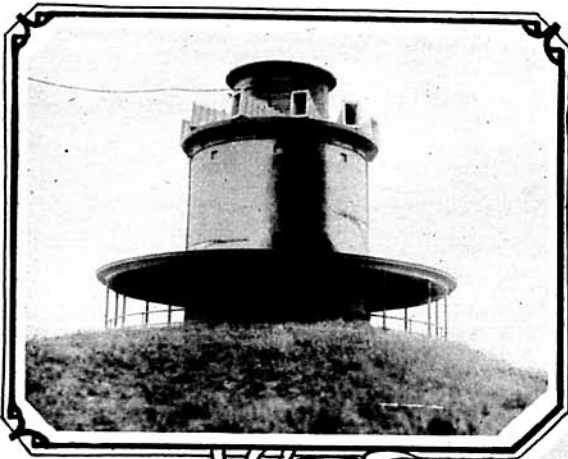


A Broadcasting Station De Luxe

By W. A. KIMBALL

A DESCRIPTION OF COL. GREEN'S STATION WMAF

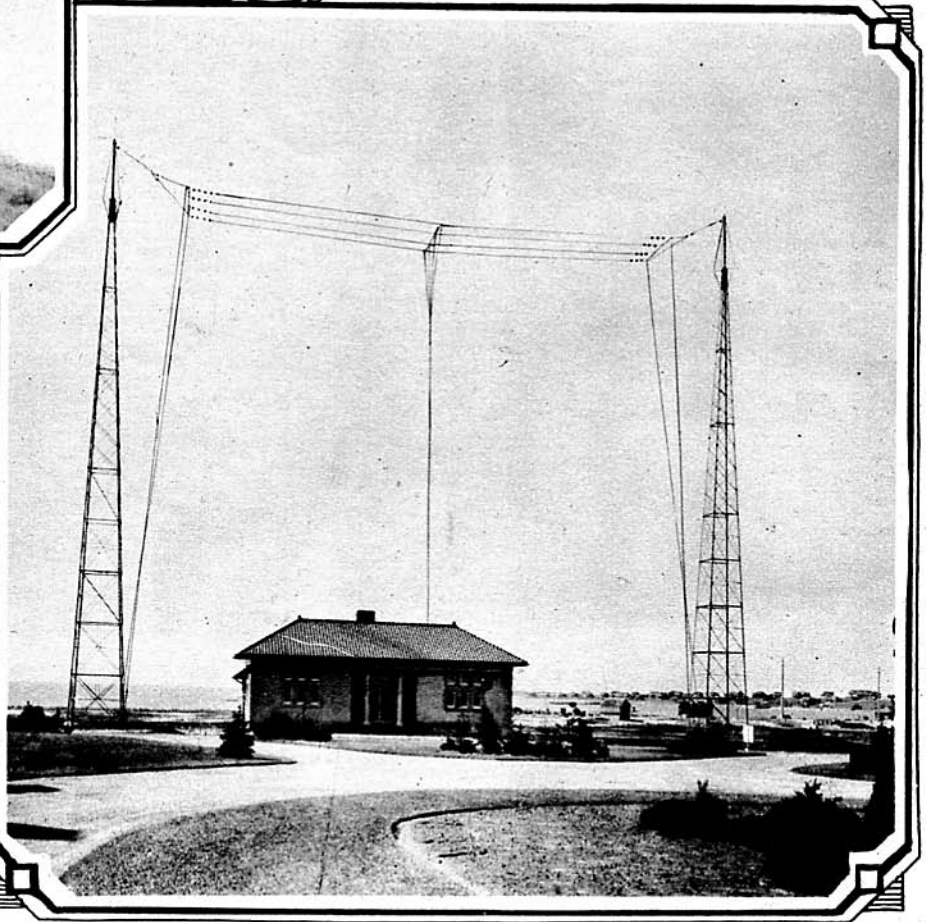


Broadcast Station WMAF Owned by Colonel Green, and on His Estate at Round Hills, Mass., Has Created Considerable Interest. The Accompanying Photos Show the Massive Towers That Support the Antenna, the Station Which Houses the Transmitter and the Interior of the Same Giving a View of the Western Electric 500-Watt Set. The Water Tower Shown Above Has a Multitude of Loud Speakers Mounted on the Roof Which Reproduce With Great Volume the Programs Rendered at This Station.

THE Round Hills Radio Corporation near New Bedford, Mass., is daily giving a broadcasting program, free to all who care to listen, from the wonderful private station of Colonel Green, listed among the many stations as WMAF.

The people of New Bedford and vicinity are particularly fortunate to have such a benefactor in their midst and they hear the very best of talent every evening during the week at no cost. Hundreds of parties are parked around the amplifying horns every evening.

As there is no trolley line to this station,

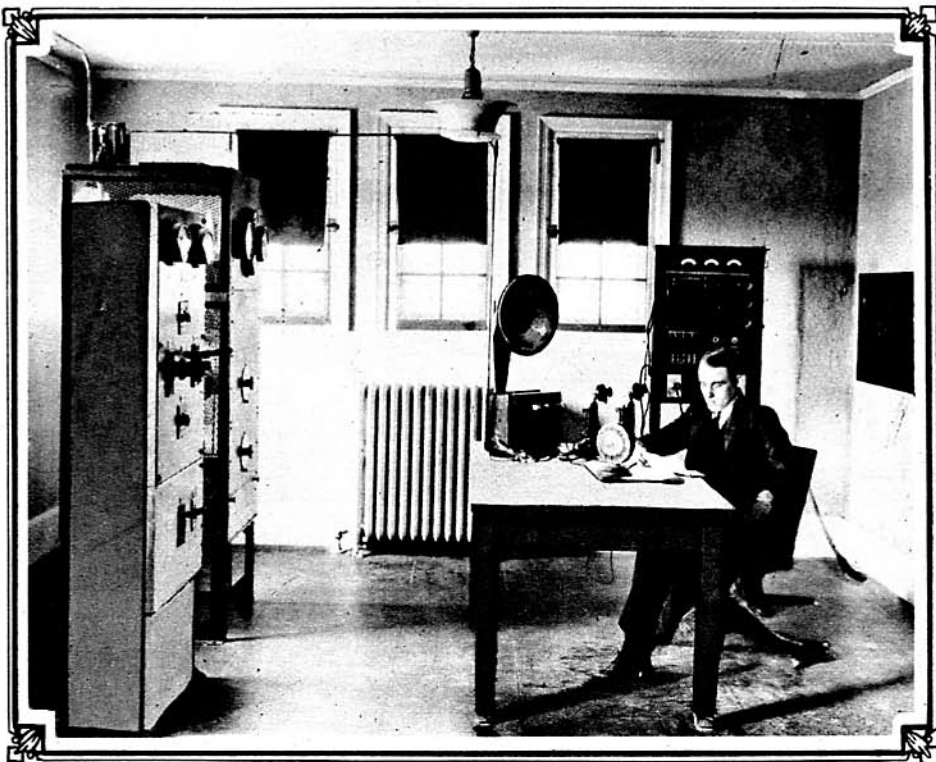


it is necessary to travel by auto out of New Bedford, about 10 miles. To give this program to the people of the city who have no automobiles, the city has installed a smaller station at Buttonwood Park and the public can get the evening program almost from the front porches of homes in this section. For those living farthest away there are trolley cars which are easily accessible to the Park.

The Station at Round Hills is a Western Electric 500-watt affair, with four stages of amplification. The American Telephone and Telegraph Co., of New York City, has arranged to transmit the programs rendered at its station WEAJ over its telephone lines to Round Hills, where the speech and music will control the radio output just as if the artists were in the adjoining room. In this circuit there are five stages of amplification at New York, two stages at each of the three points enroute and with the four stages of amplification at Round Hills there is a total of 15 stages before the public gets the program.

When a program is to be rendered at Round Hills, power is thrown on the set and the wave-length and antenna current are checked. The announcer gets a signal that all is ready and makes a final connection with the microphone and then introduces the performer at New York to the audience at Round Hills. A control operator at Round Hills listens to the program through a head-

(Continued on page 928)



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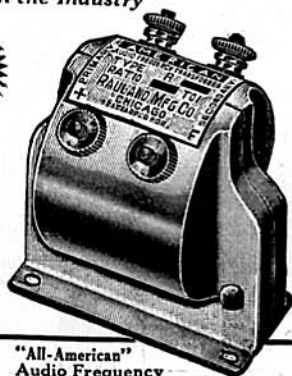
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"All-American"
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Transformer

This transmitter radiates from 25 to 30 amperes as compared with 80 amperes previously used by the spark set. However, the range of the new set, even though it uses only one-tenth of the power of the spark is about twice that of the latter transmitter. This fact was determined in a series of transmission tests in which stations on both coasts were asked to listen in. It was desired to make sure that the new set had at least the range of the old one before it took over the traffic. This cautiousness is only one example of the thoroughness of Navy radio and the shutting down of the Arlington spark is testimonial to the fact that the Navy is alive to the problem of interference with broadcast reception. As funds and conditions permit, this interference is being eliminated, always making sure that whatever changes in Navy radio material are necessary will be done with caution so as at no time to disrupt the communication needs of our first line of defense.

In closing, the writer hopes that this new transmitter will make as many friends as that older voice of NAA, the famous Fessenden spark, which has at last fallen behind the march of Progress.

**A Broadcasting Station
De Luxe**

(Continued from page 874)

set or loud speaker and adjusts the amplification so that the concert program is clear to the audience at all times.

To make the program available to the public, Colonel Green has had installed a set of loud-speaking sound-projectors on a water tower a short distance from the main station, WMAF, on his estate, and there is plenty of parking space around the tower. When the outfit was first used the program could be heard for some distance outside the grounds of the estate and later the loud-speaker sound-projectors were tipped downward a little so that the sound carried only a short distance away from the tower.

**Energy Values in a
Broadcasting System**

(Continued from page 873)

considerably increased energy. It is of interest to trace the various levels of energy through which the intelligence to be transmitted must pass as it proceeds from its source to its final destination.

THE TRANSFORMATION OF ENERGY

We will assume that a talk or lecture is to be transmitted: The speaker talks into a telephone transmitter in a normal tone at a distance of two or three inches from the transmitter. The power of the sound waves generated by such normal talking is of the order of millionths of a watt. How ridiculously small this energy is may be realized when it is said that the power delivered to the ordinary electric lamp is five million times as great as that of the sound waves generated by normal talking. This minute amount of energy in the sound waves is transmitted by the motion of the air to the diaphragm of the telephone transmitter. The actual motion of the air is likewise minute, probably of the order of millionths of an inch,

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