



An Industrial Opportunity— Will You Miss It?

Something is happening in the radio industry that makes the oldest inhabitant put on his "specs" and say, "There aint so sich animal."

And that something is an upswing in sales that has never been known before at this season of the year. The radio industry attained its majority roughly ten years ago and all of us have been accustomed to relaxing a bit, so far as sales effort is concerned, along about February or March.

So far as that goes, a lot of people did their usual relaxing in 1933 and, certainly, what with the bank holiday and the general upset in economic conditions, this breath-taking could easily be justified.

However, despite the untoward conditions, one of two things happened; either the public got all hot and bothered about the available merchandise, or there were some people in the industry who had evidently never heard about the annual season slump.

Be that as it may, by now everyone connected with the radio industry should know that instead of coasting down into the valley of apathy, total sales figures are actually mounting with increasing vigor.

Of course the increased interest in "personal" sets, particularly of the A. C.-D. C. type, has been a big factor in maintaining public interest, but totally aside from that, something is taking place that not even the bravest seer would have dared to predict on January 1st.

In a single sentence—auto radio has burst its bounds and is successfully breaking all the heretofore recognized precedents of the industry.

A certain individual, who thoroughly understands this industry and who has recently visited twenty-four of the country's major markets, makes the bold prediction that if the radio business as a whole realizes its opportunity, the sales of automobile radio might even reach the startling figure of 700,000 chassis during 1933. But if this truly astounding figure is to be reached, it means tremendous progressiveness and vision on the part of everyone.

It is a little difficult to put a finger on the real reason for the situation which exists. Performance? Yes, decidedly. Price? To some extent. But probably greater than either of these reasons is the fact that the public, after due contemplation, have suddenly realized the satisfaction and pleasure to be had from automobile radio.

Some manufacturers already have thoroughly acceptable sets on the market. We happen to know that wherever this condition exists, the makers are working against large back orders. Manufacturers whose sets are not satisfactory, in many cases realize the deficiencies and are laboring night and day to overcome them.

There still remains, however, a class of manufacturers who are not alive to the possibilities of this wonderful market. We suggest to all such that they spend three or four days in the field and find out just what is going on.

When we come to consider wholesale distributors, here we find a picture somewhat similar to that existing with the manufacturers. A few distributors with hot lines are burning up the roads that lead to their best dealers. Another group of distributors are taking what business comes to them and have not, unfortunately, sensed the opportunity which so definitely exists. In this class fall those distributors who always begin to taper off their activities in the spring. They let two or three salesmen go and begin to forget about radio for the summer solstice. Still a third class of distributors, and unfortunately this is all too large, have not lifted a finger to share in the great profit possibilities of automobile radio.

It is when we come to the dealer that we probably find the greatest interest of all, although here again it breaks down between those who have sensed the great opportunity and those who are conducting their business on the basis of what happened last year and the year before.

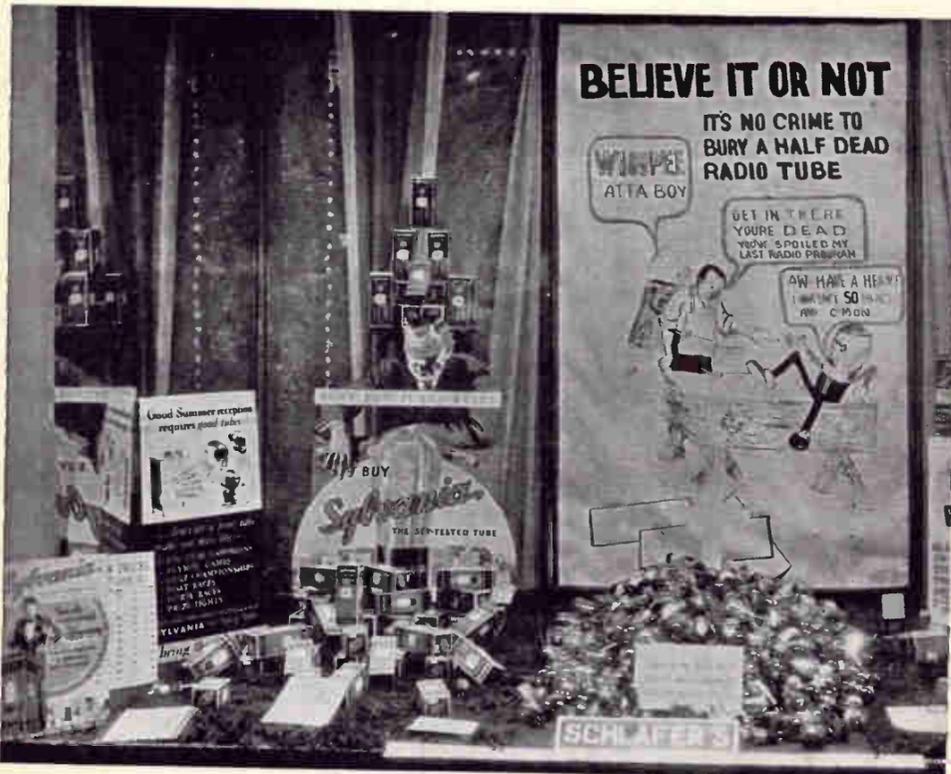
It is probably easier for the dealer to size up this market than anyone else. In almost every good sized community there are at least one or two dealers who are working day and night to install every good set that they can lay their hands on.

To every dealer who reads these lines, we cannot help but urge upon him a program of great aggressiveness in going after the automobile market. Because of it, radio is experiencing a nice healthy boom and someone is going to make a lot of money by supplying what car owners have shown that they so definitely want.

If you have not already taken on a good line of auto radio, it may be helpful to you to have the Sylvania auto set chart, which lists all manufacturers of automobile sets, together with the tube complements for these sets.

A card addressed to our Emporium office will bring it to you.

Schlafer's Score Another Hit



Schlafer's, Appleton, Wisconsin, take pride in designing window displays that are out of the ordinary. From time to time we have published pictures of their displays in Sylvania News, and invariably other dealers have been able to adapt the ideas for their own use. Above is a section of a window in which they have used as the central features an enlargement of the cartoon (do you recognize it?) printed in the January issue of the News. They report that crowds stopped to look at this window during the period it was on display, and that many of them took the hint and bought new tubes.

Pushed Off the Roof to Victory

Sylvania Tubes, in competition with five other nationally known brands, have been specified as standard equipment for the United States Forest Service in the Pacific Northwest. They will soon be installed in the portable receivers and transmitters used to maintain contact with the Ranger Stations in Forest Reserves and National Parks, and with the Forest Rangers when out on the line of duty.

Radio communication between the various units in the field and the Headquarters office in Portland is highly important, especially during the summer when the fire hazard is at the worst.

Last summer the Portland office was in constant communication with the fire fighting units during the forest fire that raged over a large area in southern Oregon and northern California, the distance between headquarters and the fire area being from 300 to 400 miles. Daily reports on the condition of the forest, both summer and winter, are radioed from the field to the Portland office.

The Radio Experimental Station is located in Vancouver, Washington, and radio activities cover Oregon, Washington, Idaho, Montana, and Northern California.

Quality and ruggedness of construction were the factors that determined the selection of Sylvania Tubes to equip the radio apparatus of the Forest Service. Price was a secondary consideration, and played practically no part in the decision to use Sylvania Tubes.

Sylvanias entered the competition from scratch. That is, they were unknown, except by "hear-say" to the Head of the Forest Experimental Station. That they won out over five of the best-known brands of tubes, in actual tests, is proof enough that the contract was won on their own merits.

The radio transmitters and receivers used by the Forest Rangers are portable, weighing about thirty pounds each. They are carried on the back of the man covering the trail, or are packed on horse or mule back. Many accidents can happen along the forest trails that might prevent the use of the set in an emergency. Men and animals have been known to slip off the trail into the depths of rocky ravines. Falling branches, stormy weather, the bumps and knocks of travel on rough paths, all contribute to the hazards. The men who handle and operate these sets are not expert radio men, and almost anything can happen to the set.

high quality, ruggedness of construction and uniformity of characteristics. It is also the reason for the severity of the tests to which all competing tubes were subjected.

Arthur S. Detsch, Sylvania Representative in the Pacific Northwest, and the man who introduced Sylvania tubes to the Forest Service, was an eye witness of a number of these tests. We'll let him tell you in his own words what he saw.

"An experimental set was equipped with tubes, then without ceremony taken to the top of a one-story building and deliberately pushed off the edge of the roof to the ground. They then took the set into the station, examined the chassis and tested the tubes.

"In testing the tubes this year each make of tubes was subjected first to a characteristic test, then the tubes were dropped on the floor and a reading taken. Then the elements were knocked com-

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Take the Display to the Dealer



"If the Dealer can't come to the display, we'll take the display to the Dealer." This is the idea responsible for the two impressive Display Cars, put on the road March 1, 1933 by Reinhard Brothers Company, Minneapolis, Minn., Sylvania jobbers. Radios, refrigerators, and other electrical appliances handled by Reinhard Brothers are displayed in each of the cars, which are so constructed that every machine can be demonstrated in actual operation. The "display room" is beautifully finished, with ample room to walk around and inspect the various household utilities.

In the short time they have had the cars operating in the territory they have proved that this is the answer to the present day problem of getting new models before the retail trade quickly.

In making this issue of Sylvania News a Service Men's Number we are not in any sense intending to neglect the thousands of loyal Sylvania Dealers. Both the dealer and the service man occupy strategic positions in the radio industry. We sincerely desire to make Sylvania News as helpful as possible to both. Because the service man has been somewhat tardily recognized as important; because we believe that the average service man is intelligent, ambitious and sincere in his efforts to raise the standards of the profession; because the service man is the most intimate contact between the set owner and the radio industry.

A CHAT WITH ROGER WISE

Chief Tube Engineer, Hygrade Sylvania Corporation



As new radio tubes continue to appear we find, upon close examination, that some are quite similar in characteristics to tubes already available, indicating that minor details of circuit design have been given undue consideration. Other new types, which combine two or more tubes in the same bulb, reflect the insistent demand for tubes which will save space—a particularly important consideration in automobile and compact AC-DC receivers. These tubes present new problems to tube manufacturers because of their complicated construction and varied applications.

Such tubes as the various new detector oscillators and pentodes combined with diodes or triodes show promise of ending the depression in the radio industry because of the greatly increased amount of labor required to produce them. This effect is felt particularly in the fabrication of the mount, but also extends entirely through the plant, all operations being slowed up. Testing becomes an important item, as the varied circuit applications make it necessary to check the tube under many different conditions.

The question as to whether or not a new tube of the more complex types is economically justifiable, is particularly difficult to determine under the present competitive conditions existing in the industry, as it is not possible to determine whether the tube will retain popularity for any length of time. Under these conditions it can be appreciated that a trend towards simple tube types would be most welcome to the tube manufacturers.

The Service Men's Exchange

Your enthusiastic response to our suggestion for a department for the exchange of service ideas is one of the most encouraging things that has come our way in a "Month o' Sundays". A lot of you that didn't have a tip to send right away have written to say that they were strong for the idea, and so are we. So here's the first genuine Sylvania Service Exchange.

Stewart Warner 950. The screen voltage in this set is bled through a 20,000 ohm, 2 watt purple resistor, and is controlled by the volume control. Almost invariably, the purple resistor drops gradually to about 2000 ohms, and burns out the volume control. When replacing the volume control, replace the purple resistor also, or the new volume control will go the way of the old.

James Reed Jr., Elizabeth, Pa.
Fada Model 42 "Flashograph"
Fading or cutting off may be due to .01 coupling condensers between plate of detector amplifier and first audio grid, or det. A. V. C. plate and det-amp. grid. Also check phono sw contacts. Local-distance switch connected through .005 cond to ANT and GND binding posts sometimes develops poor contact and causes fading. Replace switch. Flickering "flashograph" pilot can be cured by cleaning the contacts of the spring switch located behind the small panel below the tuning dial.

J. Block, Brooklyn, N. Y.
Philco 96. A loud intermittent howl is often traced to a defective carbon volume control.

Victor R32—RE45. AC hum can often be traced to a loose arm on the hum control.

J. E. Noskey, Detroit, Mich.
Kennedy 52. Low voltage on the 47. The detector is resistance coupled to the 47. Coupling condenser .006 mfd opens after being in operation for a few minutes.

Victor R32. Distortion and poor tone quality—look for speaker cone broken close to the voice coil.

Chas. B. Hast, Grand Rapids, Mich.

Sparton 931. Intermittent reception, loud hum, fading and low volume is often due to the .6 ohm balancing control, located between the 182B power tubes having high resistance (6-7 ohms). This cuts down the filament current to the power tubes decreasing volume. The control may be left out entirely, or a new one substituted.

E. Sosnoski, Waverly, N. Y.
Philco Model 20. In cases of cutting off in this model that do not show up in analysis try replacing the .01 coupling condenser.

C. Lydick, Kansas City, Mo.
Crosley Model 120 8-tube super. A very loud cracking similar to static, and a building up of volume, then cutting off sharp and clearing up, can be traced to a small midget .02 condenser placed between the 24 and 27 tubes, shoved under the resistor strip. This trouble is quite frequent in these models, and hard to find.

M. S. Benson, Thornton, Ill.

stages. Replace tubes with new ones. If trouble still persists pull out chassis, leave the cover on, power on maximum, and tap tubes gently. Change with other tubes, or replace any tubes that oscillate or howl under this treatment.

Andrew Janis, McKees Rocks, Pa.

Apex 8 and 10 Series. A. V. C. Super-heterodynes. If volume suddenly drops or increases, especially when a light is turned on in the house, trouble is due to opening up of 0.5 mfd condenser connected between R. F. Cathode and grid return of R. F. and I. F. coils. Replace with a good 0.5 mfd 400 volt condenser.

Grebe SK-4. If these sets fade on locals and are brought back by turning up the volume control or vice versa (if station comes in very loud and the volume control has to be turned down) during the first few minutes the set is turned on the trouble is gassy 24 tubes. Such tubes will often check OK in a tube tester, but new tubes will remedy the trouble.

George Mason, Santa Ana, Calif.

General Electric, J75, J59. The machine will tune very badly with a lot of noise when the condensers are turned, and will also tend to oscillate. The remedy is to solder a wire from the contact spring on the condenser to the chassis of the set.

J. W. Shade, Shamokin, Pa.

Philco 90 AVC. "Cutting off" of reception is caused by the bakelite condenser that is used as a coupling condenser between the 2nd detector and audio. The number is 3903-M or 3903-R.

W. Hartmen, Chicago, Ill.

All set models, public address systems, testers, analyzers, etc.—Service Men, send your "tips". We will send you the Sylvania tube you select, up to \$3.00 list, for every one published. Address Sylvania News Editor, Hygrade Sylvania Corporation, Emporium, Pa.

Engineers Improving Automobile Radio

RMA engineers are preparing and exchanging much data with the automotive industry toward rapid improvement of automotive radio and wider sales of receiving sets for motor cars. Under Chairman Wells of the RMA Engineering Committee and Virgil M. Graham, Chairman of the Association's special committee on automotive radio, improved installation and operation of automobile receivers is being developed. The special committee of the Society of Automotive Engineers has been given much data on operation of electrolytic capacitors in automobile radio equipment, and the RMA committee is developing additional data on trend of development regarding size of chassis and speakers. The problem of mounting automotive sets is left to each manufacturer but recommendations for standard mounting dimensions are being developed. Further work also is being done on mounting dimensions for chassis and loud speakers, together with information for guidance of

Sylvania Electronic Department Gets Under Way

Down at Clifton, New Jersey, where Hygrade Sylvania recently acquired a new plant for the manufacture of every product within the scope of the electronic art, things are humming.

In this beautiful new plant, the exterior of which was illustrated in our last issue, new equipment is being installed and sizable production is getting under way.

Hygrade Sylvania feels that it has made another very progressive step in entering this new field. This new and complete department offers all facilities for the development and manufacture of special electronic devices. Allied with this department is a group of prominent engineers, who rank in the first line of radio authorities. They are producing a complete line of broadcast and police transmitters; special transmitters of all types and power; as well as intermediate and high power transmitting tubes.

Through this new department, Hygrade Sylvania is now prepared to supply the general field of radio communications, industry and science, with standard or special apparatus, associated with the rapidly expanding realm of vacuum tubes.

You are invited to submit any inquiries which lie within the scope of electronics.

HOT OFF THE GRID

DID YOU KNOW THAT?

This is "Automobile Radio Year". From 34,000 sets sold in 1930 to 143,000 in 1932 means good business in 1933 for the man with foresight enough to go after it. Prospects are rolling up and down the street in front of your store right now.

Nearly all auto radio sets being built this season incorporate a built-in power supply, eliminating the necessity for B Batteries.

All metal used in Sylvania tubes is cleaned by heating at high temperature in a hydrogen atmosphere.

Sylvania has a completely centralized testing department for proving the quality of all Sylvania tubes.

In sets employing type 35, type 51 may be substituted without circuit change, and vice versa.

A complete line of Sylvania tubes is made for Sparton Receivers.

Every Sylvania Tube is seasoned for a prescribed length of time before testing, so as to stabilize the characteristics.

The type number on the tube is placed on the bulb at the time of manufacture, but the base etching and code dating are not put on the base until the day of shipment.

Sylvania automobile tubes are life-tested in a special device which subjects them to constant vibration, much more severe than they will ever receive in actual use, even at high speed on rough roads.

Sylvania now has a complete Electronics Department for the manufacture of transmitting equipment and supplies.

Type 43 is intended for series operation and is especially designed for resistance-coupled input.

The Sylvania "Tubes For Your Auto Set" Chart is available on request to the Advertising Department, Emporium, Pa.

Another Crime Wave

Something'll have to be done about this! Here's another set of Sylvania Technical Bulletins stolen. First it was burglars who broke into a radio store and stole 'em off a service bench. Now a set has been filched from a service car belonging to Halelectric Laboratories, Cleveland, Ohio. Mr. A. Leatherman, the owner of the second purloined set, writes in great distress of mind for a replacement, which of course

Your Question

Your question may be answered in this column. Walter R. Jones, Sylvania Commercial Engineer, selects for publication a few of the many inquiries that come to his desk each month. Only those of general interest to dealers and servicemen will appear here, but all questions relating to tube problems will be answered personally by the Sylvania Engineering staff.

Question 1—Why is it that in a Class B tube, such as Type 46, the high amplification factor reduces the plate current to nearly zero at no signal strength so that no grid bias is required?

Answer—A tube which has a high amplification factor has a very closely spaced control grid. Because of the large number of turns on this control grid only very small voltages are necessary to completely control the electron stream which flows from the cathode to the plate, and hence with no bias voltage on the grid only a small amount of electrons are able to travel to the plate. This eliminates the necessity of having a grid bias in order to limit the electron flow.

Question 2—Are any better results obtained by replacing a 45 tube with a 47 tube through the use of an adapter? I have tried this change several times, but have never been able to notice any difference in operation.

Answer—Practically all adapters designed for the purpose of replacing the 45 tube with a Type 47 have the screen terminal connected to the plate terminal and use the same grid bias as supplied to the 45 tube, therefore, very little difference can be noticed when the change-over is made. The only satisfactory method of replacing the 45 with a 47 tube is by changing the four prong socket to a five prong type. It will be necessary to change the grid bias resistor and obtain the correct screen voltage source. The output transformer for the Type 45 tube will not exactly match the 47 tube but may be used with little noticeable difference.

Question 3—Will you please inform me what is meant by "Conversion Conductance" as referred to in the description of the 2A7 and 6A7 tubes?

Answer—Conversion Conductance is the term used to express the ratio of intermediate frequency output voltage to signal frequency input voltage as measured from the grid of the oscillator tube to the grid of the following tube.

Question 4—I want to build an amplifier using Sylvania 2A3 tubes in push-pull, and would like to have information as to what other tubes should be used in conjunction with the 2A3 tube so as to derive the full benefit of the power output available.

Answer—The use of a pair of 56 tubes in push-pull arrangement proves one very satisfactory means of operating the 2A3 tubes so as to obtain the rated power output. It will be necessary to employ the new 5Z3 full-wave rectifier tube to supply sufficient current for this arrangement or to employ two Type 80 tubes operating in parallel service. With correct operating voltages the power output available should be 10 watts for self-bias or 15 watts for fixed bias.

Question 5—How does the operation of a type 19 tube compare with two 31 tubes in push-pull in regard to distortion and power output? So far I have been unable to get satisfactory undistorted output when using the Type 19 tube.

Answer—Inasmuch as you mentioned using two 31 tubes in push-pull, we assume that you are no doubt using the 19 double triode tube also in push-pull Class A service. If this is the case, the output obtained would be extremely low and distorted because of feed back between the two triode elements. Type 19 is intended only for Class B use and will deliver considerably higher output in this service as compared to the output of two 31 tubes operating in push-pull service.

Question 6—Will you please explain what Harmonic Distortion is, and also explain the theory of vacuum tubes?

Answer—Harmonic distortion is a term applied to the distortion caused by frequencies set up in power amplifiers, thereby changing the wave shape of the audio frequencies being amplified. The theory of vacuum tubes is too lengthy to explain in detail here, there-

He Doesn't Know About the Depression

It certainly looks as though Buffalo, N. Y. radio men either haven't heard of the much-advertised depression, or are refusing to be scared by it. In March we told you about Les Wheeler, Buffalo-Kenmore dealer who has just launched an ambitious and successful service campaign, with uniformed radiotricians and a fleet of service cars.

Now here's Ernest Kronson (Ernie to everybody in Buffalo), a former electrical contractor who broke into radio in 1931, just when a lot of other fellows were being scared out. He began by doing change-over work for the Buffalo General Electric Company. This work made it necessary to purchase parts for many different makes of radio receivers, and he was often troubled by the fact that he had to wait several days for some of these parts, because they were not carried in stock by Buffalo jobbers.

This gave Kronson the idea that a real replacement business could be built up in Buffalo, and early in 1932 he launched into the business. It was successful from the start, as he made it a rule to keep his stocks complete. He has in fact probably the most complete stock of replacement parts in the state, outside of New York City, and takes pride in handling only parts of high quality. In his own words, as published in "Kronsonews"—"The best is none too good, especially in selecting radio replacement parts, since each unit depends so much on every other for proper results."

"Kronsonews", by the way, is a brisk little four-page news sheet, brimming over with the kind of friendly intimacy that may explain much of the success of the Kronson Radio Service Company.

His next venture was taking over the distribution of Crosley Radio and Refrigeration, early in March 1933, which has proved so successful that Mr. Kronson was forced to move, on May 1st, into larger quarters, where both businesses will be combined.

The Erskine-Healy Company, Sylvania Representatives in Western New York, have watched the growth of the Kronson Service Company with much interest, and early last fall appointed Mr. Kronson exclusive distributor of Sylvania Radio Tubes in the replacement parts field for the Buffalo territory.

Half of page four of the April "Kronsonews" is devoted to a description of new types of Sylvania tubes.

A Little Dat on the Back Won't Hurt

We're in danger of having to buy a new hat, at least three sizes larger, on account of all the swell things you fellows have been saying about Sylvania News. We should continue to be very modest about it and not say a word, but we got one letter that expresses so exactly what we have been trying to do that we just have to quote part of it. The writer, Mr. O. M. Brady, a Chicago service man, says "Go ahead and tell 'em what I think", so here goes:

"Just received my second copy of Sylvania News and think it is great. The question and answer department is a big help. So is the dope on new tubes. Keep it up.

"I think Sylvania tubes are the best, and won't use any other, but the thing that actually sold me was Sylvania News, that intimate, newsy, four-page paper that makes you feel you are dealing with humans, and not with just another corporation. I believe you are actually interested in the service man's and experimenter's problems. And being a service man and somewhat of an experimenter myself, I cannot help but feel that when I buy a Sylvania tube I'm getting something more than just a tube."

And we'd like all of you to feel that we do have a personal interest in you, quite aside from our natural interest in the number of Sylvania tubes you sell. (And please note that we say **sell**, not **buy**). As we told Mr. Brady, if you could visit any one of our four factories, or our executive offices in New York, you'd really find us a bunch of friendly human beings, not just so many cogs in a corporation.

IMPORTANT!

Some of you will find in your copy of Sylvania News a return

AN INTRODUCTION AND AN APOLOGY



George Adelman and "Buddy"



Walter M. Ely



E. G. Kertz

Our intentions were of the best when we promised last month to print the prize-winning letters from the Service Mens' Contest in the May issue of Sylvania News. But the best we can do is to introduce you to three of them. We present here. George Adelman, of Chesaning, Mich. winner of the first prize; Walter M. Ely, Service Manager of Hertel's Radio Store, Clay Center, Nebraska, and E. G. Kertz, of the Radio Hospital, Kenosha, Wisconsin, winners of \$5.00 prizes. We believe that they are typical of the modern Service Man—clean-cut, intelligent and ambitious.

We have kept our promise concerning the question of radio service charges, which you will find discussed in the article immediately below. Next month we'll have more to say about the ideas presented by Service Men, and perhaps will bring up some questions that only service men can answer. We want every one of you to feel that Sylvania News is open to you for discussion of your problems, and that it is your medium for keeping infriendly touch with other service men.

What About Service Charges?

So many service men have expressed a desire to know what others are doing in the matter of service charges, and the question of flat rate vs. time and material charges, that we have selected a number of opinions on the subject from the letters of service men in various parts of the country. We are letting these men speak for themselves without comment other than to say that we believe that every one of them is making a sincere attempt to conduct his service business "on the square" and is honestly interested in raising the standards of the profession. Names have been omitted, but will be supplied on request.

Auburn, N. Y.: "We can state from investigation that competent service organizations in this part of the country do not believe in free service calls, as a matter of business or of policy. A service call, to be of value to the set owner, involves more than testing tubes. Inspection and repairing poor connections in aeriels and ground circuits, checking and correcting adjustments in the set, checking socket voltages, etc. are a few of the items that take time. Speaking generally and admitting the existence of exceptions, the honest service man will not make free service calls. The gyp may sell as many tubes for a time, but his time is generally short. Incidentally, the term "gyp" includes many well meaning men who simply do not know their business."

Morristown, N. J.: "In my service work I have found that in the majority of cases service calls can be made within a radius of one mile free of charge on most receivers. This statement has been based upon the

fact that I have since September 1, 1932 made all service calls with the understanding that if there is tube trouble only, and new tubes are sold to the customer, the time spent in checking tubes is so short that it is possible to work at a profit through tube sales. However, it should be explained to the prospect that this service is given only when the tube changes alone effect a complete job. On other calls where mechanical or electrical defects are found, the service charge is \$1.00. For the complete repair I charge either time or flat rate, but never charge for the return trip from the shop to the home for reinstallation of chassis."

Philadelphia, Pa.: "We have in our town a lot of so-called service stations, who advertise service calls 50 cents, and others free—pay for parts only. I charge \$1.50. I was called out on a job and found the 80 was dead. I replaced it with a new Sylvania, and told them the charge would be \$1.50 and the price of the tube. They protested that they could have had the service free, so I said 'All right, I'll call one of those fellows myself.' I took the new 80 out and put the old one back. When the "free" man got through testing this and that he told them it would cost \$7.50. I then replaced the 80 and showed him how to get the set working in one minute, after which he left without another word. I won a new customer, and they have sent me others since."

Kenosha, Wis.: "I think the house-to-house free tube testing is a very good idea to increase business. There are more radios with weak tubes in them than ever

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A Message to Service Men From One of Them

Mr. A. E. Rhine, Chairman of the Membership Committee, New York Division of the Institute of Radio Service Men, sends a personal message to service men, through the medium of Sylvania News. In an appended note he says, "There is nothing I would not do to help raise the standards of Radio Service Engineers. The day is not far off when their compensation will be one which befits the professional man, but their attitude must also be professional." His message follows:

"It has been well said that 'experience is the best teacher'. Does it not follow that one may profit by the experience of others, rather than suffer the cost of getting these experiences at first hand?

"One may not dictate the conduct of a professional man upon contact or entry into his customer's home; nevertheless the service man's entire purpose will meet defeat if this first impression is not his main objective.

"The writer, whose clientele might be considered select, has long since concluded that the anticipated 'job' is the last consideration to be uppermost when making your call. Your very visit is made with the prime object of getting your 'job'. With this fact established it should really be forgotten from then until you are told to proceed with the work, for your main object from the moment you press the front door bell should be to sell yourself to the customer.

Agree With Him

"Never try to sell the customer any pet theories. Let the customer 'buy'. 'Creation of desire' is the real secret of selling.

"The more obstreperous the action or condition of your customer's radio, the easier it should be for the service man to paint the picture of ideal reception which his customer desires.

"When he says 'The set is not worth fixing', agree with him. Never contradict. It might surprise you to know that if your customer should say 'I do not intend to re-tube this radio' that you stand a far better chance of attaining your object of retubing, by agreement, such as 'I would not do so if I were you', than were you to try to force on him the idea that he should.

"Your statement of agreement leaves an undeniable opening, for which you must be ready; for just as soon as you say 'I would not if I were you', you will hear him ask 'why?' He is with you now and not against you. Here's how I go about handling such a situation:

"Of course, Mr. Blank, if you feel that you can afford to trade in this set on a new one, that is probably the best thing for you to do; but I always like this model set, and if it were mine, the only reason why I would not consider a trade-in would be because, when it is playing right, you can understand every word and syllable with unusual clarity."

It Works

"Do not belittle what I have said above as a 'pet theory'. It works! It is natural and human for your man to say 'Yes, I have friends who have remarked about it', or 'The more I hear other radios the better I like mine.' etc. Don't forget his judgment settled the original purchase, and his pride of possession will bring forth the announcement you have been waiting for. 'You'd better go ahead and retube the old girl.'

"For some reason I have put the cart before the horse. My intention was to urge the importance of a good tube tester as a part of your calling equipment. A doctor may have a kit full of tools and medicines—comparable to your tools and analyzer—but would arouse little confidence in his patient, minus a stethoscope. None the less does this simile apply to your stethoscope, which is a **tube tester**. Your customers know little, if anything, about radio, but he does, however, know what tubes are—and believes that they are just about 90% of the reason why his machine produces sounds. No matter what you may say or do to arouse his interest in your description of his radio troubles, you will find that what you say will go right 'into one ear and out the other' until you begin testing and handling the tubes.

"What he sees, he believes, and may I say, none too strongly, that the service man who works without a good tube tester is like a brick layer who attempts to carry

NO APOLOGIES FOR THIS



To Protect Yourself— And Your Customer

N. F. Pavelec, Dupo, Ill., sends a suggestion for a form which he uses in his service work, and which we commend to the attention of other service men. He calls it a 4 in 1 form: work order, obligation to payment, guarantee and itemized statement or receipt.

In explaining the use of this form he says "The service man after thoroughly analyzing the radio and making all necessary tests will have the owner sign on the first blank line authorizing the repair or the replacement of parts or tubes or whatever may be necessary, at the same time stating the sole ownership of the set, or not, and also agreeing to cash payment on delivery of service. The service man should have the customer read the guarantee as well as what he is signing for. Should the radio require a shop repair this form is kept by the service man until the delivery is made, at which time all parts, tubes and labor are itemized and totalled on the reverse side. Should a case arise where the customer fails to pay upon delivery of service there is a better chance for a collector to obtain the amount due. This method will seldom be necessary if the customer realizes what he or she is signing for."

We add the suggestion that the form be made out in duplicate, one copy to be kept by the customer and the other to be retained by the service man, to be filed for future reference. This file would serve two purposes. It would give the service man an accurate check on the work done in case of complaints or of later requests for service, and would also serve as a reference list of former customers, to be contacted at intervals, either by mail or in person.

Your local job printer will print these forms and pad them for you at small cost. They might be typewritten, but the more authoritative appearance of the printed form will more than justify the slight additional cost.

A Home-Made Radio Program

An advertising stunt that started a new Sylvania dealer off with a bang was recently staged by Harry L. Myers, of Excelsior Radio Company, Harrisburg, Pa., long-time Sylvania jobber.

The dealer, who has just taken on Sylvania tubes, was R. F. Bowers of Shippensburg, Pa., and the stunt attracted so much attention that it made the front page of the Shippensburg News-Chronicle.

Mr. Bowers placed a small advertisement in the paper, announcing that local artists would be given a try-out before the microphone in the rear of the store on Saturday night, and that the results would be broadcast through a loud speaker in the front of the store. He featured several well known local artists, and invited the public to come in and see and hear these artists perform.

Harry Myers writes of the results "The thing was a scream. In other words a howling success. We had at least two thousand people file in and out to see the artists at work, and I shouted Sylvania tubes and Lyric Radio over the air so much that I just about lost my voice. To tell you the truth the voice went bad more from laughing than from making announcements.

"Everybody thoroughly enjoyed it and got a big kick out of the local radio performance—and what's more, everybody in the town and for many miles around knows now that R. F. Bowers Jewelry Store has a Sylvania Analyzer and that he is selling the latest improved Sylvania tubes at new low prices. This was the most successful and the least expensive advertising we have ever done."

Service Agreement and Guarantee

Phone: Dupo 1 1217 Columbia Road
Dupo, Illinois

I, _____ John Doe _____ authorize repair of _____ Majestic radio _____ Model _____ 70 _____ Serial _____ 353474 _____ which property legally belongs to _____ me _____ and to be unattached by a lien, mortgage or encumbered in any form.

GUARANTEE

The service and parts used as described in detail on reverse side are guaranteed for 90 days from date below. Should trouble develop under normal operating conditions during time limit set by this guarantee this company agrees to repair or replace any part proving defective providing same has been installed in this repair and listed on reverse side hereof.

Date _____ March 17, 1933 _____

Pushed Off the Roof to Victory

Continued from Page One

pletely over on one side and a reading taken. They were then knocked back to an approximately upright position and the reading taken again.

"A physical test was then applied to the tubes. Each tube received a voltage overload on the filament and further was subjected to a high position bias on the

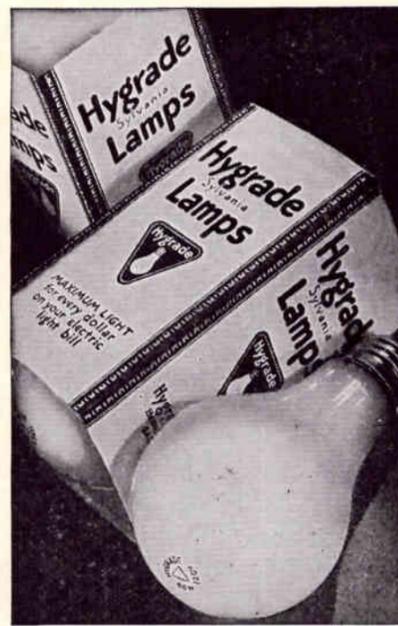
grid. Readings were taken after these tests.

"Sylvania came out triumphant over all the other brands, and was consequently specified as standard equipment. Our ST bulb and construction on the type 30 won instant favor of the United States Forest Reserve Engineers."

AMATEURS SEE SYLVANIA TUBE DISPLAY



This alert-looking bunch is part of the crowd that attended the meeting of the Oregon Amateur Radio Association at Marshfield, Oregon, and is one of the reasons why members of the radio

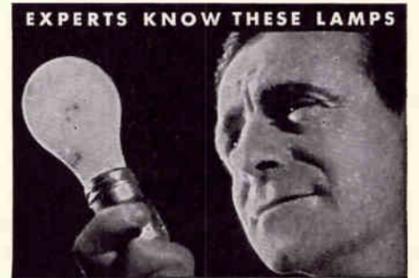


Advertised in
Saturday Evening Post
Factory Management
and Maintenance
Electrical World
Mill and Factory
Illustrated

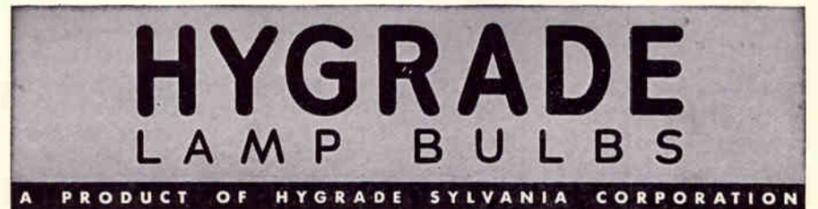
Hygrade Sylvania Lamps

A COMPLETE line of quality incandescent lamps, produced by experts with over thirty years of experience in making lamps for industrial lighting.

SPECIFIED by the buyers of many of the largest and most exacting concerns in the United States.



Hygrade Sylvania
CORPORATION
SALEM MASS



Hold Show for Dealers

The Morley-Murphy Company, of Green Bay Wisconsin, Sylvania Jobbers, are holding a sales meeting and merchandise show on May 18th and 19th for their dealers. The show will be held in the auditorium of the Columbus Community Club, where approximately fifty booths will be set up, displaying the merchandise of the manufacturers whose lines the Morley-Murphy Company handle. Sylvania Tubes and Hygrade Lamps, it is needless to say, will be well represented in the display.

Between 500 and 700 dealers are expected to attend, who will be guests at a banquet on the evening of May 18th. A nationally known speaker will discuss the news of the day. A large number of prizes, representing the merchandise of the various manufacturers, will be presented to dealers during the course of the meeting. Mr. P. M. Zilles, of the Morley-Murphy Company writes that they believe that this meeting will promote a better knowledge of the lines they handle, and will help to create a stronger bond between the manufacturer, the distributor and the dealer.

What About Service Charges

Continued from Page Three

before. People may not use their cars, but the radio will play, depression or no depression. To get into the house and test the tubes will result in more tube sales."

Sheridan, Ill.: "I have always, and am still, doing a strictly cash business. I have no outstanding accounts like so many of my competitors. I am proud of this record and think I am ahead by using this method."

Stroudsburg, Pa.: "The following plan has been formulated by our service department to increase our radio repair service as well as the sale of tubes: we advertise to the public that any radio set, regardless of what is wrong with it, will be repaired at a cost ranging from \$1.00 to \$6.00 and no higher. This plan includes all the necessary replacement parts and labor required to put the radio

have we ever repaired a radio at a loss, inasmuch as we buy repair parts in quantities, at a saving in price. It has been our experience also that every radio brought in to us for repair requires at least two new tubes."

Pittsburgh, Pa.: "I have just had an experience that made me 'mad'. It was a talk with a so-called service man who advertised for a partner. He also advertised a 50 cent service charge. 'How can you get by with only a fifty cent charge?' I asked him. 'That's where the catch is' he replied. 'It gets people to call me and then I do the rest.' His entire test equipment consisted of a voltmeter and a 45 volt C battery. 'Well, I believe I'll continue alone for a while' I told him. 'I get \$1.50 at least for a service call.' Give the customer a square deal and expect repeat business is more to my way of thinking."

Chicago, Ill.: "I test radios free of charge if brought to my laboratory. Otherwise, home service charges is \$1.00."

Bellevue, Pa.: "I specialize in radio service and do only first class work for a first class fee. I do not advocate nor advertise 50 cent, 25 cent, or free service calls."

St. Louis, Mo.: "For the past three years I have been operating for myself, and have had a hard struggle in competition with those so-called free service calls. No one can do that and do a paying business. I charge my customers depending upon the distance I must go to reach them. I charge ten cents a mile for the first five miles, and five cents a mile for each mile over that. In that way I neither lose or gain, but in 90% of all cases I sell a tube or more besides getting a repair job."

If you have a better plan, or if you disagree with any of the policies expressed above, let's hear from you service men. Absolute standardization of service charges is undoubtedly out of the question, due to differences in location, in clientele, and in costs of labor and material. But some fair standard of charges is very plainly necessary for the good reputation of the service profession, and the sooner the better.