

RADIO ACTIVE MANITOBA(Ver.2007)

thanks to Ed Henderson, VE4YU

Of early radio amateurs and radio broadcasting in Manitoba

Amateur Radio in the early days

"Amateur Radio is a scientific hobby, a means of gaining personal skill in the fascinating art of electronics and an opportunity to communicate with fellow citizens by private shortwave radio".

So says the opening sentence in the 1954 ARRL handbook that introduces the new ham to the hobby. These words are as true today, 43 years later, as they were then, and as they were at the turn of the century, when experimenters flourished at the news of Marconi proving that messages could be sent by wireless.

By 1912, with numerous government and commercial stations in operation, laws, licenses and wavelength specifications for various services appeared. With no official spokesperson for the amateur organization, the official reaction toward the experimenters was to allow them to use frequencies below 200 meters, which would severely restrict any distant communications. However, amateurs discovered how long distance communications were possible on a sporadic basis and also messages could be sent long distances using relay stations (sound familiar - nets, repeaters). Amateurs began to wonder if some day their signals could span the Atlantic on 200 meters.

In early 1914, Hiram Percy Maxim, a radio experimenter, conceived and launched the American Radio Relay League (ARRL). By 1917 ARRL was just beginning to blossom to unite radio amateurs in the USA when the first world war curtailed its activities. Of the 6000 amateurs existing then, 4000 served in the armed forces during the war.

Meanwhile, in Canada, amateur radio experimenters were also very active. In February, 1911, the first Amateur Radio Club in Canada was formed. Called the Central Canadian Wireless Club, its secretary wrote to other radio amateurs across Canada promoting the idea of the Winnipeg club becoming the coordinating organization for all Amateurs in Canada, the prototype for a national wireless league.

On August 2, 1914, an order in council from Ottawa was issued closing Amateur and other non-essential stations for the duration of the war. On April 15, 1919, eagerly waiting Canadian Amateurs, were overjoyed to hear that the order in council had been cancelled and applications for licensing of Amateur stations could once more be accepted. In Canada, licensing actually began on May 1, 1919, whereas in the USA, Amateurs were not allowed to operate until October 1st.

In Winnipeg, in March 1919, just before licensing was restored, some prospective Winnipeg experimenters formed the first club to be called the Winnipeg Amateur Radio Club.

Above taken from the 1954 ARRL Handbook and a series of articles produced by George F. W. Reynolds, VE4AJ, who became a silent key in 1996.

As you read the story of `Amateur Radio' you will notice that it is difficult to separate the `Amateur' from the `Commercial'. This is because practically all advancements and developments in wireless were made by amateur experimenters, many of whom formed commercial companies, individually or in conjunction with established firms or financial backers.

Wireless and radio are synonymous terms, `wireless' originating in Britain and `radio' in America.

Marconi is credited with being the first to span the Atlantic by wireless in 1901.

Ottawa assumed regulatory control over all forms of wireless and in 1905 passed the Wireless Telegraphy Act giving the Minister of Marine and Fisheries the exclusive authority to issue licenses for the installation and operation of any apparatus for wireless telegraphy anywhere in Canada or on any ship of Canadian registry. In the Telegraphs Act of 1906, section 6 referred to granting of licenses to amateurs solely interested in conducting wireless experiments.

Dr. Lee deForest, the famous American inventor and wireless wizard, made a historic appearance in Winnipeg in 1910.

His wireless experimenting began in 1899 and by 1903 he had erected several stations along the eastern seaboard, including stations at Toronto and Hamilton. DeForest invented a three element radio vacuum tube that he called the audion. Initially used as sensitive detectors, these devices were used as oscillators in transmitters in 1913 when feedback circuits were discovered. In 1910, deForest arrived in Winnipeg to lecture and demonstrate two-way wireless telephony.

His company had leased space in the Enderton Building at Portage and Hargrave for a factory and laboratory. After lectures presented in the Science Building of University of Manitoba, the wireless telephony demonstration, one way only, took place, from the Royal Alexandria Hotel to the five year old Eaton's store on Portage Ave..

Equipment used was the latest model Aerophone transmitter rated at 500 watts with arc voltage of 220 VDC. Adjustable tuning coils, covered 300 to 3,000 meters and modulation was accomplished using a pair of heavy duty carbon microphone buttons mounted in a standard telephone mouthpiece and wired into the ground lead of the transmitter. All the RF current passed through the carbon buttons that were tapped periodically with a pencil by the operator to loosen the carbon granules, that tended to pack and quit working. The date of this first

demonstration of wireless telephony in Canada was April 19, 1910.

Although the promised deForest factory and laboratory never happened, this event had a great effect on the amateur wireless experimenters in Winnipeg.

The following year, February, 1911, saw the formation in Winnipeg, of the first wireless club in Canada, the Canadian Central Wireless Club. Later in the year, the Wireless Association of Toronto emerged.

Amateur wireless experimenters or `hams' first surfaced in 1909 with Alex Polson, and some of his classmates from Central Collegiate Institute on Kate Street.

They built a transmitter - a one inch spark coil with glass plate condenser, a tuning helix and spark gap, and a receiver consisting of a Hughes-type microphonic detector with a steel needle resting on carbon prisms, a tuning coil and headphones.

Messages were sent from Polson's home at 94 Cathedral Ave. to Graham Ave. This is the first recorded use of wireless in Manitoba

Club growth and early callsigns explored

The Canadian Central Wireless Club, formed in Winnipeg in 1911, had 12 charter members. The president, Alex Polson, was a freshman at U of M and club dues were 50 cents a year. There were hopes to form a nation-wide amateur radio organization based in Winnipeg.

Following the sinking of the Titanic in 1912 and the part played by wireless telegraphy, the Free Press carried an article about local amateur radio activity that made many people aware of the wireless experimenters in their community. In January, 1912, Kevin Technical high school opened and soon rivaled Central Collegiate as a hotbed of amateur wireless activity.

Most 1912 amateur stations started with the reliable Ford spark coil and a detector composed of a crystal of galena or pyrite on which rested a "cat's whisker" of fine wire.

Instruction was available locally at the clubs and from American magazines such as Popular Science, Popular Mechanics, Electrical Experimenter and Scientific American. These with England's Christmas annuals, Boy's Own and Chums, had construction articles on transmitters and receivers.

EICO was the world's oldest radio supply house and was started in 1906 by Hugo Gernsback, who was also editor of Electrical Experimenter and later Radio News. For 50 cents, the Manhattan Electric Supply company would send postpaid in a wooden jewel box, a "genuine galena crystal guaranteed loaded with supersensitive spots".

During WWI, operators on ships in close convoy used buzzers for short range

communications to avoid detection of their big spark gap transmitters. The opening and closing of the buzzer contacts caused a spark that generated a signal that could be picked up several blocks away.

Code practice was provided each evening by the 100 KW spark station of NAA, the US government station in Arlington VA. "QST", the general call to all stations, could be heard in CW on 2,500 meters, then a series of dots followed by a long dash to indicate exactly nine o'clock.

Crack US Navy brass-pounders sent a news report for ships at sea and a weather report at a steady 20 words per minute.

In 1910, administration of the Wireless Telegraphy Act was transferred to the Department of Naval Service.

By international agreement, certain alphabetical license blocks were allocated by the Berne Bureau, a branch of the International Telegraph Union. One of the blocks assigned to Canada was XAA-XGZ and Canadian authorities reserved it for amateur, experimental and training school stations.

None of the Canadian Central Wireless Club members in Winnipeg had one of these licenses but instead, the club gave each club member a call letter and a station number for identification. Official records show only one amateur in Manitoba, before WWI, with a license from Ottawa. He was F. A. Anderson, XDZ, of Portage la Prairie.

Wireless telegraphy came to northern Manitoba in 1913 at The Pas with construction of the Hudson Bay Railway.

Another call sign block allotted to Canada was VAA-VGZ and these were assigned to land and coastal stations and to ships of Canadian registry. The Pas station was VBM and Port Nelson was VBN. These stations transmitted 10 KW output using a 240 cycle synchronous disc rotary spark gap on 1,800 meters and normal range was 600 miles.

In January, 1914, the Boy's Club of Winnipeg organized a wireless and scientific section with the purpose of giving boys a thorough grounding in wireless.

On August 2, 1914, the government closed all amateur and other nonessential stations for the duration of the war by an order-in-council. At that time there were only 79 licensed amateurs in Canada, including the first YL (young lady), Miss M. S. Colville, XDD, of Bowmanville, Ontario. However, only about 10 percent of active amateurs were licensed.

The Canadian Central Wireless Club had 43 members, and held sporadic meetings until spring of 1915. When it became apparent that the war would be a long one, the club disbanded.

Amateur Radio after the war and the Winnipeg General Strike

The order in council issued on August 2, 1914, that closed all amateur and nonessential stations for the duration of WWII, was cancelled on April 29, 1919.

A small number of stations, engaged in military training, such as XWB in Brandon, and Hudson Bay Railway stations VBM in The Pas and VBN in Port Nelson were allowed to function during that period. Also military authorities permitted a limited amount of radio lab work at Kelvin High School but no actual transmitting or reception was allowed.

In 1918, a Kelvin student, David Willis, constructed a model of a Poulsen arc similar to the one used in deForest's Aerophone. This is understood to be the first made-in-Winnipeg apparatus with radio telephone capability.

The 1918 Fall term saw the start of radio theory classes with a returned vet, J. Ralph Foster, as instructor. The military at that time allowed Kelvin to erect an antenna on the roof and install a radio set, in anticipation of resumption of activities. Many of the students had been perfecting their morse code and in March, 1919, the Winnipeg Amateur Radio Club was formed. The first President was the aforementioned J. Ralph Foster, Vice-President was Douglas C. Chapman and Secretary was Graham Spry.

Graham Spry, a Manitoba Rhodes scholar in 1922, later became co-founder and President of the Canadian Radio League. The Canadian Radio League was the driving force behind establishment of nation-wide publicly-owned broadcasting in Canada which culminated in the incorporation of the CBC.

The Winnipeg Amateur Radio Club met in the old red brick University of Manitoba Arts building on Kennedy Street just north of the Law Courts. The 20 members were mostly war vets with signalling experience plus a few students.

Resumption of Amateur Radio activity was allowed on April 29, 1919 and on May 22, 1919, the Winnipeg General Strike began.

The telephone operators and the mailmen went out early in the strike and commercial telegraphers quit on May 17 completely isolating Winnipeg from the rest of the continent. Also the pressmen and stereotypers walked out, effectively stopping the Free Press and the other newspapers from publishing.

Senior staff at the Free Press produced a single page paper dated May 21 and May 22, with a headline proclaiming "COMMUNICATION ESTABLISHED BETWEEN CITY AND OUTSIDE WORLD".

It explained that wireless telegraphy was brought into use and a highly efficient apparatus had been set up on the roof of the Free Press building on Carlton Street with the spreading antenna attached to flagpoles.

This is the first time that wireless had been used by any newspaper in Western Canada, if not in all Canada, and it was used to inform the outside world that, although there was a general strike, there was neither disorder or famine.

The radio apparatus used at the Free Press was owned and operated by three Winnipeg students who were active radio amateurs.

They were Douglas C. Chapman, Don G. Turner and Greg Hutchinson.

The transmitter was a 250 watt spark and the vacuum tube receiver covered all wavelengths in current use. The operation ran for about two weeks with a considerable volume of world news being received, mainly from NAA in the USA and a Mexico City station. Assistance was given by an ex-commercial telegraph operator, called a "scab telegrapher" by the union. His identity was never revealed.

Four years later, John W. Dafoe, editor-in-chief of the Free Press, offered a Winnipeg amateur radio association the use of a meeting room in the Free Press building, in appreciation it was said, of radio amateur co-operation during the general strike. Can anyone recall meetings of the radio club in the Free Press building ?

Early call signs and Winnipeg's introduction to music over the airways.

When the government allowed resumption of pre-war regulations on April 15, 1919, radio amateurs were anxious to get back on the air and to take advantage of the improvements that had been made in radio technology, particularly in the field of vacuum tube receivers and transmitters. They were quick to adopt the new techniques.

Soon all 182 callsigns in the XAA-XGZ would be assigned so the Radiotelegraph Branch switched to an entirely different system.

On January 10, 1920, Canada was divided into five districts.

District 4 was comprised of Manitoba, Saskatchewan and Alberta. (I assume that district 1 was the Maritimes; district 2, Quebec; district 3, Ontario and district 5, British Columbia) The new amateur call signs were made up of the district number followed by two (and later three) letters.

The author (George Reynolds - VE4AJ) had his first call as 4AG issued on February 27, 1920. The Canadian prefix VE did not come into official use until April 1, 1929, although many Canadian amateurs began using it in 1928.

Throughout 1919 and 1920, 4th district activity was limited solely to the amateur service and a radio inspector was not appointed until mid 1920. Thus Manitoba hams, with few exceptions, did not apply for a station license but operated 'sub rosa' using their initials for call signs. It was confirmed by amateurs from that period that no Winnipeg hams were issued calls in the XAA series.

The first Manitoba ham to receive a 4 call was William M. Cummings, 4AD, of 391 Simcoe St. in Winnipeg who was licensed in February, 1920.

In January, 1920, the three Winnipeg newspapers, the Free Press, the Tribune and the Telegram were forced to cease publication because of a shortage of roll print newsprint. The Manitoban, the student paper at the University of Manitoba, used flat paper which was in good supply. The Manitoban was normally printed weekly with a press run of 3,600 but on January 19, 1920, the editor-in-chief, Graham Spry, and his staff, started putting out a 4 page daily selling for 5 cents.

Twenty-six thousand copies of each issue were printed. Spry recruited Douglas C. Chapman, the vice-president of the Winnipeg radio club and one of the trio that ran the Free Press radio during the Winnipeg General Strike, as 'Wireless Operator of the Manitoban' as listed on the paper's masthead.

Unable to use the regular copyrighted wire services, Chapman listened to NAA and other stations for items of world news while a hastily organized reportorial staff picked up local stories. Four daily issues in all of the Manitoban were printed, before a renewed paper supply ended the halt of regular newspapers production. The Manitoban then reverted to weekly publication.

In 1920, CP and CN, wire telegraph companies, operated the lucrative field of providing a direct link between Winnipeg grain exchange and foreign markets. Although Marconi received authorization to build telegraph stations at Winnipeg, Toronto, Montreal and Glace Bay, CN and CP opposition prevented it from occurring.

The Kelvin Radio Club, with operators including E. Kennedy 4AY, Fred Stevenson 4AX and William Speechly 4AZ, ran the school station, XEY. The radio was a portable Mark II Marconi Radiotelephone - telegraph rated at 20 watts input. The station receiver had a set of de Forest honeycomb coils and a vacuum tube detector and amplifier.

The war surplus transmitter was located in one of the basement labs and the antenna was located on the school roof. It is probable that the original station license was issued shortly after May 1st, 1919.

In the fall of 1921, this group provided Winnipeg with its first taste of music over the air waves. Using an old-fashioned hand-wound Victrola and the club's only record, a well scratched 78 RPM version of 'The March of the Toreadors', four club members would warm up the set and wind up the phonograph. One of them would hold the microphone in front of the horn of the Victrola while the rest would hurry home to listen to Bizet's music.

On Saturdays, the transmitter would be switched to radiotelegraphy for contacts, hopefully, with 9YAF, Pembina High School, Pembina, North Dakota.

Lynn V. Salton and early radio broadcasting in Manitoba

Lynn V. Salton became interested in radio in 1910 at the age of 13 while living in Moose Jaw.

He began with the usual spark coil - crystal detector set and, like scores of other

amateurs across the prairies, he operated without a license. He was seriously considering radio as a career by the time his family moved to Winnipeg. In 1917, while in his third year at Wesley College, he enlisted in the Royal Navy as a wireless operator.

After courses in Engineering and a promotion to commissioned wireless officer, he served at Gibraltar, the West Indies and Naval Headquarters in London. Demobilized in early September, 1919, Salton returned to Winnipeg to complete his university studies and graduated as Gold Medalist in Arts in 1920.

Salton was appointed radio inspector for District 4 on June 29, 1920. At a press conference, he pointed out that licenses were required for both sending and receiving sets and that licensees must be British subjects. With appointment of a radio inspector, Winnipeg hams rushed to legalize their operations by securing a license.

In 1921, Salton founded the Salton-Foster Radio Engineering Company with partner J. Ralph Foster and was elected a member of the Institute of Radio Engineers early in 1922.

Salton designed and built a 100 watt broadcaster and in February, 1922, he went on the air from his home at 1164 Grosvenor Avenue in Winnipeg, on his assigned wavelength of 420 meters with the call sign CKZC. Canadian stations were licensed to operate in the 400-450 meter band and were issued calls in the CFA(A) - CKZ(Z) series.

CBC call signs were granted to Canada some years later by a concordance with the government of Chile, which then held CAA-CEZ.

When CKZC began broadcasting, there were 60 licensed amateurs in Winnipeg and 10 others elsewhere in Manitoba.

A considerable number of Winnipeggers had bought or built receiving sets capable of hearing programs from the radio stations springing up across the USA. Salton went on the air on Sunday and Tuesday evenings calling "Hello, hello, this is station CKZC, Winnipeg."

He began every broadcast with his favorite phonograph record "El Capitan March" which was reported heard at a distance of 845 miles.

The unprecedented outburst of enthusiasm for this new form of entertainment, that had swept the U.S. and eastern Canada following the commencement of broadcasting in 1919 by the Westinghouse experimental station 8XK, later KDKA, in Pittsburg, and by the Marconi experimental station XWA, later CFCF, in Montreal, had now spread to Manitoba.

The Winnipeg newspapers get into the broadcasting business.

In 1922, most broadcasting stations in Canada were owned by firms, such as

Marconi, which was primarily interested in the sale of radios and wished to provide programs for their customers, or by newspapers, not realizing that radio would become their strongest competitor in the field of news dissemination, under the impression that it would somehow increase their circulation.

In Winnipeg there was fierce competition for readers between the Manitoba Free Press and the Winnipeg Tribune. Any promotional scheme discovered by one of them to gain more readers was soon countered by the other. On Thursday, March 23, 1922, the Free Press reported that it had been granted a license for the operation of a broadcasting station on a wavelength of 410 meters with the callsign CJCG. The paper said that L.V. Salton had been engaged as consulting engineer and that an up-to-date plant would be in operation in about ten days.

The Free Press broadcast its first program on Sunday, April 2, 1922.

Promptly at 10 PM, operator Salton, to quote the Free Press, "Sped through the ether the warning call: Hello, hello, hello, radiophone broadcasting station 4AH, Free Press broadcast number one".

The opening announcement was ambiguously worded; it did not specify that the Free Press was the owner of the station.

A similar introduction was used for the second and possibly later programs. 4AH was Salton's amateur call but it was illegal for an amateur to broadcast on a commercial channel. Salton was the radio inspector and was responsible for enforcing the law. Why was the Free Press's own call CJCG not used? A logical explanation is that their license application had not received final approval from Ottawa. The Free Press, however, was eager to get on the air before its rival, the Tribune.

The Free Press wasted no time in telling the world that it was the first newspaper on the prairies to start broadcasting. Their flea power transmitter, running only ten watts into a makeshift antenna on the Free Press roof, had beaten the Tribune to the punch.

On April 13, 1922, a Marconi engineer arrived in Winnipeg along with ten cases of radio apparatus that had been shipped from Montreal.

By April 17, the set had been tuned to its operating wavelength of 400 meters and tests were being run at power reduced below its normal input of 500 watts. The Tribune announced a gala opening program for its station, CJNC, to be held on Thursday, April 20, with introductory address by the Lt. Governor, Sir James Aikens, and a concert by over 200 artists including the Winnipeg Male Choir, the Oratorio Society, two solists and the Princess Pat's regimental band.

It was the most ambitious program ever presented by a Canadian radio station and received many compliments from listeners in southern Manitoba, North Dakota and Minnesota. It was obviously designed to put to shame the opening performance of what some of the Tribune radio crew referred to as the "Carlton Street peanut whistle".

Theaters set up radio demonstrations and T. Eaton Co. enters the field.

In 1922, two of the biggest downtown radio theaters were quick to exploit radio as a gimmick to attract more customers.

On April 17, 1922, the papers carried large ads by the Capitol and the Allen (later the Metropolitan) saying that they had installed receivers and loudspeakers in order to demonstrate the wonders of radio to their patrons.

The Capitol equipment was operated by Salton-Foster; the Allen's by H. W. G. Kirk, 4CV, a 15 year-old amateur.

Both theaters made identical claims, boasting that it had the largest and most powerful receiver - the only one capable of being heard throughout the theater - and that it was the first picture palace in Canada to install such an apparatus for the benefit of their patrons.

Each promised reception from such distant points as Boston, Pittsburg and San Francisco. They had an ace in the hole, if atmospheric conditions prevented them from hearing the American stations. They could tune in the Free Press or Tribune, which were only a couple of blocks away, but the musical programs were interspersed with code signals from transatlantic stations, which must have mystified the theater goers.

Within a few days, accusations of fakery were being bandied back and forth. It was charged that the opposition was playing phonograph records over their loudspeakers because of defective radio equipment.

The Capitol management offered a \$100 reward to any person who could prove that the radio was not genuine. "The Capitol equipment is open to the closest scrutiny by anyone doubtful of its authenticity". The novelty of theater demonstrations soon wore off and after a couple of weeks was discontinued.

T. Eaton Company ads for April 22, 1922, told of the opening of a radio section on the fourth floor of the store. Eaton's was the first large city firm to enter the radio merchandising field. Salton resigned his position as radio inspector and disposed of his interest in Salton-Foster Radio Engineering to his partner before taking charge of Eaton's radio department on May 1, 1922.

Salton set up his CKZC transmitter in the store and it was a great attraction to the customers, who were fascinated by a closeup view of the apparatus that put a radio program on the air.

Eaton's also began a radio section in its mail order building. Like the city store, it started as an adjunct to the music department. Eaton's mail order is now only a memory, but a half-century ago, it completely dominated the radio mail-order business in western Canada. Eaton's 'Radio Bulletin' was the bible of radio fans across the prairies for many years and it displayed a full line of receiving sets, kits and component parts.

On May 4, 1922, the Commissioner of the Manitoba Telephone System gave a statement to the press, the significance of which was not realized at the time, but which would have a tremendous effect on radio broadcasting in Manitoba for the next decade and more.

The Commissioner said that at a conference the previous day with the Minister of Telephones, Thomas Johnson, it had been decided that the M.T.S. would enter the domain of radio broadcasting.

Strangely enough, neither newspaper commented on the M.T.S. decision. The following month, the Commissioner took an option on a Northern Electric 101-A 500 watt radio-phone transmitter.

Local radio programming in 1922 and cries of 'American influence'.

The FREE PRESS, with its feeble 10 watt set, was having trouble competing for audience attention with the 500 watt TRIBUNE station.

Seventy-five foot antenna towers had been erected on the FREE PRESS building by May 4, 1922 and the paper continued to assure its readers and listeners that its 'major broadcasting station' would be on the air shortly. Apparently the manufacturer was having problems getting the bugs out of the transmitter, a radically new design.

On May 31, the FREE PRESS reported that its broadcasts would sound much louder in the future as alterations and adjustments by operator Foster, 4CR, (Salton's former partner) had provided six times more power in the antenna. As a result, the program was received with a 'storm of enthusiastic applause.' It seems probable

that the FREE PRESS acquired the use, on a temporary basis, of the 100 watt set that had been the CKZC transmitter.

By July, CJCG and CJNC had developed a daily program pattern.

There were noon-hour news, grain and stock market reports and sports bulletins; each weekday evening a two-hour program consisting of an instrumental and vocal concert with fill-in phonograph records.

On Sunday evenings, both stations broadcast a one and a half to two-hour program of sacred music. CJNC (TRIBUNE) began an unusual feature on July 4 - a 15 minute code practice session by the station operator, D. E. Bankart, prior to its evening program.

Instrumentalists and vocalists performed 'gratis' and every music teacher in the city was continually pestering the radio stations to put their prize students on the air. Vocalists ranged from coloratura sopranos to basso profundos plus an assortment of elocutionists and dramatic readers. The piano was the most popular solo instrument but there was no shortage of violinists, banjo combos, mandolin quintets, coronetists, mouth organ virtuosos, Hawaiian steel guitar artists and xylophonists.

An article in the July 8, 1922 issue of the FREE PRESS was a preview of a controversy that has continued to rage until the present day.

The FREE PRESS was extremely critical of a letter written by W. E. Weaver of Hespeler, Ontario, to the American magazine RADIO NEWS. "Speaking from the depths of arrogant ignorance", to quote the FREE PRESS, "Weaver has made the unqualified statement that the boys of Canada, the coming generation of this country, are being exposed to an unavoidable American influence which may result in a loss of pride in their nationality, that American pronunciations threaten to creep into Canadian speech and that American ideas threaten to stifle Canadian individuality. Canadians must realize the necessity for better radio stations of their own if their national life is to be saved from extinction."

The FREE PRESS was particularly incensed at Weaver's allegation that Canadian broadcasts were of poor quality. The FREE PRESS said it had received many letters testifying to the excellence of its programming, not only from Canadian listeners, but from many points in the northern U.S. as well. "Abysmal ignorance of his own country is to be regretted in the writer to RADIO NEWS as characteristic of the poorest citizenship."

Air Board patrols set up in 1921 - airborne radiophone tested

The long-promised FREE PRESS high-powered transmitter finally went into service on Thursday, July 27, 1922. A brick superstructure to house the transmitter, power supply and an artist's studio had been built on the roof of the FREE PRESS under the west antenna tower. The station had a power of 1600 watts.

A two-hour initial program on the new set featured well-known singers, pianists and violinists. The Princess Pat's band played three numbers and Sergeant Everson gave a cornet solo.

The FREE PRESS waxed ecstatic the next day in telling of "the rare galaxy of talent" whose "superb performance ... caused a furore." The newspaper said it was flooded with congratulations from distant points on the strength of the signal and the clarity of the modulation which was "unequaled in the short history of radio in Western Canada."

Broadcasting was not the only new development in Manitoba radio in 1922.

The previous summer, the Forestry Branch of the Department of the Interior, which was responsible for natural resources, had asked the Air Board, the forerunner of the R.C.A.F., to fly patrols over the area east of Lake Winnipeg where valuable stands of spruce were being ravaged by forest fires.

The Air Board set up a staging depot on the Red River at the foot of Glasgow Avenue in Winnipeg, with operational bases at Victoria Beach on Lake Winnipeg and engine flying boats were dispatched to fly the Manitoba mission.

Carrying a crew of ten, the F3's had a cruising speed of 80 miles per hour.



Felixstowe F3 flying boat

Officials of the Interior Department were so pleased with the results of the 1921 operation that three more planes were added to the fleet.

In August, 1922, the Royal Canadian Corps of Signals installed radio stations for the Forestry Branch in the old Customs House in Winnipeg and at Victoria Beach and Norway House.

These stations were used for interbase communications and the dispatch of aircraft.

In 1921, experiments conducted with radiophone equipped planes, flying the area along the eastern slope of the Rockies, had shown that an average range of 150 miles with good commercial speech could be maintained. This meant that aircraft in the Lake Winnipeg district could be in continuous contact with either Victoria Beach or Norway House.

Major W. A. Steel of the Signal Corps offered to install radio transmitters in the F3's flying boat but the Air Board commandant rejected the suggestion saying that the

flying boats carried reliable homing pigeons and they would continue to rely on them in emergency situations. Each flight had on board two birds trained by a pigeonier.

In the event of a forced landing, a released pigeon would, hopefully, return to its home base within a few hours. This policy remained in effect for several years and R.C.A.F. planes were not equipped with two-way radios until the 1930's.

On June 14, 1922, the Radiotelegraph Branch was transferred back to the Department of Marine and Fisheries and by September 1st, the branch had been reorganized and a revised set of regulations promulgated.

Significant in the new regulations was the establishment of three new classes of station license: private commercial broadcasting, amateur broadcasting and private receiving station. The rule that the owner and operator of a station must be a Canadian citizen, or other British subject, was waived in the case of the private receiving station for which a dollar was charged.

The amateur radio broadcasting station .. Regenerative receivers .. Broadcast Interference (BCI) .. conversion to vacuum tubes

The amateur broadcasting station was a unique Canadian institution. Its purpose was to provide radio programs in communities not reached by the larger urban broadcasters.

Amateur broadcast licenses were issued only to 'bona fide' radio clubs of a non-profit nature, not to individuals or commercial interests. Manitoba never had any amateur broadcast stations for reasons that will be discussed later. Some writers on Canadian radio continue to confuse amateur broadcasting stations with Amateur Experimental or 'ham' stations. They are in no way related; the mixup is caused by the use of the word amateur in both designations.

Another change in the regulations saw the allotment of figure 6 calls to technical and training school stations. Kelvin Technical High School, formerly XEY, became 6AB while St. John's Technical High School was issued the call 6AX.

Besides the licenses issued to Salton, the Free Press and the Tribune, the Radiotelegraph Branch granted broadcast licenses to George E. Bell and Canadian Westinghouse. Neither opened stations in Winnipeg.

Bell became involved in the operation of stations in Calgary and Regina while Westinghouse decided to specialize in the manufacture of receivers rather than enter the broadcast field.

With the arrival of autumn, the reception of distant stations improved and the number of broadcast listeners increased at a prodigious rate. Many of the radio fans were building their sets either from construction articles in radio magazines or from home-assembly kits. A vacuum tube receiver was a necessity for picking up the faraway broadcasters. Most utilized regeneration, a method by which the feed-back of energy in the circuit increased sensitivity and signal strength.

In 1922, all receivers were powered wholly by batteries since the technique of using ac power to run a set was still under development.

A wide variety of vacuum tubes was on the market for the set builders and the favorite was the Northern Electric "peanut" tube at \$5.00 which required only a single dry cell for filament supply.

Among the more popular factory built receivers was the Westinghouse "RC", a regenerative receiver with two stages of audio amplification which had sufficient output to operate a loud speaker to a room volume and which sold fully equipped for \$175.00.

Another was the Westinghouse "Aeriola Senior", a single tube regenerative receiver which cost \$65.00 less earphones, batteries and aerial.

There had been an astonishing proliferation of broadcasting stations in the U.S., many of them could be heard in Winnipeg by even a single tube receiver. Interference with reception, particularly of distant stations, was an annoying problem. Sparks from the trolley wires as the street cars rattled along, the firing of the ignition of the ubiquitous Model T Fords, the "hash" from faulty insulators on hydro lines and from defective electric apparatus, could blot out weak signals.

Probably the worst offenders were the regenerative receivers themselves. When adjusted past the point of maximum regeneration, the setting where the feed-back of energy made them most sensitive, they broke into oscillation. In other words, they became miniature transmitters whose squeals and whistles could be heard for blocks by other receiving sets.

A well-orchestrated campaign tried to lay much of the blame for interference on the radio hams. A spark transmitter could cause an intolerable noise on a broadcast receiver and when Salton's CKXC first went on the air, a few malcontents were trumpeting "spark forever."

But the formation of the Manitoba Radio Association, shortly after the newspapers began broadcasting, brought agreement among Winnipeg amateurs to respect voluntary "quiet hours" between 7 and 10:30 pm.

This step was taken in order to avoid confrontation with a militant and growing horde of BCLs (broadcast listeners) many of whom were threatening to demand repressive action against amateurs. The hams had already begun to dismantle their out-of-date spark sets and convert them to the much more efficient tube transmitters which had a far lower interference threshold. The most popular tube among the amateurs was the UV202, better known as the five-watt bottle.

The UV202 required a 500 volt power supply that was furnished by a home-made chemical rectifier pack that converted ac to dc. There were no rectifier tubes available to amateurs.

The Winnipeg newspapers strive to quit the radio business and MTS seeks complete control of radio in Manitoba.

After broadcasting for nine months, the Winnipeg newspapers were becoming concerned about the viability of their radio enterprises which were in a continuing loss position.

Whatever the papers had hoped to gain by their venture into broadcasting had evidently not materialized; certainly there had not been an increase in circulation. They would be happy to get out of broadcasting if it could be done without antagonizing the public for whom they had been providing free entertainment.

The fledgling broadcast industry was in serious trouble right across Canada. The problem was the rigid governmental rules regarding advertising. A limited amount of indirect advertising, such as naming of a sponsoring company at the beginning and end of a program, was permitted. Direct advertising, that is, the airing of spot advertisements during a program, was expressly forbidden.

On January 8, 1923, the publishers of both papers met with John E. Lowry, The Commissioner of Telephones, and explained their predicament to him. They asked if Manitoba Telephone System still intended to go into broadcasting. The answer was yes if the Manitoba government could come to an understanding with the federal authorities regarding jurisdiction over radio and the division of private receiving station license fees. According to Lowry, both papers stated that they would give every support to any action which the provincial government might take for the control, regulation and development of radio in the province. This unequivocal promise of both the FREE PRESS and the TRIBUNE to support any future government policy regarding radio reflected their eagerness to get out of broadcasting.

Lowry's complete game plan was to have complete control of radio in Manitoba vested in the Telephone Commission.

On September 22, 1922, he had sent F. M. Black, Provincial Treasurer and Minister of Telephones in the newly-formed Bracken administration, a "Radio Telephone Memorandum" outlining certain proposals regarding radio broadcasting.

Lowry followed this up on January 29, 1923, with a draft of "The Manitoba Radio Regulation Act" which codified many of his ideas. This document is too long to quote in its entirety but a few excerpts will indicate its scope:

"No person, company or corporation, shall establish any radio station or shall establish or operate any radio telephone or telegraph apparatus within the province except under and in accordance with a license issued by the Commission. The Commission shall prepare, issue and control, standard methods for the erection of all wires, structures and apparatus used for radio stations within the province and all such shall be installed in a manner approved by the Commission. 90 per cent of all radio license fees shall be retained by the province.

Licenses may be withdrawn temporarily or permanently for cause at the discretion of the Commissioner and approval of the Minister after a hearing by the Commission."

The phrases "radio station" and "radio telephone or telegraph apparatus" included receivers.

Under the proposed act, if a Justice of the Peace was satisfied by information on oath that there were reasonable grounds for believing any radio telephone or telegraph apparatus was used or intended to be used in contravention of the act, he might grant a warrant for the search of any suspect premises and the seizure of any radio apparatus found in such place.

The "Radio Telephone Memorandum" had also recommended that authority for enforcement of the RadioTelegraph Act be transferred to the province and that inspectors be hired by the province to enforce the regulations under the act.

One point should be made clear, The Manitoba Government Telephone Act called for the appointment of a three-man Board of Commissioners, to be known as the Telephone Commission, that was to run the Manitoba Telephone System. But only one Commissioner, John E. Lowry, had been appointed. In all cases therefore, where the word "Commission" is used, one should read, "Commissioner Lowry." In his report on "Manitoba Commercial Enterprises," Carl Goldenberg noted that the concentration in a single person of the control of a business as large as the M.T.S. was unusual.

If the Manitoba Radio Regulation Act had ever been enacted into law, it would have made the Commissioner the virtual czar of radio in Manitoba.

The newspapers leave radio broadcasting - radio station CKY is born.

A draft copy of the proposed Manitoba radio regulation Act was submitted to the Department of Marine and Fisheries for their consideration and comment.

In a February 24, 1923, letter to the Minister of Telephones, Lowry reported that Ottawa, 'did not altogether approve of the contemplated legislation.' Departmental officials suggested, however, that if the Minister of Telephones wrote the Deputy Minister of Marine and Fisheries stating that the province was desirous of establishing a monopoly of broadcasting, they were of the opinion the department had authority by virtue of Section 11 of the Radiotelegraph Act to grant the province the right to approve all license applications for broadcasting stations and to control the issuance of permits for sending and receiving stations.

Lowry went on to say, 'The suggestion ... appears to be a very good one and might obviate a lot of difficulties, the contention being that we can get all by letter that we could secure by legislation.'

This letter would have the further advantage that no local criticism would be stirred up when the newspapers dropped out of the business and the whole matter could be developed without any friction anywhere.'

The subject of license fees for private receiving stations was a separate topic. Any division of fees between Ottawa and the province would necessitate

Parliament passing an amendment to the Radiotelegraph Act.

Manitoba wasted no time in carrying out Ottawa's suggestion.

On February 27, 1923, the Minister of Telephones wrote the Deputy Minister of Marine and Fisheries advising him that the Executive Council of Manitoba wished to secure a monopoly of broadcasting in Manitoba and that future licenses for broadcasting stations and for sending and receiving sets should be issued only by and with the consent of provincial authority. The minister also requested that the fee for a private receiving station license be increased to \$2.50 effective April 1, 1923, with an unspecified portion devolving to Manitoba.

He said this matter was now urgent as the newspapers in Manitoba were pressing for action since they wished to terminate their operations at the end of the month or as soon as possible.

On Thursday, March 8, 1923, the FREE PRESS and the TRIBUNE announced they were relinquishing the field of broadcasting to the Manitoba Telephone System. The last broadcast of the TRIBUNE station, CJNC, was on Friday night, March 9, 1923, while the last broadcast of CJCG, the FREE PRESS station, was its Saturday noon program of news and sports. Both papers printed similar explanations for discontinuing broadcasting. They said they had an amicable understanding with the Manitoba Telephone System - they had not been forced out of broadcasting. They concurred with the viewpoint of the M. T. S. that radio and wire telephony belonged together and that one high-powered station was adequate for a city the size of Winnipeg.

The TRIBUNE commented, 'Some of you may not be sorry if broadcasts are less frequent. We have had many complaints Winnipeg stations have hogged the air so much that it has been difficult to listen to broadcasts from other parts of Canada and the U. S.. We believe the M. T. S. will be more merciful and not pound the ether so hard.'

The Manitoba Telephone System was authorized to operate on a wavelength of 450 meters using the callsign CKY. A three-letter call was unique; the reason for the choice of a three-letter call is not known unless it was to distinguish the lone publicly-owned broadcaster from the privately-owned stations all of whom had four-letter calls.

Radio station CKY - a small budget station - begins to broadcast.

CKY's 500 watt Northern Electric transmitter and studios were located on the main floor of the Government Telephone Building on Sherbrooke Street just south of Portage Avenue. A flat-top antenna was strung between the towers on the roof. The overall cost of the CKY installation was only \$18,005 - operating expenses were minimal.

In a letter to a Nova Scotia official who enquired about CKY, Lowry said he doubted if anyone could run a station on a smaller budget. The only salaried employee was D. R. P. Coats, announcer, chief operator and general factotum who

was paid \$150 a month. The transmitter was operated by volunteer labor recruited by Lowry from engineering personnel. The Commissioner would not put up money for a record library so Coats had to borrow records from music stores.

The first program of the new station was broadcast at 8:30PM on Tuesday, March 13, 1923. It was strictly an in-house M. T. S. affair with selections by staff members. The Premier, John Bracken, delivered the opening address. He paid tribute to the newspapers for their pioneer work in radio broadcasting. The intention of M. T. S. was to put broadcasting on a revenue-earning basis as far as possible and to develop it as a public utility for entertainment, instructional and commercial use. The Premier said that three concerts every week on Tuesday, Thursday and Friday evenings from 8:30 to 10PM were considered as meeting with general approval because a great number of listeners wanted plenty of free air time to listen to programs from distant points.

In addition, records, news, sports and market reports were broadcast from 12:30 to 2PM daily except Sunday. On Sunday night there was a concert of sacred music at 9 PM. The final time slot in the Thursday evening program was occupied by the "University Hour", a series of talks by university professors that became one of CKY's most popular features. The decision to limit programming to three week-nights was indicative of deficiencies in the state of the radio art in 1923 that resulted in severe inter-station interference.

The CKY transmitter embodied the best available principles but it emitted a wave that could be considered broad by modern standards.

It occupied at least one-fifth of the dial on the average receiver (as had CJCG and CJNC) and blocked out weak signals from faraway stations over a substantial portion of the radio spectrum.

A complicating factor was that the technique of controlling wavelength or frequency by a quartz crystal had not been developed and transmitters tended to wobble off their assigned wavelength. Much of the fault lay with the receivers, especially the most popular type, the aerial circuit. These were inherently broad-tuning and non-selective.

The Legislature was in session when CKY went on the air. There was only a brief mention of the entry of the province into broadcasting. This occurred during the Wednesday night sitting, March 14.

J. T. Haig, Conservative, rose on a question of privilege to say he understood that the M. T. S. had ordered its own apparatus. He had hoped the government would consult the legislature before embarking on such an important change in policy. He thought the House should have more control over the Telephone Commission. In reply, the minister said it was incorrect to suggest that the government had forced the newspapers to shut down their stations - it had, on the other hand, been a mutually agreeable arrangement. He went on to say the government had no intention of imposing a tax on radio receivers but that the M. T. S. expected to obtain some revenue through rentals.

A Labor member, F. J. Dixon, also protested the government's failure to notify the

House before commencing broadcasting. There was no further discussion of CKY.

M. T. S. gets greedy and gains control of broadcasting in Manitoba.

On April 27, 1923, the Hon. E. Lapointe, Minister of Marine and Fisheries, introduced Bill 114 in the House of Commons, an act to amend the Radiotelegraph Act 1913.

The amending act read: "The Government in Council may authorize the payment of a portion of the license fee to a provincial government or private company for services given in connection with the operation of broadcasting stations."

Speaking to second reading on May 1, the minister said: "This bill is to meet specially the situation in Manitoba where the two broadcasting stations operated by the newspapers have been abandoned on account of cost. The province operates the telephone system and is quite prepared to operate a broadcasting station but wants something in return. We think it is only fair that the thousands of persons who are getting enjoyment out of their receiving apparatus should pay something to the broadcast station that supplies the enjoyment. The idea is to give part of the license fee to the provincial government or to any private company that will operate a broadcasting station."

The bill passed third reading on May 3 and was given royal assent on June 13.

No other province and no private company availed themselves of the revenue from the license fee split. Manitoba first asked for 90 percent then 85, but finally settled for 50 percent of the one dollar fee subject to review after a year with the suggestion the fee then be doubled.

The CANADA GAZETTE for June 16, 1923, published revised Regulation 2(b) of the Radiotelegraph Act which became effective May 15, 1923.

The new regulation read: "Application for license to install and operate any of the following classes of stations for radiotelephony in the province of Manitoba will, under arrangement between the Dominion and Provincial governments, be submitted to the Minister of Telephones of the province of Manitoba for endorsement before being finally dealt with by the Department of Marine and Fisheries: - Public and Private Radiotelephone Stations, Private Commercial Broadcasting Stations, Amateur Broadcasting Stations." The department stated, however that, "The control of all stations will continue to function under the regulations issued by this department."

Radiotelegraph, amateur experimental and technical-training school stations were exempt from the new regulations. The Manitoba amateurs were told by the department there would be no change in their status without full consultation between the department and the amateur fraternity.

Although the Minister of Telephones obtained only a small part of what he asked for in his letter of February 27, the practical result of Regulation 2(b) was to grant

a virtual monopoly of radio broadcasting in Manitoba to the Manitoba Telephone System. Commissioner Lowry was adamantly opposed to any station competing with CKY. His point of view regarding other broadcast outlets is shown by these quotations from three of his letters: "We want it understood that no other broadcasting stations will be allowed ... as such would be a duplication and economically wrong." And, " One single station in each state or province is going to be the ultimate solution." And finally, "If Brandon had a station, Portage La Prairie and probably Neepawa would want similar facilities."

Lowry tries to stifle radio amateurs and the CRRL is born in Manitoba

The Winnipeg newspapers avoided attacking the monopolistic practices of the M.T.S. but Lowry found himself faced with an antagonist when the magazine, THE RADIO BUG, began publication in June, 1923.

The RADIO BUG, the only general interest radio magazine ever published in Winnipeg, catered to both Amateur Radio operators and broadcast listeners. The editor of the first two issues was V. T. Thomas, 4CE. When Thomas left for the U.S., J. Kelvin Maxwell took over the editor's job. The RADIO BUG survived until November, 1924, and during its short life waged an unremitting anti-Lowry campaign. Lowry called the magazine a scurrilous and irresponsible rag.

On August 14, 1923, editor Maxwell arranged a meeting, in his office, of local Radio Amateurs desirous of forming a trans-Canada amateur organization.

Speaking as one who attended this meeting (ie. the author G. Reynolds, 4AG), it was obvious to Manitoba amateurs that, in the absence of a strong national association, they were helpless to prevent any curtailment of their privileges.

Lowry was constantly harping on the alleged interference with radio broadcasts by Radio Amateurs. In a letter to the Minister of Telephones on January 4, 1923, under the heading "Radio Legislation," Lowry stated that, "The province should have some control which would stop interference or annoyance from amateurs."

One clause of the Manitoba Radio Regulation Act proposed by Lowry read,
"Any person who ... without lawful cause or excuse, interferes with or obstructs any radio transmission, shall be guilty of an offence and shall be liable to summary conviction and a penalty not exceeding \$100 or one month's imprisonment."

Another clause stated,
"The Commission may not issue licenses for telephone and telegraph stations which are considered to be a danger or detriment to the development or progress of radio communication."

In his May 2, 1923, letter to the Minister, Lowry said, "Amateur transmitting stations, especially telegraph stations, are more or less a menace to commercial business and under the present system there is no control and not a proper

system of inspection, we would not object to a limited number of amateurs operating on a wavelength to be determined and during hours which would be set."

The RADIO BUG, in its August-September 1923 issue, reported that Lowry had told a meeting of radio dealers that "Amateurs were only a nuisance, and this type of license should either be eliminated or raised to a prohibitive amount."

If the Manitoba Radio Regulation Act had become law and the Commissioner had been given authority to write the regulations and appoint inspectors, the future of Amateur Radio in Manitoba would have been bleak indeed.

A second meeting was held in the RADIO BUG office on September 1st and an ad hoc committee was set up to organize the Canadian Radio Relay League. League headquarters were to be in Winnipeg and the official publication was to be THE RADIO BUG. The decision to form the C.R.R.L. created some consternation at the American Radio Relay League head office in Hartford. Incidentally, the word 'Relay' refers to one of the the original objectives of the A.R.R.L., a network of amateur stations formed to relay messages coast-to-coast.

ARRL opposition to the 'first' CRRL and Federal concern in Manitoba

In the November, 1923, issue of QST, the A.R.R.L. magazine, there appeared a long editorial headed: C.R.R.L. According to the editor, "The A.R.R.L. was functioning in Canada at the request of leading Canadian amateurs who realized that Canadian amateurs were not sufficient in number to finance a successful organization. When the Canadian amateurs elect to separate and maintain their own organization, the A.R.R.L. will withdraw from Canada. In the meantime, the A.R.R.L. considers it has a sacred trust in Canada and it proposes to safeguard that trust if it withdrew in favor of an amateur organization fostered by a publishing company for pecuniary motives."

These were noble but Manitoba hams felt that they had been left to fight the battle alone when Commissioner Lowry was attempting to emasculate amateur activity in the province. There is not a jot or tittle of evidence to show that the A.R.R.L. intervened on behalf of Manitoba amateurs.

The C.R.R.L. divided Canada into seven divisions and in September elections were called for divisional directors. The league received enthusiastic support west of the Lakehead but in the east it got only a lukewarm reception. Later in the year the directors decided to change the name from C.R.R.L. to Canadian Amateur Wireless Association to avoid further confrontation with the A.R.R.L..

The C.A.W.A. eventually folded when it was unable to generate country-wide support and its house organ, THE RADIO BUG, ceased publication (presumably in 1924?).

On September 22, 1923, the Deputy Minister of Marine and Fisheries wrote the Minister of Telephones that the radio-telephone business in Manitoba had become a matter of some concern to the Dominion government, the strongest representations having been made to the effect that the actual working out of the arrangement between the two governments was severely handicapping the development of the radio industry in Manitoba.

Commercial interests with plenty of financial and political clout were endeavoring to break CKY's stranglehold on broadcasting. One of the interveners on behalf of private industry was the Radio Corporation of Winnipeg (owned by the Toronto-based Canadian Radio Corporation) which was acting as the sales agent for the FREE PRESS station. They had applied for a license with the intent of putting the CJCG equipment back on the air to promote the sale of the entire station unit. Lowry had refused to endorse their application unless the radio Corporation agreed to certain conditions, one of which was a guarantee that the standard of broadcast programs be as good as CKY's. After further discussion, Radio Corporation withdrew their license application.

Amateur Radio is used in an emergency situation in 1923

In the Fall of 1923, radio was used for the first time for communication between an isolated Manitoba mine and Winnipeg. The mine was the Bellvue, situated in the wilderness 30 miles inland from the east shore of Lake Winnipeg and 110 miles northeast of Winnipeg. Mail and supplies reached the mine from Riverton, some 75 miles north of Winnipeg on the west shore of the lake. In summer the route was across the lake by boat and then along a winding river with numerous portages

to the mine; in winter, by team across lake ice and then over a rough bush trail to the Bellvue. During the spring break-up, when lake and river ice was melting, and during the fall freeze-up when the ice was forming, the mine was cut off from civilization - plane service into the north was only a hope for the future.

The mine manager wanted to investigate the practicability of radio as a means of all-seasons communication with the city and had ordered a receiver and a 20 watt transmitter from the Acme Magneto and Electrical Company in Winnipeg. The owners of the mine, the American Development Company of New York, had applied for an experimental license, which at that time carried a 9 call, with the idea of getting a commercial license if the test proved successful. The author (George Reynolds)

was offered a three-way job as assayer, mine survey helper and radio operator. The radio equipment arrived on the last boat across Lake Winnipeg for the year along with advice in the mail that the license application had been rejected because the company did not have a Canadian charter. It would be necessary to reapply in the name of the manager, a Canadian citizen. In the interim, the author would use his amateur call, 4AG, when operating the set.

On November 2 1923, an emergency arose that necessitated getting the radio operational without delay. The mill foreman's wife, Mrs. E. G. Symms, who was expecting a baby, suddenly developed complications with which the local Indian midwife was unable to cope and a doctor was urgently needed. After unsuccessfully attempting to raise a Winnipeg station, contact was made with Harry Drew, 9EBT, Fargo, North Dakota. He was asked to phone the company's Winnipeg office and have them try and get a doctor to the mine. The company's vice-president, H. V.

Hudson, contacted Dr. S. Thompson, the resident doctor in Riverton.

The doctor volunteered to try and reach the mine. After a hazardous trip by dog team over newly-formed ice on Lake Winnipeg to Manigotagan on the east shore, he was taken by a guide through the bush to the mine, travelling on horseback. He arrived at Bellvue on November 5 in time to save the mother's life, although the baby was stillborn.

Because of their part in getting badly needed medical assistance to the remote community, 4AG and 9EGT were awarded citations by the American magazine 'Popular Radio' for the most outstanding achievement by radio amateurs in 1923. Later the station power was increased to 50 watts to enable regular

communication with Winnipeg using the special experimental license 9AD.

When good reception conditions returned in the autumn of 1923, CKY introduced an unusual service to its listeners. Sensitive receivers with directional antennae were installed by M.T.S. at locations in the city that were relatively free from man-made interference.

The first spot chosen was in the Fort Rouge district, the second on Atlantic Avenue. When one of the receivers monitored a strong signal from a U. S. broadcaster, it was fed by telephone line to CKY and the received program was put on the air. During the course of an evening, a variety of programs from different U.S. stations might be re-broadcast over CKY.

Lowry was continually extolling the excellence of CKY productions yet if an entertaining program was coming through from Denver, Des Moines or elsewhere, the unpaid CKY artist was unceremoniously bumped off the air. In some quarters it was felt that this scheme might be counter-productive in that it would encourage listeners to buy receivers capable of picking up U.S. broadcasts direct in preference to CKY's own offerings.

Spectrum assignments below 200 meters -CNRW phantom station licence

In 1921, amateurs had succeeded in conquering the Atlantic using low power on short waves.

By 1924, the old concept of ultra- high power and long wavelengths for transoceanic communication had been abandoned by the commercial radio companies. A mad scramble was now on to stake out claims in what had formerly been the Amateur Radio ghetto below 200 meters.

At the 1924 Washington Radio Conference, to which Canada was a signatory, the short wave (high frequency) spectrum was apportioned between the various radio services. Amateurs were granted band segments at 80, 40, 20, 10 and 5 meters.

With inter-continental contacts a daily occurrence, a hurried decision was made to adopt unofficial national prefixes. Canadian hams began using C.

Broadcasters were happy to read in the report of the Department of Marine and Fisheries for the year ending March 31, 1924, that the department was relaxing the ban on direct advertising, to see whether advertising could be handled in such a way as to make it acceptable to broadcast listeners. The necessity for this change in policy can be seen in the figures for CKY operations for the first six months.

Overall costs were \$3,119 while revenue from indirect advertising was only \$1,806.

The most interesting local event in broadcasting in 1924 was the granting of phantom radio license, CNRW, to the Canadian National Railways. A phantom station was, like an amateur broadcasting station, uniquely Canadian. The holder of a phantom station license did not own a broadcast plant, but purchased air time from a licensed broadcaster and used its phantom station license to identify its programs.

Sir Henry Thornton, then President of the CNR, had developed the idea of establishing a chain of radio stations across Canada which were either owned by the railway or which operated under phantom radio licenses. These stations produced high quality programs that could be picked up on the radio equipped CN transcontinental trains for the entertainment of the travelling public. It was the first Canadian radio network and proved to be immensely popular with listeners in all parts of the country.

In Winnipeg, the CNR leased time from CKY and broadcast using the call CNRW. This provided CKY with substantial revenue and did not violate Lowry's strongly held principle that there should be only one broadcast outlet in each province.

Over the years there have been two radio broadcasting stations in Manitoba, one publicly owned and one privately owned, that have had the same callsign, CKY. In 1947, the federal government issued a policy statement that, in future, issuance of broadcast licenses to provincial agencies would not be permitted.

On January 23, 1948, the Hon. William Morton, Minister of Telephones for Manitoba, announced that CKY had been sold to the Canadian Broadcasting Corporation for \$200,000. CKY operated as a CBC outlet until September 3, 1948, when a 50,000 watt CBC transmitter near Carmen, Manitoba, went into service with the call sign CBW.

ACKNOWLEDGEMENTS

Much of the material in these articles was based on the author's (4AG/VE4AJ) recollection of events in the field of radio in Manitoba throughout a period of 60 years.

"The Pas Herald" was the principle source of information on the Marconi wireless stations at The Pas and Port Nelson.

The Winnipeg newspapers are the basis of the story on CJCG and CJNC.

Information on the various amateur radio clubs was found in the "FREE PRESS", "THE TRIBUNE" and "THE RADIO BUG".

The account of de Forest's visit to Winnipeg is from the Winnipeg papers; biographical data on de Forest is from his autobiography, "FATHER OF RADIO", published by Wilcox and Folett, Chicago, 1950.

"MANITOBA CALLING" a publication of the Manitoba Telephone System, furnished information on CKY.

The Lowry correspondence is located in the Department of Public Works file, RG-11, A1-Box 3 under Radio 1923 in the Provincial Archives of Manitoba.

"HANSARD" and the Sessional Reports of the Departments of Marine and Fisheries, Naval Service and Railways and Canals have proven to be valuable sources of information.

The "CANADA GAZETTE" has been consulted for details of the radio regulations as they changed over the years.

A host of publications in the public domain have provided minor details including the "SCIENTIFIC AMERICAN", "RADIO NEWS", the "MANITOBAN", Marconi's "YEARBOOK OF WIRELESS TELEGRAPHY AND TELEPHONY" and "POPULAR RADIO".

Of the individuals whose remembrances of early wireless were most informative, there are at least five who should be especially thanked.

They are, Herb Jeune of Victoria, who was 84 at the time of writing and who had a fund of stories about station VBM; Arthur Scott, possibly the only surviving member of the Canadian Central Wireless Club; Douglas C. Chapman, one of the operators of the FREE PRESS wireless during the General Strike in Winnipeg; Graham Spry of Ottawa, the secretary of the 1919 Winnipeg Wireless Club and particularly, William G. Speechly, ex 4AZ, who suggested several very productive research leads.

Finally I am deeply indebted to Mrs. Elizabeth Cam, who scrutinized the article with professional skill and pointed out numerous errors in

spelling, style and syntax.

..... The Author GEORGE F. W. REYNOLDS (ex VE4AJ)

These 20 articles published in "THE NEWSCASTER" over two years were taken from a publication by George Reynolds which is available from the Manitoba Historical Society,

(Ref: <http://www.mhs.mb.ca/docs/transactions/3/earlyradio.shtml>)

I also have, on audio tape, 2 half hour CBC radio interviews (1980) with George Reynolds about radio in Manitoba in the 1920s. Ed Henderson VE4YU

Thank you to Mrs. Wilda Ward, daughter of George Reynolds, for her approval of publishing this paper in the NEWSCASTER and for donation of papers, magazines and data used in its creation.

Submitted by Ed Henderson, VE4YU