

What are the Problems?

In most areas of the country FISE services were 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. 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 used for most RCO sites. Note that radios do not need to display to three decimal places to use these new frequencies. For instance 123.275 = 123.27 (See TC AIM – COM 5.3)
- RCO's will be located approximately 220 NM apart, along airways, air routes and VFR flyways. The 220NM 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 most RCO sites where a discrete FISE frequency has been established, FIC flight service specialists will no longer monitor 126.7 MHz. However, they will have the ability to transmit and receive on 126.7 MHz, when required, to provide the aeronautical broadcasting service (safety messages such as SIGMET, urgent PIREP) and to conduct

communication searches for overdue aircraft. Note that when the FIC selects 126.7 MHz the FISE frequency transceiver is activated also, resulting in 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 a few 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 will take several years to complete. RCO changes will primarily occur on the 56 day aeronautical publication cycle dates and will be reflected in aviation publication amendments and through notices on the NAV CANADA web site.

The NAV CANADA web site will also include maps of the FISE RCOs in Canada (see web site directions at the end of the Brochure). These maps will also be updated on the 56-day publication cycle.

RCO locations and frequencies are indicated on VFR and IFR navigation charts and in the CFS under the Aerodrome/Facility Directory by FIC 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 126.7 MHz and a discrete

FISE frequency are provided, pilots should avoid using 126.7 MHz and use the other frequency to contact the FIC.

- Pilots should monitor 126.7 MHz when in uncontrolled airspace and use this frequency to broadcast their position and intentions when operating VFR or IFR so they can co-ordinate 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 this Brochure, visit the NAV CANADA web site www.navcanada.ca under Products and Services / ANS Programs or, under Notice / Redesign of RCO network – new FISE frequencies being implemented / READ MORE

Contact Us

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

Example Current RCO System

● FISE RCO

Problems:

- 122.5
126.7
- 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

● 126.7

Example Redesigned RCO System

126.7 is no longer monitored by the FIC, but can be activated by the FIC for broadcast (bcst) of safety information (SIGMET, urgent PIREP) and to conduct communication searches for overdue aircraft. Broadcasts occur simultaneously on the FISE frequency.

● 122.375
126.7 (bcst)

New RCO established to fill gap in communications coverage.

● 123.375
126.7 (bcst)

To reduce overlap of FISE communications from pilots at high altitudes, 123.275 is the only frequency published on high altitude enroute charts and RCOs with this frequency are no closer than 300 nm.

● 123.275
126.7 (bcst)

● RCO decommissioned due excessive coverage and overlap interference with adjacent RCO

● 123.475
126.7 (bcst)

5 new FISE frequencies distributed to reduce interference with adjacent RCOs.



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 that 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.