

The Beginnings of a W2SZ History

Originally Drafted by James W. Youngberg, K1NKR, In 1966

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to 1930:

A Propitious Start

How did it start? We can not be sure, but buried in its history are such names as Maxwell, Hertz, and Marconi; Maxim, De Forest, and Armstrong; Hoover, and Green. The foundation of radiocommunication is a progression, many years long, many countries wide, in the spirit of research. There arose no single inspirational genius who caused the whole art to come alive. The Greeks provided the concept of electricity through their interest in the peculiar properties of amber, or elektron as they called it. Michael Faraday's investigations of the interrelation of electricity and magnetism led to the concept of induction. Maxwell's equations, formalized in 1873, enabled Heinrich Hertz to produce waves which were radiated rather than merely induced. By 1896, Guglielmo Marconi had done some not-too-remarkable systems engineering and come up with a useable communications system. The radio game spiraled.

~~Sometime before 1914, a group of wireless enthusiasts met at the Troy, New York, Y.M.C.A. Shortly thereafter, World War One forced the Navy Department to ban amateur activity. We can only conjecture about the activities of the newly-formed wireless club during the war years; no records have turned up.~~

As far as can be determined, the first wireless station in Troy was that of twelve-year-old Wendell W. King, 2QD. Word quickly spread of King's station and, with his assistance, other experimenters formed a group to compare notes and assist each other. About 1911 the Troy Wireless Club was formed.

By 1916 the membership was large enough that a suitable meeting place was needed. The Troy YMCA supplied an unused classroom and members donated equipment. A low-power station was assembled and a small antenna erected on the YMCA roof. Operation continued until World War I forced the government to suspend amateur privileges. The club disbanded in 1917.

Eventually, in November, 1918, Armistice was declared. The military, however, was unwilling to give up its hold on the precious amateur wavelengths.

Concentrated effort on the part of the American Radio Relay League culminated in Representative William S. Green's House Joint Resolution 217. September 26, 1919, the Director of Naval Communication Service announced the removal of restrictions on amateur operation. Amateurs were licensed under the authority of the Bureau of Navigation of the Department of Commerce.

By the end of the decade, the Troy Y.M.C.A. Radio Club was again active and maintained an effective amateur station. The club had a room in the rear left-hand corner of the second floor, just below the dormitory area. Equipment consisted of a homebrew receiver and ^{an} uncovered, one kilowatt rotary gap. When protests grew too loud and conditions became adverse, the gap was muffled. Most activity occurred at night, both because of conditions (Daylight DX was unheard of and a spark transmitter was an incredibly inefficient beast.) and because the blinking lights and noise from the gap were less troublesome after the dormitory occupants were asleep.

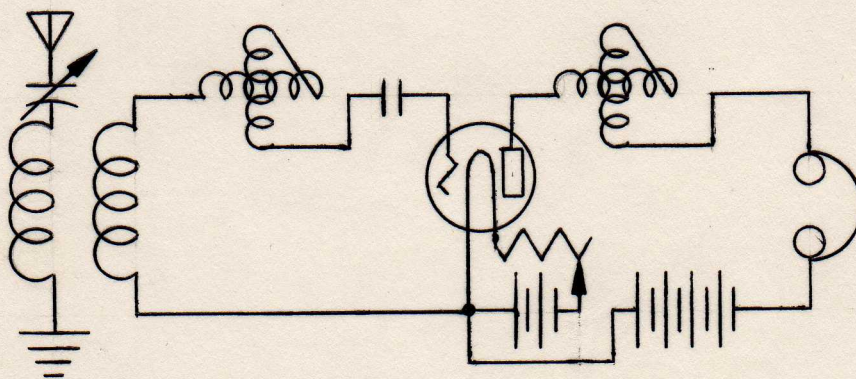
In fifty nights of operation during 1921, over three hundred stations were copied and one hundred were contacted. The club's best DX: 9JN in Ames, Iowa. A new group of enthusiasts had apparently encouraged activity. E.M. Williams, L.S. Inskip, J.A. Lynd, and H.D. Harris, all students at Rensselaer Polytechnic I

Institute, operated the station every Tuesday, Wednesday, Thursday, and Friday night. Inskip's call, 2SZ, was used. The combination of interest and technical competence brought to the club by the R.P.I. students was evidenced in the rather state-of-the-art station facilities.

The antenna is a 4-wire T, average height 115 ft., 97 ft. long, stretched between two masts two hundred feet apart. The two tin roofs marked X in the photo are made to serve duty as grounds, together with the water supply, drainage system, and steam piping of the building. The station being on the third floor, a short ground lead to earth was impossible.

The transmitter has a 1 KW Thordarson and a 1 KW Blitzen transformer, either of which may be used, a glass plate in oil condenser, 8-point HyRad gap, 2 inch copper oscillation transformer, and Clapp-Eastham antenna switch. ... With six inch coupling the antenna current is 4.5 amperes on a thermo-ammeter with a decrement of .09 on a Kolster decremeter.

The receiving apparatus is home-made and consists of a short wave regenerator, audio-tron detector, and Baldwin phones. No amplifier is used at present.¹



1. "2SZ, Troy, N.Y.," QST, April, 1921, p. 40.

The RPI membership of the YMCA club graduated during 1922 and 1923. One of the members in particular, H.D. Harris, a 1923 grad, left to work for General Electric. During 1923-24, a slump in activity and a need for extra space on the part of the YMCA forced the club to disband. Inskip retained the call 2SZ and brought it up the hill to the RPI campus where he was an instructor.

During the slump in activity, Inskip put WHAZ on the 200 meter amateur band. The new station, a gift of George Washington Roebling, had been installed in 1922 on the third floor of the Sage Laboratory. The new member of the Radio Rensselaer family did triple duty: as the Institute-sponsored broadcast station, as 200M facilities for 2SZ, and as a participating station in a two-way DX BCB QSO with a station in Calgary, Alberta.

In September, 1924, Harris returned to the Institute to teach, replacing Inskip on the Electrical Engineering Department staff. He, as junior ^{member} ~~professor~~, and Harry R. Mimno, a senior member of the EE staff, reorganized the club on campus with equipment inherited from the YMCA station.

A letter from Mimno to the Supervisor of Radio (then a part of the Department of Commerce's Navigation

Service), Prompted the following reply:

With reference to your desire to have amateur station license, call letters 2SZ transferred from the name of L.S. Inskip to the Rensselaer Polytechnic Institute Radio Club, this can be done, but this office does not know of anything that would be accomplished by this transfer, except to advertise the fact that it is a club station. There would not be any additional privileges or benefits attached to the above station which would not be in effect under the regular license in Mr. Inskip's name.

... If you decide that a license for the club station is necessary, this office would like to see Mr. Inskip remain in charge, as in the past.

The Inskip license remained in effect until September 28, 1925.

A station was established on the third floor of the Sage Laboratory, next to WHAZ. Operations resumed and the message service (traffic handling was one of the prime activities of early amateur operations) picked up. By the end of 1924, 29 messages had been sent. Since the log starts on December 12, 1924, this traffic tabulation probably represents only a month's work.

Technical progress and an active, dedicated membership were the keys to a successful club. January 10, 1925, 8CGD commented that the output of our rig was about 160 meters. A few days later, after a QSO with 9DIG, a logging comment noted that numerous

6's and 7's were "very loud on loudspeaker some were boisterous. Rec'd on 75-80 meters." Apparently our new tube transmitter was a multi-band job! The club soon became active in looking for DX. Transatlantics were not uncommon. Daylight stateside DX was normal, but, as was still the custom, there was not too much daytime activity.

A peculiarity in the station's signal bears elaboration at this point. Since the first operation of 2SZ back at the YMCA, other stations had commented on our note. All CW signals were modulated: spark signals because of the action of the rotary gap, tube oscillator signals because no filtering was used in the power supply. The reason 2SZ's signal had a peculiar note was that the station was run on 40 cycle power.

During the teens and early 1920's (to approx. 1927) local power was 40 cycle. It seems that Westinghouse was the first major company to exploit AC and standardized on three phase, 60 cycle power. General Electric, which supplied the Capital District, couldn't see using the standard set by their competitor and provided the district with two phase, 40 cycle power. People moving into the area who had 60 cycle equipment, such as battery chargers, provided a

booming business for the early radio and electric companies. When the changeover to 60 cycles came, GE provided very equitable allowances for the existing 40 cycle equipment in the area.

Just after 11:00 pm on January 30, 1925, Bill Poole, 2ALZ, and T.C. Bassett, ex- 1AYT, made what seems to be the club's first DX contact. The contact was memorable in more than one way: the station on the other end was g5SZ. The contact sparked a strong interest in DX operation and by the seventh of February 2SZ had added another Britisher, g2NB, and a Mexican, m1X, to its brag list. Spring semester, 1925, was DX season. The club was active in looking for foreign stations, all calls heard were logged, and successful transatlantics were not uncommon.

In mid-March Bill Poole copied g2SZ working 1MK. What possibilities! A three-way QSO between RPI, the ARRL, and the station at the Mill Hill School in London that had recently established the world's DX record: London to New Zeland! Disappointment. Half an hour of calling brought about no contact. At midnight Poole entered a dejected "Gud nite" in the log and went home, resolving to work g2SZ.

As theyear progressed, the club continued to pile up operating achievements. The traffic count rose. Transcontinentals on 40 meters were not uncommon. ~~Australia and France~~ ^{was} ~~were~~ added to the brag list. Play-by-plays of athletic events were exchanged with 1AWW, Springfield College, 8CAU, the University of Cincinnati, 8SZ, St. Lawrence University, 8UF, Clarkson College, 8ZU, Cornell University, and 8CYI, the University of Rochester. In spite of the many achievements, however, one thought remained in the minds of the operators, that much sought-after contact with g2SZ. Many attempts were made, but all failed.

On December 6, at 3:00 am, the operator at the key, W.L. Ellsworth, heard the elusive station. Ellsworth called. No luck. He called again. Still no reply. Another failure at 4:25. Finally, at 4:40, g2SZ answered. Ellsworth logged:

4⁴⁰:5¹⁵ G2SZ R-5 card sent sent message 69
 g2SZ says: "Hve wanted QSO u for years! Hrd
 u on 90 meters last year called many times
 =vy psd to get QSO=How is Rens Poly?=
 At 5¹⁵am g2SZ signs off: "QSS now call me
 at 2:45pm EST"

The vigil had paid off.

For almost three months our only QSO's were with stateside stations. However, in mid-February, 1926, a contact with Mississippi A&M College proved to the members that we still could get out. The operator at 5YD noted that he was able to read our signals even when our transmitting antenna was disconnected. The signals were more steady, he added, when the antenna was connected. In spite of the encouragement, no DX was to appear in the log until the end of the year.

October first, Palmer and Rowe, 2AHK and 2CTH respectively, started an 'SZ tradition. At half-past ten that night, the "all-nighter" was born. True, most activity was at night, but the two had no intention of making this the usual night of operating and noted so in the log. Numerous stateside stations were contacted and half-way through the night the 1926 DX season began: z3XB was contacted. Could the club make up lost DX time fast enough to finish the year with a respectable total? The answer was "yes." By early December, two additional stations were contacted: hu1GD in Honolulu and k4UAB in Oberbayern, Germany. In addition, KGDL, a maritime mobile 500 miles Southeast of Panama en route to the Far East, helped boost the 1926 DX total to an impressive four.

At first glance, the remaining years of the decade were rather unfruitful for the club. DX'ing hit a major slump; no new countries were worked. (Except Canada, and there is some controversy regarding just when the first Canadian contact was made.) The Message Service, although it had gained momentum, did not occupy a large amount of the on-the-air time. Yet these three years were to prove important.

The year 1927 was a crucial one in amateur history from the legislative standpoint. The entire domestic radio picture had been shifted around with the acceptance on February 23rd of the Radio Act of 1927, ending the fifteen-year sway of the old 1912 Act. The 1927 law provided for the creation of a Federal Radio Commission, in whose hands would be the control of all radio matters.²

One of the results of the entire period of legislation was the addition of capital letter prefixes to amateur callsigns. As of February first, 1927, every amateur station in the world assumed a two-letter prefix for his station call, the first letter of which designated his continent, the second letter, his country. For example, Australian 3ML who had

2. 200 Meters and Down, Clinton B. DeSoto, ARRL, West Hartford, Conn., 1936, p 115.

been signing a3ML or just 3ML (the a was not official.) now signed OA3ML; similarly, French 8FG (or f8FG) signed EF8FG and United States 2SZ signed NU2SZ. Early in 1928, a new system of prefixing was initiated. The two letter standardization was dropped and prefixes such as VE, G, F, W, and ZL were adopted. The call W2SZ was noted first on the station license dated November 28, 1929, because the previous year's license (May 10, 1928) predated the new procedure.

Sometime in 1927-28 the attic of the Sage Lab was finished - floor, etc. - and, since most of WHAZ's programming was live, it was decided that the club should move its operations to the attic. The decision was a beneficial one on many counts. Audio QRM was lessened. WHAZ gained full control of both rooms. The club obtained a room of its own and, in the process, moved a few precious feet closer to its antenna. In fact, the process of moving even explains the slack in activity during the latter years of the decade.

We had come a long way in our first few years as an organization. From a group of young boys to a fraternity of college men. From the inefficiency of "King Spark" to the round-the-world-capability of tuned oscillators. We entered the thirties with a new call and a new location, each of which was to last far beyond the next two decades.

Note the editorial review and comments by H.D. Harris on the following pages.



Inter-Departmental Memorandum

To

Date

12/14/66

From

RC 3^d par. page 4.

I believe that when the radio club officially started operations on the hill, the transmitters were all vacuum tube operation. Also, I arrived as a very junior instructor. Re the pre RPO operation at the Y.M.C.A. E.M. Williams + L.S. Inskip are still living but not in this area. I do not know about Lynd. However another member, Bill DeBois is still an active ham locally and is listed in the Troy Telephone Book. You might want to contact him if you have not already.

/s/ [Signature]

The rest of the story is a good account
and ~~is~~ is accurate to the best of
my recollection.

H. D. Harris

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