

# RADIO AGE

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## Wireless on the Great Lakes

RECOLLECTIONS BY LEVON R. McDONALD

**Editor's Introduction:** The material in this article was taken from articles in the Spring 1961 and November 1961 issues of *Keeping in Touch*, the newsletter of the "Dynamic City" (Detroit) chapter of the Morse Telegraph Club. Thanks to Ludwell Sibley for providing this material! The crudely typed newsletter distributed to club members included a "recollections" column written by old-timers. Levon McDonald was the club historian, and produced the recollections reprinted below. In reproducing this material minor changes in punctuation and style have been made to improve readability. (Comments in the article attributed to "editor" are from the *Keeping in Touch* editor, not the *Radio Age* editor.)

Today all hams use the Continental or International Code. As noted in the article, the original American Morse Code used by some land-line telegraphers was slightly different.

In the first two decades of the 20<sup>th</sup> century, telegraphers who had worked for Western Union or the railroads sometimes took jobs at land-based wireless stations or as wireless operators aboard ships. A small number of companies established wireless stations on

the Great Lakes, e.g., the Clark Wireless Telegraph Company and the United Wireless Telegraph Company, and a number of shipping companies installed radio equipment on their ships, including the railroad car ferries noted in this article that crossed Lake Michigan often. Relatively little has been written about early wireless on the Great Lakes. Most wireless

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The Clark wireless station at Ashtabula, Ohio

historians have concentrated on trans-Atlantic wireless (Marconi, Fessenden, Telefunken, Homag, etc.) Thorn Mayes' *Wireless Communication in the United States*, published in 1989 by the New England Wireless and Steam Museum, is one of the few books that includes information about wireless on the Great Lakes.

## Recollections by Levon R. McDonald

In many ways the old wireless operator was "just another brass pounder." But to the captain of the ship he was also sometimes known as ship's electrician. And on quite a few vessels he was known as a deck swabber. It was considered uneconomical to keep a man on board just to send a few messages. In fact the ship probably wouldn't have an operator at all were it not for the "Ship Act," that "radical" piece of legislation fathered by the Senior Senator Robert LaFollette, requiring that ships of certain tonnage and/or carrying passengers must have a licensed radio operator man aboard.

Wireless operation—later known as radio and today as electronics—was full of romance in the old days. Possibly as much so as Morse, although I doubt if many purely dyed in the wool wireless operators would see anything romantic about just pounding an ordinary land wire key for a living. Only those in each tribe will know what I am talking about.

Wireless operating more often than not meant going to sea, sometimes at a tender age. Any person, telegrapher or otherwise, who has made his living on the oceans of the world will not find it devoid of excitement and adventure—especially the very young.

To obtain this magnificent job it was first necessary to obtain a radio telegraph license, second class. After a year of successful operating, one became eligible for first class, provided he had reached the age of 21. In the old days they also had a radio telegraph extra first class license, obtained after still more experience and a Federal examination. The latter is no longer issued.

Originally, that is at the very beginning of practical wireless, no license was needed and operators were recruited from the telegraph companies and used American Morse. The fiasco in connection with sinking of the Titanic and the Radio Act of 1912

turned the tide in favor of International—also called "Continental" code. This actually was a good thing, especially for copying through heavy static. The Morse-spaced letters like C, O, R, and Y gave some difficulty. Also it meant that ships of all nations could copy each other.

To obtain a license was not easy, nor is it easy today. It required many, many hours of study of electricity and difficult circuit diagrams had to be memorized complete to the last detail.

As radio art advanced, more and more operators were recruited from the ranks of amateurs, who often could pass the technical phases of Government examinations easier than some of Morse operators, but they did have a problem with the code, comparatively speaking. The amateurs had the advantage of having built their own equipment. In fact, they often invented new equipment superior to the commercial type available. It would be difficult to find a more ingenious group of people than the early radio amateurs. The literature is full of examples of their accomplishments. And, it should be noted that most commercial operators had a ham station at home where experiments could be made—not possible in the commercial stations.

There have probably been as many different kinds of operating jobs in radio telegraph as in Morse. Probably the most important was and still is the ship-to-shore and ship-to-ship telegraph. The development of marine telegraphy was unquestionably a great boon to humanity. Ships might still be sunk at sea,  
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but not lost without a trace. Most times the passengers and crew were rescued. Also, it gave the ship owners tighter control and supervision over their properties and the captain was seldom without advice from the big boss. Surprisingly, this was resented by some captains—it lessened their authority and this may have been the reason why many of the “Sparks,” as they were called, had to wash down the decks. Later many reforms took place and the radio operator became one of the ship’s officers and ate in the officers’ mess and did a better job of attending to his duties as a link between the ship and the rest of the world.

(Editor’s note: Hundreds of radio officers are organized under C.T.U. [Commercial Telegraphers Union] today and receive salaries ranging from \$600 upward, plus fringe benefits.)

Standard wages for wireless operators on the Great Lakes was \$40 a month in 1919 including room and board. I have no figures on ocean-going vessels of that period. Probably the wages were not much higher. Ann Arbor railroad ferries with headquarters and land station at Frankfort, Mich., paid \$125 a month. Besides the ship stations, they also maintained land stations at Manistique [Michigan] and Manitowoc [Wisconsin]. The reason for the higher wages was that the radio man also served as purser. The C&O Railroad (then the Marquette Railroad) also had car ferries radio stations and I believe their wages were similar. The word around the Lakes was that these were the best jobs.

Early ship operators were not particularly noted for fast code. One reason was inefficient equipment. Breaking 110 volts at several amperes with a heavy telegraph key is not conducive of fast sending. Also the receiving operator used a crystal detector and headphones without amplification. It was unlawful to use vacuum tubes, even after they became available because of patent rights. Radio licenses could be revoked for violation of this rule. [*It was not unlawful to use vacuum tubes, the concern at the time was purchasing tubes from companies that were in violation of patent rights. - BCB*] The marvel today is that communication was possible at any speed. Repeating a word more than once was common practice. In the early ‘20s spark telegraphy gave way to vacuum tube CW transmitters and tubes were allowed in receivers and things were much better for the operators, including wages, and greater transmission and receiving speed was possible.

Another operating job was known as “point to point.” This was a job where any good commercial Morse operator would feel at home—in fact many did. This was a fast message service—putting a premium on how many messages you could handle in a given time, although I do not recall hearing of “bonuses” being paid. But in speed and efficient operating it was the equivalent of a good fast Morse wire. In the 1930s the code was often sent from perforated tape and recorded on ink slips at speeds of 200 w.p.m. or more. The receiving operator copied visually from the wavy line on the tape and 60 w.p.m. was considered an average speed for transcribing onto the message form.

Many of the circuits were connected to overseas stations, but some were used domestically. For instance, the Inter-city Radio Co. operated from the Book-Cadillac Hotel in Detroit with Cleveland and other cities. There were loops from the hotel to business offices and the messages were sent direct onto the radio circuit without relaying. In the ‘30s RCA had a point-to-point service from Detroit to New York with the transmitter on the Marquette Building and the receiving station in the lobby of the Western Union on the Shelby Street side. After World War II the government ordered domestic point-to-point discontinued because the wire service was adequate and the ether was getting too cluttered up with too many stations.

Still another radio telegraph job was the police department’s zone and inter-zone radio telegraph circuits, the latter operating nation-wide. Police bulletins covering stolen cars and wanted criminals were transmitted and all sorts of police messages handled. These men were very fine operators, often working at high speed. I say “was” because police Teletype probably has taken over in most cases.

The early wireless operator was a man of many parts. As with Morse, many never had much formal schooling, but due to the technical nature of his vocation, he was forced to educate himself, and as the science became more complex he tried to keep up with it. He had the great advantage of much leisure time standing his watch on a ship and some of the ambitious ones spent their time studying and improving themselves. One friend of mine, Captain Mantell of the old D. & C. Navigation Co., started as an operator. Another, a Mr. Kirk, started as a radio operator on a Danish ship and held licenses from the English, Canadian, and finally, the U. S. govern-

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ments. He studied navigation in his spare time, and the last time I saw him during World War II, he was chief chemist for a company in Iowa which makes hundreds of products from corn stalks. He had studied chemistry in his spare time after he became a ship's captain.

It was only natural that many operators gravitated into the broadcast engineering field. It was very natural, because in the '20s a radio telegraph license was required to adjust broadcast station equipment. Later a radiotelephone license was issued, but the original required license was radio telegraph. Radio marine operating was an ideal training ground for the early broadcast technicians and engineers, and it gave the men a chance to live at home and the pay was somewhat better than ship operating.

Before closing I should mention the hotel wireless stations. Very shortly after wireless communication became practical, some of the leading hotels put in their own radio telegraph stations to handle messages and reservations for guests. As I recall most of these operators were American Morse operators and American Morse was used. I do not remember the names of the hotels using the service but there was at least one in Detroit and one in Kalamazoo and no doubt in other cities. I do remember that when I arrived in Kalamazoo May 1, 1920, to relieve Jimmy Thorne at the A. P., he pointed out a big antenna atop the leading hotel and told me that it had been used for the hotel radio telegraph station.

From the above account one might be led to believe that your historian had spent many happy hours on the briny deep. It is with regret that I must set the record straight. I have operated amateur radio stations since 1914 and got my first ham license in 1922, obtained my radio telegraph 2nd and radio telephone first in the early '30s. However, my actual seagoing experience was limited to a few excursion trips on the lakes where I was the operator on duty, mostly under Captain Mantell of the City of Cleveland III. I also worked a few tricks at WFK at Frankfort land station under Ferris McKesson of the Ann Arbor car ferries. I also worked in a few broadcast stations in my spare time. I still hold a valid amateur extra first class, radio telegraph 2nd, and radio telephone first class



The Clark wireless station at Buffalo, N.Y. (About 1910). The original call was CB. Later United Wireless owned the station, and eventually American Marconi took over this and other United Wireless stations.

license. I did spend many hours in the radio shacks aboard ship from 1919 on, however, often spending an entire trip with the radio operator.

Most of the early ship operators still living are operating amateur stations today and they have many lively stories to tell. You will find quite a few still employed, some of them working on advanced design projects.

#### **(Editors note:)**

It was your editor's privilege to have been working second trick at Frankfort with Hank Workman on first trick and Sam Potter on third trick in 1911 when the wireless was installed there and on the car ferries. We were the railroad operators but doubled up and manned the new wireless station (VO at that time) using the old Morse Code. There were three ferries, manned by Claude Caldwell on the No. 3, Jack Smith on the No. 4, and Tommy Arnold on the No. 5. We were all paid \$50 per month, but the lads on the boats had their room and board free. They also took the purser's job away from the Captain so he could have more time to loaf. We land operators adjusted our crystal sets on the hour and half-hour to catch any reports the boats might have for us. Your editor later spent a few months on the No. 4 under Capt. Larsen, and treasures a wealth of pleasant memories and interesting tales of life as it was lived fifty years ago in Frankfort, the most beautiful little village in Michigan. ■