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Service Management

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RADIO - ELECTRONICS SERVICE INDUSTRY

Volume 1 Number 8

May, 1952

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IRA KAMEN has been named vice-president of the Brach Manufacturing Corp., a subsidiary of the General Bronze Corp. . . . The Eastern division of the Sales Managers Club has elected **BERNARD L. CAHN**, General Sales Manager of the Insuline Corp. of America, as their 1952 Chairman. . . . **FRED A. LYMAN** has been appointed national merchandise manager of the Allen B. Dumont Receiver Sales Division. . . . **MORRIS F. TAYLOR CO.** will handle the West Virginia and Pennsylvania territory for the General Cement Mfg. Co.; **SOUTHERN SALES** takes on Kentucky and Indiana. . . . **J. D. POTTENGER** was elected President of the Missouri Valley Chapter of NEDA; **JACK FISHER** is Secretary-Treasurer, with **MARTIN BROTHERRSON**, Chapter Director. . . . The Cathode Ray Tube Division of Allen B. DuMont Labs has named the **CLIFF LANDIS SALES CO.** as their sales representative in the New York Metropolitan area. . . . **GRAYBURNE CORP.** has been named as the national sales coordinator to parts distributors for Jackson Industries. . . . Ampex Electric Corporation's Chicago office is now under the management of **RUSSELL J. TINKHAM.** . . . Berlant Associates of Los Angeles has appointed **DAVE GURY** national sales manager. . . . **DAVID A. HARKAVY** is the new advertising manager of Harrison Radio Corp. of New York. . . . **HARRY BITTAN AND CO.** named manufacturer's representative for Crest Laboratories in the New York area. . . . Baker Manufacturing Company has appointed **A. M. REPSUMER** as their television supervisor. . . . **KENNETH C. DEWALT** is the new manager of engineering for the General Electric Tube Department. . . . **HARRY ADELMAN** has been recently appointed advertising and sales promotion manager of Arrow Electronics, Inc. . . . The Parts Division of Sylvania Electric Products, Inc., has named **DON F. KING** their East Central District Sales Manager. . . . **DONALD W. JACKSON** has been appointed Assistant Sales Manager of the Belmont Radio Corp. . . . **NEELY ENTERPRISES** to cover California, Nevada, Arizona, and New Mexico for Markel Products Company. . . . **RADIO SPECIALTIES CO.,** of Los Angeles, is going to open up their new outlet on their 20th anniversary in the parts distributing business. Festivities are planned for customers and friends on this occasion. . . .

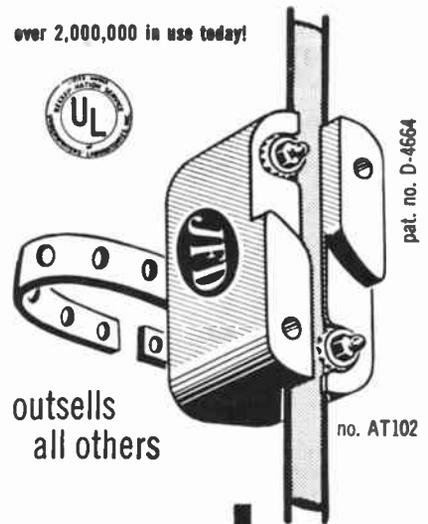
Service Management

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Transistors Increase Tube Markets

J. Milton Lang, general manager of General Electric's tube department, recently reported that he believes that transistors will replace tubes in certain applications but that they will also open up new fields in which tubes must be used. He discounted the possibility that transistor and other semi-conductor developments will mean a lag in the expansion of the tube industry.

"It seems to me that . . . as we broaden our experience with transistors," Mr. Lang said, "we may confidently expect the opening of new fields in electronics and the development of a myriad of new electronic products.

"In these new products, most of which haven't reached the drawing board yet," Mr. Lang continued, "tubes and transistors will both be used in important roles. There will be many applications for which a semi-conductor is suitable and many for which the tube is essential. Thus, the development of transistors can be expected to lead to an even greater market for electronic tubes."

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MANUFACTURING CORP. Division General Bronze Corp. 200 CENTRAL AVENUE NEWARK 4, NEW JERSEY

Grayburne Corp. Appointed

Jackson Industries, Chicago, have completed arrangements to offer parts distributors their line of television and radio products.

Under the terms of a recent agreement, Grayburne Corporation of New York becomes sole marketers to parts distributors in the United States. Grayburne, through their representatives, will promote the sale of Jackson's de luxe line of TV, AM, AM/FM and 4-Band Chassis, and the highly efficient Jackson Booster Antenna.

These products will be shown at the Radio Parts Trade Show, Conrad-Hilton Hotel, Chicago, May 19-22.

Jack Grand, president of Grayburne, stated that in his opinion this new association will be of great interest to the distributor. It will make readily available Jackson's distinctive line of products with the assurance of Grayburne's continuing sales help and well-known service.

Complete data on all products are available and may be obtained by writing to Grayburne Corporation, 103 Lafayette Street, New York 13, New York.

Service Management

VOLUME 1, NUMBER 8

MAY, 1952

Features

STAND RESPONSIBLE AND ACCOUNTABLE WITH BRAND NAMES 9

The Brand Story and the service business

SERVICE CHARGES AND CUSTOMER RELATIONS 10

— By Paul H. Wendel

An analysis of service pricing

LOWELL, MASS., SERVICE CENTER 12

— By Charles Sampas

A set dealer finds service pays

BRAND SELLING BOOSTS SALES 14

— By E. C. Tompson

A sales formula not to be overlooked

PROFITABLE AUDIO FOR ALL 16

— By Martin Wellman

A new approach to audio distribution advanced

PROPOSED ALLOCATIONS BY STATES AND CITIES 22

Departments

| | | | |
|-------------------|---|------------------|----|
| PEOPLE AND PLACES | 3 | TECHNICAL TOPICS | 6 |
| OUR OPINION | 5 | PRODUCT PREVIEWS | 18 |

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“OUR OPINION”

TO THE Radio-TV Parts and Equipment Distributor May is “market month.” It is the month when he travels to Chicago to attend the annual Parts Show. There he will see new parts, equipment and accessories planned by manufacturers for fall delivery; get first-hand information on new promotional plans; talk to the “top brass” of most of the manufacturers whose products he handles and, the chances are, this year he will sit in on a series of excellent lectures that have been arranged to give him the “how to” information about keeping his business ship afloat during good times and bad in this fast-changing industry. At the end of the show the participating manufacturers will add up their orders for new products and set their production schedules for the summer months.

But the month of May holds a different meaning to the service business executive and the service dealer. The major commodity that he handles, labor, cannot be bought in May for delivery in September. His payroll and operating expenses are very real things in which the TIME element is always NOW. He must be constantly concerned with the service business he must get today and tomorrow, for his operating costs go relentlessly on.

The month of May should be a month of serious planning on the part of every service business operator. It is the month when the winter and spring business starts to taper off. That is the prelude to the tough summer months ahead. It is the beginning of the dreary overture with its grating melody of financial doom for so many—far too many—service businesses each year.

The planning that should be done in May should be predicated on the thinking that service—all kinds of electronic and electro-mechanical service—can be SOLD during June, July and August. The business is there, in the homes and in the automobiles, but the customers must be SOLD on having the sets repaired during the summer when service businesses need that income so badly.

Many TV service business executives had hoped the TV station construction freeze would be lifted early enough to allow the first CP recipients to get their station construction started before summer. The psychological effect of the actual work being under way to expand

television coverage, they felt, would stimulate summer TV service business everywhere. But since the hearings on channel applications will not start until July there is little likelihood for this renewed TV activity to have any effect on the installation and service business this summer and especially in present TV-served areas.

So the best insurance policy a service operator can buy to keep his service business volume from hitting rock bottom during the summer months ahead is to perfect plans during May and June to SELL SERVICE aggressively during July and August. It can be done—if a program is carefully planned and diligently exploited.

But a word about *selling service*. Selling service does not mean offering to perform service at a reduced price. Neither does it mean persuading a customer to buy something he does not want or need. It means, simply, to motivate a customer to have needed services performed at the time a service business needs the business. Like retail coal companies, for instance, that use “Fill Your Coal Bin in the Summer” campaigns to keep their trucks and delivery men employed during the months that home owners don’t need coal.

Offering reduced prices on service in the hope of increasing business volume is a very dangerous—and profitless—practice. Where labor is the major factor involved, service that can be profitably sold at reduced rates was priced too high in the first place. As a matter of fact, there are very few service businesses that make the margin of profit to which they are justly entitled when business is good. When the average service business offers to perform service for less than their normal rates it stands to reason that it will lose money on every job, regardless of volume, unless, of course, the price cutter cuts corners and gives an inferior type of service.

During June, July and August, SERVICE MANAGEMENT will bring you some very useful and important articles and other information about how to get summer-time service business. You will find in the June, July and August issues of SERVICE MANAGEMENT a wealth of ideas for getting business when you need it most. Be sure to look for them.

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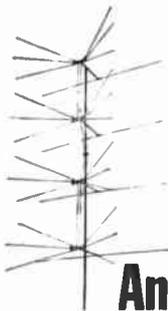
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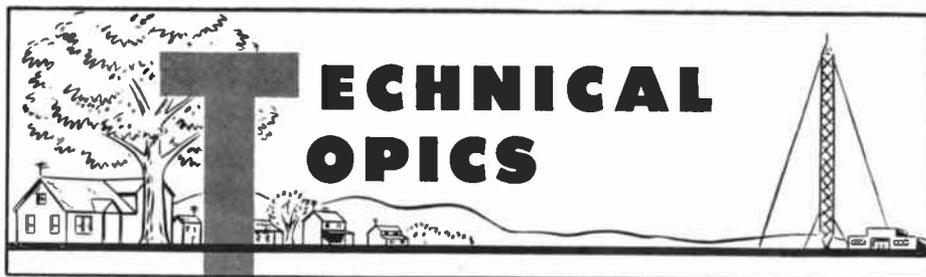
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The Effect of Technical Developments and Products Upon Your Present and Future Business Activities

By EDWARD M. NOLL

An old television receiver has no value in trade. It has no significant cash value toward the purchase of a new receiver by the customer. The dealer can make little or no profit on its resale. In fact, he often feels the sale of a used receiver has stymied the sale of a new set.

The logical approach to the problem is to have the customer retain the used set as an upstairs or den receiver and thereby acquire continued operation of the set and additional viewing convenience.

Multi-Outlet Methods

A dual antenna or multi-outlet installation must be made to permit two-receiver operation. This necessity provides installation income for the service department. Likewise, two receivers instead of one will require continued service. Thus customer, dealer, and service department benefit from the dual installation.

A two-receiver installation requires dual antenna facilities. Here we have choice of three possibilities—two roof antennas, one roof and one indoor, or a multi-outlet arrangement. The double roof antenna generally (but not always) gives peak performance but is least attractive to the customer and more costly.

A multi-outlet box is ideal when sufficient signal is available—there is a substantial signal loss in most outlet boxes. If signal levels are weak a wide-

band booster can be used ahead of outlet box.

The basic functions of a multi-outlet unit are to eliminate interaction between receivers attached to same antenna system and, at same time, have only a minimum reduction in signal levels. Interaction is in form of loading when both receivers are set on the same channel or interference between local oscillator of one receiver and station being received on second set. The most common and most pronounced interference is local oscillator feed-through which occurs when the local oscillator frequency of one receiver is on same channel selected on second receiver.

In a typical experimental installation, figure 1, two sets were operated side-by-side using a Brach multi-outlet box with a minimum of interaction and some loss in signal level on the high band channels. This loss goes unnoticed on channels 3 and 6 with just slight re-adjustment of contrast. On channel 10 (weaker signal area for this station) some line structure noise became apparent because of lower signal level.

With the addition of a wideband booster (Blonder-Tongue) as in figure 2, ahead of outlet box, channel 10 signal level is raised above receiver input noises. In addition, presence of booster permitted reception of New York channels (low band stations), some 70 miles away, via multi-outlet practice.

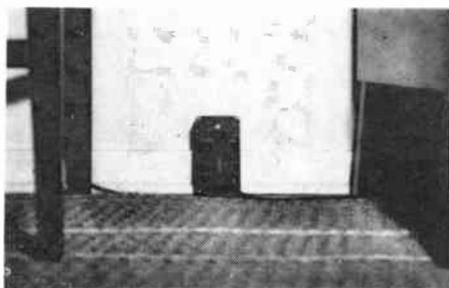


FIG. 1

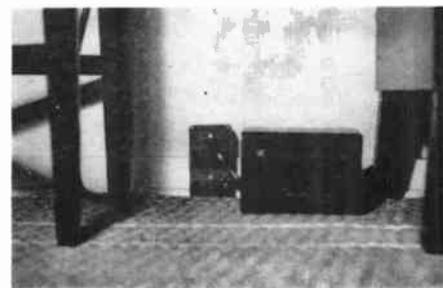


FIG. 2

When a given type of outlet box does not give sufficient isolation it is advisable to position an individual tunable



FIG. 3

booster at each receiver and attach antenna directly to outlet box, figure 4.

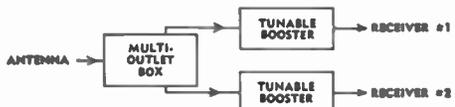


FIG. 4

This arrangement can result in a somewhat poorer signal-to-noise ratio as signals are not amplified prior to division. An excellent plan for fringe area multi-outlet reception, figure 5, is to



FIG. 5

use a wideband booster type prior to outlet box to keep signals above receiver input noises despite division losses of outlet box.

Distribution Amplifiers

This plan of amplification before division is employed in the commercial types of multi-outlet systems. These systems vary from two to hundreds of outlets. The small four-position outlet systems consisting of wideband amplifier and two multi-outlet boxes are effective in duplex and semi-detached housing. A single high-gain good quality antenna installation serving four receivers (either four apartments or two families with receivers on both floors).

If a high gain antenna is installed, good fringe area reception is possible with this arrangement. In a very weak signal area or for a very weak signal, separate tunable boosters at each receiver can be of help. If a strong signal is received, however, and one of the boosters has feedback tendencies (or input and output leads are positioned too near to each other) oscillations can be sent along the entire multi-outlet system and interfere with the operation of other receivers on the line.

Just what can be accomplished in the way of simple and elaborate outlet systems is best understood by discussion of typical commercial units. For example, Blonder-Tongue has three basic units available which can be used in

various combinations to supply from 2 to 2,000 TV sets. These units are:

1. Wideband amplifier with a gain of approximately 30. This unit is used to bring up signal level particularly, for a fringe area distribution installation. For least difficulty in a distribution system, the signal level of each channel should reach a 10,000 microvolt level. When signal levels are lower, line runs must be planned carefully to minimize noise and interference pick up.
2. Distribution outlet amplifier to supply signal to two individual receivers. The function of this unit is same as outlet box. However, this type of vacuum-tube outlet box employs a circuit that improves the degree of isolation between receivers without signal level loss.
3. Distribution outlet amplifier with eight individual receiver outlets with thorough isolation and no signal loss. A line outlet is available on both eight- and two-outlet amplifiers to permit continuance of the line path on to similar units. Some slight signal loss is encountered at these line outputs which are held down to 75 ohms for line matching. Receiver outlets are 300 ohms.

Possible combinations of these basic units in practical distribution systems are illustrated in the block diagrams of figure 6. The first shows a 12-receiver combination that can be used in primary areas either as a store or small apartment system. A fringe installation requires the addition of the high gain wideband amplifier to bring up signal

levels. Notice that both the two-outlet and eight-outlet amplifiers have a line outlet for feeding into successive units. For example, more outlets can be obtained by adding units to the chain. Each wideband amplifier recovers the losses encountered in the preceding section of the distribution system so line and distribution of signals can be continued on and on.

Still another plan recommended for large hotels and apartments is presented in third diagram. Here a single eight-outlet amplifier and numerous two-outlet units can supply some 30 receivers on a single floor. A similar arrangement is used on each floor. Intermediate wideband amplifiers can be inserted between sections wherever required.

Indoor Antenna Application

Often in a strong signal area with second receiver upstairs and higher above ground level an indoor antenna will suffice for second set. Antenna for that matter can be located in the attic—the higher the better.

With the new indoor Directronic which can be taped to closet, room, or attic ceiling, peak indoor performance can be attained. Switch orientation feature permits it to take full advantage of whatever signal levels exist in the building. In a great many primary areas two of these antennas taped to the attic ceiling (right beneath top or apex of roof) delivers high signal levels through separate lines to each of two receivers in the house. At an especially good location, a single antenna and outlet box could serve two receivers. Still

(Continued on page 26)

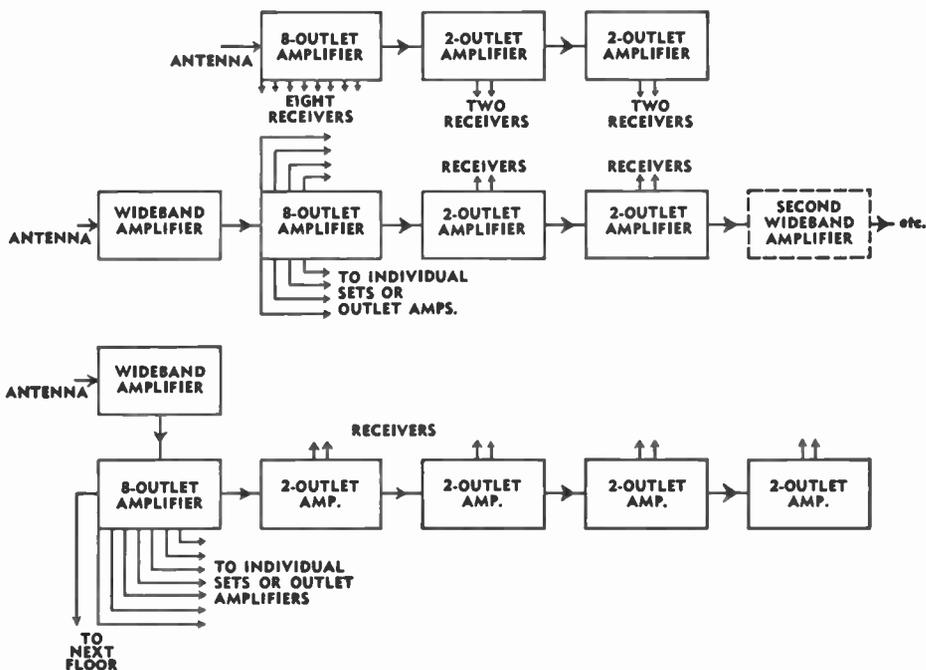


FIG. 6

BY APPOINTMENT



TO THE AMERICAN PUBLIC



In some countries products are endorsed by the Crown, and bear the arms of the royal family. That gives them prestige which stimulates sales.

But in democratic America our products are endorsed solely by the approval of the American people, and are identified by brand names and trademarks that have won esteem the hard way.

Here every product must stand on its own feet, and fight for survival in the intense competition of the market place.

Here there is no easy road to popularity or leadership—no suggestion from government as to what you shall buy or what you shall pay. Under our brand system, which is the very keystone in the structure of our free economy, people can separate the wheat from the chaff and make their purchases solely on the basis of merit and appeal to their personal tastes and preferences.

Our system of brand names and advertising is important to the American way of life for two other basic reasons:

1. It develops broad markets for our goods, which in turn stimulate volume production. As a result, many conveniences that would otherwise be luxuries can be sold at prices almost everyone can afford.
2. Brand competition spurs our manufacturers to greater efforts to please us. And this results in constant product improvement and the birth of many new products to add to our comfort and happiness.

• • •

Do as the majority of America's most successful stores do—get on the brand bandwagon for your own sake—as well as your customers'.

Brand Names Foundation

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Stand Responsible and Accountable

With Brand Names

A VERY wise man once said: "The big change that has occurred in our span of life is reflected in the fact that the real commodity which most businesses have to offer is not animal, vegetable or mineral, but spiritual."

This is so because every reputable manufacturer and business organization is founded on public faith which centers around a symbol or word — the trademark or brand name. In the last hundred years, American shoppers have witnessed the growth of a whole economic system based upon this faith, a system which makes available to all of us, thousands of familiar products made by people who are proud of what they make and glad to stand back of them.

Too many TV Service organizations have overlooked or underestimated the importance of these things in terms of their own businesses. Yet no industry has more or better brand names than the TV-radio industry.

The brand names in the TV-radio industry are those that the majority of TV servicemen's customers rely on, because brand advertising suggests sound purchasing and better living. Brand manufacturers in the TV-radio industry, like manufacturers in other fields, perform an enormous service by providing expert knowledge that is required to make wise purchases.

Brand manufacturers, realizing that the customer, the ultimate consumer, is boss, must serve their customers well, give them exactly what they want, keep faith to stay in business.

The TV Service organization that is so absorbed in its animal, vegetable and mineral aspects of its business that it overlooks these obvious facts, is losing one of its best bets to make a good name for its business and for the TV Service business as a whole.

The Hon. James A. Farley, chairman of the board of the Coca-Cola Export Corporation, recently stressed the importance of brand names when he said: "Let us consider for a few minutes what brand names stand for.

"First, our brand names and trade-marks symbolize America's products. Then they symbolize the maker of the products. Then the reputation of the maker. Every one of the great galaxy of American trade-marks implies a unity of responsibility.

"It suggests the individual's responsibility for his acts, the corporation's responsibility for the quality and value of its products. It expresses the seller's responsibility for his service. *Each one in the chain stands responsible and accountable.*"

When TV Service organizations join the brand name chain, they are recognized as Mr. Farley has said. They are recognized by the public, by their customers, as standing responsible and accountable. TV Servicemen, everywhere, will enjoy a great improvement in their customer relations if they will follow the leaders . . . and emphasize the brand names associated with parts they sell as a part of the service they render.

Service Charges and Customer Relations

By PAUL H. WENDEL, Editor
Service Management

Your Customers Want to Know What Is Behind the Cost of Service—It Is Up to You to Set Them Straight

It is extremely unfortunate that the majority of men who operate radio service shops do not know the simplest fundamentals about how to deal with their customers on service charges nor are they seemingly interested in learning about them. Because of this condition, unfavorable publicity continues to appear in newspapers to throw the shadow of doubt about the honesty of all men engaged in repairing radio and television receivers.

A case in point is the following account of an experience in having a radio repaired that appeared recently in a by-lined column in one of the Indianapolis newspapers:

Under the caption, "TAKEN," it said, "I don't know what to think about this. I'll leave it to you.

"I have a bedside radio. It cost about \$19.00, a couple of years ago. And it blew a tube.

"On my way to work I stopped in at a radio store on N. Capitol and had the tube put in. It took from 12 to 15 minutes.

"I paid two dollars for the tube, and \$2.00 for the labor.

"I'm no authority on the price of tubes, but I know what labor's worth. And two bucks for slipping in a new tube made me pay at the rate of \$16 to \$20 an hour.

"If you think I'm going back to that store again, you can guess again, and keep guessing the rest of your life.

"That's what's turned the public sour. Once in awhile they've been taken. And they don't forget it.

"I made just one mistake. I didn't ask, 'How much?'"

We have no idea how this service shop arrived at the price of two dollars for labor or service for checking and replacing one tube. Perhaps they have a minimum price of two dollars for any service job. If so, of course, this price should have been posted where it could be readily seen by any service customer. Whether this charge for service was too much or too little is beside the point.

This customer has a radio that cost him \$19.00. That is his yardstick for appraising what he thinks service on it should cost. To have just one tube replaced cost him \$4.00. It took only "12 to 15 minutes" to locate the trouble and replace the tube yet it cost him more than 20 per cent of the initial cost of the complete receiver. In his ignorance he felt he was "gypped."

What this man did not see nor take into consideration was (1) that a radio shop was handy in a traffic location to have this radio repaired; (2) that he got immediate service; (3) that the shop had the equipment to test the tubes and the set so the repairs could be accomplished in a maximum of 15 minutes; (4) that someone with experience, "know how," was there to accomplish the work quickly; (5) that the shop had a tube in stock to make an immediate replacement.

Inform the Customer

All of these are intangible things that the customer does not see nor consider in appraising what good radio and television service actually is worth. Consequently, users expect service on radios to be "cheap."

The fault of this radio shop was not in over-charging for its labor but in its failure in handling this service customer. It epitomizes the almost universal failing in radio servicing to sell consumers the true value of the services they render.

In contrast, consider the following experience in automobile servicing:

One of your editors recently left his car in an eastern dealer's service department with instructions that it be given a motor tune-up, wash, grease and oil change. On returning for it he found the service charges covered only the wash, grease and oil change. A note on the repair order stated that the engine needed a carbon and valve job,

hence, the motor was not tuned since they felt it would be a useless waste of money.

Their estimate of the cost for this job — labor and parts — was \$44.00 and they would have to have the car for two days to do it. Time did not permit this delay so the car was driven without having this engine work completed.

A Customer Saving

Later, the car was left with a dealer's service agency in the owner's home city to have the carbon and valve job done. Here again the estimate for labor and parts was \$44.00. However, when the job was completed the charges amounted to only \$27.25 for both parts and labor — a difference of \$16.75 in the customer's favor.

In discussing this differential between the estimate and the actual charges the service manager of the latter agency said, "We have found it more satisfactory in maintaining customer good will to estimate jobs where parts are involved on the basis that all wearable parts will have to be replaced. The customer is then prepared to pay the maximum bill if the job requires it. Then if the job does not require all of the parts that were figured in the estimate, his bill will be less than he had anticipated and he will feel that he "saved money" on the repairs. In many cases the difference between the estimate and what he paid looms bigger in his mind than the actual cost of the work. He is a satisfied customer.

"On the other hand," he continued, "if you try to minimize what the job will cost, or if you just quote the actual labor charges plus parts without a parts estimate, the customer will usually anticipate a small bill for the work. Then if you have to replace a lot of parts and the charges run to twice or three times the labor cost the customer will be sore. He hadn't expected to pay that much for the job. So you end up with a dissatisfied customer."

It would be an exceptionally good movement in the direction of building customer confidence in radio and television repair shops and for lifting the public's "expectation level" on charges for servicing radio and television receivers, if a booklet like the one available from the Sprague Products Company was given to every service customer at the time a radio or television receiver was repaired. This booklet titled, "Your Money's Worth in Good Radio and Television Service" explains clearly and graphically why good service cannot be cheap service. It de-

(Continued on page 20)

TELEVISION FLAT RATE LABOR CHARGES*

GENERAL SERVICE

| | | |
|-------------------|--|----------------|
| Home Call | 1st ½ hour | \$5.00 minimum |
| | After 1st ½ hour | 5.00 per hour |
| Warranty | Home call, pickup, delivery, pull, install and adjust up to 17" 18" to 24" | 7.50 |
| | Projection | 7.50 |
| | Parts exchange — minimum per set | 10.00 |
| | Picture tube, yoke, transformers, etc. | 1.00 |
| Call Backs | Operating tubes, resistors, by-passes | 1.00 ea. |
| | Maximum per set | .25 ea. |
| | All call backs regardless of trouble | 2.00 minimum |
| Bench | Call backs other trouble | 5.00 |
| | Checkup and test at shop: | |
| | when customer brings in and picks up (over ½ hour add regular hourly rate) | 3.50 minimum |
| Tube | Hourly rate | 5.00 |
| | Minimum | 5.00 |
| Tube | Replacement, locate and replace defective | 1.00 minimum |

SHOP SERVICE

| | | |
|-------------------------------|--|----------------|
| Antenna | Install built-in | 3.00 |
| | Locate and repair broken wire (built-in) | 3.00 |
| | AC interlock — locate and install defective | 1.50 |
| Alignment | RF tuner | hourly rate |
| | Audio Section | IF |
| | | Discriminator |
| | | Ratio detector |
| Beam Bender | | 4.50 |
| | | 8.50 |
| | Video section | 2.00 |
| | Complete | 2.00 |
| Capacitor and Resistor | R.F. section | 7.50 |
| | Audio | 5.50 |
| | Sweep section | 7.50 maximum |
| | Video section | 5.50 |
| | Power section | 5.00 |
| | Filter unit power section | 7.50 maximum |
| Choke Coils | Filter unit sweep section | 7.50 maximum |
| | Power section | 3.50 |
| | Wave trap and adjustment | 3.00 minimum |
| Controls | Audio section | 4.00 |
| | Sweep section | 4.50 |
| | Video section | 5.50 |
| | Focus coil | 4.50 |
| | Audio section — volume control, single dual | 3.50 |
| Connection Dial | Video section | 4.50 |
| | Clean controls | 1.50 |
| | Loose — locate and repair | 6.50 |
| | Dial cord replacement | 6.50 |
| Modifications | | simple |
| | | complex |
| | | 3.00 |
| Picture Tube | | 5.00 |
| | Modify to remove retrace | Pts. Labor |
| | Modify to prevent blooming | .65 2.50 |
| | Modify GE 811 Hi V Labor | 2.00 |
| Rectifiers | Resolder pins | 2.00 |
| | Install and adjust CRT up to 9" | 3.00 |
| | 10" to 17" | 7.50 |
| | 18" to 24" | 8.50 |
| Short | Projection | hourly rate |
| | Selenium-replace | 3.50 |
| Transformer | *All circuits — locate and clear (*except tuner) | 6.50 |
| | Audio section | 4.50 |
| Tuner | Power section — mounting charge \$4.50 plus 25¢ per connection | 8.00 minimum |
| | Sweep section — output — horiz. | 6.50 |
| | oscillator, horiz. | 6.50 |
| | output, vertical | 5.50 |
| | oscillator, vertical | 5.50 |
| | IF transformer, video | 6.00 |
| Yoke | Pull and install | 12.50 |
| | Clean, lubricate and adjust contacts | 3.50 |
| | Locate and replace defective capacitor or resistor | 7.50 |
| | Locate and repair loose connection or short | hourly rate |

NOTE: The above charges are the basis for repair labor. We often list them collectively (3 or 4 charges) as "shop service," then the total amount.

ANTENNA INSTALLATION AND SERVICE

| | | |
|---------------------|--|---------------------------|
| Installation | Installed complete with, not to exceed 50 feet of 300 ohm lead-in, all necessary standoffs and mounting base, with 6 ft. mast on private two-story home | 30.00 |
| | (This is outside installation of lead-in wires. Any fishing of wires between walls or special installation will be quoted on request and there will be additional time charges at \$7.50 per hour, plus material.) | |
| Antenna Work | Installed on chimney with bracket and 6 ft. mast | 35.00 |
| | Installations on large private homes and apartment buildings, prices are quoted. | |
| Antenna Work | All antenna repair work | 7.50 per hour min. charge |

* June 15, 1951, Chase TV Service, Inc., 16311 Grand River Ave., Detroit 27, Michigan

LOWELL MASS.

Service Center

By CHARLES G. SAMPAS

To build goodwill and keep it in a jet-propelled age requires ingenuity, an ear to the ground and constant experimentation.

In the constantly-swirling world of merchandising and service, you've got to be "on the ball." All this may seem obvious—but it must never be forgotten in the radio-electronics service industry, particularly. It is a fast and competitive field and in the rapidly "tightening-up" situation of 1952 service remains the super keynote.

It is a survival of the fittest — plus.

There is no time for second-guessing — for waiting — for letting things slide.

These thoughts are brought to mind after a study of the firm of Beaudry and Monette, Inc., Merrimack Street, Lowell, Mass.—an example, a prime example indeed, of the role the radio-electronics service industry must play.

"Remember—It's the Service That Counts!"

That is the basic psychology—the slogan—used by Beaudry and Monette—and it is on this basis that the firm has built, in six short years, a company which enjoys the confidence and respect in the Greater Lowell community which encompasses a wide area and includes approximately 250,000 inhabitants.

The Lowell firm has the community acceptance which many firms take many years to acquire. And therein lies the story.

In 1945, Beaudry and Monette came into existence on Lowell's Number One street—Merrimack Street. The company is headed by Ernest Beaudry, president, and Francis L. Monette, treasurer.

The firm's immediate aim was to render to the people of the Greater Lowell area the finest service possible for major and traffic appliance radio . . . and when it finally did come . . . television. The firm sought personnel of the finest caliber in personality and technical knowledge. This type of personnel did not come immediately, but today Beaudry & Monette's proudest claim is that it possesses the highest type of personnel in the area.

The company's officials point out that personnel is the key to the entire operation. All the gadgets in the world could not serve as a substitute for the human factor.

Service Independent Operation

The service department of Beaudry and Monette is a separated company—entirely outside the sales department. This was accomplished in 1951 as a means of controlling service cost figures, purchases, maintenance of equip-

ment and the ability to have a direct control over the entire operation without interference from sales, office, promotion and merchandising costs.

This separation of service from sales has proven to be most successful and is headed by Ernest Beaudry. This in no way took away from the sales organization—rather it became possible as the only way to give more efficient service to the consumer.

The sales department pays for its servicing of the products it sells to the consumer—a fixed fee for delivery, installations and service to the service company. These fees vary according to the products. For example—an automatic washer will carry a fee far greater than a refrigerator, due to the installation, demonstrations and service being more complex.

The service company does not do any work for any other companies, but Beaudry and Monette work on mer-



In front of the Beaudry and Monette store on Merrimack Street, Lowell, Mass., are seen seven of the nine trucks used by the service department.



A small section — of the Beaudry and Monette service department is shown above — Supervisor Andrew Balamotis at the right, John Maselunas on the left.

chandise other than that purchased from Beaudry and Monette. Such work is on a limited basis, however.

It is interesting to note that the customer ratio of Beaudry and Monette sales is carried by the service company about 3 to 1. It is felt that these people deserve first consideration or call upon it for service.

The service company sells service contracts on television and offers to its customers second and third year warranties. This has proven a tremendous basis of consumer satisfaction, for the firm has determined, by survey, that a satisfactory picture at all times is a satisfied customer. The people who give the most bother and who are always complaining are the consumers who are NOT protected by warranties.

The sales organization sells new TV sets on the basis of a contract for service. The ratio of sales with contract is approximately 95 per cent. This has had a reflection on quantity of sales, but has brought about a healthier television picture on both sales and service.

Mr. Beaudry is head of the service department—he supervises installation, delivery and service on major and traffic appliances (or electric housewares), radio and television.

Mobile Maintenance

The service department has nine trucks. Three vans are used for installation of television or major appliances when needed. Three are radio and TV service technician trucks.

There is a major appliances repair truck with the carry-all body commonly used by public utility trucks. This truck carries the major replacement parts necessary for this work at all times. Then, there is a major appliance one-ton pick-up truck — used in the delivery of refrigerators, ranges, etc. And then, there is one truck used for package deliveries and emergencies.

There are 14 members in the personnel of the service company, headed by a supervisor on radio and television who purchases, allots work inside, and orders, under Mr. Beaudry's supervision. His responsibility is only for the repairing in this department. The major and traffic appliance department also has its supervisor and personnel.

The company also has one man who takes care of all merchandise received and merchandise to be returned to factory for replacement or credit. It is also his job to arrange and supervise inventory in the department. This has proven, especially with television, a very worthwhile investment.

In merchandising its service, Beaudry and Monette believed in this business of electronics by installing two-way mobile communication in all of its trucks. This alone is repeated in all of the sales ads on merchandising. Not only is it a merchandising tool, but a means of rendering prompter service at a re-

duced cost. It has provided a decided savings and enables the company to do more work with less personnel than was thought possible.

A girl dispatcher answers the telephone calls of the company and assigns the calls to the respective trucks. These trucks are assigned given areas of the servicing area and are contacted by radio. The dispatcher checks the call when received by her as to whether it is in a guarantee, type and kind of set, and if it is a call that is to be paid or charged. She also checks the credit standing of the customer. This information is given out in code to the technicians as sometimes some of the customers do go out to the trucks to see what this new "contraption" is all about.

Says Mr. Monette, speaking on behalf of the company: "To us at Beaudry and Monette who stress service as our byword, we cannot conceive of anyone in our complex business selling appliances and electronics without a service department. We believe that the position in the great community of Lowell that we enjoy is wholly dependent on our service department."

Mr. Monette has expounded this theory many times, before many dealers, in his capacity as a director of the National Appliance and Radio Dealers Association.

Continues Mr. Monette: "Everyday folks buy from Beaudry and Monette because of some customer telling them of the service rendered. Every day, more and more, as the appliances have more automatic attachments, people are looking toward the servicing appliance dealer for their appliances. Without service as an aid to sales, a dealer is rendering only 50 per cent of his obligation to the consumer he is selling.

(Continued on page 21)



A girl dispatcher is shown receiving and sending out service calls to the Beaudry and Monette trucks. All the trucks are equipped with two-way mobile radio — and fast service is paying off for the Lowell, Mass., firm.

Brand Selling Boosts Sales

Most TV Servicemen have heard people say: "It isn't what you know but it is **who** you know that counts." This common saying is often expressed when somebody has not obtained what he wanted. But the person saying it seldom bothers to learn the lesson of his own utterance, or he would not bother to talk that way.

If you have ever felt that your competitors are getting more business than you are because of favorable acquaintances, have you ever asked yourself if you have done everything possible to establish your business in the eyes and the minds of your customers? If you have you are a really alert TV Serviceman. If you have done anything about it, you are the exception rather than the rule.

Almost everyone in business has a continuing opportunity to make his services better known to his customers and prospects. Even when everything seems to be under control, there can be no let-up in effort to increase customer relations with "who" you know.

Now let's take a look at "who" you know. At least two very important groups come quickly to mind: your customers and your parts manufacturers. You probably know your parts manufacturers pretty well. But when you look at your customers and prospects,

the trouble is that you do not know them as well as you should. The opposite is equally true. Now how can you improve the situation?

Last month we suggested an important step that you can make in the forward direction. We suggested that you conduct random market research to find out how you can render customers more service. This is important because the more service you render to a given customer, the better you will get to know each other.

However, let's suppose that you did not heed our suggestion. Let's suppose that the only thing that you really know about your customers is that they own a TV set and will, sooner or later, need service that you can render. What do they know about you?

If the answer is not much more than that you once aligned their set, installed their TV antenna or once or twice replaced a receiving type tube, they really know practically nothing about you. The blame for this unhappy situation is yours, Mr. TV Serviceman. You have a job to do. Fortunately, there is ample opportunity to correct the situation but don't delay. The time to start is right now.

A good way to start is to make the other "who" you know, go to work for you. The other "who" is the group of manufacturers that make the parts you use and sell. Many of your parts manufacturers have, at considerable expense and effort, made it known who they are. They have carefully built-up their brand names so that you and your customers will accept them and their products.

Point-of-Sale Recognition

By recognizing this fact, you can let it be better known who you are. The process serves in much the same way as an introduction to a stranger. The TV Serviceman who lets his branded parts introduce him to his customers is far ahead on the road to better customer relations, better business and easier profits. So make it a point to plug those good brand names. Get and use every form of "point-of-sale" material that your good manufacturing friends have taken pains to prepare for you.

Make use of any suitable material that your manufacturers supply for your reception room, your shop, your windows, your trucks and your sales promotion including direct mail. If they also provide giveaway material to be left with your customers, good. Make it a point to get it to work. Your customers can be encouraged to recognize the fact that you use name brand parts. This recognition begets better

(Continued on page 21)

"The TV Serviceman who lets his branded parts introduce him to his customers is far ahead on the road to better customer relations, better business and easier profits."

anybody can make claims . . . we back them up!



GUARANTEED PERFORMANCE OR YOUR MONEY BACK!

TVB-2BX television booster \$39.95 list

Yes, your money back if this booster does not give you as fine a picture as any booster on the market! (1) New, balanced input and output circuits for greatest gain. (2) Built-in power transformer (not AC-DC) with long-life selenium rectifier. (3) Utilizes finest turret tuner ever designed. (4) Fine tuning control. (5) Smart metal cabinet finished in wear-resisting mahogany enamel. (6) Pilot light illuminates selected channel.

See your nearest National distributor



Profitable Audio For All

to promote the distributor as his end medium of distribution. And the distributor had no other recourse but to promote and sell audio himself if he was to make the business successful. Even distributors soon found out that audio had to be merchandised independently and many of them set it aside to concentrate on the parts business they knew. As a matter of fact, many manufacturers found it necessary

MANUFACTURER – DISTRIBUTOR – DEALER

By MARTIN WELLMAN

to franchise local audio (music) specialists and to sell them at distributor price levels.

Today, the resultant situation of yesterday's forced operation has placed the distribution and sale (and service) of audio products into somewhat of a hodge-podge. Some dealers buy both from the manufacturer and the distributor, with the distributor and dealer competing for the same customer. The list price, meanwhile, becomes nothing more than a price on which to base discounts.

Practically everyone you talk to, whether it be dealer, distributor or manufacturer, is unhappy about the pattern of audio distribution. Today, all progressive elements agree on one thing—the future of audio requires selling and merchandising on the local level. Custom-built audio which makes demands upon a knowledge of interior decoration and cabinetry, however, still should remain in the province of the specialist. We should be primarily concerned with the mass replacement market for such audio products as needles, cartridges, arms, turntables, speakers and chassis units (amplifiers and tuners).

The market for audio products can be made a profitable one for all—dealer and distributor alike. Given mass

Probably no subject has received a greater hands-off treatment than the distribution patterns of the audio industry. A market that few foresaw has arisen and in its sudden rise the audio business has forsaken one of sales' most potent truisms—mass distribution. The intent of this article is to analyze present patterns and to point out a more effective approach in exploiting the tremendous inherent potential of this market.

Take a close look at audio distribution today. The audio product in most cases is shipped from the manufacturer to a relatively few audio-minded distributors. At that point the usual pattern of distribution is abandoned, with the dealer overlooked and the distributor selling direct to the customer. Nowhere in this sale does even the technical talents of the service industry come into use.

The blame for this inconsistent procedure lies principally with the service industry. For if the audio manufacturer had had to depend upon the service dealer to market his product after the war the twilight of the industry would have soon followed the dawn. Up until 1949 the dealer was either indifferent to audio's outlook or had little capital and organization to undertake the business. Both the audio manufacturer and the distributor tried to arouse the dealer's interest and met without success. In '49, television had reached its peak in TV areas and service-dealers in those areas placed their primary emphasis on television. They had been content to concentrate on TV and completely ignore the other facets of business open to them and for which they have the equipment, skills and merchandising facilities to handle.

The manufacturer was thus forced

distribution, audio sales and service could soon become a billion dollar market.

A typical market area was examined to determine the shortcomings in today's distribution pattern. You can see by examining figure 1 that under the present set-up the audio manufacturer isn't getting at the mass market. On the other hand the pattern set forth in figure 2 would be more profitable in this area. More customers are reached by the local service-dealer and the distributor gains the necessary increased turnover.

Let us remember, however, that this is just paper distribution as long as the service-dealer does not assume the sales and merchandising functions expected of him. It would serve both the manufacturer and the distributor well if they would re-evaluate the service industry. No longer is it a slipshod, penny-pinching, unimaginative operation. Television has made both financial and merchandising demands upon service organizations. Today, most of them stand equipped to promote, sell and service audio products in the replacement market. They are managed by business men capable of doing a business-like job. And from the standpoint of pure self-interest television service organizations today will serve their future well by getting actively engaged in audio as another facet of their business. They have the tools, the manpower and most important, the customers.

The market is there — waiting. Prospective customers have the money to buy the things they are inspired to want. And they can be "inspired" to want to hear good music faithfully reproduced. Service contractors need this additional volume of business. Let manufacturers and distributors develop the merchandising tools to reach this market through the service contractor and all will gain — the public, service contractors, distributors and manufacturers.

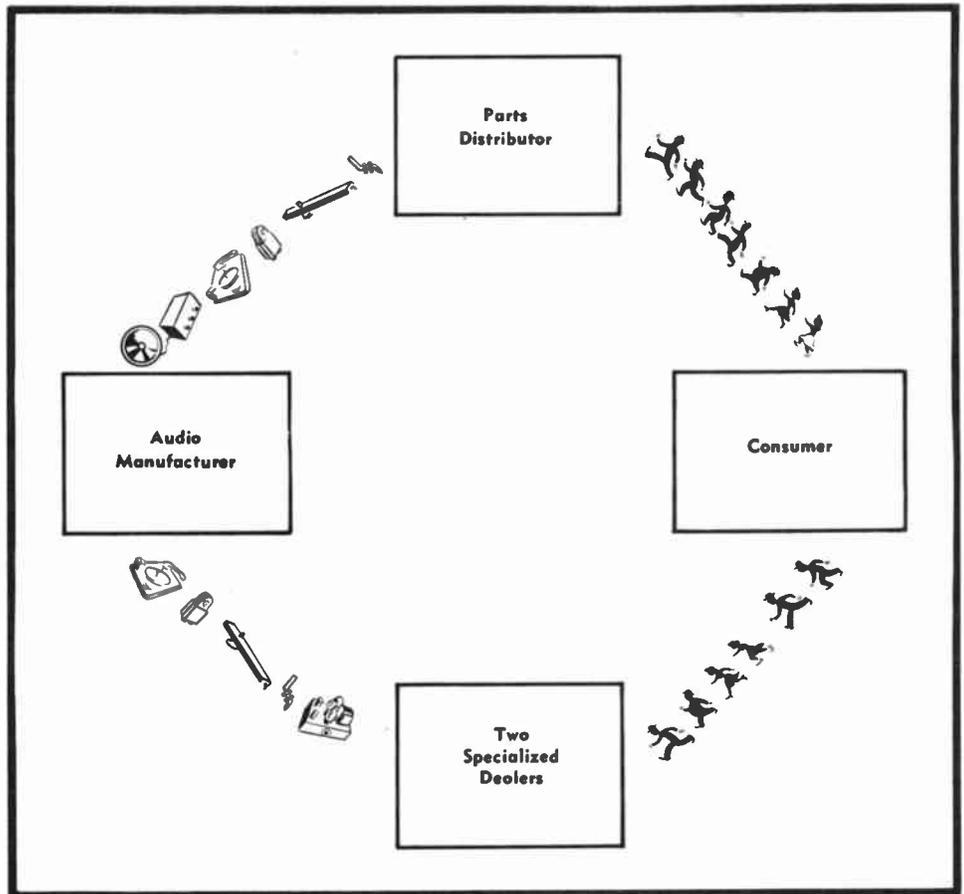


FIGURE 1 — Limited Distribution

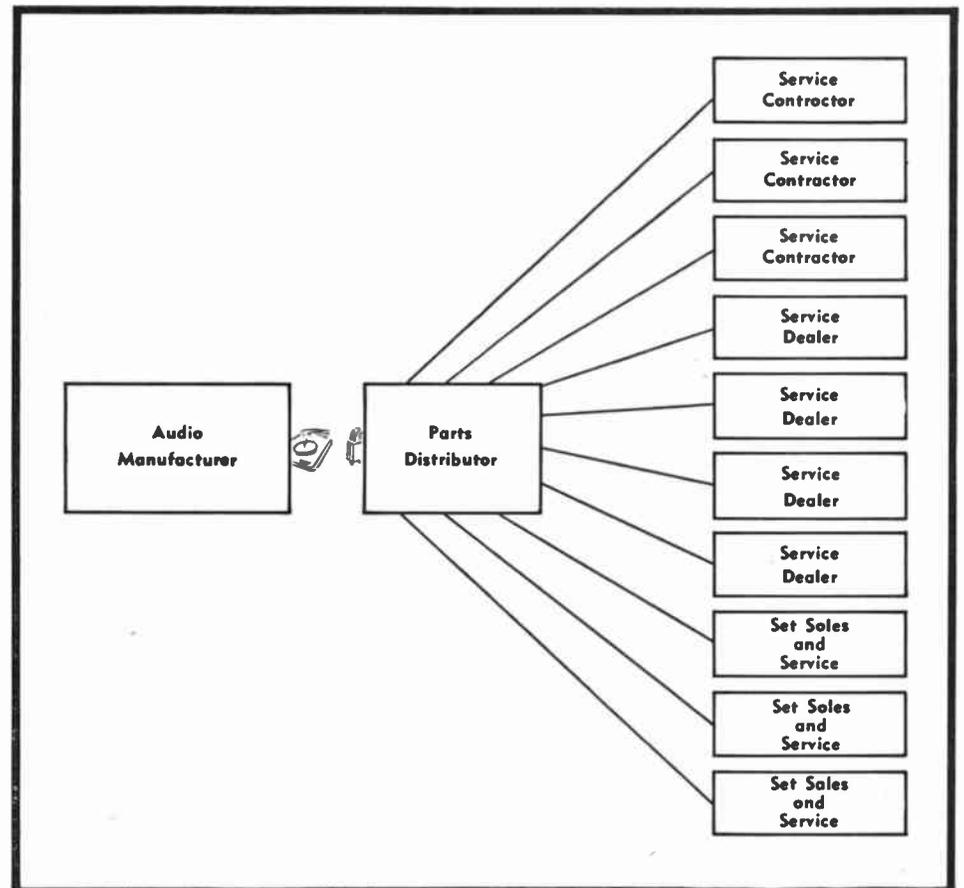


FIGURE 2 — Potential Mass Distribution

PRODUCT REVIEWS



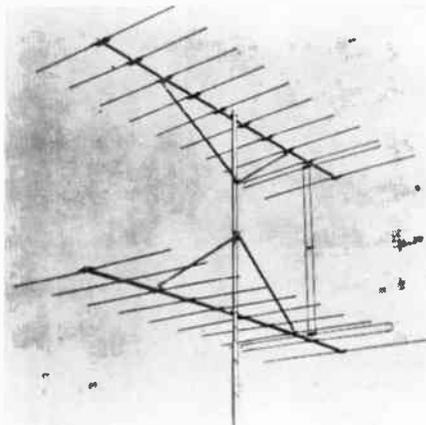
VARIABLE RF CHOKES



Grayburne Corporation, 103 Lafayette St., New York 13, N. Y., has announced a new line of variable r-f chokes providing a variation in inductance as high as ten to one. The new variable r-f chokes feature compactness, large increase in Q, reduction in d-c resistance, copper, distributed capacity and weight. Model V-6 providing inductance ranging from 0.65 to 6.0 mh and model V-25 providing inductance ranging from 5.0 to 43.0 mh are standard types. Other variable chokes can be supplied with a wide range of values up to 150 millihenries.

TEN-ELEMENT YAGI ANTENNA

Channel Master Corp., Napanoch Road, Ellenville, N. Y., has announced a new ultra-sensitive 10-element Yagi antenna which is said to provide over 12 db gain on the single bay. The antenna incorporates an impedance matching feature, the Z-Match system, and can be stacked to produce over 14 1/4 db or 78% more gain than the single bay, and more stacking gain than any other long Yagi, according to manufacturer's



claims. Excellent 300 ohm match is said to be achieved in the stacked array. Stacking bars are supplied free. The antenna is "boom braced" to prevent crossboom bounce and so eliminates picture flicker. The new "Big 10" antenna is supplied completely preassembled.

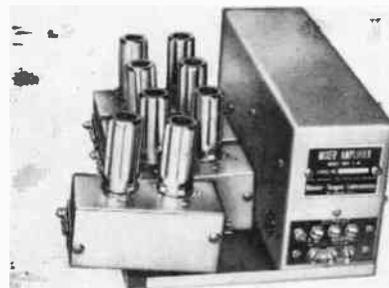
NEW LOW-COST MULTIMETER
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y., has announced a new low-cost multimeter with a 4 1/2", 400 ua meter movement that provides thirty-one different 1,000



ohms-per-volt ranges. These include a-c or d-c voltages: 0-1, 0-5, 0-50, 0-500 and 0-5000; a-c or d-c current: 0-1 ma., 0-10 ma., 0-100 ma. and 0-1 ampere. Resistance readings provided include: 0-500 ohms, 0-100,000 ohms and 0-1 megohm. Six db ranges are provided between minus 20 and plus 69. The Model 566 multimeter is supplied in a high-impact bakelite case that measures 6 3/4" x 5 1/4" x 3".

VHF-UHF TV MIXER AMPLIFIER

Blonder-Tongue Laboratories, 38 No. Second Ave., Mt. Vernon, N. Y., have announced a complete, self-contained master antenna system for vhf and uhf TV reception that eliminates need for

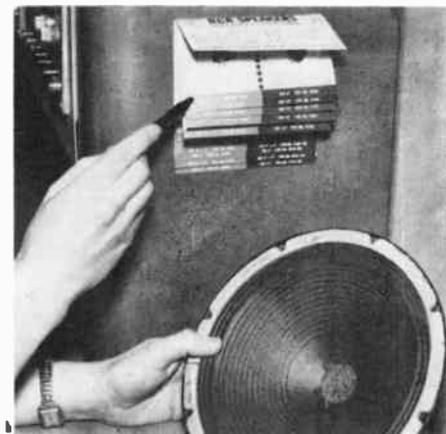


antenna rotators, separate boosters, uhf tuners or other elements. The Mixer, Amplifier, Type MA4-1 contains power supply, signal-mixing circuit, output terminal and one broad-band input for strong ghost-free signals. Socket receptacles are provided for one to four plug-in strips for specific channels. The mixer amplifier will handle signals from five different antennas and mix and feed

them through one output to any TV receiver or distribution system. The unit is enclosed in a sturdy, well ventilated, gray hammertone steel case. A weather-proof housing is available for antenna mounting.

FLIP-UP SPEAKER DATA

RCA Tube Department, Harrison, New Jersey, is offering radio service dealers and TV-radio servicemen a novel flip-type index providing basic electrical and mounting information on RCA radio and television speakers. The index is less than six inches square, is suitable for wall or top service bench mounting and provides all necessary data for the installation of any one of twenty-two types of RCA speakers. The index is available through RCA electronic components distributors.



MICROSCOPE INSPECTS NEEDLE

The Electrovox Co., Inc., 60 Franklin St., East Orange, N. J., will make a high powered microscope, capable of enlarging customer's needle tips 200 times, available to phonograph record dealers. The microscope will be a part of an



attractive display stand and it will be used to provide visible proof that most needles rapidly become chisel-shaped and seriously cut and damage record grooves. It will be used to promote the sale of Walco Needles. For further details, address Electrovox directly.

(Continued on page 20)

the PERMO Line

MADE TO ORDER FOR THE COMPONENT PARTS TRADE



The Permo Line gives you everything you need to make needle replacements fast, easy and profitable. You get (1) Handy and accurate service data, (2) Individual needle packages complete with (3) Installation tools and accessories with instructions, and (4) Stock-display and re-order case. See your jobber for fast-moving assortments or individual needles.

Developed Scientifically

Engineered Specifically

Made Precisely

Priced Competitively

Packaged Practically

Simple Inventory Control

Installation Tools, Accessories and Instructions Supplied

Complete Service Data

National Distribution

PERMO, INC.

6415 Ravenswood, Chicago 26, Illinois

MANUFACTURERS OF "FIDELITONE" "PERMO-POINT", AND "PERMO" PRODUCTS
LONG-LIFE PHONOGRAPH NEEDLES • RECORDING TAPE AND WIRE • RECORD BRUSHES

PRODUCT PREVIEWS

(Continued from page 18)

AUTO ANTENNA DISPLAY



JFD Manufacturing Co., Inc., 6106 16th Avenue, Brooklyn 4, N. Y., has announced the release of a new four-color display for distributors and dealers in which the JFD "Sky Streak" line of auto antennas is featured. The display holds five samples of the new JFD auto antenna line, including three side cowl models. The displays are obtainable from JFD on request.

UMBRELLA ACTION TV ANTENNA

JFD Manufacturing Co., Inc., 6101 16th Avenue, Brooklyn 4, N. Y., reports that it is about to launch an intensive promotional campaign for its new "Jetenna" that is said to reduce installation time to a minimum. The new antenna is a conical type with a fan front and a single reflector. Unlike other preassembled antennas, it is said to snap into place like an umbrella. The "Jetenna" is constructed of aircraft aluminum with elements of $\frac{3}{8}$ " od seamless tubes. Further information on single, two-bay and four-bay arrays may be obtained on request to Edward Finkel, sales manager.

NEW ANTENNA DEVELOPED BY VEE-D-X

A revolutionary new all-channel antenna has been developed by VEE-D-X, it was announced recently by Jerome E. Respass, president of the LaPointe Plascomold Corporation.

Named the "Q-Tee," this antenna is designed primarily for use in metropolitan areas and incorporates an entirely new principle, Electronic Channel

Separators. This permits the antenna to be broad banded with the elements performing dual functions on both the high and low channels. The same principle permits the antenna to be peaked on specific channels in any metropolitan area. Designed to replace conicals and other broad band type antennas, the "Q-Tee" has a uniform response across the entire high and low bands, with higher gain and better front-to-back ratio. The impedance is matched to 300 ohm twin lead over both bands. The "Q-Tee" may be double stacked for the near-fringe and 4-stacked for the fringe areas.

Mort Farr Addresses Canadian TV Dealers

Seven steps that should be taken to master the TV business from the start were the subject of a talk by Mort Farr, president of the National Appliance and Radio-TV Dealers Association during the recent annual meeting of the Canadian Association of Radio and Appliance Dealers held in Toronto.

Mr. Farr traced the history of TV merchandising in the United States and outlined his proposed program for Canadian dealers. He also cautioned that early, flashy, easy sales don't continue in TV for long, adding that the eight, ten and twelve time turnovers per year soon dwindle to two and a half to four.

The seven steps he outlined to the dealers included: building a solid healthy business from the start; doing a good job of consumer education; becoming a self-servicing dealer; confining inventory and sales effort to a few brands; cooperating with other dealers through organization; using the organization to keep the industry free from government domination; and cooperating with distributors and manufacturers to build TV as a valuable service to customers.

SERVICE CHARGES AND CUSTOMER RELATIONS

(Continued from page 11)

scribes the intangibles back of good service. Its cost, imprinted with the name and address of the service shop that distributes it, is insignificant. Yet, if a copy of it was given to every service customer at the time a repaired receiver was delivered, it would do much toward increasing consumer appreciation of good radio and television service.

Flat Charge Program

Major service contractors have, of course, been very conscious of the necessity for maintaining good customer relations. They have found that service customers do not expect a lot for nothing. But they do want to feel that they are getting full value for the charges they pay for service on their radios and television receivers.

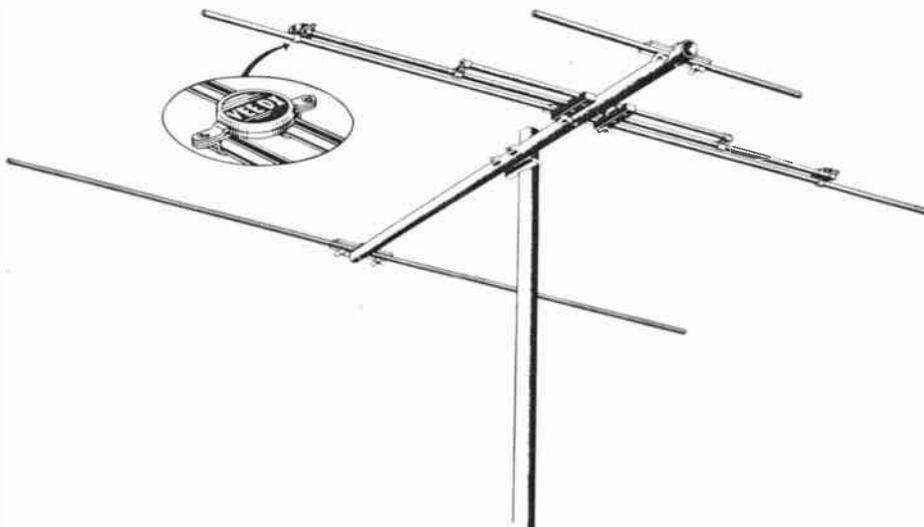
One very successful television service contractor developed a schedule of "TELEVISION FLAT RATE LABOR CHARGES" based upon a series of time studies of the operations involved. This schedule is used basically as a yardstick to measure the efficiency of the shop on each service job that is handled.

In actual practice, the bench time on every job is clocked on the shop card covering the job. When the billing is made up this bench time is compared with the flat rate for the same job or jobs. If the charges for the work at regular hourly rate exceed the flat rate, the billing is made at the flat rate. If, however, the hourly rate for the job is lower than the flat rate, it is billed at the hourly rate. In other words, the flat rate charges are used as the maximum for any job.

This service company has found it advisable to give estimates on all of the larger service jobs based upon their flat rate schedule. They have found that they can do a better job and have a happier customer if the set owner knows that the work and parts may cost him as much as \$50.00 than if they take the job without giving an estimate and have the customer expect the charges to be only \$15.00 or \$20.00.

Louisiana-Mississippi Chapter of NEDA

Newly elected officers of the Louisiana-Mississippi chapter of the National Electronics Distributors Association include: Ralph Thibodeaux, president, Radio Electronic Supply, Lafayette, La.; M. N. Sandefur, vice president, Central Radio Supply, Alexandria, La.; Alfons Schadler, secretary-treasurer, Southern Radio Supply Co., New Orleans; and Bill Kerlin, chapter director, Shuler Supply Co., New Orleans.



Revolutionary new "Q-Tee" developed by VEE-D-X. An all-channel antenna incorporating Electronic Channel Separators, a new design principle.

BRAND SELLING BOOSTS SALES

(Continued from page 14)

recognition of you and it means better customer relations.

While looking for brand-name opportunities, don't hesitate to embark on a new direct mail campaign. It will help you in the form of a postcard or as a handsome four-color mailing piece. If the available material is timely, don't wait for a change of season. Get it out promptly. Remember that many manufacturers have prepared campaigns for you. Each mailing piece may not bring you an order but they will contribute to the value of your customer relations and make it easier to get orders in the future.

Whenever possible mention the brand names that you support. Mention them in your correspondence. Instruct your technicians to mention them during service calls at every opportunity. Use brand-name point-of-sale material wherever you have customer contact: in their homes, in your reception rooms, in your shop and in the customer's mail. Overlook no opportunity to make your employees brand-name conscious.

If you will make this effort, your customers will soon learn that you know "who" is best for them. Half of your charges will be proved in advance, the parts part. The other part, labor charges, will also be easier to collect. Customers who know that the service organization selects identified parts will assume that it is also discriminating in its selection of good and reliable technicians.

This progressive situation can be made to work rather easily in the TV Service business because the leading set manufacturers are identified with leading parts manufacturers. There are few, if any, TV set makers who make their own components. TV sets are assembled products.

Sales by Association

By identifying the parts that you use and sell with those of original equipment, you are, in effect, sharing the wisdom of the manufacturer in the selection of parts. By indirection, your customers will pleasantly think that the parts you use and sell have been as thoroughly tested as the parts they bought when their set was newly purchased.

The chances are that this is true, but it might be a very difficult fact to sell to your customers without the obvious association with the respected set maker. The indirect association of ideas is easier for you and for your customer.

Doubtless you have seen expensive

advertisements sponsored by the manufacturers of tubes and other parts in which they proudly show brand-names and trade marks of the set makers who use their products. This promotion is designed to impress you by letting you know "who" has given their products recognition.

You can adopt and profit from the same principles, just as you can adopt and profit by the principles of market research that we outlined last month. The only difference between your use of principles and the use of them by leading manufacturers is that you need not spend so much money. The big manufacturer has to spend money because his program is big and he does not have the time or people to spare for the details.

The TV Serviceman, operating a smaller business in a smaller area need take only a few minutes a day of his own time and devote it to application of the principles of promotion in a small way to get proportionate results. And if he is alert, he will find that a great deal of work has already been done for him by progressive manufacturers. He need only ask for professionally prepared sales helps to get on the band wagon.

SERVICE CENTER

(Continued from page 13)

Speaking on mobile radio, Mr. Monette stated: "We also found that with our two-way mobile radio a decided saving in forms was possible, for each call assigned to each truck is recorded at the office. The only forms necessary for the technician to have is a tag form if the customer's property is to be brought in for repairs and a receipt form if he collects for work completed in the home.

"When the technician reports back to the office, every call assigned is accounted for. This eliminates the necessity of multiple forms for various controls. The service men are charged with part and tube inventory on their trucks and replacements are given to them on a one-for-one basis. If the part is a replacement, it must be tagged with the customer's name and type and serial number of set or appliance."

The high reputation, the high sales, the high-speed service—all these are testimony to the pride of Beaudry and Monette management.

"Remember—It's the Service That Counts!" It is the proud slogan of the Lowell firm—and one which they value—for on it is based their reputation and the future of their rapidly-expanding business.

VHF AND UHF TV EXPANDS WITH END OF FREEZE

The decision of the F.C.C. to end the TV freeze on April 13 opens up 2,053 TV channel assignments in 1,291 communities and 242 uhf channels for non-commercial educational service. Thirty-two existing vhf stations will be allotted new frequencies and all TV stations are placed in a single class with three geographic zones.

Anticipating a rush in applications for new TV stations, the F.C.C. has announced a temporary processing procedure, and has indicated that its aim is to make TV service available to the greatest number of people in the shortest period of time. The Commission has therefore set up separate processing lines for different categories of applications. The first applications processed will be those for TV stations presently operating, whose channel assignments will be changed.

Generally, the processing of applications will be in the order of population size so that the largest concentration of population, now having no TV service, will be handled first.

The F.C.C. formula for assignments, in part, is as follows:

| 1950 Population | Channels vhf & uhf |
|---------------------|-----------------------|
| 1,000,000 and above | 6 to 10 |
| 250,000-1,000,000 | 4 to 6 |
| 50,000-250,000 | 2 to 4 |
| Under 50,000 | 1 or 2 |

The basis of allocations by the F.C.C. is "to meet the two-fold objective: to provide television service, as far as possible, to all people of the United States; and to provide a fair, efficient and equitable distribution of television broadcast stations to the several states and communities." Allocations will be determined by priorities that have been defined as follows:

1. To provide at least one television service to all parts of the country.
2. To provide each community with at least two television services in all parts of the United States.
3. To provide a choice of at least two television services to all parts of the United States.
4. To provide each community with at least two television broadcast stations.
5. Any channels which remain unassigned under the foregoing priorities will be assigned to the various communities depending on the size of the population of each community, the geographical location of such community, and the number of

(Continued on page 26)

See pages 22-25 for channel allocations.

| KANSAS — Continued | | MARYLAND — Continued | | MISSISSIPPI — Continued | | NEVADA — Continued | |
|------------------------------------|-----------------|----------------------------|-----------------|-------------------------|-----------------|--------------------------|-----------------|
| VHF Channel No. | UHF Channel No. | VHF Channel No. | UHF Channel No. | VHF Channel No. | UHF Channel No. | VHF Channel No. | UHF Channel No. |
| Goodland | 31 | Hagerstown | 52 | Corinth | 29 | Hawthorne | 31 |
| Great Bend | 28 | Salisbury | 16 | Greenville | 21,27 | Henderson | 2 |
| Hays | 20 | MASSACHUSETTS | | Greenwood | 24 | Las Vegas | 6,10,13 |
| Hutchinson | 18 | Barnstable | 52 | Grenada | 15 | Lovelock | 18 |
| Independence | 20 | Boston | 2*,4,5,7 | Gulfport | 56 | McGill | 8 |
| Iola | 44 | Brockton | 44,50,56 | Hattiesburg | 9 | Reno | 3,8 |
| Junction City | 29 | Fall River | 40,46 | Jackson | 12 | Toponah | 9 |
| Kansas City (see Kansas City, Mo.) | | Greenfield | 42 | Kosciusko | 52 | Winnemucca | 7 |
| Larned | 15 | Holyoke (see Springfield) | | Laurel | 33 | Yerington | 33 |
| Lawrence | 11* | Lawrence | 38 | Louisville | 46 | NEW HAMPSHIRE | |
| Leavenworth | 54 | Lowell | 32 | McComb | 31 | Berlin | 26 |
| Liberal | 14 | New Bedford | 28,34 | Meridian | 11 | Claremont | 37 |
| McPherson | 26 | Northampton | 36 | Natchez | 30,36* | Concord | 27 |
| Manhattan | 8* | North Adams | 15 | Pascagoula | 22 | Durham | 11* |
| Newton | 14 | Pittsfield | 64 | Picayune | 14 | Keene | 45 |
| Olathe | 52 | Springfield-Holyoke | 55,61 | State College | 2* | Hanover | 21* |
| Ottawa | 21 | Worcester | 14,20 | Starkville | 34 | Laconia | 43 |
| Parsons | 46 | MICHIGAN | | Tupelo | 38 | Littleton | 24 |
| Pittsburg | 7 | Alma | 41 | University | 20* | Manchester | 9 |
| Pratt | 36 | Alpena | 9 | Vicksburg | 41 | Nashua | 54 |
| Salina | 34 | Ann Arbor | 20,26* | West Point | 56 | Portsmouth | 19 |
| Topeka | 13 | Bad Axe | 48 | Yazoo City | 49 | Rochester | 21 |
| Wellington | 24 | Battle Creek | 58,64 | MISSOURI | | NEW JERSEY | |
| Wichita | 3,10 | Bay City | 63,73* | Cape Girardeau | 12 | Andover | 69* |
| Winfield | 43 | Benton Harbor | 42 | Carthage | 56 | Asbury Park | 58 |
| KENTUCKY | | Big Rapids | 39 | Caruthersville | 27 | Atlantic City | 46,52 |
| Ashland | 59 | Cadillac | 49 | Chillicothe | 14 | Bridgeton | 64 |
| Bowling Green | 13 | Cheboygan | 45 | Clinton | 49 | Freehold | 74* |
| Campbellsville | 40 | Detroit | 2,4,7 | Columbia | 8* | Hammonton | 70* |
| Corbin | 16 | East Lansing | 60 | Farmington | 52 | Montclair | 77* |
| Danville | 35 | East Tawas | 25 | Festus | 14 | Newark | 13 |
| Elizabethtown | 23 | Escanaba | 3 | Fulton | 14 | New Brunswick | 19*,47 |
| Frankfort | 43 | Flint | 12 | Hannibal | 7 | Paterson | 37 |
| Glasgow | 28 | Gladstone | 16,22*,28 | Jefferson City | 13 | Trenton | 41 |
| Harlan | 36 | Grand Rapids | 40 | Joplin | 12 | Wildwood | 48 |
| Hazard | 19 | Hancock | 8 | Kansas City | 4,5,9 | Camden | 80* |
| Hopkinsville | 20 | Houghton | 17*,23 | Kennett | 21 | NEW MEXICO | |
| Lexington | 27,33 | Iron Mountain | 19 | Kirksville | 3 | Alamogordo | 17 |
| Louisville | 3,11 | Iron River | 27 | Lebanon | 18 | Albuquerque | — |
| Madisonville | 15*,21,41,51 | Ironwood | 31 | Marshall | 23 | Artesia | 4,5*,7,13 |
| Mayfield | 49 | Jackson | 48 | Marysville | 40 | Artrisco-Five Points | 21 |
| Maysville | 24 | Kalamazoo | 3 | Mexico | 26 | Belen | 18 |
| Middlesborough | 57,63 | Lansing | 6 | Moberly | 45 | Carlsbad | 24 |
| Murray | 33 | Ludington | 3 | Monett | 35 | Clayton | 23 |
| Owensboro | 14 | Manistee | 16 | Nevada | 14 | Cloyvis | 27 |
| Paducah | 43 | Manistique | 15 | Poplar Bluff | 15 | Deming | 35 |
| Pikeville | 14 | Marquette | 14 | Rolla | 31 | Farmington | 17 |
| Princeton | 45 | Midland | 17 | St. Joseph | 2 | Gallup | 3,10,8* |
| Richmond | 60 | Mount Pleasant | 47 | St. Louis | 4,5,9*,11 | Hobbs | 46 |
| Somerset | 22 | Muskegon | 19 | Sedalia | 6 | Hot Springs | 19 |
| Winchester | 37 | Petoskey | 29,35 | Sikeston | 37 | Las Cruces | 22 |
| LOUISIANA | | Pontiac | 31 | Springfield | 3,10 | Las Vegas | 14 |
| Abbeville | 42 | Port Huron | 44 | West Plains | 20 | Lordsburg | 23 |
| Alexandria | 5 | Port Huron | 34 | MONTANA | | Los Alamos | 20 |
| Bastrop | 62 | Rogers City | 24 | Anaconda | 2 | Lovington | 27 |
| Baton Rouge | 10 | Saginaw | 51,57 | Billings | 2,8,11* | Portales | 22 |
| Bogalusa | 28,34*,40 | Sault Ste. Marie | 8,10 | Bozeman | 9* | Raton | 46,52* |
| Crowley | 39 | Traverse City | 28,34* | Butte | 4,6,7* | Roswell | 3*,8,10 |
| De Ridder | 21 | West Branch | 20,26* | Cut Bank | — | Santa Fe | 2,9*,11 |
| DeWitt | 14 | MINNESOTA | | Deer Lodge | 25 | Silver City | 12,10* |
| Eunice | 64 | Albert Lea | 57 | Dillon | 20 | Socorro | 15 |
| Franklin | 46 | Alexandria | 36 | Glasgow | 18 | Tucumcari | 25 |
| Hammond | 51 | Austin | 36 | Glendive | 16 | NEW YORK | |
| Houma | 30 | Bemidji | 51 | Great Falls | 23* | Albany-Schenectady-Troy | 6 |
| Jackson | 18 | Brainerd | 24 | Hamilton | 17 | Amsterdam | 17*,23,35,41 |
| Jennings | 48 | Cloquet | 12 | Hardin | 4 | Auburn | 52 |
| Lafayette | 38,67 | Crookston | 44 | Have | 9,11 | Batavia | 37 |
| Lake Charles | 7 | Detroit Lakes | 21 | Helena | 10,12 | Binghamton | 12 |
| Minden | 19*,25 | Duluth-Superior (Wis.) | 18 | Kalispell | 8 | Buffalo | 4,7,2 |
| Monroe | 8 | Duluth-Superior (Wis.) | 3,6,8* | Laurel | 14 | Cortland | 56 |
| Morgan City | 43 | Ely | 16 | Lewiston | 13 | Dunkirk | 46 |
| Natchitoches | 17 | Fairmont | 40 | Livingston | 16 | Elmira | 18,24 |
| New Iberia | 15 | Fairbault | 20 | Miles City | 3,6*,10 | Glens Falls | 39 |
| New Orleans | 2*,4,6,7 | Fergus Falls | 16 | Missoula | 11*,13 | Gloversville | 29 |
| Oakdale | 54 | Grand Rapids | 20 | Polson | 21 | Hornell | 50 |
| Opelousas | 58 | Hastings | 29 | Red Lodge | 18 | Ithaca | 14*,20 |
| Ruston | 20 | Hibbing | 10 | Shelby | 14 | Jamestown | 58 |
| Shreveport | 3,12 | International Falls | 11 | Sidney | 14 | Kingston | 66 |
| Thibodaux | 24 | International Falls | 11 | Whitefish | 16 | Malone | 20,66* |
| Winnfield | 22 | Little Falls | 14 | Wolf Point | 20 | Massena | 14 |
| MAINE | | Mankato | 15 | NEBRASKA | | Middletown | 60 |
| Auburn | 23 | Marshall | 22 | Alliance | 13 | New York | 2,4,5,7,9,11 |
| Augusta | 10 | Minneapolis | — | Beatrice | 21 | Ogdenburg | 24 |
| Bangor | 2,5 | St. Paul | 2*,4,5,9,11 | Broken Bow | 40 | Olean | 54 |
| Bar Harbor | 22 | Montevideo | 19 | Columbus | 14 | Oneonta | 62 |
| Bath | 65 | New Ulm | 43 | Fairbury | 39 | Oswego | 31 |
| Belfast | 41 | Northfield | 26 | Falls City | 45 | Plattsburg | 28 |
| Biddeford | 59 | Owatonna | 45 | Fremont | 38 | Poughkeepsie | 21,83* |
| Calais | 7 | Red Wing | 63 | Grand Island | 11 | Rochester | 5,10 |
| Dover-Foxcroft | 18 | Rochester | 55 | Hastings | 5 | Rome (see Utica) | 15,21*,27 |
| Fort Kent | 17 | St. Cloud | 7 | Kearney | 13 | Saranac Lake | 16 |
| Houlton | 24 | St. Paul (see Minneapolis) | 33 | Lexington | 23 | Schenectady (see Albany) | — |
| Lewiston | 8 | Stillwater | 39 | Lincoln | 10,12 | Syracuse | 3,8 |
| Millinocket | 14 | Thief River Falls | 15 | McCook | 8 | Troy (see Albany) | — |
| Orono | 12* | Virginia | 26 | Nebraska City | — | Utica-Rome | 13 |
| Portland | 6,13 | Wadena | 27 | Norfolk | 50 | Watertown | 48 |
| Presque Isle | 8 | Willmar | 31 | North Platte | 2,4 | NORTH CAROLINA | |
| Rockland | 25 | Winona | 61 | Omaha | 3,6,7 | Ahoskie | 53 |
| Rumford | 55 | Worthington | 32 | Scottsbluff | 10 | Albemarle | 20 |
| Van Buren | 15 | MISSISSIPPI | | York | 15 | Asheville | 56*,62 |
| Waterville | 35 | Biloxi | 13 | NEVADA | | Burlington | 63 |
| MARYLAND | | Brookhaven | 44*,50 | Boulder City | 4 | Chapel Hill | — |
| Annapolis | 14 | Canton | 37 | Carlin | — | Charlotte | 3,9 |
| Baltimore | 2,11,13 | Clarkdale | 16 | Carson City | 14 | Durham | 11 |
| Cambridge | 22 | Clarksdale | 6 | Elko | 37 | Elizabeth City | — |
| Cumberland | 17 | Columbia | 32 | Ely | 10 | | |
| Frederick | 62 | Columbus | 35 | Fallon | 3,6 | | |
| | | | 28 | Goldfield | — | | |

NORTH CAROLINA — Continued

| | VHF Channel No. | UHF Channel No. |
|----------------|-----------------|-----------------|
| Fayetteville | — | 18 |
| Gastonia | — | 48 |
| Goldensboro | — | 34 |
| Greensboro | 2 | 51*57 |
| Greenville | 9 | — |
| Henderson | — | 52 |
| Hendersonville | — | 27 |
| Hickory | — | 30 |
| High Point | — | 15 |
| Jacksonville | — | 16 |
| Kannapolis | — | 59 |
| Kinston | — | 45 |
| Laurinburg | — | 41 |
| Lumberton | — | 21 |
| Mount Airy | — | 55 |
| New Bern | 13 | — |
| Raleigh | 5 | 22*28 |
| Roanoke Rapids | — | 30 |
| Rocky Mount | — | 50 |
| Salisbury | — | 53 |
| Sanford | — | 38 |
| Shelby | — | 39 |
| Southern Pines | — | 49 |
| Statesville | 7 | 64 |
| Washington | 6 | — |
| Wilmington | 7 | 29,35* |
| Wilson | — | 56 |
| Winston-Salem | 12 | 26,32* |

NORTH DAKOTA

| | | |
|--------------|----------|--------|
| Bismarck | 5,12 | 18,24* |
| Bottineau | — | 16 |
| Carrington | — | 28 |
| Devils Lake | 8 | 14 |
| Dickinson | 2,4 | 17* |
| Fargo | 6,13 | 34*40 |
| Grafton | — | 17 |
| Grand Forks | 2*,10 | — |
| Harvey | — | 22 |
| Jamestown | 7 | 42 |
| Lisbon | — | 23 |
| Minot | 6*,10,13 | — |
| New Rockford | — | 20 |
| Rugby | — | 38 |
| Valley City | 4 | 32 |
| Wahpeton | — | 45 |
| Williston | 8,11 | 34* |

OHIO

| | | |
|---------------------------|--------|-----------|
| Akron | — | 49,55*61 |
| Ashtabula | — | 15 |
| Athens | — | 62 |
| Bellefontaine | — | 63 |
| Cambridge | — | 28 |
| Canton | — | 29 |
| Chillicothe | — | 56 |
| Cincinnati | 5,9,12 | 48*,54,74 |
| Cleveland | 3,5,8 | 19,25*,65 |
| Columbus | 4,6,10 | 34*40 |
| Coshocton | — | 20 |
| Dayton | 2,7 | 16*22 |
| Defiance | — | 43 |
| Findlay | — | 53 |
| Gallipolis | — | 18 |
| Hamilton | — | 17 |
| Middletown | — | 65 |
| Lancaster | — | 28 |
| Lima | — | 35,41 |
| Lorain | — | 31 |
| Mansfield | — | 36 |
| Marion | — | 17 |
| Massillon | — | 23 |
| Middletown (see Hamilton) | — | — |
| Mount Vernon | — | 58 |
| Newark | — | 60 |
| Oxford | — | 14* |
| Piqua | — | 44 |
| Portsmouth | — | 30 |
| Sandusky | — | 42 |
| Springfield | — | 46,52 |
| Tiffin | — | 47 |
| Toledo | 11,13 | 30* |
| Warren | — | 21 |
| Youngstown | — | 27,33,73 |
| Zanesville | — | 50 |

OKLAHOMA

| | | |
|--------------|----|--------|
| Ada | — | 50 |
| Altus | — | 36 |
| Alva | — | 30 |
| Anadarko | — | 58 |
| Ardmore | — | 55 |
| Bartlesville | — | 62 |
| Blackwell | — | 51 |
| Chickasha | — | 64 |
| Claremore | — | 15 |
| Clinton | — | 32 |
| Duncan | — | 39 |
| Durant | — | 27 |
| Elk City | 12 | 15 |
| El Reno | — | 58 |
| Enid | 5 | 21,27 |
| Frederick | — | 44 |
| Guthrie | — | 48 |
| Guymon | — | 20 |
| Hobart | — | 23 |
| Holdenville | — | 14 |
| Hugo | — | 21 |
| Lawton | 7 | 28*,34 |
| McAlester | — | 47 |
| Miam | — | 58 |
| Muskogee | 8 | 45*,66 |
| Norman | — | 31,37 |

OKLAHOMA — Continued

| | VHF Channel No. | UHF Channel No. |
|---------------|-----------------|-----------------|
| Oklahoma City | 9,13*,4 | 19,25 |
| Okmulgee | — | 26 |
| Pauls Valley | — | 61 |
| Ponca City | — | 40 |
| Pryor Creek | — | 54 |
| Sapulpa | — | 42 |
| Seminole | — | 59 |
| Shawnee | — | 53 |
| Stillwater | — | 29,69* |
| Tulsa | 2,6,11* | 17,23 |
| Vinita | — | 28 |
| Woodward | 8 | — |

OREGON

| | | |
|---------------|------------|--------|
| Albany | — | 55 |
| Ashland | — | 14 |
| Astoria | — | 30 |
| Baker | — | 37 |
| Bend | — | 15 |
| Burns | — | 16 |
| Corvallis | 7* | 49 |
| Eugene | 9*,13 | 20,26 |
| Grants Pass | — | 30 |
| Klamath Falls | 2 | — |
| La Grande | 13 | — |
| Lebanon | — | 43 |
| McMinnville | — | 46 |
| Medford | 4,5 | — |
| North Bend | — | 16 |
| Pendleton | — | 28 |
| Portland | 6,8,10*,12 | 21,27 |
| Roseburg | — | 28 |
| Salem | 3 | 18*,24 |
| Springfield | — | 37 |
| The Dalles | — | 32 |

PENNSYLVANIA

| | | |
|---------------|----------|--------------|
| Allentown | — | 39,45 |
| Altoona | 10 | 19,25 |
| Bethlehem | — | 51 |
| Bradford | — | 48 |
| Butler | — | 43 |
| Chambersburg | — | 48 |
| Du Bois | — | 31 |
| Easton | — | 57 |
| Emporium | — | 42 |
| Erie | 12 | 35,41*,66 |
| Harrisburg | — | 27,33,71 |
| Hazleton | — | 63 |
| Johnstown | 6 | 56 |
| Lancaster | 8 | 21 |
| Lebanon | — | 15 |
| Lewistown | — | 38 |
| Lock Haven | — | 32 |
| Meadville | — | 37 |
| New Castle | — | 45 |
| Oil City | — | 64 |
| Philadelphia | 3,6,10 | 17,23,29,35* |
| Pittsburgh | 2,11,13* | 16,47,53 |
| Reading | — | 55,61 |
| Scranton | — | 16,22,73 |
| Sharon | — | 39 |
| State College | — | 44* |
| Sunbury | — | 65 |
| Uniontown | — | 14 |
| Washington | — | 63 |
| Wilkes-Barre | — | 28,34 |
| Williamsport | — | 36 |
| York | — | 43,49 |

RHODE ISLAND

| | | |
|------------|-------|--------|
| Providence | 10,12 | 16,22* |
|------------|-------|--------|

SOUTH CAROLINA

| | | |
|-------------|---------|-----------|
| Aiken | — | 54 |
| Anderson | — | 58 |
| Camden | — | 14 |
| Charleston | 2,5,13* | — |
| Clemson | — | 68* |
| Columbia | 10 | 19*,25,67 |
| Conway | — | 23 |
| Florence | 8 | — |
| Georgetown | — | 27 |
| Greenville | 4 | 23,29* |
| Greenwood | — | 21 |
| Lake City | — | 55 |
| Lancaster | — | 31 |
| Laurens | — | 45 |
| Marion | — | 43 |
| Newberry | — | 37 |
| Orangeburg | — | 44 |
| Rock Hill | — | 61 |
| Spartanburg | 7 | 17 |
| Sumter | — | 47 |
| Union | — | 65 |

SOUTH DAKOTA

| | | |
|---------------|-------|--------|
| Aberdeen | 9 | 17 |
| Belle Fourche | — | 23 |
| Brookings | 8* | 25 |
| Hot Springs | — | 17 |
| Huron | 12 | 15 |
| Lead | 5 | 26 |
| Madison | — | 46 |
| Mitchess | 5 | 20 |
| Mobridge | — | 27 |
| Pierre | 6,10 | 22* |
| Rapid City | 7 | 15 |
| Sioux Falls | 11,13 | 38,44* |
| Sturgis | — | 20 |
| Vermillion | 2* | 41 |
| Watertown | 3 | 35 |
| Winner | — | 18 |
| Yankton | — | 17 |

TENNESSEE

| | VHF Channel No. | UHF Channel No. |
|--------------|-----------------|-----------------|
| Athens | — | 14 |
| Briston | 5 | 46 |
| Chattanooga | 3,12 | 43,55*,49 |
| Clarksville | — | 53 |
| Cleveland | — | 38 |
| Columbia | — | 39 |
| Cookeville | — | 24 |
| Covington | — | 19 |
| Dyersburg | — | 46 |
| Elizabethton | — | 40 |
| Fayetteville | — | 27 |
| Gallatin | — | 48 |
| Harriman | — | 45 |
| Humboldt | — | 25 |
| Jackson | 9 | 16 |
| Johnson City | 11 | 34 |
| Kingsport | — | 28 |
| Knoxville | 6,10 | 20*,26 |
| Lawrenceburg | — | 50 |
| Lebanon | — | 58 |
| McMinnville | — | 46 |
| Maryville | — | 51 |
| Memphis | 5,10*,13 | 42,48 |
| Morristown | — | 54 |
| Murfreesboro | — | 18 |
| Nashville | 2*,4,5 | 30,36 |
| Oak Ridge | — | 32 |
| Paris | — | 51 |
| Pulaski | — | 44 |
| Shelbyville | — | 62 |
| Springfield | — | 42 |
| Tullahoma | — | 65 |
| Union City | — | 55 |

TEXAS

| | | |
|-----------------|-----------|-----------|
| Abilene | 9 | 33 |
| Alice | — | 34 |
| Alpine | 12 | — |
| Amarillo | 2*,4,7,10 | — |
| Athens | — | 25 |
| Austin | 7 | 18,24,30* |
| Ballinger | — | 25 |
| Bay City | — | 33 |
| Beaumont | — | — |
| Port Arthur | 4,6 | 31,37* |
| Beeville | — | 38 |
| Big Spring | 4 | — |
| Bonham | — | 43 |
| Borger | — | 33 |
| Brady | — | 15 |
| Breckenridge | — | 14 |
| Brenham | — | 52 |
| Brownfield | — | 15 |
| Brownsville | 4,5 | 36 |
| Brownwood | — | 19 |
| Bryan | — | 54 |
| Childress | — | 40 |
| Cleburne | — | 57 |
| Coleman | — | 21 |
| College Station | 3* | 48 |
| Conroe | — | 20 |
| Corpus Christi | 6,10 | 16*,22 |
| Corsicana | — | 47 |
| Crockett | — | 58 |
| Crystal City | — | 28 |
| Cuero | — | 25 |
| Dalhart | — | 16 |
| Dallas | 4,8,13* | 23,29,73 |
| Del Rio | — | 16 |
| Denison | — | 52 |
| Denton | 2* | 17 |
| Eagle Pass | — | 26 |
| Edinburg | — | 26 |
| El Campo | — | 27 |
| El Paso | 4,7*,9,13 | 20,26 |
| Falfurrias | — | 52 |
| Floydada | — | 45 |
| Fort Stockton | — | 22 |
| Fort Worth | 5,10 | 20,26* |
| Gainesville | — | 49 |
| Galveston | 11 | 35,41,47* |
| Gonzales | — | 64 |
| Greenville | — | 62 |
| Harlingen | — | 23 |
| Hebbronville | — | 58 |
| Henderson | — | 42 |
| Hereford | — | 19 |
| Hillsboro | — | 63 |
| Houston | 2,8*,13 | 23,29 |
| Huntsville | — | 15 |
| Jacksonville | — | 36 |
| Jasper | — | 49 |
| Kermit | — | 14 |
| Kilgore | — | 59 |
| Kingsville | — | 40 |
| Lamesa | — | 28 |
| Lampasas | — | 40 |
| Laredo | 6,13 | 15* |
| Levelland | — | 38 |
| Littlefield | — | 32 |
| Longview | — | 32,38 |
| Lubbock | 11,13,5 | 20*,26 |
| Lufkin | — | 46 |
| McAllen | 9 | 20 |
| McKinney | — | 65 |
| Marfa | — | 19 |
| Marshall | — | 16 |
| Mercedes | — | 32 |
| Mexia | — | 50 |
| Midland | 2 | 18 |
| Mineral Wells | — | 38 |
| Mission | — | 14 |

TEXAS — Continued

| | VHF Channel No. | UHF Channel No. |
|-----------------|-----------------|-----------------|
| Monahans | 9 | — |
| Mount Pleasant | — | 35 |
| Nacogdoches | — | 40 |
| New Braunfels | — | 62 |
| Odessa | 7 | 24 |
| Orange | — | 43 |
| Pampa | — | 17 |
| Paris | — | 33 |
| Pearsall | — | 31 |
| Pecos | — | 16 |
| Perryton | — | 22 |
| Plainview | — | 29 |
| Port Arthur | — | — |
| (see Beaumont) | — | — |
| Quanah | — | 42 |
| Raymondville | — | 42 |
| Rosenberg | — | 17 |
| San Angelo | 6,8 | 17,23* |
| San Antonio | 4,5,9*,12 | 35,41 |
| San Benito | — | 48 |
| San Marcos | — | 53 |
| Seguin | — | 14 |
| Seymour | — | 24 |
| Sherman | — | 46 |
| Snyder | — | 30 |
| Stephenville | — | 32 |
| Sulphur Springs | — | 41 |
| Sweetwater | 12 | — |
| Taylor | — | 58 |
| Temple | — | 16,22 |
| Terrel | — | 53 |
| Texarkana | 6 | 18*,24 |
| Tyler | 7 | 19 |
| Uvalde | — | 20 |
| Vernon | — | 18 |
| Victoria | — | 19 |
| Waco | 11 | 28*,34 |
| Waxahachie | — | 45 |
| Weatherford | — | 51 |
| Wichita Falls | 3,6 | 16*,22 |

UTAH

| | | |
|----------------|----------|--------|
| Brigham | — | 36 |
| Cedar City | 5 | — |
| Logan | 12 | 30,48* |
| Ogden | 9 | 18*,24 |
| Price | 6 | — |
| Provo | 11 | 22,28* |
| Richfield | 13 | — |
| St. George | — | 18 |
| Salt Lake City | 4,5,7*,2 | 20,26 |
| Tooele | — | 44 |
| Vernal | 3 | — |

VERMONT

| | | |
|---------------|---|--------|
| Bennington | — | 33 |
| Burlington | — | 58 |
| Burlington | — | 16*,22 |
| Montpelier | 3 | 40 |
| Newport | — | 46 |
| Rutland | — | 49 |
| St. Albans | — | 34 |
| St. Johnsbury | — | 30 |

VIRGINIA

| | | |
|--------------------------|---------|--------------|
| Blacksburg | — | 60* |
| Charlottesville | — | 45*,64 |
| Covington | — | 44 |
| Danville | — | 24 |
| Emporia | — | 25 |
| Farmville | — | 19 |
| Fredericksburg | — | 47 |
| Front Royal | — | 39 |
| Harrisonburg | 3 | 34 |
| Lexington | — | 54 |
| Lynchburg | 13 | 16 |
| Marion | — | 50 |
| Martinsville | — | 35 |
| Newport News | — | 33 |
| Norfolk | — | — |
| Portsmouth | 3,10,12 | 15,21*,27,33 |
| Norton | — | 52 |
| Petersburg | 8 | 41 |
| Portsmouth (see Norfolk) | — | — |
| Pulaski | — | 37 |
| Richmond | 6,12 | 23*,29 |
| Roanoke | 7,10 | 27,33* |
| South Boston | — | 14 |
| Staunton | — | 36 |
| Waynesboro | — | 42 |
| Williamsburg | — | 17 |
| Winchester | — | 28 |

WASHINGTON

WASHINGTON — Continued

| | VHF Channel No. | UHF Channel No. |
|-------------|-----------------|-----------------|
| Richland | — | 31 |
| Seattle | 4,5,7,9* | 20,28 |
| Spokane | 2,4,6,7* | — |
| Tacoma | 11,13 | 56*,62 |
| Walla Walla | 5,8 | 22* |
| Wenatchee | — | 45*,55 |
| Yakima | — | 23,29,47* |

WEST VIRGINIA

| | | |
|-------------|------|--------|
| Beckley | 6 | 21 |
| Bluefield | — | 41 |
| Charleston | 8 | 43*,49 |
| Clarksburg | 12 | 22 |
| Elkins | — | 40 |
| Fairmont | — | 35 |
| Hinton | — | 31 |
| Huntington | 3,13 | 53* |
| Logan | — | 23 |
| Martinsburg | — | 58 |
| Morgantown | — | 24* |
| Parkersburg | — | 15 |
| Welch | — | 25 |
| Weston | — | 32 |
| Wheeling | 7,9 | 51,57 |
| Williamson | — | 17 |

WISCONSIN

| | | |
|------------------------------|----------|-----------|
| Adams | — | 58* |
| Appleton | — | 42 |
| Ashland | — | 15 |
| Beaver Dam | — | 37 |
| Beloit | — | 57 |
| Chilton | — | 24 |
| Eau Claire | 13 | 19*,25 |
| Fond du Lac | — | 54 |
| Green Bay | 2,6 | — |
| Janesville | — | 63 |
| Kenosha | — | 61 |
| La Crosse | 8 | 32*,38 |
| Madison | 3 | 21*,27,33 |
| Manitowoc | — | 65 |
| Marinette | 11 | 32,38* |
| Milwaukee | 4,10*,12 | 19,25,31 |
| Oshkosh | — | 48 |
| Park Falls | — | 18* |
| Portage | — | 17 |
| Prairie du Chien | — | 34 |
| Racine | — | 49,55 |
| Rhineland | — | 22 |
| Rice Lake | — | 21 |
| Richland Center | — | 15,66* |
| Sheboygan | — | 59 |
| Shell Lake | — | 30* |
| Sparta | — | 50 |
| Stevens Point | — | 20,26 |
| Sturgeon Bay | — | 44 |
| Superior (see Duluth, Minn.) | — | — |
| Wausau | 7 | 16,46* |
| Wisconsin Rapids | — | 14 |

WYOMING

| | | |
|--------------|------|-------|
| Buffalo | — | 29 |
| Casper | 2,6 | — |
| Cheyenne | 3,5 | — |
| Cody | — | 24 |
| Douglas | — | 14 |
| Evanston | — | 14 |
| Gillette | — | 17,31 |
| Green River | — | 16 |
| Greybull | — | 40 |
| Lander | — | 17 |
| Laramie | 8* | 18 |
| Lovell | — | 36 |
| Lusk | — | 19 |
| Newcastle | — | 28 |
| Powell | — | 30 |
| Rawlins | 11 | — |
| Riverton | 10 | — |
| Rock Springs | 13 | — |
| Sheridan | 9,12 | — |
| Thermopolis | — | 15 |
| Torrington | — | 27 |
| Wheatland | — | 24 |
| Worland | — | 34 |

U. S. TERRITORIES
PUERTO RICO

| | | |
|----------|--------|---|
| Arecibo | 13 | — |
| Caguas | 11 | — |
| Mayaguez | 3,5 | — |
| Ponce | 7,9 | — |
| San Juan | 2,4,6* | — |

ALASKA

| | | |
|------------|----------------|---|
| Anchor-age | 2,7*,11,13 | — |
| Fairbanks | 2,4,7,9*,11,13 | — |
| Juneau | 3*,8,10 | — |
| Ketchikan | 2,4,9* | — |
| Seward | 4,9 | — |
| Sitka | 13 | — |

HAWAIIAN ISLANDS

| | | |
|----------------|----------------|---|
| Lihue, Kauai | 3,8*,10,12 | — |
| Honolulu, Oahu | 2*,4,7,9,11,13 | — |

| | | |
|---------------|----------------|---|
| Wailuku, Maui | 3,8,10*,12 | — |
| Hilo, Hawaii | 2,4*,7,9,11,13 | — |

VIRGIN ISLANDS

| | | |
|------------------|-------|---|
| Christiansted | 8 | — |
| Charlotte Amalie | 10,12 | — |

HERE'S HOW TO

HOLD your customers — and get more!

The rising flood of responses following announcement of SERVICE MANAGEMENT's "forecast" and other notable issues shows that the mental receiving systems of TV Servicemen are catching all the signals.

Service Management Means Business

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More and more the Service Industry understands the need for a business magazine. SERVICE MANAGEMENT is edited by men who REALLY KNOW the business problems of the Service business from personal, first-hand experience. It is the one magazine — in the field of television, radio, audio, electronics — which accents and persistently preaches the importance of business fundamentals as they apply specifically to this field.

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Type of Business:

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 TECHNICIAN; DISTRIBUTOR
 PARTS JOBBER
 MANUFACTURER OF _____

TECHNICAL TOPICS

(Continued from page 7)

another possibility where an indoor antenna must be used is a wideband booster and multi-outlet box with an attic-mounted indoor antenna.

Yagi Modification

We very much appreciate the wide interest in Yagi modifications. To answer this demand and do a thorough, complete work we are devoting a full section of our new fringe area notebook to the topic. We are continuing the research and expect to have the notebook available in early summer. This will permit us to be much more thorough and complete than if we answered so many individual letters.

It is significant that the full versatility of a Yagi has not been realized. Consequently, we are not only concerned with the gain factor but have learned to dimension Yagi for special conditions such as wideband operation and maximum rejection of co-channel and especially adjacent channel interference. For example, dimensions of Yagi shown, figure 7, do not make it a peak gain type but do give it a good gain for reception of New York channels 2-4-5 in an area infested with severe spill-over from local channels 3-6. It has been planned for N.E. section of Philadelphia and suburban sections north and east of Philadelphia. Yagi has been designed with a good gain and with excellent rejection of 3-6 rear pick-up.

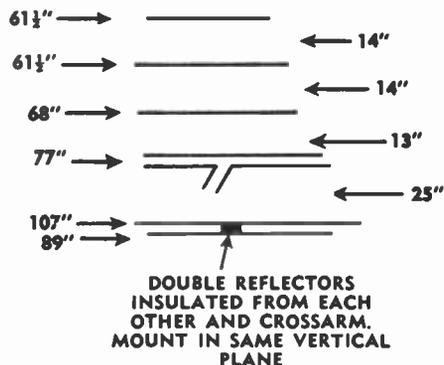


FIG. 7

JFD Readyng New Sets of Catalogs

The advertising department of the JFD Manufacturing Company, Inc., of Brooklyn, N. Y., is presently preparing three completely new catalogs for service-dealers, sales representatives and distributors. Immediately after being printed, these catalogs will reach those who handle JFD products, a line of 6,000 items.

Two of these catalogs have been designed in the well known JFD "Picto-Price-List" fashion, a real divergence from the general mode of television antenna and accessory presentation. These two catalogs, the Form 200 for service dealers and the Form 350 for distributors and sales representatives, will contain along with price listings, information and illustrations on every item. Included, to simplify inquiry and ordering operations, will be packaging quantities, shipping weights and a special easy reference indexing system.

Both of these catalogs, ready for immediate consulting, will be supplemented with the new JFD No. 75 catalog.

This catalog will venture more deeply in explaining each JFD product specifically and in detail. The data which it offers will be presented in an unusual design pattern to make its reading even more interesting. In it, too, each item will be illustrated. Actually, the Form No. 75 will be most widely used as a dealer's parts catalog. Prices will be included.

G. E. Survey of Replacement Tube Market

John T. Thompson, manager of replacement tube sales for General Electric, recently reported a G. E. Survey that showed that about 1,100,000 TV picture tubes worth about \$44 million, and 110,000,000 receiving type tubes worth about \$220 million will be sold during 1952 for radio and TV replacements. He also reported that the chances are that about one in every fifteen of the nation's 16 million TV sets will need a new picture tube by the end of 1952.

New Association Formed in Elmira

Protection against "unscrupulous" television and radio repairmen is the avowed goal of the newly organized Southern Tier Electronics Association which met at the Mark Twain Hotel in Elmira, N. Y., recently.

Floyd B. Allen of 419 Balsam St., secretary of the organization, reported the group is composed of a majority of the radio and television repairmen in the Elmira area. Individuals interested in electronics, either part or full time, may also join.

Officials of the association include: Richard Marshall, president; Justin Sadler, vice-president, and William Ozard, treasurer.

Allen reported that 80 persons from Nornell, Bath, Corning, Geneva and Sayre, Pa., have been invited to attend the next regular meeting of the association.

"We're interested in establishing a code of ethics to guard the public from fly-by-night individuals," Allen stated.

He said the rate of installation and repair of new TV sets soon will be about 500 a week in the greater Elmira area. "In two and a half years, the problems of installation and repair will reach their peak," Allen said.

The association will attempt to promote standardized service procedures and keep abreast of new circuits, stations and factors in reception. A fair standard of base rates is under consideration.

A key part of the group is the mutual aid and research committee. Members will study problems associated with better reception.

The association plans to conduct an educational program throughout the Southern Tier. Nationally known speakers are to be contacted to speak before the group on the latest radio and television problems.

Almo High Fidelity Demonstration Room

The Almo Radio Co. has announced the opening of its new High Fidelity Demonstration Room at 509 Arch St., Philadelphia 6, Pa. The new demonstration room provides leisurely, comfortable, quiet surroundings where instantaneous comparisons may be made between amplifiers, pickups, baffles, speakers and other items in the high fidelity audio field.

VHF AND UHF TV EXPANDS

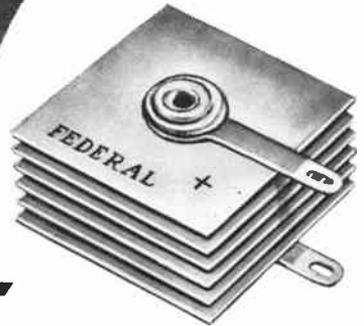
(Continued from page 21)

television services available to such community from television stations located in other communities.

The Commission reported on April 13: "If all vhf and uhf channels are utilized, there should be few, if any, people of the United States residing beyond the areas of television service. Provision has been made for at least one assignment to over 1,250 communities and it has attempted, where possible, to provide each community with at least two assignments."

When the F.C.C. completes processing of applications it will establish two processing lines to operate concurrently. The operation of these two lines is not expected to begin before the first of July, so that a reasonable time will be allowed for filing new applications and amending those on file.

"It pays to replace with the BEST" Federal-



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IT PAYS YOUR CUSTOMERS in finest quality and dependable, long-life performance—proved by over 30,000,000 units shipped to the field!

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Here Are Other Specific Reasons Why "Federal" Is Your No. 1 Choice for Servicing the Big, Growing Radio-TV Replacement Market:

- Tests by receiver manufacturers show a life expectancy of well over RTMA guarantee.
- Over 250,000 tests prove superior immunity to shelf-aging.
- Federal's synthetic barrier layer stops change during long storage.
- Quality rigidly controlled. All units fully tested before release.
- Units available either packed in the attractive Federal resale box or in bulk.
- Constant research keeps you up-to-date on rectifier progress.

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In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.



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Glass head type assembly is stronger, both mechanically and electrically—gives greater protection against leakages and arcing.



2

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3

Low resistance of outside conductive coating minimizes radiation of horizontal oscillator sweep frequency.



4

Fortified screen composition resists burning (X pattern).



5

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6

Tung-Sol Picture Tubes can be used with single or double field ion trap designs.



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