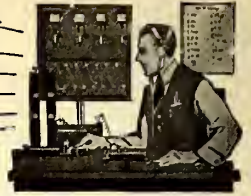




# RADIO DEPARTMENT



## Giant U. S. Radio Station at San Diego Ready

**I**N the presence of prominent San Diego citizens and Army and Navy officers the great Chollas Heights U. S. naval radio station was formally placed in commission on January twenty-sixth, with the exchange of greetings between Mayor E. A. Capps and Josephus Daniels, Secretary of the Navy, and William Kettner, Representative in Congress.

The Chollas Heights station under favorable conditions can flash messages 12,000 miles. In preliminary tests code messages flashed in Germany have been picked up in this station. Command of the new station will be directly under Lieutenant John Ashley, superintendent of the naval radio

communication service of the navy between the Atlantic and Pacific coasts.

The navy wireless stations at San Francisco and Puget Sound have been in service for some time, but they required such tremendous power to communicate directly with Arlington that anything like regular communication between them has been infrequent and the great volume of naval orders and communications have been sent by ordinary telegraph.

At San Diego there has been erected an enormous station that is more powerful and more modern than any other in the service. Its equipment will be so adjusted and of such power that communicating

The ground connection required 25 miles of piping and copper cable. Most of the ground will be kept constantly damp by means of the piping. The power plant comprises a 300 H.P. 2,200-volt, 60-cycle induction motor driving a 200 K.W. 1,000-volt, D.C. generator, which supplies a Federal-Poulsen arc transmitter of this rating. The tuning helix for the arc is 14 ft. in diameter and 11 feet high. The station is erected on a land reservation totaling 72 acres.

### AUTO BATTERIES SUPPLY RADIO SET IN EMERGENCY.

The following is an extract from the report of Radio Operator Willard Ferris, of the steamship *Carolina* of the Goodrich Transit Co., which met with an accident on Stony Creek Reef and springing several plates. The vessel is voluntarily equipped with radio apparatus and is not supplied with an auxiliary source of power supply:

"The power went off at seven p.m. and the Manitowoc station called at frequent intervals until ten p.m., and from that time until eleven p.m., the Ludington and Milwaukee stations called, but I was unable to answer them as there was no power. About eleven o'clock, with the permission of the captain and the assistance of some of the crew, I removed the storage batteries from the six automobiles which were on board.

"I wired these batteries in series, obtaining a total voltage of 36. The transmitter was of the one-half kilowatt, 120 cycle, panel type, and by adjusting the rheostats for full power and using six plates in the quenched gap a reading of one-fourth ampere on the hot-wire ammeter was obtained and communication was established with Ludington, a distance of about 75 miles.

"It was necessary to short circuit the automatic starter, as there was not enough power to raise the solenoid, and to substitute a wire for the generator field switch, in order to disconnect the motor running the quenched-gap blower and save all the power for the operation of the motor generator. The batteries were restored to the automobiles the following afternoon when the cars were placed aboard a relief vessel."

### RAILROAD MAY OPERATE TRAINS BY RADIO.

If experiments now going on at the operating headquarters of the Frisco railroad in Springfield, Mo., are successful, wireless telegraphy may become a valuable asset in the operation of trains over that system.

H. D. Teed, superintendent of telegraph of the Frisco, has installed a wireless apparatus at Springfield and messages have been heard from government stations at Arlington, Key West and from a fruit dispatch boat on the Gulf of Mexico.

A year ago the wire service of the Frisco was badly interrupted by sleet and floods, according to an announcement from the general offices in St. Louis. Since then Mr. Teed has been experimenting with wireless, and in many ways it is said to have proven successful.

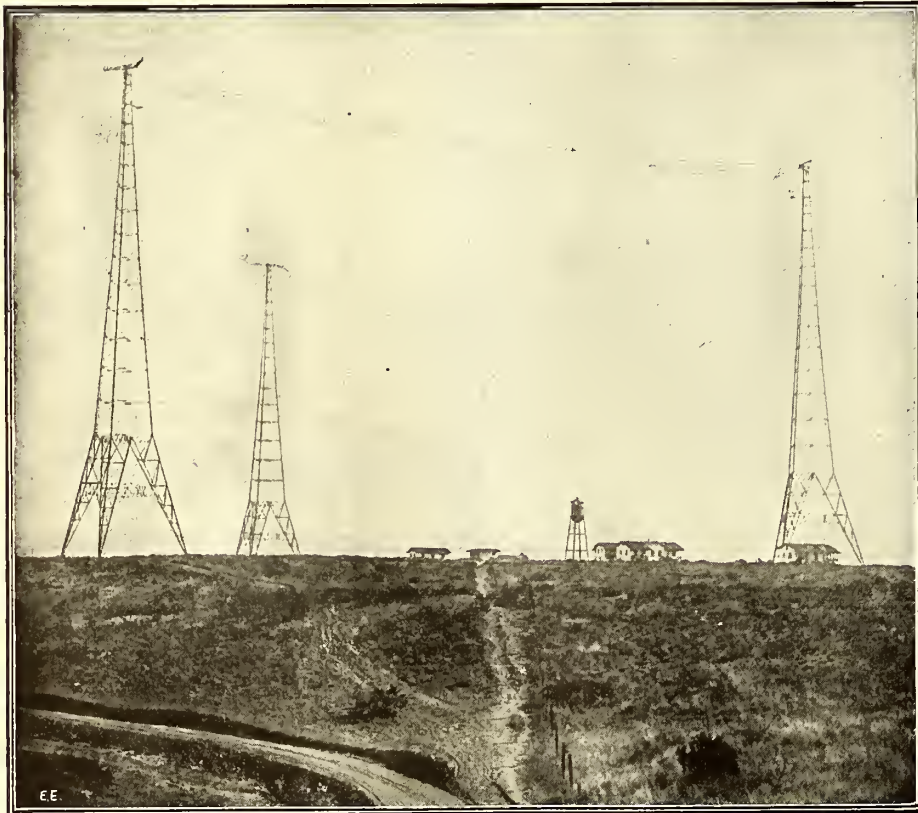


Photo by Central News Photo Service.

A View of Uncle Sam's New \$300,000 Naval Radio Station at Chollas Heights, Near San Diego, Cal., Which Was Placed In Commission on January 26th Last. The Commanding Officer's Quarters Is Seen at the Base of the 600-Foot Tower on the Right.

service for the Southern California district.

The new government wireless station gave a demonstration of its power when the operators on duty talked with the Arlington station, with Melbourne, Australia, with Panama, and with Nome, Alaska, and also Honolulu. At the same time it overheard French operators at work on the island of Papeete, in the South Pacific. Thus with one relay the government at Washington can talk with Australia and farthest Alaska. The San Diego station hopes to be able to reach Europe by means of its powerful instruments when they get properly tuned up.

Its opening marks an era in the direct

with Arlington will be a nominal service, not an extraordinary service, as is the case with San Francisco and Puget Sound. It will be the most powerful station in the world with the possible exception of the two German stations that send to Sayville and Tuckerton.

The three towering aerial masts rise to a height of 600 feet, and involve 1,000,000 pounds of structural steel in their make-up. The aerial wires alone weigh 16 tons. The aerial towers are 1,100 feet apart and form a huge triangle. Triangular in form, the masts measure 150 feet between the legs at the base and 8 feet across the top. They rest on gigantic insulators at the base.