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TELEVISION • ELECTRONICS • RADIO • AUDIO

Volume 3 Number 5

February, 1954

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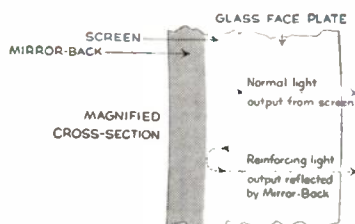
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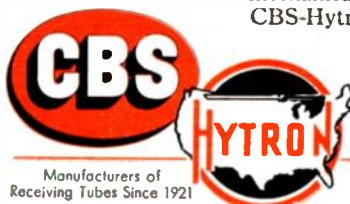
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# Service Management

PAUL H. WENDEL, Editor and Publisher

VOLUME 3, NUMBER 5

FEBRUARY, 1954

## COVER PICTURE

**HAROLD B. RHODES, President**  
Radio and Television Servicemen of New Jersey

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## Letters to the Editor

### BOUQUETS

We acknowledge receipt of your letter of November 3, 1953, with all back copies of your magazine, except February 1952, which we would appreciate your sending to us.

As a result of reading your magazine, we have ordered a three thousand account system from Markem, and have written Mr. Kanover for further advice.

We are very pleased with your magazine.

Ralston P. Edmunds, President  
TV Service Corporation  
Caracas, Venezuela

\* \* \*

After reading a copy of your last issue, I would like to take a year's subscription. Bill us directly at:

R. A. Jones, Service Manager  
U H F Engineers  
1104 Newberry Ave.  
La Grange Park, Illinois

\* \* \*

The writer has just received the October issue of SERVICE MANAGEMENT published by your company.

Contents of the above book have been found to be very interesting and it will be appreciated if in the future, copies be addressed to the writer, personally.

R. Adams, Service Manager  
Fada Radio & Electric Co., Inc.  
Belleville, New Jersey

\* \* \*

We are enclosing herewith one dollar for which kindly mail us one copy of your new TV labor charges chart.

We are interested in establishing a standard charge for TV repairs in Savannah and will appreciate any information and suggestions you may offer.

Robert W. Schutz, Manager  
Godfrey Television &  
Repair Service  
3908 Waters Ave.  
at 56th Street  
Savannah, Ga.

\* \* \*

Received TTLB Notebook Service Series #7 and am very pleased with its contents and methods of presentation. If possible, I would like to keep up with the series as they are published. Please keep me informed of new publications and let me know if I can procure the past six issues to keep up to date with such helpful information. Thank you!

Stanley M. Malec  
12 Fowler Street  
Westfield, Mass.

Start Portable Radio Service Selling in March

SERVICE MANAGEMENT



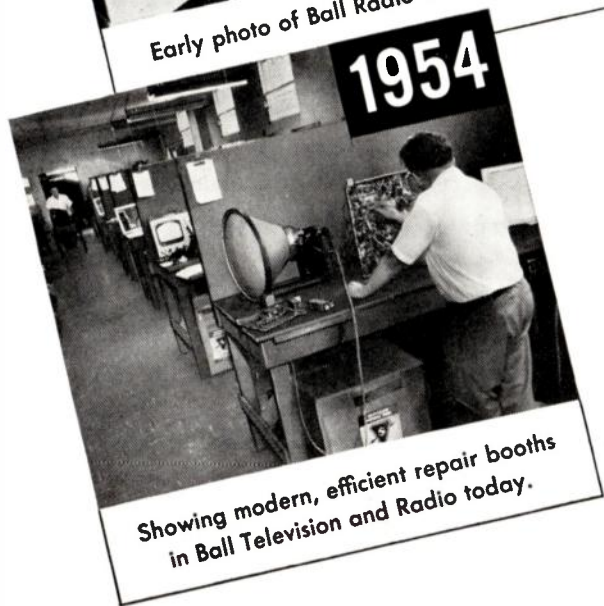
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Early photo of Ball Radio Service Shop.



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in Ball Television and Radio today.

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Ted Ball is another important Radio-TV Service Manager that appreciates the quality performance, dependability, and the nation-wide high reputation of Sylvania products.

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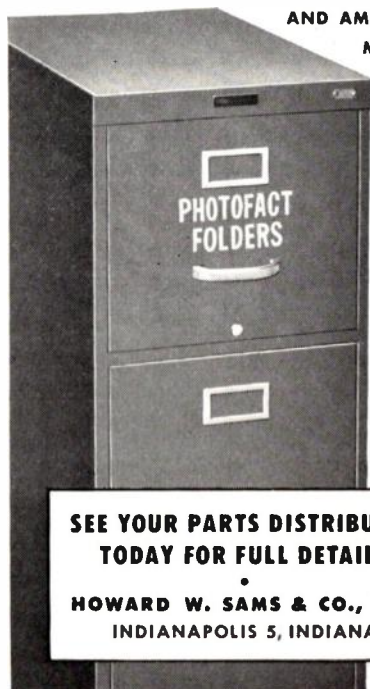
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## Editorial

# "OUR OPINION"

### Sell . . .

### Battery Radio Service In March

In this issue of SERVICE MANAGEMENT you will find the second of the service selling programs that your editors have prepared to help you maintain your volume of service business through-out 1954.



This service selling program, which you are urged to push during the entire month of March, will get service business for you from another badly neglected category of electronic home instruments—battery portable radios. Thousands and thousands of comparatively expensive battery portables are out of service because they are out of batteries. This business is yours if you will go out and get it.

If you are an average service shop operator the fundamental weakness of your business is the lack of a regular, consistent sales promotional program. As a technical man usually thinks, you believe that if you do good work and treat your customers fairly, the volume of business you need to keep busy will come to you as a matter of course. When business falls off you blame conditions—seasonal or economic—for your failure to get a satisfactory volume of business.

People are funny, as they say on the radio. They put off having things repaired. During the past few years in TV homes, there has been a tendency to let dead radios stay dead until the last one in the house goes out. When that happens, some folks have all their sets repaired while others just have one set fixed.

Again in TV homes—some that once were five- and six-radio families are now down to one radio. The rest are out of commission. The members of the family just readjusted their radio listening habits to the steadily diminishing number of radios that were operating.

That is your fault, Mr. Radio-TV service business operator. You are responsible for keeping radio and TV sets in good repair and you haven't been doing it for those people.

Your responsibility as an independent business man in our economy is not alone to be able to repair electronic equipment. You are also responsible for keeping set owners informed of their need for service and about your facilities and "know how" for performing that service.

No one will do a service selling job for you. That is a responsibility you have, as a businessman, to do for yourself.

Do not wait for customers to beat a path to your door. Get wise . . . go out and beat that path for them. You can beat that path to your door with a consistent direct mail program, house-to-house canvassing by part-time employees or by telephone canvassing by a person with a good "telephone personality."

You may say—if you operate a one- or two-man shop—"That's fine advice for big organizations, but I don't have time to do those things."

This is the age of cooperation for those who ask for it. If you are unable to work out a sales promotional program of your own, why not get together with some of the other small shop operators in your area, form a service selling association and sell service as a team?

If you form such an association go to your Parts Distributor and ask him to give you some help in setting up your service selling program and in carrying it out. Your Parts Distributors are just as interested as you are in activating the dormant market for service and they'll give you plenty of help.

You will find the monthly SERVICE MANAGEMENT service selling programs tailored to fit your needs. You can have the monthly mailing pieces made up as your own individual mailers or they can be made up for use by a group of service businesses cooperating as a service selling team.

The important thing in '54 is to SELL—and to you that means SELL SERVICE.

Sell Battery Radio Service in March.

PHW





# **SERVICE** must stand on **its own feet!**

By **HAROLD B. "DUSTY" RHODES**  
*President, Radio and Television Servicemen of New Jersey*

The other day someone asked me what I thought was the most important single factor in the success of a television service business. This question started me thinking — after all there are many things that contribute to the success of any enterprise. But here's my answer and I'll stand or fall with the accuracy of it: just two words — "Public Confidence!"

Certainly, I agree that fair pricing is a factor; naturally efficient technicians are important. Prompt service is vital, courtesy is necessary, neat appearance of both store and men is essential. The use of first grade replacement parts is a must, advertising of various types will prove helpful. You probably can add other items to the list. But will any ONE of these items be sufficient to assure a successful operation? My humble answer is a great big loud NO!

There's an old saying that if you build a better mouse trap people will beat a path to your door. This is probably true — but it may take a long time for the public to find out about it. In fact you could starve to death during process.

## **SET OWNER CONFUSION**

Many large national companies in our industry are spending thousands of dollars urging the public to deal with reliable service companies. But let me ask one question, "Who the hell knows who the reliable companies are?" Remember I'm speaking of the general public. What rule of thumb do they have to measure the dependability of any service company? Yes, we in the business know who the dependable outfits are in our own localities. But collectively what are we doing to let the public know? Are we taking effective steps to weed out the shysters and the "fast-buck-boys?" Can we take effective action unless ALL the reputable outfits get together to plan a practical program? You're right — I'm talking from an organizational viewpoint!

If all the honest service operators in any city of average size would get together, each willing to bear a fair share of the load in WORK and FINANCING,

they could quickly end many of the evils they constantly gripe about. Do you think I am crazy? All right maybe I am, in view of the lack of community interest on the part of the average individual. But believe me when I say

**(Editor's Note: Since the advent of TV, many fine business enterprises have been built up based upon consumer TV service. Although these businesses have been badly harassed by thoughtless service pricing on the part of inept competition, they have weathered these vagrant service storms and created sound, ethical business organizations.)**

The author of this article, Harold B. "Dusty" Rhodes, is one of these service business stalwarts whose business and civic activities have served to lend character and dignity to the business of electronic servicing.

A radio ham since 1920 (W2-AXV and W2IKW), he served as a radio operator on B-17's in the US Army Air Forces during World War II, racking up 30 missions over Germany during his tour of duty.

Owner of Rhodes' Radio & Television of Paterson, N. J., which he established in 1945, he has been active in movements to raise the business and technical standards of the servicing industry since he first entered the business. He is President of the Radio & Television Servicemen of New Jersey, Eastern Secretary of the National Alliance of Television and Electronic Service Associations (NATESA) and a member of the Board of Directors of the Paterson Chamber of Commerce.)

this — a customer education program sponsored by legitimate, honest service businesses is the quickest and shortest path to public confidence.

If each of us as individuals attempts to build public confidence we have a long row to hoe. Everytime a shyster is

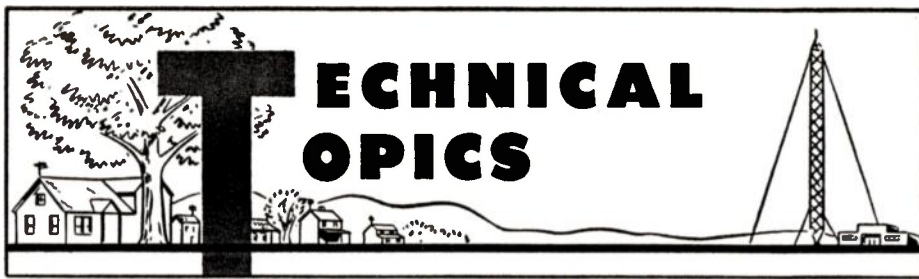
exposed, each time an individual is cheated it reflects on all of us who are operating a legitimate business. We must individually take extra steps to overcome these handicaps.

## **LICENSING?**

Many level-headed, clear-thinking operators believe the solution lies in licensing. Perhaps they are right. But personally, I think they're wrong. I have one fundamental reason for this belief. In licensing you are once again "passing the buck," in effect singing the same old chorus, "let George do it." As individuals we are unwilling to assume the extra responsibility attendant to policing our own industry. So with licensing we say, "Let's have a law passed that's a sure cure-all." Was prohibition a success? Are the laws against gambling effective? You know the answers! We have too many laws now and far too much government interference in private enterprise at the present time. Why ask for more?

If you don't have a TV association in your locality, start one or discuss the matter with your local Chamber of Commerce. That is how our group, The Radio and Television Servicemen of New Jersey came into being. Our local Better Business Bureau was getting numerous complaints about TV service. With this situation in mind officials of our local Chamber of Commerce approached a few of us who were operating TV service companies. They sought our assistance and in turn offered us certain services available through the Chamber. As a result of this affiliation I believe our group is unique, since every member of our association is also a member of the Chamber of Commerce. Close cooperation and mutual understanding has been the outcome, with the result that two of our members are now members of the Better Business Committee. The writer has for several years been a member of the Chamber's Retail Division Board of Directors. Fellow businessmen in our city now view the television service industry in a different light than they did a few years ago.

*(Continued on page 30)*



## The Effect of Technical Developments and Products Upon Your Present and Future Business Activities

By EDWARD M. NOLL

### PERSEVERANCE IS NOT STUBBORNNESS

Let's not be misguided! Just hoping and plotting along "as per usual" is not always the effective means of attaining an objective. We must at times alter our offensive and deviate from an earlier set course that has not proven really successful. Often it requires more nerve to embrace a new plan than to "hang-on" to an old procedure.

In the past few years television has been the major source of income to many many service organizations. However, frantic competition, receiver overproduction, and sales resistance have lessened the potential income possibilities of television receiver service.

One should look now for supplementary sources of income for this new year and, in particular, to a better means of escaping summer slumps. There are other phases of the electronic art that can be added to your services. Reflect for a moment and truthfully seek the answers to these questions — consider all parts of each question:

1. Who is selling, installing and maintaining high fidelity audio equipment in your city? Who is deriving most profit from this active field? Why aren't you? What group will first recognize the income potential of FM and derive the most income therefrom?

2. Who has taken over the sales, installation and repair of industrial electronic equipment in your area? Why did it escape you?

3. What businessmen are now recognizing the income potential of closed-circuit television, citizen's band radio, special electronic devices for the home, etc.? What constructive plans have you made?

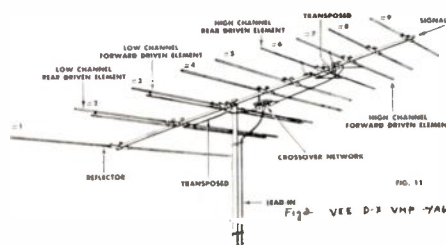
### VHF ANTENNA PERFORMANCE

In the past year reception on the VHF band has encountered some new demands and problems in many areas. Higher transmitter powers and more sensitive receivers have not eliminated fringe problems but have just pushed the fringes further out from the station.

More VHF stations have not lessened the desire to receive fringe stations because everyone is interested in program choice and variety.

VHF antenna gain, pattern and bandwidth each have an influential bearing on antenna performance. The narrow-band antenna is disappearing from many areas because of numerous VHF signals within range. Thus the trend is toward more elaborate antennas with wide bandwidth and suitable gain. A good pattern is also highly desirable to minimize adj- and co-channel interference that becomes more pronounced with more stations and greater range.

A typical antenna of higher gain, with all-channel bandwidth and better pattern, requires additional driven and



parasitic elements, figure 1. In this antenna dual low band reflector is used to establish uniform gain and good front-to-back ratio over the low band (channels 2 to 6). A folded dipole is employed to favor the low end of the low band. It is properly phased with folded dipole to drive a single transmission line. An intermediate parasitic element functions as director at low end of low band and reflector at high end of low band.

On the high band the flat-mounted conical element serves as a three-halves wave length driven element with proper tilt (three different angles) to cover the high band channels. The long driven element itself has gain at the high band frequency range as compared to a driven element cut into the high band. Use of driven elements that are both cut to

(Continued on page 26)

## Your Business Problem?

By LAWRENCE KANOVER,  
Management Consultant

During the past year and a half I have received hundreds of requests for



information concerning management problems sent by service companies from all parts of the world. After an analysis of the nature of the problems it became apparent that many

of the same problems exist wherever there are service companies operating.

The purpose of this column is to present these problems to the service industry's top management. I will answer questions of a general interest to the service industry in the column, and those questions which are related to individual or local problems will be answered by mail.

### QUESTION:

T.V. SERVICE CORPORATION  
CARACAS, VENEZUELA

"We have an inventory costing approximately \$30,000 in antennas, parts and accessories. We are now increasing our stock and will probably increase said stocks in the forthcoming year by substantial amounts for the purpose of wholesaling and retailing these parts and accessories. What forms and control would you recommend for proper business control of our parts department?"

### ANSWER:

With a stock of \$30,000 it is certainly necessary to both physically and paper-wise institute rigid controls. There is only one manual method of controlling stock. This is done by heading a different card for each product to be controlled. The necessary data which must appear on the card are:

1. Balance on hand
2. Minimum requirements
3. Date incoming
4. Quantity
5. Price

I suggest that the card be split into two halves. The left side to be used for

(Continued on page 28)





# and in High-Fidelity Sales

By **MORTON KRONENGOLD**  
*Vice President, Video Corporation of America*

Seldom does a serviceman get an opportunity to tap a source of business that is so headache-free and remunerative as high fidelity conversions and custom installations. To the lover of music, the appearance of high fidelity equipment is an exciting event. He knows he can get more fine music out of his records or radio than before. Newspapers and magazines have written about hi-fi, whetted his appetite until he is ripe for selling. However, one does not have to be a music lover to want a hi-fi unit. Everyone who listens to such equipment is immediately impressed with the superior quality of sound reproduction. That is true even where the customer is a casual TV viewer or radio listener.

The market is there. Every TV, radio and phonograph owner on whom the serviceman calls to do a repair job is a prospect. The serviceman furthermore, is the logical person to sell him because demonstration is the key to the sale. Very little high powered sales talk is required.

The high fidelity field represents the only possible present added source of business to the serviceman. No great increase in TV servicing can be expected until color television is firmly established. This will take some time.

Amazingly enough, all the serviceman needs to get into the high fidelity business is a hi-fi amplifier and the co-operation of a local cabinet maker or woodworking plant for the manufacture of cabinets where necessary. Otherwise the average servicing organization has everything needed to do conversions or custom installations. There is no increase in inventory or overhead. A number of dealers have done just that — built flourishing high fidelity departments using an amplifier this company developed for this purpose.

I believe if I describe the history of this amplifier, it will also show how the serviceman can get into the business and make money at it.

Our VC-6 amplifier was designed at the request of servicemen, and in cooperation with them so that every step of

the way, we had their needs in mind and the benefit of their advice and experience. First of all, the amplifier had to be a true high fidelity design, yet kept low in price so as to enable the servicemen to sell a large number of jobs, and make a good profit. It took some doing but the amplifier as finally developed has more than sufficient power output for the largest size home, yet costs only \$28.50. Its quality is such as to satisfy the great majority of music lovers and anyone else interested in better sound reproduction. Furthermore, it was desirable that the amplifier be compact, capable of quick and easy installation and be light in weight. In this we succeeded. The VC-6 weighs under 3 lbs. and can be installed and tested in less than an hour. Cabinet alterations are not required.

After we had completed the first models, several servicemen took them out into the field on their regular service calls. The amplifiers were hooked into TV and radio receivers and into phonographs. The units repaired ranged in original cost from approximately \$150 to over \$1,000.

When this amplifier was introduced into the circuit, the improvement in sound reproduction ranged from very good for the highest priced sets to astonishing for the lower priced units. There was a clarity and beauty of individual instruments not realized heretofore. The listener in every case stated he could hear low and high tones he didn't know were possible. There was a feeling of realism in the sound not previously experienced. In the majority of cases, the customer immediately asked that the amplifier be left in the set.

This points up the fact that every non-high fidelity set, TV, radio or phonograph can and should be converted.

Again in cooperation with service organizations, we finally worked out the best selling procedure. This method relies on the fact that the best way to sell high fidelity is to demonstrate it. The customer sells himself by listening. Here is how this method operates.

Every serviceman carries several amplifiers with him in his truck when he goes out on calls. When he walks into a home, he carries one with him. While working on the set, he asks whether the customer is acquainted with high fidelity. In many instances, the answer is affirmative. Otherwise the serviceman explains that engineering design advances in amplifiers has made it possible to secure remarkable improvements in the quality of music and sound generally. If the customer is a record fan, the sale is half made right there. The serviceman informs the customer that he has a high fidelity amplifier with him which can convert this set into a high fidelity instrument. He asks permission to tap the amplifier into the set and does so along with a simple switching arrangement. Then by switching back and forth from the old to the new amplifier, he demonstrates what high fidelity actually means. Simple as this sounds, it is just as dramatic, and effective in closing a sale. Time after time, the serviceman will walk out without the amplifier. He has not only done a repair job but sold a well-paying conversion. It is entirely possible to sell and install several such jobs in one day.

In this work there is none of the haggling over prices as so often occurs in TV servicing. The results are too gratifying to the customer.

The availability of this inexpensive, high fidelity amplifier makes it possible to sell custom installations on a larger scale. Some customers are immediately interested in such work and the ability of the serviceman to cut the cost of the installation by using a low priced amplifier will help him close more sales more rapidly. We also found on many occasions, that customers were so impressed by the improvement in sound due to the amplifier alone, they listened readily to a sales talk on a completely custom installation. Many added sales were closed by this trading-up of the customer, all based on the use of the VC-6 amplifier.

*(Continued on page 28)*

# PEOPLE and PLACES

**BURT ANDERSON** is now serving as general sales manager for Johnson Electronics . . . **HALLIE BAIN** has been elected vice-president of the Dunn, N. C. Appliance Retailers Association. . . . **KENNETH R. BEARDSLEE**, general manager of General Electric's Carboloy Department, says that the rapid development



**SNYDER'S** Dick Morris and Maury Mittelman sign 54 contract

of automatic machines and the obsolete state of machines in thousands of small to medium-size metal working plants presage a big year for cemented carbides. . . . **WILLIAM A. BERGER** has been elected secretary of the Washington, D. C. Appliance and Radio-TV Dealers Association. . . . **JAMES M. BLACKLIDGE**, president of the Gramer Transformer Corporation is now serving as board chairman and treasurer of Johnson Electronics of Orlando, Fla. . . . **FRED R. COOPER** is the new chief engineer for Johnson Electronics. . . . **P. R. DAWSON** has retired from Tung-Sol after thirty four years of service. . . . **ROBERT T. DOWD** has been elected treasurer of the Washington, D. C. Appliance and Radio-TV Dealers Association. . . . **DR. GEORGE E. DUVALL**, formerly with the General Electric Co., has joined the Stanford Research Institute as a research physicist. . . . **MORT FARR**, chairman of NARDA government relations committee, told a recent FTC meeting that a serious injustice would be imposed on the television retailer were a rule adopted which specifies that all unpacked floor samples must be designated as other than new sets. . . . **CHARLES H. FRITZ** has been appointed assistant sales manager for the Shallcross Manufacturing Co. . . . **HUGO GERNSBACH**, veteran radio publisher and forecaster, has predicted that the first atom-powered space ship will take off for the moon in 1970. . . . **HAROLD HARRIS**, Channel Master vice-president, has reported that color television will not require new or special antennas. . . . **H. H. JASON** heads the new New England district sales office of the Carboloy Department of General Electric. . . . **SAMUEL KATZ**, geophysicist at Stanford Research Institute, has won the 1953 George Frederick Kunz prize in geology and mineralogy, awarded by the New York Academy of Sciences. . . . **HELEN MARIE KELLEHER** has joined the Television and Radio Division of Raytheon, to interpret feminine angles in Raytheon TV cabinet designs. . . . **J. D. KENNEDY** heads the new South Central district sales office of the Carboloy Department of General Electric. . . . **EARL H. KIRK** is now serving as sales coordinator for I.D.E.A. . . . **DICK O. KLEIN**, vice-president and general manager of Raytheon Distributors, Inc., has been appointed director of marketing for Raytheon's Television and Radio Division. . . . **DR. CHARLOTTE ZIHLMAN LEMAY**, formerly with Texas Instruments, Inc., has joined the staff of the Stanford Research Institute as a research physicist. . . . **MAURY MITTELMAN** recently made a special trip from the West Coast to Philadelphia, to sign a new contract and confer with Snyder Mfg. Co. engineers. . . . **RAY OVERHOLT**, formerly director of laminated plastics and metals for the United States Plywood Corporation, has joined the McMillan Laboratory, Inc. of

(Continued on page 30)



**HELEN KELLEHER** . . . designing woman

## SELLING SERVICE By HAROLD CHASE

Too many people think of the technician's job in terms of the number of



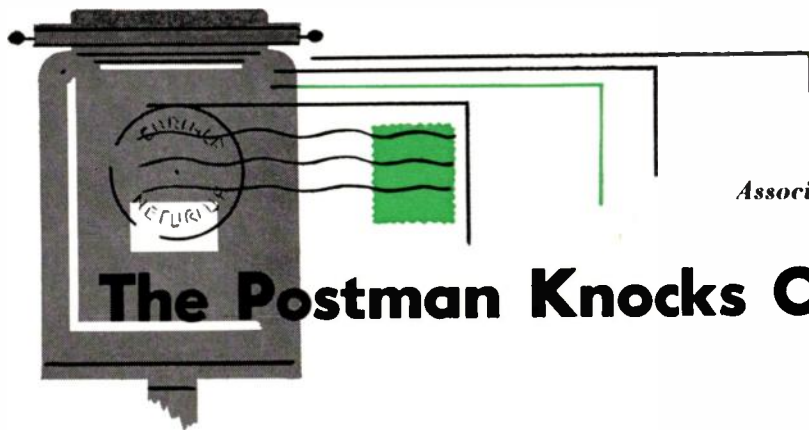
calls per day, but the television technician's job is more than that. It's his job to keep the service dealer in business. Whether we realize it or not, all of us look to the outside service technician

more than to anyone else to see to it that we stay in business and prosper. No matter what our niche in this great television industry, the outside technician is the key to our success.

Quoting Clarence Francis, Chairman of the Board, General Foods, who said, "You can buy a measured number of skilled muscular motions per hour or day, but you cannot buy initiative; you cannot buy loyalty; you cannot buy devotion of hearts, minds and souls. You have to earn these."

Yes, whatever our job in this industry we depend upon the outside technician. It is the outside technician who follows up the enthusiastic retail salesman to keep the owner happy when they wake up to the fact that the claims of the manufacturer and salesmen are somewhat exaggerated, but TV is still the pinnacle of home enjoyment. It is the outside technician who, in a majority of cases, is the only personal contact the service dealer has with his customer. In this case the easiest part of the outside technician's job is the set repair. He must also sell himself and his company. He must pave the way to get paid and still satisfy the customer that he has had his money's worth. To do this job of **SERVICE SELLING** much depends on you as his employer. You cannot buy his initiative and loyalty, you must earn it. You must earn it by conducting a clean, aggressive business of which he can be proud. You must earn it by paying well and on time. You must earn it by being fair with him, your customers and yourself. You must be genuinely interested in his welfare. Earn his respect and loyalty, only then will he do the job of service selling that will build business for you and the industry.





By ANN KARCH,  
Associate Editor, Service Management

## The Postman Knocks Once Everyday

One of the unusual features about your radio-TV service business is that every home in your community has a regular need for the services you have to sell.

But the unfortunate part of service business operation practices has been that the average shop owner is more interested in the circuitry of the sets than he is in how to keep a consistent volume of service business coming into his shop. He forgets that the public generally is indolent about proper product maintenance. The average family

will continue to use defective electronic devices until they break down completely. The result is that there are thousands of radio sets in daily use with bad switches, volume controls, electrolytic condensers and raspy speakers; there are other thousands of battery portable radios tucked away in closets because the batteries have played out, and there are thousands of record players that stand idle because some part has deteriorated to the point where the device no longer gives pleasurable music.

All of this adds up to a fabulous market for service. Now what can you do to get some of this dormant business in your area into your shop?

Since every home in your community needs the services you have to sell and Uncle Sam has a crew of men who are calling on those homes everyday to deliver messages — why not put these men to work for you?

In practically every city some mailing concern has made up address plates from the latest city directory for the  
(Continued on page 12)

### YOUR SALESMAN FOR MARCH

**Put Your  
Portable  
Radio  
in  
TOP  
Playing  
Shape  
NOW!**



THE BLANK SERVICE COMPANY  
600 Main Street  
Patterson, Ohio

Telephone: SERVICE 0-0000

... serving all your  
radio-television service needs!



occupant of every residence listed in the directory. These plates are addressed to "Occupant, Number and Street, City and Zone." You can locate a mailing company in your own city by talking to the publisher of a community newspaper or weekly newspaper in your town. These people can usually tell you how you can handle regular mailings of promotional material in your city in the most economical way.

If you have a service association in your city, your association officers may be able to make arrangements with your local power and light company to include service promotional material with the monthly bills they send out for power and light service. The power and light companies are deeply interested in any program that will help to keep electrical devices in safe operating condition.

There are other types of businesses that are in constant contact with all segments of the general public and which have mailing lists that you could arrange to use for your promotional mailings. If you belong to any of the business clubs in your city you can usually find some effective answers to your promotional problems through talking to the other businessmen in

your club about it.

In the operation of your service shop you are actually in a retail business — you have something to sell. That something is your experience, knowledge, know-how and equipment for repairing electronic instruments. But, you can be the best technician in the area where you operate and still not get enough business to permit you to maintain a normal standard of living if you do not have a regular program for telling home-owners who you are, where you are and what you can do for them.

This mailing piece is the key for your service-selling promotion throughout the month of March.

It is a three-fold flyer. When properly folded the pages will appear in the numbered sequence as shown in the illustration on this and the following page.

This type of mailing piece is commonly known as an envelop stuffer because it is to be used, not only as a single promotional mailing piece, but as an insertion piece with everyday letters, invoices, bills and the like. When folded it is intended for use in a #6 envelop which is the smaller of the two sizes of envelops normally used for business correspondence.

To have these flyers made up for your

own use, take this page from **SERVICE MANAGEMENT** to a printer who has the facilities to print by the photo-offset process. He will insert your name, address and telephone number in the spaces provided for them which will make this your individual promotion message.

When you have these flyers printed it will be more economical to pay the printer to fold them rather than to try to do it by hand when you make your mailing.

#### **Battery Portable Service**

Although this program is given to you for intensive promotion throughout the month of March, it is also important to consider it as a continuing program from now on through the spring and summer months.

When you have these mailing cards made up, you should order a sufficient quantity to take care of your direct mail needs during your March promotion and to use as envelop stuffers and hand-outs on other service jobs for the next six months.

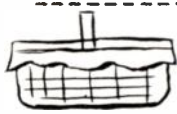
Battery portables fall into the class of equipment that the public doesn't think of having repaired until the moment they need it. For instance, a family gets ready on Saturday morning for

*(Continued on page 28)*

## **Don't Wait**



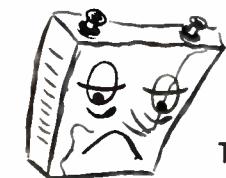
**Don't Wait until you get to the beach . . .**



**or to the picnic grounds . . .**



**or to the old swimming hole.**



**"BAD BATTERY"**

The time to discover if you've got a bad battery in your portable radio is **right now** — before your bags are packed and you're headed for relaxation.

**LOOKING FOR** the best in "portable" sound? Then you won't even want to plug in your portable . . . because the smooth, even power generated from the dry battery in your portable gives you the best possible tonal quality.

If your batteries are full of life and sparkle, they're bound to give you long hours of pleasure throughout the spring and summer.

**WHY NOT** get the portable out today and let us give it a once-over? We're a battery of battery experts. We'll give your portable a complete check-up now — so that when you start moving this summer, your portable will be in shape to go along!

### **THE BLANK SERVICE COMPANY**

**600 MAIN STREET**

**PATTERSON, OHIO**



**Telephone: SERVICE 0-0000**





the **TTLB**  
**NATIONAL**  
**ELECTRONICS**  
**SERVICE**  
**DIRECTORY**



By **WILLIAM "BILL" LEONARD**, *Service Business Consultant*

When the TTLB National Electronic Service Directory was first announced there were many skeptics who shook their heads and said it couldn't be done. "Service people," they said, "are introverts. They are schematic-happy characters who have no pride in their shops as businesses. So they will not fill out forms to get a listing in a directory of service businesses."

When the editor of **SERVICE MANAGEMENT** asked me to write a commentary on the early returns the TTLB had received on their Service Directory registrations, it seemed that I was tackling an easy assignment—until I saw the stacks of completed forms the Bureau staff had already accumulated. Thousands of them! And letters by the score.

The first registration that caught the eye was from a small town in northeastern Maine. A check to determine the extremities of the country represented in the first flood of registrations revealed completed forms in from Bellingham, Washington; San Diego, California, and Miami, Florida, which with the Maine registration, pretty much took care of the four corners of the country.

In the matter of representation from states, registrations for the Directory were in from every one of the States with a sprinkling of forms from our Canadian neighbors, within three weeks after the story of the Directory was mailed out. Many of the registrations were from non-TV areas and these, of course, clearly showed that a substantial volume of business on radio sets and other electronic devices is still being handled.

Many parts distributors wrote to the Bureau for blank official Directory Registration Forms for their service customers. The enthusiasm of many service businessmen over the Directory was reflected in letters offering to distribute blank forms to all established service businesses and servicing dealers in their areas. Typical of these letters from ser-

vice businessmen offering this kind of co-operation is the following from C. C. Bishop, President of the Radio - Television Service Association of Yakima, Washington:

"If you will send 50 copies of Form SMI Directory to me, I will see that every shop in this area receives a form to fill out for your Directory."

But all was not sunshine and roses in the letters that flooded into the TTLB offices. Several letters from part-time service technicians—men who hold down jobs with electronic manufacturing concerns and service TV sets in the evenings and during week-ends—expressed resentment at the Bureau's program of identifying full-time service businesses exclusively in the National Service Directory.

Perhaps the most interesting fact revealed from an examination of a large number of registrations is the high percentage of service companies that have expanded their fields of operation to handle the installation and maintenance of products other than TV and Radio.

As the editors of **SERVICE MANAGEMENT** have pointed out consistently: The seasonal fluctuations of TV and radio service are too great to provide a leveled year-round volume of business for the multiple-manned service organizations. Apparently, many service organizations have already recognized this basic weakness of the electronic servicing business and have adjusted their fields of activity accordingly.

To review again the benefits the independent service industry will gain from the publication of the National Service Directory, here are its six salient points:

1. It will establish the fact beyond question of a doubt that independent radio, television, sound and electronic servicing is handled by an established industry and not by a shifting mass of nameless and faceless electronic mechanics.

2. It will put on record that the bulk of the service business is being handled by legitimate service businesses rang-

*(Continued on page 26)*



Associate editor Ann Karch, assistant publisher Adelee Wendel and secretary Mary Ann Fischer (left to right) of the **SERVICE MANAGEMENT** staff tackle a small portion of the flood of registrations that have poured in for listings in the TTLB National Electronics Service Directory.

**OFFICIAL REGISTRATION FORM**  
**To obtain a no-charge listing in the**  
**TTLB NATIONAL ELECTRONICS SERVICE DIRECTORY**

**Please type or print legibly to insure an accurate listing of your business**

1. Name of Company or Business \_\_\_\_\_  
Telephone number \_\_\_\_\_

2. Name of Owner or Manager \_\_\_\_\_  
OWNER - MANAGER

3. Location — Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

4. Type of Location — (Check Which)  
☐ Business District ☐ Residential District ☐ Other

5. Number of Employees including owner \_\_\_\_\_

6. How long has business been operating? \_\_\_\_\_

7. Type of Business: (Check Which)  
☐ Exclusively Service  
☐ Basically Service but Sell Sets  
☐ TV Dealer with General Service Department  
☐ Receiver Sales & Customer Service Only

8. Average annual gross volume of service business handled \$ \_\_\_\_\_

Submitted by (Please sign) \_\_\_\_\_  
COMPANY \_\_\_\_\_  
Title \_\_\_\_\_  
OWNER OR COMPANY OFFICER

**NOTICE: All pertinent information must be given including the checking of the service categories shown below that you now handle. Do not check categories of service that you are not handling at the present time.**

**We now handle the following types of service: (Place an X in the box alongside those types of servicing you are handling:**

<input type="checkbox"/> 1. TELEVISION	<input type="checkbox"/> (e) Industrial
<input type="checkbox"/> (a) Shop Service	<input type="checkbox"/> (f) Citizens Band
<input type="checkbox"/> (b) Home Service	
<input type="checkbox"/> (c) Antenna Installations	<b>7. INDUSTRIAL ELECTRONIC EQUIPMENT</b>
<input type="checkbox"/> (d) Multiple Systems Installations	<input type="checkbox"/> (a) Engineering Facilities
<input type="checkbox"/> (e) Service Own Sales Only	<input type="checkbox"/> (b) Installation Facilities
<input type="checkbox"/> 2. AM/FM RADIO SERVICE	<input type="checkbox"/> (c) Maintenance & Service
<input type="checkbox"/> 3. RECORD CHANGERS & PLAYERS	<input type="checkbox"/> (d) Factory-appointed Service on Electronic Instruments, etc.
<input type="checkbox"/> 4. AUTO RADIO SERVICE	<input type="checkbox"/> (e) Closed Circuit TV — Camera Maintenance
<input type="checkbox"/> 5. SOUND EQUIPMENT	<b>8. OTHER HOME ELECTRONIC DEVICES</b>
<input type="checkbox"/> (a) PA, Call, Intercoms, etc.	<input type="checkbox"/> (a) Wire & Tape Recorders
<input type="checkbox"/> (b) Custom Sales, Installation & Service of Hi-Fi Sound	<input type="checkbox"/> (b) Electronic Control Equipment
<input type="checkbox"/> (c) Electronic Organ Servicing	<b>9. APPLIANCE REPAIRS</b>
<input type="checkbox"/> (d) Home Sound Movie Projectors	<input type="checkbox"/> (a) Major Appliances
<input type="checkbox"/> 6. 2-WAY COMMUNICATIONS SYSTEMS	<input type="checkbox"/> (b) Traffic Appliances
<input type="checkbox"/> (a) Police	
<input type="checkbox"/> (b) Taxicab	<b>10. Other Equipment for which specialized service is provided (give details):</b>
<input type="checkbox"/> (c) Truck Lines	_____
<input type="checkbox"/> (d) Marine	_____

**No charge will be made for a standard listing of your service business or service department.**

**When completely filled out and signed by owner, manager, partner or corporate officer, mail this form to:**

**TTLB DIRECTORY DEPARTMENT**  
**P. O. Box 1321**  
**INDIANAPOLIS 6, IND.**



# "I carry the complete Olin line because it fits 98% of all demand for radio batteries"



Every day more and more successful service managers are stocking the complete line of modern OLIN radio batteries for better service, better profits, easier inventory control. Made by Olin Industries, Inc., America's fastest-growing, most progressive manufacturer, OLIN radio batteries assure you of the latest and best in modern battery design now and in the future.

Get your share of the big profits soon to be made in portable radio battery check-ups and replacements this spring and summer. Place your order now for a complete stock of OLIN portable radio batteries.

**THERE'S REAL MONEY IN SPRING CHECK-UPS  
OF PORTABLE RADIOS**  
*Order OLIN Radio Batteries Now*

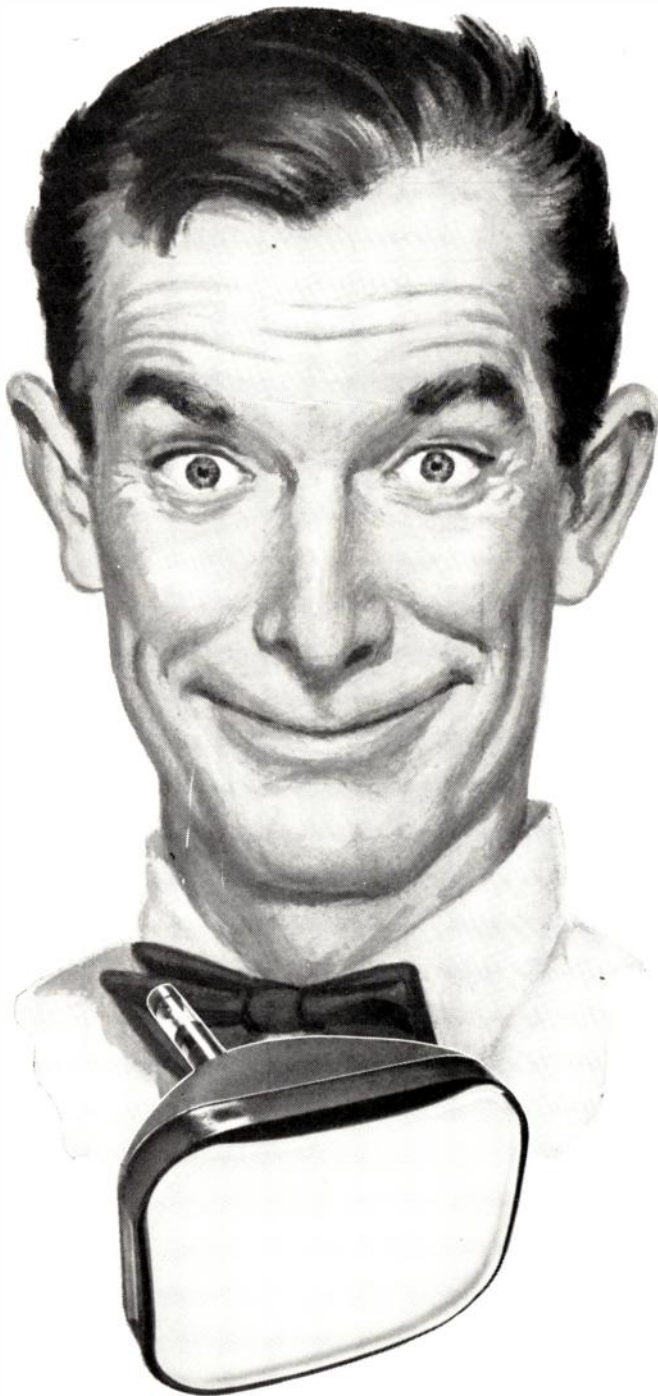
#### **ONLY OLIN OFFERS YOU ALL THESE BETTER SERVICE PROFIT ADVANTAGES**

- Complete line of top-quality batteries
- Portable radio batteries for all types of sets, new or old (they fit 98% of all demand for radio batteries)
- Exclusive OLIN patented INTERLOCKED FLAT CELL construction of "B" batteries eliminates most of the soldering connections between cells that cause "inner static" and inferior performance
- Quick delivery
- Competitively priced—deluxe quality at lowest cost



ELECTRICAL DIVISION, OLIN INDUSTRIES, INC.,  
NEW HAVEN 4, CONN.

## SERVICE MEN HAVE NO WORRIES



Tung-Sol works harder to make Tung-Sol tubes better. That pays off in fewer service call-backs.

**TUNG-SOL®**  
dependable  
**PICTURE TUBES**

TUNG-SOL ELECTRIC INC., Newark 4, N. J. Sales Offices: Atlanta, Chicago, Columbus, Culver City (Los Angeles), Dallas, Denver, Detroit, Newark, Seattle.



## Service Management

By **RUSSELL C. HANSEN**, Manager,  
*Contract Service Department, Motorola, Inc.*

In the December issue of **SERVICE MANAGEMENT** we outlined the principles of sound management practices and discussed their relation to success in a service operation. In



the January issue we presented a series of operating tables which were intended to provide a basis for appraising technical efficiency and managerial competence in maintaining the profitable relationship between labor cost and gross service income.

In this article we want to present several operating control forms with a brief discussion about their proper use in a service operation.

**Control Form #1** is a "Weekly, Service Manager's Report." This report form is a summary of operating statistics, and is designed to show the work load offered and completed, plus backlogs. It also shows overall productivity comparisons, this week, last week, month to date and

FORM #1  
TELEVISION SERVICE

SERVICE MANAGERS REPORT				Week Ending _____	
		Requests		Completed	Backlog
		This Week	Month to date	This week	This week
<b>"A" WORK LOADS</b>					
1	Installation				
2	Contract Service				
3	C O D Service				
4	Dealer Service				
5	TOTAL				
		Productivity		Trend Averages	
<b>"B" PRODUCTIVITY INDEX</b>		This Week	Last Week	Month to Date	Last Month
6	Installation				
7	Field Service				
8	Bench Service				
		Personnel		Average Hours	
<b>"C" PERSONNEL &amp; HOURS DATA</b>		Current Week	Last Week	Current Week	Last Week
		#Working	#Vacation	#Working	#Vacation
9	Technical-Field				
10	Technical-Bench				
11	Clerical				
12	Supervisory				
13	TOTAL				
<b>"D" OPERATING CONTROLS</b>		Current Week	Last Week	Month to Date	
14	Total, Payroll Ratio				
15	Install Backlog Ratio				
16	Service Backlog Ratio				

**"E" COMMENTS:**

COPIES TO:	SERVICE MANAGER'S SIGNATURE	DATE
_____	_____	_____
_____	_____	_____



**Control Form #4** is a "Monthly Profit and Loss Summary." The suggested P & L summary form is designed to cover the following column headings: Under MONTH you have *ACTUAL* and *BUDGET* on both a dollar and per cent basis; under *YEAR TO DATE* column we have two sub-columns *THIS YEAR* and *LAST YEAR* each on a dollar and per cent basis. The items listed on the form both income and expense are covered in some detail on the **Breakdown of P & L Items**, which follow the **Control Form #4**.

A  
X equals (B divided by C)

Where A equals Total completed jobs per week  
Where B equals Total hours worked per week  
Where C equals 8 (hours per normal day)  
Where X equals job average per average 8 Hr. day

(extended hours or overtime factor is not considered or corrected for in computing performance averages, regardless of number of hours worked) (effective performance value with increased overtime. (Overtime is ineffective from both a work performance average, cost and P & L basis, and hence should not be permitted)

## Start Portable Radio Service Selling in March

**TUNG-SOL®**  
dependable  
**RECEIVING TUBES**

17

# OUACHITA SERVICE PHILOSOPHER



*Talks about how to take the word 'self'  
outta the word 'satisfaction'*

By JACK DARR

Well, sir, it ain't fittin' for me to do too much preachin' about how to be a howlin' success, on account of me not bein' too much of one, but I have managed to make a few observations here and there durin' the years I've been connected with this somewhat bewilderin' business . . . some of them about the reactions that m' feller men seem to git, first one place an' then another. Amongst 'em is some few relatin' to what the psychologists call "Drive" and a few others.

Now, to those brain-boys, "drive" is somethin' like what it is to us radio technicians. If you ain't got enough drive in any stage of a transmitter, you ain't got much output, and it seems to me the same thing goes for radiomen as well as radio transmitters. If you want to really get some output, and cover your territory, you've just gotta have that ol' drive! 'Nother name for it might be "excitation," to drag in another technical term. Same thing goes here, too. Not that I mean you gotta get real excited about things, in fact just the opposite. You gotta keep cool: take it easy. If you go into oscillation, so to speak, you get about as much work done as a transmitter that has just done the same thing. By the definition of oscillation, you're just runnin' in circles, not accomplishin' a frazzlin' thing. You get all het up, you draw a lot of plate current, but you don't get no output!

I've kinda noted, here and there, a tendency among radiomen to get a leetle high-strung an' nervous at times. Same thing goes for TV men, of course, only doubled and redoubled, worse. There's more to a TV set, hence there's more chance for a nervous breakdown, if you let it git you into a state of parasitic oscillation! So, like we said in one of these here effusions a few days or weeks ago, keep yourself neutralized at all

times, and your amplification factor will go up something wonderful!

Now, I've gone and got off the track of what I started to say awhile ago. What I wanted to talk about was this here "drive" business. The successful man in any field is where he is because of his drive: his ability to get right in there and keep pitching all of the time: to keep on working 'till he gets the job done. That's kind of oversimplification of the psychological definition of the word, but it gets the job done I think. Drive means the "wantin'" to work 'n the itching for better things: for a better standard of living, for more technical knowledge, for better business methods, for a better deal all around.

## GIT BACK T' EARTH

Unless you've got that drive, you might jist as well give up and go git a job with the highway department diggin' ditches, on account of you ain't gonna git nowhere in the electronics business, that's fer sure! In a business that's as fluid as the radio-TV business, with new things comin' up every dern day, a man without drive will find himself so dern far behind the rest of 'em that he'll never catch up. He'll just wander along pickin' daisies, while the rest of the men who are keepin' eternally after themselves to do better work, to improve their shops and equipment and everything else, will git so far ahead of him that he won't be able to see 'em for the dust! His shop will git so run-down that the customers won't be able to see it fer the other guy's storefronts, shinin' in their eyes. They do pay some attention to that, y'know. Nothin' succeeds like success, like the old sayin' goes, and inevitably the successful man puts up such a much better front that he jist naturally draws more business his way.

With all th' new developments com-

in' up in the business, color TV, industrial electronics, closed-circuit TV, and a jillion more, there's always room for a man who's willin' to study and work to better himself, because that quality shows up in his workmanship, his business methods and everything else about him. Don't think the customers don't notice that, either, because they do! The old mottos about hard work and clean livin' payin' off still are true today, just as much as they were in the past. If you do good work, really good work, and charge reasonable prices for it, you're bound to git along pretty good. Of course, you've got to be able to see clearly the results of your work. If you're so dad-burned proud of yourself that you can't bring yourself to admit the possibility of any of *your* work ever failin', so that you give your customers arguments instead of cheerful adjustments when you git a callback, why, you've gone a dang step too far in the opposite direction!

## MR. IN-BETWEEN

No sir, you've got to strike a happy medium between bein' too self-satisfied and not bein' satisfied enough! The self-satisfied man can't really be critical about his own work: *he* thinks it's too good! The perpetually unsatisfied man really has a better chance to git along than does the one who thinks *he's* just about all right!

I've kinda noted a bit of that attitude in some of these here kids right fresh outa radio school. To tell you the truth, I had just a mite of it myself, some several years ago, (28 of 'em, to be right exact), when I come out of school. Ask 'em a question about what makes a certain thing happen in a radio set, an you git a quick, positive answer, like there wasn't a way in the world for 'em to be wrong! Now, you ask the same question of a man who's put in about fifteen hard years at it, and see what he says. He'll probably say, "Why, that might be so-and-so, but it also might be such-and-such. I wouldn't be able to tell you for sure until I had a look at it." Brother, there speaks a radioman! He's been around long enough to have these radios take some of the conceit out of him! He knows that there may be more than one answer to a question like that! Therefore, he gives himself a little leeway before he sticks his neck out. He's stuck it out and had it lopped off too many times in the past! He's not takin' chances, no more.

## GITTIN' ALONG

Now, I was talkin' about self-satisfaction a minute ago, and how to git along  
(Continued on page 30)



# GENERAL INSTRUMENT\*

**all channel UHF converter**

**dealers and servicemen say:**

**"superior to all others tested!"**



"In the fringe area, and in and around Milwaukee, your UHF converter has proven to be superior to all others tested."

In Springfield, Massachusetts a dealer says: "Channels 14-30-53-61. Received perfectly."



The above reports are two of thousands received from our many satisfied customers. These accumulated reports are overwhelming evidence that the General Instrument is' . . . . .

**FIRST... in side-by-side tests!**

*"JOBBERs: Some choice territories still remain open. Write for details."*



**General  
Instrument  
& Appliance  
CORPORATION**

*Subsidiary of*  
GENERAL INSTRUMENT CORPORATION  
829 Newark Avenue • Elizabeth 3, N. J.

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**A. T. R. ARMSTRONG CO.** of Toronto has been appointed Eastern Canada representative for the Mark Simpson Mfg. Co., Inc. . . . **CBS-HYTRON** has announced four new business builders to tie in with their nationally advertised Certified Quality Service Program; is



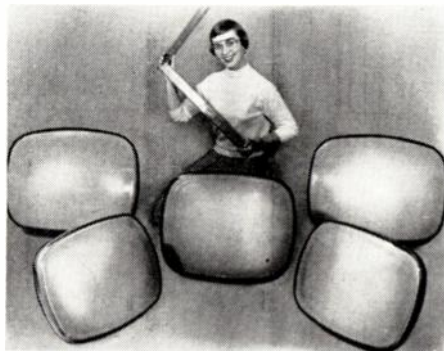
**NEW FACTORY** for Insuline Corporation of America

now mass-producing a new mirror-back picture tube: the 21FP4C. . . . **CLAROSTAT MFG. CO., INC.** has declared a dividend of 15¢ per share. . . . **ELECTRONIC CHEMICAL CORP.** has announced a new spill-proof spray especially for contacts that is available in 2 oz., 8 oz. and quart sizes. . . . **AL ENGELMAN CO.** of Memphis has been



**READ ALL ABOUT IT . . . Pyramid prizes for service men**

appointed representative of the Raytheon Receiving Tube Division's replacement tube department. . . . **FREED EISEMANN** has announced entry in the high fidelity market, initial distribution will include AM-FM tuner, preamplifier and amplifier units. . . . **GENERAL ELECTRIC** has announced two new 21-inch picture tubes with 90 degree deflection angles, 21ACP4 and 21ACP4-A; reports the development of type 6BJ7 tube, a miniature triple diode for use as the d-c restorer for the three signal channels of color receivers; has announced major price reductions on twenty three of its thirty two types of high-reliability receiving tubes; has started production of a new coreless power resistor that is up to 50% lighter than conventional types. . . . **INSULINE CORPORATION OF AMERICA** has purchased a four-story factory in Man-

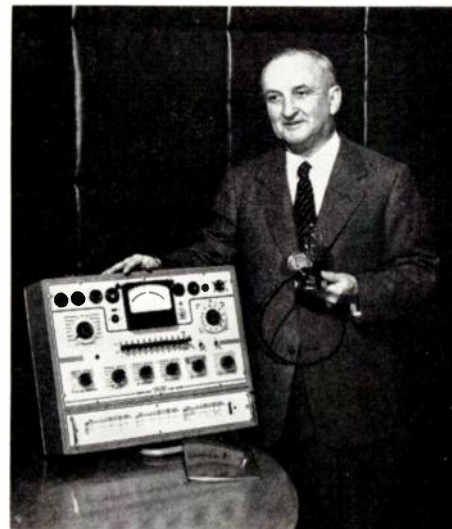


**ANGLES VS. CURVES . . . as displayed by G. E.'s Claire Graves and new 90 degree deflection angle picture tubes.**

chester, N. H. with 281,000 square feet of space, air conditioning and good shipping facilities. . . . **JENSEN INDUSTRIES** has introduced an antistatic record cloth called silclothm that deposits a microscopic silicone film on records grooves to reduce friction and to provide lubrication. . . . **NATIONAL ELECTRONIC DISTRIBUTORS ASSN.** is revising the NEDA Battery Index for an early 1954 edition, has distributed over 6500 copies of the 1953 edition. . . . **OWENS-CORNING FIBERGLAS CORP.** reports that Station WOWO has developed a new use for its noise-stop baffles in broadcasting studios. . . . **PYRAMID ELECTRIC CO.** has announced a prize contest for servicemen with cash prizes totaling \$5600. . . . **RAYTHEON**,  
(Continued on page 30)

## Triplett Celebrates 50th Anniversary

R. L. Triplett, president of the Triplett Electrical Instrument Co. of Bluffton, Ohio, which this year is celebrating its 50th anniversary as manufacturers of quality testing equipment for the electronics industry, is shown holding the first tube tester that he developed and designed back in 1925. On the table is the Triplett tube tester Model 3423, representing a half century of painstakingly engineered improvements and refinements in the original model.

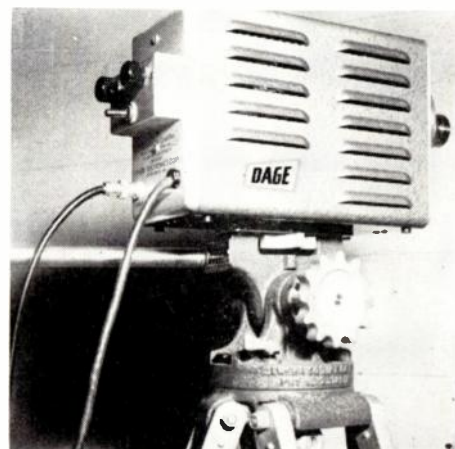


## Dage Announces Small Compact TV Camera

Rounding out its famous line of television cameras for both closed and open circuits, the Dage Electronics Corporation, Beech Grove, Indiana, has announced a new and smaller TV closed circuit camera for use in industry, commerce and education, with a complete line of accessories.

The new camera, Model 50-A, is much smaller in design than its predecessors. It measures only 4¼ inches wide by 6½ inches high, with an over-all length

(Continued on page 27)





# CONTROLLING— TUBE INVENTORY

By H. J. WOLFSON

The small radio and television shop owner has frequent opportunities to use, with profit to himself, the many fine ideas described in **SERVICE MANAGEMENT** which will help him in the operation of his business.

For one reason or another he does not always take advantage of the business suggestions outlined. It is not only shortsighted but unwise management to ignore these money-saving and forward-pointing articles.

One of the ideas we adopted several years back made us appreciate the value of an article published in the October issue of **SERVICE MANAGEMENT** — the Tube Inventory and Stock Sheet. We had followed the former with great diligence and profit. It concerns that most important part of the service inventory: radio tubes.

Enclosed with those radio tubes in their attractive boxes are many dollars of the service man's labor . . . hard-earned dollars to be sure. And, in those boxes rests a good portion of those dollars made unproductive because they are tied down as tube inventory and often are gathering dust.

The worth of the Tube Inventory and Stock Sheet became obvious because of this similar idea we had been following for some years. Here's how it works:

The plan was to use a list of radio tubes (published by RCA) currently in use at that time. This list showed the number of times a particular tube would be sold in the course of a year out of an annual volume or turnover total of 10,000 units.

Using this list as a guide, three by five ruled cards were made up, a separate card for each tube, and on it noted: the date started, the number of tubes of each type on hand, the retail price for which the tube sold, and the number of times that tube was supposed to sell yearly as indicated by the RCA list.

These cards were kept in a card file, numerically, and were indexed by small tabs which separated the voltage series. The physical inventory was divided in the same fashion, the tubes being kept in groups by voltage series number. This made it easy to check a par-

ticular group, and they never got mixed up.

When a tube was taken from stock, its card was drawn from the file, the tube checked off from the tallied amount shown to be on hand, and then refilled where it belonged at the end of the day. By referring to the master card it was possible to check the amount of tubes on hand at any particular time.

By the end of the year a record was available for the number in stock at the beginning of the period, the number sold during the year and the amount remaining at the end of the year . . . which the closing inventory would verify.

It was interesting to learn which tubes moved well, which not so well, and those which didn't move at all. This card check also uncovered the tubes on hand that were gathering dust — as many as three to four of certain numbers. Dollars tied up which should have been working and making money.

The second year using a memorandum card, tube types were jotted down as they were checked off the inventory card. At the end of each week this provided a record for reordering only those tube types that were moving. Thus *no more tubes were bought than were sold*, except as a new situation might arise which would put certain dead-stock-tubes in demand.

The first year showed that the tube inventory was larger than the business justified, at least in the quantity of certain types which had been stocked up to that time. The amounts were reduced, tubes were rebought on the basis of what the card record showed, slow-moving numbers were held to one each, and the end result was a tube inventory reduced almost two-thirds of what it had been. This is no theory. It is a realistic way of substantial savings.

By gearing your tube inventory to this Tube Inventory and Stock Sheet made up on cards, weekly pruning out of dead numbers and by adding new ones as they come on the market in a carefully selective manner — your tube

(Continued on page 28)



**HAROLD J. SCHULMAN**

director of service for

**DUMONT**

and chairman,  
service committee,  
**RETMA**

says:

"...a product as complex as a television receiver cannot possibly be maintained satisfactorily without timely, understandable and helpful service information.

"...it is only through the efforts of the experts in the field, like yourself, that servicemen can expect a steady flow of all-inclusive service information.

"We have found your publications to be consistently high in quality and integrity. We particularly single out your current Parts Replacement Information program as a service to the industry."

**Rider \*TEK-FILE—NOW, only \$1.50 per pack! (at your jobbers)**

Try a pack. If you're not satisfied, return the pack within 7 days and your money will be refunded.



\* Dependable TV replacement parts listings starting with pack 57 and TV 10

**JUST OUT! TV 12 Announcing!**

**RIDER RADIO MANUAL 231!**

Out in February, Up-to-the-minute information on all home AM, FM radios built during 1952 and 1953.

**JOHN F. RIDER** PUBLISHER, INC.  
480 Canal Street, New York 13, N. Y.



# ASSOCIATION NEWS

TRANSCRIPTS FROM SERVICE MANAGEMENT'S PARTY LINE.

BY PENNY MARTIN

In many ways, you know, a business association is just like a team on the field playing a game. Every member plays on the team, and each person's effort is concentrated on the sole and single purpose of winning the game.



There are many service and dealer associations playing the game on the checkerboard of the U.S.A. They all have one single purpose . . . bettering their industry. Let's take a glance at what is happening from East to West:

## MANCHESTER, NEW HAMPSHIRE

"In Unity There Is Strength" is the battle cry of the *Radio and Television Association of New Hampshire* for 1954. President Harvey O. Dowd has reminded all members that "to become a better association we must attend meetings and try to get at least one new member during 1954, for we are well aware of the great potentiality in our state, of fellow operators who as yet not cognizant of the basic truth that binds this representative group: namely, in "Unity There Is Strength!"

Executive Secretary Adrien J. Pin-since, Sr., will be doing his utmost to promote this new group.

\* \* \*

## BUFFALO, NEW YORK

The *Radio and Television Service Association of Western New York* is proud of their accomplishments during 1953, but believe they are only an inspiration for a continuation of programs of mutual improvement that will prosper their profession.

President F. J. Lynn mentioned this impressive list:

- (1) Accepted Code of Ethics and organizational By-Laws.
- (2) Better Homes and Garden Show.
- (3) Suggested price schedule.
- (4) Minimum service and bench labor schedule.
- (5) Joint advertising program.

- (6) Better Business Bureau co-operation.
- (7) Parts Jobbers relationship to service operator on price protection.
- (8) Group health and accident insurance program.
- (9) Affiliation with NATESA.
- (10) Spirit of harmony and confidence now prevailing among service shops toward each other.

\* \* \*

## ALBANY, NEW YORK

The *Television Service Association* has been formed by television service men in Albany, New York, to improve their business and service standards.

Association officers are: Edward P. O'Dea, president; Louis A. Ristau, vice president; Gene Lamkins, secretary; and Bernard S. Nattell, treasurer.

\* \* \*

## SPRINGFIELD, MASS.

Springfield, Massachusetts, appliance dealers are in process of forming the *Greater Springfield Appliance Dealers Association*.

\* \* \*

## WASHINGTON, D. C.

George C. Webster is the newly elected President of the *Washington Appliance and Radio-TV Dealers Association*, local chapter of NARDA.

Other officers elected include: David Smith, vice president; Robert T. Dowd, treasurer; William A. Berger, secretary.

Members of the board of directors, in addition to the officers listed above, are: James P. Fulford, Fred Walker, Jerome Malasky, Abraham Wolf, Raymond Dean, A. M. Edington, Mrs. Madelaine Bowen, Joseph Bateman, O. L. Ellis, Hanson Watkins, and C. Kemp Devereux.

Monthly meetings are planned for the third Tuesday of each month.

\* \* \*

## DUNN, NORTH CAROLINA

Final organization procedures including election of officers highlighted the November meeting of the appliance retailers in the Dunn, North Carolina, area.

William S. Wellons was elected president; Hallie Bain of Benson, N. C., vice president; Hugh Sills, Dunn, N. C., secretary-treasurer. Board members in-

clude Johnny Wilbourne, Lillington, N. C.; Mr. Simmons, Smithfield; J. A. Holmes, East Erwin. Additional board members will be elected on the basis of representation from other towns in the area.

Billy Wellons' enthusiasm made a big hit at the NARDA convention last June in Chicago, where he was a speaker. His southern drawl was so pronounced he offered his charming wife as an interpreter. From then on he had captured the hearts of everyone in attendance . . . including your news editor. Best wishes for success, Billy . . . I know your contagious enthusiasm will inspire your fellow dealers.

\* \* \*

## PHILADELPHIA, PENNA.

Received a very nice letter from Martin Benoff, secretary of the *Television Service Dealers Association* the other day. He reminded me that their organization is 100% for unification with other organiza-



tions in existence. This has already been done in Philadelphia with a body set up calling themselves the "Council of Radio and Television Service Associations of Philadelphia."

They are hoping to upgrade their industry by informing the public what it should expect from TV service shops. At present radio and TV spot announcements concerning public relations are presented over WFIL TV and radio mediums. Distributors in Philadelphia are giving excellent cooperation in presenting both the public relations program and technical lectures available to every technician.

\* \* \*

*Philadelphia Radio Service Men's Association* is backing a move to improve the service industry and "make the TV technician a respected professional man in the area."

\* \* \*

## HARRISBURG, PENNA.

At the *Pennsylvania State Federation of Radio Servicemen's Association* meeting held in Harrisburg, Pa., plans were furthered for the Federation's part in the proposed Eastern Conference scheduled for April 2, and 4 in Philadelphia.



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NORTH ADAMS, MASS.

In conjunction with the conference will be a three-day TV Color Symposium which will include TV lectures by eminent speakers, and use the first lecture to be presented on 3-D Screen.

All servicing groups in the East are invited as well as both NATESA and NETSDA.

Mr. Bert Bregenzer of the Pittsburgh Chapter announced at the meeting that the Washington, Pa., Association had voted for Federation affiliation. The Luzerne County Chapter was appointed to act as Nominating Committee. Joseph Zapracki heads the Committee.

\* \* \*

#### COLUMBUS, OHIO

Overheard at one of the recent meetings of the *Associated Radio-TV Service Dealers*: "The more I see that fellow, the better I like him. That is what makes our ARTSD family so close to each other, WE REALLY GET TO KNOW EACH OTHER, and the better we know each other the better we learn to like each other."

The remark was so typical of association members, no matter what team they are playing for, that I thank J. P. Graham for passing it along.

ARTSD officers looking back over 1953, feel they have many things to be thankful for . . . the many good new members . . . the exceptional condition of our treasury . . . the present health of our several ex-sick members . . . the financial condition of our various members. We are thankful for the splendid co-operation we have received from all of our parts jobbers and set distributors, our local newspapers and the Columbus Better Business Bureau. There is only one thing that we can think of that would further gladden our hearts . . . a closer cooperation of our local TV and radio stations with their little brother, the Service Industry."

\* \* \*

#### CHICAGO, ILLINOIS

##### LOCAL ORGANIZATION ACTIVITY ON THE INCREASE, NARDA DIRECTOR STATES

Local area organization activities are being reported regularly to the offices of the *National Appliance and Radio-TV Dealers Association*, stated A. W. Bernsohn, managing director. Escanaba, Michigan, dealers are organizing into the *Delta TV Association*; Washington, D. C., appliance-TV dealers have not only organized, but affiliated with NARDA; in Wisconsin, increasing television interest has caused the growth and organization of the *Marathon County Appliance-TV Association*.

(Continued on page 30)

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## GET THESE STANDARD TV LABOR CHARGES CHARTS

Here are the labor charges charts that should be posted in every shop that sells TV Service to the general public.

TVL-1 gives you a cross-check on adequate changes by specific service operations. TVL-2 will help you estimate TV service charges quickly and accurately.

Compiled by the editors of **SERVICE MANAGEMENT** with the cooperation of the Television Service Association of Michigan, they have been welcomed by service operators everywhere for their value as service pricing reference guides.

The Standard TV Labor Charges Charts are printed on bristol board, 11" x 14", and are suitable for use as desk or wall charts.

Send one (\$1.00) dollar for a pair of these charts — TVL-1 and TVL-2 — for reference in estimating TV service jobs and for checking over-all service charges against individual operations charges.

**SERVICE MANAGEMENT**  
Circulation Dept.,  
161 Luckie Street, N.W.,  
Atlanta 3, Ga.

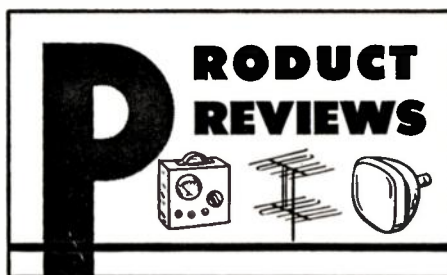
Enclosed is one (\$1.00) dollar. Please send me a copy each of the Standard TV Labor Charges Charts — TVL-1 and TVL-2.

Name .....

Address .....

City .....

State .....



### UHF SWEEP ALIGNMENT GENERATOR

Hickok Electrical Instrument Co., 10620 Dupont Ave., Cleveland 8, O. has announced a new UHF sweep alignment generator that provides fundamental output on all channels from 14 to 83, reported to provide excellent linearity along its entire sweep width with constant amplitude. The instru-



ment solves the r-f leakage problem by a triple shielding so that the generator may be operated on top of a UHF receiver without noticeable spurious signal interference. Complete details may be obtained by writing to Hickok and requesting Form 697.

### HI-LO VOLTAGE INDICATOR

Industrial Devices, Inc., Edgewater, N. J. has announced an inexpensive high-low voltage indicator designed for use with portable or stationary equipment. The unit is mounted in a cast aluminum junction box with conduit fittings and has a bakelite panel with two glow-lamp indicators and test jack receptors. Model 961 will indicate a low of 95 to 105 volts and a high of 130 to 140 volts. Model 960 indicates lows of 190 to 210 volts and highs of 235 to 255 volts. These indicators are suitable for use on a-c or d-c and other voltage ranges may be obtained on special order. The filamentless glow lamps are not affected by vibration.

### TWISTED TAB CONTROLS

Clarostat Mfg. Co., Inc., Dover, N. H. is distributing a twisted tab control with a mounting that eliminates the usual bushing, lockwasher and nut. The inexpensive unit is mounted by inserting its tabs through slots in the panel or chassis and securing them by twisting. The control is the same as Series 47, 15/16" diameter units. It is supplied

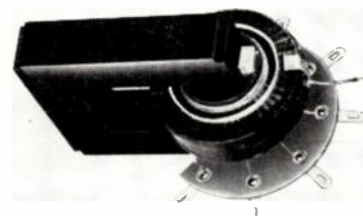
with or without switch, with resistance values from 500 ohms to 5 megohms, rated at 0.5 watt. For detailed information, address Clarostat and request drawing number 251914.

### WIRE-WOUND CONTROLS

Clarostat Mfg. Co., Inc., Dover, N. H. has announced an improved design of their Series 43 potentiometers and rheostats with an improved wiper arm contact and end termination. The contact is reported to permit higher resolution, more intricate tapers and tighter tolerances in overall resistance and linearity. The collector and terminal are in one-piece to eliminate rivets as mechanical fasteners and current conductors. Series 43c controls are available with one to 10,000 ohm values, rated at 2 watts. For detailed information, address Clarostat and request drawing number 251961.

### ENCAPSULATED RESISTORS

Shallcross Manufacturing Co., Collingdale, Pa. has announced encapsulated resistors in eleven new styles including lug-types and axial lead types with wattage ratings to 3.5 watts at 125 degrees C operation. The bobbins and encapsulating coating of these wire-wound resistors is a mineral filled, pigmented epoxy resin. Adequate encapsulation provides sealed resistors with maximum winding areas and leakage paths and minimum weight and size. Address Shallcross for Bulletin L-30 for test data and available styles and ratings.



### REPLACEMENT FLYBACKS FOR SYLVANIA

Chicago Standard Transformer Corp., Addison & Elston, Chicago 18, Ill. has announced exact replacement flybacks for almost 90% of all Sylvania production up to 1953. They are supplied as core and coil for quick, easy installation to original brackets which are a permanent part of the chassis. Write to any Stancor distributor or to Stancor for Bulletin 478 with list of more than 170 Sylvania models and chassis using these transformers.

### 21" MIRROR-BACK PICTURE TUBE

CBS-Hytron Division, Danvers, Mass. has announced a 21" cylindrical face, rectangular, all-glass, mirror-back picture tube with low-voltage electrostatic focus and electromagnetic deflection. Type 21FP4C is reported to provide improved contrast and reflection-free



viewing and brighter, sharper pictures without additional demand on receiver components. Its electron gun is designed for use with a single-field external ion-trap magnet.

#### SINGLE-WIRE UHF TRANSMISSION LINE

David Bogen Co., Inc., 29 Ninth Ave., New York 14, N. Y. has announced a new single-wire transmission line which is reported to extend the range of UHF television because of its unusually low-loss characteristics, unaffected by weather conditions. "G-Line" consists of an impedance-matching unit at each end that matches the usual 300-ohm balanced line connection at the antenna. Near the TV receiver, a similar unit matches the line to a short length of 300-ohm twin line which is attached to the receiver. Losses in the line are said to be only one db per 100 feet in the UHF television band.



#### AUTOMATIC SIGNAL EQUALIZER

Tele-Matic Industries, Inc., 1 Joralemon St., Brooklyn, N. Y. has introduced an automatic signal equalizer designed for locations where signals from low frequency channels cause overloading and the high frequency channels lack strength for any attenuation. Model AT-25 equalizer provides maximum attenuation on the low frequency channel and minimum attenuation on the high frequency channel — without affecting the TV receiver impedance.

#### UHF TV BOOSTER

David Bogen Co., Inc., 29 Ninth Ave., New York 14, N. Y. has announced a new UHF TV booster that is reported to greatly increase UHF TV reception on channels 14 to 83, with a gain of 13½ db at the lower frequencies and 8 db at the high end. The booster utilizes a patented coaxial-type tuning system with a 6AN4 tube. Model UHB is supplied in a compact case with vernier type dial and pointer behind a screened glass face plate for single control. The unit may be automatically switched on or off by the television set and a thermal relay.

#### HAND TACHOMETER

Metron Instrument Co., 432 Lincoln St., Denver 3, Colorado has announced a new easy-to-read hand tachometer that eliminates confusion and reading errors by means of a novel thumb operated range selector which automati-



cally changes the scale numbers for each range. The same mechanism also indicates the correct number of r.p.m. per scale division so there is no need to figure out scale markings for each range. Commutated capacitor principle of operation provides freedom from damage from overspeeding or selection of wrong range. Different types of tachometers are supplied for measurement of speeds as low as 2 r.p.m. and as high as 100,000 r.p.m.

#### MINIATURE POTENTIOMETER

Jet Electronics, Inc., 93 Massachusetts Ave., Boston, Mass. is producing a new ⅞" precision potentiometer with up to 360 degree electrical and mechanical rotation, with resistance values up to 50,000 ohms. These potentiometers are reported to feature a unique assembly method similar to that used in fine watchmaking. Complete units weigh only half an ounce. Type D-100 has an anodized aluminum case with phosphor bronze bushing and a ⅛" centerless ground stainless steel shaft. Gold alloy rotor take-off brushes rotate on a coin-silver ring. The use of precious metals for moving parts is said to assure more than a million cycles of noise-free operation.



#### CONICAL-YAGI ANTENNA

Falcon Electronics Co., Quincy, Illinois has announced a new conical-yagi VHF antenna utilizing five elements on low channels and four elements on high channels to provide features of the conical with the high gain and sharp directivity of the yagi. The Falcon 88 antenna high channel section uses two separate driven elements and a director for each. One driven element and director operate across channels 7, 8 and 9 and the other pair serves channels 10

(Continued on page 30)

## WIRE WARNING!

### WHY

pay more for questionable quality\* tubular TV lead-in wire?

\*subject to patent infringement.

### LOOK



for highest quality license-labeled\* Tubular TV Wire...

\*JSC Tubular Wire is manufactured under license of Amphenol Pat. 2543696.

### DEMAND



the most for your wire dollar... get BOTH Quality\*\*! AND Low Price\*\*!

\*\*JSC—Highest in Quality...Lowest in Price!

#### JSC NEW Twin Tubular TV Lead-In Wire...

The best low loss, low cost 300 ohm lead-in for UHF and VHF television.

Rain, snow, dirt or salt deposits do not materially affect impedance and electrical efficiency. JSC tubular construction contains and protects the concentrated field of energy and reduces to a minimum high ratio signal losses.



Always Look for Orange & Blue Disc of Quality

HVO-II for under chassis replacement in Zenith sets having 12" to 19" round tubes. HVO-9 Autoformer for RCA, Hoffman and Hallicrafters sets designed for picture tubes 21" and up. HVO-10 for "fast retrace". Merit TV Replacement Guide No. 405 covering practical recommendations for replacements in over 6000 models and chassis; Auto Radio Replacement Guide Form No. 3 can be obtained from your Jobber or by writing: MERIT COIL AND TRANSFORMER CORP. 4425 N. Clark Street, Chicago 40.

# MERIT

LISTED IN RIDER'S TEK-FILE & SAMS' PHOTOFACT INDEX. TAPE MARKED TO HELP YOU—ORIGINATED BY MERIT. MERIT IF-RF COILS INCLUDE A COMPLETE LINE OF TV REPLACEMENTS.

FIELD TECHS ☐ INSTALLERS ☐ BENCH TECHS ☐

[illegible]

## Management

(Continued from page 17)

- 1) **Service Income** is composed of the following:
  - a) Installation Income.
  - b) Contract Service Income (on Deferred Schedule Basis).
  - c) Renewal Service Income.
  - d) COD.
  - e) Guarantee, if any.
  - f) Dealer Activity, Credit from Sales, etc.
- 2) **Parts Income.**
  - a) Replacement Part and Tubes used in the TV Service Operation, Markup of same from cost.
  - b) Counter Sales.
  - c) Mail Order, etc.
- 3) **Gross Income, combines service and parts incomes.**
- 4) **Dealer Commission**, monies paid to dealers for the sale of Service Contracts. (Usually 10%).
- 5) **Net Income**, equivalent to Gross Income minus Dealer Commission, if any.
- 6) **Salaries, Technical**, includes the direct payroll and employee premium or incentive.
- 7) **Salaries, Clerical**, includes indirect payroll and incentive or premium costs.
- 8) **Overtime Premium**, indicates overtime, direct and indirect payments, plus shift premiums, if any.
- 9) **Total Payroll Expense**, total of technical, clerical and overtime salaries.
- 10) **Total Materials**, include the following items:
  - a) Inventory Items
  - b) Non-Inventory Items
  - c) Inventory Adjustments
  - d) Material Credits.
- 11) **Other Operating Expense**, includes the following:
  - a) Vehicle expense, owned, leased, employee.
  - b) Subcontractor payments, where such is involved.
  - c) Rent and building operating expense.
  - d) Telephone, telegraph and postage.
  - e) Office and shop supplies.
  - f) Cabinet replacement and repair, if any.
  - g) Management's travel, transportation and entertainment expenses.
  - h) Other miscellaneous operating expense.
- 12) **Miscellaneous Expenses**, includes:
  - a) Insurance and taxes.
  - b) Expense Credits.
  - c) Bad debt Write-offs.
  - d) Depreciation.
  - e) Provision for work backlog (or uncompleted calls).
  - f) Expense transfers, where required.

## TTLB Directory

(Continued from page 13)

ing in size from one-man shops to organizations employing ten or more technicians.

3. It will show that competent independent service facilities and personnel are available in all sections of the country — businesses fully capable of handling any type of radio, television, sound or electronic installation, maintenance or service if the right kind of information is made available to them.

4. It will provide the reasons why set manufacturers need not set up their

own national or distributor-operated service organizations to handle the installation and servicing of color television receivers.

5. It will help manufacturers of closed circuit TV systems, electronic control devices and specialized electronic assemblies to directly contact competent independent service companies in all sections of the country where their products may be sold.

6. It will help to channel more industry money into public relations and other programs that are of distinct value to established service businesses.

Any individual service business or service organization interested in help-

ing to get *all* full-time service businesses in their sections listed in the Directory may get a supply of the Official Registration Forms for local distribution by writing to the TTLB Directory Dept., P. O. Box 1321, Indianapolis 6, Indiana.

## Technical Topics

(Continued from page 8)

the low band prevents the loading and impedance disturbances that occur when an attempt is made to use two driven elements of widely differing lengths (low band and high band) to

(Continued on page 28)

	MONTH				YEAR TO DATE			
	ACTUAL		BUDGET		THIS YEAR		LAST YEAR	
	\$	%	\$	%	\$	%	\$	%
1) Service Income								
2) Parts Income								
3) Gross Income								
4) Less Dealer Commission								
5) Net Income								
6) Salaries, Technical								
7) Salaries, Clerical								
8) Overtime Premium								
9) Total Payroll Expense								
10) Total Materials								
11) Other Operating Expense								
12) Miscellaneous Expense								
13) Grand Total Expense								
14) Net Operating Income								
INVENTORY OPENING BALANCE								
INVENTORY RECEIPTS								
INVENTORY USAGE								
BALANCE END OF MONTH								
CHANGE THIS YEAR								
TURNOVER								

- 13) **GRAND TOTAL EXPENSE, total of:**  
a) Total Payroll Expense.  
b) Total Materials.  
c) Total All Other Operating Expense.  
d) Total Miscellaneous Expense.
- 14) **NET OPERATING INCOME, totals of all above expense items**  
subtracted from net income item.

**Control Form #5 is a "Balance Sheet."** This is indispensable. You should have a **Monthly and Year End, Balance Sheet.** The following is a suggested form of balance sheet, commonly used.

## BALANCE SHEET

**PERIOD: (Either month or year end)**

### A.) ASSETS

- 1) Cash on hand and in the bank
  - 2) Accounts receivables
  - 3) Inventory
  - 4) Capital equipment
- TOTAL ASSETS:**

## B.) LIABILITIES

- 1) Accounts payable
- 2) Notes payable

**TOTAL LIABILITIES**

## C.) TOTAL NET WORTH

**Editor's Note:** In the March issue, Mr. Hansen will carry on his discussion of items that are to be considered in a profit and loss statement and will outline a complete program of business control based upon a master card system.



of but 9½ inches. It weighs only seven and one-half pounds. A total of but seven tubes are required for this remarkable camera and the conservative design and small number of components provide for an absolute minimum of maintenance. Only two controls are required, plus the on-off switch.

In announcing the new model, company officials stressed the fact that "five minutes instruction would permit even the layman to operate this small camera efficiently." It has remote electrical and optical controls, remote pan and tilt, and an auxiliary sound unit. Price of the camera unit (with pick-up tube) is quoted at less than \$1,000.

For full details, specifications and application ideas for any phase of commerce, industry or education, write or call Dage Electronics Corporation, 69 North 2nd Street, Beech Grove, Indiana.



## Colton Wins NATESA Award

First annual award of the President's Cup of the National Alliance of Television-Electronics Service Associations goes to Fred Colton, chairman of the board of the Associated Radio & Television Service Dealers of Columbus, Ohio, shown receiving the coveted cup from Frank J. Moch (right) of Chicago, president of NATESA, at a luncheon in Colton's honor.

The NATESA President's Cup, to be awarded annually hereafter at the Alliance's conventions, was presented to Colton "because of his zealous work on behalf of NATESA during the year 1953, especially for his efforts in the interest of the NATESA annual convention in Chicago," Moch said.

Colton, who is Eastern Central Vice-President of NATESA, headed the largest visiting delegation to the Convention.



# There's **REAL** Money in TV Signal Distribution

with the

## Add-A-Unit

### MASTER TV SYSTEM for UHF and VHF



**The B-T Add-A-Unit System is a new tool.  
It is your 'open sesame' to the biggest boom  
that has ever hit the TV servicing industry.**

Hotels, motels, schools, apartment houses, community developments, hospitals, and hundreds of others with multi-receiver problems are clamoring for low cost, easy-maintenance, efficient TV distribution systems.

**This is YOUR BIG MARKET...your real money market**

**The B-T Add-A-Unit System offers you these advantages:**

1. It is the lowest cost amplified distribution system ever designed.
2. It is the easiest system to install under all conditions... requires no special tools and no outside engineering assistance.
3. Its flexibility is practically unlimited and it can serve 2000 TV receivers as effectively as it can serve 2.
4. It has no 'bugs' and requires little or no maintenance.
5. It permits complete control of signal strength: amplification or attenuation, as may be required, assuring high quality reception at all TV outlets from all available channels.
6. Every B-T Master System installed by you is a sure fire 'clinch' for additional business.

**Let the B-T System  
Work for You.**

The B-T Add-A-Unit Master TV System consists of the following B-T units:

- MIXER AMPLIFIER
- DISTRIBUTION AMPLIFIERS
- COMMERCIAL ANTENSIFIER
- RESISTOR OUTLET BOX
- TV SYSTEM ACCESSORIES

Attenuator   Matching Transformer  
Remote Control   Line Splitters  
Line Loss Equalizer  
Weather-Proof Housing



**Write to Dept. NB-9 for Free Installation Manual  
and Complete Specification Data.**

**BLONDER-TONGUE LABORATORIES, INC.**  
Westfield, New Jersey

## Inventory

(Continued from page 21)

inventory will no longer be a composite of fast and slow moving units, with dead lumber gathering dust. It will be an active and controlled stock which will turn over faster, cleaner and with a consequent return of profits heretofore lost.

These cards were kept in a file in full view of the selling counter. When a customer asks for a tube, recourse is made to the card, the tube is taken from stock, marked off the card and marked on the memo card which is placed with others to be refilled at the end of the business day.

As an added bit of information, we placed on the inventory card data direct substitutes of the particular tube listed. This made saving the sale possible if, inadvertently, that tube was out of stock and the record had not yet been received. Also the list price was marked with subsequent changes of price either up or down.

One of the less noticeable things about this method, but worth much in customer reaction and attitude, was the frequency with which customers remarked about the smart way the tubes were kept track of. In the customers' mind a mental note was made of a business-like service man.

## Hi-Fi Sales

(Continued from page 9)

If the serviceman who wants additional business will follow out the line of procedure I have described, he should meet with success. Problems other than those I have raised will undoubtedly occur. His own experience will, after awhile, show the answers. But we can, from a considerable body of experience, help him further. I would be happy to answer any questions that come up with particular situations.

## Postman

(Continued from page 12)

a weekend outing and someone thinks to get the battery portable out of the attic or closet where it is stowed. They try it out and discover the batteries are dead. So, they stop by a drugstore or an auto supply shop to pick up batteries for it. This is business that logically belongs to you, but you're not going to get it unless you go after it.

Let the public know who you are, where you are located and what services you can perform for them by using these distinctive mailing pieces which have been prepared for you by sales promotional experts.

## Your Problem

(Continued from page 8)

crediting to and the right side for charging out. In large organizations where part numbers are used, the part number should be visible from the top. This can be accomplished by manufacturing the card with a tab on one side.

In smaller operations where there are no part numbers, the items should be filed numerically using the prefix of the nomenclature which is usually a number.

This type of record is always a very active one, and should be housed in an open type file. For systems having less than 2,000 parts, the housing may be 3x5, 4x6, 5x8 or 6x9 posting tray or steel draw. When the number of cards exceeds 2,000 I strongly recommend the use of a Revo-File which is manufactured and sold by The Mosler Safe Co. This file will house some six feet of records in an area of three feet by one foot. This particular file allows the operator to remove the card from the file without damaging the record.

Credits should be made on the inventory card from the incoming vendor's invoice and disbursed from the service installation or repair forms used by the service department.

(Continued on page 30)

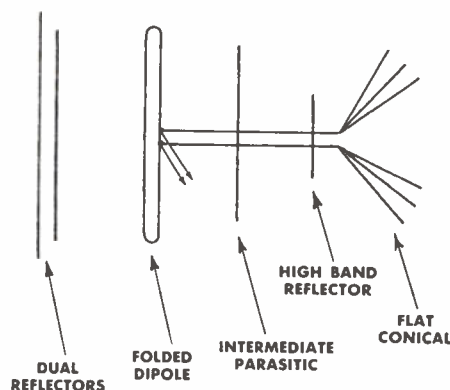
## Technical Topics

(Continued from page 26)

feed a single transmission line. Dual reflector action is obtained with high band reflector and intermediate parasitic element.

### VEE D-K YAGI

With reference to figure 2, the general configuration presented is that of a nine-element mono-planar Yagi. The five elements of the forward section are cut to cover the high channels 7-13. At the rear are four wider elements responsive to the low channels 2-6. Analyzing the basic element layout, the reflector (#1) at the rear is cut for channel 2 so that it contributes a high front-to-back ratio for the low channel section. In front are two "T" matched main radiators (#2 and #3) cut for the audio-carrier of channels 2 and 5 respectively. This double-driven radiator section is phase-linked by a transposed 300 coupling line which in turn is connected to an isolation network. A director (element #4) cut for the audio-carrier of channel 6 also serves as the low channel director. In addition, this element has a dual function of serving as a reflector for the low end of the high



channel spectrum.

In the high channel section, a reflector, (element #5), is resonant to channel 7 and was introduced as the control element for establishing correct impedance matching. A pair of double-driven main radiator elements (#6 and #7) drive the high or forward section to provide broad-band coverage. Both of these elements are Delta-matched; #6 being cut for the video-carrier of channel 7, and #7 is resonant to the audio-carrier of channel 12. In addition, the former radiator (#6) also acts as a reflector for the high end of the spectrum, namely channels 10-13. Coverage for the lower end of the high channel band, (i.e.

channels 7-9), is gained through dual use of #7 as a director, thus providing full reinforcement of the high channel spectrum. Elements #8 and #9 are cut for emphasis as directors for channel 13; however, they also serve as effective directors for the inclusive channels 7 through 13.

### FLYBACKER

A special tester for yokes and flyback transformers has been developed by Radio City Products. This checker consists of an oscillator and meter circuit that can evaluate small changes in inductance introduced by a shorted turn and is able, also, to indicate intermittents and more extended shorts.

Many of the standard transformers as a function of circuit design can be tested simply by disconnecting one side of width coil and removing horizontal output and HV rectifier tubes. Yokes are tested by disconnecting one lead of each section.

For newer transformers and yokes it is necessary to locate test calibration points using a normal receiver. These readings are recorded and filed. When a suspected unit comes in for repair, transformer and yoke readings can be compared with those on file for a normal unit of the same type.



EVERY SERVICE BUSINESSMAN KNOWS THAT:

# HANDLING THE CUSTOMER IS AS IMPORTANT AS REPAIRING THE TV SET

Here are a few customer questions and problems. Do your servicemen know the best answers?

Customer invites you to have a drink with her.

"Why are the test patterns good, but the pictures poor?"

You do some damage to the customer's furniture.

"Are you sure my set will work after you fixed it?"

You have some screws left over after repairing the set.

Customer insists on keeping an old CRT which you replaced.

"Did I buy a lemon?"

"What kind of set do you have in your home?"

Customer asks you to stay for lunch.

"Why is my neighbor's picture better than mine, when I paid more for my set?"

Children interfere with your tools.

"This is the same trouble that you fixed last week, I am not going to pay again."

Customer tells you which parts need replacing even before you look at the set.

"My credit is good, charge it."

Fierce dog is in the room, which makes you nervous.

"Why is it my set never acts up when the serviceman is here?"

"How long will my picture tube last?"

Customer asks you how much money you make.

You call at the house and find the customer in a negligee.

THE RIGHT ANSWERS ARE FOUND IN THIS VERY VALUABLE BOOK. RIGHT FOR THE SERVICEMAN; RIGHT FOR YOUR COMPANY; AND RIGHT FOR THE CUSTOMER TOO.



- Compiled by the 150 working supervisors and technicians of Central Television Service, Inc., largest independent TV service company.
- Written with the assistance of a psychologist on the staff of Chicago University.
- Forward by Milton S. Kiver.
- Cartoons and sketches make it entertaining as well.
- Over 90 pages crammed with vital do's and don't's in the customers' homes.
- 50 question true-false test included for servicemen to test themselves.
- Distributed by Service Management magazine as a service to the entire television industry.

QUANTITY LIMITED ON THIS PRINTING. ORDER YOUR COPY RIGHT NOW FOR QUICK DELIVERY.

## SERVICE MANAGEMENT

161 Luckie Street, N.W.  
Atlanta 3, Ga.

Mail me \_\_\_\_\_ copies of your "Customer Relations" handbook for technicians. Enclosed is \$1.00 for each copy.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

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

## People and Places

(Continued from page 10)

Ipswich, Mass. as technical director of the manufacturing division. . . . **WILLIAM G. PLISKIN, JR.** has joined the industrial sales division of the Gerber Sales Company. . . . **C. W. POWELL** heads the new Pittsburgh district sales office of the Carboly Department of General Electric. . . . **VERNE ROBERTS** has been appointed distributor sales manager for the Regency Division of I.D.E.A. . . . **DONALD H. ROGERS** has been appointed chief engineer for Blonder-Tongue Laboratories. . . . **CLAYTON RYDER** has been appointed district replacement sales manager for the General Electric Tube Department. . . . **HOWARD W. SAMS** has stated that the electronics industry is so bemused by the advent of color television that it is in danger of neglecting the medium that will bring television to the great mass of American communities — UHF. . . . **HUGH SILLS** has been elected secretary-treasurer of the Dunn, N. C. Appliance Retailers Association. . . . **DAVID SMITH** has been elected vice-president of the Washington, D. C. Appliance and Radio-TV Dealers Association. . . . **RALPH L. WEBER** is the new secretary for Johnson Electronics. . . . **GEORGE C. WEBSTER** is the newly-elected president of the Washington, D. C. Appliance and Radio-TV Dealers Association. . . . **WILLIAM S. WELLONS** has been elected president of the Dunn, N. C. Appliance Retailers Association. . . . **PAUL P. WICKMAN** has been named merchandising manager of dealer products for General Electric replacement tube sales.

### Service

(Continued from page 7)

We naturally desired to take part in the national picture so we promptly affiliated with NATESA because we thought this group was best equipped to expand our interests on a national scale.

It isn't an easy job to build a successful service association because there is so little to offer in the form of an immediate return to any individual. You must have the vision and foresight to see the long term results. Unfortunately, far too many individuals will say, "What will an association do for me? I want this; I want that. Why don't they stop price cutting? Why don't they turn the world upside down today?"

Let's get wise to ourselves and realize that the only one who is really going to do anything for "ME" is "ME"! When a lot of us "ME'S" get together as "WE'S" and work together, things will start to happen. When YOU say "WE" and work as a team instead of always ME-ME-ME — Public Confidence will come as a natural result.

### Your Problem

(Continued from page 28)

A most important factor in controlling inventory stock is the realization that unless a physical count is made periodically and adjustments made to the control card, any system will be almost worthless.

(You may send your questions to the writer directly at 145 Hudson Street, New York 13, N. Y.)

### News Briefs

(Continued from page 20)

Receiving Tube Division, reports attendance in excess of 600 at their recent "Service Saver" meetings in Florida, Georgia and South Carolina; Television and Radio Division, is making available a "three-for-free" coin box to promote TV set sales in hotels, motels, tourist cabins and other public lodging places.

### Product Previews

(Continued from page 25)

through 13. Phasing bars are available for stacking. Complete details may be obtained from Falcon.



### MINIATURE PIN STRAIGHTENERS

CBS-Hytron Division, Danvers, Mass. has developed a twin pin straightener for radio-television service dealers, electronic technicians and engineers which is compact, light and roll-proof. It provides safe, fast pin-straightening for 7-pin and 9-pin miniature tubes.

## Association News

(Continued from page 23)

### ARTS STATES ITS PURPOSE

The Associated Radio and Television Servicemen has at last become a reality to the men who "stuck to their guns" and gathered others around them who have committed themselves to self-help through cooperative effort.

The small shop man has been very much like flotsam on an angry sea of unfavorable publicity, inadequate business knowledge and the disadvantage of being small. This group has organized to combat such publicity and gain technical and business management knowledge . . . to work together for mutual protection, mutual cooperation and self help.

Howard J. Wolfson has been elected chairman; Clifford L. Anderson, vice chairman, and Thomas H. Craig, secretary-treasurer. Mr. Wolfson writes that they are "devoted to a better understanding between the maker and user of electronic devices and the man who services them."

\* \* \*

Until next month then . . . Don't forget the Ides of March!

Penny Martin  
Association News Editor  
P. O. Box 283  
Brackenridge, Pa.

### Quachita

(Continued from page 18)

best when you weren't satisfied. I still maintain that the man who is never satisfied, who keeps on believin' that there is lots of room for improvement in his shop, his business methods, his equipment and especially in himself, is gonna wind up better than the dude who feels that all that needs be done has been done: that he's the final result, the Noblest Product of Nature's Art, the Complete Radioman!

You know, that's about what it boils down to when you git right down to it. Something to work toward, some goal to achieve, some new incentive in life. If you've got something just outa reach all the time, to keep you up on your toes, why, you're happier than you would be if you had the whole world with a gold ribbon around it.

Well, I gotta go now. Got a new test-equipment catalogue this mornin', and hain't had time to read 'er yet. Might have something about that new scope I been wantin'. Y'all come!



ONE HALF MILLION SOLD!

Original  
**Snyder**  
PHILADELPHIA

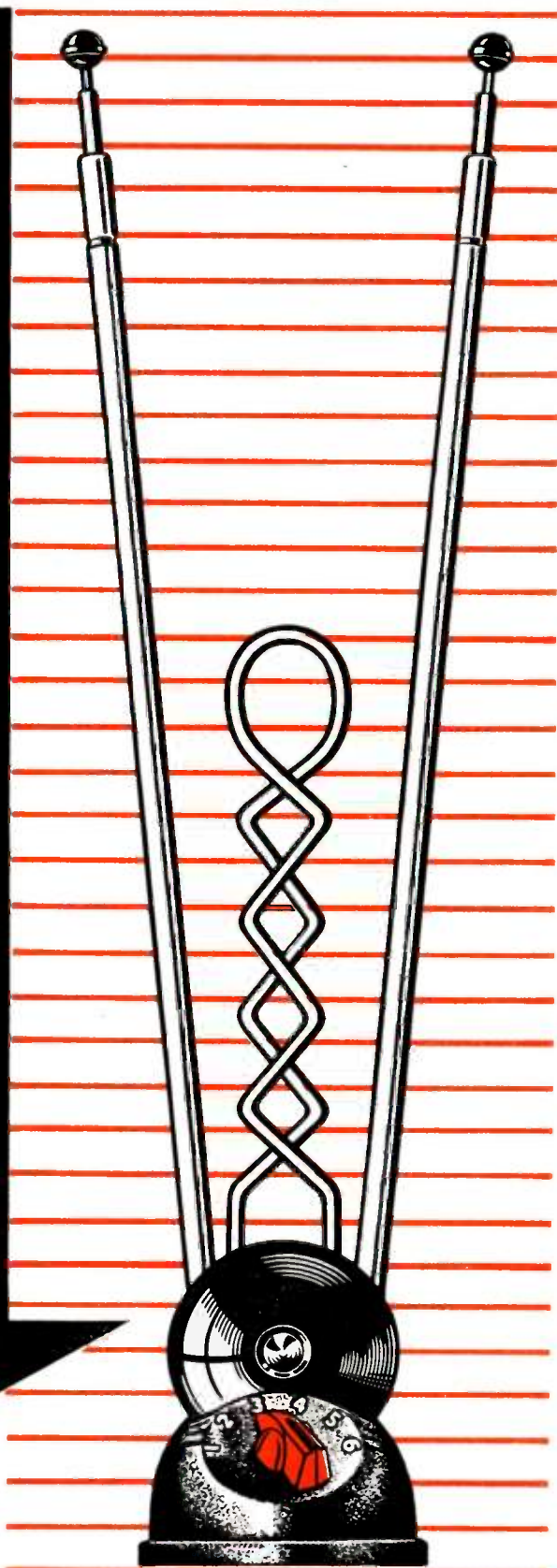
UHF **3D** VHF

**Directronic**  
PORTABLE TV ANTENNA

*New Low Price!*

**7<sup>95</sup>**  
FORMERLY  
**9<sup>95</sup>**

RETAILED WITH A 5-DAY  
MONEY BACK GUARANTEE



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SNYDER ANTENN-GINEERS LTD., TORONTO, CANADA • WORLD EXPORT: ROBURN AGENCIES, INC., N.Y.

# \$50,000 "TELL & SELL" CONTEST

For Dealers and Servicemen\* who use RCA Tubes



**1954 DeSoto Automatic "Hard-Top"**—170-H.P. Fire Dome V8 engine, Power-Flite Transmission, Power Steering . . . completely equipped, including radio and heater.

**1954 Dodge DeLuxe 1/2-Ton Panel Truck**—complete with "Truck-o-matic transmission," radio, heater and accessories . . . *plus a full set of RCA Test Equipment*, aluminum ladder, and winner's business name and address on truck panel.

## Here's all you do—

Get an entry blank from your RCA Tube Distributor Salesman. Complete the following sentence in 25 additional words or less:—

*"I use and recommend RCA Tubes because"*  
It's as easy as that . . . and you may enter as often as you like, but each entry must be on an official entry blank.

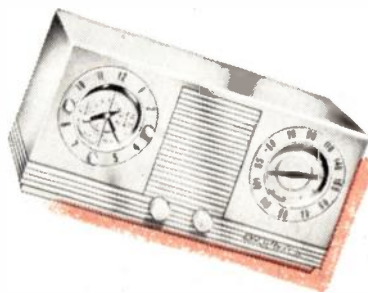
## Hints to help you win

See your RCA Distributor Salesman right away. He has a copy of the "clue book" waiting for you. This book contains full details on the whole exciting "Tell and Sell"

Campaign, including contest rules.

You may win first prize . . . so don't waste a moment. Contest closes April 30, 1954.

\*Your RCA Distributor Salesman will be glad to help you . . . because if you win, he wins a duplicate prize!



## 400 FABULOUS PRIZES

### including:

- \* TV sets
- \* Watches
- \* Cameras
- \* Air Conditioners
- \* Test Equipment
- \* Radios
- \* Ranges



**RADIO CORPORATION of AMERICA**  
ELECTRON TUBES  
HARRISON, N. J.