

# electronic service dealer

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## LETTERS

Gentlemen:

Your October Issue is a real dandy. It is, however, my belief that as an industry that has in the past been working for peanuts are troubles are just beginning. People with low three figure bank balances and some two figures are obtaining credit for the purchase of high price color tv sets and rotor antennas. This un-restricted selling is bound to play havoc. Just wait until this customer is faced with replacing a color picture

tube at \$200 plus about \$45 to put it in the set. Who will be the crook? Not the tube manufacturer but us. This customer expects the complete job for \$5.50. Now, just wait until transistorized tv is abundant and can not be repaired in the home. True you not be competing with the self service tube checkers but will be running neck and neck with the finance company. One other suggestion, it might be a good idea to check with your credit bureau before accepting a

color call. Black and white was tough but now you better fasten your seat belts.

Bascom TV  
San Jose, Calif.

*Ed: This was a great letter. Sorry we couldn't print it all.*

Dear Don,

It has been a while since we last corresponded. Your actions in the matter of contractor licensing were a service to the industry.

**CATV—AND WILL IT “TAKE OVER” THE TV SERVICE INDUSTRY.**

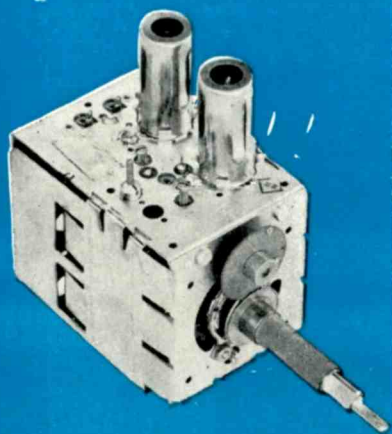
In your November editorial you speak of PAY AV OPERATORS and state—“Without exception the cable-TV operators tell us that they are not interested in service or sales or broadcasting” and you say HOGWASH.

Assuming that you are speaking of CATV operators as well as PAY-TV operators (and there is a significant difference) I am here to tell you that there is at least one C.A.T.V. firm that admits to an interest in service and sales. I admit to it and the others are interested but do not admit to it. I am willing to “give up” the sales and service in a straight-forward and clean cut manner because this is required by the city councils in the area.

Unfortunately there are those in the business that pay only a form of lip service to this ideal. There are CATV's in Northern California (and most likely elsewhere) who perform a free service call to each hook-up to “set the tv set up for Cable TV “even though those self-same cities have ordinances that do not allow servicing by the cable operator.

I maintain that the Cable operator in a specific city should have a working arrangement with the local Association for set ups and referrals to local Association members. Perhaps the CSEA should stop “backbiting” CATV and start seeking involvement with the Cable operators. I know of cities where the total potential service and sales dollar volume will triple (or more) within a year after the Cable is installed. It is about time for the TV SHOPS to make positive plans to be involved in this increase in business. The statistics indicate that CATV is here to stay. The statistics also indicate that most CATV systems will be controlled by broadcast and publishing interests and this continued concentration of control of CATV systems bodes ill for the service industry.

## TUNER REPAIRS



# \$9.50

**FOR COMPLETE OVERHAUL**

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

**24-HOUR SERVICE with  
FULL YEAR WARRANTY**

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

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

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

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

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

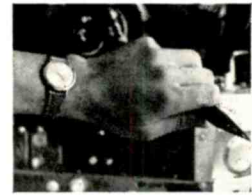
 **SARKES TARZIAN, INC.**  
TUNER SERVICE DIVISION

See your distributor,  
or use this address

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

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

# OK, Watch Watchers!



## We want you to time your

## next service call

## with our watch!

Buy our Color Commander color bar generator. If it doesn't save you time, return the Color Commander within 10 days and keep the \$10.95 Timex.



What makes us so sure you'll save time? Amphenol's exclusive technique of color alignment. Only Amphenol gives you a:

1. Single cross bar that immediately centers the raster.
2. Single dot for fast, constantly accurate static convergence.
3. Three-bar color array that isolates your working bars—the 3rd, 6th and 9th.

### Your Time is Money

If you're spending 45 minutes on a color alignment job, the Color Commander technique can cut that to as little as 27 minutes. That could mean two or three more calls a day—\$24-\$36 more income. Result: The Color Commander could pay for itself in two to three weeks.

### Become an Amphenol Watch Watcher

Take advantage of this limited time offer. Cut out this coupon and beat the Watch Watcher rush. For the name of your nearest Amphenol distributor, write Dan O'Connell, Head Watch Watcher, Amphenol, Box 134, Broadview, Illinois 60153.



### Watch Watcher Special

Count me in on the Watch Watcher Special. I understand I will get a lightweight, compact, completely solid state Amphenol Model 860\* Color Commander along with a Timex watch to time my savings all for **\$169<sup>95</sup>**

Model 860AC \$20.00 higher\*  
\*Suggested resale prices



# AMPHENOL



DON MARTIN

### **Angry Industry Takes On Educational TV Program**

The tempers are really flying all across the United States as the National Educational Television Network began to release their program titled, "Your Dollars Worth".

Although originally described as not derogatory to the service industry, its release has brought a barrage of complaints. Last month NEA (National Electronic Associations) meeting in Indianapolis, passed a resolution stating that "the film has errors, half-truths and contained material that would lead the consumer to false conclusions. The resolution also stated that "the conclusions in the film concerning reported set failure rates which are at best a poor and erratic sampling involving a specific group of people who may not be a reasonable cross section of the population." The resolution concluded with a request for equal time to prepare material that correct "some of the misleading innuendoes contained in the film to better inform the consuming public about the most technical home appliance they own."

We recently received a copy of a letter written by Enos R. Rice, President of the TSA King County in Seattle that was directed to Robert Hudson, V.P. of National Education TV 10 Columbus Circle, New York, New York 10019. In this letter Mr. Rice did a terrific job of outlining the many items in the film that dis-credited the industry and once more hit below the belt.

If you haven't seen the film let me point out a few of the remarks made. "One scene showed a service dealer making two home calls on successive nights with an intervening trip to his supplier with the commentator emphasizing that the \$3 charge for service was fair.

In another part of the film he indicated that \$4.00 was about the right price to pay for a service call in an urban area. How this "educational" TV program could come up with these figures is beyond my comprehension.

The film did extoll the virtues of the Registration law in California and we are reminded that this film had several member of CSEA in it. I am sure that if any of those in the film had had a chance to see it prior to its release it would never have been allowed to be released. This type of commentary is quite similar to the sensationalism of some newspapers to sell papers. These writers take things completely out of context and develop their own conclusions. Although nobody like it . . . we kind of accept it as "selling papers."

Now, in the case of "educational TV" that is paid for by the taxpayer it is unbelievable that the same type of "rag" reporting could be allowed. No one with one ounce of responsibility could possibly have allowed this film to be released. The very

Bureau in California that was taking credit for doing such a great job in reducing the crooks knows that a \$4 house call results in more crooks. Our recent series of articles alone indicated that no service firm could exist on this type of billing . . . yet there it was for millions to view.

General Electric's computer indicated that they had to charge \$11.05 to break even. RCA factory service is tabbed now in the same area and based on cost figures. Just who produced the so-called facts that acted as a base for this show? We would like to face him in a debate sometime and just see how smart he really is.

### **NEA Asks Manufacturers For Payment For Replacing Their Defective Parts**

At the recent NEA board meeting in Indianapolis the Association passed a resolution asking that since the color TV manufacturer warrants each new unit to be free of defects for a period of one year that the manufacturer also determine a method of payment for the labor incurred in the replacement of their defective components. They also recommended that the payment not be a blanket price but at local prevailing service rates.

This problem has been with us for some time now and it is only fair that the manufacturer find a way to cover the cost of labor in replacing defective parts.

### **Pricing Controversy Continues Across Country**

Recent reports from Associations across the country indicate that there is still considerable controversy over the question of pricing. In general, most dealers have recognized their problems and have adjusted prices but there is still some resistance by the notorious cut raters or those who are just afraid to charge a fair price and continue to hide behind parts charges. We intend to send out a random sample survey of current prices and trends in California later this month and encourage everyone who gets one of these forms to fill it out and return it right away. It is only through this type of cooperation can we report true findings and act as a source of information to the trade on pricing practices.

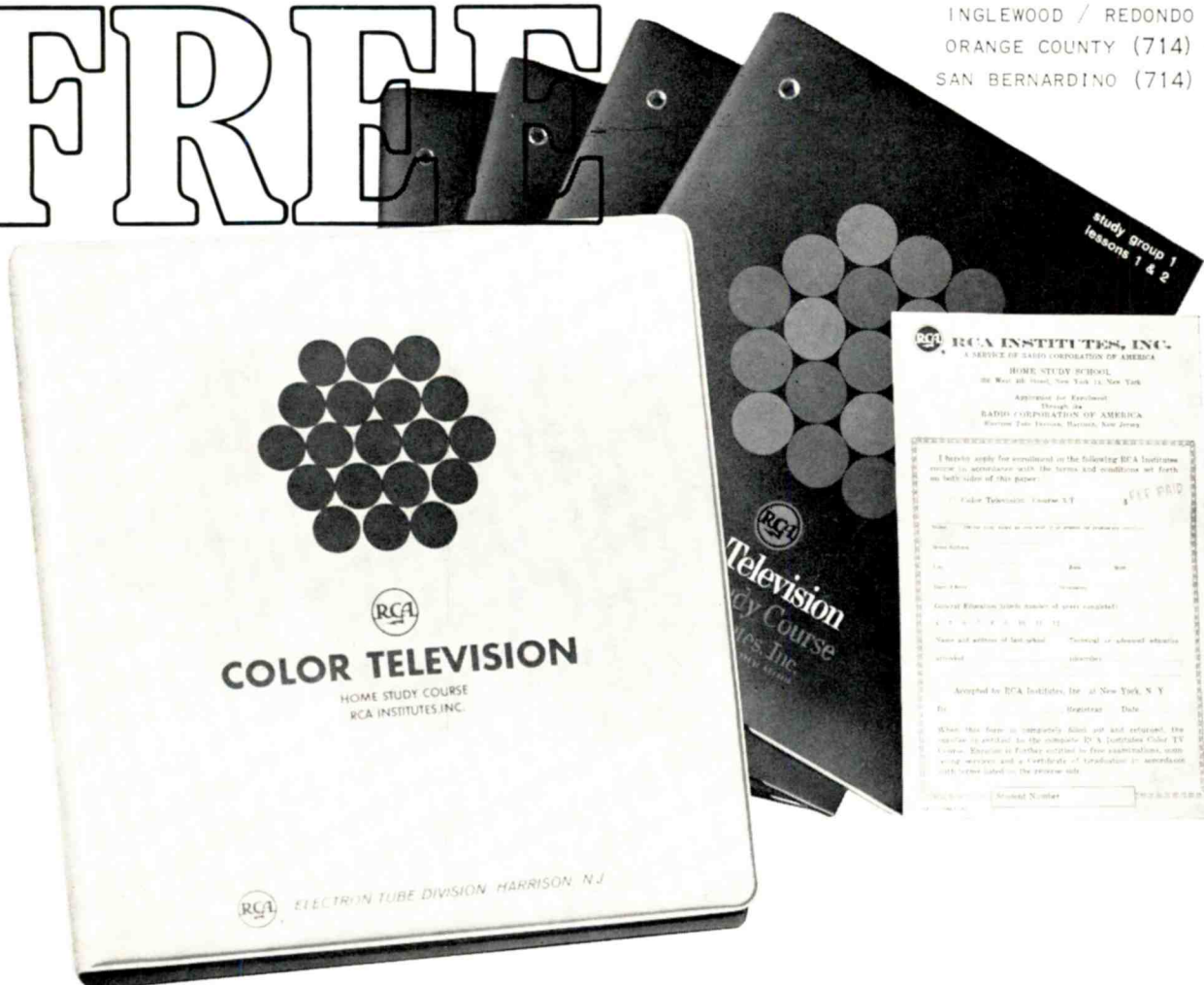
### **Add On "Dollars Worth" Film**

Just as we were about to go to press we received notification that the TV portion of the "Your Dollars Worth" educational TV film had been placed in the "ashcan." In a letter from Mr. Edwin Bayley of the National Educational Television System, he stated that none of these films have been placed in the library and there will be no further distribution of the film. Although this has been done he further stated that this action resulted from no alleged fault of the film but rather because he felt that situations change fairly rapidly and valid material today might very well not be valid six months from now.

# Get this \$65 RCA color TV course FREE

from your RCA Victor Distributing Corp.  
6051 Telegraph Rd., L.A., 90022

LOS ANGELES • 723-6661  
SAN FERNANDO VALLEY • 781-6501  
PASADENA / BURBANK • 246-8373  
SAN GABRIEL VALLEY • 443-6907  
WHITTIER / ALHAMBRA • 728-7295  
LONG BEACH / DOWNEY • 639-6950  
INGLEWOOD / REDONDO • 675-4401  
ORANGE COUNTY (714) • 521-6700  
SAN BERNARDINO (714) • 889-1518



when  
you buy  
this



WR-64B RCA Color  
Bar/Dot/Crosshatch Generator

or this



WR-69A RCA TV-FM  
Sweep Generator

or this



WR-99A RCA Marker Generator

or this



WO-91B RCA 5" Scope

That's right! RCA Institutes famous Home Study Color TV Servicing Course FREE, when you buy ANY ONE of the instruments shown here. Buy all four...get four courses. Enroll all your technicians while you equip your shop with the instruments you'll need for color TV servicing anyway.

**Here's how it works:** Simply buy one, or all, of the four instruments shown, the WR-64B, WR-69A, WR-99A, or WO-91B—ALL essential color TV test instruments—from your Authorized RCA Test Equipment Distributor between now and November 15, 1966. Fill out your warranty registration card and attach the white identification label on the carton. Send them to RCA, Test Equipment Headquarters, Bldg. 17-2, Harrison, New Jersey. We will send you the enrollment form and a binder

containing the first two lessons. When you complete the lessons and forward them to RCA Institutes for grading, the next lessons will be supplied to you directly from RCA Institutes, all without charge to you.

But do it now. This offer is good only for equipment purchased between September 1, and November 15, 1966. To allow for postal delay, we will honor cards received up until December 1, 1966. Here's your chance to equip your shop for color servicing while we train your people for FREE!

Electronic Components and Devices, Harrison, N.J.



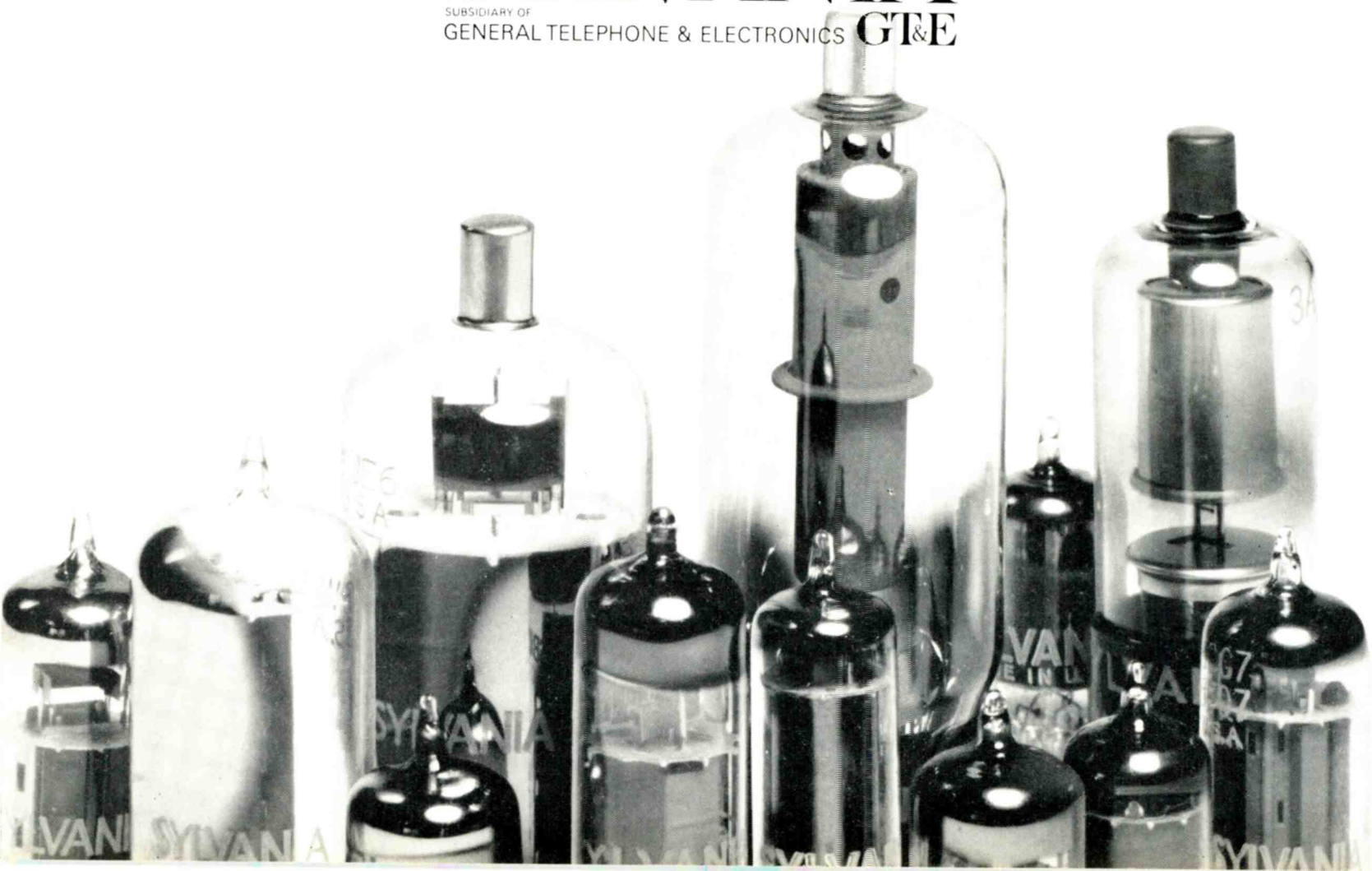
The Most Trusted Name in Electronics

# A dozen ways to cut down on color call-backs.

In color TV set repair, these 12 Sylvania tubes do most of the work. They cut down on call-backs because their quality is assured by thorough testing before they leave our plant.

Sylvania makes color replacement receiving tubes for every major color TV set manufactured. Available quickly from your Independent Sylvania Distributor.

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





# CSEA NEWS WIRE

A ROUND-UP OF STATE AND LOCAL NEWS OF  
THE CALIFORNIA STATE ELECTRONICS ASSOCIATION

San Diego (chapter 13) last month discussed the format for the coming color school to be sponsored by the chapter. The course will be called "A Short Course in Practical Color Servicing" and will include field engineers of all major manufacturers presenting their particular chassis and establishing check off sheets for future use by the technician. Another new item to be added to the course will be a program on the best approach to meeting the public. The members also discussed the possibility of attaching the work orders to the estimated forms. Full details have not been worked out as yet but will be within the near future.

ESD ESD ESD

The Zone "B" Council of CSEA is about to go all out in establishing a consumer image on the value of dealing with a member of a local or state association. Most members felt that this had been accomplished earlier in the Bay area but that there is now a need to go hard at it again. All members are urged to talk up the association they belong to. Run the association "bugs" in all advertising. Carry it on all trucks and uniforms. All letterheads and all mailings should contain some information on the value of dealing with an association. Members felt it might be a good idea for the State office to come up with an envelope stuffer that could be inserted in all bills or left with the customer telling the value of dealing with a firm that stands behind a code of ethics and good business standards.

ESD ESD ESD

Zone "F" has just authorized the purchase of 30,000 estimate forms from the State office for use of their members. These, and many other state supplies, are available at nominal cost and should be ordered from Fresno for local use. The value of a State Association is its ability to buy such aids in quantity and return them for a break even charge to the members.

ESD ESD ESD

The delegates of Zone B have passed a resolution asking the telephone company yellow page representatives not to take the advertising of any shop who refuses to carry their address in their ad. The Zone suggests that every dealer in the State, when contacted by the yellow page ad salesman, to insist that they do not run their ad if another dealer is allowed to run without an address. Make the salesman put it in writing that this will not happen and through this pressure insure a top quality book. Remind these people that by accepting ads without addresses can well discredit the yellow pages as a whole.

ESD ESD ESD

Speaking of yellow pages, the San Mateo County chapter is still considering the possibility of a quarter page ad for CSEA. This is the type of advance thinking that has made this group outstanding as a local association for years. If all chapters of CSEA would have its members "chip in" a few bucks apiece, and run a similar ad, the combined impact could be outstanding. Such an ad could tell the advantages of doing business with a member of CSEA and, in turn, the individual member runs the association "bug" to capitalize on the total promotion. Great idea!

ESD ESD ESD

The Zone "F" Board of Directors have developed a committee to investigate and report on poor quality and workmanship of the present day TV's. The Zone secretary was also advised to request the State office to place the item of "Manufacturer's poor quality and lack of quality control" on the agenda for the next board of directors meeting.

ESD ESD ESD

At the same time, the Zone directors sent a letter of appreciation and an Associate Member Certificate to Carl Huber of Philco-Los Angeles in recognition of his and Philco's "invaluable support of Zone 'F' and Operation Spotlight."

*(Continued on page 25)*

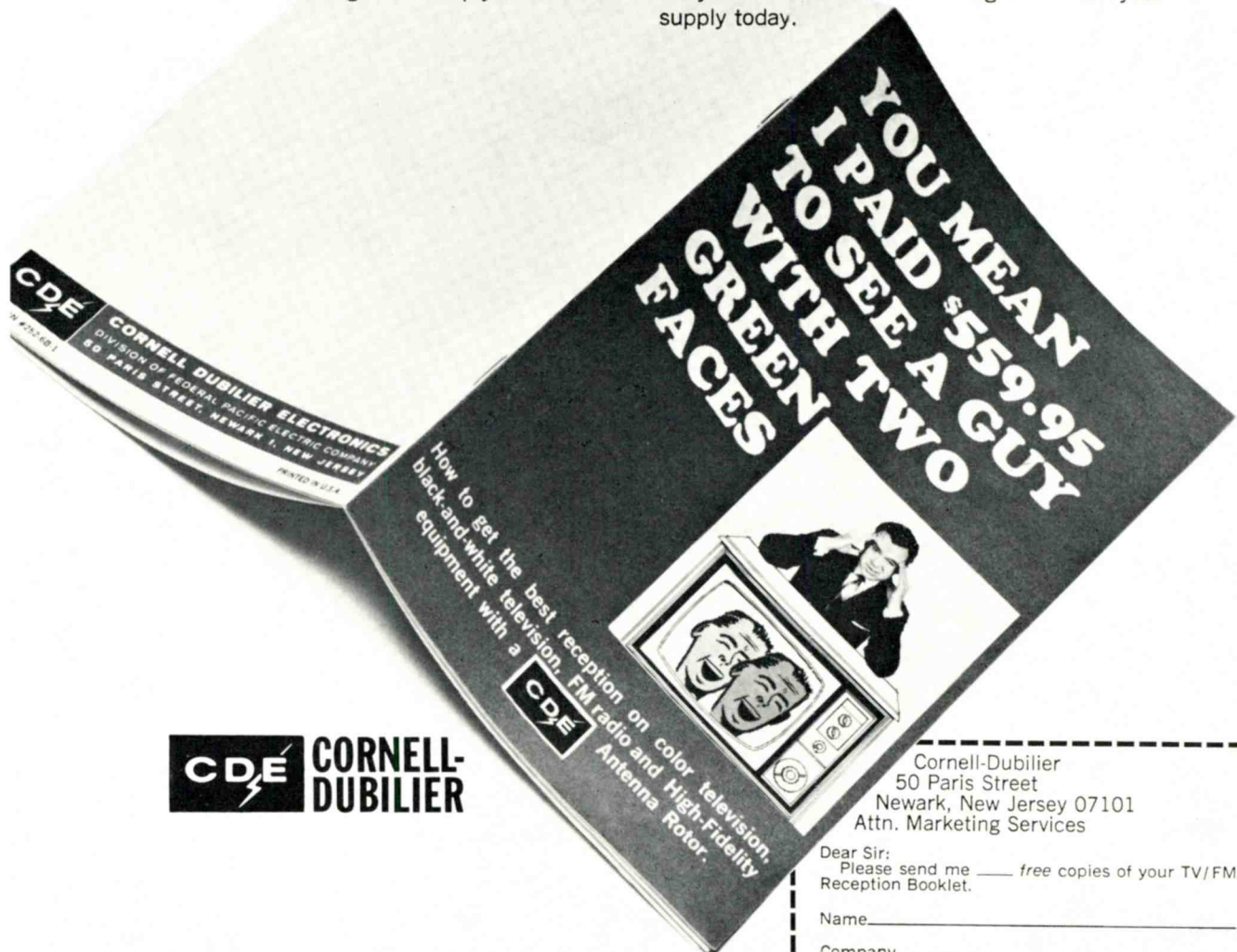
# Another great new sales booster from Cornell-Dubilier!

This new and completely revised 16-page booklet is a hard working sales tool. It explains to your customers—in non-technical language—how and why their TV and FM reception can be improved with a CDE Antenna Rotor System.

The booklet is designed to help you convince

buyers of new color TV sets—as well as the present owners of FM and Black-and-White sets—that they should consider a high quality CDE Rotor System.

Make sure you have enough copies on hand. They're available free of charge. Ask for your supply today.



**CDE CORNELL-DUBILIER**

Cornell-Dubilier  
50 Paris Street  
Newark, New Jersey 07101  
Attn. Marketing Services

Dear Sir:  
Please send me \_\_\_\_\_ free copies of your TV/FM Reception Booklet.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



**YOU MEAN  
I PAID \$559.95  
TO SEE A GUY  
WITH TWO  
GREEN  
FACES**



How to get the best reception on color television, black-and-white television, FM radio and High-Fidelity equipment with a



Antenna Rotor.

# Here's why even the super receivers often isn't enough

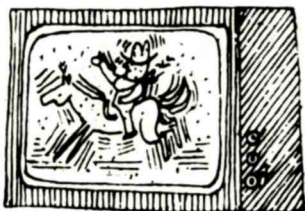


**IF** you've ever looked at the insides of a television set, you've seen a marvel of electronic engineering. Thousands of complicated parts are connected and interconnected into the circuits that pluck sound and picture out of the air and re-create it on the screen.

Before you brought the set into your home, it was carefully inspected to make sure that everything operates correctly.

Yet – in spite of all the engineering and inspection, you're getting a poor quality picture. Why? In this brochure we're going to explain why in non-technical language and to suggest ways to improve color television, black-and-white television, FM radio, stereo, and UHF television.

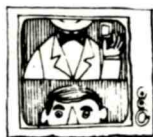
# Engineering in today's TV to give you a decent picture!



**FIRST**, let's take a look at a radio or television signal **before** it ever reaches your receiver. The signal is broadcast by the station from a tower located, usually, within a 50 mile range from your home. The original signal is powerful, clean and clear and continually monitored by broadcast engineers to maintain its perfection.



But along the way to your antenna, the signals encounter many obstacles. The further they travel, the weaker they become. Mountains, hills and tall buildings stop some of them, or deflect them into other directions. Aircraft bounce them back to earth. Atmospheric conditions scatter and weaken them. Local RF interference distorts them.



And that's not all of their troubles. By the time they reach you, they're very weak. Sometimes the part of the signal reflected or deflected by an obstacle arrives a little later than the original signal and becomes a ghost in the making.





**BUT,** eventually, the signals strike your antenna and are carried down to the receiver where tubes, transistors, capacitors, resistors and other electronic components convert them into picture synchronized with sound. The signals are amplified millions of times, smoothed out, sorted out, meshed for sound and picture. Obviously the weaker the original signals from your antenna, the poorer the reception.

The link – the vital link – between the transmitting station and your set is your antenna. This interesting assortment of pipes should pick up a signal as free as possible of unwanted interference from natural and man-made sources (your neighbor's car starter, the X-Ray machine the doctor down the street uses, electric razors, mixers, etc.) and should reject reflected signals.

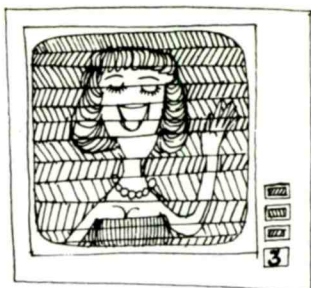
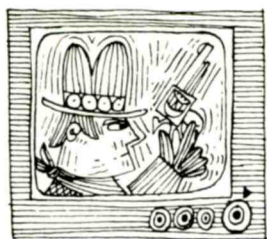
# Your antenna has four jobs to do:

**1. GAIN** That means the strength of the signal **picked up**. A poor antenna receiving a strong signal will deliver a weak signal. In a fringe area, you need a “high gain” antenna to deliver maximum signal strength.

**2. DIRECTIVITY** The antenna should be designed to have the most gain in a specific direction. For example, high gain in front; low gain at the back and sides to receive the signals you want and reject the ones you don't want.

**3. ORIENTATION** If you point your directional antenna directly at the transmitting tower, you will get the best possible reception. Most antennas pick up some stations better than others because they are not oriented to each transmitting tower.

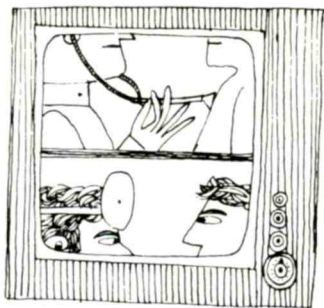
**4. TRANSMISSION TO RECEIVER** Even if you have an excellent antenna, with high gain, good directivity and excellent orientation — you may still receive poor quality sound and pictures — because a vital link — the lead-in wire between your antenna and your receiver — is not properly selected or installed.



The antenna must accomplish all four jobs if you are to receive color television without color distortion . . . black-and-white television without "snow" or "roll-over" or blurring . . . UHF television clear and strong . . . FM radio without a loud hiss in the background . . . and stereo that is truly stereo.

What's more, **all** of the four jobs must be done at the same time. No good having a high gain antenna pointed the wrong way. No good having a directional antenna wrongly oriented. (The result is "ghosting" – two faces, green or otherwise.)

Assume that you have the correct kind of antenna (there are many different types, one of which is correct for your area and situation) and that it is adequately directional and its hook-up to your receiver is perfect. The results may still be unsatisfactory, because **ORIENTATION is vital for good reception.**



**REMEMBER** that we said that if you could point your antenna directly at the transmitting tower, you would get the best picture.

**Well...YOU CAN.**

**You can do it with a  
CDE ANTENNA ROTOR.**

**WHAT IS A ROTOR?**

An Antenna Rotor is a simple device that turns your antenna to face the station you want to receive. The rotor fits neatly between your antenna and its mast, and you direct it with a simple control box placed near your TV set. You turn a knob to the direction you wish the antenna to point and walk away. That's all there is to it. **AN ANTENNA ROTOR CAN MATERIALLY IMPROVE PICTURE AND SOUND QUALITY IN ALMOST EVERY INSTANCE. IT IS ESSENTIAL FOR GOOD RECEP-**

TION AS YOU GO FARTHER AND FARTHER INTO FRINGE RECEPTION AREAS, AND AS YOU FIND YOURSELF SURROUNDED BY TRANSMITTERS THAT ARE BROADCASTING TO YOU FROM A VARIETY OF DIRECTIONS.

An Antenna Rotor, aiming a high gain, directional antenna correctly connected to your TV or sound system will give you the finest possible reception.

Cornell-Dubilier, with years of experience in designing and manufacturing antenna rotors for C.B. and amateur radio – makes the highest quality TV & FM rotor available.

A rugged, durable, high quality rotor should be selected. One that, once installed, will need no maintenance.

Cornell-Dubilier has developed a line of TV/FM rotors that will satisfy any antenna requirement – from simple yagi antennas – widely used in metropolitan and suburban areas – to heavy multi-stacked arrays necessary in difficult “fringe” areas.



# CORNELL-DUBILIER OFFERS

## FOUR ANTENNA ROTOR SYSTEMS . . . DESIGNED TO MEET ALL APPLICATIONS

CORNELL-DUBILIER ANTENNA ROTOR SYSTEMS are specifically designed to meet all needs . . . from large array fringe area applications to modest metropolitan antenna requirements. No compromises with quality and sound engineering practices have been made. In all cases the basic requirements of a high quality antenna rotor have been exceeded.

### THESE REQUIREMENTS ARE:

#### Repeatability and tracking accuracy

To return precisely to a given position repeatedly, and to indicate accurately the direction of the antenna.

#### Increment of movement

Should be less than  $10^\circ$  to position a highly directive narrow beam antenna to signal source.

#### Torque

The mechanism should be powerful enough to turn a large antenna, even in a strong wind.

#### Long Life

Must withstand years of weather without service problems.

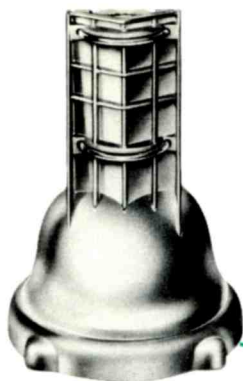
## THE FOUR CORNELL-DUBILIER TV/FM ROTOR SYSTEMS EXCEED ALL REQUIREMENTS

These four systems may be classified by their appropriate antenna arrays:

ANTENNA	ROTOR SYSTEM	CONTROL
Metro-suburban	AR-10	Automatic
Metro-suburban	TR-10	Manual, compass lights
Large-Array	AR22R	Automatic
Large-Array	TR-2C	Manual, compass lights



# THE "BELL" SERIES ROTOR



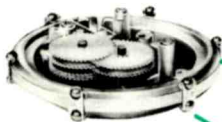
HOUSING



MOTOR



GEARS



BEARINGS



HARDWARE



The famous CDE "Bell" Rotor . . . the only Heavy Duty Rotor on the market . . . developed from years of design experience in the amateur radio field . . . is the most reliable and strongest TV/FM Antenna Rotor available. Its die-cast heavily reinforced housing is designed to support large TV & FM arrays.

The "Bell" housing provides a metal umbrella for complete weather protection of the rotor drive system. No plastic or other type seal is necessary.

High torque powerful motor with built-in magnetic friction brake turns heaviest antennas even under severe wind and ice conditions. This CDE rotor motor produces four times the power of any other TV/FM rotor.

Only the "Bell" design allows the use of CDE's unique Planetary Gear System. This train of heavy duty gears allows approximately one degree of shock absorbing action at all times, and under extreme wind stress will "back-down", rather than allow damage to antenna or rotor mechanism.

Two 6 inch ball thrust bearing races provide a broad base of support to accept the IN-LINE THRUST of a heavy installation. This in-line design centers the load of antenna thrust directly over the support structure to minimize sway. *No extra external thrust bearings are needed.*

Bell rotors are supplied ready for pipemast, top tower, or inside tower installation. Extra heavy hardware is supplied to accept upper or lower masts of  $\frac{7}{8}$ " to  $2\frac{1}{8}$ " OD.

# THE "BELL" SERIES CONTROLS

## MODEL AR22R

### *Fully Automatic Control*

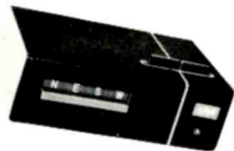
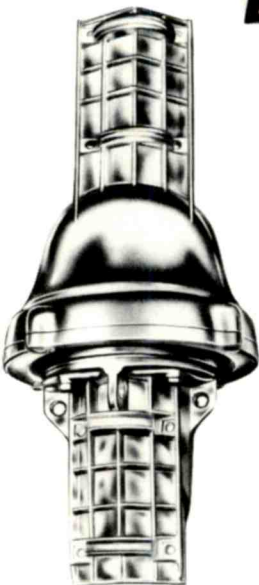
The AR22R System comprises the Bell Rotor with this automatic control.

Tens of thousands of users have indicated their preference for a fully automatic control system over the past years.

The AR22R system is just that . . . fully automatic. The knob is turned to the desired direction and the unit takes over, rotates the antenna and stops it precisely at the desired point. The dial is easily marked with channel numbers or call letters.

The control unit is electro-mechanical in function, substantially identical to the previous AR22 unit which has enjoyed an outstanding performance record. The mechanical design has been produced for many years and represents the culmination of years of testing experience. The design is inherently accurate and not subject to critical adjustments. It contains no delicate electronic circuits that can be damaged by voltage surges.

The control box is finished in black vinyl over steel, with brushed aluminum sides. Its low silhouette blends with any room decor. The dial is softly edge-lighted when in operation. Uses four wire cable.



## MODEL TR-2C

### *Manual Control*

The TR2C System comprises the Bell Rotor with this manual control. This control system utilizes a time tested indicating system that is easy to operate and never needs calibration.

When the finger touch-bar is depressed, the antenna rotates and the lights give accurate easily understood indication of the position of the antenna. Reception can be tuned to perfection while viewing or listening to the reception.

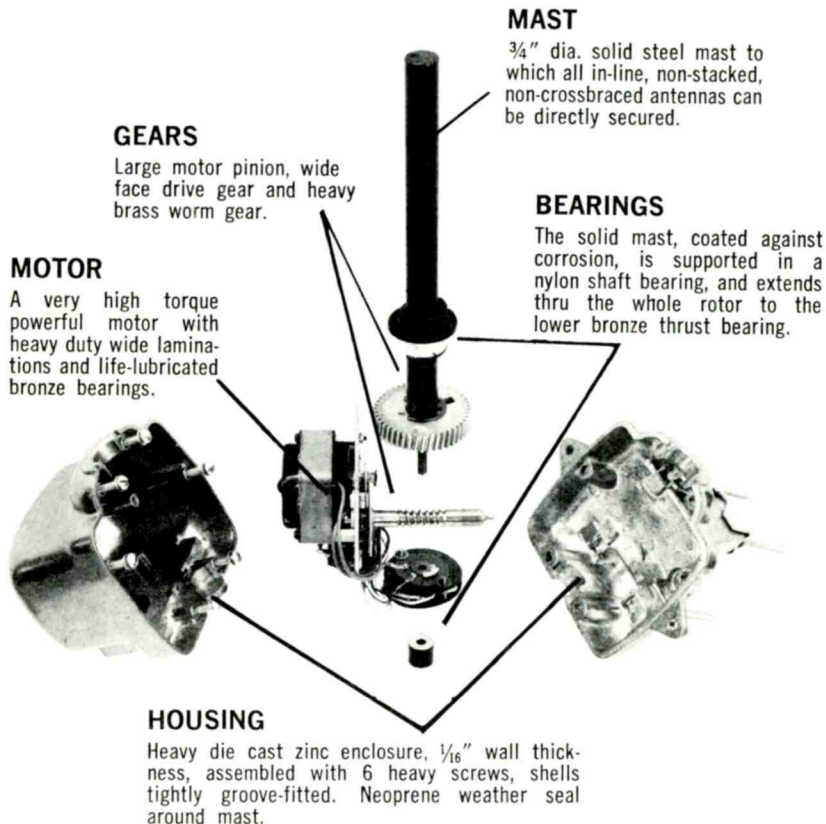
Uses 8 wire cable.

# THE SKYLINE SERIES ROTOR

In suburban areas the recent trend is towards 'In-Line' TV/FM antennas. These are extremely efficient and may be installed close to the roof as 'low-silhouette' installations. THE CDE SUBURBAN ROTOR is a low cost, well made unit

especially designed for these antennas.

The unique stub mast provides secure direct mounting of all in-line, non-stacked, non-crossbraced antennas, or with a simple adapter, can accommodate larger arrays.



## MAST

$\frac{3}{4}$ " dia. solid steel mast to which all in-line, non-stacked, non-crossbraced antennas can be directly secured.

## GEARS

Large motor pinion, wide face drive gear and heavy brass worm gear.

## MOTOR

A very high torque powerful motor with heavy duty wide laminations and life-lubricated bronze bearings.

## BEARINGS

The solid mast, coated against corrosion, is supported in a nylon shaft bearing, and extends through the whole rotor to the lower bronze thrust bearing.

## HOUSING

Heavy die cast zinc enclosure,  $\frac{1}{16}$ " wall thickness, assembled with 6 heavy screws, shells tightly groove-fitted. Neoprene weather seal around mast.

**THIS IS A QUALITY ROTOR . . . DESIGNED AND PRICED FOR EXTENSIVE USE IN SUBURBAN AREAS.**

# THE SKYLINE SERIES CONTROLS



**MODEL AR-10**  
*Fully Automatic  
Control*

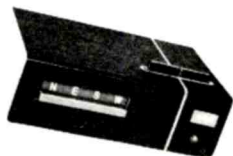
The AR-10 system comprises the Skyline Series Rotor with this automatic control.

This fully automatic control is inherently accurate and not subject to critical adjustments. Its electro-mechanical design contains no delicate electronic circuits that can be damaged by voltage surges. The reliability and accuracy of this automatic control have been proven by years of time-tested performance.

Finished in beautiful black vinyl over steel, with brushed aluminum sides, the control blends with all TV and Hi-Fi styles.

Uses 4 wire cable.

**MODEL TR-10**  
*Manual Control*

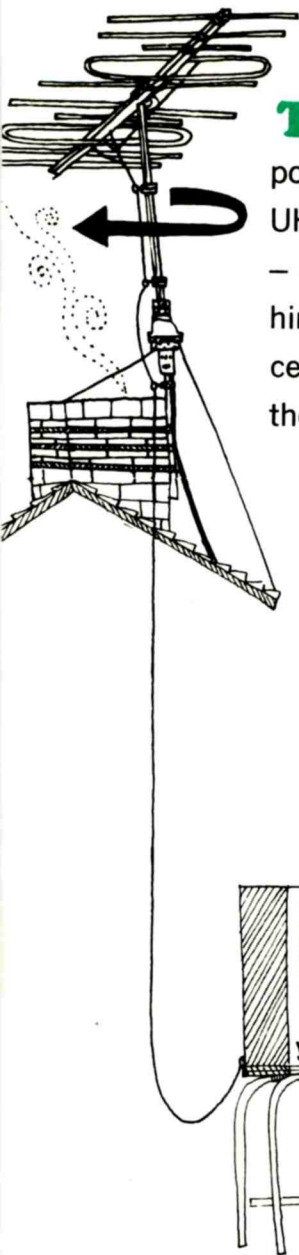


The TR-10 system comprises the Skyline Series Rotor and this manual control.

The antenna position is monitored by a compass point indicating light system which responds to finger touch control.

The quiet good taste of the design blends with any decor.

Uses 8 wire cable.



**TO SUM UP:** if you are receiving poor quality color or black-and-white or UHF television or poor FM or stereo sound – consult your service technician and ask him about a CDE Antenna Rotor. We are certain he will agree that it will improve the situation.

**You spend a lot of  
money on electronic  
entertainment.**

**A CDE Antenna Rotor  
assures you of getting  
your money's worth!**





**CORNELL DUBILIER ELECTRONICS**

DIVISION OF FEDERAL PACIFIC ELECTRIC COMPANY

50 PARIS STREET, NEWARK 1, NEW JERSEY



Craig Electronics, distributors of Motorola products in Southern California, presented their latest service information at a special meeting of the San Antonio chapter of CSEA last month. The meeting, held at South Gate Radio & TV, was technical in nature and provided the ins and outs of transistor television. A special thanks was extended to Carl Finzer and Jim White.

ESD ESD ESD

A City license is a possibility in San Francisco as dealers feel such a license would add to the status of dealers in that area. Mike Fusaro reported that this would be worked out and a test developed to be taken before the license was issued. He also recommended that a grandfather clause be added.

ESD ESD ESD

The San Francisco apprenticeship program is underway with seven applicants willing and qualified. Although only a few, it is a step in the right direction and the first real attempt at such a complete program.

ESD ESD ESD

A report from Northern California Zone B representative Oakley Dexter indicated that in the opinion of a legal adviser there is no need for a service daler operating in one city to pay a business license to service work by truck in another. This same attorney indicated that under the California veterans laws there is a business license exemption that should be looked into by all veterans operating service shops.

ESD ESD ESD

Increased price schedules have been reported in Sonoma, Sacramento, San Mateo and Marin counties with ranges from \$10 to \$12.50 in the majority. Some areas reported spotty prices with the cut raters still operating under the opinion that what the customer don't know won't hurt him. In this case, it is not the initial cost (call rate) but the upkeep (jacked up parts charges and false work).

ESD ESD ESD

Phil Fisher was honored at the recent Zone B Boat Party and thanked for his years of work. Phil has done a great job over the years for CSEA and ACTRA and this small token of appreciation was very timely. In Phil's own words . . . "Flowers have a nicer aroma when the recipient still has an alert nose."

ESD ESD ESD

Reprints of the article published in the October issue of ESD are now available from the CSEA State office in Fresno. "A Report On Service Pricing" has been printed on one sheet of paper and can be used as a give away to customers, to hang up in the shop, or as a personal reminder to what is happening. At the same time, remember that the state office also has available parts bags, patches, estimate forms and decals in both 6" and 12" sizes.

ESD ESD ESD

EST Publisher Don Martin spoke recently at the Pasadena Chapter meeting held at the El Dorado Inn. His topic was service pricing in California and the results of recent polls as to the over all acceptability of increased service pricing by the consumer. He is also scheduled to speak in San Diego on December 8th on the same subject.

ESD ESD ESD

Despite rainy weather that threatened to cut down attendance at the Zone "B" Boat ride party, over 165 people boarded the Harbor Queen November 19th and rode to the Galleon Restaurant for an evening of fun, food and dancing. Under the direction of Larry Schmitt and his wife Dorothy, the event was an unqualified success. Several of the CSEA Board members arrived early for their meeting on the 20th and took part in the Zone activity.

ESD ESD ESD

CSEA, as a State wide Association of television service men, went on record last month as deploring the image created by the educational TV program "Your Dollars Worth". A resolution was passed at the last Board of Directors meeting held in San Francisco November 20th asking that every effort be made to have this program discontinued. NEA and NATESA, as national organizations, also added their strength to this effort and good results are expected.

# ORIGINAL



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## PRESIDENT'S MESSAGE

By ED FORT

Last month we held our regular Board Meeting in San Francisco and, in spite of the rain, had a full turnout of members.

Of prime importance at this meeting was the Educational TV film "What Your Dollars Worth." A report was made regarding action taken concerning this film by NEA as well as NATESA and other State Associations throughout the country. Our Board also went on record against the future showing of this film and, from what I now understand, it has been discontinued.

Another major topic of discussion was the problem of quality in current home entertainment products and general serviceability. A special committee, headed by Virgil Gaither in Southern California, has been asked to survey the Industry in an attempt to determine where the major problems seem to be and to make this available to set manufacturers. This survey will be taken either through this magazine or through a special statewide mailing to all service dealers. Many feel serviceability and quality control is lacking but want to have as much information as possible before taking any formal action.

CSEA membership was also discussed at great length with membership chairman Al Chesser of Fresno making a report on their activities. Al set up a major industry meeting in Fresno the previous month and over 170 dealers attended. At this meeting they had repre-

sentatives of the BBB, the Small Business Administration and Don Martin, publisher of ESD. The major portion of this program was devoted to pricing and the local and national trends toward higher rates. According to his report the meeting was an outstanding success and lead to several new members. Fresno is one of the State's largest chapters and this might be a good format for other chapters to follow.

As for the Bureau of Electronic Repair Registration, Jim Wakefield reported that the Governor has not appointed anyone to take Dan Weston's place as chief and that this position will probably be filled by the new administration after the first of the year. However, he reported, the Bureau is functioning on a normal basis and anticipates no problem in the change over.

Our insurance program seems to be going well and almost all of the members who had our former plan have converted to CPS. There was some confusion in the beginning as to the comparison of the plans but everyone seems satisfied with the new plan. Actually, we have a greater degree of coverage at less cost and I would certainly recommend it to all members who are not now participating.

I would like to take this opportunity to wish you all the very best Holiday Season and feel we can all look forward to a prosperous 1967.

# The Two Sides To...

## SERVICEABILITY

**Many Dealers Feel Television Quality and Serviceability Is On a Decline. Others Feel Manufacturers Make Them and They Should Fix Them. This Article Recaps These Two Points of View of a Very Timely Topic.**

A few months ago the National Electronic Associations serviceability sub-committee did a survey to determine whether or not the dealers felt the serviceability of home entertainment products was satisfactory. The survey also asked for concrete recommendations that could be discussed, reviewed and a report presented to the manufacturers.

In this article we will quote some of the reports that came in plus review some editorial material published in local association trade papers in the mid-west taking different view points on the subject.

One of the chief complaints was the accessibility of tubes and the continual production of similar tubes with numerous different numbers. Most dealers felt that if there was ever a need for some sort of established standards for all tube manufacturers so that the total number of tube types could be reduced considerably.

Set identification was another chief complaint including pertinent instructions for such items as chassis removal, and a more pertinent method of establishing the set number, chassis number and model number. Many times a set is difficult to identify even after a few years of service. One dealer recommended that a uniform method of designating chassis or model number be adopted so that the service information could be found easily in Sams or through factory literature. He went on to say that determining this information is probably the most costly thing in the entire shop operation.

In the matter of actual service work one dealer suggested that all sub-assemblies not mounted on the main chassis should be plug in adapter for easier removal and service. Still another, viewing a particular set, stated that the tube shield stuck and the tube didn't stick out far enough to get a hold of. He also suggested that most sets could make dial light changing much easier. It is very difficult to charge for this replacement according to the time involved in doing the job. The customer just wouldn't stand for it.

To quote another dealer, "on one portable it is impossible to replace certain parts without taking the entire set apart. The Hig Voltage Rectifier leads to short on most sets." On printed boards it is impossible to remove parts without

printed wire coming off along with it. Printed circuit sockets not reliable, etc., etc.

On the other hand, we received reports that, "being quite satisfied with most designs—charge customer accordingly. Another stated, "Learn my job better, have top quality equipment, learn to use a scope, learn, learn and learn more. Study new techniques, diagrams and stop blaming ignorance onto the set builder. Let's fox en—not build them.

With these few individual quotes we would like to reprint two articles that appeared in local association magazines.

The first article was written by Dean R. Mock, Executive Secretary of the Indiana Electronic Service Association. It is called "YOU PUT IN THE NAMES." This article will then be followed by an editorial that appeared in the Iowa Beacon titled, "A LITTLE DISSENSION" by Frank Gromert. We feel that you will enjoy these articles and it may lead to further discussion at a later date. After you have finished them . . . drop us a line and let us know where you stand on serviceability.

### "YOU PUT IN THE NAMES!"

SERVICE DATA, and SERVICEABILITY is of great importance to all service dealers and technicians, as you are aware. Therefore may we bring to your attention some problems regarding your service data, and some suggestions to improve "SERVICEABILITY" of ..... TV.

1. Filing of ..... radio manuals is little short of impossible, and as a result, they are of little value. Identification of the manuals as to model number, chassis number, and even service data number is not uniform. Without a service data number on each manual, it is impossible to assemble an "index" for these manuals.

2. Black and white TV manuals are slightly improved, in that the YEAR of the TV receivers is printed on the front of each one, such as #50 for 1963 TV, #51 for 1964 TV, however even this numbering system becomes confused when you publish #40 for 1966 transistor TV. Also this manual includes a "general description of circuits" plus an "introduction to semi conductors and transistors." A service manual hardly seems the place for such technical publications, in the interests of uniformity. Furthermore, some of the

manuals identified as #50, #51, etc., also include an additional part number (such as 463-746) and some do not!! Who knows, just what is the proper way to refer to some specific manual??? To further complicate matters, your manuals on Hi-Fi's and stereo, and other products each have non-uniform methods of identifying the products which they cover. It appears most difficult for any service technician to use these manuals successfully. Picture yourself behind a counter, when a valued customer walks in (in a hurry) and wants a "needle" or a "45 RPM adapter" for his..... stereo, and even gives you the model number! Without a superhuman memory, where do you look to find the proper part number And if you have such a memory, who needs a service manual?

3. Parts Price Book. Apparently ..... does not have such a book for service dealers to use. What would you think of an auto dealer, an authorized agency, who didn't know the cost of a carburetor for a 3 year old auto you purchased from him without calling the factory? Likewise, if a "yoke" is needed for a 3 year old ..... TV, a ..... dealer should be able to quote the exact price, without calling the distributor. Prices do change considerably, at times.

May I point out here at least one company (a manufacturer) who does a good job with their service data, concerning the problems I have mentioned. Each piece of service data they publish carries an identification number, chronological . . . so that it can be filed properly. Then a very complete "index," issued regularly, shows the proper service data if you have the model number, or the chassis number or even the "sales name" of the particular instrument.

A complete parts price book is issued annually, with a "supplement" issued at regular intervals. For the price of any part, both net and list, we look in the supplement first . . . if it is not shown there, there has been no change and we look it up in the annual book. If any part has been discontinued or superseded, this information is in the price book. This book gives the part number, a brief description, and the prices. A monthly technical bulletin is published covering new circuit descriptions, technical tips, and also any necessary corrections to service data. These can be properly filed by year and volume number. Properly labeled binders are available for all this data.

If an authorized ..... dealer is to properly serve his customers, he most certainly needs accurate, complete, indexed service literature, parts price books and other such information, which in many cases can only be obtained from the distributor.

"Serviceability" of ..... TV is greatly hindered by no provision to secure the tuners and other sub-assemblies to the chassis for bench servicing. Any chassis which, when removed from the cabinet, has a "basket full" of unattachable subassemblies is both difficult to remove and transport to the shop, and once there is difficult to service, and the same problems are encountered when returning the chassis to the customer. Here again, for 'lo these many years ..... (a competitor) chassis is provided with a most helpful bracket to attach the tuners to the chassis . . . and what a convenience it is!! Since the need for a "bench job" is usually diagnosed when one man-on a service call, PLEASE get some brackets on your chassis so that one man can pull a chassis and remove it to the shop safely, by having the tuners and sub-assemblies secure. (You may suggest having a universal tuner at the shop and leaving the tuners in the cabinet when removing a chassis . . . but tuners also need repairs . . . at times). On the suggestion for tuner mounting brackets . . . service technicians would not be happy with any compromise. Tuner mounting brackets are necessary . . . if a chassis is to be really serviceable!

ERRORS IN SERVICE MANUALS. Nothing is more dis-

couraging than to rely on the accuracy of a manual, only to be led astray by errors therein. Errors seem to abound in not only ..... manuals, but nearly all. Once a technician makes an erroneous adjustment, etc., or obtains the wrong part, by relying on an inaccurate manual, we are skeptical to rely on ANYTHING shown in it, without making doubly sure it is correct. Therefore the usefulness of such manuals is greatly reduced. Everything done to insure more accuracy would be of real value to all. (If you were traveling in a strange area and had to rely on a road map, you would expect the road numbers to be correct . . . if they were not, you could not get to where you were going without difficulty. The same applies to our service manuals.) A service dealer simply needs accurate service data, properly filed under a workable index system. Coming up (quick) with the right part number for such items as earphones for radios, needles (stylus) for stereo and other common parts and accessories is something that even the "front salesman" or office girl is capable of doing . . . IF service data is published properly.

Manufacturers spend thousands of dollars in advertising to promote consumer acceptance and apparently overlook (in many cases) this very important need for complete, accurate and workable service data, which would go a long way in creating both consumer and dealer satisfaction with a product . . . after the sale is made. This problem is not new . . . but seems to be getting worse. Most service dealers are aware that improvements are needed but do not take the time to make their suggestions known to those who can make improvements. Instead we continue with much unnecessary confusion and lost time while customer complaints and "irritations" continue to pile up with the dealer, distributor and manufacturer alike. Here's hoping for quick improvements.

### "A LITTLE DISSENSION"

Much as I admire the efforts of those who do the work in our association, there is one thing which I must disagree. That thing is telling the builders of TV sets how they should be built.

Such advising of a manufacturer comes under the heading of serviceability and the plan is to make the sets more serviceable. WHY?

The cold truth is that the manufacturer could care less about a TV set being serviceable and I think he is probably right in that. What he really has to worry about is whether the set will sell, whether the production line and sales costs will let him have a profit. That is HIS number one worry—PROFIT - PROFIT - PROFIT—remember that.

Now just where do you come in with the serviceability pitch? Well, just as it is none of your business how the manufacturer builds the set, so is it none of his business how you service it. O.K., so it takes an extra hour to remove the chassis and the picture tube to clean the screen. Why do you care? You are supposed to be selling service. Sell it then and put the blame for the charges right where it belongs.

Remember what I said about the most important thing for the manufacturer? It was PROFIT. Well, that is the most important thing for you also. If your customer needs your service—sell it to him. Stop griping about it being difficult to remove the chassis to clean the screen. Just go ahead and clean the screen and charge the man for it and smile sweetly and thank the manufacturer for making at least one thing in such a way it still takes a technical man to do the job.

Do you recall the various asinine ways RCA used to have to clean the screen on their sets? Well, hardly anybody cleaned their own screen and they thought you were great

## SERVICEABILITY

(Continued)

when you did the job for them. Did this ruin the sale of RCA sets? Not on your life!

Can you remember Whouse built the most horrible horizontal hold circuits in TV? And 5 years after everyone else had a good solid hold circuit they finally came out with Betty Furness telling the world about "no more flopper, no more flutter"? They could have cured it all 5 years before with the price of a Howard Sams folder and an engineer who could copy a circuit. Did you get your share of the modification jobs to make a good horizontal circuit? You should have and you should have made some money on them.

To continue, how about the switch type tuners Sarkes used to make? One big outfit bought 75 shiploads of them and there wasn't a good one in the lot. So what? Sell the customer a new one and quit bellyaching. **IT IS NONE OF YOUR BUSINESS IF A MANUFACTURER BUILDS A DOG.** It is only your business to do your job at a profit—period.

Please consider a large TV producer. He builds an AMAZING number of sets per day. What does it cost him to stop a production line and make a minor modification? PLENTY. A major modification is out of the question. Still you sit down and write him a letter telling him his chassis is upside down. You are writing a multi-million dollar concern and telling him to modify his set that is presently in production. You are out of your mind! He has already frozen the design on NEXT YEAR'S sets and has enough upside down chassis on hand to build seven million sets.

What is he to do? Run back up the pipeline and stop production in the suppliers' plants. Change specs here and there and stop the lines for changes? Negative!

What would your reaction be if a customer came into your shop for a 1 amp slow blow fuse, then said that if you didn't change to a different brand or another color box he would have to take his fuse business elsewhere? To a manufacturer you are a fuse buyer, a nuisance, a person who clobbers up the normal flow of a few sets to express an opinion about something not included in your store of knowledge. Your letter hits the wastebasket and rightly so.

How many can guess the manufacturer's NET profit per unit produced? Probably MUCH LESS than 5%. That's right. A good clean distributor (not back door type) may make 2% or 3% net if he is lucky. He may turn his stock 10 times a year and thereby come up with 20% or 30% on the ten turns, but it takes a hell of a lot of money to do it.

Most large manufacturers have a distribution system made up of from 75 to 100 branch or independent distributors. You will buy your sets from one of these. Do you presume to be able to tell these people how to run their business when you cannot see even one thousand thousandth part of when you cannot see even one thousandth part of the overall picture?

Why not just let the manufacturer go ahead and manufacture. If he blows the deal—it is his problem and the problem of the set purchaser. **IT IS NOT YOUR PROBLEM AND YOU SHOULD NEVER MAKE THE MISTAKE OF THINKING IT IS.** Simply repair whatever is needed and CHARGE THE CUSTOMER FOR IT.

That way YOU TOO can make a profit!!!

## NEA TECHNICAL-TIPS

*This is the first in a series of Technical Tips provided as a service to the Industry by the National Electronic Associations. Techni-Tips are designed for technicians as real time savers. We sincerely hope you like this new feature and will look forward to receiving MESD monthly.*

Disregard lack of purity when a color TV is turned on its side for service procedures—this is caused by the earth's vertical magnetic field and will correct itself when the CRT is returned to an upright position. (ED.)  
MAGNAVOX T919 & T920—"Spooks" on left side of screen.

Replace Silicon Diode SR802, on left convergence board, with part No. 530098-1. Service Manual Parts List for these chassis incorrectly shows SR802 as 530098-2.

Courtesy MAGNAVOX NEWSLETTER  
MAGNAVOX T918/T919/T920 — HORIZONTAL HOLD RANGE IMPROVEMENT

This control has been changed from

35K (part No. 220146-48) to 45K (Part No. 220146-69). As a temporary measure with the 35K pot., a 10K resistor has been (or can be) added between R533 (180K) and point D (top of hold control) on the deflection board.

MOTOROLA TS-908—INSUFFICIENT BRIGHTNESS  
Courtesy MAGNAVOX NEWSLETTER

Brightness control lacks range to cause HV to go off the regulator even when master G-1 control is fully clockwise. This could result from a loss of blanker pulse on the color difference amp's or from a contrast control that has increased in value. One case of blanker trouble has been traced to an open R-920. (Plate load, V20B-6BL8, Ed.)

Courtesy MOTOROLA TECH-REVIEW  
SYLVANIA—COLOR BEAT

Ed Hicks, TV Service Corp., E. Hartford, Conn., says a color beat may be introduced is the 3.58 color crystal is not properly installed. Make sure to bend and dress top end pointing toward power transformer.

Courtesy

SYLVANIA SERVICE NOTEBOOK  
SYLVANIA D03 — VERTICAL ADJ. TO PREVENT DAMAGE TO 21LU8.

It is possible to misadjust height and Lin. controls and still get a fairly linear picture. This may damage the 21LU8 or cathode resistor. PROPER PROCEDURE: 1. Turns height control full counterclockwise. 2. Adj. linearity control for best linearity. 3. Adj. height control for full screen. 4. Trim both controls if necessary.

Courtesy

SYLVANIA SERVICE NOTEBOOK  
MOTOROLA TS-914 — LACK OF WIDTH

Check diode E503 for shot. This diode is connected from plate (pin 6) of horiz. osc. to C511 coupling and will decrease horiz. drive when shorted. (Ed.)

Please address all correspondence to: Glen Dickey, NEA Technical Information Digest, Iowa TV & Appliance, Mt. Vernon, Iowa.



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JUST IN TIME FOR CHRISTMAS!**

**Philco Stereo Component System  
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**PHILCO 7 WA/C  
DELUXE TURNTABLE WITH  
MATCHING WALNUT FINISH**

- Scratch Guard Tone arm with diamond-sapphire stylus has feather-lite 2 gram touch
- Multi-mix 4-speed record changer plays all sizes
- Rugged 11" turntable with protective cushion mat
- Automatic turn-off after last record.

**PHILCO 1007 WA  
SOLID STATE TRANSISTORIZED STEREOPHONIC  
FM; FM/AM TABLE RADIO**

- Genuine hardwood cabinets luxuriously finished to blend with finest Walnut furniture
- Two dual-speaker stereo enclosures each contain 9" oval and 2 3/4" speakers
- Bass, treble, balance and loudness controls
- 18 transistors, 17 diodes
- 15 peak music watts output
- Slide rule Vernier tuning
- Stereo FM, FM/AM tuner
- Stereo FM On-dicator signal light
- Philco stereo monitor
- Separate AFC switch for drift-free FM
- Function control switch selects Off, Tuner Mode, Phono Input
- Stereo phono input jacks

**Dimensions:** Tuner—6 5/8" high; 14 5/8" wide; 9 7/8" deep  
Speakers—10" high; 16" wide; 6" deep

**Shipping Wgt.**—31 1/2 lbs.



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# TAX TALK

## Guide Line For 1966

by  
Ralph H. Butz

**Reimbursed Expenses**—Salesmen B keeps an itemized record of traveling and entertainment expenses. The treasurer of his company checks all items and reimburses B. Should B keep duplicates of these expense statements for a possible revenue audit?

Assuming B was reimbursed for the actual amounts listed on his expense reports, it would be unnecessary to list the expenses and the reimbursements, which would amount to the same totals. If a revenue agent objects to items listed on B's expense account, the company's treasurer is obligated to explain items in dispute. The company keeps B's original expense statements and supporting receipts.

However, if the reimbursements exceed the actual expenses, the excess would be reported as taxable income. If he was not reimbursed for the total amount of his expenses, and he claims a deduction for the amount not reimbursed he should keep a record of expenses and the amounts received as reimbursement.

**Miscellaneous Expenses**—Harwaick reports that he pays small amounts for miscellaneous items (not personal) while he is traveling to promote his own business. Are receipts necessary to substantiate these small disbursements?

The general rule is that receipts should be obtained for disbursements in excess of \$25 at one time, provided that such receipts are readily obtainable. There is an exception regarding lodging expenses in hotels and motels, where receipts should be obtained regardless of the amount. When items are paid by check, the check together with a bill from the payee, ordinarily will establish the element of cost. A canceled check drawn payable to a named payee will not by itself support a business expenditure without other evidence to show that the check was used for a certain business purpose.

**T and E Expenses**—Under the old rule taxpayers had notice of the necessity to keep records and receipts covering travel and entertainment expenses to substantiate deductions claimed. If adequate records were not always available, the revenue agent might have compromised on the amount to be allowed. Compromises are no longer permitted.

The Internal Revenue Code in the New Revenue Act provides that "no deduction shall be allowed for any traveling expenses (including meals and lodging while away from home), for any entertainment, amusement or recreation, or for any expenses for gifts . . . unless the taxpayer substantiates by adequate records the amount, time and place, business purpose and relationship."

Is this rule followed to the letter? Yes, no records, no allowance. The burden of proof is on the taxpayer. There is no room for compromises. The claimant must produce records, and receipts where required, to substantiate deductions for T and E expenses.

**Keeping An Expense Diary**—An acceptable method to record T and E expenses is a diary, and to keep receipts where they are needed to support diary entries. Tax diary books are available in many book and stationery stores. Even an ordinary diary, a page for each day, can be used

to record expenses while traveling and when entertaining business associates and clients. Some of these books have cover pockets in which to stuff receipts required to support diary entries.

**Credit Cards**—Credit cards are used by many taxpayers because the monthly statements indicate dates and amounts. Credit card statements may serve as proof for deductions claimed if the statement lists the taxpayer's destination where transportation charges are listed, and the business reason for the trip. Charges for entertainment should describe the business reason for the entertainment, names of persons present and the location. If personal expense items are listed on the statement, a notation should identify such items.

Some credit card companies issue monthly statements with enough marginal space to record details required by Internal Revenue. If a statement does not provide sufficient space to enter such details, the statement may be used to support diary entries.

**Automobile Expenses**—Brown uses his personal automobile for business travel. He clocked 30,000 miles in one year, 2/3 of which was for business travel. His itemized car expenses totaled \$2,100. Should the auto expense deduction be based on his itemized expense account, or should he take advantage of the Treasury's standard mileage allowance?

Since 2/3 of the mileage was for business travel, he can deduct \$1,400, based on his expense account. Under the Treasury's standard mileage allowance, he can deduct 10 cents per mile for the first 15,000 miles and 7 cents per

mile for mileage in excess of 15,000. Using this schedule, he would deduct \$1,850.

**Stock Dividends**—Some years ago Jones paid \$10,000 for 100 shares of XY Corporation stock. Recently he received a certificate for an additional five shares, representing a five per cent stock dividend in lieu of the cash dividend which had been paid in the past. How should he list this stock dividend on his tax report?

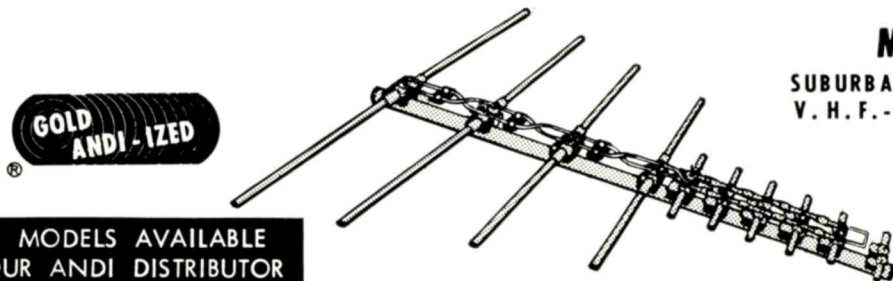
While this is a dividend it is not reported as such, and he has increased his proportionate ownership in the company Jones does not list it on his tax report. If he holds the stock from 100 to 105 shares. The cost basis of his shares now is \$10,000 divided by 105, bringing the adjusted cost per share to \$95.24.

Later on he may sell some or all of the shares at a profit over the \$95.24 adjusted cost. He will then report the profit on his tax report, paying tax according to the capital gains rule effective at that time.

One of the reasons some stockholders prefer stock dividends in preference to cash dividends is that they avoid paying tax until the stock is sold, and because the capital gains rule results in a lower tax rate.

This benefits the stockholder who prefers to accumulate untaxed assets in anticipation of retirement. He may have sufficient income from his business or occupation and doesn't need dividend income while he has occupational income. After retirement he can arrange to dispose of the stock as he needs additional funds, and in such amounts that his annual tax bill will be at a minimum.

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**ANDI** **Antenna Designs, Inc. — BURLINGTON, IOWA —**



## PRODUCT NEWS

Conducted by **A. Diane Powell**, Associate Editor

### JERROLD'S ADDS VHF ANTENNA SIGNAL PREAMPLIFIER TO ITS "DE-SNOWER" LINE

The Distributor Sales Division of Jerrold Electronics, Philadelphia, Pa., is now offering a fully solid-state high gain preamplifier for single-channel use. Designated "De-Snow" Model DSS-, the unit is designed to provide an exceptional 30 dB gain to sharpen up the weakest signal.

The preamplifier unit is weatherized for mast or indoor mounting. Its power supply, Model 105, is indoor mounted and provides low voltage AC to the preamplifier while acting as a feed-thru for the amplified signal to the receiver.

Models are supplied tuned to the specific single-channel 6 MHz VHF bandwidth, or for the full FM band. GAIN: 30 dB for TV or FM; NOISE FIGURE: Low Band 4.3 dB, High Band 5.4 dB, FM Band 4.0 dB; DISTORTION: 1/2 dB maximum sync. compression.

### GAVIN THE GREAT CHARGES INTO COLOR

The completion of the first in a series of TV commercials has recently been announced by Gavin Instruments, Inc., Somerville, N. J. This 60-second commercial presents a unique approach in the marketing of Gavin's line of TV antennas.

It shows the first TV "materialization" of Gavin the Great, the wizard of color. This mighty wizard puts into dramatic action Gavin's plans to place a rainbow of color on every rooftop. The commercial captures Gavin as he shows just how easy it is for the average homeowner to capture true TV color and lock in signals ordinary antennas lose.

The commercial is the most recent phase of the Gavin company's "Charge Into Color" campaign. The wizard's charge into color was pre-paved by a nation-wide campaign of advertising in trade magazines, distributor mailings and personal appearances of the wizard.

The commercial is scheduled for immediate nation-wide release and is to be seen on both VHF and UHF stations. Time allowance is made at the end of the commercial for names of dealers who carry the Gavin line of TV antennas.

For more information, as well as your wizard balloons, write to the manufacturer, Gavin Instruments, Inc., Wizard Division, Somerville, N.J.

### AMPHENOL OFFERS NEW CATALOG OF SUBMINIATURE RF CONNECTORS AND CABLES

Subminiature RF connectors and coaxial cables are described in a new 12-page, two color catalog now available from Amphenol RF Division of Amphenol Corporation.

The publication contains specifications and illustrations of the Division's com-

plete line of SUBMinax 27 Series and 5116 Series connectors. The 27 Series units are available with three types of cable terminations: Radial-Crimp, Quick-Crimp and field serviceable. Field serviceable models, with "UG" designations, fully comply with MIL-C-22557A. The 5116's are low-cost crimp-type connectors that can be assembled faster than any other comparable connector on the market.

(Continued Next Page)



## RCA Hi-Lite color picture tubes bring OEM quality to your replacement tube customers

Odds are that when a dealer is called to replace a customer's color picture tube and he replaces it with an RCA Hi-Lite, he's giving the set owner a better product than he had when his set was new.

That's because RCA Hi-Lite picture tubes are RCA's best... the same quality... the same tubes... that go into today's original equipment sets. RCA Hi-Lites are all-new... glass, gun, the works! And incorporate the continued advancements in picture tube technology achieved by the world's leading color picture tube manufacturer. So your dealer literally "up-dates" his customer's color set when he installs one.

Here's picture brightness and color fidelity at its finest, available for the service trade in 19-inch and 25-inch rectangular and 21-inch round tube types.

How about you? Are you offering your customers today's color?



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## NEW PRODUCTS

(Continued)

Amphenol also offers several high reliability SUBMinax 27 Series connectors. These units—with special rhodium-plated stainless steel friction-lock coupling nuts—are designed to meet Bureau of Ordnance specification OS-7462C.

Complete assembly instructions, along with step-by-step drawings, are included for each connector type.

A section on SUBMinax cable, produced by Amphenol Cable Division, covers available dielectric and cable jacket combinations, along with a full listing of electrical characteristics.

Easy-to-use reference charts detail compatible connectors and cables. A copy of the catalog, No. SC-1, may be obtained from Amphenol RF Division, 33 E. Franklin St., Danbury, Conn.

## NEW COLOR BAR GENERATOR INTRODUCED BY JACKSON ELECTRICAL INSTRUMENT CO.

A highly professional solid-state Color Generator has just been introduced by Jackson Electrical Instrument Co., Inc., 35 Windsor Avenue, Mineola, N.Y. The new instrument, designated the Model X-100 Color Bar Convergence Generator has convenient push button selector switches and is extremely simple and quick to operate. It provides an extraordinary range of patterns and is engineered to include many fine features that enable the serviceman to install and troubleshoot Color TV faster and more accurately.

An exclusive feature—2 sets of color bar patterns simplify and speed-up color

adjustments greatly. With just a push of a button the serviceman selects either of three NTSC type colors: red, blue and green—or yellow, magenta and cyan. This unique feature eliminates confusion and counting of bars and enables him to concentrate only on the necessary bars.

## CDE OFFERS COMPLETE LINE OF COMPUTER GRADE ELECTROLYTIC CAPACITORS

A complete line of computer grade electrolytics designed to cover all computer circuit requirements is being offered by Cornell-Dubilier Electronics.

The miniature size of CDE's type NLH Computer Grade Electrolytic makes it an ideal selection for input filters on computer cards, translator assemblies, memory decoders, storage and addressing assemblies. It features a unique, cold-welded anode foil connection, coupled with a reliable, all-welded design. The standard type NLH is supplied with a plastic insulating sleeve.

The type BWH computer grade tubular electrolytic is used in intermediate circuit for coupling, by-pass and decoupling. It is hermetically sealed in a drawn aluminum case and is of all-welded construction. The standard unit is supplied with plastic insulating sleeve.

The high capacitance type FAH computer grade electrolytic is designed for use in power supplies exceeding requirements of MIL-C-62. It offers extremely low leakage current, minimum ESR, high ripple current and large C-V per can size. The type FAH has a molded terminal block with safety vent seal and is provided with screw terminals.

The standard stock FAH is supplied with plastic insulating sleeve.

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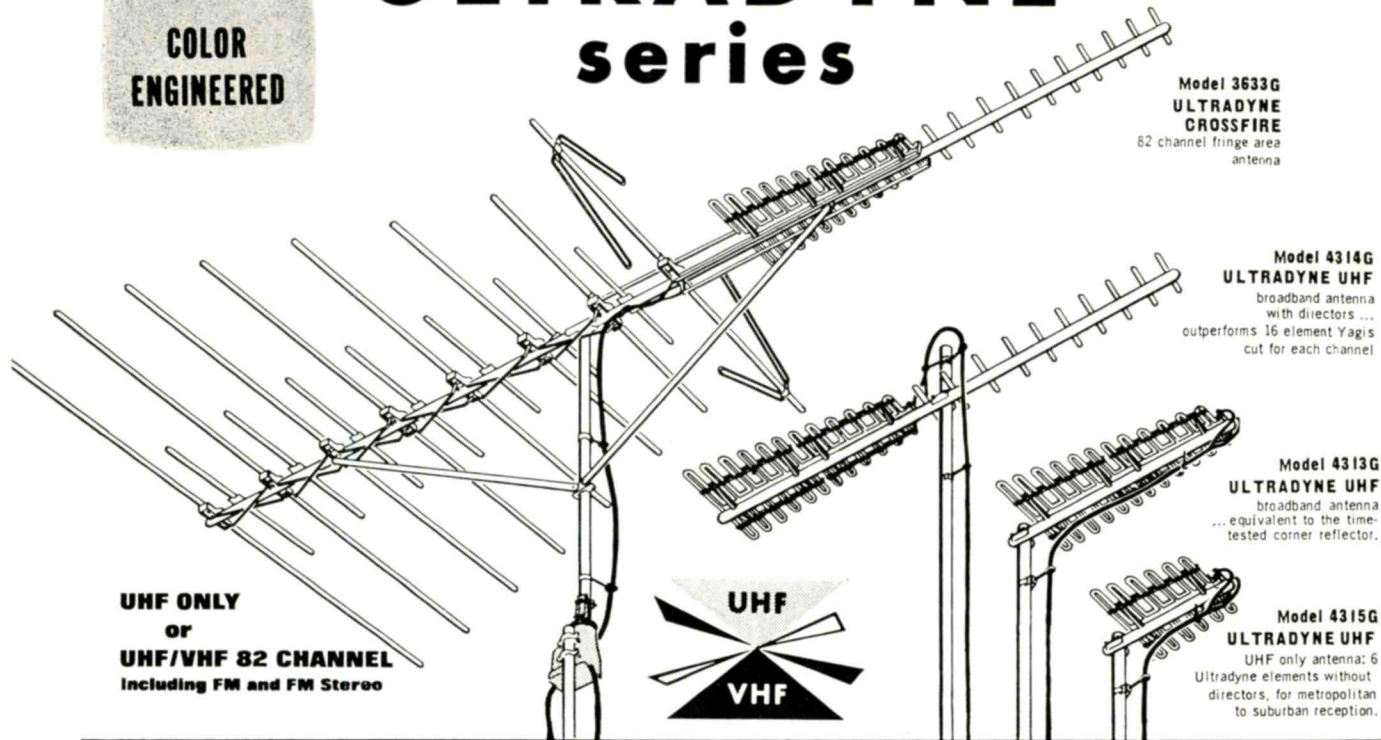
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Including FM and FM Stereo**

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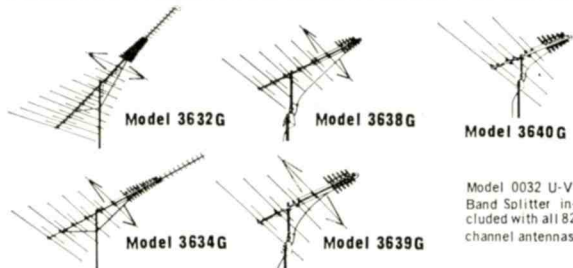
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## BREAKTHROUGH!

Six new ULTRADYNE CROSS-FIRE antenna models provide the first high gain FM and FM Stereo performance ever attained in an 82 channel TV antenna. Channel Master's exclusive, patented Tri-Band Directors make it possible. All ULTRADYNE series antennas feature the famous the famous EPC golden coating.



## BREAKTHROUGH!

The amazing electronic ghost-killing power of Channel Master's famous Coloray antenna is now combined with the ULTRADYNE principle to create an 82 channel antenna for superb color reception as well as FM and FM Stereo in ghost-plagued areas.



**Model 3637G  
ULTRADYNE  
COLORAY**

## COLOR AGE BREAKTHROUGH!

Model for model, new ULTRADYNE CROSS-FIRES are the highest gain, highest front-to-back ratio 82 channel antennas ever developed. Unprecedented acceptance has made Channel Master Color Crossfires the best-selling VHF-FM antennas in TV history. Now, in combination with the ULTRADYNE UHF antenna, new standards of 82 channel performance are achieved.

## BREAKTHROUGH!

Obsoletes so-called log periodic antennas. ULTRADYNE antennas, employing an entirely new principle, have higher gain than any log periodic antenna type on the market.

"Built-In" 300 ohm impedance actually makes the ULTRADYNE function as a length of 300 ohm transmission line at VHF. This eliminates the need for an antenna coupler when the ULTRADYNE is used in conjunction with any 300 ohm VHF antenna such as Channel Master's Famous Color Crossfires (models 3617G, 3610G, 3611G, 3612G, 3613G, 3614G, and 3615G).

## BREAKTHROUGH!

Unique construction. Two stamped aluminum sections make up the entire driven element section of the antenna. This means precise control of dimensions and the elimination of connection and corrosion problems.

## BREAKTHROUGH!

Fantastic front-to-back ratios ... over 15:1 across the entire UHF band.

## BREAKTHROUGH!

Three separate United States patents and two patents pending cover the exclusive design features of Channel Master's new ULTRADYNE series. No other antenna line incorporates such important technical advances. Yes, from the standpoint of gain, front-to-back ratio, impedance, construction simplicity and versatility, no other antenna comes close to the ULTRADYNE series. No wonder the entire industry knows that the truly significant advances in antenna design traditionally come from...

**CHANNEL MASTER** ELLENVILLE, NEW YORK  
World's Largest Manufacturer of TV/FM Reception Equipment



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