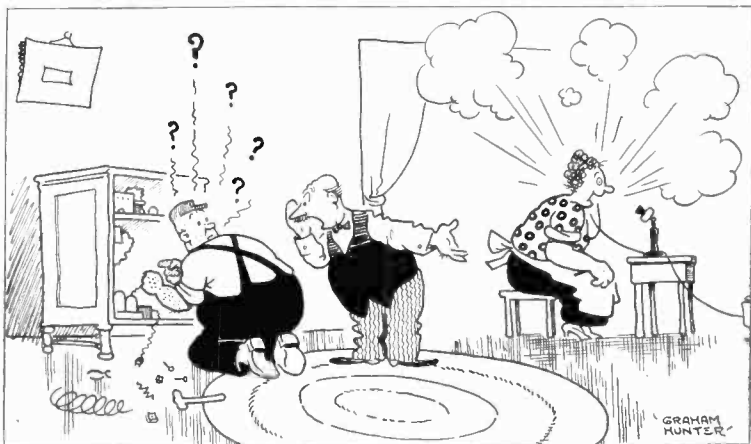


The IRC SERVICER

Published by the Makers of IRC Resistors as a Part of
Their Policy of Helping Servicemen Do Better Work—
and Make More Money Doing It



"Psst! What can I do to tone down this type of loud speaker?"

"Trade associations are an invaluable factor in American business life."

... Quoted from a prominent magazine.



"Right!" says Service Sam.
"And remember: You benefit through your association in direct ratio to the time and enthusiasm you put into it."

More of Those Unusual

Maybe You'll Never Be Called to Handle Jobs Exactly Like These But You'll Find That They Make Interesting and Helpful Reading Nevertheless

“THE chances of this trouble occurring again are practically nil,” explains E. W. Slater of the Radio Service Shop, Port Arthur, Ontario, in submitting the first kit-winning story of the month. “However, it should be useful if it does nothing more than prove to other servicemen as it proved to me that all parts should be regarded guilty until proven innocent.”

This radio was a De Forest-Crosley combination having a model 810 chassis which, thanks to its many connections, is difficult to remove. An electrician who serviced the set previously had gotten the chassis out by the simple expedient of cutting all connecting wires. Now, however, the set operated intermittently as before and Serviceman Slater was called in.



A brief test disclosed a loose wire on the end of the voltage divider resistance feeding the screen grids. With this remedied the set worked perfectly. Then, with his hat and coat on ready to depart, Mr. Slater tapped the set just to prove to the customer that there were no more loose connections. Was his face red when it proceeded to cut off completely? He admits that it was—and especially so when the customer remarked that the electrician had at least been able to get the set to operate satisfactorily for a couple of weeks.

A voltage check disclosed no trouble. Next, Mr. Slater spent an hour and a half going over the chassis but still without results.

“I took the chassis to the shop,” he explains. “Thinking it might be the band-pass condensers in the variable condenser housing, I removed the shield and it was while I was testing here that the trouble was finally found—a short in the variable condensers. It was not a mechanical short and no noise resulted when the condensers were turned. When checking the chassis upside down, a few drops of electrolyte from the mershon condenser must have dropped through the one small crack in the condenser housing shield, forming a drop between plates. Evidently this didn't quite short them but when I tapped the chassis the short was made and the set went dead.”

AVC TROUBLE

Alfred R. Gray of Northwood Ridge, N. H., to whom the second kit of the month is awarded, cites this call as proof that “if your tube tester doesn't have a good gas test, change all tubes controlled by the AVC before becoming suspicious of anything else.”

Here is the story as he writes it:

“My most puzzling radio job was on a Silver-Marshall Model Q which has the same circuit as Model 727-SW. The set worked perfectly as long as the tuning dial was not touched. Different stations could be tuned in for about fifteen minutes. Then volume would drop to almost nothing if the dial was moved.

“No trouble showed up in the variable condenser and all tubes tested satisfactorily. Studying the action of the tuning meter, I decided that there was some intermittent trouble with the AVC or some preceding tube or circuit and so took a 27, a 51 and a 24A and replaced these tubes in the set one at a time. Next, I connected an O-300 micro-ammeter in series with a 1 meg. resistor to make an extremely high resistance voltmeter with which to measure all voltages from tube prongs to ground. This led to the discovery that, as the set was tuned off the sta-

Service Calls

tion, the control grid voltage of the 51 tubes came down from a high negative value to about zero (which was natural due to AVC action)—but then it became slightly positive.

"I suspected a high resistance leak between the plate or screen circuit and the control grid circuit through some condenser or insulation but none was found. When the 51 tubes were removed the positive voltage disappeared which seemed to indicate that the leak was in the tubes. However, I had already changed the tubes one at a time but—well, now you've guessed it! I hadn't changed them both at once and when I did the set worked normally.

"The explanation is that both 51 tubes became slightly gassy after about fifteen minutes but this did not show up on the tube tester. In other words, there was a slight flow of current from control grids to ground through the 100,000 ohm AVC filtering resistor and the 1 meg. AVC plate resistor. This tended to make the control grids positive but as long as the set was tuned to a strong station, the AVC supplied more than enough negative bias to offset this tendency. When the set was detuned the grids became suf-

HA! THERE
YOU ARE!



ficiently positive to reduce the gain to a point where the signal did not operate the AVC. Therefore the grids remained positive until the set was turned off, tuned to a station and turned on again. This trouble might have occurred with almost any radio

HOW MUCH RESISTANCE
IN A CAT?



using 51, 35 or other variable mu tubes having $\frac{1}{2}$ megohm or more between their control grids and ground."

Serviceman Theodore Critzon of Detroit, Michigan, who wins the final kit of the month, warns against cracked carbon resistors.

WATCH THOSE RESISTORS

Called to service a receiver which produced a loud crackling that was intensified by anyone walking across the floor, he naturally suspected gas or water pipes that touched. But such was not the case. Turning the set upside down Mr. Critzon started pulling the connections. Finally he came to a carbon resistor in the plate circuit of the A. F. While, to all outward appearances, this appeared to be in perfect condition, investigation showed that it was cracked completely in half. The paper label hid the defect, at the same time holding the unit together sufficiently to make a poor contact. This resistor was replaced with an IRC and the set operated perfectly. Then Mr. Critzon proceeded to test the remaining carbon resistors and found two which broke under light pressure from his fingers.

He closes with the warning: "Watch these resistors—especially if the set makes a crackling noise and the usual tests fail to disclose the trouble."

Even though it isn't a kit winner, we can't fail to give honorable mention to a letter from L. D. Brown of Morristown, N. J., who adds a new one to the growing list of animal life which has at one time or another interfered with radio set operation. Our menagerie already includes water bugs, mice by the score, wrens, and roaches—and now Mr. Brown proceeds to present us with a cat.

"During a cold spell last winter, one of my customers complained of very weak reception on a Buckingham 80," he writes. "When I went to the house

and started testing, lo and behold if I didn't find the family cat in the chassis—dead and with its head resting on the binding posts which supply field current for the dynamic speaker. The cat had evidently discovered that there was heat radiating from the rectifier or power transformer and, with the temperature hovering close to zero, had sought comfort in the set.

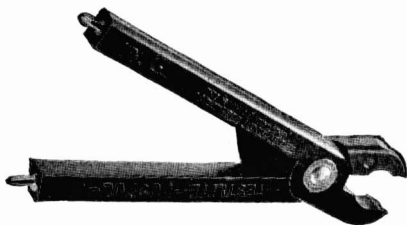
"Remedy: Remove cat and insert a new 80 tube which had been strained by a partial short in the field circuit."

And now that we've learned that cats and radios don't agree, we also learn from Borden & Chesluk of Kingston, Pa., that spark plugs are not necessary to good reception, either. Recently, in servicing a Philco they found a spark plug underneath the chassis where it had shorted the power transformer.

"When I questioned the owner, he claimed he didn't know how the plug got there," writes G. Borden. "Maybe an auto mechanic had tried to fix the set before I was called on the job."

COMBINED TEST-LITE AND FUSE PULLER

A new double purpose tool introduced by the Ideal Commutator Dresser Co. offers a quick, practical means of testing fuses from 110 to 550 Volts A.C.-D.C., and pulling and replacing fuses up to 100 Ampere ca-



capacity. It eliminates the hazards of touching live parts in switch boxes and is also admirably adapted to handling live wires. Bakelite construction insures maximum insulation. A small test lamp is enclosed in one

leg of the plier handles which are equipped with test tips at each end. The fact that IRC Resistors are used is proof of the quality of the tester.

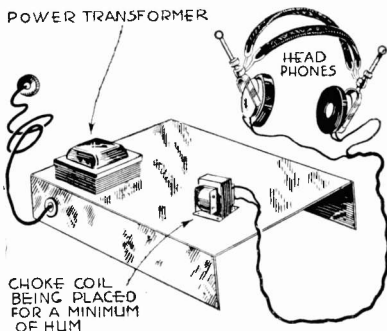
A descriptive folder may be obtained by writing to The Ideal Commutator Dresser Co., Sycamore, Illinois, and mentioning the "IRC SERVICER" by way of introduction.

LOCATING AUDIO TRANSFORMERS & CHOKE COILS

(By the Engineering Staff of the Radio & Television Institute)

In any radio receiver, the audio transformers and the filter choke coils must be carefully placed to avoid hum.

The illustration shows how this may be accomplished. First, connect

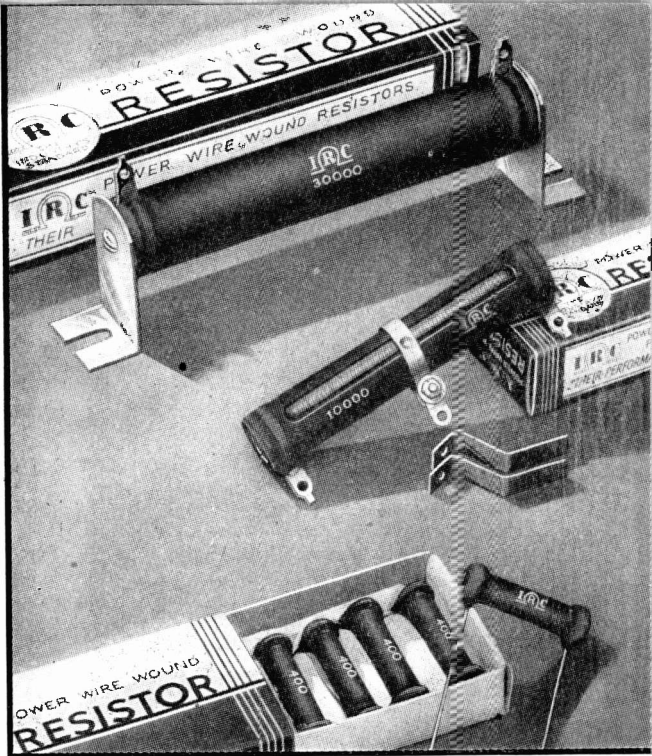


the power transformer to an alternating current source and leave the secondary of this transformer disconnected or open circuited. A set of headphones is then connected to the filter choke or to the primary or secondary of the audio transformer which is being placed in position on the chassis. If the field of the power transformer is very strong and if the hum voltage is being induced in the choke or audio transformer, it will be heard quite distinctly in the headphones. The audio transformer for the choke can then be moved to an angle where hum is eliminated.

This same procedure can be followed when locating audio transformers with respect to filter chokes.

SEND IN THE STORY OF YOUR MOST UNUSUAL SERVICE CALL . . . Not only will it prove helpful to other readers of The Servicer but it may win you a Kit of IRC Resistors. Three Kits are awarded every issue for the stories, which, in the editors' opinion, are most interesting and instructive.

49



BIG INDUSTRIAL USERS CAN'T BE WRONG

Within recent months, forty-nine large electrical and industrial material manufacturers have changed from resistors with old style coating to IRC CEMENT COATED Power Wire Wounds. They changed after convincing tests showed—

- *IRC Cement Coated Resistors last longer under extreme moisture and humidity.*
- *Greater mechanical strength.*
- *The method of applying the IRC coating does not weaken resistance wire as sometimes happens*

under other methods wherein terrific heat must be used.

- *IRC Cement Coating allows lower surface temperature, greater load capacity, and less temperature rise affecting surrounding parts.*

Whether for radio service repair or "ham" requirements, you can't go wrong by specifying IRC POWER Wire Wounds on your next order.

Made in popular wattage sizes, both fixed and adjustable types, their increasing popularity has made possible PRICE REDUCTIONS as of April 15th. Write for Catalog 24.

INTERNATIONAL RESISTANCE CO.
2100 Arch Street, Phila., Pa. (In Canada, 137 Duchess St., Toronto, Ontario)

Service Dope

Mention here of trouble on any particular make of equipment should not be construed as a reflection on the quality of those products. The best of radios will require attention from time to time. Thus, makes are mentioned only as a means of expediting prompt, efficient service on the wide variety of jobs confronting the average radio man.

Readers are cordially invited to contribute their own service kinks to this department. Four IRC 10-Watt Power Wire Wound Resistors are given to those submitting acceptable items.

NEW USE FOR SUPPRESSORS

We were bothered by a persistent radio interference resulting from continuous arc oil burners and occurring between 80 and 200 meters.

After trying numerous filter systems, I hit upon the idea of using IRC spark plug suppressors and found they turned the trick nicely. The interference was completely eliminated. Even with the radio set only a few feet away from the oil burner, reception was perfect.

On a Williams Oil-O-Matic installation, for instance, a suppressor was inserted between the high voltage cable and electrode on one side only.

While I don't claim this system will work on all installations, it did produce satisfactory results here on burners of several different makes.

CHARLES E. MACCARN, *Waterville, Maine.*

SILVERTONE MODEL 1506

In case of no reception, look either for an open I. F. transformer primary, an open in either section of the voltage divider, or a shorted .01 mfd. by-pass condenser between the 47 plate and grid.

If the trouble is not found in one of these or if there is still no reception above 1200 k. c., try a new 24 tube. Should an I. F. transformer prove defective, I have found it advisable to replace both I. F. transformers as a safeguard against future trouble.

THOMAS J. TUCCI, *Philadelphia, Pa.*

MAJESTIC 50

When volume cannot be turned down, a satisfactory repair may be made simply by placing a 10,000 ohms

IRC Resistor between the center tap of the front section of control to the white lead on rear of control. We have tried this plan on several models and have had no comebacks.

V. M. MOEN, *Tracy, Minnesota.*

RCA-VICTOR R-37-P and GRUNOW 501

If these sets go dead with the exception of a continuous popping, look for trouble in an open filter condenser. In the RCA this will likely be the 4 mfd. condenser "C-30" and, in the Grunow, the 8 mfd. condenser.

J. L. BAER, *Alexandria, Nebraska.*

CROSLEY MODEL 129

If oscillation persists on the high frequencies after all the usual tests have been made, check the value of the fixed portion of the volume control. This fixed resistance should be 200 ohms and is very critical. In some instances, I have found it advisable to raise the value to 225 ohms by placing an external resistance in series with the fixed resistance of the volume control.

J. R. QUINLIVAN, JR., *Mobile, Ala.*

MOTOROLA TWIN EIGHT AND DUAL SIX

If the high frequency end of the dial goes dead and the set acts as though the condenser plates were shorting, try replacing the oscillator tube.

In case of a buzzing noise coming from the vibrator pack and being audible through signals or with volume control off, tighten the self-tapping screw which holds the vibrator pack in the housing. This is located

on the bottom of the set and also holds the cover on at the bottom. When it becomes loose a poor ground to the vibrator pack sometimes results.

S. G. WESCOAT (W4CWY); *Charleston, South Carolina.*

SILVERTONE "SUPERS"

If the complaint is motor-boating or a slow "popping" noise at around 1400 on the dial and if voltages, tubes, output grid circuit and by-pass condensers test out, look to the resistor in series with the oscillator grid.

Chances are you will find that it has either opened or has too high an ohmage value. Replace with an IRC F- $\frac{1}{2}$ ($\frac{1}{2}$ -watt) Metallized of 100,000 ohms. Also check the condenser shunted across this resistor.

THEODORE CRITZON, *Detroit, Mich.*

ZENITH MODELS 35-P to 40-P

If reception is noisy, look for high resistance ground on the secondary of the original audio transformers. In several cases, I have found a green corrosive formation under the terminal lugs on the secondary side of transformers. Usually this trouble does not show up on the regular ohmmeter tests.

JOHN E. TRIESNER, *Bronx, New York.*

AUTO RADIO NOISE SUPPRESSION HINT

After checking quite a few automobile radios for spark noises we have, in many cases, found poor cord connections in the distributor suppressors themselves to be causing much of the trouble. The solution is to replace it with an IRC Suppressor (Type MCA, MC or MD). IRC suppressor end contacts are made to "stay put" under the most severe vibration.

LUTHER SHAFFNER, *Lowry City, Mo.*

RCA SUPERHET and G-E S-22

Critical volume control on these models is frequently due to someone having substituted 224's for the original 33's found in R. F. and first I. F. stage.

JOHN E. TRIESNER, *Bronx, New York.*

RCA-VICTOR 280

Continuous or intermittent lack of volume with a seemingly imperative volume control is sometimes due to an open in the reactor coil L-16 of 3200 ohms. One end of this coil is connected inconspicuously to the volume control. The leads from the coil are very fine and should be checked.

ALEX. BUDNIK, *Irvington, N. J.*

HUDSON-TERRAPLANE INSTALLATIONS

Intermittent scratching noise when the engine is speeded up might lead one to suspect a defective generator condenser. However, shield the aerial lead at the top of the corner post and ground at the metal corner of the top and at the bottom of the post to the dash. The aerial lead should, of course, be shielded to the set.

S. G. WESCOAT (W4CWY), *Charleston, South Carolina.*

Resistors, Reason & Rhyme

Serviceman Jim Kirk, of Oakland, California, relates the story of a cheap midget brought to his shop for repairs. The manufacturer of this set had evidently reasoned that, inasmuch as a resistor is a very small thing anyway and, in this particular set, would carry no great load, it would be just as well to install a cheap one. Well, here is what that one little resistor in the grid return of the 45 output did in that particular case:

By opening the grid, it made the 45 draw excessive current. The excessive current, drawn through the primary of the output transformer, set fire to it, and eventually reduced the speaker to ashes. The 80 rectifier was destroyed. The cabinet caught fire from the burning speaker. Only prompt action saved the house from joining the fireworks. And all this for want of a dependable resistor!

Which reminds us:

"For want of a nail, the shoe was lost;

For want of a shoe, the horse was lost;

For want of a horse, the rider was lost;

For want of a rider, the kingdom was lost—

All for the want of a horse shoe nail."

Check!

These 10 Reasons Why You Should Use



IR C
REG. U. S. PAT. OFF.

Metallized

RESISTORS

- ✓ Used by U. S. Army and Navy and other government departments here and abroad.
- ✓ Famous Metallized resistance principle has stood the test of time.
- ✓ Not made to excel in one particular feature or so-called "test"—but to give *balanced* performance in all essential resistor characteristics.
- ✓ The only resistors selected for *ALL* the Byrd Expeditions.
- ✓ ACCURATE wattage ratings—based on R. M. A. standards.
- ✓ Non-inductive—show only nominal change in resistance value on high frequencies.
- ✓ Moisture-proof and humidity-proof.
- ✓ Remain accurate at all practical voltages.
- ✓ Made and guaranteed by a company which, since the beginning of radio, has specialized on quality resistance units.

✓ NEW LOW PRICES (*)

1/3-Watt, 1/2-Watt, and 1-Watt, **12¢ Net**
List 20¢ each
2-Watt, List 30¢ each **18¢ Net**

WRITE FOR NEW METALLIZED CATALOG

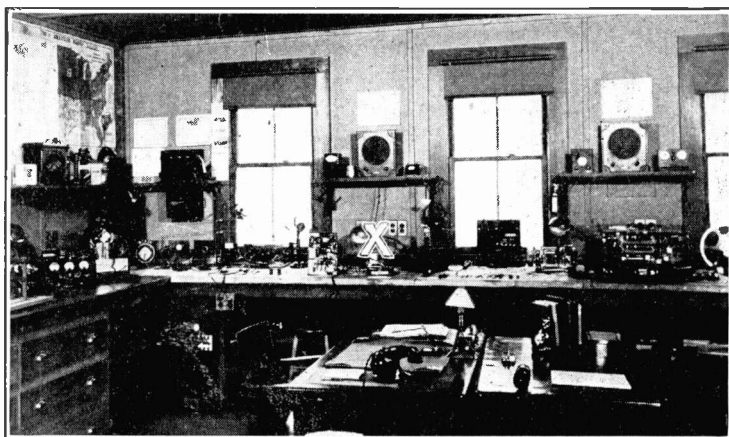
INTERNATIONAL RESISTANCE COMPANY

2100 Arch Street, Philadelphia, Pa.

(In Canada, 187 Duchess Street, Toronto, Ont.)

(*) Prices slightly higher in Canada.

X MARKS THE SPOT



No, this isn't a murder mystery—just an interesting picture of the well-equipped service shop of Serviceman Alfred M. Winchell in Waterbury, Conn. X marks the spot where one of the handiest service tools of all may be seen—the new IRC Dual Resistance Indicator.

Service benches are arranged around all four walls. Power panels are shown at left. All testing equipment is portable. Small parts—including IRC Resistors, of course—are kept in the many drawers which have been provided. Larger parts are kept on shelves or in bins in an adjacent room which also has drive-in facilities for auto radio servicing. The "mike" marks the location of Mr. Winchell's complete short wave station.

IRC GUIDE OWNERS ATTENTION!

IN line with a policy of keeping our service helps strictly up-to-the-minute, we have discontinued the IRC Resistor Replacement Guide. Efforts will now be concentrated to an even greater extent on the IRC Servicer and other helps to be announced in the near future.

For a long time, the Replacement Guide contained information that was not available in convenient form through any other source. Lately, however, it has been almost impossible to include complete current information in the Guide because of the number and frequency of resistance changes in modern radio receivers. We believe that such data can now best be obtained from publications such as the Rider and Gernsback

manuals and other publications of a similar nature.

Thus the IRC Resistor Replacement Guide has served its purpose—and served it well. Thousands upon thousands have been supplied to servicemen to whom, for years, they proved an invaluable aid. Even in their present form, they will prove helpful for some time to come. However, IRC is now convinced that, rather than continuing with the Guide, it can be of still greater service along somewhat different lines to users of its products and it is with this in mind that efforts are being concentrated on the "IRC Servicer" and other helps of an equally helpful type.

Owners of the IRC Resistor Replacement Guide will automatically continue on the mailing list to receive the IRC Servicer.

News and Near News

SERVICE DIFFICULTIES in Europe would seem greatly increased by the fact that a number of broadcasting stations deliberately heterodyne each other. With neighboring nations ridden by conflicting political and social tides, it is only natural that many should turn to the radio as a most effective means of spreading propaganda. Moreover, these broadcasts are not always for home consumption. Not infrequently a large station will broadcast a political address given in the language of a neighboring nation and designed primarily to spread propaganda there. Then, by way of defense, the latter nation may not only reply in kind but there have been complaints that certain stations have purposely broadcast their regular programs over a wide band with the intent of heterodyning foreign competitors and rendering their political broadcasts unintelligible. There have been still farther complaints that stations near national borders have even gone so far as to change wave lengths temporarily, disguise their programs and attempt to foist them on listeners in the neighboring nation as broadcasts from their own stations.

All of which indicates to us that European servicemen must have a lot of explaining to do in getting customers to understand the occasional queer action of their receivers.

FOUR THOUSAND POLICE CARS in 128 municipalities throughout the United States are now equipped with radio receivers according to *Electronics* magazine.

Three years ago, the Federal Radio Commission assigned 9 frequencies for police use. This was later increased to 11 and now the plan is to make 20 channels available for state and municipal police use throughout the country. The police radio equipment has proved so successful it is expected that, in the not far distant future, many cars will also be equipped with low power transmitting sets.

Thus servicemen who have made it a point of knowing what short waves and motor radio are all about should

find the local police department one of their best prospects. And if you live in a state capitol city, by all means see the men in charge of radio for the state police. Eight states already have radio police communication systems.

A SHORT WAVE MANUAL

has been published by the Hammarlund Manufacturing Co., 424 W. 33rd street, New York City. Its 16 pages contain the latest Short Wave news, as well as construction details on 12 popular receivers and power supplies. More than 10,000 words are devoted to descriptions, analyses, and details on Short Wave kits. Profusely illustrated with actual photographs of equipment, as well as circuit diagrams and picture wiring diagrams, this book is an ideal guide both for the beginner and those interested in studying Short Wave receiver construction.

GOSDEN AND CORRELL, far

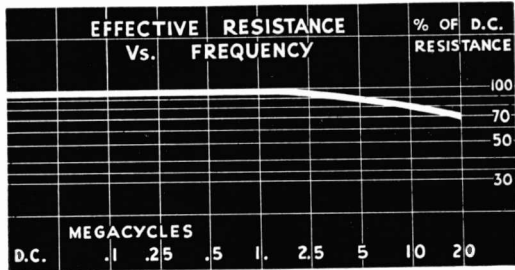
better known as Amos 'n' Andy, have, in the course of their radio careers, spoken 3,500,000 words into space. Some idea of just how many words that is can be obtained from the fact that the average best seller novel ranges from 60,000 to 80,000 words. Moreover, these two radio stars write all of their own "stuff." Neither had ever been on the stage previous to facing the mike for the first time and they started broadcasting merely for the fun of it back in 1925 when volunteer radio talent was the order of the day. But how times change. They're in the \$100,000-a-Year class now!

SERVICEMAN ED PETZGOLD of South Milwaukee, Wisconsin, speaking:

"Have been using IRC Resistors for the past four years and have yet to have one breakdown when used on the proper load. Fact is we have had one on test in a set for the past year that is loaded about 75% over its rated capacity—and it's still going strong. Some record, I'll say!"

Thanx, Ed. Come again!

The results of this impartial test on 1.0 meg. IRC Metallized Resistors show plainer than words why these units excel for exacting Short Wave requirements.



WHAT A HIGH FREQUENCY TEST SHOWED ABOUT RESISTORS

AS many servicemen and amateurs know (and as others have discovered to their sorrow), resistance requirements for various SHORT WAVE circuits are the most exacting to be found in modern radio receivers. Resistors which might serve in ordinary applications fall down so miserably at the higher frequencies when used in certain applications such as short wave oscillator circuits, AVC filter circuits or as grid leaks across r. f. tubes, as to interfere seriously with results. It is, in fact, not uncommon for ordinary units to change in resistance from their D.C. value as much as 100 per cent and 200 per cent under these high frequency conditions.

Thanks to the fact that they are of the filament type, rather than being solid extruded or composition units, IRC Metallized Resistors have long been noted for their non-reactive characteristic which makes them unexcelled for short wave circuits of the type mentioned. Recently, they were tested impartially by an outside testing laboratory under actual short wave high frequency conditions with results for standard one megohm F-1 (1-Watt) resistors as shown on the accompanying chart. This test by a strictly impartial authority shows a resistance change of only about 30 per cent at 20 megacycles—a relatively small change for such a high frequency and one which tells plainer than words why IRC Metallized Resistors are so generally specified for this type of work. Further tests

showed that they will likewise give entirely satisfactory results on even higher frequencies where the change on some types of units might be so great as to make anything like accurate calculations difficult if not actually impossible.

... Just another reason why discriminating servicemen and amateurs standardize on IRC not only for the exacting short wave needs but for ALL radio requirements.

Hot Stuff!

"Some time ago," writes Jack Barrette, of Baltimore, Md., "we put a 2-watt IRC Metallized Resistor in a customer's radio. A few months later this set stopped playing. The trouble lay in a shorted by-pass condenser which placed a heavy drain through this IRC Resistor. In fact, the resistor had become so hot that its paper label had charred and the metal ends had partially melted and were hanging like tear drops—but the resistor was NOT burnt out!

"This little incident certainly sold me on the superiority of IRC's!"

Almost half of all the radio sets in the world are in the United States. According to recent government estimates there are approximately 42,516,904 receivers in existence today—and about 18,000,000 of them are in this country. Europe has slightly over 18,000,000, but there are less than 1,000,000 radios in South America, and not quite 2,000,000 in Asia.

**Service
Sam's
Buddy
Says:**



"Your daughter is a good worker but she talks too much," wrote the school teacher—

And her Daddy replied: "You should meet her mother."

It's all right to meet a competitor's price—provided in doing so you don't meet his possibility of going out of business in short order.

"It's been a terrible day," confessed the radio dealer. "That kid serviceman of mine asked off to go to his grandmother's funeral. I knew that old gag and said if that was the case, I guessed I'd go with him."

"Yeh? What happened then?"

"That's where I lost out. It was his grandmother's funeral!"

A man best improves his condition by improving himself.

During a recent Los Angeles service meeting, so the story goes, the speaker stated that there were between 75,000 and 100,000 servicemen.

"H——!" broke in a big fellow in the front row. "There are that many in Los Angeles!"

SERVICEMAN: "Maybe I'll trade in this truck of mine. What do you think I ought to get on it?"

FRIEND: "A good mechanic."

There are two kinds of people—happy ones and those who take themselves too seriously.

SERVICEMAN: "How's the radio since I put on that new loudspeaker?"

CUSTOMER: "Wonderful! When I turn it on full I can't hear a word my wife says."

No man ever won greatness by waiting for instructions.

WIFE (at the beach): "My chin is getting all sunburnt."

HUBBY: "What do you care? You've got another."

"Why are you marking that letter to Jones 'Personal'?"

"I want his wife to be sure and open it."

SERVICEMAN (attempting to tune in foreign S. W. stations): "This is nothing to what we'll be hearing a few years from now. Even today, radio is still in its infancy."

BORED CUSTOMER: "I thought so, judging from the howls I've been hearing."

Give a woman an inch and she'll make a new evening dress out of it.

Then there's the serviceman who has been making his young son sleep on the mantlepiece every night. If he keeps it up three weeks longer dad figures the kid's picture will be in "Believe It or Not."

A Western farmer claims to own a cow who gets the hiccoughs regularly and churns her own butter.

HOTEL MANAGER: "Do you want the porter to call you?"

PARTS SALESMAN: "No thanks. I always get awake at seven."

MANAGER: "Then would you mind calling the porter?"

Sam says he isn't going to send his son to college but he will buy him a fur overcoat.

"Dear Doctor," wrote the excited serviceman's wife in a note to the M. D., "Come quickly. John's temperature is 148 degrees."

To which the Doc replied: "Dear Madam: I'm sorry but the case is beyond my skill. I'd suggest sending for the fire engine!"

Then there's the story of the serviceman who found a new use for old razor blades. He stuffed a sofa pillow with 'em and sent it to his mother-in-law for Christmas.

THE **IRC** SERVICER

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Vol. II

MARCH-APRIL, 1935

No. IV

WHO SHALL ORGANIZE servicemen on a national scale and just how it shall be done are debated questions these days.

MEANWHILE, effective local organization looms equally important—perhaps much more so. Slowly but surely evils have crept into servicing which, according to our way of looking at it, only strong associations can stamp out.

LET'S TAKE a single case in point: In San Antonio, Texas, the local association has uncovered a service racket of no mean proportions. In several instances, new radio receivers known to be in good condition were placed by the association in certain homes according to the story as described in *The National Technician*. A single connection was then purposely broken in the receivers and a service call sent to various "service" organizations suspected of racketeering. In one instance, the serviceman who came on such a call took the set to the shop. He returned it with a bill for \$4.25 covering a new tube, a coupling condenser and a resistor, none of which, so it is claimed, were actually installed. Nor is that all. Of the six new tubes in the set, four are said to have been removed and replaced with old ones!

Several similar investigations by the San Antonio Association disclosed racketeering activities almost equally as vicious.

LIKE OTHER MANUFACTURERS, the International Resistance Company wants to sell its products. But it is not anxious to sell them to servicemen who use them

(or even claim to use 'em) under these conditions.

Service racketeering such as that allegedly disclosed in San Antonio is bound to become known to the public sooner or later. And then the real repercussions will commence! Unless there is a strong, well-financed local association ready and willing to step into the picture, the service trade in general may suffer severely.

WHAT ANY ONE serviceman can say or do individually to counteract racketeering of this sort means pitifully little. But what an honest, square-shooting group of servicemen associated for the common good can accomplish might well spell the difference between near disaster and better, more profitable business for all concerned—plus better, more efficient service work for the radio set owning public as well.

THAT IS WHY we raise our voice on behalf of strong local organization as forming the bulwark of any association activity, either state or national. And that is why we also urge every thinking serviceman to take a full and active part in his local service group.

True, it may become monotonous at times. True, it is frequently more pleasant to spend an evening at home than in a smoke-filled meeting room. But it pays!

IF IT HADN'T BEEN for the Minute Men of Lexington and Concord, the entire history of the United States might have been vastly changed.

And the strong local associations stand as the Minute Men of the Radio Service Industry.

SWAP OR SELL SECTION

It is requested that servicemen wishing to advertise in this section send 25c (cash or stamps) to help cover cost of forwarding replies which frequently range from 25 to 50 for a single ad. Make your copy brief, clear and to the point. Advertisements will be run as promptly as possible in the order of their receipt. The right is reserved to reject any not deemed suitable. When sending equipment in response to advertisers, we suggest that it go express C. O. D. "subject to inspection" and with the sender's name plainly marked on the package.

SWAP OR SELL—Want a 3 in. 0-1 mil. meter. Will swap Weston No. 506 0-1 mil. meter; Weston 506 0-5 mil.; 4 Readrite meters, 0-5 mil., 0-10 mil., 0-10 D.C. volts; 0-15 D.C. volts. T. S. Writhtson, c/o IRC Servicer.

SWAP OR SELL—Want Rider's Service Manuals, 3 and 4—or Gernback No. 4. Will trade or sell cheap. Sterling Model R 522 Set Analyzer, factory revamped for pentode and 6 prong tubes. It tests tubes by grid change method, and all circuits. Ballantyne & Comfort Electric Co., c/o IRC Servicer.

FOR SALE—Weston No. 590 Oscillator, used very little, cost \$115—\$35 cash takes it. Jewell Pattern 210 Tube Tester, fine condition, tests 4-5-6 prong tubes and 7 prong with one adaptor. Cost \$65—yours for \$15 cash. Hickok Set Tester 5 meters No. SG4700 Perfect condition, cost \$115. Will sell for \$25 cash. W. H. Wentz, c/o IRC Servicer.

SWAP OR SELL—Want test equipment and meters, prefer Weston or Jewell. Have Short Wave sets of all kinds; or will buy test equipment, meters or sets. Glenn Watt, c/o IRC Servicer.

WILL BUY—A National FB 7 Receiver with coils—with or without crystal—tubes optional. Must be in very good condition. Harry F. Wielebski, c/o IRC Servicer.

SWAP OR SELL—Want 2 1/4 x 3 3/4 Graflex camera with f4.5 lens. Will swap RCA home study course covering radio constructing, servicing, television, code, etc., or will sell for \$25. Will also include 2 years' subscription of Radio News and 1 year of Radio Craft (1933-1934). Roderick Southworth, c/o IRC Servicer.

FOR SALE—400-B Supreme Analyzer in special small case with built-in resistors instead of 100 watt bulb. Cost \$139.50, will sell for \$22 cash. King Radio Service Co., c/o IRC Servicer.

WILL BUY—Volumes 3 and 4 of Rider's Manuals, a 5 in. or 7 in Jewell or Weston voltmeter; also a Jewell Model 214, 538 or 533 tube tester. Write and state price. Kyburz Radio Shop, c/o IRC Servicer.

SWAP OR SELL—Jewell Oscillator Model 560 in beautiful leather case, complete with tubes and batteries; also Weston 0 to 1 milliammeter Model 301 flush type three inch. Make offer. Real Radio & Elec. Service, c/o IRC Servicer.

FOR SALE—A.C. Pilot Super Wasp All Wave Receiver, complete. Make offer. Paramount Radio Service Co., c/o IRC Servicer.

WILL TRADE—One Acme portable tube tester that will test all tubes, \$12.50 (Neon Test); one Philco all purpose No. 048 tester, analyzer and oscillator, \$35; 1 Jewell No. 95 tester. What have you to trade? C. A. Lampel, c/o IRC Servicer.

FOR SALE—Readrite, Model 850 capacity tester. Used only once. Still in original container. Cost \$16.50. Will sell for \$6.50. Also Wyco type Universal Motor saw with 1/4 H.P. motor. Used very little. Cost \$35. Will sell for \$8.50. Dexter Becker, c/o IRC Servicer.

WILL SELL—Remington typewriter, \$8; Complete Radio Course cost \$125. for \$20; Complete Code Practice set including spring motor, six practice lessons, key, high frequency buzzer and case for set, \$10. Wilbur Bergson, c/o IRC Servicer.

WILL BUY—Used carbon mikes. Hurlbut Sound Radio Service, c/o IRC Servicer.

FOR SALE—One Radio City tube tester, tests all the latest model tubes. \$10. James M. Hyde, c/o IRC Servicer.

WILL TRADE—Universal Phono-Motor 78 RPM. 110 A.C. and D.C., in first class condition, for Auto Radio, 110 Volt, 60 cycle, 100 Watt Generator, Portable short wave set. Radio Manuals, or what have you? Jack Owens, c/o IRC Servicer.

WANTED—Pratt & Whitney Bench lathe (used). Must be in first class condition. R. H. Williams, Regina, Sask., c/o IRC Servicer.

FOR SALE—N.R.I. Radio Course; N.R.I. Code Course, no instruments; Readrite No. 407 tube tester with short test; Readrite 0-500 v.d.c., 0-10 v.a.c., 0-20-100 d.c. M.A. meters; Volume 1 Official Radio Manual, no supplements; Readrite No. 500 ohmmeter with built-in low range switch. Best offer takes any or all. Andrew F. Benedict, Sharon, Pa.

SWAP OR SELL—Complete Electrical Engineering course, R.C.A. Institute's Radio Course, Readrite Model 710 Analyzer, for cash or what have you? Mitchell Dohmlo, Jr., c/o IRC Servicer.

WANTED—One converter 32 volts DC to 110 volts AC, 60 cycle, 200 to 500 watt. Can be burned out but must have original winding. John Wiegand, Jr., c/o IRC Servicer.

FOR SALE—Weston 547 Analyzer, \$25; Jewell 209 Tube Checker and NA-ALD adapter 950 XYL, \$10; Gernsback Service Manual 1 and 2, \$6; Rider's Manual 1, 2 and 3, \$12.50; Weston Thermo Galvanometer Current Squared RF Model 425, \$8.50. S.A. Frank, c/o IRC Servicer.

POSITION WANTED—Radio and Electrical Engineer, expert designer and draftsman, thorough theoretical and practical knowledge of radio receiving sets and P.A. Systems, inventive ability, mathematician, 15 years experience. Desires position as engineer or designer. Now in Philadelphia. Louis B. Sklar, c/o IRC Servicer.

SWAP OR SELL—Want service manuals and all wave oscillator. Will swap shotgun 12-gauge Winchester pump six shots full choke, shot about one hundred times. Cost \$40. Also violin in good condition. Cost \$30. Chisholm's Radio Service, c/o IRC Servicer.

WILL TRADE—Large list of service and amateur parts, such as meters, etc., for a list of parts I need. If desired will sell for cash at half present wholesale prices. Send for lists. Jim Kirk, c/o IRC Servicer.

FOR SALE—Model C Confidence Tube Tester, \$22.50. Model 444 Supreme 5 unit radio tester, \$42.50. Refrigeradio Sales & Service Co., c/o IRC Servicer.

SWAP OR SELL — Carter 32 V Generator, new Weston 1000 V.D.C. meter with external resistor, radio, electric pick-up, neon sign transformer, miscellaneous parts. Want copies "Q S T," "RADIO," "RADIO CRAFT," "SHORT WAVE CRAFT," "RADIO WORLD." Want 6 V. input dynamotor with 300 to 500 V. output, or what have you? E. Carter, c/o IRC Servicer.

FOR SALE—6 meter test panel for only \$10.00. W. C. Edens, c/o IRC Servicer.

SWAP OR SELL—Six sets, of four each. K-457 Philcocons in original sealed cartons. Also have some 1/2 HP DC motors. Can use good meters or what have you? Max Leavy, c/o IRC Servicer.

POSITION WANTED — Young man, 23 years old, single, located in western W. Va., wants steady radio work anywhere in U. S. Five years experience in radio service work. Has necessary tools and test equipment. Will work for small salary. References. M. Diamond, c/o IRC Servicer.

WILL BUY—or offer radio parts to swap for Silver-Marshall 727, or S.M. 714 Tuner. They need not be in working condition, but must be a bargain. Joseph A. Omela, c/o IRC Servicer.

FOR SALE—Weston 566 Type 3 set analyzer in good condition. Beautiful black bakelite case with two adapters, \$30. Supreme Model 222 Multimeter in excellent condition, \$26. Vito Daidone, c/o IRC Servicer.

SWAP—Jewell model 563 Oscillator in perfect condition for Riders Manual Nos. 1, 2 and 3, or will sell for \$25 cash. Wm. A. Ellis, c/o IRC Servicer.

SWAP OR SELL—One complete drafting outfit with table (Herman make). Want all wave oscillator, analyzer and English reading tube tester. Also want Rider's or Gernsback's Service Manuals, volumes 3 and 4. Will pay cash for reasonable offers. Durkot Radio Service, c/o IRC Servicer.

FOR SALE—Croft Library of Practical Electricity, in 8 volumes. Good condition. \$13 cash. Herbert J. Mayer, c/o IRC Servicer.

SWAP OR SELL—Want good used set analyzer, Rider's Service Manuals or good all-electric car radio. Will swap 1 Tungar 2 amp. and trickle charger, and one 6 amp. Perflex battery charger 1 to 15 batteries. R. C. Hyde, c/o IRC Servicer.

SWAP OR SELL—Hickok S-G-4600 Analyzer with carrying case. Cost \$155. Will sell for \$20 or swap for what have you? Berg's Radio Service, c/o IRC Servicer.

WANTED—Rider's Manuals 1, 2, 3 and 4. Will pay cash. Berg's Radio Service, c/o IRC Servicer.

SWAP OR SELL—Want Rider's Manuals, tube tester, oscillator, or what have you? Will swap used Radio Course covering construction, radio merchandising, servicing, transmitting, television and broadcasting, etc. Cost over \$100. Will sell for \$20 cash. James H. Mills, c/o IRC Servicer.

POSITION WANTED—Radio Serviceman with ten years experience wants job with reliable concern in Northern or Western States. References furnished. Ex-amateur operator W4ATL. S. A. Childs, Jr., c/o IRC Servicer.

POSITION WANTED—Man 25 years old with B.S. Degree in Electrical Engineering, also completed course offered by N.R.I. specializing in Sound Pictures and Public Address Systems, wants steady work. Interested in organizing radio servicemen. Salary of secondary importance. References furnished. E. D. Penn, c/o IRC Servicer.

SWAP—Weston Model 612 Photoelectric Cell, complete new unit—will trade for 15 Watt Public Address System—must be good. H. Elliot, c/o IRC Servicer.

FOR SALE—A built-up radio repair trade in a city of 85,000. Also a gas trade (Cooking Gas) in tanks for use in rural districts. Reason for selling is receipt of government appointment. Carl R. Hansen, c/o IRC Servicer.

WANTED—Service manuals, test equipment, or what have you? Will swap or sell American Institute Business Administration Course including texts; business science talks, lectures, and problems; also misc. radio parts. Bernard L. Kirkpatrick, c/o IRC Servicer.

WANTED—Volumes 2, 3, and 4 of Rider's Service Manual, in exchange for either a Savage 22 Bolt Action rifle or a set of Lufkin 1 to 2 inch and 2 to 3 inch micrometers. Would pay cash if price is right. M. P. Anderson, c/o IRC Servicer.

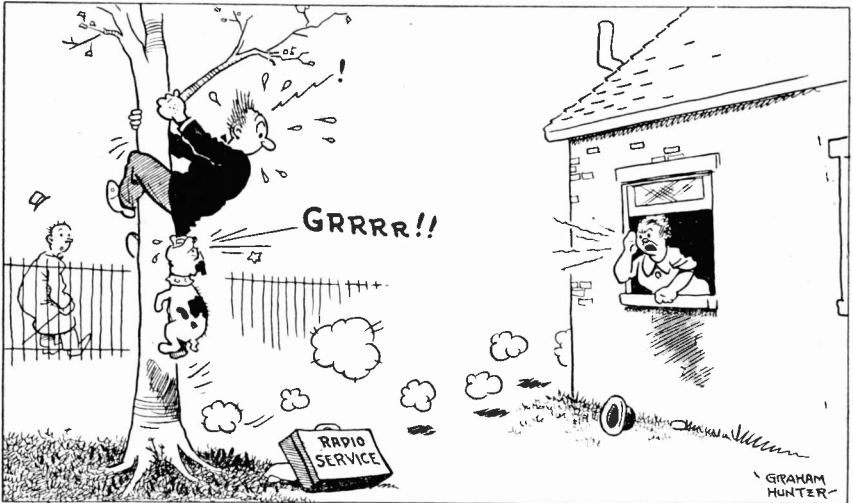
SWAP OR SELL—One Lafayette 3.5 watt 2A5 Amplifier complete with tubes—nearly new. Also a Magnavox—80-110 V. A.C.—self excited dynamic speaker used with above amplifier, \$12.50 cash or what have you? Emil Veith, c/o IRC Servicer.

NOTE

Please be patient if your advertisement does not appear in this issue. Ads are run as fast as space permits and in the order of their receipt.

THE **IRC** SERVICER

Page Fifteen



Housewife: "See here, young man! I sent for you to fix the radio—not to amuse the dog!"

DOES RADIO ADD TO THE DANGERS OF DRIVING?

AUTO radio has frequently been condemned on the score that it adds to the dangers of driving. This assumption, however, is hit a hard blow by facts evolved by General Motors Corporation as a result of mailing questionnaires to more than two million car owners. These were designed to draw direct from potential purchasers their preference and tastes in motor cars.

Contrary to the popular impression, it was learned that members of the younger generation want a top cruising speed only 3-7/10 miles per hour greater than that voted for by the adults. Also, the general subject of safety was stressed more frequently by youths than grown-ups.

"However," states H. G. Weaver, Director of the General Motors Customers Research Staff, "the most outstanding point of difference between the young people and the adult group is that an overwhelming majority of the boys and girls want radios in their cars and it was pointed out over and

over again that radio equipment makes for slower, safer driving. As one college chap expressed it, 'Even the fastest kind of fox trot doesn't blend nicely with a speed of over 50 miles an hour—and with waltz-time I find myself slowing down to 40 or less.'

We print this as something worth remembering should the question of driving safety pop up to interfere with the sale of an auto radio during the forthcoming Big Selling Season on this type of receiver.

Still Growing

From two employees to a staff of fifteen plus an eight-times increase in floor space during so-called depression years, is the record of Hatry & Young, Inc., Hartford, Conn., well-known distributors of IRC Resistors and other quality lines, who, on March 1st, established a second wholesale branch at 86 Meadow St., New Haven. Complete stocks of service and amateur material are maintained at this new store.