

THE FIRST CENTURY

WIRELESS AND AMATEUR RADIO HISTORY

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The Historian's View: The Early Logbooks of Hiram Percy Maxim *A Glimpse Into the Early Era of Wireless in the United States*

Editor's Note: This article consists of the author's own research in addition to excerpts from material in "The ARRL Heritage Museum - Archival Collection," which he prepared as Historian/Archivist for the ARRL Board of Directors Historical Committee, used with permission of the ARRL.

Under the auspices of the Historical Committee, appointed by the ARRL Board of Directors, the volunteer Historian and Archivist at headquarters has been cataloging the previously unrecorded assemblage of paper material contained in the League files. This is the material that was not catalogued in the earlier effort done in the Microsoft Word program and which occupies more than 40 file

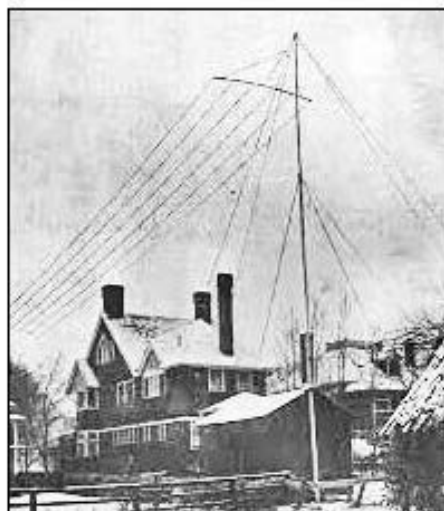
drawers. To continue the project, a new format was developed utilizing the Microsoft Access database program for ease of "finding." Over a two year period, 24 file drawers of specifically recorded material, and 145 boxes of general and executive correspondence have been catalogued, and stored in archival containers.

In the process of cataloging this material, several discoveries of documents of historical import have been made. These documents had been preserved but not previously recorded.

The following are comments on one of these finds—the *logbooks of 1ZM and 1AW*. These logs are contained in two ordinary ruled school notebooks. The entries are mostly in ink and are remarkably clear after almost 100 years of storage—only a few pages are illegible.

The first book, labeled, "French Notebook, H H Maxim", with the first page entered as "Log of 1ZM," covers the period May 14, 1919 to March 18, 1920. The second book, labeled "Log No. 2, Radio Station 1AW," covers the entry periods March 2, 1920 to December 16, 1921; September 26 to September 29, 1922; and at the end contains a number of fragmentary entries along with typewritten attachments and insertions.

These post World War I logs are likely not the very first written logs of ARRL founder Hiram Percy Maxim and his son Hiram Hamilton Maxim. They began operating in 1911 as SNY and SNW and in 1913 became officially licensed as 1WH and 1ZH. Their activity continued through the



Maxim residence with later antenna.



Maxim spark transmitter—"Old Betsy."

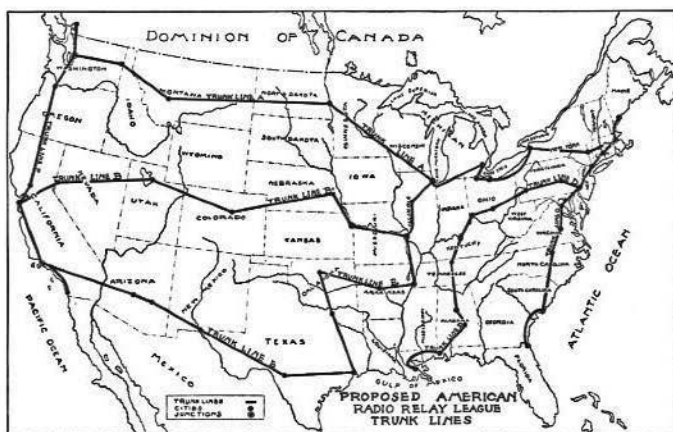
time of the founding of ARRL in 1914 and up to the April 1917 government-imposed World War I amateur radio silence. After the war, the station call IAW was issued to the senior Maxim.

From its inception, the station was a major relay link in the National Traffic System (NTS), which was the founding principle of the ARRL. During these early years, the station not only handled traffic but also originated and transmitted bulletins and announcements addressed *QST*, "to all radio amateurs."

The United States government ban on amateur radio operations was not lifted until November 1919. In anticipation of an imminent return to the air, the first entries

in the log book, from May through August 1919, are concerned with copying code transmissions of governmental and permitted commercial stations, along with notations regarding preparation of Maxim's station. Finally, on November 24, the first contacts were made with 1FD and 2ZS and duly entered. Subsequent entries record the re-emergence of the NTS, number of messages handled, band conditions, and the maintenance and performance of the station. Individual stations heard and worked were recorded and later transcribed to appear in *QST*.

Throughout, the names and signatures of visitors appear. Besides Hiram Percy Maxim, notable and frequent operators were ARRL functionaries General Manager K.B. Warner, Communications Manager F.D. Schnell, Secretary C.D. Tuska and two of the six original Directors, D.L. Moore and R.S. Kruse. This crew engaged in handling traffic and broadcasting announcements of events of interest to the organization's growing member ranks. Each operator either signed or initialed his individual logbook entries. In addition to those that operated, the station hosted observing visitors too numerous to mention. Accordingly, the book contains the signatures of several noteworthy early wireless dignitaries.



National Traffic System preliminary concept (from February 1916 *QST*).

A typical and significant extract from the first logbook, as entered in penciled script, follows below.

This extract records the receipt of the first message relayed across the North American continent after the end of the war. The 10:30 (p.m.) entry concerns a message to K.B. Warner, ARRL General

Manager from R.H.G. Matthews, ARRL Vice President.

Many log entries complain of noisy/static conditions (QRN) and fading signals (QSS).¹ In an effort to understand the nature and cause of fading, the ARRL and the United States Bureau of Standards undertook a cooperative program of study. A

Dec. 3 On at eleven P.M. Heard usual run of 2's, 8's and 3's. Called ICM, IAN, IAU repeatedly for msg relay but no answer. Unable to get msg east of here so far. Worked 8AD 8JZ Off at 12.00

Dec. 4. Worked 8DA and took first trans-continental relay since war. Was from 6EA Los Angeles. Read -
to Hiram Percy Maxim^{Hartford, Conn.}, via 6EA, 6LF, 9BT 8JZ, 8DA from Los Angeles Calif
Regards from 6EA sig Seepred.
Worked 1AP - Manchester - (used entire word each time. Called IAN, IAU, IAS, ICM but no answer. Impossible to get east.
10.30 to 11 worked 9ZIN. Took msg to K.B.W from ^{R.H.G.M.} ~~W.H.G.M.~~ reading Pse hold ~~data~~ data until check curve will write back
^{R.H.G.M.}

Log extract recording receipt of the first message relayed across the continent after the end of World War I.

total of 243 receiving stations were enlisted to record the simultaneous transmissions of 17 sending stations including W1AW. The logs indicate that W1AW, with Hiram Percy Maxim operating, made the first transmission for this test on June 1, 1920, and that the station was a consistent participant in the program until its conclusion in the spring of 1921. Although the resultant data was inconclusive, it did provide insights into short wave propagation.²

The 1920s roared in with a rush of interest in radiophone. Broadcasters appeared and competed with both amateurs and commercials for wavelength. This situation was relieved in 1922 when the United States Department of Commerce recognized amateurs as a distinct entity and imposed precise frequency allocations, separating the services. In March 1920, Tuska installed gear and introduced W1AW to the phone mode. The station sporadically utilized this mode to send announcements but rarely to make contacts.

Two major operating events occupied the station's staff during 1921. The first of these consisted of transcontinental tests which were held between the nights of January 14-15, and January 17-18. The objective of these tests was to send a message from one coast of the United States to the other and receive a responding answering message in the least amount of time. The standing record was one hour and 20 minutes for an East Coast to West Coast round trip. Both the efficiency of the National Traffic System (NTS) and the competence of its relay operators were challenged in this event. After several other round trip relays had been successfully completed, a new record was established on the last night of the event, just before morning dawned on the East Coast. 1AW (Hartford) sent a message via 9ZN (Chicago) and 5ZA (Roswell, New Mexico) which was received by 6JD in San Francisco, which dispatched a response that traveled back over the same route with a total elapsed round trip time of six and a half minutes. The back of the logbook has a number of typewritten pages stapled in, comprising a draft report

of the event, which later appeared in *QST*.³

The second 1921 operating event was the first transatlantic test, which was run during early February. The objective was for pre-qualified stations in the United States to be heard by British amateurs. On February 5-6, F.S. Schnell recorded in the log "Ran off transatlantic on time—not much hope." This signified that 1AW had transmitted the signal that had been assigned to the station, on 200 meters at the precisely designated time. This carefully orchestrated event was a failure—not one of the 25 American stations was heard by the 250 or so listening Englishmen. But, this was not to be the last thrust in this effort.⁴ The station was inactive during early August as the staff attended the First ARRL National Convention in Chicago. At this event, the Board of Directors met and considered actions to reverse the failure of the first transatlantic tests. The Board decided to conduct a second test in early December with an official listener from the United States posted in Britain. The log records the stations heard in the qualification preliminaries in No-

QST
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BY THE AMERICAN RADIO RELAY LEAGUE, INC.

TRANSATLANTIC TESTS SUCCEED!
The Atlantic Ocean has been bridged by the signals of American amateur stations—not one but dozens of them! Paul F. Godley sent overseas with American equipment by the ARRL set up his station at Ardrossan, Scotland, and there copied the signals of the following stations:

SPARK	18KA Glenbrook, Conn.
1ARY Burlington, Vt.	18KM Cambridge, Mass.
1AAW Illegal Station, not yet located	1YK Worcester, Mass.
18BT Atlantic, Mass.	2EH Riverhead, N.Y.
2BK Yonkers, N.Y.	2FD New York City
2DN Yonkers, N.Y.	2FP Brooklyn, N.Y.
CAN. 3BP Newmarket, Ont.	2ARY Brooklyn, N.Y.
C.W.	2AJW Babylon, N.Y.
1RU West Hartford, Conn.	2BML Riverhead, N.Y.
1RZ Ridgefield Conn.	3DH Princeton, N.J.
1RY Burlington, Vt.	Atlantic City, N.J.
18U Greenwich, Conn.	3FH Cleveland, Ohio
18CG Atlantic, Mass.	BSU Washington, Pa.
18GT Hartford, Conn.	8ACF Pittsburgh, Pa.
	8KV

This accomplishment is epoch-making and opens the door to unguessed possibilities in private radio communication. We will publish the COMPLETE STORY IN OUR NEXT ISSUE—DON'T MISS IT!

January 1922 20 Cents

January 1922 *QST* front cover.



ARRL Hartford offices.

ember, the actual tests in December, and Schnell engaging the station in the “free for all” finale on December 16-17. The event was a major success, but not for 1AW, which was not among the 30 American and Canadian stations heard in Great Britain. This event also settled a controversy—spark was dethroned and CW was crowned king.

Hiram Percy Maxim’s May 13 log entry states “No regular log kept up to here—station not operated regularly because of pressure of other affairs.” The discipline of the log deteriorates from this point onward

with fragmentary and sometimes unintelligible records. The operations of the station at the Maxim home were gradually assumed by expanding operations from the League’s confined Hartford offices, utilizing the call 1MK.

In 1928, these functions were fully assumed by a modern station constructed at the newly created suburban airport, Brainard Field. The most advanced Amateur Radio station of its time, W1MK became the loud voice of the League. This

station was destroyed by a flood in 1936, and was replaced in 1938 with the ultimate Amateur Radio station, the renowned W1AW – The Hiram Percy Maxim Memorial Station in Newington, Connecticut.

Overall, the logs provide insights into the operations of a significant wireless era institution. They fill in a great deal about the nature of this eventful period and provoke questions of detail and background that suggest matters for further research.

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W1MK layout.



Early W1AW arrangement.

REFERENCES

1. Later changed to the current Q signal QSB.
2. “First Report of the Fading Tests,” ARRL, *QST* August, 1923 pp 29ff, and other articles accessible from the online *QST* archives.
3. Warner, K.B. “The Story of the Transcons,” ARRL, *QST* March, 1921, pp5ff.
4. Marinaro, M.W. “The Transatlantic Tests,” ARRL, *QST* May, 2014, pp72ff.