34. In the relatively short time since then, UHF has had a tremendous impact—in Los Angeles, in the electronics industry and in the entire country.

UHF has become the law of the land, paving the way for the larger, ready-made audiences needed to encourage more stations to take to the air on channels 14 to 83. You are ready to welcome your next UHF station, Channel 28.

Are you also ready to give your converter sales a boost at a promotional level not available to dealers in any other major market in the country?

Your new station provides a fresh opportunity to generate interest and enthusiasm for UHF. Perhaps even more important, you can promote UHF this time around without the liability of cumbersome first-UHF-station explanations as to what UHF is, how it works and other technical aspects that tend to obscure the basic idea of more television.

The big emphasis is on selection. You're selling many UHF channels . . . more in the 14-83 spectrum in Los Angeles than most other markets in the country have in the 2-13 VHF range. It's a great selling point, and a little energy can make it really pay.

One of the most profitable aspects of your multi-UHF station situation is that it puts you in a perfect position to concentrate on quality. The selection of TV on the upper channels is strong justification for selling the best top-of-the-set all-channel converter you can.

New UHF converter and antenna models, such as those shown by Blonder-Tongue at the recent Parts Show, enable you to offer improved reception. UHF is no longer a promise in your market, it's a fact.

You have all the ingredients you need to really hit your market.

As you get ready to promote converter sales around Channel 28, this is a good time for you to examine your previous approaches, weigh their success, and then see where the opportunities lie for you to pick up business you may have missed, plus all the converter sales you can make with a new push.

Tops among the continuing ways to make converter sales to your customers is the use of your servicemen or any outside sales people you have. Blonder-Tongue has found that nothing is more effective than having the converters taken into every home called upon. They can be quickly installed and demonstrated. Our experience is that

two out of every five demonstrations become closed sales.

The best sale, of course, is the package sale, including converter, antenna and any other needed accessories. This assures you of a full, fair price.

If the sale isn't made, literature should be left with the customer . . . and his neighbors, too. When you do install a converter, cards can be left which say something as simple as, "Your neighbor is enjoying channel(s) . . . are you?"

Reaching the balance of your customers still take a planned promotion program, tempered with the wisdom of experience gained in the two previous UHF station introductions.

The surest, strongest approach is to make certain that you are keyed in to the station's own activities and timetable. Working with manufacturers whose own programs are so oriented can assure you of maximum effectiveness.

Blonder-Tongue, for example, works directly with the stations whenever possible and keys its advertising, literature and other related promotion efforts directly to the station's programming and promotion. With that as background, you should be following certain basic steps.

Make your store the recognized headquarters for UHF. Take the time to set up an attractive display, tying-in material from the station with your own product display. Keep literature on your counter. Put streamers on your windows.

A prominently displayed TV set, tuned to the new channel, is an effective sales aid.

Advertising should be timed to coincide with the opening of the station. Newspapers are basic. In certain markets, particularly ethnic ones, radio has proved to be a successful advertising medium.

Mailings, either to large lists or as bill stuffers, add another important dimension to your activities. You can use pre-printed literature, such as is made available along with advertising material by Blonder-Tongue, or use something as simple as postcards.

The point is not to neglect any aspect of a planned, comprehensive program.

Your situation in Los Angeles is unique, and filled with great potential for converter sales. Unlike many UHF markets, yours offers the single most important selling point for UHF products—a good selection of programming.

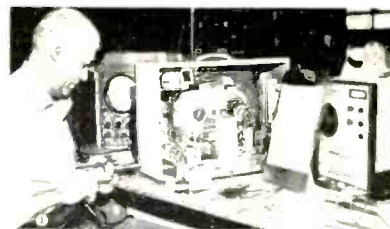
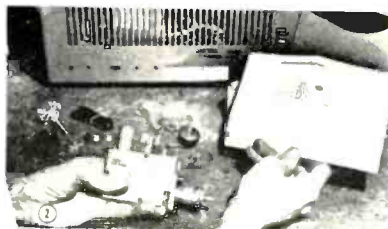
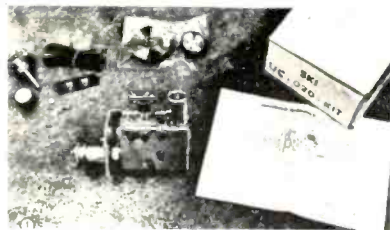
Capitalize on your advantage. Go after your customers. The sales are there to be made.

By

RICHARD B. HELHOSKI

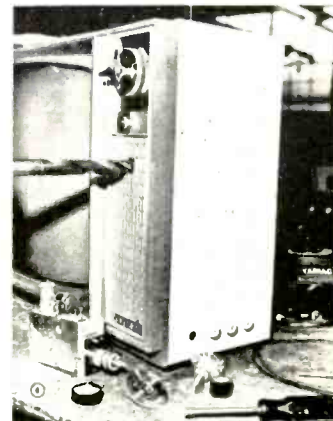
Director of Marketing

Blonder-Tongue Labs., Inc.



The "How-To" Story Of Built-In Converters

Today, more than ever before, the idea of "built-ins" is demanding a greater consumer dollar. The attractiveness of built-ins must be considered by every industry and the Television Converter Industry is no exception. With more and more interest in UHF each day, the Television Service Dealer is in the unique position of also offering the Consumer the Built-in look with the new Standard Kollsman Converter Kit. The following is a quick "how to do it" presentation of the Built-in UHF Converter.



1. NEW UHF CONVERTER KIT FOR TV SERVICE-MEN INTRODUCED BY STANDARD KOLLSMAN: Shown are the basic items included in the new SKI UC-020 kit: (1) UHF converter tuner having output on Channels 4-6; (2) mounting washers; (2) 3/4" Hex mounting nuts; (1) indicator dial; (1) tuning knob; (1) terminal board with bolts and nuts to mount; (1) antenna-B-switch with 2 nuts and washers; (1) switch knob; (1) length 300 ohm lead.

2. Easy - to - follow installation instructions, kit parts checked, proper tools, and you are ready to install the UHF converter tuner into the VHF TV set giving it that factory, "built-in" appearance. Installation time, approximately 45 minutes. Tune all channels, 14 through 83. Before starting out, the TV service technician should look the TV cabinet over to determine the best location for mounting converter inside set. Take into consideration good exterior appearance and blending with other TV controls. Also, he should consider ease of customer tuning, finished dress of leads, and ease of securing desired voltages.

3. Drilling 7/16" diameter hole on side of TV portable cabinet for B+ switch. If switch is to be mounted on removable back plate of TV set, it should be mounted last, remembering to leave sufficient lead lengths.

4. Drilling 3/4" mounting hole in cabinet. A chassis punch also works well on metal cabinets.

5. After providing enough lead length between points of connection and mounted location of converter, five connections have to be made. With standard hook-up wire, connect ground terminal on UHF converter to chassis ground to set. Connect terminal "B" (see instructions sheet) through proper dropping resistor (value determined from table provided in installation instructions) to B+ source in set. Voltage at this terminal should be 80 VDC. Connect "C" to source of 6.3 volts in set. The kit manufacturer states that in many cases the required voltages can be taken right off of terminals on the VHF tuner without going below the chassis. Shown above is the standard twinlead from antenna terminal strip on back of set being soldered to terminals "O" on the SKI converters.

6. Proper dropping resistor to B+ source in set is soldered in its proper location on UHF converter tuner. Use installation instructions as check list for accurate and rapid installation. Clipboard (shown) can be of immense help.

7. Checking the wafer switch "X" index for proper orientation of connections.

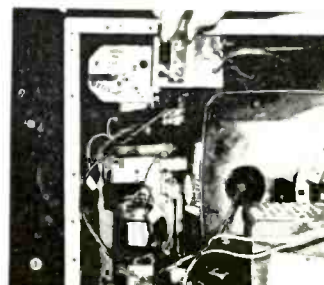
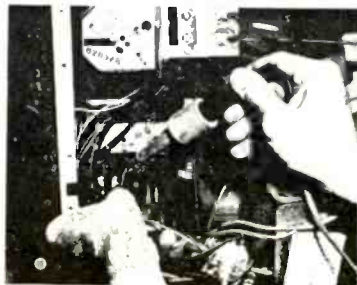
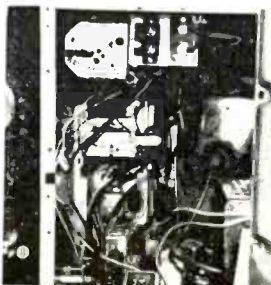
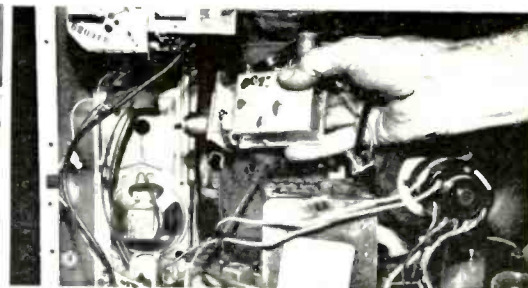
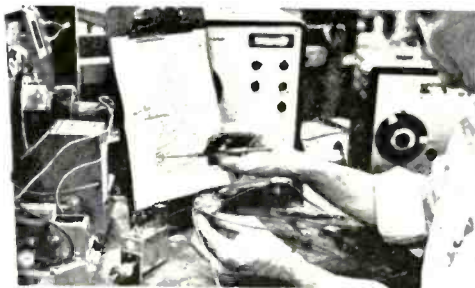
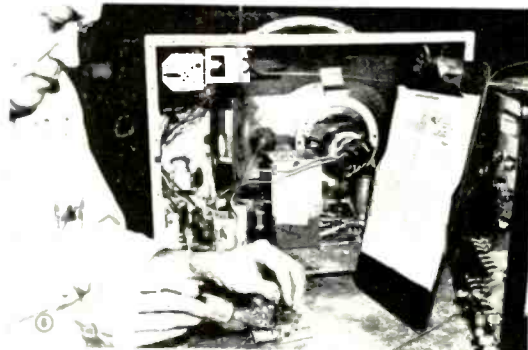
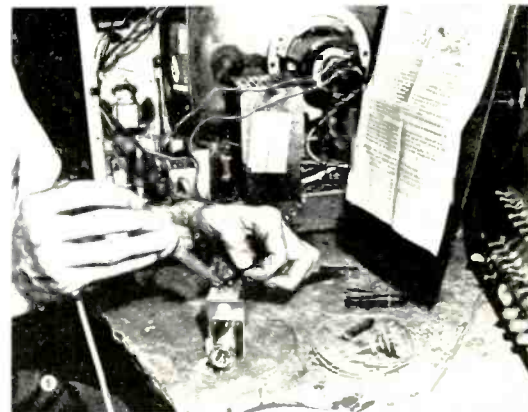
8. Wired UHF converter tuner ready to be placed inside cabinet of TV portable set. Note 3/4" hole into which mounting bushing is inserted and entire unit held in place by (2) hex mounting nuts.








9. Installing UHF antenna terminal board adjacent to VHF antenna board on back of TV set.

10. Interconnecting B+ dropping resistor with switch assembly prior to final stage of installation.

11. UHF converter tuner kit completely installed, television set rear cover going on.

12. Final adjustment and tuning in UHF Channel 26, WCIU, Chicago. Time: 45 minutes. Note natural blending of UHF dial and knob from the kit and other controls on front face of portable.



<p>Low power PNP ET1 ET2 ET3 ET4 ET5 ET12</p> 	<p>Medium power PNP ET6</p> 	<p>High power PNP ET7</p> 	<p>Low power NPN ET8 ET9 ET10 ET11</p> 	<p>Signal Diodes IN34A IN60 IN64 IN82A IN198 IN295</p> 	<p>Silicon Rectifiers ET200 ET400 ET600</p> 
					

IF IT ISN'T IN THE TUNG-SOL ET LINE YOU MAY NEVER HAVE A CALL FOR IT!

You can service virtually every transistorized car or home radio, TV or other entertainment device, from the Tung-Sol ET line of transistors, diodes and rectifiers. There are only 21 numbers in the entire line. It's easy on your inventory dollar, easy to stock

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Tung-Sol Electric Inc., Newark, N.J. 07104

UHF SHAPES...

And their Influence on the Market

by JACK BEAVER
JERROLD ELECTRONICS

Since May 1, 1961 when the all-channel law went into effect, more and more, interest has been centered on UHF. Because UHF represents such a tremendous potential, antenna manufactures have brought out a number of new types of UHF antennas. This rash of new antenna shapes has puzzled many TV dealers. They are at a loss to explain these new shapes to their customers or to recommend the most effective for each reception problem. This article will give you some background in the why's and wherefore's of the new UHF antennas.

UHF antennas have one major advantage over VHF antennas. Because UHF wave lengths are smaller it is practical to build higher gain UHF antennas. However, gain isn't the only important antenna characteristic. An antenna should also be judged by its flatness and its ability to reject unwanted signal. Also, critical is the "vertical interception" area of the antenna. Finally, mechanical construction is of vital importance.

Until recently, the simple bow-tie—a half wavelength dipole—was the most commonly used UHF antenna. Also fairly popular were the UHF yagis for weak areas. Parabolic dish reflector antennas provided the highest gain of all and were used in the deepest fringe areas.

How are the new antennas different? First, let's look at the log periodic type antennas. The big advantage of the periodic antenna is flat frequency response. The log periodic principle is especially applicable to UHF again because of the short wavelengths. However, log periodic antennas are not noted for high gain. Therefore, manufacturers often add elements to the periodic antennas in order to increase gain. Unfortunately, these added elements not only increase gain but distort the antenna lobe.

The shape of the antenna lobe is very important in minimizing pick-up on desired signals. Ideally, you should have

one clean front lobe with no side or back lobes. In other words, signals should be receivable from only one direction. This gives you the best opportunity to orient the antennas for the best picture without picking up interfering signals. A good clean lobe is especially important in color TV reception.

The traditional yagi type antenna, so commonly used at VHF, has a reasonably clean lobe, but it is quite frequency sensitive—effective only for a very narrow frequency bandwidth. At present, narrow frequency range does not represent much of a problem at UHF. In most UHF areas there are only one or two channels fairly close in frequency. However, narrow frequency antennas may have to be replaced as new UHF channels come on the air. For this reason, antennas that are flat over the entire UHF range are desirable. Another disadvantage of the yagi type antenna is that it has only a small "vertical interception" area (not "capture area," but the actual vertical area which the wave front cuts). Experienced installers know that they have to probe at various heights when installing a UHF antenna. This is because there are alternating hot spots and dead spots of signal strength caused by the interaction of rays direct from the transmitter with reflected rays. Reflected rays are often fed in out of phase and therefore cancel all or part of the signal.

Even though the installer probes and finds a real good hot spot, there is no guarantee that it will remain hot. Good signal spots tend to shift significantly with changes at atmosphere, growth of foliage, traffic on the street, etc. It is for this reason that the best UHF antennas have a relatively large vertical interception area. One of the most effective antennas in this respect has been the stacked bow-tie with reflecting screen (See Figure 2). This type of antenna has

(Continued Next Page)

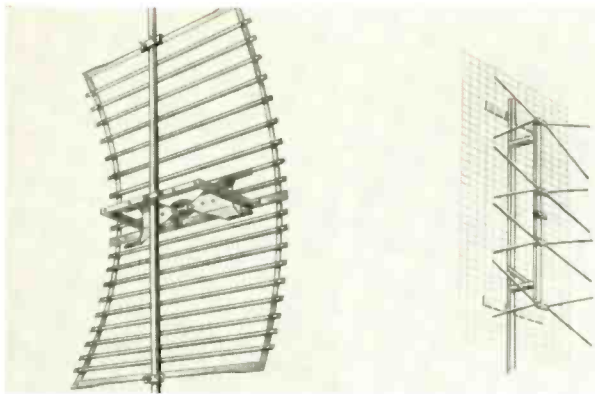


Figure 1. This represents a new line, by Jerrold, of UHF Antennas. Pictured here is the Jerrold Paracyl Model JUP-3.



Figure 2. Pictured here is the stacked bow-tie with reflecting screen with alternating hot and dead spots.



Figure 3. This demonstrates the most mounted UHF pre-amplifier with a remote power supply.



Figure 4. A typical Indoor UHF amplifier that is recommended for use on older sets to gain maximum reception.

a very large vertical interception area, but its disadvantages are considerable. A four-bay bow-tie, for example, has four dipoles which actually are not able to cover the entire UHF band. Compromises must be made to get full frequency coverage. The connecting harnesses are also frequency sensitive and this tends to narrow the bandwidth even more. But the big disadvantage of the four-bay bow-tie is that some dipoles will be in hot reception spots and other dipoles will be in dead spots. The dipoles in the dead spots will act as a load on the other dipoles. Mechanically, the stacked bow-ties also have some disadvantages. A four-bay bow-tie, for example, has ten connecting points. These are invariably weak links and potential sources of noise. They represent a high likelihood of corrosion damage. Also, each dipole is insulated from ground, and tends to accumulate a static discharge.

The latest of the new UHF antennas is the cylindrical parabola type, such as that shown in Figure 1. This type of antenna provides very high gain. Its curved reflector is designed so that all incoming signals are focused onto a single extended resonance driven dipole. This gives the cylindrical parabola a very large vertical interception area. It also eliminates the problem of dead spot loading. Dead spots on the parabolic reflecting surface simply do not reflect any signal onto the dipole.

In the case of a bow-tie driver (half wave dipole). This type of dipole is quite effective in the lower frequencies but has little directivity in higher frequencies. In fact, it is essentially omni-directional.

The extended resonance type dipole driver, on the other hand, retains its directivity over the entire range from the lowest frequency to the highest. Of course, the cylindrical parabola reflector removes the back lobe and adds it to the front lobe. This driver actually changes its electrical length with frequency. It looks like a half wave at the lower half of the UHF spectrum but it also looks like a half wave at the upper end. This has been accomplished by the addition of the quarter wave length whiskers to a dipole cut to the upper end of the UHF band. Actually there are only two connection points on the cylindrical parabola type antenna compared with ten connection points on the traditional four-bay bow-tie antenna.

Despite their new shapes the new UHF antennas can be handled in much the same way as traditional units. Installation procedures are exactly the same. It is important to

use good lead-in wire. The new polyfoam types are recommended. Also, the best service dealers generally use 7 inch stand-offs of the type that do not encircle the lead-in wire with metal. This minimizes mismatches and cable losses. UHF lead-in wire should not be spliced and should be kept as far away as possible from metal and other surfaces.

In weak signal areas, especially where high masts are required, mast-mounted antenna preamplifiers, such as that shown in Figure 3, can produce great improvement in picture quality. Indoor units, such as that shown in Figure 4, are also available. These are recommended primarily for use with older TV sets and for multiple TV set installations.

It is important for service dealers to acquaint themselves as soon as possible with the new types of UHF antennas. During this period of UHF growth UHF antennas can be an important source of profit.

ATTENTION PLEASE

This has been a special
Modern Electronic Service Dealer
UHF Issue.

We have attempted to cover all areas of questions regarding the present and future of UHF. We would appreciate your comments and suggestions as to future subjects, that could be contained into one issue, for reference and to use as a sales tool to potential customers.

Donald J. Martin, Publisher



TRADE / TALK

NATIONAL ASS'N OF BROADCASTERS BACKS NATIONAL LEGISLATION OF CATV

The National Association of Broadcasters have voted in favor of national legislation in regards to Cable Community Antenna Systems and suggested that it be placed under the control of the Federal Communications Commission. At the same time, the group refused to change its position in opposition to Pay TV either wired or wireless.

GAVIN EXPANDS UHF TUNER PLANT—GOES FAIR TRADE

Gavin Instruments, Inc. have announced the occupation of a new 26,000 square foot plant for the production of Gavin's UHF Television tuner. The consumer product line of antennas, converters, boosters, etc. will continue to be manufactured at the present location. At the same time, the firm announced a new program of fair trade pricing in the California market. The line is presently represented by Erlanger Sales Co. and distributed by RCA Victor Dist. Co. in the Los Angeles area.

DEMOCRATS SEEK TO REMOVE PAY-TV ISSUE FROM BALLOT

It has been reported that the Democratic State Central Committee is behind a move to remove the Pay-TV Issue from the November Ballot. At the same time, it was learned, a call made for service on an STV installation resulted in a \$7.50 service charge for fixing the set. Still we hear remarks that Pay-TV is not interested in service. One source stated that STV can not be held responsible for action of Lear Siegler service agents.

Another add on this item is the complaint of one resident that the phone company was digging up her back yard to install new lines for the STV hook-up. Still another STV subscriber is unhappy about the unsightly relay box that is now sitting a foot or two up in the air in their parkway. Big complaint . . . can't open the car door in front of their own home anymore. Signs of the times!

DAN WESTON SPEAKS AT THREE SOUTHERN CALIFORNIA MEETINGS

Dan Weston, chief of the Bureau of Electronic Repair Dealer Registration, had a busy schedule last month as he spoke at three separate Southern California Dealer meetings. The schedule began with a special luncheon meeting with the S.R.T.T. group in the San Fernando Valley followed by a Dinner Meeting at Knotts Berry Farm and completed by another all industry meeting in Ontario. The results were a better understanding of his Bureau and the new regulations that went into effect on the 24th of August. (Published in the August Issue of MESD).

TEST PATTERN FOR NEW UHF KLET CHANNEL 28

A test pattern for the new UHF Channel 28 went on the air on August 17th and will continue until it begins its programming in September. The test pattern appears on Monday, Wednesday and Friday from 10:00 a.m. to 4:00 p.m. and on Tuesday and Thursday from 3:00 p.m. to 9:00 p.m.

RCA UHF CONVERSION TIPS

RCA Victor Distributing Corp. has just made available a complete list of UHF conversion information for all of their receivers. These can be obtained by contacting RCA or any of their salesmen.

SPOKESMAN STATES PROP. 15 IS NOT UNCONSTITUTIONAL

Frederick C. Dockweiler, attorney for the Free TV Committee stated recently that proposition 15 will not prevent Pay TV in California in the future. All that it will mean is that the STV people will have to go through normal channels of regulation such as the FTC instead of having a free uncontrolled right to use telephone company easements over public and private property. "STV is now using these rights of way, granted for a public utility purpose in the public interest, for a completely different pur-

pose for its own private gain, with no controls whatever." He further stated that, "Pay-TV will have the same opportunity to go into business as it did before the highly questionable Assembly Bill 11 was passed. But it must go through proper channels, as all over-the-air Pay-TV operators must do."

STV IS GROWING

A recent report indicated that STV has passed the 30,000 mark in definite orders for installations both in San Francisco and Los Angeles. At the present time, it stated, 22,625 subscribers are now receiving programs or will have their homes wired in the near future. In San Francisco the total is 7376.

SYLVANIA DEVELOPES SPECIAL COLOR RECEIVING TUBES

Sylvania Electric Products, Inc. have announced the development of a special line of receiving tubes that allows operating voltages of color TV sets to be reduced from 400 to 270 volts. The development, according to the manufacturer, will allow manufactures of Television sets to achieve greater economy, performance and reliability and at the same time allow them more latitude for circuit design.

NEA CONFERENCE SLATED FOR DETROIT SEPT. 19th

The next conference of the National Electronic Association is slated to be held on September 19th and 20th at the New Harlan House Motel in the heart of Detroit. According to the announcement, registration will begin on Saturday the 19th with tours, displays and round table discussions lasting until 6:00 p.m. This will be followed by a formal banquet with a guest speaker and entertainment. On Sunday, following a family style breakfast, the NEA conference meeting will get underway and will last until the luncheon meeting. All interested in attending are urged to make reservations early with TSA of Michigan, the host chapter, 15374 Schaefer Road, Detroit.

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

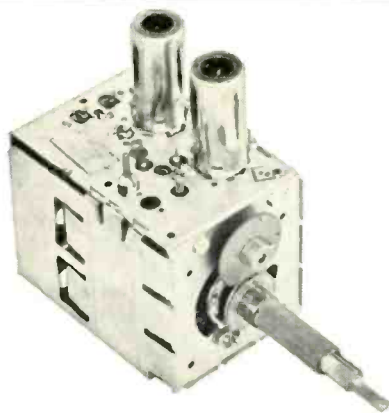
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TUNER REPAIR
SERVICE (ALL
MAKES)**



It just makes sense that a manufacturer of tuners should be better-qualified, better-equipped to offer the most dependable tuner repair and overhaul service.

Sarkes Tarzian, Inc. pioneer in the tuner business, maintains two complete, well-equipped Factory Service Centers—assisted by Engineering personnel—and staffed by specialized technicians who handle **ONLY** tuner repairs on **ALL** makes and models.

Tarzian-made tuners received one day will be repaired and shipped out the next. Allow a little more time for service on other than Tarzian-made tuners.

Tarzian offers a 12-month guarantee against defective workmanship and parts failure due to normal usage. And, compare our cost of \$9.50 and \$15 for UV combinations. There is absolutely no additional, hidden charge, for **ANY** parts except tubes. You pay shipping costs. Replacements on tuners beyond practical repair are available at low cost.

Ⓢ Tarzian-made tuners are identified by this stamping. When inquiring about service on other tuners, always give TV make, chassis and Model number. All tuners repaired on approved, open accounts. Check with your local distributor for Sarkes Tarzian replacement tuners, replacement parts, or repair service.



SARKES TARZIAN, INC.

Bloomington, Indiana

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

ONLY
\$9.50
INCLUDING

ALL PARTS
(except tubes)
and LABOR

**24-HOUR SERVICE
1-YEAR WARRANTY**

**TWO SERVICE CENTERS
TO SERVE YOU BETTER**

See your distributor, or use the address nearest you for fast factory repair service

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Tel: 769-2720

Trade / Talk

continued

RCA DISPLAYS NEW 25-INCH COLOR TUBE

The first public viewing of the new RCA 25-inch rectangular color picture tube was unveiled during the recent WESCON show in Los Angeles. This tube, now being delivered to color set manufacturers in sample quantities, was shown in an experimental color receiver in full operation. Another part of the RCA exhibit gave visitors a microscopic view of the more than 11¼ million tiny phosphor dots that "paint" a color picture on the tube's screen.

TELEVISION PICTURE TUBES SHOW SALES GAINS

The latest figures released by the Electronic Industries Association indicated that factory sales of picture tubes and receiving tubes in June showed monthly gains for the first time since last March. The rise held last year's cumulative sales of picture tubes ahead of the January-June total last year but the increase in receiving tubes fell short of closing the 19.6 million-unit gap between 1964 and 1963 sales.

NEW BOOK DEVOTED TO SERVICE OF UHF

A new book, just released by John F. Rider Publisher, Inc., called "How to service UHF TV" and authored by Allan Lytel is now available from the company or local distributors. Lytel presents an easily understood explanation of the principals and peculiarities of UHF operation and the servicing of UHF front ends.

LATE NEWS FLASH

On August 24th the Bureau of Electronic Repair Dealers Registration Advisory Board held a hearing in Sacramento on the proposed new regulations. At this meeting, James Wakefield, representing CSEA and Ed Zydeck, President of the Sanoma County Association, opposed the setting of a ten set limit as a starting point for "engaged in the business."

At the same hearing a representative of Montgomery Ward opposed the invoice and return of parts requirement.

On August 26th the Bureau Chief Dan Weston issued the formal adoption of these regulations and they now become a part of the law. MESD printed the complete list of regulations in the August issue and dealers should refer to them or to the Bureau for further information.

LETTERS *continued*

Dear Mr. Martin:

In your editorial of April, 1964, you state that it is likely the Bureau of Electronic Repair will rule that if less than ten sets are repaired registering will not be necessary. I don't know if this means ten sets per day, week, month, or year; but I don't feel that it is important. If a license is necessary in order to work on television, radio or sound producing equipment, then it should be required whether one or a hundred sets are repaired.

To the best of my knowledge where a license is required, such as an electrician or plumber, you can not work for pay nor without pay in most instances except on your own property without said license.

I was lead to believe that the licensing was an effort to upgrade the television industry, but it is beginning to look as though it is only a means of taxing the larger service companies.

Sincerely yours,
Sues, Young & Brown, Inc.

We are sorry that we did not mention that the time factor is 10 sets per year.

We certainly agree with your position that the logical starting point should be whether or not a person is paid for his services. I am sure you will be interested to know that the Zone "F" council of CSEA has passed a resolution based on exactly the same points you mention in your letter. It looks as if we are all of the same opinion and it is now up to us, as an industry, to convince the Bureau of the soundness of our stand.

Dear Ralph Johonnot;

I am so glad to have been placed on the mailing list of MESD magazine. The July issue arrived today and I read it from cover to cover. Congratulations on your election to the Presidency of CSEA. I only wish I were with you to help but, as you know, I have been out of business for awhile although my heart and thoughts are still with you. Through MESD I am able to watch with great interest the progress you are making. CSEA can't help but win with dedicated fellows like you.

Best wishes,
Arnie Meyer

This letter was sent to MESD by Ralph Johonnot with an idea that many of the readers would be interested in hearing from Arnie Meyer and knowing that he is still keeping up with the industry. He contributed a great deal in the early days of the Association and is missed by many.

Dear Sir:

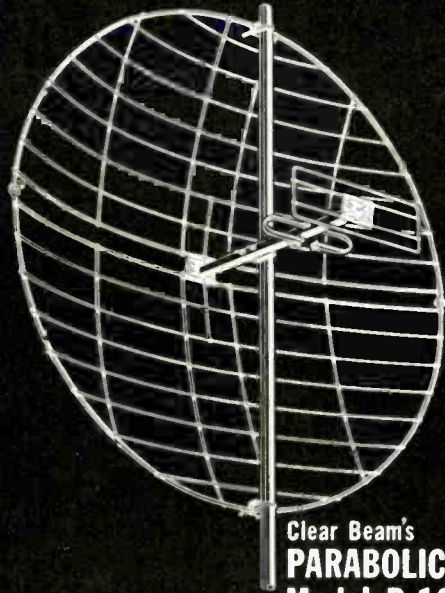
Would you please send me a copy of your May 1964 issue? I'm interested in seeing the color TV alignment article.

Art Buynton
Delta Communications, Sacramento

It's on its way today . . . sorry for the delay.

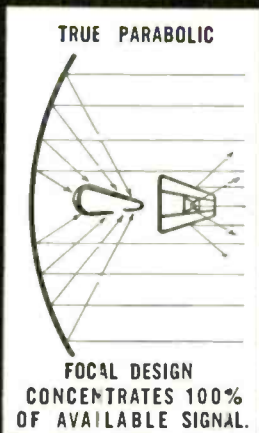
SEPTEMBER, 1964

Most POWERFUL UHF FRINGE ANTENNA EVER!



Clear Beam's
PARABOLIC
Model P-100

New, from Clear Beam UHF Research



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selects directional signal
... Rejects ghosts.

Unique parabolic "big screen" design, single dipole feature, and all metallic construction provide maximum performance even in the toughest fringe and translator UHF areas. Prevents signal loss caused by weather deterioration and phasing harness mismatch. Preassembled screen and dipole for fast, strong installation! Up to 18 db gain. *Proven the most powerful UHF antenna ever designed!*

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FOR THE BEST • UHF RESEARCH UHF DESIGN • UHF PERFORMANCE • CLEAR BEAM

Through continuing research and nationwide evaluation of problems in UHF areas, Clear Beam brings you the widest selection of proven UHF designs. Clear Beam's UHF antennas have been field tested in every type of UHF reception area to assure you maximum performance, maximum profits!



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... one step ahead!

Broadcasters Receive Anti-PAY TV Story by TAME Executive

Since the controversy between Pay and Free TV, as well as that of cable systems, is reaching its peak here in California in November we felt that the following article is extremely important. Throughout the next eight to ten weeks Television Servicemen, more than anyone else, will be asked about STV. The quality of the answer will have a direct bearing on the outcome of the election. The article itself is a direct publication of a speech made recently by Morton Leslie, acting chairman of the Television Accessory Manufacturers Institute, before the Georgia Association of Broadcasters, and we feel sure it will be of benefit to you in the weeks to come.

When TAME first appeared on the scene in late 1963, we were likened to the "buggy whip manufacturer" who was vigorously opposing the advent of the automobile. The inference intended by the critic was that like the auto, CATV represented a giant technological step forward. Possibly also, he may have been prophesying the demise of the television receiving antenna from the home in favor of a community strung with miles of coaxial cable and the accompanying booster amplifiers at regular intervals. We do not look upon CATV per se a technical advancement or as a necessary adjunct to entertainment. Aside from those early systems which performed the unmistakable function of bringing television enjoyment to difficult and impossible areas, CATV imposes upon the set owner not only unnecessary program duplication, but the ultimate reality that he is saddled with a life-long monthly charge. The continued growth of the making available to the set owner the cheapest and simplest form of receiving method. Even the most complex receiving antenna system is by far in the long run least expensive, more generally trouble-free and in the main, more to the liking of its owner. For the purpose of clarification, I should like to state that the future of the television antenna has not place the members of TAME in the throes of despair. Much like any well organized company, our members are not wholly dependent upon this area of electronics alone. We will say that the television antenna has been good to us—and good for you, the broadcaster. You have only to check your own chief engineers for an authoritative appraisal on the role that the receiving antenna has played in television growth. But I ask that one important consideration also pervade during this seminar—the public interest—a concern that has been untouched, but is nonetheless paramount. The area of greatest importance is just how the indiscriminate spread of CATV will affect TV's growth and the public interest.

We regard it axiomatic that television's future and continued prosperity is linked to the growth of UHF. Much like radio first began to grow with the spread of stations throughout the land from its beginning only in major cities, so will

television really take-off in even greater dimensions within the UHF spectrum. UHF's incipient difficulties should in no way deter its growth consideration. An entirely different climate exists today from the mid-fifties. The very mechanics of UHF in the early days presented impediments often too great to overcome. A set owner who was enjoying TV from several VHF channels saw little purpose in investing the additional \$30.00 - \$50.00 to equip his set for UHF. As you all know, a major part of this problem was solved with the passage of Public Law 87-529 requiring that all television receivers made after April 30, 1964 be equipped with all channel head-ends. Add to this the overall improved circuitry of the set and the fact that most locations require very simple antennas; and you can see where these original cost objections have been eliminated.

More than one million UHF equipped receivers were produced in 1963. This represents almost double the 1962 total and three times that produced in 1961. At least five million UHF sets will be made in 1964. Given just a little more time and additional all-channel receivers in the field, we are confident that a new "gold rush" will take place for the 1,130 allocated, but unapplied for commercial UHF stations. This must be the pattern of TV's growth—the extension of free off-the-air television entertainment and enlightenment through UHF.

CATV is not compatible with the growth of UHF. No wary investor will build a UHF plant so long as he must contend not only with normal local competition, but re-transmitted signals from some other marketing area. In Utica, New York, the applicant for Channel 54 will withdraw his application if CATV is franchised. An executive in Zanesville, Ohio's Channel 18 informed TAME that the refusal by two CATV systems to include his programming may force him out of business. The Mansfield, Ohio city council was informed by a group that they will apply for and build Channel 36 at a 1/3 million dollar cost if they will deny the pending CATV franchise request. Charlotte, North Carolina will soon have its third TV station, a UHF, now that the tide of public opinion is in opposition to a CATV franchise.

I believe that Free-TV as we know it today will grow in continual constructive evolution. It will delineate, portray and project American tastes, ideas, culture and humor. Above all it must benefit the people and provide them with this service cheaply and trouble-free. This it has done with undiminished consistency. The broadcasting industry has functioned for thirty years within the framework of the Communications Act. Such Federal control has in part been responsible for the unmistakable advances that have taken place. Technical achievements have been many, production techniques have constantly improved, artistry before the cameras has achieved new highs and even overall profits have steadily mounted.

CATV cannot exist without the broadcaster. It is dependent upon a free off-the-air signal which today it takes without asking. It does not concern itself with programming or engineering or sales. It admittedly provides an extension of service for one TV station into an area where the FCC original allocations plan may not have intended it to reach. In more and more cases a second and sometimes a third station is subjected to a form of competition that did not exist when it originally filed for a license and commenced construction. Section 214 of the Communications Act specifically prevents a broadcaster from such extension of services without Commission approval. Thus, the paradox emerges. A CATV operator conducting his business outside the jurisdiction of the Communications Act may actually do what is illegal for the broadcaster. Taking into consideration even the advantages that a few broadcasters may enjoy; the interplay, interdependence and even brotherhood that has abounded within your industry and the National Association of Broadcasters, must not permit an otherwise thoughtful broadcaster to gain at the expense of overall industry growth. The unregulated growth of CATV makes the Communications Act self-defeating, and the Congress must be made to once again balance the scales. Is there a solution? We believe so. TAME is proposing that necessary amendments to the Communications Act of 1934 be adopted bringing CATV under the jurisdiction of the Federal Communications Commission. Among a number of additions and changes in the inclusion of a Section 302 which makes the construction and operation of a CATV system re-transmitting off-the-air material for a charge, subject to the full provisions of the Act.

An area of profound confusion and complexity focuses on the qualifications of lower municipalities to pass on the feasibility of CATV. For the most part these town councils comprise local businessmen and merchants; a filing station operator, haberdasher, furniture store owner, insurance broker to mention a few. Where available, professionals, particularly attorneys are asked to serve. The oftentimes bulish effort of the group seeking a CATV franchise will becloud the full effect of their application through the introduction of highly technical material which is so often over the heads of those who must make a judgment. With varying degrees of emphasis, the full gamut of persuasion comes into play. The usual representations that their citizenry will enjoy better TV, more TV, have one or two music channels, no longer require unsightly antennas—are some of time tested halftruths utilized. When city councils are involved with similar technical matters in other fields, it is usual for them to retain a local consulting expert. Such capacities as building engineer, water engineer, sanitary engineer are commonplace. Somehow in the area of Community Antenna Systems, they have relied in the main upon the contentions and arguments of the applicant! Public hearings rarely take place and when they do, local TV technicians and other interested parties are frequently hesitant to express their

views in the face of a professionally conducted appeal. This reticence and indecisiveness results in either incomplete representation to the people or in hurried insufficiently thought-out local legislation. The decision as to whether a CATV system will benefit a community or not must come from a body who with knowledge and fairness will decide in the public interest—the Federal Communication Commission. Only they can weigh its effect upon local VHF's and the growth of UHF. And equally important to all parties, they provide by-law on all important system of appeal.

I know you will not look upon TAME's stand as a counter prejudice. Nowhere in our thinking or actions have we advocated outlawing CATV. Nor do we wish to impede the system of free enterprise. In yet untried applications, this medium may yet grow and find a place in our television entertainment scheme. But CATV is altogether too closely linked to broadcasting and the broadcaster not to be a part of the same set of ground rules to which he is subjected. It's insecurity and rootlessness can only be offset by thus legitimizing its existence.

There are many also who feel that CATV's search for a rich existence is closely allied to Pay TV or Subscription TV. Certainly from a technical viewpoint this is possible. While the cost of converting a cable system into an originating programming facility may in some cases be high, it is nevertheless possible; and taking into consideration the obvious tremendous income potential, I don't believe that conversion costs will pose any deterrent. We know of at least three large CATV companies who are actively pursuing the establishment of Pay-TV in various parts of the country.

By whatever label they employ, CATV and Pay-TV are closely related and must be included in any nationwide or network Pay-TV master plan. The breadth and daring of Pay-TV's effort is exemplified by the capitalization of Subscription TV, Inc. in San Francisco and the recently announced Pay-TV companies in Houston, Dallas, Miami and right here in Atlanta! If Pay-TV must come, it should be as a controlled "mix" with Free TV. The FCC through its control of CATV would be in the pivotal position through its rule making procedures of establishing some pattern or proportion of Pay-TV and Free TV. This bureau, and only this bureau, can thus safeguard Free TV, the broadcaster and the people.

To the broadcaster who is also active in the CATV field, we offer little criticism, only the observation that he is a businessman wearing two hats. Analysis invariably discloses that one business does not necessarily gain with the other. To the broadcaster who applies for a CATV franchise "defensively" because of other applications placed before his town council, we submit that path is only seemingly easier to take. With little more effort, tremendous local support can be mustered to make possible a resounding expression of opposition.

TAME finds itself at this junction in the role of disseminating information and aid not only to those members of our own industry, but allied groups as well. For this reason, we welcome the opportunity to participate in this seminar and make our views known. We recognize the important role that the National Association of Broadcasters will play in determining the future of CATV; and we ask that all broadcasters make their views known to its officers, directors and staff. Somewhere amid the scores of these expressions will come legislation thoroughly grounded in theory and workable in practice.

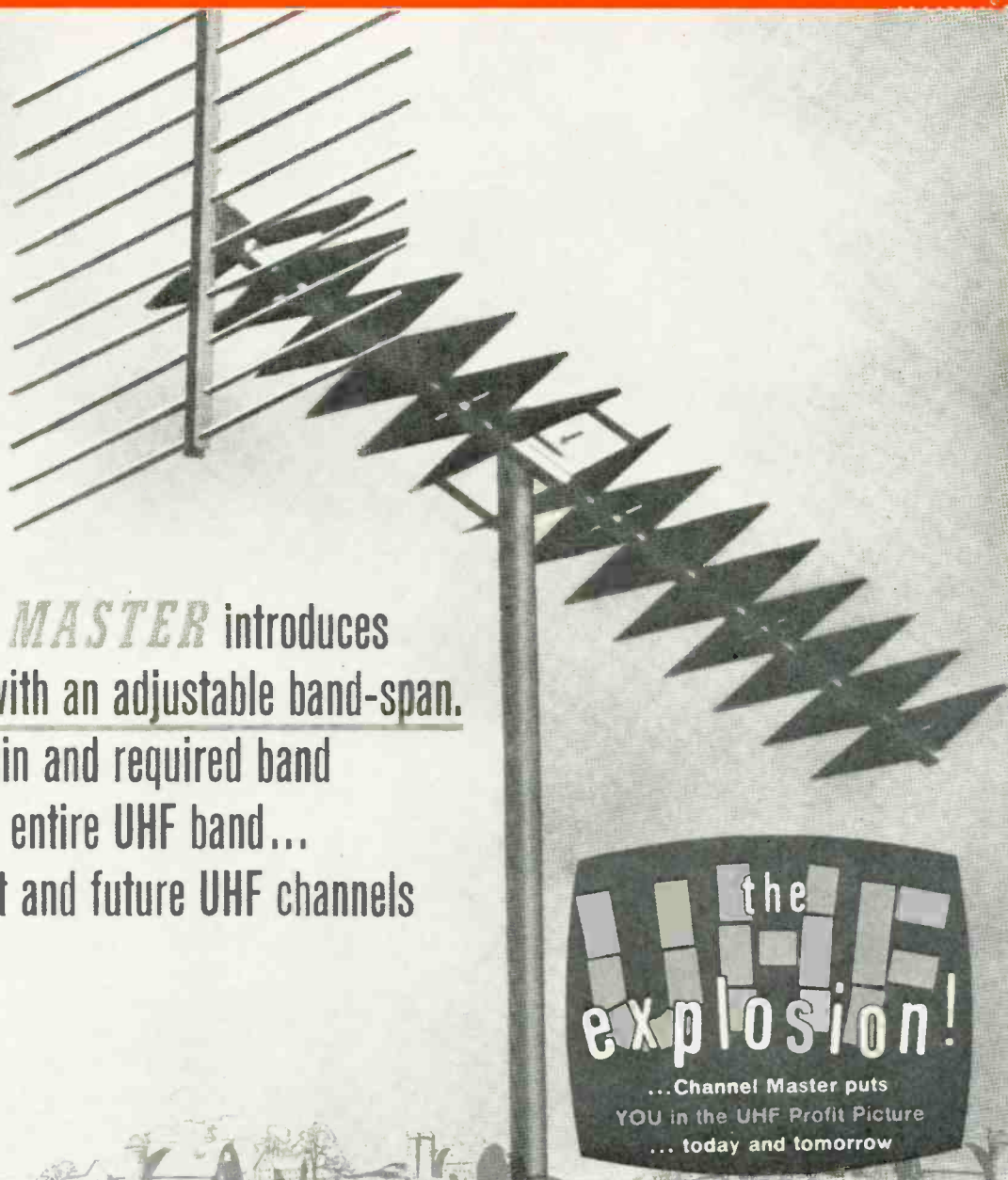
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UHF BANDSAW

World's first moderate-priced antenna that

Patent Pending

- GIVES EVEN HIGHER GAIN THAN A 16-ELEMENT YAGI CAN!
- SPANS WIDELY SEPARATED CHANNELS LIKE A YAGI CAN'T!
...AND YOU SET THE BAND WIDTH!



Now... *CHANNEL MASTER* introduces
world's first antenna with an adjustable band-span.
Can be set for peak gain and required band
width anywhere within entire UHF band...
to receive both present and future UHF channels

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Long Beach HE 6-9697 & SP 5-1428
IN
Anaheim: KI 7-3527 & 865-0688
Bakersfield: FA 7-5535
Oxnard: HU 3-9541
San Bernardino: TU 8-6807
Van Nuys: ST 1-3930

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Oakland, TE 4-9185
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Santa Rosa: LI 2-5423
Walnut Creek: YE 4-3000

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IN
Palo Alto: DA 3-3173
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Sacramento, 442-9041

NEWS WIRE continued

Dan Weston, Chief of the Bureau, was the principal speaker at a special meeting held at Knotts Berry Farm and co-sponsored by the Whittier and Orange County Chapters on Wednesday evening August 26th. Chapter members, their wives and guests as well as members of the Long Beach RTA attended the affair and heard an explanation of the new regulations that just went into effect.

The Zone "B" Council members were the guests of Chairman Oakley Dexter at his home in Marin County last month. Over 30 people attended the Spaghetti, with special meat sauce prepared by Mike Fusaro of San Francisco, Dinner, swam in the Dexter pool and completely enjoyed themselves. The business part of the monthly meeting included an informal discussion of industry problems and plans for the future. Executive Secretary Phil Fisher was also advised to send a letter to NATESA questioning the advisability of their soliciting new members on an individual basis without contacting any local organization in regards to their competence and ethical business practices.

ACTRA had a dark meeting in August because of vacations but have set up a meeting for September 1st with Dan Weston to be the main speaker. The meeting will be held at Finn's Restaurant in Oakland with dinner starting at 8:00 p.m. A special committee of Ben Follrath of Ben's TV in Alameda, Fred Rock of Granada Radio in Oakland and Jack Edwards of Styles TV has been set up to plan the fall social party for ACTRA members, their wives and guests. Plans tentatively call for it to be held around the middle of October.

THE CSEA membership drive is still in full swing and Chapter secretaries are urged to send in the names of those attending their local chapter meetings so that these names can be placed in the fish bowl for the trip drawing. Some chapters are taking advantage of this and others are not.

The Zone "B" Council has directed a letter to the State President Ralph Johonnot requesting information regarding the status of the apprenticeship program. It seems that the Bay area is very interested in this program and are ready to start developing new techniques through apprenticeship.

Santa Monica Chapter of CSEA has just named Bernstein as President of the group with Ginsburg as Vice President and Sherman as Treasurer. The chapter is in the progress of expansion and renewed activity.

New members of CSEA include Russco Electronics in Fresno; Windsor Hills Radio-TV Electronics Co., Los Angeles; Wright's TV and Village TV Service in Sacramento; Crofton's Radio & Television in Salinas; Mel-Time Repairs in Santa Barbara; Western Radio & TV in Santa Clara; Dickinson Television Service in San Francisco and J & M TV in Marin County.

The San Bernardino Chapter of CSEA recently received the following letter from Mr. G. W. Hooper, Principal, School of Hope, the Council for Retarded Children: "On behalf of the children of the School of Hope I want to thank your Association for donating the 8 television sets and installing them in the classrooms and office. They are certainly appreciated." This is the type of letter that tends to make up for the criticism the Service Industry is forced to take from un-knowledgable Television Commentators.

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 GL 2-3171
 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 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

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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?**
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A subsidiary of Zenith Radio Corporation

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IN PERSON: Come to 4041 Marilton Ave. in the Crenshaw Shopping Center, next to Barker's. (This Address is for the Classified Dept. only.)

BY MAIL: Send your ad to MODERN ELECTRONIC SERVICE Classified Dept., 4041 Marilton Ave., Los Angeles 8, Calif.

RATES

95c PER LINE, one time.

MINIMUM 5 lines.

BOX NO.: Add 50¢ service charge, and allow 2 lines for reply address.

RE-RUNS: 2nd and 3rd times, less 10% each, 4th and thereafter less 15% each. Same copy.

HEADLINES, ETC.: Large headlines, box borders and 2-col. ads available at modest charge.

"POSITION WANTED": Less 15%, payable in advance.

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BUS. OPP.

BEAUTIFUL AIR CONDITIONED corner Mall location in live shopping center. Fast growing Orange County area. Solidly established full list price record shop. Ample working space for TV-Radio-Hi Fi service work. Ideal set-up for one man Service and Sales operation. Will sell for inventory and fixtures. \$5,000 will handle; balance at Bank terms. Contact owner direct: A. R. Hoffman, 304 West 3rd Street, Santa Ana, Calif. Phone: (area code 714) 543-1805 or 543-8474. HURRY! This opportunity will not last.

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USED TV'S FOR SALE

USED TV'S—

Working—Late Model

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LOW SHIPPING COSTS

TV BROKERS—WE 1-6622

4920 W. Pico, L.A. 19, Calif.

WILL SELL my one-man Wholesale Elex Business in Hemet, Calif. Business will be sold to responsible party for inventory. \$15,000 down and balance in payments. Handles most major lines, others can be added. Includes service shop, tools & other equipment plus 12 yr. old 20 x 30 store bldg. Located 30 miles from Riverside, nearest competition. New man could easily triple business. 50,000 population in 15 mile area. Drop-in trade figures for 1963 were: Gross sales, \$40,878. Gross profit, \$19,196. Would be willing to stay with new owner for thirty days to introduce him to accounts. This is an OPPORTUNITY you can't afford to miss. Contact: Gil Severns, 658-5115, or write 40400 Florida Ave., Hemet, Calif. Reason for selling? Retirement, of course.



Tubes That Perform Reliably Here...



Work Well Here

At top, you're looking into the RCA Receiving Tube Reliability Laboratory—a most important factor behind the exceptional reliability of RCA receiving tubes, and one more plus-value that you have in RCA tubes.

Here in two-hundred TV sets of all sizes—black-and-white and color—samples of each week's production of RCA receiving tubes are subjected to extensive tests under actual field conditions. The operating conditions for the TV sets vary from low-line to high-

line voltages. And the sets are regularly cycled on and off to check the effects of heating and cooling on the tubes.

The Tube Reliability Laboratory reveals—and allows us to eliminate—problems that do not show up under normal production life testing. It also permits us to conduct pre-production tests of new tube designs to make certain that the RCA standards of quality will be fulfilled before the new tubes are marketed.

Testing in the Tube Reliability Lab-

oratory enables us to verify the consistent high quality of RCA receiving tubes—to maintain uniformity of characteristics from tube to tube and throughout life. It is another example of the care we take to assure that RCA receiving tubes give RELIABLE PERFORMANCE where it really counts—in your customers' sets.

SEE YOUR AUTHORIZED RCA DISTRIBUTOR FOR TOP-QUALITY RCA RECEIVING TUBES

RCA ELECTRONIC COMPONENTS AND DEVICES, HARRISON, N. J.



The Most Trusted Name in Electronics

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!

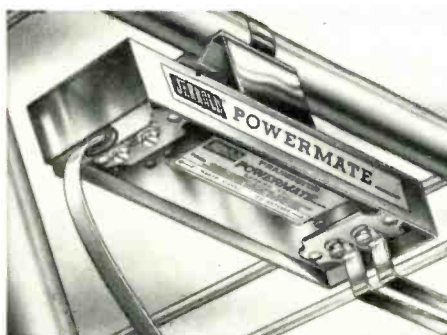
FM stereo indoor amplification—new Stereo Range Extender brings in distant FM stations, splits signal from TV on same antenna.

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
 List price \$44.95

NEW!

Best color and b&w reception—Super Powermate Coaxial eliminates ghosts, color smear, ignition pickup, and other problems caused by the download.

Model SPC-103
 List price \$47.95

NEW!

"De-Snow" power for deepest fringe areas—mightiest of all VHF Powermates works where all other amplifiers fail. Ideal for small public buildings as well as homes.

Model SPC-132
 List price \$97.75
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