



Canadians on Radar Background

In 1940, Great Britain stood alone against the Nazi horde. Her greatest need was for trained technicians to service and maintain her rapidly expanding radar defences. She appealed to Canada and Canada responded. From December 1940, to May 1943, five thousand trained Royal Canadian Air Force Radar Officers and Airmen Radar Mechanics passed through Pier 21 on their way overseas to serve with the Royal Air Force. Dispersed in penny packets from North Africa and Malta, from Sicily and Italy to Northwest Europe, from the Murmansk Run to Australia, from Burma to Britain and "neutral" Turkey, these Canadian radar specialists provided over one third of the RAF's expertise in this critical, war-winning area. In all, over six thousand RCAF radar specialists were sent to serve with the Commonwealth and other Allied Air Forces.



Frederick 'Fred' Roy Hunt

Royal Canadian Air Force 1942 -1946 CAN R156302

In the spring of 1941 I completed the Commercial Course at the local High School in Port Hope, Ontario at the age of 17. Because of my requirement for glasses, my youthful aspiration to join the Royal Canadian Air Force in an aircrew capacity was impossible. However, in the early summer an advertisement appeared in the Toronto Star offering training prior to actual enlistment for people interested in radio. I applied and after a satisfactory ground crew medical examination commenced a six and a half months' course of introductory radio theory and practice at the Central Technical School in Toronto. After satisfactorily completing the course in mid-February 1942, the class was inducted into the RCAF in mid-March. Two months of square-bashing followed before going to

the radar school at Clinton, Ontario. Here another three months and a half were spent training on airborne and ground radars. Then it was two weeks' embarkation leave before arriving in Halifax.

At the Y-Depot in Halifax, we spent our time on daily route marches, which usually ended downtown, or fatigues. In late September, a draft was formed to go overseas. We marched to the pier and boarded the *Louis Pasteur*. However, before bedtime that night, the draft marched back to the depot. It appears that the ship was infested with bed bugs after having completed a voyage from Africa with a German prisoner-of-war contingent. Back to route marches and fatigues. At this time, the Allies were preparing for landings in North Africa and there was a shortage of shipping. In mid-October, Y-Depot was overpopulated and a large draft of us was shipped off to the RAF depot at Moncton where we first suffered from RAF food. On or about the 27th of October 1942, we returned to Halifax and boarded the *Queen Elizabeth*.



We landed at Greenock in Scotland on the 6th of November and the radar mechanics boarded a train for the RAF depot at Padgate near Manchester. After processing here and indoctrination into the RAF life we were posted to various radar stations. I was the sole Canadian going to RAF Bempton, a CHL ground station on the east coast of Yorkshire near Flamborough Head. The station here was mainly concerned with the plotting of bomber raids by the RAF and the occasional German raid on Hull. A small army radar detachment plotted shipping in the North Sea and sent their plots to the Navy at Hull.

In mid-March, 1943, I was posted to Renscombe Downs and joined the newly formed Light Warning crew, LW6096. The Light Warning Set was a small ground radar set operated by a small Royal Air Force crew and provided early warning of approaching enemy aircraft. Various Light Warning Crews saw operation service in the Far and Middle East, North Africa, Italy, as well as in North-west Europe.

The Light Warning Set came in two versions where the same radar equipment was mounted either in a specially constructed tent or in a $\frac{3}{4}$ -ton Ford signals-van. During transit, the tent-mounted equipment could be dismantled and transported in about 15 wooden boxes. Each box could be carried by a maximum of 4 men. In most cases, the tented version's boxes were transported in a 3-ton Crossly truck. However, in

theory, mules, camels, etc could also carry the boxes. After two weeks' training and some leave, the crew spent the remainder of 1943 and a few months of 1944 at various sites in the southeast of England. During the early summer, our crew with two other LW crews and a larger mobile GCI (Ground Controlled Interception) radar unit were prepared for transfer to operations on a Greek Island. This posting was cancelled and we thought later that it was a security hoax as it was at this time that the landing in Sicily took place. In the fall, the LW was posted for a two-week

Combined Operations course at HMS Dundonald near Troon in Scotland. This consisted mainly of combat training and wet-landings of vehicles from Landing Craft. In mid-winter the LW crew was posted to Tarrant Rushton airfield. Here we took part in a demonstration of the loading of the LW equipment in gliders. In late March 1944, the author was transferred to a newly formed Eureka-H Beacon crew, RAMSU 5320, (RAMSU = Radar and Mobile Signals Unit). The five-man crew operated and maintained one of eight ground-based navigational radar beacons used mainly by nighttime photo reconnaissance Mosquito aircraft fitted with the airborne Rebecca-H equipment and operated by 140 Squadron of the RAF. The two-week course on the equipment was followed by another trip to Renscombe Downs for a refresher course on mobile operations. On the 28 th of June the unit landed in Normandy. It was to be a wet-landing from the Landing Craft, but the NCO i/c of our sister crew insisted that the navy measure the depth of water into which we were to drive. This appeared to be more than ten feet. The Craft went around for another try but in the meantime free space occurred at a dock and so the two beacons landed dry-shod.

On July 2 nd our beacon moved to a site northeast of Caen accompanied by a five man Wireless Observer Unit (WOU) to provide wireless communications to HQ. We were within artillery range of the Germans all the time that we were at this site. While the beacon crew was on the south side of a hill facing the enemy, the WOU were on the north side at a crossroads facing HQ for better communications. On July 22 nd , a few shells fell near the beacon and then the fire shifted over the hill. After firing ceased we found the WOU post had suffered a direct hit with two being killed and the other three wounded. Our beacon was then withdrawn for a few days while another newly landed beacon fulfilled our role at a safer site. In mid-August we began operations in the American sector with another WOU unit. However, with more of the area in Allied hands, we were able to operate beyond artillery range. This also had accuracy advantages for the aircraft navigators.

The crew moved up to Belgium in the first week of September and operated a few miles south of the town of Oudenaarde during the clearing of the Scheldt Estuary. In November the beacon again moved

and operated just east of the Gilze-Rijen airfield in the Netherlands. Things were quiet here except for New Year's Day, 1945. The German airforce attacked the airfield. Luckily, we had been stood down the previous night and our vehicles were undercover in a barn belonging to the family where we were billeted. However, a Canadian army vehicle travelling along the road a short distance from us

was strafed by a German aircraft. The soldiers had extensive shrapnel wounds. A group of Dutch cyclists on their way to church also suffered some casualties. We dug out our medical kit and administered first aid and then carried them off to the airfield hospital in one of our vehicles.

In late January our beacon returned to HQ and we were granted leave to England. Upon our return, we spent our time at the old site south of Oudenaarde. We operated in the daytime for training and test flights by the aircrew. On March 24 the beacon provided guidance to the many Dakotas carrying the airborne troops for the crossing of the Rhine. The crew left the continent on the 20 th of August and ended up at RAF Thame. On the 15 th of September the author left the crew and went to the RCAF Repatriation Depot at Torquay. At Torquay we were subjected to the usual checkups and allowed to put up our Corporal hooks, which had been awarded by the RCAF but not recognized by the RAF. On September 27 th we sailed from Southampton on the Ile de France and landed in Halifax a few days later. On to RCAF station Dorval where we were granted a month's disembarkation leave. In early November, I reported to RCAF Station Clinton again, having decided to give the permanent airforce a try. Then followed a six-month course on all the communication equipment used by the service, plus courses in Morse code and microwave radar. During this time, I was corporal i/c of a barrack block of airmen who were awaiting discharge after having worked on constructing airfields in Newfoundland. A very interesting experience. With the prospect of the peacetime airforce consisting mainly of bull, I took my discharge on June 3 rd , 1946.

Having done well in the educational tests prior to discharge, I decided to try University. With six months at the Veterans Rehab School in Toronto completing my Senior Matriculation and four years in the Honours Bachelor Science in Radio Physics, I was awarded my BSc in 1951 from the University of Western Ontario (UWO). At that time, the Physics Department at UWO had a multi-year contract from the United States Air Force in the studies of the Upper Atmosphere. I was offered the chance of constructing equipment to measure the half-life times of radioactive sources and this resulted in aMSc in 1952. Then followed three years in adapting and using the equipment to measure the half-life of one of the excited states of the mercury atom. A PhD was awarded in 1955. These four years were financed by the remainder of my veteran's credits,

scholarships from the National Research Council of Canada (NRC), and the USAAF.

A position was awarded to me at the Radio Division of NRC in Ottawa. At that time, the cold war was very hot and about ten years was spent with the Defense I section where research, design and development were carried out on “quick-fix” improvements for use mainly on the RCAF Pinetree radars. If these fixes were applicable, they were also used on Army and Navy radars. These fixes consisted mainly of additions to the radars to improve their capability against electronic jamming and chaff. As with most projects at NRC, there was not a clean break between the end of one and the start of another.



In 1965, NRC began phasing out its defence work and for the next five years; I acted as radar consultant to the NRC Associate Committee on Bird Hazards to Aircraft and as secretary to the Radar Subcommittee of the International Committee on Bird Hazards. The work included some research and development by myself. This was followed by another five years working on weather radar problems. Two or three years were spent investigating the use of radar deployed on helicopters flying in advance of icebreakers. By such use, it was hoped that the radars could be used to measure ice thickness thus providing the easiest paths for the boats. A joint program of NRC and the Defence Research Board into radio-frequency (RF) hazards to humans had the author designing the necessary measurement equipment. At the same time, I became a member of the Canadian Standards Association committee on Radiation (RF) Hazards. In 1979, the author became Scientific Secretary to the Electrical Engineering Committee of the National Scientific and Engineering Research Council.

As the only permanent member of the committee, I provided its continuity as one third of its members were replaced each year. The committee made the annual decisions on the dispersal of several million research dollars to the Electrical Engineering faculties across Canada.

In 1986 the author went into retirement to spend time with his wife Alice whom he had met and married in Ottawa. In the early years, the winter

months were spent in Florida and the summer months at a cottage near Perth, Ontario. Trips to Europe were taken every second year until the mid-1990s, sightseeing as well as visiting wartime friends. Lately, these trips have ceased to be replaced by trips to Cuba during the winter. Most of my time is now spent in reading-mainly wartime history and detective novels.

Frederick R. Hunt

August, 2003