

ON THE PACIFIC COAST

by Bernard H. Linden (6XBL), Supervisor of Radio, Sixth U.S. Radio District

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[Here's a re-run of an article which appeared in the *San Francisco Examiner* on August 21, 1971, located by Dave Atkins, W6VX, and which Ed J. Dooley, Editor of the *Examiner* has kindly permitted SGT to reproduce.]

Having been interested in various phases of the radio industry almost since its inception in the Pacific Coast in 1902, the thought has often occurred to me that a history of its progress should be recorded, as years are rolling by and there will consequently come a time in the not very distant future when there will be no one of the few early pioneers to perform this duty. Even now time has faded details to such an extent that it is necessary for several “veterans” to gather around the historical round stove and argue points in order to confirm recollections of the past. This seems to be an appropriate occasion to begin such a history.

{HAWAII AND EARLY STATIONS}

In the year 1901 the Marconi Company of England erected wireless stations on practically all the islands of the Hawaiian group for inter-island commercial traffic. These, I believe, were the first installations on United States soil in the West. The first commercial radio stations to be established in the Pacific Coast were located at San Pedro, California, and Avalon, Catalina Island. These were owned and operated by a Los Angeles newspaper, the primary purpose of which was the furnishing of news to a paper printed on Catalina Island and called “*The Wireless*.” This circuit also handled commercial traffic. A few years later these stations were taken over by the Pacific Wireless Telegraph Company, a stock-jobbing concern which

finally was discontinued in 1908 or 1909, but before this latter date stations were erected in the Merchants Exchange Building, San Francisco, and Goldberg Bowen Building, Oakland, between which points commercial traffic was carried on. Also, stations were erected on Queen Anne's Hill, Seattle, Port Townsend and Victoria for the same purpose.

TAMALPAIS STATION

This company's culminating effort was the construction of what was to be a trans-Pacific station on top of Mt. Tamalpais in December 1905. Huge wooden masts, 200 or 300 feet in height, were put up and an enormous open core induction coil built, which was to produce a spark several feet in length. As the tale goes, the coil's length was so great that in order to house it, it was necessary to provide holes in the walls of the building to allow ample space for the core. All of the transmitters of the Pacific Wireless Telegraph Company were of the untuned open spark gap type and their first detector consisted of a needle lightly touching a carbon disc. In the fall of 1906 an extraordinary windstorm caused the collapse of both poles, resulting in the discontinuance of the station.

{ALASKA}

In 1904 the United States {Army} Signal Corps erected stations at Nome and St. Michaels on opposite sides of Norton Sound, Bering Sea, thereby connecting nome with the long Signal Corps telegraph line, which ended at St. Michaels.

{STATION PH}

In the spring of 1905, the American de Forest Telegraph Company established an office in the old Palace Hotel. For a transmitter, the old 60-cycle straight gap equipment was employed. In connection with their receiver, they utilized the Wollaston {wire} electrolytic detector. The call {sign} of the station was PH, after the Palace Hotel.

{U.S. NAVY}

In 1906 the Navy erected its first Pacific Coast radio station on the Fallon Islands, and soon afterward built others at Mare Island, Yerba Buena, North Head, Tatoosh and Bremerton. These were equipped with the then well-known Massie Wireless Telegraph Company's apparatus. As there were no radio laws in those days, the owner of a commercial station would choose a call to his own liking {and the Navy did too}. It would invariably be a two-letter call, because at that time there were plenty of them to go around. Mare Island's call was TG, Yerba Buena's TI, and Farallon Islands' TH. About this time the U.S.S. *Ohioan*, equipped with similar apparatus, steamed out to sea for the purpose of conducting tests with the established government stations. This was the first Pacific Coast United States vessel to be equipped with radio.

DESTROYED BY FIRE

During the fire of 1906, both the "DeForest" and the "Pacific" companies' San Francisco stations were destroyed. The "Pacific" started immediately to rebuild and the "DeForest" re-incorporated under the name of the Occidental and Oriental Wireless Company. The latter obtained a station site on Russian Hill, San Francisco, on a lot owned by the school department. Upon completion, the station was sold to the United Wireless Telegraph Company, which operated it for some time under the call PH. The station was subsequently moved to Hill Crest, Daly City, and from there, after the Marconi Company took over the interests of the company, to its present location at Bolinas, California, where it is now known as KPH and is owned by the Radio Corporation of America. Needless to say, there is no part of the original equipment at the present location.

Timothy Furlong acted as the first operator for both the Palace Hotel station and the United {company} station on Russian Hill. J. O. Watkins relieved Mr. Furlong when he was assigned to the Standard Oil Barge No. 3. Barge No. 3 was the first commercial vessel {berthed on the coast} to be equipped with radio. L. {"Larry"} Malarin {LM}, until recently Pacific Coast sales manager for the Radio Corporation of America, was one of the early operators of the Russian Hill station.

In February 1907, A. A. Isbell, until a year or two ago Pacific Coast division manager of the Radio Corporation of America, a position now held by G. Harold Porter, equipped the

then new steamship *President*, now named *Dorothy Alexander*, at Camden, N. J., with a three KW Massie set, on the receiver of which was used a Fessenden electrolytic detector. The transmitter was of the open spark gap type with a conductively coupled antenna working on a wavelength of 900 meters. (The wavelength and power to be employed by a station in those pre-law days were optional with the owner of the station). Mr. Isbell arrived on this vessel at San Francisco forty-nine days later, coming via the Straits of Magellan.

This vessel was the first one of the merchant marine in the Pacific {to have radio}, and Mr. Isbell was the first {high-seas} commercial marine operator. This vessel and the same operator had similar honors in the same year when the vessel entered the Bering Sea en route to Nome. The station made some extraordinary records for those days; after leaving the Delaware Capes it kept in touch with the Brooklyn Navy Yard for 2,000 miles; picked up the naval radio station at Point Loma when 1,000 miles south of that point and when going to Nome constant communication was maintained with the naval radio station at North Head until the vessel passed through Unimak Pass. Quite naturally, the achievements attracted a great deal of attention and much publicity was rightfully received. Incidentally, the writer has the honor of having operated on the S. S. *President* in the early days.

WIRELESS ON THE BEACH

In 1908 the Mutual Telephone Company of Hawaii erected a 10-KW station at Kahuku {Kaimuki?}, and in October of the same year this station established radio communication with the United Wireless Telegraph Company's station on Russian Hill, San Francisco, which was the first to be established between the Islands and the mainland. The United Wireless was another stock-jobbing concern, which had embarked upon an ambitious program to erect stations all over the Pacific Coast, in fact, all over the United States. The company eventually took over the Pacific Wireless Telegraph Company's stations and operated them.

The Poulsen Wireless Corporation erected a station, commonly known as the "Beach" Station, in San Francisco in 1909 and in 1912 erected a similar station in the Hawaiian Islands and was successful in carrying on commercial traffic between the two points with 1-KW Poulsen arcs. In the meantime, they went ahead with their program of erecting stations in the principal cities of the Pacific Coast and as far East as Kansas City. Their point- to-point service between Pacific Coast stations was, and always has been, a success.

"WHITE HAT" IN RADIO

Along about this period a man generally known as "White Hat McCarthy" {sic: McCarty} was much interested in radio telephony. As it is remembered, there were three McCarthy brothers. It seems that the first brother interested in radio was associated with Santa Clara College. {"White Hat" was actually their uncle, who raised the money to start their company, according to Henry Dickow.} Later developments were taken care of by the youngest brother, who met with an accident, being killed, and consequently Jack McCarthy {sic: Ignatius McCarty} continued with the experiments and established three stations, one in San Francisco, one in Los Angeles, and the other at the St. Marks Hotel, in Oakland. The arc was used as a generator of radio frequency oscillations. {At the time, the McCarty arc was known as the "peanut whistle."} Modulation was effected by the use of a multiplicity of carbon granule, carbon diaphragm microphones in parallel so as to pass a large amount of current, as in some experiments they were either connected directly in series with the antenna circuit or coupled thereto. The failure of a stock-selling plan resulted in the dismantling of other stations and Jack McCarthy's {Ignatius McCarty's} further activities in radio. {He later became a San Francisco private detective!}

Also, about this time, perhaps a little later, the Dewire Wireless Telegraph Company established experimental radio telephone stations: one on top of the Fairmont Hotel, San Francisco, and another in Fruitvale. Arc generators were used for transmission. This was also a stock-selling concern and was not long lived.

BROADCAST PIONEER

In 1913 Charles D. Herrold, 6XE, XF, carried on experiments in radio telephony with considerable success. His laboratory was located in San Jose.

The National Wireless Telephone Company operated in San Francisco under similar conditions around the year 1919, using an arc burning in alcohol.

{MARCONI — RCA}

In 1912 the Marconi Wireless Telegraph Company of America took over the remaining assets of the United Wireless Telegraph Company and soon thereafter erected two large stations at Bolinas and Marshall, California, and at Kahuku and Koko Head on the Island of Oahu, Hawaiian group. These stations were equipped with 300 KW synchronous rotary gap spark transmitters. In 1914 and 1915 the Marconi Company erected stations at Ketchikan and Juneau, Alaska, and a station similar to these was erected at Astoria, Oregon, thereby establishing a radio circuit between the United States and Alaska. These were sold to the Navy in 1918, along with other marine coastal stations of the Marconi Company and of the Federal Telegraph Company, which had succeeded the Poulsen Wireless Corporation.

The Radio Corporation of America was organized at the request of the officials of the United States government and took over the Marconi Wireless Telegraph Company {of America} in November 1919.

{DETECTORS}

For years the different forms of crystal detectors such as silicon, galena, iron pyrite, carborundum, zincite - bornite, and crusite had been used entirely, replacing others until in 1913 the Fleming valve was first used on the Pacific Coast. It consisted of just a plate and filament in an evacuated glass container. Shortly after this the deForest three element audion detector was introduced and since, as we know, it has been developed into an amplifier, at radio or audio frequencies, an oscillator, relay and modulator.

DURING {THE 1915} EXPOSITION

In 1915, during the World Fair at San Francisco, the vacuum tube, which was developed for radio purposes, was used as a relay in a transcontinental telephone circuit and was such made possibly the first successfully operated telephone circuit across the continent. It might be interesting to mention here that the first New York-to-London call occurred in January 1927, and that on the 7th day of April 1927 television by telephone and radio made its formal bow to the public.

{BROADCASTING}

It was not until 1920 or 1921 that the public began to take a real active interest in radio broadcasting. This interest was born, one might say, with the early experiments with the three-element tube as an oscillator for radio telephony. First radio broadcasting stations utilizing the three-element vacuum tube as an oscillator were licensed as experimental stations in 1920 and 1921. Some of these stations were: 6XW, Presidio of San Francisco, California, operated by Richard C. Tavers; 6AXN, Oakland, operated by S.M. Warner; 6XG, located on the roof of the Fairmont Hotel, San Francisco, California, operated by the Leo J. Meyberg Company; and 6XAC, Los Altos, California, operated by Colin B. Kennedy and E. A. Portal. Mr. Portal conducted experiments in radio telephony as early as 1912, using an arc burning in alcohol. In 1922 these stations were classed Limited Commercial, and so licensed.

{RADIO COMPASS}

The first commercial radio compass to be installed on board a vessel in the Pacific was installed by the Federal Telegraph Company on board the United States Lighthouse Tender *Sequoia*. In November 1921 the steamship WGCO or KDYK, *H. F. Alexander* of the Pacific Steamship Company was the first Pacific Coast commercial vessel to have a radio compass. This was also a Federal installation, which took place in October 1922. Just prior to 1921 the United States Navy had installed a number of land compass stations along the coast; also, many ship installations had been made. The first Pacific Coast radio beacon was installed on the United States *Lightship No. 70*, San Francisco Bar, in May 1922. This was followed by the first shore radio beacon, which was located at Point Sur, on December 1, 1925.

FIRST FLYER LICENSES

And now in August 1927, the government for the first time licensed radio stations aboard Pacific Coast airplanes. These planes were entrants in the Dole contest flight to Hawaii, namely: *Oklahoma*, *El Encante*, *Pabco Flyer*, *Woolaroc*, *Aloha*, and *Golden Eagle*. The radio calls assigned to these vessels were respectively: KOE, KRK, KGGI, KGGT and KWS. The history of the flight with failure of some of the planes to start is well known.

{RADIO LAWS}

It should be mentioned in a history of this kind that the first Radio Act to be passed was approved June 24, 1910. An act was approved July 23, 1912, amending Section No. 1 of the before-mentioned Act. These required apparatus and operators for radio communication on certain ocean steamers. The act as amended is commonly known as the "Ship Act." An Act, commonly known as the "Radio Act," to regulate radio communication, was next to be approved and it became a law on August 13, 1912. The next and last law to be passed is known as the "Radio Act of 1927." It provides for a commission of five members appointed by the President and confirmed by the Senate. This Act was approved February 23, 1927, and divides the States into five zones with one commissioner representing a zone. The Act of August 13, 1912, was repealed at the passage of the Radio Act of 1927.

{CONCLUSION}

In conclusion, the writer would appreciate receiving from his contemporaries any additional facts of historical value. {End of Linden text.}

[SGT COMMENT]: Bernard Linden, dean of the West Coast Radio Inspectors is well known among the Old Timers. In addition to his famous "6RI" he used 6BL and BL for his personal call sign. Those wishing to drop Pop a line (as he is affectionately called) may reach him by writing to 7072 Napa Ave., Alto Loma, CA 91701 [AS OF 1971] —Ye Ed.

{CHRS/SoWP COMMENT}: Note Linden's initial comment: "... now time has faded details..." Thus, some historical caution may be appropriate inasmuch as Linden was recalling events seven decades prior. For example, Deputy Archivist Bob Rydzewski points out that it may only have been Marconi equipment, not the Marconi Company, that was involved in Hawaii in 1901. For another instance, Haraden Pratt recorded that the guy wires of Mt. Tamalpais station had been cut before the towers fell. de K6VK, 07 IX 2021 v2##}