

RADIO
AUDIO
TELEVISION
ELECTRONICS

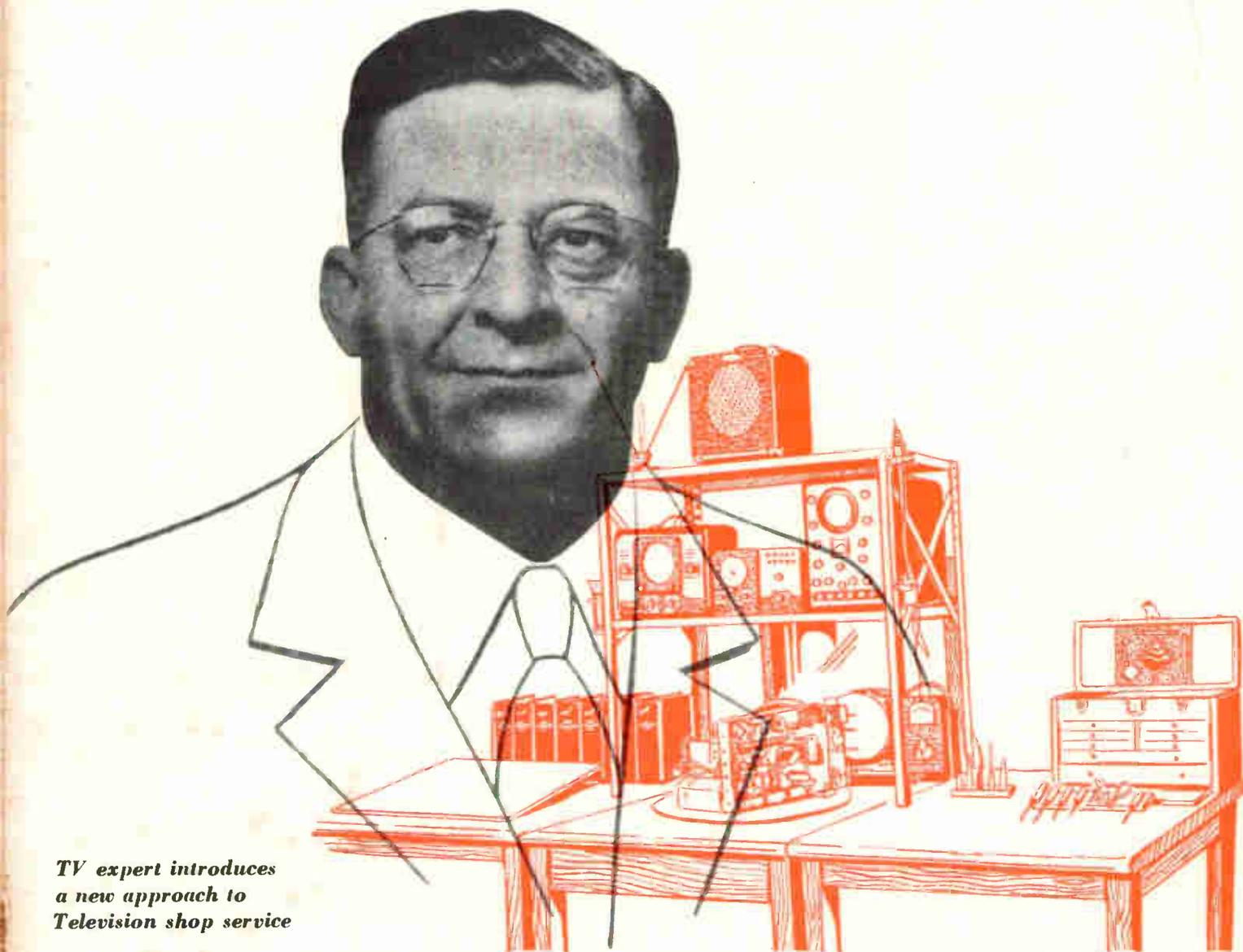
Service Management

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THE BUSINESS MAGAZINE OF THE
RADIO - ELECTRONICS SERVICE INDUSTRY

Volume 1 Number 3

December, 1951



*TV expert introduces
a new approach to
Television shop service*

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SERVICE MANAGEMENT
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Frank J. Moch says—

"there is no other **OSCILLOSCOPE**
like the **NEW Simpson MODEL 476**
MIRROSCOPE"

FRANK J. MOCH,
president of the
National Alliance of Television and
Electronics Service Associations.

Simpson's new and completely advanced type of oscilloscope—Model 476 **MIRROSCOPE**—is designed to eliminate certain inherent disadvantages found in the conventional type of oscilloscope by use of the "Mirroscope principle." In this kind of construction the 5-inch cathode ray tube is mounted in a vertical position, thus reducing bench space requirements to an area of only 9" x 8" thereby permitting better concentration of associated equipment for any type of test procedure. The cathode ray image is reflected from an optical type front surfaced mirror mounted in the adjustable cover at the top of the cabinet bringing the viewing surface of instrument near eye level when instrument is used on benches of normal height. The mirror angle is quickly and easily adjusted to any position of the operator. The cover with integral side wings forms an effective shield against external light sources or may be closed down for protection of the tube and mirror when the instrument is not in use. The upright construction permits location of controls and connections for maximum convenience and allows for internal cathode ray tube connections at the front of the panel instead of the rear.

SENSITIVITY:

Vertical direct.....12 volts rms per in.
Vertical amplifier.20 millivolts rms per in.
Horizontal direct.....14 volts rms per in.
Horizontal amplifier.....38 millivolts rms per in.

INPUT IMPEDANCE:

Vertical direct....10 megohms, 15 mmf.
Horizontal direct...10 megohms, 15 mmf.
Vertical amplifier.300,000 ohms, 30 mmf.
Horizontal amplifier.....500,000 ohms, 15 mmf.

Horizontal trace expansion is over 4 times tube diameter. This makes it possible to examine minute portions of a response pattern for finer detail. Linear Sweep frequency is continuously adjustable in five overlapping ranges from 15 cycles to 60,000 cycles. Internal, external or line frequency synchronization with variable amplitude is available. Means for intensity or "Z axis" modulation is provided. Approximately 14 volts peak will blank a trace of normal intensity. The vertical amplifier frequency response is within 3 DB from 20 cycles to over 300,000 cycles and is usable to well over three megacycles. Square wave slant and over-shoot is held to less than 5 per cent of amplitude. This response will be found adequate for all phases of television receiver service including observation and diagnosis of Sync. signals.

TUBE COMPLEMENT:

- 5UP4 Cathode Ray Tube.
- 4-6J6 Horizontal and Vertical Amplifiers.
- 1-12AU7 Vertical pre-amplifier.
- 1-6J6 Linear Sweep oscillator and Sync. injector.
- 2-6X4 High voltage rectifiers.

LINE VOLTAGE: 105-125 volts, 50-60 cycles.
SIZE: Height 16 1/4"; Width 9 1/8"; Depth 8" over all
WEIGHT: 25 lbs.; Shipping weight 30 lbs.
High Frequency Crystal Probe...\$7.50
DEALERS NET PRICE including operators manual\$179.50



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Phone: Columbus 1-1221
In Canada:
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HAROLD S. STAMM, member of the RCA Tube Department since 1945, has been appointed Manager of Advertising and Sales Promotion of the Department, succeeding Lawrence LeKashman, who resigned. . . Clarostat Mfg. Co., Inc., has announced the appointment of **ALBERT W. McCARTY** as Personnel Manager. . . Annual convention of **NARDA** will be held January 13-15 at the Conrad Hilton (Stevens) Hotel in Chicago. . . **RECOTON CORP.**, manufacturer of phonograph needles and phono accessories, have moved into larger quarters in New York City. . . Cathode-ray tube division of the Allen B. Du Mont Laboratories, Inc., has announced the appointment of **WILLIAM CARLIN** as manufacturing manager. . . Recent announcement by Motorola-N. Y. named **WILLIAM H. KELLEY** president and **ALLAN G. WILLIAMS** vice-president in charge of operations. . . **CHARLES PENK** has been elected president of Allied Electric Products, Inc., and its subsidiary Sheldon Electric Company. He succeeds **NATHAN CHIRELSTEIN**, who has been named chairman of the board. . . Bogue Electric appointed **LEO G. SANDS** general sales manager. He was formerly director of advertising and public relations for Bendix Radio. . . **TV-"Q" CUSTOMBILT CORP.**, manufacturer of cathode-ray tubes opened a new plant at Hawthorne, N. J. . . RCA Victor has named **W. L. ROTHENBERGER** manager of eastern regional office to succeed J. R. Little, Jr., who resigned. . . **RICHARD H. SCHNEBERGER** has been appointed general service manager of the Crosley Division of Avco Manufacturing Corp. . . Sangamo Electric Co. named **JOHN GILTNER TWIST** as Sales Manager of the capacitor division at Marion, Ill. . . **DAVID G. CHRISTIE** has been designated director of employee services of Sylvania Electric Products, Inc. . . A new manufacturing plant has been acquired by **CBS-COLUMBIA** in Long Island City, New York. . . National Video Products Corp. has appointed six representatives to handle their picture tube line in the replacement field — **LeROY SCHENCK**, of Newark, N. J.; **W. C. HENDRICKSON**, of Boston; **HOWARD FAIRBANKS**, of Philadelphia; **MYERS & YOUNG**, of Kansas City; **FRANK WEDELL**, of Seattle; and **MEL FOSTER**, of Minneapolis. . . Gabriel Company has appointed **DR. LAN JEN CHU** as director of research. . . **ROBERE T. LEITNER** has been added to the engineering staff of the Technical Appliance Corp. . . Zenith Radio Distributing Corp. of Chicago has named **HARRY C. CHRABOT** as assistant to the general manager. . . **WILLIAM J. MORLOCK** appointed as general manager for commercial equipment activities of General Electric's commercial and government equipment department in Syracuse. . . Two regional sales representatives were announced by Victor Electric Wire and Cable. They are **CRESCENT ELECTRIC SALES CO.** of Chicago and **JOE CLANCY AND CO.** of Angola, Indiana. . . **RALPH R. SHIELDS** has been appointed Merchandising Supervisor for the Television Picture Tube Division of the Sylvania Electric Products, Inc. . .



Shown above are only a few of the prime movers in Philadelphia's Joint Electronics & Radio Committee on Service, as they appeared during a recent WCAU-TV broadcast of a panel of experts' discussion on television service problems in the community. First row, seated, are (l. to r.) Ty Yonker, Raymond Rosen & Co., Inc.; Albert D. Steinberg, Albert Steinberg Company; Morris Green, Almo Radio Company and President of NEDA's Keystone Chapter; Albert Margolis, Almo Radio Company; Albert M. Haas, A. M. Haas Radio & Television Service; Harry Ehle, International Resistance Company. Standing (l. to r.) are Paul V. Forte, Executive Secretary; Muriel Ichelson, Secretary; and Gene Castrovillo, Service Manager of Raymond Rosen & Co., Inc.

New Guarantee Picture Tube Plan by Du Mont

A new cathode-ray picture tube guarantee providing 100% protection for receiver manufacturers, for a six-months' period, from the date of actual installation of a receiver in a consumer's home, was announced recently by Irving G. Rosenberg, general manager, Cathode-ray Tube Division, Allen B. Du Mont Laboratories, Inc., Clifton, N. J. The new guarantee is effective immediately.

This action by Du Mont, the first in the television tube industry, now provides the same protection for TV receiver manufacturers as now enjoyed by distributors and servicemen.

Under former guarantees, time elapsed from the date the tube was purchased from the tube manufacturer, was charged against guarantee time. Under this new Du Mont guarantee, according to Rosenberg, it is now possible for a receiver manufacturer to be assured of the tube manufacturer's obligations in his overall guarantee of the receiver.

Possible Selenium Rectifier Shortage

Selenium rectifier manufacturers industry advisory committee has reported that production of selenium rectifiers will be cut 50% as current inventories of basic materials are exhausted. At this level most production will be required for defense activities. Selenium is a rare element which is produced as a by-product of copper smelting and refining. About 30 million selenium rectifiers are now in use. Approximately a million and a half are required each year to maintain home radio and television receivers.

Two Buck TV Service In Brooklyn

"Mad Dog" Tyson, who has opened two new retail TV set outlets in Long Island, and has announced plans for opening five additional stores in Brooklyn, N. Y., early in 1952, recently used newspapers to advertise his debut in the TV service field. His ads offered service to all set owners at \$2.00 per call plus cost of needed parts. The ad said that Tyson had previously limited service to his set customers but now is set up to handle service calls for all of Long Island.

Tel-O-Tube Expands

Mr. Samuel Kagan, president of the Tel-O-Tube Corporation of America, nationally known cathode ray tube manufacturer, Passaic, N. J., announced that his firm had purchased the entire equipment and inventory of the Video Industry Products Company, Paterson, N. J., manufacturers of television and cathode ray tube test equipment and electronic instruments.

The move, which will enable the Tel-O-Tube firm to expand its facilities into large scale production of test equipment and electronic instruments, was completed recently, with the establishment of Tel-O-Tube's electronic equipment division.

The new facilities will be housed in Tel-O-Tube's recently renovated 10,000 sq. ft. plant number 2, at 159-161 Marshall St., Paterson.

William Kiselewsky and Steve Ikker, formerly chief engineer and production managers of the Video Industry Products Company, will hold similar positions in Tel-O-Tube's newly formed electronic equipment division.

Florida Service Group Grows

The Radio and TV Technicians Guild of Florida, founded only a year and a half ago in Miami, has increased board membership to eleven. Newly elected members are: Samuel Kessler of Kessler's Radio Service and Messrs. Middleton and John C. Ryan of Ryan Radio. Officers of the Guild include: Robert Collins, president; Orville Smith, vice-president; Steve Petruff, secretary; and Ed Stevens, treasurer.

Teletrons Warehoused On Coast

The warehousing of Teletrons or Du Mont TV picture tubes in Los Angeles, is announced by Bill C. Scales, Sales Manager of the Cathode-ray Tube Division of Allen B. Du Mont Laboratories, Inc., Clifton, N. J. The availability of this Pacific Coast warehouse stock means prompt delivery for the trade beyond the Rocky Mountains. Du Mont distributors can now replenish their own inventories and also receive shipments of the more unusual Teletron types with minimum delay and maximum savings.

This warehouse stock will be under the supervision of the W. C. Hitt Company, Du Mont Teletron representatives, 1169 South Broadway, Los Angeles 15, and 1355 Market Street, San Francisco 3, California.

Service Management

PREVIOUSLY NAMED THE NATIONAL TV TUNER

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"OUR OPINION"

Now that there is growing recognition that carefully planned programs in the interests of independent service are definitely a responsibility of the radio-television industry, it is interesting to note the wide range of opinion about the *kind* of training program most needed.

For instance, there are many executives who feel that *all* of the problems arise from public ignorance of TV complexities and the resulting public relations problem of the independent service man. They feel that an educational program can teach the service man the fine points of customer relationships—and convince the set-owners that the television receiver is an intricate mechanism.

Another group places more emphasis on those training programs which cover the practical and mechanical aspects of servicing. It is felt that the service technician cannot cope with the flood of technical literature or take the time to sift and select that which is sound and useful. In a suitable training program, technical data on ever-changing procedures would be analyzed, co-ordinated and presented in organized and condensed form.

Still another group contends that the troubles of the service industry are caused primarily by the shortage of adequately trained and skilled technicians. And this suggests a campaign to interest more people to study television service and to enter it as a rewarding vocation. Action in this direction has been taken by R-TMA through vocational and trade schools.

IN OUR OPINION, *all three* of these programs are necessary. Television ser-

vice must be managed as a business. Maintaining good public relations is vitally important. Service management "clinics" would be an excellent means of bringing about improvement—especially as such meetings would bring up the problems which are peculiar to the specific area; exchange of information would automatically solve many local problems. And if Distributors of Sets and Parts will co-operate in such service clinics, they can make an important contribution, drawing upon comparable experience and operating practices known to be successful.

The expanding variety of circuitry employed in television receivers poses a really serious problem to the independent service business man. It is likely that some of his employes work simply because they need jobs and not because of pleasure in superior skill or craftsmanship. Such men, whether the percentage be large or small, are loath to spend the time necessary to keep abreast of new developments. Yet they **MUST** in some way be trained and informed. Hence the quite evident need for a planned training program which would more or less compel employees to know the practical service aspects of new circuit developments.

Co-operation in the service industry is not merely theoretically desirable—it is necessary for profitable operation and the continuing existence of this form of enterprise. Without teamwork, it's rather hard to win a ball game, or to fight a war—or to promote the success of an industry which, even today, is still wrapped in its swaddling clothes.

P. H. W.

TELEVISION SERVICE DEMANDS SOUND MANAGEMENT*

There are today so many aspects involved in conducting a TV service business that no one man can handle it in its entirety. No longer can it be undertaken as a hobby or trade. Today to operate successfully it is imperative to have an office equipped with basic office machinery, staffed by competent personnel to handle telephones, reception and dispatch forms, cost control machinery, proper billing and collection procedures and service records. The shop must be equipped with adequate test facilities and have a parts department carrying enough parts and tube stock and here it is imperative

to have a shop man in charge. Controls on every phase of the business are **ESSENTIAL** and daily work records are a must. Proper accounting records are vital for sound management. Efficient handling of service calls is a major key to successful operation. Advertising should be done through experienced advertising men, rather than rule of thumb. Today you must recognize the fact that no longer can a man go into the TV service business and expect to survive purely on his technical ability. **SOUND MANAGEMENT** is a main ingredient of successful TV Service.

*TSA News, Detroit, Michigan

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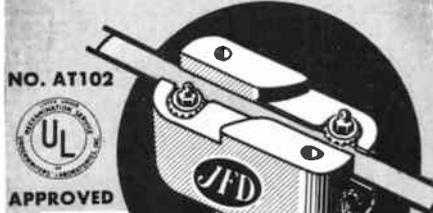
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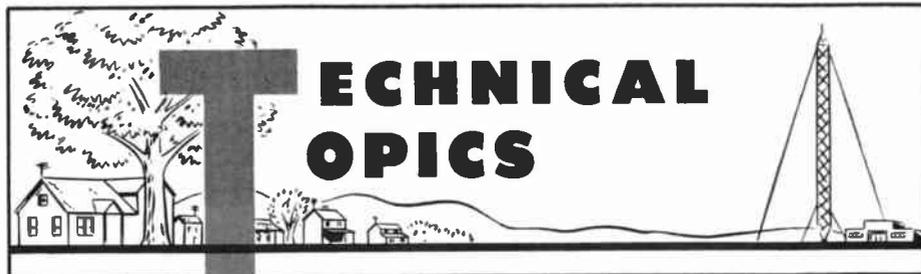
Improved Picture Tube Selector

A new version of the Du Mont TV Picture Tube Selector introduced by the Cathode-ray Tube Division of the Allen B. Du Mont Laboratories, Inc., Clifton, N. J., last September, is now being offered to TV servicemen through Du Mont Teletron distributors.

Proved in use by over 10,000 servicemen, the Selector has undergone improvements in design to facilitate easier use. In addition, the tube listings have been increased by utilizing both sides of the slide-wheel. A space has been provided for the imprinting of the Du Mont distributor's name.

The Du Mont Selector makes possible the selection of the proper tube type for the best replacement performance by merely dialing the type to be replaced. The correct modern replacement type appears along with the technical mechanical and electrical specs. The Selector also proves helpful in selection of tubes for conversion jobs where a larger tube is to replace a smaller one.

The Du Mont Selector has been acclaimed as a real time-saver over former methods of charts and booklets that required much time to check the various specifications against each other.



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

By EDWARD M. NOLL

A well-organized shop and an efficient bench plan expedites handling of incoming and outgoing receivers. It permits effective and speedy repair of receivers in bench position. Certainly, these are essential factors in the operation of a profitable service department. Still another and often neglected consideration is the condition of the test equipment.

Today! Investigate how many test units the technicians believe are not in proper operating condition in your shop.

If a specific test unit is defective or is just believed to be defective, any doubt as to its performance slows receiver repair. A defective unit means false results and hampers performance checks. If unit is functioning properly but technician is in doubt as to its goodness, he loses time trying to think his way around what he suspects is wrong with instrument. A poorly performing test unit destroys confidence and can lead technician off on a delaying tangent.

Each shop should have a group of small devices that can be used to check performance of test equipment. Performance records should be filed for each piece of test equipment. Routine performance checks should be made at regular intervals and close watch kept on test equipment readings by comparison with those on file.

Sensitivity Checker

The technician must rely on his test equipment to give an indication of cor-

rect or incorrect operation of the device being serviced. His test instruments are electronic devices too, and subject to defects after a period of operation. Methods should be employed in each shop to make routine checks of test equipment performance. It is important to keep test instruments working at peak efficiency if reliable and conclusive measurements are to be made.

A very simple unit, figures 1 and 2, can be constructed to keep watch on the sensitivity of the horizontal and vertical amplifiers of your scope. In addition to this application, it can be used as a voltage calibrator, if your scope has no such facility, to measure voltage amplitudes of pulses and non-sinusoidal waveforms.

The test unit consists of a means of applying a weak 60 cycle sine-wave



FIGURE 2. Sensitivity checker and voltage calibrator.

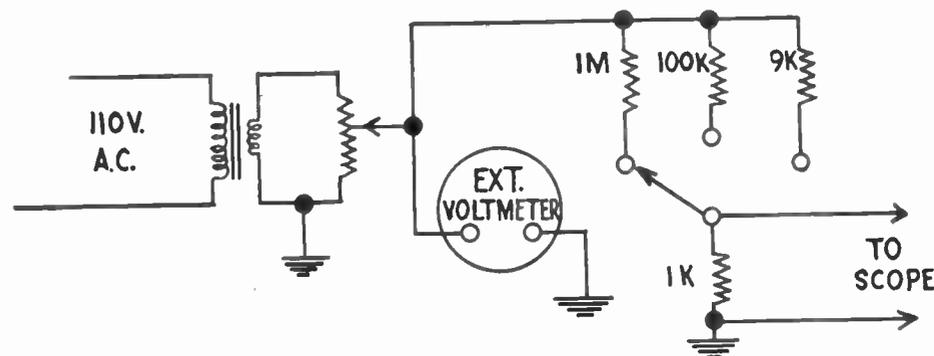


FIGURE 1. Sensitivity Checker

signal at millivolt level to the vertical and horizontal input of the scope. With scope set for least attenuation and gain control set on maximum, the height of the pattern is measured, figure 3. This reading is used to calculate the number of millivolts of applied signal necessary to obtain an inch deflection on the screen. Answer is compared with manufacturer's figures of deflection sensitivity. If sensitivity is poorer than rated value it is an indication of a weakness in the vertical amplifier. A decided weakness in gain often includes a non-linear or poor frequency response (also an important performance consideration) so nature of defect should be traced down. Same procedure can be used to check performance of horizontal amplifier.

Once a week or at periodic intervals, scope sensitivity should be checked. Proper reading is a good indication of continuing amplifier performance. Consequently, there is no uncertainty as to scope performance when waveform observations and measurements are being made.

Voltage Calibrator

The very same device can be used to calibrate the vertical gain control and attenuator settings. After such a calibration is made it is possible to use scope quickly to measure the peak amplitudes of various waveforms applied to scope as a function of gain control setting and attenuator position. A means of checking waveform amplitudes in various circuits reliably affords an easier means of tracing down some of the more obscure receiver troubles.

The sensitivity checker can be used to calibrate your scope gain control dial and a prepared chart permits you to measure waveform amplitudes almost instantly. You then have a means of direct comparison with waveform amplitudes recommended by receiver manufacturers.

For complete details on construction and technical operation of simple test equipment standards refer your technical staff to TTLB lecture notebook on test equipment.

Balanced R.F. Detector

Still another simple but useful device is the crystal detector of figure 4. This

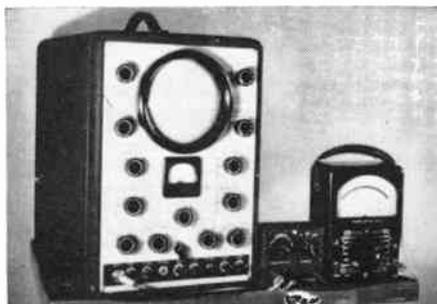


FIGURE 3. Checks scope sensitivity.

small unit in conjunction with a sensitive micro-ammeter of 0-60 amps, or less has a number of applications. It is fundamental being a low impedance r.f. termination and balanced crystal detector. Crystal current is measured by attaching a sensitive current meter in series with d.c. current path and across the r.f. filter capacitor.

One very important application for the detector is to keep check on the output levels of the various signal generators in the shop. Here is a simple means of making routine scheduled checks giving your technicians the added confidence that comes with knowing test equipment is performing properly.

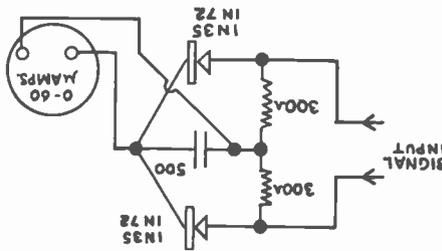


FIGURE 4. Balanced Crystal Detector.



FIGURE 5. Check of Signal Generator output.

It requires a minimum of effort to connect the detector and take a set of readings. Generator is set on a prescribed frequency and output turned to maximum. Detector is attached to output, figure 5, and reading is recorded. Readings are made and recorded for various other representative frequencies. These records are filed and, at routine intervals, the generator is checked with the same detector. A change in readings at some or all check frequencies is an indication of performance deterioration. All shop generators should be checked in same manner.

Additional applications for the detector are:

1. Alignment of boosters and peaking on specific channels, figure 6.
2. Alignment of UHF converters.
3. Tuning of resonant circuits to specific frequencies.
4. Measurement of signal levels for outputs that must be terminated in a low impedance.



FIGURE 6. Booster Alignment.

Crystal Diode Modulator

A crystal diode modulator, figures 7 and 8, developed by General Radio as a laboratory accessory, has specific application possibilities in the service field. The modulator can be attached to the output of a signal generator and produce wideband amplitude modulation of that signal. Pulses, video, or a sine-wave can be used as a source of modulating signal. An excitation level of just 0.2 volts rms can produce 30% modulation of a 50 millivolt r.f. carrier source. Video levels up to a limit of 4 volts peak can produce a suitable modulation characteristic.

A suitable source of video is a standard television receiver tuned to a local television station. Output can be taken off video output stage through a suitable divider network. With a suitable VHF-UHF r.f. generator this signal and modulator can be used to form an amplitude modulated television signal on any television channel. Some applications for modulator are:

(Continued on page 23)



FIGURE 7. General Radio Diode modulator.

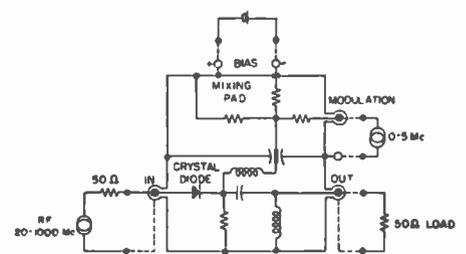


FIGURE 8. Diode Modulator Schematic.



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*Director of the
Saunders Radio and
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The operating income of a service business is based on the profitable sale of "time" in the form of labor. All too often this fundamental business truth is forgotten or overlooked by men who operate as independents in the radio or television service business. When it is not taken into account the business sooner or later will become involved in financial difficulties.

The rugged individualists who fought for a living in the radio service business seldom gave much consideration to what their labor was worth. Operating usually as one-man businesses they managed to snatch a precarious living from their efforts through their versatility in being able to handle a wide variety of service jobs on radio and sound equipment. By adjusting their own standards of living in accordance with the varying income available from the business, they were able to continue as independent service technicians over a long period of time.

The average radio shop is an inefficient enterprise when considered as a business activity. Because of this many radio service shop owners had great difficulty or failed completely in adjusting their businesses to handle TV service. They have failed to recognize that television service is not just a bigger kind of radio service. Television service is a distinctly new kind of business and one which has many peculiar requirements of its own that must be met if the business is to be operated at a profit.

The heart of any service business is its shop. And it is in how efficiently the shop is laid out and operated that will greatly influence whether the business will produce a profit.

Shop Layout and Work Routine Spell the Difference Between Profit and Loss in a TV Service Business

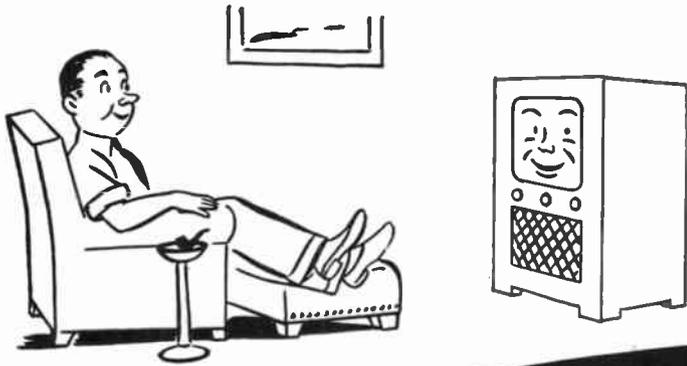
Competition will determine the prices that customers will have to pay for installations and for home service calls. Competition will also establish the wage levels for competent service analysts and technicians. The TV service business in which management planning provides for full utilization of its investment in servicing tools, equipment and the working hours of its employees will be the one that will continue to show an operating profit.

In our studies of the peculiar requirements for servicing television receivers we were greatly concerned by the almost insurmountable problems involved in trying to adapt a regular radio service bench for television servicing. A television receiver is a bulky unit and tricky to handle; the array of test instruments which should be instantly available to the technician working on a TV chassis requires a substantial amount of space and yet they have to be carefully and compactly set up to insure the accuracy of the instrument readings when applied to a service job. A proper installation of test instruments for TV servicing will eliminate all "guess-work" in the instrument readings.

Where TV chassis were brought into the shop and set on the floor we found numerous instances where technicians had developed hernias from handling the units from the floor to the bench and then back to the floor. Much time was lost in maneuvering chassis on the work bench to accomplish repairs, adjust controls and observe the response on the picture tubes.

In designing the "ideal" TV service shop our first objective was to minimize the amount of time required for the physical handling of the chassis in the shop. This was accomplished with a dolly mounted on heavy rubber-tired casters. These three-foot square by three-foot high units provide easy mobility of the jobs in the shop and they reduce the necessary handling of a chassis to two operations—the first is when the chassis is brought to the shop where it is placed directly on a dolly when it is taken from the field car or service truck; the second handling is from the dolly back to the truck after the chassis has been serviced and is ready for delivery to the customer. At no time does a shop technician need to lift the chassis.

(Continued on page 16)



THE ODYSSEY OF MR. HAPPY SOUL

By MARTIN WELLMAN

A MAN IN SEARCH OF A RELIABLE TELEVISION SERVICE OPERATOR

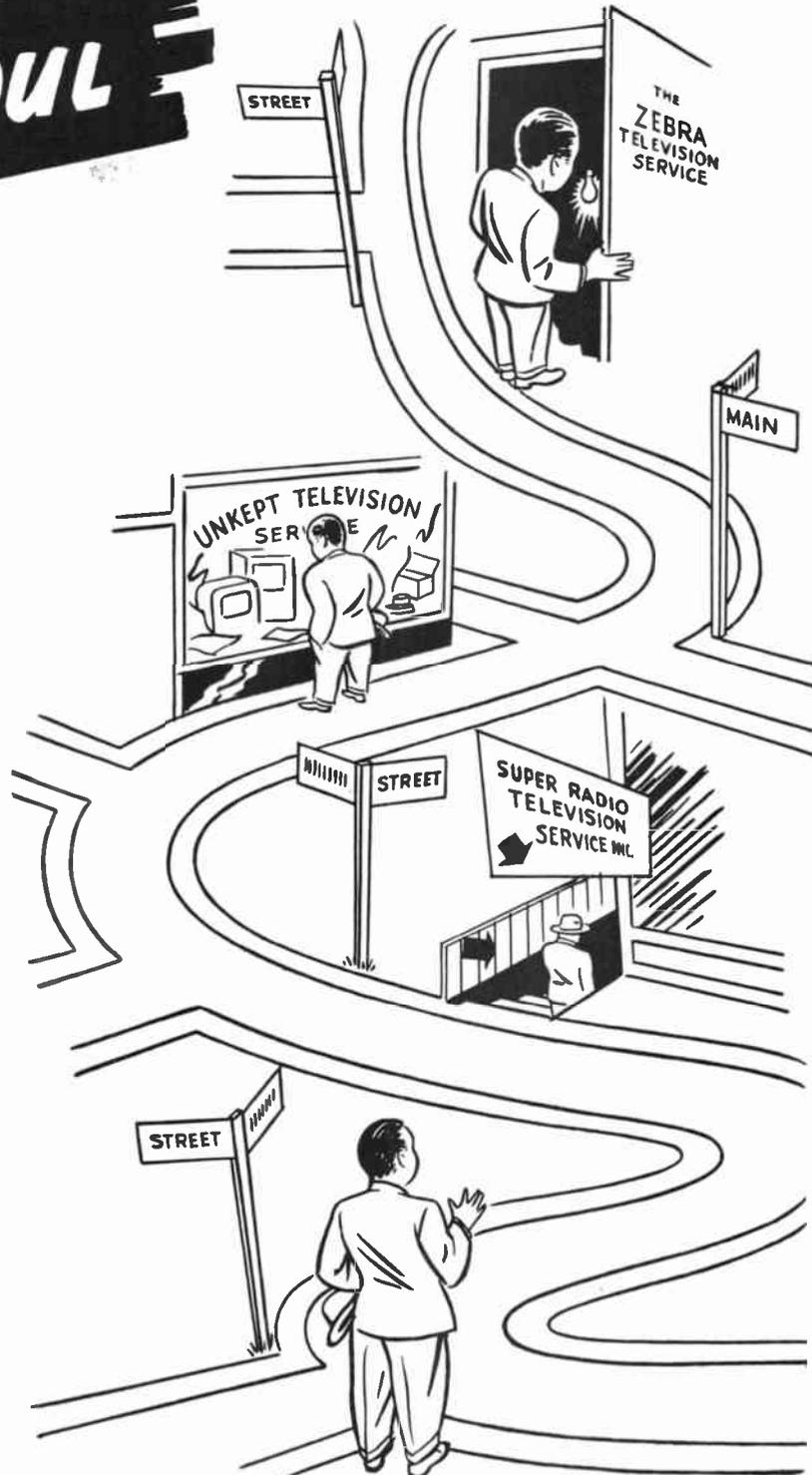
Once upon a time there was a man who had a television set. He was a Happy Soul. The world was within his living room. The joys and pleasures of entertainment were his to behold. Yes, this man was a Happy Soul.

His set was a well-meaning mechanism. It was usually in good health, and in those cases when it did become rundown, there was that nice television serviceman who came around and quickly put it on the road to recovery. There wasn't much to worry Mr. Happy Soul; he had a good television set and a competent doctor to take care of its spurious ailments — The ABC Service Company.

One day, a day that will go down in Mr. Happy Soul's log-book, he received a letter from that fine, upstanding dispenser of television service. The party of the second part wanted to convey the fact that the first year of service had ended and it would cost Mr. Happy Soul an extra eighty dollars to insure said set for the next year, plus twenty-five dollars to secure the vitality of said set's face, the cathode-ray tube.

The letter trembled in his hands; the room whirled about into outer space. He was taken aback to say the least. For if there was anything Mr. Happy Soul hated to be separated from it was money. He should not be considered cheap, for he wasn't; he just demanded value, and he couldn't see laying out \$105.00 for a second-year policy.

The rumblings in the Happy Soul household were heard by the Lady of the house. Her feminine curiosity came to the fore and she inquired about his belligerence. Mr. Happy Soul, between persistent snorting and bellowing explained the difficulty of the day. Madame Happy Soul, after a decade of marital bliss, was immune to his huffing and puffing about family expenditures. She never had trouble making a dollar go a "short way" and, when it was important to her, she never had too much trouble



convincing him that money should be more freely circulated for goods and services. She was certainly not to be parlayed into confusion by this television servicing problem . . . not Mrs. Happy Soul. She had the answer.

Said she, "If you feel that \$105.00 is too much to pay for a second-year television service policy, who not investigate other servicing companies? There are many such companies advertising in the TV magazine we receive . . . see what they have to offer."

Mrs. Happy Soul had spoken, and being the "free thinker" that he is, he agreed.

So began the Odessey of Mr. Happy Soul — his trials and tribulations amidst television service land.

His first stop was on the North side of town — The Zebra Television Service Company. He would not have found it, except that he tripped over an apple seed. It was set back 'way off the street, with company name emblazoned over the front door. Since there was no admission price requested, he entered. It was a sight to behold, that is if he could see it, for the darkness was all-consuming . . . so he fingered his way toward the fifty-watt beacon in the rear of the shop. He was sure there was a figure in the shadows. Sure enough — it spoke!

"Anything I can do for you?"

"Well . . . I don't know. Do you do television servicing here?"

"Yes. Are you interested?"

"I am."

"Sixty-five dollars a year — parts and the tube guaranteed and replaced free."

"Where's your equipment?"

"Just what you see here . . . that's all you need."

The stillness was broken only by a trail of footsteps and the slam of a door.

The Odessey continued.

Mr. Happy Soul was not to be deterred in his determination to find an acceptable servicing outlet. Onward he marched, like the Christian Soldier of old, searching for his Messiah.

In the middle of one of the town's main streets, he spotted target number two — UNKEMPT Television Service. He viewed the store exterior with interest. Its large glass store-front was filled with tubes, parts, appliances, and old model radios. In bold type in the center of the window, a sign shouted out to passers-by, "WE SPECIALIZE IN EFFICIENT TELEVISION SERVICING."

Mr. Happy Soul brashly entered the store with the confidence of a gold bullion salesman. Beyond the threshold, his air changed . . . the note of triumph disappeared. He found himself amidst a collector's paradise . . . a collector of old parts and relics that is. For wherever he planted his feet, Mr. Happy Soul was encompassed by debris. He thought to himself — "If cleanliness be Godliness, then the owner is an Atheist."

It hurt H. S. to see a place of business in such an untidy state — for he was an immaculate man! He felt stifled just standing there. He was about to leave when a man — bent over behind the counter — straightened up to question his business.

"What can I do for you?"

"Nothing — nothing at all. I was just looking."

With those words, Mr. Happy Soul retreated to the street where dirt, at least, had a chance to move around.

He was frustrated. His mission for maintenance was a failure.

(No doubt there was a service shop somewhere that was properly set up to dispense efficient servicing — but where?)

Happy Soul looked about, wondering what to do next. Should he continue his search or give up now and pay the \$105.00? The thought of payment aroused his energies still further. He decided to continue his patrol.

Target Number 3 was Super-Radio-Television Service, Inc. The name at least was impressive.

Happy Soul walked down the avenue where it was located. Fortunately for him, his head was raised skyward, for dangling above a second story window was the black on white sign announcing his destination. A large arrow pointed to a basement entrance. He followed succeeding arrows along a winding path until his entire frame faced a door marked "Entrance" — "Super Radio-Television Service, Inc."

Happy Soul entered. Before him was a dark, dingy, pint-sized room with a varied assortment of radio sets strewn about.

"What can I do for you?", a voice bellowed out from under the prevailing silence.

"Do you service Television Sets?" queried Mr. Happy Soul in as questionable a tone as possible.

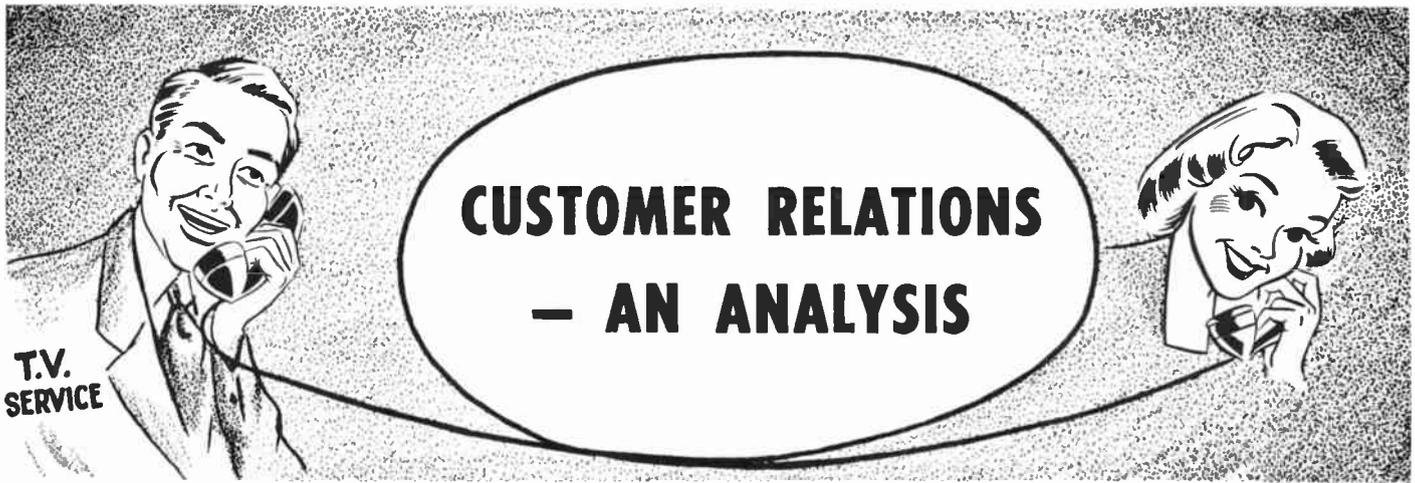
"Sure do," retorted the voice confidently.

"In this location?"

"All the space and equipment I need right here."

The following day the ABC Service Company received a check for \$105.00 — undersigned by a Mr. Happy Soul.





**T.V.
SERVICE**

By

E. C. TOMPSON

Public Relations Counsel

***Part 3. Your Telephone Sales Can Be the
Difference Between Profit and Loss***

Recently Sears, Roebuck & Co., which is one of the largest merchandising retailers in the world, launched what they call "a new merchandising plan" which will carry 100,000 items in their catalog into more homes in the Atlanta area "with an expanded telephone shopping system geared through their mail order plant." Sears also reported that this new method of shopping has grown into a real sales force in the retailing picture, and that the number of telephone customers has increased almost one-third in the past year.

Department stores have, for years, recognized that they could increase sales initiated by advertising by providing customers with adequate facilities and trained personnel for handling telephone orders. They know that the telephone is one of the best means to close a sale, particularly impulse purchases, and they sell millions of dollars worth of merchandise by making their 'phone service really pay off.

A point in common between Sears, department stores and the TV Serviceman is that they all retail service, and most of the service they retail is to women in the home. It is therefore entirely logical that TV Servicemen should look on the telephone as one of their most valuable selling tools. The telephone, which provides the means of connecting personalities via the ear, is also a tool that can be capitalized on just as easily by the average TV Serviceman as it is by big companies like Sears and the department stores.

The only difference is in the amount of equipment and the number of personnel. Sears may find it advisable to train and equip hundreds of special operators; the serviceman has only to train himself and present personnel to use the 'phone or 'phones already installed and paid for.

Give and Take on the 'Phone

The general technique of getting the most out of 'phone calls is a relatively simple matter which requires some thought and intelligent effort but no additional expense. The first thought that the TV Serviceman should appreciate is the fact that his 'phone is not just a receiving instrument. It is a transceiver. Therefore it deserves alertness in two ways. The party answering the 'phone must be both a good listener and a good talker, if satisfactory exchange of intelligence is to be established with the maximum advantage for the serviceman.

While acting as a receiver, the service operator should make every effort to grasp the meaning of the message from the inquiring TV set owner. A good listener will train himself to judge what information should be transmitted so that the set owner can easily recognize that his time and effort to make the call are worthwhile. The chances are that in most of the 'phone calls this step in the customer relation will be very important.

Servicemen should recognize the fact that incomplete inquiries are to be expected. The stress placed on a phase

of information desired will vary with the personality and the emotional makeup of the inquirer. If she or he has the pocket book uppermost in mind, conversation may begin with: "How much will it cost to fix my television?" If the set owner is a hurry-bird, the first, hurried question may demand, "When can you fix my television?"

In either case no exact answer can be given because more information is needed. But the skillful telephone operator will adjust the reply to the mood of the set owner. If money, or cost, is the main consideration, he will attenuate feeling of cost. If speed is the number one consideration, he will quickly pick up the conversation and inform the set owner that in most cases a TV set can be put back into working order in a relatively short time.

Be Sure to Get Customer Information

But before making a commitment he will seek more information which will usually include: name and address of the caller; behavior of the set as the customer sees it; and specific data such as screen size, make, age, service record and whether or not an outside antenna is used.

During this necessary procedure the serviceman, if he has normal selling instincts, will secure the upper hand in the conversations and will lead the prospect or customer to a sale with good customer relations. In many instances a random prospect can be transformed into a lasting customer in a matter of a few minutes. How well the

serviceman achieves this position of leadership will depend on how well he has passed the inescapable inspection that the caller has been giving him over the 'phone.

This inspection, through impressions received wholly by ear, is not unlike the visual size-up the customer gives the serviceman when they first meet in the customer's home. And, no matter how well the serviceman may appear visually, if one of his personnel does a poor customer relations job on the 'phone, he will probably not have an opportunity to benefit from his pleasant smile or to prove the skill of his training and of his hand.

So, in fairness to the business and in recognition of standards set up by competitors for the TV Service dollar, the alert serviceman will do at least two things and learn to do them well. He will train himself to be a good telephone salesman. He will select and train personnel to do as good or a better job than he can do on the 'phone. During the process he will not overlook the importance of handling random 'phone calls which can increase or decrease the welfare of his entire service organization.

It should also become self-evident that the bonus sales that can be secured on the 'phone provide equal opportunity to all servicemen. They provide an "in hand" opportunity when the 'phone rings. But the bird can escape and certainly will if scared away . . . to a competitor. This means that servicemen should be particularly careful with 'phone calls because they may result in a comparison of prices charged as well as an estimate of the personality and skill of the serviceman who is called.

TV set owners call many servicemen and have a knack for stacking their impressions of one against their impressions of competitors. Learn how to make peace with your competitor's unhappy customer when he calls. Capitalize on the fact that, in every business, a part of the market is always looking around, but will buy from somebody. Stack your skill in gaining new business against the customers you lose.

These are prime considerations in a program to improve customer relations and increase your service business through telephone calls. The final details of telephone interview technique must be worked out, however.



All Kinds of People Call You on the Phone

Women Require Careful Consideration

Particular consideration should be given to 'phone calls from women because women have been greater champions of television than men. When the need for service arises it is probable that a woman will call the serviceman and will initiate the service job. Therefore whoever answers the serviceman's 'phone will have to develop ability to cope with the lady's incisive intuition. The chances are that the lady will decide, but quick, whether or not the service organization called is the one to fix her television set.

If a man talks to her he had better learn how to make the ladies feel that he is a "nice" man by intelligent organization of the conversation and a careful inflection and modulation of his voice. They should convey a feeling of patience and sympathy. After reaching "first base" he will have to know how to keep running with a firm hand on the extra patience many women require. The lady, for example, may know nothing about her TV set except its brand name. If pressed for screen size or purchase date, the new lady prospect may decide, impetuously, to skip the serviceman.

Special care is also required for training women to answer service inquiries on the 'phone. They must be

taught to develop good telephone voices and to respect a logical, business-like sequence in 'phone conversations. A woman operator with a nice, pleasant voice may attract men who call but she will have to be firm and business must precede pleasure or prejudice when she talks with women customers. An efficient girl will learn just how much of each consideration to put into a 'phone conversation and to make the choice depend on the business problem.

Servicemen interested in developing more business through better use of their telephones can benefit from a review of a booklet entitled, "the Voice of RCA Service" which has been prepared for the RCA Service Company, Inc., Camden, New Jersey and by consulting with their local telephone business offices.

Learn to use your telephone to increase your service business; remember it is a trans-ceiver so you have to give as well as take information from a competitive customer. Be careful in handling inquiries from women because they can strike you out quickly or play ball for a home run. Train your associates to use the 'phone as expertly as you do. Review the finer details of telephone technique by consulting published literature and your local 'phone company.



Your Silent Partner

By BENJAMIN HANDLER, C.P.A.

Taxes — How They Affect You and Your Business

During the past 38 years, our tax laws both in complexity of structure and revenue toll, have mushroomed up around us and increased at an alarming rate. This has been caused principally by the cost of fighting two World Wars and now the cost of making preparations which we hope will avert a third World War.

In 1913, Congress first enacted a Federal Income Tax Law as part of the tariff act for that year. That revenue act caused many complaints, but the tax burden at which those complaints were directed should be a source of much amusement to present day taxpayers. In 1913, the normal tax was only 1% with a \$3,000 exemption for a single man and a \$4,000 exemption for a married man. There was no surtax until one's income exceeded \$20,000 and the surtax rates were graduated from 1 to 6%. Under the Revenue Act of 1951, the combined normal and surtax rates for 1951 range from 20.4% on the first \$2,000 of net taxable income to 91% on net income in excess of \$200,000.

The following summary reflects the 1951 taxes on various amounts of net taxable income for an individual and a married couple filing a joint return. A special table would be required for an individual who qualifies as the head of a family.

1951 Net Income Minus Exemptions	Amount of Tax	
	Separate Return	Joint Return
\$ 2,000.00	\$ 408.00	\$ 408.00
4,000.00	856.00	816.00
6,000.00	1,396.00	1,264.00
8,000.00	1,996.00	1,712.00
10,000.00	2,696.00	2,252.00
12,000.00	3,476.00	2,792.00
14,000.00	4,336.00	3,392.00

The tax burden reflected by the preceding is not a pleasant sight indeed, and the picture for 1952 and 1953 is even less pleasant since 1952 and 1953 rates are even higher. If you know what your tax was for 1950, the following summary will show you your approximate tax for 1951, assuming the same income and exemptions.

If Your Tax For 1950 Was	YOUR TAX FOR 1951 WILL BE		YOUR TAX FOR 1952 and 1953 WILL BE	
	Amount	% of Increase Over 1950	Amount	% of Increase Over 1950
\$ 100.00	\$ 117.24	17.24%	\$ 127.59	27.59%
200.00	234.48	17.24%	255.18	27.59%
500.00	578.07	15.61%	630.77	26.15%
750.00	857.83	14.38%	937.96	25.06%
1,000.00	1,143.12	14.31%	1,244.39	24.44%
1,500.00	1,701.93	13.46%	1,862.73	24.18%
2,000.00	2,258.90	12.94%	2,481.43	24.07%

In a preceding article for this publication, it was stated that the average business man is primarily interested in the answer to these five questions.

1. What do I own?
2. What do I owe?
3. How much profit have I made?
4. How much tax do I owe?
5. What am I worth?

Withholding Tax

The preceding tax tables have been included because it is with the fourth question that this article is concerned. The average man conducting a business of his own is fully conscious at all times of his indebtedness to others and the importance of paying his bills as they become due. He is frequently not so aware, however, of the fact that if he is running a profitable business, he will have one creditor who can never be denied. As a wage earner his pay check was automatically decreased because of Federal payroll tax withholding. Most, if not all, of his liability for Federal Income Taxes was deducted during the 52 weeks of the year and sometimes he was entitled to a refund.

As an individual proprietor or member of a partnership operating a TV Service Business, it has now become your responsibility to make proper deductions from your employees' pay checks and to remit same to the Collector of Internal Revenue. This collection of income tax from wages at the source is commonly termed the "pay as you go" system.

As the owner of a business, there can be no weekly withholding since your personal drawings are not "wages." In order to put you on a current or "pay as you go" basis, the Revenue Act requires you to file a declaration at the beginning of the year which will reflect the estimated amount of tax for that year. Thus, on or before March 15, 1952, you will file a declaration of your estimated tax for the year 1952. Your estimated tax can be paid in quarterly installments, the first installment being payable at the time the declaration of estimated tax is filed, on or before March 15, 1952.

As is to be expected, ignorance of the law is no defense for failure to comply with any of the provisions regarding filing a declaration, paying installments on time, or substantiate underestimating the tax. The "pay as you go" law as it affects you has many ramifications and problems will sometimes arise which may require the aid of professional advisors.

I am chiefly concerned with Federal Income Taxes as they affect your finances and the conduct of your business. It is important that you should not

ignore the impact of Federal Income Taxes on your everyday affairs. Let us presume that you have earned \$12,200 during the year 1951. If you are married and file a joint return, your tax for 1951 will amount to \$2,252.00. How much estimated tax did you pay during 1951? If you estimated that your 1951 tax would be \$400.000 and paid three installments of only \$100.00 each, you would now be confronted with a problem. On or before January 15, 1952, you will have to amend your estimate and pay \$1,501.60 in order to avoid the penalty for substantially underestimating the tax. The balance of \$450.40 must be paid on or before March 15, 1952. Will the necessary funds be available?

Your Partner

Whether you like it or not, the Federal Government is a partner who is by law entitled to a substantial "take" if your business has been profitable. He is a silent partner and as profits are earned during the year he expects that a certain portion of the profits, commonly called income tax, will be remitted quarterly. On or before March 15th of the following year, this "silent partner" requires a settlement and at that time you will file a final tax return which embodies a reckoning of the profits for that year.

No business man running a legitimate business and filing correct tax returns has ever gone to jail for failure to pay his taxes. However, failure to make proper provision for payment of taxes may prove to be costly and embarrassing. Interest at the rate of 6% can assume serious proportions. In addition, your "silent partner" to protect his "share" of the profits will probably put a lien on record against you and this procedure will certainly be most embarrassing.

In order to avoid such a situation, it is essential that your books and records should be so organized as to reflect accurately the results of operations and thereby determine the share of profits which belongs to your "silent partner." You will then be able to pay your "partner" his just dues. If your books are not properly set up, you may make either or both of the following errors.

On one hand you may set up too high a standard of living and use all or part of your "partner's" take for that purpose. Or you may plow too much of your profits back into the business in the form of trucks, equipment, etc. In either case you will be unable to satisfy your "silent partner" when the day of reckoning is on hand. Good management requires a certain degree of planning; providing for tax payments is certainly an important function which should not be slighted.

Prior to 1913, you, as a business man, were sole master of your books. Whatever system or lack of system you had was a matter of individual whim and preference. Today, the Bureau of Internal Revenue and other Government Agencies are insistent upon complete records for income tax and sundry other purposes.

Maintain Proper Records

This insistence of the Bureau of Internal Revenue has as its authority one sentence in the Internal Revenue Code in which appears the words "each taxpayer shall keep proper records for income tax purposes." Those few words are the basis on which a veritable host of regulations have been promulgated by the Commission of Internal Revenue from 1913 to the present day.

Because of these Regulations, all taxpayers who are engaged in trade, business or profession must keep permanent books and records which must be available if an audit is to be made by an Internal Revenue Agent. No uniform set of bookkeeping is prescribed, and the income tax return made up from your records will be acceptable unless the Commissioner of Internal Revenue is of the opinion that the method used does not clearly reflect income. In answer to an often-asked question, the records must ordinarily be retained for a minimum period of three years from the time the tax return covering that year was filed.

If you fail to keep records, or they are inadequate and do not properly reflect income, serious consequences may result. The Commissioner of Internal Revenue will then determine the taxable income from one of the arbitrary methods available. Based upon such determination, the Commissioner may assess a deficiency and in extreme cases even impose a fraud penalty. The burden of disproving such severe and arbitrary assessments is upon you, the taxpayer. If you fail to keep books or they are inadequate and do not clearly reflect income, the Commissioner's determination, however arbitrary the method, will usually be upheld by the court's as being conclusive, unless you can prove that he is unreasonable and that the facts do not support his contentions. Lacking books or having inadequate records may make it impossible for you to prove your case.

Regardless of how burdensome it may be, adequate bookkeeping records are a must, if only to eliminate the danger of disastrous assessments. These records need not be elaborate, but they should, with a minimum of cost and effort, reflect the true income of your business.

Most taxpayers use one of the two following methods of accounting:

1. The cash receipts and disbursements method, often called the cash method.

2. The accrual method.

The cash method is chiefly used by individuals. All items of taxable income, actually (or constructively) received are classed as receipts. Those expenses actually paid for during the year are deducted from the receipts in order to determine taxable income.

Under the accrual method, net income is arrived at by deducting the actual expenses from the income earned even though the expenses have not yet been paid and the income has not yet been collected from your customers. This method is ordinarily used by business concerns. From the viewpoint of management, the accrual method does reflect more accurately than the cash method the results of operations for the year.

Inventory Important

In fact, the Regulations make the use of the accrual method mandatory if true income is to be determined in a manufacturing or trading business where inventories are carried. The TV Service Contractor is primarily engaged in the sale of service and ordinarily he will find the cash method to be the least cumbersome of the two methods. From a management viewpoint, the cash method of determining income, while satisfactory for tax purposes, does not reflect the real income for the year. Under these circumstances, it may be advisable to keep the books on an accrual basis for management purposes and then prepare the tax returns on a cash basis if that method is acceptable to the Commissioner. The reverse procedure can also be used, i.e., the books are kept on a cash basis for tax purposes and then adjusted to the accrual basis for management purposes. Such procedures are acceptable, but the adjustments which must be made require the services of a qualified accountant.

If your TV Service business is growing and your inventory of tubes and parts becomes increasingly larger, you may find that the Commissioner may insist that you cannot use the cash method for tax purposes, but must use the accrual method. His position will be that your picture tubes, small tubes and parts constitute an income producing factor. The use of the accrual method will then become mandatory and you will be required to take physical inventories at the beginning and end of the year.

Accepted accounting principles and tax law are usually in agreement, but sometimes they clash. When contra-

(Continued on page 26)

FAST

TELEVISION

Tuner Alignment

to Crystal Accuracy

HICKOK



MODEL 680

**R. F. MARKER and
CRYSTAL CALIBRATOR**

EXCLUSIVE — Contains Magic Eye circuit for calibrating and crystal accuracy.

FEATURES

- Provides accurate alignment of RF and overall sections of a TV receiver. 53-89 MC and 173-217 MC on fundamentals.
- Harmonic output on UHF and VHF.
- Will calibrate any other generator to crystal accuracy by means of a built-in magic eye zero-beat indicator.
- 2.5 MC crystal supplied — 2 other crystal holders provided.
- Permits adjustment of frequency of TV local oscillators to crystal accuracy.
- Moderately priced — the 680 will prove to be a valuable investment in modern TV equipment.

See the 680 at your jobber's today, or write for full details.

THE HICKOK ELECTRICAL INSTRUMENT CO.
10620 Dupont Ave. • Cleveland 8, Ohio

MODERN TV SERVICE SHOP

(Continued from page 9)

To provide for easy maneuverability of a chassis during the analysis and servicing operations a 33-inch circular turntable was built into the top of the dolly. This permits free movement of the chassis during servicing and adjustment. It saves a considerable amount of time that is normally wasted in lost motions when it is necessary to lift and turn a chassis to accomplish the complete analysis, servicing and adjustment work.

The dolly is actually a sectional, mobile service bench. A complete dolly with its circular top is shown in figure 1 and construction details are shown in figure 2.

The second vital requirement in a television service shop is for the test instruments to be readily accessible for any service job and so installed that the service technician can always depend on their readings as showing the conditions of the circuit under test.

To accomplish this objective a test instrument rack was designed to work in conjunction with the mobile dollies. The test instrument service position is a steel rack mounted on two 3' x 3' x 3' tables which straddle a space that will accommodate a mobile dolly. In

actual use the dolly containing a chassis is moved into position beneath the array of test instruments. The chassis can be quickly grounded to one of several convenient ground posts on the rack. The technician has instantly available for convenient use a Sweep Generator, Marker Generator, Oscilloscope and a VTVM with high voltage and signal tracing RF probes.

The necessary tools are easily accessible to his right and the complete service library is handily located to his (Continued on page 19)



FIGURE 1. The dolly as it appears with its circular turntable raised.

All photographs are herewith presented through the courtesy of the Saunders Radio and Electronic School, Inc., Boston, Massachusetts.

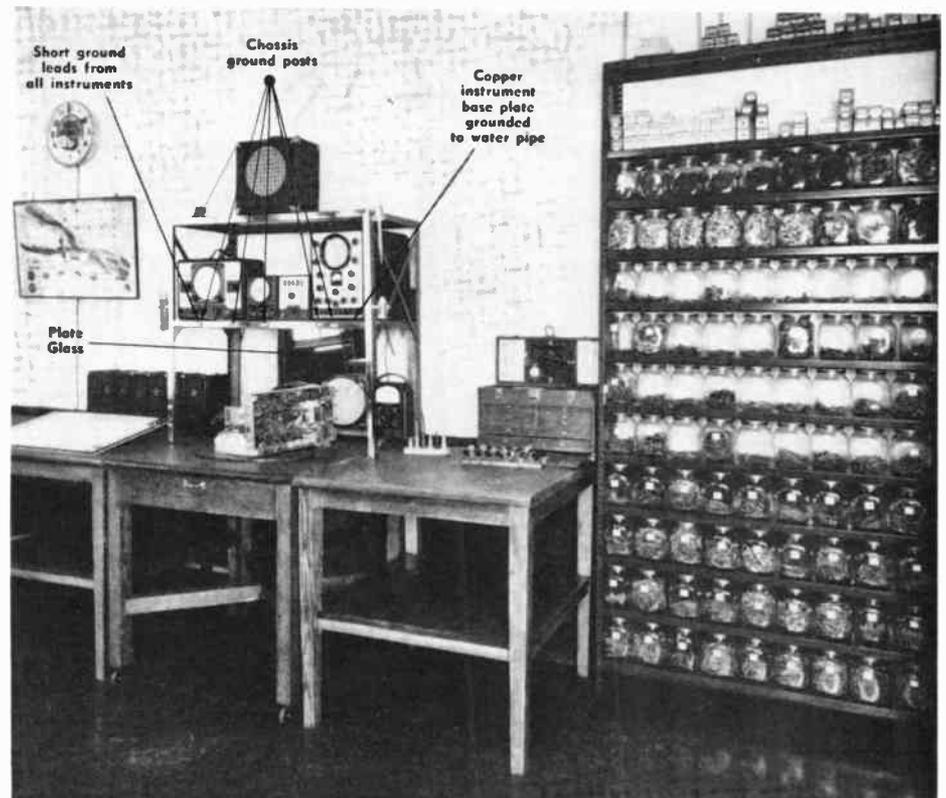


FIGURE 3. Complete test bench with auxiliary facilities for efficient TV servicing.

TV REPAIR DOLLY

(ISOMETRIC DRAWING)

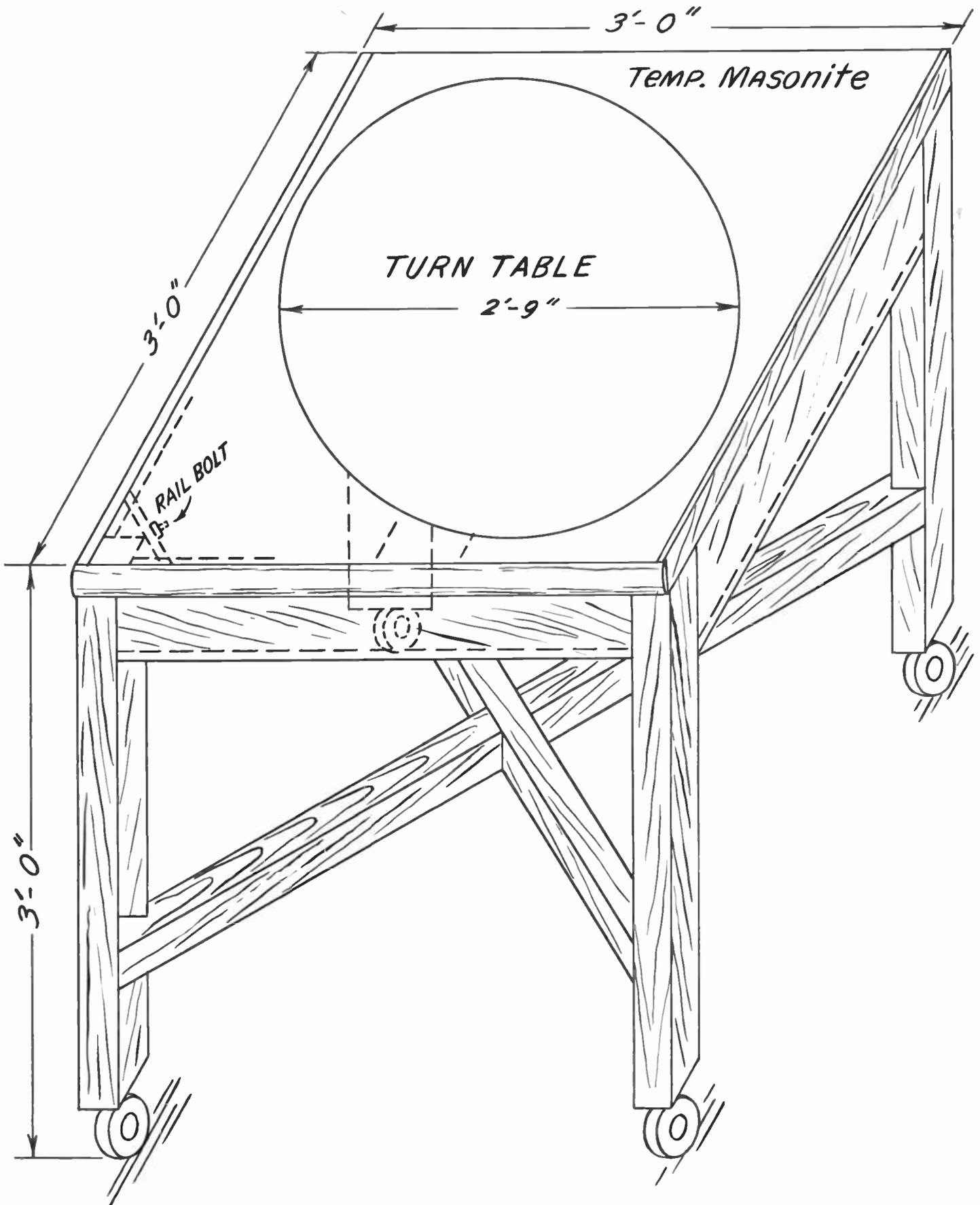
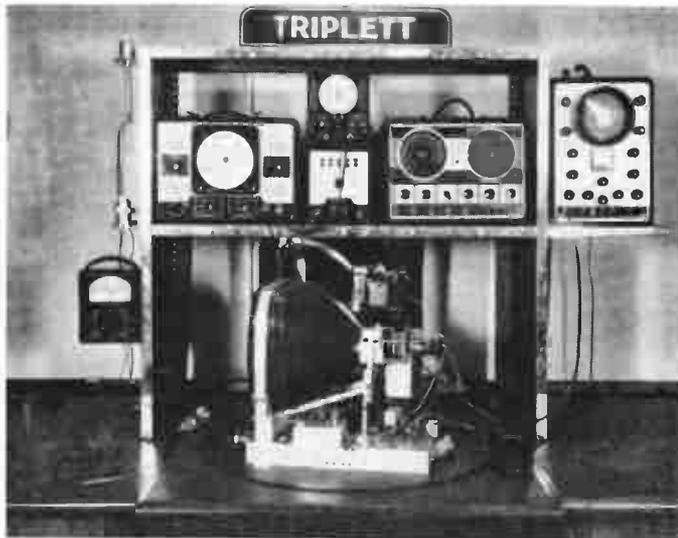
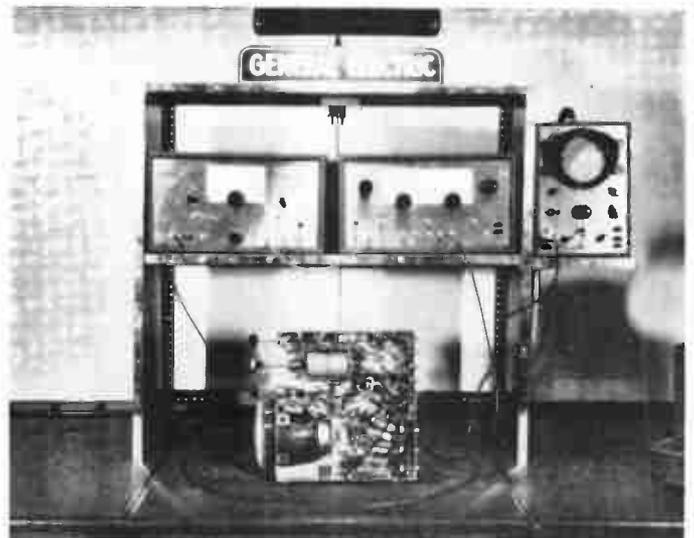


FIGURE 2. TV Repair Dolly

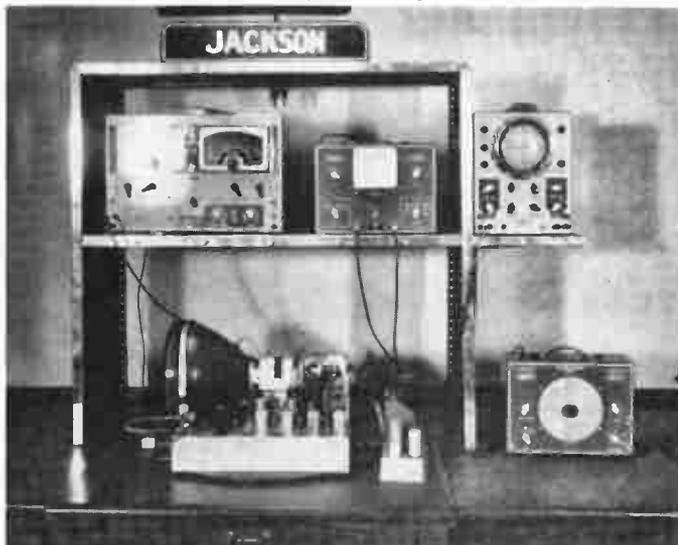
TEST EQUIPMENT RACK LAYOUT



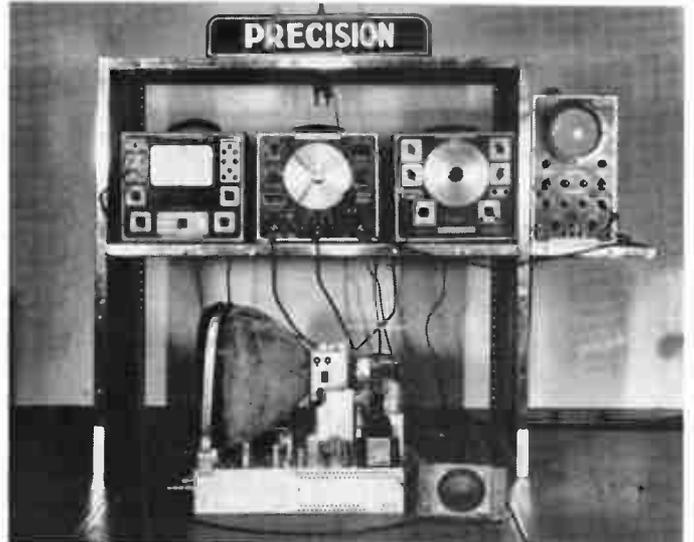
The Triplett Television Sweep Generator, the Variable Absorption type Marker, a Crystal Oscillator Marker with five crystal positions and additional combined Sweep Generator and Marker for sweep alignment. Associated Triplett Oscilloscope provides for a complete test rack.



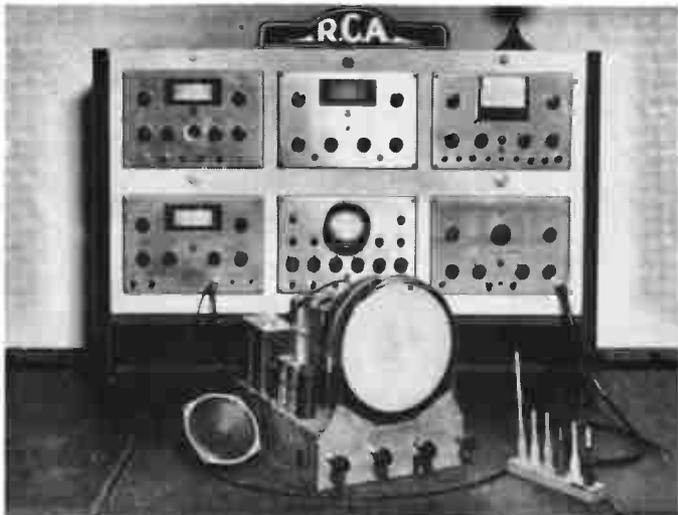
The General Electric Marker Generator, Sweep Generator and Cathode Ray Oscilloscope are matched for television alignment.



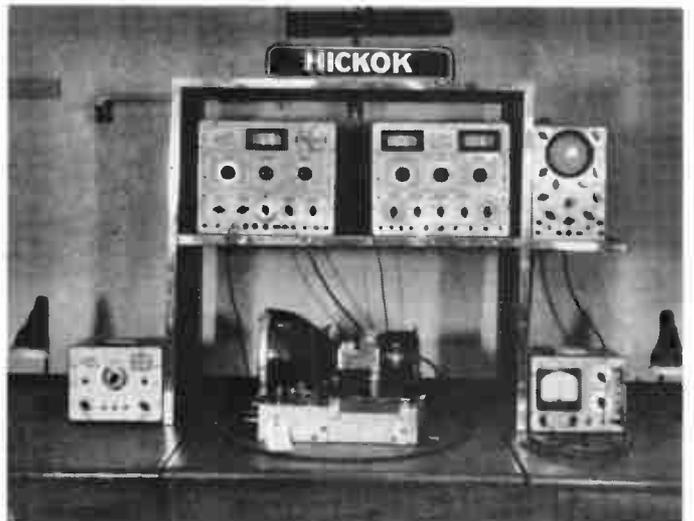
This position contains a Jackson TV sweep generator and marker generator, an RF signal generator and a sensitive wide band oscilloscope.



Shown from left to right are a Precision Vacuum Tube Voltmeter, Sweep Generator, designed for AM, FM and TV, Signal Generator and Cathode Ray Oscillograph.



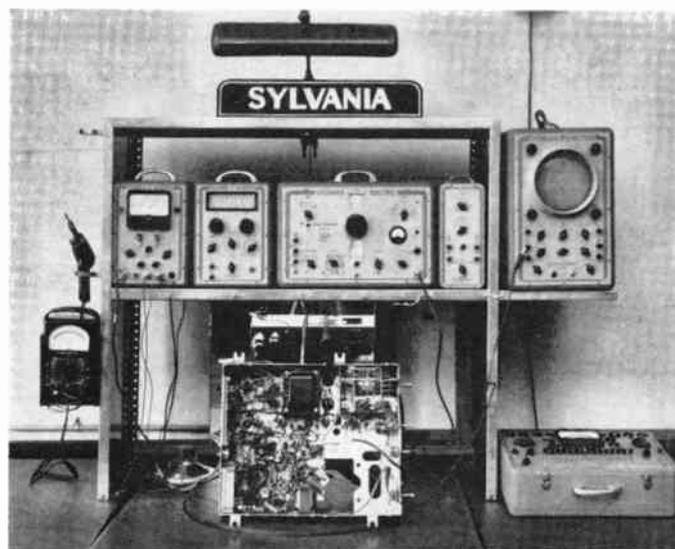
Six individual test units contained in a steel rack — from top-left to bottom-right these are a Variable Audio Oscillator, RF test oscillator, Vacuum Tube Voltmeter, Television Calibrator, Oscilloscope and Television Sweep Generator.



The Hickock Television Alignment Signal Generator and Universal Signal Generator for TV visual alignment. Universal Generator also provides output for alignment and signal tracing of AM and FM receivers. A Hickock Linearity Pattern Generator produces a cross-hatch pattern for use in the absence of an actual broadcast television pattern.



The Simpson TV-FM SiGnal Generator plus the new Simpson Mirrorscope for TV service. Simpson vacuum tube voltmeter adds volt and ohmmeter tests to the procedure.



The Sylvania TV service position includes a Polymer, Sweep Generator, Marker Generator, RF Signal Generator, Voltage Calibrator, Oscilloscope and Tube Checker.

MODERN TV SERVICE SHOP

(Continued from page 16)

left. The circuit diagram for the chassis undergoing repairs and adjustments may be placed under a sheet of plexiglas for rapid reference with a minimum handling requirement.

To permit picture tube observations while rear chassis adjustments are made, a piece of plate glass is mounted on the wall at the rear of the rack and in line with the mobile dolly position.

Details of a complete test equipment position are shown in figure #3.

TV service contractors who have adopted the plan of this modern TV service shop have followed the recommended practice of having enough dollies available to handle the normal flow of work going through their shops. The number of test instrument positions that are necessary in any given service shop will, of course, depend upon the volume of service business that must be handled and the number of technicians employed during peak seasons.

In addition to providing a clean, orderly and well-laid out shop for their technical employees, service management also has the responsibility for directing work organization and analysis and servicing routines so that the technical man-hours they buy will be employed in productive work.

By all means, the proper use of test instruments in analyzing service jobs brought to the shop should be a "must." Hit-or-miss analysis of the complex circuitry of television receivers is too costly in lost time to be acceptable practice in a capably managed television service business.

New Service Organization In Buffalo

The Radio and Television Service Association of Buffalo, N. Y., recently met and decided to set up an advertising program to acquaint the public with the operation and servicing of TV sets and to make suggestions which will help the public keep their sets in good operating condition. Members also agreed that: if and when a licensing proposal should arise in Buffalo, that the association should have an active voice in shaping regulations. Committees were named to include: Edward J. Danaher as chairman of ethics, assisted by Joseph Russo; Norman Shultz, membership chairman, and Frank Armbruster and Howard R. Wander, assistants; Jay Espolito, chairman of by-laws assisted by Sam Giambare and Al Szlay; Joseph Russo, chairman of emblem committee; and C. L. Hayes and Ed Telak as members of the publicity committee.

Cleveland Westinghouse Service Center

Westinghouse Electric has opened a factory-operated service center in Cleveland, Ohio to handle all Westinghouse consumer products ranging from television sets to electric irons. The new service center, located at 4505 Euclid Avenue, includes 19,000 square feet of space and ten telephone lines to assure prompt telephone service. Individual

territories will be assigned to outside servicemen. Customer service procedure begins with appliance checking at the counter by an experienced service man. He advises the customer what repairs are needed, how much time will be required for repairs and approximate cost. Each appliance is ticketed and routed to the proper repair department. When work is completed the customer is advised by post card.

TV Homes Have Most Radios

There are more radios in homes with a TV receiver than there are in homes with only radio and 77% of the radio listening in TV homes is done on secondary sets away from the living room, according to a recent survey conducted jointly by CBS and NBC. In every 100 families with TV there are now 253 radio sets. In every 100 families without TV there are only 219 radios. 46% of the TV families have three or more radios but only 35% of the radio-only families have three or more. The survey revealed that mother does most of the radio listening, the score: mothers using radio most, 52%; father 21%; daughter 13%; son 10%; and others 4%. In TV families: 98% have one or more radios; 77%, two or more radios; 46%, three or more radios; 22%, four or more radios; and 10% of the TV families have five or more radios.



By JOSEPH G. WERNER, JR.
TELE-VUERS Service Center, Incorporated

Up to the Summer of 1951, the majority of the service work done by Televuers was the one-year contract variety; the independent service work was a very small percentage of our total work.

With the advent of tighter credit controls, fewer sets and fewer renewals, the C.O.D. work began to form a greater part of our total business. To meet competition, speed was of the essence. Very often our serviceman arrived at the customer's home only to have the person say, "Oh, some other service company has already repaired the set; they got here much sooner than you." This little habit of the customer calling more than one service company for the same call had caught us off guard more than once. The only way of completing the call was to get there within the hour — two-way radio has enabled us to do just that.

We have equipped a number of our service cars with mobile phone, NBFM, operating in the 153 mc. range. The manufacturer is Link of New York, and the effective radiated power is 50 watts. The cost per unit is approximately

\$595.00. The standby battery drain is 10 amps., the drain on Transmit is about 65 amps. As you can see by the enclosed photographs, the equipment is very compact and does not require a great amount of valuable trunk space, and up to the present time, we have had no maintenance whatsoever on any of the equipment.

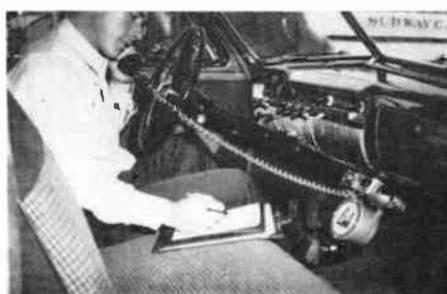
To contact one of our servicemen in the field, our router in the office merely dials a central office in Newark and gives the message (usually a service call) to the commercial operator at the fixed transmitter site, which is an affiliate of the Telephone Answering Service. Our office can then forget about the call from that point on. The commercial operator then begins to page our man by means of voice transmission. All cars are assigned a three-digit number. If he happens to be in the car at that time, he answers the operator's call and within thirty seconds the message has been routed, relayed and on the way to completion.

If the man is not in the car at the time of the operator's call, the procedure is also very simple. After com-

pleting a service call, the serviceman returns to his car and simply picks up the handset and says, "Newark — 959." The operator will immediately acknowledge his call and check the work sheets for any messages assigned to him. We have not had a slip-up on a relayed message yet! And most important of all, we have not lost a service call either since we have gone on mobile.

Televuers Service Center was formed three and a half years ago by Bob Lewis and myself, and in that time we have handled an average of 40,000 service calls per year. 10% of these sets required a trip to our shop, and between 3% and 4% of the total calls, we found no one at home.

In closing, I should like to bring out the fact that in general, the consumer has shown considerable surprise at the speed in which we handled their service call, and most important of all, the fairness of our prices. Contrary to a good number of companies, Televuers does not "pull" an independent set to the shop unless it is absolutely necessary.



A COMMENT ON SERVICE*

A few years ago the TV service industry was faced with the enormous job of servicing the early sets with only a few qualified technicians and engineers available. The only consideration of those overworked servicemen was to get as many sets out as was possible in a minimum of time . . . and the matter of customer relations grew rapidly worse, because of delays and lack of understanding. A common attitude taken by the service organizations of then was expressed to the customer as "If you won't wait for us to call, go get someone else."

Today, with more technicians available and the pressure slackened somewhat, we have found time to realize that we must establish sound customer relations, because every satisfied cus-

tomers means from two to ten new customers. . . . "Your top TV serviceman may be the best man in his field in Detroit, yet he will prove a liability rather than an asset to you, if he follows the all-too-common practice of arguing with his customer, often winning the argument but losing the customer," Al Miller stated.

"We have reached the conclusion," he continued, "that most of our customers' complaints were legitimate. We have adopted a policy of carefully listening to his complaint and investigating his service problem . . . and then doing our utmost to correct it. Often what is wrong with his set can be made right with little outlay in cost or time. Result is another satisfied customer."

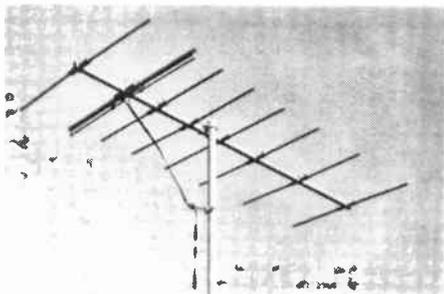
*Al Miller, Miller-Franco, Detroit, Michigan — TSA News

P RODUCT REVIEWS



SINGLE BAY 8-ELEMENT YAGI ANTENNA

The LaPointe Plascomold Corp., Windsor Locks, Conn., has announced a single bay 8-element Yagi antenna for better single channel fringe area TV reception which is reported to produce 41% greater gain than the best



5-element Yagi and gain equal to any 5-element stacked array. High front-to-back ratio eliminates co-channel interference. The type LJ antenna is supplied with standard Vee-D-X pre-assembly with a reinforced boom on the low channels for sturdiness.

NEW UHF TUBE

The General Electric Company's Tube Department, Schenectady, N. Y., has announced that it has started production on the 6AF4, a miniature receiving tube for use in ultra-high-frequency reception.

A seven-pin triode, the 6AF4 is designed for use as a local oscillator for the new UHF channels from 470 to 890 megacycles.

Other characteristics of the 6AF4 include:

Plate voltage 150 volts, plate current 28 milliamperes, plate input 2.5 watts, plate dissipation 2.25 watts, heater voltage 6.3 volts, heater current 225 milliamperes.

Additional information on the 6AF4 can be obtained from the General Electric Company, Tube Department, Schenectady 5, N. Y.

NYLON PLUG BASE

Industrial Devices, Inc., Edgewater, N. J., is currently producing a new-type plug base.

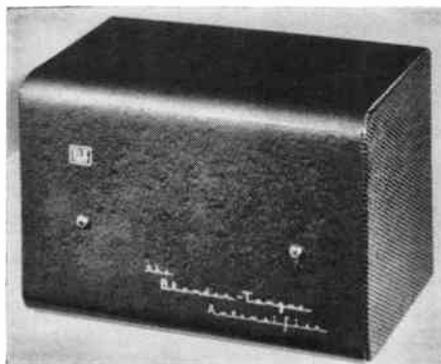
The new plug base is manufactured for capacitors of the Type CE50 Series, fitting a standard medium octal socket. It is suitable for use in condensers made under JAN-C-62 specifications and carries a manufacturer's designation of Model #1800.

Through the use of Nylon important advantages have been achieved over ordinary phenolic bases. Most important is the toughness of the unit which reduces breakage to a minimum while being assembled to metal cans, or other related parts. Due to the high strength of this material it has been possible to hollow the unit to a great extent thus making it lighter and creating a savings in material. The Nylon used on this base has a melting point in excess of 425° F. and excellent electrical properties as well.

Slight resiliency of the material eliminates danger of base cutting cathode tabs and also results in a better seal to the metal can. This same resiliency aids the fabricator by lessening the chances of the can rotating on the base either during or after the spinning process.

AUTOMATIC TV BOOSTER

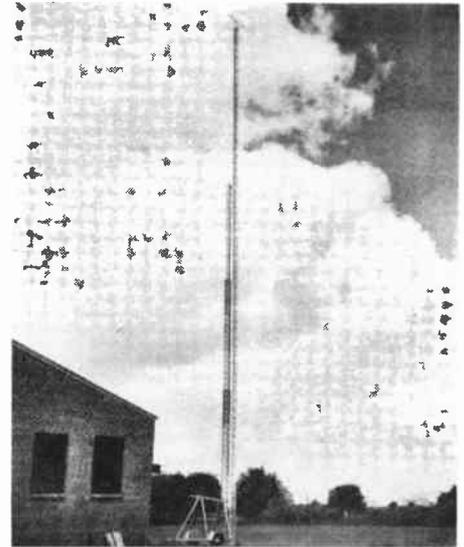
Blonder-Tongue Laboratories, 38 North 2nd Ave., Mt. Vernon, N. Y., has announced a new fully automatic, all-channel TV booster which goes on and off with TV set operation by means of an automatic thermo relay power switch. Model HA-2-M booster includes



a 4-stage push pull amplifier providing 24 db gain with low noise factor. Three 6J6 and one 12AV7 tubes are used. The booster is supplied in an attractive cabinet with mahogany hammertone finish.

TELESCOPING TV TOWER

Alprodco, Inc., Kempton, Indiana, or Mineral Wells, Texas, announces a new, easily erected, aluminum TV tower for fringe area TV dealers and installers suitable for set demonstration; signal strength testing; or for permanent antenna installation. Towers up to 120 feet may be erected quickly by two men. Complete unit consists of sectionalized telescoping aluminum towers mounted on framework fastened to a two-wheel trailer with jacks for leveling and steadying the structure.



TV JUMPER CORD

General Electric Company, Tube Department, Schenectady, N. Y., has introduced the TV jumper cord, a unique new service aid designed to speed home servicing of television receivers. It is now available to service technicians through General Electric tube distributors.

The jumper cord serves as a connector between the two parts of the interlock after the back has been removed from the television set, automatically disconnecting the power.

The jumper cord is simply a six-foot length of 18-gauge parallel cord with an all-rubber female connector molded on one end and a miniature male connector substituted for the conventional plug on the other.

It eliminates one of the time-wasting annoyances of home servicing—the location of a power source after the power has been disconnected. With the new device the serviceman merely removes the back of the set, stands it in some convenient location, and plugs the jumper cord into the two parts of the interlock.

Use of the jumper cord eliminates the necessity for use of extension leads or cube taps which may easily be left behind when the job is finished. There is little chance of leaving the jumper cord behind, because both ends must be disconnected before the back of the set can be replaced.

NEW CLAROSTAT CATALOG

Clarostat Mfg. Co., Inc., Dover, New Hampshire, announces a new catalog with listings of types and values of resistors and controls including: carbon and wire-wound types; attachable shafts and switches; rotary switches; constant-impedance controls and sound-system attenuators; tube-type resistors and ballasts; line-voltage regulators; fixed and adjustable power resistors; power rheostats; glass-insulated flexible resistors; TV beam benders; and Clarostat power resistor decade box. Copies of Clarostat Catalog No. 51 are available on request to Clarostat distributors or direct from Clarostat Mfg. Co., Dover, New Hampshire.

LOW COST RF PROBE

Precise Development Corp., Ocean-side, New York, has announced a new low-cost r-f probe which utilizes a germanium crystal rectifier and is suitable for measurements at frequencies up to 250 mc. Response ranging from low



audio frequencies up to 100 mc is reported to be practically flat. The probe is reported to be suitable for linear a-c readings up to 20 volts; d-c blocking allows r-f voltage component measurement in d-c circuits up to 600 volts. Approximate input capacity is 3 uuf. and input resistance is approximately 200,000 ohms at one megacycle; 150,000 ohms at ten megacycles; and 25,000 ohms at one hundred megacycles. Precise r-f probe, Model 912, is 6½ inches long exclusive of lead and end connector and weighs only eight ounces.

NEW SPRAGUE TV CAPACITOR MANUAL

Sprague Products Company, North Adams, Massachusetts, announces the fourth edition of the Sprague TV Replacement Capacitor Manual which includes 1561 set-by-set listings of orig-

inal equipment capacitors and recommended replacements. The manual contains a condensed listing of all Sprague TV capacitors and lists "service packages" containing all electrolytic capacitors required for 22 brands of TV sets. Copies of the new Sprague Manual, M-481, may be obtained on request from Sprague distributors or by remitting ten cents directly to Sprague Products Company, North Adams, Massachusetts.

NEW RCA POCKET REFERENCE BOOK

Radio Corporation of America, Tube Department, Harrison, New Jersey, announces the 1952 edition of its annual reference book including quick-selection guide for power, cathode ray, photo and special tubes; an interchangeability directory of non-receiving tube types; battery replacement guide for more than 300 portable radios of 47 manufacturers; detailed descriptions of essential test instruments and their use in servicing; components directory for RCA Victor TV receivers; and description of available technical literature on RCA products. The pocket reference book, which is combined with a 56-page diary for 1952, is available on request to RCA distributors.

DU MONT FM-TV CONVERSION INPUTUNER

Electronic Parts Dept., Allen B. Du Mont Laboratories, Inc., East Paterson, N. J., has announced a Du Mont Inputuner for low-cost conversion of straight TV receivers to combination FM-TV receivers which is now available to service-dealers with trade-in allowance for present tuners. Conversion permits reception of incidental or background music when set owners are not viewing TV programs. Inquiries should be directed to Mr. Edwin B. Hinck, Electronic Parts Dept., Allen B. Du Mont Laboratories, Inc., E. Paterson, N. J.

RCA ANNOUNCES NEW TV RECEIVER

RCA Victor Division of RCA, Camden, New Jersey, announces a new open-faced TV console receiver with a rectangular 17-inch picture tube which is powered by a "super set chassis" said to be the most powerful built by RCA Victor. The Caldwell Model 17-T-162 is available in contemporary styling with mahogany, walnut or limed oak finish with clean, simple lines for harmony with any type of home decoration. It is reported to be capable of bringing in clear, dependable pictures in fringe areas.

NEW ELECTROSTATIC TUBE

A new, all-glass 21" Rectangular, low voltage, electrostatic focus television picture tube with a revolutionary no-glare cylindrical face was announced recently by the Sheldon Electric Company, a division of Allied Electric Products, Inc., Irvington, N. J.

Known as the 21FP4A, this tube is said to be "one of the most efficient and delightful-to-view" picture tubes ever produced. "When mounted in any standard TV set, it virtually eliminates reflections from surrounding objects and lights." This no-glare feature is accomplished by using a cylindrical area face plate rather than a spherical face, commonly employed in picture tubes. By using a cylindrical face, annoying reflections are thrown below the level of the viewer's eyes by tilting the tube to an almost unnoticeable degree. To do this with a spherical face tube, it would be necessary to tip it so far forward that it could not be viewed comfortably.

The Sheldon 21FP4A, no-glare picture tube with an overall length of 23" — ¾" has a useful screen area of 19½" x 13¾". Current production in the Sheldon plant on this type of picture tube is presently at the rate of 1500 daily.

INTRODUCES RF ATTENUATOR

A versatile new RF attenuator, with wide usefulness for television and radio engineers, technicians and servicemen, has just been introduced by Jerrold Electronics Corporation, 26th and Dickinson Street, Philadelphia, Pa.

This new attenuator, designed for 72-ohm input and output matching over the 0-250 mc range, provides precise attenuation in any value from 0 to 82 db by a simple "In" and "Out" switching arrangement. The attenuator is accurate with 1% at the maximum attenuation. The feed-through insertion loss is less than 0.5 db at 250 mc.

Uses of this new Jerrold attenuator in TV-radio-electronic design and maintenance include its application as a standard to calibrate laboratory, bench and field test instruments. It is also useful to check the values of attenuator pads; to measure the gain of amplifiers, in conjunction with a signal generator and output meter; and to simulate line losses.

(Continued on page 24)

TECHNICAL TOPICS

(Continued from page 7)

1. Can be used to modulate output of marker generator, sweep generator (with deviation turned off) or signal calibrator to form a video signal on any desired channel.
2. Can be used to modulate an i.f. frequency generator so video modulated signal can be applied directly to i.f. strip.
3. Can be used to obtain video modulated signal source on the UHF band to permit converter and tuner strip adjustments and performance checks prior to start of UHF service or doing UHF station off-the-air periods.
4. In large service organizations can permit formation of video modulated signal on any frequency to be piped along transmission line to various outlets.

Industrial Television Training

In the next few years the commercial and industrial television sales and service business can mushroom into a new active branch of the industry. A few months ago we listed many of the applications for such systems. Their utility in monitoring and protection functions in small and large defense plants could mean industrial TV will be encouraged and processed more speedily than UHF or color.

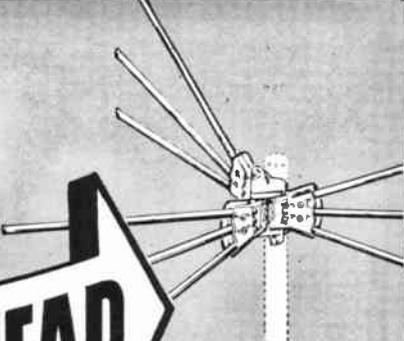
We feel the service industry, from the standpoint of customer convenience and economy, should participate actively in this endeavor. Television service establishments could provide local service particularly for the smaller installations. With their present facilities and test equipment plus a few additional convenient accessories, a speedy, round-the-clock and economical service can be established for the users of industrial TV equipment.

Industrial and commercial installations can be made by service organizations. Small unit installations present few problems; larger installations require planning and skill.

The Television Technicians Lecture Bureau has organized an educational project to present industrial television to the service industry. Program starts with a series of ten application and technical lectures. These lectures are to be presented initially in the Philadelphia area. However, wire recordings of lectures will be made available for distribution to other areas and to technical schools. The bureau has designed, constructed, and tested a small industrial system that will form a part of the lecture series. The few manufacturers of industrial TV equipment will also participate in the program.



YEARS AHEAD



Directronic

MOTORLESS TV AERIAL SYSTEMS

360° ELECTRONICALLY SWITCHED BEAM

GIVES SAME CLEAR PIX AS MOTOR DRIVEN AERIALS AT $\frac{1}{3}$ THE COST

**SIMPLE FLICK OF SWITCH
CLEARS PICTURE *INSTANTLY NO WAITING***

OPENS BIGGEST REPLACEMENT MARKET IN TV HISTORY

MAIL THIS COUPON TO-DAY!

SNYDER MFG. CO. B
22nd & Ontario Sts., Phila. 40, Pa.

Please send me free copy of authoritative booklet TENNA TIPS on Directronic and all other types of aerials, plus catalogs.

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

NO MOTORS OR MOVING PARTS



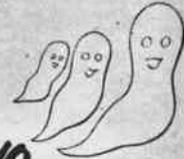
NO ROOF ORIENTATION



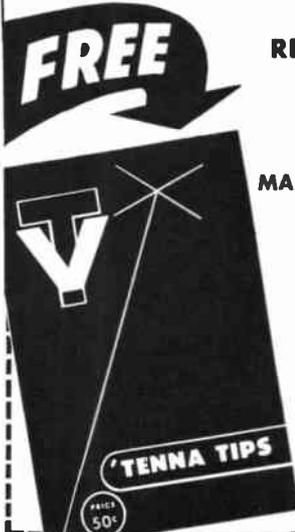
NO ELECTRIC POWER



NO GHOSTS



FREE



TENNA TIPS

PRICE 50¢

PRODUCT PREVIEWS

(Continued from page 22)

The new attenuator is available in two models: Jerrold Model A-72 for use with RG-59/U cable; Jerrold Model A-72X for use with RG-11/U cable. Both models are supplied with appropriate chassis connectors and two male cable connectors.

NEW TV COUPLER

A master TV antenna system coupler for use in conduit installations in new-construction work is now available from *Technical Appliance Corporation, Sherburne, N. Y.*, manufacturers of the Tacoplex Master Antenna System. The new coupler is designed to fill the need for a tap-off device along the main transmission lines housed in conduits.

As a tap-off device, the Tacoplex Cat. No. 1582 provides the necessary isolation between receivers and at the same time provides proper attenuation to maintain a constant level of signal strength throughout the system. By means of three resistors wired in parallel, the proper attenuation is obtained by clipping out one or two of the resistors. Complete instructions accompany the unit.

The coupler is designed to be housed in a standard electrical outlet box. Connection to the receiver is made by means of a polarized plug that is supplied with each unit. A standard-size flush cover plate is available as Cat. No. 1581 which identifies the outlet as a TV signal source.

NEW THERMAL SWITCH

The *LaPointe Plascomold Corporation, Windsor Locks, Conn.*, has announced a Thermal Switch (Model SW-T-1) for remote on-off control of auxiliary electrical circuits. Switching operations in accessory circuits and appliances, such as TV boosters that are used closely with the TV receiver, will function reliably without manual aid, it was reported. Model SW-T-1 eliminates special wiring and switching equipment.

Design features include small, compact size, easy installation, rugged construction, fast self re-cycling, pure sil-

ver-to-silver contact, mechanical stability. The maximum load of the SW-T-1 is 50 watts — actuating load minimum is 100 watts at 117 V — actuating load maximum is 500 watts at 117 V. Accelerated life tests show 5 years of operation without failure. The Vee-D-X Thermal Switch, Mr. Hancock stated, is individually boxed for experimental use or sold in bulk for industrial production. They are also available in a wide range of actuating voltages and current loads for specific applications.

ADD-A-SET TV COUPLER

Telematic Industries, Inc., 1 Joralemon Street, Brooklyn, N. Y., TV accessory manufacturer, announced that it is now delivering the new Add-A-Set TV coupler for the operation of two television receivers from one antenna.

The Telematic Add-A-Set coupler is designed for a market that includes the two set home, garden type apartments and other multiple dwellings, dealer showrooms for demonstration purposes

and taverns, hotels, schools, hospitals or any institution that might operate more than one TV set.

The coupler accomplishes the operation of two TV sets from one antenna through a balanced semi-tuned electronic system with no noticeable signal loss. This is an extremely important feature in weak signal areas.

Specifications are as follows: perfect impedance match of 300 ohm antenna to two 300 ohm receivers; highest Q, lowest loss Bi-Filar Impedance dividing network transformers; complete decoupling, shielding minimizing losses from inter-line mutual coupling; interwinding capacitance combined with Bi-Filar inductance provides good high pass filter action; and inter-set coupling is eliminated by correct phase shift in Bi-Filar transformer.

Model AM-40, a four-receiver coupler, operates four 72 ohm receivers from one 300 ohm antenna without any noticeable signal loss. These units can be cascaded to operate 7, 10, 13 etc. receivers from one antenna.



Dr. Allen B. Du Mont (left) presented with a testimonial scroll in recognition of his "continuous pioneering, development and inspired leadership" by Mayor Morris Pashman of Passaic, N. J., on the occasion of that city adopting the official slogan of "Passaic, Birthplace of Television."

RTMA Set Production Estimates for 1952

At a recent RTMA board meeting, Frank W. Mansfield, chairman of RTMA industry statistics committee and sales research director for Sylvania Electric estimated 1952 TV set production at 4,300,000 units but estimated that dealers will sell 4,600,000 sets. RTMA members attending the meeting made a general estimate of 4,200,000 with a high of 5,000,000 and a low of 3,000,000. Estimates of radio receiver production for 1952 ranged from 7,500,000 to 12,500,000 with an average of about 10,900,000.

Philadelphia Audio Show a Success

The first Audio Show in Philadelphia was held recently under the co-sponsorship of the Almo Radio Company; the Radio Electric Service Company; and A. Steinberg & Company to stress the increasing importance of sound sales to the serviceman and the dealer. Robert Reiss, engineer for University Loudspeakers delivered an address on high fidelity in the home. The two-day show was open to the public in the Broadwood Hotel where hundreds of people reviewed exhibits and showed keen interest in numerous demonstrations of the latest high fidelity techniques.

Du Mont Markets Original Replacement Parts

Replacement parts for Du Mont Telesets are being made available to servicemen through jobber channels, it was announced by Allen B. Du Mont Labs., Inc.

E. B. Hinck, Sales Manager of Electronic Parts of the company stated: "A recent study shows clearly that wider distribution of Du Mont Teleset replacement parts is becoming increasingly important to the independent serviceman and service organizations. A growing function is being performed by the service industry as the great number of Telesets already long in use continues to increase at a rapid rate. With the necessary replacement parts available from his parts jobber's shelf, the

serviceman will be better equipped to fulfill this function.

"The greater availability of exact replacements will benefit both service organizations and the Du Mont set owner." Mr. Hinck further stated: "It will be more practical for the serviceman to use exact replacements rather than compromise service quality by using near replacements. Since Du Mont Telesets are designed with the greatest of safety factors, installment of original replacement parts which contain the same safety factor, will insure the set

owner of original quality throughout the life of his receiver."

The Du Mont replacement items will be packaged individually and clearly marked for the serviceman's convenience, as, "Original Television Parts." It is expected that the number of parts packaged will increase as the distribution plan widens in scope.

Jobbers carrying the line will be equipped with cross-reference literature, point-of-sale promotions, and announcements to their serviceman customers.

Now

BLONDER-TONGUE BRINGS YOU FOR THE FIRST TIME IN TV HISTORY

An ALL-CHANNEL MASTER ANTENNA SYSTEM that YOU can install—in a matter of minutes—that is guaranteed to out-perform any other system.

...AND AT THE LOWEST COST!

NO Special connectors
NO Matching transformers
NO Engineers
NO Individual channel equipment

Distribution Amplifier
8 TV Outlets at Lowest Cost



Model #DA8-1-M
\$87.50

Model #DA8-1-M Distribution Amplifier

Full electronic isolation (min. 35db. between outlets). Amplifies as it distributes... Variable Gain Control. No signal loss. Automatic All-Channel transmission. Ordinary screw terminals assure faster, simpler installation.



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



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

Combine these B-T units to serve up to 2,000 TVsets from 1 antenna.



Literature on Request write Dept. B 1

Mt. Vernon, N.Y.

Model #HA-2-M
HOME ANTENSIFIER — Fully automatic, all-channel TV booster. 16 times gain. In metal cabinet. 57.50



They Say . . .

DEMAND DROPPING OFF

"Demand for radio and television receivers probably will drop off in the next year or two because of the buying wave at the start of the war in Korea and the delay in thawing the freeze on new TV stations, but factory sales of electronic equipment may exceed 7 billion dollars in 1953."

E. FINLEY CARTER,
Vice-President
Sylvania Electric Products, Inc.

PARTS WARRANTY

"Faced by almost industry-wide unanimity, Belmont reluctantly abandoned its one-price system in which each advertised price for Raytheon television included the Federal excise tax and one-year parts warranty."

"Belmont Radio Corp. now feels that the public has not been fooled by the industry's current pricing system, which has resulted in confusion and drawn criticism from the Office of Price Stabilization."

W. L. DUNN, *Vice-President*
Belmont Radio Corp.

COOPERATION KEY

"In place of a uniform industrywide television warranty, I strongly suggest that you write each manufacturer, sending one copy of each letter to a top executive and another to the firm's service manager, telling him exactly what you want. I would like to have copies of your letters. If you approach the manufacturers cooperatively, you will see advantageous changes in service policies in not too long a period."

E. W. MERRIAM, *formerly Service Manager*
Radio Television Manufacturers' Association

SALES TRENDS

"I predict that people will want to buy at night, and they will want to buy in convenient locations near their homes. More stores are finding this out every week — witness the movement to suburban areas in the last few years of super markets and other major stores which are staying open at night."

WILLIAM A. BLEES,
Vice-President
Avco Manufacturing Corp.

DEALERS TO FARE WELL

"It is our estimate that distributors and dealers will fare quite well. They should be able to reduce discounting and long trade-ins to a minimum and cut sales costs generally so that their final results will be much more satisfactory than in the second and third quarters. They will not, of course, enjoy the very lush profits obtained under the highly abnormal conditions prevailing in 1950."

ROSS D. SIRAGUSA, *President*
Admiral Corp.

BEFORE THE THAW

"The freeze is still on because we must make a final decision on many important problems. We must decide on a new assignment table distributing these VHF and UHF channels over the nation. We must set up technical standards to prevent interference and assure the best quality of transmission. Then we must decide whether or not educational institutions are to have channels reserved for them. The educators, as you know, have asked for reservations for non-commercial educational systems. Among the 2,000 available assignments, the commission has proposed to set aside about 10 per cent, but a final decision is still pending."

WAYNE COY, *Chairman*
Federal Communications Commission

SUBSCRIPTION TV

"We are about to petition the Federal Communications Commission for the establishment of subscription television as a commercial service, and for the approval of Phonevision as one practical method of subscription television. We recognize the fact that there are other systems of subscription television in the field, and we seek no monopoly. Whichever system proves to be the best, economically and technically, will win out, and it is entirely possible that this system may not be Zenith's. However, we believe that subscription television is of such fundamental importance to virtually all Americans from economic, social and cultural considerations that it merits universal support."

H. C. BONFIG, *Vice-President*
Zenith Radio Corp.

YOUR "SILENT PARTNER"

(Continued from page 15)

diction does appear, the tax law will obviously be the winner. Thus, the receipt of several years' rent in one year results in the entire amount being taxable in the year of receipt, although the expenses of maintaining the property can be deducted only in the year when the expenses are incurred. Good accounting requires that only one year's income be picked up on a profit and loss statement prepared for management purposes and that the advance payment be shown as a liability. Tax law provides that it is all income in the year of receipt whether on an accrual or a cash basis.

The sale of warranty service contracts creates a similar problem for the TV Service Contractor who is on an accrual basis. Suppose he sells a \$60.00 one-year service contract on December 15, 1951. It does not matter if the transaction is for cash or on a time payment basis. The Commissioner will consider the \$60.00 to be income in the year 1951, regardless of the fact that only 16 days are left in 1951 in which to service the set, whereas 349 days of service expense will be incurred in 1952.

The proper accounting procedure would be to prorate the \$60.00 sale, thus \$2.50 (1/2 of \$5.00) of income would be allocable to 1951 and the difference of \$57.50 would be earned in 1952. The income would then be reported as the expense of servicing is incurred. However logical the accounting procedure may be, it is in conflict with tax law. Perhaps some brave TV Service Contractor, confronted with this problem, may be willing to spend time and money making a test case.

RMS Nationwide Forum Schedule Accelerated

The RMS Forum series for television jobber and servicemen organizations now in its fourth month is continuing through the country.

The most recent forums were conducted in Salina and Wichita, Kansas, under the auspices of the Radio Service Dealers of Kansas. One hundred servicemen and jobbers at these meetings witnessed demonstrations of a new corner array antenna, the RMS Booster and the new HiGain open line being made by the firm.

With the new season just around the corner, Mr. Bettan has extended an invitation for all jobber and servicemen organizations to schedule these informative forums for the year of 1952. Arrangements can be made by writing to RMS at 1165 Southern Boulevard, New York 59, N. Y.

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"WHAT WILL YOU DO IN '52?"

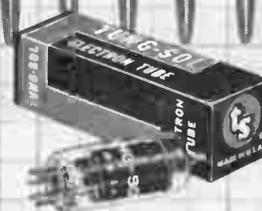
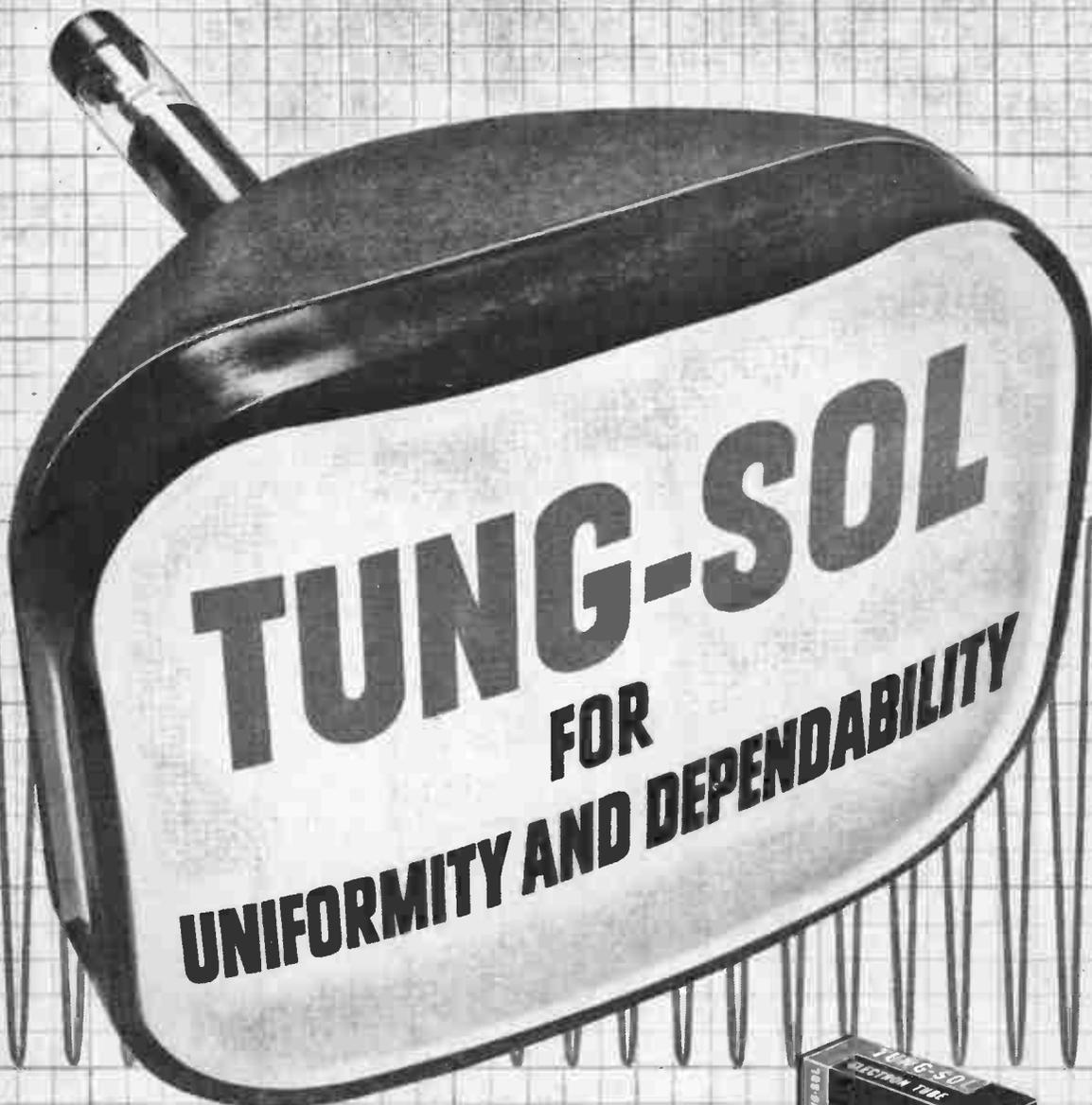
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- ★ **TV SET PRODUCTION:** its distribution and regional effects; expected production, customer-demand, technical improvements.
- ★ **REPLACEMENT MARKET:** startling facts and figures about this vast field for repeat sales
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