

RADIO
AUDIO
TELEVISION
ELECTRONICS

Service Management

THE BUSINESS MAGAZINE OF THE
RADIO - ELECTRONICS SERVICE INDUSTRY

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FORECAST

1952

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Product Forecasts For 1952

JFD Manufacturing Co., Inc.

The company is introducing a new line of masts, antennas and a new amplifier booster that will allow for the successful operation of more than 13 sets from a single antenna. A line of revolutionary installation components which include screw eyes, stand-offs and others will also be initiated.

A special installation kit will be offered the serviceman. Known as the JFD "Tenna-Pak," the kit will include all items needed for installation plus the JFD UL approved lightening arrester. A stepped-up advertising and promotional campaign will provide the trade with greater information so that the dealer and service technician will choose the right item for each job.

Blonder-Tongue Laboratories, Inc.

New emphasis is being placed on a merchandising program for the Blonder-Tongue Home Antensifier since a substantial portion of TV set sales are expected to be in fringe areas. The company figures that many of these areas will be newly created markets due to the increase of station power and the probable lifting of the freeze.

A brand new and lucrative market is being created for service dealers and contractors in the field of Master Antenna Systems. The development of the multi-outlet Distribution Amplifier by Blonder-Tongue now enables the technician to install Master Antenna Systems for any purpose, without the aid of engineers or special equipment. Entire communities can be served from one antenna in difficult signal areas.

Federal Telephone and Radio Corporation

To attempt to get its share of the selenium rectifier replacement market, the company has initiated an intensive merchandising program at the dealer and jobber level. Highlighting the campaign will be a select group of merchandisers — a self-service dispenser and a product display kit. The specially packaged radio and television kits will take care of 90% of the technicians' replacement needs. Advertising and merchandising aids will be available in February.

A coaxial cable dispenser has been designed as a selling aid at the jobber level.

Radio Merchandise Sales

The company plans to concentrate its efforts on UHF during 1952. They have presently adapted an antenna for present UHF television frequencies in an
(Continued on page 18)

Service Management

PREVIOUSLY NAMED THE NATIONAL TV TUNER

VOLUME 1, NUMBER 4

JANUARY, 1952

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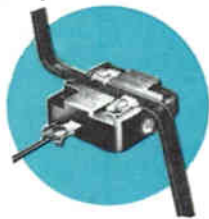
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INLINE ANTENNA

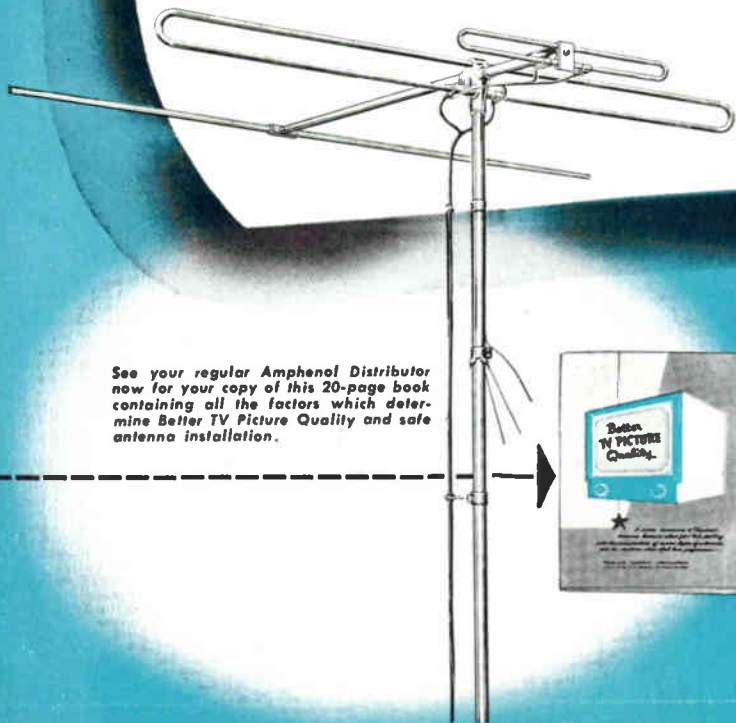
Because your TV antenna is continually being exposed to the rigors of Mother Nature—wind, ice and storm—choosing an antenna that is structurally strong is very important. The Amphenol Inline Antenna is engineered to repeatedly withstand winds of 70 miles per hour and one-half inch annular ice loadings. It is clean in design and presents no surface unduly exposed to wind. Its aluminum construction is strong and light in weight. In addition, the aluminum is rust and corrosion resistant and is especially suited for use in sea coast areas and other places where salt or other corrosive conditions are encountered.

LIGHTNING ARRESTOR

The National Electric Code states that every unshielded outdoor antenna lead-in should have an approved lightning arrester. The Amphenol Lightning Arrester is approved for this purpose and also carries the Underwriters' Laboratories seal of approval. It eliminates the danger of lightning causing damage to your TV set or home and also carries off the minor static discharges that interfere with good picture reception.



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REMOLD W. SCHMIDT appointed to position of assistant manufacturing manager of the cathode ray tube division of the Allen B. DuMont Laboratories. . . . **J. KENT BURTON** named manager of manufacturing for the electronic tube division of Westinghouse Electric Corp. . . . The JFD Manufacturing Company, Inc., has announced the appointment of **THE MILLEN, DURNIN AGENCIES** of Winnipeg, Canada, as their exclusive sales representative in western Canada. . . . **JULES J. BRESSLER** named by the LaPointe Plascomold Corporation as Manufacturer's Representative for Vee-D-X products to cover the Metropolitan New York territory. . . . **ROBERT E. LEE** appointed assistant manager of the General Electric's Tube Department's cathode ray tube operations. . . . Klipzon Products of the United Technical Laboratories has added four new sales representatives: **S. H. STOVER** of Pittsburgh, **HAROLD CHAMBERLAIN** of Boston, **DICK HYDE** of Denver, **JACK JOHNSON** of Philadelphia. . . . Electronic Instrument Co., Inc., appointed **MICHAEL SCOTT** sales representative for the New England States. . . . **LEO K. HEIN**, Plant Superintendent of the LaPointe Plascomold Corporation, received the Vee-D-X ten-year pin. . . . **FLOYD J. VANALSTYNE** has been appointed Jobber Sales Manager of Permoflux Corporation. . . . The company also announced the appointment of **HOWARD ROTH** as Industrial Sales Representative and **EUGENE ROESKE** as head of their new transformer core division. . . . **H. A. GUMZ** has been named vice-president of the Webster-Chicago Corp. . . . Sangamo Electric Company named **WILLIAM W. TAYLOR** Sales Promotion manager of the capacitor division. . . . **DOUGLAS Y. SMITH** has been promoted to manager of sales operations of the RCA Tube Department. . . . National Union Radio Corporation appointed **JOHN M. MCGUIRE** district manager for the up-state New York territory. . . . **HARRY J. HARMS** named district sales manager for Nassau Suffolk Counties, New York, by the New York Factory Distributorship of Allen B. DuMont receiver division. . . . **JAMES M. KERBEY** resigned as vice-president and general manager of Krich-Radisco Services, Inc. . . . **BOB MORRISON** has been added to the Burt C. Porter Co., of Seattle, to represent Elcor, Inc., in the Northwest. . . . Ram Electronics Sales Co. has appointed three new sales representatives: **HENRY LAVIN ASSOC.** of Meriden, Conn.; **MURPHY & COTA**, of Atlanta, Ga.; **LAWRENCE ELLIOT & CO.** of Ohio. . . . **RICHARD HYDE** of Denver appointed representative by Crest Transformer Corp. . . . Standard Transformer Corp. has named **ROBERT J. REIGEL** distributor sales coordinator. . . . **JKM INC.**, of Chicago, now covers the Illinois-Wisconsin area for Utah Radio Products Co. . . . **ALBERT M. SOLEN** of Denver appointed as representative for the JFD Manufacturing Co. . . . **J. M. CARTWRIGHT & SON** named Southern representative by Workshop Associates. . . . Bell Sound Systems, Inc., named **GRANT SHAFFER** of Detroit as their sales representative in Michigan. . . . Thomas Electronics appointed **LES A. MORROW** as its sales representative in the Ohio, Kentucky, Western Pennsylvania and West Virginia area. . . . Audicraft Inc. has named **EMMET J. TYDINGS** their sales representative to contact sound distributors in Western Pennsylvania, Ohio and West Virginia. . . . **MILTON R. BENJAMIN** has Jewel Radio Corp. as general sales manager. . . . **GUS W. WALLIN** is the new vice-president in charge of engineering of Webster-Chicago. . . .

Service Management

THE BUSINESS MAGAZINE OF THE
RADIO-ELECTRONICS SERVICE INDUSTRY

Published by LECTURE BUREAU PUBLISHING COMPANY

Business and Publication Offices: 161 Luckie Street, N. W., Phone MA. 4546

ATLANTA 3, GEORGIA

You have now received — free — FOUR issues of Service Management which is the one-and-only magazine devoted exclusively to your needs as a member of the independent SERVICE industry.

May we now bill you for the next 12 issues -- a year's subscription at only \$3.00? Your paid subscription will make certain that you receive those twelve future issues (because the mailing of specimen copies must be limited to introductory purposes). As a paid subscriber you always have available valuable free-consultation-service-by-mail -- your questions being answered always by experts intimately experienced in TV-Service Shop operation.

You will agree, surely, that with the ever-expanding scope of the SERVICE business, practical business methods are vitally important. For instance:

**ACCOUNTING, when adapted to fit the Service business, can be a real guide in getting prompt collections, maintaining credit, management of finances.

**CUSTOMER--RELATIONS -- important in holding and pleasing today's customers and in attracting tomorrow's new business.

**EMPLOYMENT is less of a problem if applicants can be "screened" and scientifically sifted to avoid being saddled with incompetent help -- to pick the "right" people for each kind of job.

**ADVERTISING includes good use of manufacturer's selling aids as well as your own sales-promotion along tested lines to avoid wasteful experiments and to make your dollars "pay off".

**PURCHASING (along with modern TV stock management and control) -- TRAINING of personnel -- use of all appropriate procedures which insure survival and promote growth.

These references to BUSINESS methods are cited to emphasize the special value to you of the business magazine -- SERVICE MANAGEMENT. You can continue to plug-in on this motive-power for only \$3.00 (less than one cent a day).

So, will you instruct us to bill you? Or, better still, will you use the enclosed blank and send along your check?

Cordially,


Paul H. Wendel

"OUR OPINION"

Henry Ford is said to have fathered the pertinent observation that "the only thing you can be sure of in American business is change." This changefulness is the product of the restless, dynamic, creative minds that have had a fertile field for unfettered action in this co-operative society that we cherish as our country.

No other industry has corroborated the truth of that aphorism so dramatically and often as the Radio-Electronics Industry in making its far-reaching contribution to the development of the revolutionary pattern of living that has become our way of life in the course of the past three decades. From the very beginning the radio industry has always moved fast. Visionary ideas of facilities that *might* be available in five years become realities in a year. Television expansion plans that in 1946 looked like long-range programs moved forward so rapidly that the country probably would have been blanketed with telecasting stations within three years if the freeze had not applied the brakes to progress. Yes, ours is a fast-moving industry.

Ahead of us lies a brand new year. In our hands we hold — in television — the miracle achievement of all times. This hardy stripling, scarcely five years old as a major business, is potentially the greatest business giant of all times. Give it the opportunity to develop unhampered and in a few years it will be doing useful work in a myriad of new applications.

If the television station construction freeze is lifted early in 1952 it may well be a year that will be the third great milestone in the forward progress of the Radio-Electronics Industry.

In presenting this *Forecast* edition of SERVICE MANAGEMENT, your editors are deeply conscious of the many factors that may materially influence the course of business in the months ahead. Material supplies are questionable; the need for skilled and trained technicians is acute and growing; the world situation may worsen and force even more rigid controls on our economy than we have now; the new tax bite in the face of rising living costs will leave all of us with less dollars to spend for the things we need and want; and — it is a Presidential election year.

Yet we must plan ahead if we want our businesses to prosper and in that planning the studied opinions of experts can be very helpful.

It has been our objective, of course, to present this broad picture of the probable course that our Industry will follow in 1952 from the standpoint of how it will affect the business of installation, maintenance and service of Radio-Electronics products. We say "radio-electronics" products because we have centered our attention and most of our interest on television during the past few years and given scant heed to the other major categories of products that in themselves offer service business volume of considerable magnitude.

We are still producing and consumers are buying millions of AM and FM radios every year; other millions of radios ride around our streets and along our highways entertaining those who drive the automobiles in which they are installed; audio equipment of some kind can be found in practically every home and business; and the rapidly expanding use of electronics equipment in manufacturing and other commercial activities spells out an entirely new facet of maintenance and service business for the alert service businessman.

These several categories of equipment constitute the *business* of service. You will be reading factual reports on each of them in SERVICE MANAGEMENT in the months ahead.

What trends are indicated in the facts, figures and opinions of the business executives in this Forecast edition of SERVICE MANAGEMENT?

First to be considered is service as a business activity — what path will it follow in 1952?

Our experience with television service has shown clearly that a properly equipped and staffed shop capable of handling the installation and maintenance of television receivers requires a substantial financial investment. The protection of this investment requires an adequate system of accounting to enable its management to have timely, accurate facts on all facets of the business.

(Continued on page 23)

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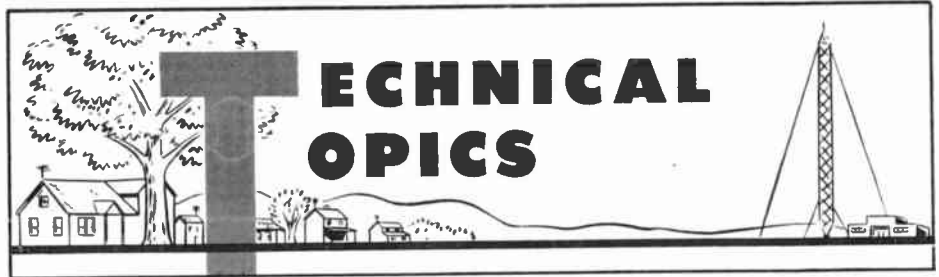


MANUFACTURING CO., INC.
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FIRST in Television Antennas and Accessories

"Service Packages" Speed TV Repairs

A new "Service Package" system announced by the Sprague Products Company of North Adams, Massachusetts, makes it easy for TV repairmen to carry complete stocks of just the right replacement capacitors for the brands of TV sets they service most frequently. Sprague distributors now have available complete "Service Packages" of all the electrolytic capacitors necessary to service each of 22 of the most popular makes of TV receivers in use today, thus enabling servicemen to give prompt repair service without loss of time or unnecessary seldom-needed capacitor values.

A complete listing of the capacitors recommended for inclusion in the "Service Package" for each brand of TV set is included in the new brown-covered 4th edition of the Sprague TV Replacement Capacitor Manual, M-481, available free through Sprague distributors, or directly from Sprague for 10¢ to cover handling and mailing costs.



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

By EDWARD M. NOLL

UHF — THE QUESTION MARK OF 1952

Just how quickly there will be substantial UHF activity is a function of many variables. If FCC plans are processed as expected some 80 UHF-VHF allocations will be made in 1952 — division between UHF and VHF assignments being approximately equal. With present material allocations in effect, it would be possible to have some few stations in operation and on the air in late '52 and the remainder by mid-'53. To foretell just how quickly you will have to become active will depend on the allocation procedure decided upon by the commission. They do predict the bulk of allocations will be to areas under 100,000 population.

Plans for the arrival of UHF can be crystallized in a group of questions and answers:

What Consideration Must Be Given to Propagation Characteristics?

Do not anticipate the same range and fringe area performance you now obtain on the VHF band. The UHF wave is not bent as readily by the atmosphere, and coverage beyond line-of-sight is very much limited. It does not fill in behind obstacles and hills. Consequently, shadowed areas will be more prevalent and more severe.

Therefore, plan to make more frequent site checks to find antenna mounting positions where UHF signal is at peak level.

What Types of UHF Antennas Will Be Needed?

Various types of UHF antennas and combination VHF-UHF types will be needed as a function of channel allocations, signal strengths, and directions of signal arrival. In a strong UHF signal area only a very simple antenna (approximately one foot long) is required. In strong signal and reflection-free areas, some conventional VHF antennas can be used for UHF reception if proper compromise antenna orientation can be attained. Another possibility is to use an isolation-coupling system to feed

both VHF and UHF antennas to single transmission line with a minimum of interaction between antennas.

In more difficult and weaker signal areas a separate VHF antenna and higher gain UHF antenna as well as separate transmission lines are preferable. Such an arrangement permits improved orientation versatility, optimum gain and minimizes interaction. In those areas where stations are all in same direction (VHF and UHF) a single wideband antenna type for both VHF and UHF reception is feasible.

In the UHF fringe areas (15 to 25 miles) and in difficult reflection or shadowed areas, the high gain single-lobe type of UHF antenna (corner reflector) will be needed.

Plan to stock a number of different types of UHF antennas to meet the propagation needs of your locale.

What Types of Transmission Line Will Be Used?

Although the same type lines will be on the UHF band, the losses will be higher, matching more critical, and weather influence on line more severe. For example 300 ohm line in dry weather has just a few DB loss per hundred feet (good quality) on the UHF band. In damp weather the line loss is two to three times greater.

Open wire and tubular 300 ohm lines are less subject to weather conditions because of higher percentage of air dielectric separation. Tubular line is preferred type of many for UHF operation and is easier to route than the open type. Coaxial cable can also be used — its characteristics are more constant and, although it is less subject to weather conditions and installation path, its attenuation is severe. It can be used in locations of high noise level and route difficulties if signal levels are sufficiently high.

Conventional lines of high quality will be used. In addition special UHF matching transformers called "baluns" are likely to have wide application for

better matching between UHF antennas, lines, and receivers.

What Is Needed to Prepare a VHF Receiver for UHF Reception?

Initially, there will be two basic preparation methods — plug-in arrangements and external converters. The UHF plug-in arrangement can be applied to drum-type VHF tuners. An unused VHF tuner strip is removed and replaced with a UHF strip. If two UHF stations come on the air, two unused VHF strips are removed and replaced by two UHF strips. A separate UHF strip is needed for each UHF channel to be received.

Strip does not employ any additional tubes, using two crystals for UHF mixing and harmonic local oscillator generation. This type of UHF arrangement can be applied to Zenith receivers and those receivers using Standard Coil Tuners, figures 1 and 2.

The external type of UHF converter is positioned somewhere near the VHF receiver. The external converter can be used with any type of VHF receiver and will, in most cases, permit tuning over the entire UHF band.

Initial models will consist of a crystal mixer, vacuum tube local oscillator (6F4 or 6AF4), and cascode type i.f. amplifier. Output frequency of most UHF converters is in the channel 5-6 spectrum and, therefore, it will be possible to apply signal to antenna terminals of receiver. Receiver is set on channel 5 or 6 depending on which is unused in your area. Some few converters will use channels 12-13 or 2-3 as i.f. and output frequency.

The external converter has two antenna inputs, VHF and UHF, for use with separate antennas and lines. When converter is turned on, it also switches off VHF antenna and applies UHF antenna to converter input and converter output to antenna terminals of VHF receiver. Some of the later console model TV receivers include space for mounting UHF converter.

What Additional Test Equipment Will Be Needed?

The initial UHF converter designs will be basically simple and very little additional test equipment of an elaborate nature will be required. Test

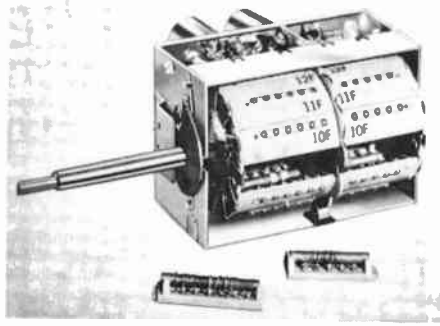


FIG. 2. "The Standard Tuner" with two VHF Channel Coils removed.

units required will be a source of signal, perhaps a source of modulation, and finally an indicating device. Initially, only one or perhaps, two stations will come on the air in any one area. It is very possible that station and its modulation can be used as a signal source and converter can be peaked using station signal.

Another source of signal can be harmonic output of present signal generators (sweep and/or marker). Those VHF generators with a high VHF fundamental range (General Electric sweep is an example) have been found to have a high to just useable output over the UHF range. Still a third possibility is to construct a small UHF oscillator to operate on your assigned UHF channel or channels. Oscillator must be calibrated with an accurate wavemeter or harmonic generating crystal oscillator.

A special UHF sweep oscillator has been developed by RCA, figure 3, for use on the 490 to 890 megacycle range.

(Continued on page 26)



FIG. 3. RCA UHF Sweep Generator.

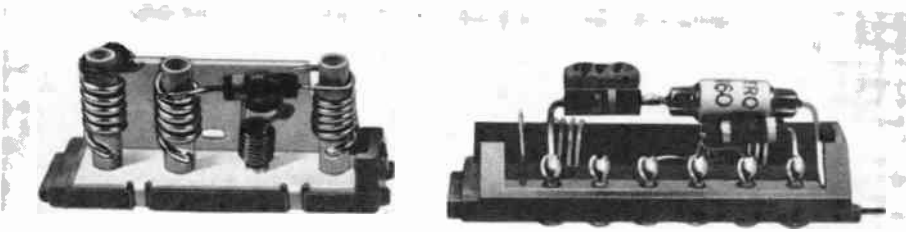


FIG. 1. Standard Coil UHF Channel Coils shown actual size.



Only Rider Tek-File gives you so much for so little. You buy just the data you want, to match the set you're working on...and it's complete, unabridged factory-authorized data, including record changer data for ALL phono combination sets.



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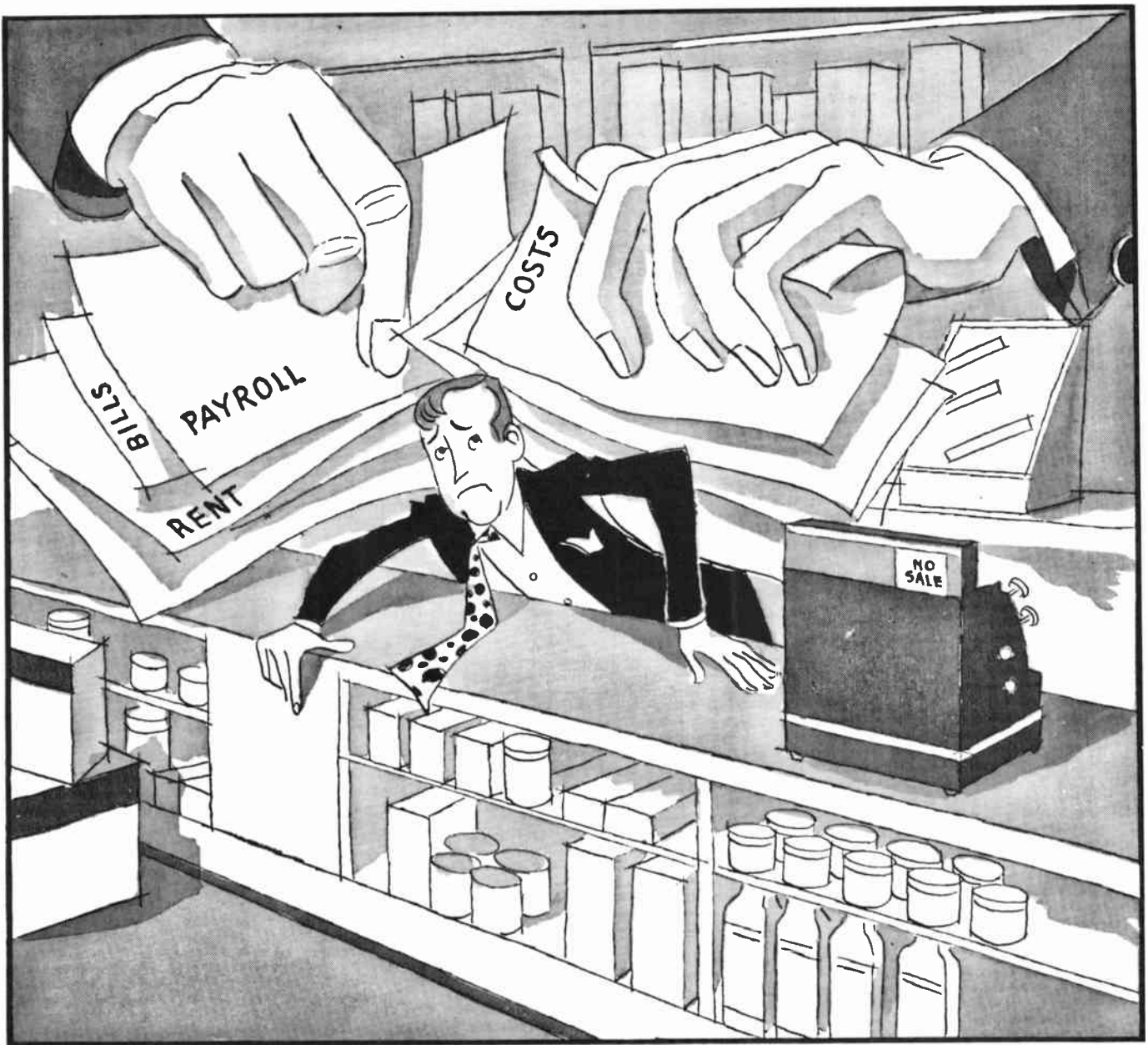
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“ . . . the saturation of television sets has not yet gone so far as to limit their annual sale to less than 5 million sets per year . . . even with only the present 108 television transmitters continuing on the air during most of the coming year.”

1952 -

As

I

See

It

By

ROBERT C. SPRAGUE
Chairman of the Board
RTMA

SHIPMENTS of military electronic equipment, including communication equipment, radar, test equipment, etc., but excluding proximity fuses and guided missiles, are presently running at the rate of about 400 million dollars per quarter. This is expected to build up to a rate of about 600 million dollars per quarter around July, 1952, and remain at this high level until the end of 1953.

It is to be noted that this is an increase, on the average, of only about 50% from present levels, but that the impact on individual products and companies may be dramatically at variance with this average figure.

TV production has recently been running at the rate of about 1,200,000 sets per quarter, and household, automotive and portable radio sets at the rate of about 2½ million sets per quarter. It is expected that materials will be available, giving effect to conservation measures as adapted by the industry, for a continuation of this rate of manufacture during 1952, or at a rate of about 20% less than these figures. There is a divergence of opinion on this point. NPA executives estimate 3½ to 4 million TV sets for 1952. My own estimate is a minimum of 4 million or probably more nearly 5 million TV sets for the year.

There should be no difficulty in selling either quantity to the public as there has been no recent increase in excise taxes on either radio or television sets and there has been a relaxing in credit controls. Also the saturation of television sets has not yet gone so far as to limit their annual sale to less than 5 million sets per year in times of reasonably full employment, even with only the present 108 television transmitters continuing on the air during most of the coming year.

It has also been estimated that the FCC would process approximately 120 applications for new UHF and VHF transmitters between April 1st and the end of 1952. These applications would be in one and two channel areas where it appears that there would be no conflict between applicants. It is also probable that transmitters for these new UHF and VHF stations would be delivered at the rate of 40 transmitters per quarter during the first half of 1953, and probably more UHF than VHF transmitters. It is also probable that some of these transmitters are already being built to order or to stock, and that there will be anticipatory buying of television sets in the new areas to be served by these transmitters during the latter part of 1952, but it is probable that the effect on the market will not be significant until 1953.

It is entirely possible that the number of VHF and UHF transmitters on the air will, in the next five to ten years, increase to 1,500 to 2,000. And eventually the number may approach nearly 3,000 transmitters. This all augurs well for the future yearly sale of television sets of all types.

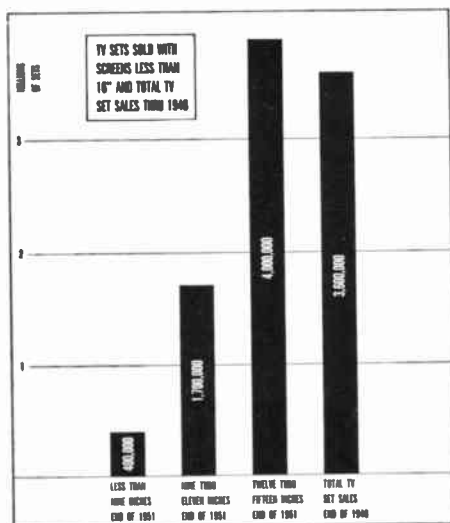
THERE has been a lot of talk about the slump in television set sales during 1951. The truth of the matter is that practically no slump occurred. Except for a buying spree that occurred after the start of hostilities in Korea, the public has been buying TV sets at a very healthy rate. While exact figures are unknown, the record shows that total sales to the public through 1949 were approximately 3,600,000 and that sales increased to about 6,200,000 in 1950. 1951 sales will not total much less, probably around 5,300,000.

This remarkable rate of growth in the industry has created a rapidly increasing need for TV Service and for TV Servicemen. Projected on a national scale, the rapid advance in the TV business shows that, in 1952, at least 149,200 more servicemen will be required for full-time jobs during the year.

If I were asked to cite the most outstanding characteristic of the TV business, and one that clearly separates it from other appliance businesses, I would point out the terrific rate at which television is approaching a saturated market condition.

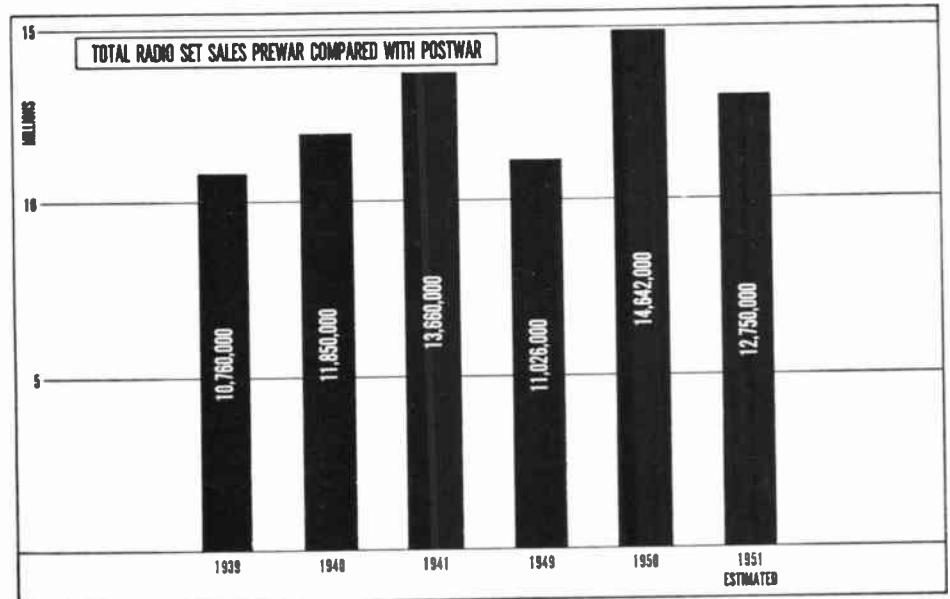
There has also been a lot of loose talk in the television business about the bugaboo of market saturation. There has been a tacit assumption that when a market becomes saturated it also becomes exhausted. Nothing is farther from the truth, more damaging to the morale of the industry or more detrimental to the effort to sell sets and TV Service.

What is happening is rather a challenge to those who sell sets and those who sell service. New sets will tend to be sold to replace sets that are old, worn out, obsolete, or have small screens. It may be interesting to note that, of all sets in use at the end of 1951, nearly 400,000 had screens of less than 9 inches; another 1,700,000 had screens 9 through 11 inches and almost 4,000,000 sets had screens 12 through 15 inches.



Outlook for Radio and Television Service Business

By FRANK W. MANSFIELD, Director Sales Research
Sylvania Electric Products, Inc.



Our studies reveal that there is a long term potential for initial installation and replacement ranging from 4,500,000 to 6,500,000 TV sets per year if it may be assumed that:

1. The rate of TV set obsolescence will settle close to 12% per year, or an average life of eight years. This is extremely realistic in view of the known rate of obsolescence on refrigerators, washing machines, radios and many other appliances.
2. A degree of saturation will be attained at a healthy, but not at any unreasonable rate of growth. No one yet knows what ultimate saturation will be, but these estimates are predicated on the reasonable assumption that ultimate saturation may be in the order of 90%. It may be 80% of the TV homes with 10% of them with a second set, or it may be 75% of them with 20%

with a second set. At the end of 1951 practically 40% of the country had already attained an average saturation of 70%.

At the end of 1950, the television market was approximately 38% saturated on a national basis. This was true in spite of the fact 35% of the population was located in areas where TV progress was slow, either because of no signal at all, or because signals were so weak that only a few novelty seekers were buying sets.

It may be worthwhile to consider the fact the radio industry has been serving a saturated market for quite a few years and now enjoys a wholly replacement market. Yet, most of the years that this has been true, the volume of the radio business has been larger than it was during the years when radio was growing toward saturation. Total radio set sales for 1949 through 1951 were about as follows:

	1949	1950	1951 (Estimated)
Home Radios	7,176,000	9,903,000	8,050,000
Automobile Radios	3,850,000	4,739,000	4,700,000
Total	11,026,000	14,642,000	12,750,000

“ . . . for a long time, a replacement market for home radios will range between 6,500,000 and 8,000,000 sets per year . . . ”

Compared with any prewar year, when the radio market was building up to saturation, this record is far from being a record of recession. Home and auto sets, combined, exceeded this volume in only one year, 1941, and then only because it was known that restrictions were coming due to World War II. During the years 1939 through 1941 total radio set sales were about as follows:

1939.....	10,760,000
1940.....	11,850,000
1941.....	13,660,000

Looking ahead, the long-term demand for home and auto radio sets and service to maintain them, is a speculation and a challenge to the sales ingenuity of radio dealers and servicemen. But from known data on the rate of wear-out there is every reason to believe that, for a long time, a replacement market for home radios will range between 6,500,000 and 8,000,000 sets per year, and that the automobile radio set market will be sustained in a range between 3,000,000 and 4,000,000 sets per year.

Now what does this market projection mean to the serviceman? It should mean that there will be a good level of both radio and television service business. It should also suggest that the transition from a new market to a saturated market will gradually change the type of work required, and that service

work will begin to appear as three distinct jobs which may be defined as follows:

1. Work tied to the installation of a set or the reinstallation of a set sold to replace an old one.
2. The repair of television sets.
3. The repair of home, automobile and portable radio sets.

This trend is reflected by the national picture of the radio and television set market which has a direct bearing on the service business outlook for 1952. The service market expands as sets are sold. It expands faster when more sets are sold. However, individual service organizations, to get their business prospect in sharper focus, should look closely at actual market conditions in the particular communities in which they operate.

The Radio and Television Manufacturers Association regularly publishes data regarding the sale of television sets to dealers by counties. Allowing for a reasonable inventory at the retail level, servicemen can make fair estimates of TV set sales and TV service potentials in their own trading areas. Sylvania market studies break the country into retail trading areas of which there are about 500. Six groups of these trading areas show market trends as follows:

Trading Area	Radio Homes		Television Homes End of 1949	Television Sales in 1950-51 (Estimated)	
	Number	Percent			
Group A	15,630,000	40.0	3,040,000	4,502,000	3,260,000
Group B	5,150,000	13.0	347,000	967,000	1,004,000
Group C	4,550,000	11.5	166,000	529,000	631,000
Group D	5,450,000	14.0	46,000	180,000	338,000
Group E	5,220,000	13.0	1,000	21,000	62,000
Group F	3,300,000	8.5	_____	1,000	5,000
Total	39,300,000	100.0%	3,600,000	6,200,000	5,300,000

A study of trends in the same trading areas with a view of progress toward market saturation for TV sets looks like this:

Trading Area	1949		1950		1951	
	Cumulative	Year	Cumulative	Year	Cumulative	Year
Group A	19.5%	28.8%	48.3%	20.9%	69.2%	
Group B	6.7	18.8	25.5	19.5	45.0	
Group C	3.7	11.6	15.3	13.9	29.2	
Group D	.8	3.3	4.1	6.3	10.4	
Group E		.4	.4	1.2	1.6	
Group F				.2	.2	
Total	9.2%	15.8%	25.0%	13.5%	38.5%	

These trading areas have been classified into Groups A through F which show descending orders of saturation. Typical trading areas in Group A include: Los Angeles, Washington, Atlanta, Chicago, Baltimore, Boston, New York, N. Y.; Cleveland, Cincinnati, Philadelphia, and Providence. Group B includes: Indianapolis, Louisville, Minneapolis, and Kansas City, Mo. Group C includes: Birmingham, Oakland, New Orleans, Charlotte, Oklahoma City, Houston, and Seattle. Group D includes: Sacramento, Peoria, Des Moines, Winston-Salem, Scranton, Saginaw, Tampa, Fort Wayne, Sioux City, Portland, Maine, and Charleston, W. Va. Group E includes: Little Rock, Tallahassee, Evansville, Ind.; Paducah, Ky.; Augusta, Maine; Springfield, Mo.; Brownsville, Texas, and Appleton, Wisconsin. Group F includes: Fort Smith, Ark.; West Palm Beach, Fla.; Billings, Montana; Charleston, S. C., and Green Bay, Wisconsin.

The most interesting feature of these studies is that they show, except in the A type areas, sales during 1951 exceeding those of 1950 by a very healthy margin. What does this signify to the TV Serviceman for the near future, assuming that:

1. There will be no major war.
2. Shortages of critical materials will affect our economy only temporarily and not to the degree where there will be terrific shortages of sets, repair parts or labor to keep sets in repair.
3. That the TV freeze will be lifted within a reasonable length of time, and the range of good signals which now cover some 65% of the population will be extended to a point where nearly 90% of the population will be covered by good signals and programs.

If these basic assumptions are valid, there is positively no place for pessimism in the TV industry. There will be a larger and larger percentage of total sets sold for replacement and a smaller and smaller percentage of set sales will be for initial installation. But there is no reason why the TV industry cannot sell about 4,500,000 sets to the public in 1952. The manufacturers may not produce that many because there are still some sets in distribution pipelines that can be depleted with beneficial results to the industry.

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RADIO-TV SERVICE FIELD FACES PEAK YEAR IN '52

During 1951, the industry's radio and television servicing fraternity answered more service calls and sold more replacement kinescopes and receiving tubes than ever before. The service market was expanded by the addition of more than 15 million new radio and television receivers, and the number of receivers in use rose to staggering proportions.

It was a good year — for those radio and television servicemen who aggressively went after their fair share of the business and profits. However, peak year that 1951 was, 1952 figures to be even better.

The service market in the main is determined by the number of radio and television receivers in use, each of which potentially is a market for service, and replacement tubes and component parts.

According to recent estimates, 1951 ended with more than 101 million home and automobile radios in use, as compared with 95 million sets in use at the beginning of the year. Making a fair allowance for obsolescence, these figures indicate an average increase of at least a half million radio sets per month during the past 12 months.

The television service market showed even more dramatic expansion, with the number of television receivers in use soaring from around 10 million sets at the beginning of the year, to well over 15 million sets at year end.

Tremendous as the market is, it will grow still larger during the next 12 months. Understandably, predictions covering 1952 must be predicated on the availability of critical materials and on Government requirements covering man-power, production facilities, materials, and production for national defense. However, a front page article in the Wall Street Journal of December 14, 1951, made it clear that Defense Mobilizer Wilson doesn't intend to speed up the armament program. Mr. Wilson said that the government's outlay of \$150 billion for defense will be spread

By H. F. BERSCHE
*Renewal Sales Manager
RCA Tube Department*

"Last year, the industry's servicemen replaced more than 620,000 picture tubes. It has been estimated that they may replace more than two million during the coming 12 months. This estimate is not predicated on new receivers expected to be sold during the year, but on the number of receivers sold each year since 1946."

over a period of three years. Therefore, it may be possible for the Radio & TV industry to produce receivers in 1952 on a scale comparable to that of 1951.

The year 1951 was a milestone in the expansion of the renewal sales field. An all-time high in the sales of renewal receiving tubes was established, with the industry's servicemen replacing more than 90 million tubes in the nation's home receivers. This surpassed by far the 1950 peak sales of 69 million tubes.

During the year, the importance of the renewal kinescope business to the over-all service industry was more clearly defined. More than 620,000 new, unused renewal picture tubes alone were sold during the year, as compared with 472,000 the previous year.

In all, more than 200 million new active receiving tube sockets were added to the market, with each socket repre-

senting potential service business for some aggressive service dealer who has established himself as a local expert on all radio and television service problems.

As these figures indicate, the radio and television service field, tremendous as it already is, is still expanding rapidly. Its potential for sales and profits is unlimited — but only for those servicemen with the "know-how" and the initiative to get-up-and-go after their fair share of the business. That know-how involves many things — establishing a reputation for efficient, economical servicing; building and enhancing local prestige; merchandising technical knowledge to attract customers; and selling customers on the advantages of periodic checkups and the quick replacement of faltering parts and tubes.

That know-how also includes making effective use of available display, merchandising, and sales promotion material prepared by the industry's manufacturers to aid the serviceman in his local reputation-building campaigns. During the year, for example, the RCA Tube Department instituted a promotion campaign designed to establish the importance of the serviceman to his community. The campaign, which was built around a variety of display and promotion material all keyed to the "Serving the Community" theme, brought home to many set owners that the local serviceman is an integral part of the community welfare group, along with the local doctor, fireman, policeman, and nurse.

The success the individual serviceman has had in establishing himself as local service headquarters will pretty much determine his share of the local service business during 1952. And from all indications, it will be another banner business year.

(Continued on page 19)

FORECASTING is at best a difficult proposition but particularly so for the year ahead in which we will continue to operate in a dual economy subject to various Governmental Controls covering the allocation of materials and the regulation of prices, which regulations have so far not been too severely felt. However, the Governmental Agencies for these controls are now well organized and set up and business men well realize that the intensity of their activity and areas of coverage could very well be stepped up quickly should world events, as they affect us, suddenly take a turn for the worse. However, assuming that the defense production and military programs will continue to increase at a moderate tempo, we should get through the year ahead without too many upsetting complications.

Forecasts for the next year are for high production and full employment which will assure us of good purchasing power generally, and since the Electronics and Radio field is still expanding, we should have a most active year and with good business management, a moderately profitable one, increased taxes notwithstanding. Interest in the Presidential Election is certain to increase the use of receivers of all types with particular emphasis on TV. Electronic parts distributors generally are therefore looking forward to a good year in the various segments of their sales activity depending upon their particular specialties and markets. Those who do industrial business are expecting this phase of their business to hold steady or increase depending upon their trading areas. We are assured of a goodly production of new Radio and TV Receivers and this will tend to keep the market for installation supplies and equipment good. It now appears that some UHF Television licenses will be approved and new stations of this type on the air before the year is out. This activity will open up new markets for tuners and adapters, quite possibly by next fall, at least in some markets where the new stations will go into operation. The outlook for the sale of "Ham" equipment in 1952 is very good, particularly in view of the importance of "Ham" operations in the Civilian Defense setup, which importance is recognized by virtue of the Government Priority that has been assigned to licensed "Hams" to give them assistance in obtaining critical material that they may need to properly maintain and expand their equipment. Interest in High Fidelity Sound Apparatus continues to run very high and the out-

Outlook for Parts Distributors for 1952

By **GEORGE WEDEMEYER**, *President,*
National Electronics Distributors Association

look for the sale of sound amplifying and intercom equipment, especially in the industrial field, is excellent.

Service Market

Now let us take a good look at that very important segment of the parts distributors markets, the Radio and TV Maintenance, Repair, and Installation Trade, and consider what the new year holds in store for them. First off let me say that parts distributors generally, expect to do substantially more business with the Service Trade in 1952 than they did in 1951 for the very simple reason that there are a great many more Radio and TV Receivers in operation than there were and a substantial portion of them are getting old enough to require servicing to keep them in good operating order and this maintenance market is on the increase and will continue to increase for some time. This represents a tremendous market for tubes, parts, and service necessary to keep these receivers in good operating order as they depreciate in operating efficiency from normal use and require maintenance.

In view of all this, electronic parts distributors are expecting no falling off in the sale of Receiving Tubes and expect a very great increase in the sale of TV Picture Tubes and other TV components. All this adds up to a very encouraging picture for the alert and capable service technician who is also a good business man. Please note that I have said a good business man since it is basic that if one is to succeed in business, then he must be a good business man. This is a very fast grow-

ing industry and the Service Trade is part of it. The day of the very small, careless hand-to-mouth type of Service Operation is about over. The Radio and TV Technician who operates his own business is definitely a part of one of the fastest growing and expanding businesses that the world has ever known. He is rapidly becoming of age. In spite of the fact that his trade generally, has come in for a great deal of unjustified criticism, he is making progress and gaining recognition as a legitimate business man and is being accepted as an asset in his community. However, if he is to continue to succeed and prosper, he must, in addition to being a good technician, do a number of things that in the past may not have seemed too important. In addition to developing any technical men he may employ, he must acquire other business skills to a high degree including the handling of help, dealing with the public, and in promoting and advertising not only his own business but his trade in general in order to gain increasing public confidence. Moreover, he must maintain adequate stocks of parts and supplies and have proper up-to-date test equipment as well as keeping a good set of books and paying taxes. All this has come upon him rather suddenly as a result of the rapid expansion of his business and represents something of a challenge to him. However, I have every confidence that he will recognize his duties and responsibilities and carry them out in such a way as to warrant the increasing respect of everyone he comes in contact with and to convince them that his most important service trade is in fact rapidly "coming of age."

Forecast

For Audio

By H. S. MORRIS
*Products Sales Manager,
Altec Lansing Corporation*

A suburban home market of huge dollar size has been set up for the Neighborhood Radio-Television Service Dealer, a market that he can well set as a goal for 1952 if he will.

I refer to the High Fidelity Audio craze that has begun to sweep the country, representing the public's first taste of truly remarkable music reproduction in the home and the decisive reaction that the public likes it.

For over two years, basic promotion of this field has been going on through the various popular home periodicals. When conservative "Atlantic Monthly" hesitantly published the first article "They Shall Have Music" in March in 1950, the editors were so amazed at the readership interest it developed that this staid old Boston publication scheduled an article on the same subject every three months — four a year! "Atlantic Monthly's" first article brought in over 5,000 letters from their readers. This unusual interest explains why practically every home magazine has picked up and plugged the high fidelity home music system idea with lavishness that any of the cigarette companies would gladly have paid millions of dollars for.

Where you, the Neighborhood Radio-Television Service Dealer comes in is here: One or more of these home magazines enters practically every home in the nation. When the man or the woman of the house sees article after article praising the delights of high fidelity music, illustration after illustration of how to fit custom equipment unobtru-

sively into tasteful home furnishings and report how many important personages worked the idea into their homes . . . with this constant bombardment, Mr. and Mrs. Average American cannot help but become imbued with the thought of doing the same for themselves. Then comes the obvious question, "But where do I get this new High Fidelity equipment? . . . Who in our town is capable of installing it?"

The use of professional grade components to achieve high fidelity sound reproduction in the home started with engineers and semi-technical hobbyists but the grass roots promotion that has been going on at the home level has spread both idea and desire to every town and hamlet and definitely placed High Fidelity in the public domain. The layman prospects of this almost infinite market can be adequately served only by local outlets, and first in line is the Neighborhood Radio-Television Service Dealer. The demand is created.

It is easy to get in to the High Fidelity Audio Business. The equipment involved is technically much less complicated than television and the return in dollars and satisfaction is much, much greater.

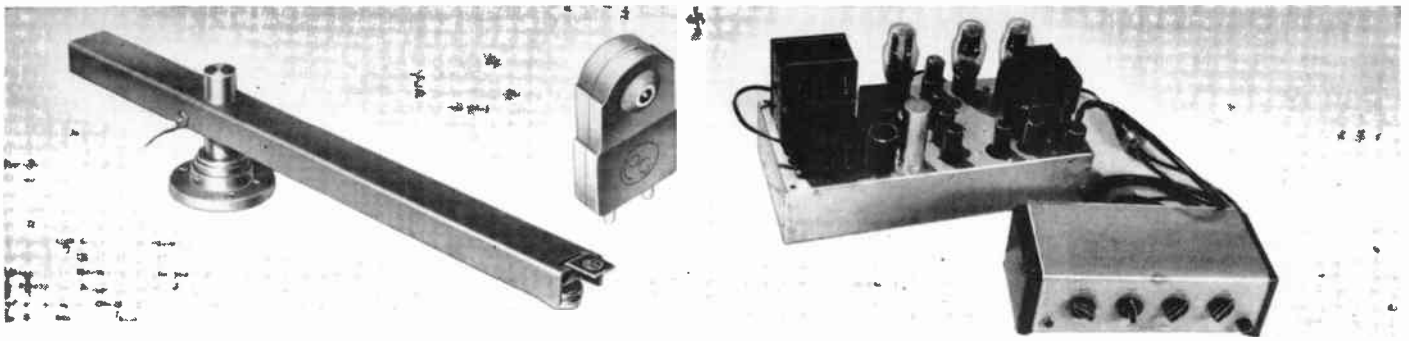
High Fidelity equipment basically consists of only four items: professional type two-way loudspeakers, very low distortion amplifiers, AM-FM radio tuners built for quality and low noise rather than for sensitivity, and record changers equipped with magnetic pickups. The emphasis is on quality-matched components carefully installed.

High Fidelity Growth Offers Radio and Television Service Dealer Bright Future in 1952

Appearance Important

Manufacturers of professional equipment who have also turned to the home High Fidelity market have given particular attention to the femininely important factor of appearance and to the non-technical factor of ease of installation. The better units are interconnected by means of polarized plugs and cables which are provided already made up. In fact, the only critical installation requirement with such equipment relates to the two-way loudspeaker system, but even this is simple in the light of the technical knowledge of the Radio Service Dealer. If the High Fidelity Speaker is to be installed in a cabinet it should be in as large a cabinet as possible with a minimum of 7 or 8 cubic feet and be sturdily constructed with proper "reflex" ports and internal sound absorption padding. If concealed by installation in the wall, the loudspeaker should be four to six feet above the floor and located so the high frequency multicellular horn can provide good sound distribution over the entire sitting area of the room. These simple rules are discouraging to the average non-technical person but mean nothing when there is a local dealer he can turn to to do it for him.

The basis of all good merchandising is salesmanship, display and local promotion to inform neighborhood customers that you have it. It follows that the first step towards going into High Fidelity Audio is demonstration facilities in your store. Although an elaborate acoustically-treated sound room is impressive and of great help, the unique abilities of custom high fidelity equipment can be shown with startling effectiveness to every day visitors to your store very simply. All you need is a good two-way loudspeaker installed in an adequate sized cabinet. Place on top of the cabinet a record changer with a good grade magnetic pick-up plus a high quality AM-FM tuner with phono equalization and record cross-over selection facilities — and you are in business! Set it up in the front of your store, put on three or four LP records and let it play at a pleasant level. It will do the rest. If four out of every five people who enter your store do not stop, listen and ask about it, something is wrong.



National Home Magazines Have Promoted Wide Consumer Interest in Audio Products

The next step is likewise simple. A window display. Two-way loudspeaker systems are unfamiliar to the public. The minute they see one in your window they will know that there is something fine and professional. The same will apply to a custom designed tuncr and amplifier. The whole display can be tied together with several of the recent home magazines opened at pages illustrating High Fidelity Home equipment.

Consumer Promotion

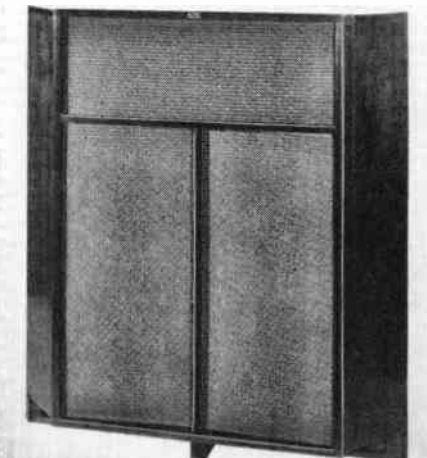
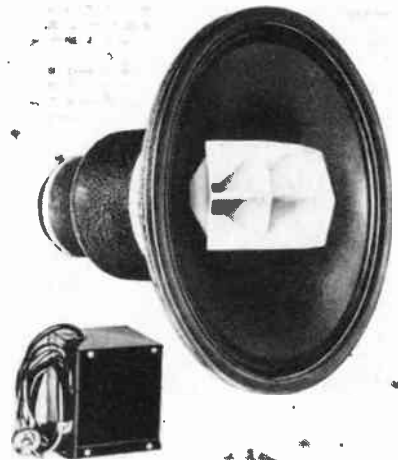
You as a Neighborhood Service Dealer and the recent flood of home magazine articles make the perfect combination for another almost invincible promotion move. You and your serviceman have visited several hundreds of local homes in the course of radio-TV installation and repair work. If not from records, at least from memory you can recall those people who have invested in big name furniture radio-phonograph consoles in past years . . . a sure indication that the owner is interested in nothing but the best . . . and you no doubt can recall those homes which have large phonograph record collections. If you also sell records you have a still more accurate indication of those people who are constantly spending to collect classical and semi-classical albums, etc., because they like them.

Why not give the lady or the gentleman of these homes a telephone call? Ask them if they recall the beautiful home photographs of custom built-in high fidelity music equipment in the December issue of "House and Garden" or do they get "Atlantic Monthly" and have they been following the quarterly articles on this same subject, or do they read "House Beautiful." Then tell them that you, the local man they have been doing business with right in their community, can provide them with this same professional high fidelity equipment and are ready to demonstrate it

in your store and to install it in their home as beautifully and as effectively as reported in the home magazine articles.

Here is a true story of eye-opening promotion: a New Jersey dealer wanted to gauge the home interest in High Fidelity in his strictly residential area before "getting his feet wet." Mind you, this incident occurred over a year ago. The dealer selected a new development section where houses sold between \$18,000 and \$25,000. He took a copy of Aug., 1950, issue of "House Beautiful" one Saturday and rang the door bells of exactly 20 newly-moved-in residents. He selected Saturday because he wanted to be sure that both the man and the woman of the house were at home, so as to reduce the need for callbacks to talk to an absent party. He rang door bells and when the door was opened he presented a copy of "House Beautiful" with the query "Did you see this article? I can give you this kind of equipment and music enjoyment in your new home." Many of the people immediately stated they had read the article. Those who had not seen it were curious enough, since it was in well-known "House Beautiful," to rapidly scan it. As a result of these 20 calls, over half of the homes invited the dealer back with portable demonstration equipment which he had put together. The next Saturday, again on Saturday so as to catch both the man and the woman at home, he was able to make three home demonstrations. He set his portable High Fidelity speaker, amplifier and record player up alongside the resident's commercial radio-phonograph combination and asked for their favorite record. He played the record first on their equipment, then on his High Fidelity demonstrator. That was all that was necessary. One sale of \$800.00 was made on the spot, another future sale seemed clinched as soon

(Continued on page 21)



Outlook for Radio and Television Service Business

(Continued from page 11)

Declining factory production during the latter part of 1951 was due entirely to a terrific build-up of inventories as a result of the spree buying during 1950. Total inventories of TV receivers, which reached nearly 2,500,000 at the end of the first 1951 quarter and increased to more than 2,600,000 at the end of the second quarter, dropped to 2,000,000 during the third quarter. By the middle of the fourth quarter reduction of dealer inventories reached a point as low as could be supported by the going rate of TV set purchases by the public.

Projections of the business outlook for TV-Radio Servicemen during 1952 are apt to be misleading if they are presented on a national basis. In areas where television growth is at a slow rate, the rate of growth of television service is less than it is where television hit early and hard, but in television areas where set ownership is increasing, television servicing activities are also increasing. The kind of service work needed also changes as a television market develops, antenna installations fall off and there is an increase in time required for set repair.

It has become apparent that the growth of a television market favorably affects the total dollar sales of parts. Taking Chattanooga as an example of an area where television set ownership has been growing at a comparatively slow rate, studies have shown that the total dollar sales of renewal parts for each \$100 worth of sales in 1949 and \$119 in 1951 may be expected to rise to \$157 in 1952.

A similar study, in which man-hours of service work were surveyed, indicates that for every 100 hours of work required in 1949, 128 were required in 1951 and 192 will probably be required in 1952. I might add that in this area even greater increases in dollar sales of renewal parts and man-hours of service work are expected between 1952 and 1955 when our study indicates that dollar renewal parts sales will reach 5¼ times the 1949 rate and man-hours of service work will increase almost five times.

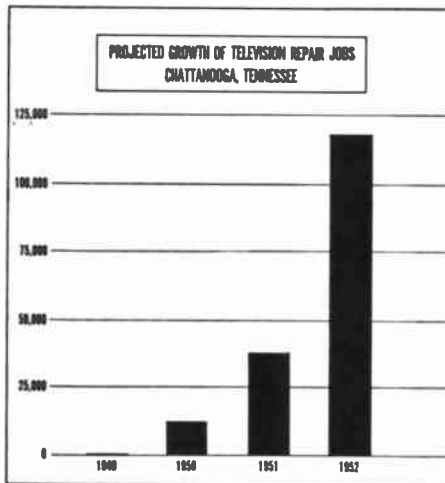
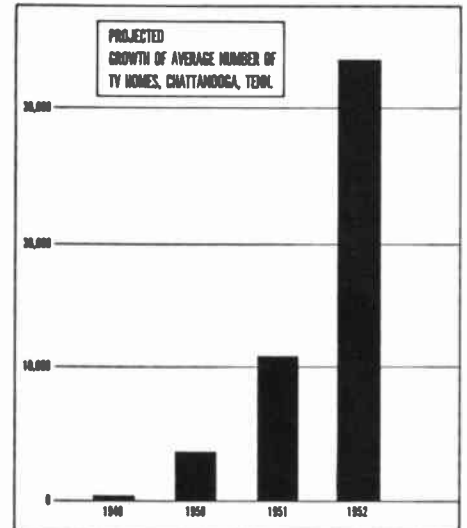
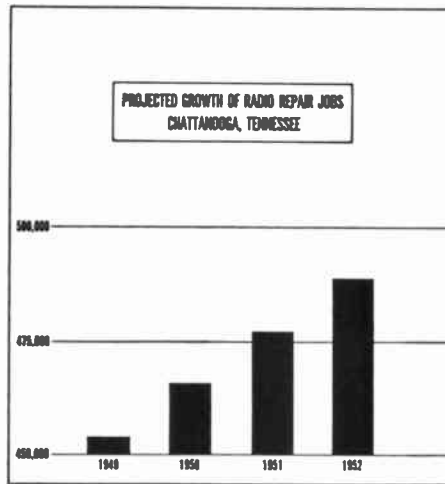
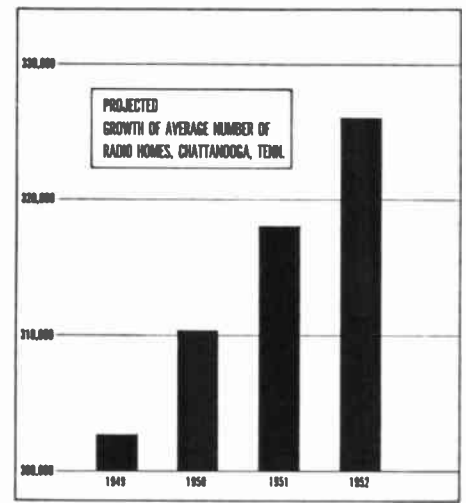
Other trends, important to TV Servicemen in the Chattanooga area and which may be of interest to other service organizations are included in the following tabulation:

	1949	1950	1951	1952
Radio Homes, average	302,700	310,200	318,000	326,000
TV Homes, average	160	3,600	10,800	33,700
TV, installed during year	331	6,623	7,746	38,100
Radio Repair Jobs	454,000	465,300	477,000	489,000
TV Repair Jobs	560	12,600	37,800	118,000

In the tabulation above, radio repair jobs were estimated at the rate of one and one-half service jobs per radio home per year and TV repair jobs were estimated at three and one-half service jobs per TV home per year.

The transition in the type of work required from the TV-Radio Serviceman is also revealed in studies made for the Chattanooga area. To compile our projections, we have assumed that while one unit of service work is usually adequate for radio repair, two units should be allowed for TV service and four units for TV installation jobs. This is how the Chattanooga service work picture appears:

Units of Work	1949	1950	1951	1952
Radio Repair	454,000	465,300	477,000	489,000
TV Repair	1,120	25,200	75,600	236,000
TV Installations	1,320	26,400	30,800	152,400
Total	456,440	516,900	583,400	877,400



Assuming that a TV-Radio Serviceman can perform four units of work in a day, this means that in the data above, it will be noted there will be 294,000 more units of service work to be done in Chattanooga in 1952 than were required in 1951. Translated into days work and full-time employment, this increase may be expressed as 73,500 more man-days of work, assuming four units of work per day, or a years work for 246 more TV-Radio Servicemen than were busy in 1951.

A study of the Atlanta TV area has indicated that for every 100 servicemen making a living in 1949, there were 224 at work in 1951 and that there will be work enough to keep 371 busy by 1953. The parts distributor outlook for sales in the Atlanta area is equally bright: for every \$100 worth of business in 1949 there was \$214 in 1951 and probably will be \$495 in 1953.

(Continued on page 21)

By ALBERT M. HAAS, *President, Television Contractors Assn.*

History writes the story for the Service Industry in 1952 much more effectively than I. Rather than look forward, I think we should look back to the experiences and lessons of the last five years to guide us in the coming year. They have been rich, wonderful years which will not soon be repeated in established television areas, such as we have in Philadelphia.

In other areas which have yet to see television, and which are waiting for ultra high frequency to bring them this modern miracle, I strongly urge that the people whose responsibility it will be to install and service TV receivers take advantage of our knowledge and benefit by our mistakes. The heavy business mortality rate in our business makes the utilization of this suggestion a prime necessity, and for many reasons.

One reason is public relations. Our industry has suffered greatly from our failure to understand the need for good public relations on the consumer level. While some of us in the industry have been arguing that this is a responsibility of the manufacturers, I am convinced that it is a job peculiarly ours. Only we can tell our story to the consumer in the best possible light and, when we begin to do so, I do not doubt but that we will receive a great deal of help from manufacturers, set distributors and parts distributors.

Late in 1951 we began to tackle our public relations problem in Philadelphia by assisting in the organization of the Joint Electronics & Radio Committee on Service in Philadelphia. This group is composed of all industry elements.
(Continued on page 18)



Service

Industry

Leaders

Forecast

1952



By FRANK J. MOCH, *President, National Alliance of Television & Electronic Service Associations*

To say the least, 1951 was not a banner year for the TV industry in general. The great interdependence of the various segments upon each other could not be better exemplified than in the present situation wherein every element suffered because of the dearth of sales. Unfortunately, when things get rough, service suffers the most since it is "the bottom man on the totem pole." In the general panic, set producers tried to take the easy way out . . . price cutting. Such a policy seems very short sighted in an upward spiralling economy. In doing so, economics had to be effected in manufacture. This was done by stripping the sets down to bare essentials. A further economy was made by speeding up production (proved by RTMA figures) with the consequent

rash of poor quality sets delivered in 1951.

Another saving for the manufacturer was made through such labor-saving devices as leaving knobs off sets, etc. Each of these ideas saved money for manufacturers; however, each added substantially to the woes of service companies who had to install and maintain these sets on delivery. Endless problems arose from the imposition of the forced sale of parts warranties. Although on first look, this subject seems to bear no connection with manufacturing economies, as it is generally accepted by those in the know that this racket is just another scheme to increase the total profit at the manufacturing level despite pious statements
(Continued on page 20)

By E. J. (JACK) BARTON, *President, Television Service Association of Michigan*

When we can pull ourselves away from the everyday problems of conducting a television service business, lie back in our swivel chairs and put our feet on the desk for a few moments, light the good cigar that we have earned, we can see some patterns form in our cigar-smoke for 1952. They make pretty pictures but, like all pretty pictures, there's a lot of hard work that goes into the making.

Sometimes we need to get away from our desks and take a mental walk before we can fully understand what is happening in our wonderful industry. It is only then that we can realize that we are barely on the first rung of a ladder that rises to dizzy heights. All that has gone before, the growing pains

reflected in new and daily problems, will be as nothing compared to what the immediate future holds for us.

In the middle-West we wait, with a great deal of anticipation, for the lifting of the television freeze. Those of us who grew up with television service in urban areas know what will happen when UHF (ultra high frequency) brings television to the millions who read about it but never see it until they get into or near a large city.

As up-State Michigan and comparable areas are able to receive television signals we expect that it will have a considerable effect on our industry. The initial impact of UHF may result in the shifting of some TV service operators
(Continued on page 20)

HAAS SERVICE FORECAST

(Continued from page 17)

ments in our city and forms a pool of experience, knowledge, prestige and influence that enables us to meet the challenge of our problems in a progressively effective manner. The Committee, or JERCS as we are sometimes called, doesn't lessen the responsibility of its Service Industry members but does help, immeasurably, to heighten the success of their efforts.

Such industry co-operation is available in every television area. It needs only to be met with appreciation and understanding by the Service Industry, something that is easier said than done in many areas, it seems. It is something that must be worked for unrelentingly and, in so doing, outmoded concepts of Service's position in our industry must be discarded. For too long we have been prone to blame everybody but ourselves for the backwardness of our industry and, actually, we have been a little snobbish in our attitudes and narrow in our approaches.

For a long time we have been regarding ourselves as technicians and beyond the mundane problems of other elements in television. We seemed to think that we lived in another world, and that all of our ills were caused by unwarranted intrusions by customers, manufacturers, and distributors. We declined to recognize our interdependence upon one another and we built up some first-class headaches for ourselves.

In the coming year I think that we will begin to more fully understand the television service business, and the electronics service business, for what they are: businesses! I think we will begin to realize that in such businesses we need highly trained technicians and equally highly trained businessmen. Our trouble, it appears, is that we have a lot more technicians than businessmen, even though we are suffering from a serious lack of competent technicians.

Many of us have failed to assess the growth of our industry and, thus, have failed to keep pace with it. Its growth has been unparalleled but, in relation to its future, we haven't yet scratched the surface. It's time for all of us, in 1952 and every succeeding year, to match the opportunities of our wonderful industry with the business acumen and ability to derive from it all that we want while, at the same time, putting into it all that we should to help its growth.

It is time for us to recognize that TV and electronics service are so big that a service business, to be effective and worthwhile, can no longer be handled by individuals. They must be directed

by men who are trained in business management, men who thoroughly understand the principles of selling, accounting, employment, purchasing, promotion, public relations and, of prime importance, intra-industry relations. In other words they must be directed by executives whose problems are quite different from the technicians.

It is time for us to realize that we must all work together to train and make available more competent technicians for the big jobs which are ahead. We must learn how to do this and other things by exchanging ideas on all phases of management activity with our contemporaries. We must encourage the same kind of thinking on the technicians' level as a matter of good business.

In the last five years we have been so busy with the many and varied problems posed by television service that we tended to neglect other and fertile fields from which we originally grew. Those of us who have managed to survive until now, learning about business management the hard way, will take television service problems in our stride. We will do a constantly better job for the consumer, ourselves and the industry as we cooperate with each other for common good.

MORE THAN TV

Feeling our confidence, we are going to take on the jobs, the opportunities, we let slip from our grasp. With ninety million AM and FM receivers in the country it would be foolish for us, as good businessmen, to refrain from handling this profitable business. This is particularly so when, in our experience of the last five years, we find that this is business we can procure easily in the summertime when TV service suffers a lull. There will be no lulls for the good business manager if he works and plans ahead while his technicians are handling current business.

Record players, home recorders and musical instruments, such as organs, will be fitted into our businesses. It is foolish not to use the facilities and the manpower we have to their fullest capacity. We will never again be a single-service business, dependent upon too many factors beyond our control for the profitable conduct of our businesses.

Those of us who have concentrated on TV service and who have built our facilities around it are looking at our creations with wondering eyes. We are beginning to see that with very little change in our facilities, but with a great change in our thinking, we can take advantage of the ever-present and ever-profitable automobile radio servicing business. Here's a business that

comes to us, and with very little urging! It has the advantage of being well adjusted to today's servicing costs and doesn't require us to invest in new bench and mobile equipment. It enables business expansion without appreciably increasing our cost of doing business.

INDUSTRIAL ELECTRONICS

In the field of industrial electronics maintenance, however, is where we in TV service will find our most magnificent opportunities. We can't fail to see that industrial electronics applications are growing faster than the ability of manufacturers' service divisions to handle them. All we need to do, as business managers, is to get away from that bench in the shop (where we don't belong) and look into the status of industrial electronics. Before long we begin to see that it has many facets, such as medical, computing machines, radiant heating, quality control and so on, ad infinitum!

This is our business, too. However, it will only be our business because we have prepared for it and are ready to handle it on a businesslike basis. When we handle it we won't be doing business with householders but with other businessmen. They won't tolerate anything but the best in the management of our businesses and our service to them.

For '52 our opportunities are limited only by our imagination and our ability to handle them. Our greatest need for '52 is to know that we are businessmen and, as such, to advance our knowledge of business procedures and to work actively and unselfishly with others in our industry. This has been the lesson of the last five years, now let's put it to work!

Products Forecasts for 1952

(Continued from page 3)

effort to familiarize both the trade and buying public with the antenna types that will be necessary when UHF comes. Most of the RMS antennas now in use can be immediately adapted to UHF use by merely changing the size of the crossarm elements.

A new UHF converter is now in the process of being developed.

RADIO-TV SERVICE FIELD FACES PEAK YEAR IN '52

(Continued from page 12)

The service market will be expanded appreciably. More than 15 million radio and television receivers should be added to the market during the next 12 months, bringing the total number of receivers in use to more than 130 million. These receivers will represent a potential market for replacement tubes, batteries, speakers, condensers, and the whole run of component parts.

The replacement market for television picture tubes will show another marked increase. Based on the number of sets in use, the length of time in service, and the average picture tube life, it appears that this market will double itself annually for the next three or four years.

The real import of these statistics is that they indicate the magnitude of the potential radio and television serviceman's market, for he is the businessman who will make the final sales of kinescopes, receiving tubes and component parts to the radio and television set owner.

To make certain that a fair share of the potential comes his way, the individual serviceman must launch and maintain a permanent local campaign designed to establish his reputation for reliability and for efficient servicing. Let the dealer concentrate on "selling" his technical knowledge, his completely equipped shop, his fairness and reliability, and his sales of replacement parts and tubes will most assuredly take care of themselves.



Local identity important

RMS PRESENTS AN ANTENNA PROGRAM FOR PROFIT IN '52

DESIGNED FOR YOU!

A series of educational Antenna Forums has been set up around the country to acquaint you, the men who must turn investment into profit, with a profitable outlet for your Service Business.

For further details contact Radio Merchandise Sales as to when the RMS Profit Forum may be presented in your area.

RADIO MERCHANDISE SALES

1165 Southern Blvd.

New York 59, N. Y.

ST. LOUIS SERVICE MEETING

Interstate Supply Company of St. Louis, Missouri, distributor of Raytheon Tubes in the St. Louis area, held a series of two meetings in St. Louis recently to announce their sponsorship of the Raytheon Bonded Electronic Technician Program in their trading area.

Large groups of TV and Radio Service Dealers turned out for the meetings. Along with the presentation of Raytheon's famous Bonded Dealer Program, movies were shown and refreshments served.

Mr. Ray Dawdy, manager of Interstate's Parts and Equipment Departments, acted as master of ceremonies. Mr. F. B. Simmons of the Raytheon Tube Division and Mr. Ralph Sharp of the Kay Sales Company, Raytheon Tube Representatives, addressed the meetings. Also in attendance were Mr. Dale E. Neiswander, general manager, Mr. Bill Bockius, Mr. Gene Ward, Mr. Bob Coquelin, Mr. Ben Lambert, Mr. Don Eckles and Mr. Howard Huffman of the Interstate Supply Company.

As a result of the meetings many service dealers in the area submitted application forms under the Raytheon Bonded Dealer Plan which has been proving so popular and beneficial for service dealers from coast to coast.

NEW RECTIFIER TUBE DEVELOPED BY G. E.

The General Electric Company announced it has developed a new power rectifier for television receivers, radios, and military electronic equipment. It is believed to be the most efficient commercial rectifier ever produced and employs germanium, a metal not critical in the mobilization effort.

James H. Sweeney, G. E. sales manager for germanium products, said pilot production of the device has begun at the company's Clyde, N. Y. plant, and that quantity production will begin soon.

Known as the G-10 germanium rectifier, the unit operates on the junction principle and is designed to supply 350 milliamperes at normal television receiver plate voltages in a 55 degree centigrade ambient. It has a peak inverse voltage rating of 400 volts, with rectification efficiencies up to 98 per cent, he said.

The unit's small size and higher B+ voltages are due to extremely low internal losses, Sweeney said. Its forward resistance at rated current is about three ohms, and back resistance is approximately one megohm at -350 volts.

MOCH SERVICE FORECAST

(Continued from page 17)

that it is being inflicted to benefit the set purchaser.

The creation of problems for service was not limited to the manufacturer. In their usual fashion, many dealers continued and even surpassed their record of abuse of good business principles. Many dealers, in many cases in concert with distributors of sets, have continued phony ads. After all, you need not limit your promises if you don't have to make good on them. Service was burdened with almost insurmountable public demands and condemnation as a result of these ads. Thus far, the public has not been fully educated regarding the responsibility for these phony ads. The loss of prestige for service through the many chiseling dealers who "can get it for you wholesale" and then must racketeer on service, is beyond comprehension. This rabble who has no business in the TV industry has pulled every kind of dishonest racket. It has subcontracted work to entirely unqualified "punks" operating out of basement holes, back alleys, kitchens, etc. These would-be service companies have neither financial status, technical knowledge, management ability, necessary insurance, adequate parts stocks, data or any other requisite of good business. Their sole stock in trade is repacious price cutting. Their philosophy is "get it while the getting is good and to hell with everyone else." Some legitimate dealers have invaded the service business on the advice of dealer associations. They thought they would make millions in service. Since service is a highly specialized business, suffering from an acute man-power shortage, they soon found that they could not render adequate service. All of these corner-cutting service operations have given many authors of sensational literary garbage in the public press enough real cases of customer abuse to put an aura of authenticity upon their diatribes against service. These authors are not qualified generally to lay the blame where it belongs. Instead of condemnation of service, they should expose the bad practices previously mentioned as perpetrated by the manufacturer, the distributor and the dealer.

The problems of service and lack of cooperation from other segments have reached such a sad stage that we predict legitimate service companies will in '52, as a matter of self preservation, be forced to draw a battle line. We believe the parts warranty racket will cease either through independent voluntary action by its sponsors or through an all-out court battle. We hope the

manufacturers are sufficiently mature business-wise to see the wisdom of voluntary action. The exposure of evidence now in the hands of service would cost the industry millions in dollars and prestige. We further predict that RT-MA will augment the up to now superficial moves toward recognition of independent service as an indispensable, necessary and desirable element of the industry. We expect that through a new awakening of the industry to its responsibilities and the need of good service, the sales end of the industry will clean its house by disfranchising the fly-by-night dealers who have done nothing but prostitute a good industry and business.

As far as service itself is concerned, we predict a revival of the service contract. This is sure to happen since parts will become scarce and service shops will of necessity use their parts in their own customers' sets. Service will wage an all-out fight in '52 to clean its own house and to break the shackles of set manufacturer, distributor and dealer control. Service will probably move to licensing to help clean its own house. Consumer education on a grand scale by service will debunk the many untruths about service. Service will use its acceptance in the customers' homes to rid itself of the stigma cast upon it by many other elements of the industry, directly, by innuendo and by lukewarm denial. The few really progressive manufacturers who have spent money and time to disprove the false charges against service, will be rewarded by the good will and business of service operators. The many companies who stupidly run down service with the intention of forcing lower service rates for their set customers will either realize the folly of their position or take the consequences. Yes, we expect 1952 to be a banner year for service.

BARTON SERVICE FORECAST

(Continued from page 17)

from present highly competitive areas to new markets, a not undesirable trend. It should result in more and profitable business for operators so long established that they would not be interested in moving.

The operators who move into new areas will benefit from their experience in the installation and service business and, it is to be expected, can build sounder and better businesses than local radio service operators who branch off into TV service largely on the basis of trial and error. Such migrations, unfortunately, will not solve the tremendously increased needs of the new areas. Nothing that we know of in the lifting

of the TV freeze will have any effect on raising the number of technicians available in general.

One regrettable danger in the lifting of the freeze will be the almost certain wide-spread failure of service "businessmen" after initial booms level off. This is something that all of us in the television industry, and particularly those of us in Service, should anticipate and do everything in our power to overcome. Whatever happens in the new areas of TV will have their inevitable effect on the longer-established areas, and we have had more than enough problems to contend with in the last few years.

It would distinctly be to the advantage of the Service Industry on the management level, as well as to other segments of the industry, to support an effective national organization of service businessmen. Through such a medium we can help our fellow service businessmen to do a better, abler job without the painful and injurious business failures that have been so prevalent. These failures hurt not only Service but the whole industry, and it is the responsibility of the whole industry to minimize their possibility in the future.

Experience has taught us in Michigan that if we are to preserve our industry and see it attain its full growth we must work with each other. For that reason we are expanding our association of service business operators to cover the whole state. We see it as incumbent upon us to help others benefit from our experience.

We know that unless we do the things that are dictated to us by good business practices and procedures, such as encouraging the orderly growth of service businesses in other areas, we will be lax in our obligation to an industry that has given us much of its bounty. More important, disorderly growth will create pressures that, ultimately, will not be in our power to control.

Such pressures can bring about municipal and state licensing measures that would make everyone of us subject to the whims of politicians. Looking toward New York, Los Angeles, Miami, Pennsylvania and other areas, we find that it won't take much more pressure to get some of the temporarily abandoned or tabled licensing ordinances or bills out in the limelight again.

When the problem of licensing first cropped up it was a comparatively simple matter to have these measures tabled when various industry trade associations jumped into the fight. However, having these bills tabled is becoming increasingly difficult and, once a state bill is passed somewhere, the chances

(Continued on page 21)

FORECAST FOR AUDIO

(Continued from page 15)

as cash could more easily be spared, and the third party could not make up their mind one way or another.

Radio Advertising

Another unbelievably low cost way of local promotion of Custom High Fidelity is to get several 30 second plugs a day on the local FM station during musical programs. It is surprising how low cost many FM rates are. This form of promotion is particularly effective because it is so selective of prospects:

(a) It is heard only by those who are listening to music because they like music, and not by those who are interested in soap operas and probably would not want high quality music equipment.

(b) It selects only those who are listening to FM because they feel that FM gives the best quality of reproduction, and also selects those who are affluent enough to invest in an FM receiver.

(c) It is an effective cooperative arrangement with the local FM station's effort to build up music appreciative audiences to the better FM method of transmission.

You as a local Service Dealer should not be caught asleep to this new market that is opening to you. It is a solid market, it deals mostly with the solid citizens of your community who like fine music and such people generally have the money to pay for it. The percentage of mark-up generally is appreciably greater than that of TV, and its headaches are far, far less. The dollar size of the sale is often breathtaking; and it has the advantage of when all the dollars are not immediately available, step by step component sales can be made. First, a High Fidelity loudspeaker, later adding a high quality AM-FM tuner and amplifier and then a better record changer with magnetic pick-up and diamond stylus.

And then there comes that satisfaction that every Radio-Television Service Dealer who is a true salesman at heart most likes — the satisfaction of knowing that you have provided a truly Cadillac product which will give the buyer immense leisure-time pleasures.

High fidelity reproduction custom built into a man's "castle" is no novelty. TV may hurt the movies and it may curtail sporting events attendance but it will never hurt that music appreciation which has been bred deep in every man's soul since the beginning of civilization. Take a look at phonograph record sales. In spite of the predicted confusion that would be caused by three different record speeds, the offering to

\$ \$ \$ \$

SERVICEMEN . . . THERE ARE THOUSANDS OF OUTMODED RADIOS IN YOUR "BACKYARD" WAITING TO BE REPLACED WITH A MODERN ESPEY AM/FM CHASSIS



Rated an excellent instrument by America's foremost electronic engineers. Fully licensed under RCA and Hazeltine patents. The photo shows the Espey Model 511-C, supplied ready to play. Equipped with tubes, antenna, speaker, and all necessary hardware for mounting.

NEW FEATURES — Improved Frequency modulation circuit, drift compensated • 12 tubes plus rectifier, and pre-amplifier pick-up tubes • 4 dual purpose tubes • High quality AM-FM reception • Push-pull beam power audio output 10 watts • Switch for easy changing to crystal or variable reluctance pick-ups • Multi-top audio output transformer supplying 4—8—500 ohms.

Write for literature SM-1 for complete specifications on Model 511-C and others.

Makers of fine radios since 1928.

ESPEY
TEL. TRafalgar 9-7000
MANUFACTURING COMPANY, INC.
528 EAST 72nd STREET, NEW YORK 21, N. Y.

the public of real high quality LP records on noiseless vinylite resulted in an all-time record for phonograph record sales in 1950, and still a larger record of sales for 1951.

Make it a resolution in 1952 to let your customers and other music lovers, record collectors and owners of fine homes in your community, know that you, Mr. Local Radio Service Dealer, can offer them the product and pleasure that their home magazines have been writing so much about.

OUTLOOK FOR SERVICE

(Continued from page 16)

There will be plenty of business for the TV Serviceman in 1952. The rapid growth of television markets will make his business more active but it will also create tremendous problems. He will face new financing problems, will probably have to expand the space his business occupies. He will find that expanding operations will mean he will have to hire more help, find and train salesmen. He will also be faced with problems of supervising expanded operations and will have to assume the moral obligation that goes with assisting in the training of repairmen in problems pertaining to technical knowledge, business knowledge and business ethics.

BARTON SERVICE FORECAST

(Continued from page 20)

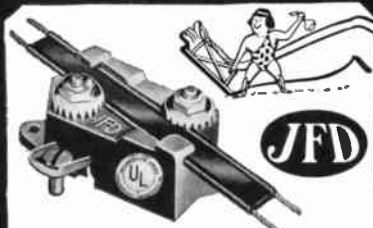
are that licensing would have a chain-reaction across the country. To obviate this possibility we must work harder and be more vigilant in 1952.

The coming year is one to be met with purposeful thinking, planning and action, despite all the problems we can see ahead. We may not have all the knowledge, tools and instruments we need to exact from it all that we want but they will come to those of us who will see what we want and work to get it.

Perhaps the greatest thing we see in 1952 is that it will inaugurate an era of good industry relations. All around us we see signs of interest and offers of help from manufacturers, distributors and parts jobbers who are beginning to recognize the importance of television service in the scheme of things. With the help of these people there is no question but that Service will achieve a position it has long deserved. To me, 1952 will be the year to begin doing the big job we have always needed to do.

To me, this is the year when business managed television service operations will come of age. It will be a wonderful year if we only accomplish that much.

PERFORMANCE Not Size IS WHAT COUNTS



"LITTLE GIANT" LIGHTNING ARRESTER



PROTECTS

Against Lightning Hazards

No. AT 105

For ribbon-type and oval
jumbo twin lead.

\$1.25
LIST

ONLY JFD Lightning Arresters offer you these
exclusive patented features . . .

1. Strain-relief Retaining Lip prevents pulling or straining of lead against contact points.
2. You actually see positive contact made with lead-in wire.
3. No wire stripping or cutting.

Write for Form No. 84 showing the damage
lightning can do to a Television Installation.



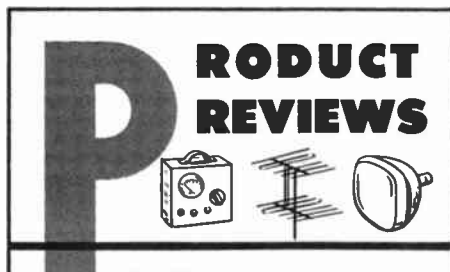
JFD MANUFACTURING CO., Inc.
6127L 16th AVENUE, BROOKLYN 4, N. Y.
FIRST in Television Antennas and Accessories

PICTURE TUBE TREATMENT ADDED BY RAYTHEON

The Receiving Tube Division of Raytheon Manufacturing Company announced that the company has developed and is now producing picture tubes treated with the new Raytheon Corona Inhibitor.

Under certain atmospheric conditions, servicemen have been plagued by a loss of picture brightness due to leakage, corona, and arc-over at the second anode connector on the bulb of a television picture tube. This leakage from the second anode connection reduces the second anode voltage, and consequently the brilliance of the picture. In addition, there may be audible effects from the corona, which can be a source of alarm to the set owner. This difficulty has been experienced in varying degrees of intensity and in those cases where the leakage or corona has been slight, many valuable man-hours have been lost tracking down the source of trouble. Raytheon picture tubes treated with Corona Inhibitor eliminate trouble from this source.

Tubes treated with Corona Inhibitor show an amazing difference over untreated tubes.



TV SERVICE DATA

Servicemen now have the opportunity of purchasing the servicing data of receiver manufacturers in individual file folders. RIDER TEK-FILE, the new monthly data service, offers this unique aid to the trade. The purpose of TEK-FILE is to make available, monthly, the same type of factory-authorized service data that is published in RIDER MANUALS. Every month a different selection of Packs will be available at the distributors of *John F. Rider Publisher, Inc.*, 480 Canal St., New York 13, N. Y.

The first month's selection of 16 Packs contains the TV service data of 49 manufacturers. They are now available at the firm's distributors.

1. Admiral, Affiliated Retailers, Arvin Industries
2. Belmont, Cadillac, Conrac, Covideo, Crosley
3. Electro-Technical Industries, Emerson
4. Fada, Firestone, Franklin Airloop
5. Gamble-Skogmo, General Electric
6. Hallicrafters, Hoffman, Jackson, Kaye-Halbert, Majestic
7. Macy's, Meck, Midwest, Mitchell
8. Montgomery Ward
9. Motorola (including 1952 line), M. P. Telev., Multiple, Packard-Bell
10. Pathe, Philco, RCA
11. RCA, Sears, Roebuck
12. Sears, Roebuck, Skyrider, Spencer-Kennedy, Standard Coil, Stewart-Warner
13. Sylvania
14. Tech-Master, Telequip, Teletone, Television Equipment, Trans-Vue, Vidair, Western Auto Supply
15. Radio Craftsmen, Stromberg-Carlson, Westinghouse, Zenith
16. RCA (1952 line)

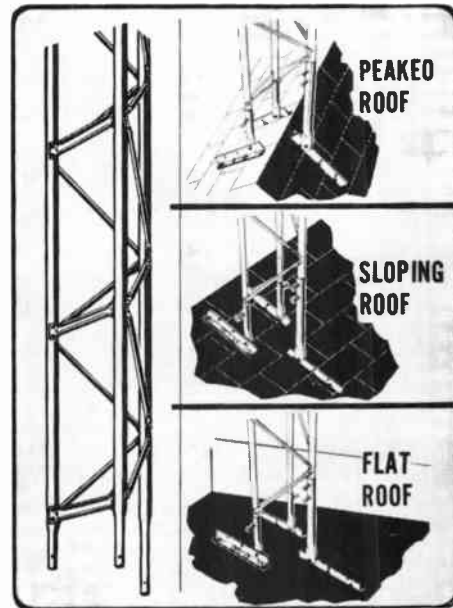
STEEL TOWERS

Channel Master Corporation, Ellenville, N. Y., announced a new line of steel towers.

Available in 10-ft. sections, the towers have a built-in ladder on one side with no obstructions to interfere with easy climbing. The other 2 sides feature truss construction for added strength. Tower legs are made of steel tubing and are wide spaced, 8½" apart, for greater rigidity and twist-resistance.

All tower sections are completely interchangeable, because only one type of section is used. No different top,

middle, or bottom sections are required, and base mount and mast brackets fit all sections. Because all sections are identical, distributors' stocking problems are considerably reduced.



All 3 tower legs are swaged on one end for easy assembling. Additional sections are merely slipped into each preceding section and fastened. Masts and rotators are mounted internally for greater support and protection.

Channel Master has also developed a universal base mount, specially designed for these towers, which is adaptable for all types of installations—peaked, sloping, and flat surfaces. Special dual purpose mounting brackets, for use both as mast supports and rotator bearings, are also available with the towers. Complete literature will be sent upon request.

ELECTROSTATIC TUBE

The General Electric Company's Tube Department, Schenectady, N. Y., today announced three additions to its new zero-voltage electrostatic tube line.

E. F. Peterson, department manager of sales, said that the three new cathode tubes embody the same principles which have proven highly successful in the company's 17RP4/17HP4, General Electric's first commercial zero-voltage tube, which was placed on the market in August.

The three new tubes are the 17VP4, a 17-inch tube; the 20HP4-A/20LP4, a 20-inch tube, and the 21FP4-A, a 21-inch tube. All are space-saving glass rectangular tubes. The 17-inch and 21-inch tubes have cylindrical faces.

NEW ANTENNA ROTATOR

Newest development in the antenna rotator field is this powerful unit now being delivered by the *Viking Tool and*
(Continued on page 24)

"OUR OPINION"

(Continued from page 5)

The bread and butter business of a Service enterprise is the profitable sale of skilled labor. Competent technicians must be employed, trained and their work supervised. For a Service business to prosper all of the time the employees are paid for and must be sold at a profit. Accurate accounting records will tell how much overhead must be added to the actual cost of labor for the business to make a profit on the sale of the labor it employs.

Then there is a minimum volume of work that a Service business must have to make a profit. It is a sales project to maintain this minimum volume of business. Some of this selling can be accomplished by advertising and some of it requires personal contacts.

These are but a few of the factors that enter into the operation of a Service shop as a business activity. They require time, understanding and "know how" and cannot easily be handled by someone as a secondary activity.

A radio-electronics service business when properly staffed and capably managed as a business has been proven to be a profitable enterprise.

In the light of these known facts the year ahead will probably witness an accelerated trend in the shift of service to business operated service organizations.

The lifting of the TV station construction freeze will open up many new television areas. These new areas will create new opportunities for substantial service businesses. These new opportunities will attract many experienced television service operators from present television areas. Their experience and "know how" will enable them to get firmly entrenched in the new areas before competition gets as keen as it is in older TV areas.

Service businesses in most of the present television areas will not benefit greatly in added installation and service work from the renewal of station construction. Now that a pattern of service volume appears to be established in these older TV areas, TV service businesses will look for additional business from handling other types of radio and electronics products. An efficient television service business has all of the facilities and skilled help necessary to accomplish service on any type of electronic instrument used in a home. This provides a virtually "untapped" source of service business volume that many service businessmen will soon find it profitable to solicit.

There has been a rapidly growing interest in co-operative programs to solve Industry, and particularly service problems on local levels. The success of one such program will encourage its adoption for use in many other areas. When businessmen find through the medium of these programs, how much they gain by pooling their attention and effort in solving problems that are common to all, they will gain a better understanding of what effective association activity can accomplish. They will also learn that the basic tenet for a successful trade

association must be "how can we better serve the public, our industry and ourselves by working together on our common problems" and from this an effective national association for service businessmen may arise.

The recognition of Service as a substantial business activity has been taking place slowly. The pace will quicken in 1952. And during the year you will find in the pages of SERVICE MANAGEMENT the factual reports on the management practices that are successfully employed in the best Radio-Electronics Service Businesses. P.H.W.

MORE TV OUTLETS PER DOLLAR!

AMPLIFIED, ALL-CHANNEL MASTER ANTENNA SYSTEMS

FOR 2 TO 2000 TV SETS

NO
NO
NO
NO

Special connectors
Matching transformers
Engineers
Individual channel equipment

BLONDER-TONGUE systems are based on the use of "no loss" Distribution Amplifiers which split the signal from the antenna into the desired number of outlets... all having the same signal level and picture quality as though each TV set used the antenna alone.

The B-T Automatic, All-Channel systems, using three basic units in any desired number and combination, can be easily installed by any TV service man.

INSTALLED WITH THE TURN OF A SCREW



DISTRIBUTION AMPLIFIER, MODEL DA8-1-M
8 TV Outlets
Amplified and Isolated
List Price \$87.50



B-T HOME ANTENSIFIER MODEL HA-2-M



Model #CA-1-M
Commercial Antensifier
(30 Times Gain)
Use As Pre-Amplifier, Line Amplifier or de-luxe Booster
List Price \$77.50



MODEL #DA2-1-M
Distribution Amplifier
2 TV Set Outlets
List Price \$39.50



Finest All-Channel TV Booster. Fully Automatic, 16 Times Gain. In Metal Cabinet
List Price \$57.50

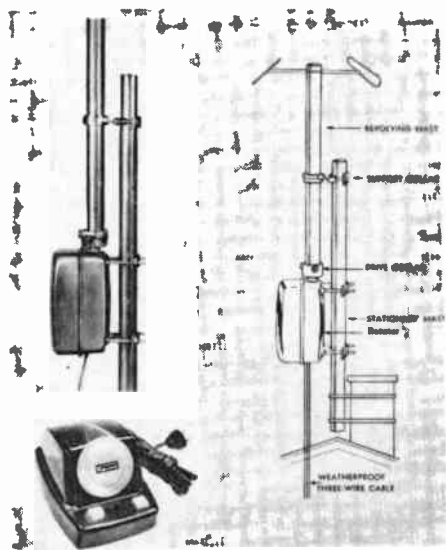
FREE INSTRUCTION BROCHURE ON MASTER ANTENNA SYSTEMS..Write Today. Dept. B-2

Blonder-Tongue Labs., Inc. Mt. Vernon, N. Y.

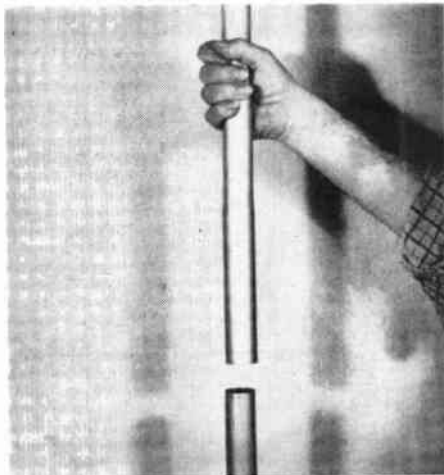
PRODUCT PREVIEWS

(Continued from page 22)

Machine Corporation of Belleville, N. J. Powered by a simply designed impulse motor, the Viking Antenna Rotator assures full starting torque of 50 inch



coating is Vinsynite. Both masts are available in 10-foot lengths.



M108 — JFD Jones & Laughlin Permatube Antenna Mast.

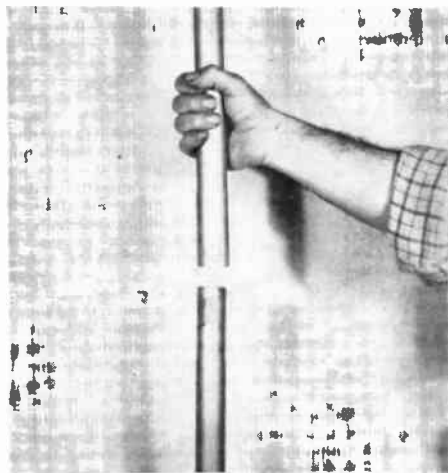
These masts are packaged 14 to a carton, providing for easy stacking and excellent inventory control for both distributor and dealer. This method of packaging, too, insures receipt of the masts in top condition.

Literature on the JFD antenna mast line may be speedily obtained by writing the JFD Manufacturing Co., Inc., 6101 16th Avenue, Brooklyn 4, New York.

pounds to give it maximum advantage in icy and adverse weather conditions. Corrosion resisting materials are used throughout to make this one of the most trouble-free rotators on the market today. Unit comes with attractive remote control box. Also available with antenna direction indicator.

ANTENNA MASTS

The JFD M110 mast, produced by Republic Steel and called the JFD "Dura-Mast," is a seamless steel unit. It is electro-galvanized with the exact same process as EMT conduit and its 6" fitted joints provide an inter-lock grip which guarantees against any separation.



M110 — JFD Republic "Dura-Mast"

The Jones & Laughlin mast, made of Permatube, is a seamless piece too. Like the M110, this mast — the M108 has 3" fitted joints. Its corrosion-resistant

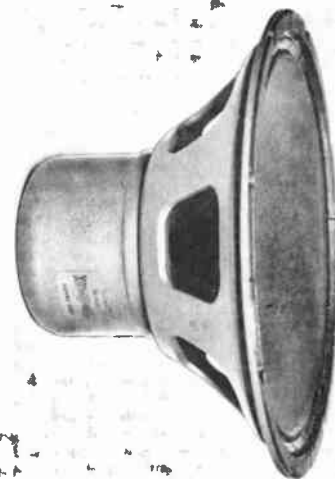
those supplied on the RC80, which make it possible for the purchaser to use any cartridge of his choice, crystal or magnetic.

A Model "MC" will also be available embodying these same features but with dual stylus crystal turnover cartridge already installed.

For further details about performance and price on the Models "M" and "MC," write to Garrard Sales Corporation, 164 Duane Street, New York 11, N. Y.

THE PERMOFLUX CORPORATION

The Permoflux Corporation, 4900 W. Grand Avenue, Chicago 39, Illinois, announces the addition of a fifteen inch Royal Speaker to its De Luxe Royal line. The new Royal 15" (15WP-8-1) has wide range with a low of 40 to a high of 13,000 cycles and it makes a fine "woofer" for a two-way speaker system.



The amazing performance of the speaker is due to its new improved cone, with the following features:

ADDED LOW FREQUENCY RESPONSE: Slotted-treated cone edge, and a flexible spider provide super soft suspension and greatly increase the low-frequency response.

EXTRA HIGH FREQUENCY RESPONSE: The royal blue cone is curvilinear and deeper than the regular speaker cone of the same diameter, and a special stiffening treatment at the throat of the cone results in a highly increased response at the upper end of the audio frequency scale.

HIGH OUTPUT WITH SMALLER MAGNET: In Royal speakers, the distance between the pole-stem and the plate-yoke is smaller. This places the voice coil in a more concentrated magnetic field. Result: high volume output with a smaller, lower cost magnet.

MANUAL RECORD PLAYER

The Garrard Sales Corporation announces a new precision manual record player, Model "M," at a popular price. The Model "M" is identical in construction to the famous Garrard RC80 3-speed changer except for the record changing mechanism. It has been designed to meet the increasing demand for a single play machine which has been due to the growing popularity of long-playing records.



Sturdy construction and precision parts characterize the Model "M." It has a four pole heavy duty silent motor which is hum free and rumble free; a heavily weighted turntable to insure flywheel action and the renowned Garrard parallel lift tone arm, which is perfectly mounted.

In addition, the Model "M" has interchangeable plug-in heads, similar to

About the AUTHORS



ROBERT C. SPRAGUE
Chairman of the
Board, RTMA

Mr. Sprague, who now heads the company that carries his name, considered the Navy his calling in his younger days. His ambition was realized when he graduated from the Naval Academy at Annapolis. He continued his seafaring career for many years in the peace-time U. S. Navy.

In 1926, he tied his destiny to the growth of the radio industry and formed his own company in Quincy, Massachusetts. Mr. Sprague's organizational talents soon led to the expansion of the company's facilities and today it stands as one of the country's largest manufacturers of capacitors.

His desire to see the electronics industry prosper led him to play a greater role in the industry's growth. It wasn't long before he was elected president of the Radio & Television Manufacturers Association, and soon after he was made Chairman of the Board.



FRANK W. MANSFIELD

He joined the inside sales organization of Sylvania Electric Products, Inc., at Salem, Mass., in 1932 and was selected in late 1942 to head the Company's market research activities when they became a company-wide activity.

In addition to serving as Sylvania's Director of Sales Research, Mansfield has served on RTMA's industry statistics committee since 1947. He is a member of the American Marketing Association and the Sales Executive's Club of New York City. He is a graduate of Harvard, magna cum laude, and of the Harvard Business School.



HAL BERSCHE

Hal Bersche, Sales Manager of the RCA Renewal Operations, launched his career in electronics back in 1926 when he joined Electrical Specialties Company, Detroit, Michigan. He became a junior partner of the firm in 1932.

In 1936, Mr. Bersche became associated with Tung-Sol Lamp Works, Newark, New Jersey. Granted a leave of absence in 1942, he joined the Procurement and Distribution Division of the War Department, and was named Electron Tube Controller in 1943.

Following the war, Hal became the Western Representative for RCA Renewal Sales, with headquarters in Los Angeles, California.

In 1947, he was promoted to the position of Renewal Field Force Manager. A year later Hal was again advanced, this time to his present position of Renewal Sales Manager.



GEORGE E. WEDEMEYER

Has been in virtually every phase of radio, starting as a Ham in 1914. Was commercial ship wireless operator during 1920-24. Attended universities of Virginia and Michigan. Taught radio in trade school. Sold and serviced at retail. Did broadcast engineering and announcing. Since 1927 he operated his own business of selling radio parts at wholesale. Presently operates business out of Ann Arbor, Michigan, with a branch office in Lansing.

He has been active in NEDA affairs for over 15 years. Was President and Director of Michigan chapter for many years. He was elected National President in September, 1951.



H. S. MORRIS

Following school, he went to sea as a wireless operator for five years on merchant vessels, his first two vessels being equipped with crystal detectors and 5 kw spark transmitters, to show how far back this was!

He went with Electrical Research Products in 1928 when talking pictures were introduced, and continued with that company in the capacity of Field Engineer and Complaint Bureau Supervisor until 1937 when the Altec Service Co. was formed. He was Merchandise Manager with Altec Service until his transfer to Altec Lansing in 1946 as Products Sales Manager where his duties have been promotion and sales in the High Fidelity Home Music field.



ALBERT M. HAAS
President, Television
Contractors Association

Mr. Haas is a veteran of more than twenty-five years in the radio and television servicing business. Presently he operates one of the largest service organizations in Philadelphia, handling work for many of the large department stores as well as doing his share of direct consumer selling.

He is probably one of the most outspoken adherents of diversification of service activity. Recognizing the instability of placing all his resources behind television service, Mr. Haas has built up a solid business in the field of electronic organ and musical instrument repair.

With the growth of television no one recognized the need for a local association more than he did. His spirited activity led to the formation of a strong Television Contractors Association in Philadelphia. He has been president since its inception in 1949.



FRANK MOCH

The electronics bug bit Frank Moch very early in life. In fact, more than 31 years ago he made the mistake of building his first crystal radio. From this evolved the job of servicing the early radio sets for all friends and neighbors. He sold his first service in 1921. He has been actively engaged in the service of various electronic equipment ever since. His first company was General Radio Service Company which a few years later was changed to Moch Radio and Sound Service.

He has been extremely active in association activity. He has just been re-elected, for the fifth time, to the Presidency of the Television Installation Service Association (TISA) and very recently been re-elected for a second term as the President of the National Alliance of Television & Electronic Service Associations (NATESA).



MR. E. J. (JACK) BARTON
President, Television
Service Association,
Detroit, Michigan

Mr. Barton attended and graduated from both the University of Detroit High School and the University of Detroit.

He received his degree in electrical engineering and, shortly after, joined the service division of station WXYZ.

In the midst of the depression years, Barton opened his own service business. His talent for business overcame the period's difficulties and brought him the seasoning he would need in the future. World War II interrupted his career and he became a Naval lieutenant. Returning to Detroit after the war, he resumed the business of Barton Radio & Television Service. When television came to his area, his organization expanded rapidly and he soon had one of the largest television service organizations in the city.

Mr. Barton quickly recognized the need for a local association. His executive abilities soon propelled him to the presidency, a position he has held since 1949.

Michigan Conference Called

A state-wide meeting called by the Television Service Association of Michigan, under the direction of E. J. (Jack) Barton, in Detroit, January 24th, has attracted a great deal of national attention. The immediate objective of the meeting is to stabilize television service at the management level.

The February issue of SERVICE MANAGEMENT will carry a complete resume of the Michigan conference.

TECHNICAL TOPICS

(Continued from page 7)

It includes variable and fixed frequency 1 and 10 megacycle markers. To summarize the following signal sources are possibilities:

1. UHF Station
2. Harmonic output of present VHF Generators
3. Home-constructed UHF oscillator
4. Commercial UHF Sweep Generator

It is very possible single-frequency alignment will suffice for most of the initial UHF converters. Modulation is or is not required as a function of type of indicator used.

If video modulation is desired it can be obtained from present VHF signal at video amplifier of an operating VHF receiver or from a composite video generator (Supreme). UHF signal source can be modulated using General Radio crystal diode modulator mentioned in this department last month (December, SERVICE MANAGEMENT). Technical details have been presented in our "Television Test Equipment Application Manual."

Sweep modulated signal can be obtained from commercial type UHF sweep generator or harmonic output of present VHF sweep generator.

The final required instrument is an indicator of some sort. For single frequency alignment (likely to be most common) two indicators would be the home-constructed balanced detector (also mentioned in December, SERVICE MANAGEMENT) or high frequency detector probe such as used by Sylvania with their Polymeter. If modulation can be applied to signal source, a crystal detector probe and oscilloscope can be used as an indicating device for alignment work.

If sweep alignment is used, the same crystal detector probe and oscilloscope can be used to obtain a visual alignment pattern.

VHF — THE EXCLAMATION POINT OF 1952

The FCC plans to allocate approximately 40 VHF stations mostly to smaller cities. There will also be additional grants for increased power output for some present VHF stations. Some stations have been requested to shift channels to reduce co-channel interference.

Power increases and more sensitive receivers have increased VHF station range. Consequently, the reliable coverage range of stations has been increased opening new markets in fringe areas.

Three problems have arisen as a result of increases in effective radiated power — too high signal levels near the station, extended co-channel interference belts, and adjacent channel spill-over. Your technicians will be encountering these conditions throughout 1952.

High Signal Levels

Tremendous signal levels put a strain on even the more modern a.g.c. systems — particularly, if a.g.c. must be set to receive a relatively weak signal as well as the strong one. The best solution in many cases is to use a resistor attenuator pad to drop the signal level of the strong station before it reaches antenna terminals. This can be in the form of a fixed pad that is switched in when strong signal is to be observed or, better still, the TV signal attenuator introduced recently by IRC, figure 4. This type of controlled attenuation is very helpful on those receivers without a.g.c., figure 5. Variable pad provides smooth attenuation as well as retaining a satisfactory impedance relation.

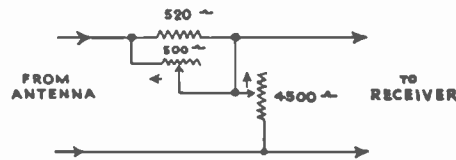


FIG. 4. IRC Signal Attenuator.

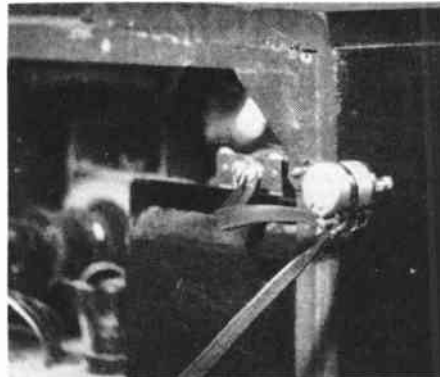


FIG. 5. IRC Attenuator attached to receiver.

Co-Channel Interference

The co-channel interference problem is a difficult one. The too familiar "venetian blind" is prevalent throughout the flat mid-western states and extends into most all sections of the country on nights of abnormal refraction (often during hot, humid nights). Shifting of allocations with further distance separation between co-channel assignments can minimize this defect. A high-

ly directional antenna (strictly unidirectional pattern) and careful orientation do minimize the interference. A large reflector screen (at least 3/2 wavelength square) helps to reduce pick up from offending station.

Adjacent Channel Interference

With an increase in effective radiated power, the adjacent channel picture and sound levels are correspondingly higher. This becomes a particular problem when strong and weak station signals fall on adjacent channels. Technicians must be instructed to align traps carefully — preferably as spill-over is observed on screen.

An antenna pattern that can be oriented toward desired weak station and away from interfering strong station is of substantial help. The added selectivity of a booster can make desired signal dominate adjacent channel interference to a greater extent.

Indoor Antenna

Higher signal levels in metropolitan and suburban areas will give the indoor antenna (Fig. 6) an opportunity to do a better job. Although the indoor antenna leaves much to be desired in terms of picture crispness and motionless background, the higher signal level will permit a more stable raster and minimize the influence of impulse noises and local oscillator radiation.

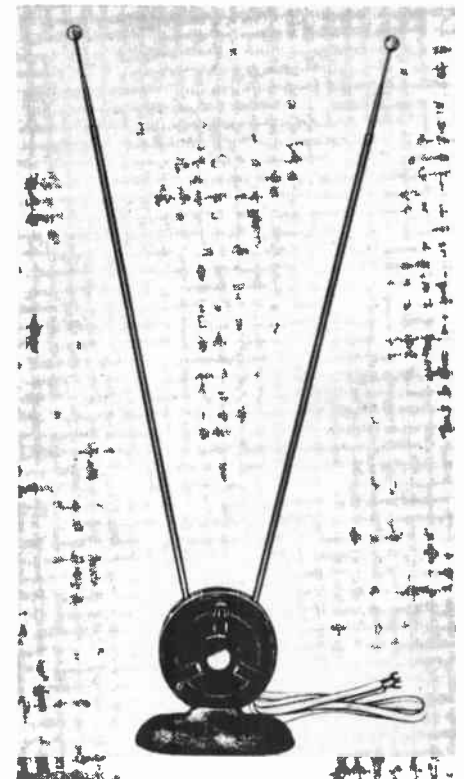


FIG. 6. JFD indoor antenna.

In February

SERVICE MANAGEMENT *presents . . .*

1. The Picture-Tube Warranty Story

Your *Service Management* editors have compiled all available Picture-Tube Warranty data put out by the leading tube manufacturers. This data has been carefully *analyzed* and is now published for your information in *easy-to-read* form.

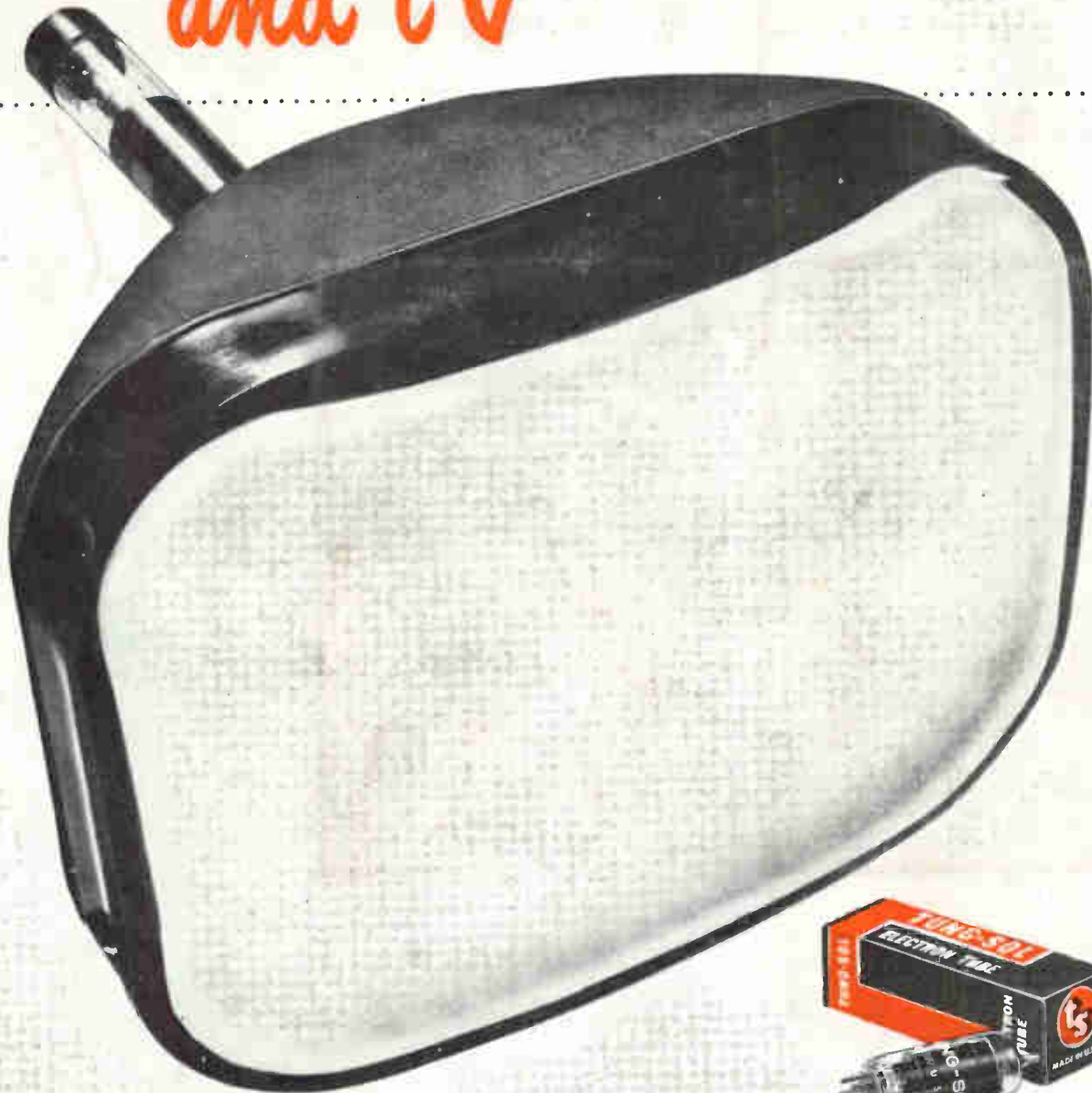
2. Discussion of REBUILT Picture-Tubes

Careful study of this subject proves that the industry is decidedly confused about the status of rebuilt picture-tubes. So *Service Management* presents an honest, thorough and timely appraisal of the entire problem.

ALONG with these important articles thus spot-lighted, SERVICE MANAGEMENT for February will include articles on the *business* aspects of the TV-Service business and the department-features of the high caliber you have learned to expect. Today, more than ever, the principle of the survival of the fittest applies quite literally to the service industry. For this reason, TV-Service men enthusiastically welcome "*Service Management*" as guide, counselor and friend. It is the *one* magazine which accents *business* management as a vital success-element in the service field which, this year, may qualify as a *billion* dollar industry.

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Quality -that keeps pace with the growth of the electronic industry
-that meets fully the performance requirements of all
radio and tv set manufacturers
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