

# CFARS HISTORY

## WW II

1. Possibly the first close association between the amateur radio fraternity and the military in Canada occurred during WWII at which time the "Call to Arms" saw many of the electronics and communicator trade positions in all three services (army, navy and air force) filled by ham operators. Many of these amateurs formed the nucleus of the Forces communications training cadre and it is a well-documented fact that the experience and expertise of the ham operators contributed greatly to an effective communications system.

## AFARS

2. Shortly after the war, on 8 August 1946 to be exact, under the auspices of the RCAF, the Air Force Amateur Radio System (AFARS) was implemented. This program operated successfully for 6 years until 31 August 1952, at which time a portion of the program integrated with the Civil Defence Communications Organization. AFARS was made up of approximately 500 licensed amateur radio operators from across Canada and carried out such roles as providing communication in the area of search and rescue, assistance during national emergencies, and operating weekly nets on a regional and national basis.

The program was funded by DND, and operated on various frequencies allocated outside the amateur radio bands. It published an excellent quarterly magazine and provided various types of communications equipment on a loan basis to its members.

## MID 1950 ON - PHONE PATCH TRAFFIC

3. Perhaps the most visible association and, as far as the military is concerned, the most beneficial service in terms of morale, provided by the amateur radio fraternity over the past 25 years or so, has been the provision of a person-to-person voice traffic link in the form of "phone patching" performed by ham operators for service personnel stationed in remote and isolated locations so they may communicate with their families at home.

4. The first recorded and publicized accounts of this morale boosting communications service appeared in the 1956/57 period and involved Canada's first peacekeeping force which was deployed in the Middle East (Egypt) with the United Nations Emergency Force. A young and enterprising Staff Sergeant whose call was VE3AHU set up the first Middle East ham station to operate phone patches back to Canada. This same station operated successfully for about 10 years until the UN was abruptly asked to leave. CFARS stations are on the air from the Middle East daily from El Gorah Sinai and from the Golan Heights; also from Western Sahara and Yugoslavia, etc. Further, for the past 20 years or more, phone patches have been operated for servicemen in the Far North and from HMC Ships on sea deployments.

5. Not enough can be said for the hundreds of amateur operators in Canada who have devoted their valuable time and equipment to operate informal traffic nets over the

years. The communication service provided through ham radio has been and continues to be tremendously popular as far as individual service personnel and their families and relatives are concerned; this can be seen from the impressive traffic volume figures. It is without a doubt a key morale booster for DND personnel serving at remote and isolated posts around the world.

## **PROBLEM AREAS**

**6. With such an effective communication service operating over the years, why the need for a formal radio system...CFARS?**

Up until about 1976, there did not appear to be a need, and then unfortunately, two particular problems were encountered which delayed the traffic process for extended periods and, in some cases, made it necessary to temporarily close down particular stations.

**7. The first problem was the increasingly difficult task of finding licensed military amateur radio operators who were willing to volunteer to serve in isolated or remote locations. The courses and the on-job training given at many of the military amateur radio clubs to assist personnel to obtain their amateur radio licences, and in a few cases the willingness of some military amateur radio operators to do a second tour of duty at remote locations did not provide a viable or permanent solution.**

**8. The second problem encountered was that of interference which at times was intentional jamming and which delayed the traffic process for extended periods.**

Interference for the most part can be attributed to rapid growth in the hobby and to the subsequent crowded conditions in the amateur bands.

## **CFARS**

**9. Because of the Department of National Defence desire to continue this worthwhile communications service and as a result of the problems already described, National Defence Headquarters decided to launch a program to be known as the Canadian Forces Affiliate Radio System - CFARS.**

**10. Basically, CFARS was organized to operate in a somewhat similar fashion to the United States Military Affiliate Radio System (MARS) which has operated successfully for over 50 years. Certainly, the volume of traffic would not compare to the MARS program, but if the volume of our informal nets over the past 25 years was any indication, quite a number of affiliate stations would be needed to operate CFARS. As such, the basic operational concept was that CFARS would:**

**a. operate on specifically allocated frequencies outside the amateur radio spectrum;**

**b. provide membership to include military installation stations, military amateur radio unit/club stations and a number of designated volunteer affiliated licensed amateur radio operators;**

- c. operate using quasi-military voice and operating procedures;
- d. operate on several different radio nets, for example: a Northern net, a Maritime or HMC Ships net, a United Nations Canadian Contingents nets, a National net, and a Training net; and
- e. use international call signs while operating within its own framework.

11. The CFARS designers had realized from the start that to organize and operate the system could take considerable time. Up to 1976, the CFARS program had been mainly in the initial concept stage; various development aspects had yet to be worked out and finalized. These included:

- a. an allocation of a full range of frequencies;
- b. obtaining IC approval for designated radio amateurs to operate outside the amateur bands;
- c. the publication of a comprehensive CFARS operating manual;
- d. the tasking of a command and control organization;
- e. the formulation of exactly how many networks should be operated;
- f. the possibility of publishing a periodic CFARS News bulletin; and
- g. various other administrative details.

12. It was generally agreed that the long range outlook would be to operate a traffic and phone patch service for Canadian Forces personnel wherever they were located, be it sea deployments, the far North, United Nations peacekeeping operations and other locations where the number of service personnel would warrant the service.

13. In April and May of 1978, trials were conducted by operating on a CFARS frequency of 13972.5 kHz - just outside the 20-metre amateur band. Participants included military amateur stations at Ismailia and the Golan Heights in the Middle East and thirteen amateur stations in Canada. The selection of the Canadian stations was made on advice received from the Ismailia station.

Temporary international call signs were issued. The trials were conclusively successful, with the traffic volume having increased dramatically above that normally handled within the amateur bands.

Worthy of note, tests which had previously been carried out by IC on similar equipment as that used by the Ismailia station during the CFARS trials had already shown that frequency tolerances and stability were well within those allowed by radio regulations.