

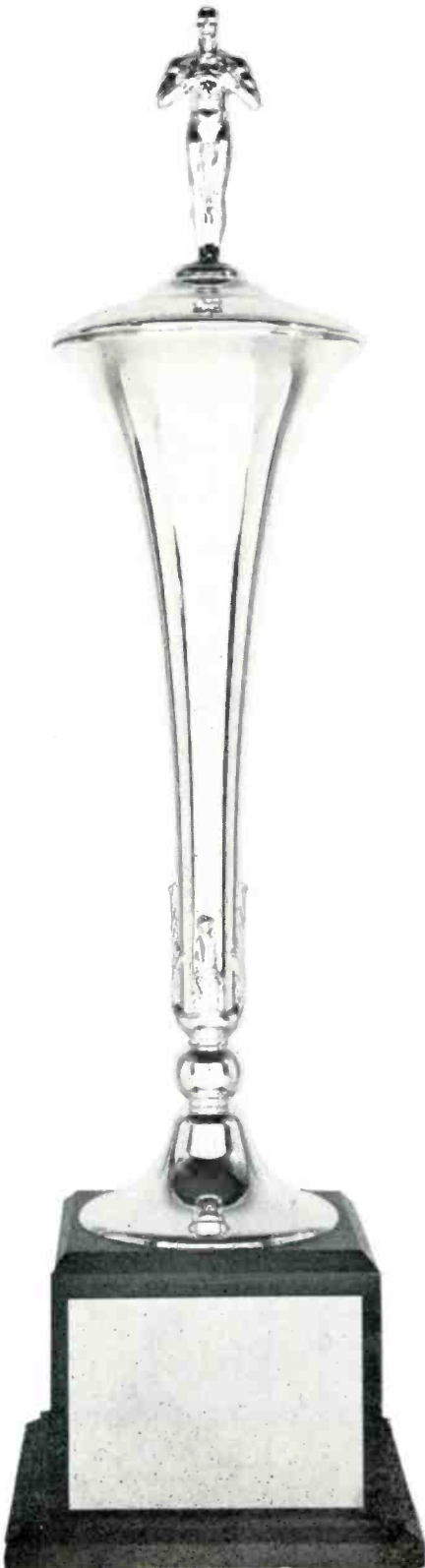
MODERN

# *electronic service dealer*

THE OFFICIAL PUBLICATION OF THE CALIFORNIA STATE ELECTRONICS ASSOCIATION

VOL. 3, NO. 2

JUNE, 1963



A few weeks ago, we were notified that Modern Electronic Service Dealer Magazine had been nominated for an editorial award in the 12th annual Western Society of Business Publication's "Awards of Merit" contest.

On May 23rd at the Annual Awards Dinner, at the Statler Hilton Hotel, MESD was named as the top publication. The award reads, "for the best over-all job throughout the year on behalf of its readers, advertisers and industry it serves and averaging under 48-pages per month"

We are extremely proud of this award and hope that our industry will be equally proud and share this honor with us.

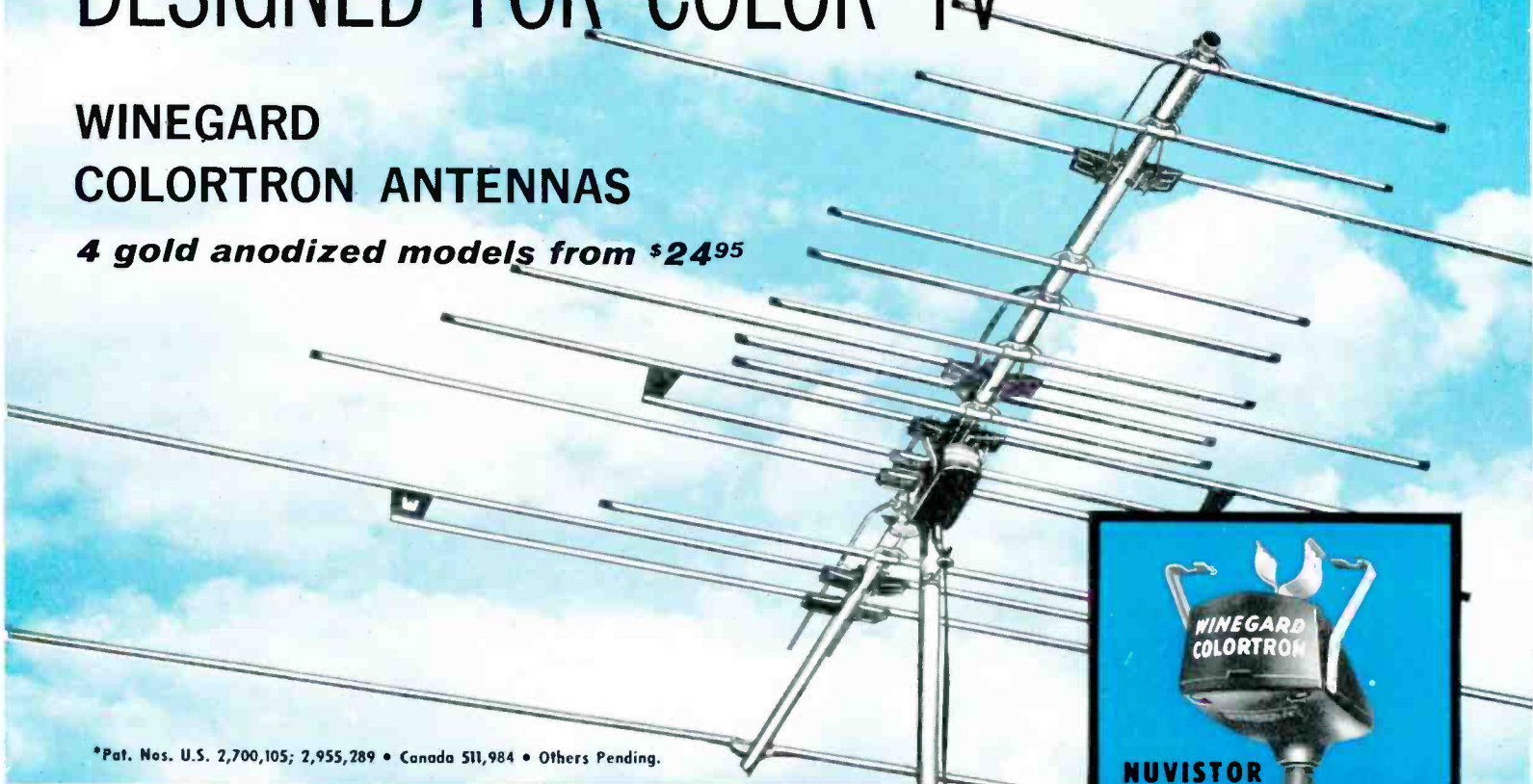
## ALSO IN THIS ISSUE

- California's First Service Dealer Survey page 13
- CSEA Annual Meeting and Program page 11

# DESIGNED FOR COLOR TV

## WINEGARD COLORTRON ANTENNAS

4 gold anodized models from \$24<sup>95</sup>



\*Pat. Nos. U.S. 2,700,105; 2,955,289 • Canada 511,984 • Others Pending.



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There are 4 Colortron models to cover every reception need, from suburbs to distant fringe areas . . . \$24.95 to \$64.95 list.

New Winegard Colortron twin-nuvistor amplifier perfectly matches Colortron antennas. Gives added gain and sensitivity on both color and black and white. Ultra-low noise, high

gain Colortron Nuvistor Amplifier can easily drive 6 or more TV sets.

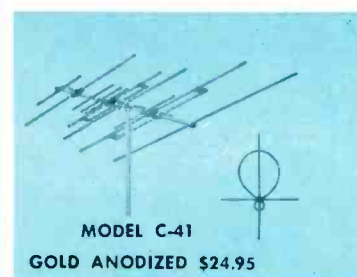
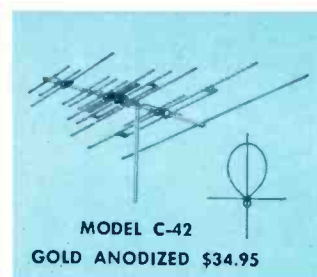
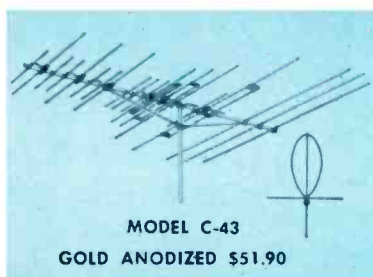
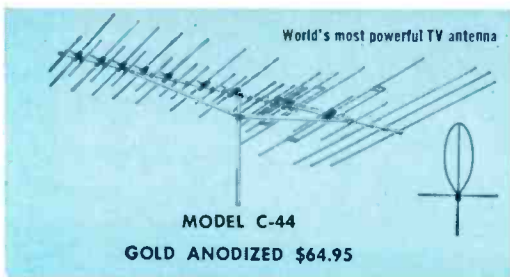
With revolutionary twin-nuvistor circuit, Colortron amplifiers can handle up to 400,000 micro-volts of signal without overloading. *This is 20 times better than any single transistor amplifier.* The Colortron Amplifier will bring the weakest signals up out of the snow, yet strong local TV & FM signals will not overload it. A special life saver circuit gives the two nuvistors a life of 5 to 8 years.

This amplifier is completely trouble free and the finest performing antenna amplifier you can own.

Completely weather sealed, nothing is exposed to corrode and cause trouble . . . has all AC power supply with 2 set coupler. (Model No. AP-220N, \$39.95 list). Twin transistor model also available up to 80,000 micro-volts input. *New type circuit protects transistor from static electricity built up in lightning flashes.* (Model No. AP-220T, \$39.95 list).

Colortron Amplifier can be added to any good TV antenna for sharper, clearer TV reception.

Ask your distributor or write for technical bulletin.



# Winegard

There's an extra bonus of quality and performance in every Winegard product.

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Get this book **FREE** with the purchase of G-E tubes. Here's *101 Tele-Clues* to help make TV repair easier and more profit-



able for you. Your General Electric tube distributor will give it to you free in appreciation of your purchase of G-E tubes and electronic equipment. Enter the ONE-O-ONE Contest. Get *101 Tele-Clues*. See your General Electric Distributor today.

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ITT batteries—penlites, C, D, and 9-volt miniatures — now offer the same “extra value” and acceptance already experienced with fast-moving ITT Receiving Tubes.

ITT can provide this “extra value” of finest quality at higher profit margins in each of its lines because ITT products are on call from 154 factories and laboratories in 24 countries. If you are selling ITT tubes and batteries, you can compete with anyone in the world

... on quality, on price, and on acceptance. Brands without these worldwide resources are finding it tougher than ever.

Make sure *you* have this *value* leadership in *your* service market. Stock ITT tubes and batteries—the only worldwide lines with such a world-famous name.

ITT Distributor Products Division, International Telephone and Telegraph Corporation, Box 99, Lodi, New Jersey.



DON MARTIN

## AB 1292 COMES OUT OF SENATE COMMITTEE

Senate Bill 1292, requiring the registration of all TV Servicemen has been o.k.'d by the Senate's Committee on Business and Professions and now heads for the finance committee. The next step from there is the floor of the Senate and we will try to publish any last minute news we might receive just before printing this issue.

## MESD SURVEY

In this issue of MESD you will find the results of our recent survey of the Service Industry in California. Although our returns were very good for such a project we want to make sure that everyone realizes that this is only a good random sample and should be judged as such. Actually, we were able to get a 10% sample of all the service dealers in California and feel that the figures could be adjusted as much as 10% either way if larger samples were obtained. We do, however, feel that this is a valid survey and is probably the most accurate accounting of the California Industry ever presented. We only printed the results and have not commented on them. We sincerely hope they will be of value to our readers and to the Industry as a whole.

## ANNUAL CSEA MEETING

On June 8th and 9th the California State Electronics Association will hold their annual meeting at the Town and Country Hotel in Fresno. This meeting climaxes a year of hard work and a lot of accomplishments. We want to take this opportunity to thank all of the Board Members, Delegates and regular CSEA members for their fine cooperation with our staff in producing MESD each month. In particular I would like to thank Claire Lanam, President of CSEA, for his monthly President's Message and all around help in solving problems effecting the Publication. To Ed Fort for being on time with the San Diego page. To Phil Fisher for helping us out up north with Zone "B" news. To our direct representative Ralph Johannot for his advice and consent over the months, and to the many who have given us suggestions and ideas for making MESD a better publication.

## MORE ON ELECTRONIC CONTRACTORS LICENSE

Everyday we seem to get more and more involved with the true definition of how the State Contractor's License affects those dealers doing Sound System and Antenna Installations.

In a recent communication from Mr. W. S. McKay, Registrar of Contractors State License Board in Sacramento

he stated, "It is necessary to have a contractor's license to install a sound system or antenna in NEW construction when it is installed in such a manner that it becomes a FIXED PART of the real property. There is no difference in regulations involving new construction versus completed structures. A license is not required when the total cost of all labor and material on the project is less than \$100. We are unable to answer your question on whether or not a structure is considered an occupied structure as soon as it is completed and accepted by the owner even though it is still vacant. That is a legal question which should be referred to your attorney."

At the same time we received a letter from Gerson Ribnick of APA stating that the majority of the information we presented last month was in error. We would like to comment that this information came out during a Zone "B" meeting and was backed up by two members who seemed to have the right information. The letter from Mr. McKay should clear up a lot of confusion but I still feel that anyone engaged in this type of work should check it out with their local State Licensing Office before taking on any job that will go over \$100 in material and labor.

It has been suggested that we list the different State License Board District Offices so that anyone wishing further information could contact them directly. They are as follows:

Fresno District Office, 2550 Mariposa St.; Los Angeles, 107 So. Broadway, Rm. 7117; Oakland, 1111 Jackson, Rm. 3023; San Diego, 3258 Rosecrans St., and in San Francisco, 525 Golden Gate Ave., Rm. 210.

One other point of information that has become available is, that to qualify for a license you must have been a journeyman, or better, for the last 4 out of 10 years, submit a detailed application stating experience, pay a \$20 fee, and then you will be scheduled for examination.

## MESD ENDORSED BY CSEA BOARD

At the last meeting of the CSEA Board of Directors, the contract between Modern Electronic Service Dealer, an independently owned publication, and the State-wide Association was renewed, without debate, for another two years. This action, by the Board, indicates a favorable endorsement of our publication as the only official publication of the Association in all local, zone or state-wide areas. At the same time, special efforts are being made to make it possible for closer relationships between the different chapters and the publication staff. Meeting times and dates have been changed in order to provide news in time for publication the first Friday of every month. We would like to take this opportunity to thank all the members for their many letters and comments in regards to our publication. We want you to know that it is our sole objective to provide a working publication that will tell the story of the independent dealer in California, and to help him build a better business through Business and Technical articles.



MODERN

# electronic service dealer

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\* dates

\* dealer news

\* programs

## LOS CERRITOS CHAPTER RAISES DUES— SETS UP COLOR CLASS

The Los Cerritos Chapter of CSEA recently voted in favor of raising their annual dues to \$120 per year or \$10 per month in order to become financially sound and an effective force in affairs of the Association.

At the same meeting, Mr. Robert Whitmore, past State President of CSEA was elected as chapter Treasurer and then appointed as the chapter's representative on the Board of Delegates.

The Chapter also announced the organization of a color class to be held at Compton College with a probable cost of \$10 to \$20 per member. Further information on this class will be announced in the near future.

## CSEA Board Members Meet with Los Angeles Better Business Bureau

Board of Director members Emmett Mefford, Don Reed and Ralph Johonnot recently met with officials of the Los Angeles Better Business Bureau to discuss Senate Bill 1292. Also present were Virgil Gaither and Ron Keeley of the CSEA Board of Delegates.

According to reports from the committee the BBB felt that they had done an excellent job of presenting the Bill and that it did not contain many of the objections the BBB had to our previous Bill in 1960.

Formal action by the Los Angeles BBB, should be taken in the near future and it is expected to have some direct effect on the success or failure of the program.

## LANAM COMMENTS ON NEA AT ZONE MEETING

It has been reported by Claire W. Lanam, CSEA president, that there has been much talk regarding CSEA joining a national organization of the industry.

He commented that any premature worry or agitation should be restrained, as CSEA was only contacting other state groups and calling for information to compile and study. As yet, not enough information from any source had been obtained to bring any recommendations before the state group.

Lanam advised that CSEA directors, delegates and members had more than enough to do in perfecting, broadening and promoting CSEA.

## PHIL SOTO ADDRESSES ZONE "F" REGARDING SB 1292

Assemblyman Phil Soto, former TV Service Dealer in La Puente and a former chairman of the CSEA Board of Delegates recently addressed the monthly meeting of the CSEA Zone "F" Council.

In discussing SB 1292 Assemblyman Soto pointed out many of the things that still face the bill before it reaches the stage of becoming law. Although there are numerous committees that could, in effect, kill the bill he felt that there was a good chance for its passage. He complimented our executive secretary Kieth Kirstein and the State Staff for doing an outstanding job in preparing the Bill and paving the way for possible passage.

Other items discussed at this meeting included the passage of a resolution endorsing AB 1292, a report on the possible change in the By-laws by the Board of Delegates and further discussion on a possible Zone office. Further action was delayed until after the annual meeting on June 8 and 9.

## VALLEY SRTT ELECTS NEW OFFICERS

The Society of Radio and Television Technicians, Inc. of Van Nuys California recently named their new officers and board members for 1963.

At a meeting held at the Sky Trails Restaurant in Van Nuys, Mr. Bob Albright was named as the new President. Other officers included: Hugh McClellan as Vice President; Ernie Larson as Secretary Treasurer and a Board of Directors that included: Norb Fournier, Jack Likert, Horst Theim, Sid Becker and Bob Bergstrom.

The group has a number of interesting activities going and meet the second Wednesday of every month at the Sky Trails. A recent survey has gone out to the members asking their cooperation in selecting the best type of programs. With this information in hand the future programs will be directed along the lines of the majority of interest. Anyone interested should contact Bob Albright at P.O. Box 126, Van Nuys, California.

## ACTRA Sends Letter Endorsing SB 1292

The ACTRA Chapter of CSEA in a formal resolution, endorsed Senator Short's Senate Bill 1292 and sent a letter to this effect to him late last month.

In this letter, Mr. Phil Fisher, Executive Secretary for the Chapter, stated:

"Last night, at the regular monthly meeting of this association, Senate Bill 1292 was the sole matter on our agenda. It was deemed by all as that vitally important to our service industry and to the consuming public.

"The bill was gone into in detail by Claire W. Lanam, president of the California State Electronics Association. Questions were freely asked, and as openly answered. A vote was taken.

Unanimously our membership endorses your bill. And unanimously we are determined to call upon all others in our industry, upon our officials and upon the consuming public, likewise to endorse it.

"For years this association has carried on a 'self-policing' program aimed toward giving the public a fully competent and ethical service dealership... one in which the consuming public might have full trust. We have had many successes. Yet there does remain a small residual which has cast upon the whole industry a shadow of doubt. Doing this on a voluntary basis we have not had the 'teeth'... and I trust our meaning there is entirely clear.

"With SB 1292 we can see a better future for all... and certainly for the public which hopes to look forward to us for competence and ethical and honest business standards.

"We appreciate your work on this bill, trust that it will have full committee support and that it will become law."



CLAIRE W. LANAM

# CSEA Zone "B" Council Discusses SB 1292

★ ★ TIME ★ ★

None for internal politics.  
 None for business.  
 None for parties.  
 None for vacation.  
**JUST WORK!**  
 Work for our S.B. 1292.

Every moment awake should be spent in writing, phoning, and talking to everyone we can to urge a Do-Pass for our bill.

Work and write to each Senator on the Committee of Business and Professions—NOW.

This must be done on each phase that our bill passes through on its way through the legislature.

On Monday May 20th I had the pleasure of attending the public hearing before the Business and Professions Committee of the State Senate, in regards to SB 1292. The unanimous ap-

proval of this committee and the recommended "do Pass" was a real test for the Bill and is very encouraging to all of us who have worked so hard. I want to personally thank the committee and the hundreds of dealers throughout the State who backed the Bill with their cards and letters.

This, of course, is only the first step of major importance and there is still a lot of hard work ahead of us. As the Bill progresses we will make every effort to keep the entire Industry informed and hope they will continue to give us the necessary support that will end with a registration law for Television Service Dealers.

Remember there are no restrictions to free enterprise. We pay our own way, and we are on the commission to direct our destinies.

All your time should be directed only to our goal, don't waste your time!

At the May 14 meeting of CSEA Zone "B" Council, Senate Bill 1292, because of its importance, was immediately discussed. SB 1292, calling for "registration" of all persons whose "activities consist only of repairing, servicing or maintaining televisions, radio, and phonographic equipment normally used or sold for use in the home" was a direct quote from the bill and was thoroughly reviewed.

One item in the Bill met with much discussion (Sub-section 9844, pertaining to "The service dealer may charge a reasonable fee for making the estimate" and for "labor and parts necessary for a specific job." It was agreed, however, that the provision had much merit, was protective of both service dealer and customer, and that the amount of a "reasonable fee" for making an estimate could well be established by averages, and in specific cases could well be cared for by the Advisory Board's two professional members whose advice would certainly be sought by the three members representing the public.

Consensus was that the Bill was a step in the right direction, and should have the support of both our industry and the consuming public. All agreed to write letters to Senator Alan Short, who had introduced the Bill, and to the Committee on Business and Professional Standards, to which the Bill has been referred, calling for its passage. Such letters were to be addressed to the Senator or Committee: State Capitol, Sacramento, Calif.

President Lanam stated he was working with Berkeley City officials and Alameda County Board of Supervisors for support and letters. Director Hoy read letters of appreciation for his efforts from Senator Short. Secretary-treasurer Fisher stated he had conferred with Mayor Houlihan of Oakland, resulting in the Mayor writing Senator Short in support, sending a copy to Senator Holmdahl of Alameda County. Fisher also stated he had bulletinized every service dealer in Alameda County, all Zone B leadership, and many Bay Area manufacturer representatives and distributors.

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SAN DIEGO #13  
3211 Adams Ave.  
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NORTH COUNTY #18  
930 S. Santa Fe Ave.  
Vista, Calif.

# California State Electronics Association SAN DIEGO NEWS

**NEXT MEETING**

**CHAPTER 13**  
To Be Announced

**CHAPTER 18**  
TO BE ANNOUNCED

VOL. 2, NO. 9

JUNE, 1963

Editor: ED FORT, JR.

## More Letters to Legislators Urged

Even though our Bill has come out of the Senate Committee we can not afford to stand by and wait for the next step.

**STATE ASSEMBLYMEN**

*76th District* — Clair W. Burgener, 4921 Southcrest Ave., San Diego 10.

*77th District* — Richard J. Donovan, 1003 Plaza Blvd., National City.

*78th District* — E. Richard Barnes, 3027 Poinsettia Dr., San Diego 6.

*79th District* — James R. Mills, 1718 39th St., San Diego.

*80th District* — Hale Ashcraft, Linea del Cielo, Rancho Santa Fe.

**STATE SENATOR**

*40th District* — Jack Schrade, 107 Julian, El Cajon.

## San Diego Members to Provide Service for County Hospital Home

**SPECIAL NOTE**

Since my recent editorial in MESD I would like to make one thing perfectly clear. The fact that I am opposed to N.E.A. does not mean that I am in favor of NATESA. Apparently there is a little confusion on this score in the minds of some of the NATESA representatives. My chief concern is that a sound CSEA comes first before we consider what comes next.

The San Diego Chapter of CSEA has agreed, through its Board of Directors, to maintain the Hospital Television Sets at the Valclain Home at the County Hospital for an indefinite period at no charge for labor.

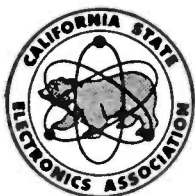
This new program has already gone into effect with an agreement being made with the San Diego Tuberculosis Association to pick up these sets at the hospital and deliver them when the work has been completed.

According to Ed Fort of Mobilshop Television, "this is a very worthwhile cause and I want to thank all the members for taking part in it. This type of project is very much appreciated and it provides a great deal of goodwill towards our individual shops as well as our Association as a whole."

## Business Index 79%



# YOU TOO! ... CAN AID YOUR INDUSTRY



**COMPREHENSIVE  
INSURANCE  
PROGRAM**

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**BETTER BUSINESS  
SUPPLIES & AIDS**

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3333 Watt Avenue

Telephone 482-0706

Sacramento 21, California

Owners Name.....

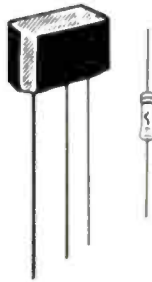
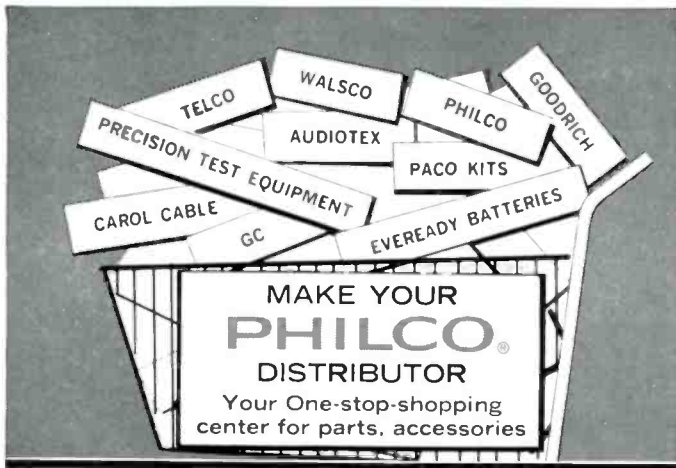
State Resale Permit No.....

Business Name.....

Business Address.....

Tel. No..... City.....

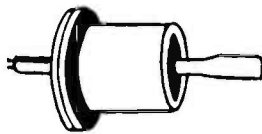
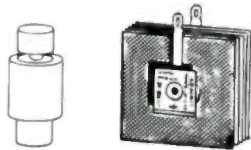
**CLIP OUT — MAIL IT TODAY — WE WILL CONTACT YOU**



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A complete selection of diodes for exact replacement, including IN34, IN64; and Dual Diodes P15, common cathode (replaces Fed. K1615 and IRCD4); P16 series connected (replaces Fed. K1616 and IRCD5) and P17 common anode (replaces Fed. K1617 and IRCD6)

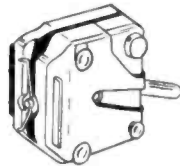
**HI-DENSITY 500 MIL Selenium Rectifier and 500 MIL Silicon Cartridge Rectifier**  
Top quality products, perfect replacements for original equipment.



#### GUARANTEED 500 MIL SILICON RECTIFIER

Ideal for general replacement and miniaturization purposes. Lower voltage drop gives more drive plus greater anode voltage.

**PHILCO POPULAR CARTRIDGE**  
Plays all speeds. Includes dual sapphire (synthetic) tip needle. Fits Philco changer models M20, 22, 24, 24A, 25, 26.



#### 45 RPM SPINDLE

Quality made, low in price. For VM and Philco M40, 40A, 41. Also 45 RPM spindles for M60A and all BSR changers as well as other makes and models.

#### YOUR PHILCO DISTRIBUTOR

Features These Famous Brand Parts and Accessories

- PHILCO
- EVEREADY Batteries
- FLASHLIGHTS
- CAROL CABLES
- GOODRICH V-Belts
- GC Products
- AUDIOTEX
- WALSCO Products
- TELCO Antennas
- PRECISION Test Equipment
- PACO Kits

PHILCO MODERN COPPER ENGRAVED CIRCUITS — for Simplified Service



The Fresno Town and Country Hotel is the site of this year's California State Electronics Association annual meeting. Special rooms and accommodations have been set aside to make it an ideal location for Delegates to meet.

#### ACTRA TO CONTINUE AD PROGRAM IN OAKLAND PAPER FOR 4 WEEKS

ACTRA members who have been participating in the current co-op ad program have made arrangements to continue this schedule for, at least, another four weeks.

Response, so far, has been very good and additional members are expected to take part in the ad as it progresses. Special note is made, in the new copy, to point out that ACTRA is now a chapter of the California State Electronics Association and is in an even better position to provide the public with the very best service possible.

At the present time most of the ACTRA members are taking part in the campaign and it is hoped that it can be continued on a regular basis throughout the months to come.

Be Sure To Attend The

# CSEA Annual Meeting

Town and Country Hotel  
Fresno, California  
June 8-9, 1963

Registration Begins At 10:00 a.m. June 8th

# ANNUAL CSEA MEETING SET FOR FRESNO JUNE 8-9

- Senate Bill 1292 To Be Discussed
- Possible Changes In Association Structure
- Ladies Program Planned

The annual meeting of the California State Electronics Association will be held at the Town and Country Hotel in Fresno, California, on Saturday and Sunday, June 8th and 9th.

This year's event will feature an adjourned Board of Delegates meeting in order for this group to consider a possible change in the Association By-Laws that would set up an annual Convention of the entire membership and the election of officers by that group. At the present time the officers are selected from the Board of Directors by the Board of Directors at this annual meeting.

At the last Board of Delegates meeting held on March 24th in Fresno, a special committee was named to consider this matter and to make a recommendation, in report form, 30 days prior to the annual meeting. The committee did meet as suggested and their recommendations have been sent out to all of the delegates 30 days prior to the June 8th date.

The extent of their recommendation is as follows:

"In accordance with instructions of the March 21, 1963, Board of Delegates meeting, the By-Laws Committee has held several meetings to prepare a final submission of proposed by-laws changes to carry out the main objectives of the Board's unanimously adopted resolution of June 10, 1962.

"March 29, 1965: At the home of Don Reed. Present: Don Reed (presiding), Capp Loughboro, Bob Whitmore, James Scarborough, Ron Kealey and Hugh Wilkins.

"April 18, 1963: At home of Don Reed. Present: Same as above except Capp Loughboro absent and Director Ed Fort present. Ron Kealey presided at this meeting by unanimous consent.

"April 25, 1963: At home of Hugh Wilkins. Present: Ron Kealey (presiding), Bob Whitmore, James Scar-

by Don Martin

Loughboro was consulted by long distance telephone.

"The resolution of June 10, 1962, was reviewed to fix objectives. During discussion and on suggestion of Don Reed, it was decided to recommend one deviation from those items specifically covered: To wit: That the election of State Officers be conducted immediately following "unfinished business" instead of as the last order of business in order that the new officers would be installed before new business is taken up.

"As the result of extensive consultation with various Directors and delegates, several innovations have been included which the committee regards as very desirable in promoting interest and participation of the general membership in actions of the Association at convention level. These are, in brief:

- "1. Including the general membership in conventions, instead of the separate state-wide membership meetings, as now provided. (Suggestion of Director Don Reed).
- "2. Establishment of a quorum as consisting of a majority of the membership, either in person or as represented by delegates. This automatically reaches clear down to the 'grass roots' of the organization for authority to do business if higher echelons should become derelict in performance of their duties.
- "3. Assuring that every member shall participate in election of principal officers, either in person or by representation, by providing that votes of all members not otherwise represented at such election shall be equally apportioned among, and cast by, the newly-elected Directors. (This was a compromise based on a suggestion of Director Ed Fort.)

"The undersigned, accordingly, recommend the adoption of the attached proposals as being a decidedly forward step in the affairs of the Association and as fulfilling the specific mandates of the Board of Delegates to your Chairman and By-Laws Committee.

- "(Signed) Robert Whitmore
- (Signed) Jimmie Scarborough
- (Signed) H. W. Wilkins, Co-Chairman By-Laws Committee
- (Signed) Ron Kealey, Chairman Board of Delegates
- (By telephoned authority) Capp Loughboro."

\* \* \*

## *Special Events for the Ladies*

This year a few special events have been set up for the ladies who annually attend with their husbands. On Saturday afternoon a special Tea and Hair Styling Show has been arranged at the Town and Country. Then on Sunday morning, a special arrangement is being worked on that would provide a trip to the famous nearby Underground Gardens.

\* \* \*

## *Installation Luncheon*

On Sunday afternoon the annual installation of officers will take place with Don Martin, Publisher of MESD, acting as installing officer. All outgoing officers and board members, as well as Board of Delegates officials, will be introduced and recognized for their hard work during the past year.

Although only the official Board of Delegates will be able to vote, all members are invited to attend and to learn more about their Association and what is in store for the future. Reservations must be handled by the individual directly with the Town and Country Hotel. One hundred rooms have been set aside for this event and they can go real fast. We encourage anyone interested in attending to make their reservations as soon as possible.

FRESNO, CALIFORNIA, JUNE 8-9

# CALIFORNIA STATE ELECTRONICS ASSOCIATION ANNUAL CONVENTION PROGRAM

Chairman: Ralph Johonnot

Registration: Ron Keeley

Program: Harry Kiyomure

## June 8, 1963

- 12:00 Noon.....Registration of all members of CSEA.  
Delegates should present their credentials and  
have voting rights verified prior to meeting.
- 1:00 p.m.....Board of Delegates Meeting.  
Room to be announced at time of registration.
- 3:00 p.m.....Hair Styling and Tea For Ladies.  
Features: Mr. Jerry Bennett, Well Known and former  
Hair Stylist for Rubinstein of New York.
- 5:00 p.m.....Adjourn Board of Delegates Meeting.
- 8:00 p.m.....Special Dinner at Hacienda Hotel  
(near Town and Country).  
Entertainment by Vickie Frazer and Ronnie Schell  
(optional—Make reservations at time of registration).

## June 9, 1963

- 9:00 a.m.....Board of Directors Meeting,  
Hospitality Room #1.
- 10:00 p.m.....Ladies' Trip to Underground Gardens  
(optional—check at registration desk).
- 1:30 p.m.....Annual Installation Luncheon.  
Introduction of new officers, Board of Directors  
and Board of Delegates Chairman.
- GUEST SPEAKER:
- 3:00 p.m.....Convention Adjourned.

Registration Fee: \$5 per person (includes luncheon and all Ladies Activities)

# California's First Service Dealer . . . . SURVEY and Average Charge Schedule

During the last few months, MESD has gone into an extensive survey in an effort to learn more about the Service Industry and the Dealers that make it up. Of course, since our coverage is only California, the facts and figures are confined to this area and may very well be ahead of any national average.

The California Dealer has been in business for just over 10 years and has a shop consisting of about 1500 square feet. For the 70% who handle both sales and service this is broken down into about 2/3rds service and 1/3rd sales. Many of those that are now pure service dealers have at one time or another handled sales but have discontinued this part of their business because of competition and the low margins in set sales.

About 19% of those dealers owning their own business today actually own their own building as well and are usually open from 9:00 a.m. to 6:00 p.m. Less than half of the dealers make night calls (46%), only 14% will make a call on Sunday and even fewer, 9%, will make one on a holiday.

The average dealer employs two extra men in his operation with one on the bench full time and one in the field. This, of course, does not include the owner who will work in both places.

Vacations are accepted by the dealers and over 81% do give paid vacations to their employees. The usual measure of vacation time is 1 week the first year and two weeks the second year. A little better than half (54%) pay their employees for the six holidays but only 9% will pay sick leave.

The formal uniform has still not caught on in an extensive manner with only 32.1% of the dealers insisting that they and their employees wear uniforms. Of those that do have this policy about 70% pay for their employee's uniforms.

The average California Dealer has 2.2 vehicles of which 75.4% are small trucks and 35.3% are station wagons. There is a natural over-lap here since many have 1 truck and one station wagon while others will have two trucks or two station wagons. These trucks serve an area that averages about 14.4 miles surrounding the main store with some shop owners staying as close to home as five miles and some serving as distant as 100 miles. Only a very few will charge for mileage but of those that do the average is the acceptable 10c per mile.

## Advertising

Dealer Advertising is pretty well summed up in two mediums, the Yellow Pages and local newspapers. It is amazing to realize that over 90% of all the dealers in the state use regular advertising space in the Telephone Yellow Pages. The average spent monthly in this form of advertising is \$47.56 and when you consider there are over 8,000 service dealers operating full time businesses this represents an expenditure of some \$380,000 per month or \$4,000,000 a year. The high for this type of advertising was \$300 per month with a low of \$7.50.

By the same token only about 40% of the dealers use newspapers and they

spend an average of \$68.85 per month. This amounts to over \$250,000 per month and a yearly expenditure of 3 million dollars.

These type of expenditures in themselves are not too impressive but as a combined buying group the service dealer would have to stand very high in advertising expenditures per industry.

## Income

The average shop in California is a pretty good small business with an average service only sales figure of about \$29,000. It is interesting to note that the average for a one man shop is \$10,140 per year; \$29,000 for a two man shop; \$53,000 for a three man shop and \$57,000 for four or more men. From these figures we can determine that 2 men can do three times the amount of business as a one man operation; 3 men can do almost 5 times as much business as the one man shop but it then becomes a decreasing factor with only 10% increase in business from a three man shop to one with four or more. It would seem from these statistics, that the ideal operation for a service dealer is single ownership and two employees. These figures are SERVICE ONLY. The sales percentages were removed from the gross incomes reported in order to present a pure service income.

On the other hand, the 78.7% of the dealers who do handle product sales, as well as service, the average two man shop did about \$38,400 per year. The survey revealed that we had a low of some \$2,000 in sales and a high of some

# SURVEY SHOWS BRAND PREFERENCE

\$170,000 in sales plus the service. Since the readers of MESD are basically service dealers it is interesting to point out that the average dealer, including both sales and service, will do \$29,000 in service business each year and about \$9,000 in sales.

One other point is that the California Dealer has invested about \$2835.00 in equipment and fixtures or about 10% of his gross annual sales. He also carries an average monthly inventory of parts and accessories of \$1844.00 of which 60.3% is in receiving tubes, 10.5% in CRT's and 29.2% in parts and accessories. The average turn-over of these parts was 6-times per year or a total annual expenditure, on parts, of \$11,064.00. When you consider that this is about 1/3rd of the average service income you can see that it is very close to being a true picture. Using the percentages established in the survey we could estimate that the average two man shop would buy \$6,671.00 worth of receiving tubes annually. He would buy \$1,164.00 per year in picture tubes and about \$3,400 on parts and accessories. Using the same factor of some 8,000 service dealers in the State of California we can estimate the annual sales, to dealers, of receiving tubes at \$51,368,000, the sales of picture tubes at \$9,312,000 and the sale of accessories at some \$27,000,000.

## Product Survey

At the same time they were asked how much they buy, the dealers surveyed were asked which brands they buy. The following is a list, by percentage of the brands mentioned, that, when compared with the total amounts purchased by dealers, should give a good reflection of the annual sales made by these brands to the California Service Dealer.

Brand	Percentage
1. RCA	32.44
2. G.E.	21.01
3. Sylvania	23.07
4. Tung-Sol	10.38
5. Philco	3.4
6. Raytheon	2.6
7. Misc.	4.1

Brand	Picture Tubes
1. RCA	26.9
2. Sylvania	24.3
3. G.E.	20.9
4. Calvideo	6.7
5. Zenith	3.3
6. Du Mont	2.8
7. Tung Sol	2.6
8. Philco	2.6
9. Raytheon	.9
10. Misc. Rebuilts	6.9

## Brand of Television Sets

1. Zenith	19.3
2. RCA	15.4
3. Packard Bell	14.3
4. Motorola	11.4
5. Emerson	11.4
6. Admiral	7.2
7. Philco	5.1
8. Sylvania	5.1
9. G.E.	4.1
10. Curtis Mathes	3.2
11. Misc. Brands	3.5

Judging that the average dealer is selling about \$9,000 in products per year we can estimate that the TV service dealer accounts for over 7 million dollars in finished product sales per year.

## Pay and Earnings

At the present time the owner is paying his employees an average of \$3.11 per hour. Outside service technicians are receiving an average of \$2.74 per hour with a high of \$4.65 and a low of \$1.75. On the other hand, benchmen were getting a little more with an average of \$2.81 with a high of \$4.85 and a low of \$2.20.

Of particular interest was that the service dealer himself was drawing out of his business an average of \$133.00 per week. The high draw was \$250 per week and a low of \$75.00. There were no figures for the percentage of profit of the over-all operation.

## Service Calls and Charges

The California Service Dealer receives an average of 9.1 service calls per day and he expects his outside men to average about 7.39 of these per day. There was a wide difference of opinion in this regard in that some dealers expected their men to service as many as 14 calls per day with a low minimum expressed at 5. Of these calls about 23% resulted in shop jobs.

Charges for service calls were higher than normally expected with an average house call charge of \$5.13 for a black and white set. The highest charge for this type of service was \$7.50 and a low of \$3.95. The most popular price was \$5.95. In servicing black and white sets the average time allowed for this work was 30 minutes and the charges made for additional sets serviced at the same time averaged \$2.50. Even though the average is rather high the most popular charge was \$1.50, per additional set in the same home.

Color, of course, was much higher. The amazing thing was that only about 56% of the service dealers are servicing color sets and their average charge for a house call is \$7.29. In this category the high charge was \$12.50 and the

lowest charge of \$5.95. Here again the most popular charge was around \$6.95 or about \$1 more than black and white sets.

## Pricing Shop Repairs

Almost every service dealer did have a minimum charge for shop TV repairs with an average charge of \$6.41. The highest rate reported was \$12.50 and the lowest \$3.50. Of those who did charge an hourly rate for shop repairs the average was \$6.25 per hour with a high of \$9 and a low of 6.50. When working on a minimum charge most of the dealers (63%) charged for delivery at 10c per mile. As far as guarantees are concerned, 97% guarantee the parts for 90 days and the labor for 30 days.

As for radios, over half (53%) have an hourly rate for repairs with an average charge of \$6.25 per hour. The high was reported as \$8.00 and a low of \$3.00. Many of the shops (47%) do handle factory warranty business with an average charge for this work of \$4.75 with a high of \$6.00 and a low of \$3.00. For those that do have a minimum rate for radio repairs the average charge is \$3.25 with a low of \$1.50 and a high charge of \$3.50.

## Antenna Charges

One of the most varied items reported in the survey was that of Antenna Installations. The vast majority (89.4%) of the dealers do handle antennas and over 80% (80.3%) install them. By the letter postmarks we were able to determine that the average charge for antenna installations in local areas was about \$23.00 while in the fringe areas it ran as high as \$95.00. In local areas the charge had a high of \$60 and a low of \$12.50, while in the fringe areas we had a low installation figure of \$75.00 and a high of \$175.00. These charges did not include the antenna.

Many of the dealers (63.1%) have a flat rate for antenna installations, for labor only, of \$6.75 per hour. The high hourly rate was \$25.00 and the low rate was \$5.00 per hour. As for antenna systems only 40% of the dealers were doing this type of work.

## MESD Magazine Survey

Judging from this survey we could say that in the past two years we have been able to establish the name of our publication. Over 92% of those answering the survey reported that they did receive the publication. Since everyone sampled does receive the magazine we can determine that about 7% do not, as yet, recognize it. When asked if they read the publication thoroughly, 80.3% stated that they did. 19.4% of those surveyed said that they at least glanced at it and only .3% stated that they did not look at it at all.

In reviewing the type of articles they wished to see 78.1% stated that they liked the Business articles while 74.5% stated that they liked more Technical articles. Judging from these reports we would say that whatever articles are featured monthly over 75% of the readers will be interested in reading the material presented.

Some of the comments that were mentioned in this survey were: "o.k. as is, better shop layouts, contest for outstanding shop layouts, more articles on realistic pricing, more service talk among shops especially new ideas and short cuts, you are doing fine, less B.S. and more technical, a section with hints, customer relations, more on local chapters, more on teaching the technician how to run a successful business . . . there are plenty of technical books, more technical, industry news, surveys, etc., where to find qualified men, we have technical magazines . . . we need MESD to help us in the business end, business statistics, stories about shops, business problems, educational business, more northern California news, more on business, continue same policy, business management, equipment and the proper way to use it, how to huck the discount houses, inter-coms. sound and antenna systems, trouble shooting articles, very good as is, what others are doing and how, advertising techniques, short cuts on all segments of the electronic industry, tough dog repairs, more articles on the merits of buying from dealer - closed - door distributors, laws effecting the small businessman, methods of inventory control, etc.

In summary we can determine that the California Service Industry represents an annual gross sales of some \$232 Million dollars and a gross annual finished product sales figure of over \$7 Million dollars. This, of course, does not include the "part-time" operators which could account for an additional 10% in annual sales.

The dealer buys over \$88.5 Million dollars worth of parts and accessories annually and spends over \$9 Million dollars for advertising. He has invested in equipment and fixtures over \$22.5 Million and in trucks over \$40 Million.

All in all, we feel that this survey is valuable in determining the California Service Industry. We received a 37% return on the surveys mailed and this represents a sample of just under 10% of the dealers in the state.

This survey should be accepted for what it is and the sample it represents. We hope that it will be of benefit to the dealers in the operation of their business and of value to the industry as a whole.

## AVERAGE MINIMUM SHOP CHARGES AND PER HOUR RATES

*Note: Please remember that these rates are averages as compiled in our recent survey. There was a wide range of charges reported and all were considered in the tabulations. These figures are being reported only as a guide to the industry as a whole. It is interesting to note that the average hourly rate for all types of electronic repairs is about \$6.25 per hour. The percentage noted is to indicate the importance of each repair classification and to reflect the type of service the average shop is performing.*

<i>Product Serviced</i>	<i>%</i>	<i>Flat Minimum Shop Charge</i>	<i>Hourly Shop Rate Charge</i>
Black and White TV	100	\$11.25	\$6.95
Portable TV	100	11.00	6.45
Transistor Radio	85	5.50	6.50
Color TV	83	15.25	5.95
Ac-De Radio	95	3.25	6.00
Car Radio	66	4.75	5.75
Marine Radio	25	7.75	6.50
Citizens Band Radio	25	8.00	6.25
Hi-Fi	59	8.50	6.50
Stereo	67	8.65	6.45
P.A. Systems	43	6.25	6.45
Record Players American	57	9.25	6.25
Record Players Foreign	56	9.25	6.25
Tape Recorders American	57	9.25	6.25
Tape Recorders Foreign	42	10.25	6.50
Home Intercoms	30	5.75	6.45
Garage Door Openers	17	5.45	6.00
Electronic Ovens	4	10.00	8.00
Ultra Sonic Cleaning	4	6.00	7.00
Medical Electronic Repairs	.8	3.75	7.00
Small Appliance Repair	10	5.00	7.00



How To Talk . . . . .

# ANTENNAS TO YOUR CUSTOMERS

By ROBERT D. RAYNOR, President  
Clear Beam Antenna Corp.

## PART IV

### WHAT ANTENNAS DO

Probably the most common question asked concerning a television antenna is . . . "Which is the best antenna I can buy?"

Unfortunately, there is no single answer to this since an antenna which works well in one area might be the wrong antenna for another. We have seen that what we hope to overcome with the antenna are:

1. Ghosts . . . or signals coming in from different directions.
2. Snow . . . or the weakness of the signal.

How well an antenna can overcome these problems *on every channel* is a measure of how efficient the antenna is. The more difficult the ghosts and snow are to overcome and the more stations being broadcast in the area which have these problems, the more efficient the antenna must be. This explains why relatively simple antennas are used in good reception areas and why more complicated and more expensive antennas are needed in poor reception areas.

Although there are many different kinds of antennas, they all work on essentially the same basic principles. They vary and appear different only insofar as they are tuned for more powerful reception on certain combinations of channels and in the element arrangements used to eliminate ghosts.

### HOW AN ANTENNA IS TUNED

In all antennas one basic element is receiving the signal and sending it to the TV set. If an antenna has more elements they are only helping this main element do a better job. This element is called the **DIPOLE** and is usually the element to which the lead-in wire is attached. The simplest form of a TV antenna is one which merely has one element, or a straight dipole. Such an element, mounted on a plastic base is the common "Rabbit Ear" antenna.

Each of the TV channels which an antenna must receive is "tuned" to a given frequency. This is not as complicated as it sounds. In music each string of a harp is tuned to a different frequency and produces a different note. The longer the string, the lower the note. The shorter the string, the higher the note. This is true of TV also. The lower the Channel number is the longer the antenna must be . . . in physical size to receive it. The higher the channel number, the shorter the antenna must be.

In the case of the rabbit ear, when the elements are pulled all the way out, that is . . . to their longest position, the antenna is "tuned" to channel 2. When they are all the way in they are "tuned" for channel 13.

Since a rabbit ear is in the living room, the tuning can be done easily by lengthening or shortening the elements. In an outdoor antenna, adjustments of this nature would be impractical and, therefore, engineers design antennas so that their lengths are changed electrically and the antenna is then "tuned" to more than one station. This is one of the reasons that antennas have wide differences in the lengths of their elements, i. e. long for channel 2—short for channel 13.

### HOW AN ANTENNA ELIMINATES GHOSTS

A rabbit ear antenna is not very efficient in the elimination of ghosts. You can, however, eliminate some of them simply

by rotating the antenna. The reason for this is that an antenna works better from some directions than others. In the case of the rabbit ear, the most powerful reception can be attained by placing the dipole at right angles (90°) from the station.

We have seen that Ghosts are caused by reflected signals reaching the antenna. Because of the fact that they are reflected, they are generally received from a direction off to the side or from the back of the antenna. Accordingly, it is understandable that if we could design an antenna which would work only from one direction and be blocked out in all other directions, none of the reflected signals coming in from the side or the rear of the antenna would reach the TV set and we could eliminate ghosts.

In practice this is accomplished in two methods: first, by eliminating all signals from the rear, and, secondly, by narrowing the angle from which the antenna receives the desired direction.

By adding an element to the back (side away from the station) the antenna rejects most signals from that direction. This element is slightly longer than the dipole and is called a reflector.

By adding an element to the front of the antenna which is a little shorter than the dipole, we have an element that is called a director. This element has the effect of narrowing the angle from which the antenna can receive.

To summarize, the reflector element and the director element both add to the antenna's ability to select signals from only one direction. The reflector stops signals from coming in from the back of the antenna and the director narrows the receiving angle from the front. Since ghosts are reflected signals they usually come in from the side or the rear and the antenna, therefore, eliminates them.

### IMPROVING THE POWER OF AN ANTENNA

We have already seen that by adding a director element and a reflector element to a dipole increases its ability to select signals from a given direction. Actually, the addition of the directors and the reflectors serves *two* purposes.

If you will again imagine a TV signal as being similar to sunlight you can see that if we want to concentrate light on one spot we can do so in several ways. First, we could use a magnifying glass which tends to collect light and focus it in one spot. The director element of the antenna serves just such a function since it collects the TV signal and concentrates it on the dipole. Another way to concentrate light is through reflection . . . we have all seen the effect of sunlight on a mirror. The reflector element of an antenna accomplishes this same function for the antenna in that it reflects the TV signal back to the dipole.

By the addition of the directors and reflectors, the dipole now receives not only the regular energy it would normally receive, but also the concentrated energy from the director and the reflected energy from the reflector element.

By actual measurement, a dipole with a director and reflector receives a signal up to five times more powerful than a dipole alone. By adding additional directors in proper mathematical sequence, this can be built to as much as ten to twelve times the power.



# MODERN ELECTRONIC SERVICE DEALER'S COLOR CUES<sup>©</sup>

## PART II

### • • • A CTC-4 COLOR CHECK CHART TO PROFESSIONAL SERVICING

#### SOURCE AND REFERENCE MATERIAL:

Servicemen who repair, modify, or align this series of receivers will find that versions of the CTC4 chassis found in many brands are covered by: RCA Service Manual 21-CT-661U, etc., dated 5-4-55 (original printing).

Early modifications and parts symbols are to be found in RCA Service Manual 21-CT-661U, etc., dated 12-9-55. Revised printing.

Users of Howard W. Sam's Photofact Folders are referred to Photofact Set 314 Folder 9.

Schematic identification symbols are shown for both publications.

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In the May Issue of MODERN ELECTRONIC SERVICE DEALER the first portion of the "CTC-4 COLOR CHECK CHART" appeared. Items X-1 to X-10 were devoted to problems which have developed in eight years of operation and for which special modification or change data is available. Space did not permit us to include X-11 and X-12 which are included this month.

Experienced servicemen are quick to appreciate the value of modification or change data which has been field tested. When this is not available the only alternative is often long and costly experiment to develop the answer on an individual basis.

In this, the June Issue, we present the "Y Series," Y-1 through Y-5. The material is somewhat different from the "X Series" in that it is primarily concerned with modifications and changes incorporated in late production runs of the CTC-4 series.

If you wish to up-grade an early run to late production standards much of the information will be found in this section. Some of the changes were made to avoid malfunctions which were peculiar to the early runs, and others were made to improve performance. It should be noted that if you are in doubt as to whether you have an early or late run receiver a check of components listed in Y-1, Y-2, or Y-3, will usually provide the answer.

Naturally some of the changes suggested in the "X Series" will overlap some of the "Y Series" changes, with "X-3" and "Y-4" being a case in point.\* Every effort has been expended to avoid a situation in which you would find yourself modifying a just completed modification, and further checkouts will be made before the complete "CTC-4 COLOR CHECK CHART" is printed as a separate brochure.

\*Due to a typing lapse an error crept into one paragraph of X-3 as printed last month: The G-Y plate load resistors were listed "Same as R-Y (3 82 K 2 watt resistors in parallel)" when "Substitute 1 120 K 2 watt resistor for the original 2 56 K 2 watt resistors" was the proper suggestion.

To understand the use of Schematic Part Symbols the following should be kept in mind:

1. Schematic symbols from the Service Manual "RCA Victor 21-T-661U, etc., First Edition 5-4-55" are enclosed in single parenthesis: (C-240).
2. Schematic symbols from the Service Manual "RCA Victor 21-T-660U, etc., Second Edition 12-9-55" are enclosed in brackets: [C-240].
3. Schematic symbols from the Howard W. Sam's Photofact Set 314, Folder 9, are enclosed in double parenthesis: ((C-170)).

Inclusion of the three sets of symbols, where applicable, will help the serviceman using any of the listed service manuals.

#### CHANGES NOT COVERED IN THE "Y" SERIES:

Two subjects have not been included in this section for special reasons:

1. Flyback Change: If a replacement flyback is required for an early production model, the supplier may provide a revised model with instructions enclosed to outline changes required by the variations in pulse polarity and amplitude existing at terminals U1, U2, and U3. Obviously the flyback furnished will determine the changes. Servicemen are cautioned to make a careful check of the application before attempting to substitute either an early or late run flyback.

2. Convergence Change: Late production runs used a very different convergence circuit than is found in early models. The differences can be worked out by reference to the First and Second Edition service manuals.

The manufacturer states that convergence errors can be reduced 50% by use of the revised circuit, but servicemen are advised to check X-3 for a suggestion on the late circuit. Satisfactory convergence with the early models was usually possible when all circuits were working normally, but experience with rewiring from the early to the late version could provide the serviceman with valuable basic knowledge of these circuits.

## X-11: JITTER IN LOWER HALF OF RASTER

### SOURCE OF PROBLEM

Non-polarized capacitor in vertical centering circuit open

### RCA SYMBOL

C-226

### PF SYMBOL

C-9

### CORRECTION SUGGESTED

Replace with new capacitor part No. 79625

## X-12: EFFECTS OF MIS-ADJUSTMENT OF AGC AND NOISE THRESHOLD CONTROLS:

AGC should be adjusted to prevent compression of picture "blacks" and not by reference to the point where the picture loses sync. Improper AGC adjustment will cause poor sound quality at certain settings of the fine tuner, and the receiver will not produce a properly saturated picture at any setting of the chroma control. Decrease the AGC setting a few degrees from the point where sync starts to compress. If the AGC control does not permit a full contrast picture without raster bend the Noise Threshold Control should be retarded. (This control will limit contrast if advanced excessively).

# Y-SERIES

## Y-1: TO IMPROVE EDGES OF COLOR INFORMATION:

These changes will permit alignment of the band-pass amplifier circuit to correct waveform. These changes should be completed before Y-2 is performed.

**REMOVE:** The 2.2 K ½ watt resistor (R-232) ((R-157)) from band-pass transformer (T-113) terminal "C" to "D" (ground).  
**INSTALL:** 2.7 K ½ watt resistor (R-232) across band-pass transformer (T-113) terminals "C" and "D" (ground).  
**REMOVE:** The 10 K 2 watt resistor (R-231) ((R-158)) between B+ 285 and band-pass transformer (T-113) terminal "A."  
**INSTALL:** A 5.6 K 2 watt (R-231) from B+ 285 to same terminal "A."  
**REALIGN:** As per instructions in "Z Series."

## Y-2: TO IMPROVE COLOR RECEPTION FROM STATIONS OF UNEQUAL SIGNAL STRENGTH:

The following changes will improve bias tracking of the band-pass amplifier with changes in burst levels.

**REMOVE:** Lead from band-pass amplifier 6AZ8 (V-121B) ((V-9A)) pin 2 to terminal "A" of band-pass transformer (T-113).  
**INSTALL:** Lead from same 6AZ8 pin 2 to pin 7 of AGC amplifier (V-119B) ((V-20A)).  
**LOCATE:** The junction of the 2.2 meg. resistor (R-218) ((R-169)) and the 560 K resistor (R-217) ((R-168)) connected as a load network to pin 7 of the 6AL5 phase detector (V-120) ((V-21)).  
**INSTALL:** An 18 meg resistor (R-323) from the junction located above to terminal "A" of the band-pass transformer (T-113).

## Y-3: TO IMPROVE LOW FREQUENCY OF THE VIDEO AMPLIFIER:

**INSTALL:** A .0027 tubular capacitor ((C-173)) (C-256) in series with a 63 ohm (R-77) (R-230) between pin 1 of the 2nd Video Amplifier (V-111) ((V-8)) and chassis. The resistor end of the series combination connects to the cathode of the tube.

## Y-4: TO IMPROVE THE RESPONSE OF THE B-Y PHASE INVERTER:

The rather extensive changes outlined below represent modifications which appear in late production runs of the CTC-4 chassis. The manufacturer estimates the time required for the modification as 1 hour.

### A: CHANGES IN CRT (V-126) ((V-26)) (V-126) CIRCUITS:

**REMOVE:** Both ends of the 62 mh peaking coil (L-111) ((L-92)) CRT tie-point strip (top deck) on end nearest power transformer. An orange wire connects one end of this coil to the junction of the 180 ohm resistor (R-315) ((R-224)) and the 270 uuf capacitor (C-240) ((C-170)) in the cathode circuit of the B-Y phase inverter (V-124B) ((V-23B)).  
**REMOVE:** The orange wire mentioned above.  
**REMOVE:** The 180 ohm resistor mentioned above.  
**REMOVE:** The 270 uuf capacitor mentioned above.  
**REMOVE:** The .0012 mfd (C-248) ((C-68)) connected to same terminal on the top deck tie-point strip as the peaking coil removed above.  
**REMOVE:** The 470 ohm 1 watt resistor (R-314) ((R-223)) below deck connected from B+ to the CRT tie-point strip.  
**INSTALL:** A lead from B+ 270 to the free end of the 250 mh peaking coil (L-112) ((L-93)).  
**REMOVE:** The blue cathode lead (CRT pin 13) from the CRT tie-point strip.  
**INSTALL:** Parallel a 12 K ½ watt resistor (R-314) with a 39 uuf capacitor (C-248) and connect this network between the CRT blue cathode lead and the original tie-point.

### B: B-Y AMPLIFIER 6AZ8 (V-124B) ((V-23B)) CIRCUIT CHANGES:

**REMOVE:** The 2.7 K 2 watt resistor (R-297) ((R-209)) connected from ground to pins of the B-Y amplifier (V-124M) ((V-23B)).  
**INSTALL:** A 1.5 K 1 watt resistor (R-297) from ground to pin 7 of the same 6AZ8.  
**REMOVE:** Both ends of the 1 mh peaking coil (L-128) ((L-94)) from pin 9 (grid) of the same 6AZ8.  
**LOCATE:** The junction of the 2.2 K resistor (R-305) ((R-211)) and the 220 K resistor (R-255) ((R-212)).  
**REMOVE:** The 18 uuf capacitor connected from the above junction to ground.  
**REMOVE:** The 1.7 mh peaking coil (L-143) ((L-95)) between pin 8 of the 6AZ8 (V-124B) ((V-23B)) and the 2.2 K resistor mentioned above.  
**INSTALL:** A new 250 mh peaking coil to replace item removed above. RCA part No. for this coil 71526.  
**LOCATE:** The junction formed by the 56 K ½ watt 5% resistor (R-287) ((R-206)), the 120 K ½ watt 5% resistor (R-256) ((R-195)), the 2 uuf capacitor (C-246) ((C-169)) and the 1 mh peaking coil (L-128) ((L-94)) from the grid pin 9 of the 6AZ8 (V-124B) ((V-23B)).  
**REMOVE:** The 56 K ½ watt resistor mentioned above.  
**REMOVE:** The 120 K ½ watt resistor mentioned above.  
**REMOVE:** The 2 uuf capacitor mentioned above.  
**REMOVE:** The 1 mh peaking coil mentioned above.  
**INSTALL:** A 110 K ½ watt 5% resistor (R-256) in parallel with a 3 uuf capacitor (C-246) from the 6AZ8 grid pin 9 to the junction of the peaking coil (L-129) ((L-89)) and the 3.3 K ½ watt 5% resistor (R-282) ((R-196)) in the pin 1 12BH7 R-Y demodulator plate circuit.  
**INSTALL:** A 47 K ½ watt 5% resistor (R-283) from the 6AZ2 grid pin 9 to the junction of the 750 mh peaking coil (L-130) ((L-91)) and the 3.3 K ½ watt 5% resistor (R-286) ((R-203)) in the pin 6 12BH7 G-Y demodulator circuit.  
**INSTALL:** A new 8 uuf capacitor (C-247) in parallel with the 47 K resistor installed in the paragraph above.

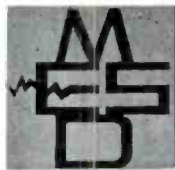
### C: PLATE CIRCUIT CHANGE IN THE 12BH7 (V-125B) ((V-25A)) DEMODULATOR:

**REMOVE:** The 3r uuf capacitor (C-243) ((C-166)) from the Demodulator transformer (T-114) terminal "D" and the 12 mh choke (L-147) ((L-90)) connected to 12BH7 pin 6.  
**INSTALL:** A new 27 uuf capacitor (C-243) to replace the 39 uuf item removed above.

## Y-5: CHANGES IN CRT SCREEN CONTROL POT SIZE:

Early production called for use of 500 K pots for screen controls. Later production used 1 meg pots.

**REMOVE:** Green screen control (R-144) ((R-19)).  
**REMOVE:** Red screen control (R-145) ((R-17)).  
**REMOVE:** Blue screen control (R-146) ((R-18)).  
**INSTALL:** 1 meg screen controls for above. RCA part No. 101821 or equivalent.  
**REMOVE:** 56 K 2 watt resistor (R-292) ((R-214)) from screen controls to ground.  
**INSTALL:** A 120 K 2 watt resistor (R-292) from the new 1 meg screen controls to ground.



MODERN

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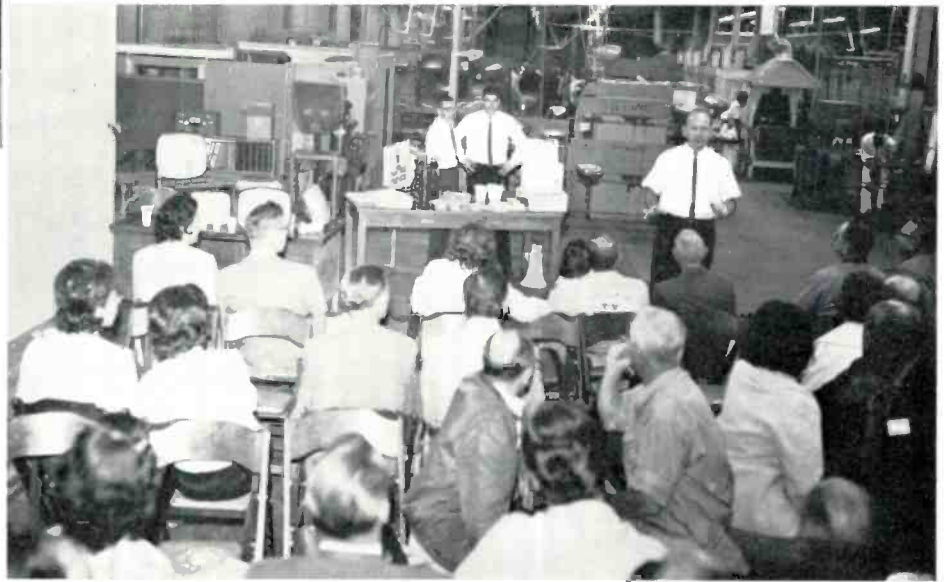
## INDUSTRY NOTES

### AMERICAN VIDEO HOLDS OPEN HOUSE—ANNOUNCES \$5 CALL-BACK PLAN

American Video Corp of Compton, California, and manufacturers of the Calvideo line of picture tubes, recently held a week-long open house for dealers at their plant.

According to General Sales Manager Gil Sherman, this series of open houses for dealers was designed to give them a real good look at our plant and the methods we have of producing an outstanding product. "The open house consisted of a complete tour of the plant starting at a point where picture tube progress of being completely re-built ends enter the plant and following their with new parts to their final inspection. Following the tour, refreshments were served and questions answered.

At the same time, American Video announced a new free \$5.00 Call-Back Compensation Plan. This plan is in addition to the one year full warranty offered by the company on its Calvideo, Custom King and Custom Designed picture tubes. Actually this plan is designed to compensate the service dealer for his time and expense on a customer call back caused by a picture tube failure due to manufacturing defects during the warranty period. In other words, should a service dealer encounter a defective tube at any time within the warranty period he will receive, in addition to the warranty replacement of the tube, a \$5.00 bonus compensation credit good toward the purchase of any tube type of the same brand, and redeemable by any American Video Distributor.



Mr. Gil Sherman, of American Video, makes a point during recent series of dealer open houses.

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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.



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Bloomington, Indiana

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**Co-op Venture  
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Paying off in increased sales is a Co-operative educational venture sponsored by a local electronics distributor and 42 dealers.

Conceived by Russ Tatro, co-owner and sales manager of NorCal Electronics, the program gives the dealers and their sales personnel an intensive 12-week course in business management and sales training.

Four and a half hour sessions every Thursday night make the bulk of the program. One hour is devoted to instruction in business management, conducted by William Stull, business instructor at Sacramento State College, and the remainder to sales training by Ken Moore, regional manager of Dale Carnegie Courses. Classes are held in the Carnegie offices at 2512 Watt Ave.

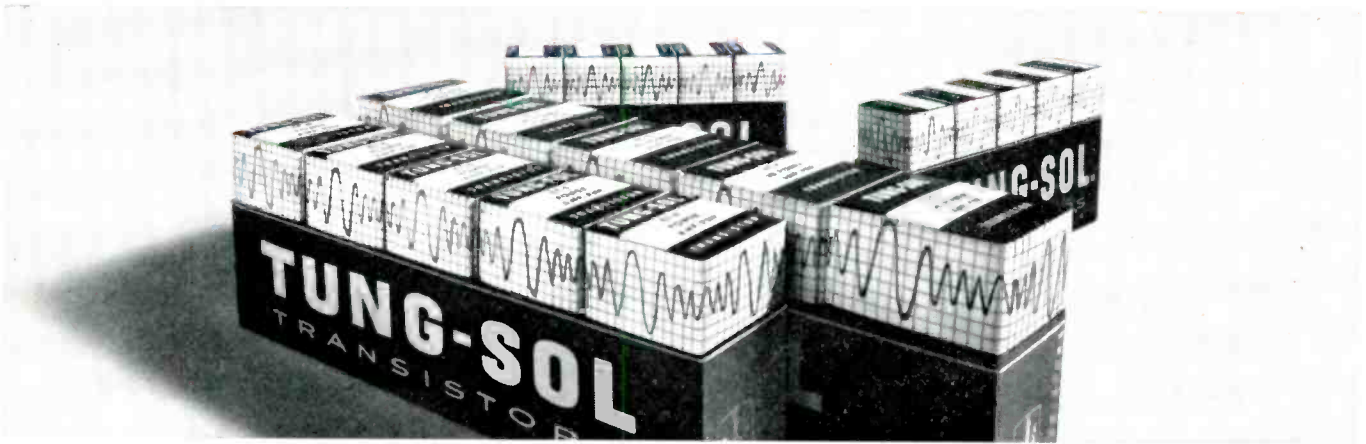
"As far as we know, this is the first time a program like this has been offered in ours or any other industry on a local basis," reports Russ Tatro, Nor-Cal sales manager. "We have felt for some time that a business management and sales training program was needed in our industry."

The idea was conceived by Tatro some time ago. Before utilizing it, however, he sponsored the course for Nor-Cal sales personnel last year. This training with additional instruction, prepared them to serve as group leaders for the current sessions.

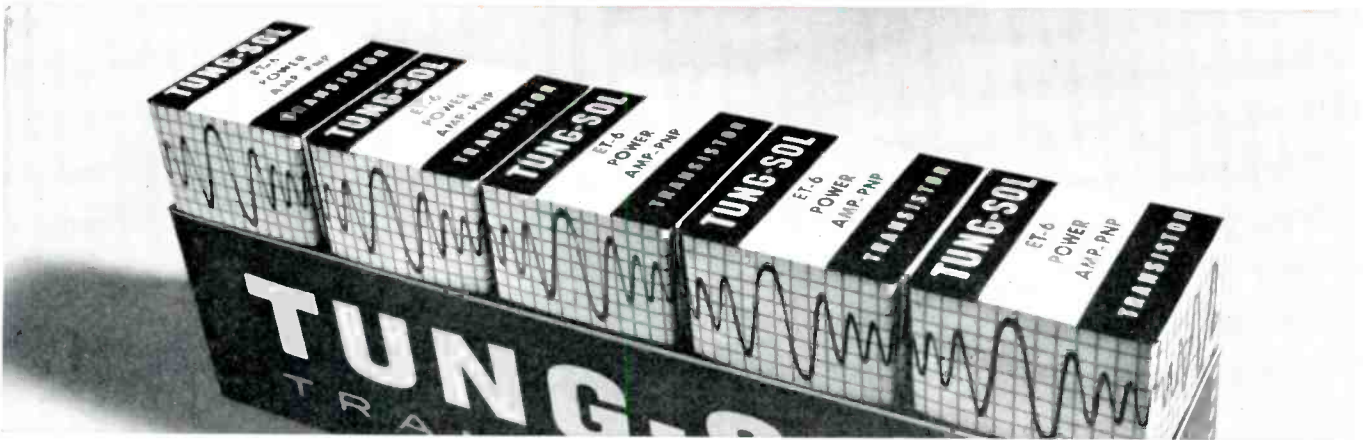
Consisting of the complete selling process, the course began Feb. 7. Two or three classes may be devoted to each of the instruction subjects, including (1) Attention; (2) Interest; (3) Conviction; (4) Desire, and (5) Close.

"Even after receiving instruction in the first two or three steps, many of the dealers report they have increased sales," Tatro said.

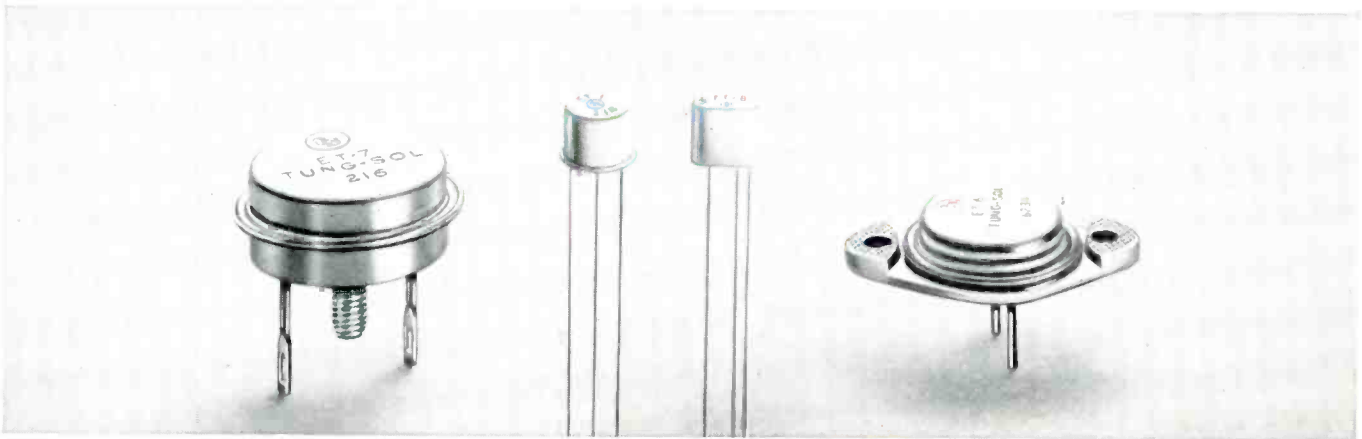
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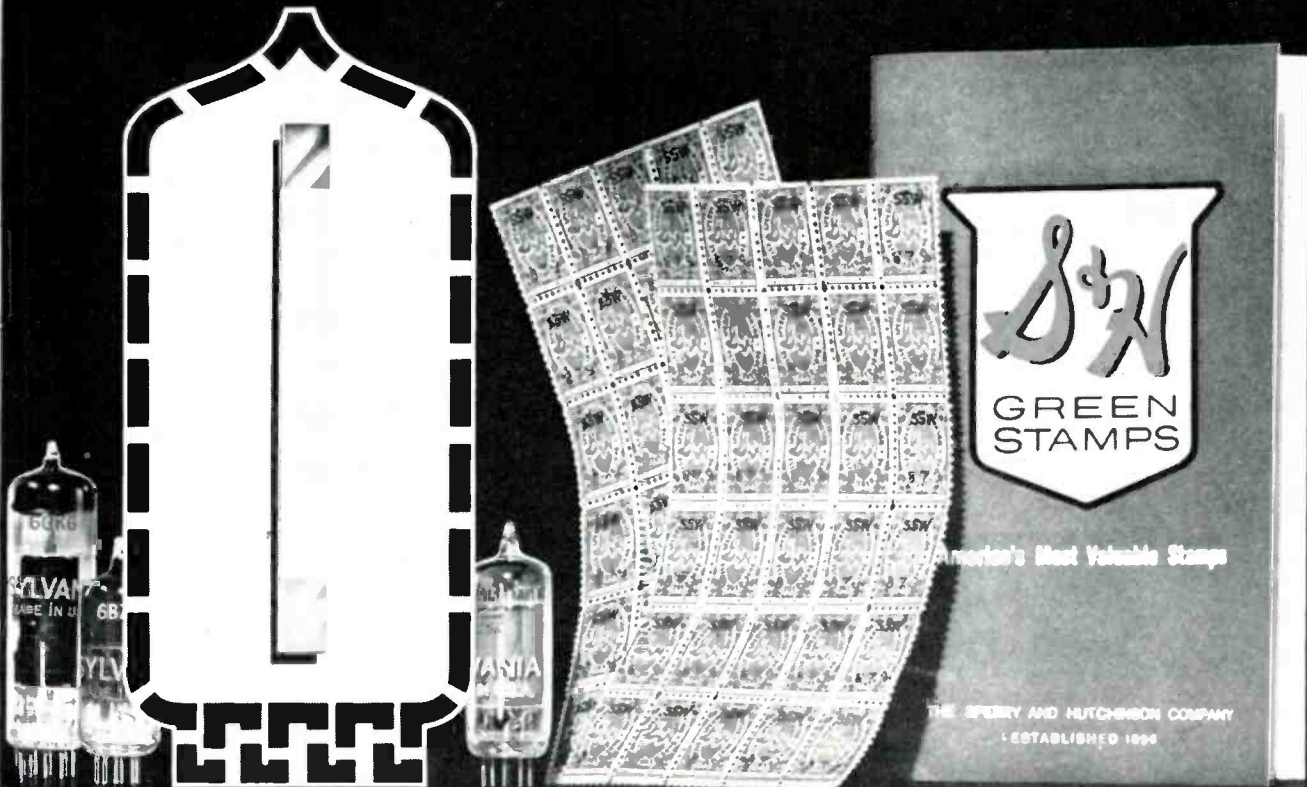
95c PER LINE, one time. MINIMUM 5 lines.  
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