

## **MARITIME NET CHRONOLOGY**

by Bill Gillis, VE1WG

### **Introduction**

The *Maritime Net* is a regional Amateur Radio voice net meeting daily at 1900L on 3.750 MHz. It broadcasts announcements of general interest, facilitates off-frequency contacts and relays traffic by voice and CW between stations in the Maritime provinces and adjacent regions. Not to be confused with maritime nets related to marine communication, the *Maritime Net*, in the best tradition of Amateur Radio, has a long history of exceptional performance. This chronology is presented in response to a number of queries directed to the writer requesting information on the exact startup date of the *Maritime Net*.

The delay in restoring high frequency bands to Amateur Radio following World War II, technical limitations of the period, and the brief existence of earlier voice nets all combined to influence the concept and beginning session of the *Maritime Net*. Just pinpointing the startup date would overlook these factors and fail to recognize the foresight and determination of those who launched the Maritime Net and ensured its continuity over many years.

The writer received authorization for station license, VE1WG, in 1946 and the events described are based on log entries, personal notes and recollections of the period. Reports in QST, LCARC Bulletins and exchange of historical transcripts with the late Burns Getchell, VE1CL, confirm the events as described.

### **Lifting of Wartime Restrictions**

Although World War II ended in August 1945, over three months elapsed before any easing of wartime restrictions on Amateur Radio was implemented. On-air Amateur activity had been prohibited for the duration of the war and Amateur bands were assigned to the military. The Canadian Department of Transport and the US Federal Communications Commission simultaneously announced at the end of October that a partial lifting of restrictions permitting Amateur Radio operation on the 10, 6 and 2-meter bands would take effect at 0400AST, November 15, 1945. The former 2.5-meter band was shifted from 112-115.5 to 155 to 144-148 MHz.

It wasn't until the following year on April 1, 1946 that postwar resumption of Amateur on-air activity on the 80-meter band was permitted when 3.625 - 4.0 MHz. was released by the military with the lower portion to 3.5 MHz. returned to Amateur Radio in May 1946. Restoration of other bands to Amateur Radio progressively followed.

### **Radio Amateurs and the War Effort**

There were approximately four thousand Radio Amateurs licensed in Canada at the beginning of WWII in September 1939. Until August 1945 many served in various capacities contributing to the war effort. In announcing the first step in postwar restoration of Amateur Radio bands, Minister of Reconstruction, Hon. C. D. Howe, paid tribute to the wartime service rendered by Radio Amateurs.

Many men and women who returned from wartime service with newly acquired technical and operating skills in radio became Radio Amateurs and the postwar growth of Amateur Radio has continued ever since. Coincident with the above announcement, Minister Howe stated that every effort would be made to quickly restore the 80, 40 and 20-meter bands to Amateur use.

### **New Amateur Radio Allocations**

In March 1946 a new band, 11 meters, 27.185 to 27.455 MHz., was assigned to Amateur Radio use. In later years it was reassigned to a new service designated "GRS," more popularly termed, "CB." Effective May 1, 1952 another new Amateur band, 15 meters, 21.0-21.450 MHz. was allocated coincident with a loss of 50 kHz. from the upper end of the 20-meter band.

### **Technical Limitations of the Period**

Most Amateur Radio stations in the mid to late 1940s used a home-built transmitter with power output in the 100 watt range combined with a manufactured HF receiver and a switched antenna through a relay controlled by the transmit/receive switch. Another relay desensitized the receiver when transmitting by removing DC plate voltage to the RF/IF stages. Plug-in or switched coils for each band were used in tuned stages of the transmitter. Variable frequency oscillators with adequate stability were not generally available at affordable prices and digital readout was an unknown technology.

The common method of frequency control used crystal-controlled oscillators with crystals cut to a specified frequency. Unless one could afford a collection of crystals, which were expensive, the choice of transmit frequencies was limited. A few Radio Amateurs ground their own crystals.

The average station using plug-in or switched crystals had transmitting capability on only one or two frequencies in the CW portion of the band and a similar limitation in the voice segment of the band. Choice of a net frequency was therefore critical to attracting maximum participation.

### **Wartime Surplus Equipment**

In the postwar period, war surplus equipment became increasingly available and many Amateurs took advantage of low prices on wartime military transmitters, receivers, components and tubes. Such models as the BC-348, R1155, Army 19 set and the popular "command set" series of transmitters and receivers were widely sold along with various test units such as the BC-221 frequency meter.

Conversion articles and manuals were popular. Solid-state devices had yet to be invented or employed. The military version of certain all band short wave receivers such as the RCA AR77 and AR88 also appeared on the surplus market.

### **Qualification Endorsements**

In addition to stipulated technical, regulatory and Morse code qualification requirements, regulations of the day required that newly certified Radio Amateurs produce a one-year log of on-air activity. Demonstration of increased Morse code speed ability along with log records showing actual on-air experience was required before receiving endorsement for voice mode operation. This restriction limited the participation of newly licensed Amateurs in voice nets unless the net accommodated CW stations.

### **Amateur Radio Band Usage**

Coincident with the May 1946 restoration of the 80-meter band, USA Amateurs were permitted voice mode operation between 3.850 to 4.0 MHz. Amateurs outside USA were allowed to use voice mode from 3.8 to 4.0 MHz. The remainder of the band was authorized for CW mode. A few stations experimented with RTTY (radio teletype) in the CW segment of the band and NBFM (narrow band frequency modulation) was permitted in the voice portion of the band.

The entire forty-meter band was restricted to CW operation only. Twenty meters was considered the prime DX band and ten meters was a favorite band for medium and long haul informal QSOs. The 80-meter band was the main regional working and rag chew band. Activity above 30 MHz. was mainly limited to experimental working and testing the limits of propagation. VHF/UHF repeaters were not even imagined.

### **Modes in Common Use**

Morse code transmission or CW (continuous wave) working was much as it is today. Electronic keyers and code reading devices had yet to appear. Most Amateurs transmitted on a straight key or to facilitate speed and ease of sending used a vibrating mechanical device such as a *Vibroplex* or *SpeedX* key to produce a controlled string of dots. Reception of CW employed the use of a BFO (beat frequency oscillator) built into the receiver. Its output when activated mixed with the incoming CW carrier to produce an audible tone.

Amplitude modulation (AM) was the common voice mode. Single sideband had not yet come into use and transceivers, as we know them today with the odd exception, did not exist. AM signals had a bandwidth of 6kHz. making the need to precisely “zero-beat” with the “other station or stations” less demanding. Even with development of SSB and availability of stable VFOs, AM voice mode and crystal oscillators were common well into the late fifties.

### **Air Force Amateur Radio System**

At the end of WWII, the RCAF organized *AFARS*, the *Air Force Amateur Radio System* throughout Canada. Many Radio Amateurs, including the writer, joined *AFARS* and participated in its regional weekly net conducted on Mondays at 1900hrs on 3.835 MHz. *AFARS* also operated an out-of-band net above 80-meters on 4.290MHz.

### **Fundy Net**

A number of CW traffic nets operated almost from the beginning of Amateur Radio. CW nets had developed efficient procedures for relaying traffic over long distances -- thus the name American Radio Relay League. AM voice nets handling message traffic were not as common. The October 1947 LCARC Bulletin announced the formation of a new weekly 80-meter AM net, reporting that its first session on September 23, 1947 was “*well managed and organized thanks to Harley Richardson, VE1IE.*” Stations participating included: VE1IE, VE1EE, VE1EW, VE1FC, VE1IW, VE1IZ, VE1JO, VE1NW, VE1RQ and VE1TY.

The November 1947 LCARC Bulletin reported that a second session of the newly organized AM net for Saint John vicinity Amateurs was conducted on October 28, 1947 and was a “*howling success.*” A third session was held Tuesday, November 3, 1947. It was announced that future Nets will be held Tuesday nights on 3800 to 3805 kHz. Although all Amateurs in the Maritimes were invited to join the new net, participation was mostly by Saint John area Amateurs. A contest was announced inviting submission of a suitable name with a high power 813 transmitting tube to be awarded to the winning entrant. VE1AYL submitted “*Fundy Net*” and won the prize.

### **Brief Existence of AFARS and Fundy Nets**

After a lengthy period of indecision and without an officially stated reason, the RCAF withdrew active support of *AFARS* early in 1949. Its associated *Air Force Nets* had a few months earlier ceased operation. In 1952 the RCAF officially announced dissolution of *AFARS*.

Meanwhile, the “*Fundy Net*” decided to split into voice and CW operation on 3.803 MHz. and 3.750 MHz. respectively. With crystal-controlled oscillators still the predominant means of transmitter frequency control, this decision created a problem for several members of the *Fundy Net* and attendance began to fall off. The Net Committee was composed of VE1FC, VE1JO, VE1FL, VE1IW and VE1IF.

### **Recognition of Need for a Maritime Net**

With dissolution of *AFARS* and reduced participation in the *Fundy Net*, the need for a Maritimes wide voice net completely independent of any organization or Club became increasingly apparent. A number of Amateurs at an informal 1948 Victoria Day weekend enthusiastically supported a proposal that such a net be organized. It would conduct weekly on-air sessions on a designated frequency in the 80-meter band and have its own slate of officers. The net would be primarily a voice net, but would accommodate CW stations checking in on the net frequency.

### **Launch of the Maritime Net**

The December 1948 *LCARC Bulletin* confirmed formation and startup of the new *Maritime Net*. It reported that the *Maritime Net* sessions were scheduled on Monday nights at 1900L and that its first session was held that month.

Things moved a bit slower in those days and it wasn't until April 1949 that a slate of officers was elected to manage the net. They were; President Harley Richardson, VE1IE, Vice President Fred Bath, VE1LG and Secretary-Treasurer, Don Bain, VE1LZ. The new Executive confirmed that the *Maritime Net* would continue to meet on Monday nights at 1900L. After some deliberation, agreement was reached that the Net frequency would be 3.830 MHz.

### **First Steps and Consolidation of the Maritime Net**

Less than a year after the plan was enthusiastically supported, the first session of the *Maritime Net* was conducted. The call went out at 1900L on December 6, 1948. Earl Thompson, VE1AA, took on the role of Net Control Station.

The *Maritime Net* further consolidated its operation through 1949 and a year later the January 3, 1950 session of the *Maritime Net* reported that twenty-three stations had checked in and traffic was handled. Discussion among *Maritime Net* members recognized the need for greater emergency capability and expressed a general preference for 3.825 MHz. as the *Net* frequency. After further consideration, the *Maritime Net* adopted 3.820 MHz. as its operating frequency.

Later, the *Maritime Net* changed its schedule to daily sessions. Over time the *Net's* frequency changed as voice mode band segments were widened. Participation increased and the *Maritime Net* soon became a loyally supported tradition. Other than during infrequent extreme propagation conditions, it has operated without interruption since its first session.

### **Official Startup Date of Maritime Net**

Taking into account technical limitations of the period, delay in lifting wartime restrictions, competing interests and other obstacles to its initial organizational attempts, it is understandable that a few months would elapse between conception and startup of the *Maritime Net*. Based on several sources and published records of the time, **the first official session of the *Maritime Net* can be confirmed as having been conducted on December 6, 1948.**

### **Ongoing Legacy**

The *Maritime Net* has a progressive history going back almost 60 years. Through that lengthy period it has survived competing interests and many evolutions in Amateur Radio. With such a history, the *Maritime Net* stands as unique testimony to the tenacity and loyalty of Radio Amateurs in the Maritimes and their dedication to public service.

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