



KTAR Becomes Most Powerful Station in Arizona With a New Western Electric 5KW Transmitter

BOOSTING its signal from 1 to 5 KW with a new Western Electric transmitter, KTAR, key station for the Arizona Broadcasting System, became the most powerful broadcast unit in the Sunset State. The expansion program under which increased power took place includes the construction of a modernistic transmitter building, directional antenna system, 35 miles of wire ground system and complete remodeling and enlarging of studios and offices atop the Heard Building in downtown Phoenix.

"First" has been KTAR's byword these many years in Arizona annals. It was the first commercial station in the state, first full-time 1000 watt, first 5000 watt, first to become a network member. Then, too, under the call letters KFAD, back in 1922, it was one of the country's pioneers, sturdy enough to endure broadcasting's growing pains during the early years.

Outstanding among the station's many notable programs heard over

nation-wide hook-ups is the famous Easter Sunrise Service broadcast annually from the Shrine of the Ages — the Grand Canyon. From year to year high dignitaries of the Episcopal ministry have journeyed to the south rim of the Canyon to take part in these inspiring ceremonies. All phases of these broadcasts are either handled directly or supervised by KTAR's program and technical

departments. Time involved has meant days of patrol duty on forest service phone lines which hang from almost inaccessible points, to prevent the slightest possibility of line failure. Always the service is built around the central theme paralleling in some way the Grand Canyon itself. Each service represents a composite of three parts—the music, a five minute description of the actual sunrise and short sermon.

A strong advocate for teaming radio and education, KTAR and its affiliated stations are closely associated with the University of Arizona, from

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The 5KW transmitter and associate equipment including turntables are Western Electric



Western Electric Man Cited by Navy For Work at Pearl Harbor

IN A LETTER from the Chief of the Bureau of Ships, Navy Department, Burdett Packard Cottrell, Western Electric Specialty Products field engineer, has been cited for unusual "diligence and zeal" in the performance of his duties in connection with servicing installation of Western Electric equipment aboard naval vessels at Pearl Harbor during and following the Japanese attack of December 7, 1941. The letter quotes from the Pearl Harbor Navy Yard commandant's letter to Mr. Cottrell, commending him for services far above those normally required of civilians.

The text of the letter to Western Electric from the Chief of the Bureau of Ships is as follows:

NAVY DEPARTMENT
BUREAU OF SHIPS
WASHINGTON, D.C.

From: The Chief of the Bureau of Ships
To : The Western Electric Company,
Kearny, New Jersey
VIA : The Inspector of Naval Material,
New York
ATTENTION: Mr. F. R. Lack

SUBJECT: Appreciation for Diligence
and Zeal in the Performance
of Duty.

1. The Bureau of Ships is in receipt of a copy of a letter from the Commandant, Navy Yard Pearl Harbor, T. H., and addressed to Mr. B. P. Cottrell, special representative of the Western Electric Company. This letter is quoted herewith for your information:

"The Commandant notes that during the period from December 7, 1941, to December 13, 1941, you performed your duties at this Navy Yard in an exceptionally diligent and zealous manner and were on duty during that period a total of eighty-four (84) hours and forty-five (45) minutes.

The service which you rendered during the above period of time was highly necessary in the interest of the fighting efficiency of the Fleet.

The Commandant is pleased to commend you for the performance of

this duty which is considered to be over and above that normally required of civilian contract employees."

2. It afforded the Chief of the Bureau of Ships a great deal of pleasure to receive the above report. This example of good American spirit is typical of the manner in which Western Electric Company engineers have been undertaking their duties in connection with the installation and servicing of equipment in U. S. Naval vessels.

A. H. VanKeuren
Chief of Bureau of Ships

Mr. Cottrell joined Electrical Research Products Inc. in 1929, as an installation engineer. He remained with ERPI until 1935, rising to the post of superintendent of operating planning at the Company's New York headquarters. Last year he took up his present duties with the Specialty Products Division. He is a graduate of the University of Arizona and has a Master of Science degree in Electrical Engineering from Massachusetts Institute of Technology. Mr. Cottrell makes his home in New York City.

Radio and Sound Equipment

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of 90 degrees and a vertical angle of 60 degrees.

In combination with a 722A receiver it will cover a frequency range from 500 to 6500 cycles. The loud speaker thus formed will handle the full undistorted output of a 25 watt amplifier when reproducing speech or music with frequencies around and below 500 cycles sufficiently attenuated and will provide an intensity level of approximately 76 db above 10^{-16} watt per square centimeter at a distance of 100 feet on the axis of the horn. Combined with a 713A Receiver the new horn will cover a frequency range from 500 to 10,000 cycles. The loud speaker thus formed will handle the full undistorted output of a 25 watt amplifier when reproducing speech or music with frequencies around and below 500 cycles sufficiently attenuated and will

provide an intensity level approximately 78 db above 10^{-16} watt per square centimeter at a distance of 100 feet on the axis of the horn.

KTAR Most Powerful Station in Arizona

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whose campus the Arizona Broadcasting Company originates five non-commercial programs weekly. Another aspect of the station's educational programming is KTAR's School of the Air which offers classes in English and Spanish.

Religious programs released by the station are headed by a five-time-a-week series called the Morning Devotional. These broadcasts are under the direct supervision of the Phoenix Ministerial Association. Each Sunday morning a half hour is set aside for a Mexican church service which is devoted to the work of Protestant churches of the Spanish speaking people in the state. This has been a popular KTAR feature for many years.

The antenna system is a directional array by means of which power can be concentrated or limited in desired directions. This type of system represents one of the latest advances in radio engineering and, according to KTAR, is the first installation of its kind in the Southwest.

Dozens of years of experience form the background of KTAR's well trained staff of employees which is headed by Dick Lewis, general manager. Lewis also directs operations of the Arizona Broadcasting System. Since 1920 when he started with the Arizona Republic as a newspaper carrier, Lewis has been associated with the Arizona Publishing Company or its affiliated institutions. In 1929 he joined the staff of KFAD, forerunner of KTAR, when the publishing company and the Electrical Equipment Company joined forces for the creation of KTAR.

Top members on his staff are Arthur C. Anderson, chief engineer; J. Howard Pyle, program director; J. R. Heath, commercial manager; B. R. Fulbright, office manager and Paul Giroux, musical director. An outstanding pioneer in commercial broadcasting, Anderson has directed the technical operations of the station since its inception in 1922.