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Volume 3 Number 11

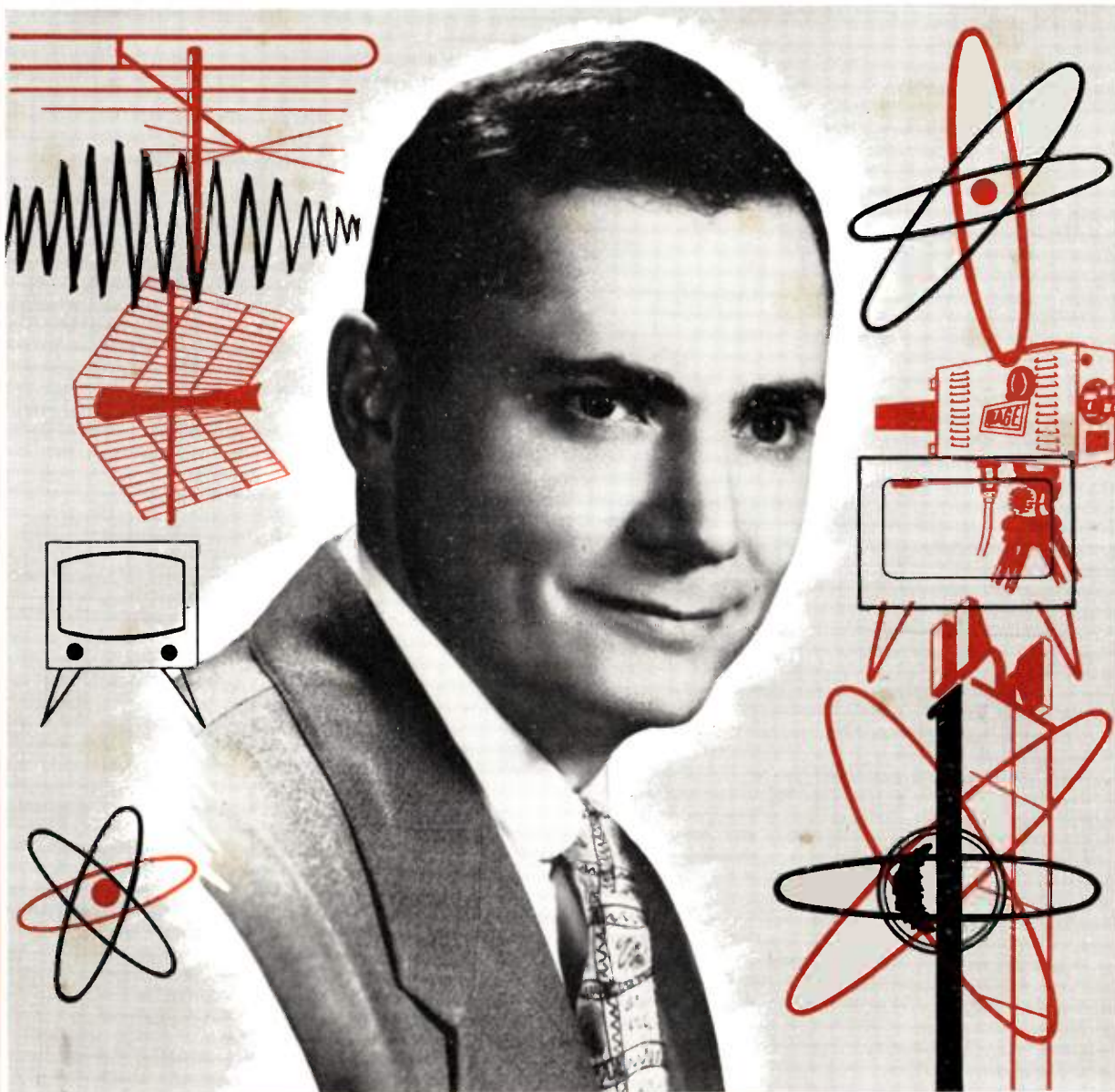
August 1954

**COMMUNITY
TV**

HOT CHECKS

MAGNETIC RECORDERS

SEPTEMBER MAILER



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Letters to the Editor

Forming Association

The dealers in Bowling Green have been meeting for the past four weeks to set up an organization which will be known as the Radio & Television Sales & Service Association of Bowling Green. Their purposes are to be consistent with their charges and policies as well as being able to help one another with service and credit problems as they go along.

They are very interested in learning if there is some established UL approved method of installing outside TV antennas. If you have any information in regard to this or if you can advise us where it could best be obtained, we will appreciate it.

Bowling Green is a town of approximately 25,000 and if you have any information from a similar group in a town of this size, we would like to know about them or receive their address in order to write them directly.

Whatever information you can send will be appreciated.

Leonard R. Deloteus, Mgr.,
Crescent Radio Supply

Bowling Green, Ky.

* * *

TV Pricing Picture

Please send me additional information on your time rate schedules. Mine is a one-man shop in a limited area specializing in two-way mobile, intercoms, sound systems, etc. Or, as I like to phrase it, I service the stuff that the "TV Mad" boys will not touch.

The specialties service business appears to be sadly neglected by most service shops. In this area, for instance, I was almost drafted by the owners of two-way mobile systems to do their service work as none of the other shops will even look at it. One church having a large PA system was actually told by a shop owner, "We don't do that kind of work any more; it's too much trouble."

Edward Tremblay

Mexico, Maine

* * *

Having been enjoying your magazine for several months . . . am enclosing my order for one of your Customer Relations books.

M. W. Beck,
Pioneer Electric
Sales and Service

Pioneer, Ohio

August, 1954

Service Management

PAUL H. WENDEL, Editor and Publisher

VOLUME 3, NUMBER 11

AUGUST, 1954

COVER PICTURE

MILTON J. SHAPP, President
Jerrold Electronics Corporation

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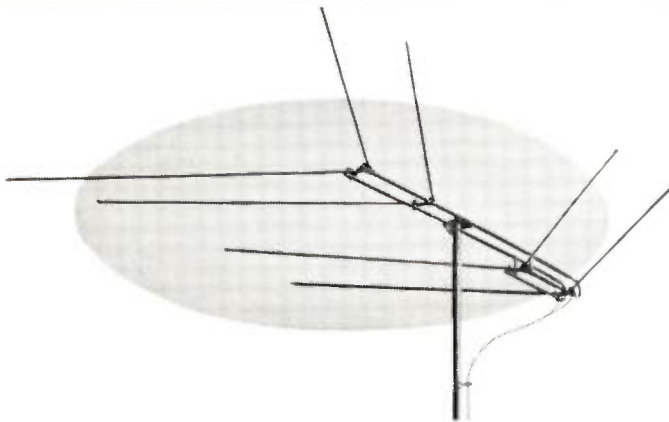
FOR BETTER TV RECEPTION

...BETTER PICTURE QUALITY



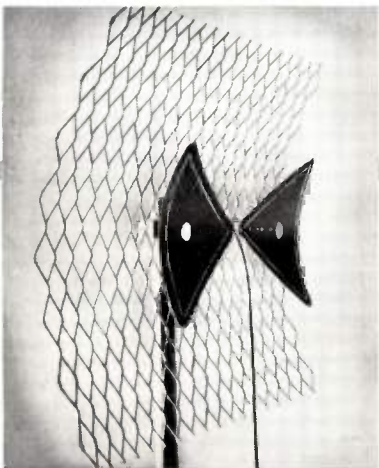
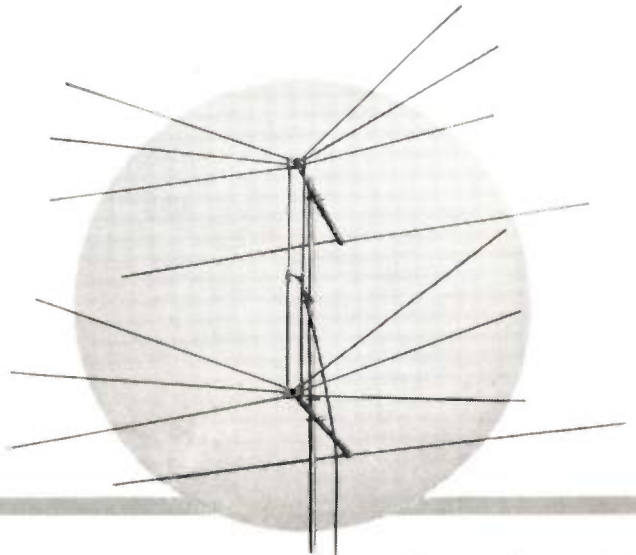
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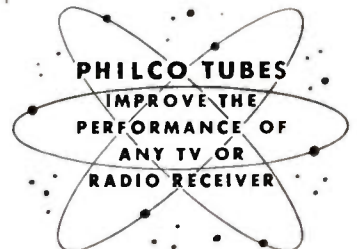


PHILCO TWO-BAY SUPER CONICAL ALL-CHANNEL ANTENNA: Strong signal pickup on VHF channels 2 through 13, UHF channels 14 through 83... ideal reception in fringe areas... all-aluminum: Part No. 45-3096-2. Fringe area single bay design: Part No. 45-3096.

PHILCO ALL-CHANNEL UHF-VHF TROMBONE ANTENNA: The ideal antenna for areas having both UHF and VHF stations. The Philco Trombone can be stacked for VHF fringe area use. Completely pre-assembled at the factory... all-aluminum construction with dowelled elements: Part No. 45-1880.



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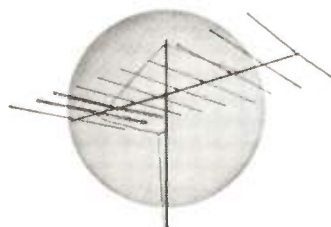
PHILCO TWO-BAY VHF LOW BAND YAGI ANTENNA: 10 elements . . . all-aluminum . . . factory pre-assembled. Top performance on channels 2 through 6 . . . 13 db to 15 db gain on various channels. Singlebay Part No. 45-3112-2 through 6. Stacked version uses stack-harness Part No. 45-3267.



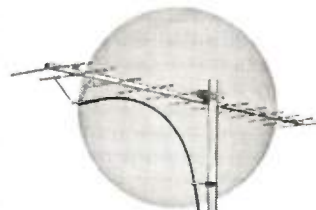
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PHILCO BROAD BAND VHF YAGI ANTENNAS: All-aluminum, factory assembled for quick installation . . . high gain plus adequate band width. Three broad band models cover channels 2 to 6 . . . 4, 5, 6 . . . or 7 through 13: Basic Part No. 45-3112.



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A complete line of powerful Philco TV antenna rotors as low as \$39.95

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Editorial

"OUR OPINION"

THE MANY THOUSANDS of registrations for the planned National Electronic Service Directory that have been



sent in by the readers of **SERVICE MANAGEMENT** now provide the most complete picture of the character and structure ever compiled of the independent electronic servicing industry.

This is a very important development for men who are working to build stable businesses in electronic servicing. It is important because it proves that the bulk of the service business is handled by established service businesses and *not* by countless thousands of "sun-down" technicians. It is important because it shows the wisdom to other elements of the industry, of giving greater service selling promotional help to the now identifiable established independent service industry.

These regular readers of **SERVICE MANAGEMENT** manage the leading established service businesses in all sections of the country. They include servicing dealers, service dealers, companies that specialize in auto radio service, 2-way mobile communications equipment maintenance, commercial and industrial sound equipment, sales and service and industrial electronic equipment maintenance.

More than 25,000 legitimate service businesses receive **SERVICE MANAGEMENT** regularly. On the basis of the information received on the National Electronic Service Directory forms, these service companies and shops handle more than 80% of all installation and service of electronic instruments used in homes.

This is the independent electronic service industry.

The Challenge of Tomorrow

Kenneth B. Willison, President of the National Better Business Bureau, Inc., handed this electronic service industry a real challenge when he said:

"As I see it, it is not only the responsibility of the industry to do its own house-cleaning, but it makes good sense for the industry to handle the job

from within its own ranks. Waging unceasing warfare on the dishonest minority in any group is the decent majority in that group. Just as the Bar association and the Medical and Dental Associations undertake to free their groups of the unethical practitioner, so must all in the TV service industry assume moral responsibility, not only for striving for high ethical practices, but for combating bad practices as well.

"Weeding out the unethical serviceman calls for courage and leadership by all who are concerned with the welfare of the industry. It must be recognized as an industry problem and vigorously attacked from within, if the industry is to protect its good name from the corroding influence of the dishonest. It is a job for all, but it starts with you because you are at the grass roots level where these things happen. Take an active part in your service associations, local and national, strengthen them with your leadership. By joining forces and cooperating with service organizations, industry groups and Better Business Bureaus, the problem of the unethical service operator can be solved from within."

We are standing on the threshold of a period of tremendous expansion in the electronics industry. Before too long the problems of color television will be whipped. After that, there will be a flood of new business installing and servicing color sets. Closed circuit television for industrial and commercial applications has been straining at the leash for a couple of years. When it breaks loose it will open up an entirely new field of opportunities for independent service *if the industry is capable of absorbing them*. The market for mobile two-way communications systems has hardly been scratched. Here, again, the extent to which independent service will become a factor will be determined by the ability of the independents to absorb the business.

These are the coming opportunities. What are you doing to make them realities for you? What are you doing to make your industry the important factor it must be to shape its own destiny in the world of electronics of tomorrow?

Rugged Individualism

The time is long past when an individual could shape the destiny of his
(Continued on page 19)



a costly business..

Bad Check-Good Will

David C. Finley

A TENDENCY BY BUSINESSMEN to charge off bad checks as "good will" or "overhead" may be a prime factor behind the steady increase of check fraud in the U. S.

This possibility was reported in a recently completed national survey of check crime believed to be the first comprehensive study of the problem ever made.

The resigned attitude of most businessmen toward bad check losses has resulted in a "snowballing" of check fraud, according to many of the 98 police chiefs contacted in the survey.

The check crooks' take last year amounted to between \$400,000,000 and \$500,000,000 by authoritative estimate — an all-time high.

This year's bad check losses will approach \$600,000,000, experts predict, unless American businessmen overhaul their check-cashing habits.

Check fraud has reached the point where authorities have labeled it "the fastest-growing crime in the United States."

Police chiefs of 98 key cities of over 40,000 population participated in the survey directed by veteran investigator George W. Adlam of the Todd Company, Inc., Rochester, N. Y., maker of protected, insured checks and check protecting equipment.

Survey tabulations revealed an average rise last year of 5 per cent in dollar losses due to check fraud in the 98 test cities. Arrests increased 11 per cent over the same period.

Contributing most to the check crooks' bankrolls were the nation's department stores. Next biggest contributors were supermarkets. Other favorite spots to pass phonies were liquor stores, taverns, and independent groceries. Gas stations, banks, and restaurants, while less popular, still exchanged sizeable amounts of goods and

cash for worthless checks last year.

The police reported that only one-third of the merchants in the 98 communities exercise proper care in cashing checks. Only about a third even cooperate fully with police to permit effective investigation and prosecution after they've exchanged good money for bad checks.

Check crooks know this, police pointed out — and they're cleaning up as a result.

NEW TALENT

The practice of charging bad check losses off to "overhead" not only is a green light to check crooks, police officials feel, but it also attracts a flow of new talent to this enterprise.

More than half of the check crooks booked last year were amateurs, with no previous police records, the survey showed. About a fifth of the passers were women.

Both of these findings raised eyebrows among professional fraud investigators, since the traditional check crook is a male "pro," with a long trail of worthless checks and jail sentences behind him.

Survey findings substantiated long-held opinions on favored methods of the bad check artists, investigator Adlam said.

Indicated as the three favorite methods were: Passing completely bogus checks, with phony signature or endorsement or both, drawn on a non-existent or collapsed bank account, and sometimes on a non-existent bank; forging the signature of the maker or endorser on a legitimate check; and counterfeiting a legitimate check.

Newspaper reports in various parts of the country have indicated a particularly significant increase in the use of completely fictitious payroll checks, privately printed by the crook with the

name of a respected company, made out for a reasonable payroll sum, and cashed — usually with little difficulty — at a local store. These local reports were fully substantiated by the national findings of the survey.

Less common, but still accounting for a significant percentage of cases reported by police in the survey, were these three check fraud techniques: Thefts of company checks by employees; thefts of company checks by non-employees; and raising the amount on a legitimate check.

Any one of these techniques, however, can be fatal to a bank balance, check fraud experts warn. The individual crook picks the one he believes will work the easiest and safest.

The 98 reporting police chiefs agreed the racket probably can't be stopped since it thrives on a fundamental human weakness — carelessness.

THINK TWICE

But check fraud can be retarded, police said, if people will merely think twice before cashing any check, small or large, for anyone they don't know personally.

"Know your endorser," was the advice most often given by the police. Other good advice, often repeated, was:

1. Don't cash out-of-town checks.
2. Be especially careful when clerks are very busy.
3. Demand better identification than a social security card or driver's license.
4. Guard blank checks, cancelled checks, and check protection equipment carefully.
5. Don't cash checks for juveniles.
6. Don't cash post-dated checks.
7. Don't cash checks written in pencil or checks that show signs of alteration.
8. Don't be impressed by big company names on checks.

Magnetic Recorder Servicing

By **WILLIAM LEONARD**
Service Business Consultant

IN THEIR EXCELLENT BOOKLET* on the subject of Brush-developed magnetic recording heads, the Brush Electronics Company paints the following picture of the future of this shining star in the galaxy of electronic products:

"Today, magnetic recording rates as one of the most dynamic elements in the fast-moving electronics industry. On top of revolutionizing the basic sound recording techniques in the radio, phonograph record and motion picture industries, it is now being aggressively exploited as a memory device. In this broad new field of application, magnetic recording promises to become a key tool for all industry.

"As a high-fidelity medium for recording and reproducing sound, magnetic recording has spread farther and faster than almost any other recent innovation. . . .

"As a memory device for storing complex intelligence in a compact and readily usable form, recording on a magnetic medium is slated to become the basis for many new, valuable products and methods. Such diverse applications as air traffic guidance and control . . . transport reservations systems . . . automatic process control . . . electronic computers . . . automatic inspection and evaluation . . . and automatic machine operation only hint at the potential.

"Regardless of application or complexity, the critical component of the entire magnetic recording unit is the head. Its function is to record, reproduce or erase the magnetic field pattern on the recording medium. The successful performance of the complete unit depends upon the correct design and operation of the head."

These widely varied applications will be of deep interest to the independent service companies that contemplate expansion of their activities into the in-

dustrial field in their long-range business planning. But recent developments presage a new popularity for magnetic tape recorders in the home. RCA has announced and is promoting the first of their popular recordings combinations on one-hour reels of magnetic tape. Other phonograph record manufacturers will probably follow RCA's lead to make some of their more popular recordings available on tape.

These developments will widen the home market for tape recorders to include the vast army of consumers who previously were not interested in the utility of these units for making their own recordings. Since the incidence of mechanical or electrical failure will probably be higher on magnetic reproducers than it has been on automatic record players, service shop operators should plan to handle this service and to promote their facilities and "know-how" for doing it.

All too often, radio-television service business executives assume that consumers know they are able to handle the repair of any type of electronic device used in the home just because they advertise "TV Service." This is not true. A consumer normally will associate a business only with the type of product it advertises. If the company is listed and promoted only as a "television service company," the average person will not think of it when they need service on a radio, phonograph or recorder. TV service technicians observe this fact from practical experience with the public. Often, when servicing a TV set in the home, a technician is asked whether he can recommend some service shop that repairs radios. In some reported cases, as many as five radio sets have been picked up for servicing when the customer learned her TV service company could fix them.

Owners of wire and tape recorders have long complained about their inability to have the units serviced locally. In several cases checked by your editors, it was found the recorder owners had inquired in practically all kinds of service shops except those that handled radio and television service. Others

who had gone back to the dealers from whom they bought the recorders were referred to service companies in nearby large cities. These dealers apparently knew of no local radio or TV service shops that were competent to handle recorder repairs.

Service businessmen who would like to add magnetic wire and tape recorder servicing to the products they handle, should survey local dealers and jobbers to learn what makes and models of recorders are being sold in their area. It would be a wise policy to build up a file of manufacturers' literature at the time the instruments are current. It is sometimes very difficult to find schematics and mechanical information on some units after they are out of production.

The promotion of service on home instruments, like recorders, often results in the service business getting new, permanent, preferential type TV service customers. Like radio and phono service, the facilities and "know-how" to service magnetic recorders can be used in service selling bulletins and mailers to focus set owners' attention on the splendid facilities the service company has to keep their customers' electronic home instruments in top operating condition.

A survey was recently made among the manufacturers of heads for magnetic recorders seeking information on their catalog numbers for replacement heads that are available through Parts Jobbers. Shure Brothers, Inc., of Chicago, was the only manufacturer that could provide this information. The Shure Magnetic Recording Head Replacement Chart reproduced in connection with this article should be filed for future reference. The file number for this chart in the SM Management Index is 60.6.1s. Service companies that would like to have complete technical data on these Shure Replacement Heads in their files should write to Shure Brothers, Inc., 225 West Huron Street, Chicago 10, Ill., and ask for a copy of their technical bulletin on magnetic and wire recording heads.

*(Brochure titled "An Invitation to Better Products," published by the Brush Electronics Company, 3405 Perkins Ave., Cleveland 14, Ohio.)

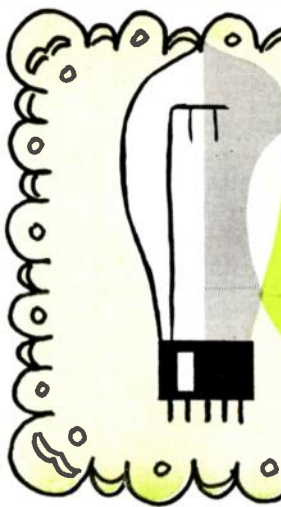
MAGNETIC RECORDING HEAD REPLACEMENT CHART

(INCLUDING MFRS. EQUIPMENT BY DESCRIPTION AND MODEL NO. AND THE SHURE REPLACEMENT MODEL NO.)

MANUFACTURER	TRADE OR BRAND NAME	MFRS. EQUIPMENT MODEL NO.	SHURE HEAD USED	REPLACE WITH
AMPLIFIER CORP. OF AMERICA	MAGNEMITE	610B	TR6	TR6
AMPLIFIER CORP. OF AMERICA	MAGNEMITE	610C	TR6	TR6
AMPLIFIER CORP. OF AMERICA	MAGNEMITE	610TD	TR6	TR6
AMPLIFIER CORP. OF AMERICA	ELECTRO-MAGNEMITE		TR5	815
AMPLIFIER CORP. OF AMERICA	MAGNEMASTER	815	TR5	815
AMPRO CORPORATION	AMPRO	730	TR6A	*816
AMPRO CORPORATION	AMPRO	730	TR6C	816
AMPRO CORPORATION	AMPRO	731	TR6C	816
BELL SOUND SYSTEMS, INC.	RE-CORD-O-FONE	RT-65B	TR5	815
THE GENERAL INDUSTRIES CO.		250	TR6	TR6
MARK SIMPSON MFG. CO., INC.	MASCO	R-3		**816
MARK SIMPSON MFG. CO., INC.	MASCO	M-60 (Mechanism)		**816
MARK SIMPSON MFG. CO., INC.	MASCO	375		**816
MARK SIMPSON MFG. CO., INC.	MASCO	D-37	TR-5H	TR5H
MARK SIMPSON MFG. CO., INC.	MASCO	D-37R	TR-5H	TR5H
MARK SIMPSON MFG. CO., INC.	MASCO	LD-37	TR-5H	TR5H
MARK SIMPSON MFG. CO., INC.	MASCO	LD-37R	TR-5H	TR5H
MARK SIMPSON MFG. CO., INC.	MASCO	DC-37	TR-5H	TR5H
MARK SIMPSON MFG. CO., INC.	MASCO	DC-37R	TR-5H	TR5H
MOHAWK BUSINESS MACHINES	MESSAGE REPEATER	MR1	1-441 and TR5P	TR5P
REVERE CAMERA CO.	REVERE	T-700 (T-701 63)	TR5B	TR5B
REVERE CAMERA CO.	REVERE	T-10 (T-701 67)	TR5B	TR5B
REVERE CAMERA CO.	REVERE	TR-800 (T-77 1 63)	TR5B	TR5B
REVERE CAMERA CO.	REVERE	TR-20 (T-771 67)	TR5B	TR5B
REVERE CAMERA CO.	REVERE	T-100	TR5D	TR5D
REVERE CAMERA CO.	REVERE	TR-200	TR5D	TR5D
REVERE CAMERA CO.	REVERE	T-500	TR5K	TR5K
REVERE CAMERA CO.	REVERE	TR-600	TR5K	TR5K
TAPEMASTER INCORPORATED	TAPEMASTER	TH-21 (Mechanism)	TR5L	TR5L
TAPEMASTER INCORPORATED	TAPEMASTER	PT-121	TR5L	TR5L
TAPEMASTER INCORPORATED	TAPEMASTER	TH-25 (Mechanism) "A-Wind"	TR5G	TR5G
TAPEMASTER INCORPORATED	TAPEMASTER	TH-25 (Mechanism) "B-Wind"	TR5L	TR5L
TAPEMASTER INCORPORATED	TAPEMASTER	PT-125 (TH-25 Mech.) "A-Wind"	TR5G	TR5G
TAPEMASTER INCORPORATED	TAPEMASTER	PT-125 (TH-25 Mech.) "B-Wind"	TR5L	TR5L
TELECTRO INDUSTRIES INC.	TELECTRO	TR-46	1-312 and TR5R	TR5R
TELECTRO INDUSTRIES INC.	TELECTRO	TR-48	TR16	TR16
SONOGRAPH LTD.	SONOGRAPH	C-1	TR5	815
SONOGRAPH LTD.	SONOGRAPH	C-2	TR5	815
SONOGRAPH LTD.	SONOGRAPH	C-3	TR5	815
SONOGRAPH LTD.	SONOGRAPH	C-3A	TR5	815
SONOGRAPH LTD.	SONOGRAPH	C-4	TR5	815
WILCOX-GAY CORPORATION	RECORDIO	2A10	TR6H	TR6H
WILCOX-GAY CORPORATION	RECORDIO	2A10B	TR16	TR16
WILCOX-GAY CORPORATION	RECORDIO	2A11	TR6J	TR6J
WILCOX-GAY CORPORATION	RECORDIO	3A10	TR16	TR16
WILCOX-GAY CORPORATION	RECORDIO	3A11	TR16A	817
WILCOX-GAY CORPORATION	RECORDIO	1B10	TR6G	TR6G
WILCOX-GAY CORPORATION	RECORDIO	1C10	TR6	TR6
WILCOX-GAY CORPORATION	RECORDIO	3C10	TR6	TR6
WILCOX-GAY CORPORATION	RECORDIO	9C10	TR6	TR6

*Contact AMPRO CORP. For Required Circuit Information.

**Contact MARK SIMPSON Mfg. Co. For Required Circuit Information and Specia Mtg. Plate.



The Romance of Electronics

Ann Karch

THERE IS A STRANGE QUIRK in the thought processes of many men who service radio and television sets that leads them to belittle the knowledge they proudly possess by seriously underpricing their time for their services.

Most men who have acquired a good mental comprehension of the workings of the abstract forces harnessed in radio and TV are proud of their knowledge — proud of their abilities to track down circuit failures and bring a dead set back to life. Yet, by a peculiar twist in their thinking they depress the level of the activity that they would like to have recognized as a profession by selling them services for a song.

What makes this situation even more of a paradox is that the equipment with which these men work represents the greatest achievements of all times. The story of the miracle of resonance, for instance, which each set owner performs every time he tunes in a radio or television program has been buried with the incredulous wonderment of the early radio pioneers as they probed the mysteries of the ether with their cumbersome, hand-made sets. In those days radio was truly a modern miracle — a continuing source of amazement to a public that was just beginning to accept the telephone as a convenient vehicle for personal communication.

No other industry possesses so many miraculous elements in its products so deserving of “romanticising” as are found in radio and television receivers.

The trouble is the ingenuity of electronic engineers has made these devices so darned simple that even the technicians who must solve the vagaries of circuit eccentricities take these remarkable achievements for granted.

Despite the blasé attitude that has developed over these outstanding achievements, the alert independent service businessmen can still use them to “romanticize” the activity of maintenance and to build a higher consumer respect for the knowledge and skill required to properly repair radio and television receivers.

SERIES OF LEAFLETS

To help you capture the interest of service customers with the “Romance of Radio and Television,” your editors have arranged to provide you with a series of envelop stuffers that will tell the story of these great achievements. These service selling leaflets are designed to sell *your business* and *your facilities*. No “time element” is involved in their use so you may order a large enough quantity of them from your printer to use over a long period of time.

These “envelop stuffers” may be used in many ways. If you get out a flyer on a special service deal you are offering, include one of these envelop stuffers in the same mail. Another important use is to give one to each service customer when a set is serviced or delivered in the home after servicing in the shop. Literature like this helps to

take the edge off the average customer’s dislike to pay out money for service.

A third use for envelop stuffers is to use them as give-away pieces at home shows, audio fairs and other events where the general public participates. If you service radios, record players and home recorders, be sure to have your printer include this information on the page that is reserved for the name, address and telephone number of your business.

Just remember this — the public cannot know who you are, where you are located or what services you are qualified to give unless you tell them about yourself. Do not depend on a listing in the classified section of the telephone directory and perhaps ads in the classified columns of community or daily newspapers to keep you supplied with service customers. Use a planned service selling program, even though a simple one — and use it consistently.

YOUR MAILER FOR THIS SEPTEMBER

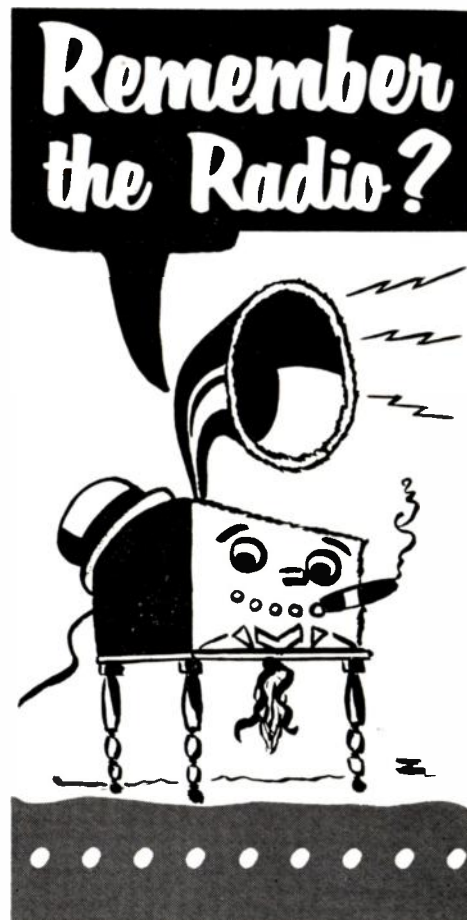
(Place the top and bottom sections of the opposite page back-to-back — have them reproduced by your printer — fold twice and you have a customer-built mailing piece. Get everyone to remember your radio shop!)



**Remember the mystery,
the excitement, the
romance of radio!**

THE BLANK SERVICE COMPANY
600 MAIN STREET
PATTERSON, OHIO

Call SERVICE 0-0000



Great Men Built a Great Industry!

There was Marconi.

And Armstrong.

And Farnsworth.

There's Lee De Forest . . . the last living pioneer of radio. He was almost indicted in the early part of the century for fraud . . . because he was trying to raise funds for a company that wanted to transmit sound and music by air!

De Forest is a powerhouse of energy. He has been granted over 300 patents . . . including one for the electronic vacuum tube.

WHAT DID THE INVENTION OF THE ELECTRONIC VACUUM TUBE MEAN?

De Forest's invention was a vital part of the story. It meant that audio and radio frequencies could be detected and transmitted. It meant that millions of people could enjoy the miracle of sound transmission.

Most people take the tubes in their set for granted . . . until a tube comes to the end of its life expectancy. Then they know they're in trouble. But cathodes and anodes, to average listener, are far afield from the words and music he enjoys. He doesn't know that tubes are power flow controls. Receiving tubes and picture tubes are only vague terms to him as he tunes in his set to his favorite program.

TECHNICAL TALK?

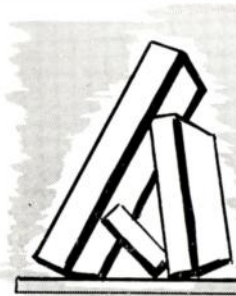
You bet! Because when you're talking about tubes, you're in a highly technical field. Vacuum tubes may look alike to the untrained eye, but there's plenty of differences between them.

That's why you need to rely on experts. On men who know which tubes are best for your set. On a firm that won't let your set be the victim of a technical knock out.

Our company offers you reliable, dependable service for all your radio-tv needs. And when it comes to vacuum tubes, you'll get tested tubes of proven brands, guaranteed to do a job for you, at

THE BLANK SERVICE COMPANY

600 Main Street
PATTERSON, OHIO
Phone: Service 0-0000



Living Library



FOR EVERY SERVICE BUSINESS

In a business world everything is moving, active and forever progressing to a more intricate state of affairs. This is a super plus situation as far as the electronic servicing industry is concerned.

It is the job of the Shop Owner or Service Business Manager to supply the field and shop technicians with the latest available data on all of the diverse information that concerns manufacturer's parts and their performance, technical details of repairing and maintaining these products, and new concepts of "things to come."

These managerial business men must, also, keep *themselves* abreast of the newest ideas in business procedures, promotions, personnel and customer relationship.

Publishers and manufacturers are doing a terrific job in keeping their brochures, pamphlets, books and manuals up to date. And a competent system by Service Managers in filing this material will provide their companies with a library that is "alive" and in step with the times.

SERVICE MANAGEMENT is publishing here, for the first time, a chart of publications now available (some at no cost, others regularly priced) for the ordering convenience of all service companies. These publications can be obtained by writing to the address given above each reference.

From time-to-time there will be other lists published by SERVICE MANAGEMENT in order to give you the names of the most recent material available from all leading electronic manufacturing companies.

Filing Fitness

Where to put all of this interesting and potentially useful information becomes a realistic problem, however, when your "serviceable" library starts to build up. The best system that the editors of this magazine have discovered for keeping it in an orderly and efficient manner is a combination numerical and descriptive-title filing system which the manager may set up immediately.

There are ten general categories used which are numbered from 1. - 10. - 20. and so on up to 100. Sub-divisions are unlimited under such a method of filing, Eg.: 10.1, 10.2, 10.3.

Most technical brochures and pamphlets listing manufacturers' replacement equipment, and how to install it, would be listed, for instance, in one of the following divisions under the general category of 80. :

- 80. Technical data.
- 80.1 General, by product categories.
- 80.2 Manufacturers'.

Such far-sightedness on the Service Manager's part would help him indicate by number where each piece of literature coming into the shop should be placed. For instance, if the shop owner writes the file number on each important piece of literature that goes across his desk, the matter of actually filing it is simple. Then at some future date, when he needs the information, he will find all of it accumulated in its specific file.

File #50., which was distributed last year to paid subscribers of SERVICE MANAGEMENT, carries the complete management index printed on its front cover. Those who would like to have a copy of File #50, with the various management brochures, now available with it, may obtain it by writing to: TTLB Special Services Dept., P. O. Box 1321, Indianapolis, Indiana.

(Next page)

CLIP-AND-SAVE THIS LIST

AMPEREX ELECTRONIC CORP.

230 Duffy Ave.

Hicksville, L. I., N. Y.

1. Condensed Tube Catalog (no cost)
2. Tube Reference Manual (\$2.00)
3. "Power Tube" Chart (no cost)
4. Bulletin on Point-Contact Transistors (no cost)
5. Radiation (Geiger) Counter Tube Catalog (no cost)
6. Germanium Diode Folder (no cost)
7. Research and Communication UHF Tubes (no cost)
8. Application Notes & Data Booklet (no cost)
9. Voltage Reference & Regulator Tubes Folder (no cost)
10. "High Power Transmitting Tubes" (no cost)
11. Ignition Tube Folder (no cost)
12. Thyatron Folder (no cost)

BELDEN MFG. CO.

4647 W. Van Buren St.

Chicago, Ill.

1. Belden Electronic Wires & Cables, Catalog #854

BLONDER-TONGUE LABORATORIES, INC.

526-536 North Ave.

Westfield, New Jersey

1. How to Install Master TV Systems
2. TV Calculator Sheet
3. Dealer Price List Form DP-254

BROOK ELECTRONICS, INC.

34 DeHart Place

Elizabeth, N. J.

1. Better Listening
2. Pamphlets on Brook High Quality Audit Amplifiers

CBS-HYTRON

Danvers, Mass.

1. The CBS-Colortron "205" Data Sheet, Bulletin E-227

CHANNEL MASTER CORP.

Ellenville, New York

1. Channel Master Corp. Catalog (no cost)
2. Antenna & Booster Booklet (no cost)
3. Your TV Antenna Is Showing (no cost)

CLAROSTAT MFG. CO., INC.

Dover, New Hampshire

1. Clarostat TV Control Replacement Manual 2nd Edition (\$1.00)
2. Clarostat Catalog #54 on Controls & Resistors (available from distributor)

CONANT LABORATORIES

6500 O Street

Lincoln 5, Nebraska

1. Instrument Rectifiers (25¢)
2. Instrument Rectifier Replacement Guide (no cost)
3. Pricing Information on Copper Oxide & Selenium Rectifiers (no cost)
4. Conant Instrument Rectifiers, Specifications & Prices, Standard Types (no cost)

CORNELL-DUBILIER ELECTRIC CORP.

Jobber Division

South Plainfield, N. J.

1. Cornell-Dubilier Capacitors, Catalog 200D (no cost)
2. Television Capacitor Replacement Guide, TVR-7A-2 (no cost)
3. VHF & UHF Antennas, Form CF 902 A (no cost)
4. Cornell-Dubilier Powercons, Catalog 410 (no cost)

DAGE ELECTRIC CO., INC.

Beech Grove, Indiana

1. Catalog #101 UHF Sweep Generator

D. VAN NOSTRAND CO., INC.

250 Fourth Ave.

New York 3, N. Y.

1. Television Simplified (\$6.75)
2. Television & FM Receiver Servicing (\$4.20)
3. FM Simplified (\$6.50)
4. UHF Simplified (\$4.50)
5. The Radio Manual (\$12.00)
6. Microwave Theory & Techniques (\$12.50)

GENERAL ELECTRIC

Electronics Park

Syracuse, N. Y.

1. Successful Service Management

HALLDORSON TRANSFORMER CO.

4500 Ravenswood Ave.,

Chicago 40, Ill.

1. Halldorson Transformers, Catalog #22 (no cost)

HICKOK ELECTRICAL INSTRUMENT CO.

10514 DuPont Ave.,

Cleveland, Ohio

1. Hickok Cathode Ray Oscilloscopes (no cost)

(Continued on page 22)

SELLING SERVICE

By HAROLD CHASE

SUMMERTIME MEANS a let-up in service which is, of course, understandable. You, I, and the public practically



live out-of-doors at the lake, on picnics, vacations or just plain porch loafing. This along with the 20-year-old movies and the Class B replacements of the good programs furnishes little incentive for John Q.

Public to spend any great amount of money on television repairs. It is a time when every job must be sold. Some have been a little successful with special summer check-up promotions, but by large the rank and file of service operators find even these efforts pay small dividends. This is the time when instruments, shops, and equipment are gotten in readiness for the fall business.

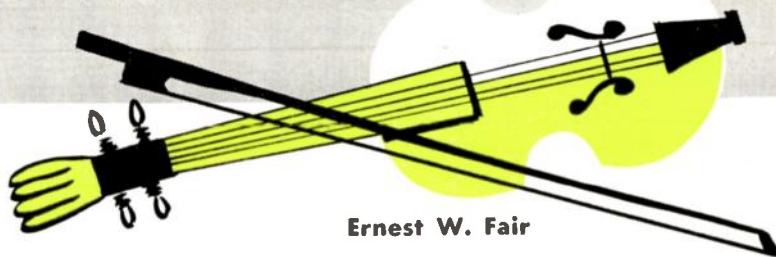
The summer leaves time for thinking which, if done along the right line, can pay dividends later. It is the time to get in and do some good solid planning in your local association. If you don't have a local association, get one started. There never was as great a need for co-operation in an industry as there is right now in the television service industry. Get your plans laid so when fall comes, the program is ready to give you real help.

When business is low, everyone tries to stop the leaks. The first big holler from service is always "jobber retail sales" at wholesale prices. No one will deny that there are plenty of jobbers guilty of selling to our servicemen, to factory-after-hours servicers and to our customers, either across the counter or through industrial connections. However, most established jobbers honestly try to protect the service industry by selling only to bonifide service dealers.

Believe me, it is a task for a jobber to stay clean. These "buy-it-wholesale" chislers know every trick in the book to get their parts wholesale. They know how to talk, how to order and even have phoney cards and letterheads. Unless some organizing is done by the jobber groups and service associations to register legitimate service dealers, the jobber is almost certain to make some mistakes. Your local association can by co-operation with clean, local jobbers do much to clear up this

(Continued on page 27)

Choose Your Partner



Ernest W. Fair

for the business reel!

(EDITOR'S NOTE: The suggestions contained herein have been developed by Mr. Fair from interviews with many business and professional men as well as his own experiences in three such partnerships. They touch on the practical aspects of such a relationship seldom presented in magazine articles of this nature.)

HAPPY MARRIAGES have much in common with successful partnerships. Both develop over extended periods of time and are the result of understanding and consideration on the part of the individuals concerned. Sometimes not too much advanced planning goes into a marriage what with the moonlight and soft music and other factors. Too often little planning goes into a business or professional partnership also.

Whether it be a partnership forming a radio-TV service shop or one setting up a corner grocery store, there are many factors which should be considered not only before but kept in mind forever after.

In the paragraphs to follow are time tested ideas, which, when used, can avoid business divorce and sometimes painful "business alimony" in its many forms.

1) *Consider Your Partner's Wife.* She's going to have a lot to do with the success or failure of a firm. She will be as much your partner as will be her husband whether or not she puts in appearance at the shop. It will always pay any service shop owner to give as careful consideration and study of his potential partner's wife as he does of that individual. The type of woman she may be can make or break your partnership.

2) *Buy Partnership Insurance.* One of the toughest problems to face is bridging the gap caused by a partner's death. If partnership insurance and an accompanying agreement is carried, the policies take care of your partner's interest and satisfy all claims of his heirs. A sudden death can leave a partner in a most difficult position unless such provision is made in advance.

3) *Don't Sidestep a Lawyer.* The small fee your lawyer will charge for drawing up the partnership agreement and giving you some very sound advice will be repaid many times in the future. You will also make certain your partnership is formed on a sound legal basis insofar as the laws of your individual state are concerned.

4) *Know Your Responsibilities.* Far too often shop owners enter into partnership with only the vaguest of ideas of their legal responsibilities in such a contract. The law varies from state to state. No generalized summary appearing in a magazine or book should be taken as sufficient.

5) *Avoid Personal Friendships.* Time and again it has been proven that when a partnership agreement is made between personal friends disasters will result. Business and social life do not often mix. In rare instances the reverse is true but the odds are overwhelming against personal friends becoming good business partners and retaining that status.

6) *Define Duties in Advance.* A great many disagreements between partners arise because the duties of each in the firm were not clearly defined from the start. It is also unwise to have each partner "handle any and everything." Fixed responsibilities not only avoid future arguments but permit concentration of each partner on a particular phase of the business.

7) *Provide for More Money.* Sooner or later the partnership will come upon opportunities for advancement that require additional capital investment. Working out the method by which this will be handled will provide an automatic method of solving the problem. It will also avoid ill feeling should one partner be financially unable to equal the contribution of the other at a given time.

8) *Define the "Profits."* Any partnership agreement should include detailed specifications as to what each partner is to take from the firm in the way of monetary compensation. It should also provide for re-investment of a certain percentage of profits, depreciation accounts and other factors as well as the all important division of profits between partners.

9) *Make Sure of His Ability.* That's what pays off in business . . . not how much personality an individual may have or how many people he knows. The latter are important but they change with time . . . real ability seldom does. It's not good procedure to select a partner solely on a basis of personal friendship, because he's a "nice guy" and "everybody likes him."

10) *Provide Orderly Dissolution Procedure.* Every partnership agreement should contain detailed and specific procedure on how the partnership shall be dissolved at any time in the future. The lack of it may result in law suits and business disaster for both men involved.

11) *Keep Relatives Out.* Experience is proving this to be a good point for inclusion in any partnership agreement. A partnership loaded with the relatives of one partner is seldom a smooth operation. It can be an understood agreement between partners but it's a lot

(Continued on page 22)

B

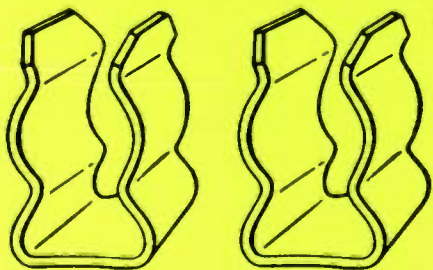
A

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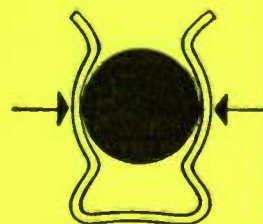
NOT

AS THEY SEEM...

Lines A and B are parallel.



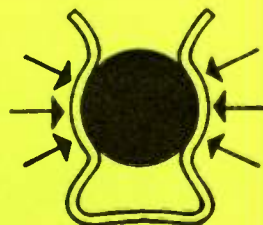
These two fuse clips look alike **BUT** this fuse clip makes only two-point contact.



This **LITTELFUSE** clip makes wrap-around or multiple-point contact.

Multiple-point contact lowers the resistance between the fuse and the fuse clip, allowing more efficient, cooler operation of the fuse.

Poor contact can actually change the characteristics and rating of a fuse in operation.



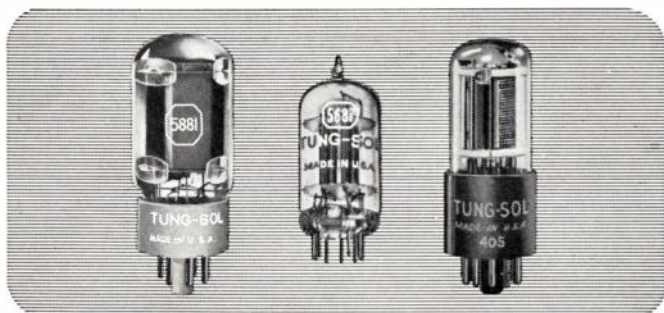
LITTELFUSE, INC.

DES. PLAINES, ILLINOIS

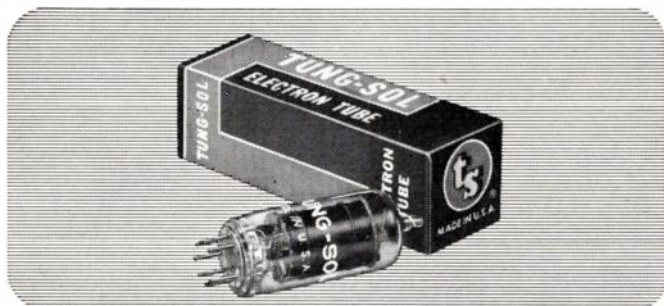
TUNG-SOL TUBE QUALITY PAYS OFF IN SALES !



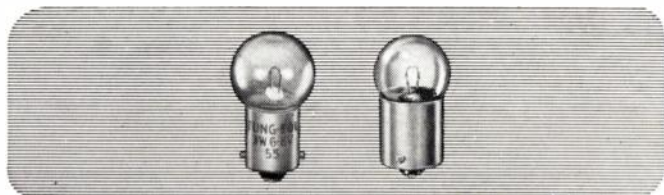
Black and White Picture Tubes



Special Purpose Tubes



Radio and TV Receiving Tubes



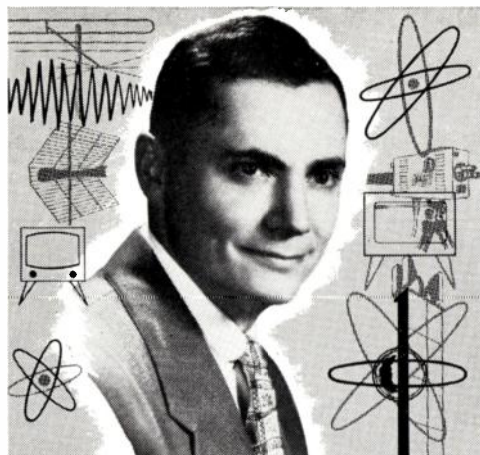
Dial Lamps

The performance quality of Tung-Sol Tubes will keep customers convinced that you're the best serviceman in the business. Tung-Sol Tubes meet highest set manufacturers' specs—protect you against call-backs. Tell your supplier you'd rather have Tung-Sol.

TUNG-SOL ELECTRIC INC., Newark 4, N. J.

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

TUNG-SOL® *dependable*
ELECTRON TUBES



THE ONE GROUP of businessmen who benefit most in any town, in which a community antenna system is installed, are the radio-TV service dealers. And on the other hand — the one group of businessmen who can most affect the success of a community antenna system are the service dealers.

In most cases this important group has been solidly behind the community antenna operator. And why not? With clear, snow-free pictures, the service dealer's customers are not apt to bother him with unnecessary service calls. He is not faced with the problem — is it the set — or the antenna? More people buy more television sets when they have crystal clear pictures. More television sets mean more service.

However, there are some cases of early resentment on the part of the service dealer when a community antenna system first comes to town. Some feel that the cable might hurt their installation business. But — let's analyze this situation and see why community antenna systems are really a benefit to the service dealer.

BOOM AND BUST

In the early days of television in the metropolitan areas, the radio servicemen were faced with a serious problem: either to expand their businesses to meet the tremendous demand for TV antenna installations or to sit back and "wait for the service."

To meet the demand meant that the servicemen would have to invest heavily in trucks and equipment. They would also have to hire helpers and installation specialists to carry the work load. If they did not do this, outsiders or newcomers would take over the business of their old standby customers. If the service operator had dealers as customers he was forced to expand or he would lose the account to the newcomer.

After he had expanded his business to meet the demand, profit from this new venture was again re-invested in trucks, men and ladders. Next, as the town approached saturation in antennas, dealers usually resorted to a price war for the few remaining installations. Their own men (so carefully trained) then turned into their worst competitors — and failures started. Chicago, Cleveland, New York, Denver — all provide graphic case histories of the serious attrition among service businesses when "the installation booms" tapered off.

After such upheavals, the established servicemen settled down to a more stable service operation on TV sets and in this — his bread and butter activity — ran a profitable business venture.

MILTON J. SHAPP
President, Jerrold Electronics Corp.

How Community Antenna Systems Benefit Servicemen

STABLE SERVICE BUSINESS

In town after town where television is provided by means of a community antenna system, the service dealers have skipped the painful phase of over-exertion without profit. The stable business of servicing TV sets started almost immediately.

In these towns, cordial working arrangements were established with the cable system operators — who generally do not sell or service TV sets. The system operator handles maintenance of his system only, and carries the brunt of the nuisance calls.

Probably the best way to show the importance of the service dealer to the whole community antenna business is to outline the exact procedures a new system follows when it comes to town.

When the television signals are ready to be delivered, the television servicemen are the first group of people to know more than just rumors. A meeting is held for them by the local antenna company, and Jerrold engineers explain the system and tell them exactly what to expect as work progresses.

Next, the dealers have a private showing of the pictures, and plans are usually set for a large kick-off demonstration of the system in a meeting hall. Every dealer in town is invited to show his sets at this demonstration. Thousands of people attend these meetings to compare sets!

The antenna company spends hundreds of dollars promoting the show. In most cases the dealers time their own advertising with that of the antenna company, and the newspaper puts out a special television supplement. It is as big a show as if three to five television stations had constructed towers in town at the same time.

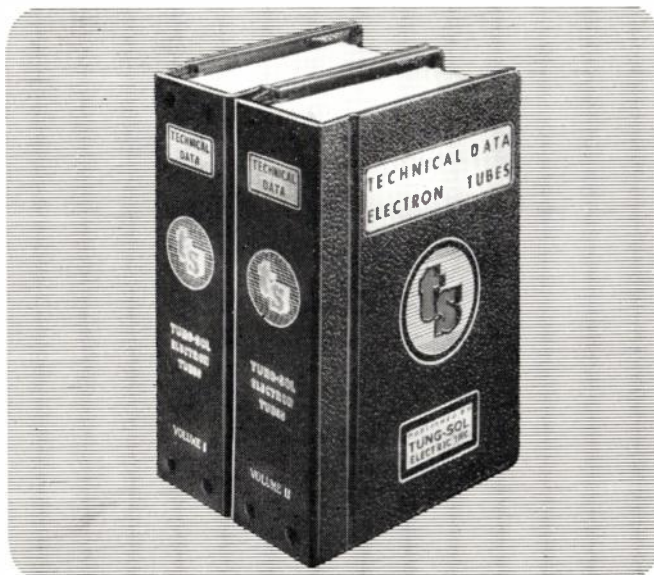
Properly promoted, the television showing makes television the most important subject in town for weeks.

Large ads are usually placed by the cable company announcing construction progress. This also keeps television in front of the public, and TV stores are the busiest places in town.

After the initial promotion and the system has settled down to the routine sale of connections, the service dealer can expect the following rate of sales in his town. Twenty-five per cent of the homes will connect to the cable the first year; twenty per cent the second year and ten to fifteen per cent the third year. These figures are from Jerrold connection records, and will give the service dealer some idea of what to expect in the way of service potential.

(Continued on page 18)

TUNG-SOL TECHNICAL DATA PAYS OFF IN SERVICE !



T-58 700 pages—600 tube types



NEW! 1954 Edition! T-70 160 pages of data on CR tubes, receiving and special tubes, dial lamps



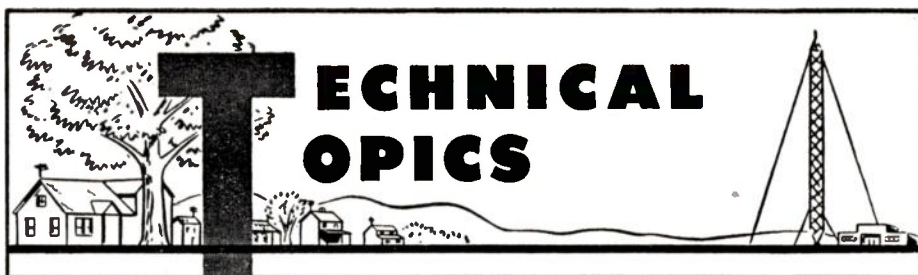
T-31 300 blueprint base diagrams for 1100 tube types

Here's the most practical set of tube reference books in the industry—all the information you need for everyday jobs! They're easy to read—easy to use (always lie flat when open.) You'll get work done faster with Tung-Sol Technical Data Books. Ask your tube supplier about them.



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

TUNG-SOL® *easy reference* TECHNICAL DATA



Closed-Circuit Television And Its Versatility

By EDWARD M. NOLL

CLOSED-CIRCUIT AND INDUSTRIAL television cameras are not complex pieces of equipment. The circuits of a typical small camera are no more complex than those in a modern television receiver. Of course, we have to study and learn about these circuits just as we have to keep up with receiver changes. Do not put the subject aside as unimportant or too complicated. Its multiple applications and declining costs with rising production make it an inviting phase of the electronic era.

Intense interest in low cost units will eventually encourage production of cameras to match that market. There is

no such thing as a typical installation for a closed-circuit camera. Rather, the best approach is to recognize the versatility of an industrial system and make it fit the needs and requirements of a particular service it is to render.

An industrial TV system can be made to have great versatility when well-planned. Generally, there are three basic units — camera, viewer and pulse-power generator. Cameras and viewers can be made small and compact; pulse-power generator, small or large as a function of number of cameras and viewers.

A simple system, figure 1, would con-

sist of just three pieces. This basic plan could have many applications as a small industrial system and could be made compact and lightweight. It would be an inexpensive approach to using television as an advertising gadget. In fact, with proper design a small television receiver can be used as a viewer.

There are many interconnection possibilities that can meet specific needs. It is possible to have any number of viewers when distribution output from pulse-power generator is designed to supply adequate signals and levels, figure 2. This method is well-suited for educational, advertising, and demonstration activities — presentation of picture to many persons from a central origination. Likewise, a multiple-camera single-viewer plan, figure 3, can be used. This method is suited to inspection, monitoring, and protection techniques where from a central location remote activities can be viewed.

In more elaborate installations, figure 4, it is possible to use multiple cameras and viewers. With such a combination the most versatile arrangements for industrial applications can be arranged and can be varied conveniently to meet differing needs. It is apparent how variable an industrial television system can be made and how with ingenuity can be

(Continued on page 20)

Community Antenna Systems

(Continued from page 17)

CLOSED CIRCUIT POSSIBILITIES

During the operation of the system, connection rates hit the same lows and highs as the normal antenna business — with one notable exception. It is entirely possible to promote connections (and the resulting set sales) out of season. Several community antenna operations have been experimenting with closed circuit television. Oil City, Pennsylvania, held a closed circuit demonstration over the cable last year that was tied in with a public showing of TV sets. The demonstration was in early September and was so successful in selling receivers that a great deal of the Christmas rush for TV sets was spread out through the months of September and October. Closed circuit and subscription television — so easy on a closed cable system — can come at any time to stimulate business.

Recently, Lehigh Transvideo, Lehigh, Pennsylvania, added two sports channels (New York 9 and 11) to its NBC, CBS and ABC coverage. The public showing in cooperation with all dealers in town hit at a time when the coal mines in that area were closing. Although business seemed to be at a standstill, the dealers sold more than their normal month's quota of sets during the first week following the show.

Other systems operators have cooperated with dealers in town to set up private home demonstrations. Dealers were invited to call on the antenna company to install a connection for 10 days in the home of any prospective customer. Probably the nicest thing about the free ten-day home trial is that "free loaders" have only one chance for a demonstration. Since the antenna company knows about every demonstration, the customer is not permitted to have

more than one trial. This keeps people from going to one dealer after another for free trials.

Another tie-in promotion with local service dealers that has resulted in out-of-season business, has revolved around the showing of a cross hatch test pattern. The antenna company transmitted a cross hatch pattern down the cable. Service dealers sent out post cards telling people about distortion that could be spotted by this cross hatch transmission and invited them to call their serviceman for a special adjustment offer. This type of cooperation can generate preventive maintenance thinking and offers many possibilities for planned increase in service business when it is needed.

Other Jerrold Communities have arranged for public demonstrations of color television. Showing color over the cable has proved that the antenna system is ready to handle future TV needs of the people. Actually showing small screen color pictures had the same effect as it had during demonstrations in larger cities. People decided not to wait for color and purchased large black and white sets.

Where do we go in the future? While the allocation plan for increasing the number of UHF and VHF stations is running into more and more economic snags, Community Antenna Systems are on the increase.

Most Community Systems that are installed today provide for service on three channels. Many of these three-channel systems can be, and are being expanded by the addition of extra equipment to provide for five channels. Service is thus available from all of the major networks and the all important facilities for local closed circuit telecasts are ready. Subscription television can be delivered over the cable at any time.

As a public service, Community Television is here to stay. As a business booster for the local service dealer, cable television cannot be beaten.

Opportunities

*Ever wonder how Monroe
Became the star who rates the dough?
Or how Abe Lincoln by candlelight
Came to make his name so bright?
Well, good readers, both of these
Were gained through opportunities!*

IT PAYS TO ADVERTISE!

FROM TIME TO TIME we have received cries for "help" through the mail at this office. Men solicited our aid in problems they couldn't go about solving in any other way.

Our correspondence has included letters from technicians who had to relocate their homes in other cities and were seeking the names of leading firms who might offer them employment. And, employers, culling for reliable technicians, have written for any list we might have available of dependable men to add to their technical staffs.

Managers of service departments, too, who felt they were wasting their potential leadership with their present companies have sent us inquiries about outlets for their capabilities which would better suit them. And several radio-TV Appliance Dealers who planned to expand their service departments have approached us to help them find a man whose technical and managerial capabilities would qualify him to head such a department.

Because of this, SERVICE MANAGEMENT is opening this new column of "Opportunities" as a service to all such business men. Through its wide circulation which reaches the owners and managers of thousands of service businesses, SERVICE MANAGEMENT ads will have the most select audience for their inquiries.

For instance, the owner of a TV service shop who wishes to relocate in another part of the country might be anxious to find another owner with his shop, building, test equipment and employee system in good working order, but an owner who is at the retiring age and eager to sell out. "Opportunities" would be a perfect media for revealing such proposals.

And the demand for service managers — a top position which requires a good deal of know-how and authority — is one which lends itself entirely to the outlets made possible by this magazine.

Advertising can be a very private affair even while it is putting its message in front of the public's eyes.

Any business man who wishes to place advertising with SERVICE MANAGE-

MENT can request that his ad be assigned a certain number (given by the editor) and all answers will be directed through SERVICE MANAGEMENT and back to him, unopened. This method will solve many awkward situations which might arise.

The ads, for instance, might read as follows:

Well-trained, experienced TV Service Manager must relocate home in Kansas, due to health. Prefer work with aggressive, large servicing firm. References from leading New York firm. Write: J-1, P. O. Box #1321, Indianapolis, Ind.

OR:

PARTNER WANTED
Successful service company on West coast needs experienced service business manager to handle customer contacts, sales and promotion for a planned expansion. Investment required: \$5,000. For information write: H-1, P. O. Box #1321, Indianapolis, Ind.

This column will also be open to manufacturers of specialized electronic equipment to help them locate capable service outlets in areas where their products are being sold.

* * *

And here are the first two "Opportunities" that we would like to send knocking at the doors of all service businesses. . .

MOBILE 2-WAY COMMUNICATIONS

Business Opportunity for

Competent Service Companies

Large manufacturer of mobile 2-way communications system wants names and addresses of all service businesses that are equipped to handle mobile systems installation and maintenance. If your company is qualified to handle these systems, send your name and address to: M-1, P. O. Box #1321, Indianapolis, Indiana.

INDUSTRIAL TELEVISION

This field is expanding quietly. A manufacturer of complete industrial television systems is interested in having the names, addresses and facilities of all service companies that can expand their facilities into this new and potentially big field. Interested service organizations should write to: M-2, P. O. Box #1321, Indianapolis, Indiana.

ADVERTISING RATES:

(Special Introductory Rates for

"Opportunities" Column Only)

1 inch = \$10.00

½ inch = \$ 5.00

Our Opinion (Continued from page 6)

own business without the cooperation of a lot of other men. And only a powerful association, with the aggressive participation of the leading businesses engaged in it can shape the future of an industry from within.

Who is going to shape the future of independent electronic service? The Set Manufacturers? Parts Manufacturers? Parts Distributors? Or businessmen now in electronic servicing?

Regardless of whether you run a one-man shop or manage a 50-man service organization — NOW is the time to do some serious thinking about the future of your business.

If you want to create an industry in which a man can build a stable business; an industry in which capable management and honest service can produce a profit; an industry to which you can point with pride . . .

You had better get interested in building a strong national service association.

PHW

HV0-II for under chassis replacement in Zenith sets having 12" to 19" round tubes. **HV0-9** Autoformer for RCA, Hoffman and Hallicrafters sets designed for picture tubes 21" and up. **HV0-10** for "fast retrace". Merit TV Replacement Guide No. 405 covering practical recommendations for replacements in over 6000 models and chassis; Auto Radio Replacement Guide Form No. 3 can be obtained from your Jobber or by writing:
MERIT COIL AND TRANSFORMER CORP.
4425 N. Clark Street, Chicago 40.

MERIT

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

Technical Topics

(Continued from page 18)

made to meet many needs in industry and business—needs that are, at the moment, largely unexplored.

INDUSTRIAL TV VIA R.F. CARRIER

Tests show the use of an r.f. carrier has many encouraging advantages for small television systems, figure 5. In such an arrangement just a low level video signal is required to modulate a low powered r.f. oscillator. Consequently, the power requirements and number of video amplifiers are minimized. The

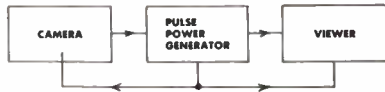


FIG. 1. Single Industrial System

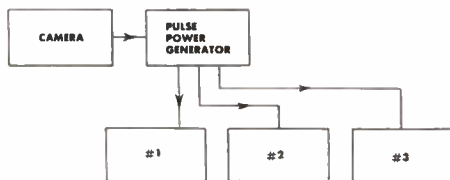


FIG. 2. Multi-Viewer System

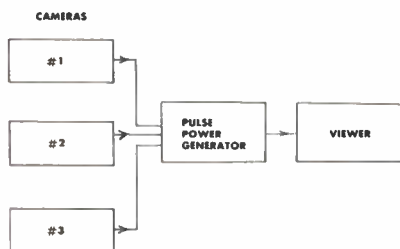


FIG. 3. Multi-Camera System

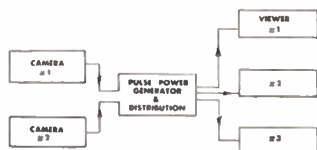


FIG. 4. Multiple Camera-Viewer System



FIG. 5. R.F. Carrier System

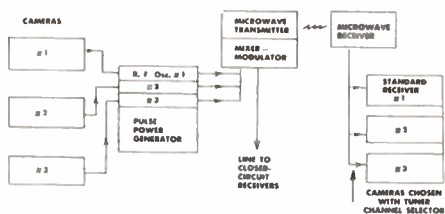


FIG. 6. Elaborate R.F. Carrier Systems

TEXAS RADIO & TV SERVICE CLINIC

The second annual Radio & Television Service Clinic and Electronics Fair sponsored by the Texas Electronics Association will be held at the Adolphus Hotel in Dallas, Texas, on August 27, 28 and 29.

Nationally recognized as one of the leading service events, the TEA Clinic attracts service shop operators from New Mexico, Oklahoma, Arkansas and Louisiana as well as all sections of the Lone Star State. Special buses and trains will bring delegations of service people from Amarillo, San Antonio, El Paso, Galveston, Houston and Beaumont.

Service Associations in the host cities of Dallas and Fort Worth have arranged a fast-moving program featuring a series of lectures and demonstrations by some of the industry's leading speakers.

Parts Distributors and manufacturers' representatives are participating in the clinic and fair to show the latest in parts, supplies and equipment and to make the latest literature available to service operators.

Service operators who wish to attend the TEA annual service clinic and fair should write to Will A. Shaw, Executive Secretary, Texas Electronics Association, 1610 Eighth Ave., Fort Worth 4, Texas, and send ten dollars to cover the registration fee. If hotel accommodations are desired, reservations may be arranged by writing to the TEA executive secretary.

r.f. modulated signal can be conveyed over a single coaxial line or, in a small installation over a conventional 300 ohm twin lead. It is evident that camera and pulse-power generator can be constructed with a very minimum of parts (and can even be incorporated in a single small unit).

An outstanding advantage of r.f. carrier use is that a standard television receiver can be used as a viewer and signal can be applied directly to antenna terminals. Thus, a system can be formed with a small camera and pulse generator and a group of standard television receivers. Frequency of the r.f. oscillator is set on one of the unused channels in the area. Of course, with proper shielding and the wired system any channel can be used but by selecting unused channels receivers can also be used to receive standard telecasts in the area. This is an excellent plan for educational use in schools because receivers can be used to receive educational telecasts from local commercial channels as well as over a school close-circuit system.

An r.f. distribution system also lends itself to simultaneous operation of a number of cameras permitting selection choice at the receiver, figure 6. Each camera operates on a different r.f. channel frequency and is chosen by setting receiver selector switch on corresponding channel. It is quite possible that the picture-modulated r.f. outputs can be mixed and used to modulate a microwave transmitter. At receiving points a microwave receiver and detector can demodulate the signal and supply the lower frequency r.f. signals to the viewer lines. Individual camera signals can be chosen by receiver selection with tuner. An arrangement such as this

can be used with effectiveness in jumping long hops such as to be found on ranches, oil fields, refineries, sprawling industries, etc. A closed-circuit television system can be used to supply locally generated pictures on a community distribution system.

World's First Air-Conditioned Village

A compact new year-round residential air conditioner of two-ton cooling capacity, combining heating and cooling in a single package, which was announced recently by Frigidaire division of General Motors, was first installed in a six-room home at Austin, Texas, in the world's first air-conditioned village.

The National Association of Home Builders and Frigidaire are cooperating in a research project there which is expected to produce important data on many technical, medical and psychological aspects of residential air conditioning.

"Home designs and building techniques and materials being studied in Austin will help make complete air conditioning available to the great mass market of home buyers," Switzer said.

He forecast that within the next five years there will be 2,000,000 fully air-conditioned homes in America.

"Year-round equipment for cooling and heating an entire six-room home now costs about the same as two small room coolers did 25 years ago when we produced the first room air conditioners," he declared. "Much of this improvement has come in the past five years."

air-conditioning boom brings more need for service

"THIS SUMMER a million U. S. families will keep cooler in their homes than ever before, thanks to the biggest air conditioning boom in the history of the industry."

So states the opening paragraph of an article by Don Wharton in the July issue of *Reader's Digest*.

"Cloud Wampler, president of Carrier Corporation, one of the largest manufacturers of air conditioning equipment, has concluded that by 1960 half of all homes in the United States will have air conditioning, a fourth of all new autos, all buses, nine out of ten railroad passenger cars, all new office buildings, and most new hospitals.

"We will then be close to the point where the absence of air conditioning will be more noticeable than its presence," Mr. Wharton concludes.

In his 3-page article the noted author touches upon almost every important area where the average American comes in contact with the nation's big demand industry.

Room air conditioners, one of the reasons for a million cooler families, "create their own sales momentum," Mr. Wharton states.

DETERMINING the direction in which radio stations lie, this charming mariner easily and quickly establishes her approximate position offshore. She's using Raytheon's new portable radio direction finder — a 3-band set which receives standard entertainment broadcasts, "marine" band, and "beacon" band. A high quality portable radio, it has in addition a knob-shaped directional antenna on top, which points out the direction of the station or beacon to which the set is tuned.



Tops In Service

RCA Service Co. branch managers, winners of 1954 campaign to achieve maximum customer satisfaction, receive their "President's Cup" awards from Frank M. Folsom, President of RCA. Three-month campaign was designed to maintain highest rate of customer satisfaction and boost operating efficiency. Left to right: Acie C. Criss, Montgomery, Ala.; William L. Davis, Indianapolis; Lawrence E. Traeger, Spokane; Mr. Folsom; James K. Stewart, Salt Lake City, and Orval H. Bowers, Flushing, N. Y.

He points to an "amazing surge" of central air conditioning for residences. Due to the range of different dwelling units from prefabricated houses to high-priced mansions which may be located from Massachusetts to the Texas Panhandle, no general statement regarding actual operating and installation costs can be made, he reports.

"A survey of 7,400 air conditioned homes constructed by 109 builders in all parts of the country, however, showed installation costs average 89.3 cents per square foot of floor area." He noted that cooling cost, for similar houses, might range from \$40 to \$160 in different areas.

In addition, householders are finding out that air conditioning saves money in cleaning, painting and reupholstering. He mentions the possibility of construction savings through design, elimination of some windows and screens, fans and other summer cooling aids, but reports that these are yet to be fully exploited.

Further proof of the air conditioning boom is provided by the big building field. Since 1947, the article reveals, out of 51 office buildings started on Manhattan, 49 are air conditioned.

The automobile industry, the giant of American businesses, has sensed public demand for air conditioning. This year virtually every manufacturer is

offering air conditioning as optional equipment.

The move for conditioned comfort is not restricted to this country. Dramatic expansion has taken place in many lands. Providing air conditioning benefits overseas are apartment houses in Calcutta, the Congress and Senate Buildings in Venezuela, Parliament Building in Oslo, 17 rooms in Emperor Hirohito's palace Japan and scores of private as well as government buildings in Italy and numerous other countries.

ROBERT C. SPRAGUE, left, chairman of the board of the Sprague Electric Co., North Adams, Mass., receives the Medal of Honor of the Radio-Electronic-Television Manufacturers Association from Glenn McDaniel, president of the RETMA. Mr. Sprague, third to receive the medal in the Association's history, was honored for his contributions to the progress of the electronics industry.



Choose Your Partner

(Continued from page 14)

better and more binding when put on paper as part of the partnership agreement.

12) *Make Sure Prestige Is Equal.* Too many partnerships flounder because one partner attempts to carry the other. This is not only a very unsound procedure but it eventually builds up ill feeling and resentment on the part of the lesser partner.

13) *Check His Credit.* No partnership credit in business or the community will be any better than that of each of the partners themselves. In a firm where one individual has a shaky business reputation, it is certain to rub off on that business.

14) *Set Liability Limits.* It is good personal procedure to decide before entering into any partnership that it will not be permitted to assume liabilities beyond "our own ability to pay off." If failure comes, our partner may well take the "midnight express for parts unknown" and if the partnership liability has been extended far beyond our personal means then we will find ourselves in very serious personal difficulties.

15) *Cool Off First.* No partnership has ever existed without some disagreement or misunderstanding between the individuals involved. It's a good idea, therefore, to adopt a personal slogan of cooling off before we criticize or admonish our associate about anything.

16) *Pick an Arbitrator in Advance.* Assuming no disagreement will ever exist is a grave error. These are bound to come in time. Every agreement should, therefore, contain a paragraph setting forth the mechanics for settling any disputes or disagreements between the parties and naming a mutually agreeable third party as the arbitrator whose decisions will be accepted by both.

17) *Trust Is Important.* In all partnerships there is one very good rule to follow — if you can't trust the other fellow, don't enter into an agreement with him; and if you develop mistrust later on . . . get out quick.

18) *Protect Against Competition* from the other partner should the agreement be dissolved insofar as the laws of your state permit such a contract. Consultation with one's lawyer on this point is most advisable.

19) *Have Weekly Sessions* arranged for many details of the operation of the partnership but particularly for deciding on what shall be purchased and from whom. This always works out better when both partners participate in all purchasing rather than leaving it to one or the other.

20) *Don't Carry Tales from School.* No matter how mad one may get at a partner it's always best not to talk about it with a third party. Humans just love carrying such tales to the other fellow. A "blowing off steam" remark can, through such tale bearing, be developed into a major crisis within a partnership.

21) *Set Up Salaries, Provide Percentages for Profit, Funds for Expansion of the Business, etc.,* within the original partnership agreement rather than leaving this for a decision at a later time.

22) *Let the Articles of Agreement Provide* that an amendment of the original document be on a delayed basis;

Living Library

(Continued from page 13)

HOWARD W. SAMS & CO., INC.

2201 East 46th St.

Indianapolis 5, Ind.

1. How Much Is Your Labor Worth (no cost)
2. Accounting Procedures for Radio & TV Service Technicians (no cost)
3. Photofact Folders
4. PF Index

MACMILLAN CO. PUBLISHERS

60 Fifth Ave.

New York 11, N. Y.

1. Mand's Television Servicing (\$5.50)
2. Television Service Course Laboratory Manual (\$3.90)
3. Elements of Mathematics (\$7.20)
4. Television for Radiomen (\$8.00)
5. Television and FM Antenna Guide (\$5.25)
6. Micro-Wave Measurements (\$6.75)

NATIONAL CARBON COMPANY

30 E. 42nd St.

New York 17, N. Y.

1. Battery Engineering Bulletins #'s 1 & 2 (no cost)

PERMO, INC.

6415 Ravenswood Ave.

Chicago 26, Ill.

1. Permo Products for the Electronic Parts Trade #104
2. Form PPSL-1 — Dealer Price Schedules for All Units

PERMA-POWER CO.

4727 N. Damen Ave.

Chicago 25, Ill.

1. Perma-Power Line & The Horizontal Bar Generator Catalog (no cost)

P. R. MALLORY & CO., INC.

P. O. Box 1558

Indianapolis 6, Ind.

1. Guide to Auto Radio Replacement Controls (no cost)
2. Precision Electronic Components (no cost)
3. Vibrator Guide (no cost)

RADIO RECEPTOR CO., INC.

251 W. 19th St.

New York 11, N. Y.

1. Germanium Diodes and Transistor Catalog # G-23 (no cost)

JOHN F. RIDER PUBLISHER, INC.

480 Canal St.

New York 13, N. Y.

1. Complete Guide to Rider Books, Manuals and Tek-File, Manual #IB 102 (no cost)

TECHNICAL APPLIANCE CORP.

Sherburne, N. Y.

1. TACO Trapper, Form 1240 (no cost)

TELEVISION TECHNICIANS LECTURE BUREAU

P. O. Box 1321

Indianapolis, Indiana

1. Index of Manufacturing Information with Enclosures (50¢)
2. Notebook #3 — Color Television (\$1.00)
3. Notebook #5 — Twenty Basic Points (\$1.00)
4. Notebook #6 — Test Instrument Operating Manual (\$1.00)
5. Notebook #7 — UHF Television & VHF Front Ends (\$1.00)

TELONIC INDUSTRIES

444 South Rural St.

Indianapolis, Indiana

1. Telonic Sweep Generators, Bulletins # 101-108 (no cost)

U. S. PRODUCTS, INC.

Columbus, Indiana

1. TV-Truck Bulletin (no cost)

UNITED CATALOG PUBLISHERS, INC.

106-110 Lafayette St.

New York 13, N. Y.

1. Radio's Master (\$6.50)

WESTINGHOUSE ELECTRIC CORP.

Tube Div., Box 284

Elmira, N. Y.

1. UHF Conversion, Installation & Service (\$1.00 or from Tube Distributors with purchase of 25 Westinghouse Tubes)
2. Service Manual, RM # 4037
3. Service Manual, #'s RM 4043-4045

don't
be
vague...

insist on
**SPRAGUE
BLACK
BEAUTY®**

TELECAP®
tubulars



SPRAGUE

NORTH ADAMS, MASS.

don't be vague...

SPRAGUE
36C

insist
on
SPRAGUE

SPRAGUE
29C

*Cera-mite**

disc ceramics

19C

*Trademark

SPRAGUE

NORTH ADAMS, MASS.

quick amendments made in anger can often disrupt an otherwise good partnership.

23) *Avoid Trying to Outdo Each Other* — being an "eager beaver" is always good in any partnership but when two men get into a contest with one another, trouble is sure to set in. It's wise procedure to expend surplus business energy in a separate private venture.

24) *Avoid the Potential Partner Who Has Proven Himself Financially Unsound*; he can't be re-educated. Many a business man has gone into such an arrangement with the feeling his own proven sound judgment would counter balance its lack in a partner. This has never been known to work out successfully over an extended period of time.

25) *Keep Private Property Out of the Partnership*. There may come a time when the partnership needs security for money sought . . . when one partner puts up his home or car or something else . . . even as security for a business loan . . . a cancer has started that will ultimately destroy the partnership.

26) *Provide for Reduced Compensation* to the partners if the business should hit a slump in order to pull through and save the venture. If such procedure is automatic, one's partner will agree readily; otherwise, he may feel it unwise to take the chance.

27) *Be Sure to File Complete Partnership Papers* at the county courthouse in order to establish legal responsibilities not only of the partnership but of each of the partners to the firm created by the agreement.

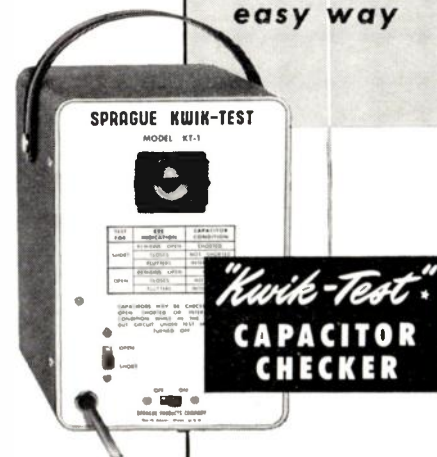
"Miss Management"



"I think this TV business has gone to his head."

don't be vague...

do it the
easy way



for finding opens, shorts, or
intermittents in a jiffy.

*Trademark

SPRAGUE

NORTH ADAMS, MASS.

don't

be

vague...

insist


on

SPRAGUE

NORTH ADAMS, MASS.

P

RODUCT REVIEWS



Federal Dispensers

Federal's new Germanium Diode Dispensers — the all metal counter or wall dispensers hold 150 single-unit packages, 25 five-unit packages, and 10 ten-unit packages and provide constant fingertip inventory control. The small wall dispensers is for one unit diode packages. These dispensers are part of a unique overall packaging program for diodes offered for the first time to distributors. S-C-S (single-crystal-stabilized) Germanium Diodes are hermetically sealed and provide new high in performance for diode applications. They are manufactured by Federal Telephone and Radio Company, Clifton, New Jersey, a division of International Telephone and Telegraph Corporation.



Webb Wrapabout

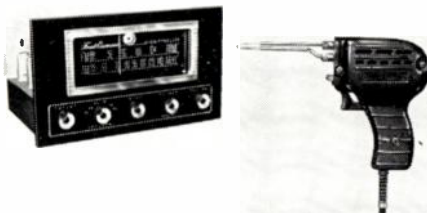
Webb's new Wrapabout Model #40 for handling room air conditioners is adjustable to fit all models of $\frac{1}{3}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 H.P. units.

Made of rugged, water repellant canvas, padded with thick cotton batting and lined with soft, scratchless flannel, Wrapabouts offer 3-way protection: (1) for air conditioner — heavily padded cover absorbs shocks and flannel lining protects finish against scratches and stains; (2) for customer's premises — air conditioners can be easily maneuvered up narrow stairways, through doorways and halls without damage to walls or woodwork; (3) for your employees — lifting straps sewn to the Wrapabout have four handles on each side for comfortable, balanced lifting without strain.

Price, \$11.80. Webb Manufacturing Company, 2912 N. 4th Street, Philadelphia 33, Pa.

AM-FM High Fidelity Tuner

Freed-Eisemann, of 200 Hudson Street, New York 13, N. Y., has announced production of an AM-FM High Fidelity Tuner . . . the Model 750. Self-contained with all controls within a fully enclosed front panel assembly, the Model 750 has a beautiful baked ebony finish on the front panel with bronze escutcheon and two-tone knobs. All controls including record compensation and bass and treble boost are readily accessible, eliminating the necessity of using a separate pre-amplifier control unit. The chassis and other metal parts are copper plated.



Wen "Quick-hot" Soldering Gun

Wen Products, Inc., 5808 Northwest Highway, Chicago 31, Ill., recently announced their Model #199 "Quick-Hot" Electronic Soldering Gun to sell for only \$7.95.

The unit, which weighs only one and one-half pounds, will get working-hot in $2\frac{1}{2}$ seconds.

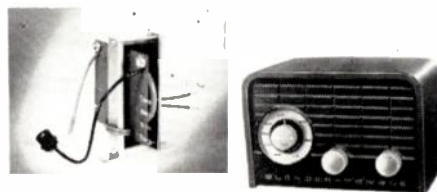
Further information on the Wen Model #199 soldering gun may be obtained by writing the manufacturer.

New Horizontal Transformers

Three new horizontal output transformers designed as exact replacements for similar Admiral units are being manufactured by the Merit Coil and Transformer Corp. of Chicago.

The new units, models HVO-22, HVO-23 and HVO-24, all have mounting brackets, mounting centers, terminal boards and terminal locations exactly comparable to the Admiral television transformers they are designed to replace.

For more information about these transformers, write the Merit Coil and Transformer Corp., 4427 North Clark Street, Chicago 40, Illinois.



UHF Converter

Blonder-Tongue Laboratories, Inc., Westfield, New Jersey, announces the new Ultravert Model BTU-2.

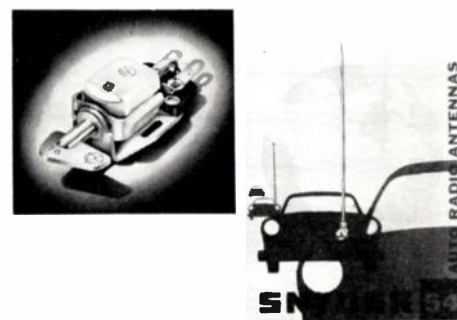
This UHF Converter features dual-speed tuning, for faster and more accurate selection of any UHF channel. The Ultravert is fully compensated to guarantee frequency stability even under the weakest signal conditions. The converter is turned "on" and "off" automatically by means of the patented Thermo Relay, controlled by the TV set power switch.

Special tuned circuits, the precision-tracking three-section Ultratuner, and 300 ohm impedance match throughout, provide maximum signal power with lowest noise factor. Excellent reception has been obtained in all UHF areas, far beyond normal fringes. Tube complement is 6T4, 6AB4, and selected crystal mixer. The unit is completely self-contained, has its own power supply, and is UL approved.

Diamond and Sapphire Stylus Combination

Pickering & Company, Inc., Ocean-side, Long Island, N. Y., announces that their Model 260 Turnover Pickup Cart-ridge is now available with a diamond stylus for long-playing recordings and a sapphire stylus for standard 78 recordings. The diamond stylus is of .001" radius for long-playing records and the sapphire stylus is of .0027 radius for standard groove 78 rpm records.

Except for the sapphire stylus, this unit is identical in all respects to the famous Pickering Model 260 double diamond turnover pickup which features: lower overall distortion, higher compliance, lower moving mass, minimum tracking force and higher output.



New Auto Antenna Catalog

An entirely redesigned catalog illustrating its new line of auto radio antennas has just been published by Snyder Manufacturing Company of Philadelphia.

Copies of the new Snyder Auto radio antenna catalog may be obtained by writing to Dick Morris at Snyder Manufacturing Company, Philadelphia 40, Pa.

(Continued on page 30)

ENOUGH VALUE FOR YOU TO KEEP PERMANENTLY!



Yes, sir, readers of Service Management are finding that every issue of Service Management contains information valuable enough to keep permanently.

Present and future issues will be a TREASURE of business management operation — with specific details as to forms, systems, methods, suggestions regarding customer relations — selection of equipment — financing — accounting — staff-training — taxes — credit — maintenance. One good idea put to use, can mean hundreds of dollars to you.

Here's Why

Service Management is edited by men WHO KNOW THE PROBLEMS OF TV SERVICE BUSINESSMEN. They anticipate future difficulties and developments, and bring to you in simple condensed, easy to read format, the most modern innovations for successful TV Service Operations.

And, if You're Overworked and Have Very Little Time to Read . . .

Service Management boils down TV Service problems to the essentials. With Service Management, you'll have the information you need for profitable management and technical developments.



For Example . . .

Color Television, Home Air Conditioner Installation & Service, Major Appliance Servicing . . . these are new opportunities for Electronic Service businesses. Service Management will keep you informed about how to get your share of this business profitably.

HERE'S MORE HELP!

A pair of the popular Radio-Phono and TV Service Standard Labor Charges Wall Charts will be sent to you

FREE!

AS A BONUS WITH YOUR SUBSCRIPTION
TO SERVICE MANAGEMENT MAGAZINE

FILL IN THIS COUPON AND
MAIL YOUR SUBSCRIPTION NOW



LECTURE BUREAU PUBLISHING CO.
161 Luckie Street, N. W.
Atlanta, Georgia

TVL-2 F
RPS-1 R
E

GENTLEMEN: PLEASE ENTER MY ORDER FOR A SUBSCRIPTION TO
"SERVICE MANAGEMENT" AT \$3.00 A YEAR. (TWO YEARS, \$5.00)

☐ CHECK ☐ MONEY ORDER ☐ CASH

NAME _____ 152

(Please Print)

ADDRESS _____

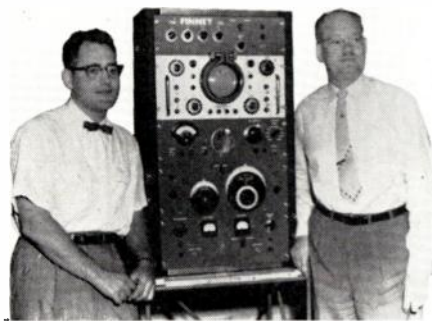
CITY _____ STATE _____

SIGNED BY _____ POSITION _____

Type of Business: (Check Which)

- ☐ Exclusively Service
- ☐ Basically Service but Sell Sets
- ☐ TV Dealer with General Service Department
- ☐ Receiver Sales & Customer Service Only
- ☐ Other

KALEIDOSCOPE



R. E. WEISS (left), Chief Engineer, and L. H. Finneburgh, President of the Finney Co., with the Finco Antenna-scope.

CBS-HYTRON introduced its 19-inch picture tube for color television early in July. Known as the CBS-Colortron "205," it derives its name from the fact that it offers 205 square inches of picture screen area. Shortly after it was introduced, **MOTOROLA, INC.**, showed three color TV sets in its 1954 line, in which the CBS-Colortron is employed. The Motorola color sets included a Console with an \$895 list and two Consoles, each with a list of \$995. Other

manufacturers who have already indicated they will offer sets this year using the CBS-Hytron "205" are **WESTINGHOUSE** and **CAPEHART-FARNSWORTH**. It is claimed that this new color picture tube will get color TV off "dead-center." . . . Chairman of the RETMA Set Division, Robert S. Alexander, forecasts the prospect of a healthy boost in the manufacture and sale of television and radio receivers during the coming fall and early winter. . . . **NATIONAL APPLIANCE & RADIO-TV DEALERS ASS'N** now has available its eighth annual "Costs-of-Doing-Business Survey" covering the year



SERVICE DEALER ON TV

1953. This report (available for \$1.00 from NARDA, 1141 Merchandise Mart, Chicago, Ill.) shows that while dealer dollar sales increased 2.7% over 1952 — dollar profits declined 22.8% from 1952. . . . **RETMA** reports that business failures of manufacturers of radio-TV-electronic equipments and components doubled in the year ending May, 1954. . . . **HOWARD W. SAMS & Co., Inc.**, has just completed the dedication of its new plant located at Sams Park, 34th & Sutherland Avenues, Indianapolis, Ind. . . . The 1954 **NEDA Battery Index**, published by **NATIONAL ELECTRONIC DISTRIBUTORS ASSOCIATION**, is being offered by the association to all distributors, servicemen,

dealers and the like. . . . **MAX F. BALCOM**, who has served as President of **RETMA** for two years, is the new Chairman of the Association's Board of Directors. **GLEN McDANIEL** was re-elected as President and General Counsel. . . . **G. LEE HURLBURT**, radio-television service dealer in Lakewood, N. J., was named the grand prize winner of the \$50,000 sales promotion contest sponsored by the Tube Division of **RCA**. . . . Newly elected officers for the **RADIO OLD TIMERS** organization include: Sam Poncher, Newark Electric Co., Chicago, secretary; R. W. Farris, W. W. Farris Co., Kansas City, Mo., treasurer; and Charley Golenpaul, Aerovox Corp., New Bedford, Mass., president. . . . **G. LEONARD WERNER**,



PONCHER, FARRIS and GOLENPAUL (left to right) to lead Radio Old Timers in '54.

widely known figure in the electronics industry, has been appointed general sales manager of **The ASTATIC CORPORATION**, Conneaut, Ohio. He was formerly with the Mark Simpson Manufacturing Co., Inc. . . . **RADIO MERCHANDISE SALE'S** new sales manager is **ALBERT BRAND** who will still retain his title of Secretary-Treasurer of the R M S Corp. . . . It has been announced that **HAROLD HENNIG** has joined the renewal section of **RAYTHEON's** Receiving and Cathode Ray



HENNIG appointed by Raytheon



WERNER . . . now with Astatic Corp.



C. F. STROMEYER, President of CBS-Hytron with "205" cross-section. Left to right, parts include: Face plate with tricolor phosphor-dot screen, simple lightweight shadow mask, glass funnel, and electro-magnetically converged three-beam electron gun.

Tube Operation in Newton, Mass., as Market and Sales Analyst. . . . **SPRAGUE PRODUCTS CO.** is offering reprints of what it calls its "most popular direct mail flyer" for consumer use. They may be obtained directly from Sprague, North Adams, Mass., at \$3.00 for 1,000. . . . **The FINNEY CO.** announced when they introduced their new "Finco" antenna-scope that it will serve a very useful purpose in demonstrations and lectures. They said that in the near future the Finney Co. would hold antenna clinic meetings over the entire country using the Antenna-scope to rapidly show antenna theory and development as well as determine the local efficiency of any type TV antenna. . . . New, **ONE-MINUTE MOVIE** for TV screenings shows public "what it takes to fix your TV set." Film stresses complexity of a TV set, long training and expensive equipment needed by serviceman. The 16 mm. sound film, produced by **GENERAL ELECTRIC's** Tube Department, is available to tube distributors for local TV showings in behalf of their service dealers.

Selling Service (Continued from page 13)

situation. However, just how clean is service in your area? Jobber-service co-operation must work both ways. Do you patronize the jobber in your area who is trying to stay clean? Or do you buy tubes, specials, and other material from car-back-seat jobbers or mail-order firms?

The mails prove daily many service

dealers patronize these mail-order houses, otherwise it wouldn't pay them to deluge your mail with these flyers. Service needs good local jobbers, work with them, and buy all your needs from them, not just fill-ins between mail-order or car-back-seat distributor specials.

In a nutshell a summer program for service is — get all the service you can without jeopardizing the future by price cutting, revitalize your local service association or organize one, get together with your local jobbers and set up plans for registration of bonifide service dealers and support these jobbers with all your business. Make your slogan, "Let's Co-operate More in '54."

Dealer Goes After Replacement Business

Mr. Russell Wigam of Biloxi-Gulfport, Mississippi, initiated an enterprising approach to get new and replacement television antenna business.

Featuring a JFD SuperJet mounted on the roof of his sedan, Mr. Wigam toured the residential and business neighborhoods of Biloxi-Gulfport. From a loudspeaker, also mounted on the sedan, a voice told how old, worn antennas, antiquated antennas, could cause deficient reception, and be a hazard to life and property.

The voice from the continuous tape recording went on to say what qualities to look for, when buying a television antenna, and how to get a better antenna installation.

Mr. Wigam's aggressive approach to new and replacement business is entirely voluntary, and extremely successful. There is a huge market potential in replacement sales. And, with thousands of new television sets being bought every day, there could be an even greater flow of television antennas to the consumer.

It is the dealer's responsibility, for his own success, to exploit manufacturer's advertising, by going out after sales in lieu of waiting for sales to come to him.



GET THESE STANDARD TV LABOR CHARGES CHARTS

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

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

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

The Standard TV Labor Charges Charts are printed on bristol board, 11"x14", and are suitable for use as desk or wall charts.

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

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

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

Name _____
Address _____
City _____
State _____



ASSOCIATION NEWS

BY PENNY MARTIN

T.E.A.

ALL TEXAS (and many other parts of the U. S. A.) is buzzing about the 2nd annual RADIO & TELEVISION SERVICE CLINIC and ELECTRONICS FAIR being held at the Adolphus Hotel, Dallas, Texas, August 27-28-29, under the sponsorship of the Texas Electronics Association, Inc.

Exhibit booths in the Grand Ball Room will open Friday morning, August 27th. The session on Color TV will begin at 2 P.M. and will be covered by speakers from four major manufacturers . . . each covering a different approach.

One of the country's outstanding speakers, Mr. M. S. Finneburgh, of the Finney Antenna Co. in Cleveland, will keynote the banquet Friday evening.

Saturday's Clinic will cover management subjects such as pricing, merchandising, credits, inventory controls, public relations, etc.

As last year's was such a success, a Panel Discussion will take place on Sunday morning. Questions are to be submitted during this Clinic and answered by nationally famous factory service managers.

Mrs. Becky Inman has worked up a wonderful Ladies' Program, so bring your better half with you when you come to attend the Fair.

Wm. J. Inman, 1816 Magnolia St., Dallas, Texas, is General Chairman of the Clinic and Fair, with Truett Kimzey, president of the Fort Worth Radio & Television Assn., acting as co-chairman.

NEW OFFICERS

Election of officers for 1954-55 for TEA, was held June 13th at Austin and the 36 delegates unanimously elected Truett Kimzey, President. First Vice President is Van J. Roark, Houston; Second Vice President, R. L. McDonald, Fort Worth; Secretary, G. M. Bettes, Austin; Treasurer, Roger Dickey of Grand Prairie.

Due to a very severe illness, Luther Bradley of Dallas is inactive now . . . but his years of untiring effort in behalf of the local and state associations, his hard work and sound council, will never be forgotten by his fellow club members. In appreciation of his diligent



work, a fitting plaque has been presented to Mr. Bradley by TEA.

Will A. Shaw remains as Executive Secretary of TEA, with offices at 1610 8th Avenue, Fort Worth, Texas.

I.R.T.S.A., WISCONSIN

Another new slate of officers for 1954-55 comes from the Indianhead Radio-TV Servicemen's Association. At the Association's annual dinner, the following officers were elected: President, Vernon Townsend, Menomonie; Vice Pres., Earl M. Kratch, Bloomer; Secretary, C. W. "Chuck" Stiemke, Eau Claire; Treasurer, Upton "Rip" St. Clair, Bloomer.

The present organization is a resurrection of the former Chippewa Valley Radiomen's Association which was fairly active before the war. Reorganization was started in February of 1950. Members come from a fifty-mile radius and with Wisconsin winters . . . it is sometimes pretty rough to hold a meeting. They rotate their meetings between Eau Claire, Menomonie and Chippewa Falls, with one meeting each year held in Ladysmith.

Secretary Stiemke's address is 602 Water Street, Eau Claire, Wis.

R.T.S.A., PITTSBURGH, PA.

The Radio & Television Servicemen's Association of Pittsburgh, Inc., held an all industry banquet at the Elks dining room on the North Side of Pittsburgh, at which all segments of the TV profession including broadcasting, manufacturing and distribution, were present.

Mr. Daniel Creato, Vice Pres. of R.C.A. Service Co., and Lew Winner of "Service," were guest speakers.

ROCKY MOUNTAIN RADIO-TV GUILD, INC.

Tom Sampson, Secretary of the Rocky Mountain Radio-TV Guild, Inc., 8201 W. Grandview, Arvada, Colorado, reports that the Guild, headed by President Robert Miller, took the bull by the horns regarding the sudden influx of cut-price service and other phony advertising.

This project is necessary to prevent the establishment of false standards for the set owners. Working in close harmony with the local BBB's manager of merchandising division, W. M. Gibbons, they put on a 15-minute TV program in which they exposed the practices of the phonies. This was supplemented with a full-page ad listing all the Guild members and featuring that fine Sprague "Beware of the Service Bargain" theme. Another facet of the campaign is the attempt to convince the newspapers of the falacy of accepting obviously false advertising.

L.I.E.T.A., INC.

William A. Carey, President of the Long Island Electronic Technicians Association, Inc., 88 Fourth Street, Oceanside, New York, writes that L.I.E.T.A. has agreed to affiliate itself with the Radio & Television Technicians Assn., Inc., of New York City (R.A.-T.E.T. Assn., Inc.), 52 East 19th Street, New York 3, N. Y., and vice versa, each keeping their own autonomy.

L.I.E.T.A. has also agreed to join, as a charter member, the Eastern Television Service Conference, Inc., 25 Church Street, Paterson, New Jersey.

L.I.E.T.A. celebrated their first year with a "Charter Day Gala," June 26, 1954, at the Masonic Club, Williston Park, N. Y. NBC supplied Vicki Mills of the "Name That Tune" program and her accompanist to entertain L.I.E.T.A. members. Ernest Forslund was Master of Ceremonies.

GEM FROM L.I.E.T.A. NEWS

... One of our member's children, to his mother during an electrical storm, "Is Daddy fooling around with the TV again?"

E.A.D.A., MINNEAPOLIS, MINN.

Taking concrete action to offset rumors and scare-talk, the *Electric Appliance Dealers Association*, 627 Plymouth Bldg., Minneapolis 15, Minn., joined the General Electric Supply Corporation in staging a stag fun night keyed to talking business up, not down.

Membership announcements stated that all those who suffer from BUSINESSISLOUSYITIS would find a cure at the hands of Dr. Decision, on the occasion of the Optimism Rally. Earl Norling, Director of Sales Training and Dealer Development for the General Electric Corp. from Louisville, Ky., was the enthusiastic "healer" and discoverer of the antidote for BUSINESSISLOUSYITIS. . . . Great Success!

KANSAS APPLIANCE DEALERS ASSN., INC.

The initial meeting of the *Kansas Appliance Dealers Assn., Inc.*, was held in Wichita, Kansas, June 16th. The following members were elected to the Board of Directors: NW Region—Joseph Rome, Hays; Duane Kurtz, SW Region—Paul Warner, Dodge City; Ned Brown, Larned. No. Central—E. G. Anderson and Uhl Wheatley of Salina. So. Central—Emerson Dole, Wichita; Harold Phillips, Hutchinson. NE Region—Charles Marling and George Kistler of Topeka. SE Region—W. H. Airgood and Lee Mitchell of Independence. Distributors—Carroll Willis and O. W. Hennigh, of Wichita. Utility—Lee Nicholson, Kansas Power & Light, Topeka.

The newly elected Board of Directors met immediately following the membership meeting and elected the following officers for 1954-55: Emerson Dole, President; E. G. Anderson, Vice Pres.; Harold Phillips, Secretary; and George Kistler, Treasurer.

NATESA

Have you red penciled September 24th, 25th and 26th yet? Those are the dates of the 5th Annual TV-Radio-Service Industry Convention & Exhibits at the Morrison Hotel, Chicago, Illinois.

The latest data on Color, Transistors, Printed Circuits, UHF, and Projection will be revealed. The latest business building ideas will be discussed.

Successful service people from all over the country and even beyond our borders will be there to exchange news and views. It is one event you in the service industry should make a point of not missing.

This is under the sponsorship of the *National Alliance of TV & Electronic Service Associations*. For further information write to President Frank Moch, 5908 South Troy St., Chicago 29, Illinois.

ORGANIZATION BROCHURE

And if you have just recently organized an association, or are in the thinking stage of organizing one . . . here is a tip that can be very valuable to you. NATESA has put out a brochure titled, "Here's How" . . . and literally that is exactly what it does tell . . . how to organize an association, a sample constitution and by-laws, and many suggestions to give your association a solid core. It is based upon actual, successfully completed work by other groups.

President Frank Moch tells me that "so far it has helped create no less than 30 local associations in the last four months, many of which are moving along to the point where they soon will be effective. A few have already affiliated with NATESA."

TELEVISION SERVICE GUILD

The *Television Service Guild*, 3265 Zephyr Dr., Dayton 4, Ohio, has recently elected officers to serve for the next two years. They are: Stanley Copp, President, 333 West Monument Ave., Dayton 2, Ohio; Vice President, Albert W. Houser; Second Vice Pres., Alfred Redolfi; Treasurer, Ralph Snyder, and Secretary, Marshall Rankin.

I like TSG's motto: "The purpose of TSG is to inspire public confidence and good will in the TSG and its membership; to create and hold an honorable Code of Ethics." This motto heads the *TSG News* published monthly by the Secretary.

NARDA

Brief, but to the point: NARDA wrote to all their members in Roswell, New Mexico, after the flood, offering any emergency aid they needed. Fortunately, none were in the immediate area subjected to the worst damage.

INFORMATION on how to build this closed-circuit TELEVISION CAMERA

Cost of Parts

\$150

\$200



Technical Information You Have Missed in Current Issues of Noll's ELECTRONIC STUDY GUIDE:

CONSTRUCTION DETAILS FOR

1. Closed-Circuit Television Camera
2. Transistor Probe
3. One Megacycle and One-Half Megacycle Marker Generators for IF and VHF Ranges

Sequential Studies of transistors, color television, antennas, and circuit mathematics

Write for literature or send one dollar for sample lesson (includes marker generator construction detail) of study guide. No obligation.

Edward M. Noll
TTLB Educational Section
Box 94, Hatboro, Pa.

Name _____
Address _____
City _____ State _____

Product Previews

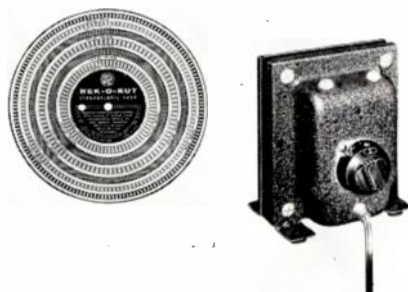
(Continued from page 24)

New Stroboscopic Speed-test Disc Announced by Rek-O-Kut

Rek-O-Kut Company, of Long Island City, N. Y., has announced the availability of a new Strobe disc for checking turntable speeds. One of the new features of this disc is that it is printed in two colors, each pattern band being alternately red and black. This greatly simplifies locating the correct pattern band being checked.

The Rek-O-Kut Stroboscopic Card, as it is called, is designed for all speeds: 33 $\frac{1}{3}$, 45, and 78 rpm, at both 50 and 60 cycles. Complete instructions are furnished on the card.

Cards may be obtained free, on request, by writing to: Avery Yudin, Rek-O-Kut Company, 38-01 Queens Boulevard, Long Island City 1, N. Y.



VB-1 Voltage Booster

Full-size television pictures in areas where low line voltage shrinks the picture size have been assured through use of the new Regency VB-1 voltage booster now being manufactured by the firm, a division of I.D.E.A.

The new Regency voltage booster can maintain a 117 volt power supply to any TV set regardless of line voltage variations from 90 to 130 volts. It may be used on any TV set or electrical device drawing 350 watts or less.

Since the VB-1 is an auto transformer with tapped primary, it may be used in high voltage areas to decrease the line voltage or in low voltage areas to increase the line voltage.

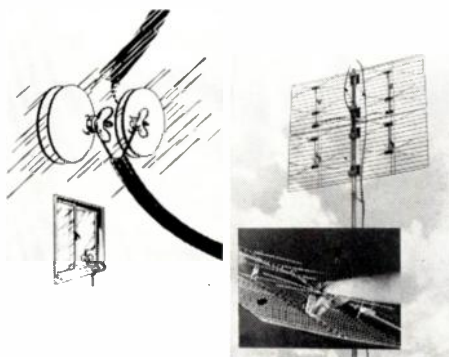
The list price is \$19.95.

For more information on this unit, write Regency, a division of I.D.E.A., Inc., 7900 Pendleton Pike, Indianapolis 26, Ind.

Walsco's "Window Thru" Bushing

Walsco Electronics Corp., 3602 Crenshaw Boulevard, Los Angeles 36, Cal., recently announced their "Window Thru" antenna transmission line bushing to bring lead-in antenna wires into the home without drilling holes.

Said to be effective with VHF and UHF, its weatherproof capacitor discs are easily attached to the window pane. The new Walsco "Window Thru" bushing is packaged with window pane cement.



JFD's Tunable 8-Bow Antenna

JFD of Brooklyn, N. Y., recently unveiled a new 8-bow antenna with an exclusive calibrator. This precision calibrator is a custom-designed and custom-built graduated slide. It connects the bow to the screen element. It is claimed to have higher signal-to-noise ratio and better selectivity because of the calibrator adjustments possible between bows and grids.

Information on the JFD Tunable 8-bow antenna, designated as model UHF-208, may be obtained from the manufacturer: JFD Manufacturing Co., 6101-16th Ave., Brooklyn 4, N. Y.

Webster Com-ettes

The Webster Electric Company of Racine, Wisconsin, has announced the introduction of two new series of intercommunication units. Known as the RF and WC Com-ettes, these units are designed for simple, low cost installation in large and small business, farms, homes and numerous other places. The units are compact and easy-to-operate. Each set consists of two units packed in an easy-carrying display container.

The RF Com-ette Series is designed to work on regular AC or DC current and requires no interconnecting wires between units.

For more information on the Com-ette units, write to the Sound Sales Division of the Webster Electric Company, 1900 Clark Street, Racine, Wisconsin, and ask for Bulletin M6A2.

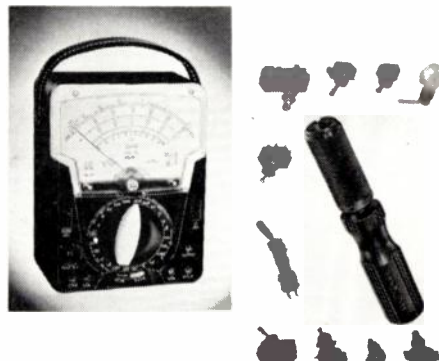
V-OM and VTVM Unit

A radically new tester that combines a volt-ohm-millammeter and a vacuum tube voltmeter in a single unit — Model 631 — has been introduced by the Triplett Electrical Instrument Company of Bluffton, Ohio.

The versatile new testing equipment is handsomely designed and contains an exceptionally legible scale.

Outstanding characteristics of the new Triplett Model 631 include: 34 ranges; V-O-M; 10 A.C.-D.C. volts; six direct current; resistances from 0.1 ohms to 150 megohms; decibel and output readings. VTVM: four, including 1.2 volt range for grid voltage and accurate discriminator alignment. (First division mark at 0.02 volt.)

For more information, contact your local Triplett dealer or write directly to the Triplett Electrical Instrument Company, Bluffton, Ohio.



New Adjustable Driver for Knurled Finish Nuts

A new kind of time-saving nut driver (or wrench), especially designed for tightening or loosening knurled finish nuts, is now being manufactured and marketed by the Chase Manufacturing Co., Los Angeles 6, California.

In addition to being a production tool for plant assembly line work, Knurl-Tite is also a Repairman's and Handyman's Tool. It is the right tool for tightening or loosening knurled finish nuts on all types of electrical devices and products using toggle, chain, push-button fixtures, etc. Finish nuts slip "flush" into the jaw, and when nuts are tightened or loosened the fine surfaces of panels or fixtures are not scratched, marred or damaged in any way.

Information may be obtained from: Chase Manufacturing Co., 5008 West Jefferson Blvd., Los Angeles 6, Calif.



EVERY SERVICE BUSINESSMAN KNOWS THAT:

Handling the Customer

IS AS IMPORTANT AS
REPAIRING THE TV SET

Here are a few customer questions and problems.

Do your servicemen know the best answers?

Customer invites you to have a drink with her.

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

You do some damage to the customer's furniture.

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

You have some screws left over after repairing the set.

Customer insists on keeping an old CRT which you replaced.

"Did I buy a lemon?"

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

Customer asks you to stay for lunch.

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

Children interfere with your tools.

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

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

"My credit is good, charge it."

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

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

"How long will my picture tube last?"

Customer asks you how much money you make.

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

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

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

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



SERVICE MANAGEMENT

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

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

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

September Service Drives — Harvests New Customers

NOW

any selenium rectifier
can be replaced with a

Federal

Federal's
COMPACTED • EYELET TYPE
UNIVERSAL LINE

**meets all replacement needs
where size is a factor**

ONE SOURCE OF SUPPLY

**... Federal's Universal and Regular Lines
provide complete coverage of today's
selenium rectifier requirements!**

SERVICEMEN! Now you can buy all the selenium rectifier types you'll ever need ... from *Federal*!

Whatever the make or rating of the rectifier being replaced, Federal's new, smaller-size *Universal Line*—or Federal's *Regular Line*—will meet all requirements!

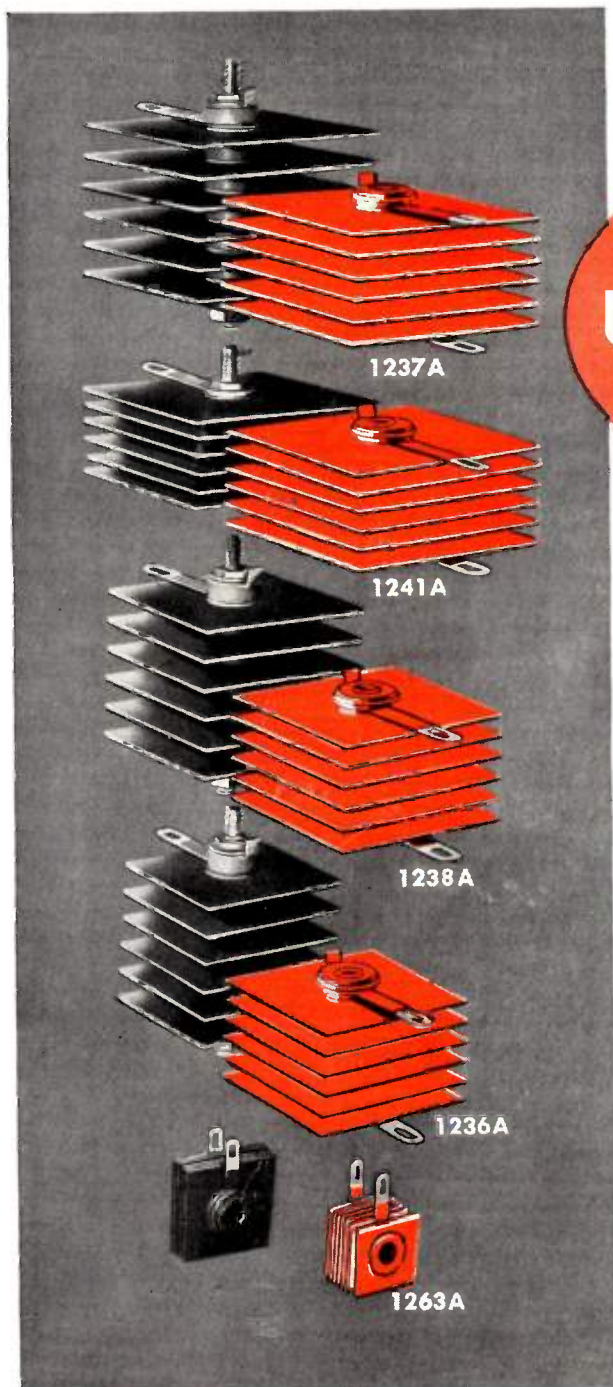
The Universal Line's smaller "H" dimension does the job where space is a factor. The five types are listed below. All are eyelet construction, with 6/32" mounting screw enclosed. They are designed to handle approximately 70% of all replacements.

Make *your* servicing job easier ... more profitable ... by simplifying rectifier procurement. Get *uniform* quality, dependability and performance—plus *long, long life*—by replacing with Federal's *Universal* and *Regular Lines* ... in the easy-to-identify "Rectifier Red." Ask your distributor, or write to Dept. F-35A.

UNIVERSAL LINE RATINGS AND DIMENSIONS:

Type	Max. DC Ma.	"H" Dim. Max.	Plate Size
1263A	65	21/32"±1/32"	11/16" Sq.
1236A	300	1-3/8"±1/32"	1-5/8" Sq.
1238A	350	1-3/8"±1/32"	1-3/4" Sq.
1241A	400	1-1/4"±1/32"	2" Sq.
1237A	500	1-3/8"±1/32"	2" Sq.

Federal has available a new type bolt and nut for mounting rectifiers in tandem. Order bolts by Part No. IDR-6131; nuts by Part No. IDR-6015.



Federal Selenium Rectifiers are listed in
Howard W. Sam's Counter-Facts and Photo Facts

America's first and largest manufacturer of selenium rectifiers

Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
COMPONENTS DIVISION 100 KINGSLAND ROAD CLIFTON, N. J.
In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.



Federal
"S-C-S"
GERMANIUM
DIODES!

—in the industry's
most useful
PACKAGE LINE!
Ask your
Distributor!

September Service Drives — Harvests New Customers