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## The San Francisco Radio Club, Since 1909

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### Abstract

The San Francisco Radio Club has enjoyed more than a century of the advancing radio art, fraternity and public service, as an exemplar of the Amateur Radio Service at its best. Its technical investigations have explored radio's potentials since 1909. The Club's early days show the enthusiasm with which young men took to the new art, both as a hobby and as professional preparation. It also established, from its beginning, cordial relations with its government regulators, from whom it received the first Amateur Radio license issued by the Federal Radio Commission in 1927. Its members pioneered pre-war VHF work on 5 meters and 2&½ meters, and then 2 meters. The Club adopted the callsign of an early member, W6PW, as its own, for its repeater and field operations. In recent decades it has continued its public service, education, and social activities in the best traditions of amateur radio, on its deep foundations as one of the oldest radio organizations in the world.

In August, 1899 *Lightship 70*, moored nine miles off San Francisco in the fog, signaled to San Francisco's Cliff House that it had sighted the troopship *USS Sherman* returning from the Spanish American War. The ship used an induction coil; the receiver in the Cliff House was a wire and a coherer and an inker. Wireless telegraphy thus sent America's first radio message. Newspaper reports gave rise to national interest in the new mode of communication. Marconi, of course, had been making widely publicized progress in England. Tesla, too, had publicized experiments. But the San Francisco signal ignited local

interest and enthusiasm, especially among young experimenters.

The early 1900s witnessed great progress in Navy, Army and commercial wireless. The San Francisco area pioneered much of the new technology:<sup>1</sup>

- Cyril Elwell in Palo Alto works with Poulsen's arc transmitter, 1907.
- Maritime wireless stations appear in San Francisco from 1907 – e.g., the Massie Company's at Land's End.
- The Great White Fleet visits San Francisco in 1908, playing wireless

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music on a DeForest Company arc transmitter.

- “Doc” Herrold in 1909 experiments with modulating a spark transmitter, and by 1912 routinely broadcasts music in San Jose using an arc transmitter.

In and perhaps before 1903, young men in San Francisco followed the earliest nautical and commercial work in the radio art with their own “wireless telegraphy” transmitters and receivers. Home-made induction coils and even doorbell buzzers worked as transmitters (along with automotive ignition spark-coils a little later). Combinations of carbon rods and steel, and coherers, worked fine as detectors of wireless signals, at least at short ranges. Many a telephone lost its earpiece to facilitate amateur experimentation. By 1909, word was out about crystal detectors, particularly carborundum. In San Francisco and elsewhere, men and boys formed clubs to work with like-minded wireless telegraphy experimenters. Their object was to communicate over the air – the “ether” as it was known then – and they did, sometimes to the annoyance of the Navy and others.

School occupied the weekdays of these young amateurs but on Saturday mornings the ether called, to the despair of professional operators. As one DeForest Company station PH operator in 1906 noted in the log:<sup>2</sup>

“8:30 a.m. The combined forces of 3,000 ham factories are bursting forth with their weird codes upon the quietude of this lovely rainy morning.”

Landline telegraphers described as

“ham” what they heard as a result of bad telegraph key technique – “ham-fisted” operators on the key – and the term migrated to the wireless world. Most wireless operators of the day had been landline telegraphers. The use of the term “ham” for an amateur radio operator likely derives from this usage.

On December 26, 1909 the San Francisco Chronicle reported:<sup>3</sup>

“This is amateur morning in the wireless world. San Francisco and adjoining suburbs alone have between 200 and 300 young wireless operators; amateurs who rank as such principally in name, who are everywhere dotted about the city and country for a stretch of miles that extends way beyond the city and county boundaries.”

Wireless clubs initiated the earliest San Francisco area amateur callsigns. They assigned their own members call letters, in imitation of maritime and commercial stations. The Bay Counties Wireless Telegraph Association, in Berkeley, did so as early as 1907.<sup>4</sup> That club assigned “S” as a prefix. Ray Newby, a young but accomplished San Jose wireless amateur, got SEW, after using the self-assigned call EZM. He assisted Charles D. “Doc” Herrold, in San Jose, in some of the first radio broadcasting as early as 1909 (Modern Electrics in 1910 published a photo of the two of them operating a spark station) and Newby later went to sea as a marine operator. Likely earlier than 1906, Bill Larzelere and Ed Stevens were two of the first amateur wireless operators in San Francisco. Barney Osbourne, later W6US, experimented

early in the century and took to the ether in San Francisco about 1908, running 5 KW using the call sign CG.

Hugo Gernsback published the “First Annual Wireless Blue Book of the Wireless Association of America” in May of 1909. He did so in connection with promotion of his new *Modern Electrics* magazine, and had solicited information about stations. The Blue Book lists nine responding California amateur stations, although hundreds of amateurs operated in California. One listed itself as the “Ozone Wireless Company” in San Francisco. Inasmuch as it used the call sign MJ, those were probably the operator’s initials, the common practice of the day. The Blue Book shows MJ operated on 80 meters, a short wavelength for 1909, with a ten-inch spark from his induction coil transmitter (high voltage but not necessarily high power). Most listed sparks were in the one inch or few inches range, although nationally a few stations listed themselves by power, in the fractional kilowatt to two kilowatt range. Ray Newby in San Jose listed himself as EZM with a three-inch spark at 235 meters wavelength.

The San Francisco Radio Club came together in 1909.<sup>5</sup> The Club is the oldest persisting amateur radio organization in the nation and likely the world (although not the first such club to form, even in the Bay Area). Henry W. Dickow started the Club in 1909 as a twelve-year-old boy; R.E. Crowden assumed the presidency of this boys’ club. Dickow later edited *Pacific Radio News*. This evolved into Radio and

eventually *Audio* magazine, still published. He later held amateur radio call sign W6JYN and still later helped to manage the Society of Wireless Pioneers.<sup>6</sup> (Figure 1) The Club seems to have foreseen fewer than 26 amateurs in the City eligible for membership in 1909. For its call signs, it used the prefix RS for Radio San Francisco, and then letters A through Z, e.g., RSC.<sup>7</sup>

A 1924 retrospective noted: “Radio amateurs of San Francisco have long been banded together in an organization known as the San Francisco Radio Club, Inc. The club is one of the oldest and largest of its kind in America, having been founded in 1911”<sup>8</sup> [sic; 1909]. In 1917 Dickow wrote:<sup>9</sup> “In former years



Figure 1. Henry Dickow about 1924, from the 1924 Radio Convention Official Program.

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there flourished a radio organization ... known as the San Francisco Radio Club, having a membership of about fifteen operators. This club was organized before the U.S. Government laws went into effect and disbanded shortly after... twelve [out of the 15 total club members] successfully passed the ... Commercial First Grade examination..." (He refers to the 1912 law (see below) that required amateurs to operate on shorter wavelengths).

From its beginning the Club provided an educational and social forum for young wireless amateurs to work towards professional status in the maritime industry, and to associate with professionals as well. In contrast, the University wireless experiments of the day, from Harvard to Stanford, focused on learning physics, and on engineering applications, albeit farsighted. But from the Gold Rush until recent decades, the maritime industry kept San Francisco's port the busiest on the West Coast. From the first decade of the 20th Century, the Bay Area ether rang with signals of ships and shore stations, including the Navy's first wireless network. The prospect of well paid, adventurous and high profile work as sea -going radio operators powerfully attracted young men of talent, spirit, and a good ear for Morse code, as San Francisco's marine industries prospered. The San Francisco Radio Club facilitated their ambitions.

In 1912, new U.S. law<sup>10</sup> challenged amateur radio. To eliminate conflict between amateur stations and maritime communications, the law's section 15

relegated amateur radio to wavelengths 200 meters and down; i.e., 1,500 KHz and up. Amateur wireless stations may have interfered with Titanic -related communications in April 1912, and certainly with other communications nationwide. Many amateurs earned the enmity of commercial and government organizations. The abuses of some amateurs precipitated this exile to radio Siberia for all. The radio art considered these frequencies, with wavelengths of 200 meters and shorter, to be a wasteland of the unfamiliar, the difficult and the futile. Most maritime stations worked on 600 meter band wavelengths (500 KHz). Amateur wireless stations often did the same – annoyingly, although some worked shorter wavelengths. The 1912 restriction would be like a law today that amateur radio could only use frequencies of five gigahertz (5 GHz) and above. Many, perhaps most, amateur wireless operators turned to other endeavors once they were restricted to shorter wavelengths. For example, M.H. Dodd, who started out in Los Angeles about 1908, operated his station<sup>11</sup> in Nevada until 1912 (Fig. 2). He closed it and sealed it up in 1913, as a result of the wavelength restriction. Only recently found, as if preserved in amber, a museum now displays it.<sup>12</sup>

The 1912 change in the law imposed for the first time licensing and testing on amateur radio operators. The new law also provided for government -assigned callsigns by district. For example, California and some of the western states comprised District Six, with callsigns such as 6HD, while

District One covered New England, with callsigns such as 1XM.

Between 1914 and 1917 amateur radio again flourished, as operators improved techniques to use the newly assigned higher frequencies above today's AM broadcast band. Amateur radio had these "short waves" pretty much to itself. The new vacuum tube, and E. Howard Armstrong's regenerative circuit that it enabled, piqued interest in amateur radio operation. This was especially so because regenerative receivers could resolve very weak and distant signals. The regenerative circuit could also oscillate. Technically adept amateurs could then soon employ vacuum tubes as transmitters that emitted continuous waves. San Francisco enjoyed many radio entrepreneurs, such as Elmer Cunningham



Figure 2 M.H. Dodd's 1912 Nevada station; he started out in Los Angeles.

and Otis Moorehead (6XJ and 6XP) and George Haller.<sup>13</sup> They concerned themselves way more with profits than with patents. They bootlegged triodes with abandon, much to the annoyance of Lee de Forest. Still, most amateurs used spark, and crystal detectors.

In the midst of this techno-ferment, the San Francisco Radio Club reinstated itself in January 1916, with 36 members. In 1917 former President Crowden, by then a Marconi operator, noted that several of the original 1909 era members participated in the revived San Francisco Radio Club. The Club published a "Yearbook" in 1916. The U.S. Department of Commerce published extracts from the Yearbook in an issue of its Radio Service Bulletin,<sup>14</sup> as a model for other clubs. Surely San Francisco Radio Inspector Lt. Ellery Stone arranged the publication of the extracts (Fig. 3 – he had been an amateur since 1910, licensed as 6YE until January, 1915<sup>15</sup>).

### **Extracts from the Yearbook of the San Francisco Radio Club**

#### ***Object and Purpose***

During the early part of January, 1916, a number of prominent commercial and experiment radio operators of San Francisco met in order to discuss the possibility of organizing a radio club in that city. The number of enthusiastic operators barely reached the dozen mark, but regardless of the small number present, a prosperous future for a radio organization was foreseen, and the necessary steps toward founding an organization were taken.

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Figure 3 Lt Ellery Stone, U.S.N., Radio Inspector; he later authored a highly regarded book on radio engineering and rose to the rank of Admiral.

Radio operators throughout the city were notified of the undertaking and were urged to give all possible support to insure a huge success.

A meeting was held and the number of responders was surprising large. A constitution was framed, submitted for approval at a later date, and finally signed by 15 charter members. The situation was then well in hand, and the membership of the club increased rapidly as the weeks passed by, until at the present time 36 radio men are in possession of the membership card.

### **Membership and Qualifications**

The membership comprises:

(a) Members who either hold a first-grade commercial license or better or who have passed the club examination of that grade.

(b) Associates who are interested in radio communication.

Associate member[s] desiring to become full members are examined when their capability permits, and if they are successful in passing the club examination they are transferred from the grade of associate to member. A certificate of skill will be issued to all associates who successfully pass the examination.

### **Meetings**

Meetings of the San Francisco Radio Club are held every Friday evening at the club room, 737 Shrader Street, at 8 o'clock.

The four meetings per month comprise an experiment meeting, a social meeting, and two business meetings. At the experiment meeting various electrical and radio apparatus are demonstrated. Experiments impossible for a single experimenter to perform have been made possible by the cooperation of the members.

### **Advantages of Membership**

The San Francisco Radio Club offers many distinct advantages to its members. Radio men in all grades of experience come together, exchange ideas, relate experiences, benefit by interesting and educational lectures, and learn the methods of good speech delivery. Commercial operators come into contact with amateur operators and experimenters; interference between stations is reduced to a minimum, and the maximum of efficiency is secured from the experimenters' apparatus with the aid of accurately calibrated measuring instruments which the club possesses.

Privately owned stations are tuned to resonance to comply with the regulations of the Department of Commerce without charge to the owner.

The Club, in a typical technical event in November 1916 mooted a debate: “Resolved, The Audion Is Superior To The Crystal Detector.” The Audion proponents got the better of the issue with almost 100 “enthusiasts” present.<sup>16</sup>

Starting in January 1917 the Club published the first issue of *Pacific Radio News* (Figure 4). Henry W. Dickow was the principal of the Club and the magazine. Friendly Radio Inspector Stone no doubt assigned Dickow’s callsign 6HD, his initials. Dickow went on to a distinguished career and the magazine

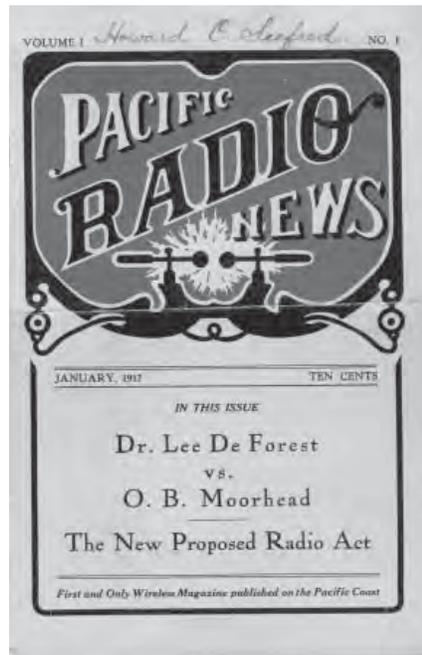


Figure 4 *Pacific Radio News*, January 1917 First Issue; it followed on the Club’s 1916 Yearbook.

became *Radio*, as owned and published by him, in the 1920s.

Dickow was not above promotional doggerel for the magazine:

*“The San Francisco Radio Club, Its members tried and true,*

*Will furnish all the latest news, That may appeal to you.”*

The San Francisco Radio Club flourished in 1916 and 1917. Nearly a hundred members had signed up by 1917, according to Dickow. Commercial and maritime wireless companies already employed many members. Members had to pass a test equivalent to the U.S. Department of Commerce First Grade Commercial examination. The Club then considered applicants who also showed Morse code proficiency. Use of the Club’s measuring instruments, wave-meters and the like avoided interference to commercial and naval operations. Prominent speakers addressed the Club and the Club printed the lectures. The Club’s initiation fee was \$1 and monthly dues 25 cents (amounting to \$3 a year, equal to about \$50 today). The Club maintained a clubroom in the City.

There was much official praise for the Club, in an era of newly regulated amateur radio operation. Inspector Stone (photo<sup>17</sup> Fig. 3) noted that only the San Francisco Radio Club and the Institute of Radio Engineers in New York had published Yearbooks. According to Dickow in 1917: “The task of tuning stations to resonance has met with great approval by the local Radio Inspectors...” Bureau of Navigation Radio Engineer V. Ford Greaves wrote:

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“I... desire to congratulate you and the members of your club on your excellent organization...”

In 1917, the Club officers were:

- H. W. Dickow, President (6HD in 1913, later W6JYN).
- D. B. McGown, Vice-President – later in 1921, Assistant Radio Inspector.
- H. R. Lee, Secretary – Treasurer.
- T. J. Ryan, Sergeant –at -Arms – later in 1919 also a Club Officer, and an Army Sergeant stationed at the Presidio, active in wireless there.
- C. M. Heaney, Examining Officer
- H. J. Malarin, Examining Officer – He was later a radio dealer in 1921. Laurence Malarin (“LM”), likely his brother, was the legendary manager of United Wireless and American Marconi in San Francisco (later RCA).
- Also, W.D. Hewartson, later W6NCB, helped revived the Club in 1916. (He, like others, continued his Club membership well into the 1940s).

But soon enough, World War One – “The War to End All Wars” – almost ended amateur radio as well. In April 1917, the U.S. Government shut down *all* radio stations, receiving as well as transmitting; *all* antennas had to come down.<sup>18</sup> The fear of German spies pervaded the country. The San Francisco Radio Club, however, held itself together under the leadership of Francis K. Teeter, Jr., (Fig. 5) with only four active members. Many amateurs enlisted in the armed forces. Most if not all other amateur wireless clubs

and all non-governmental stations went quiet for the duration: QRT in the wireless telegraphers’ code.

After victory in November 1918, amateurs looked to getting back on the air, especially with the newly available vacuum tubes. The Navy, however, wanted to maintain its wartime total control. Commercial interests won out, also liberating amateur radio from Navy suppression.

The San Francisco Radio Club revived again after World War One. It incorporated<sup>19</sup> on May 16, 1919, looking to a long future. It did so anticipating the lifting of the ban on amateur operation, which occurred in September 1919, effective October 1, 1919, according to the Radio Service Bulletin.<sup>20</sup> Stations still had to get re-licensed. The Club’s purposes in 1919, exactly as stated in its incorporation papers, and which it achieved for decades, were:

- To promote among its members the practice of, and interest in Radio Communication;
- To advance the science of Radio Communication among its members;
- To have club rooms and halls for its members;
- To construct and maintain for



Figure 5. Francis K. Teeter, Jr. in the early 1920s serving in the Forest Service.

the educational advancement of its members Radio apparatus and equipment;

- To conduct lectures and demonstrations and give courses in Radio Communication and construction of apparatus;
- To hold social functions;
- To acquire a library and current periodical literature on the science of Radio Communication.

The incorporating amateurs in 1919 were:

- Adolph W. Honing, 516 7th Avenue.
- William Joseph Henry, 554 11th Avenue (who went to sea in 1921 on “one of the Panama boats.”)
- Francis K. Teeter, Jr., 365A 11th Avenue (who had kept the Club alive during the war).
- Eugene L. Chaix, 2056 Bush Street.
- Sergeant Thomas J. Ryan, 349 7th Avenue (a 1917 officer).

Radio -telephone operation came to the Club in 1920, courtesy of Lee de Forest who had been broadcasting in San Francisco and then Berkeley since 1919. Leo J. Meyberg, 6XG, a radio dealer who owned broadcast station KDN from 1921, made the arrangements for the Club. For experimental use, the radiophone broadcast Club announcements and promoted the Club on the air by way of “club propaganda.”

<sup>21</sup> This may well have been a proof -of -concept trial for Meyberg’s broadcasting station. That same summer, Hiram Percy Maxim, of the then six -year -old American Radio Relay League, gave the Club “an interesting address on the history of the A.R.R.L.” <sup>22</sup> Maxim held

the Special Amateur callsign of 1ZM as of March, 1915.

A Club officer, Harrison Holliway, 6BN, frequently used his amateur radio -telephone (‘phone) station in 1920 to broadcast music “for the sheer pleasure of it” (Fig. 6 )<sup>23</sup>. His station established a record for voice amateur communications with a contact of 1,800 miles into Vancouver, B.C., Canada. He had started out in 1911 (at age 11) with a carborundum detector, and he had gone to sea and to Stanford. By 1924 Holliway was the manager of San Francisco’s new powerhouse broadcaster (50 watts of Westinghouse!), KFRC.<sup>24</sup>

The Club put on San Francisco’s first radio convention (held in in 1920), and according to program of the later 1924 radio show, which noted: “Radio amateurs of San Francisco have long been banded together \*\*\* The first radio show held in San Francisco, a number of years ago, was entirely conducted by the San Francisco Radio Club.” The Club displayed equipment from Francis McCarty’s radio -telephone enterprise, which he started in 1902, inductors and detectors and the like, already antique



Figure 6. Harrison Holliway, 6BN, San Francisco in 1920; he later became an early broadcast radio personality.

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by 1920. The Radio Service Bulletins of 1920 carried regular updates on the progress of the preparations for the radio show. In the October issue of *Pacific Radio News*, the Club placed a large advertisement inviting participation in “The First Pacific Coast Radio Convention.” *Pacific Radio News*, after the show, declared it to be the great success it was, after having promoted it (and its Radio Banquet and Radio Ball) extensively – e.g., “The Radio Convention – a Stepping Stone to Progress.”<sup>25</sup> The December 1920 issue featured a two page photograph of one third of the 580 attendees and a detailed report. This included the titles of musical numbers played at the Ball, received from a hotel on a DeForest radio and presented through “a Magnovox” (the newly invented “loudspeaker”): e.g., Oscillating Fox Trot, Synchronous Waltz, Amplified One Step and Loose Coupled Waltz.

Building on the success of the 1920 Radio Convention, the Club resolved in January 1921 to acquire a big blackboard for diagrams and two receivers (a regenerative set and a long -wave honeycomb coil set), to overhaul the radio -telephone and put up a new antenna, and to put a complete station on the air.<sup>26</sup>

By 1921, Francis K. Teeter, Jr. had pioneered use of radio by the U.S. Forest Service, calling on amateur operators to come to work for the Service. He used World War One radio equipment from the Army Air Service for both air and ground operation (photo nearby<sup>27</sup> Fig. 5). Nonetheless homebrew equipment and home construction defined state

-of -the -amateur -art in those days: *Pacific Radio News* featured a vacuum tube transmitter of 20 Watts power, continuous wave (CW) for Morse code and radio-telephone. Like much else amateur, it was Do-It-Yourself.

Club officer nominations for 1921-'22 included Dickow, Clarence Schomaker (callsign 6AET) and Sydney J. Fass. A graphic of Clarence Schomaker's membership certificate<sup>28</sup> appears below. (Fig. 7). It is signed by Teeter as President. Sydney Fass had been active since 1909, “MU”, later W6N2. He also served as a seagoing wireless operator in 1911 at age 16, and then shore-side at United Wireless station PM in Eureka, California. He served in the Navy for 33 years and in both wars and retired as a Commander. He then established one of the largest radio and electronics retailers in San Francisco in the 1950s.

By 1922 advanced amateur stations had achieved considerable sophistication. A series of photos that come from a photo album<sup>29</sup> of a Canadian by the name of C. West (callsign 5CN) Vancouver, B.C., Canada appears nearby. It



Figure 7 Clarence Schomaker's 1920 SFRC membership certificate (author's collection).

seems that some amateurs, who had the money to do it, enjoyed trading station photos, both in North America and in Europe. Of course, most amateurs had neither the time nor the funds to create extensive stations and photograph them as well. It was in these years, however, that the exchange of postal verifications of radio contact, QSL cards, became common, initially as penny postcards

A San Francisco station features prominently in the C. West album: 6AWT. Bart Molinari, callsign 6AWT, was the American Radio Relay League (ARRL) 1924 Hoover Cup Winner for Best Amateur Station in the United States. Cage antennas on towers at 6AWT put out the signal from Molinari's state of the art station, Fig. 8. In the 1930s, Philo Farnsworth, the San Francisco inventor of electronic television, employed Molinari as his Chief Engineer at Farnsworth's Green Street laboratory.<sup>30</sup>



Figure 8. Bart Molinari's 6AWT cage antennas; photo from C. West 5CN album (author's collection).

Washington State's 7NJ enjoyed the attentions of a professional photographer, Fig. 9. Yerington, Nevada's 6UO (Fig. 10) features a DeForest Company "Unit" or Interpanel modular receiver and Western Electric audio amplifier for a horn speaker. Many amateurs of the day forwarded messages around the country, in relay operation; hence the typewriter for "traffic." The 6UO photo discloses the name of the operator, Bill Heade, and shows his vacuum tube transmitter.

Before 1927, the U.S. Department of Commerce regulated the ether and issued station licenses. Radio advanced into a new legal era with the Radio Act of 1927.<sup>31</sup> The new industry of broadcasting demanded regulation of interference and more than the two frequencies to which it had been relegated. The new law established the Federal Radio Commission (F.R.C., later the F.C.C.), it reallocated frequencies, and limited operating times, and required operating licenses. The San Francisco Radio Club, Inc. applied early for a license from the F.R.C., for itself as a club. It apparently got the very first one issued, perhaps as a result of its continuing cordial relations with its



Figure 9. 7NJ in Washington State, circa 1922; professional photo from C. West 5CN album.

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Figure 10. 6UO in Nevada, June 29, 1923; photo from C. West 5CN album.

regulators. This license (Fig. 11), by the Federal Radio Commission, signed by Bernard Linden, the San Francisco Radio Inspector, issued on November 17, 1927 as “License No. 1.” A photo of Inspector Linden<sup>32</sup> (Figure 12) appears nearby. Linden had given a talk about radio’s future to the Club a few years earlier; the Club enjoyed friendly Inspectors.

The F.R.C. issued 6MU as callsign for the new Club station, located at 454 Bright Street, in San Francisco. The license specifically provides for:

- Power Authorized: 100 Watts.
- Bands Authorized: 70 cm (400+ MHz), 5 meters (56 MHz), 15 meters, 40 meters, 80 meters & 160 meters (1,500 KHz to 2 MHz).
- Phone operation only in 70 cm, 15 meters & 160 meters.
- Term of license: one year.
- Silent Hours, 8 PM to 10:30 PM if interfering.
- No news, music, lectures, sermons or entertainment.

Standard license conditions of the time for amateur stations called for silent hours and precluded broadcasting. For 1927, the frequency range

stands out: 160 meters to 70 cm, *i.e.*, 1,500 KHz to 400 MHz. To generate a 400 MHz signal in 1927 required considerable technical skill.

The first three decades of the San Francisco Radio Club laid a solid social and technical foundation for the next seven. In the 1930s it flourished despite the Depression. It participated in the ARRL Amateur Radio Emergency Corps before World War Two. It held *and filmed* summer Field Day exercises in 1940 and 1941 and thereafter. It chose as its site the highest point in San Francisco, Mt. Davidson, in the south of the city. Field Day also became the subject of local “ham humor” – see Figure 13. Social events played a large role in the Club. On one occasion in the 1930s a New Zealand amateur, a distant station



Figure 11. SFRC station license, 1927, 6MU, “License No. 1”; courtesy of Paul Merrill, W7IV, via Ed Silvester, NI6S and Dave Bilceci, WA6UHA, SFRC.



Figure 12. Radio Inspector Bernard Linden of San Francisco; from the 1924 Radio Convention Official Program.

(“DX”) frequently contacted, visited San Francisco, to a great welcome by the Club, and he extended his visit considerably. But “the San Francisco gang” also arranged to have amateurs across the country welcome and host him, as they did.<sup>35</sup>

Frank Jones, a noted engineer and technical writer, participated in Club activities. He designed the first



Figure 13. Early Field Day cartoon by Les Funston, W6QQU from Amateur Radio Defense published in 1941.

working five -meter (56 MHz) communications system in 1936, for use in the construction of the San Francisco Bay Bridge. He was also responsible for the Radio Handbook published annually in Palo Alto, often known as the West Coast Handbook to distinguish it from the Handbook of the American Radio Relay League (ARRL).

Some other prominent members of the Club before the War (screen-capture photos nearby from the Field Day 16 -mm movies) included:

- William A. (Bill) Ladley, W6RBQ (Fig. 14). He owned the Pacific Felt Company and the movies feature a company truck as the mobile communications center. He was a VHF enthusiast who broke two-meter distance records; the nearby mountains *Diablo* and *Tamalpais* helped. He served as an ARRL Section manager in 1945.
- Wilbur E. (“Bip”) Bachman, W6BIP (Fig. 15) born in 1911, operated pre-war on the 2&½ meter band, 112 MHz as an early VHF enthusiast. He put together a mobile VHF rig with its own tower. Bip enjoyed DX as a member of the Northern California DX Club (NCDXC); he also travelled to Greenland. He served as vice -president of the San Francisco Radio Club when the FCC awarded him the first Extra Class license in the Club. As an attendee of the 1965 ARRL National Convention, Club records show that he was pleased to win a HeathKit as a door prize. He remained active

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Figure 14. Bill Ladley, W6RBQ, seated at an early Field Day (this and similar images are screen captures from the SFRC movies which were probably shot by Russ Hanlon, W6KJ).

and visited the Club at 89 years of age in 1999.

- R.S. (Rus) Hanlon, W6KJ, preserved and probably shot and edited the Club's 1940s Field Day movies. The movies also feature



Figure 15. Wilbur E. ("Bip") Bachman, W6BIP on Field Day, with his mobile and portable 2&½ meter, 112 MHz rig.

other prominent California amateur stations. He retired from the wartime Navy as a Lt. Commander.

- John L. Stevens, W6PW (Fig. 16), served as President of the Club at one time. He first appears in *Radio*

*Amateur Call Book* magazine in 1932.<sup>36</sup> He built rigs for others and participated in record -breaking five-meter contacts in 1932. He and his callsign last appear in the *Call-book* in 1955. The Club adopted his callsign as its own in 1957.

- Kenneth E. Hughes, W6CIS (Fig. 17), an active operator before and



Figure 16. John L. Stevens, W6PW about 1941; the Club adopted his callsign in 1957.

after the War, including Field Day. He served as the ARRL Section Manager early in the War, and later as the ARRL Pacific Region Director. Later in the War he served in the Pacific Theater of operations. His daughter Joan Porath remembers his amateur radio operations



Figure 17. Kenneth E. Hughes, W6CIS, foreground, in the 1948 Field Day truck.

well, and she has been very helpful in identifying images.

- Jack Slater, W6NF (Fig. 18), also retired from the Navy after the War. In the movies, his wife (“XYL” – former YL or Young Lady) has to drag him away from his radio by the ear, in a dramatization. Like many amateurs of the day, he used a Pilot AC Superwasp receiver. More amateurs in the late 1920s and well into the 1930s used this regenerative radio than any other. This was so until the advent of affordable receivers using Armstrong’s superheterodyne circuit (the superhets) such as the Hammerlund Comet Pro, one of the earliest. Slater’s transmitter, like that of W6PW, was a breadboard with a couple of vacuum tubes, almost low power (QRP) by today’s standards.
- Clayton Bane, W6WB, also acted as an ARRL official. He too visited



Figure 18 Jack Slater, W6NF, and his XYL about to haul him out of the shack by his ear.

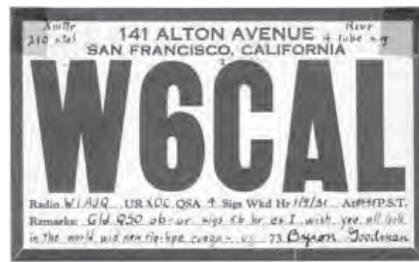
the Club when he was in his late eighties about 1999.

- Byron Goodman, W6CAL, used a homebrew one vacuum tube

transmitter employing a 210 tube and four tube receiver.

- Some of the other Presidents of the period were Hal Ayers, W6NGV, who worked in San Francisco at Henry Dickow’s *Radio* magazine; Sam C. Van Liew, W6CVP; and A.W. Fonseca, W6NYQ, a ten-meter phone enthusiast and telephone company executive who arranged the Club’s technical presentations.

In 1939, San Francisco hosted a World’s Fair on the newly created Treasure Island in the Bay, the Golden Gate Exposition. It featured the operating amateur radio station W6USA. Club members Bob Hanson, W6MPC and Johnny Werner, W6ONQ, among



others, operated it. W6USA issued a special event QSL card.

Immediately before the War, the San Francisco Radio Club stood out for the quality of its membership (224 at one point) and the success of its organization. In 1941 an article about it appeared in *Amateur Radio Defense* magazine, published in San Francisco by Henry Dickow. It was titled: “Success Secrets of a Radio Club.”<sup>37</sup> It listed eight of them:

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1. Age 21 and over for membership but some open meetings;
2. Meetings regularly at the same restaurant
3. which means a free room in return for members buying dinner;



4. Technical presentations of high quality;
5. Extensive publicity, passing the hat to cover this cost;
6. No discussion of finances during meetings;
7. No dues and no initiation fees;
8. Meetings are first social at dinner, and then technical.

The Club membership in 1941 looks to be predominantly successful businessmen. A few wives, sometimes licensed amateurs, participated in social activities. Minorities do not appear in Club photographs or records of the day, but then it was not until after the Second World War that there was much minority interest in amateur radio, often as a result of war-time training. The Club did not consider itself elitist, although it acknowledged the characterization. To this day, members vote on new members, although the Club does not discriminate in any way. Still, its members from its first decades have



Figure 19 Hallicrafters all band racked wide coverage dream receiver(s) in 1941; from an advertisement (with emendations).

been the cream of the hobby. But only if you were rich as Croesus could you afford what Hallicrafters advertised in 1941 as the Complete Radio Receiving Station, 2730 meters to 1.8 meters AM and FM (that is to say, 100 KHz to 150 MHz); Hallicrafters racked an SX-28,



Figure 20 Abbott TR-4 Transceiver for 2&½ meters, 112 MHz of the type used in WERS in San Francisco (author's collection).

an S-27, and an S-22R together for this advertisement (Fig 19).

The years of radio silence during World War Two were in many ways the Club's finest hour. Although it was necessarily dormant, many of its members served with distinction in the armed forces. San Francisco amateurs also participated in the War Emergency Radio Service (WERS) on 2&½ meters, 112 MHz, which the Club had pioneered. The City of San Francisco provided WERS operators with 35 Abbott TR-4 transceivers for 112 MHz operations (Fig 20). The San Francisco WERS stations used the collective call-sign KGCW, and presumably tactical identifiers. Sixty or more San Francisco and Oakland amateur radio operators participated in WERS.<sup>38</sup>

After victory in the Second World War, the San Francisco Radio Club resumed activity. It held its first post-war meeting in February 1946. Its membership soon exceeded 100. Field Day 1948 features in the movies. War surplus permitted mobile operation in Jeeps; it also soon supplied many high quality and easily converted receivers and transmitters to the amateur ranks.

In 1957, the San Francisco Radio Club adopted the callsign of an early member, John L. Stevens, W6PW as its Club station callsign. An early Club QSL card notes its phonetics: "six peanut whistle."<sup>39</sup> The Club's two-meter repeater has identified itself as W6PW for many years. The two main VHF repeaters in San Francisco are W6PW, known as Poppa, and the Telephone Pioneers' W6TP, known as Mother.

The Club also has operated a multi-band station W6PW in the Veterans Administration hospital, in which it meets monthly. That VA station is now W6SF.

Amateur Radio has always been a social pastime. The Club has hosted a Christmas and Holiday Party every year since 1916. The Club has held meetings, nets and social events for a century. In recent years, this has included an annual "pasta feed," and annual Field Day cookouts. One tradition that fell by the wayside, to the regret of many, was the venue of the 1960s for Club meetings: the Bergermeister Brewery.

Members of the Club have also devoted themselves to continuing public service for decades. This has included:

- Field Day every peacetime year since the 1930s, including one visible light Morse code exchange with the Mt. Diablo Amateur Radio Club (W6CX) on Mt. Diablo in Contra Costa County, some 30 miles distant from the W6PW Field Day site in the Marin headlands. Field Day has provided recent opportunities to introduce young people to the amateur radio hobby (Fig. 21 – 1990s). The Mt. Diablo club and the SFRC have jointly hosted a summer camping trip for many years with field operations.
- Typical of its ongoing public service, putting up the antennas for the amateur radio station at a recreation center for the handicapped in 1967, as noted in *Popular Electronics*.<sup>40</sup>

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- Communications Assistance at the 1984 Democratic National Convention in San Francisco.<sup>41</sup>
- Member-provided Amateur Radio assistance in the 1989 San Francisco Earthquake and to the Red Cross in New York in disaster recovery



Figure 21 1990s Field Day, Ms. Keller at the microphone of W6PW, in the Presidio of San Francisco (KRON-TV image).

after the terrorist enormity of September 11, 2001.<sup>42</sup>

- Support of ARRL ARES and the San Francisco Auxiliary Communications Service (ACS, the California version of the F.C.C.-defined Radio Amateur Civil Emergency Service, RACES) and provision of communications as a public service at many local events such as foot and bike races.

In the 1980s the Club added “amateur” to its legal name (perhaps to avoid confusion with abusive Citizens’ Band practices). The Club has in 2012 reverted to its original name: San Francisco Radio Club. It continues to thrive as an active social and technical society of amateur radio operators. Its website is: <http://www.sfarc.org>.

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A few other clubs and organizations have comparable lineages. Harvard University and the Massachusetts Institute of Technology (MIT) in Massachusetts, and Columbia University in New York, occasionally provided wireless experimentation opportunities to some students in about 1909 and perhaps a year or two earlier. They each have amateur radio clubs to this day claiming these early physics lab experiments as their ancestors. Their callsigns are respectively W1AF for Harvard which was 1YE in 1913 (“Y” for training school and in 1907 Harvard’s “Pierce” experimental station is listed at 5 KW<sup>43</sup>), W1MX, initially 1XM for MIT; and W2AAE, initially 2XM for Columbia. (The X callsign were assigned to experimental stations after 1912). Today’s Radio Club of America derives from young New York area amateur wireless experimenters *circa* 1907 - ’09. It first formalized itself in 1909. The Radio Club of America quickly evolved into the distinguished professional and scientific institution it is today. The Wireless Institute of Australia dates back to March 1910. The Radio Society of Great Britain established itself in 1913, and the American Radio Relay League goes back to 1914. Thus amateur radio nationally and worldwide has enjoyed well over a century of growth and service.

## Endnotes

- 1 See Bartholomew Lee, *Wireless Comes of Age on the West Coast*, 25 *Antique Wireless Association Review* 241 (2012). Most of the pre-1920 detail in this article

- not otherwise cited comes from *Wireless Comes of Age*, and later detail derives largely from sources otherwise cited herein
- 2 DeForest Wireless Telegraph Company, San Francisco Station PH log of 1906, reproduced in *Pacific Radio News*, January 1917 (Vol. 1, No. 1).
  - 3 *San Francisco Chronicle*, December 26, 1909, insert: "Youthful Wireless Operators" now on file at the KRE Museum of the California Historical Radio Society in Berkeley, California. This article reads as if it were prepared for use by various newspapers, with local detail as the fill-in.
  - 4 Jane Morgan, *Electronics in the West*, Palo Alto, 1967, at 22, giving a 1907 date, as do archives preserved by James Maxwell, W6CH, now at the California Historical Radio Society. Ray Newby (EZM/SEW) and "Doc" Herrold appear in *Modern Electrics*, Vol. III, No. 5, August 1910 at 275.
  - 5 Jane Morgan, *supra*, at 23; she attributes the founding of the Club to Henry Dickow.
  - 6 From the Official Program of the Pacific Radio Exposition (San Francisco, 1924). Dickow also designed the WW II U.S. Army intercept station - Two Rock Ranch - in Northern California.
  - 7 Amateur Radio Defense, January 1941, at 43.
  - 8 Official Program Pacific Radio Exposition (1924), looking back at the San Francisco Radio Club.
  - 9 *Pacific Radio News*, January 1917 (Vol. 1, No. 1).
  - 10 Public Law no. 264, An Act To regulate radio communication, approved August 13, 1912, accessible at Thomas H. White's Radio History site <http://earlyradiohistory.us/1912act.htm>; see generally Clinton. B DeSoto, *200 Meters and Down*, ARRL 1936.
  - 11 Photograph Archived and Preserved at the Western Historic Radio Museum, Virginia City, Nevada; This Photograph on the Museum Website is Copyright Henry Rogers, All Rights Reserved, used by permission.
  - 12 The wireless station is preserved at the Western Historic Radio Museum, Virginia City, Nevada; Photograph by and copyright Henry Rogers, All Rights Reserved, used by permission. Sharon and Henry Rogers received the California Historical Radio Society (CHRS) "Doc" Herrold Award for 2001 in connection with their museum. M.H. Dodd wrote to *Modern Electrics* in 1909 from Los Angeles with a long description of his station there and two photographs, all of which were published in *Modern Electrics*, Vol. II, No. 2, May 1909 at 114-15.
  - 13 See generally Eric P. Wenass, Elmer T. Cunningham and the Tube Tangle, 25 *Antique Wireless Association Review* 185 (2012). See also Lee, *Wireless Comes of Age*... [note 1 above] at 268 ff.
  - 14 U.S. Department of Commerce, Bureau of Navigation, Radio Service Bulletin, No. 23, November 1, 1916, at 10; these Bulletins tell the story of early radio's development with considerable detail including prosecutions of amateurs operating illegally; they are accessible at <http://www.fcc.gov/encyclopedia/radio-service-bulletins-1915-1932>, and radio history websites such as Thomas

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- H. White's outstanding site <http://earlyradiohistory.us> (excerpts and link at /RSBannoc.htm) and others such as <http://www.americanradiohistory.com/Service-Bulletin-Guide.htm>.
- 15 *Modern Electrics*, Vol. III, No. 9, December 1910 at 529 published a letter from Stone and a photograph of his Oakland station. A "Y" license, such as Stone's after 1912, issued for technical purposes or to training schools, and experimental stations naturally enough got an "X" license, according to Thomas H. White's Radio History site [www.earlyradiohistory.us](http://www.earlyradiohistory.us) at /024.htm, article titled US Special Land Stations.
  - 16 *The Wireless Age*, Vol. 4, February 1917, at 353.
  - 17 From the 1924 Pacific Radio Show Official Program, supra.
  - 18 Executive Orders of April 6, 1917 (2585) and April 30, 1917 (2605A).
  - 19 The Club's corporate number is 16407, by which its articles of incorporation are still available from the California Secretary of State.
  - 20 Radio Service Bulletin, October 1, 1919, No. 30, at page 7; but formally by Executive Order 3228, February 13, 1920, also published in the Radio Service Bulletin.
  - 21 *Pacific Radio News*, August 1920 Vol. II, No. 1 at page 7.
  - 22 *Pacific Radio News*, *ibid.*
  - 23 Photo of station 6BN and Holliday from John Schneider, *Voices out of the Fog, The History of KFRC...* at [www.bayarearadio.org/](http://www.bayarearadio.org/) (CHRS – Bay Area Radio Museum) at <http://www.bayarearadio.org/schneider/radiol12.shtml>.
  - 24 John Schneider, *Voices out of the Fog, The History of KFRC...* at [www.bayarearadio.org/schneider/kfrc1.shtml](http://www.bayarearadio.org/schneider/kfrc1.shtml) (CHRS – Bay Area Radio Museum).
  - 25 *Pacific Radio News*, November 1920, Vol. II, No. 1 at 1, preceded by two full pages of promotion in the September, 1920 issue, page 120 -21.
  - 26 *Pacific Radio News*, February 1921, at 216.
  - 27 From *Pacific Radio News*, October 1921, at 98.
  - 28 Author's collection.
  - 29 Author's collection.
  - 30 Elma G. Farnsworth, *Distant Vision*, Salt Lake City, 1990 at 195, 203.
  - 31 Radio Act of 1927, Public Law No. 69-632, February 23, 1927, 44 Statutes at Large 1162 and codified 47 USC Chapter 4, provisions since repealed.
  - 32 From the 1924 Pacific Radio Show Official Program, supra.
  - 33 Saved from E-Bay by Paul Merrill, W7IV, and made available to the Club by Ed Silvester, NI6S, and Dave Billeci, WA6UHA. Note. "MU" had been Sydney Fass's early call sign.
  - 34 Drawn for Amateur Radio Defense in 1941 by San Francisco artist Les Funtston, W6QQU. He drew several other published ham radio cartoons.
  - 35 Clinton B. DeSoto, *Calling CQ -- Adventures of Short Wave Radio Operators*, New York, 1941 at 17.
  - 36 *Radio Amateur Call Book* Summer, 1932, Vol. 13, No. 2.; CHRS archives.
  - 37 Amateur Radio Defense, January 1941, at 42.
  - 38 Data and information from *QST* in several wartime issues.
  - 39 Whimsical phonetics were common at the time; the identifier of what is now the California Historical Radio Society
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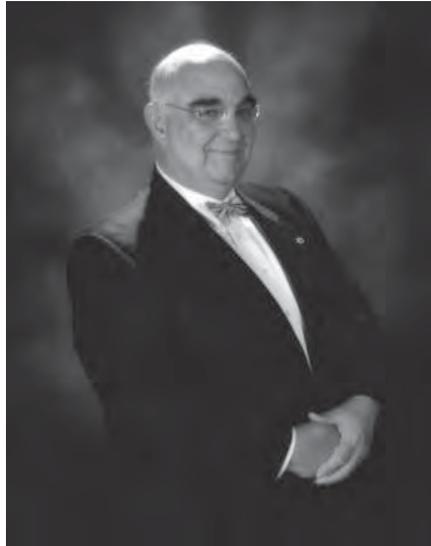
- amateur radio station, W6CF, was [ol'] "chicken feathers."
- 40 Herb S. Brier, Amateur Radio (column), *Popular Electronics*, April 1967, accessible at <http://www.rfcafe.com/references/popular-electronics/world-peace-and-amateur-radio-apr-1967-popular-electronics.htm>.
- 41 ARRL's *QST* noted this public service communications assistance. Club lore recalls considerable controversy about what could appear as an involvement in politics, according to Dave Billeci, WA6UHA.
- 42 See Bartholomew Lee, 9 -11: Amateur Radio in New York, *Popular Communications*, September 2002.
- 43 *U.S. Navy, List of Wireless -Telegraph Stations of the World*, Washington, D.C 1907 at 26-27.

### About the Author

**Bartholomew (Bart) Lee, K6VK, xKV6LEE, WPE2DLT**, is a long time member of AWA and a Fellow of the California Historical Radio Society (CHRS), for whom he serves as General Counsel Emeritus and Archivist. He has enjoyed radio and radio-related activities in many parts of the world, most recently in Israel. Radio technology and history have fascinated him since he made his first crystal set with a razor blade and pencil lead more than 50 years ago. He is especially fond of those sets of which it is said: 'Real Radios Glow in the Dark.' Bart is a published author on legal subjects and most recently on the history of radio. He has written about and lectured on early radio technology, radio intelligence activities ('episodes in the ether wars') from 1901 into the latter 20th Century, wireless telegraphy especially Marconi's early work, wireless developments on the West Coast since 1899, radio ephemera including radio stamps, and radio in emergency and disaster response. Since 1989 he has made some 20 presentations to the AWA conferences on his research interests including short wave radio and the development of television in San Francisco in the 1920s. The AWA presented its Houck Award for documentation to him in 2003 and CHRS made its 1991 'Doc' Herrold Award to him in connection with his work for the Perham Foundation Electronics Museum. In 2001, during disaster recovery operations in New York after the '9/11' terrorist enormity, he served as the Red Cross deputy communications

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lead from September 12 to September 21, (the 'night shift trick chief'). He has served in RACES as the Liaison Officer for the San Francisco Auxiliary Communications System, and as an ARRL ARES Emergency Coordinator. He presently serves as an ARRL Government Liaison and Volunteer Counsel. Bart has been a litigator by trade, prosecuting and defending civil cases in both state and federal court for 40 years. He also had taught Law & Economics for 20 years, including the economic history of telecommunications. He is a graduate of St. John's College (the 'Great Books School') and the University of Chicago Law School. Bart's son Christoffer Lee is also a licensed amateur radio operator and is now also a practicing lawyer. Bart invites correspondence at: [KV6LEE@gmail.com](mailto:KV6LEE@gmail.com).



Bart Lee. Photo by Paula Carmody taken in Indonesia; copyright Bart Lee 2009.