

POLICIES AND POLITICS
in
RCAF RADAR - WORLD WAR II

Prepared by Robert F. Linden

Policies and Politics

Policies and Politics

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Policies and Politics

Policies

A desperate Great Britain in the dark hours of 1940 sought technicians and technical officers to service and maintain the RDF (later called radar) systems so vital to the defence of their Island. Britain's defensive radiolocation chain had fully proven its worth and, as a long war appeared increasingly certain, plans were advanced for extensive expansion of the "Chain Home" (CH), "Chain Home-Low- Flying" (CHL), "Anti-Aircraft Gun-Laying" (GL) and "Search-light Control" (SLC) RDF systems. Also, an immense commitment was being made towards development of "Ground Controlled Interception" (GCI) and to RDF-2, airborne systems (such as "Airborne Interception" (AI), "Air to Surface Vessel" (ASV) and others as yet not even on the drawing board) as well as to Naval surface-search and gun-control radars. The birth of electronic warfare was imminent.

British staffing resources were by now strained to the limit. There was immediate and enormous demand for recruits, not only for the three services, for industrial workers and for all of the civil functions, but also there was a predictable limitation in numbers of technically-educated personnel of the type required to build, maintain and operate the rapidly expanding RDF systems. It became obvious that assistance from outside in the form of trained radio technicians would soon be required.

On the 4th of October, 1940, Sir Gerald Campbell, the U.K. High Commissioner to Canada advised the Canadian Dept. of External Affairs that the RAF was in urgent need of recruits to maintain and operate RDF equipment as there was a serious shortage of trained personnel in the U.K.. The deficiency of radio officers and radio mechanics was most serious. (1)

RCAF recruiting centres were authorized on Oct. 10/11 to recruit immediately up to 100 radio officers and 1000 radio mechanics. (2) All possible sources of recruiting were explored. The Canadian Broadcasting Corporation made a broadcast in mid-October:

"A large number of radio men are required by the R.C.A.F for service overseas, according to an announcement by the Minister of National Defence for Air at a press conference today....."

"Only experienced men are to be accepted, and they should apply in the first instance at the nearest RCAF Recruiting Centre in their locality, but it is particularly requested that only thoroughly qualified men should apply....."

"The majority will be required for ground duties only, and it is expected that they will be sent overseas immediately on completion of their recruits training."

1. 510C/4 4 Oct., 1940 *Radio Mechanics Detachments*, microfilm RG24E7 C1232 National Archives of Canada
2. *Ibid* S.15-1-329 Vol. 2, 4 June 1943

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"A limited number of vacancies also exist for officers in the same branch. Candidates for commissions should preferably have a University degree in Electrical Physics or Radio Engineering, and a first class knowledge of modern radio both from the theoretical and practical side....."

Six weeks after the mid-October radio broadcast, during which there was strenuous recruiting activity, less than two hundred of the one hundred radio officers and a thousand radio mechanics had been recruited. Throughout the winter and spring, in dribs and drabs the recruiting continued. In total this recruiting drive had netted only 61 radio officers and 794 radio mechanics. All of them received their RDF (radar) training in the United Kingdom.

There was wastage because the recruiting standards were uncertain and the Department of Transport (DOT) inspectors were testing people to a vague standard, and not to any particular objective within their responsibility. In many cases the DOT inspectors were very lenient because, after all, these men had volunteered to serve their country, and would be serving overseas, and would be trained by the Royal Air Force. The wastage in officers was about 10%. Some of them were transferred to other branches, others were returned to Canada and released from the Service. The wastage in technicians was higher than this, but this was resolved in that those that did not pass a technical exam were sent to technical colleges in the United Kingdom for basic training in electronics. They were then posted to Yatesbury for further training.

In late November, 1940, it was evident that the required officers and mechanics with radio experience were not available in Canada. An RCAF committee examined the desirability of lowering the minimum educational standard, high school entrance, in order to increase the number of recruits. This committee decided that the educational and technical qualifications laid down could not be reduced. It recommended that an alternative was to train men of the Dominion and Youth Training Scheme in the technical schools throughout Canada, and that these trainees should have a junior matriculation or equivalent technical school education.(1)

In January, 1941, the High Commissioner for the United Kingdom wrote to the Prime Minister of Canada:

" I have now however received a telegram from the Secretary of State for Dominion Affairs which shows that the needs of the United Kingdom in this respect are far greater that can be met from recruitment in Canada alone, and I have been asked to approach the Canadian Government immediately with the view to securing their cooperation in the enlistment of volunteer United States radio mechanics to a total of 8,000 for work for the Air Force and Army and possibly a few for Naval purposes."

1.) RCAF AFHQ file S15-1-172, 20 Nov., 1940

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" It is, I am informed by Lord Cranborne, no exaggeration to say that the Radio Direction Finding was a decisive factor in winning the Battle of Britain, and our experts look to it to play a vital part in meeting the problems of the night bomber and attacks on merchant shipping. For these reasons the further expansion of Radio Direction Finding has been allotted the highest priority by the Cabinet."

"The need to get this help into service with minimum delay is so urgent that we cannot afford to wait until inexperienced personnel have received ab initio training.

"A committee, formed by Lord Hankey to comb all sources in the United Kingdom has found that only a proportion of the requirements in experienced radio personnel will be available there, and the recent drive by the Royal Canadian Air Force to secure radio mechanics has shown that immediately available Canadian sources are exhausted. This being so, and greatly as they welcome the training scheme which the Canadian authorities are organising in this country, the United Kingdom government are forced to explore the United States field, which is the only remaining potential source of the numbers required." (1)

The Canadian Government agreed to act as a staging area for a civilian corps of radio mechanics recruited in the United States (2) and, at the same time, an ab initio training scheme for RDF (Radar) mechanics in the RCAF began to take shape. In February, 1941, a conference of representatives from Canadian universities was held in Ottawa for the RCAF to recruit and the universities to conduct ab initio training in radio physics for 2,500 men. The initiator of this proposal was Dr. E.F. Burton, Director, Department of Physics, University of Toronto.

Wire News - Canadian Press

Ottawa. March 31 (CP)

The Royal Canadian Air Force officials said tonight that there is "urgent need" for 2,500 technicians, men who will be given a short, intensive course in radio work in Canada and sent overseas to take their places in the ground defences.

The RCAF has been recruiting skilled radio mechanics to take these posts for several months " but this source of supply seems to have been nearly exhausted", the announcement said.

The RCAF now proposes to take untrained radio men, provided they have passed their junior matriculation or attained an equivalent standard for this work. The age limit is from 18 to 43, with preference for those between 20 to 27. Medical standards will not be as strict as for those entering the aircrew, but call for "sound health".

Men recruited as radio technicians will be posted to a Manning Depot for one month's

1. RCAF AFHQ file S15-1- 329 Vol. 2.

2. Letter from High Commissioner of UK to External Affairs file 510C15 2 May, 1941

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training and outfitting and then will be sent to one of thirteen Canadian universities, where their technical training will be undertaken.

The university course will last about 13 weeks "and much must be crowded into the short space of time allowed", the announcement said. A progress examination will be held five weeks after the start of the course and those failing the examinations will be granted their discharge or be enabled to apply for other RCAF duties.

Radio technicians will be regarded as second-class aircraftmen. Graduates will be reclassified as leading aircraftmen. Commissions will be granted to graduates of "outstanding ability". The radio men are asked to apply at RCAF recruiting stations.

To attract volunteers of the calibre required, recruits were promised that the top 10% of graduates would be commissioned immediately and a further 10% would be commissioned in the field.

In May/June 1941, 2,145 airmen began their training at 13 universities across Canada: Universities of Saskatchewan (80), New Brunswick (100), Alberta (120), British Columbia (150), Manitoba (250), Western Ontario (100), Toronto (500); McGill (500), Mount Allison (35), Dalhousie (50) McMaster (100), Queen's (100) and the Ontario Agriculture College. (50).

Standards were high; wastage or failure was 40 percent of all beginners. At the same time ground was being broken at Clinton, Ontario, for the construction of No.31 Radio School, Royal Air Force, for the purpose of training the ab initio radio physics graduates in the principles of RDF(Radar).

A series of appeals from the United Kingdom escalated their requirements ever upward. Subsequently, considering manpower requirements elsewhere, the Canadian War Committee authorized financial commitments to 5,000 on 9 February, 1942. By early 1942, No 31 Radio School was producing 65 trained radar mechanics a week and by April 1943 all but 223 of the 5,000 had been posted overseas.(1) But the British Air Ministry wanted still more and requested extension of the contract. The Right Honourable C.G. Power, Minister of National Defence for Air, who had been burnt politically by complaints of mis-employment or under-employment, categorically refused to provide personnel in excess of the 5,000 originally agreed upon.(2)

TERMS OF ENLISTMENT

The conditions of their enlistment were:

that they would serve with units of the Royal Air Force, or with units of any Allied Air Force,
that they would serve with any ship or shore establishment of the Royal Navy, and
that they would serve with any regiment or unit of the British Army.

1. RCAF AFHQ file S34-5-1 Vol. 2

2. RCAF AFHQ file S15-1-329 Vol. 2

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No other group of volunteers in Canada's Armed Forces in World War II had their particular conditions of enlistment. In a letter, dated 7 January, 1943, from the High Commissioner of the United Kingdom, Malcolm MacDonald, to the Under Secretary of State for External Affairs, Mr N.A. Robertson, it was stated:

"It was made clear in Mr Hankinson's letter of 17 March, 1941 with regard to the original 2,500 men that although that they would be enlisted in the RCAF, they might be required to do duty with the Navy (the Royal Navy) and the Army (the British Army)..."

As a follow-up in a memorandum to the Minister of National Defence for Air, and to Mr N.A. Robertson, the Deputy Minister for Air Services, DND, Mr S.L. de Carteret stated:

"Instructions have been sent to the recruiting offices that all personnel enlisting in this category may be attached to one of the other services with the distinct understanding that they will remain members of the RCAF".

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The Honourable C.G. "Chubby" Power, Minister of National Defence for Air, took a keen interest and became personally involved in providing RDF (radar) technicians that were so badly needed by the British government. In a visit to the UK in 1940 he was approached informally by the British government on the possibility of Canadians being recruited for this service with the RAF. Later, when the formal request came through, he obtained the necessary financial commitment and broadcast from the CBC to urge qualified people to enlist. Later, in 1941, he went on the air again to urge men of a high standard of education to come forward to enlist and be trained for "RDF" duties. His son responded to this call and he was posted overseas in early 1942.

Unfortunately, there were periods of mis-employment, lack of employment, and misunderstandings of purpose by the RAF for a number of these RCAF RDF personnel. There were two significant areas of contention between the RCAF and the RAF:

Airmen: On graduation from No. 31 Radio School, Royal Air Force, at Clinton, ON., the airmen were sent overseas with the rank of LAC and trade group B. After some practical experience the airmen were to have a trade test to up-grade to trade group A. At one point there was a backlog of over 1,500 airmen waiting for their trade test by the RAF. This was so unsatisfactory that the RCAF established its own travelling trade-test boards in the U.K.

Officers: On graduation, ten percent of the graduates were appointed to the commission rank of Pilot Officer and a further ten percent were to receive their commissions through the RAF in the field. Fed up with the procrastination by the RAF, the Minister of National Defence for Air proposed that the RAF establish a quota system to meet this commitment on their part.

"Chubby" Power's enthusiasm wore thin. At a meeting, February 23, 1943, with Malcolm

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MacDonald, the High Commissioner for the United Kingdom he recorded:

"RDF - I called to his attention the unsatisfactory position with regard to RDF. I stated that to a large extent young men of superior attainment had been scattered all over the world with no hope of preferment and that in many cases their services were not being used to the best advantages. I told him that I had spoken to the Air Ministry on the subject and finally had refused to send any more than the number already agreed upon."

"He stated that he understood that there would be a great need for these men later on. I agreed that the statement had already been made to AVM Scully in his recent visit. While I warned him that I would have to receive considerable criticism with regard to the general treatment of radio mechanics."

The acrimony continued, culminating in a most undiplomatic signal 28 June, 1944, from Powers to RCAF Overseas Headquarters:

"R.A.F have been informed by me on many occasions that we would send no more RDF largely because they do not know how to treat those that we did send to them. To your knowledge on several occasions War Committee has turned down requests for RDF. Replacements will be supplied only for persons repatriated to Canada. We are under no obligation and have no commitment to keep a specific number of RDF in RAF and there will be none. **Better let Air Ministry know this definitely and finally**".

And so it was, at the cessation of hostilities in Europe, as a matter of policy, the Royal Canadian Air Force implemented its decision to operate as an independent force for the Japanese campaign. All RCAF personnel attached to the RAF were repatriated to Canada or to RCAF units in the area. Swept up in this "Canadianization" were the 5,000 RCAF radar officers and technicians. This meant the immediate withdrawal, throughout the world, of 35% of the radar technicians serving with the Royal and Allied Air Forces. All were experienced and over 50% were non-commissioned officers. Additionally, hundreds of RCAF radar technical officers were lost to the RAF. Such was their loss that there are several recorded instances when senior RAF officers offered departing Canadians permanent commissions in the Royal Air Force. It is no stretch of the imagination that the existing acrimony became supercharged. For example, with this loss of technicians the RAF had to cancel their plans to extend the coverage of the most modern (at that time) air navigation system, GEE.(1) Had not the hostilities come to an abrupt end in August of 1945, for the RAF the unforeseen immediate withdrawal of 35% of their radar technical capability would have caused untold problems, but the damage was done. The bitterness expressed by Powers to the Air Ministry was returned ten-fold.

1.) Page 188 Vol III of "The Second World War, 1939 - 1945 RAF Signals." CD 1136

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CERTIFICATES OF APPRECIATION

RCAF HQ was notified in March, 1946, that 5,000 special certificates were being forwarded by Overseas HQ for the insertion of the names and subsequent issue to the radar personnel. The certificates were only for the RCAF and the choice of personnel to be honoured, and the dates of service required, would be a purely Canadian ruling.(1)

When the certificates arrived, April 25, the Records Office (RO) at AFHQ made enquiries to the Director of Personnel Careers (DPC) and the Director of Signals (D of S). "Both DPC and D of S have been checked but no knowledge of the background surrounding the origin of the certificate is known."(2)

By memorandum 25 April, D of S advised (surmised?) that "the Certificates... have been issued in a belated attempt to recognize the valuable services given to the RAF by Canadian Radar Mechanics. The need to make this recognition was brought to the fore during the recent campaign by the RCAF to have its radar mechanics repatriated. ... So the Air Ministry has taken this step as the only one possible to make amends."

D of S then went on to caution that "When the terms of service necessary to pick out these 5,000 men are determined they should be examined to see if there are other contemporary mechanics, sent overseas, to whom an injustice would be done by restricting the certificates to the original 5,000."(3)

The Air Member for Personnel (AMP), 23 April, by signal, requested information from RCAF Overseas HQ on the background and qualifications for the distribution of the certificates. Air Vice Marshal (AVM) Johnson, AOC RCAF Overseas HQ being close to the scene of acrimony sent a personal IMPORTANT signal to the RCAF Chief of Staff AVM Leckie.

"THIS CERTIFICATE WAS PRODUCED BY THE RAF ESPECIALLY FOR RECOGNITION OF RCAF RADAR PERSONNEL WHO WERE SUPPLIED BY THE RCAF FOR SERVICE WITH THE RAF IN RESPONSE TO THE UK SPECIAL APPEAL FOR RADAR PERSONNEL NO REPEAT NO SIMILAR CERTIFICATE IS BEING ISSUED TO RAF RADAR PERSONNEL AND THEREFORE IT IS ENTIRELY AT RCAF DISCRETION TO DETERMINE ELIGIBILITY (,) I SUGGEST AS A BASIS FOR ELIGIBILITY A MINIMUM OF SIX MONTHS SERVICE IN A GROUND RADAR POSTING OVERSEAS"(4)

(This suggestion became the "red herring". It was taken out of context. All of this group did volunteer "to man the vital radar stations" but many were assigned to other radar duties in accordance with the terms of their enlistment.(5)

1.) RCAF AFHQ file S34-5-1 Vo III

2.) *ibid*

3.) *ibid*

4.) *ibid*

5.) *The terms of their enlistment were that they would be required to serve with any unit of the British Armed Forces*

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It was then noted that because of rotation with RCAF home forces personnel, which began in late 1945, 5,800 or 6,100 (depending upon which figure is selected from the same paper) RCAF radar personnel had been sent on loan to the RAF.

May 7, 1946, in a memorandum to AMP, file S34-5-1, the Records Officer expressed his inability to issue the certificates. He assumed that the "Recorded Location Whilst Overseas" was an important factor. He further embellishes the importance of recorded location by his admitted inability "to interpret any of these postings and attachments in relation to the degree of **hardship, responsibility or types of duties performed**" and that "only the RAF can interpret them". Based upon this erroneous decision, the certificates were not issued.

How much simpler life would have been without the animosity over radar personnel that existed between the RAF and the RCAF in the latter stages of the war. At the appropriate staff level the problem of the apparent insufficient number of blank certificates could have been resolved by a telephone call in the following manner:

"I say old boy, we have received your 5, 000 certificates for our radar people. You will recall that in the fall of 1944 we decided to rotate those radar people who had served with you for three years or more; bring them back home and replace them with others who were part of our home establishment. The total number who served with you was 5,800 (or 6,100 depending which set of numbers the RO used in his memo to AMP). Could you please send us an additional 800 blank certificates?"

EPILOGUE **1994 - 1996**

In his research at the National Archives in support of "The Canadian Radar History Project", Robert Linden uncovered the Certificate story. The sole remaining copy was in the SECRET radar files. The other 4,999 copies had long since hit the shredder.

All correspondence related to radar, irrespective of its security classification was placed in radar files. All radar files during WW II were classified SECRET. Under the Official Secrets Act all SECRET files were sealed for over thirty years before being made available for public scrutiny.

The certificates were brought to the attention of the Minister of National Defence and Veterans Affairs by way of a letter to Marlene Catterall MP, 9 March, 1994. The Organizing Committee of Radar Reunion 96, in 1995 were aware of the Certificate and they asked Linden to intervene for the issuance of the certificates in time for the reunion in Calgary, 7 - 9 June, 1996. As a test case Linden requested that the Department issue his certificate. This dragged on and Linden then asked Lloyd Francis to intervene.

The Honourable Lawrence MacAulay, P.C. M.P. Secretary of State (Veterans) and his Deputy Minister met on June 6, 1995, with the Honourable Lloyd Francis P.C., M.A. Ph.D. (Cpl C.L. Francis, Can R132837, Radar Mechanic), Marlene Catterall M.P., Deputy Government Whip, and Robert F. Linden to determine whether the certificates could be replicated and presented to those

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deserving veterans. A plan was proposed whereby Mr MacAulay would present the first group of Certificates to those radar veterans attending WWII Radar Reunion Calgary 1996, (June 7,8, and 9).

This was not to be. When this was reviewed by the Minister of National Defence, the Honourable D. M. Collenette, his office stated that the original decision of 1946 not to issue the certificates would still stand. This Ministerial decision was appealed by both Lloyd Francis and Marlene Catterall but the Minister replied, "From a British perspective, the Canadian radar mechanic's contribution to the war was larger than might have been expected in this specialized field, and the proposed British blank certificate would have recognized this. However, it also would have unfairly singled out a particular group of individuals without specific reason, such as locality and duration of service. Many other Canadian Air Force served operationally in or with the RAF, and their contribution was also noteworthy. Nor was this situation unique to the Air Force. Without special criteria or a wider issue, there would not have been equitable treatment and an injustice would have resulted to others. The 1946 National Defence decision not to release the certificates was consistent with Canadian recognition policy at that time, a policy that remains current."(1)

The appeal then moved from the Department of National Defence to the Fifth Estate. Following a devastating article by Douglas Fisher in "The Sunday Sun" of April 21, 1996, under the heading "DND perpetuates a petty wartime snub", the Minister of National Defence relented.

In the House of Commons, April 24, 1996, Marlene Catterall M.P. posed the question: "Mr Speaker at the end of World War II a grateful British government sent certificates of appreciation to 6,000 Canadian Volunteers whose service as radar technicians had been vital to the air defence of England. Unfortunately, these certificates were never distributed and all but one were destroyed.

Will the Minister of Defence now, finally after 50 years authorize the production of replica certificates so that these Canadian radar veterans can finally be thanked?"

The Honourable David M. Collenette (Minister of National Defence and Minister of Veterans Affairs) replied : "Mr Speaker. This is a misunderstanding that has gone on for 50 years and has continued until recent days. I think all Canadians recognize the great contribution made by the radar technicians in the second World War when attached to the Royal Air Force.

Certainly, if the British government is willing to recognize replicas of the original certificates, we will have a Government of Canada representative present these certificates to the survivors or their families.

I hope this action will meet with the approval of the survivors and their families."

1.) Letter from Hon. D.M. Collenette to Hon. Lloyd Francis, 8 August 1996.

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On October 9, 1997, during the Ottawa Radar Reunion, the House of Commons rose and officially lauded the RCAF Radar Veterans in the Gallery and held a special reception in the Centre Block in their honour. At the same time the Mayor of the City of Ottawa, Jacqueline Holtzman proclaimed October 7 - 13, 1997, to be Radar Veterans Week and the Governor General, the Right Honourable Romeo Leblanc, extended his patronage to the Ottawa Radar Reunion.

* * * * *

Replica of the Certificate of Appreciation



Robert Fenwick Linden

Can. C19567

Royal Canadian Air Force

was one of those who, in the hour of England's greatest need, came forward voluntarily to man the vital Radar stations upon which the air defense of Great Britain so signally depended.

By their selfless and devoted services these men not only had an indispensable share in the defense of this country but also contributed in great part to the development of this new branch of science, to the general benefit of the Allied cause.

Air Ministry, 1946

Secretary of State for Air

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APPENDIX "A"

SPECIAL RADIO TECHNICIANS NEEDED

On 8th April, 1941, "Chubby" Power broadcast over the radio a statement on RCAF recruiting, from which the following is extracted:-

"Here is something to catch the imagination of men who can look ahead. Scientists of England have invented and their fellows in Canada and the United States have assisted in the development of a modern weapon against day and night attack by air. The details of this work are of course secret, but I can say that in general terms it means that by using a great number of small radio sets of modern design radio technicians posted at ground points all over the British Isles will be able to detect enemy planes in the air and direct anti-aircraft fire with deadly precision.

The British Air Ministry expects great things of this invention, but like anything else it calls for men to make it work. For several months now we have combed Canada for amateur and professional radio men and rushed them overseas. But that source of supply is now dried up and we are ready to take green men, men of good-education who have never seen the inside of a radio. We will train them in this new work and within a few months they will be holding key posts in the defence of Britain.

Educational requirements for these jobs are about the same as for aircrew -- a man must have junior matriculation or its equivalent -- but obviously the physical qualifications need not be so strict. We don't demand the perfect vision required of a pilot, nor the soundness of body. The age limit is from 18 to 45, but if we can we want to fill our requirements with men between 22 and 27.

Thirteen Canadian universities have rallied to our aid to fill this urgent need. Recruits go to an Air Force Manning Depot for one month and then on to one of these universities for a 13-week course under the able tuition of experts. And from there the next step is overseas.

I do not like to overstate the case, yet I can say that it is of vital importance that we get these men and that we get them immediately. We are not thinking in terms of months hence when we talk of radio technicians. The need is urgent. We are looking for 2,500 Canadians of good common sense who are ready this minute to volunteer for overseas service in a new service, one that will develop and grow and one to which we are harnessing the initiative and zest of Canadian youth. Those who get into it on the ground floor will themselves be the ones to improve it, to invent by tinkering and experience a still greater defence to that Fortress of the Seas upon which our minds are now so intently fixed".

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APPENDIX “B”

RADIO LOCATION SECRET ANNOUNCED

The following article appeared in the Montreal Gazette on 18 June 1941. It was possibly the first press release by the British concerning equipment that those in the know secretly referred to as “RDF,” and later in the war as “Radar.”

Secret Arm to Combat Air Raids Uses Ether Waves, UK Reveals.

“Radio Location Responsible for Defeat of Luftwaffe Over Britain last fall Now Conquering German Night Fighters”.

London, June 17 - (CP) - The Air Ministry announced tonight that the new device credited with an important part in Britain’s winning fight against the German Air Force is the “radiolocator”, which warns of the approach of enemy aircraft by ether waves sent far out from Britain’s shores. The Ministry revealed the device helped the R.A.F. win the Battle of Britain last autumn, and suggested it will be a vital factor in overcoming the menace of the night raider.

Information on the device was released by the Air Ministry in connection with Lord Beaverbrook’s broadcast appeal tonight for recruits for technical radio work. Lord Beaverbrook, Minister of State and formerly Minister of Aircraft Production, made the first official reference to the radiolocator in his address.

The Air Ministry’s statement follows:

The development of the radiolocator has created a new military science which came into being without the world being aware of its existence, and which has already exerted a profound influence on the air, military and naval strategy. It has been kept so secret that in the services it has been referred to by three letters only, and even these could not be whispered outside.

Today production lines in the plants of radio manufacturers throughout Great Britain are turning out radiolocators in ever increasing quantities, and their installation throughout the country has made it imperative to train more men to service and maintain them, although thousands are already engaged in this work.

Unfortunately it takes longer to train a man to service one of these instruments than it does to make one. They are not simple pieces of apparatus. Before he is competent to maintain one, a man needs to have a sound working knowledge of radio to begin with, and then he must have at least two months of specialized training. Thousand of men with a knowledge of radio are required to look after the radiolocators now being produced. For these men, this is an opportunity to get abreast of

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one of the greatest and most far-reaching scientific developments of the century.

Radiolocation is a vital part of the complicated system by which we get advance knowledge of the approach of enemy aircraft. If hostile planes are to be successfully intercepted by the Royal Air Force fighters, it is necessary to know from which direction they are coming.

The use of the radiolocator in this system has been so successful that independent observers who have seen it in operation have expressed the opinion that but for it, the first Battle of Britain might have been lost many months ago.

But the first battle was not lost, and the system of radiolocation is now being extended. Radio men accepted for this work, receive a course of technical instruction lasting approximately eight weeks. However much they may know of radio, this course and the experience that will follow will extend their knowledge of new developments in radio far beyond anything yet imagined.

Because of the hundreds of these radiolocators which have been installed throughout the country, the overworked RAF long ago was able to do away with the maintenance of standing patrols, relying on the vast detection system to give ample warning of the approach of bombers and the exact direction they were following.

Although this is not the time to talk about the peace-time applications of radiolocation, it is no exaggeration to state that when this system is fully applied to the sea and air navigation in peace, most shipwrecks will be eliminated, there need never be another Titanic disaster, and many causes of accident to aircraft will be abolished. No one concerned with radiolocation has had time fully to consider its peacetime possibilities, but those who work with it believe that it will become one of the great radio developments of the future.

Credit for its early development belongs to the RAF R.A.Watson-Watt, scientific adviser of telecommunications to the Air Ministry; Dr. Wilkins of the Air Ministry research staff; Sir Henry Tizard and H.E.Wimperis were the moving spirits on the scientific side.

Backing their faith and vision on the service side in those early days were Lord Swinton, then Air Minister; Sir Cyril Nevall, then Chief of the Air Staff; Sir Wilfred Freeman, Sir Christopher Courtney and Air Marshal Sir Philip Joubert. The latter, one of the greatest believers in radiolocation from the early days, was until last week in charge of all radiolocators in the RAF. He has just been appointed Air Officer Commanding, Chief of the Coastal Command.

(Clipping courtesy of Raymond McLean, Ottawa)

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APPENDIX “C”

RCAF TO TRAIN RADIO EXPERTS AT UNIVERSITIES

(The following article appeared in an Ottawa newspaper on 5 April 1941)

Force of 2135 Men to Take Summer Courses at Colleges Across Dominion - 500 at U. of T.

Ottawa, April 5 - The Royal Canadian Air Force announced to-day that the first of a force of 2,135 men will start training courses in Canadian universities on June 2 to qualify as radio experts for service overseas.

Thirteen universities will take part in the program in conjunction with the Royal Canadian Air Force to train these men for 13 weeks, after which they be sent overseas to act as technicians.

They will be groomed specifically for radio detecting work, an important phase of the defence measures against night bombers over Britain.

The students do not necessarily need previous radio experience, the Air Force said, but they all should have their junior matriculation or its equivalent.

Arrangements for co-operation in training between the RCAF and university staffs were made by the National Defence Department.

Personnel will be enlisted with the rank of Aircraftsmen Second Class (AC2) and on completion of the course will be Leading Aircraftsmen (LAC's).

Age limits are from 18 to 45 years and, while the standard of physical fitness is not as high as for training for air-crew, the Air Force said the men must nevertheless be in good health.

The universities taking part in the training program, the number they will train and tentative dates for starting the course follow: Dalhousie, 50, June 2; Mount Allison, 35, June 2; New Brunswick, 100, June 2; McGill, 500, June 2; Queen's, 100, June 16; Toronto, 500, May 26; McMaster, 100, June 16; Ontario Agricultural College, 50, June 19; Western, 100, June 16; Manitoba, 250, June 9; Saskatchewan, 80, June 9; Alberta, 120, June 9; British Columbia, 15 June 2.

Policies and Politics

APPENDIX “D”

(Excerpt from the Globe and Mail, 15 August, 1945)

WILL EVER REMEMBER CANADA RADAR EXPERTS

London, Aug. 14 (CP). - Five thousand Canadian radar mechanics and 750 RCAF radar officers - more than half of the total serving in the RAF's ground and air installations in the European and Pacific theatres - answered a powerful S.O.S. from Britain and helped to speed the peace.

These figures were released by the Air Ministry and the RCAF overseas as the lid was removed from what was one of the best kept secrets of the war. For the first time the public was given an official explanation of how radar works and what it has accomplished..

"It would not have been possible to meet the vital and increasing demands of radar in the latter part of 1940 and the following years without the knowledge that Canada was undertaking the recruiting and training of men to help us to handle this immense weapon," said Air Commodore C. P. Brown, director of radar at the Air Ministry.

“Will Never Forget”

"The exact nature of the duties could never be made known publicly in Canada at the time, of course. But so enthusiastic have RCAF personnel been since those earliest days that their role in the unseen struggle throughout the years of war is one that Britain will never forget”.

Most of the Canadian radar men were trained at a secret school built at Clinton, Ont., in a matter of months as insurance against bombing of the only other school in the United Kingdom. Starting as a purely RAF school, Clinton soon became a British Commonwealth Air Training Plan establishment where Canadians and a number of United States servicemen underwent advanced training.

Fifteen Canadian Universities provided the basic training in the principles of radar.

Before the Clinton school was opened in 1941, an urgent message was sent from Britain: "Recruitment of radio mechanics here almost ceased and RDF (radio direction finding) expansion now dependent on Canadian sources. One thousand mechanics wanted by end of year”. (RDF was the original name by which radar was known).

It was an urgent send-off. Ansons droned over Lake Huron carrying trainees and the situation was met.

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These are some of the facts of Canadian radar work disclosed officially:

Although some hundreds of Canadian radar experts have gone overseas again, from the United Kingdom, some 20 percent of the mechanics of an RAF group controlling home ground stations are still Canadians.

There have been many Canadians working on H2S's - the blind-bombing gadget known popularly as the magic eye - and many other systems carried in aircraft.

Canadian aircrew in "great numbers" operated the flying end of radar in fighters and bombers, coastal and other aircraft.

Frequently Canadians formed as much as half the strength of the mechanics on mobile radar units which were doing field training in England before embarking for abroad.

Canadian radar men served in the Burmese jungle with Brig. Charles Orde Wingate's Chindits, in the South Seas, with the RAF wing in Russia, in Africa, Malta - in fact everywhere the RAF was serving.

Canadians participated in radar research at Malvern, Worcestershire, where Ministry of Aircraft Production telecommunications research was carried out.

They helped to devise a number of prototype models of brand new radar systems and flew with them on extensive tests.

They did servicing work at RAF radar stations which were working entirely on the surface, watching for German E-boats.

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