

# THE HORN SPEAKER

RADIO NEWS FOR MARCH, 1930

JUST IMAGINE HOW MUCH INTEREST ONE OF THESE THEREMIN UNITS ADDS TO THE GENERAL INTEREST OF A COLLECTION OR MUSEUM.

809

## The Modern Music Box

VINTAGE

*By motions of the hands in the air anyone can play this new musical instrument comprising vacuum tubes and a loud speaker*

By Stuart C. Mahanay



Leon Theremin playing the instrument of his invention

still further, the qualities of viola, violin and flute are closely approximated, toward the upper end of the scale the Theremin can, with an amazing versimilitude, represent the soprano human voice, humming.

The Cleveland Orchestra demonstrated the possibilities of the Theremin in a concert given on December 4th, 1929, in Carnegie Hall, New York City. The audience exhibited its approval in repeated ovations and applause. When Rudolph Ganz, the noted pianist, heard the Theremin for the first time, he said: "The striking feature for me is that it is the first time that music has been extracted from something instead of being put into something, and that there is nothing between the human being and the music itself—no wood, no steel, no string, no horsehair—and that the personality of the performer is more sensitively presented than on any existing instrument."

An instrument so simple to play, and possessing such remarkable qualities of tone and pitch, will undoubtedly have a strong popular appeal. Those who never studied music, or who for one reason or another abandoned their study, will hail an instrument of this kind with delight. Where all the mechanical work is done by electricity, personal variations of expression will have an almost unlimited field in which to express themselves.

THE Radio-Victor Corporation of America has just placed on the market for home use a new and amazing musical instrument, which anyone can play by merely moving the hands in the air above it. Although the new "ether-wave" Theremin is neither a radio nor a phonograph, it is based on well-known radio principles.

The instrument itself resembles an orchestra conductor's stand with two metal antennae. It has no keyboard, strings, reeds or other mechanical aids for manipulation. It may be connected directly with the house lighting current like a radio set, and may be placed anywhere, requiring no other apparatus than an ordinary loud speaker. One antenna, a vertical metal rod at the top, controls tone, or pitch—the "voice" of the Theremin. The other antenna is in the form of a looped horizontal bar, at the left side, and controls volume, or the intensity of the music.

When the human hand is brought into the sensitive electrical field sur-

LEON THEREMIN was born in 1896 in Leningrad, Russia. He attended the school of Physics and Mathematics at the University of St. Petersburg, and later the Polytechnic Institute of the Russian capital, meanwhile pursuing a higher musical education under the tutelage of the well-known Russian 'cellist, A. Garpf.

From 1915 to 1917 he served in the army as radio-technical instructor in the college for officers.

After the war he continued his scientific investigations in the fields of radio, astronomy, television and musical acoustics.

The Thereminvox is one of his achievements in the realm of musical art. The invention has already attracted widespread attention, not only in Europe, but in the United States as well. Its consequences and their future influence upon the course of musical development are being awaited and studied with the closest interest throughout the world of science and art.

rounding the vertical antenna the field is so affected that audio-frequency notes, or musical sounds, are produced. These are amplified by vacuum tubes within the cabinet, and passed through the loud speaker. As the hand approaches the vertical antenna the pitch of the sounds becomes higher; as the hand is withdrawn, the pitch becomes lower.

When the hand is lowered over the horizontal,

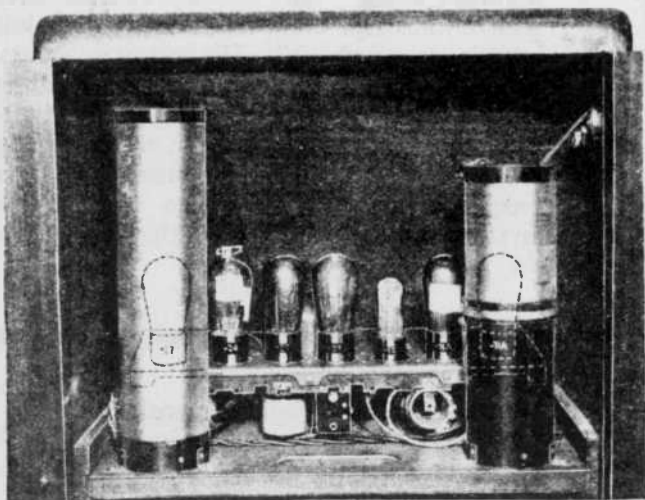
looped antenna the volume is lessened, in minute gradations, down to the faintest whisper; when the hand is raised the volume is increased, by similar delicate gradations, to an intensity exceeding that of the most powerful stringed instrument.

The sounds originate from two oscillating circuits within the Theremin, which produce a heterodyne beat note, varied and controlled by the position of the player's hand in relation to the vertical antenna. The Theremin employs eight tubes, a screen grid -24, three -27's, a -120, two -71-A's, and a -80 for power supply.

It is claimed that anyone who can hum or whistle a tune is able to produce whatever music he wishes from the Theremin. Little technical knowledge, practice or study is necessary in order to play it.

The tone is rich and full and the range is about three octaves. It may be adjusted practically for any three consecutive octaves in the musical scale. In the lower range the instrument's tone resembles that of the bassoon, string bass and other wood-wind instruments; further up the scale the tone is extraordinarily like that of a 'cello;

Interior view of the Theremin



### DIGITAL DISPLAY

The additional dial above the main one projects the station location and frequency.



### A NOVELTY IN DIALS

AN UNUSUAL type of dial is used in one of the new German receivers, shown in Fig. C. In addition to the usual visual scale, which indicates the location of the station according to the usual practice in Europe, an additional indicator is included which projects the name and frequency of the particular station in tune on a translucent screen.

This greatly facilitates the location of a station. It is a very attractive adjunct to the usual dial.



"THE HUB OF THE RADIO UNIVERSE"

Mr. R. H. G. Matthews, known to hams as "Matty," is here shown operating the "hub," which is so-called because, located in Chicago, it is a clearing house for amateur messages in all directions

RADIO BROADCAST, February 1923

## The "Ham" What Am

By ROBERT F. GOWEN

I AM just beginning to find out why I did not remain in China. I left there sooner than I had planned as I felt I was getting out of touch with radio development at home. Letters from my friends told obscurely of the remarkable inventions that had taken place in the short nine months of my absence; of how broadcasting had revolutionized both transmission and reception and that I would have to begin all over again and learn the new game of 1922. But the temptations to stay were many. I had learned to like the Chinese people with whom I was doing business and they in turn almost refused to let me go. They insisted that I should stay with them for another year at least, working out their radio problems which, though difficult, were intensely fascinating. I felt I could not afford to get behind the times. And now I am just awakening to the fact that it was not being out of touch with the new development that was worrying me but that I was hankering to get back to my old amateur set and into the game again as a "Ham," which, after all, gives us more pleasure than the professional phase of radio.

And what did I find on my return? Listening in on 200 meters brought back the old thrill that one gets when he is able to copy a little code after a long struggle as an amateur to learn it and to send it out with a home-made transmitting set made up of miscellaneous junk parts at a minimum of expense. There were a few of the oldtime buzz-saw rotaries asking each other "QRK" and "QRU" with the usual "MSG," etc., tacked on. I noticed an increase in the number of CW and ICW sets though the traffic was pretty light, it being the off season when the static was bad. I tuned to 360 meters and heard a babel of phonographs sending out the inevitable jazz just as I and many others had done some two years previously.

I began to look for the new developments, and beyond the Armstrong super-regenerative circuit, the value of which seems to be somewhat questionable in its present state of development, I am still looking for them. In other words the stunts which we, as amateurs, had tried out and discarded as worthless have now been commercialized to be inflicted upon the unsuspecting public. I had heard that some wonderful thing had been brought out by which you might use the electric wiring in your home as an antenna and thus do away with expensive outside aerials forever. I found it to be nothing but a condenser such as we used in attempts to employ electric light wiring and telephone lines as aerials in the old days, the only difference being that the condenser was now moulded into a plug form that would screw into the ordinary electric light socket. The results obtained with it were identical with those we used to obtain, i.e., practically negative. So now I am not quite so worried about being behind the times except in one respect and that is that I find that practically all my old amateur pals have also been commercialized and are now operating broadcasting stations or acting as chief engineers for the thousands of radio manufacturing companies that have sprung up during the past year.

Broadcasting progressed as the public got tired of "canned" music. The Government was forced to allot a 400-meter wave to super-broadcasting stations which were not allowed to transmit music of the "canned" variety and were therefore compelled to send out something worth while. This was excellent and a great step in advance. And then what happened? The public who were beginning to enjoy broadcasting were beginning to hear strange things with the many cheap, single-circuit tuners that the thousands of illegitimate, so-called "radio-

manufacturers" forced upon them. These strange numbers which were not on the programme consisted of dots and dashes which interfered with the listeners' enjoyment of the music, and Mr. Public, having read in the papers that the country was infested with amateurs immediately said to himself, "Why, that is an amateur next door bothering us and he has no right to play with his apparatus when we want to hear this music that is so worth while!"

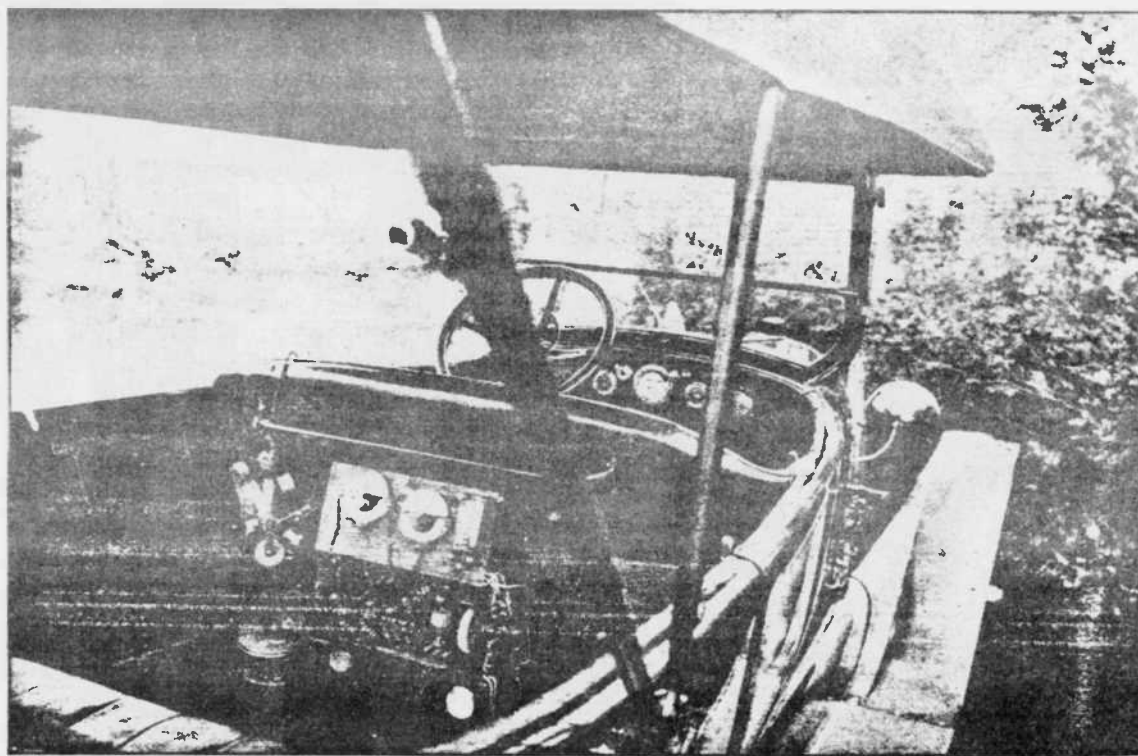
And so to-day, the "Radio Fan" as he is popularly known, is attempting to bring legislation to squash the amateur and put him out of business on the ground that he is a nuisance and is merely playing with a toy that bothers other people. But Mr. Public does not stop to realize that if this is true perhaps he too is playing with a toy for his own amusement. He does not understand or appreciate what "wavelength" means. He does not even know what kind of a circuit he is using for reception and that if he used a different type of circuit, perhaps a little more expensive or perhaps even cheaper (if bought with more intelligence), he would not hear the dots and dashes when he wanted to hear music. He does not know that if he had the proper type of receiver and knew how to tune it he could hear either dots and dashes or music at will, one without interfering in the least with the other. And the problem is, how are we going to educate him to these facts so that he may play at the same time that the amateur is playing?

But does the amateur play, and what is a "ham" anyway? Perhaps not ten per cent. of the readers of this article know the proper definition of the word "ham." And yet it is very simple. A "ham" is not a small boy using a spark-coil, jamming up the ether with noises sounding like a boiler factory in action, but a young man of the average age of twenty years who has enthusiastically studied radio both theoretically and practically and whose idea is to better the art in any way he can by unselfish application. He has solved many problems that have confronted him, not for financial gain, but for the love of the thing. The very apparatus that you are using to-day, as well as the equipment that is sending its music to you, is the result of his effort and conscientious endeavor. The man who announces at a broadcasting station is a "ham." The man who operates the broadcasting transmitter is a "ham," and the man who designs your receiving set is a "ham." Why? Because no one but a "ham" can do these things. When I was chief engineer for the De Forest Company, designing among other things radio telephone transmitters, purchasers would ask me to get them men to operate the equipment that they bought. Do you suppose I could get a commercial operator to operate a radio telephone set? No. I found they knew absolutely nothing about it and in every case I had to get a "ham", simply because the former was a man who knew only how to press the key and read code while the latter was a technician who had trained himself in the fundamentals of radio and knew how to analyze the circuit and keep it functioning properly in addition to his knowledge of key pressing. Likewise, every man I had in my laboratory was an amateur, not because I was one but purely because they were the only men obtainable who could tackle the problems placed before them. The question naturally arises, "Why does the amateur have such enthusiasm and why does he not lose interest after a while?" The answer is "sportsmanship." This sportsmanship is the finest type we know of, as it is dependent for its existence on personal unselfishness in not interfering with the other fellow, a sportsmanship that breeds good fellowship. Then there is the mystery and thrill of it and the tremendous

incentive to beat the other fellow's record. And some of these records are hard to beat. Fellows on the Pacific coast and some as far east as Minnesota "work" an amateur in Hawaii nightly. Figure the distance for yourself and remember that these stations are restricted to an output of 1 kw. of power and usually employ less than this amount. And this with home-made apparatus!

Everyone knows of Frank Conrad, assistant chief engineer of the Westinghouse Electric and Manufacturing Company, and Paul Godley who went to Scotland to listen for the transatlantic tests of the amateurs. These men are "hams" through and through, always were and always will be, and there are hundreds of professionals just like them though they are not so well known. Did you ever hear of Mr. H. P. Maxim, President of the American Radio Relay League and his fine station that does remarkable things at Hartford, Conn.? Then there are Irving Vermilya at Marion, Mass., "Johnny" Clayton at Little Rock, Ark., J. A. Gjelhaug at Baudette, Minn., A. L. Groves at Brooke, Va., C. R. Runyon at Yonkers, New York, Mr. and Mrs. Charles Candler at St. Mary's, Ohio, and a host of others too numerous to mention, all known from coast to coast for their untiring enthusiasm in American amateur radio. There is the ever popular "Matty"—R. H. G. Matthews of Chicago, one of the best known "hams" in the game. And yet he never did anything very startling. He is not of the fireworks type. But he runs a station, 9ZN, that has been called "The Hub of the Amateur Universe" because it can be absolutely depended upon to relay messages north, east, south and west, a thousand miles or more any night without fail. It has been built and rebuilt by Matthews and his assistant operators to a remarkable state of efficiency which every true sport is bound to admire. Then too "Matty" is the manager of the Central Division of the A.R.R.L.

A.R.R.L., the American Radio Relay League, is an organization of thousands of these amateurs, conducted by and for amateurs. It came into existence in the old days after the amateurs in the East awoke to the fact that there were a lot of them located all over the country. The thing that awakened them was the Federal Radio Law of August 13, 1912. Among other things which this law provided was a call book and this book contained the names and addresses as well as the call letters of all the amateurs who had passed the necessary tests to secure transmitting licenses. The book disclosed the astounding fact that there were several hundred of them scattered over the various States of the Union. It demonstrated immediately that it was a good thing to observe the law and take out a transmitting license because it established one's standing and gave one a dignified position among the better amateurs of the country. With it came the birth of the radio club. It came from the natural tendency to gather together and exchange experiences, information and knowledge. In this way the radio club became the meeting ground of the amateurs and presently there came into being a wonderful spirit of fraternity. One felt a queer little thrill at these early radio club meet-



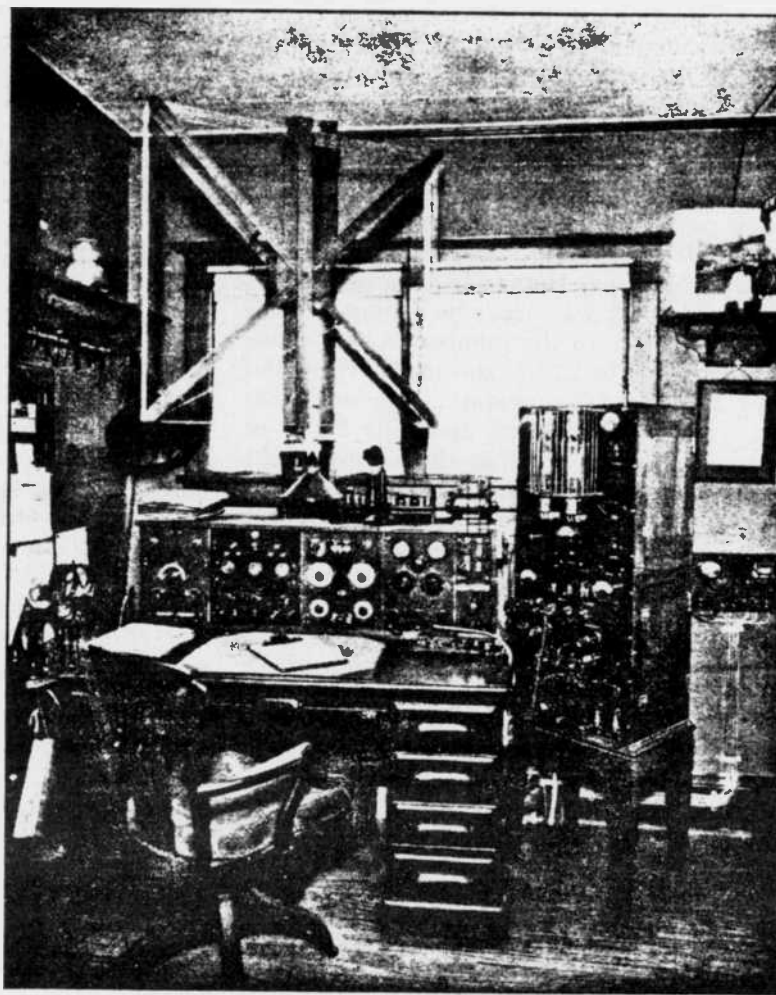
THE AERIAL IS OUT OF THE WAY UNDER THE TOP

With this portable set, Mr. Gjelhaug has heard long-wave arc stations hundreds of miles away with a single tube. While the car was making twenty-five miles an hour, he has copied signals from a spark-coil transmitter using 12 watts input, up to five miles

ings when he came face to face with the fellow he knew well in the air but whom he had never seen. To one who has never sat in his little back room late at night and conversed with another fellow seated in *his* little back room away over in some remote town, and then finally come to grasp the hand of this fellow, can never come this peculiar thrill.

The radio club was the natural birthplace of the relay. It probably developed in the minds of several of the clubs at about the same time, but it was in the Radio Club of Hartford, Conn., that the relay idea which finally became the American Radio Relay League first took practical form. It was born of the fact that one amateur in Hartford found he could communicate with another amateur in Windsor Locks, 25 miles away. If Hartford could reach Windsor Locks which was half way to Springfield, why could not Windsor Locks reach Springfield? And if this could be done why would it not be possible to branch out and to eventually link up with amateurs in distant parts of the country? The idea was an incentive for the amateur to study and work harder and to improve his apparatus to cover great distances, to simplify it and to make it more practical.

Just look at the result! To-day the whole United States is divided into operating districts, each supervised by a competent and enthusiastic amateur who is responsible for the traffic in and through his district. He appoints amateurs to take care of traffic along certain lines so that now there are trunk lines from one end of the United States to the other, North, East, South, and West by means of which messages may be sent to any point in the United States. The organization is so perfect that substitute stations and even alternate



MR. GOWEN'S STATION IN OSSINING, N. Y.

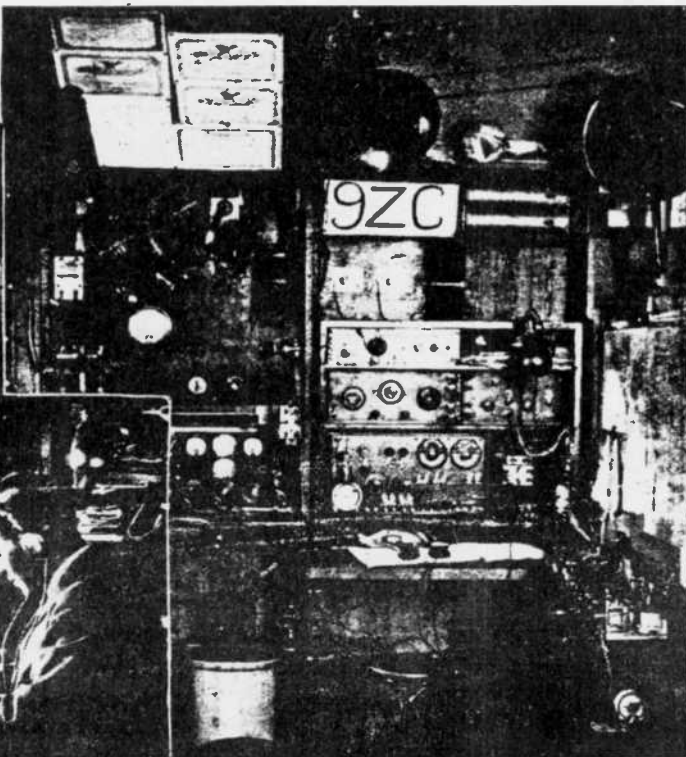
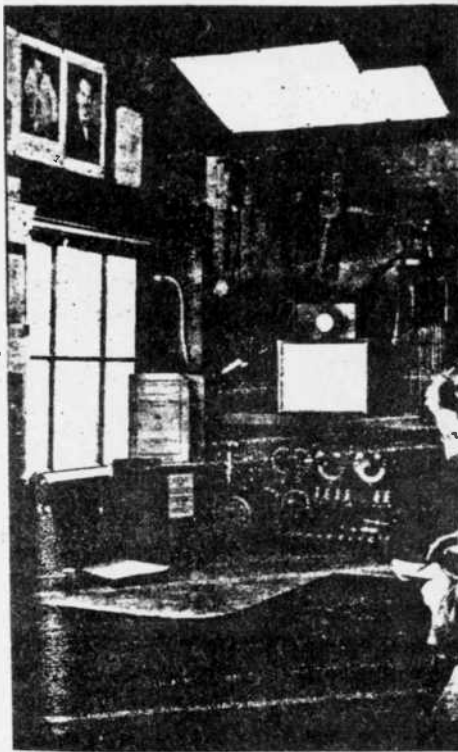
The tube transmitter, mounted on the upright panel at the right, is used for broadcasting and has been heard all over the country

lines are established to handle a message should an amateur on a regular trunk line be out of commission for any reason. Monthly reports of the traffic are made by the Division Manager to the Traffic Manager at the headquarters in Hartford, Conn., and these are published in the official organ of the League, a truly remarkable magazine known as "QST." The nominal dues of the association go to pay the expenses of publishing this magazine which is no small matter and requires to-day a rather large office force.

What have the amateurs accomplished by such organization? To begin with they have maintained their very existence by it for attempts have been made from time to time to legislate against them. By appointment of the present vice-president, Charles H. Stewart,



(BELOW) 9QK, A PRE-WAR STATION  
Built and operated by John  
A. Gjelhaug, Baudette, Minn.



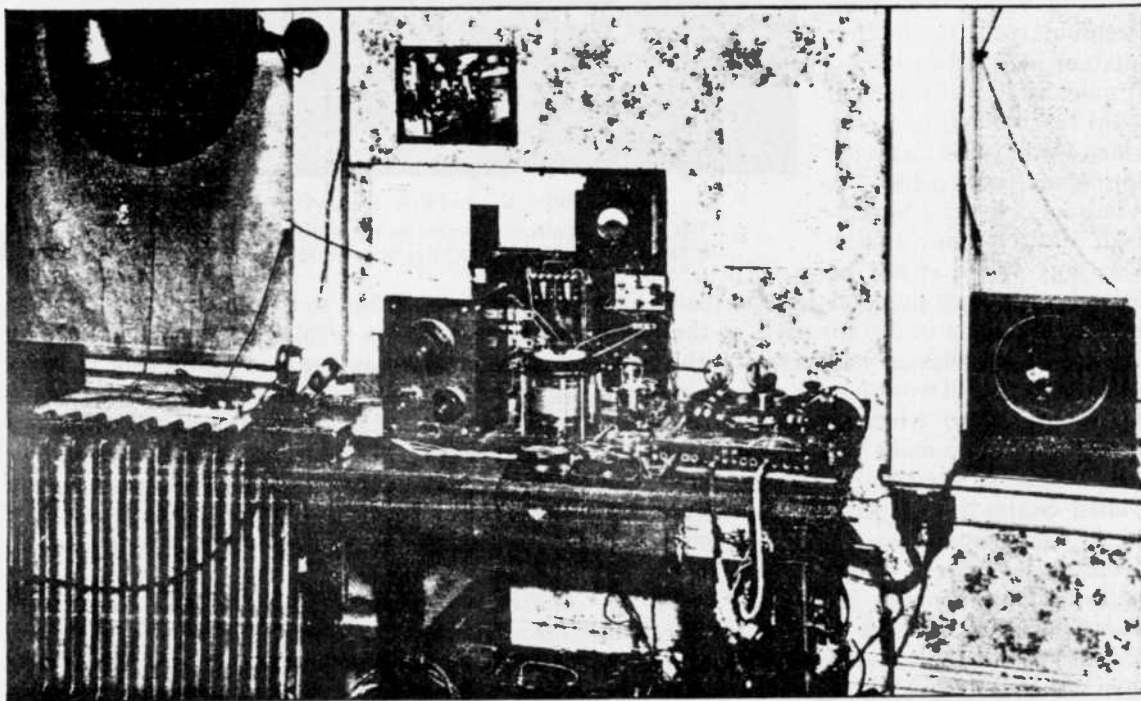
(ABOVE) MR. GJELHAUG'S NEW STATION  
Located in Baudette, Minn. This picture  
was taken November 27, 1922

as chairman of the Legislation Committee of the Association, it has been strongly represented at all hearings of radio bills in Washington with the result that bills detrimental to the interest of amateur radio have been tabled. Such representation has been of vital importance and the amateurs are now called in for consultation on important matters of radio policy so that Mr. Stewart and others were present at the Radio Telephone Conference called by Secretary Hoover last Spring.

The record of war needs no telling. These young amateurs to the number of nearly five thousand gave to Uncle Sam in his Army and Navy the best radio operators the world has seen. It is no reflection upon the Navy or Army operator to say that the amateur beat him at his own job. The amateur had developed his extreme expertness because of his love for his hobby, and he represented furthermore the pick of the young men of the country. No matter where one went in the Army or in the Navy during the war one encountered the amateur on every hand, from the high officer to the enlisted man. The chief operators in all of the important stations were ex-amateurs. When President Wilson journeyed to France

and back, the chief radio operators on the *George Washington* were ex-amateurs.

And now all of these young men are amateurs again, and in these days of peace, they have rebuilt their organization. Their recent accomplishments are a good indication of what they are and what we may expect of them in the future. Over a year ago they decided to demonstrate what their organization could do in the way of a rapid interchange of messages from the Atlantic to the Pacific and back, and from the Canadian border to the Gulf of Mexico and back. A series of messages was started from Portland, Maine, Boston, Mass., Hartford, Conn., New York, and Chicago, and destined for points on the Pacific Coast and on the Gulf of Mexico. Each of these messages had to be relayed through several stations, the message delivered, the answer secured, and this answer transmitted back to the starting point. A Portland, Maine, organization sent a message to a Portland, Oregon, station, and received its answer back within an hour. Similar messages went from the various points mentioned. One message originated in Hartford, Conn., and was addressed to one of the amateurs in Los Angeles, Calif. From the time that this mes-



SOME BROADCAST ENTHUSIASTS PROCURE ELABORATE APPARATUS

For the purpose of getting the distant stations. In a receiver of this type there are entirely too many adjustments for the "ham" to bother with, especially where rapid DX (long distance relay) work is carried on

sage started its first dot at the key in Hartford to the time the answer was received back from Los Angeles and all written out on a telegraph blank was just *six and one half minutes*. This message was relayed at Chicago and Roswell, New Mexico, and the *esprit de corps* was such that the entire country full of amateurs remained quiet during the interval of the tests so that every assistance might be given to a quick transit.

Within the past year it was decided the technical advance in Amateur Radio and the advance in organization had been such that the greatest of all feats might be attempted. This was to span the Atlantic Ocean by amateur wireless and establish communication between the amateurs of America and those of Great Britain. These young men selected one of their number, Mr. Paul Godley, to go to Europe and look after the reception and encourage the English amateurs to take an interest in the matter. All the expenses were borne by the amateur organization. The result of the transatlantic tests are a classic in radio history, for more than thirty American amateur stations were recorded in the British Isles. On November 22nd last, all records were smashed to atoms when 1 AW at Hartford, Conn., sent a message to 6 ZAC in Hawaii via 9 AWM at Sleepy Eye, Minn., and the answer returned in just *four minutes and eighteen seconds*. 9 AWM was the only intermediate station! There is no telling where these young men will carry American amateur radio and it is very safe to assume that it will not be long before they will be exchanging messages regularly with their brothers across the seas.

In addition to their own interests in intercourse among themselves they have been of material benefit to radio in general because "Necessity is the mother of invention" and, having but little to work with, they have been forced to find a cheaper and better way out of their difficulties. In 1920, as an organization, the amateurs of this country collected data for the Bureau of Standards which was not obtainable from any other source in the world. Night after night the "hams" sat up and made fading tests on signals sent out from several selected stations in the hope that the data collected would give some insight into the cause of fading as a basis on which to combat it. An analysis of the results obtained, however, showed little of value at the time, but it is believed that later when we know more about the peculiarities of the ether this data will be of inestimable value in overcoming this or similar problems.

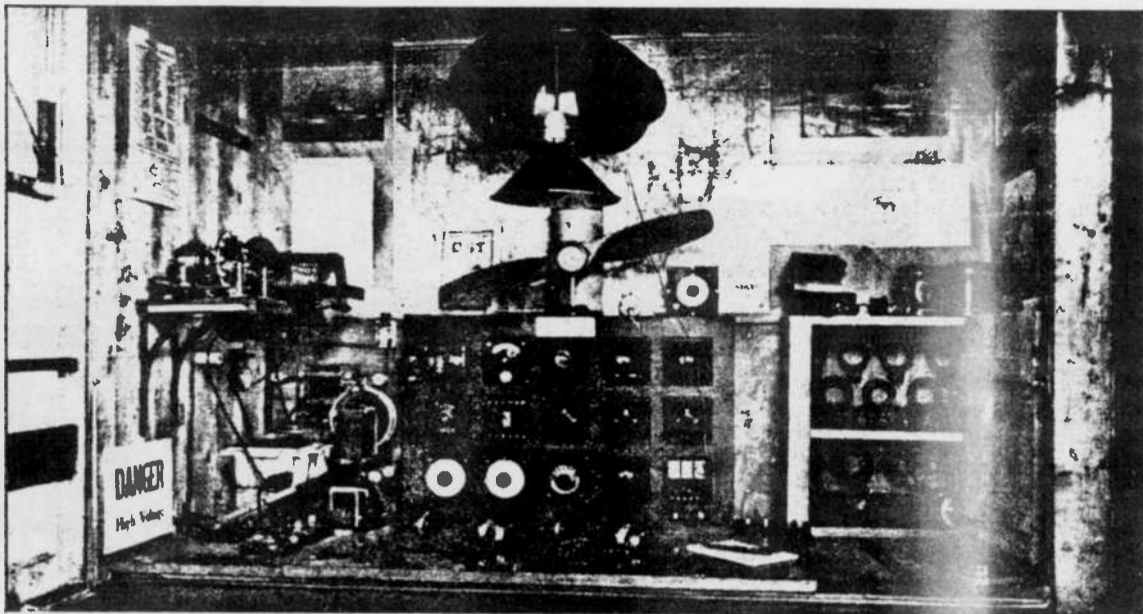
The amateurs have checked and rechecked test after test at the request of the broadcast operators and it is safe to say that without the amateurs, broadcasting would never have developed to its present state of efficiency in so short a time. In fact, broadcasting could not have existed without the amateur for he is responsible for the education of the public in the use of receiving apparatus, by inviting his friends to hear the music at his own set. Broadcasting is impossible without an audience and without the amateurs there would have been no audience.

Is it possible, then, that men who know as much about radio as outlined above; men who have designed, constructed and operated the broadcasting stations; men who are conscientiously fair to their brothers in handling traffic and in interference questions; men whose activities have been used many times by an ignorant press as an excuse to cover up some shortcoming of the radio service which has been due to other causes; men who know fully and appreciate the limitations of radio communication and who have therefore unselfishly and without restraint of law agreed to stop transmitting between the hours of 7 and 10.30 P. M. to make certain the enjoyment of broadcast listeners—is it possible that these men maliciously interfere with the work of broadcasting stations on a wavelength removed from that allotted to

them by law? Why should they deliberately wish to go out of their sphere of communication and trespass upon the rights of others, especially since the advent of the Armstrong, Super-regenerative Circuit tends to make for transmission on wavelengths less than 200 meters.

The amateurs have no axe to grind even though in all fairness it must be said that the broadcasting stations, because of their high power output and improper tuning in some instances, do bother them. All they want is to be let alone that they may go forward and develop in years to come with the same remarkable advance as formerly. They agree, as we all agree, that there is a place for broadcasting—a most important place—with its Philharmonic and Symphony Concerts, its Grand Opera and its sporting events as amusement, together with its stock market and weather reports of inestimable value to the public in general. It is fast becoming a public utility that cannot be dispensed with. But American amateur radio must also exist, for of it broadcasting cannot continue to develop to the unforeseen heights to which we are sure it will climb. There are places for both amateur radio and radio broadcasting, and the solution of the clash between them is a mutual understanding of each other's rights.

The "Ham" What Am



THE STATION OF HAROLD ROBINSON AT KEYPORT, N. J. When built, the transmitting apparatus of 2QR was of better design than that employed on most commercial vessels. However, spark transmitters are rapidly going into the discard in favor of the continuous wave system. The tube transmitter which supplanted the one shown at the left in this picture was heard in Aberdeen, Scotland

SOCIAL EVENTS

Amazing Music Machines  
Antique Cylinder & Disc Phonographs  
Buy - Repair - Restore  
Parts and Pieces



EDISON PATHE COLUMBIA VICTOR BUSY BEE BRUNSWICK

Jimmie Grissom  
246 Keene St  
Henderson, NC 27536  
Phone: (919) 492-0518

MEMBER -  
Michigan Antique Phonograph Society  
California Antique Phonograph Society  
Canadian Antique Phonograph Society  
Vintage Radio and Phonograph Society

PUGET SOUND ANTIQUE RADIO ASSOCIATION - Washington - The P.S.A.R.A. and the Antique Wireless Association will hold a meet on March 15, 1:00 p.m., at the Shoreline Historical Museum in Seattle. For more information contact: Warren Green, W7JY, 7202 N. Mercer Way, Mercer Island, WA 98040.

JOINT MEET - Ohio - G.C.A.R.A., The Gray Museum, Q.C.W.A. Dayton - Cincinnati Chapter, Indiana Historical Society, O.O.T.C. members and guests with A.W.A. pro-

gram scheduled at the Crosley Telecommunications Center, 1223 Central Parkway, Cincinnati, OH 45214, 8:00 p.m., March 25. Collectors welcomed.

INDIANA HISTORICAL RADIO SOCIETY - INDIANA - May 1 - 2. More details later, or write or telephone: Eric vonGrimmenstein, 9318 Seascapes Drive, Indianapolis, IN 46250 (317) 849-0563.

A.W.A. South-East Conference - North Carolina - March 27 and 28th. More information: Call (704) 392-4844 after 6:00 p.m.

Two New Models Announced for Philco Line

Two new models have been added to the line of Philco radio receivers, it was recently announced by the Philadelphia Storage Battery Company, makers of Philco radios. Both ends of the scale in size are represented by the new models which are respectively the largest and the smallest set Philco has ever manufactured.



The large model will be known as the Philco Concert Grand. It is a combination phonograph and radio, and will occupy the same relative position to the rest of the line that the concert grand piano does to the upright and the apartment grand piano.

The phonograph mechanism boasts the improved electro-magnetic pick-up, the inertia-weighted pick-up arm, the new motor, and the other improvements of the Philco combination radio and phonograph model. The radio receiver utilizes the model 96 screen-grid plus chassis, a nine-tube a.c. set with tone control and automatic volume control, and the new Philco electro-dynamic speaker. The tone control knob regulates not only the radio reception but also the phonograph recording.

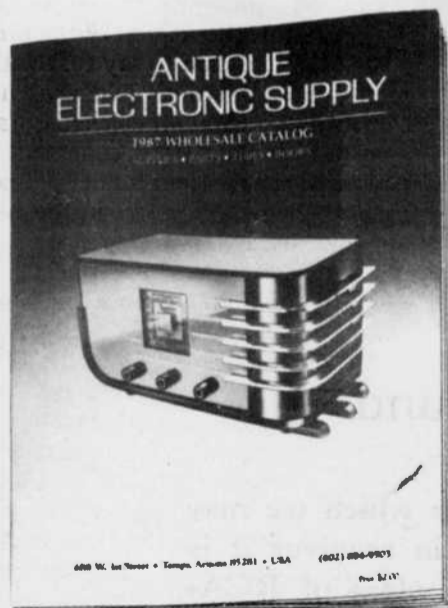
The outstanding feature of the Concert Grand is a new baffle board to be



found on this model only. It is twelve square feet in size.

The small model will be known as the Philco Baby Grand. The cabinet is only 16 inches wide and 17 1/2 inches high, and is Gothic in design, built of genuine walnut. It houses a full-performing seven-tube screen-grid Philco receiver and a built-in electro-dynamic speaker. The set is all-electric and plugs into any a.c. light socket.

(1930 clipping)



YOUR SOURCE

for

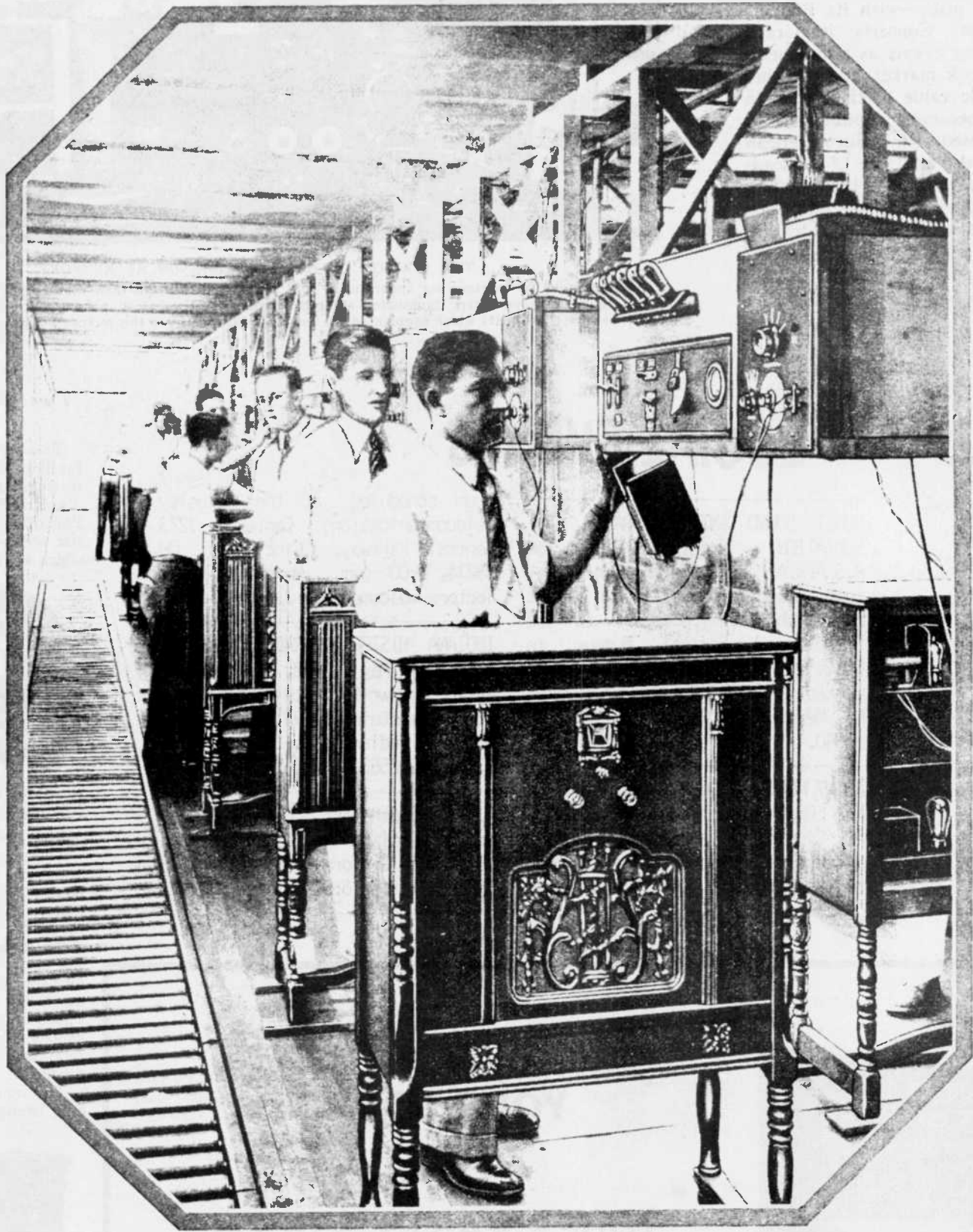
TUBES, PARTS, & BOOKS

Our 1987 catalog contains the most extensive listing of parts and supplies available for early radio, with 20 pages of tubes, capacitors, transformers, lamps, grill cloth, repro parts, books and more.

Write or call for 20 page wholesale catalog.

ANTIQUE ELECTRONIC SUPPLY

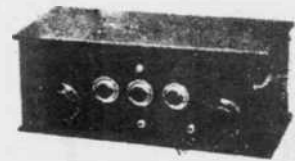
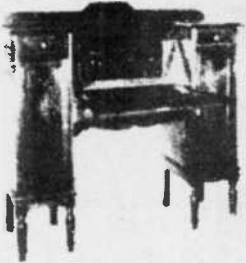
688 W. First St., Tempe, Arizona 85281, 602/894-9503



## Superheterodynes by the Thousands

**H**ERE is the advance guard of the parade of the superhets which we may expect to see featured as the most efficient type of radio receiver it is possible to design and build. This picture was taken in the plant of RCA-Victor, Incorporated, at Camden, New Jersey, and shows a line of superheterodynes in console cabinets undergoing final test on the production line. The dramatic engineering story behind this new and interesting receiver is told in this number.

**TRADE NAME:** "Microdyne."  
**MODEL:** 550-EM.  
**TYPE:** Two radio frequency, two detectors, two audio frequency and oscillator with built-in loud speaker.  
**TUBES:** Seven.  
**BATTERIES:** "A," "B" and "C" needed.  
**CONTROLS:** Two.  
**AERIAL:** Loop.  
**PRICE:** \$400.00 without accessories.  
**MANUFACTURER'S NAME:** Lakeside Supply Company.



**TRADE NAME:** "Midland Radio Frequency Receiver."  
**TYPE:** Radio frequency, detector and audio frequency.  
**TUBES:** Four.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Two.  
**AERIAL:** Indoor or outdoor.  
**PRICE:** \$35.00 without accessories.  
**MANUFACTURER'S NAME:** Midland Electric Mfg. Company.



**TRADE NAME:** Miraco.  
**MODEL:** "R."  
**TYPE:** Tuned radio frequency circuit.  
**TUBES:** One.  
**BATTERIES:** Dry cells.  
**CONTROLS:** One.  
**AERIAL:** Outdoor.  
**PRICE:** \$14.35 without accessories.  
**MANUFACTURER'S NAME:** Midwest Radio Corporation.

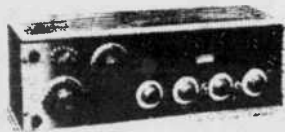


**TRADE NAME:** Miraco.  
**MODEL:** R-3.  
**TYPE:** Tuned radio frequency circuit.  
**TUBES:** Three.  
**BATTERIES:** Not furnished.  
**CONTROLS:** One.  
**AERIAL:** Indoor and outdoor.  
**PRICE:** \$29.50 without accessories.  
**MANUFACTURER'S NAME:** Midwest Radio Corporation.

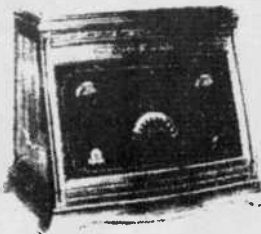
**TRADE NAME:** Miraco.  
**MODEL:** Ultra-5.  
**TYPE:** Tuned radio frequency circuit.  
**TUBES:** Five.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Three.  
**AERIAL:** Outdoor and indoor.  
**PRICE:** \$75.00 without accessories.  
**MANUFACTURER'S NAME:** Midwest Radio Corporation.



**TRADE NAME:** Miraco.  
**MODEL:** MW.  
**TYPE:** Tuned radio frequency circuit.  
**TUBES:** Four.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Three.  
**AERIAL:** Outdoor and indoor.  
**PRICE:** \$54.50 without accessories.  
**MANUFACTURER'S NAME:** Midwest Radio Corporation.



**TRADE NAME:** "Mohawk."  
**MODEL:** VA.  
**TYPE:** Five-tube single control.  
**TUBES:** Five.  
**BATTERIES:** "A" and "B."  
**CONTROLS:** One.  
**AERIAL:** Outside or inside.  
**PRICE:** \$150.00 without accessories.  
**MANUFACTURER'S NAME:** Mohawk Electric Corporation.



**TRADE NAME:** "Mohawk."  
**MODEL:** XLI.  
**TYPE:** Uni-control built-in loud speaker.  
**TUBES:** Five.  
**BATTERIES:** "A" and "B" needed.  
**CONTROLS:** One.  
**AERIAL:** Inside or outside.  
**PRICE:** \$300.00 without accessories.  
**MANUFACTURER'S NAME:** Mohawk Electric Corporation.



**TRADE NAME:** "Murdock."  
**TYPE:** Neutrodyne with built-in loud speaker.  
**TUBES:** Five.  
**BATTERIES:** "A" and "B" needed.  
**CONTROLS:** Three.  
**AERIAL:** Inside or outside.  
**PRICE:** \$100.00 without accessories.  
**MANUFACTURER'S NAME:** Wm. J. Murdock Company.

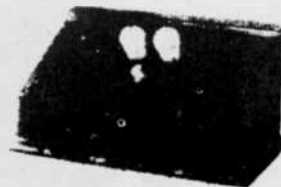


**TRADE NAME:** "National Country Gentleman."  
**MODEL:** Portable.  
**TYPE:** One-stage tuned radio, detector and two audio.  
**TUBES:** Four.  
**BATTERIES:** None furnished.  
**CONTROLS:** Two.  
**AERIAL:** Outside or inside.  
**PRICE:** \$80.00 without accessories.  
**MANUFACTURER'S NAME:** National Radio Manufacturing Company.

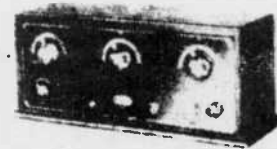
**TRADE NAME:** "Neutrodyne Phonograph Radio Panel."  
**MODEL:** P-11-215.  
**TYPE:** For Victor Console No. 215  
**TUBES:** Five.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Three.  
**AERIAL:** Indoor or outdoor.  
**PRICE:** \$115.00 without accessories.  
**MANUFACTURER'S NAME:** R. E. Thompson Mfg. Co.  
**NOTE:** For Victor Consoles No. 400, 405 and 410, the price is \$125.



**TRADE NAME:** "Nyaccoflex."  
**MODEL:** R-2.  
**TYPE:** Reflex with crystal detector.  
**TUBES:** Two.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Two.  
**AERIAL:** Indoor or outdoor.  
**PRICE:** \$32.50 without accessories.  
**MANUFACTURER'S NAME:** New York Album and Card Co.



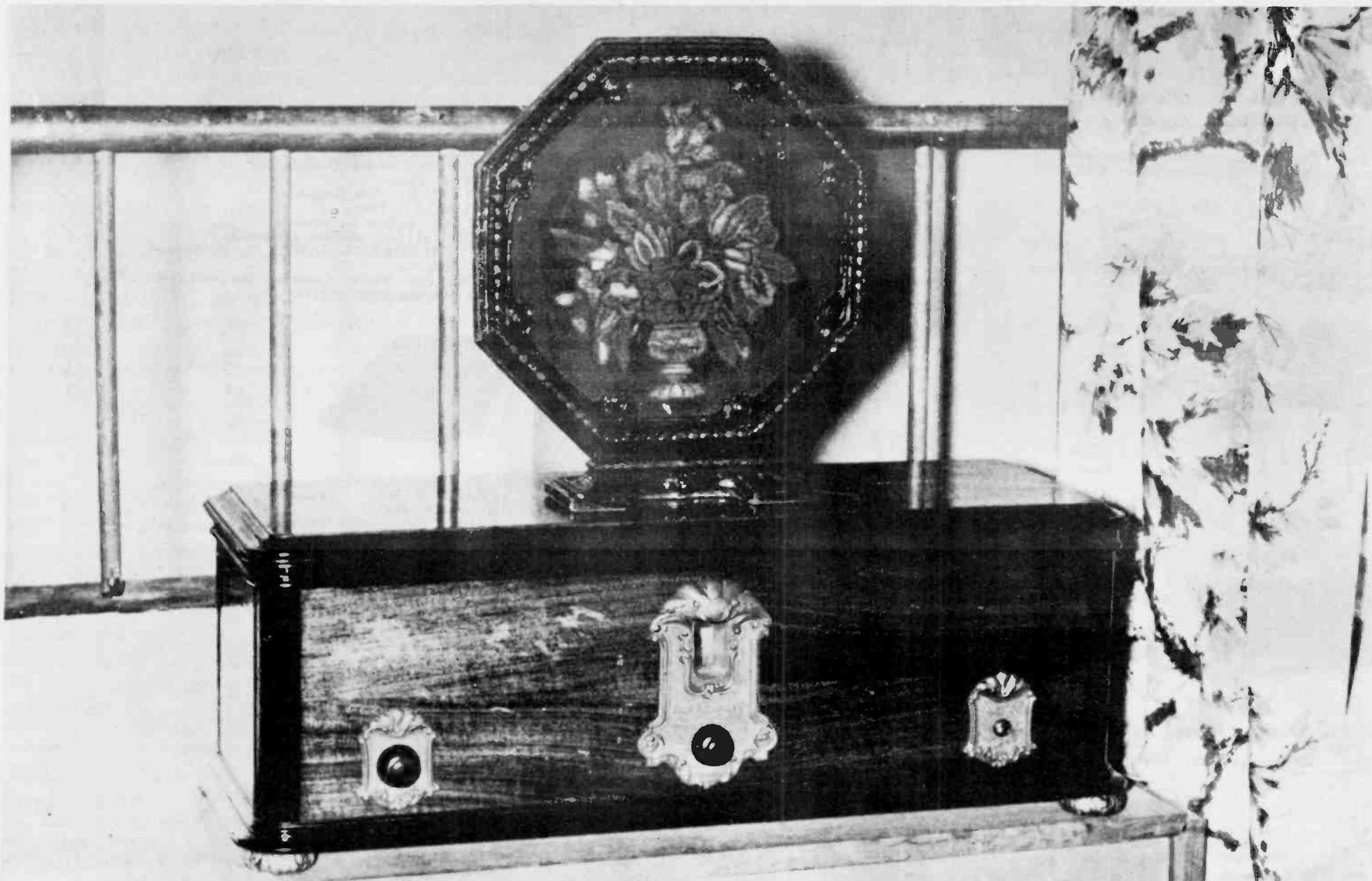
**TRADE NAME:** "Nyaccoflex Portable."  
**MODEL:** RP-1.  
**TYPE:** Reflex. In same case with phonograph.  
**TUBES:** Two.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Three.  
**AERIAL:** Indoor or outdoor.  
**PRICE:** \$55.00 without accessories.  
**MANUFACTURER'S NAME:** New York Album and Card Co.



**TRADE NAME:** "Oem."  
**MODEL:** 7 Day-Fan.  
**TYPE:** Two-radio frequency, detector and two audio; reflex.  
**TUBES:** Four.  
**BATTERIES:** "A" and "B" needed.  
**CONTROLS:** Four.  
**AERIAL:** Inside or outside.  
**PRICE:** \$98.00 without accessories.  
**MANUFACTURER'S NAME:** Dayton Fan and Motor Company.



**TRADE NAME:** "Parlor Grand."  
**MODEL:** S-6.  
**TYPE:** Neutrodyne.  
**TUBES:** Five.  
**BATTERIES:** Not furnished.  
**CONTROLS:** Three.  
**AERIAL:** Indoor or outdoor.  
**PRICE:** \$145.00 without accessories.  
**MANUFACTURER'S NAME:** R. E. Thompson Mfg. Co.




This 1928 Radiola 60, first R.C.A. A-C superheterodyne, that had an original cost of \$147.00 and now being priced by price guides at \$100.00 deserves special recognition for innovations. It has 9 tubes with no "catacomb" (a change-out unit

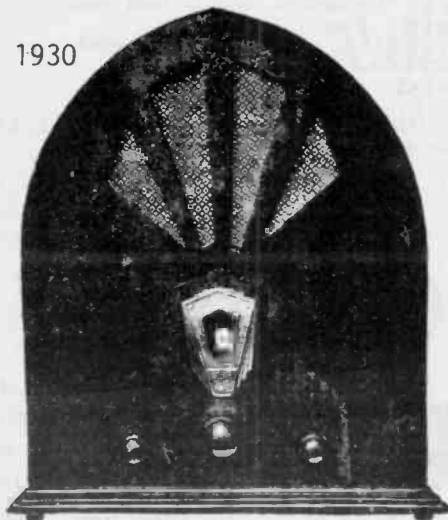
used in earlier R.C.A. superhets), plugs directly in the wall and single dial tuning—all these features in one radio by a major manufacturer—hard to resist!! It looks good with the 1927 R.C.A. loudspeaker.

**KNOB REPRODUCTIONS**

Larry Bordonaro now has Keith Parry's business, which he bought from Bill Wakefield. It is Old Time Replications, 5744 Tobias Street, Van Nuys, CA 91411. (818) 786-2500.

TIE CLASPS                      LAPEL PINS  
 PHILCO-G.E.-R.C.A.-GRUNOW-&-MORE  
 "COLORFULL ENAMEL EMBLEMS"  
 MANY  STYLES  
 "ENGRAVE WITH STATION CALL SIGN"  
 SEND L.S.A.S.E. FOR  
 COMPLETE ILLUSTRATED LIST!  
 MICHAEL SABODISH 11-A MATAWAN AVE.  
 CLIFFWOOD, N.J. 07721.....  
 "MAKES A GREAT GIFT"              3/87

1930



**TOM THUMB  
MIDGET RADIO**

# LETTERS

Dear Jim,

I especially enjoyed the article entitled "Reinartz, Cockaday and the Super Trindyne." It was a pleasure to read it and it brought back many happy memories of my early days of radios, when I saved my tiny allowance for many months to buy a desired variable condenser or variocoupler.

We eagerly awaited the weekly radio section of the evening newspaper. The radio section was a four page issue which contained the radio programs for the week; a new

**NEW** **PUETT ELECTRONICS**  **NEW**  
 P.O. BOX 28572 DALLAS TX 75228  

# CATALOG 7 SEVEN

48 - PAGE CATALOG \$2.00 POSTPAID  
 A \$3.00 DISCOUNT COUPON WILL BE SENT WITH YOUR CATALOG IF YOU INCLUDE THIS CODE NUMBER WITH YOUR CATALOG ORDER -- HS007-7.

**GET THIS  
WORLDS!  
GREATEST  
RADIO  
CATALOG**

OUR NEW CATALOG --- MORE THAN 1,000 ANTIQUE RADIO PUBLICATIONS - BOOKS, INSTRUMENT MANUALS, COMMUNICATIONS RECEIVER MANUALS, CATALOGS, SERVICE DATA, SALES BROCHURES, TECHNICAL DATA, FACTORY SERVICE MANUALS, AND OUR NEW REPRODUCTIONS OF MANY FAMOUS BOOKS AND OTHER LITERATURE, PRINTED ON BOTH SIDES OF THE SHEET AND WITH ATTRACTIVE COVERS! HUNDREDS OF OLD-TIME-RADIO-PROGRAM CASSETTES, HUNDREDS OF DIFFERENT TYPES OF TUBES WHICH ARE USED IN ANTIQUE RADIOS, RIDER MANUAL INDEXES, TUBE MANUALS, TUNING DRIVE BELTS, LARGE LIST OF CLASSIC RADIO LITERATURE, SCHEMATIC DIAGRAMS ON NEARLY ANY RADIO RECEIVER, DIRECTORY OF ANTIQUE RADIO SERVICES, APPRAISALS, ATWATER KENT FACTORY MANUALS --- MASTERCARD & VISA AVAILABLE!! ANTIQUE RADIO TOPICS, A 14-SERVICES PUBLICATION, SUBSCRIBERS GET 15% OFF ON ALL CATALOG ITEMS EXCEPT TUBES, 20% OFF ON TUBES! 6 FREE SCHEMATIC DIAGRAMS, MUCH MORE!! SUBSCRIPTION RATE \$15.00 POSTPAID!!

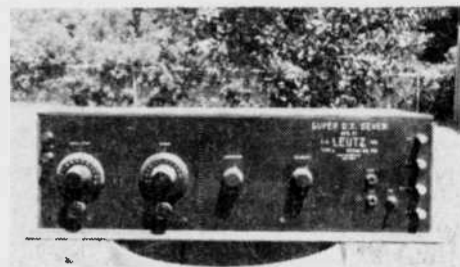


easy to build hook-up of a radio set which promised to perform miracles in receiving distant stations or DX. With our meager saving we scanned the many radio parts ads for that elusive bargain that was needed to try out a new circuit, which when completed was found to be no better than the previous one.

Sincerely  
Leo Gibbs, WBBHT  
Kettering, Ohio

sell so that we can cancel your ad. If you want to run only as you specified, we will run it only that number of times. Thank you.

\*\*\*\*\*  
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Hi There Jim!!!

Got a kick out of that picture of the little spark transmitter in the February issue of The Horn Speaker!

It is a typical layout of the vintage of 1912 !! Shown there is one of the smaller Bull Dog coils of the Electro Importing Company, N. Y. C. —no doubt a one inch— good for 25 miles— We used to wad the vibrator on these to reach a higher note— and a times step up the input voltage from six to twelve volts— provided we had a spare set of contact points on hand— Hi!

That is a neat little helix shown— if I recall correctly— it's a MESCO — The gap is definitely a Bunnell— with the push button locks on the adjustments. Signal brass key with flame proof knob! Great for 1/2 KW and above— plush item for this rig— Hi!

I still have my old two inch Bull-Dog here in the collection— with Leydon jars— who "growl's" regularly upon the arrival of visitors!!!!

Cheerio!!!  
Mel  
Melvin R. Comer  
Andmore, Pennsylvania

RARE FIND— TAKING BIDS— TWO C. R. LEUTZ SUPER DX SEVEN — SUPER DX EIGHT — TYPE L SER. NO. 518— LONG ISLAND NY PROTOTYPES — EVERETT BERRY, C/O — 2008 E. SEWARD STREET, TAMPA, FL 33604.

\*\*\*\*\*  
"FREE FOR LATEST FLYER, NO. 186D, SEND 2 STAMP S.A.S.E. TO: OLDE TYME RADIO COMPANY, 2445 LYTTONS- VILLE, MD 20910.

\*\*\*\*\*  
ANTIQUE BEEHIVE WHITE INSULATORS — \$1.00 EACH — HEAVY DUTY T.V. REPLACEMENT TRANSFORMERS, NEW BOXED AT \$20.00 EACH. — 50 YEAR COLLECTION OF VACUUM TUBES LOW LOW PRICES. INQUIRE M. LEVY, 101 EAST DRIFTWOOD #44, FBG, TX 78624 TEL (512) 997-2534.

\*\*\*\*\*  
VINTAGE RADIO AND RELATED LITERATURE. LSASE FOR LIST. FOTHE, 10 JACKSON STREET, SLOATSBURG, NY 10974.

\*\*\*\*\*  
FOR SALE. SERVICE DATA, PARTS, TUBES, TEST EQUIPMENT. LIST #2-86. SASE. KRANTZ, 100 OSAGE AVENUE, SOMERDALE, NJ 08083.

\*\*\*\*\*  
ACME 'ACMEFLEX' (1925, VG TO EXC, UNTRIED, BOTH AUDIOS OK) \$75 — PHILCO 43B (1932, EXP REF'D, WORKS) \$190 — PHILCO 70B (1931, NICELY REFINISHED, SMALL VENEER PATCH ON THE TOP REAR OF CABINET, WORKS) \$190 — BULB SHAPED TUBES AND RADIO BOOKS — SEND LARGE 2 STAMP S.A.S.E. FOR COMPLETE AND UP-TO- DATE PHOTO LIST. — RON BOUCHER, 376 CILLEY ROAD, MANCHESTER, NH 03103. (603) 669-1698.

\*\*\*\*\*  
FREE some old time radio for SASE, new, super flyer completely revised. 4 pages of radio. Olde Tyme Radio, 2445 Lyttonsville Road, Silver spring, MD 20910

\*\*\*\*\*  
CRYSTAL, TUBE EXPERIMENTER'S catalog — \$1.00 — None free. Sets, kits, handbooks, plans, coils, supplies, obsolete tube quotations. Laboratories, 1477-H, Garden Grove, CA 92642.

\*\*\*\*\*  
50 YEAR COLLECTION HARD TO FIND TUBES: LOW LOW PRICES, INQUIRE, M. LEVY, 101 EAST DRIFTWOOD #44, FBG, TX 78624.

\*\*\*\*\*  
SCOTT ALL WAVE RADIO w/ speaker and power supply \$275.00, Silvertone 12" x 15" metal speaker \$15.00, 1910 Dictaphone Transcriber, shaving machine \$75.00, Radiola 28 on four legs, \$100.00, Radiola 25 w/loop \$55.00, Radiola 60 cabinet only w/jewel box made inside

\$40.00, 12" x 12" rd. temple style speaker \$40.00, Magnavox R3 speaker \$65.00, Radiola 18 w/tubes \$40.00, Riders 10, 12, 13, \$10.00 ea., Plus U.P.S., Larry Chambers, 5026 Suter Drive, Nash- ville, TN 37211 (612) 833-2448.

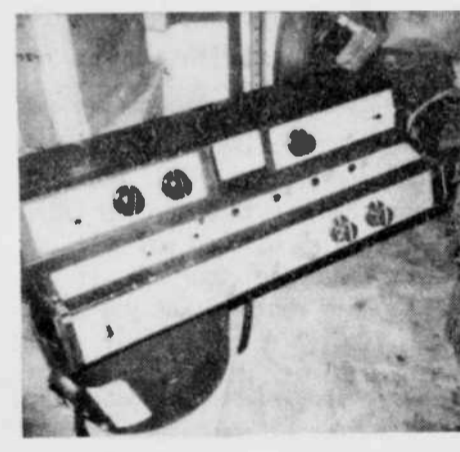
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FOR SALE— UNUSED AND USED TUBES, CAPACITORS, speakers, etc. Send S.A.S.E. for lists. C. Elmer Nelson, 11 S. Church St., Princeton, IL 61356.

\*\*\*\*\*  
PHILCO CATHEDRAL, AK 46, RADIOLA AR812, Radiola 18, Crosley Show- box, CASE, RCA T62, speaker AK-F4, quack home diathermy machine, B & K tube tester, wood cased test equipment, John Kendall, 600 Rem- ington Road, Fallston, MD 21047. SASE for pictures and more infor- mation.

\*\*\*\*\*  
FOR SALE. RIDERS, HOWARD SAMS, RCA, PHILCO, GE SERVICE MANUALS. TUBES, TEST EQUIPMENT, SPEAKERS, KNOBS, PARTS. SASE FOR LIST. KRANTZ, 100 OSAGE AVENUE, SOMER- DALE, NJ 08083.

\*\*\*\*\*  
TRANSFORMERS— POWER— HEAVY DUTY— T.V. AND RADIO REPLACEMENT TYPES, STANCOR AND MERIT, NEW BOXED AT \$20.00 EACH. LARGE COLLECTION VACUUM TUBES, LOW, LOW, PRICES. INQUIRE M. LEVY, 101 EAST DRIFTWOOD #44, FBG, TX 78624, TEL. (512) 997-2534.

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FOR SALE OR TRADE: CBS 190 COLOR SET 1953 uses 15GP22 in excellent original working condition.. Altec Lansing 230B mixing console near mint with original Altec book. Also have many 20's battery sets and horns. See wanted ad this issue. Ward Kremer, 301 SW 16st., Ft. Laud., FL 33315. (305) 772-1608.

\*\*\*\*\*  
FOR SALE— RIDERS MANUALS, ABRIDGED (VOL. 1-5) AND VOL. 6 THROUGH 16 \$275.00. VOL. 9, 10, 14 \$20.00 EACH. ANTIQUE RADIO SERVICE, O. H. McDONALD, 2535 WEDGLEA #124, DALLAS, TX 75211.

\*\*\*\*\*  
"RETIRED RADIO- TV SERVICEMAN SELLING OUT PARTS, TUBES, LARGE S.A.S.E. BRINGS LIST." N. McVALLY, 190 PERRIN, PAWTUCKET, RI 02861.

\*\*\*\*\*  
ELECTRON TUBES: Receiving, trans- mitting, microwave.. all type available. Large stock. Next day delivery, most cases. Daily Elec- tronics, P. O. Box 5029, Compton, CA 90224 (213) 774-1255.

\*\*\*\*\*  
CHASSIS— RCA 88K, 8 TUBES, EYES, CLOCK- TYPE DIAL, 3 BANDS,

SPEAKER, SOME RUST, \$30.00 — PHILCO 112, 11 TUBES, \$30.00 — MOTOROLA HS-253, 8 TUBES, AM-FM, LOOP \$20.00 — RADIOS —

AK-33, E3 SPEAKER \$60.00 — ZENITH 5R303, 5 TUBE AC, WOOD, PUSHBUTTONS \$20.00 — PHILCO E-812-124 YELLOW PLASTIC, 5 TUBE, AC/DC \$15.00 — SETCHEL —

CARLSON 49-6, PAY RADIO, LESS COIN MECHANISM, 5 TUBE AC/DC \$15.00 — COMMUNICATION RECEIVERS — NATIONAL HRO-W, 5 COILS, POWER SUPPLY \$60.00 — HRO 5TAI,

3 COILS, POWER SUPPLY \$40.00 — NC-183D SPEAKER \$60.00 — HALLICRAFTERS SX-28, CABINET (NO CHROME) \$60.00 — HEATHKIT AR-3 \$15.00 — HEATHKIT HR-1680, SPEAKER \$30.00 — TEST

EQUIPMENT — RIDER CHANALYST, PROBES, MANUAL \$40.00 — PRE- CISION E-200-C GENERATOR, MANUAL \$20.00 — ALL COMPLETE

WITH TUBES, SHIPPING EXTRA. JOE WATSON, 3300 ARROWHEAD CIRCLE, ROUND ROCK, TX 78681 (512) 255-7962.

\*\*\*\*\*  
FOR SALE: TEST EQUIPMENT for radio and telephone. SASE for TE list. Serge Krauss, 141 Homan Avenue, Elkhart, IN 46516.

\*\*\*\*\*  
FOR SALE: RADIOS, PHILCOS & RCA cathedrals, Kennedy, Radiolas, Atwater Kents, King and others. No. 199 radio tubes and others. Clifford Schoen, 549 Fulton Street, Seymour, WI 54165. Phone (414) 833-2429.

\*\*\*\*\*  
FOR SALE 20 SW SETS— LIST SW87. PARTS, TUBES, SERVICE DATA, TEST EQUIPMENT, SASE FOR LIST E86, HARD TO GET TUBES, AK BB PARTS, TUBE SAGA, RADIO NEWS 1920 - 1945. SASE FOR LIST # OFFER 1987. PLUS MORE. KRANTZ, 100 OSAGE AVENUE, SOMER- DALE, NJ 08083.

\*\*\*\*\*  
LONG ISLAND ANTIQUE RADIOS— For sale and repair. All prices. Reasonable, come to AA Electronics, 178 I. W. Willets Road, Albertson, NY; 11542 at Albertson R. R. Station. Call first, (516) 741-4212.

\*\*\*\*\*  
CONSOLES— 10 NICE RADIOS FOR SALE. PHILCO, RADIOLA, MARSHALL, MAJESTIC, KELLOG — SASE FOR LIST. RUSS OLMSTED, 608 W. THOMPSON LANE, MURFREESBORO, TN 37130.

\*\*\*\*\*  
TUBES AND POWER REPLACEMENT TRANSFORMERS... LOW LOW... PRICES: MINATURES AT \$1.00... OCTALS AND LOCTALS AT \$2.00... INQUIRE ON OTHERS..... M. LEVY, 101 EAST DRIFTWOOD # 44, FREDERICKSBURG TX 78624. TEL. (512) 997-2534.

\*\*\*\*\*  
RADIO RELATED TIE CLASPS, LAPEL PINS, R.C.A. - G.E. - PHILCO, ETC. FULL ENAMEL EMBLEMS. SEND S.A.S.E. FOR LIST. YOU-WILL BE GLAD YOU DID. MR. MICHAEL S. SABODISH, SR., 11-A MATAWAN AVENUE, CLIFFWOOD, NJ 07721.

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# flea market

ADVERTISE IN THE HORN SPEAKER  
Box 53012, Dallas, TX 75253 (lower price per square inch— compare)

AD SPACE:  
Full page ..... \$75.00  
Half page ..... \$37.50  
Quarter page .... \$16.25  
Business size  
card ads ..... \$1.00  
Space per square  
inch ..... \$0.60

CLASSIFIED ADS .. 15 cents a word.  
(first 20 words free)  
PHOTO ADS..... \$5.00 extra.

\*\*\*\*\*  
\*\*\*\*\*SPECIAL\*\*\*\*\*  
We will run your ad until you sell your merchandise through June 1987. Please notify us when you

\*\*\*\*\*  
 ROTARY SPARK GAP, medium power. Works fine. \$95; Hallicrafters S-85 Receiver. Excellent. \$85; Three coil mount with honeycomb coils. \$45; Bodine loop antenna. Beautiful. \$75. All plus UPS. Paul C. Crum, W9LC, 6272 N. Cicero Avenue, Chicago, IL 60646. 1 (312) 282-3033  
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 INDIANA HISTORICAL RADIO SOCIETY information and membership application send SASE to: IHRS, 245 N. Oakland Avenue, Indianapolis, IN 46201  
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 FOR SALE— 3 AERO COIL SHORT WAVE REMOVEABLE COIL TUNERS. 1945 RADAR BOOK U.S. AIR FORCE. TRANSMITTER CRYSTALS. U.S. AIR FORCE WW2 PHOTO. 1913 MICROPHONE. TRANSMITTER TUBES 12 IN. LONG. RUSSELL SCHOEN, R #1 BOX 224, CLINTONVILLE, WI 54929. (715) 823-6744.  
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 FOR SALE: PHILCO 87. ZENITH 10S160. Silvertone R101. Crosley five. Crosley 515. Airline "Movie Dial" and others. List. WOIAZ, P. O. Box 141, Goodman, MD 64843. (417) 364-7936.  
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 AMATEUR RADIO RECEIVERS AND TRANSMITTERS — MAGAZINES — TUBES PHOTOS — .50. SASE FOR LIST — SEND YOUR WANT LIST. K4UJZ, RUSS OLMSTED — 608 W. THOMPSON LANE, MURFREESBORO, TN 37130.  
 \*\*\*\*\*

\*\*\*\*\*  
 COLLECTION OF Radio, Popular Science, Science and Invention, etc. magazines, 320 in all for \$750. or best offer; 81 antique radio tubes for \$225. or best offer, Emerson and Sentiel TV's \$125. each. Large number of antique radios and phonographs for sale. Call Charles Rakes at (501) 273-5340 or send a large SASE for list of items for sale to: Charles Rakes, P. O. Box 445, Bentonville, AR 72712.  
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 RCA CT-100, fully restored 1954 COLOR TV, Bill Russell, 3236 Laurel Canyon, Santa Barbara, CA 93105. (805) 682-8115. Send \$1.00 and SASE for color picture.  
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 NEW BOOKS ABOUT OLD RADIOS, PHONOGRAPHS. 6 page catalog. Long SASE to Sound Box, Dept. HS, Box 226, Ettrick, WI 54627.  
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 FOR SALE, NEW AND USED RADIO TUBES. Late 1920's thru early 1940's. SASE for list. FOTHE, 10 JACKSON ST., SLOATSBURG, NY 10974.  
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 FOR SALE— SCOTT — RADIO — MINT — 800B — ALL ORIGINAL. Details included. Buyer pays delivery. \$650.00. Tel. (216) 481-0226. Frank Hoffert, 19605 Chardon Road, Cleveland, OH 44117.  
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 OVER 100 AUTO RADIOS, most are tube type, as is, \$15.00 to \$50.00, restored to \$100.00, list for SASE. Test equipment for SASE. Interested in buying Carter Genemotor, James Fred, Cutler, IN 46920.  
 \*\*\*\*\*

\*\*\*\*\*  
 FOR SALE: BOOKS, MANUALS, Tubes from 1930's to 1970's at 75 cents each. SASE for lists. Bruce Harbeck, 13408 Westwood Lane, Omaha, NE 68144. Phone (402) 333-9013.  
 \*\*\*\*\*

\*\*\*\*\*  
 RADIO! RADIO! Jonathan Hill has published the most complete book on British radios from Marconi to the 1960's. Almost 1000 photographs illustrate the 242 page 8 1/2" x 12" book. Cost: \$19.95 paperback, \$29.95 hardback, plus \$2.50 P&H. Howard Stone, 2825 6th Avenue, Fort Worth, TX 76110.  
 \*\*\*\*\*

\*\*\*\*\*  
 AVAILABLE: DUPLEX PHONOGRAPH, \$4000/BO. Proposed deals involving pre-war TV's will receive priority. Jim Clark, 1 (517) 323-9595.  
 \*\*\*\*\*

\*\*\*\*\*  
 FOR SALE: OLD QST AND ARRL RADIO HANDBOOKS. SEND SASE FOR LIST. K. M. MILLER, K6IR, 16904 GEORGE WASHINGTON DRIVE, ROCKVILLE, MD 20853.  
 \*\*\*\*\*

\*\*\*\*\*  
 HIGH FIDELITY magazine, 1940s; MUSIC AT HOME, AUDIOCRAFT magazines; old RCA theremin, early oddball hi-fi stuff. Have trade items. Hal Layer, P.O. Box 27116, San Francisco, CA 94127.  
 \*\*\*\*\*

\*\*\*\*\*  
 CAPEHART 112N2 has unusual record changer— \$325; Neutrowound Super 6 — \$185; Zenith 6S229 — \$85; AK-20 — \$75; and others. Rosenthal, 507 South Maryland Avenue, Wilm., DE 19804.  
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\*\*\*\*\*  
 \*\*\*\*\*SPECIAL\*\*\*\*\*  
 We will run your ad until you sell your merchandise through June 1987. Please notify us when you sell so that we can cancel your ad. If you want only to run only as you specified, we will run it only that number of times. Thank you.  
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 BROWNING DRAKE KIT \$65.00, (no case) A K E speaker \$25.00, Sonochorde spkr (fair) \$20.00, Philco 16 cathedral \$175.00, Philco 650 (refin) \$65.00, SHIPPING EXTRA. Richard Foster, 12 Shawmut avenue, Cochituate, MA 01778. (617) 655-2056.  
 \*\*\*\*\*

\*\*\*\*\*  
 WESTINGHOUSE CONSOLE MODEL WR7, depression era 1929-1930. Built-in phono and record cutter/recorder w/ original hand mike, manual and dealer's documents. Great condition — it works! pick up only \$250.00. Frank, K2RLG, 117 Cathedral Avenue, Florham Park, NJ 07932.  
 \*\*\*\*\*

\*\*\*\*\*  
 SELL: FOUR CATHEDRALS: RCA 18, AK 47, Crosley 515, speaker RCA cabinet #104, Music Master gooseneck 12 inch bell. All complete, refinished and operating. Phone (904) 683-7202. Charles Kaelber, P. O. Box 3335, Spring Hill, FL 33526.  
 \*\*\*\*\*

\*\*\*\*\*  
 FOR SALE: ABOUT 150 different SAMs sets, most complete at 25 cents each or offer for all and postage. Radio and TV tubes from 30s to 70s, 25 cents to \$200.00 each. NOS and used. SASE, Craig Larson, 2122 45th

Avenue, Minneapolis, MN 55421.

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 PHILCO PHANS: unusual chairside "BAR RADIO" with swing out bar has Philco model 38-10 chassis (5 tubes) \$50.00. Philco 112 chassis (11 tubes) \$30.00. Motorola HS-253 chassis (8 tubes), AM-FM, loop \$20.00. COMMUNICATIONS RECEIVERS: National NC-183D, speaker \$60.00, Hallicrafter SX-28, cabinet, no chrome \$60.00. Heathkit HR-1680, speaker \$25.00. Joe Watson, 3300 Arrowhead Circle, Round rock, TX 78681. (512) 255-7962.  
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 FOR SALE: UNUSED AND USED TUBES, capacitors, speakers, etc., send SASE for lists. C. Elmer Nelson, 11 S. Church street, Princeton, IL 61356.  
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 FOR SALE:: KENNEDY MODEL 5 \$199.00, Hallicrafter 7" TV \$149.00, Air Service (Rambler) that uses 199 tubes — \$79.00, Atwater Kent model 52 — \$59.00. Stan Jacobs, 232 Highbrook Avenue, Pelham, NY 10803. (914) 738-3483.  
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 FOR SALE: "B" POWER SUPPLY for RCA model 18 R.C.A. tube manual — complete 1950. Sylvania tube manual — good — 1956. Heathkit tube test equipment from 40's — like new and manuals. Chas. Kaelber, P. O. Box 3335, Spring Hill, FL 33526.  
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 FOR SALE: SILVER COCKADAY receiver \$90.00, Radiola 17 & 18 \$50.00 each, GGH Bakelite Horn (Mint) \$90.00, Newcomb-Halley drum speaker \$40.00, Arbocone speaker (mint) \$45.00 and other cathedrals, horns, tubes, AC sets, Rider manuals, parts and literature. Send SASE for upcoming list. Fireside Wireless, 1507 Ridge Avenue, New Castle, PA 16101. (412) 654-9335.  
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 FOR SALE N.O.S. TUBES IN ORIGINAL BOXES NAME BRANDS. 6AWA 6X5 6SA7 6SF5 12SK7 12SQ7 25L6 50A5 may be met. g. or gt. mix or match. 12 for \$15.00 P.Pd. in the 48. ———

R.C.A. WT110a tube tester with between 400 and 500 cards also master card, a few blank cards and puncher for making additional cards, and owners manual. This is the automatic tester you drop in the card instead of using a tube chart. It test 7, 9, pin octal and laktal tubes in good working order. \$50.00 plus shipping for 30 pounds. SASE for parts list. C. F. England, 98 Montague Avenue, South Zanesville, OH 43701.  
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 BEAUTIFUL, COLORFUL, ENAMEL radio-related tie clasps and label pins with emblems of Philco, G. E., R.C.A. and others. Must see to appreciate. Send a L.S.A.S.E. for completely illustrated list. Mr. Michael S. Sabodish Sr., 11-A Matawan Avenue, Cliffwood, NJ 07721.  
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 SWAP — OLD RADIOS, TUBES, LIT., FOR OLD FIDDLES AND OR FIDDLE PARTS, CASES. NEED LID FOR AERIOLA SR MADE BY WESTINGHOUSE. CECIL BOUNDS, STAR RTE. 1, BOX 420, CARLSBAD, NM 98220. (505) 785-2363.

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 CONSOLES FOR SALE: ATWATER KENT model 70 \$95.00, SCOTT PHANTOM 19 \$195.00 both in good operating condition. Chrome on Scott chassis is dull. Pick-up only. Ross Smith, 1133 Strong Avenue, Elkhart, IN 46514.  
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## WANTED

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 WANTED HALLICRAFTER SX-71 OR NATIONAL NC-183 in excellent condition. Please state price and condition when corresponding. Roy Schmitt, Rt. 1, Box 800 Lot 84, Converse TX 78109 (512) 659-0094.  
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 WANTED: DISK CUTTING EQUIPMENT, Rek-O-Kut, Presto, Meumann, etc. Also need idler wheel or measurements for Federal PR-12 disc cutter. Old pro mikes RCA 44's, 66's, AKG, etc. Ward Kremer, 301 SW 16st., FT. Laud., FL 33315, (305) 772-1608.  
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### NOTICE

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 SPRING SPECIAL — through June 1987 please specify on your ads if you want to run them until you find the item and notify us when you do (limit 6 months or less). If not, please specify the limit on the number of months you want the ad to run before all the readers of THE HORN SPEAKER.  
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 WANTED: B-ELIMINATOR, 01A tubes; quote prices, specifications. T. C. Day, 215 West 7th Street, St Waynesboro, PA 17268.  
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 TELEVISIONS BOUGHT! Buying 12" and smaller pre 1950 sets, plus Predictas, early color, etc. Paying \$40-350. Buying pre-WW II TV's—TRK's, Dumont, TT's, Fadas, more. Paying \$1200-4000! Books, TV novelties— wanted. Harry Poster, Box 1883, So. Hack., NJ 07606 (201) 794-9606.  
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 WANTED: DUMONT TELEVISION, table model with continuous tuning and FM. Jack Kashak, 139 E. Saemann, Chesterton, IN 46304. (219) 926-7240.  
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 WANTED: EDISONIC D. D. REPRODUCER. Edison antique finish dance reproducer — picture records — record dusters — Contact: Jimmie Grissom, 246 Keene Street, Henderson, NC 27536.  
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 WANTED: CABINET TOPS FOR RADIOLA 20 or 25 and 104 speaker unit. Deforest tubes and cans, early tubes and light bulbs. Bruce Harbeck, 13408 Westwood Lane, Omaha, NE 68144. (402) 333-9013.  
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 WANTED: WOOD FRONT PANELS for Radiola 20, large tuning knobs for A.K. 35. Mark Oppat, 167 Caster, Plymouth, MI 48170.  
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 S.A.S.E. is a self addressed stamped envelope.  
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WANTED COAXIAL OR TRIAXIAL SPEAKERS of Jensen, Trusonic, Tannoy, Altec 604's. Western Electric equipment (tubes, amps., drivers, horns, speakers, microphones and parts). Radio tubes (50's, 211, 845, 8005) David Yo, P. O. Box 832, Monterey Park, CA 91754. Tel. (818) 576-2642.

CATHEDRAL RADIOS, MUST BE NICE AND WORKING CONDITION. WILL PAY TOP DOLLAR. ALSO WANT OTHER UNUSUAL AC RADIOS. HAROLD PERKINS, 4468 SUN VALLEY DRIVE, LAS VEGAS, NV 89121.

WANTED — RCA CREDENZA'S, Edison windups - speaker systems and components, JBL Hartfield, Paragons- Altec Laguna, Magnificent, 515A/B, 288B/C, 604B/C/D/E, E.V. Patricians, Tannoy Autograph, GRF - Red/ Silver/ Gold, Jensen G610, Western Electric theatre equipment, speakers, drivers, horns, electron tubes, mixers, x-formers, x-overs, tubes, round top 45, 50 - W.E. 252A, 300A/B, 350B, etc. Charles Dripps, 4331 Maxson Road, El Monte, CA 91732. (818) 444-7079.

WANTED — GRANDFATHER CLOCK RADIO and Radiola IV. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada, T6H 0H9

WANTED— OLD 1960s or 70s large Allied Radio Catalogs. Earl Phillips, 311 David Lane, Maryville, TN 37801.

WANTED: BOOKS; buy, beg, borrow, rent or steal. Twining, "Wireless Telegraphy and High Frequency Electricity;" Curtis, "Construction of Induction Coils & Transformers;" Collins, "The Amateur Electrician's Handbook;" and other books with Tesla coil projects. Need data for forthcoming bibliography. TCBA, RD 3, Box 181, Glens Falls, NY (518) 792-1003.

WANTED- INSTRUCTIONS FOR OPERATING Hickock tube tester model # 600-A plus supplement tube data sheets. Zerox copies OK. Frank Hoffert, 19605 Chardon road, Cleveland, OH 44117. Tel. (216) 481-0226.

WANTED— OLD 1960s or 70s large Allied Radio Catalogs. Earl Phillips, 311 David Lane, Maryville, TN 37801.

WANTED— FOUR WIRE OSC. COIL 266KC or Philco part 322828. Don Aldred, 39 East 8th Street, Jacksonville, FL 32206.

URGENT— URGENT— NEED PART FOR VOLUME CONTROL FOR AK BREADBOARD MODEL 10. STRIP THAT HAS WIRE WOUND ON INSIDE OF CONTROL. RUSS SCHOEN, R#1, CLINTONVILLE, WI 54929.

WANTED: INFORMATION OR EQUIVALENT CHARTS ON MUTER BRAND BALLAST TUBES. OLD CATALOGS MAY LIST THEM. ANTHONY JACOBI, 8053 MAYWOOD, RALSTON, NE 68127.

WANTED - New or used OA2 voltage regulator tubes. Need 1200, must be reasonable. Tom Burgess, Box 9769,

Little Rock, AR 72219 - (501) 565-1750 evenings.

WANTED: GRANDFATHER CLOCK RADIO, AK, Philco, etc. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta Canada T6H 0H9.

RADIOLA Balanced amplifier— RADIOLA IIIA. whole— parts— junk. State price and condition when corresponding. B. Block, 2118 Winn, Kenah, TX 77565.

WANTED — TWO WINDING OSCILLATOR COIL, 265 kc I.f. frequency badly needed. For sale Thompson flybacks and yokes, two thru 167. \$12.95 postpaid. — Don Aldred, 39 East 8th Street, Jax. FL 32206.

RADIOLA ITEMS WANTED: Vocarola, RE, AR, Concert Receiver; Radiola IV, VI, VIIB / IX grand; any of AA series. CASH OR TRADES. Rosenthal, 507 South Maryland Avenue, Wilmington, DE 19804

WANTED: SET OF RIDER MANUALS, Vol. 1 thru 8. Must be realistic price. Michael Sabodish, 11A Matawan Avenue, Cliffwood, NJ 07721. (201) 566-1486.

HR-3 RCA ELECTRON TUBE HANDBOOK. Industrial, receiving and transmitting tube technical bulletins by GE, Sylvania, etc. Nick Tusa, K5EF, 129 Somerset, LaPlace, LA 70068 (504) 652-4904.

WANTED: LARGE HIGH VOLTAGE VARIABLE CAPACITOR. TCBA, RD 3, Box 181, Glens Falls, NY 12801

WANTED: COLORFUL "CATALIN" plastic radios; Fada, Emerson, DeWald, Addison, etc. Top prices paid. Mint condition only. R. W. Oliver, 355 Highwood Avenue, Leonia NJ 07605 (201) 944-0777.

WANTED— ANY McMURDO SILVER ELECTRIC set with or without cabinet. Masterpiece I, II, III, IV, V, VI 14-15, 15-17. Any literature, McMURDO SILVER TIMES OR FORUM Magazines. Also 1935- 1939 Zenith consoles. We pickup most areas of U. S. and Canada. Frank and Mary Rasada, 12507 Pinegrove Lane, Cerritos, CA 90701. Days: (714) 951-9591. Evenings: (213) 926-6722, leave message for return call.

WANTED— INFORMATION / DATA on the "SHELDON RADIO COMPANY" that was active in Los Angeles 1925-1931. Ed Sheldon, 656 Gravilla Place, La Jolla, CA 92037.

WANTED: SILVERTONE MODEL 4500A, black plastic table model— only interested in cabinet. Tom Johnson, 215 E. 7th Street, Ames, IA 50010.

WANTED: INFORMATION ON PEERLESS wireless, Milo Bailey, Thomas E. Clark (TECLA), and any other pre 1930 Michigan manufacturers: brochures, ads, articles, photocopies ok. Tips welcomed. Oran Sauder, 316 Wellington, South Lyon, MI 48178. (313) 437-4413.

SPARK EQUIPMENT— Especially 25,000 volts Commercial Spark Condenser, Rotary gap or complete sets. Paul C. Crum, 6272 N. Cicero Avenue, Chicago, IL 60646. 1(312) 282-3033.

WANTED: RADIO CORRESPONDENCE course kits. AC or battery. Leo Teply, geddes, SD 57342.

WANTED: DON'T THROW AWAY THOSE ELECTROMECHANICAL POWER SUPPLIES AND PARTS 6 VOLT AND 12 VOLT VIBRATORS, OZ4's, TRANSFORMERS. CASH PAID OR TRADES. MARVIN ROTH, 14500 LaBELLE, OAK PARK, MI (313) 399-5993.

A GERMAN MADE RADIO. Small table model— working condition. Phone or write. PETERSONS, 3115 North 61st Street, Lincoln, NE 68507. (402) 466-7548.

HALLICRAFTERS SX-88, parts or junker. Gene Mottern, 313 Royal Drive, Kingsport, TN 37663.

WANTED: A.K. BREADBOARD PARTS; antenna coils, type 11 tuner coil-tube unit, detector unit, potentiometers. 3 tube detector amplifier unit, switches, highest prices paid. DeWitt L. Bills, 5237 Upton Avenue North, Minneapolis, MN 55430. (612) 521-7109.

WANTED: LARGE HIGH VOLTAGE variable capacitor. Books and magazines on electricity, medical electricity and wireless telegraphy. Want list available. TCBA, RD3, Box 181, Glens Falls, NY 12801.

WANTED: LID FOR RADIOLA 20 and ATWATER KENT 20C, power supply for U.S. Radio and Television model 80. Richard Peterson, 3940 Lolan Ct., Marrero, LA 70072.

WANTED— A COPY OF SCHEMATIC for portable radio. R.E. 8000 - Ross Electronics and Manual. Michael J. Doback, 592 Southlawn, Birmingham, MI 48009.

CHELSEA MODEL 102 AF transformer, working or not. Will buy junker set to get one. Transformer nameplate says Songbird Midgie. P. A. Kinzie, 713 E. Beale Street, Kingman, AZ 86401.

WANTED: FANCY LOOKING GRANDFATHER CLOCK RADIO. Also AK models 558, 217, 165, 246, 944. Also Radiola IX, Airline 20 and Philco 20B. Need dud WD11 tubes. Gordon Wilson, 11108-50 Avenue, Edmonton, Alberta, Canada T6H 0H9.

WANTED: SILVERTONE MODEL 4500A, black plastic table model— only interested in cabinet. Tom Johnson, 215 E. 7th Street, Ames, IA 50010.

WANTED: RADIOLA X CHASSIS FOR PARTS. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada T6H 0H9.

TV'S BOUGHT — NEED 10", 7", etc. — pre 1950+ Predictas, early color, paying \$40 - \$350. PRE- WAR

TV's - TT5, TRK, LOTS MORE - \$1200 - \$4000. Books on TV's, pre 1948. Harry Poster, Box 1883H, So. Hack., NJ 07606. (201) 794-9606.

WANTED— WIRING CIRCUIT for RADIO-DYNE WD17- 5 tube radio, made, (Western Coil and Electric) Co., Racine, Wisconsin, a copy, a tracing or anything to get the wiring hookup. Herb DeGarmo, 203 3rd Street, Early, IA 50535.

WANTED: PHILCO 60 CHASSIS. Rheostat knob for a Crosley 51. Marc Ingenthron, 9215 W. 83rd Street, Overland Park, KS 66204.

WANTED: DRIVER AND METAL PARTS FOR MUSICMASTER HORN SPEAKER. HALLICRAFTER SX-17 AND SPEAKER. CHARLES FURTA, 241 OAK, ELMHURST, IL 60126.

WANTED — DeForest Interpanel. Richard C. Foster, 12 Shawmut Avenue, Cochituate, MA 01778. (617) 655-2056.

WANTED: QST 1950-59 BOUND LIBRARY VOLUMES. ALSO MINT WRL GLOBE SCOUT (820). M. GRIMES, 3805 APPOMATTOX, PLANO, TX 75023. (214) 867-6373

WANTED TO BUY. A 1927 AC only Zenith table model radio. Must be in original condition. Cabinet also original finish. Will pay top price for a nice one. Thanks. Ron Bertzos, 915 Crane Drive, Apt. 703, DeKalb, IL 60115.

WANTED: ANY GREBE DETECTOR OR DETECTOR AMP AND GREBE CR-6 AND CR-7. JIM COLLINGS, 12005 VICTORIA PL., OKLAHOMA CITY, OK 73120

CASH OR TRADE OLD RADIOS, tubes, speakers, literature, etc. for old fiddles, bows, cases or parts. Cecil Bounds, Star Rte. 1, Box 420, Carlsbad, NM 88220. (505) 785-2363.

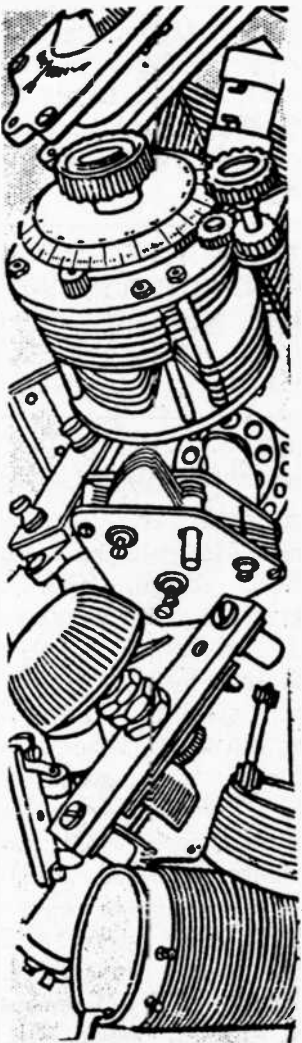
WANTED: 75P-4 CRT'S — FRED EMERSON, 627 ILLINOIS AVENUE, ELGIN, IL 60120

WANTED: NATIONAL HRO 60 coils: 15 meters (AC), 6 meters ((AD), E, F, G, H, J, others, dead or alive. Please write giving condition and price. Art W6ZNO, 18151 Rancho Street, Tarzana, CA 91356.

WANTED — GREBE CR18, HALLICRAFTER SX11, SX16 SKY CHIEF. RCA ACR 136, HOWARD 430. HT6 TRANSMITTER. K4UJZ, 608 W. THOMPSON LANE, MURFREESBORO, TN 37130 (615) 893-5344.

WANTED— CABINET FOR MY MADISON-MOORE RECEIVER. PANEL SIZE 7" X 26". MUST BE DEEP ENOUGH FOR A CHASSIS 10 1/2" DEEP. ALSO WANT CABINETS FOR RADIOLA II AND FOR ECHOPHONE V-3. DAVID MCKENZIE, 516 SOUTH EXETER STREET, EUSTIS, FL 32726. (904) 589-0149.

WANTED: MAJESTIC 3 TUBE PORTABLE MODEL 130 - oak case for Supreme model 385 set tester, chassis for American Beauty radio. Delmer Woodley, RT. 3 Box 13, Milford, IA 51351.



## OLDE TYME RADIO CO.

Need hard to find Olde Tyme Radio parts such as:

- Vintage Tubes
- AK Style Battery Cable
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- Audio Transformers
- Power Transformers
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- Speaker Grill Cloth
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- XTAL Set Parts

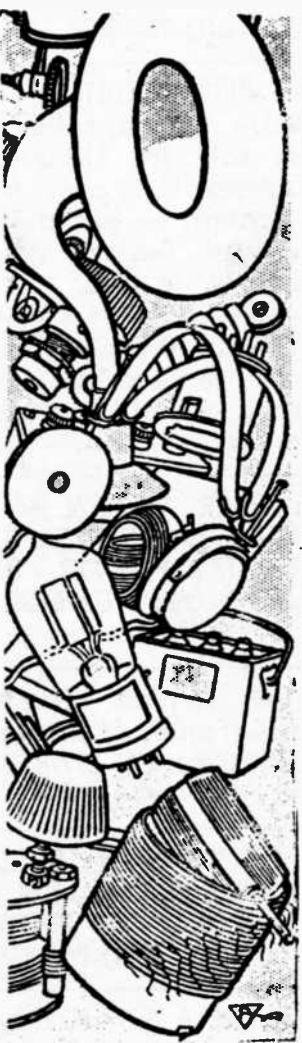
Also can provide reprints of the following Olde Tyme Radio publications:

- Arwater Kent Insulators Manual
  - Arwater Kent Equipment Catalog
  - Radiola IIIA Manual
- (See flyer for details.)

• **VINTAGE RADIO IDENTIFICATION SKETCHBOOK** by U. H. Moore  
 And much, much more, also as a convenience to you, we can even provide copies of those ever popular books 'Vintage Radio & Flick of the Switch' in soft covers. Schematics of many radios and TV sets are also available. For free flyer send SASE to Olde Tyme Radio Company, 2445 Lyonsville Road, Silver Spring, MD 20910.

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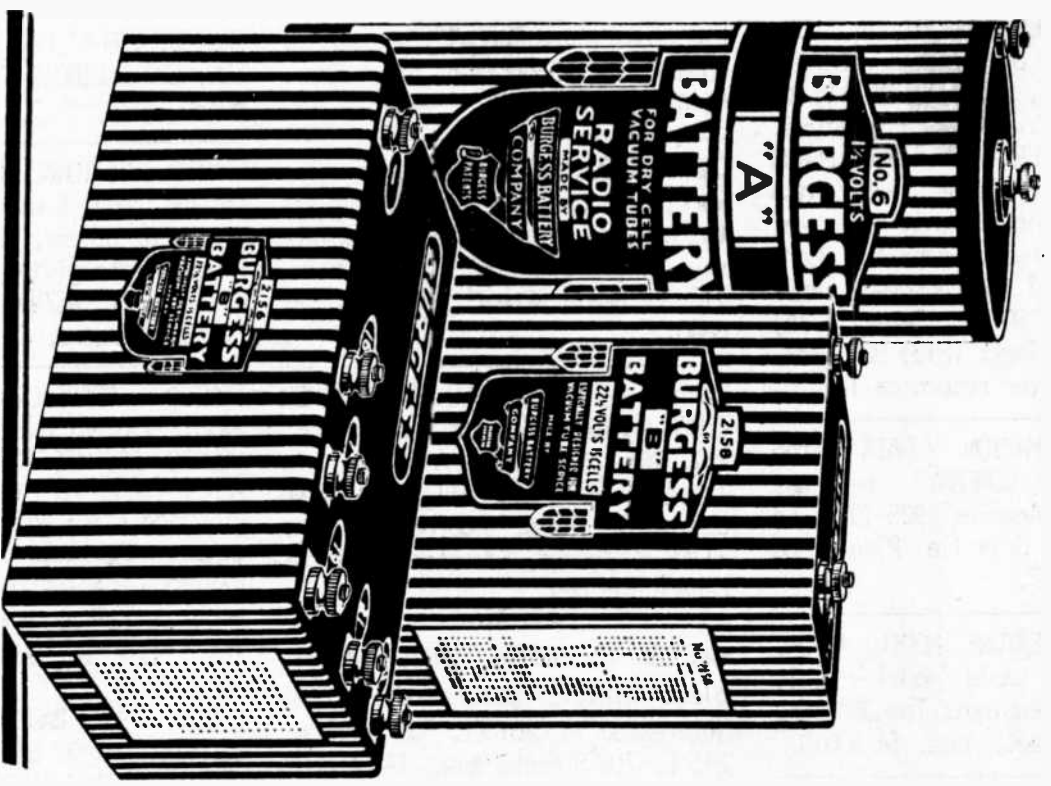
Wish to reach us by phone? The number is (301) 585-8776.  
 Please call between 10:00 a.m. and 10:00 p.m. est.



March

# THE HORN SPEAKER

1987



MR. GERRY B. SCHNEIDER  
 9511 SURPRISE BLVD J-23  
 NORTH ROYALTON OH 44133  
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