

IN THE WORLD OF RADIO

Superstation at Chicago Soon

Wrigley Building to House Equipment; Tower 28 Miles Away.

Chicago, Feb. 6.—A new radio superstation, one of the largest and most elaborately equipped in the world, will go on the air from Chicago shortly to broadcast coast-to-coast and international programs. It was announced today by the Radiophone Broadcasting Corporation, which has been formed by several prominent Chicagoans to operate the station.

The station, to be known as "WHT," in the Wrigley building, will possess 5,000 watts power and, inclusive of equipment, will cost more than \$200,000, according to George E. Carlson, general manager. Carlson is a former commissioner of electricity of Chicago.

Work on the studios, to occupy 500 square feet of floor space on the first floor of the Wrigley building, has been started and negotiations have been completed for erecting the towers and power plant near Deerfield, about 28 miles from Chicago on the Waukegan road.

Ex-Mayor President.

William Hale Thompson, former mayor of Chicago, is president of the operating corporation. U. J. Herrmann, theater owner, vice president; H. H. Maier, automobile man, treasurer, and J. H. Kiel, secretary.

"Programs will include entertainment, religious, patriotic and educational features," said Thompson. "The slogan of the station will be, 'Boost Chicago.' Every effort will be made to keep the programs of general national interest and arrangements are being made to procure a staff of nationally-known artists and bring performers here from all parts of the country."

Remote Wire Control.

Carlson, who will have charge of building and operating the station, including the studio, explained that the tower location at Deerfield was selected following tests that show transmission is exceptionally good from that point, and will be operated by remote control wire from the studio in the Wrigley building. A Spanish bungalow will be built at the foot of the towers to house the power plant and provide living quarters for the operators, he said. This building will include a power room, transmitting room, control room, shops, garage, reception room and rest-rooms, besides living, dining and sleeping rooms. About 25 men will be included in the power plant staff.

"An idea of the size and completeness in construction of the plant may be gained by the layman from the fact that 25 miles of copper wire will be buried in the surrounding area between the towers to form the grounding," said Carlson. Western Electric equipment, including some newly developed broadcasting machinery, will be used.

ANTENNAPHONE REPLACES AERIAL

The antennaphone is designed to replace the present outdoor or indoor aerial. It is a thin padded disc that is placed directly under the telephone without in any way tampering with the telephone or interfering with its use. A wire connected to the antennaphone is carried to the radio receiver and attached to the antenna post. All that is then necessary is to tune in.

Perfect radio reception, it is claimed, is had by induction, using the telephone wires as an aerial. Because there is no actual contact between the telephone and the antennaphone there is established a condenser in series in the aerial. The antennaphone forms one plate of the condenser and the telephone the other. By moving the telephones on and off the antennaphone it is claimed that the results of a variable condenser in the aerial are obtained. If the telephone was to be moved back off of the antennaphone it would be equivalent to short-circuiting the outdoor aerial. With the use of the antennaphone no lightning arrester is necessary. It is said that the antennaphone will work any type of set from a crystal to a super-heterodyne.

RADIO DISPELS SCOTCH MYTH

Montreal, Quebec.—That old joke about Scotsmen preferring church services by radio because there is no collection plate attached thereto will have to be discarded. A report has been received at headquarters of the Canadian National railways from William Simpson, district passenger agent at Saskatoon, that when the Continental Limited, the transcontinental passenger train of the system, was approaching Saskatoon last Sunday morning the radio operator on board tuned in on a service being broadcast from Westminster Presbyterian church in Saskatoon. The sermon by Rev. George A. Dixon of Knox church, Calgary, who was preaching in Westminster church, so delighted the passengers in the radio observation car that a collection was taken up and sent to the minister of the Westminster church when the train reached Saskatoon shortly after noon.

Assembling Is Instructive.

When building a radio set, start with a simple, one tube receiver. When the various units are put together it will be the first lesson in what the instruments do when the knobs are turned.

This One-Tube Set Has Record for Short Waves; Schudt Receiver Brings in Australia, New Zealand

By W. A. SCHUDT, JR.

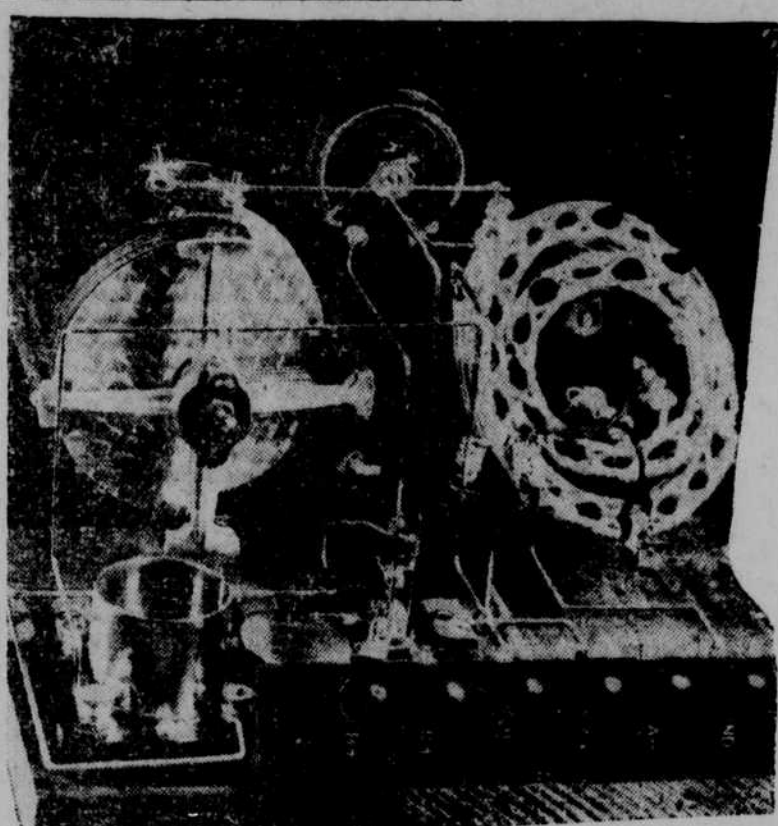
Of late we hear quite a lot of gossip of the possibilities of the shorter wave lengths. One time we read of an amateur here communicating with another in Australia. Again, we read of great distances being covered by broadcasting stations using the short wave lengths. For instance, KDKA, operating somewhere around 60 or 70 meters, is easily heard in Europe and with great volume.

Even with all this publicity, how many have concrete ideas of how to receive these low wave length stations? At the present time amateurs are principally interested in the frequencies between 35 and 150 meters, since most of the high frequency experimenting is done between these wave bands.

Those interested in code reception have great radio thrills awaiting them if they decide to listen in on the ultra-short waves. Think of being able to listen to from three to five continents in one night. That is real DX! One may consider this exaggerated or, to use ham slang, "apple sauce," but it is being done nightly by thousands of amateurs. Of course, the one drawback is the fact that one must first acquaint himself with the International Morse code before he can receive this great DX. Once the code is mastered, however, you can sit back in your chair and listen to the world in the true sense of the word.

Plenty of Thrills.

For the man who does not care to learn the code there are plenty of thrills in listening to the few broadcast stations operating on low wave lengths. As time goes on there



Placement of parts is clearly shown in the photo of the Schudt set, which heard Australia on code.

One binding post strip with six posts mounted.

Two dials three inches in diameter.

Miscellaneous pieces, bus bar and lugs.

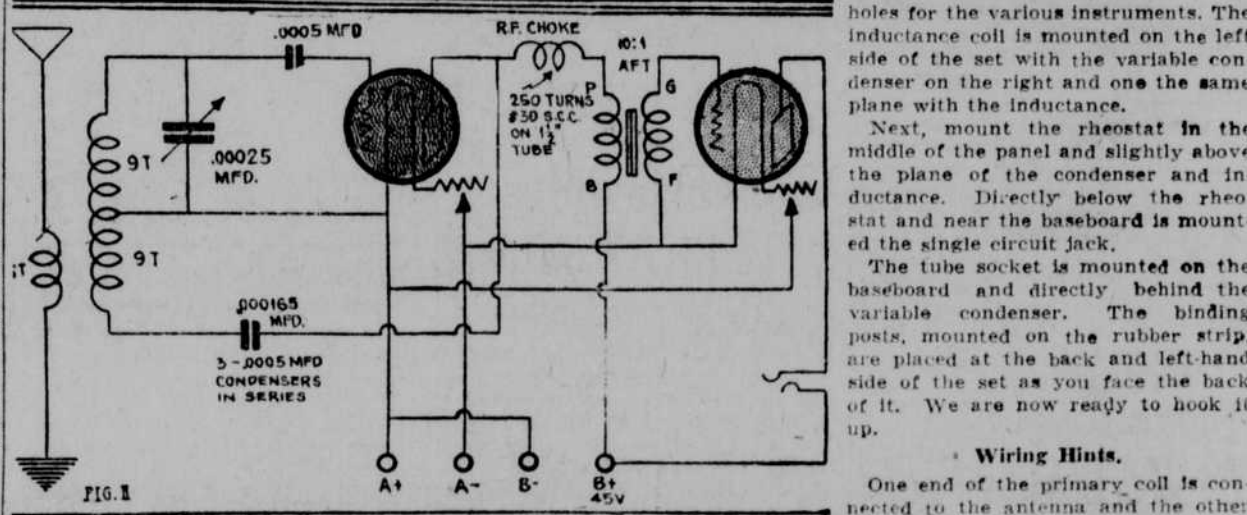
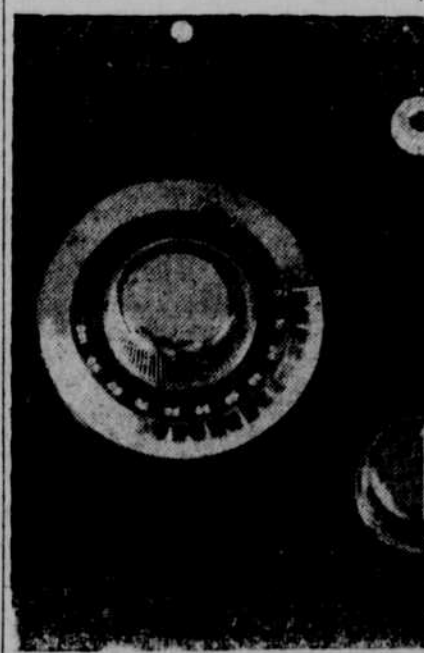


Diagram at top shows wiring of set with one stage of amplification. At right is schematic diagram of set described with one tube only.

are bound to be many more broadcast stations operating on the high frequencies. In fact, many prominent radio experimenters claim that the ultra-short wave lengths will be used exclusively by all types of radio stations.

Many people who read that the amateurs have been assigned the wave band from four to five meters laugh and think it to be one grand joke. But it is not. The wave length band from four to five meters is broad enough to contain all naval, commercial, broadcasting, amateur and transatlantic radio stations without one station interfering with the other. If this small band is figured out in kilocycles it will run up into the thousands.



The photo shows the front view of the Short Wave Tuner.

There are many types of circuits and apparatus that can be successfully used for the reception of these frequencies, yet all are not able to bring in the DX signals consistently. The short wave tuner we are about to describe is one that has been carefully selected from several really good sets as one of the best. This set, the model of which contains only one tube, has been given a very severe operating test and has proven its worth in gold. One of the sets was constructed by E. M. Glaser, owner and operator of station 2RRB, and is in use there. It is on this receiver that he listens to Europe and New Zealand every night. He used this set when he first communicated with Australia.

Paris List.

A list of apparatus for the construction of a one-tube low loss low wave length set follows:

- One special low loss, low wave tuner.
- One .00025 low loss variable condenser.
- One tube socket (low loss design).
- One 20-ohm rheostat.
- Four .0005 mfd. fixed condensers.
- One hard rubber panel, 7x10 inches, with suitable baseboard.

The panel should be fastened by means of two wood screws to the wooden baseboard. Then drill all holes for the various instruments. The inductance coil is mounted on the left side of the set with the variable condenser on the right and one the same plane with the inductance.

Next, mount the rheostat in the middle of the panel and slightly above the plane of the condenser and inductance. Directly below the rheostat and near the baseboard is mounted the single circuit jack.

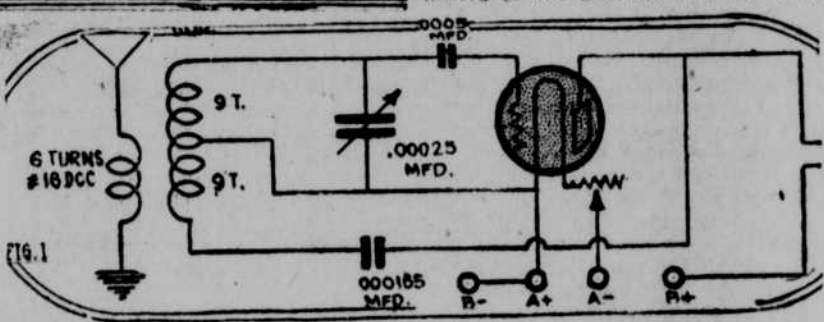
The tube socket is mounted on the baseboard and directly behind the variable condenser. The binding posts, mounted on the rubber strip, are placed at the back and left-hand side of the set as you face the back of it. We are now ready to hook it up.

Wiring Hints.

One end of the primary coil is connected to the antenna and the other end is connected to the ground binding post.

Starting from the top end of the secondary coil run a wire to one end of the grid condenser. This same wire is connected to the fixed plates of the variable condenser. The other side of the variable condenser is connected to the mid-plate of the secondary inductance and also to the positive filament terminal on the tube socket, our positive filament being in turn connected to both the "A plus" and "B minus" binding posts.

Take the three fixed condensers and connect them all in series. Thus we obtain a capacity of about .000165. These condensers are connected in series with the lead running from the



A special tuner was designed for use in this set and can be constructed as follows: Primary coil consists of six turns of No. 16 DCC magnet wire wound in low loss fashion, with a diameter of three inches. This primary coil is fastened to a shaft which protrudes through the panel and becomes one of the controls. The secondary coil is wound in the same manner and is connected to the ground binding post.

When attaching an aerial to a tree have the wire insulated about 15 feet from the tree to avoid loss.

WOAW Program

Natural, February 7.

8:15 p. m.: Omaha's Gloom Chasers (orchestra).

8 p. m.: Dramatic hour.

9:45 p. m.: Dinner program, transmitted from Brandeis cafe restaurant.

1:30 p. m.: Weekly address, under auspices of the Omaha Chamber of Commerce.

2 p. m.: Program under auspices of Eugene's Printing Company, arranged by Eugene's Whittier-Dinkins.

11 p. m.: Frank W. Hodak, Jr., and his Omaha Nightingales at Brandeis restaurant.

11:30 p. m.: Organ music, transmitted from World theater; Arthur Blasz, organist.

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Special Offer: \$12.00 for 10 days trial. No money back without a word. Free descriptive literature. Shows many interesting features. Exchange National Bank, Atchison, Mo. Order today.

Novice in Mechanics, She Wins Trophies With Radio Inventions



Ignorant of the mechanics of radio, the sight of a tangled mass of wire that was to have been an aerial, set Gill Savage, Brooklyn, to thinking. Her interest thus aroused, she delved deep in the subject, and devised a portable aerial, and later, a compact two-stage amplifier, with the result that she has been awarded trophies at two radio shows. She is shown with the trophies.

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RADIO HELPS SEEK IMPOSTOR

Washington.—For the first time radio will be used in an effort to locate the impostor now operating in the state of Ohio in violation of the federal statutes, according to an announcement by the interior department.

The impostor is a middle-aged man who is posing as an agent of the bureau of pensions of the interior department, defrauding old soldiers. For some time attempts have been made to apprehend him, without success. The commissioner of pensions has requested the WKB broadcasting station at Cleveland, O., and WLW station at Cincinnati, to broadcast a message, giving his identity and warning veterans against being victimized. His detection and arrest is also requested in the message.

KDKA Heard in Australia.

Recently the station of the Westinghouse Electric Company at East Pittsburgh, Pa., better known to radio fans as KDKA, was reported heard in Australia. The time the station was reported was during a special test which took place between the hours of 5 and 6 Tuesday morning. At Australia, which is more than 9,000 miles away, the time was 9 p. m. The wave length used by the East Pittsburgh station was 63 meters. Several hundred radio fans in Australia reported hearing KDKA.

RADIO

Program for February 7.
(Continued from Radio Times)

By Associated Press.

WGR, Buffalo, (319), 6, music.

WGN, Chicago Tribune, (378), 4, orchestra; 5:30, assembly, string quintet; 6, classical; 10, dance.

WRRH, Chicago, (310), 7:12, orchestra; Riviera, popular Hawaiian guitar; readings, pianologues.

WLS, Chicago, (343), 7:29, barn dance; 11:15, Senate theater.

WMAQ, Chicago News, (417), 6, program; orchestra; 8:29, pianologues; 9, Chicago theater.

WJZ, Chicago, (448), 7, concert; solo; 10:30, Skyscraper.

KWV, Chicago, (536), 7, concert; 8, musical; 9:10, Young's Companion; 9:25, classic; 12:2, Congress carnival.

WLV, Cincinnati, (423), 6, collector; 10:15, Lafayette.

WEAR, Cleveland, (3613), 12, "Nine Cases of Late Eric."

WPA, Dallas News, (419), 8:30, musical; 9:30, orchestra; 10:30, musical.

WGC, Davenport, (498), 7:30, religious discussion; orchestra; 8:30, orchestra; 9:30, K.A.A. Home; 10:30, orchestra; 11:30, W.V. Detroit News, (337), 6, News orchestra.

WEAF, Port Wash (call).

KNN, St. Louis, (427), 8:15, orchestra; 9:29, instrumental; 10, vocal, instrumental; 11, orchestra.

WJAF, Kansas City Star, (414), 6, school of the air, address, story, orchestra; 11:45, Nicholas.

KJL, Los Angeles Times, (484), 8:30, children; 9:30, instrumental; 10, orchestra; 11, 4 a. m.; 10:45, talk; 6, orchestra; 9:45, book review; 10, instrumental trio; 11, variety; 12, popular songs.

WHAS, Louisville Times, (406), 7:50, concert.

WCO, Minneapolis-St. Paul, (417), 8, pianologues; 8:15, dance; 8:30, program; 10:30, orchestra.

WTKR, Norfolk, (425), 6:50, concert; 7:50, entertainment; 9:30, orchestra.

WJJD, Monroeville, (3024), 7:15, orchestra.

WNT, Newark, (223), 9:30, orchestra.

WHR, Newark, (465), 6, orchestra; 7, string quartet; 1:30, program; 8:15, main quartet.

WJEA, New York (492), 6:30, soprano; 8:45, pianist; 7, violinist; 8, special music.

WNY, New York (24), 6:31, Chateau four; 7:50, concert; 8:45, orchestra; 9:10, travel talk.

WHR, New York City (212), 7, musical; pianist; violin.

WOT, Oak Park (201), 4:15, baritone; violinist; pianist; 9, organ, vocal.

WGO, Oakland (566), 8, concert; 10, comic opera; 12, dance; soloists.

WOAW, Omaha (523), 4, dramatic; 6:30, announced; 8, program; 11, Niagara; 11:30, organ; (505), 4, talk; 7, talk; 7:15, concert; 9:05, orchestra; 10:45, recital.

KDKA, Pittsburgh (404), 4:45, talk; 7:30, concert.

KDKA, Philadelphia (493), 6:50, orchestra.

WV, Philadelphia (593), 6, talk; 7, talk; 8, recital.

KPQN, Seattle (255), 8:15, Aunt Victoria; 12:45, orchestra; 11, concert; 12, dance.

WKB, Pittsburgh (463), 6:50, Uncle Kayser; 6:45, movie chat; 7, road talk; 7:15, music.

KGY, Schenectady (280), 8:30, dance.

KGW, Portland Oregonian (481), 12, Melody Man.

KPO, San Francisco (421), 7:30, theater; 10:30, dance.

KDIA, Seattle (465), 8:45, program; 10:30, orchestra; 11:30, concert; 12, dance.

KSD, St. Louis Post Dispatch (451), 7, symphony.

WAB, Washington (468), 6, music; 7, Bible talk; 7:30, talk; 7:45, announced; 8:15, program; 11:15, orchestra; 11:30, W.B.Z. Schenectady (537), 6:30, concert; 7:15, violinist; soprano; 8:25, guitar; 8:40, vocal.

All the Pleasures of Radio

You may know that when you install the Super-Zenith model, here shown, you will enjoy all the pleasure that radio can give. For it is positively the highest development of the radio builder's skill. Combining, as it does, distinctive beauty with marvelous performance, it is the ideal radio set for the fine home. It is years ahead of other designs.

Remarkable Beauty and Performance

Installed in a beautifully finished cabinet of solid mahogany—44 1/2 inches long, 16 1/2 inches wide, 10 1/2 inches high. End compartments for dry batteries. Only two dials to operate. Six tubes—2 stages of tuned frequency amplification, detector, and 3 stages audio frequency amplification.

It enables you to draw from the atmosphere programs broadcasted by practically any station. Powerful local stations don't stop you from getting far distant cities. You skip from coast to coast—from Canada to Cuba—and select the very best that may be on the air.

Dr. MacMillan, the explorer, while near the North Pole, used a Zenith to hear all over the country. See the various Zenith models. Also Thompson Neutrodyne, Thompson Speaker, and Music Master Speaker, which we handle.

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