



RCO Redesign

The RCO System

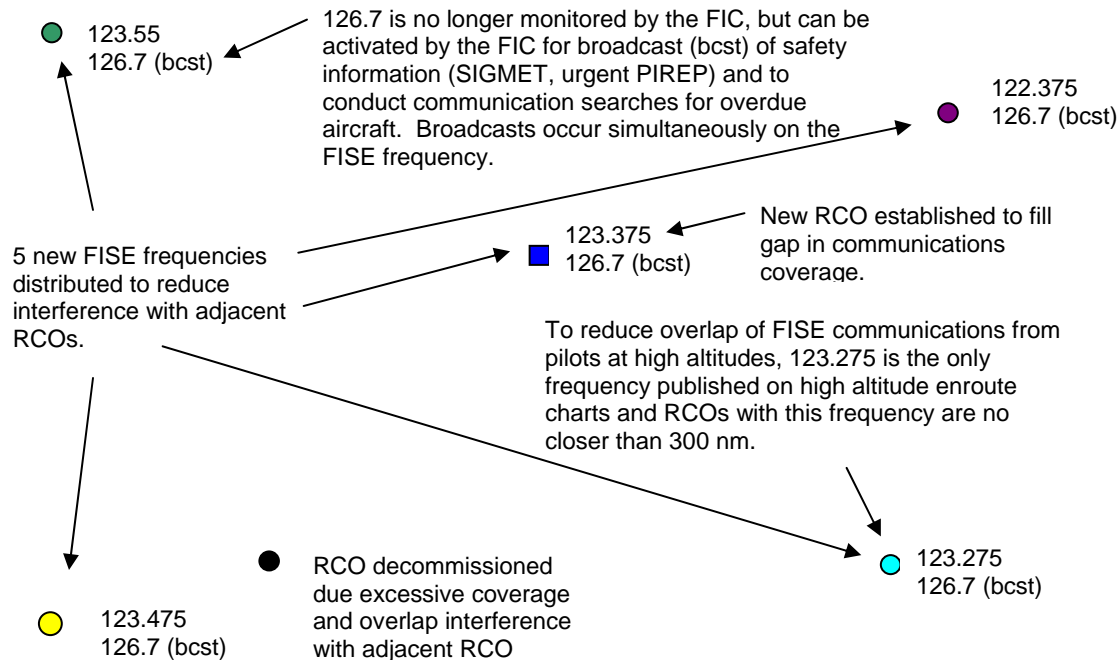
A Remote Communications Outlet (RCO) uses VHF transmitters/receivers to provide a remote communications link between pilots and Air Traffic Services (ATS) facilities. Flight service specialists at Flight Information Centre (FIC) facilities use the RCOs to communicate with pilots and provide the following services:

- FISE (Flight Information Service Enroute), which includes the provision of aviation weather information, NOTAMs, accepting flight plans, position reports and pilot reports (PIREPs);
- Aeronautical broadcast service which consists of broadcasting information that could impact flight safety but which may not have been available to the pilot prior to take-off such as SIGMETs and urgent PIREPs;
- Communication searches by flight service specialists to determine the status of an overdue aircraft; and
- Relay IFR clearances, wind and altimeter information to conduct an instrument approach and special VFR authorizations at aerodromes within control zones.

Example Current RCO System ● FISE RCO

- 122.5
126.7
- Problems:
- 126.7 used for pilot broadcasts of position and intentions in uncontrolled airspace – interferes with provision of FISE on 126.7 & vice-versa.
 - High demand for FISE on 126.7 creates congestion and interference on other 126.7 RCOs.
 - Pilots at high altitudes requesting FISE on 126.7 prevent FISE being provided from other 126.7 RCOs in the area.
 - Some areas of the country have gaps in coverage along commonly used VFR routes.
 - Some RCOs are too close to each other causing overlap, interference and feedback problems.
- 126.7 ● 126.7 ● 126.7

Example Redesigned RCO System



What are the Problems?

Currently, in most areas of the country these services are provided on one frequency, 126.7 MHz. This is also the frequency designated for use by pilots (both VFR & IFR) to broadcast their position and intentions while operating in uncontrolled airspace. In some areas of the country, a large demand for FISE service in combination with high levels of pilot broadcasts has resulted in frequency congestion and interference on 126.7 MHz. This has an impact on the safety of flight operations. In addition, some RCOs are close enough that they interfere with each other or result in coverage overlap while in some areas of the country there are large gaps in RCO coverage.

What are the Solutions?

To resolve the safety concerns and to improve the overall provision of flight information service, NAV CANADA is redesigning the RCO system as follows:

- Five frequencies dedicated to FISE (122.375, 123.275 MHz, 123.375 MHz, 123.475 MHz and 123.55 MHz) will be established at most RCO locations.
- To help reduce the interference problems that can result at multiple surrounding RCOs when a pilot accesses FISE while at a high altitude (e.g. above FL180), 123.275 MHz will be the only RCO frequency published on the ENROUTE HIGH ALTITUDE (HI) IFR charts.
- The other 4 FISE frequencies will be assigned to RCO's located approximately 220 NM apart, along airways, air routes and VFR flyways. The 220 nm separation guideline was based on a requirement for a pilot to get a weather information update once an hour while flying an aircraft at 3,000 feet above ground at 120 knots. In mountainous areas, spacing of RCOs will be closer in order to meet coverage requirements for VFR flyways in valleys.

- At RCO sites where one of these five FISE frequencies has been established, flight service specialists will no longer monitor 126.7 MHz. However, 126.7 MHz communications equipment will be retained at these RCO sites and flight service specialists will selectively activate the 126.7 MHz RCO transceiver when required in order to provide the aeronautical broadcasting service (safety messages such as SIGMET, urgent PIREP) and to conduct communication searches for overdue aircraft. When the 126.7 MHz transceiver is selected, the FISE transceiver is activated also for simultaneous broadcast on both frequencies. RCO sites with this configuration for 126.7 MHz will be published in the CFS and on maps and charts as "126.7 (bcst)".
- At sites where lower traffic levels and less demand for FISE permits, 126.7 MHz will remain the sole frequency for both FISE and aeronautical broadcasts.
- Some new RCOs will be established and some will be decommissioned in order to provide more uniform and effective enroute communications coverage.

Status?

Changes to the RCO system have begun and will take at least another four years to complete. The initial focus of the changes will be in areas of the country where congestion and interference on 126.7 MHz is the greatest. RCO changes will be reflected in aviation publication amendments and through notices on the NAV CANADA web site. The web site will also include a series of maps, which will indicate each FIC area of responsibility and the FISE RCOs under their control. The maps will be updated as changes occur. RCO locations and frequencies are indicated on VFR and IFR navigation charts and in the CFS under the Aerodrome/Facility Directory by FIC/FSS name: Halifax FIC, Quebec FIC, London FIC, Winnipeg FIC, Edmonton FIC, Pacific Radio (Kamloops FIC), Arctic Radio (North Bay FIC) and Whitehorse FIC.

Good RCO Communication Practices

To help reduce frequency congestion/interference and improve the provision of flight information services, pilots should apply the following communication practices:

- Until the RCO redesign is complete, at RCO sites where both 126.7 MHz and an alternate FISE frequency are active, pilots should avoid using 126.7 MHz and select the alternate FISE frequency to contact the FIC.
- Pilots should monitor 126.7 MHz when in uncontrolled airspace and when practical broadcast their position and intentions on this frequency when VFR or IFR so they can coordinate their flight with other aircraft. Any pilot-to-pilot communications not for this purpose should be conducted on 122.75 MHz (within the Canadian Southern Domestic Airspace) or 123.45 MHz (within the Northern Domestic Airspace and the North Atlantic).
- On initial contact, pilots should state the name of the FIC controlling the RCO, the aircraft identification and the name of the location of the RCO followed by the individual letters R-C-O in a non-phonetic form.

Example: HALIFAX RADIO, GOLF ALPHA BRAVO CHARLIE ON THE FREDERICTON R-C-O.

For additional information on the RCO Redesign including RCO maps and an information Brochure, visit the NAV CANADA web site www.navcanada.ca under [Products and Services / ANS Programs](#).

Contact Us

Send your feedback or questions to service@navcanada.ca or call 1-800-876-4693.