

THE NEWSPAPER FOR  
THE HOBBYIST OF VINTAGE  
ELECTRONICS AND SOUND

# THE HORN SPEAKER

MORE PAGES  
EVERY QUARTER

To give more needed space in The Horn Speaker, especially after going to the smaller format, the March, June, September and December editions will be planned for 12 pages. During the period of a year the newspaper will have more space.

## Guglielmo Marconi

THE WORLD'S  
FIRST FULLTIME  
RADIO ANNOUNCER

by  
RAY POINDEXTER

ON December 12, 1929, Senatore Guglielmo Marconi, who sent the first wireless message across the Atlantic twenty-eight years ago, spoke into a microphone in London and his voice was heard throughout the United States. Graham McNamee, in New York, introduced Marconi to American listeners.

Engineers of the National Broadcasting Company and the Radio Corporation of America were successful in picking up a short-wave broadcast from Station G-5SW, at Chelmsford, England, of Marconi's voice, and it was rebroadcast through a chain of forty-six stations extending as far west as Denver. The short-wave signals were picked up at Riverhead, Long Island, and then routed to the New York NBC studios and the network. The rebroadcast was the sixth successful attempt of this organization to rebroadcast a program from abroad. WEAJ and WJZ were the New York outlets.

*Following is Senatore Marconi's address delivered from the London studios of the British Broadcasting Corporation and rebroadcast in the United States by the National Broadcasting Company.*

THE EDITORS

IT gives me very great pleasure to recount to Americans through the courtesy of the National Broadcasting Company of America and the British Broadcasting Corporation my experiences at the time when I first attempted and, indeed, successfully, to send radio signals across the Atlantic Ocean twenty-eight years ago, almost to the very hour.

From the time of my earliest experiments I had always held the belief, almost amounting to an intuition, that radio signals would some day be regularly sent across the greatest distances on earth, and I felt convinced that trans-Atlantic radio telegraphy would be feasible.

Very naturally I realized that my first endeavor must be directed to prove that an electric wave could be sent right across the Atlantic and detected on the other side.

What was at that time a most powerful wireless station was built at Poldhu in England for this purpose and an antenna system was constructed, supported by a ring of twenty masts, each about two hundred feet high. In the design and construction of the Poldhu station I was assisted by Sir Ambrose Fleming, Mr. R. N. Vyvyan and Mr. W. S. Entwisle.

Another similar station was erected at Cape Cod in Massachusetts. By the end of August, 1901, the erection of the masts was nearly completed when a terrific gale swept the English coasts, with the result that the masts were blown down and the whole construction wrecked. I was naturally extremely disappointed at this unforeseen accident, and for some days had visions of my test having to be postponed for several months or longer, but eventually decided that it might be possible to make a preliminary trial with a simpler aerial attached to a stay stretched between two masts 170 feet high and consisting of sixty almost vertical wires. By the time this aerial was erected another unfortunate accident, also caused by a gale, occurred in America, destroying the antenna system of the Cape Cod station.

I then decided, notwithstanding this further setback, to carry out experiments to Newfoundland with an aerial supported by a balloon or kite, as it was clearly impossible at that time of the year, owing to the wintry conditions and the shortness of the time at our disposal, to erect high masts to support the receiving aerial. On the twenty-sixth of November, 1900, I sailed from Liverpool accompanied by my two technical assistants, Mr. G. S. Kemp and Mr. P. W. Paget.

We landed at St. Johns, Newfoundland, on Friday, December the sixth, and before beginning operations I visited the Governor, Sir Cavendish Boyle, and the Prime Minister, Sir Robert Bond, and other members of the Newfoundland government, who promised me their heartiest co-operation in order to facilitate my work. After taking a look round at the various sites, I considered that the best one was to be found on Signal Hill, a lofty eminence overlooking the harbor. On the top of this hill was a small plateau which I thought suitable for flying either balloons or kites. On a crag of this plateau rose the Cabot Memorial Tower and close to (Continued on page 5)



Harold W. Arlin, KDKA, Pittsburgh, the world's first fulltime radio announcer

Harold W. Arlin was an electrical engineer working as a time study supervisor in the manufacturing division of Westinghouse Electric in East Pittsburg, and it was only natural that he wanted to observe the operation of the company's latest innovation. He was twenty-five at the time and thought that he was established vocationally.

He had been born in La Harpe, Illinois, had moved with his parents to Carthage, Missouri, at the age of four, and had attended a two-room elementary school, Carthage High School, and the University of Kansas.

The Westinghouse Company had put KDKA on the air the night of November 2, 1920, after Dr. Frank

Conrad, their assistant chief engineer, had received considerable recognition with his broadcasts over amateur station 8XK. KDKA was the nation's first regularly licensed commercial station with a regular program schedule. The opening night feature was the broadcasting of returns of the Harding-Cox presidential election. During the following nights, the station had no regular announcers. Members of the company's publicity department filled in on the air.

Harold Arlin went up to KDKA's small transmitter penthouse on top of the plant. During a recent telephone conversation from his home in Mansfield, Ohio, still strong-voiced at seventy-eight, he related details of his visit:

"I went more or less through curiosity and found out they were looking for an announcer. They wanted to know if I wanted to try out. I said, "Yeah." I thought maybe I'd do this for a week or two, and it ended up I was there about five years."

Arlin "tried out" on the air in contrast to the off-the-air audition methods of today. "Actually, we didn't think much about technique," he said in his conversation. "We didn't realize that we were starting something that would expand and grow like radio did. The first thing we had was the broadcast of phonograph records and the announcing of baseball scores. Then we started bringing artists (musicians) out from Pittsburgh. And then there were speakers."

For about six months, KDKA didn't have a regular studio. Records were played from the transmitter room, and remote broadcasts were carried from such places as churches, theatres and hotels. In mid-May of 1921, the decision was made to include live programs from a studio. The plant auditorium was used at first, but its acoustics were not suitable for the desired quality. Next, a tent was pitched on the roof beside the penthouse where the equipment was located. This arrangement was satisfactory until an autumn wind toppled it. Although the canvas structure served well for the purpose of resonant sound, there were problems. A freight train passed at 8:30 each night, and its whistle became a part of the KDKA program at that time. On one occasion, a popular tenor almost swallowed an insect while his mouth was wide open for a high note. His remarks were not suitable for broadcast, and the operator quickly shut the station down.

Much about radio acoustics was learned from the use of the tent studio. Engineers utilized drapes and sound board to the best advantage in a new indoor studio

that was put into use October 1, 1921. Even this facility was not an absolute guarantee against on-the-air mishaps. Announcer Arlin was reading baseball scores one night when a dog ran through the studio, knocking over the microphone, upsetting copy, and adding barking sound effects to the broadcast.

Because Arlin was the original fulltime announcer, he is credited with many "firsts." He did the first broadcast of a major league baseball game, describing the contest between the Pittsburgh Pirates and the Philadelphia Phillies in August 1921. He had followed baseball as a fan and possessed a good working knowledge of the game. The play-by-play broadcasting of college football was added to the list of firsts with the opening game of the season between Pitt and West Virginia in 1921. His second football broadcast, which matched Pitt and Nebraska, is even more memorable to him. "I got a little excited and yelled into the microphone so loud that it knocked the needle off the modulation meter, and we were off the air for several minutes," he said.

Mike fright was very common among guest performers and speakers. Arlin stated, "I found out that a lot of famous actors and actresses didn't have the inspiration they got from a visible audience, and they were just lost at the microphone." Once a newspaper reporter brought Babe Ruth to the studio while the Yankees were in town for an exhibition game. "He had written a little speech for Babe," Arlin recounted. "I introduced Babe and he got cold feet. I took it and read it myself. I received a lot of letters telling me what a wonderful voice Babe had."

Arlin had no such problem with Will Rogers. The cowboy humorist took a copy of the Pittsburgh Sun and talked for fifteen or twenty minutes about the news headlines. He mentioned that there had been another mail robbery and added that this type of criminal act had not happened during the tenure of the preceding postmaster general. When asked by Arlin how he accounted for that, Rogers answered, "Well, no one knew when the mail was coming through."

Other celebrities introduced by Arlin on KDKA included William Jennings Bryan, Marshall Foch, David Lloyd George, Lillian Gish and Herbert Hoover.

In 1924, Arlin received the most votes in a contest to select the world's most popular announcer. Since KDKA's shortwave broadcasts were heard on several continents, a British newspaper called him "the best known voice in Europe."

After being on the air almost

every night for about five years, Arlin accepted an offer to head up a department of the Westinghouse plant in Mansfield. He has been very active in school and civic affairs of the city. He served as president of the Board of Education for sixteen years. Arlin Field was named for him after he spearheaded a drive for construction of the stadium. He has also held the office of district governor of Rotary International. Since his retirement in 1961, he has visited every continent.

His retirement period was climaxed in 1972 (fifty-one years after his initial major league broadcast) when he was invited to announce a couple of innings of a Pittsburgh game in which his grandson was a pitcher for the San Diego Padres. He is still invited to other special occasions.

Arlin enjoys quoting a basketball coach who was at the University of Kansas during his student days: "You start to get old when it takes you longer to rest than it did to get tired." If Harold W. Arlin has reached that point in life, his telephone voice and personality do not reflect it.

## LETTERS

### EDITOR'S MAILBAG

Editor,  
The Horn Speaker:

I read with interest your article entitled "Morris N. Beitman-The Radioman Who Helped Thousands" in the November Horn Speaker. However, in the article, Brent Dingman states, "Volume FM, not Volume 7, was published in 1947."

Although, long since out of print, Volume 7 was in fact published, and consists of more of the same type information as the other Volumes in the Radio Series. I know, as my set of Supreme Radio Manuals contains this volume.

I assume Volume FM was published in addition to Volume 7, and is as Mr. Dingman says, really TV-1.

Sincerely,  
Russ Harvey  
2656 LaCruz Ave.  
Yuma, Arizona 85364

Dear Jim:

Would you please print this letter? I need help in locating the following radio books.

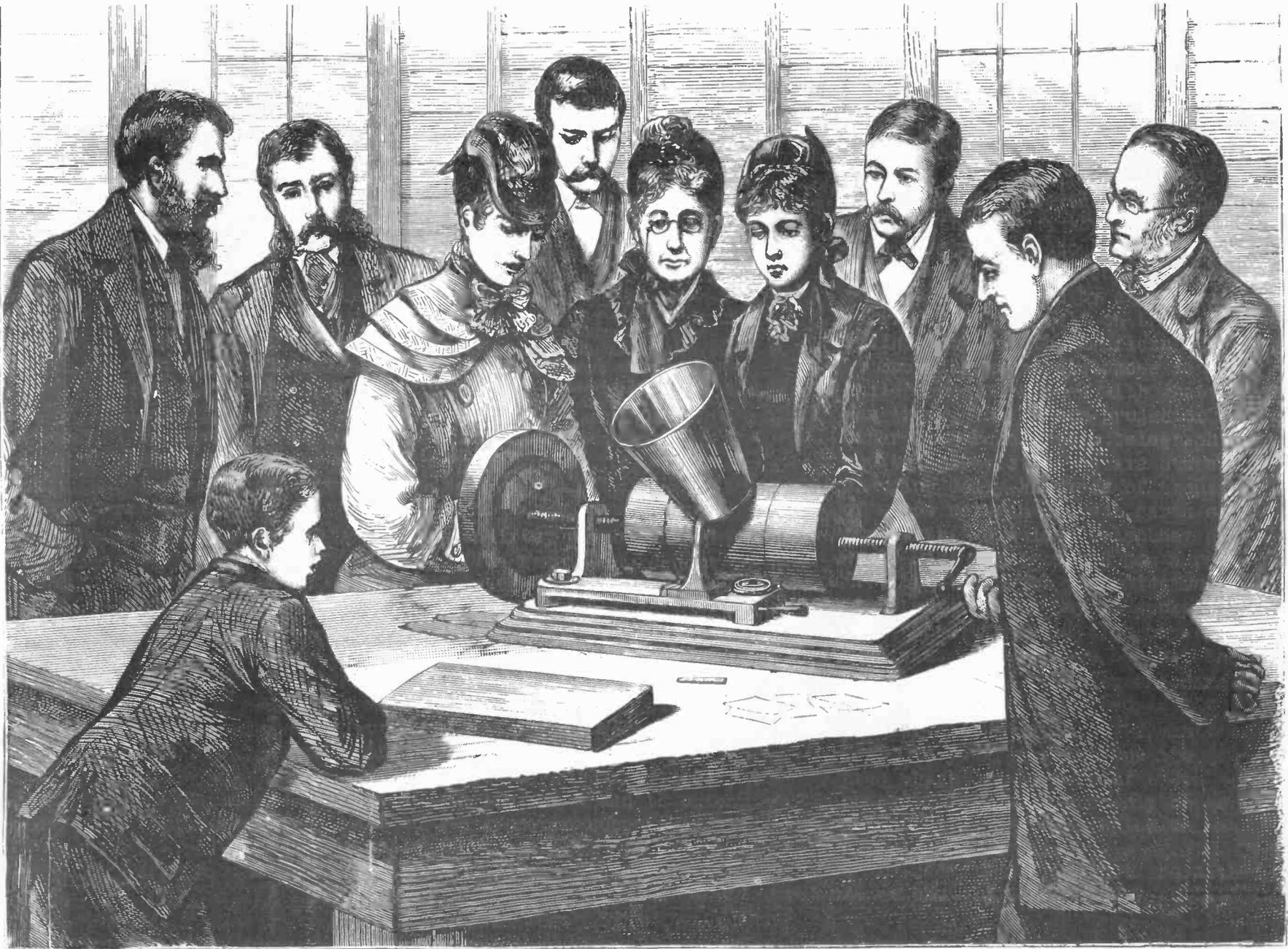
Radio Up To The Minute 1926,  
J. R. Irwin.

Radio For All, Hugo Gernsback.

Radio Receiving Tubes, Moyer & Wostrel.

Practical Radio Repairing Hints,  
John R. Rider.

(Continued on page 4)



NEW JERSEY.—PROFESSOR EDISON EXHIBITING THE PHONOGRAPH TO VISITORS, AT HIS LABORATORY, MENLO PARK.

SCIENTIFIC INTELLIGENCE

**Edison's Phonograph.**—Mr. Thomas A. Edison, the celebrated electrician, has invented a talking phonograph, which speaks with great clearness and loud enough to be audible at a distance of 175 feet. The speech is also recorded by diagrams on a revolving disk, so that it can be stored up and read at leisure. The instrument is still in its infancy, but bids fair to become a rival of the telephone, particularly as it is self-recording.



THE LATEST SCIENTIFIC WONDER.

EDISON'S SPEAKING PHONOGRAPH.

FOR a year or more the scientific world has been excited from time to time by the discoveries of Thomas A. Edison, who has made electricity a

special study. One of his first inventions was the automatic telegraph, which was received as quite a marvel. This he followed in turn with the quadruplex and sextuplex system of telegraphy, the carbon telephone, the stock indicator, the electric pen, the airphone, and lastly and more wonderful than all the others, the speaking phonograph. Although his discoveries embrace a far greater range of applications and instruments, these are the ones with which the public are best acquainted.

Mr. Edison's workshop is located at Menlo Park, on the line of the New York and Philadelphia Railroad, in New Jersey. The building is a long wooden structure, facing to the east. A dozen telegraph-wires are led into it by sentry-like poles connecting with the main line along the railroad. The front doors open directly into the office. The second story is one room, in which Mr. Edison carries on his experiments. It is an immense laboratory, filled with electrical instruments. A thousand jars of chemicals are ranged against the walls. An open rack, filled with jars of vitriol, stands in the middle of the room. The western end of the apartment is occupied by telephones and other instruments, and there is a small organ in the southwestern corner.

It was here that our artist caught Mr. Edison in the act of completing his improvements on the latest wonder, the speaking phonograph. This is an instrument that will record and reproduce any words or sounds pronounced or made within the proper distance of the mouthpiece of the appara-

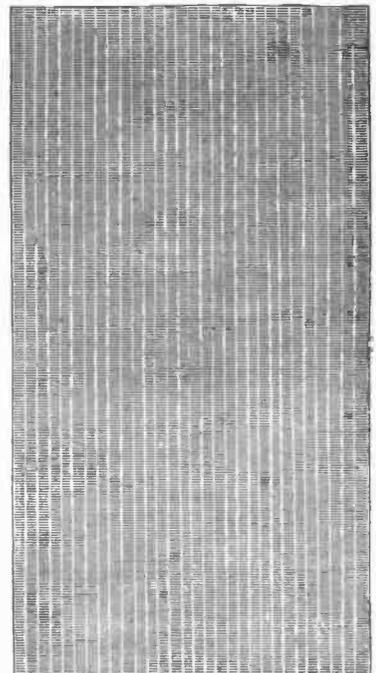
tus. This apparatus is exceedingly simple. It consists of a cylinder four inches in diameter and ten inches long upon a shaft. A spiral groove, like the thread of a screw, is cut in the surface of the cylinder from end to end, and the same kind of a screw is cut in the shaft carrying it. Over this cylinder is secured a sheet of paper or tinfoil. Immediately opposite the cylinder, on an upright arm (4), is a speaking tube, one end of which is closed by a diaphragm (1). In the centre of the diaphragm is a small point (2) like that of a pin, arranged so as to be exactly opposite the grooves upon the cylinder. When the cylinder is set in motion it rotates, and at the same time moves endwise.

Mr. Edison explains very clearly the method of manipulating the phonograph. "This mouthpiece is simply an artificial diaphragm. Turn it over and you see this thin disk of metal at the bottom. Whenever you speak in the mouthpiece the vibrations of your voice jar this disk (3), which, as you see, has in its centre a fine steel point. Now for the other part of the machine. Here is a brass cylinder, grooved something like the spiral part of a screw, only much finer. I wrap a sheet of tinfoil around the cylinder, and shove the mouthpiece up to it so that the tiny steel point touches the tin-foil above one of the grooves. I then turn the cylinder with a crank, and talk into the mouthpiece. The vibrations arouse the disk, and the steel point pricks the tin-foil, leaving perforations resembling the old Morse telegraphic alphabet. They are really stereoscopic views of the voice, recording all that is said, with time and intonations. It is a matrix of the words and voice, and can be used until worn out. Now let us reset the cylinder, so that the steel point may run over the holes or alphabet made when we talked in the mouthpiece. The thin metal disk rises, and, as the steel point trips from perforation to perforation, opening the valves of the diaphragm, the words, intonation and accent are reproduced exactly as spoken through the funnel" (5).

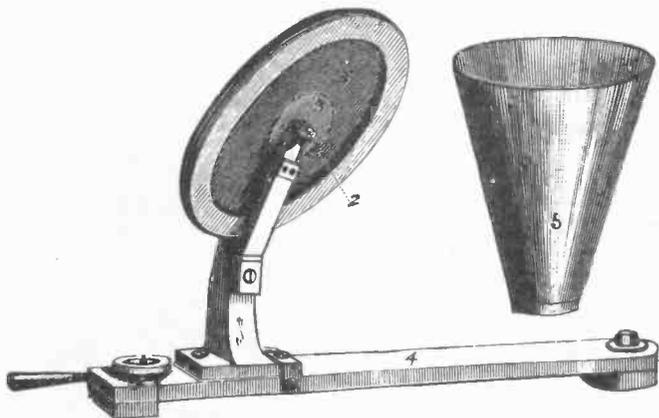
The instrument is so simple in its construction, and its workings so easily understood, that one wonders why it was never before discovered. There is no electricity about it. It can be carried around under a man's arm, and its machinery is not a fiftieth part as intricate as that of a sewing-machine. It records all sounds and noises. Mr. Edison blew in at intervals, and the matrix recorded the sound and returned it. He whistled an air from the "Grande Duchesse," and

back it came as clear as a life, and in perfect time. He rang a small bell in the funnel. The vibrations were recorded, and, on resting the cylinder, the tintinnabulatory sounds poured out soft and mellow. Mr. Edison coughed, sneezed and laughed at the mouthpiece, and the matrix returned the noises as true as a die.

Mr. Edison says the machinery is designed for practical use by business men and lawyers, etc. He is now making a new machine which will have a plate sufficiently large to receive 500 spoken words. Thus a man may dictate half a dozen letters before leaving his office, and his clerks may write them out in his absence. If he should wish to say more, he can remove the first plate and put in a



SHEET OF TIN-FOIL ON WHICH THE SOUNDS ARE RECORDED BY EDISON'S PHONOGRAPH.



NEW JERSEY.—EDISON'S PHONOGRAPH FOR RECORDING AND REPRODUCING SOUND.

second, and so on up to any number he may require. His improvements of the airograph, he claims, will enable navigators to converse with each other during a storm at sea, while their ships are as far as three miles apart. It can also be attached to Bartholdi's statue of Liberty to be erected on Bedloe's Island.

# LETTERS

(Continued from page 2)

Radio Frequency Amplification,  
Kenneth Harkness.

The Home Radio-How To Make &  
Use It 1922,

A. H. Verrill.

Gernsback Radio Encyclopedia,  
2nd. edition published in the  
1930's, 352 pages.

Gernsback Official Radio Ser-  
vice Manuals, 1931-1932-1933  
copys.

Thanking you in advance for  
this favor.

Sincerely, Bill  
William E. Hemrick  
Route 1, Box 93A  
Terra Alta, W. VA  
26764

## The Classic Radio

by J. W. F. Puett

Remember how excited you were  
when you added that fine old set to  
your collection? A new set always  
sparks our enthusiasm, but how many  
collectors are familiar with the  
historical significance of the lit-  
erature published by certain classic  
radio manufacturers?

For instance, in addition to mag-  
azine ads and articles, McMurdo Sil-  
ver published The Silver Times and  
E. H. Scott sent The Scott News to  
hundreds of customers and prospects  
all over the world. Most of the  
history of these companies is pre-  
served in the pages of these month-  
ly periodicals. The next time you  
purchase an oldie from an estate  
sale or antique dealer, I suggest  
that you don't forget to ask if  
there is an instruction book or any  
other literature that goes with the  
set.

Scott published many beautiful  
luxurious sales brochures in the  
thirties and forties. He also pub-  
lished special brochures such as,  
"A 24,000 Mile Radio Test On Land  
And Sea," (1933) and "Special De-  
luxe Installations" (circa 1940).

## on the Air

Some collectors have been  
beefing about their letters sent  
to other collectors being unan-  
swered. Of course, I believe,  
that in case the original letter  
is lost a second letter should be  
sent in case there is no reply.

I understand that S.A.S.E. do  
not work for Canada or any foreign  
country since they must use their  
own stamp for mailing.

# FIND OF THE MONTH

by  
Ross E. Mason

While going home from work one  
night, I over-heard a co-worker say  
that he had to go home and clean  
out the garage, because it was full  
of old radio tubes. So I said, as  
he walked by me, "And I'm going a-  
long to help."

When we got there, he had tubes  
on his work bench, on the floor and  
he even drove on some, so I asked  
where they all came from? And he  
said that they were here when they  
moved in over a year ago.

He gave me two boxes full, with  
mostly type 80, 71A, 47, 45, 42, 27,  
24A, etc., some were the old style  
type.

The sad part for me was, that  
most of my radios use OIAs.

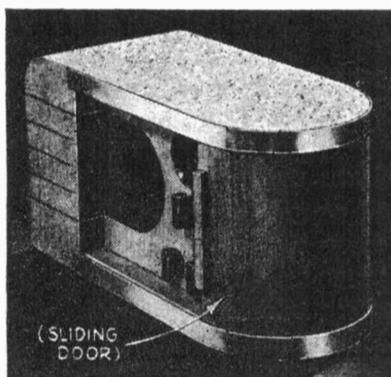
Ross E. Mason  
641 So. Georgia Ave.  
Mason City, Iowa  
50401

211

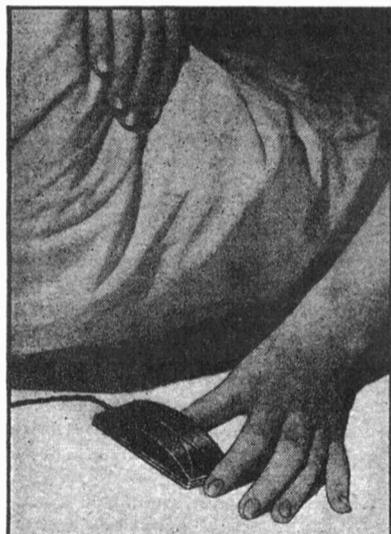
GOLDEN AGE RADIO

### DICTOGRAPH A.C.-D.C. "SILENT RADIO" MODEL 91134 SERIES

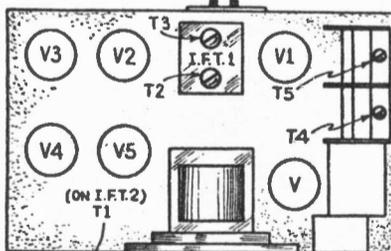
A 6-tube (including ballast) "Silent Radio" broadcast superhet.



Appearance of the "Silent Radio" receiver.



The "mystic ear", tucked under a pillow, permits individual radio enjoyment without disturbing anyone close by.



Chassis showing location of trimmers.

This radio set affords optional loudspeaker (group) or "mystic ear" (individualized) program reception; the latter is desirable in hospital sick rooms, etc. Service data follow.

Connect the low-potential side of the signal generator to the metal chassis through a 0.1-mf. (400 V.) condenser for the following adjustments.

Adjustment of I.F. Condensers. (a) Remove the control-grid lead of the 6A7 tube and insert a 50,000-ohm (carbon type 1/3-W.) resistor in series with same. Then connect the high-potential lead of the signal generator through a 0.001-mf. condenser (paper tubular 400-V. type), directly to the control-grid of the 6A7 tube.

(b) Turn the rotor plates of the ganged variable condenser where no broadcast station carrier is heard (approximately 1,000 kc.). If this is not possible connect a 0.1-mf. condenser (paper tubular) from the oscillator stator section of the ganged variable condenser to chassis.

(c) Place an output meter (copper-oxide type) across the "mystic ear" terminals with the speaker control switch in a clockwise position so that variations in signal output can be noted.

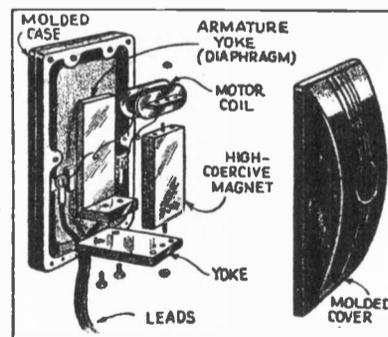
(d) Place the signal generator in operation, adjust the carrier frequency to 456 kc. and regulate the attenuator control of the signal generator so that the output signal is low enough to insure accuracy in adjusting the I.F. condenser.

(e) Adjust trimmers T1, T2 and T3 (see sketch showing trimmer locations) to resonance as indicated by the greatest swing on the output meter.

Adjustment of Ganged Variable Condensers. (a) Remove the signal generator connection from the control-grid of the 6A7 tube and replace the control-grid lead. Then connect the antenna wire of the receiver to the high-potential lead of the signal generator through a 200-mmf. condenser (mica type).

(b) Set the dial pointer directly at the last long line at the right-hand side of the dial with the ganged variable condenser fully meshed. Then rotate the receiver dial to 1,500 kc.

(c) Adjust the carrier frequency of the signal generator to 1,500 kc. and, starting with trimmer T4 and then T5, adjust each for maximum signal output.

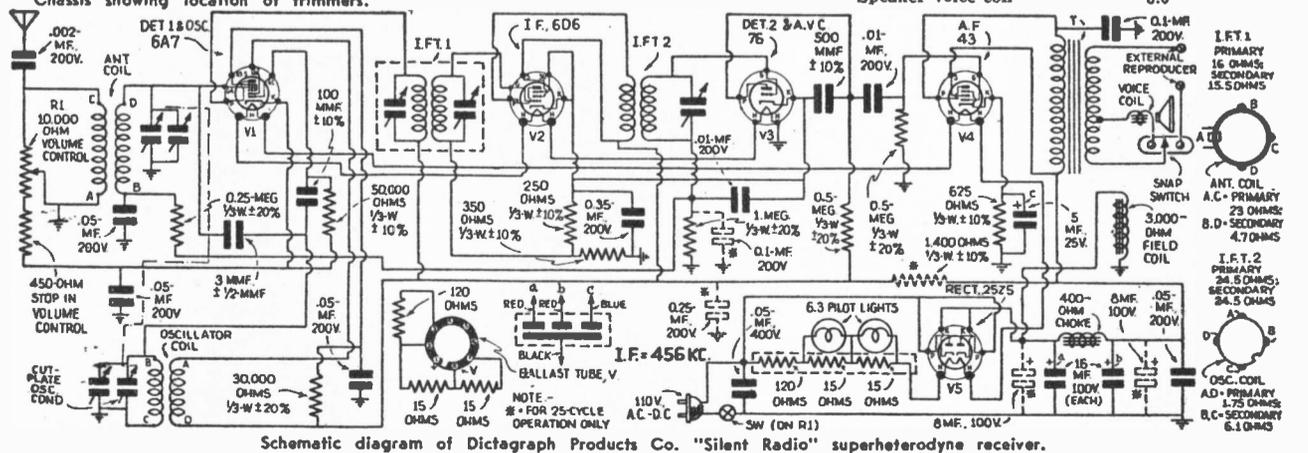


Exploded view of "mystic ear" construction.

Voltage Readings (at 119 V., A.C.):				
Tube Type	Plate Volts	Plate Ma.	C.-G. Volts	S.-G. Volts
V1	108	1.4	2.6**	54
V2	108	2.2	—	—
V3	105	8.4	2.6	105
V4	36*	.05	6.2**	—
V5	90	20.0	15.0**	97
			78.0 TOTAL	—

\*Taken with a 1,000 ohms/volt meter.  
\*\*To be measured across bias resistor. Speaker field, 128 V.; filter choke, 15.5 V.

D.C. RESISTANCE VALUES, IN OHMS		
Unit	Pri.	Sec.
Antenna coil	23.0	4.7
Oscillator coil	1.75	6.1
1st I.F. trans.	15.0	15.0
2nd I.F. trans.	25.0	25.0
Filter choke	400.0	—
Speaker input trans.	300.0	6.25
Speaker field	8,000.0	—
Speaker voice coil	3.0	—



Schematic diagram of Dictograph Products Co. "Silent Radio" superheterodyne receiver.

# Regenerative

BY

William E. Hemrick

A regenerative receiver when properly regenerating is one of the most selective receivers known. It is more selective the more you are able to regenerate. If a very large antenna is used it is difficult to regenerate much, in fact, it may not be possible to regenerate at all, due to the long antenna, the moment you regain regenerating by using the tickler coil or plate variometer the set begins to squeal.

Long antenna means small regeneration and little selectivity, for you cannot employ the very feature of the receiver which gives it its selective qualities, regeneration. With a short antenna it is possible to use considerable regeneration before the squealing point is reached, thus the set is extremely selective on a short antenna, due to the ability to regenerate and bring its selective properties into play.

Why is a short antenna better than a long antenna? A regenerat-

ive receiver is more sensitive to low signal voltages, that is, it will amplify low signal voltages considerably more than it will high signal voltages.

Although the long antenna will bring in a large signal voltage it will not be amplified much. Whereas the short antenna's low signal voltage may be amplified many times and thus bring the ultimate signal intensity above that of a long antenna.

Weak signal from a short antenna is considerably amplified by the regeneration of the set. Use a short antenna if your set is the regenerative type, and regenerate as much as possible. You will not have as much trouble with interference and the signals will be considerable louder.

## Club News

### ANTIQUA RADIO GUILD OF AMERICA

We are looking forward to receiving more information about this organization of Scranton, Pennsylvania that seems to be nationally oriented and public relations minded.

### WHIPPANY VINTAGE RADIO DISPLAY

This club scheduled to display antique radio receivers and communication material for the employees of the Bell Labs at Whippany, New Jersey. Information about the historical Whippany "barn" purchased in 1926 for radio communication experiments as well as the display of receivers, circa 1918-1935, was programed for the event.

### SOUTHWEST VINTAGE RADIO AND PHONOGRAPH SOCIETY

The collectors of the Dallas area are becoming more active. At the last meeting: there was selling and trading of radios, phonographs, and associated items and there was a discussion of the society sponsoring exhibits for public viewing.

Earl McDonald, Clarence Johnson and Jim Crenshaw displayed their vintage wireless and radio equipment for student education of the development of electronics at Eastfield College in Mesquite Texas during the week of January 27 to 31.

For membership information call: Bob Sullivan at (214) 255-9033.

### MARCONI

it was an old military barracks. It was in a room of this building that I set up my receiving apparatus in preparation for the great experiment.

On Monday, December 9th, barely three days after my arrival, I and my assistants began work on Signal Hill. The weather was very bad and very cold. On the Tuesday we flew a kite with 600 feet of antenna wire as a preliminary test, and on the Wednesday we had inflated one of our small balloons, which made its first ascent during the morning. Owing, however, to the strength of the wind, the balloon soon broke away and disappeared in the mist. I then concluded that perhaps kites would answer better, and decided to use them for the crucial test.

I had arranged with my assistants in Cornwall to send a series of "S's" at a prearranged speed during certain hours of the day. I chose the letter "S" because it was easy to transmit, and with the very primitive apparatus used at Poldhu I was afraid that the transmission of other Morse signals, which included dashes, might perhaps cause too much strain on it and break it down. Mr. Entwisle, Mr. George and Mr. Taylor were in charge of the English station at Poldhu during the transmission of signals to Newfoundland.

On the morning of Thursday, the twelfth of December, the critical moment for which I had been working for so long at last arrived, and, in spite of the gale raging, we managed to fly a kite carrying an antenna wire some 400 feet long. I was at last on the point of putting the correctness of my belief to the test! Up to then I had nearly always used a receiving arrangement including a coherer, which recorded automatically signals through a relay and a Morse instrument. I decided in this instance to use also a telephone connected to a self-restoring coherer, the human ear being far more sensitive than the recorder.

Suddenly, at about half-past twelve, a succession of three faint clicks on the telephone, corresponding to the three dots of the letter S, sounded several times in my

ear, beyond the possibility of a doubt.

I asked my assistant, Mr. Kemp, for corroboration if he had heard anything. He had, in fact, heard the same signals that I had.

I then knew that I had been justified in my anticipations. The electric waves which were being sent out into space from Poldhu had traversed the Atlantic, unimpeded by the curvature of the earth which so many considered to be a fatal obstacle, and they were now audible in my receiver in Newfoundland!

I then felt for the first time absolutely certain that the day when I should be able to send messages without wires or cables across the Atlantic and across other oceans and, perhaps, continents, was not far distant. The then enormous distance, for radio, of 1,700 miles had been successfully bridged.

On the following day the signals were again heard, though not quite as distinctly. However, there was no further doubt possible that the experiment had succeeded.

The result was much more than the mere successful realization of an experiment. It was a discovery which proved that, contrary to the general belief, radio signals could travel over such great distances as those separating Europe from America and it constituted, as Sir Oliver Lodge has stated, an epoch in history.

It must be remembered that at that time there was no suggestion of the existence of the Heaviside-Kennelly layer, nor of the reflection of electric waves from the higher regions of the atmosphere. The instruments we had at our disposal were very crude compared with those we have today. We had no valves or tubes, no amplifiers, no sensitive superheterodyne sets, no directional transmitters and receivers, and no means of making continuous waves. All we had for transmitting was the means of making crude damped waves by means of irregular spark discharges. The receivers that were then employed were insensitive as compared with those of the present day.

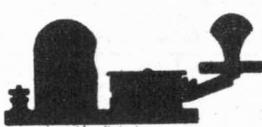
Following the success of the test I was

(Continued on page 6)

1975 advertisement

**50 YEAR OLD FLAME PROOF KEY  
TYPE J-7-A**

Gov't Order No. 141082 Dated: 1921



**\$1295**

PPD

In 1966 the U.S. Navy closed the hugh Brooklyn Navy Yard and the City of New York purchased the property. The J7A Keys were discovered in a warehouse where they had been stored for the past 50 years. Corrosion has been corrected, however, there is some slight paint peel. New boxes have been provided.

Both keys are of heavy duty construction with a large Navy type knob. The keying arm and dome are brass . . . the contacts are 1/4 inch coin silver. The J7A is 2 1/2 x 5 1/2 inches and the J5A is 2 1/2 x 3 1/4 inches in size. The BULB, or Lamp is NOT supplied with the J7A.

**A RARE FIND!  
ORDER TODAY!**

**\$1295**

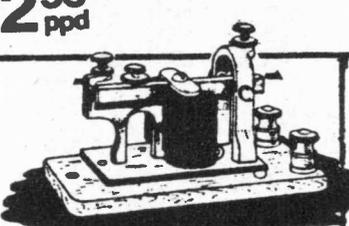
ppd

The J5A was made for the Signal Corps in 1941, and is the same type of Key except for the Dome housing the neon bulb. A real memento of WWII. Supply is somewhat limited . . . buy today!



**\$1195**

ppd



**Sounders**

**\$2500**

ppd

**WALTS EMPORIUM**

P. O. BOX 19406      DALLAS, TEXAS 75219

EVENINGS - 214-262-7855

**SAVE FOR  
COMPLETE  
LIST**

MARCONI,

promptly notified by the Anglo-American Telegraph Company that, as they had the exclusive right to construct and operate stations for telegraphic communication between Newfoundland and places outside that colony, the work upon which I was engaged was a violation of their rights.

I mention this to show why my experiments in Newfoundland were thus cut short. When, however, the reason became known, I received a very cordial invitation from the government of Canada to erect a station in Nova Scotia, an offer which I gladly accepted.

The announcement that I had succeeded in transmitting radio signals across the Atlantic was received with scepticism by most scientists, principally in Europe.

The same thing cannot be said of American electrical engineers, for the American Institute of Electrical Engineers was the first technical and scientific body which believed in me and my statement of having received signals across the Atlantic Ocean.

me in New York, at which most distinguished American scientists took part, including men whose names were and still are household words in electrical science, such as Dr. Alexander Graham Bell, the inventor of the telephone, Professor Elihu Thomson, Dr. Steinmetz, Dr. Michael Pupin, Mr. Frank Sprague, and many others.

Spanning great distances is now child's play compared with what it was then. The l-beam projector and other commercial radio telegraph and telephone stations are now exchanging daily hundreds of thousands of words between distant parts of the earth.

Mr. Kemp and Mr. Paget are with me at the microphone today while I

am addressing you, and I wish to send my most cordial greetings to all those interested in radio in America (I feel sure they form the majority of the American people) and to all my friends at the other side of the Atlantic.

READER WANTS AND NEEDS

"Put in more articles about the early battery sets," is a frequent request lately. Many readers say that they want to see more about the small table radios between 1930 and 1939.

THE HORN SPEAKER has the viewpoint that all radios, phonographs, telephones, phones, electric equipment, telegraph items, etc. along with all the people who invented, improved and used these items make interesting reading material.

In passing let me mention that we never try to promote one collectible over another. Please let us know what you like.

SUBSCRIPTION RATES FOR THE HORN SPEAKER

Regular rate:

One year.....\$1.50

Two years.....\$3.00

Special rates for one year (mailed in envelope)

First class.....\$8.00

Air mail.....\$12.00

Foreign air mail..\$16.00

1975 advertisement

PUETT ELECTRONICS advertisement featuring product lists (Table 1-5), company address, and contact information. Includes sections for 'ALL TUBES ARE THOROUGHLY TESTED', 'MORE RECENT TUBE TYPES', 'OLDER TYPE-NUMBER TUBES', 'BALLAST TUBES', and 'SCHEMATIC DIAGRAM SERVICE'.

# MART

## EASY COST CHART

FOR CLASSIFIED ADS

No. Words	One Line	Two Lines	Three Lines	Twelve Lines
1-25	1.25	2.45	3.65	12.75
26-50	1.75	3.00	4.15	15.50
51-75	2.25	3.45	4.60	17.50
76-100	2.75	3.95	5.10	19.50
101-125	3.25	4.45	5.60	21.50
126-150	3.75	4.95	6.10	23.50
151-175	4.25	5.45	6.60	25.50
176-200	4.75	5.95	7.10	27.50
201-225	5.25	6.45	7.60	29.50
226-250	5.75	6.95	8.10	31.50
251-275	6.25	7.45	8.60	33.50
276-300	6.75	7.95	9.10	35.50
301-325	7.25	8.45	9.60	37.50
326-350	7.75	8.95	10.10	39.50
351-375	8.25	9.45	10.60	41.50
376-400	8.75	9.95	11.10	43.50
401-425	9.25	10.45	11.60	45.50
426-450	9.75	10.95	12.10	47.50
451-475	10.25	11.45	12.60	49.50
476-500	10.75	11.95	13.10	51.50
501-525	11.25	12.45	13.60	53.50
526-550	11.75	12.95	14.10	55.50
551-575	12.25	13.45	14.60	57.50
576-600	12.75	13.95	15.10	59.50
601-625	13.25	14.45	15.60	61.50
626-650	13.75	14.95	16.10	63.50
651-675	14.25	15.45	16.60	65.50
676-700	14.75	15.95	17.10	67.50
701-725	15.25	16.45	17.60	69.50
726-750	15.75	16.95	18.10	71.50
751-775	16.25	17.45	18.60	73.50
776-800	16.75	17.95	19.10	75.50
801-825	17.25	18.45	19.60	77.50
826-850	17.75	18.95	20.10	79.50
851-875	18.25	19.45	20.60	81.50
876-900	18.75	19.95	21.10	83.50
901-925	19.25	20.45	21.60	85.50
926-950	19.75	20.95	22.10	87.50
951-975	20.25	21.45	22.60	89.50
976-1000	20.75	21.95	23.10	91.50

Photo ads \$2.00 extra.

## MISC.

WILL REPAIR, restore, refinish, re-new or rebuild your old radio. Buy, sell or trade tubes, parts and radios. Bob Lucas, 9014 Mahoning, Houston TX 77036.

WILL DUPLICATE exactly, the mutilated panel for your antique radio. Send sketch or rubbing for quotation, or will trade for antique radios of equal value. Norman A. Parsons, 22 Forest St., Branford CT 06405.

PROFESSIONAL CW operators, retired or active, commercial, military, Gov't, police, etc., invited to join Society of Wireless Pioneers, W7GAQ/6, Box 530, Santa Rosa CA 95402.

## FOR SALE OR TRADE

FOR SALE: Misc. Radio parts, all \$5.00 per item or lot, postage paid. UX201's, UX112's, 71's, UX199's, UV199's, Arcturus Blue type GA, boxed blue Wunderlich's, 8 Rheostats, 15 Grid Leaks, 30 assorted binding post, 2-UV199 Adaptors, 7-UV 199 shock mounted sockets, 25 pieces raw galena crystal, 3 Kilograd ver-niers, 2 Remler Honeycomb coils, Thordarson Audio Autoformer, AK cam transformer-open, Redhead ear-phones. G. B. Schneider, 6848 Commonwealth Blvd., Parma Hgts., Ohio 44130.

1921-1931 Schematics and service data where available \$2.00. Cecil Bounds, Pine Springs Rte., Carlsbad, N. M. 88220.

FOR SALE: Rubber stamp with your name and address plus AK Radio and speaker \$3.00pp. James Fred, P. O. 42, Rossville Ind., 46065.

## FOR SALE OR TRADE

FOR SELL: HRO 50, RME 6800, Crosley Showbox, Muscraire 32, Hallicrafters S-20, SX-28, Hoefler 1924, A-K 7, old car radios. Please make offer. NEED: Old test gear, E. H. Scott and other radios. Albert Pratt, WA9DYE, 114 Lakewiew, Milwaukee, Wis. 53217.

TUBES FOR EARLY RADIOS and TV's. Send want list for lowest prices, trade in some types for others. Jim Farago, 247 W. Park St., So. St. Paul MN 55075.

RARE RCA VICTORS: Model 7-3 Radio Record Player C1926 \$275.00; Alhambra I \$275; Early Orthophonic Credenza \$350.00; Model 9-18 Mint; Extremely Rare Model 9-25 Mint; Ex-tremely High Quality Microphones and many early Radio Books; Grand-father clock-radio, self winding clock and Elra Radio in Pooley Cab-inet cannot be told from actual Grandfather clock C1930; Rare "Mon-arch Special" Victor talking Machiae heavily carved cabinet.

NEW OLD TUBES FOR SALE:  
350.....#10; 500.....#24A;  
1000.....#27; 100.....#47  
350.....#71A; 100.....#35  
50.....#81; 50.....#76  
500.....#80

3000 tubes - Price \$1000.00. Also many other hard to find tubes. Bruce Hertzberg, 343 Wagaraw Road, Hawthorne, N. J. 07506. Phone 201 423-3830.

WD11 Adaptors, use UX199, 120, VT24. No Wiring changes, Radiola III's battery hook up included \$5.25pp., 2 for \$9.25. Keith Parry, 17557 Horace St., Granada Hills CA 91344.

FOR SALE: Group of early radios, speakers, earphones, etc., please send long SASE for list. Bill Sprentall, 331 1/2 East Lake Road, Canandaigua, New York 14424.

FOR SALE OR TRADE: Sixty near mint copies of Radio World Illustrated covering 1923, 1924 & 1925 for sale as a lot or trade. Don Patterson, 1220 Meigs St., Augusta GA 30904. Phone: 404-738-7227.

TAPES OF OLD RADIO PROGRAMS: Reel-to-Reel-8 Track-Cassettes. Free list. The Radio Tape Library, P. O. Box 805, Bakersfield CA 93302.

HAVE AIRLINE 26 radio, WANT Com-patible speaker same era, not neces-sarily Airline. Also CX 201 tubes. Bill Guertin, 10509 Oak Place, Fairfax VA 22030.

FOR SALE: Original Atwater Kent sales brochures. Excellent con-dition quantity limited, \$2.50 ea. postpaid. Gary Probst, 336 West Church St., Lock Haven, Penn. 17745.

## FOR SALE OR TRADE 7

WILL TRADE AK-10, Remler Superhet and possibly Radiola IIIA with WD-11s for AK-9 or 12, early Federal or Paragon. G. Hausske, 1922 E. Indiana St., Wheaton, Ill. 60187.

## WANTED

WANTED: Good cabinets for Philco Models 60 and 84. AK 43, 46, 47, or 53 power pack. Westinghouse FL field coil unit or substitute, for RCA FH horn speaker. Frank Heathcote, PSC 2, Box 2365, KAFB, N. M. 87117.

WANTED: Midwest eighteen tube chas-sis for parts. Fada "KG" AC chassis. Please write on any early AC Fada chassis. Any information on Brunel-li Jones radios. Cecil Bounds, Pine Springs Rte., Carlsbad, N. M. 88220.

WANTED: Telegraphone, Magnecorder SD-1, pre-1946 wire recorders; books on recording and pre-1936 television. Buy or trade. H. Layer, AV-SFSU, 1600 Holloway, San Fran-cisco CA 94132.

WANTED: Radio parts, sets, books, magazines, tubes, catalogues, in-struction booklets etc., pre-1930. Western Electric audio and tele-phone equipment, instruction book-lets etc., any vintage. Bill Nangle, 761 No. 29th. St., Mil-waukee, Wisc. 53208.

WANTED: 1922-28 commercially built radios with unusual mechanical coupling devices for ganged tuning. Arthur Harrison, 1021 Falcon Drive, Columbia, Missouri 65201.

WANTED: RCA Horn Speaker, Model UZ-1320 in good condition, "Radio News" and "Popular Radio" for the 1920's and 1930's with covers. J. Albert Warren, Box 279, Church St., Waverly PA 18471.

WANTED: 21" Magnavox horn speaker. Would prefer to trade one of the following: RCA IV, V, VIIB, VIII, 25, 28, RADA, or Zenith Super 7. W. Wiley, 282 Highland Ave., Wads-worth, Ohio 44281.

WANTED: Scott All-Wave 12 cabinet, Knobs, escutcheons, speakers. Rauland Lyric R-500 Audio trans-former. George Harris 3212- 36th Street, Lubbock TX 79413.

WANTED: Old radio books, catalogs, Gernsback manuals, Early test eq-uisment. Give price in first let-ter. William Hemrick, Rt. 1, Terra Alta, West Virginia 26764.

WANTED: Old car radios, parts man-uals etc. Send description, model number, price desired, trade? Marv Roth, 14500 LaBelle, Oak Park Michigan 48237.

