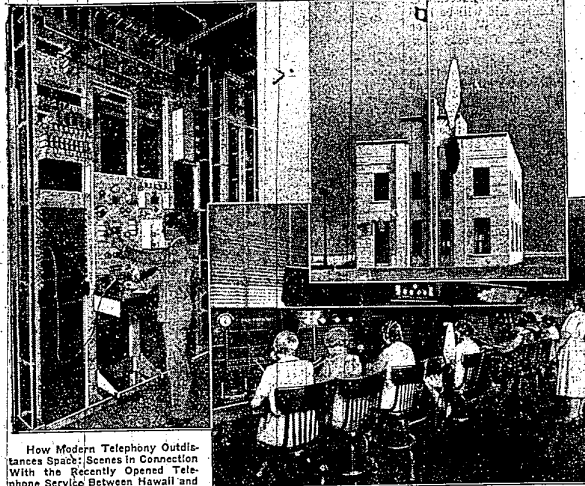


Voices Leap the Pacific as Telephone Service Now Reaches West to Hawaii



How Modern Telephony Outdistances Space; Scenes in Connection With the Recently Opened Telephone Service Between Hawaii and North America.

Above at right: Building at Dixon, Cal., where voices from this country take off for their 2,400-mile leap to the receiving station at Koko Head, near Honolulu. The pole at the left leads to the diamond-shaped transmitting antenna at the rear of the building above. Equipment in a copper room in the Dixon building control room, and above him are relays and vacuum tube repeaters. Right: Switchboard of the Mutual Telephone Company of Hawaii, where radio telephone service to the United States is handled as well as at other islands of the Hawaiian group. The operator at the left is at the San Francisco station, and the clock above shows the time in that city.

For the first time in history, voice-to-voice holiday greetings could be exchanged last Christmas between friends in Hawaii and in North America. For on December 23, 1931, radio telephone service was formally opened to make conversation possible between persons in the United States, Canada, Cuba and Mexico, and those on the principal islands of the Hawaiian Archipelago. Hawaii thus becomes the first of the outlying dependencies of the United States to be linked with the latter by direct voice communication.

Two separate paths form the voice channel to Hawaii. In its course from one telephone to another, the voice receives an amplification measured in millions. The transmitting station for the transpacific service is at Dixon, California, 20 miles southwest of Sacramento, and the receiving station at Point Reyes, 35 miles north of San Francisco. Both the Dixon and Point Reyes stations have recently been completed, and equipment installed, by Transpacific Communication Company, Ltd., subsidiary of the American Telephone & Telegraph Company.

San Francisco is Central Point for North America

The station at Dixon transmits to a station at Koko Head, 12 miles from Honolulu, and Point Reyes receives from a station at Kahuku Point, 30 miles from that city. These stations in Hawaii are operated by the Radio Corporation of America. The channels from the United States are connected not only to the wire network of the Mutual Telephone Company in Hawaii but also to an inter-island short wave radio telephone system which it has recently inaugurated.

San Francisco is the focal point for the new overseas system. Through the transpacific control room in the San Francisco telephone office, subscribers in Hawaii are connected with the United States, Canada, Cuba and Mexico. A special switchboard handles Hawaiian calls. This switchboard, staffed by highly trained operators, is fitted with direct circuits not only to the radio transmitting and receiving stations but to the principal cities of the United States and to the switching points for other parts of North America.

A New Development in Directional Antennas

Simplicity and compactness mark the new type antennas for Dixon and Point Reyes. These antennas, developed by the Bell Telephone Laboratories, in New York, are diamond shaped. The arrangement of the wires makes them highly directional, resulting in great power economy.

The diamond at Dixon is formed by two copper wires mounted on 20 foot poles. (The antenna is "aimed" at the receiving station in Hawaii by placing the longer axis along the great circle course between the two stations. At the western end of the antenna is a system of iron wires looped back and forth on a line of 20 foot poles. This dissipates energy which would otherwise be radiated in an easterly direction.

The receiving antenna at Point Reyes is a diamond formed by a single copper wire. It is mounted on poles. Just as the transmitting antenna concentrates its energy in one direction, so this antenna, due to its shape, is sensitive only to signals traveling along the

line of the major axis. This is of course placed along the great circle course between the Hawaiian transmitting station. A circuit at the western end of the antenna dissipates the signals received from the rearward.

The Dixon transmitting station has a rated power output of 20 kilowatts. With a highly directional antenna this is ample to bridge the 2,400 miles between the West Coast and Hawaii. It uses several frequencies between 7,000 and 21,000 kilocycles, corresponding to a range of 40 to 14 meters. The Point Reyes receiving station has eight stages of amplification, in addition to a high frequency and a low frequency detector. Automatic volume control minimizes fading or variations in volume.

"Speech Inverter" Insures Privacy on the Air. With the exception of the antennas, the equipment to be used in the transpacific service is much the same as that now employed on the transatlantic channels. In the control room is the "speech inverter," which gives the conversation privacy over the radio channel, and the "modulator," a device to eliminate the echoes which would otherwise make it impossible to talk in both directions on the same radio wave length. In addition to this, there is the wealth of associated apparatus at radio station control room and switchboard which have been brought in by the development engineers since the beginning of the project.

The inauguration of the service in Hawaii reflects not only an expansion of 1926 years by the American Telephone & Telegraph Co., a transpacific service across the Atlantic Ocean, but months of preparation in determining the best equipment for bringing the service across the West Coast and Hawaii.

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WEST POINT PARK Mrs. William Zwahlen

Miss Mary Jane Junod of Northville was the guest Saturday and Sunday of Miss Ernestine Wolfe. Mr. and Mrs. A. Berchem returned with their daughter, Mrs. Ervill Stoneburner and little daughter from the Hospital in An Arbor to her home in Northville, last Saturday.

Doris Gilbert entertained Velma and Fern Woodley, Marie and Lusille Carter, Dorothy Smith, Virginia Ault, Geraldine Oultte, and Mildred Bolyard at a birthday party at her home Saturday afternoon. Games were played, prizes given, and a lunch served by her mother, Mrs. L. B. Gilbert.

Miss Dorothy Gerge entered Grace Hospital Tuesday to start training as a nurse.

The regular meeting of the Ladies Community Club was held last Thursday afternoon at the home of Mrs. C. W. Wolfe. Officers were elected as follows: president, Mrs. Earl Wolfe, vice-president, Mrs. Albert Heichman, secretary, Mrs. Roger Whipple, treasurer, Mrs. Frank Gould. After the meeting a light lunch was served by the hostess.

Friday evening, December 15 the young people of the Sunday school will have another spelling bee at the Community Hall. Games will be played and a lunch served.

Wednesday December 20 the Woman's Association of the West Point Park Presbyterian church, will give a tea from two to five o'clock at the home of Mrs. John Mergon on Seven Mile road. All members are requested to come and bring a friend with them.

Mr. and Mrs. Floyd Hopkins and son, Billy of Detroit were guests Sunday of Mr. and Mrs. L. B. Gilbert.

Mr. and Mrs. Charles Karakostas and son, Kenneth of Detroit were the Sunday guests of Mr. and Mrs. Ralph Voorhees.

Tuesday evening, December 19

the monthly meeting of the Adult Bible class will be held at the home of Mrs. Thomas Gillispie on Seven Mile road. A large attendance is desired.

Mr. and Mrs. William McIntosh left last Thursday for Florida where they will spend the next few months.

Thursday evening, December 21, the Sunday School will hold its Midwinter picnic. The primary and junior boy's classes are to have the Turkey dinner. They have the highest percentage for the year.

Mrs. Russell Ault and two daughters, Delores Jean, and Shirley were supper guests Sunday evening of her sister, Mrs. Homer Coolman.

Mr. and Mrs. James Eastman, Mr. and Mrs. Fred Gerge and Mrs. A. Berchem attended the funeral services of Mrs. Elizabeth McDermott Sunday in Oakwood Cemetery in Farmington.

Mr. and Mrs. Howard Ellison and daughter Myrna Jean of Lansing were guests Sunday of Mr. and Mrs. L. B. Gilbert.

Cricket's Long History. Cricket seems to have evolved slowly from an older game. It is probably a specialized form of club ball. It was certainly being played under the name of cricket by boys of the free school of Glastonbury as early as 1550.

One Shellfish Family. Shrimps, prawns, and crayfish are called to the lobster; the crayfish often being called fresh-water lobster.

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Hudson Speeds 85.0 Miles an Hour
Silent Second Speed 55 Miles
Thermosetting Carburetor Heat Control
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*Power Drive Anti-Knock
*Anti-Flood Check Intake Silencer and Air Cleaner
*Dual Automatic Engine Oiling
*Triple-Sealed Oil-Cushion Clutch
Simplified Selective Free Wheeling
*Synchro-Mesh Transmission
*Silent Constant Mesh Second Gear
*Diagonal Transmission Instrument Panel
*Starlix, Automatic Self-Start and Anti-Stall
*Tell-Tale Oil and Generator Safety Signals
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*Lateral Spring Seat Cushions
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*These, and an impressive list of other exclusive features are no extra cost, illustrate the completeness of Hudson 1932 standard equipment. Prices from \$1995 to \$1595. F. O. B. Detroit

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*Power Drive Anti-Knock Combustion Chamber Intake Silencer and Air Cleaner
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*Roller Valve *Diagonal Transmission *Dual Automatic Engine Oiling
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*Tell-Tale Oil and Generator Safety Signals
*Ride Controls
*Natural Grip Steering Wheel
*Lateral Spring Seat Cushions
*Adjustable Seats, Both Front and Rear
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TELEPHONE COMPANY SPEEDS UP BUILDING PROGRAM

In order to relieve the unemployment situation, the Pacific Telephone and Telegraph Company has decided upon immediate construction of a new \$2,500,000 building at the southwest corner of Pine and Steiner Streets, San Francisco, to house three of the important central offices of the company. Originally scheduled for completion in 1933, this building program has been moved ahead as a contribution to alleviation of the unemployment problem. The company has a vast program of construction projects from twelve to eighteen months. These projects approximate \$10,000,000 of construction work.

Penitential Ceremony. Fire walking, a weird ceremony of ancient Indian countries, will be performed by religious fanatics who walk with bare feet over large beds of burning charcoal in order to purge their souls of sin.

Step Beyond Reality. To cross the Rubicon means to take some step from which it is not possible to retreat. The Rubicon was a shallow river, separating Italy from Cisalpine Gaul, the province allotted to Julius Caesar. In B. C. 49, when he had crossed this stream, he passed beyond the limit of his own province and became an invader of Italy.