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TELEVISION • ELECTRONICS • RADIO • AUDIO

Volume 2 Number 11

August 1953



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**Letters
to the Editor**

STANDARD LABOR CHARGES

Please send me the "Standard TV Labor Charges Chart." I am opening a TV Service organization in Southern Oregon and find that my six years experience in TV Service in the Los Angeles area has not equipped me with all the answers. The following questions are still unanswered:

1. A fair charge for standard installation and 90 day service.
2. How to handle service of sets on dealer floor prior to sale — with minimum amount of apper work.
3. Can I educate dealers to deliver sets to customers residence or should I pick up sets from dealer and pre-check before installation?

Any information will be greatly appreciated.

Donald W. Culbertson
Lawndale, Cal.

Received . . . copy of your June edition. Very good indeed! Have heard about wonderful article published in May issue pertaining to standard rates for TV Service. Please send me a copy. . . . I am now a regular subscriber to your magazine.

E. I. Brown, Jr.
Brown's Radio & TV Service
Oakland, Cal.

READER SURVEY

I thought it might interest you to know that during one of our informative media discussions and sales pitches presented by one of the leading publications in the electronics industry, I was startled and certainly impressed to find that in a questionaired analysis survey made by IRC . . . our organization was completely amazed at finding your publication directly pushing (two competitive) books. . . . I thought it would be nice for you to know that this relatively new publication of yours has made such tremendous strides and certainly now is a definite contender in the electronics market.

Good work; keep punching; keep your editorials slanted in the right direction and we will be right behind you.

Edward Conti
Conti Advertising Agency
New York, N. Y.

Letters should be addressed to Readers Report Editor, SERVICE MANAGEMENT, 501 Fifth Avenue, New York 17, N. Y.

Service Management

PAUL H. WENDEL, Editor and Publisher

VOLUME 2, NUMBER 11

AUGUST, 1953

COVER PICTURE

John H. Hauser

. . . Veteran Electronic Merchandiser Prepares the First of a Series of Guest Editorials for SERVICE MANAGEMENT, Page 20 This Issue.

Features

TV SERVICE REFERENCE FILES	6
<i>— By E. C. Tompson</i>	
WHY SO MANY SERVICE ASSOCIATIONS?	8
<i>— By Paul H. Wendel</i>	
ARKANSAS PARTS CENTER	10
<i>— By Jack Darr</i>	
SERVICE TRENDS AND STATISTICS	11
<i>— By Frank W. Mansfield</i>	
OUACHITA SERVICE PHILOSOPHER	12
<i>— By Jack Darr</i>	
1953 BATTERY MERCHANDISING	16
<i>— By Dwight Schoeffler</i>	

Departments

LETTERS	3	ASSOCIATION NEWS	13
OUR OPINION	5	PEOPLE AND PLACES	20
NEWS BRIEFS	7	PRODUCT PREVIEWS	22
TECHNICAL TOPICS	9	TRADE LITERATURE	23

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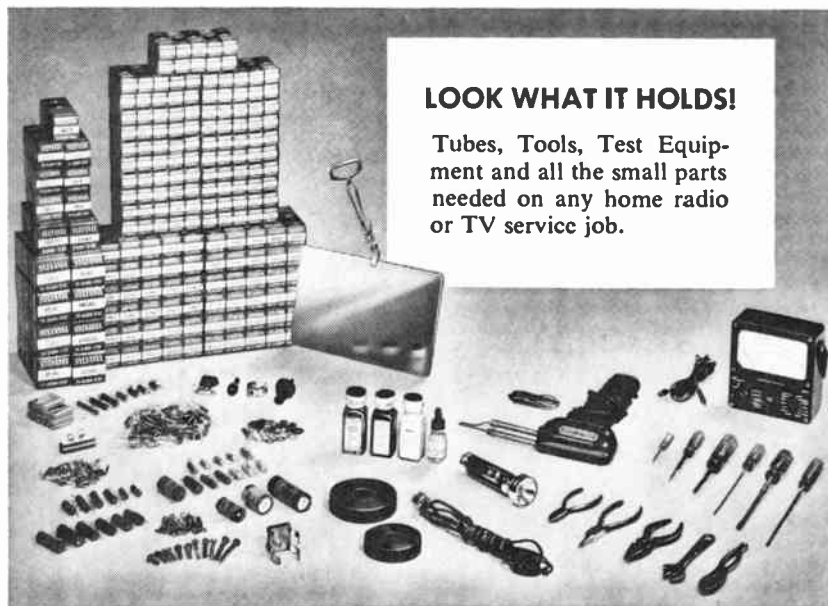


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- Brass-plated hardware
- Room for mirror and ohmmeter
- It's a complete, portable service shop!

ACT NOW . . . Offer Limited!

This chest is now yours for only \$5.00 and 30 Sylvania Premium Tokens. Offer good only between August 1st and November 15th. See your Sylvania Distributor who has these kits now.

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Remember, you get 1 Sylvania Premium Token with every 25 receiving tubes or with every picture tube you buy.

"OUR OPINION"

THIS month we would like to talk to you about *your business magazine*, SERVICE MANAGEMENT.

If you are pleased with the work you are doing, you should be proud of your status as a business man engaged in supplying competent electronic service. SERVICE MANAGEMENT is your voice on a national, all-industry scale incisively reporting the fascinating story of independent service which some say will eventually be the country's greatest industry.

SERVICE MANAGEMENT is the most effective trade publication you ever have had working in your behalf. Month by month it reflects the news, opinions and trends of development in electronic servicing and thus reveals to other elements of the industry the growing stature of service as a business.

The current circulation includes more than 20,000 full-fledged service businesses, 968 Parts Distributors and the executive personnel of all manufacturing companies that serve the replacement parts industry. In addition to this unusual line-up of top-flight readership, SERVICE MANAGEMENT is read by the national service manager of practically every set manufacturing company and by most of their field service engineers.

What does all this mean to you as a business man in service? What benefits does it hold for you?

The top value of SERVICE MANAGEMENT to you is, of course, the proven, practical management information it brings you month after month. It is the one magazine that monthly cover-to-cover readership is a MUST for service executives. Every line of information it carries has been carefully appraised for its importance to you. Some of the ideas it brings can be put to work immediately in your business. Others you will want to preserve for future reference.

SERVICE MANAGEMENT encourages the adoption of sound business practices by

all service businesses. This is very important to you as a business man. As more and more service people discover they can get adequate charges for their work, it will gradually raise the level of the activity as a business. And as service operators learn and apply the simple rules of sound management, better businesses will develop. Set owners will benefit from a higher grade of service.

The third important value that *your business magazine* gives you is that it keeps you informed of new opportunities in service. No doubt you followed the fine series of articles on industrial electronics service. In the months ahead you will read about successful service businesses that handle auto radio service, custom-installed audio equipment and mobile 2-way communications systems. And as the new field of closed circuit television develops, SERVICE MANAGEMENT will keep you informed of the opportunities in it.

Through continuing stories about successful businesses, we are giving the entire industry a new concept of service as a sound, profitable business activity. And as the real strength of independent service becomes recognized, it will encourage industry support of public relations and other programs in the interests of independent service.

Now, how can you help SERVICE MANAGEMENT to help you improve the status of your industry and thus provide a healthier atmosphere in which your business can grow and prosper?

The first thing you can do for yourself and your industry is to specify a brand name on every part, tube and piece of equipment that you order from your Parts Distributors. After selecting the brands of your choice, insist on getting the brands you ask for.

You know, probably from costly experience, that there are always several grades of replacement items floating around the industry. Most of the sub-standard stuff is unbranded. You can

buy it at a special price. It is dangerous to start fooling around with this stuff in servicing. Your best bet is to stick to standard brands and advertise that you use only standard brand tubes and parts in your repair work.

Take TV antennas, for example. A brand name manufacturer will introduce a new antenna that he has spent considerable money to develop. Just as soon as it has been proven in service and becomes popular, hot-shot manufacturers will start making inferior copies of it. These fast-dollar boys skimp on everything in copying the design and construction. They have but one sales point — price. In several cases the failure of inferior antennas has killed the whole market for antennas in an area.

Stick to your reliable, brand name manufacturers. Sell quality in parts and quality in service and you will build your business on a sound foundation.

From time to time developments occur that may seriously affect your business. When that happens you should express your opinion. You can do that in the pages of SERVICE MANAGEMENT. A letter from you reproduced in *your business magazine* will be read by those people who can lend a hand in correcting bad conditions in your area.

Finally, you should get acquainted with as many service business operators as you possibly can. Sure, they are your competitors but as you get to know them, you will find there are many areas in which you can all cooperate for your mutual good. One of your big business problems is not how you can get business away from your competitors, but rather how you and they can capture a larger share of the consumers' dollars for service on TV and other electronic home instruments. Watch our future issues for information on service selling campaigns that produce results.

SERVICE MANAGEMENT is *your* magazine — your voice in the industry. Help it to help you and you will find it bringing you tangible benefits far out of proportion to the small price you pay for your subscription. PHW

TV SERVICE REFERENCE FILES

Simplified coding and filing of management aids keeps data at fingertips for effective business planning

By E. C. TOMPSON, managing editor
Service Management

In recent issues of **SERVICE MANAGEMENT**, we have presented a series of articles on business control. These have dealt, in specific, with an important phase of service operation: the control of money and the control of service work in progress. The purpose of these articles was to present a practical and efficient means of utilizing existing personnel for the reduction of overhead costs.

The need for this type of information has been amply shown in nation-wide response and the adoption of better business control by thousands of TV and other types of service operators. The system described was suitable for all types of service operations and it could be expanded to take care of increasing volumes of business.

Business control discussed in this series was of interest because it showed how to operate an existing business more efficiently and more profitably. It provided the means of controlling a larger operation — but it assumed that business was in hand.

BUSINESS-BUILDING IDEAS

Alert TV Service operators are interested in obtaining maximum efficiency in existing operations — but they should also be interested in systems that deal with business-building ideas; so that they can meet new opportunities and solve new problems of the future — so that they can work out answers to seasonal trends, so they can be prepared for new developments like color, industrial and 3-D TV.

To help TV Service operators develop business-building ideas, thousands of manufacturers spend millions of dollars in the preparation of printed material. In aggregate, this material represents very valuable business-building ideas for the TV Service operator. Preparation of the material presents no appreciable problem to the manufacturer because he has professional staffs at his command.

The manufacturer realizes that an important part of the product distribution path, the last mile, is from the service organization to the consumer. Because of this, manufacturers make available many valuable business-building ideas to TV Service organizations.



Unfortunately, a tremendous quantity of this material goes to waste because of inefficiency in distribution and the fact that many TV Service operators do not have facilities for absorbing and using these business-building ideas.

A NEW SERVICE

To assist in the utilization of available business-building ideas, the editors of **SERVICE MANAGEMENT** have evolved a practical plan to select, organize, distribute and facilitate the use of manufacturers' data and other business-building ideas. The plan is based on a series of pre-arranged files in more than fifty categories for simplified use by the average TV Service organization. Material on a given subject will be pre-arranged in a special letter-size file folder as a package for ready reference.

SELECTED AND ORGANIZED

Categories will include vital subjects such as: financing, capital requirements, accounting, personnel, inventory control and purchasing and shop. The material for these files will be selected and organized in a progressive manner until complete files in all categories have been supplied as a reader service.

Material provided will include bibliographies of articles published on specific subjects in a wide range of publications. Periodically, new material that may be filed easily and efficiently, will be supplied to keep the TV Service Reference File up to date in every respect.

FINGER TIP DATA

This new reader service is designed to fill a need long felt by progressive manufacturers and aggressive TV Service organizations. It will permit the manager of service organizations to maintain, at his finger tips, a vital compact file of reference data on every phase of his operation.

It should eliminate waste circulation of data, those disorderly piles of material that tend to litter some TV Service organizations — and make valuable data about as available as the needle in the proverbial haystack.

Selection, organization and distribution of material for your handy reference file will be done by the editors of **SERVICE MANAGEMENT**. But it will be up to you to prepare for it, receive it and file it for maximum value to your operation. To accomplish this, you should plan the use of existing facilities or the addition of nominal facilities.

FACILITIES REQUIRED

The TV Service management should make it a point to acquaint one of its office personnel with the details and importance of this new service. Then he should delegate responsibility for the building and maintenance of a handy file. As very little time will be required, some TV Service managers will, no doubt, choose to handle these details themselves.

Since all business-building references will be supplied for standard letter folders, the only office equipment needed will be a standard letter file cabinet. This should be kept handy to the executive's desk. It may be a four-drawer or a two-drawer stationary type or the managerial two-drawer type on casters for personal use.

EXPANDING THE REFERENCES

SERVICE MANAGEMENT is planning to provide a continuous flow of business-building references in the categories indicated in the adjoining tabulation of twelve basic topics and subdivisions. However, the individual TV Service manager should plan to use this filing system for other business-building references received from manufacturers, distributors and other sources.

To accommodate this material, the TV Service manager should arrange let-
(Continued on page 26)

TV SERVICE REFERENCE INDEX

1. Financing — Capital Requirements

- 1.1 Capital Investment
- 1.2 Operating Capital
- 1.3 Bank Financing
- 1.4 Private Capital Sources
- 1.5 Automotive Equipment
- 1.6 Test Instruments

10. Accounting

- 10.1 Breakdown of Accounts
- 10.2 Operating Statements
- 10.3 Profit & Loss Statements
- 10.4 Financial Statements
- 10.5 Business Control
- 10.6 Forms

20. Personnel

- 20.1 Technical, Shop
- 20.2 Technical, Field Service
- 20.3 Technical, Installation
- 20.4 Supervisory
- 20.5 Office
- 20.6 Training, General
- 20.6.1 Training, Technical
- 20.6.2 Training, Customer Relations

30. Inventory Control & Purchasing

- 30.1.1 Tubes, Picture
- 30.1.2 Tubes, Receiving
- 30.1.3 Tubes, Special Purpose
- 30.1.4 Tubes, Transistors
- 30.2 Replacement Parts
- 30.3 Supplementary Equipment
- 30.4 Operating Supplies
- 30.5 Technicians' Equipment

40. Service Shop

- 40.1 Location
- 40.2 Appearance
- 40.3 Layout
- 40.4 Equipment

50. Service Selling Programs

- 50.1 Advertising General
- 50.1.1 Advertising, Newspaper
- 50.1.2 Advertising, 'Phone Book
- 50.1.3 Advertising, Special Publications
- 50.2 Sales Promotion, General
- 50.2.1 Sales Promotion, 'Phone
- 50.2.2 Sales Promotion, Direct Mail
- 50.2.3 Sales Promotion, House-to-House
- 50.3 New Business Development
- 50.4 Customer Relations
- 50.5 Market Research

60. Service Business Categories, Home Devices

- 60.1.1 Television, Dealer Service
- 60.1.2 Television, Set Owner
- 60.1.3 Television, Installation
- 60.2 AM-FM Radio
- 60.3 Phonographs
- 60.4 Auto Radio
- 60.5 Audio Equipment, Custom Installation
- 60.6 Wire & Tape Recorders

70. Service Business Categories, Commercial & Industrial

- 70.1 Audio
- 70.2 Two-way Mobile Communication
- 70.3 Industrial Electronics
- 70.4 Closed Circuit Television
- 70.5 Community Television

80. Technical Data

- 80.1 General, By Product Categories
- 80.2 Manufacturers'
- 80.3 Information Services
- 80.4 Reports, Special

90. Fields of Supplementary Service Volume

- 90.1 Air Conditioning, Home Units
- 90.2 Appliances, Major
- 90.3 Appliances, Traffic
- 90.4 House Wiring, Low Voltage
- 90.5 Special Electronic Devices

- 100. Trade Associations



LEON L. ADELMAN CO. has been appointed representative for River Edge Industries. . . . **AEROCOIL, INC.**, a subsidiary of Aerolite Electronics Corporation, is now located at 24 Cliff St., Jersey City, N. J. . . . **RONALD G. BOWEN & CO.** of Denver has been appointed sales representative for the Technical Appliance Corporation. . . . **CBS-HYTRON** Division of Columbia Broadcasting System, Inc., has announced a new evacuated junction transistor. . . . **CHANNEL MASTER CORP.** has announced a four-color counter display merchandiser for interaction filters, and six 90-second TV commercials for dealers and distributors. . . . **CLAROSTAT MFG. CO., INC.**, has announced a 292-page second edition of the Clarostat TV Control

MAN CO., Boston distributors, has opened a branch at Norwood, Mass. . . . **JERROLD ELECTRONICS CORPORATION** has estimated that more than \$30 million has been spent for TV receivers on community antenna systems that serve 90,000 homes; that



Helen & Diane Windsor, JFD hostesses

by the end of 1953, these figures will double. . . . **JERSEY SPECIALTY CO., INC.**, has been granted a license to manufacture 300 ohm twin tubular lead under Amphenol patent number 2,543,696. . . . **JFD MANUFACTURING CO., INC.**, reports hundreds of fan letters for Helen and Diane Windsor, their delightful flower girls at the May Parts Show (see cut). . . . **MANNFRED ELECTRONICS CORP.** is now located in larger quarters at 21-38 36th Avenue, Long Island City 6, N. Y. . . . **MAYTAG**



New Cornell Dubilier Plant

Replacement Manual. . . . **CORNELL-DUBILIER ELECTRIC CORP.** reports that its new 270,000 square foot plant at Sanford, N. C., is nearing completion (see cut). . . . **ESSEX WIRE CORP.** has announced the consolidation of its Chicago Transformer Division and the Standard Transformer Corporation; for joint operation as the Chicago Standard Transformer Corporation. . . . **FEDERAL TELEPHONE & RADIO CORP.** has announced a gift program including a tool and tube caddy and a Weller soldering gun, to stimulate sales of TV picture tubes. . . . **GENERAL ELECTRIC** has opened its new Chicago tube warehouse, reported to be the world's largest. . . . **HARRISON RADIO CORPORATION** has moved its Jamaica, N. Y., branch to 144-24 Hillside Avenue. . . . **HEADQUARTERS** Television, Radio & Electronic Supply is organizing a new business at Willow & Trinity Sts., Austin, Texas, under the direction of Lyle Hamner. . . . **LOUIS M. HER-**



Jane White & Jacque Gustafson, Raytheon flyers

ATLANTIC CORPORATION of Long Island City, N. Y., has adopted the Markem Service System for control of its TV Service, appliance and air conditioning business. . . . **JAMES MILLAR ORGANIZATION** of Atlanta is now

(Continued on page 18)

Why So Many Service Associations?

Growing interest in trade associations raises questions about objectives of present groups

By **PAUL H. WENDEL**, editor
Service Management

In her department, "TV Association News," in the June issue of **SERVICE MANAGEMENT**, Penny Martin carried a condensation of a letter from a reader who asked some pertinent questions about service association activities in Philadelphia. This letter inspired considerable discussion among our readers. The extent of this discussion was reflected in letters, telephone calls and personal discussions with your editors.

Mrs. B. D. F., who wrote the letter, posed questions that seem to be in the minds of many top-flight TV Service executives. There is a growing interest in an effective trade association for the TV Service industry. But many service operators are confused about the objectives and motivations behind some currently active groups.

The following reply to Mrs. B. D. F.'s letter from Paul V. Forte, executive secretary of the TCA of Philadelphia and public relations counsel for the Joint Electronic Committee on Service for Philadelphia, carries an explanation of association developments in that city which may clarify the situation for many readers in other cities.

It explains how diverse groups in one metropolitan area have been able to find a suitable plan for mutual cooperation in programs for their common good. Mr. Forte wrote:

" . . . You carried a condensed letter from one Mrs. B. D. F. in which she commented on the service association situation in our fair city. Your correspondent writes a perceptive letter with a slight edge designed to cut sensitive skins.

All in all, however, she seems to be remarkably well informed about Philadelphia associations and most of the questions she posed were more or less academic in nature. It seems to me that she knew the answers in advance, and was merely exercising her constitutional rights as well as her imagination.

Nevertheless . . . her comments and questions had implications which are understood in Philadelphia but not, I am certain, throughout the country. **SERVICE MANAGEMENT** is a national publication of considerable caliber in our industry, and I know that your corre-



spondent's letter was read by many without comprehension.

If I may, I would like to answer Mrs. B. D. F. and the thousands of others who wonder at the ebullience and virility of our several groups. Perhaps, as a result, she may be in a more intelligent position to advise her reluctant husband on the advisability of which group to join.

THINGS IN COMMON

In the first, the Keystone Chapter of NEDA, the Electrical Association, the National Appliance & Radio-TV Dealers Association, the Television Contractors Association, and the Philadelphia Radio Servicemen's Association have one thing in common: They are all in the great television and radio industry. After that their interests diverge.

EMPLOYERS OF TECHNICIANS

Of specific interest is the fact that the TCA is composed of service operators who are businessmen and the employers of television and radio technicians; and, on the other side, the PRSMA is chartered primarily to handle the interests of the technicians. There is some overlapping but nothing that will not, in time, straighten out as the leaders of these groups become more familiar with the concepts of their organizations.

COMMUNITY CONSIDERATIONS

As for the Northeast Television Service Dealers Association and the Television Service Dealers Association, they have much in common with the TCA but believe that they have problems peculiar to their geographical location in the community. They prefer their autonomy for this and other reasons and, in Philadelphia, we prefer to live and let live. If they want their own organizations we will . . . fight for their right to have them.

THE UMBRELLA ORGANIZATION

That leaves us with the Joint Electronics & Radio Committee on Service, an umbrella organization that is composed of representatives from every one of the foregoing mentioned organizations as well as 'Reps' and manufacturers. A prime purpose of all organizations is to do things collectively that the members cannot do as individuals. This rule applies to the Joint Committee which handles activities which cannot be handled by individuals, smaller associations or splinter groups.

Given all this information, I am sure that Mrs. B. D. F. is now placed in a position where she can be most informative in guiding her husband. Surely she, as an intelligent person, will realize that her suggestion of a single organization is much too idealistic to be practical at this time. Further, she must be aware that the Joint Committee offers the closest approach to her suggestion and that time and experience will bring about the acme of efficiency in organization that she would like to see.

SOME PERSONAL OPINIONS

Now, to pick the barbed parts of her letter from our organizational body, let me get personal: Dave Krantz holds, at this time, no official position in any organization that we know of. He has belonged to and headed many, and he has been instrumental in organizing several organizations in our field.

He is a strong and shrewd personality and functions in a dominant manner that is hard, after a time, to accept. In some quarters he is regarded as 'The Loyal Opposition' because, unless things are done his way or originated by him, regardless of their merit, he is

inclined to be obstructive. Most of us regret that he hasn't learned, after all these years, to be tactful and diplomatic.

In mentioning Albert M. Haas, president of TCA and a member of NTSDA, Mrs. B. D. F. fails to note that he is also one of the founders of the Joint Committee and one of its vice chairmen. He is also a member of the Chamber of Commerce, the Optimist Club and several other civic and fraternal groups. Yes . . . he is a 'joiner,' and all service businessmen should emulate him.

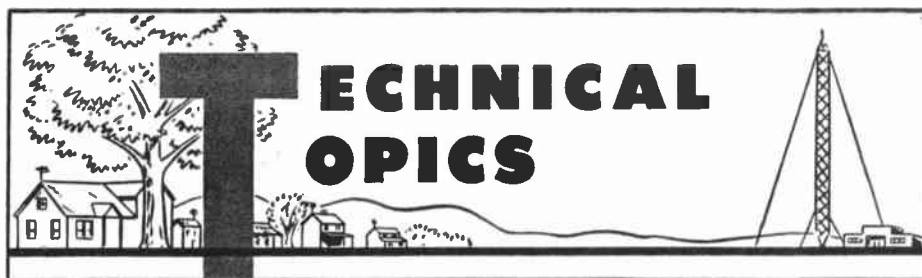
The contacts achieved by his active, dues-paying memberships are part of a most intelligent, well-designed personal and public relations program. Because other businessmen, prominent in the community, have learned to know and respect him, they have been unhesitant in referring much business to his organization.

Because of Mr. Haas' 'joiner' proclivities, his employees benefit by steady employment. His business becomes a model and an influence in the industry. I, for one, can attest to the fact that his business operations have been studied by many other elements in the industry as they seek a means of understanding and development of cooperation with service.

As to the comment about myself in which your correspondent asks whether the TCA is run by its executive secretary, I must confess that the answer is in the affirmative. Certainly I 'run' the TCA, but as a professional trade association executive and public relations counsellor. I 'run' it in accord with the principles and policies established for me by the membership and I am employed to reflect their thinking, attitudes and wishes to the industry and the public.

It may be well for Mrs. B. D. F. to know and understand that I am not now, nor have ever been, in any phase of the television industry, and that my professional services are utilized by organizations on a 'for hire' basis. This may explain to Mrs. B. D. F. why TCA and the Joint Committee have become important forces in the growth and stabilization of our industry. Certainly she must be aware that a TV businessman or technician doesn't have the background, training and the time to handle the multitude of details inherent in a well operated organization.

It is my earnest hope, one in which I am joined by many leaders of television groups of all kinds, that we may ultimately find professional men handling the affairs of all of our trade associations. The skilled projection of organizational programs and official utterances would do much to reduce misunderstandings and uninformed clamorings which have seriously injured the cause of TV Service. . . ."



UHF Sweep Generator by Modification of a UHF Converter

By EDWARD M. NOLL

At present UHF sweep generators in a reasonable price range are not readily available for the service field. However, turning a UHF converter inside out does a reasonable job.

It is possible to use a standard VHF sweep generator and a slightly modified UHF converter to form a UHF sweep signal with good linearity and ease of operation. In conventional application the UHF converter mixer crystal

amplifier of the converter is passing signal from plate to grid and there is a substantial loss. A simple modification of the i-f stage to reverse its direction improves UHF sweep output and linearity. The input circuit of the i-f amplifier should be connected to the VHF output terminals being used as VHF sweep input terminals and plate output circuit of converter i-f amplifier should supply amplified sweep signals to the crystal mixer.

A Mallory UHF converter was modified by breaking just two circuits. The lead between RFC choke at crystal mixer output, Fig. 2, and primary winding of input transformer was opened and the 300 ohm line between switch and VHF output terminals was disconnected at the switch. The free end of mixer choke is now connected to terminal #5 of output transformer. The disconnected 300 ohm line is now connected across primary of input transformer.

To place the UHF sweep in operation, the VHF sweep must be first set on channel 5 or 6. A UHF sweep signal is now available at UHF antenna terminals of converter — output center frequency being indicated approximately by calibration of UHF converter dial. A

(Continued on page 17)

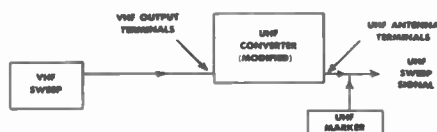


FIG. 1. Indirect UHF Sweep Generator

matches the UHF signal frequency and UHF local oscillator, to produce a difference frequency in the i-f range.

Likewise, it is possible to crystal mix a low and a high frequency to produce a still higher or sum frequency. Thus if we apply a VHF sweep signal to what is the normal VHF output of a converter, Fig. 1, and mix it with the local oscillator signal, a UHF sweep signal is available at what is the normal UHF antenna terminals.

Although this non-modified arrangement performs to a degree, the high i-f

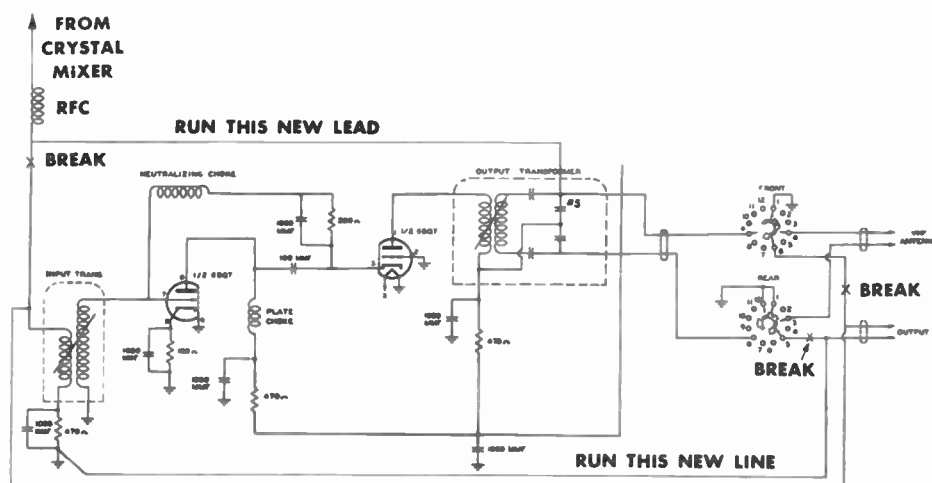


FIG. 2. Modification of Mallory Converter IF Amplifier

ARKANSAS PARTS CENTER

The Story of Wise Radio Supply and How It Grew

By JACK DARR

In 1933 a slender young man in the radio service business decided that it was about time to branch out, to expand a little. So he opened an equally slender wholesale radio parts business. Today, both of them have expanded considerably: the man around the middle, and the business — which now serves most of Arkansas and quite a bit of Eastern Oklahoma.

The man is J. Elmo Wise of Wise Radio Supply, Fort Smith, Arkansas,



Wise Radio Supply was established in the front room of this residence in 1933.

one of the largest radio-electronic supply houses in the territory.

HUSBAND AND WIFE TEAM

Elmo began the business on the proverbial shoestring. He and his wife, "Elmo and Bessie" to everyone in the territory, had gone into the radio service business in 1929. The business was conducted in the front room of their house about twelve blocks from downtown Ft. Smith. They opened the first unit of their wholesale business in the same front room.

From one room in 1933, the business expanded to another front room and then to another room. Within two years it occupied the whole house. Bessie's furniture and household goods moved steadily backward until the Wises were reduced to a home in two back rooms.

Meanwhile, Bessie had quit her downtown job to take care of bookkeeping, correspondence and counter work. This became her full-time job. It still occupies most of her time although she now has an assistant.

THE PARENT ORGANIZATION

To meet growing need for space, the house next door was purchased and a covered runway was built between the two houses. Wise Radio Service,



J. Elmo Wise confers with Bill Buster, head salesman for Wise Radio Supply.

which might be called the "parent organization" had continued to function as a source of assistance to many "stuck" radiomen. It had been established in 1929 in the original house, but it had been shoved farther and farther back along with Bessie's furniture.

About the beginning of World War II, Elmo found that two businesses were too much to manage, so he sold his service operation to Leroy Kimmons, his



Wise Radio Service is no longer connected with Wise Radio Supply.

head serviceman. The service business still retains its original name. It is operating today in a fine new building next door to the site of the second or "other" house of the wholesale business.

WARTIME OPERATIONS

When wartime scarcities and allocations plagued the radio business, Elmo and Bessie avoided "under-the-counter" deals and the frigid attitude that prevailed in many supply houses. They adhered to the good old-fashioned principle of giving the very best service on the very best parts — at fair prices. As a result Wise customers swear by them, never at them.

If there is one factor that has determined the success of the business, it is their unswerving honesty and fair-dealing. They lean over backwards to

that even the smallest customer is absolutely satisfied. From long experience, Wise customers have learned "if Elmo says so, by gosh, it's so!"

Shortly after World War II, a long cherished dream came true. The Wises had purchased a lot across the street. In 1946 the Wise Radio Supply moved into a modern structure with 55,000 square feet of space. Today, partly due to the introduction of television, these facilities are inadequate. Outside storage is used and new storage facilities are being planned.

HUMAN RELATIONS

One of the keynotes of their success is accessibility. Customers never enter Wise Radio Supply without seeing the "Boss" and getting a warm and friendly handshake — and usually an invitation to dinner! Elmo and Bessie are real homefolks. One hour with them and you feel as if you'd known them forever. As one TV Serviceman said: "By golly, they like everybody!"

Evidence of this is shown when you talk with their employees. To them labor trouble is merely a newspaper phrase. From the bundle boy to the head salesman, everybody is happy. The atmosphere makes you feel at home.

Today Elmo and Bessie live in the old house which has been remodeled into a lovely home, just across the street



Wise Radio Supply building has served since 1946, is already outgrown.

from the business. They also have a summer cabin on Tenkiller Lake, about forty miles from town. Fishing is their favorite sport. Bessie loves fishing on week-ends although the fish she catches aren't as large as those that Elmo almost catches!

They have come a long way from the days when they operated in a 15 x 15 room, with an initial stock valued at

(Continued on page 17)

SERVICE TRENDS AND STATISTICS

A Review and Forecast for Increasing Business Through Better TV Service Management

By **FRANK W. MANSFIELD**, sales research director
Sylvania Electric Products Inc.

People in general are like a bunch of chickens. If radio tubes are short, everyone and his brother buy them like crazy and store them in the garage, the attic or the basement. When tubes are plentiful they all live off the little nest eggs that they built up in the bad times — so that actual sales of tubes, year by year, are much more unpredictable than sales over a long period of time.

For forget the little swings of the pendulum — let's see what has really happened in the radio tube business — because it is the backbone of your business.

RENEWAL TUBE SALES

During the prewar year of 1940, the total demand for tubes was roughly 28 million to 30 million per year. That was a big year for radio. In those days servicemen needed 30 million tubes to keep all of the radios in repair. When television hit the scene, this is what happened. By 1948, demand was up to 48 million tubes a year. Television had just begun to make its impact, but there was already a 60% increase.

By 1950, the demand was up to 70 million tubes — two and a half times the prewar rate. In 1951 it rose to 83 million. And in 1952 the figure was 93 million, or more than three times as big as prewar. But there were not that many tubes sold in 1952, because servicemen collectively "ate" up the tubes that they bought during the excitement that occurred right after the declaration of war in Korea in 1950.

RENEWAL PICTURE TUBE SALES

The renewal picture tube business is just in its infancy. "You ain't seen nothin' yet." Back in 1948, probably not more than 30,000 or 40,000 renewal picture tubes were sold in the whole United States. By 1950, sales were up to half a million.

In 1952, my guess is that the figure was about 1,800,000. Actual industry reported sales were 1,400,000, but that figure made no allowance for the local reprocessing of tubes. Guesses have been made about the size of that industry. My personal hunch, which is shared by many factors in the industry, is that it may be as high as 400,000 or 500,000 tubes per year.

RECEIVING TUBE FORECAST

If you agree with the figures given



about TV sets and radios in use, and that all of those sets should be kept in repair, what's going to happen to the renewal tube business during the next eight to ten years?

We have already pointed out that the renewal tube business is more than three times its pre-war size. In 1953, there is every reason to believe that it will be about 97 million. It should increase to 127 million by 1956; to 171 million by 1959; and to about 224 million by 1962: In other words, it is going to more than double again.

TUBES AND TRANSISTORS

I have considered transistors as a sort of an adjustment factor. As far as TV Servicemen, collectively, are concerned, transistors are nothing but a ripple on the string. TV Servicemen are going to have to sell transistors in the replacement market just as they have been selling tubes in the replacement market.

PICTURE TUBE FORECAST

The picture tube business will probably grow to be about six times its present size within a few years. This means a minimum of about 2,700,000 renewal tubes this year, and an increase to at least 8, 9 or 10 million tubes per year. This will mean a demand for a lot of space and a lot of new headaches — but TV Servicemen should know about it, should be prepared for it.

REPAIR INDUSTRY FORECAST

How big is the Radio-TV repair industry and what is going to happen to it? As a key, we have extremely accurate figures on receiving tubes and picture tubes. We know how much those tubes are worth per unit at the factory, and therefore have a foundation on which to build a lot of our projection of what is going to happen for TV Servicemen over the next few years.

Looking back to 1941 when there were 33,800,000 renewal receiving tubes sold, they were valued at an average price of 35¢ at the factory door. That made radio servicemen the end-users in a \$12 million tube business. Your cost was greater and your selling price was considerably greater, but that is the best base on which to build the picture.

During war-time shortages, the business shrank to \$7 million or \$8 million per year. By 1948, with the inclusion of picture tubes, the figure rose to \$28 million. In 1950, it reached \$60 million and by 1952 had reached \$90 million. TV Service is a big business.

The total renewal tube business which amounted to only \$10 million, prewar, will reach the \$126 million mark this year; will increase to about \$200 million by 1956; \$271 million by 1959; and \$360 million by 1962. These figures cover only receiving and picture tubes that TV Servicemen will need, collectively, to keep sets in repair.

TECHNICAL VS. BUSINESS PROBLEMS

I would like to suggest that progressive TV Service organizations do a little sound thinking about the problem of market research and market planning. You have problems today and you are going to have bigger problems, much bigger problems. I would say that at least half of these problems will be of a commercial rather than a technical nature. Because of this, I think that you should divide your meetings so that about half of the time is devoted to technical problems and the other half to discussion of business problems.

TV Service organizations can always hire some kind of a technician. What is really going to be tough is to run your businesses like businessmen. There is an old saying: the typical repairman is
(Continued on page 26)

OUACHITA SERVICE PHILOSOPHER

*Ouachita Service Philosopher Talks About
Sittin' and Thinkin'*

By JACK DARR

Well, sir, there has been a powerful lot of bad jokes and a few good ones made about the alleged Southern habit of sittin' and thinkin', or just merely sittin' period. But it seems to me like it's a pretty good habit to git into, sometimes.

Th' world would be a lot better off right about now if several men I know of woulda done a little bit more sittin' and thinkin' before they done some of the things they did, huh? That'n kinda got away from me, but I think you know what I mean. Also who I mean, so let's just let that part of it go, and git on with the business at hand.

What I was tryin' to git into was how to apply the peaceful art of sittin' and thinkin' to the problems encountered in the everyday world of radio and TV service work. Might oughta said "maintenance work." I like that better anyhow. The real genuine maintenance man has to do a lot of thinkin', about any job that he wants to do real well.

PLAYIN' DETECTIVE

Fact is, you have to be able to think before you ever git anywhere in this dangd business. I don't mean jist sittin' an' woolgatherin', either, I mean real constructive thinkin'! Boilin' it down, the repairman has the same job that a detective has; he's gotta get himself a set of clues, make a set of deductions from those clues, and there's his solution. Now, dangit, there's that word I been trying to think of: "deduction." Shoul'da thought of that a good while back, seein's as how income tax time ain't so far off.

The ability to perform real, purely deductive mental processes is the difference between the good qualified electronics man and the hack. You've got to take a set of clues, symptoms that you've observed, conditions which your instruments show you are existing within a piece of apparatus—and from those few clues, by a process of deductive thinking, form a conclusion as to where the defective part of circuit is located.

If you're not able to do this kind of thinking, you might jist as well git out of the radio-TV business now, and take up drivin' a plow or somethin' that don't call for so much cerebation.

LIKE RESEARCH SCIENTISTS

The research scientists thinks along



those same lines. He creates a set of conditions, and subjects his test animals materials or processes to them, and from the reaction observed, he draws the conclusions from which he formulates a new theory, maybe.

You've gotta be able to do the same thing; you may have a piece of equipment that is just as strange to you as the new materials are to the researcher, but you've got to observe it, and form a set of conclusions from its behavior, and from those conclusions, arrive at your analysis.

TRUE OR FALSE?

There's another important function of that mass of gray glue between your ears that hasn't been mentioned yet. You've gotta be able to recognize a false conclusion when you see one. In other words, if you've got a dandy set of conclusions all figgered out, and you apply them, and they don't work, you'd better be able to set back, look over your own work, and ask yourself, honestly "Now, What in Tarnation have I done wrong?"

Believe me, this part is harder than the other one! This is being able to think objectively; to be able to step back and look over your own shoulder, and criticize your own work, like you would someone else's. It's dang hard to do, as I said. It's awful hard for a writer to set down and read his own stories, and tell where he left out something. He can't be objective enough to

tell, unless he's had a heck of a lot of experience, and sometimes then he can't.

This situation comes up right often in radio or any kind of electronics work. Does in mine, I know. I'll do something to a set, turn it on, and set there glarin' at it wonderin' why in thunder it won't work! Downright cantankerous of it, it seems, at such times. Well, it's happened to me so many times that I've done got in the habit of goin' back an' checkin' everything I just did, over again.

Found a goody the other day. Turned on a li'l ac-dc after replacin' the output tube socket, and nothin' happened. Set there an' glared at it fer a while. Then I got to noticin' that the wirin' looked a mite peculiar. After a few minutes of lookin' daggers at it, I saw it.

COUNTING BACKWARDS

Tube was a 50B5. For the benefit of my non-technical readers, such as my wife and mother, a 50B5 has a 7-prong socket. An octal has 8. When I took the wiring off, and then went to put 'em back, I says, countin' backwards, "Let's see, plate's on #6. 8-7-6. There. Screen's on 7. 8-7. There."

That led to what you might call a wee bit of confusion. Consequently the set didn't work! Well, sir it was hard to see that, but easy enough to straighten up, once you'd seen it. I'd just got done being so dang careful, puttin' them wires on those little bitty lugs. In fact I was kinda settin' there admirin' the neat job I'd done, and so forth. I had to laugh at myself, but it was well worth it. I learned a good lesson from that, or perhaps I should say Re-learned it; don't ever be too sure that the work you just did, or the part you just put in, was good!

TUBES FOR INSTANCE

Don't ever be ashamed to go back and check on your own work. It'll pay off in the long run. Tubes, for instance; 99 out of a hundred new tubes, literally, are good. Still, if you don't check a new tube before you put it into a set, you're leavin' yourself open to the dangdest case of trouble you ever got into! One of the dad-burnedest jobs I ever got into was a non-oscillatin' brand new 6A7.

HERE'S HOW

So, here what a feller's got to be able
(Continued on page 24)

TV ASSOCIATION NEWS

Transcripts from Service Management's party line

By PENNY MARTIN

President Roger Haines of Haddonfield, New Jersey, presided over the June meeting of the National Electronic Technician and Service Dealers Association in New York City.

Delegates from Pennsylvania, New Jersey, New York and Long Island passed a resolution which stated that NETSDA will aid all Association requesting help in their licensing problems. Final details were completed for obtaining a Chapter of Incorporation. A study and a brief discussion was made on a booklet printed by RTMA entitled, "How To Get Good Television Service Without Destroying Free Enterprise," announced John Wheaton of Long Island City, Corresponding Secretary for NETSDA.

NARDA

"When a strong local organization gets together, the business in the community is as clean as the strength of the organization," said Mort Farr, past president of NARDA, at the initial meeting of the Alle-Kiski Valley Chapter of the National Appliance & Radio-TV Dealers Association.

"When a man goes to meetings regularly he feels the necessity of earning the respect of his fellow dealers," continued Mr. Farr, and went on to explain how NARDA's 14-point program can help a local organization.

Mr. Farr pointed out the NARDA helps dealers even though they may not belong to NARDA. During the week of July 20th, Mr. Farr was the first witness before a Congressional Committee hearing on the removal of the excise tax on ironers and dryers. NARDA membership represents 5% of the dealers and servicemen in the United States so their voice will assuredly be heard, declared Mr. Farr.

Wm. R. Gott of Gott's Furniture, Arnold, Pa., acted as chairman of the meeting which had the indorsement of the New Kensington Chamber of Commerce and has been asked to continue in that capacity until permanent officers can be elected.

Rudert's Inc. of Tarentum and Al's Radio & TV of Arnold, promoters of the local chapter, have been NARDA members for several years. They signed up fourteen new members at their initial meeting. Also assisting with arrangements were Mr. Thomas Allan and



Mr. Thomas George, West Penn Power officials.

DETROIT

Retailers and television servicemen must work together to establish better public relations, Mort Farr told the Television Service Association meeting in Detroit, Michigan.

"There are whole fields of activity that we are not handling correctly or vigorously enough," he said. "It's because retailers have done serious injustice to service people in the past and that injustice must be corrected. Nor are service dealers as free from fault as you and I would like."

Mr. Farr developed five main points of important mutual retailer-service dealer responsibility: 1. Salesmen must be educated to do an honest selling job

in informing customers as to possible television service needs. 2. Falsified ads promising service below actual cost levels must be stopped with the aid of ad media, BBB's and legal agencies. 3. Manufacturers should be encouraged to maintain uniformity on warranty tags; minimize line changes per year and issue service data promptly with new models. 4. Standardized 90-day warranty periods on parts would reduce troubles of set and service dealers alike. 5. Interchange of business information between service firms can help them all improve their profit picture.

"Service is the most important single part of the television business," Mr. Farr continued. "Those little leaks through which our profits drain—the chiseling on price, the loss of replacement parts through warranty complications, the prohibitive prices we must pay for manpower for lack of suitable training facilities—these are things we must work together to correct. Our choice is not one of liking or disliking each other; as long as we're divided our suppliers will sell to our customers at our prices and the other evils of our industry will remain."

WICHITA, KANSAS

Appliance dealers generally do not capitalize adequately on their role of businessmen who help people to live, with labor-saving, sanitation, convenience and necessity items, Wallace Johnston told the 300 dealers and distributor representatives attending a Wichita Appliance Dealers Association
(Continued on page 18)



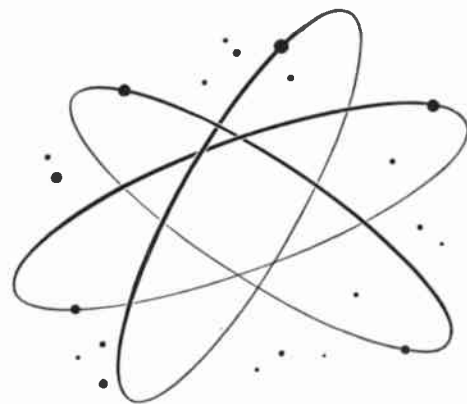
New Kensington, Pa. Daily Dispatch
Mort Farr, past president of NARDA, addressing members of the Kiski Valley Chapter at a recent meeting in the West Penn Auditorium, Arnold, Pennsylvania.

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UHF Auto-Level Sweep Generator

Model G-8002. The newest, most modern, most inexpensive UHF sweep generator on the market. Checks sweep alignment with *any* test oscilloscope. Its output is controllable . . . makes possible overall trouble shooting and testing of low level units such as UHF tuners, boosters, converters, etc.



PHILCO Test Equipment



Field Strength Meter

Model M-8104. More features than any other unit at this popular price. Reads signal strength directly from the dial from 10 to 100,000 microvolts. A serviceman's time saver to measure actual TV picture signal strength.

**NOW YOURS
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3-inch TV Oscilloscope

Model S-8200. The most practical portable unit available for bench or field servicing. Preset horizontal and vertical sweep rates take the guesswork out of trouble shooting. Ideal for television because of its high sensitivity and wide response.



Cathode Ray Tube Checker

Model 7053. Tests *all* picture tubes used in home TV receivers. Special cathode-ray tubes are easily checked by using plug-in adapters. Eliminates trouble shooting guesswork. Neon lamp indicates shorts and open elements in the electrodes of the gun.



Dynamic Signal Tracer

Model 7031. An extremely versatile instrument . . . this unit is designed for fast diagnosis of radio trouble by audibly monitoring RF and AF circuits. Can be used to accurately check P.A. systems, microphones and phonograph pick-up circuits.

THE SERVICEMAN

The Philco test equipment line is new! New circuits, new styling, new ruggedness, new versatility, new accuracy! Each piece of equipment is precision-built and now brings new features specifically designed *with your needs and your problems in mind!* Look over the individual instruments shown on these pages, and then mail the coupon below or get in touch with your Philco distributor to find out how easy it is to own a complete Philco Test Equipment Service Laboratory.



5-inch High Gain Oscilloscope

Model 5-8202. This outstanding scope is built to the highest standards of test instruments... It features the highest gain 10 millivolts/inch, and widest frequency range at its popular price. Wide sweep ranges allow flexibility in sweep circuit trouble shooting.



Mutual Conductance Tube Checker

Model 7052. Tests more different type tubes than any unit on the market, from subminiature to acorn low power transmitting tubes... Forecasts tube life... employs roll chart instead of cards... for use as a portable or counter top unit.



Model M-8100



Model M-8102

Model M-8100. The rugged PHILCO CIRCUIT MASTER is one of the finest vacuum tube voltmeters ever designed. With its companion unit the famous...

Model M-8102. PHILCO CIRCUIT TESTER you have a combination engineered to meet the most rigid specifications for reliability, durability and accuracy of design.



Visual Alignment Generator

Model 7008. Combines in *one* economical instrument functions that can be approached only in a cumbersome collection of costly devices. No special scope connections are required for the most accurate visual alignment that is possible to achieve.

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VHF to UHF Signal Generator Adapter

Model G-8000. The most economical system yet designed to produce UHF signals for TV receiver tests. Through a conversion process this unit produces from an input VHF signal, UHF signals having the same characteristics as the VHF signal.



Appliance Tester

Model 5007. The ultimate in versatility. A one package, all purpose, portable appliance service unit. Permits over-all analysis of refrigerators, ranges, air conditioners and household appliances. With "pick-up" elements to determine temperature.

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1953 BATTERY MERCHANDISING

... turns over inventory up to fifteen times a year

By DWIGHT SCHOEFLER, RCA Victor Division

With a little smart promotion you can turn the summer doldrums into a profit whirlwind. How? By getting your share of the big service and replacement market created by that husky youngster, the portable radio.



Counter Display Merchandiser

Over one hundred prominent manufacturers have smart entries in the portable business. What's more, they have manufactured and produced over ten million sets since 1945.

To sell tubes and repair service to the portable radio fans in your area, there is one step you must take. That step is the aggressive and alert merchandising of radio batteries. In few other items that you sell is there the profit potential that is possible with batteries. Many dealers report that their battery inventories turn over up to fifteen times a year.

Add the plus profits this shop traffic can mean for you to the fast-moving battery sales you'll enjoy, and you'll be concentrating on radio batteries right around the calendar. Maybe you've dabbled in batteries before, but never have taken them seriously. Want to start your cash register ringing pronto? Here's a step-by-step plan of action for you — right from the SERVICE MANAGEMENT merchandising staff.

STEP-BY-STEP PLAN

1. Talk over the problem of building your battery business with your distrib-

utor salesman. Ask them about the current potential in your area. Inquire about portable sales in recent years. And remember — every portable sold last year means *three* battery complements sold this year. They can help you make those sales.

2. Order an adequate battery stock of the leading volume types. Surveys reveal that nearly 97% of your dollar volume will be created by less than a dozen battery types. You must offer a representative group of these batteries or you'll miss sales. Buy wisely and portable radio owners will remember that you'll have what they want — when they want it.

3. Start promoting your business as "portable radio headquarters" in your neighborhood. Where is it more likely that a customer should turn for radio



Battery Stock Merchandiser

batteries and portable radio repairs — than a radio-TV Serviceman? You know all about radios — and you should become an expert on batteries, too.

You can obtain a wealth of fine promotional material from leading battery companies. Use it. TV Servicemen stocking and selling RCA Batteries this year, can choose from such helpful sales aids as wire floor stand or counter merchandisers; a modern window display; a handy battery guide listing the battery complements of all leading portable radios; a specially-designed radio

battery tester and display; shop pennants; direct mail kits and many other display and selling materials.

4. Display your batteries attractively in a clean shop window — and you're ready for business. Price your merchandise neatly for customer reference. Stamp the batteries you sell with your name and address — to build repeat business by reminding customers where they bought their last batteries.

5. Handle your stock carefully. Keep it neat and clean. Rotate it every time you restock — to make sure no customer buys an unfresh battery — forced to the rear of stock by inadequate rotation. Check your inventory carefully — to avoid over-ordering or inadequate supply. The sales you lose through short supply will never return.

6. Sell your radio battery stock. Supplement the power of your battery sales aids with personal selling effort. Mention portables and radio batteries to every prospect in your shop. Selling emphasis will create interest, will impress your customers with the fact that you are in the portable repair and battery replacement business.

Follow these general steps and you



Counter Battery Checker

will be well on the way toward establishing a firm foothold in the portable radio battery market. Add this strong potential to your current sales volume. It will pay you well.

TECHNICAL TOPICS

(Continued from page 9)

UHF sweep signal is available on any UHF channel by setting dial on that channel, assuming UHF converter dial has been calibrated accurately and has been tracking properly.

There are a few precautions to take in setting up the alignment equipment:

1. Use a short 300 ohm line to connect sweep output to UHF input of UHF device to be aligned. Keep this line clear and away from other leads. Establish good grounding between units.
2. Do not overdrive converter as indicated by flattening of response curve as output of VHF sweep is increased.
3. Do not permit marker generator to distort response. Also be certain you do not align with a false marker. There are at least two and perhaps three local oscillators functioning in the usual UHF alignment set-up. Opportunities for false markers and beats are obvious. A test for a true marker is:
 - a. When the center frequency of a UHF sweep generator is changed by varying tuning control of modified UHF converter, a true marker will stay at same position on the response curve as the curve is moved along the screen.
 - b. When the tuning control of a UHF device under alignment is changed, the true marker moves along the curve. It stays fixed at same horizontal position on scope screen. A true marker will respond to both checks; a false one, to just one or neither check.

UHF SIGNAL GENERATOR

The same arrangement can be used to generate a single frequency UHF signal. In this application a single VHF fixed frequency is applied at same point as the previous VHF sweep signal. Thus a single frequency for any UHF channel can be made available at the UHF antenna terminals. In fact, this can be a video-modulated UHF signal. We pick up a strong channel six signal right off the antenna and apply it to the VHF input of our modified converter and there is available at UHF antenna terminals a video modulated signal on any UHF channel for antenna or converter tests.

TV RELAY SYSTEM

Further checks indicated that by tuning the UHF generator additional local VHF channels could be turned in. Signals were at a weaker level, of course, because we now tune off the channel 5-6 maximum gain of the converter i-f amplifier.

It takes just a little imagination to

realize it would be possible to modulate a microwave transmitter with the entire spectrum of VHF channels 2-13 and transmit it as a solid signal into a community area. For example, all VHF signals could be received on a mountain top and entire spectrum used to modulate a single microwave transmitter that would concentrate its radiation into

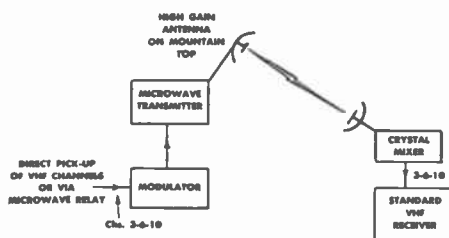


FIG. 3. Why is this Method of Community Service Illegal?

the community. Each receiver would have a high gain antenna and crystal mixer with a fixed frequency local oscillator. Difference frequency at its output would be the entire VHF spectrum and stations could be selected in normal manner with the receiver of a VHF tuner.

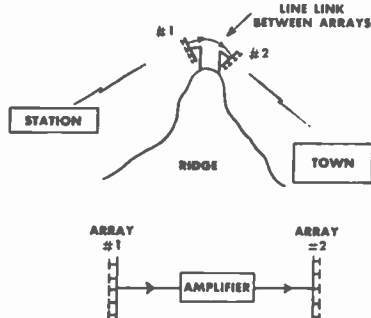


FIG. 4. Why is this Method of Improving UHF Coverage Illegal?

Here is a system that would simplify community system and lower its cost to the consumer without using old-fashioned pole rigging. It would eliminate the standing-wave and radiation problems of present wired systems. Here is a modern method of providing community service. Again such a system is not legal—is it not time for the FCC to be told how their tight control on relay systems is not permitting full public service?

PARTS CENTER

(Continued from page 10)

about \$2000. "In those days," Elmo explains, "a hundred tubes covered every type on the market." Long hours of hard work, attention to the business and being really friendly to customers, employees and sales representatives have upped Wise Radio Supply's gross sales to almost half a million dollars annually.

NARDA Costs-of-Doing-Business Study

Appliance and television dealers had a net operating profit ratio of only 3.2 in 1952 as compared to 2.9 in 1951 and 6.0 in 1950, the annual Costs-Doing-Business Survey conducted by the National Appliance & Radio-TV Dealers Association reveals.

Dollar sales in 1952 expanded 8.8% over those of 1951, the sales turnover rate increased sharply, the cost-of-goods-sold ratio declined for the second consecutive year and the gross margin rose 0.8 points over 1951, the study shows.

The meager profits are attributed to the rising operating cost, total operating cost ratio reaching an all-time high in 1952 since the study began in 1946 and the dealers attributing further difficulties to price-cutting, excessive trade-in allowances and shortage of good sales personnel.

The annual survey is conducted for NARDA by Richard E. Synder, Chicago consulting economist and an authority in trade-wide business analyses.

TELEVISION SALES LEAD

In order of importance, television sold best in 1952 and increased its share of total sales to 30.8%. Refrigerators regained a surprising second place in the sales standing with 19% of the 1952 total after falling below washers in 1951, and washer sales were the next best selling major appliance in 1952 with 15.9%. Air conditioners last year more than doubled their percent of total reported sales—from 0.7% to 1.5%.

Special group breakdowns of operating ratios showed the smallest dealers to be in the most precarious position and West Coast dealers to have the highest profit ratio.

Discounts allowed by manufacturers were rated by dealers as one of the most important causes of their poor showing for 1952, many specifically mentioning low discounts on television. Only reckless price-cutting and excessive trade-in allowances received greater attribution for the slim profits.

DEALER PROBLEMS

Other problems, in the order of frequency of mention, were the salesman shortage, back-door selling, consumer sales resistance, increased number of competitors, over-production, misleading advertising, shortage of some TV models, too many TV model changes, high service costs, high market saturation and competition from co-ops. Most of these were also listed among the obstacles seen for 1953.

Nearly 60 percent expect 1953 to surpass 1952 in volume, their estimates averaging 15 percent above last year.

(Continued on page 23)

NEWS BRIEFS

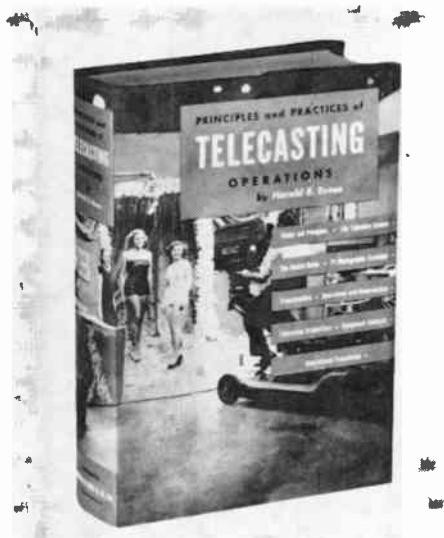
(Continued from page 7)

representing Clarostat. . . **NATIONAL UNION RADIO CORPORATION** has announced expansion of its Pacific Coast warehousing facilities. . . **L. L. DEL PADRE ASSOCIATES** of Springfield, Mass., recently sponsored a RMS program for technical discussion of TV antennas and lightning arrestors. . . **P. R. MALLORY & CO., INC.**, is now



W. W. Watts & Barton Kreuzer demonstrate new RCA push-button tape recorder

supplying a full line of power rheostats from 25 watts to 500 watts. . . **RADIO MERCHANDISE SALES, INC.**, recently stressed the role played by TV Service technicians in a telecast over **WHYN-TV**, Holyoke, Mass.; has announced similar programs for Zanesville, O.; Ft. Lauderdale, Fla., and Madison, Wis.; has announced the addition



Howard Sams announces new book of a new 18,000 square foot warehouse. . . **RAULAND CORPORATION** has obtained a five-story warehouse at 3501 West Potomac Avenue, Chicago. . . **RAYTHEON Television & Radio Divi-**

sion recently sponsored an "All Woman Transcontinental Air Race"; 44 gals entered the race for \$800 first prize and a handsome trophy (see cut); Receiving Tube Division has announced decreased prices on type CK722 junction transis-



Semco Remote Control for TV Set

tors. . . **RCA VICTOR Division** has announced a compact carrying case called the "RCA Servi-Chest" to carry parts, tools and test equipment required by TV technicians during house calls; has announced a new push-button tape recorder that will record or play back for two hours on a single reel, rewind in less than three minutes (see cut); has announced new high fidelity phonographs and extended range records; has announced plans for construction of a new plant at Findlay, Ohio, for manufacture of components for home radio and TV receivers. . . **HOWARD W. SAMS & CO., INC.**, has announced, for publication about October 1, a 600-page book with more than 450 illustrations



Webster Electric portable sound system

entitled "Principles and Practices of Telecasting Operations" by Harold E. Ennes (see cut); has declared a twelfth consecutive semi-annual dividend of \$2.50 per share on its 5% cumulative preferred stock. . . **SEMCO ENGINEERING & MFG. CO.** of Los Angeles has announced a remote control for TV receivers (see cut). . . **SPRAGUE ELECTRIC COMPANY** has announced construction of a new 50,000 square foot plant in the Blue Ridge area of North Carolina. . . **WARD TERRY & CO.** of Denver has been appointed distributor for RCA and RCA Victor products. . . **TRANSVISION, INC.**, has announced a

viding 30 minutes of operation for 25 cents. . . **WEBSTER ELECTRIC CO.** has announced the addition of a portable sound system to its line (see cut). . . **ZENITH RADIO CORPORATION** has introduced a new "Cinebeam" television tube that is reported to act like millions of tiny built-in mirrors to produce fine-grained pictures.

ASSOCIATIONS

(Continued from page 13)

meeting.

"We should give good service to gain the confidence of the public we serve, so that it will have the proper respect for us; our products and our reputations are not better than the service with which we back up our sales." He said.

TRENTON, N. J.

Cut-price operators in the appliance industry face inevitable disaster, Mort Farr pointed out to the Central Jersey Electrical League at Trenton, New Jersey.

There's not a thing we can do to stop a man from cutting the price on anything he sells that's not fair traded, he advised. "But there are stronger economic laws that are forcing many of the most notorious price cutters out of business more effectively than any pressure



John T. Thompson, G.E. replacement tube sales manager, at left, receives a special plaque from Ben Sims, president of the Radio Television Technicians Guild of Boston, Mass., as A. C. W. Saunders looks on.

organized dealers could generate. These are the economic laws which say that the dealer who maintains sound controls over his business, who buys realistically and sells enthusiastically and profitably, just and will prosper."

SPRINGFIELD, ILLINOIS

The proposal presented to the Illinois state legislature on behalf of the Chicago City Council that cities be empowered to license television servicemen was killed in committee by a vote of 8 to 2 after Howard Wolfson of Mercury Radio Service, Chicago, presented testimony about the hardship such legislation could cause the smaller service firms.

(Continued on page 24)

FILE

50

A VITAL, PROFITABLE SERVICE FOR

Owners and Managers of Service Business

Are You . . .

- Cashing in on all possible business?
- Using all the "Keys" to open the Service Selling door?
- Getting your share . . . or more . . . of new business?
- Over-buying or underselling?
- Cutting unnecessary costs that slice away profits?
- Organized for money-making efficiency?
- Making more than an ordinary salary?

SERVICE MANAGEMENT and the FREE FILES, starting with FILE 50 on Service Selling Programs, will answer these and hundreds of other vital questions and give you solutions to every problem of a SERVICE BUSINESS MAN or MANAGER.

The owner of a Service Business or manager of a Service Department will not realize top profits unless he puts into practice tested, proved management ideas . . . practical methods that cut costs and increase the flow of dollars. *Now, for the first time, this Gold Mine of Profit-Building data is available to you as a SPECIAL SERVICE tailored for your business operation.*

FILE 50 is FREE only to subscribers of SERVICE MANAGEMENT MAGAZINE, the only magazine that concentrates on the business problems of the Service Business. It is a tool that more than 20,000 wide awake, progressive, service executives find valuable each month; a guide to money-making and prosperity for you. It is a MUST INVESTMENT THAT PAYS DIVIDENDS.

FILE 50, which alone cost far more than a year's subscription to SERVICE MANAGEMENT, will be followed by other packages of specially prepared FILES . . . all FREE only to subscribers who own or manage a service business . . . including Inventory Control and Purchasing of picture, receiving, special service tubes and transistors, replacement parts, supplementary equipment, antennas, boosters, converters,

etc.; Capital Requirements and Financing; Personnel; Shop Problems; Accounting — methods that will give you the real facts about your business and show you the way to plug leaks in profits; Service Business Categories ranging from Home Devices to Commercial and Industrial; Technical Data, Sources of Extra Service Volume, etc.

The complete index for these Files will appear in the August issue of SERVICE MANAGEMENT . . . more than sixty items, all of which will be FREE TO SUBSCRIBERS . . . thousands of ideas for your information and which you can put to work to make your business most successful.

FILE 50 will be mailed to thousands of Service Operators in September and, in addition, the September issue of SERVICE MANAGEMENT will give detailed information about the correct use of FILE 50.

Months of research and work by experts has started the ball rolling on this most important extra service to subscribers of SERVICE MANAGEMENT. It will keep you up-to-the-minute on every phase of the management of your business . . . and open the road to greater profits.

Behind quality technical performance for customers there must be sound management, so that you earn maximum profits, not just a small wage . . . and eliminate waste and loss that has forced many a mismanaged business to close the door and look for a job.

Act Now! Fill in the coupon today!

SUBSCRIBE NOW! MAKE SURE OF RECEIVING FILE 50 FREE

SERVICE MANAGEMENT

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Gentlemen: Please enter my subscription to SERVICE MANAGEMENT at \$3.00 a year. (Two years, \$5.00). This includes Management Information FILE 50 and subsequent Management Information Files FREE.

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NAME _____ STREET _____
Please Print

CITY _____ ZONE _____ STATE _____

Type of Business:

- SERVICE CONTRACTOR; DEALER
- TECHNICIAN; DISTRIBUTOR
- PARTS JOBBER
- MANUFACTURER OF _____

SIGNED BY _____
POSITION _____

August Sales Tips

By JOHN H. HAUSER,
manager, distributor sales
CBS-Hytron Division
Columbia Broadcasting System, Inc.

*The first of a series of guest editorials
by distinguished sales executives.*

Our industry, one of the youngest, is growing by leaps and bounds. To assure continued development, every segment of it must be healthy. An integral part of our program is the betterment of the lot of our associates in the radio and television service field.

Our engineers have developed many firsts in tube manufacturing. They are continually working out new products and new ways to make old products better — to assure greater customer satisfaction. A recent accomplishment is the new CTS-rated tube program designed primarily for use in critical television circuits.

We offer, in addition to our scientific developments, numerous technical aids to assist servicemen. However, our interest is not purely technical. We realize that service personnel must be adequately trained. Technical data and tools merely assist the already trained technician in the performance of his job. We will continue to expand this program.

SALES PROMOTION

An important step in the development of a healthy service industry is the initiation of sound advertising and sales promotion. It is gratifying to see the increased number of service organizations that advertise service via the classified section of their local telephone directories and newspapers. Some of them use local radio. A few have used television.

Trade associations, manufacturers and distributors conduct programs to educate the public to the merits of reputable service companies. Direct mail, to attract new customers and bring back the old, is another important phase of sales promotion. Signs, decals and window displays provide excellent results at the point-of-sale. Much of this material is supplied by manufacturers free or at slight cost.

BUSINESS METHODS

The first moment the customer steps into your shop is the time to impress him favorably with the way you conduct your business. It should be neat.

(Continued on page 24)

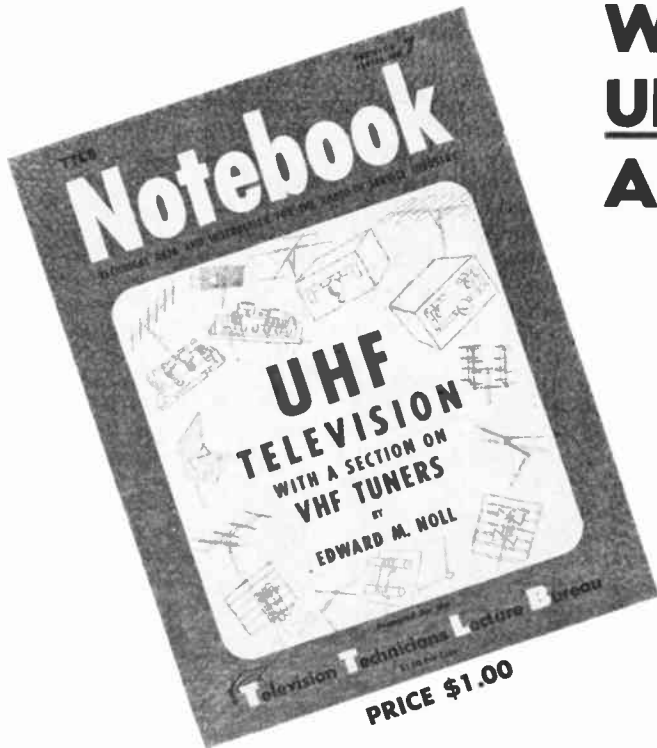


HENRY ALBAUGH has been appointed sales engineer for the Radio Condenser Company. . . . **MAX F. BALCOM** has retired as Sylvania Electric's board chairman. . . . **WEBSTER E. BARTH**, formerly New England sales manager for the Reynolds Metals Company, has been appointed general sales manager for LaPointe Electronics, Inc. . . . **ERNEST W. BEYER**, export manager for Olympic Radio & Television, Inc., has testified that quotas against importation of Venezuelan oil may result in Latin American restrictions against American electronic exports. . . . **SAM BIALEK** received a gold wrist watch, a testimonial scroll and a Clarostat 25-year gold lapel pin from Victor Mucher, Clarostat president, at the 1953 Electronics Parts Show. . . . **MICHAEL BORIS** has been appointed assistant factory manager for the Simpson Electric Co. . . . **STANLEY T. BUREK**, RCA-TV service branch manager at Kalamazoo, has received the "President's Cup" award. . . . **E. C. CAHILL**, president of the RCA Service Co., says, "the serviceman is the only representative of the television industry who visits the home of the average customer. It is essential that he be pleasant, courteous and cooperative as well as a competent craftsman." . . . **FRANCIS X. DIAMOND**, RCA branch manager at Baltimore, was a recipient of the RCA "President's Cup" award to its TV service branches. . . . **MORT FARR**, past president of NARDA, recently told members of the Central Jersey Electrical League that the most effective weapon against price cutters is salesmanship. . . . **AL FRIEDMAN**, formerly vice president in charge of sales, has been elected director of Olympic Radio & Television, Inc. . . . **LEON C. GUEST, JR.**, formerly assistant controller, has been elected controller of Sylvania Electric Products, Inc. . . . **W. BENTON HARRISON, JR.**, formerly treasurer, has been elected vice president of Sylvania Electric Products, Inc. . . . **DR. J. E. HOBSON**, director of Stanford Research Institute, recently presented views on "The Philosophy of Telemetering" at a three-day conference sponsored jointly by the Institute of Aeronautical Sciences, the Institute of Radio Engineers, the American Institute of Electrical Engineers and the Instrument Society of America. . . . **JOHN HOLZMAN** has been named vice president and director of sales for the RCA Victor Distributing Corporation. . . . **CHARLES F. KETTERING**, retired director of research for General Motors, says: "One of the things we have to be thankful for is that we don't get as much government as we pay for." . . . **DONALD H. KUNSMAN** has been elected vice president in charge of the consumer products division of the RCA Service Company. . . . **OTIS S. MARSHALL** has been appointed manager of Sylvania's radio & television division cabinet plant at High Point, N. C. . . . **NEAL McNAUGHTEN** has joined the RCA Victor Division as administrator of the broadcast market planning section of the engineering products department. . . . **DON G. MITCHELL** has been elected chairman of the board of Sylvania Electric Products, Inc. . . . **EDWARD L. NUNG** has been named manager of the tuner division of P. R. Mallory & Co., Inc., at Indianapolis. . . . **ERIC K. ORNE**, formerly sales manager for Metro Distributors of Boston, has been appointed eastern sales manager for Olympic Radio & Television, Inc. . . . **RICHARD PARKER** has been appointed distributor salesman for CBS-Hytron in upper New York state. . . . **JACK PERLMUTH** received a gold wrist watch, a testimonial scroll and a Clarostat 25-year gold lapel pin from Victor Mucher, Clarostat president, at the 1953 Electronics Parts Show. . . . **EUGENE F. PETERSON** has been appointed manager of marketing for General Electric's radio & television department. . . . **GERALD W. PFISTER** has been elected treasurer and controller of the RCA Service Company. . . . **ANGEL RAMOS**, owner-president of San Juan, P. R., *El Mundo* and *Radio El Mundo*, is purchasing General Electric equipment for WKAQ-TV, operating from a 1,750-foot transmitter site; signals are expected to reach a potential audience of 1,700,000 — may reach as far as the Virgin Islands. . . . **GRADY L. ROARK** has been appointed manager of marketing for General Electric's tube department. . . . **ROBERT C. SCULLY**, RCA-TV service branch manager at Bridgeton, N. J., has received the "President's Cup" award. . . . **WALTER R. SEIBERT**, formerly controller, has been elected treasurer of Sylvania Electric Products, Inc. . . . **ERNEST A. STEINKRAUS**, RCA-TV service branch manager at Auburn, N. Y., has received the "President's Cup" award. . . . **THOMAS STEWART** has been appointed sales engineer for the Radio Condenser

(Continued on page 24)

GUARANTEED TO HELP YOU

WHIP YOUR TOUGHEST UHF INSTALLATION AND SERVICE PROBLEMS



Here is the practical, fact-packed manual on UHF television that will save you many hours of time working with equipment in the new high bands.

Thousands of technicians who heard Edward M. Noll lecture on UHF television ordered copies of Notebook #7 before it was printed. Mr. Noll knows the practical needs of field service technicians. He gives you the vital "how-to-do-it" information that saves your time and eliminates endless hours of wasted effort.


In this 72-page, graphically illustrated manual you will find priceless information that will help you on every UHF installation or service job you have to work on. Here are just a few highlights from only four pages of this idea-packed Notebook.

1. Circuit diagram for a UHF test oscillator that will develop any frequency in the UHF spectrum. Build one of these low-powered oscillators and you will have an indispensable UHF test instrument for your own shop.
2. A simple plan for testing, aligning and servicing UHF converters and sets with equipment you now own. You can eliminate guesswork by following the suggestions given in this section.
3. A plan for making your own transmission line checks.
4. How to make your own antenna performance checks. UHF is tricky. Equipment that works well in one location fails in another. You can eliminate a lot of guesswork by knowing the individual limitations of UHF products by making your own tests of performance.
5. How to align a UHF converter. Step-by-step instructions for converter alignment that will simplify that kind of service when it is needed.
6. A complete table of UHF frequencies with channel center wavelength in inches for all 70 UHF channels.

Get your copy of Notebook #7 on UHF Television from your Parts Distributor or use the coupon below to order directly from the publishers:

TYPE OF BUSINESS:	Paul H. Wendel Publishing Co., Inc.
<input type="checkbox"/> SERVICE CONTRACTOR; <input type="checkbox"/> DEALER	P. O. Box 1321
<input type="checkbox"/> TECHNICIAN; <input type="checkbox"/> DISTRIBUTOR	Indianapolis 6, Ind.
<input type="checkbox"/> PARTS JOBBER	Enclosed is \$1.00 (check or M.O.) to pay for my copy of Edward M. Noll's new Notebook #7 on UHF Television. Please send it to the following address (Please print clearly):
<input type="checkbox"/> MANUFACTURER OF _____	Name _____
_____	Address _____
	City _____ State _____

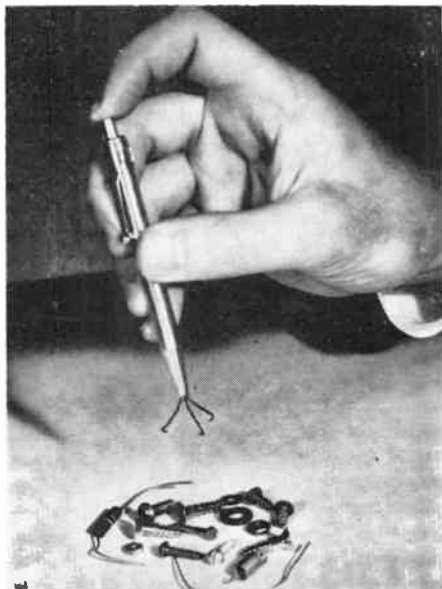
PRODUCT REVIEWS



CBS-Hytron Tubes

CBS-Hytron Division of Columbia Broadcasting System, Danvers, Mass. has announced its type 6216 filter reactor tube and its 6T4, a miniature uhf oscillator triode. The 6216 is a nine pin miniature beam power tube for use in: Class A; Class B; and Class C amplifiers; as a passing tube in electronic voltage-regulated power supplies; in wide-band video amplifiers; and in passive switching operations. The 6T4 operates under approximately the following conditions at 950 mc.:

Plate voltage	100 volts d-c
#1 Grid voltage	-4 volts d-c
#1 Grid voltage resistor	10,000 ohms
Plate current	22 ma. d-c
Grid current	400 ua. d-c
Useful power output	160 milliwatts.



Automatic Pick-Up Tweezers

Win Sales Company, P. O. Box 257, Forest Hills, N. Y. has announced stainless steel tweezers that will assist in picking up odd-shaped objects, hot objects and others that are difficult to handle because of size or shape. Spring steel fingers extend from the tweezer tip and flare out when a top plunger is depressed. The object is held firmly until released when the plunger is depressed again. Its steel fingers extend out approximately 1/4" between tips.

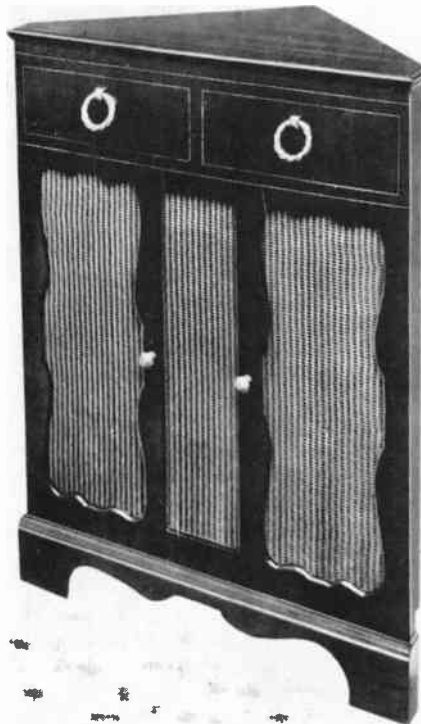
Magnetic Tape Eraser

Rason Mfg. Co., 3050 West 21st St., Brooklyn 24, N. Y. has announced an

inexpensive, portable means of demagnetizing tapes or films—on reels without rewinding or wear. The "Jeffy-Rase" is also said to lower tape signal-to-noise ratio by removing residual magnetism, and to lower background noise as much as 6 db below that of new, unused tape.

Salt Tablet Dispenser

General Scientific Equipment Co., 2700 W. Huntingdon St., Philadelphia 32, Pa. has announced a salt dispenser for dependable shop and office use to combat heat fatigue and loss of body salt due to excessive perspiration. The attractive dispenser provides good visibility of 750 10 grain salt tablets. Its glass and plastic design is said to make it strong, simple and foolproof.



University Loudspeaker Enclosures

University Loudspeakers, Inc., 80 South Kensico Ave., White Plains, N. Y. has introduced a line of high fidelity corner enclosures for twelve inch speakers. These enclosures are available styled in moderne, traditional or provincial, in a variety of wood finishes. They are 37" height, 28" wide and 15" deep.

Field Strength Meter

Radion Corporation, 1130 West Wisconsin Ave., Chicago 14, Ill. has announced a new portable, battery-operated field strength meter for use in monitoring, trouble-shooting and the installation of TV receivers. Type FSM-5000 field strength meter is said to be adequate for one installer in fringe and UHF areas. Microvolt readings are not affected by line voltage variations and no warm-up period is required. It fea-

tures continuous one-knob tuning for channels 2 to 38 and sensitivity ranging from 5-50,000 mv on VHF to 50-100,000 mv on UHF.

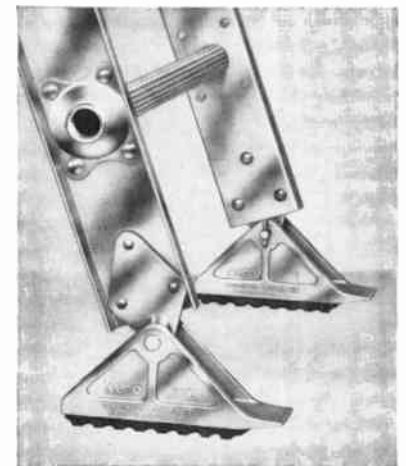


Weather-Proof Housing

Blonder-Tongue Laboratories, Inc., 526 North Ave., Westfield, N. J. is now supplying a weather-proof case for protecting any of its units in outdoor installations. The housing measures 9 3/4" x 7" x 5 3/4" and is made from heavy gauge aluminum, zinc and copper plated steel. Clamps and strapping are provided for antenna mast, chimney or corner structure mounting.

Snyder Portable Aerial

Snyder Manufacturing Co., Philadelphia 40, Pa. has announced a new Directronic portable TV aerial for UHF-VHF that is reported to provide maximum adjustments for weaker than normal signals encountered indoors. The antenna has a six-point Directronic switch with a special phasing bar in a variety of circuit arrangements for impedance matching, ghost elimination and orientation.

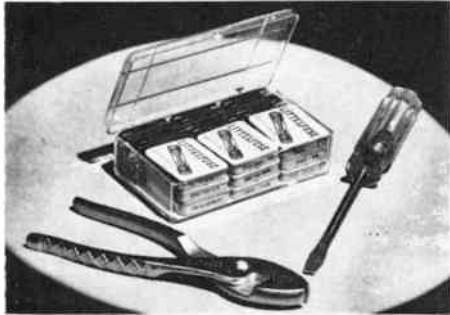


Aluminum Ladder Safety Shoe

Aluminum Ladder Company, Worthington, Pennsylvania has announced a cast aluminum safety shoe for straight and extension ladders. It is suitable for use with rubber tread or spike on the floor surface. These shoes can be attached to almost any metal or wooden ladder.

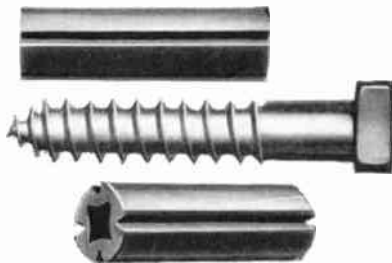
75-Volt B Battery

Tube Department, RCA Victor Division, Harrison, N. J. has announced a new 75-volt B battery that is reported to be lower priced than any comparable battery for portable radios. It has been designed particularly for use in portables and portable clock radios. Type VS217 B battery is conventional Le-Clanche call unit. It measures 6½" high, 1⅞" wide and 1 15/32" deep.



Littelfuse One Call Kit

Littelfuse, Inc., 1865 Miner St., Des Plaines, Ill. has announced that its one call kit has been brought up to date to provide convenient, compact selection of fuses required for 95 per cent of TV Service calls. The Littelfuse Kit is supplied individually packaged to simplify stock control.



Plastic Lag Screw Anchors

Holub Industries, Inc., 413 DeKalb Ave., Sycamore, Illinois is Supplying two new plastic anchors for ⅜", 7/16" and ½" lag screws or corresponding wood screws, for use in any material that can be drilled. Underwriters' Laboratories have approved these anchors for unlimited indoor and outdoor use. Laboratory tests indicate that they have a holding power of two tons in concrete. The anchors are made of ethyl cellulose. As the screw is turned in, the anchor expands and the plastic cold flows into crevices in the drilled hole wall.

Aerosol Rust Cutter

James R. Kearney Corp., 4236 Clayton Ave., St. Louis 10, Mo. is distributing a rust-cutting oil designed for spraying on rusted fastenings to free corroded nuts, bolts and studs. A short spray from six to eight inches away is said to dissolve rust in about two minutes. The product is supplied in easy-to-hold six ounce spray cans.

Trade Literature

RCA TV BUSINESS BOOKLET

A thirty-three page booklet entitled **This Business of Radio & TV Servicing** is described as a blueprint for greater profits and increased efficiency in radio and TV Service operations, includes a description of business practices and essential test equipment.

The practices outlined are based on the practical experience of successful service dealers and should be helpful to any service organization, regardless of size. Its business-guide sections treat management subjects including: budget planning; wages and salaries; materials; stock control; employee training; customer relations; and tested methods for reducing operating costs.

Available from RCA tube, parts and test equipment distributors.

WILLIAMSON AMPLIFIER DATA

A revised Williamson Amplifier instruction sheet has been published that contains performance curves, schematics, parts lists, chassis layout and diagrams for a high fidelity, low-cost audio system.

Write to Standard Transformer Corporation, 3580 Elston Ave., Chicago 18, Illinois.

SURVEY

(Continued from page 17)

only 10 percent expect a decline. 45 percent expect profits for 1953 to improve, 42 percent see no change and 13 percent expect a profit decline.

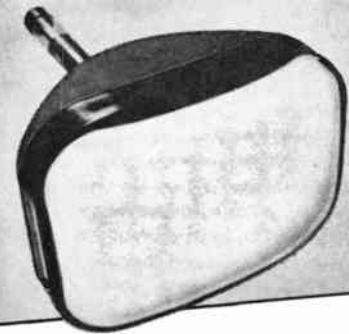
Greatest hopes for sales volume in 1953 were given to laundry equipment followed in order by television, refrigerators, ranges, freezers, air conditioners, dishwashers and kitchen equipment.

MORE EFFECTIVE SELLING

That dealers are selling more effectively and stocks are reduced to practical size is indicated in the turnover rate reported. This rose to 4.4 in 1952 as compared to 3.3 in 1951, with 4.3 in 1950 and 3.8 in 1949. At the end of 1952, dealers had 15.3% less stock (in dollar value) than at the beginning. The 1951 year-end inventory was 6% above the starting level for that year.

Gross margin, including service parts and supplies, for 1952 was 32% in comparison to 31.2 in 1951. On merchandise excluding service parts and supplies it was 30.2 in comparison to 29.7 for 1951. Revenue from service amounted to 10.6% of the combined total in 1952; it was 8.6% in 1951. 7.4% in 1950 and 8.4% in 1949.

You can build a reputation on Tung-Sol® Quality



TUNG-SOL makes
All-Glass Sealed Beam Lamps,
Miniature Lamps,
Signal Flashers,
Picture Tubes, Radio, TV,
Special Purpose Electron Tubes,
Semiconductor Products.



TUNG-SOL ELECTRIC INC.
Newark 4, New Jersey

Sales Offices: Atlanta, Chicago, Columbus, Culver City (Los Angeles), Dallas, Denver, Detroit, Newark, Seattle

The **NEW** JSC Tubular Twin Lead...



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.



Manufactured under license of Amphenol Pat. 2543696

OUACHITA PHILOSOPHER

(Continued from page 12)

to do. You gotta be able to think **objectively**: this means steppin' back and looking over your own work just like somebody's elses. **Deductively**: this means being able to observe a set of possibly disconnected facts and symptoms—put 'em all together and add 'em up to a conclusion. **Inductively**: By bein' able to apply inductive reasoning to the process of fixin' a contrary radio or TV set, you'll save yourself a power of trouble!

Now, don't tell me you can't do it. You've been doing it, in one form or another, for lo these many years. If you hadn't, you wouldn't have been able to survive in this business. You can do it, and you'll find out that this business is a lot easier, if you will.

Keep 'em thinkin'! You-all come see us.

SALES TIPS

(Continued from page 20)

well arranged and equipped with up-to-date testing and servicing devices. Personnel must be properly trained to do the job. They should have the kind of appearance and manner to make the customer want to come back.

But beyond this: what about your

shop records? Your invoice systems? Your accounting and credit policy? Are you operating at a profit and in a way to inspire confidence?

Most of us agree that the average family derives more hours of pleasure from its television, radio and record player than it does from its car. How can we sell this idea?

How can we convince the public that a TV Serviceman's time is worth as much as that of a garage mechanic? That by replacing a component now, we can save a call-back later. Most of us accept the garage man's word without a whimper, why not the TV Serviceman's word?

Most people can be reasoned with if they are presented with facts about what was needed, what parts were required and how long the job took. This is especially true if we are sold properly.

CBS-Hytron has done much research in business methods for TV Service operation. Its Budget Plan was a direct result of this research. Assisting TV Servicemen to obtain cash for service performed on *credit* has contributed much toward a healthy customer. It is our firm conviction that sales promotion, advertising and business methods are the keys to an ultimately stable industry in which the public will have complete confidence.

CBS-Hytron, a division of Columbia Broadcasting System, Inc., has a great stake in the future of the electronics industry. CBS radio and television networks span the nation. CBS-Columbia radio and television sets are used country-wide as are Columbia high fidelity record players. As manufacturers of tubes since 1921, we have had national distribution for many years. Our interest in the field of entertainment and in the broader field of industrial electronics is considerable.

PEOPLE

(Continued from page 20)

Company. . . **DR. CONSTANTIN S. SZEGHO** has been appointed vice president in charge of research for The Rauland Corporation. . . **CHARLES E. TORSCH** has been appointed chief television engineer for The Rola Company, Inc. . . **EDWARD C. TUDOR** president of the Industrial Development Engineering Associates has announced a new, inexpensive remote control for television—that requires only a single conductor cable to the set. . . **DAVID J. WHALEN** has been appointed a district sales manager for General Electric replacement tube sales; headquarters in Kansas City, Mo. . . **H. WARD ZIMMER** has been elected president of Sylvania Electric Products, Inc.

ASSOCIATIONS

(Continued from page 18)

At earlier hearings, C. T. Van Ausdall of the Rockford, Ill., Chamber of Commerce and secretary of the Rockford Appliance Dealers Association, testified in opposition to the proposal on behalf of NARDA, and L. B. Calamaras, executive vice president of NEDA, opposed the bill on behalf of that organization. Others who had worked to prevent the passage of the measure include RTMA and many manufacturers and Illinois distributors of television sets.

HARTFORD, CONN.

During a recent dinner-meeting of the Southern New England Chapter of the National Electronic Distributors Association held in Hartford, Conn., Harold Johnson was elected president-secretary of the Chapter.

Mr. Johnson, of Hatry of Hartford, Inc., succeeds Murray Dressler, Hatry & Young of Springfield, Mass.

Raymond Fulliero, of The Bond Radio Supply, Waterbury, Conn., was unanimously re-elected national director.

NEDA SOUTH ATLANTIC CHAPTER

James G. Prestwood, Jr., Prestwood Electronics Co., Augusta, Ga., is the newly elected director of the South Atlantic Chapter of NEDA. He succeeds Ralph H. Julius, Radio Sales & Service Co., Columbus, Ga., who was elected president for the 1953-'54 period.

Other Chapter officers are E. T. Reid, Birmingham, Ala., vice president, and L. R. Moore, Tuscaloosa, Ala., secretary.

EASTON, PA.

NEDA president, W. D. Jenkins, was guest speaker when the Keystone Chapter of NEDA met in Easton, Pa., Dahl W. Mack, secretary-treasurer of the Chapter has announced.

Mr. Jenkins discussed industry problems and gave a detailed report on accomplishments of the Association over the past several months.

NEDA NORTHWEST CHAPTER

Seventy-two members and guests were present when the Northwest Chapter of NEDA honored the Northwest factory representatives during the Chapter's Fourth Annual Cocktail Party and Dinner.

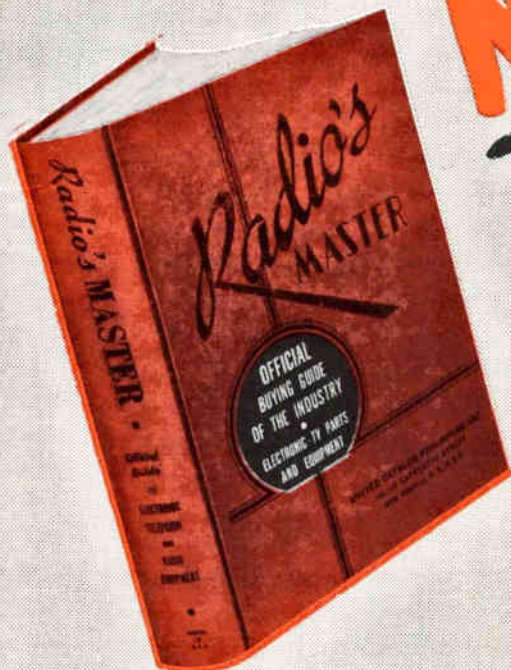
Preceding the evening's festivities, the Chapter convened for a morning and afternoon session during the second quarterly 1953 meeting with President L. R. Norberg, Tacoma, Wash., presiding.

It was recommended that members write to manufacturers using the NEDA battery numbers in their interchangeability charts and express their appreciation for the cooperation extended in developing universal numbers.

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REFERENCE FILES

(Continued from page 6)

ter size folders for each of the subdivisions indicated in the tabulation. These may be prepared by typing the title of the subdivision and file number on gummed roll labels for file folder tabs.

In addition, file folder dividers should be provided for easy-finding of groups of material filed in any one of the twelve categories. For this purpose, standard alphabetical file index may be used with gummed labels pasted over the tabs indicating A, B, C, etc.

CLASSIFICATION

As material is received from other sources, the service executive should mark it with the proper index number, then make sure that it is filed for future reference. This *classification* procedure will automatically screen out material without reference value so that only the valuable reference data will be retained. Disorderly piles of material should disappear. Control of filing procedure should assure continuous, efficient handling of qualified data.

ARRANGEMENT OF FILE CABINET

Arrangement of file cabinets should be made so that the basic files are within easy reach, preferably in drawers at least 36" off the floor. Lower drawers may be used for less active and more bulky items — as a matter of convenience to provide better balance of the cabinet and to conserve space. Lower drawers may be used for catalog filing, as these form a part of the required complete range of product information.

The first of a series of files for *SERVICE MANAGEMENT* readers and the scope of the new index service will be described in our September issue. It will reveal the basis on which you can establish your systematic TV Service Reference. Meanwhile, prepare for it by earmarking a file cabinet and consider the most convenient place for your business-building references.

SERVICE TRENDS

(Continued from page 11)

a guy who wants, in the worst way, to get into the radio repair business. In general, many did get into the radio repair business in the worst way.

There is no law against being a good businessman. There is no law that says you can't know more about your markets. There's no law that says that you can't study what the public thinks about you, what it wants from you or how much it is willing to pay for your services.

STUDY AT LOCAL LEVEL

You are going to have to do a great deal about learning how good a job you

are doing in your own territories. One of the very best yardsticks that we have to evaluate the success of Sylvania sales departments is to find out the potential for business at the local territory level. Our sales departments are judged on their merits and abilities with respect to these yardsticks.

I believe that TV Service organizations have got to start thinking that way if they are going to do the kind of a job this series of articles has mapped out for them. The Radio-TV repair business can snake along as it has in the past, as a half-organized, poorly run, poorly managed business — or progress with the leadership of aggressive operators that have the power to revolutionize the whole picture.

FORMULA FOR POTENTIAL BUSINESS

Here are a few ideas about finding out about how much repair business there is in your own community. At Sylvania, we know that for every radio home and for every television home, regardless of location, there is a repair business of so many tubes to assure set operation. In 1953, the number of receiving tubes required is 1.18 times the number of radio homes and 2.23 times the number of television homes. The number of picture tubes required is 13 for every 100 sets in use.

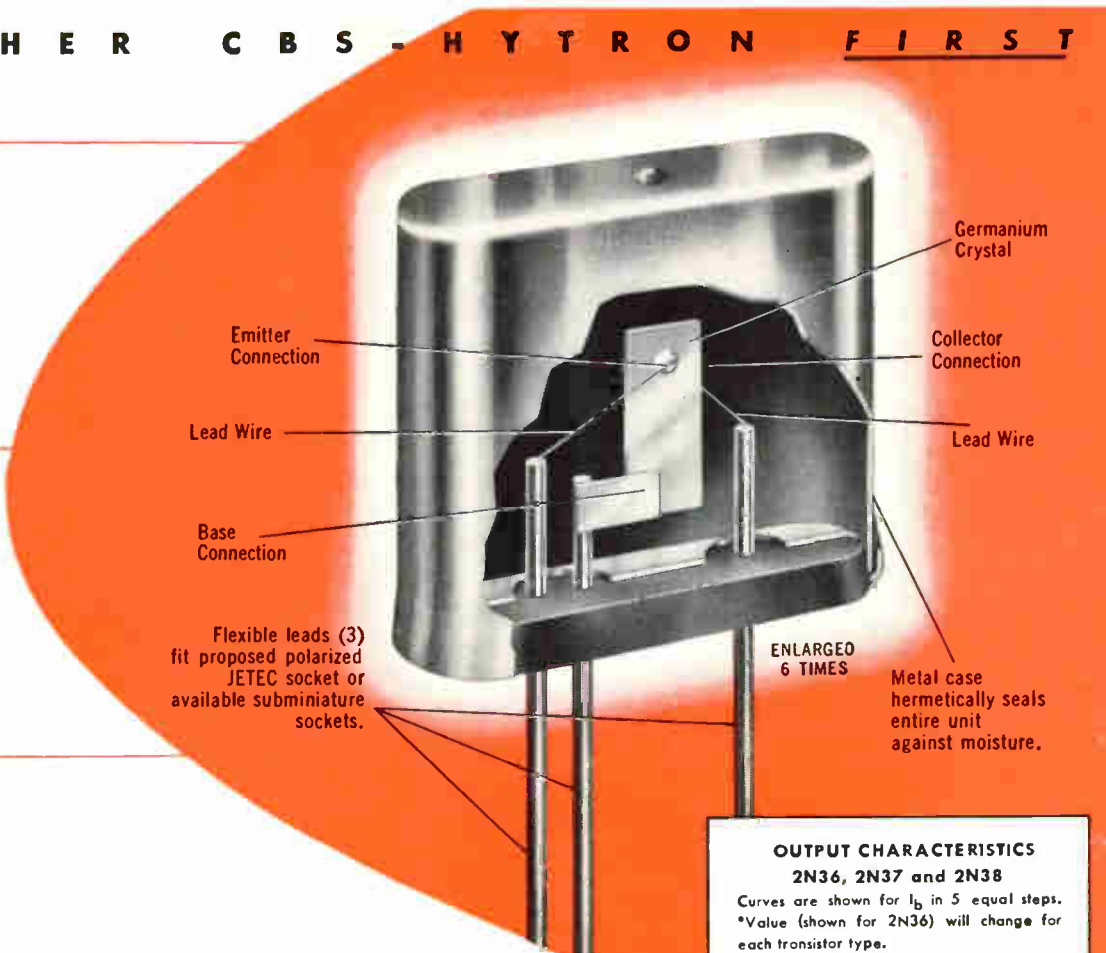
We believe that these factors are going to be a constantly increasing ratio. UHF is going to change the picture. Color, when it comes, will change it further. We have in front of us nothing but a healthy growth pattern.

FORMULA FOR PARTS BUSINESS

There are no reliable figures available on the size of the whole parts business for renewal sales. However, within the past year or two, the National Credit Office has made a study of the character of the parts distributor business. Assuming that the bulk of the TV Service organization's business is done through distributors, we have a pretty good idea of the size of the repair business.

Based on N. C. O. records, we know that TV Service operators spend about \$1.00 for tubes for every \$1.40 worth of components; 78¢ worth of television accessories; 28¢ worth of batteries; 35¢ worth of sound systems; and 32¢ worth of tools and test equipment. In other words, for every dollar spent on tubes, about \$4.13 is spent for total parts.

So we have, for the first time, a pretty good picture of how big the parts business is at the distributor's sales price — the cost to TV Service organizations. It indicates that TV Service organizations will buy almost three-quarters of a billion dollars worth of parts in 1953 — to keep existing radio and television sets in repair.



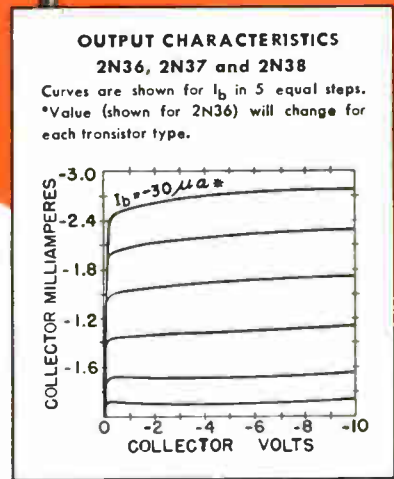
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In junction transistors, the surfaces are extremely sensitive to moisture. For dependability, they must be completely moisture-proofed. CBS-Hytron, recognizing this, is the first to offer you the new *hermetically sealed* 2N36, 2N37, and 2N38 junction transistors. Each is uniquely sealed in a metal case . . . moisture-proof, contamination-proof, light-proof. (See drawing.)

You can buy these new hermetically sealed P-N-P junction types immediately. All are amplifier types. Have similar characteristics, except for current amplification and power gain. You may operate the 2N36, 2N37, 2N38 up to 55°C. Their in-line design gives you: Compact, flat mounting . . . easily identified polarity . . . solder-in or plug-in (with clipped leads) convenience.

In addition to their unique moisture-proof feature, these CBS-Hytron junction types offer: (1) High gain. (2) Low noise figure. (3) Operation at low voltages. As well as other advantages characteristic of transistors: Compactness . . . light weight . . . ruggedness . . . instantaneous operation . . . and long life.

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Characteristic	2N36	2N37	2N38
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Collector current	-1	-1	-1
Current amplification factor β	45	30	15
Power gain β	40	36	32

†Typical values at 25°C. ‡Grounded emitter connection.



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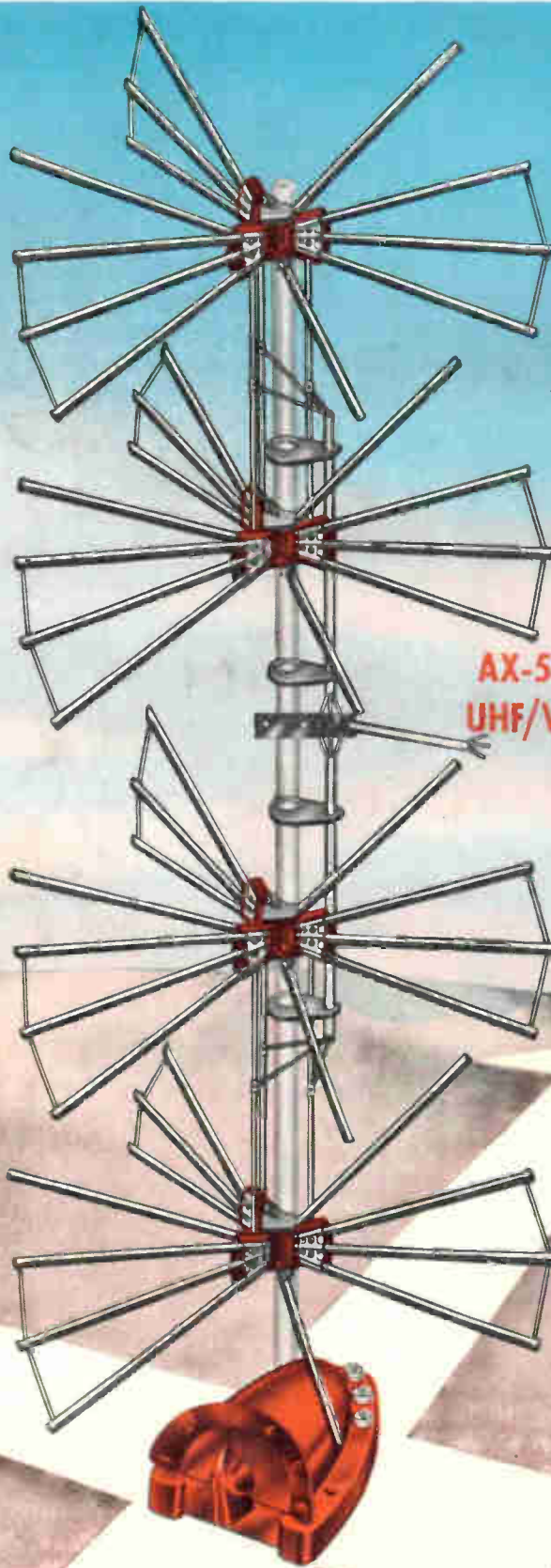
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