



AIP Canada (ICAO)
**Aeronautical Information
Circulars**

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AERONAUTICAL INFORMATION CIRCULAR SUMMARY 6/05

(Supersedes all previous summaries)

The following Aeronautical Information Circulars are in effect:

- 4/95 Amendment to the Waste Disposal Clause in the Airport Zoning Regulations
- 1/97 Exemption to subsection 602.129(3) of the *Canadian Aviation Regulations – Approach Ban – General*
- 2/97 Altitudes Appropriate to the Direction of Flight
- 3/97 Exemption from subsections 602.77(1) and (2) of the *Canadian Aviation Regulations – Requirement to File an Arrival Report*
- 7/98 Exemption from Paragraph 404.18(2) of the *Canadian Air Regulations – Permission to Continue to Exercise the Privileges of a Permit, Licence or Rating*
- 8/98 Amendment to the Statement on Medical Certificates Regarding “Fit Assessments” – January 1, 1999
- 9/98 Operation of Precision Approach Path Indicator (PAPI) Units
- 2/99 Exemption from Paragraph 602.43 of the *Canadian Aviation Regulations – Rockets*
- 2/00 IFR approval of Global Positioning Systems in North Atlantic Minimum Navigation Performance Specifications Airspace
- 6/00 Exposure to Laser and Other Directed Bright Light Sources - Pilot Procedures
- 7/00 Exemption from Paragraph 804.01(c) of the *Canadian Aviation Regulations*
- 10/00 Medical Certificates
- 14/00 Exemption from the *Canadian Aviation Regulations - Medical Validity Period of Medical Certificates*
- 3/01 Exemption from Paragraph 804.01(c) of the *Canadian Aviation Regulations* and from Chapter 4 of the *Manual of Surface Weather Observations*
- 4/01 Implementation of European Reduced Vertical Separation Minimum Airspace
- 5/01 Emergency Security Control of Air Traffic (ESCAT)
- 6/01 Potential Interference from broadcasting stations on VHF Radionavigation Receivers On Board IFR Aircraft Operating in France
- 1/02 *Geographic Area Safe Altitude* replaced by *Area Minimum Altitude*
- 4/02 Advance Notice of Proposed Change to Noise Abatement Departure Procedures
- 5/02 Exemption from Paragraph 804.01(c) of the *Canadian Aviation Regulations* and from Chapter 7 of the *Manual of Surface Weather Observations*
- 8/02 NAV CANADA to Complete Implementation of 25 kHz Channel Spacing for VHF Aeronautical Communications in Canada
- 2/03 Exemption from Paragraph 605.33(2)(c) of the *Canadian Aviation Regulations*
- 3/03 Exemption from Paragraph 703.31(b) of the *Canadian Aviation Regulations (CARs)* and Section 723.31 of the *Commercial Air Service Standards (CASS)*
- 4/03 Exemption from Paragraph 704.27(b) of the *Canadian Aviation Regulations (CARs)* and Section 724.27 of the *Commercial Air Service Standards (CASS)*
- 5/03 Exemption from Paragraph 602.123 of the *Canadian Aviation Regulations (CARs)*
- 6/03 North American Free Trade Agreement (NAFTA) Advisory

- 7/03 Expansion of Controller-Pilot Data Link Communications (CPDLC) in the North Atlantic (NAT) Region
- 10/03 Flight Management Computer (FMC) – Waypoint Positioning Reporting (WPR)
- 11/03 Remote Communications Outlet (RCO) Communications Procedures
- 1/04 Reduced Vertical Separation Minimum (RVSM) in North American Airspace (Replaced AIC 9/02)
- 3/04 Automatic Dependent Surveillance (ADS) Waypoint Position Reporting (WPR) in the Edmonton Flight Information Region/Control Area (FIR/CTA)
- 4/04 Gimli Industrial Park Airport - New Frequency and Mandatory Frequency (MF) Area
- 6/04 Application of Strategic Lateral Offsets in North Atlantic (NAT) Airspace
- 8/04 Changes to SIGMET and AIRMET Headers
- 10/04 Change in NOTAM Procedure Regarding Logging Activities – Pacific Region
- 11/04 Operational Test and Evaluation Site for a New Obstacle Collision Avoidance System (OCAS) in the Pacific Region
- 12/04 IFR Approval to Use the Global Positioning System (GPS) in Canadian Domestic Airspace (CDA) (Replaces AIC 7/04)
- 1/05 Use of Electronic Flight Bags (EFB)
- 3/05 *Restricted Canada Air Pilot (RCAP)*
- 5/05 Transport Canada and NAV CANADA to Introduce New Aeronautical Publications
- 6/05 Aeronautical Facilities Notification (AFN) Logons for Future Air Navigation System (FANS) Operations
- 7/05 Navigation Aids (NAVAID), Instrument Approach Procedures (IAP) and Low Frequency (LF) Airways/Air Routes
- 9/05 North American Aerospace Defense Command (NORAD) Interceptor Flares
- 10/05 Removal Of The Phrase “VFR Flight Not Recommended” In Pilot Briefing
- 11/05 Exemption from Paragraphs 602.128(2)(a) and (3)(a) of the *Canadian Aviation Regulations*
- 12/05 Changes to the Provision of Remote Aerodrome Advisory Service (RAAS) at 20 Airports
- 13/05 Vancouver Airspace Review – Changes to Control Zones (CZ) at Boundary Bay and Vancouver Airports
- 15/05 Canadian Differences with ICAO Phraseology
- 16/05 Kamloops Flight Information Centre (FIC) Radiotelephony Call Sign Change
- 17/05 Exemption from Subsection 602.34(2) of the *Canadian Aviation Regulations* (Replaces AIC 14/05)
- 18/05 Exemption from Paragraph 804.01(c) of the *Canadian Aviation Regulations* And From *The Manual Of Surface Weather Observation* (Supersedes AIC 11/00)
- 19/05 Exemption from Paragraph 602.27(b) of the *Canadian Aviation Regulations* (Replaces AIC 3/02)
- 20/05 Exemption from Paragraph 602.26(a) and Section 603.37 of the *Canadian Aviation Regulations* (Replaces AIC 2/02)
- 21/05 Exemption from Paragraph 602.07(a) and (b) of the *Canadian Aviation Regulations* (Replaces AIC 9/03)
- 22/05 *Canada Airport Manoeuvring Surfaces (CAMS)*
- 23/05 Redesign of the Remote Communications Outlet (RCO) System
- 24/05 Emergency Navigation Services
- 25/05 Changes in Availability of Aerodrome Forecasts (TAF)

- 26/05 Flight Instructor Refresher Courses 2005–2006
- 27/05 Instrument Flight Rules Operations Using Global Navigation Satellite System
- 28/05 25 kHz Remote Communications Outlets
- 29/05 World Aeronautical Chart Information
- 30/05 Canadian NOTAM Procedures Manual
- 31/05 Industry Invigilation of Recreational-Type Written Examinations
- 32/05 Change of Level of Service – Abbotsford, British Columbia
- 33/05 Flight Instructor Refresher Courses – Aeroplane, Spring 2006
- 34/05 Calgary Airspace Control Zone and Airspace Design Changes and the Implementation of RNAV (GPS) Approaches and RNAV STARs and SIDs at Calgary/Springbank, AB
- 35/05 Notification of Changes to the Contingency Procedures Applicable in the North Atlantic (NAT) Region
- 36/05 Change of Level of Service – Sydney, Nova Scotia

AERONAUTICAL INFORMATION CIRCULAR 36/05

CHANGE OF LEVEL OF SERVICE SYDNEY, NOVA SCOTIA

NAV CANADA recently completed a study of air navigation services provided at Sydney, Nova Scotia (CYQY). Considering the complexity, volume and nature of air traffic, the study concluded that a remote aerodrome advisory service (RAAS) would meet the air traffic services requirements.

Accordingly, NAV CANADA intends to close the flight service station (FSS) and introduce a 24-hour RAAS service to be provided within the control zone on the existing mandatory frequency (MF) by the Charlottetown FSS. A contract weather office (CWO) operating 24 hours a day, seven days a week, will be established for continuity of weather observations. The very high frequency directional finder (VHF/DF) will also be decommissioned.

These changes will take effect 16 February 2006 at 0901 Coordinated Universal Time (UTC) with amendments to the appropriate aeronautical publications.

If you have questions or comments regarding this notice, please contact

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Kathleen Fox
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AERONAUTICAL INFORMATION CIRCULAR 35/05

NOTIFICATION OF CHANGES TO THE CONTINGENCY PROCEDURES APPLICABLE IN THE NORTH ATLANTIC (NAT) REGION.

As notified in Transport Canada’s *Aeronautical Information Manual* (TC AIM), RAC, Section 11.19, the in-flight contingency procedures applicable in the North Atlantic (NAT) region are published in the International Civil Aviation Organization’s (ICAO) *Regional Supplementary Procedures* (Doc 7030), *Guidance and Information Material Concerning Air Navigation in the North Atlantic Region* (NAT Doc 001) and the *North Atlantic MNPS Airspace Operations Manual* (NAT MNPS).

An amendment to the international standards and recommended practices, as detailed in ICAO’s *Procedures for Air Navigation Services, Air Traffic Management* (PANS–ATM Doc 4444), became effective on November 24, 2005. The portion of the PANS–ATM amendment relating to contingency procedures will result in the *NAT Regional Supplementary Procedures* (NAT SUPPS, Doc 7030) being amended effective February 16, 2006. Until February 16, 2006, pilots should follow the contingency procedures as detailed in the NAT SUPPS, Part 1, “Rules of the Air, Air Traffic Services and Search and Rescue.” As of February 16, 2006, some of the NAT SUPPS contingency procedures will be replaced by the PANS–ATM procedures.

The following table may be used to assist in understanding the upcoming changes. NAT SUPPS paragraphs not listed in the table will not be amended.

PANS–ATM Paragraphs	Replace NAT SUPPS Paragraphs
15.2.1 Introduction	7.1 General (all paragraphs)
15.2.2 General procedures	7.2 General procedures (all paragraphs) 7.3 Special contingency procedures for subsonic aircraft 7.3.1 – 7.3.3.4 7.4 Special procedures for supersonic aircraft (all paragraphs)
15.2.3 Weather deviation procedures	7.6 Weather deviation procedures for oceanic-controlled airspace (all paragraphs)

The applicable paragraphs from the PANS ATM are reproduced below:

15.2 Special Procedures for In-flight Contingencies in Oceanic Airspace

15.2.1 Introduction

15.2.1.1 Although all possible contingencies cannot be covered, the procedures in 15.2.2 and 15.2.3 provide for the more frequent cases such as:

- a) inability to maintain assigned flight level due to meteorological conditions, aircraft performance or pressurization failure;
- b) en route diversion across the prevailing traffic flow; and

- c) loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations.

15.2.1.2 With regard to 15.2.1.1 a) and b), the procedures are applicable primarily when rapid descent and/or turn-back or diversion is required. The pilot's judgement shall determine the sequence of actions to be taken, having regard to the prevailing circumstances. Air traffic control shall render all possible assistance.

15.2.2 General procedures

15.2.2.1 If an aircraft is unable to continue the flight in accordance with its ATC clearance, and/or an aircraft is unable to maintain the navigation performance accuracy specified for the airspace, a revised clearance shall be obtained, whenever possible, prior to initiating any action.

15.2.2.2 The radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times shall be used as appropriate. Subsequent ATC action with respect to that aircraft shall be based on the intentions of the pilot and the overall air traffic situation.

15.2.2.3 If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time and, until a revised clearance is received, the pilot shall:

- a) leave the assigned route or track by initially turning 90 degrees to the right or to the left. When possible, the direction of the turn should be determined by the position of the aircraft relative to any organized route or track system. Other factors which may affect the direction of the turn are:
 - 1. the direction to an alternate airport, terrain clearance;
 - 2. any lateral offset being flown, and
 - 3. the flight levels allocated on adjacent routes or tracks.
- b) following the turn, the pilot should:
 - 1. if unable to maintain the assigned flight level, initially minimize the rate of descent to the extent that is operationally feasible;
 - 2. take account of other aircraft being laterally offset from its track;
 - 3. acquire and maintain in either direction a track laterally separated by 28 km (15 NM) from the assigned route; and
 - 4. once established on the offset track, climb or descend to select a flight level which differs from those normally used by 150 m (500 ft);
- c) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including the ATS route designator or the track code, as appropriate) and intentions on the frequency in use and on 121.5 MHz (or, as a back-up, on the inter-pilot air-to-air frequency 123.45 MHz);
- d) maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped);
- e) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
- f) keep the SSR transponder on at all times; and
- g) take action as necessary to ensure the safety of the aircraft.

15.2.2.3.1 When leaving the assigned track to acquire and maintain the track laterally separated by 28 km (15 NM), the flight crew, should, where practicable, avoid bank angles that would result in overshooting the track to be acquired, particularly in airspace where a 55.5 km (30 NM) lateral separation minimum is applied.

15.2.2.4 *Extended range operations by aeroplanes with two-turbine power-units (ETOPS)*

15.2.2.4.1 If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

15.2.3 Weather deviation procedures

15.2.3.1 *General*

Note — The following procedures are intended for deviations around adverse meteorological conditions.

15.2.3.1.1 When the pilot initiates communications with ATC, a rapid response may be obtained by stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response. When necessary, the pilot should initiate the communications using the urgency call "PAN PAN" (preferably spoken three times).

15.2.3.1.2 The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

15.2.3.2 *Actions to be taken when controller-pilot communications are established*

15.2.3.2.1 The pilot should notify ATC and request clearance to deviate from track, advising, when possible, the extent of the deviation expected.

15.2.3.2.2 ATC should take one of the following actions:

- a) when appropriate separation can be applied, issue clearance to deviate from track; or
- b) if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:
 1. advise the pilot of inability to issue clearance for the requested deviation;
 2. advise the pilot of conflicting traffic; and
 3. request the pilot's intentions.

15.2.3.2.3 The pilot should take the following actions:

- a) comply with the ATC clearance issued; or
- b) advise ATC of intentions and execute the procedures detailed in 15.2.3.3 below.

15.2.3.3 *Actions to be taken if a revised ATC clearance cannot be obtained*

Note — The provisions of this section apply to situations where a pilot needs to exercise the authority of a pilot-in-command under the provisions of Annex 2, 2.3.1.

15.2.3.3.1 If the aircraft is required to deviate from track to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received the pilot shall take the following actions:

- a) if possible, deviate away from an organized track or route system;
- b) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a back-up, on the inter-pilot air-to-air frequency 123.45 MHz);

- c) watch for conflicting traffic both visually and by reference to ACAS (if equipped);
- Note — If, as a result of actions taken under the provisions of 15.2.3.3.1 b) and c) above, the pilot determines that there is another aircraft at or near the same flight level with which a conflict may occur, then the pilot is expected to adjust the path of the aircraft, as necessary, to avoid conflict.*
- d) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
- e) for deviations of less than 19 km (10 NM) remain at a level assigned by ATC;
- f) for deviations greater than 19 km (10 NM), when the aircraft is approximately 19 km (10 NM) from track, initiate a level change in accordance with Table 1;

Table 1

Route center line track	Deviations > 19 km (10 NM)	Level change
EAST 000° - 179° magnetic	LEFT RIGHT	DECEND 90 m (300 ft) CLIMB 90 m (300 ft)
WEST 180° - 359° magnetic	LEFT RIGHT	CLIMB 90 m (300 ft) DESCEND 90 m (300 ft)

- g) when returning to track, be at its assigned flight level when the aircraft is within approximately 19 km (10 NM) of the centre line; and
- h) if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.



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AERONAUTICAL INFORMATION CIRCULAR 34/05

CALGARY AIRSPACE CONTROL ZONE AND AIRSPACE DESIGN CHANGES AND THE IMPLEMENTATION OF RNAV (GPS) APPROACHES AND RNAV STARS AND SIDS AT CALGARY/SPRINGBANK, AB

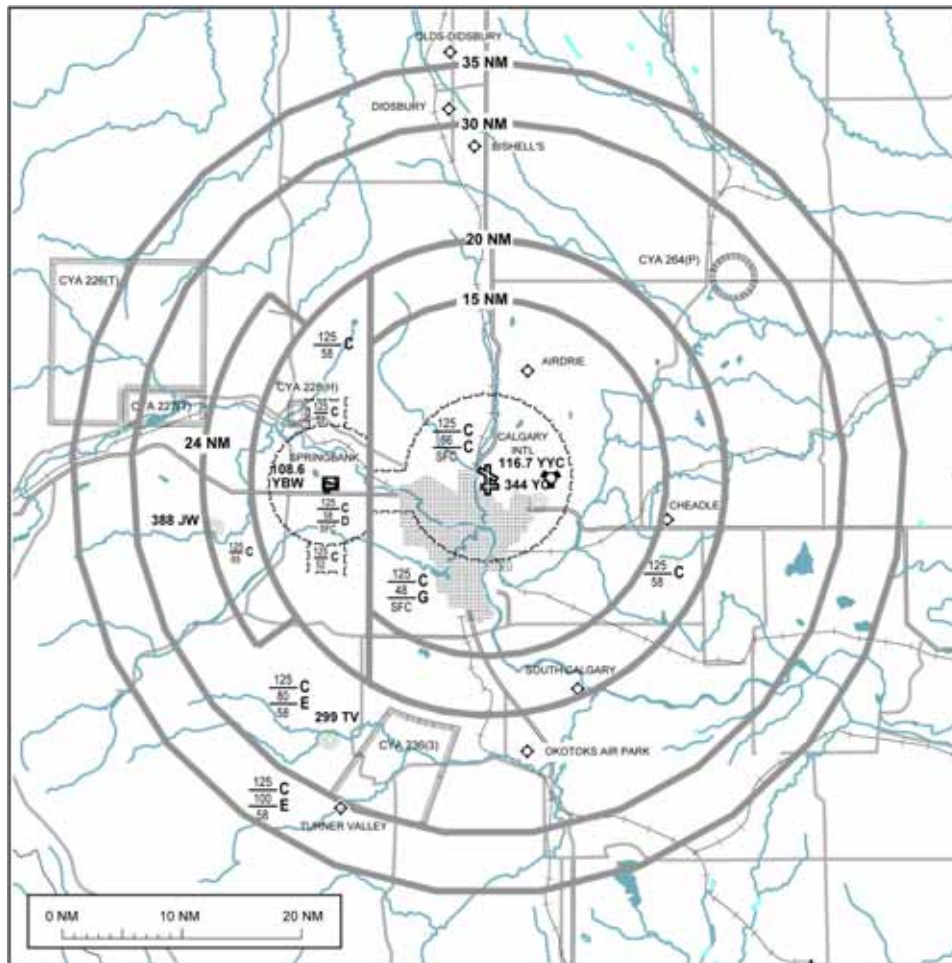
As part of a plan by the Calgary Airport Authority to introduce instrument flight rules (IFR) operations at the Springbank Airport, NAV CANADA was requested to develop and implement instrument approach procedures for the Springbank Airport. As a result of this request, NAV CANADA conducted an aeronautical study of the airspace and aircraft operations in the vicinity of Springbank Airport.

NAV CANADA's primary objective is to ensure that operations take place in a safe, orderly and efficient manner, while making the most effective use of airspace, and human and technical resources. As a result of the aeronautical study, NAV CANADA is implementing changes to airspace in the vicinity of the Springbank Airport, including changes to visual flight rules (VFR) training and recreational alert areas, as well as IFR procedures that will support IFR operations at Springbank Airport. The new airspace configuration will also improve tactical alternatives from the air traffic control (ATC) operational perspective at both Springbank and Calgary International Airports.

NAV CANADA intends to make the following changes to the airspace configuration in the vicinity of Springbank Airport on February 16, 2006:

1. Lower the base of controlled airspace north and south of the Springbank control zone to 5 200 feet above sea level (ASL) to contain new Springbank instrument approach procedures in controlled airspace.
2. Lower the base of controlled airspace between 20 to 24 miles west of the Calgary International Airport to 6 500 feet ASL to contain the new Springbank standard terminal arrival (STAR) within controlled airspace.
3. Relocate the Class "F" advisory airspace (CYA) 206 Area 1 approximately 7 nautical miles (NM) west and increase it in size for training (T); it becomes CYA 226(T).
4. Create a new flight training area in the vicinity of Arkayla Springs with a 7 000 foot ASL floor; it becomes CYA 227(T).
5. Reduce CYA 206 Area 2 in size and designate it as a hang gliding (H) area, activated by Springbank automatic terminal information service (ATIS); it becomes CYA 228(H).

These changes will introduce a new IFR airport into the air navigation system and better accommodate VFR recreational and training activities in the Calgary–Springbank area.



These changes will be reflected in the next publication of the VFR terminal area chart (VTA), the VFR navigation chart (VNC) and the *Canada Flight Supplement*. Implementation is currently planned for February 16, 2006.

Additional details regarding the aeronautical study or the changes referred to above are available on NAV CANADA's website or contact

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Kathleen Fox
 Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 33/05

FLIGHT INSTRUCTOR REFRESHER COURSES – AEROPLANE SPRING 2006

Transport Canada, Civil Aviation, will conduct flight instructor refresher courses at the following locations:

AEROPLANE		
French	January 31 – February 2, 2006	Drummondville, QC
English	February 28 – March 2, 2006	King City, ON

Any holder of a Class 1, 2, 3 or 4 flight instructor rating is eligible to apply for a course, provided their rating is valid (**not expired**) at the time the course begins. Successful completion will result in renewal of the flight instructor rating.

Instructors will be selected to attend each course from the applications received. Although there is no fee for the course itself, there will be a \$30.00 administration fee for instructor rating renewal and course members will be expected to make arrangements and pay for their own travel, meals and accommodation.

Interested instructors may fill out the application form on the reverse side of this AIC. The completed form can be faxed or mailed to Transport Canada at the following address:

Transport Canada
AARRE
Ottawa, ON K1A 0N8

Fax: (613) 990-6215

NOTE: APPLICATIONS FOR COURSES MUST BE RECEIVED A MINIMUM OF 45 DAYS PRIOR TO THE COURSE DATE

An [on-line application](#) can be submitted from

<www.tc.gc.ca/civilaviation/general/flttrain/IRC/menu.htm>



Merlin Preuss
Directory General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 32/05

CHANGE OF LEVEL OF SERVICE ABBOTSFORD, BRITISH COLUMBIA

NAV CANADA recently completed a study of air traffic services provided at Abbotsford, British Columbia (CYXX). The study concluded that, in consideration of the complexity, volume and nature of air traffic, the most effective and efficient configuration of services would consist of sixteen hours of airport control service (ACS) and eight hours of remote aerodrome advisory service (RAAS).

Accordingly, NAV CANADA will introduce a new eight-hour RAAS at Abbotsford from 2300 until 0700 Pacific Standard Time (PST) daily. This RAAS will be provided on the existing mandatory frequency (MF) by the Cranbrook flight service station (FSS). On establishment of the RAAS and a new contract weather office (CWO) operating 24 hours a day, seven days a week, the Abbotsford FSS will close. Abbotsford control tower operating hours (0700 – 2300 PST) remain unchanged.

These changes will take effect 16 February 2006 at 0901 Coordinated Universal Time (UTC) with amendments to appropriate aeronautical publications.

If you have any questions or comments regarding this notice, please contact

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Attention: Brian Stockall, Manager
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Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 31/05

INDUSTRY INVIGILATION OF RECREATIONAL-TYPE WRITTEN EXAMINATIONS

In April 2002, Transport Canada began delegating the invigilation of recreational-type examinations to the industry. These authorized examination invigilators (AEI) can administer those examinations required for hang-gliders to fly in class E airspace, ultralight aeroplane permits, gyroplane pilot permits, recreational pilot permits—aeroplanes, glider pilot licences, balloon pilot licences, and private pilot licences—aeroplanes and helicopters, including alternate category. For those who have been involved, it has been a very successful and relatively problem-free program.

Civil Aviation intends to discontinue administering the written examinations for those recreational licences and permits in our offices as of **April 1, 2006**.

As there are a limited number of AEIs, more people and organizations will need to get involved with the AEI process. The process is outlined in *Authorized Examination Invigilator's Information and Guidance* (TP 13802E). Candidates wanting to become an AEI must fill out the following three application forms and send them to their Regional Manager, General Aviation:

1. Application for appointment as an authorized examination invigilator;
2. Application for security screening;
3. External subscriber application (Entrust PKI for encryption).

These documents may be downloaded from our [website](#) at the following location:

<https://www.tc.gc.ca/aviation/activepages/FTAE_cde/AppProcess.asp>

Please note the “https” as it is a secure website.

One of the advantages of being an AEI is the flexibility and convenience you can offer your clients when it comes time for them to write their Transport Canada written examination. You would be able to offer them the option of writing their examination on evenings and weekends, which is unavailable at Transport Canada centres. Transport Canada does not set the fees you can charge your clients; however, for each examination administered, there is a fee that you have to send to Transport Canada.

We are confident that with a sufficient number of AEIs, service to the clients will be improved, while maintaining the high standards and integrity of the Canadian written examinations.

Any comments or questions may be forwarded to:

Transport Canada
Flight Crew Examinations (AARRF)
Place de Ville, Tower C
330 Sparks Street
Ottawa, ON K1A 0N8

E-mail: cdesupport@tc.gc.ca
Fax: 613 990-6215



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 30/05

CANADIAN NOTAM PROCEDURES MANUAL

Effective 29 September 2005, NAV CANADA introduced a new *Canadian NOTAM Procedures Manual* to provide information and guidance based on International Civil Aviation Organization (ICAO) and Canadian standards. This manual supersedes the 1993 edition of Transport Canada's *Canadian NOTAM Procedures* (TP 973E).

The new *Canadian NOTAM Procedures Manual* is available on a CD from the NAV CANADA Aeronautical Publications (AEROPUBS), Sales and Distribution Unit, at a cost of \$50.00, plus applicable taxes. The CD can be ordered by contacting AEROPUBS by telephone at 1-866-731-PUBS (7827) (toll free) or by e-mail at aeropubs@navcanada.ca.

Any comments or suggested amendments to this document may be addressed to

Manager, AIS
NAV CANADA
77 Metcalfe Street
Ottawa, ON K1P 5L6
Canada

or

NAV CANADA
Customer Service
Tel.: 1-800-876-4693
E-mail: service@navcanada.ca



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 29/05

WORLD AERONAUTICAL CHART INFORMATION

World Aeronautical Charts (WAC), VFR Navigation Charts (VNC) and VFR Terminal Area Charts (VTA) provide information to satisfy the requirements of visual air navigation.

NAV CANADA provides the aeronautical information published on these charts. The underlying culture (roads, populated areas, etc) and topographic information is provided by Natural Resources Canada.

Due to changes in technology and the methods used to collect culture and topography, at the municipal and provincial levels, challenges are being experienced in publishing updated culture and topography information on these VFR Charts.

The aeronautical information on VFR Navigation Charts and VFR Terminal Area Charts is being maintained. However, this information is not being depicted on the World Aeronautical Charts.

NAV CANADA is working with Natural Resources Canada to have the information on these charts updated.

While this work is ongoing, pilots are cautioned that when using World Aeronautical Charts that the aeronautical information on these charts must be validated against NOTAM, the aeronautical information published on VFR Navigation Charts and VFR Terminal Area Charts, and the VFR Chart Updating Data published in the Planning Section of the Canada Flight Supplement.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 28/05

25 KHZ REMOTE COMMUNICATIONS OUTLETS

New flight information service en route (FISE) remote communications outlet (RCO) frequencies have recently been introduced with 25 kHz spacing. Some pilots are unaware that their radios are capable of gaining access to these new frequencies. The frequency selector on some 760-channel transceivers does not display the third decimal place. If the last digit displayed includes 2 and 7, then the equipment is capable of 25 kHz operations. For further information, refer to Transport Canada's *Aeronautical Information Manual*, "COM," Section 5.3, "VHF Communication Frequencies – Channel Spacing."

The following examples show how 25 kHz frequencies display on transceivers that do not display to the third decimal place:

- 123.275 MHz is displayed as 123.27
- 123.375 MHz is displayed as 123.37
- 123.475 MHz is displayed as 123.47
- 132.825 MHz is displayed as 132.82



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 27/05

INSTRUMENT FLIGHT RULES OPERATIONS USING GLOBAL NAVIGATION SATELLITE SYSTEM

1.0 Introduction

This notice is a reprint of the *Canada Air Pilot* Special Notice titled, “Instrument Flight Rules (IFR) Operations Using GNSS (GPS and WAAS),” which provides the terms and conditions of the Canadian approval for use of global positioning systems (GPS) and wide area augmentation systems (WAAS) in Canadian IFR flight operations. If a difference exists between these two documents, the *Canada Air Pilot* Special Notice will take precedence.

For additional reference and guidance material, refer to Transport Canada’s *Aeronautical Information Manual*, COM, Section 3.16, “Global Navigation Satellite System (GNSS).”

2.0 GPS and WAAS Operations

2.1 General

- a) The GPS or WAAS avionics shall be operated in accordance with the aircraft flight manual (AFM) or AFM Supplement, as defined by the *Canadian Aviation Regulations* (CARs).
- b) If the loss of GPS or WAAS navigation performance accuracy or integrity results in the inability to support the planned flight operation, the pilot-in-command shall advise the air traffic service (ATS) as soon as practical.
- c) The COM/NAV equipment suffix to indicate either GPS or WAAS capability is “G.”

2.2 En Route and Terminal Operations

- a) GPS or WAAS may be used for all en route and terminal operations.
- b) Course deviation indicator (CDI) sensitivity and integrity alerting shall be appropriate for the phase of flight.
- c) Sufficient navigation capability shall be available in accordance with CARs, [Part VI](#), “General Operating and Flight Rules,” to continue to the planned destination or another aerodrome in the event of a loss of GPS navigation.

2.3 RNAV (GPS) and RNAV (GNSS) Approaches

GPS and WAAS based approaches are charted as RNAV (GPS) RWY ## or RNAV (GNSS) RWY ##, denoting that GNSS navigation shall be used for approach guidance. These approaches may have up to three charted minima lines, as follows:

- LPV (localizer performance with vertical navigation);
- LNAV/VNAV (lateral/vertical navigation); and
- LNAV (lateral navigation only).

2.4 GPS Overlay Approaches

Overlay approaches are traditional very high frequency omnidirectional range (VOR)- or non-directional beacon (NDB)-based approaches (not localizer (LOC)-based) that have been approved to be flown using the guidance of an IFR approach-certified GPS. These are identified in the *Canada Air Pilot* with the letters GPS in parentheses and in small capitals after the runway designation (e.g., NDB RWY 04 (GPS)).

Unless required by the aircraft flight manual or flight manual supplement for the GPS equipment, pilots do not have to monitor the underlying traditional aids while flying these approaches, and may fly the approach even when the underlying aid is temporarily out of service.

When communicating with ATS, pilots shall refer to GPS overlays as follows:

“GPS overlay RWY ##.”

3.0 GPS or WAAS Avionics

3.1 General

- a) The avionics shall be approved in accordance with the applicable standards specified in Section 3.3.
- b) The avionics shall be installed and approved in accordance with the appropriate sections of the *Airworthiness Manual* (TP 6197E).
- c) Aircraft shall be equipped with an approved and operational traditional navigation system appropriate to the area of operations. The avionics requirements for IFR flight are described in CARs, [Section 605.18](#), “Power-driven Aircraft–IFR.”

3.2 En Route and Terminal

- a) The avionics for GPS equipment must meet Technical Standard Order (TSO)-C129/C129a (any class) issued by the US Federal Aviation Administration (FAA); WAAS equipment must meet FAA TSO-C145a or TSO-C146a (any class) or equivalent criteria.
- b) For flight within Canadian minimum navigation performance specifications (CMNPS) airspace or required navigation performance capability (RNPC) airspace, an installation meeting the requirements defined in CARs, Part VI, “General Operating and Flight Rules,” and Part VII, “Commercial Air Services,” may serve as the long-range navigation system. CMNPS and RNPC airspace are defined in the Designated Airspace Handbook (TP 1820E) and illustrated in Transport Canada’s *Aeronautical Information Manual*, “RAC,” Figure 12.2, “CMNPS, RNPC and CMNPS Transitional Airspace.”

3.3 Approach

- a) LNAV approaches, including overlays, may be flown using GPS (FAA TSO-C129/C129a, Class A1, B1, B3, C1 or C3) or WAAS (FAA TSO C145a/146a, any class) avionics.
- b) LNAV/VNAV approaches may be flown using WAAS (FAA TSO-C145a/C146a, Class 2 or 3) avionics, or multi-sensor flight management systems (FMS) (FAA TSO-C115b) with Baro VNAV capability, certified in accordance with FAA *Advisory Circular* AC 20–129 or equivalent.
- c) LPV approaches may only be flown using WAAS (FAA TSO-C145a/C146a, Class 3) avionics.

3.4 Approach Database

Approaches flown using GPS or WAAS must be retrieved from a current navigation database. The pilot-in-command is responsible for ensuring that the navigation data matches the current *Canada Air Pilot* information as amended by NOTAM.

4.0 Operator Certification

Holders of air operator certificates issued under CARs, [Part VII](#), “Commercial Air Services,” or private operator certificates issued under CARs, Part VI, [Subpart 4](#), “Private Operator Passenger Transportation,” are required to be authorized by an operations specification to conduct GPS-based (including WAAS) instrument approach operations in instrument meteorological conditions (IMC). This requirement is explained in *Commercial and Business Aviation Advisory Circular*, No. 0123R, “Use of Global Positioning System for Instrument Approaches” (25 March 2004).

5.0 Alternate Aerodrome Requirements

Pilots can take credit for a GNSS-based approach at an alternate aerodrome when all of the following conditions are met:

- a) An approach completely independent of GNSS at the planned destination is expected to be available at the estimated time of arrival (ETA);
- b) The published LNAV minima are the lowest landing limits for which credit may be taken when determining alternate aerodrome weather minima requirements. No credit may be taken for LNAV/VNAV or LPV minima;
- c) The pilot-in-command verifies that LNAV approach-level receiver autonomous integrity monitoring (RAIM) or WAAS integrity is expected to be available at the planned alternate ETA, taking into account predicted satellite outages; and
- d) For GPS FAA TSO-C129/C129a avionics, periodically during the flight, and at least once before the mid-point of the flight to the destination, the pilot-in-command verifies that approach-level RAIM is expected to be available at the planned alternate ETA.

For additional guidance on flight planning of GPS-based approaches at alternate aerodromes, refer to Transport Canada's *Aeronautical Information Manual*, "COM," Section 3.16.12, "GPS and WAAS Approaches at Alternate Aerodromes."

6.0 Use of GNSS in Lieu of Ground-based Aids

GNSS may be used to identify all fixes defined by distance measuring equipment (DME), VOR, VOR/DME and NDB, including fixes that are part of any instrument approach procedure, to navigate to and from these fixes along specific tracks, including arcs, and to report distances along airways or tracks for separation purposes, subject to the following conditions:

- a) An integrity alert is not displayed;
- b) Fixes that are part of a terminal instrument procedure are named, charted and retrieved from a current navigation database;
- c) Where ATS requests a position based on a distance from a DME facility for separation purposes, reported GNSS distance from the same DME facility may be used stating the distance in miles and the DME facility name (e.g., "30 miles from Sumspot VOR," instead of "30 DME from Sumspot VOR"); and,
- d) For approaches that are not part of the GPS overlay program described in 2.4, the pilot-in-command shall monitor the underlying navigation aid (NAVAID) for approach and missed approach track guidance.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 26/05

FLIGHT INSTRUCTOR REFRESHER COURSES

2005–2006

Transport Canada, Civil Aviation, will conduct flight instructor refresher courses at the following locations:

Aircraft Category	Language	Date	Location
Aeroplane	English	October 12–14, 2005	Winnipeg, Man.
	English	October 18–20, 2005	Leduc, Alta.
	English	October 24–26, 2005	Langley, B.C.
	English	November 1–3, 2005	Toronto, Ont.
	French	To be determined	To be determined
	English	February 1–March 2, 2006	King City, Ont.
Helicopter	English	October 26–28, 2005	Ottawa, Ont.

Any holder of a Class 1, 2, 3 or 4 flight instructor rating is eligible to apply for a course, provided their rating is valid (**not expired**) at the time the course begins. Successful completion will result in renewal of the flight instructor rating.

Instructors will be selected to attend each course from the applications received. Although there is no fee for the course itself, there will be a \$30.00 administration fee for instructor rating renewal and course members will be expected to make arrangements and pay for their own travel, meals and accommodation.

Interested instructors may fill out the application form on the reverse side of this AIC. The completed form can be faxed or mailed to Transport Canada at the following address

Transport Canada
 AARRE
 Ottawa ON K1A 0N8
 Fax: 613 990-6215

Note: APPLICATIONS FOR COURSES MUST BE RECEIVED A MINIMUM OF 45 DAYS PRIOR TO THE COURSE DATE

An on-line application can be submitted from:

www.tc.gc.ca/civilaviation/general/flttrain/IRC/menu.htm



Merlin Preuss
 Director General
 Civil Aviation

APPLICATION FOR FLIGHT INSTRUCTOR REFRESHER COURSE		
Course Type:	Course Date:	
Aeroplane <input type="checkbox"/> Helicopter <input type="checkbox"/>	Location:	
FIRST NAME	INITIAL	LAST NAME
Mr. Ms. Mrs.		
MAILING ADDRESS:		
TELEPHONE: Home: () Work: ()		
Fax: () E-mail:		
If accepted on the course, I would prefer to receive any course material and correspondence by e-mail: Yes No		
LICENCE TYPE:	LICENCE NUMBER:	
CLASS OF INSTRUCTOR RATING:	EXPIRY DATE:	
FLIGHT INSTRUCTOR EXPERIENCE PAST 12 MONTHS:	OTHER RATINGS:	
CLUB OR FLIGHT TRAINING UNIT:		
PRESENT STATUS AT CLUB OR SCHOOL		
CHIEF INSTRUCTOR: <input type="checkbox"/>	FULL TIME: <input type="checkbox"/>	PART TIME: <input type="checkbox"/>
FREELANCE: <input type="checkbox"/>	DFTE: <input type="checkbox"/>	UNEMPLOYED: <input type="checkbox"/>
WHAT YEAR DID YOU LAST ATTEND?	NEVER ATTENDED: <input type="checkbox"/>	
LIST YEAR(S) OF ANY UNSUCCESSFUL APPLICATION(S) TO ATTEND:		
SUBJECTS YOU WOULD LIKE TO SEE INCLUDED IN THE COURSE THIS YEAR:		
APPLICATIONS FOR COURSES MUST BE RECEIVED A MINIMUM OF 45 DAYS PRIOR TO THE COURSE DATE		
Transport Canada AARRE Ottawa ON K1A 0N8 Fax: 613 990-6215		

AERONAUTICAL INFORMATION CIRCULAR 25/05

CHANGES IN AVAILABILITY OF AERODROME FORECASTS (TAF)

Following the completion of an aeronautical study and consultation with customers on proposals designed to better match the company's services to customer requirements, NAV CANADA intends to make a number of changes to the availability of TAFs.

Subject to Transport Canada's approval, the following changes will be made. Some of the changes may occur beginning in the fall of 2005:

Airport		Current TAF Coverage	Future TAF Coverage
CAF2	Bella Bella	None	1400Z-0600Z*
CYAH	La Grande-4	24 hours	1200Z-2200Z*
CYCH	Miramichi	1200Z-0200Z	None
CYEL	Elliot Lake Muni	12 hours	None
CYGX	Gillam	1300Z-0600Z	24 hours
CYQD	The Pas	24 hours	1300Z-0500Z*
CYQW	North Battleford	1100Z-0500Z	24 hours
CYRJ	Roberval	24 hours	1300Z-0300Z*
CYRL	Red Lake	1400Z-0300Z	1400Z-0400Z*
CYSC	Sherbrooke	24 hours	1100Z-0300Z*
CYSL	St. Leonard	11-21Z	None
CYVT	Buffalo Narrows	None	1400Z-0400Z
CYVV	Warton	24 hours	None
CYYD	Smithers	24 hours	1400Z-0600Z
CYZE	Gore Bay-Manitoulin	0800Z-0200Z	1100Z-2300Z*
CYZR	Sarnia	1300Z-2100Z	1300Z-0300Z
CZBF	Bathurst	1200Z-0300Z	1000Z-0400Z*
CZMT	Masset	None	1630-0230Z*

* Standard time to be adjusted for daylight savings time.

These changes will improve the efficiency of the Air Navigation System (ANS) without affecting the safety or efficiency of aircraft operations. However, changes to the availability of TAF may impact the ability to use particular airports as alternates in flight planning. Pilots should monitor aeronautical publications for changes.

Additional details on these and other planned changes to the ANS are available on NAV CANADA's Web site at <www.navcanada.ca> or by contacting:

Gary Chandler
Manager, ANS Program Coordination
NAV CANADA
77 Metcalfe Street
Ottawa ON
K1P 5L6

Tel: 613 563-3847
Fax: 613 563-5602
E-mail: chandlg@navcanada.ca



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 24/05

EMERGENCY NAVIGATION SERVICES

NAV CANADA provides emergency navigation assistance to VFR pilots using radar or VHF direction-finding (VDF) equipment. With the expansion of radar availability, some of the existing VDF equipment has become redundant. NAV CANADA is planning to decommission redundant VDF equipment in areas where suitable radar coverage is available. An examination of radar availability has also identified other airports without radar coverage where VDF equipment would provide improved service. Installation of equipment at these airports is planned to occur over the next five years.

Subject to Transport Canada's review, VDF equipment will be decommissioned at the following locations:

Charlottetown	CYYG	Earlton	CYXR
Hamilton	CYHM	Kamloops	CYKA
Kapuskasing	CYYU	La Ronge	CYVC
Muskoka	CYQA	North Bay	CYYB
Port Hardy	CYZT	Prince George	CYXS
Roberval	CYRJ	Saint John	CYSJ
Sault Ste. Marie	CYAM	Sept-Îles	CYZV
Sudbury	CYSB	Sydney	CYQY
Thunder Bay	CYQT	Tofino	CYAZ
Toronto / Buttonville Muni	CYKZ	Toronto / City Centre	CYTZ
Winnipeg / St. Andrews	CYAV		

VDF equipment will be installed at the following locations:

High Level	CYOJ	Îles-de-la-Madeleine	CYGR
La Grande Rivière	CYGL	Lloydminster	CYLL
Mont-Joli	CYYY	Peace River	CYPE
St. Anthony	CYAY	Terrace	CYXT
Timmins	CYTS	Whitecourt	CYZU

These changes will improve the efficiency of the Air Navigation System (ANS) without affecting the safety or efficiency of aircraft operations.

Additional details on these and other planned changes to the ANS are available on NAV CANADA's Web site at <www.navcanada.ca> or by contacting:

Gary Chandler
Manager, ANS Program Coordination
NAV CANADA
77 Metcalfe Street
Ottawa ON K1P 5L6

Tel: 613 563-3847
Fax: 613 563-5602
E-mail: chandlg@navcanada.ca



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 23/05

REDESIGN OF THE REMOTE COMMUNICATIONS OUTLET (RCO) SYSTEM

NAV CANADA flight information centres (FIC) use RCOs to provide several aviation services, including flight information services en route (FISE), and aeronautical broadcasting service (AIRMETs, SIGMETs, urgent PIREPs, or other information that would be in the interests of flight safety, but which may not have been available to a pilot prior to departure). RCOs are also used to conduct communication searches in the event of an overdue aircraft. The primary frequency used for FISE RCOs is 126.7 MHz. This is also the frequency designated for pilot broadcast of aircraft position and intentions while en route in uncontrolled airspace. This applies to both IFR and VFR flights. Experience in many areas across the country, however, has demonstrated that excessive demand on 126.7 MHz results in frequency congestion that interferes with the provision of NAV CANADA services and pilots broadcasting communications.

To resolve this problem, and to improve the overall provision of flight information service, NAV CANADA will redesign the RCO system by establishing four frequencies dedicated to FISE (123.275 MHz, 123.375 MHz, 123.475 MHz and 123.55 MHz) and cease providing FISE on 126.7 MHz at most locations. In addition, some new RCOs will be established and some will be removed in order to provide more uniform and effective en-route communications coverage.

Where alternate FISE frequencies have been established, FIC specialists will no longer monitor 126.7 MHz. FIC specialists will, however, access the 126.7 RCO transceiver to provide aeronautical broadcasting service and conduct communication searches.

The redesign will be implemented over approximately five years. Changes to the RCO system will be reflected in aviation publication amendments, as they occur.

Some RCO sites that provide FISE use another published frequency in addition to 126.7 MHz. To ease congestion and interference during the RCO redesign implementation period, pilots should avoid using 126.7 MHz and select the alternate FISE frequency to contact the FIC at these sites.

For additional information on the RCO Redesign Project, please refer to the NAV CANADA Web site at <www.navcanada.ca> or contact:

Gary Chandler
Manager, ANS Program Coordination
NAV CANADA
77 Metcalfe Street
Ottawa ON K1P 5L6

Tel: 613 563-3847
Fax: 613 563-5602
E-mail: chandlg@navcanada.ca



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 22/05

CANADA AIRPORT MANOEUVRING SURFACES (CAMS)

As the office responsible for the publication and distribution of aeronautical information, NAV CANADA has produced a new product entitled *Canada Airport Manoeuvring Surfaces (CAMS)*.

The information in CAMS is intended to assist pilots during aircraft ground movement operations at Canadian airports. CAMS contains all the aerodrome, taxi, low visibility and parking charts published in the *Canada Air Pilot (CAP)*. Other up-to-date information on flight planning procedures and airport services, including fuel, lighting, and local prohibitions or procedures will continue to be found in the *Canada Flight Supplement (CFS)*.

The publication of airport diagrams by NAV CANADA is in direct support of the safety initiatives generated by *Flight 2005*: "Promoting a shared commitment to enhancing aviation safety in Canada and internationally." It also reflects the intent of the NAV CANADA and Transport Canada runway incursion prevention reports, and contributes to enhancing aviation safety and mitigating some of the risks associated with runway incursions.

The airport diagrams in CAMS are available at no cost on the NAV CANADA Web site at <www.navcanada.ca>.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 21/05

EXEMPTION FROM PARAGRAPHS 602.07(a) AND (b) OF THE *CANADIAN AVIATION REGULATIONS*

(Replaces AIC 9/03)

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt **all persons operating an aircraft** from the requirements of paragraphs 602.07(a) and (b) of the *Canadian Aviation Regulations* (CARs) subject to the conditions of this exemption.

Paragraph 602.07(a) states that no person shall operate an aircraft unless it is operated in accordance with the operating limitations set out in the aircraft flight manual, where an aircraft flight manual is required by the applicable standards of airworthiness.

Paragraph 602.07(b) states that no person shall operate an aircraft unless it is operated in accordance with the operating limitations set out in a document other than the aircraft flight manual, where use of that document is authorized pursuant to Part VII.

Purpose

The purpose of this exemption is to permit **all persons operating an aircraft** to take credit for GPS-based approaches when selecting an alternate aerodrome as part of a flight plan, as permitted through Aeronautical Information Circular (AIC) 12/04 paragraph 3.3.4 (Taking credit for a GPS approach at an alternate aerodrome), where **persons operating an aircraft** may have restrictions against taking credit for GPS-based approaches at an alternate aerodrome set out in the Aircraft Flight Manual or in another applicable document.

Application

This exemption applies to **all persons operating an aircraft** when selecting an alternate aerodrome as part of a flight plan in accordance with AIC 12/04 paragraph 3.3.4 (Taking credit for a GPS approach at an alternate aerodrome).

Conditions

This exemption is subject to the following conditions:

1. No person operating an aircraft shall take credit for GPS stand-alone or GPS overlay approaches at that aerodrome when determining weather minima requirements at an alternate aerodrome, except as described in condition #2 of these conditions;
2. All persons operating an aircraft may take credit for a GPS approach at an alternate aerodrome when **all** of the following conditions are met:
 - a) a useable approach at the **destination** is served by a functioning useable traditional aid. This approach must be completely independent of GPS. (Note that this precludes GPS in lieu of ground-based aids credit);
 - b) the pilot or operator determines that approach-level RAIM will be available at the **alternate** aerodrome at the expected time of arrival, using methods that take account of predicted satellite outages; and

- c) for TSO C129/C129a avionics, periodically during the flight, and at least once **before the mid-point** of the flight to destination, the pilot uses the avionics to perform a RAIM prediction for the **alternate** aerodrome at the expected time of arrival. If an in-flight prediction indicates that approach level RAIM will not be available at the alternate, the pilot should plan accordingly. (In-flight predictions are not required for TSO C145/145a/ 146/146a avionics.)

Validity

The exemption will take effect on **April 1, 2005** until the earliest of the following:

- a) **EST October 31, 2010;**
- b) the date on which any condition set out in this exemption is breached; the date on which any of the conditions of this exemption is breached;
- c) the date on which an amendment to the CARs and related standards comes into effect; or
- d) the date on which the exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest or is likely to affect aviation safety.

Dated at Ottawa, Ontario, Canada this 4th day of April 2005, **on behalf of the Minister of Transport.**



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 20/05

EXEMPTION FROM PARAGRAPH 602.26(a) AND SECTION 603.37 OF THE *CANADIAN AVIATION REGULATIONS*

(Replaces AIC 2/02)

Pursuant to Subsection 5.9(2) of the *Aeronautics Act*, and after having taken into account that the exemption is both in the public interest and is not likely to affect aviation safety, I hereby exempt a **person conducting a parachute descent and a pilot-in-command of an aircraft operated for the purpose of conducting a parachute descent in or into controlled airspace or an air route**, from the requirements set out in paragraph 602.26(a) and section 603.37 of the *Canadian Aviation Regulations* (CARs), subject to the following conditions.

Paragraph 602.26(a) requires that except where permitted in accordance with section 603.37, no pilot-in-command of an aircraft shall permit, and no person shall conduct a parachute descent from the aircraft in or into controlled airspace or an air route.

Section 603.37 requires for the purposes of section 602.26, that a pilot-in-command may permit and a person may conduct a parachute descent if the person complies with the provisions of special flight operations certificate - parachuting issued by the Minister pursuant to section 603.38.

Purpose & Application

The purpose of this exemption is to permit parachute descents in or into controlled airspace or air routes without requiring a special flight operations certificate.

This exemption applies to persons conducting parachute descents and pilots-in-command of aircraft operated for the purpose of conducting parachute descents.

Conditions

This exemption is subject to the following conditions:

1. The person conducting a parachute descent and the pilot-in-command of the aircraft shall
 - a) be aware of their duties and responsibilities associated with the parachute descent; and
 - b) be capable of carrying out any such duties and responsibilities.
2. The person conducting a parachute descent and the pilot-in-command of the aircraft shall not conduct the parachute descent
 - a) in a manner that creates a hazard to other airspace users or to persons or property on the ground;
 - b) in wind speeds that exceed the maximum published by the manufacturer of the parachute being used for the descent;
 - c) through clouds for any part of the parachute descent, including free-fall;
 - d) unless a wind drift indicator drop or other wind drift procedure has been conducted within one hour prior to the commencement of the parachute descent;

- e) where the proposed parachute descent is to take place at an airport, unless the airport manager has been advised of the proposed parachute descent and has no objection;
 - f) where the proposed parachute descent is to take place at an aerodrome other than an airport, unless the aerodrome operator has been advised of the proposed parachute descent and has no objection;
 - g) where the proposed parachute descent is to take place onto private property, unless the landowner or tenants have been advised of the proposed parachute descent and have no objection; and
 - h) where the intended parachute landing area is within 1 kilometre of open water, unless the person conducting the parachute descent wears a personal flotation device capable of supporting that person and his or her equipment.
3. The person conducting a parachute descent and the pilot-in-command of the aircraft shall not conduct a parachute descent at night unless:
- a) the person conducting the parachute descent is equipped with a steady or flashing light visible through 360 degrees;
 - b) the parachute landing area is illuminated in a manner that enables the pilot-in-command of the aircraft and the person conducting the parachute descent to clearly identify the landing area from the maximum altitude established for the parachute descent; and
 - c) the parachute landing area is clearly visible to the pilot-in-command of the aircraft and to the person conducting the parachute descent.
4. The person conducting a parachute descent and the pilot-in-command of the aircraft shall not permit a parachute descent to be initiated in uncontrolled airspace that will enter controlled airspace or an air route unless:
- a) the parachute operator has notified the ATC facility or FSS responsible for the airspace in which the proposed parachute descent is to take place;
 - b) the aircraft is equipped with a two-way radio capable of broadcasting and obtaining traffic advisories on frequencies appropriate to the airspace; and
 - c) the pilot-in-command broadcasts an advisory containing all the pertinent information relating to the parachute descent being carried out prior to any parachute descent being initiated.
5. The pilot-in-command of the aircraft shall not permit a person to conduct a parachute descent into or in Class A, B, or C unless:
- a) there is prior co-ordination between the pilot-in-command and the air traffic control unit providing air traffic control service in that airspace; and
 - b) the pilot-in-command complies with air traffic control instructions and clearances.
6. The pilot-in-command of the aircraft shall not permit a person to make a parachute descent into or in controlled class D or E airspace unless there is prior co-ordination between the pilot-in-command and the air traffic control unit providing air traffic control service in that airspace.

Validity

This exemption is in effect until the earliest of the following:

- a) **23:59 EST on March 31, 2006;**
- b) the date on which an amendment to the appropriate provisions of the *Canadian Aviation Regulations* and related standards comes into effect;
- c) the date on which any condition set out in this exemption is breached; or
- d) the date on which this exemption is cancelled, in writing, by the Minister where he is of the opinion that it is no longer in the public interest, or that it is likely to affect aviation safety.

Dated at Ottawa, Canada, this 21st day of October 2004, **on behalf of the Minister of Transport.**



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 19/05

EXEMPTION FROM PARAGRAPH 602.27(b) OF THE *CANADIAN AVIATION REGULATIONS*

(Replaces AIC 3/02)

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after having taken into account that the exemption is both in the public interest and is not likely to affect aviation safety, I hereby exempt **persons conducting aerobatic manoeuvres in an aircraft in controlled airspace**, from the requirement set out in paragraph 602.27(b) of the *Canadian Aviation Regulations* (CARs), subject to the following conditions.

Paragraph 602.27(b) requires that no person operating an aircraft shall conduct aerobatic manoeuvres in controlled airspace, except in accordance with a Special Flight Operations Certificate issue pursuant to section 603.67

Purpose & Application

The purpose of this exemption is to permit persons operating an aircraft to conduct aerobatic manoeuvres in controlled airspace without requiring a Special Flight Operations Certificate issued pursuant to section 603.67 of the CARs

Conditions

This exemption is subject to the following conditions:

1. The person operating an aircraft to conduct aerobatic manoeuvres in controlled airspace shall comply with paragraphs 602.27(a), 602.27(c) and 602.27(d) of the CARs;
2. The person shall advise the appropriate air traffic services unit prior to conducting aerobatic manoeuvres in any class of controlled airspace that requires radio contact with air traffic services;
3. Where the aerobatic manoeuvres will be conducted in Class A, B or C airspace or Class D Control Zones, prior coordination between the person conducting the aerobatic manoeuvres and the air traffic control unit providing air traffic control services in the above airspace shall be carried out.

Validity

This exemption is in effect until the earliest of the following:

- a) **23:59 EST on March 31, 2006;**
- b) the date on which an amendment to the appropriate provisions of the *Canadian Aviation Regulations* and related standards comes into effect;

- c) the date on which any condition set out in this exemption is breached; or
- d) the date on which this exemption is cancelled, in writing, by the Minister where he is of the opinion that it is no longer in the public interest, or that it is likely to affect aviation safety.

Dated at Ottawa, Canada, this 21st day of October 2004, **on behalf of the Minister of Transport.**

A handwritten signature in black ink, appearing to read 'Merlin Preuss', written in a cursive style.

Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 18/05

EXEMPTION FROM PARAGRAPH 804.01(c) OF THE *CANADIAN AVIATION REGULATIONS* AND FROM THE *MANUAL OF SURFACE WEATHER OBSERVATION*

(Supersedes AIC 11/00)

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt persons who provide aviation weather services, that have met the criteria and application set out below, from the requirements of the *Manual of Surface Weather Observation* made pursuant to paragraph 804.01(c) of the *Canadian Aviation Regulations* (CAR), subject to the following conditions.

Paragraph 804.01(c) of the CAR states that a person who provides aviation weather services shall provide the services in accordance with the standards specified in the *Manual of Surface Weather Observation*.

Purpose

The purpose of this exemption is to permit persons to provide aviation weather services consisting of the automated observation and reporting of any or all of: wind direction, speed and character; visibility; present weather; sky condition; temperature; dewpoint temperature or atmospheric pressure. These services when provided by automated observation and reporting are not provided in accordance with the existing standards in the *Manual of Surface Weather Observation*.

Application

This exemption applies to persons who provide aviation weather services that include any or all of the automated observation and reporting of wind direction, speed and character; visibility; present weather; sky condition; temperature; dewpoint temperature or atmospheric pressure, including reporting of such in AUTO METAR / SPECI format.

Conditions

This exemption is subject to the following conditions

1. Subject to section 803.01 of the *Canadian Aviation Regulations*, a service provider shall notify the Minister in advance of commencing to provide these services or making changes to services already being provided.
2. Where a service provider is already providing services on the date that this exemption comes into effect and the service provider wishes to operate under the authority of this exemption, the service provider shall immediately notify the Minister of the service provider's intention and, within 60 days after the date of that notification, shall provide the Minister with a notification that meets the requirements specified in condition 3.
3. This notification shall include the following information:
 - a) the name, address and telephone number (and e-mail address, as applicable) of
 - (i) the service provider,
 - (ii) any person with whom the service provider has entered an agreement to provide meteorological observations on their behalf,

- (iii) the person providing maintenance of the meteorological instrumentation to be used,
 - (iv) the aerodrome or meteorological station, and its geographical coordinates, where the meteorological observation will be provided;
 - b) a summary description of the service to be provided;
 - c) the manufacturer and type of meteorological instrumentation used to make the meteorological observations;
 - d) the meteorological elements being reported;
 - e) for new or significantly modified meteorological instruments or meteorological systems, the name, address and telephone number (and e-mail address, as applicable) of
 - (i) the person who tested the meteorological instrumentation and meteorological system to verify its compliance with the accuracy standard,
 - (ii) the person who provided the verification of the test data in accordance with requirements of the accuracy standards.
 - f) for those services for which paragraph (e) is applicable, a copy of the written confirmation of the verification report.
4. Each person providing meteorological observations under the authority of this exemption, shall do so in accordance with the conditions in Annex A attached to this exemption.
 5. Service providers shall continue to comply with all applicable requirements of Annex 3 to the Convention as referenced by *Canadian Aviation Regulations* paragraph 804.01 (a).
 6. The service provider shall notify the Minister if the aviation weather services provided under the authority of this exemption are discontinued.
 7. No service provider shall permit a person other than a person qualified in accordance with Annex A to provide aviation weather services.
 8. Any service provider who provides services in accordance with this exemption that are not in full compliance with Annex A shall, within 90 days of the effective date of this exemption, have an implementation plan for entering into compliance with all provisions, which is acceptable to the Minister.
 9. The service provider shall keep the implementation plan required by condition 8 up to date and shall make it available to the Minister upon reasonable notice given by the Minister.

Validity

This exemption is in effect from 5:01 am EDT on July 7, 2005 until the earliest of the following:

- a) 23:59 EDT on January 5, 2007;
- b) the date on which an amendment to the appropriate provision of the *Canadian Aviation Regulations* and associated standards comes into effect;
- c) the date on which any of the conditions of this exemption is breached; or
- d) the date on which this exemption is canceled, in writing, by the Minister of Transport, where he is of the opinion that it is no longer in the public interest or that it is likely to affect aviation safety.

Cancellation

Effective from 0501 am EDT on July 7, 2005; the exemption to paragraph 804.01 c) of the *Canadian Aviation Regulations* issued to persons who provide automated observations and reports of wind, temperature, humidity and atmospheric pressure signed on September 21, 2000 by the Director Aerodromes & Air Navigation (formerly Air Navigation Services and Airspace) on behalf of the Minister of Transport is canceled and superseded by this exemption.

Details on the application process and complete copies of the exemption, including details of Annex A, are available from local Transport Canada offices

A handwritten signature in black ink, appearing to read 'Merlin Preuss', written in a cursive style.

Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 17/05

EXEMPTION FROM SUBSECTION 602.34(2) OF *THE CANADIAN AVIATION REGULATIONS*

(Replaces AIC 14/05)

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and taking into account that the exemption is both in the public interest and not likely to affect aviation safety, I hereby exempt persons conducting IFR flight, in Reduced Vertical Separation Minimum (RVSM) airspace while operating an RVSM certified aircraft, from the requirement to operate at a cruising flight level appropriate to the track, as set out in the Table referenced in subsection 602.34(2) of the *Canadian Aviation Regulations* (CARs), subject to the following conditions.

Subsection 602.34(2) Table of the CARs currently requires 2000 feet vertical separation between FL290 to FL410 inclusive.

Purpose

The implementation of RVSM in a designated portion of Northern Canadian Airspace occurred on April 18, 2002, and in Southern Domestic Airspace on January 20, 2005. This exemption will permit persons operating an RVSM certified aircraft, in RVSM airspace to conduct IFR flight, at altitudes appropriate to track between FL290 to FL410 inclusive, in accordance with the 1000 feet RVSM vertical separation. RVSM procedures will permit certified RVSM aircraft to be operated with 1000 feet vertical separation in lieu of the normal 2000 feet separation.

Application

The exemption applies only to persons conducting IFR flight, within Reduced Vertical Separation Minimum (RVSM) airspace while operating a RVSM certified aircraft.

Conditions

This exemption is subject to the following conditions:

1. A person operating a RVSM certified aircraft in RVSM airspace shall conduct IFR flight, in accordance with subsection 602.34(2) of the CARs, with reference to the following table; and
2. Aircraft operated in RVSM airspace shall be RVSM certified.

TABLE CRUISING ALTITUDES AND CRUISING FLIGHT LEVELS APPROPRIATE TO AIRCRAFT TRACK				
TRACK 000° - 179°		Cruising Altitudes or Cruising Flight Levels – 18,000 feet and below	TRACK 180° - 359°	
Column I	Column II		Column III	Column IV
IFR	VFR		IFR	VFR
1,000	-		2,000	-
3,000	3,500		4,000	4,500
5,000	5,500		6,000	6,500
7,000	7,500		8,000	8,500
9,000	9,500		10,000	10,500
11,000	11,500		12,000	12,500
13,000	13,500		14,000	14,500
15,000	15,500		16,000	16,500
17,000	17,500			
IFR & CVFR			IFR & CVFR	
RVSM			RVSM	
190			180	
210			200	
230			220	
250			240	
270			260	
290			280	
310			300	
330			320	
350			340	
370			360	
390			380	
410			400	
450			430	
490			470	
530			510	
570			550	
			590	
		Cruising Flight Levels – 180 to 590 RVSM 1,000 feet Separation FL290-FL410		

Validity

This exemption is in effect until the earliest of the following:

- a) October 31, 2006, at 23:59 UTC;
- b) The date on which an amendment to the appropriate provision of the CARs and related standards comes into effect;
- c) The date on which any condition set out in this exemption is breached; or
- d) The date on which this exemption is cancelled, in writing, by the Minister, where he is of the opinion that it is no longer in the public interest, or that it is likely to affect aviation safety.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 16/05

KAMLOOPS FLIGHT INFORMATION CENTRE (FIC) RADIOTELEPHONY CALL SIGN CHANGE

Introduction

The Kamloops FIC radiotelephony call sign has produced some ambiguity as it is shared with the Kamloops flight service station (FSS). The call sign presently in use for both sites is "Kamloops Radio."

Intention of Circular

The intention of this circular is to inform all pilots and users of the upcoming radiotelephony name change for the Kamloops FIC throughout the Vancouver flight information region (FIR). Effective July 7, 2005, the Kamloops FIC radiotelephony call sign shall be **Pacific Radio**.

This change shall be reflected in all applicable publications, such as the *Canada Flight Supplement* (CFS), enroute charts, etc. As the *Water Aerodrome Supplement* (WAS) cannot be changed until next year, a NOTAM indicating this change will be issued.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 15/05

CANADIAN DIFFERENCES WITH ICAO PHRASEOLOGY

The International Civil Aviation Organization (ICAO) publishes standard aviation terms and phrases in the *Procedures for Air Navigation Services—Air Traffic Management (PANS-ATM)*, Document 4444 for use worldwide. For the most part, the use of standard terms and aviation phraseology in North America is consistent with those published by ICAO; however, pilots are cautioned that certain specific ATC terms used in Canada are different from the terms and phrases published by ICAO.

A large number of ICAO member States use the expression *“TAXI TO HOLDING POSITION/POINT”* to indicate a point situated 200 ft from the edge of the runway. In addition, these States then use the phraseology *“LINE UP”* or *“LINE UP AND WAIT”* when an aircraft is given a taxi instruction to enter the runway intended for takeoff.

In Canada, aircraft that are holding short of active runways and ready for takeoff will be issued instructions such as *“TAXI TO POSITION,” “TAXI TO POSITION AND WAIT”* and *“HOLD YOUR POSITION.”* Canadian controllers do not use the expression *“TAXI TO HOLDING POSITION/ POINT”* as it has the potential to create confusion with the existing Canadian expressions *“TAXI TO POSITION”* and *“TAXI TO POSITION AND WAIT.”*

There are a significant number of daily transborder flights in North America. Similar pilot procedures, aviation regulations, communication techniques and a common phraseology ensure that aviation safety is not compromised. Implementing the suggested ICAO phraseology in North America would result in a significant change to existing North American phraseology. While this change may occur in the future, Canada and the United States will retain their existing phraseologies for the time being.

Pilots are therefore urged to remain alert to the different phraseologies that may be encountered when operating near runway thresholds in various locations. The table below is provided to acquaint pilots with the different phraseologies in use.

ICAO	CANADA	Federal Aviation Administration (FAA)
TAXI TO HOLDING POSITION/POINT	TAXI VIA BRAVO To a departure runway via multiple taxiways: TAXI VIA BRAVO AND DELTA	TAXI VIA CHARLIE, HOLD SHORT OF RUNWAY TWO SEVEN RIGHT
LINE UP	TAXI TO POSITION	RUNWAY (number), POSITION AND HOLD
LINE UP AND WAIT	TAXI TO POSITION AND WAIT, (REASON)	RUNWAY (number), POSITION AND HOLD



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 13/05

VANCOUVER AIRSPACE REVIEW CHANGES TO CONTROL ZONES (CZ) AT BOUNDARY BAY AND VANCOUVER AIRPORTS

NAV CANADA is undertaking an aeronautical study of airspace in the Vancouver and Lower Mainland area. The study includes an area 50 NM around the Vancouver VORTAC.

The study has uncovered some issues at Boundary Bay and the Vancouver area known as the North West Corridor that require immediate action. Rather than wait for the implementation of the final report recommendations from the aeronautical study, NAV CANADA intends, subject to Transport Canada concurrence, to modify the shape of the CZs at Boundary Bay and Vancouver International airports. These changes will be reflected in the next publication of the VFR terminal area chart (VTA), the VFR navigation chart (VNC) and the *Canada Flight Supplement* (CFS). Implementation is presently planned for May 12, 2005.

Additional details regarding the aeronautical study or the changes referred to above are available on NAV CANADA's Web site at <www.navcanada.ca>, under Level of Service Review, Aeronautical Studies, by e-mail at <aerostudy@navcanada.ca>, or by phone at 1 800 876-4693.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 12/05

CHANGES TO THE PROVISION OF REMOTE AERODROME ADVISORY SERVICE (RAAS) AT 20 AIRPORTS

In the course of a national level of service review involving consultations with stakeholders, NAV CANADA identified a number of airports with RAAS where the service was not required or where the hours could be reduced to match the level, complexity and nature of the aircraft operations at each site.

Subject to Transport Canada’s review of the aeronautical study for these service changes, NAV CANADA intends to cease providing RAAS at seven airports and reduce the hours in which RAAS is provided at another thirteen airports as follows:

- | | |
|----------------------------|--|
| Atikokan Municipal Airport | ▪ decommission 24 hour RAAS |
| Chibougamau (Chapais) | ▪ decommission 24 hour RAAS |
| Gillam | ▪ decommission 24 hour RAAS |
| Lynn Lake | ▪ decommission 24 hour RAAS |
| North Battleford | ▪ decommission 24 hour RAAS |
| Swift Current | ▪ decommission 24 hour RAAS |
| Whitecourt | ▪ decommission 8 hour RAAS |
| Buffalo Narrows | ▪ reduce RAAS from 24 to 12 hours
(1400Z-0200Z) |
| Dauphin | ▪ reduce RAAS from 24 to 14 hours
(1200Z-0200Z) |
| Flin Flon | ▪ reduce RAAS from 24 to 16 hours
(1200Z-0400Z) |
| Havre-Saint-Pierre | ▪ reduce RAAS from 24 to 16 hours
(1100Z-0300Z) |
| Moosonee | ▪ reduce RAAS from 24 to 14 hours
(1200Z-0200Z) |
| Natashquan | ▪ reduce RAAS from 24 to 10 hours
(1300Z-2300Z) |
| Norway House | ▪ reduce RAAS from 24 to 13 hours
(1300Z-0200Z) |
| Pickle Lake | ▪ reduce RAAS from 24 to 15 hours
(1100Z-0200Z) |
| Quesnel | ▪ reduce RAAS from 24 to 16 hours
(1400Z-0600Z) |
| Red Lake | ▪ reduce RAAS from 24 to 16 hours
(1200Z-0400Z) |
| Stony Rapids | ▪ reduce RAAS from 24 to 15 hours
(1300Z-0400Z) |
| The Pas | ▪ reduce RAAS from 24 to 16 hours
(1300Z-0500Z) |
| Yorkton | ▪ reduce RAAS from 24 to 16 hours
(1200Z-0400Z) |

With the reduction and decommissioning of RAAS, information required to conduct an instrument approach (wind, altimeter, runway condition), special VFR approvals (for sites within control zones) and IFR departure clearances may be obtained from the flight information centre (FIC) via the flight information service en route (FISE) frequency or from the area control centre (ACC) via the peripheral station (PAL) frequency, as appropriate. In addition, vehicle operators will be monitoring the mandatory frequency (MF) while on the manoeuvring area of the aerodrome. Pilots will communicate directly with the operators to obtain the vehicle's position and operator intentions when required for co-ordination of the aircraft's arrival or departure. This guidance information will be included in the *Canada Flight Supplement* (CFS), General section under Communications, RAAS.

Subject to Transport Canada's review, these changes will begin in the summer and are expected to be completed by the end of 2005. The appropriate amendments will be made to aeronautical publications in coordination with the service changes. These adjustments in services will improve the efficiency of the Air Navigation System (ANS), without affecting the safety or efficiency of aircraft operations. Additional details are available on NAV CANADA's Web site at <www.navcanada.ca> under Completed Aeronautical Studies, or by contacting:

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Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 11/05

EXEMPTION FROM PARAGRAPHS 602.128 (2)(a) AND (3)(a) OF THE *CANADIAN AVIATION REGULATIONS*

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt pilots-in-command of IFR aircraft from the requirements set out in paragraphs 602.128(2)(a) and (3)(a) of the *Canadian Aviation Regulations* (CARs), subject to the following conditions.

Paragraph 602.128 (2)(a) prohibits pilots-in-command of IFR aircraft from descending below the decision height, in the case of CAT I or II precision approach, unless the required visual reference necessary to continue the approach to land has been established.

Paragraph 602.128 (3)(a) requires pilots-in-command of IFR aircraft conducting a CAT I or II instrument procedure to initiate a missed approach procedure at decision height unless the required visual reference has been established.

Purpose

The purpose of this exemption is to permit pilots-in-command of IFR aircraft to conduct instrument approach and landing operations using an **approach procedure with vertical guidance (APV)**, that utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

The purpose of this exemption is also to allow pilots-in-command of IFR aircraft, in the case of a CAT I or II precision approach or an **approach procedure with vertical guidance**, to continue the final approach below the decision **altitude**/height when the required visual reference necessary to continue the approach to land has been established. The **decision altitude (DA)** or decision height (DH) being a specified altitude or height in the precision approach or **approach with vertical guidance** at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Application

This exemption applies to any pilot-in-command of an IFR aircraft conducting a CAT I or II precision approach or an **approach procedure with vertical guidance**.

Conditions

1. No pilot-in-command of an IFR aircraft shall, unless the required visual reference necessary to continue the approach to land has been established, in the case of a CAT I or II precision approach, or an approach procedure with vertical guidance, continue the final approach descent below the decision altitude/height.
2. Where the pilot-in-command of an IFR aircraft conducting an instrument approach does not establish the required visual reference referred to in condition (1) above, the pilot-in-command shall initiate a missed approach procedure in the case of a CAT I or II precision approach procedure, or an **approach procedure with vertical guidance**, at decision **altitude**/height.

Validity

This exemption is in effect until the earliest of the following:

- a) June 30, 2006, 23:59 EDT;
- b) the date on which the appropriate amendment to the *Canadian Aviation Regulations* comes into effect;
- c) the date on which any condition set out in this exemption is breached; or
- d) the date on which this exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest or is likely to affect aviation safety.

Dated at Ottawa, Ontario this 21st day of January 2005, **on behalf of the Minister of Transport.**



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 10/05

REMOVAL OF THE PHRASE “VFR FLIGHT NOT RECOMMENDED” IN PILOT BRIEFING

Until now, a flight service specialist was required to state the phrase “VFR FLIGHT NOT RECOMMENDED” at the beginning of a pilot briefing for a VFR flight when extensive instrument meteorological conditions (IMC) or conditions that may affect the safety of flight were reported or forecast to occur along the planned route of flight. The phrase was advisory in nature and the conditions that prompted the use of the phrase were then to be stated and the pilot was to be asked if a briefing was still required.

Pilots have requested that the phrase no longer be used in briefings. It was reported that flights were cancelled because the phrase was used even though the flights could have been conducted.

NAV CANADA recognizes that the responsibility for determining if a flight should be conducted or not rests solely with the pilot. The requirement for flight service specialists to use the phrase “VFR FLIGHT NOT RECOMMENDED” is discontinued and the phrase will no longer be used at the beginning of a pilot briefing. Significant meteorological information that could influence the pilot to alter or cancel the proposed flight will continue to be provided at the beginning of the briefing in accordance with current practice.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 9/05

NORTH AMERICAN AEROSPACE DEFENSE COMMAND (NORAD) INTERCEPTOR FLARES

NORAD is tasked with ensuring air sovereignty and defending American and Canadian airspace against attack from all enemies—foreign and domestic. Since September 11, 2001, NORAD operations have been closely coordinated between the Transportation Security Administration (TSA), the Federal Aviation Administration (FAA), Transport Canada and NAV CANADA. These operations include incorporating restricted operations areas (ROA) and exclusion zones (EZ).

In a continuing effort to safely enforce restricted areas, NORAD interceptors have developed procedures to communicate with aircraft that have unknown intentions. These procedures augment standard International Civil Aviation Organization (ICAO) interceptor procedures as detailed in *A.I.P. Canada SAR 4.7, SCHEDULE II*.



In addition to the visual signals described in SCHEDULE II, NORAD interceptors may dispense flares in your vicinity as an attempt to communicate the following:

1. Pay attention;
2. Contact air traffic control (ATC) immediately on the local frequency or 121.5 MHz/243.0 MHz;
3. Follow the interceptors' visual ICAO signals;
4. Non-compliance may result in the use of force.

These procedures will be done with the highest regard for the safety of the intercepted aircraft and its passengers, and are practiced regularly by NORAD assets. As always, aircraft not complying with airspace restrictions face enforcement action and possible prosecution.



Every person operating aircraft in the United States and Canada has an important role to play in air sovereignty through thorough flight planning and review of posted flight restrictions and NOTAM information. Wide dissemination of information in order to understand what it means when flares are dispensed is an important part of this flight planning process.

Questions should be addressed to 1 Canadian Air Division / Canadian NORAD Region Headquarters, Public Affairs at 204 833-2500, extension 5176.

A handwritten signature in black ink, appearing to read 'Kathleen Fox'.

Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 7/05

NAVIGATION AIDS (NAVAID), INSTRUMENT APPROACH PROCEDURES (IAP) AND LOW FREQUENCY (LF) AIRWAYS/AIR ROUTES

Introduction

In the course of a national level of service review involving consultations with stakeholders, NAV CANADA identified a number of NAVAIDs, IAPs and LF airways/air routes that no longer meet any defined service requirement. NAV CANADA intends to eliminate these redundant systems and services to improve the efficiency of the Air Navigation System (ANS), without affecting the safety or efficiency of aircraft operations.

NAVAIDs

NAV CANADA maintains over 1 400 NAVAIDs, including precision and non-precision approach aids. Technical advances, notably in satellite navigation, have reduced the dependence on ground-based navigation aids in recent years, while increasing airport usability.

A review of the ANS has identified a number of non-directional beacons (NDB) and a small number of instrument landing systems (ILS) that are not required to maintain airport access. NAV CANADA intends to decommission these NAVAIDs and revoke their associated IAPs. In all cases, there is at least one alternative ground-based method of accessing the affected airports with equivalent or better landing minima. In many cases, additional RNAV(GPS) approaches will be implemented prior to the decommissioning of the NAVAID, and these new approaches will increase airport access.

IAPs

A review of IAPs has identified runways with multiple IAPs with varying minima. NAV CANADA intends to revoke a number of IAPs with higher minima that neither enhance airport access nor provide suitable levels of redundancy.

LF Airways/Air Routes

A review of the airway system has identified a number of LF airways/air routes that are closely paralleled by existing VHF airways/air routes with similar minimum operating altitudes. NAV CANADA intends to revoke a number of LF airways/air routes that are redundant.

The appropriate amendments will be made to aeronautical publications as changes are made. Details on the actual items to be decommissioned or revoked are available on NAV CANADA's Web site at <www.navcanada.ca> under Completed Aeronautical Studies, or by contacting:

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Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 6/05

AERONAUTICAL FACILITIES NOTIFICATION (AFN) LOGONS FOR FUTURE AIR NAVIGATION SYSTEM (FANS) OPERATIONS

This aeronautical information circular (AIC) provides information pertinent to the North Atlantic (NAT) region and also updates *A.I.P. Canada Supplement 11/04*, which is pertinent within the Edmonton flight information region (FIR).

Canada and the NAT region are harmonizing AFN logons with other regions that support FANS operations. AFN logons to the address “CADS” will not be supported within the NAT region after May 31, 2005. This change also affects FANS operations planned within portions of the Edmonton FIR (see AIC 3/04 and *A.I.P. Canada Supplement 11/04*).

After May 31, 2005, crews shall not logon to the “CADS” address. FANS AFN logons shall use the following addresses, as appropriate, for air traffic services (ATS) facilities:

- | | |
|--|--------|
| Gander Oceanic Control Area | ▪ CZQX |
| Shanwick Oceanic Control Area | ▪ EGGX |
| Reykjavik Oceanic Control Area | ▪ BIRD |
| Santa Maria Oceanic Control Area | ▪ LPPO |
| New York Data Link service area | ▪ KZWY |
| Bodø Oceanic Control Area | ▪ ENOB |
| Edmonton automatic dependent surveillance (ADS) Airspace | ▪ CZEG |

Operators should note that an AFN logon to any of these addresses will also result in a controller-pilot data link communication (CPDLC) connection, if the ATS facility offers CPDLC services. It is the operator’s responsibility to ensure that only trained crews avail themselves of CPDLC services.

Guidance material for data link operations in the NAT region is available for download at www.nat-pco.org/adswpr.htm. The onus is on each operator to be familiar with, and meet, the requirements of the *Guidance Material for ATS Data Link Services in North Atlantic Airspace* (particularly “Participation Requirements” and “Responsibilities—Aircraft Operator”).



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 5/05

TRANSPORT CANADA AND NAV CANADA TO INTRODUCE NEW AERONAUTICAL PUBLICATIONS

Under *Canadian Aviation Regulation (CAR) 803.01*, NAV CANADA is responsible for the production of an integrated aeronautical information package including an International Civil Aviation Organization (ICAO) compliant Aeronautical Information Publication (AIP). In order to satisfy this requirement, Transport Canada (TC) and NAV CANADA are intending to make a number of publication changes.

The current TC publication, entitled *A.I.P. Canada*, will be converted into the TC *Aeronautical Information Manual (AIM)*. This TC AIM will contain information of a regulatory or educational nature. In concert, NAV CANADA will introduce a new ICAO-compliant AIP. To avoid confusion between the current *A.I.P. Canada* publication, and the ICAO-compliant AIP to be produced by NAV CANADA, the new NAV CANADA product will be entitled *AIP Canada (ICAO)*.

The volume of regulatory, educational and aeronautical information currently published in the *A.I.P. Canada*, will continue to be provided, albeit in a different format, through a combination of Web and paper products.

The TC AIM

As part of our continued effort to improve information services to the flying community, TC has recently launched on its Web site at <www.tc.gc.ca/CivilAviation/Regserv/Affairs/AIP/menu.htm>, a downloadable version of *A.I.P. Canada*. This version of *A.I.P. Canada* will be kept up-to-date and will remain in effect and available online until October 2005, at which time it will be replaced by the new TC AIM. This new publication will contain the same information as currently found in *A.I.P. Canada*, but in a new format. The new publication will be available online and in a paper version in a letter-size bound format. There will no longer be any need to insert amendments into a binder, as each publication will be complete and up-to-date. In order to facilitate the transition to the new format, the Web version of the *A.I.P. Canada* will be kept up-to-date until October 2005; however, the final amendment to the paper version of the *A.I.P. Canada* will be amendment 2/05, dated April 14, 2005.

The new TC AIM will be initially available on the TC Web site as a downloadable product, with the intent that an HTML version will be added shortly thereafter. The TC AIM will be updated in the fall and spring of each year. The first two editions of the printed version will be provided free of charge, but after the first year, it will be available as an individual purchase or as a subscription only. Additional information will be provided at a later time. The latest version of the TC AIM will also be included free of charge on the CARs CD-Rom.

AIP Supplements, Aeronautical Information Circulars (AIC) and Aviation Notices

Supplements, AICs and Aviation Notices will not be included in the paper version of the TC AIM. The Supplements and AICs, which are currently available on the TC Web site, will also be available on the NAV CANADA Web site starting July 7, 2005. They will also be available with NAV CANADA's *AIP Canada (ICAO)* publication.

As of July 7, 2005, information currently being disseminated as Aviation Notices will be published as AIP Supplements or AICs in order to align the dissemination of information with the ICAO standards.

AIP Canada (ICAO)

AIP Canada (ICAO) will be an ICAO-compliant publication intended primarily to satisfy international requirements for the exchange of aeronautical information of a lasting character.

AIP Canada (ICAO) will be published by NAV CANADA. As required by ICAO, it will contain, or provide reference to, basic permanent and long-duration temporary Canadian aeronautical information.

AIP Canada (ICAO) will be available on the NAV CANADA Web site as a downloadable product as of October 27, 2005.

A summary of this information is provided in the table below:

	<i>Aeronautical Information Publication Canada (ICAO) AIP Canada (ICAO)</i>	Transport Canada <i>Aeronautical Information Manual TC AIM</i>
Produced by	NAV CANADA	Transport Canada
Intended use	Intended primarily to satisfy international Requirements for the exchange of aeronautical information.	To provide regulatory and educational information to users of the air navigation system (ANS).
Content	The information source for basic Canadian aeronautical information required by ICAO; including AIP Supplements and AICs.	The information currently found in the <i>A.I.P. Canada</i> .
Publication date	27 October 2005	October 2005
Product format	Online	Online, CARs CD-Rom and in paper bound format



Kathleen Fox
Vice-President, Operations
NAV CANADA



Merlin Preuss
Director General
Civil Aviation
Transport Canada

AERONAUTICAL INFORMATION CIRCULAR 03/05

RESTRICTED CANADA AIR PILOT (RCAP)

In accordance with its assigned mandate for the provision of aeronautical information services as stated in the *Civil Air Navigation Services Commercialization Act*, NAV CANADA has assumed responsibility for publishing the instrument procedures contained in the current Transport Canada (TC) *Regional Route and Approach Inventory* and those attached to *Operations Specifications* numbers 017, 034, 099 and 410 (collectively referred to herein as the Inventory). The purpose of this aeronautical information circular (AIC) is to prepare you for this change in service provision and provide you with the necessary information.

Inventory Instrument Procedures

The Inventory contains two types of instrument procedures; those that are compliant with the standards and criteria contained in TP 308, *Criteria for the Development of Instrument Procedures*, and those that are not. Those that are compliant will be moved to the *Canada Air Pilot (CAP)*. All responsibilities for the instrument procedures that are transferred from the Inventory to the public CAP will be assumed by NAV CANADA.

The instrument procedures that are not compliant with TP 308 are now called restricted instrument procedures (RIP). RIPs have been moved from the Inventory to a new NAV CANADA publication called the *Restricted Canada Air Pilot (RCAP)*. Responsibility for a RIP will now be assigned to a "sponsor."

Sponsors

A "sponsor" is deemed to be an individual or organization that has agreed to assume the regulatory and fiscal responsibility for a RIP at an aerodrome or operational location. This responsibility primarily involves the initial design, verification, flight check and maintenance of the RIP, including cyclical review. Sponsors may be air, private or aerodrome operators, or other organizations. In cases where multiple operators have a requirement for a RIP, one of these operators must agree to be the sponsor.

After conducting the cyclical review, the sponsor will advise NAV CANADA of the completion date and if there are any required changes to the RIP. NAV CANADA will then update the RIP in the RCAP through the aeronautical information regulation and control (AIRAC) process. Any requirements for NOTAM action must be applied to RCAP information in the same manner as currently applied to the CAP.

The Transition

In transitioning to the RCAP, it was noted that many of the RIPs have not undergone cyclical review for an excessive period of time. A risk assessment of this situation determined that a procedure that has not been reviewed and flight checked for a period of five years or more poses an unmanageable risk.

To give sponsors an opportunity to be identified and provide them with sufficient time to have their RIPs undergo the required cyclical review, TC will continue to authorize the use of all RIPs until July 7, 2005. This means that all RIPs will initially be published in the RCAP regardless of the date of the last cyclical review. If after July 7, 2005, a sponsor has not been identified for a specific RIP and/or the cyclical review has not been completed, the RIP will be removed from the RCAP.

RIP Effective and Regulatory Review Dates

All RIPs published in the RCAP will carry both an effective and regulatory review date on the bottom left corner of the approach plate. The effective date will coincide with the effective dates of the RCAP, which will be issued every 56 days (in CD format). The regulatory review date will indicate the date by which the sponsor must complete the cyclical review; otherwise, the RIP will be removed from the RCAP.

In accordance with the transition guidance above, the common expiry date of July 7, 2005, will apply for all the RIPs that expire on or before July 7, 2005. For example, if the last cyclical review date is December 12, 1991, that RIP will expire on July 7, 2005. If your RIP has an expiry date of July 7, 2005, and you want it to remain valid after that time, you must contact TC in writing.

A specific regulatory review date will be applied to RIPs that expire on July 8, 2005, or later. The specific expiry date is calculated by adding five years to the last cyclical review date. For example, if the last cyclical review date is August 14, 2000, that RIP will expire August 14, 2005. For scheduling purposes, a good lead-time for contacting TC is one year before the expiry date. RCAP RIPs that are allowed to expire will be removed from the RCAP.

RCAP Subscriptions

NAV CANADA will produce the RCAP under the current regulations and processes that exist for the CAP. Annual subscriptions to the RCAP may therefore be arranged as per the procurement information found in the General Section of the *Canada Flight Supplement* (CFS).

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Merlin Preuss
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AERONAUTICAL INFORMATION CIRCULAR 1/05

USE OF ELECTRONIC FLIGHT BAGS (EFB)

Introduction

This aeronautical information circular (AIC) is intended to inform pilots who are contemplating using EFBs about Transport Canada's (TC) position at this time on the use of such equipment.

References

Federal Aviation Administration Advisory Circular (FAA AC) 120-76A, dated 3/17/03—*Guidelines for the Certification, Airworthiness and Operational Approval of Electronic Flight Bag Computing Devices*.

The definitions used in this FAA AC for the various hardware classes and types of software applications (as amended by the FAA), will also be used in Canada for consistency and international standardization. Refer to <www.airweb.faa.gov>.

Canadian Aviation Regulation (CAR) 103.04—Record Keeping

CAR 602.08—Portable Electronic Devices

CAR 602.60—Requirements For Power-driven Aircraft

CAR 602.71—Pre-flight Information

CAR 602.127—Instrument Approaches

CAR 605.93—Technical Records—General

ICAO Annex 4, Chapter 20, Electronic Aeronautical Chart Display—ICAO

Commercial and Business Aviation Advisory Circular (CBAAC) No. 0231, dated July 20, 2004—Electronic Flight Bags

Aircraft Certification Policy Letter (PL) No. 500-017, Issue No. 01, effective date 2004-09-02—Certification of Electronic Flight Bags (EFBs)

Background

Definition

Electronic Flight Bag (EFB): Electronic computing and/or communications equipment or systems used to display a variety of aviation data or perform a variety of aviation functions. The scope of EFB functionality may include data connectivity. EFBs may be portable electronic devices or installed systems. The physical EFB may use various technologies, formats and forms of communications.

EFBs include everything from commercial off-the-shelf (COTS) notebook computers to fully-integrated avionics systems. The FAA AC 120-76A referenced above addresses the use of EFBs in the United States. While the guidance in that FAA AC is comprehensive, it assumes the organizational structure and operational evaluation capability of the FAA, which is not reflected at TC.

EFB Use

TC will not prohibit the flight-deck use of EFBs as a means of complying with the CARs, including those referenced above. Pilots should review FAA AC 120-76A, taking due consideration of the operational guidance contained therein. In particular, pilots who employ EFBs that display flight information, such as that contained in current flight information publications used during flight (for example, approach plates, radio navigation charts, aircraft flight manual (AFM) information), are cautioned to develop adequate procedures for the timely retrieval of lost data, and for ensuring that redundancy is assured in the event of a complete failure of any electronic device used in flight. It is worth adding that it is imperative that the EFB unit demonstrate that it will not interfere with any aircraft systems or equipment. Air operators, please refer to the above-mentioned CBAAC, mailed under separate cover to all holders of a valid operating certificate.

Installation Approval (Certification)

The guidance pertaining to aircraft certification, contained in FAA AC 120-76A, may be considered applicable to Canadian installations of Class 2 and 3 EFBs. Class 3 EFBs will undergo a full certification of all hardware and software to ensure compliance to the *Canadian Airworthiness Manual*. In the case of Class 2 EFBs, TC will certify, through the supplemental type certificate (STC) process, the provisions affixed to the aircraft to allow the mounting and connecting of a portable EFB. The installation considers structural mounting, pilot compartment view, pilot egress, data connectivity, power supply, electromagnetic interference / electromagnetic compatibility (EMI/EMC) and lighting issues. There will be neither aircraft certification evaluation nor approval of the following aspects of the portable part of the EFB system: hardware, software, database, display, lighting or controls. Applicants should contact their regional Aircraft Certification office for more information on the certification of EFBs.

Pilots intending to use Class 1 or 2 EFBs should take due consideration of the following potential shortcomings of using Class 1 and 2 EFBs.

Hardware

Pilots should be aware that COTS computing hardware, or portable electronic devices (PED), often sold as EFBs, are not necessarily subject to appropriate environmental qualification that is normally required for avionics equipment. For example, COTS may be susceptible to vibrations, humidity, temperature extremes and variations, electrical power transients, rapid pressure changes, and electromagnetic energy. As well, COTS may be the source of disruptive electromagnetic energy affecting aircraft systems. Certain types of batteries or battery packs (lithium dioxide based batteries, in particular) that may be contained in battery-operated electronic devices may vent harmful gases and become an ignition source when damaged by shock, heat and mishandling, which can be a hazard to the aircraft and cause personal injury. Devices subject to repeated in-service cycles may fail or degrade prematurely, or may require regular maintenance and inspections. COTS hardware is not evaluated against a minimum aviation standard of performance and reliability. Due allowance should be made for the inherent weaknesses and vulnerabilities of COTS hardware in contemplating their acquisition and usage in an operational environment.

Software and Database

Commercially available software and operating systems are generally not developed with aviation safety in mind. Avionics systems software, on the other hand, is developed according to stringent aviation standards and must be approved for the intended usage. This process offers a high degree of confidence, or design assurance, that these systems will perform reliably. Unlike avionics systems software, commercial software is prone to latent programming errors, or may not respond appropriately to certain keyboard control selections, undefined data entries, or mishandling, which can result in unexpected system behaviour, such as system shut-downs and lock-ups. For the most part, there is no reliable self-diagnostic, data validation or safeguard against computation errors and display of misleading information.

Display and Lighting

Commercial computing device displays are not designed to optimize their readability under a wide viewing angle. The display size, resolution (number of pixels), character font and size, and symbology may not be suitable for all intended graphical representations, which can lead to distorted images potentially resulting in the presentation of unintelligible information to the pilot. The use of colours may not be standardized and compatible with installed aircraft displays or other devices. Displays may have limited sharpness and brightness control, which may impede their usability under certain ambient cockpit lighting conditions and viewing angles. Combinations of these factors can lead to undue eyestrain or fatigue and additional pilot workload.

Controls

COTS computing devices, in particular the Class 1 and 2 devices defined in the FAA AC referenced above, are not evaluated for the intended function or for human factors by Transport Canada Civil Aviation, Aircraft Certification. The accessibility of controls, their marking, the design of associated applications, in particular the presentation and the logical layout of menus and their intuitiveness, will greatly vary between application vendors, and may be hardware and operating system dependent.

Conclusion

Based on the above observations, given a choice, pilots should therefore favour a standard design approach, application, operating system and hardware, for commonality across aircraft types.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 12/04

IFR APPROVAL TO USE THE GLOBAL POSITIONING SYSTEM (GPS) IN CANADIAN DOMESTIC AIRSPACE (CDA)

(Supersedes AIC 7/04)

1.0 Introduction

This aeronautical information circular (AIC) specifies the terms and conditions associated with the approval to use GPS for IFR operations in Canada. More ample information may be found in *A.I.P. Canada* COM 3.16.

The purpose of this revision is to clarify the use of wide-area augmentation system (WAAS) receivers for credit for a GPS approach at alternate.

2.0 Avionics Requirements

2.1 General

- a) The GPS avionics shall be approved in accordance with the applicable standards specified in sections 2.2 and 2.3.
- b) The GPS avionics shall be installed and approved in accordance with the appropriate sections of the *Airworthiness Manual*.
- c) Aircraft using GPS avionics under IFR shall be equipped with an approved and operational traditional navigation system appropriate to the area of operations, normally VHF omnidirectional range (VOR) and/or automatic direction finder (ADF). The avionics requirements for IFR flight are described in the *Canadian Aviation Regulation (CAR) 605.18, Power-driven Aircraft—IFR*.

2.2 En Route and Terminal

- a) The GPS avionics shall meet TSO C129/C129a (any class), TSO C145/C146/C145a/ C146a or equivalent criteria.
- b) For flight within Canadian minimum navigation performance specifications (CMNPS) airspace or required navigation performance capability (RNP) airspace, a GPS installation meeting the requirements in 2.2(a) may serve as the long-range navigation system. CMNPS and RNP airspace are depicted in RAC Figure 12.2 of the *A.I.P. Canada*.

2.3 Approach

- a) The GPS avionics shall meet TSO C129/C129a (Class A1, B1, B3, C1 or C3), TSO C145/C146/C145a/C146a or equivalent criteria.
- b) The navigation database shall be current and shall contain the approaches to be flown. The navigation database shall store the location of all waypoints required to define each approach and shall present them in the order depicted on the published instrument approach procedure (IAP) chart.
- c) Avionics used to fly barometric vertical navigation (BARO VNAV) approaches (see 3.3.2.1) shall be certified in accordance with Federal Aviation Administration (FAA) *Advisory Circular (AC) 20-129* or equivalent. Currently, only flight management systems (FMS), typically installed in transport category aircraft, have this capability.

3.0 GPS Operations

3.1 General

- a) The GPS avionics shall be operated in accordance with the aircraft flight manual (AFM) or AFM Supplement.
- b) If pertinent to the flight, a pilot shall advise ATC if GPS navigation or approach capability is lost, and state intentions.
- c) For flight plan purposes, the COM/NAV equipment suffix "G" shall be used.

3.2 En Route and Terminal Operations

- a) GPS may be used for all en-route and terminal operations, including navigation along airways and air routes, navigation to and from ground-based aids along specific tracks, and even area navigation (RNAV).
- b) When using GPS to maintain a track in terminal operations, the avionics shall be in terminal mode and/or the course deviation indicator (CDI) shall be set to terminal sensitivity.
- c) Should GPS navigation capability be lost, the traditional navigation equipment described in 2.1(c) shall allow navigation along the planned route or a suitable alternate route.

3.3 Approach Operations

3.3.1 General

- a) GPS can be used to fly GPS stand-alone [charted as RNAV (GPS)] and GPS overlay approaches.
- b) Holders of private operator certificates issued under CAR Subpart 604, or air operator certificates (AOC) under CAR Part VII, shall receive specific Transport Canada approval to conduct GPS-based approaches in instrument meteorological conditions (IMC). This approval is highlighted in Commercial and Business Aviation Advisory Circular (CBAAC) 0123.
- c) An approach using GPS shall not be flown unless it is retrieved from the navigation database. Pilots shall verify approach waypoints either by checking co-ordinates or by ensuring that bearings and distances between waypoints are consistent with current charted data.
- d) If a pilot has informed ATC of the intent to fly a GPS approach, and an in-flight receiver autonomous integrity monitoring (RAIM) prediction indicates that RAIM will not be available at the expected approach time, the pilot shall advise ATC and state intentions as soon as possible.
- e) If a RAIM alert is displayed when the aircraft is established on the final approach course, the pilot shall not continue the approach using GPS guidance.

3.3.2 Stand-alone approach—operational procedures

- a) GPS stand-alone approaches are charted as RNAV (GPS) RWY NN, with the "(GPS)" before the runway identification denoting that GPS shall be used for the approach.
- b) Pilots and controllers shall use the prefix "RNAV" in radio communications (e.g. "cleared the RNAV RWY 04 approach").

3.3.2.1 RNAV (GPS) approaches with vertical navigation VNAV

- a) Some RNAV (GPS) approaches will support approaches with VNAV. These will be based on GPS for lateral navigation (LNAV) and on barometric inputs for VNAV.
- b) These procedures will normally have two minima lines, identified as LNAV/VNAV and LNAV. To qualify to use LNAV/VNAV minima, the aircraft shall be equipped in accordance with section 2.3(c).

- c) If the aircraft is not certified for IFR VNAV approaches, the LNAV minima line shall be used.

3.3.3 Overlay approach—operational procedures

- a) Overlay approaches are based on VOR, VOR/DME (distance measuring equipment), non-directional beacon (NDB) and NDB/DME approaches identified in the *Canada Air Pilot (CAP)*. These are designated by having “GPS” in parentheses and small capitals **at the end** of the title, e.g. “NDB RWY 02 (GPS).” This denotes that GPS **may** be used to fly the approach.
- b) Unless required by the AFM or AFM Supplement, there is no requirement for pilots to monitor the underlying approach aid, and pilots may use GPS to fly an overlay approach when the underlying ground-based aid is out of service.
- c) When communicating with ATS, pilots shall refer to GPS overlays as follows: “GPS overlay RWY XX.” ATS may request that the pilot specify the underlying approach if more than one overlay is published for the runway.

3.3.4 Taking credit for a GPS approach at an alternate aerodrome

- a) Except as described in (b) below, when determining weather minima requirements at an alternate aerodrome, the pilot shall not take credit for GPS stand-alone or GPS overlay approaches at that aerodrome.
- b) A pilot can take credit for an RNAV (GPS) approach at an alternate aerodrome when all of the following conditions are met:
 - (i) A useable approach at the **destination** is served by a functioning useable traditional aid. This approach must be completely independent of GPS. (Note that this precludes GPS in lieu of ground-based aids credit);
 - (ii) The pilot or operator determines that approach-level RAIM will be available at the **alternate** aerodrome at the expected time of arrival, using methods that take account of predicted satellite outages; and
 - (iii) For TSO C129/C129a avionics, periodically during the flight, and at least once **before the mid-point** of the flight to destination, the pilot uses the avionics to perform a RAIM prediction for the **alternate** aerodrome at the expected time of arrival. If an in-flight prediction indicates that approach-level RAIM will not be available at the alternate, the pilot should plan accordingly. (In-flight predictions are not required for TSO C145/145a/146/146a avionics.)

Note: These provisions are applicable to meet the legal flight planning requirements for alternate airports. Once airborne, pilots are free to re-plan as needed to accommodate changing situations while exercising good airmanship.

4.0 Use of GPS in Lieu of Ground-based Aids

Subject to any overriding conditions or limitations in the AFM or AFM Supplement, GPS may be used to identify all fixes defined by DME, VOR, VOR/DME and NDB, including fixes that are part of any IAP, to navigate to and from these fixes along specific tracks, and to report distances along airways or tracks for separation purposes, subject to the following conditions:

4.1 General

- a) A pilot shall not commence using or continue to use GPS in lieu of ground-based aids if a RAIM alert is displayed.
- b) For NDB or VOR approaches that are not part of the GPS overlay program described in 3.3.3, pilots shall monitor ADF or VOR for final approach track guidance. For these, and localizer (LOC)-based approaches, pilots shall monitor ADF or VOR during the missed approach when the missed approach procedure requires tracking to or from an NDB or VOR.

- c) All fixes defined by signals from ground-based aids will be named and charted so that pilots will not have to use distances or bearings from reference fixes.
- d) All fixes shall be retrieved from the navigation database. For fixes that are part of an approach procedure, the GPS navigation database shall be current. For other fixes, the AFM Supplement shall govern the use of the navigation database.
- e) GPS may be used in accordance with the terms and conditions herein when the ground-based aids that define fixes are temporarily out of service. Note that the restriction in 4.1(b) still applies.

4.2 GPS in lieu of DME

- a) Where a fix is defined by reference to DME ranging, the pilot may use GPS for navigation reference in place of DME by selecting the applicable named DME fix as a GPS waypoint.
- b) Where ATC requests a position based on a distance from a DME facility for separation purposes, the pilot may report GPS distance from the same DME facility, stating the distance in "miles" and the DME facility name (e.g. "30 **miles** from Sumspot VOR"). This phraseology will be used for all RNAV systems. Note that when reporting DME distance, the pilot will report, "30 **DME** from Sumspot VOR." This allows ATC to compensate for DME slant range error.

4.3 GPS in lieu of ADF or VOR

- a) Where a fix is defined overhead an NDB or VOR, or by an ADF or VOR bearing, the pilot may use GPS to identify the fix when the GPS position coincides with the ADF or VOR fix and the named waypoint is selected as the active GPS waypoint.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 11/04

OPERATIONAL TEST AND EVALUATION SITE FOR A NEW OBSTACLE COLLISION AVOIDANCE SYSTEM (OCAS™) IN THE PACIFIC REGION

Transport Canada, Pacific Region has been working with the British Columbia Transmission Company, the Federal Aviation Administration (FAA) and the Norwegian company, OCAS AS, to test a new technological system to improve the protection for aircraft in the vicinity of obstructions and catenary wire crossings areas. OCAS™ will be installed at the Ruskin power line crossing on the Fraser River, located 9 NM east of the Pitt Meadows Airport.

The Ruskin power line is presently lighted with strobes, but is not marked with the standard orange and white spheres, due to the length of the crossing.

OCAS™ includes a visual strobe light and an audio warning to alert pilots of potential collisions with obstacles.

This system consists of a low-voltage radar that detects aircraft that are on a track that may conflict within 5 NM from the surface to 165 ft above the obstacle. The system's first warning is the activation of the existing strobes on the north and south towers, up to 15 seconds prior potential conflict. The second warning, at 5.5 seconds, consists of an audio message, which is transmitted on pre-selected VHF and UHF frequencies stating, "WIRES, WIRES."

The trial period will be from November 25, 2004, until June 30, 2005, and will be further advised by NOTAM.

Any questions or comments may be directed to Aerodromes and Air Navigation (Pacific Region) at 604 666-5490.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 10/04

CHANGE IN NOTAM PROCEDURE REGARDING LOGGING ACTIVITIES PACIFIC REGION

Transport Canada, Pacific Region has been working with the logging industry to develop an improved safe method to provide protection for aircraft in the vicinity of blasting areas. This past summer, an agreement was reached that will greatly reduce the number of NOTAMs issued, and more importantly, reduce the hazard to aviation.

The new procedures have been in effect (by NOTAM) since July 2004, and rely on the cooperation of both pilots and the logging crews.

Blasters' Responsibilities (NOTAM will not be filed):

- If utilizing instantaneous blasting equipment, blasters will ensure the area is clear of all air traffic prior to the blast.
- If utilizing a standard 6 min fuse, blasters will make two transmissions on 123.2 MHz, advising of the imminent blast. These transmissions will be at approximately 4 min and 1 min prior to the estimated blast. These transmissions will include the geographical location, referenced to a prominent landmark, and the time to the blast.
- Notwithstanding the above two calls, if blasters detect an aircraft in the immediate vicinity of a blast, they will direct a radio transmission to that aircraft, using aircraft type and colour (i.e. red and white helicopter, you are over an active blast site, clear the area immediately).
- Blasters may elect to utilize both methods for added safety.

Pilots' Responsibilities:

When operating VFR over forested areas of British Columbia, pilots should:

- Be aware of new logging road construction, new construction areas at beach level (areas used for log sorting), and rock drilling equipment; if there is no dust or activity in the vicinity, then a blast could be imminent.
- Arrange flight to be at least 1 000 ft AGL in areas of active road construction or logging.
- Monitor 123.2 MHz for imminent blasting notification if operating below 1 000 ft AGL.
- Determine their location in reference to the blast site upon hearing a warning transmission regarding an imminent blast, and if necessary either climb to at least 1 000 ft AGL, or deviate from the blast area.
- Contact the blast site and advise them of the aircraft's location and intentions if unable to comply with the above recommendations.
- Relay information on active blast sites to other pilots in the area.

Notwithstanding the above recommendations, a NOTAM will be required if the blast site is within 5 NM of an aerodrome or if the blaster elects not to utilize either of the above procedures. In any case, the NOTAM will have a maximum duration period of 14 days.

Any questions or comments may be directed to Aerodromes and Air Navigation (Pacific Region) at 604 666-5490.

A handwritten signature in black ink, appearing to read 'Merlin Preuss', written in a cursive style.

Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 8/04

CHANGES TO SIGMET AND AIRMET HEADERS

Effective January 20, 2005, at 0000 UTC, Environment Canada will make the following changes to aviation bulletin headers:

SIGMET currently issued by Gander for the Gander Oceanic flight information region (FIR) will be issued by the Canadian Meteorological Aviation Centres (CMAC) as follows:

WSCN02 CYQX - will change to - WSCN02 CWUL
WCCN02 CYQX - will change to - WCCN02 CWUL
WVCN02 CYQX - will change to - WVCN02 CWEG

SIGMET/AIRMET linked to GFACN31 will change as follows:

WACN31 CWLW - will change to - WACN31 CWEG
WSCN31 CWLW - will change to - WSCN31 CWEG
WCCN31 CWLW - will change to - WCCN31 CWEG
WVCN31 CWLW - will change to - WVCN31 CWEG

SIGMET/AIRMET linked to GFACN32 will remain unchanged:

WACN32 CWEG
WSCN32 CWEG
WVCN32 CWEG

SIGMET/AIRMET linked to GFACN33 will change as follows:

WACN33 CWTO - will change to - WACN33 CWUL
WSCN33 CWTO - will change to - WSCN33 CWUL
WCCN33 CWTO - will change to - WCCN33 CWUL
WVCN33 CWTO - will change to - WVCN33 CWUL
WACN33 CWUL - will remain unchanged
WSCN33 CWUL - will remain unchanged
WCCN33 CWUL - will remain unchanged
WVCN33 CWUL - will remain unchanged

SIGMET/AIRMET linked to GFACN34 will change as follows:

WACN34 CYQX - will change to - WACN34 CWUL
WSCN34 CYQX - will change to - WSCN34 CWUL
WCCN34 CYQX - will change to - WCCN34 CWUL
WVCN34 CYQX - will change to - WVCN34 CWUL
WACN34 CWUL - will remain unchanged
WSCN34 CWUL - will remain unchanged
WCCN34 CWUL - will remain unchanged
WVCN34 CWUL - will remain unchanged

SIGMET/AIRMET linked to GFACN35 will change as follows:

WACN35 CWLW - will change to - WACN35 CWEG
WSCN35 CWLW - will change to - WSCN35 CWEG
WVCN35 CWLW - will change to - WVCN35 CWEG
WACN35 CWNT - will change to - WACN35 CWEG
WSCN35 CWNT - will change to - WSCN35 CWEG
WVCN35 CWNT - will change to - WVCN35 CWEG

SIGMET/AIRMET linked to GFACN36 will change as follows:

WACN36 CWNT - will change to - WACN36 CWEG
WSCN36 CWNT - will change to - WSCN36 CWEG
WVCN36 CWNT - will change to - WVCN36 CWEG
WACN36 CWUL - will remain unchanged
WSCN36 CWUL - will remain unchanged
WVCN36 CWUL - will remain unchanged

SIGMET/AIRMET linked to GFACN37 will change as follows:

WACN37 CWNT - will change to - WACN37 CWEG
WSCN37 CWNT - will change to - WSCN37 CWEG
WVCN37 CWNT - will change to - WVCN37 CWEG

The above bulletins will be issued as required and will be linked to the graphic area forecast (GFA) bearing the same number. In other words, WACN37 will be linked to GFACN37 and so on, regardless of the aviation centre that issues them.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 6/04

APPLICATION OF STRATEGIC LATERAL OFFSETS IN NORTH ATLANTIC (NAT) AIRSPACE

Introduction

During recent years, the introduction of very accurate aircraft navigation systems, along with sophisticated flight management systems (FMS), has drastically reduced the number of risk-bearing lateral navigation errors reported in NAT airspace. Paradoxically, the propensity of aircraft to navigate to such a high level of accuracy has led to a situation where aircraft on the same track but at different levels, are increasingly likely to be in horizontal overlap. The effect of this is to increase the risk of collision in the event that, for whatever reason, an aircraft departs from its cleared level.

It must be stressed that the current estimated risk of a mid-air collision in NAT airspace is at an all-time low, and is exhibiting a downward trend. However, NAT service providers have a responsibility to their customers to continually assess the level of risk in the NAT and make modifications to system operations to ensure the highest possible level of safety. Accordingly, following a successful trial in the West Atlantic Route System (WATRS), it has been determined that by allowing aircraft conducting oceanic flights to fly lateral offsets not exceeding 2 NM right of the centreline, an additional safety margin will be provided and will mitigate the risk of collision when abnormal events, such as operational altitude deviation errors and turbulence-induced altitude deviations, occur.

The Strategic Lateral Offset Procedure

The procedure provides for the application of lateral offsets within the following guidelines:

- a) strategic lateral offsets and those executed to avoid wake turbulence are to be made to the **right** of a route or track;
- b) in relation to a route or track, there are three positions that an aircraft may fly: centreline, 1 NM or 2 NM **right**; and
- c) offsets are not to exceed 2 NM **right** of the centreline.

The intent of this procedure is to reduce risk (increase the safety margin) by distributing aircraft laterally and equally across the three available positions. In this connection, pilots must take account of the following:

- a) aircraft without automatic offset programming capability **must** fly the centreline;
- b) aircraft capable of being programmed with automatic offsets may fly the centreline or offset 1 NM or 2 NM right of the centreline to obtain lateral spacing from nearby aircraft;
- c) they should use whatever means are available [e.g. traffic alert and collision avoidance system (TCAS), communications, visual acquisition, ground proximity warning system (GPWS)] to determine the best flight path to fly;
- d) any aircraft overtaking another aircraft is to offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken;

- e) for wake turbulence purposes, they are also to fly one of the three positions mentioned above and never offset to the left of the centreline nor offset more than 2 NM right of the centreline;

NOTE: It is recognized that the pilot will use their judgement to determine the action most appropriate to any given situation and has the final authority and responsibility for the safe operation of the aeroplane. The use of air-to-air channel 123.45 may be used to coordinate the best wake turbulence offset option.

- (f) they may apply an offset outbound at the oceanic entry point but must return to the centreline at the oceanic exit point;
- (g) aircraft transiting radar-controlled airspace, e.g. Bermuda, are to remain on their established offset positions;
- (h) there is no ATC clearance required for this procedure and it is not necessary that ATC be advised; and
- (i) position reports are to be based on the current ATC clearance and not the exact coordinates of the offset position. An example of a report when passing 54N 020W while being offset from the track is "*Shanwick, Austrian 73, position 54N 020W, 1222, estimate ...etc*".



Kathleen Fox
Vice President, Operations

AERONAUTICAL INFORMATION CIRCULAR 4/04

GIMLI INDUSTRIAL PARK AIRPORT NEW FREQUENCY AND MANDATORY FREQUENCY (MF) AREA

A new **mandatory frequency** of **122.15 MHz** has been selected for the Gimli Industrial Park Airport in order to enhance aviation safety and minimize the congestion experienced when operating at or near the airport. This new mandatory frequency will come into effect on **15 April 2004**. The MF area will be within 5 nautical miles (NM) of the airport up to 3 800 ft above sea level (ASL). Pilots are reminded that effective this date, a functioning radio will be required when operating in the Gimli Industrial Park MF area.

Gimli Industrial Park Airport has significant aerial activities, with a mix of both VFR and IFR traffic. Year-round operations include student-training on light aircraft, a helicopter operating charter flights, and large piston aircraft flying cargo. In the summer months the airport also sees CL 215 water bombers and light twin-engine birddog aircraft in support of aerial forest fire suppression, and military Hercules and civilian aircraft dropping parachutists. Glider traffic is likely to be present anytime from April until October. This traffic increases dramatically from June to August because of the Air Cadet Gliding Program. Traffic patterns have been established that keep powered aircraft circuits east of the runway, while gliders operate from the grass west of the runway and remain west of the runway in their circuits.

Applicable *Canadian Aviation Regulations* (CARs) governing MF procedures are referenced below:

602.97

1. Subject to subsection (3), no pilot-in-command shall operate a VFR or IFR aircraft within an MF area unless the aircraft is equipped with radio communication equipment pursuant to Subpart 5.
2. The pilot-in-command of a VFR or IFR aircraft operating within an MF area shall maintain a listening watch on the mandatory frequency specified for use in the MF area.
3. The pilot-in-command of a VFR aircraft that is not equipped with the radio communication equipment referred to in subsection (1) may operate the aircraft to or from an uncontrolled aerodrome that lies within an MF area if
 - (a) a ground station is in operation at the aerodrome;
 - (b) prior notice of the pilot-in-command's intention to operate the aircraft at the aerodrome has been given to the ground station;
 - (c) when conducting a take-off, the pilot-in-command ascertains by visual observation that there is no likelihood of collision with another aircraft or a vehicle during takeoff; and
 - (d) when approaching for a landing, the aircraft enters the aerodrome traffic circuit from a position that will require it to complete two sides of a rectangular circuit before turning onto the final approach path.

602.98

1. Every report made pursuant to this Division shall be made on the mandatory frequency that has been specified for use in the applicable MF area.
2. Every report referred to in subsection (1) shall be
 - (a) directed to the ground station associated with the MF area, if a ground station exists and is in operation; or
 - (b) broadcast, if a ground station does not exist or is not in operation.

- 602.99 The pilot-in-command of a VFR or IFR aircraft that is operated at an uncontrolled aerodrome that lies within an MF area shall report the pilot-in-command's intentions before entering the manoeuvring area of the aerodrome.
- 602.100 The pilot-in-command of a VFR or IFR aircraft that is departing from an uncontrolled aerodrome that lies within an MF area shall
- (a) before moving onto the take-off surface, report the pilot-in-command's departure procedure intentions;
 - (b) before take-off, ascertain by radio communication and by visual observation that there is no likelihood of collision with another aircraft or a vehicle during takeoff; and
 - (c) after take-off, report departing from the aerodrome traffic circuit.
- 602.101 The pilot-in-command of a VFR aircraft arriving at an uncontrolled aerodrome that lies within an MF area shall report
- (a) before entering the MF area and, where circumstances permit, shall do so at least five minutes before entering the area, giving the aircraft's position, altitude and estimated time of landing and the pilot-in-command's arrival procedure intentions;
 - (b) when joining the aerodrome traffic circuit, giving the aircraft's position in the circuit;
 - (c) when on the downwind leg, if applicable;
 - (d) when on final approach; and
 - (e) when clear of the surface on which the aircraft has landed.
- 602.102 The pilot-in-command of a VFR aircraft carrying out continuous circuits at an uncontrolled aerodrome that lies within an MF area shall report
- (a) when joining the downwind leg of the circuit;
 - (b) when on final approach, stating the pilot-in-command's intentions; and
 - (c) when clear of the surface on which the aircraft has landed.
- 602.103 The pilot-in-command of an aircraft flying through an MF area shall report
- (a) before entering the MF area and, where circumstances permit, shall do so at least five minutes before entering the area, giving the aircraft's position and altitude and the pilot-in-command's intentions; and
 - (b) when clear of the MF area.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 3/04

AUTOMATIC DEPENDENT SURVEILLANCE (ADS) WAYPOINT POSITION REPORTING (WPR) IN THE EDMONTON FLIGHT INFORMATION REGION/CONTROL AREA (FIR/CTA)

Introduction

NAV CANADA is planning to begin operational trials of ADS WPR in some portions of the Edmonton and Winnipeg FIRs that are currently served by Arctic Radio (Edmonton ADS airspace). Nonparticipating aircraft will not be affected by these trials.

Intention of Circular

The intention of this circular is to provide:

- a) notification of ADS WPR implementation plans; and
- b) contact information to participate in the trials.

Participation

Air operators wishing to participate in ADS WPR trials in Edmonton ADS airspace are requested to contact Mr. Norman Dimock (see NAV CANADA Contact, below).

ADS WPR Implementation Plans

Operational trials are planned to begin sometime after April 15, 2004. From that time, air operators may choose to provide ADS position reports. Initially, voice reporting will continue to be required. Once the trials have confirmed the effectiveness of the ADS WPR service and associated pilot procedures, flights providing ADS position reports will receive authorization to discontinue providing voice position reports in Edmonton ADS airspace.

Edmonton ADS Airspace

This airspace will comprise areas of the Edmonton FIR/CTA north of the Northern Control Area (NCA) Track 19. Please note the Edmonton CTA includes airspace within the Winnipeg FIR, FL 290 and above, as depicted on *Canadian Enroute High Altitude Charts* and described in the *Designated Airspace Handbook* (DAH). Before and during the trials, the specific dimensions of this area will be finalized and eventually published in the *A.I.P. Canada* (AIP).

Communication with Arctic Radio

Communication procedures will be developed leading up to the trials, and participating air operators will be notified via customer notifications. The effectiveness of these procedures will be validated during the trials and, once finalized, published in the AIP.

NAV CANADA Contact

To ensure that they are included in the customer notifications necessary to develop and finalize the communication procedures associated with these trials, air operators should contact:

Mr. Norman Dimock
Manager, Oceanic and Northern ATC Systems
Tel.: 613 248-6859
E-mail: DimockN@navcanada.ca

Notifications

Notifications regarding the commencement of ADS WPR operational trials will be advised via NOTAM.

Notifications of revised communication procedures or revised dimensions of Edmonton ADS airspace will be advised via customer notifications.



Kathleen Fox
Vice President, Operations

AERONAUTICAL INFORMATION CIRCULAR 1/04

REDUCED VERTICAL SEPARATION MINIMUM (RVSM) IN NORTH AMERICAN AIRSPACE

Introduction

NAV CANADA plans to implement an RVSM at 09:01 UTC January 20, 2005 between flight level (FL) 290 and FL 410 inclusive in Southern Domestic Airspace (SDA). This implementation will expand RVSM, which has been in place in Northern Domestic Airspace (NDA) since April 2002, throughout Canadian Domestic Airspace (CDA).

The Federal Aviation Administration (FAA) is planning concurrent implementation at the same flight levels for the airspace over the lower 48 states of the United States, Alaska, the Atlantic and Gulf of Mexico High Offshore Airspaces (including Houston and Miami Oceanic Airspaces) and the San Juan International Civil Aviation Organization (ICAO) flight information region (FIR). On the same date and time, and at the same flight levels, Mexico is planning to implement RVSM within Mexican Domestic Airspace and the Gulf of Mexico High Offshore Airspace.

Background

RVSM enables vertical separation to be reduced between FL 290 and FL 410 inclusive, from 2 000 ft to 1 000 ft. RVSM was first implemented in the North Atlantic Airspace in 1997, and is a global initiative, with implementations in the Pacific Ocean, European, Australian, Canadian Northern Domestic and Middle East airspaces.

RVSM airspace is exclusionary, and aircraft and operators that have not received RVSM approval from their responsible State authority, with limited exceptions, will not be permitted to operate in RVSM airspace.

Safety

The expansion of RVSM throughout CDA will be in accordance with ICAO Document 9574, *Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive*. It will also take account of the experience gained with the implementation of RVSM in Canadian NDA and other regions where RVSM has been implemented.

RVSM Aircraft/Operator Approval

Prior to operating in RVSM airspace, operators and aircraft must receive RVSM approval from their responsible State authority. Aircraft must be equipped with altimeters, altitude control systems (auto pilots) and altitude alerters that meet RVSM performance tolerances. Operator maintenance and operations programs must incorporate RVSM policies and practices.

The process for obtaining authorization to operate in RVSM airspace requires coordination between the operator, Transport Canada Civil Aviation (TCCA) principal operations inspector (POI), principal maintenance inspector (PMI), the operator's TCCA regional airworthiness office and TCCA Operational Standards (AARXB).

Commercial Business and Aviation Advisory Circular (CBAAC) 0186 outlines the process for obtaining RVSM operations specification approval and may be downloaded from the following Web site:
<<http://www.tc.gc.ca/CivilAviation/commerce/circulars/menu.htm>>.

FAA Document 91 RVSM *Interim Guidance Material on the Approval of Operators/Aircraft for RVSM Operations* was written by the FAA and then adopted by ICAO for use by all Member States (including Canada) in their authorization programs. It includes policy, procedures and guidance on operator and aircraft compliance with RVSM standards, and can be found on the NAV CANADA RVSM Web site at <www.navcanada.ca> under Service Projects, RVSM.

Operators intending to operate in RVSM airspace, who do not have aircraft and operator approval, are urged to start the RVSM authorization process with Transport Canada as soon as possible.

Flight Planning

ATC uses the flight plan equipment block information to either issue or deny clearance into RVSM airspace. Operators annotate the equipment block of the flight plan with the designated letter to inform ATC when the operator and its aircraft have received RVSM approval. The letter "W" indicates that the aircraft is RVSM compliant, and the operator has received RVSM approval. The "W" designator is not to be used unless both conditions have been met.

With limited exceptions, operators who do not obtain RVSM approval by January 20, 2005 will be required to flight plan and operate at FL 280 and below. *A.I.P. Canada* RAC 12.16.6 specifies the limited exceptions for non-RVSM approved aircraft permitted to operate in RVSM airspace, and details the flight planning and coordination procedures.

Consultation

A communications and consultation process with customers, stakeholders and interest groups is ongoing, and will continue through implementation.

SDRVSM Contacts

Queries may be addressed to the following:

Don MacKeigan
SDRVSM Project Manager
NAV CANADA
Tel: 613 563-5678
Fax: 613 563-7987
E-mail: mackeid@navcanada.ca

Joanne Coughlin
Director, Customer Relations
NAV CANADA
Tel: 613 563-3877
Fax: 613 563-3426
E-mail: coughlj@navcanada.ca

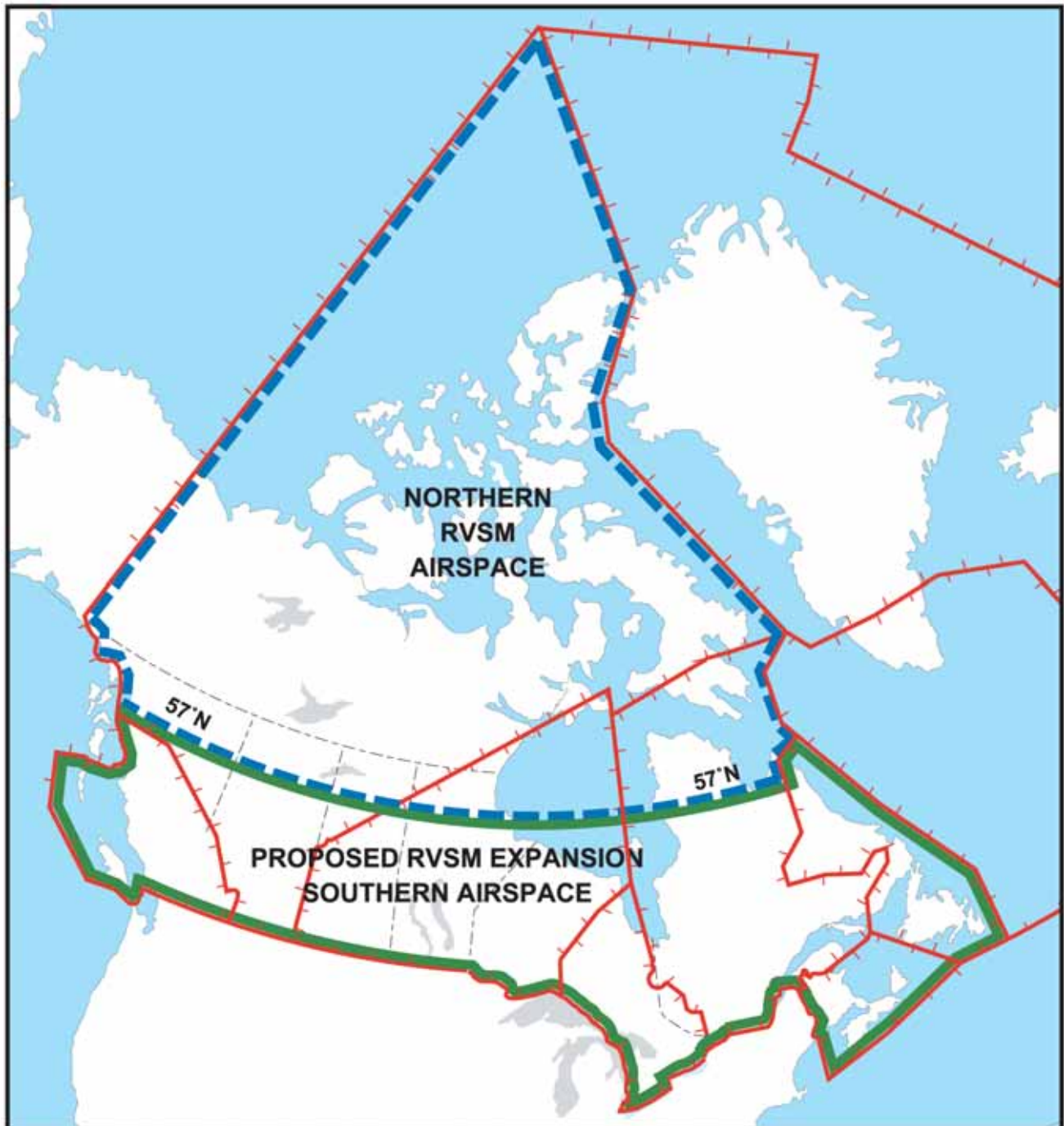
Transport Canada RVSM Contacts:

Robert Freeman
Inspector
Commercial and Business Aviation
Operational Standards
Airline Standards
Tel: 613 990-1868
Fax: 613 954-1602
E-mail: freemar@tc.gc.ca

M.E. (Merv) Swallow
Inspector, GMEL Program Manager
Commercial and Business Aviation
Certification Standards
Tel: 613 990-1091
Fax: 613 991-5188
E-mail: swallom@tc.gc.ca



Kathleen Fox
Vice President, Operations



AERONAUTICAL INFORMATION CIRCULAR 11/03

REMOTE COMMUNICATIONS OUTLET (RCO) COMMUNICATION PROCEDURES

This is a reminder that RCO frequencies are to be used only for flight information services en route (FISE) and remote aerodrome advisory service (RAAS) communications. Adherence to this requirement will eliminate superfluous communications on RCOs and reduce the potential for frequency congestion.

As per *A.I.P. Canada* (A.I.P.) **COM 5.13.3**, the frequencies for air-to-air communications are:

- 122.75 MHz—within the Canadian Southern Domestic Airspace (SDA);
- 123.45 MHz—within the Northern Domestic Airspace (NDA) and the North Atlantic (NAT).

Pilots are encouraged to review RCO communication procedures presented in **A.I.P. COM 5.8.3**.



Kathleen Fox
Vice-President, Operations

AERONAUTICAL INFORMATION CIRCULAR 10/03

FLIGHT MANAGEMENT COMPUTER (FMC) WAYPOINT POSITION REPORTING (WPR)

Introduction

Canada is planning to begin pre-operational trials of FMC WPR in the Gander Oceanic flight information region (FIR) portion of the North Atlantic (NAT) Region. Non-participating aircraft will not be affected by this trial. FMC WPR is not intended to replace or delay FANS-1/A ADS WPR (future air navigation systems 1/A automatic dependent surveillance waypoint position reporting).

Intention of Circular

The intention of this circular is to:

- (a) notify operators of the existence of guidance material and other related information regarding FMC WPR operations in the NAT; and
- (b) provide advance notification of FMC WPR implementation plans.

FMC WPR Guidance Material

The NAT FANS Implementation Group (FIG) has produced a document, "*Guidance Material For FMC WPR Services in NAT Airspace*," pertaining to this service. This document provides a description of FMC WPR operations and the trials planned for the NAT. This document is available on the NAT Programme Coordination Office (PCO) Web site at <<http://www.nat-pco.org>>.

Operators wishing to participate in FMC WPR trials are requested to register with the NAT FANS Central Monitoring Agency (FCMA). Details of the registration requirements and contact information for the FCMA are included in the Guidance Material in sub-parts 1.5 and 1.6.

FMC WPR Implementation Plans

A pre-operational trial, as defined in the above referenced Guidance Material, is planned to begin sometime after October 2, 2003. When the pre-operational trial begins, operators may choose to provide FMC WPRs, in addition to voice reports, to provide data by which the quality of this service may be analyzed. Data from operators able to provide FMC WPRs via HF data link (HF DL) would be especially useful.

Upon successful completion of the pre-operational trial, transition to an operational trial is anticipated.

Notifications

Notifications regarding commencement of FMC WPR pre-operational trials, including possible delays or modifications, will be advised via NOTAM.

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Kathleen Fox
Vice President, Operations

AERONAUTICAL INFORMATION CIRCULAR 7/03

EXPANSION OF CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC) IN THE NORTH ATLANTIC (NAT) REGION

Introduction

Canada is planning to expand the trial of limited CPDLC services in the Gander Oceanic flight information region (FIR) portion of the NAT region. Phase 1 and 2 CPDLC operations will continue in the Shanwick Oceanic FIR until otherwise notified by the United Kingdom. Non-participating aircraft will not be affected by this trial. Mandatory CPDLC equipage is currently not envisaged for the NAT Region.

Intention of Circular

The intention of this circular is to:

- (a) notify operators of the existence of guidance material and other related information regarding CPDLC operations in the NAT; and
- (b) provide advance notification of CPDLC implementation plans.

CPDLC Guidance Material

The NAT Future Air Navigation Systems (FANS) Implementation Group (FIG) has produced guidance material pertaining to data link services in NAT airspace. "*Guidance Material for ATS Data Link Services in NAT Airspace, Chapter 2—CPDLC*" contains information particular to CPDLC. This document provides a description of CPDLC operations and the phases of CPDLC trials planned for the NAT. This document is available on the NAT Programme Coordination Office (PCO) Web site at: <http://www.nat-pco.org>.

Airlines wishing to participate in CPDLC trials are requested to register with the NAT FANS Central Monitoring Agency (FCMA). Details of the registration requirements and contact information for the FCMA are included in part 2 of the Guidance Material.

CPDLC Implementation Plans

Phase 3, as defined in the above-referenced Guidance Material, is currently planned to begin sometime after September 1, 2003. From that time, additional Phase 3 capabilities will be supported within the Gander Oceanic FIR. This operational trial will provide the experience necessary to safely integrate more CPDLC capabilities in future operational trials.

Operators should note that the Shanwick Oceanic FIR will continue Phase 1 and 2 operations beyond the Phase 3 implementation in the Gander Oceanic FIR. Although the change from Phase 2 to Phase 3 involves how ATC will respond to CPDLC downlinks, there will be no additional flight crew workload associated with Gander and Shanwick operating in different phases of the trial.

Notifications

Notifications regarding commencement of Phase 3 operational trials in the Gander Oceanic FIR will be advised via NOTAM.

NOTE: Commencement of Phase 3 operational trials in the Gander Oceanic FIR will supersede AIC 7/02—*Implementation of Controller-Pilot Data Link Communications (CPDLC) in the North Atlantic (NAT) Region*, which will be withdrawn at that time.

A handwritten signature in black ink, appearing to read 'K Fox' followed by a stylized flourish.

Kathleen Fox
Vice President, Operations

AERONAUTICAL INFORMATION CIRCULAR 6/03

NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA) ADVISORY

(Supersedes Aeronautical Information Circulars 1/01 and 5/00)

This aeronautical information circular provides information on NAFTA.

Background

Ratified by Canada, the United Mexican States and the United States of America, NAFTA came into force on January 1, 1994. Among other things, NAFTA opened up cross-border trade in specialty air services (SAS), defined in article 1213 of NAFTA as aerial mapping, aerial surveying, aerial photography, forest fire management, firefighting, aerial advertising, glider towing, parachute jumping, aerial construction, heli-logging, aerial sightseeing, flight training, aerial inspection and surveillance, and aerial spraying services. The effective date of NAFTA coverage for some of these services was January 1, 1994. The coverage for all other services has since been phased in for each signatory country in accordance with Annex B to NAFTA. (See Appendix II.)

Meetings of government officials led to the issuance of a joint statement establishing Working Groups “to discuss standards and regulations pertaining to specialty air services” and began a process for the “smooth implementation” of SAS operations. Representatives from the three civil aviation authorities (CAAs) formed a Steering Committee to provide leadership during the process, and technical experts from each country constituted Working Groups covering the areas of airworthiness, flight operations and personnel licensing. This document identifies the process resulting from the efforts of the Steering Committee and Working Groups.

Applicability

This aeronautical information circular applies to operators in each NAFTA signatory country who wish to conduct a cross-border SAS, as defined in article 1213 of NAFTA. This information is exclusive to NAFTA SAS operations and is not to be used for any other purpose.

Glossary

The following **CAAs** are referenced in this document:

- the **Dirección General de Aeronáutica Civil** (DGAC), United Mexican States;
- the **Federal Aviation Administration** (FAA), United States of America; and
- **Transport Canada Civil Aviation** (TCCA), Canada.

National CAA: The CAA responsible for the regulatory control of an operator when it applies for operating authority in another NAFTA country. The national CAA will normally be the same as the state of registry for the aircraft and will be responsible for the regulatory oversight of aircraft on its register, including, but not limited to, maintenance and inspection requirements.

Host CAA: The CAA of a NAFTA country in which cross-border SAS are being conducted.

Operator: The organization engaged in a commercial SAS operation.

Flight Training is a term that applies to the following:

- **Certified Flight Schools:** Those schools that hold an operating permit or certificate issued by the CAA to conduct approved training for any pilot qualification.
- **Flight Training Operators:** Those operators conducting training for an agricultural rating, a seaplane rating, a multi-engine rating, a type rating, an instrument rating, an airline transport pilot licence, or currency requirements.
- **SAS Operators:** Those operators conducting specific operational training for a particular SAS. Type-rating training may be included if the aircraft is used in that specific operation and is specified on the air operator certificate or the NAFTA operating authority.

Definitions of SAS

The following is a list of SAS identified by NAFTA and shall include any other special-purpose operations determined by the three CAAs to have similar characteristics.

NAFTA SAS are specialized commercial aviation operations involving the performance of the following:

Aerial Mapping: The operation of an aircraft for the purpose of mapping by use of a camera, or other measuring and recording devices.

Aerial Surveying: The operation of an aircraft for the purpose of surveying by use of a camera, or other measuring and recording devices.

Aerial Photography: The operation of an aircraft for the purpose of taking photographs or recording information by use of a camera, or other measuring and recording devices.

Forest Fire Management: The operation of an aircraft for the purpose of fire detection and control, as well as for the purpose of dispensing any substance intended for forest fire suppression and prevention. This includes carrying firefighters, fire bosses and/or fire managers from the base camp into the fire area or the actual fire site as well as within the fire zone.

Firefighting: The operation of an aircraft for the purpose of dispensing water, chemicals, and fire retardants intended for suppressing a fire. This includes the carrying of firefighters.

Aerial Advertising: The operation of an aircraft for the purpose of skywriting, banner towing, displaying airborne signs, dispensing leaflets, and making public address announcements.

Glider Towing: The towing of a glider by a powered aircraft equipped with a tow hitch.

Parachute Jumping: The operation of an aircraft for the purpose of allowing a person to descend from that aircraft in flight using a parachute during all or part of that descent.

Aerial Construction: The operation of a helicopter for the purpose of conducting external-load operations in support of construction, hoisting of utilities, power line construction and erection of special purpose towers.

Heli-logging: The operation of a helicopter for the purpose of transporting timber suspended from the fuselage.

Aerial Sightseeing: The operation of an aircraft for the purpose of providing recreation to passengers. This type of flight originates and terminates at the same airport or aerodrome.

Flight Training: Training provided by certified flight schools and flight training operators who follow an approved ground and flight syllabus, which permits students to meet all certification requirements for obtaining an airman certificate or rating, and operational training provided by SAS operators.

Aerial Surveillance and Inspection: The operation of an aircraft for the purpose of conducting aerial observation and patrols for surface events and objects.

Aerial Spraying: The operation of an aircraft for the dispersal of products.

Recommended List of Publications

- Annex 2 to the International Civil Aviation Organization (ICAO) *Convention on International Civil Aviation*
- Aeronautical Information Publication (*A.I.P. Canada*), Canada
- *Publicación de Información Aeronáutica (PIA)*, Mexico
- *Aeronautical Information Manual (AIM) / Aeronautical Information Publication (AIP)*, United States

NAFTA Cross-Border SAS Operations

General Requirements

Validity

- A NAFTA authorization, unless amended, suspended or revoked, will normally be valid for a maximum of one year and can be renewed. The renewal process will be the same as the original authorization process.

Authorization Process

- The SAS operator must be equipped and able to operate in each of the SAS applied for; apply for and obtain authorization from the national CAA; apply for and obtain authorization from the host CAA(s); and make the application in the official language(s) of the host country.

Operational Conditions

Aircraft

- The current and valid certificate of airworthiness and certificate of registration are required from the national CAA. The operator must provide the national CAA with proof of the validity of the documents.
- Aircraft must have an original FAA or TCCA civil type certificate for all SAS operations. Ex-military aircraft that have restricted-category certification based on military experience only are not eligible, while those that are operating as civil types may be eligible, provided that they meet civil standards and are in a civil type configuration.
- Foreign (third-country) type-certificated aircraft must have both an FAA and a TCCA type certificate.
- Changes in type designs (that is, supplemental type certificates or repair design certificates) issued by third countries on their own designs and manufactured products will be acceptable, provided that there is a bilateral airworthiness agreement or the equivalent with either the FAA or TCCA that specifically addresses design standards.
- Primary-category aircraft will not be used for flight training. Standard-category airworthiness certificates will normally be required, except as otherwise approved by the host CAA. SAS operators may conduct operational training in aircraft that are approved for the particular SAS.

SAS Operations

- As required by Annex 2 to the ICAO *Convention on International Civil Aviation*, operators must comply with the general operating and flight rules of the host country. Operators should be aware that there are significant differences in the VFR for each country.
- Operators must deal with government agencies including customs, trade and commerce, immigration, environment, and other applicable agencies, as necessary.

- The SAS operator must contact the host CAA(s) (see Appendix III) prior to commencing initial SAS operations in each geographic area, upon changing the type of SAS operation being conducted, or upon subsequently returning to the original geographic area.
- Operators based in one host country and operating in another host country require authorization from each host CAA.
- As a minimum, a current and valid commercial pilot licence issued by the national CAA is required for the specific operation. A licence validation issued by the host CAA does not meet this requirement.
- Flight instruction towards the issuance of national CAA licences, permits and ratings may be conducted in any host country by a person who holds a valid commercial pilot licence or flight instructor rating, as applicable, for the type of instructional activity, and who satisfies the requirements of the national CAA.
- Flight instruction towards the issuance of host CAA licences, permits and ratings may be conducted in any host country by a person who holds a valid commercial pilot licence or flight instructor rating, as applicable, for the type of instructional activity, and who satisfies additional requirements specified by the applicable host CAA. (See Appendix IV.)
- Flight-training operating authority will be granted to certified flight schools, flight training operators and SAS operators according to the conditions specified by the host CAA.
- Agricultural aircraft may be operated at an increased maximum take-off weight (MTOW) if an increased MTOW has been authorized by the national CAA and the increase does not exceed 1.25 times the MTOW.
- Maintenance shall be performed in accordance with the requirements of the national CAA.
- Sightseeing operations shall be conducted by operators certificated by their national CAA for commercial passenger-carrying operations.
- The movement of essential personnel from base camp to a fire zone is not deemed to be air transportation, nor is the movement of essential personnel from one base camp to another to continue firefighting. These are operational necessities included under SAS for firefighting purposes.

Specific Requirements

For Operations in Canada

- Operators must provide TCCA with the name of the appropriately approved maintenance organization facility(ies) where maintenance will be performed.
- Proof of insurance must be carried on board the aircraft. (See Appendix VI.)
- Operators must comply with the flight and duty limitations regulations and standards requirements applicable to the operations to be conducted. (See CAR 700.15 and CASS 720.15.)
- Operators must comply with the survival-equipment requirements applicable to the operations to be conducted. (See Appendix V.)
- Mexican flight schools must designate a qualified flight instructor responsible for operational control. Operators must identify to TCCA the type of inspection or maintenance program being used for each aircraft type (i.e. progressive, annual, at 100-hour intervals, or according to the manufacturer's recommended program or an approved program).

For Operations in Mexico

- Operators must provide the DGAC with the name of the appropriately rated repair station(s) where maintenance will be performed.
- The PIA must be used for all operations and carried on board the aircraft.
- Proof of insurance must be provided with the application before a permit can be issued and must be carried on board the aircraft. (See Appendix VI.)
- Operations will be conducted from approved runways or sites, unless otherwise authorized.
- A special permit must be obtained for handling fuel other than at approved fuelling facilities.
- Operators must participate in alcohol- and drug-testing programs when conducting SAS operations.
- Operators must comply with the survival-equipment requirements applicable to the operations conducted. (See Appendix V.)
- All night flights under VFR must have a special authorization.
- Flight training schools must obtain a public education certificate or a letter of authorization from the Secretaría de Educación Pública to teach ground school.
- In addition to the DGAC authorization, operators of SAS (aerial photography, aerial surveying, and aerial mapping) must obtain permission from the Secretaría de la Defensa Nacional.

For Operations in the United States

- Operators must participate in alcohol- and drug-testing programs when conducting sightseeing operations from a base in the United States. (See Appendix III.)
- The maintenance and alteration of emergency parachutes must be certified by a person authorized by the FAA.
- Department of Transportation Order 97-7-03 (Specialty Air Service Operators of Canada and Mexico) must be carried on board the aircraft.



Merlin Preuss
Director General
Civil Aviation

APPENDIX I

Sample Documents

This appendix contains sample documents that may be used by operators when applying for SAS authority in each NAFTA signatory country.

Operators Applying to a National CAA

In Canada

- Application for Specialty Air Service Operations—Free Trade Agreement (FTA) (FTA Form 26-0509)

In Mexico

- Letter of Application for Operations Under NAFTA

In the United States

- Application for Certificate of Waiver or Authorization (FAA Form 7711-2)

Operators Applying to a Host CAA

In Canada

- Application for Specialty Air Service Operations—FTA (FTA Form 26-0509)

In Mexico

- Letter of Request for Operations Under NAFTA
- Proof of Insurance

In the United States

- Application for Certificate of Waiver or Authorization (FAA Form 7711-2)

Notes:

1. National CAA authorization is required as part of the Host Application Process.
2. The host CAA will provide an information package outlining the application requirements.

APPENDIX II

Phase-in Schedule of NAFTA SAS

Service Category	Mexico	Canada and United States
Aerial Advertising	EIF*	EIF
Aerial Construction	EIF	EIF
Aerial Inspection or Surveillance	EIF	EIF
Aerial Mapping	EIF	EIF
Aerial Photography	EIF	EIF
Aerial Sightseeing	EIF	EIF
Aerial Spraying	EIF	EIF
Aerial Surveying	EIF	EIF
Firefighting	EIF	EIF
Flight Training	EIF	EIF
Forest Fire Management	EIF	EIF
Glider Towing	EIF	EIF
Heli-logging	EIF	EIF
Parachute Jumping	EIF	EIF

*EIF = entered into force

APPENDIX III

Contact Information

Country	CAA Contact Office	Phone and Fax Numbers
Canada	Chief, Certification Standards Commercial and Business Aviation Place de Ville 330 Sparks Street Tower C, 4th Floor Ottawa, ON KIA ON8	Phone: 613 990-1098 Fax: 613 954-1602
Mexico	Dirección Técnica Dirección General de Aeronáutica Civil Providencia 807-4 ^o Piso Col. del Valle C.P. 03100, México, D.F.	Phone: 525 687-76-80 Fax: 525 523-67-40
United States	General Aviation and Commercial Division, AFS-800 800 Independence Avenue Southwest Washington, DC 20591	Phone: 202 267-3411 Fax: 202 267-5094
	United States Drug and Alcohol Program Office Implementation and Special Projects Branch, AAM-810 800 Independence Avenue Southwest Washington, DC 20591	Phone: 202 267-8976 Fax: 202 267-5200

APPENDIX IV

Flight Training—General

Certified Flight Schools	Flight Training Operators	SAS Operators
	specialized training facilities (for example, Flight Safety International)	training of pilots included, regardless of whether they are employed by that operator
all training authorized under a certificate; see CAR 406.02; <i>Federal Aviation Regulations</i> 141.11 and 141.57; and the <i>Ley de Aviación Civil</i> , article 39, and <i>Reglamento de Escuelas Técnicas de Aeronáutica</i> (11-X-1951)	agricultural licence (DGAC)	type rating
recreational*	seaplane rating	currency requirements
private—airplane and helicopter*	multi-engine rating	
commercial—airplane and helicopter*	type rating	
flight instructor rating—airplane and helicopter*	instrument rating	
night flying privileges—airplane and helicopter*	airline transport pilot licence	
	currency requirements	

Notes:

1. The flight training listed in the first column includes specific training activities, identified by an asterisk, that must be conducted under the authority of a certified flight school.
2. The flight training listed in the second column may be conducted by certified flight schools or by instructors operating under the authority of a flight training operator.
3. The flight training listed in the third column may be conducted by an instructor operating under the authority of an SAS under NAFTA for that type of SAS operation.

Additional Pilot-Instructor Qualifications

Night Training in Mexico

- A Canadian instructor must hold an instrument rating.
- An instructor from the United States must hold a certified flight instructor—instrument (CFII) rating.

Seaplane Training

- Canada requires instructors from Mexico and the United States to have 50 hours of flight time on seaplanes.

VFR Over-the-Top Training in Canada

- An instructor from the United States must hold a CFII rating.
- A Mexican instructor must hold an instrument rating.

Aerobatics Training in Canada

- Instructors certified in Mexico and the United States who wish to teach aerobatics must hold a Canadian authorization.

Aerobatics Training in Mexico

- Canadian instructors wishing to teach aerobatics must hold a special permit and/or authorization.

Training for a Flight Instructor Rating—Aerobatics in Canada

- Instructors certified in Mexico and the United States who wish to conduct training for a flight instructor rating—airplane—aerobatics must hold a Canadian authorization.

Flight Training for an Instructor Rating—Airplane or Helicopter

- In Canada, TCCA requires instructors from Mexico and the United States to have 750 hours flight instruction in the category (600 hours dual flight instruction for a civil pilot licence) and have recommended 10 applicants for the private, commercial or recreational pilot permit (RPP) flight test (maximum 3 for the RPP). Instructors from the United States must take an evaluation flight.
- In Mexico, the DGAC requires instructors from the United States to have 3 years experience as a flight instructor, 350 hours of flight time in the category and class (150 hours in the aircraft), 30 hours as pilot-in-command in the preceding two months, a written examination, and a flight test.

APPENDIX V

Survival Equipment

Operations in Canada

- Survival equipment must be carried to satisfy CAR 602.61. This equipment includes provisions for shelter, water, fire and signalling. This section does not apply where the aircraft is being operated in an area and at a time of year such that survivability is not jeopardized. Specific information on the geographic location requirements is included in *A.I.P. Canada*. A.I.P. information can be obtained by calling 1 800 305-2059 or visiting <<http://www.tc.gc.ca/aviation>> for the CARs.

Operations in Mexico

- Survival equipment must be carried to satisfy standards 191, 193, 194, and 195 of the *Reglamento de la Ley de Aviación Civil*. This equipment includes provisions for a first-aid kit, shelter, flotation devices (for over-water operations), a fire extinguisher, an emergency locator transmitter, emergency rations and clothing, and signalling. Emergency rations and clothing are required for remote locations only, appropriate to the area being overflown. This information can be obtained by contacting the DGAC by phone at 525 687-76-80 or by fax at 525 523-67-40. The information will be sent by fax.

APPENDIX VI

Insurance Requirements

Canada

- SAS operators must meet the insurance requirements contained in CAR 606.02 and have passenger and third-party liability coverage to the limits specified.

Mexico

- SAS operators must meet the insurance requirements contained in article 64 of the *Ley de Aviación Civil* and have passenger and third-party liability coverage to the limits specified.

United States

- Sightseeing operators must meet the insurance requirements contained in part 402 of the *Department of Transportation Regulations* and have passenger and third-party liability coverage to the limits specified.

AERONAUTICAL INFORMATION CIRCULAR 5/03

EXEMPTION FROM PARAGRAPH 602.123 OF THE *CANADIAN AVIATION REGULATIONS (CARs)*

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt helicopter pilots-in-command (PIC) from the requirement of Section 602.123 of the *Canadian Aviation Regulations (CARs)*, subject to the following conditions. Section 602.123 of the CARs states that: "No PIC of an aircraft shall include an alternate aerodrome in an instrument flight rules (IFR) flight plan or IFR flight itinerary unless available weather information indicates that the ceiling and visibility at the alternate aerodrome will, at the expected time of arrival, be at or above the alternate aerodrome weather minima specified in the *Canada Air Pilot (CAP)*."

Purpose

The purpose of this exemption is to authorize helicopter PIC to use the alternate aerodrome weather minima requirements as specified in this exemption, rather than the alternate aerodrome weather minima requirements specified in the CAP, when selecting an alternate aerodrome where instrument approach procedures are available.

Application

This exemption applies to helicopter PIC, planning to include an alternate aerodrome in an IFR flight plan or itinerary.

Conditions

This exemption is granted subject to the following conditions

1. if the alternate aerodrome has global positioning system (GPS) approach (es) only, or no IFR approach available, the PIC shall use alternate weather minima requirements for "No IFR approach available" as indicated in the CAP;
2. forecast weather at the estimated time of arrival at the alternate aerodrome, shall be at or above 200 feet above the minima for the approach to be flown and visibility shall be at least 1 statute mile but never less than the minimum visibility for the approach to be flown;
3. the minima derived for an alternate aerodrome shall be consistent with aircraft performance, navigation equipment limitations, functioning traditional navigational aids, type of weather forecast, and runway or landing area, to be used.

Validity

This exemption is in effect until the earliest of the following:

- (a) 23:59 EST on March 1st, 2004;
- (b) the date on which amendments to the appropriate provisions of the CAP document come into effect;

- (c) the date on which any of the conditions set out in this exemption are breached; or
- (d) the date on which this exemption is canceled in writing by the Minister where he is of the opinion it is no longer in the public interest or that it is likely to affect aviation safety.

A handwritten signature in black ink, appearing to read 'Merlin Preuss', written in a cursive style.

Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 4/03

EXEMPTION FROM PARAGRAPH 704.27(b) OF THE CANADIAN AVIATION REGULATIONS (CARs) AND SECTION 724.27 OF THE COMMERCIAL AIR SERVICE STANDARDS (CASS)

Whereas a person may conduct an Instrument Flight Rules (IFR) flight where an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary, if the person is authorized to do so in an air operator certificate and complies with the CASS.

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt helicopter pilots-in-command and helicopter air operators from the requirements of section 723.31 of the CASS made pursuant to paragraph 704.27(b) of the CARs. Section 724.27 of the CASS contains the helicopter standard for authority to conduct an IFR flight when an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary. This exemption is subject to the conditions enumerated below.

Purpose

The purpose of this exemption is to provide helicopter pilots-in-command and helicopter air operators with revised weather limits requirements when conducting an IFR flight where an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary.

Application

This exemption applies to helicopter pilots-in-command and helicopter air operators operating under subpart 704 of the CARs.

Conditions

This exemption is subject to the following conditions:

1. the *Company Operations Manual* shall contain guidance on the execution of no alternate IFR flights and the flight shall be operated under a Type C Operational Control;
2. flight following personnel shall be aware that the flight is operating no alternate IFR and shall have current weather readily accessible for timely communication to the flight;
3. pilots-in-command shall be familiar with diversionary aerodromes;
4. terminal forecasts and weather reports shall be available for the destination which show that, for at least two hours before until two hours after the estimated time of arrival, there will be a ceiling of at least 1,000 feet above the airport elevation, or at least 400 feet above the lowest applicable approach minima, whichever is higher, and a visibility of at least two (2) statute miles.

Validity

This exemption is in effect until the earliest of the following:

- (a) 23:59 EST on March 1st, 2004;
- (b) the date on which an amendment to the appropriate provisions of the CASS comes into effect;
- (c) the date on which any of the conditions set out in this exemption is breached; or
- (d) the date on which this exemption is canceled in writing by the Minister where he is of the opinion that it is no longer in the public interest or that it is likely to affect aviation safety.



Merlin Treuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 3/03

EXEMPTION FROM PARAGRAPH 703.31(b) OF THE CANADIAN AVIATION REGULATIONS (CARs) AND SECTION 723.31 OF THE COMMERCIAL AIR SERVICE STANDARDS (CASS)

Whereas a person may conduct an Instrument Flight Rules (IFR) flight where an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary, if the person is authorized to do so in an air operator certificate and complies with the CASS.

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt **helicopter pilots-in-command** and **helicopter air operators** from the requirements of section 723.31 of the CASS made pursuant to paragraph 703.31(b) of the CARs. Section 723.31 of the CASS contains the helicopter standard for authority to conduct an IFR flight when an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary. This exemption is subject to the conditions enumerated below.

Purpose

The purpose of this exemption is to provide helicopter pilots-in-command and helicopter air operators with revised weather limits requirements, when conducting an IFR flight where an alternate aerodrome has not been designated in the IFR flight plan or in the IFR flight itinerary.

Application

This exemption applies to helicopter pilots-in-command and helicopter air operators operating under subpart 703 of the CARs.

Conditions

This exemption is subject to the following conditions:

1. the *Company Operations Manual* shall contain guidance on the execution of no alternate IFR flights and the flight shall be operated under a Type C, Operational Control System; the flight crew shall consist of two pilots who meet the qualifications of Section 703.88 of the CARs;
2. flight following personnel shall be aware that the flight is operating no alternate IFR and shall have current weather readily accessible for timely communication to the flight;
3. pilots-in-command shall be familiar with diversionary aerodromes;
4. terminal forecasts and weather reports shall be available for the destination which show that, for at least one hour before until one hour after the estimated time of arrival, there will be a ceiling of at least 1,000 feet above the airport elevation, or at least 400 feet above the lowest applicable approach minima, whichever is higher, and a visibility of at least two (2) statute miles.

Validity

This exemption is in effect until the earliest of the following:

- (a) 23:59 EST on March 1st, 2004;
- (b) the date on which an amendment to the appropriate provisions of the CASS comes into effect;
- (c) the date on which any of the conditions set out in this exemption is breached; or
- (d) the date on which this exemption is canceled in writing by the Minister where he is of the opinion that it is no longer in the public interest or that it is likely to affect aviation safety.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 2/03

EXEMPTION FROM PARAGRAPH 605.33(2)(c) OF THE CANADIAN AVIATION REGULATIONS

Pursuant to Subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt **Canadian air operators** and flight crew members from Paragraph 605.33(2)(c) of the *Canadian Aviation Regulations* (CARs), subject to the following conditions. Avionics Requirements

Paragraph 605.33(2)(c) states that no person shall conduct a take-off in the following aircraft unless the aircraft is equipped with a cockpit voice recorder (CVR) that meets the *Aircraft Equipment and Maintenance Standards*:

After July 31, 1997 or, for an aircraft operated under Part VII, after February 28, 1997, any multi-engined turbine-powered aircraft that has a passenger seating configuration, excluding any pilot seats, of six or more, and for which two pilots are required by the type certificate of the aircraft or the Subpart under which the aircraft is operated.

Purpose

Where aircraft are being operated using the single-pilot Instrument Flight Rules (IFR) authority of Section 703.86 of the CARs, the situation arises where the required auto-pilot becomes unserviceable and the aircraft then requires two pilots and hence, a CVR. The purpose of this exemption is to allow **Canadian air operators and flight crew members** who operate multi-engined, turbined-powered aircraft under the single-pilot IFR authority Section 703.86 of the CARs to continue to operate for a maximum period of 90 days without a CVR following the failure of the auto-pilot.

Application

This exemption applies to **Canadian air operators and flight crew members** who operate multi-engined, turbine-powered aircraft under the single-pilot authority of Section 703.86 of the CARs.

Conditions

This exemption is subject to the following conditions:

1. the aircraft shall be a multi-engined, turbine-powered aircraft which had been operating under the single-pilot authority of Section 703.86 of the CARs at the time of the failure of the autopilot;
2. the flight crew shall consist of two pilots who meet the qualifications of Section 703.88 of the CARs;
3. documentation shall be carried on board the aircraft certifying the date on which the auto-pilot became unserviceable;
4. following the failure of the auto-pilot, an aircraft which had been operating under the single pilot IFR authority Section 703.86 of the CARs shall continue to operate for a period no longer than 90 days; and
5. a copy of this exemption shall be carried on board the aircraft at all times.

Validity

This exemption is in effect until the earliest of the following:

- (a) March 31, 2004;
- (b) the date on which an amendment to the appropriate provisions of the *Canadian Aviation Regulations* comes into effect;
- (c) the date on which any of the conditions set out in this exemptions is breached; or
- (d) the date on which this exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest or that it is likely to affect aviation safety.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 8/02

NAV CANADA TO COMPLETE IMPLEMENTATION OF 25 KHZ CHANNEL SPACING FOR VHF AERONAUTICAL COMMUNICATIONS IN CANADA

The Need for Fully Implementing This Transition

Available Canadian air traffic control frequencies are currently not taking full advantage of the International Civil Aviation Organization (ICAO) 25 kHz channel spacing standard for very high frequency (VHF) aeronautical communications.

The U.S. Federal Aviation Administration (FAA) has implemented assignment of 25 kHz channel spacing. There are a limited number of channels available for air traffic control frequencies and there is great demand in busy metropolitan areas along the Canada/U.S. border.

If NAV CANADA does not complete the transition to 25 kHz channel spacing, operational efficiency will suffer and the corporation will be limited in its ability to provide essential communication services.

Use of 25 kHz channel spacing will be extremely beneficial at busier airports and terminal areas by reducing the potential for interference and in fact making available required frequencies not possible without completing this transition.

NAV CANADA has the opportunity to offer more air traffic services frequencies to its customers and to improve the efficiency of aeronautical communications through the full implementation of 25 kHz channel spacing for all aeronautical radio communication services.

The completion of the transition to 25 kHz VHF channel spacing does not require an aeronautical study or formal consultation process due to the fact that Transport Canada promulgated the decision in 1980. Completion of this transition will bring NAV CANADA in line with ICAO and Industry Canada standards.

However, in keeping with NAV CANADA's commitment to transparent communications with its customers, information sessions will be provided to national and provincial stakeholder groups and through various means to help inform those relying on VHF communications about completing this important transition.

Impacts for Pilots and Aircraft Operators

Aircraft flying in instrument flight rules (IFR) operations are equipped with 720/760 channel radios and would therefore be able to select frequencies on 25 kHz spaced channels.

Most visual flight rules (VFR) aircraft are similarly equipped, but the actual proportion is unknown to NAV CANADA. Pilots of aircraft that do not have 720/760 channel VHF transceivers may receive or cause interference on some frequencies in areas where 25 kHz spaced channels are in use and as a result will be unable to select certain frequencies. It is difficult to estimate the number of aviators who would be in this situation or the extent that they would be affected in the near/medium term, as the actual implementation of new frequencies would be gradual, but system wide.

The onus is on the owner-operator to acquire the proper equipment to be able to use the airspace where 25 kHz spaced frequencies are in use. Therefore, some pilots or aircraft operators may be required to re-equip their aircraft with appropriate radios.

Summary

- NAV CANADA is planning a significant enhancement to service through the full implementation of 25 kHz channel spacing.
- Completing this transition will improve safety by reducing frequency congestion and interference across the country—especially at Canada’s major airports.
- It will also improve service by making more frequencies available to customers for Air Traffic Services, enhancing the quality and availability of critical voice communications.
- We must move with reasonable speed because there are a limited number of 25 kHz channels available for air traffic control frequencies and they are allocated on a first-come first-serve basis for the busiest parts of the country.
- The decision to implement the transition means NAV CANADA will be in a position to accommodate growth in demand for aviation communications services for the next decade and possibly longer.
- Industry Canada mandates that user equipment cannot be permitted to bar the use of 25 kHz standard frequencies. In the case of aircraft owners using radios that conform to older standards, the onus is on the aircraft owner or operator to conform and not cause interference.

If you require further information or would like to provide comments, please contact:

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Andris (Andy) U. Vasarins
Vice President, Operations

AERONAUTICAL INFORMATION CIRCULAR 5/02

EXEMPTION FROM PARAGRAPH 804.01(c) OF THE CANADIAN AVIATION REGULATIONS AND FROM CHAPTER 7 OF THE *MANUAL OF SURFACE WEATHER OBSERVATIONS*

The purpose of this AIC is to advise persons who provide aviation weather services, who meet the criteria set out below, that an exemption has been issued that they may be able to use.

Criteria

The exemption will permit persons who meet the application conditions and criteria set out in the exemption to provide certain meteorological observations that do not meet the standards for observation of wind direction and speed in Chapter 7 of the *Manual of Surface Weather Observations*.

Persons providing aviation weather services must have met the following criteria in order to operate under the authority of this exemption:

- (a) the aviation weather service must be estimates of wind direction and speed provided by a qualified person in accordance with annex A; or
- (b) the aviation weather service must consist only of the meteorological observations of the wind direction and speed.

This exemption does not apply to:

- (i) pilots who meet the requirements of subpart 602 of the *Canadian Aviation Regulations (CARs)*;
- (ii) persons providing services in accordance with CAR 804.01(c) and Chapter 7 of the *Manual of Surface Weather Observations*;
- (iii) persons providing services in accordance with the exemption to CAR 804 pertaining to *Meteorological Observations Measured by Automatic Instrumentation of Wind, Temperature, Humidity or Atmospheric Pressure Standards*.

Details on the application process and complete copies of the exemption are available from local Transport Canada offices.



Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 4/02

ADVANCE NOTICE OF PROPOSED CHANGE TO NOISE ABATEMENT DEPARTURE PROCEDURES

Introduction

The purpose of this Circular is to provide advance notice of the implementation of amended noise abatement departure procedures for operations at noise-sensitive airports. The system wherein a noise abatement vertical profile was restricted to only VNAP A or VNAP B will be replaced by a more integrated solution incorporating the parameters stated below. Two examples of compliant noise abatement profiles, NADP1 and NADP2, are provided below:

General

Noise abatement departure procedures (NADP) are designed to minimize the environmental impact of departing aircraft without compromising safety. Typically, operators require two procedures: one to avoid close-in noise, the other to minimize noise over a more distant noise-sensitive area.

When developing a noise abatement strategy, airports and air operators should consider the following:

1. In no case should a noise abatement departure invalidate an engine failure strategy;
2. Aircraft limitations, including maximum body angle limits, shall be respected at all times;
3. Where possible, each aircraft type should base its standard departure procedure on the noise abatement strategy that minimizes its overall noise impact (See NADP1 and NADP2 below for examples of strategies);
4. Operators serving certain noise-sensitive airports may need to follow specific, non-standard departure procedures. Crew training and departure information shall address identification and procedural differences associated with alternate noise abatement procedures; and
5. Where applicable, air traffic control agencies should be involved in the development of noise abatement procedures, especially regarding take-off flight path in the event of an engine failure.

Noise abatement departure procedures requiring reduced take-off thrust settings may only be flown when reduced thrust is permitted by the aircraft flight manual or aircraft operating manual.

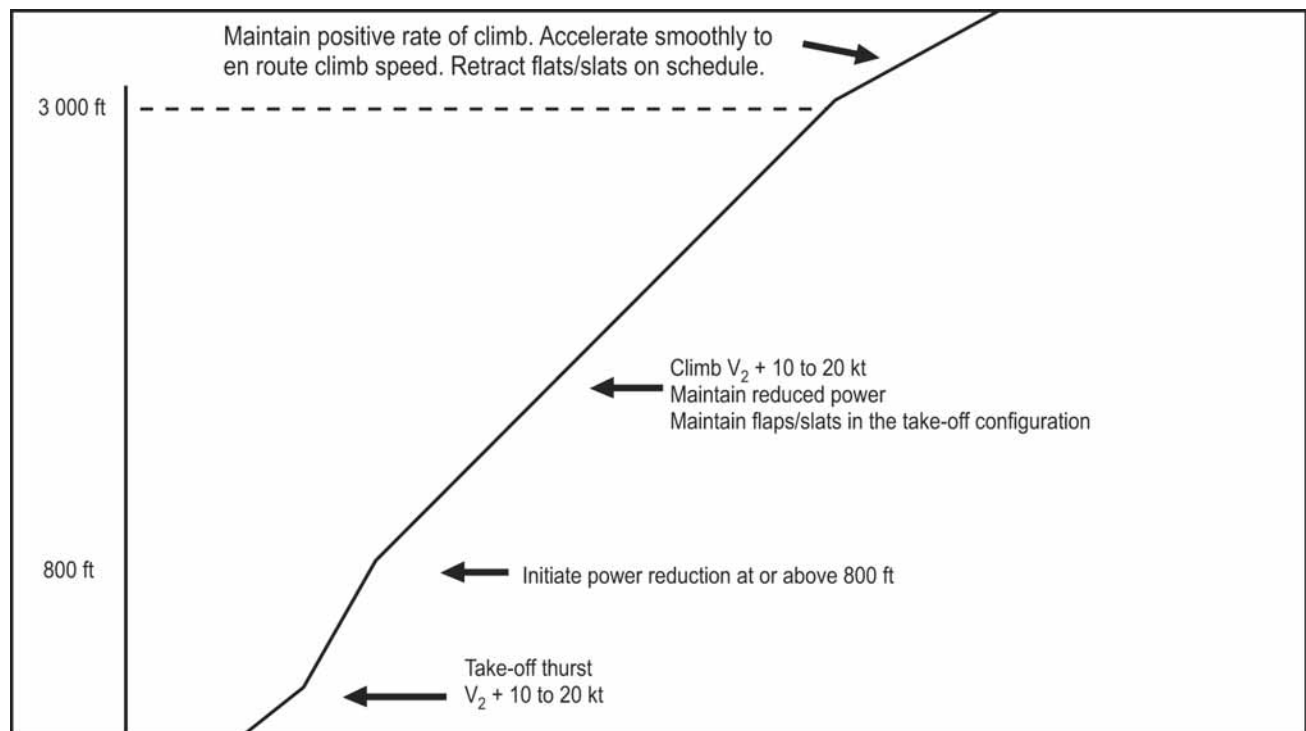
NADPs 1 and 2

These aeroplane operating procedures for the takeoff and climb have been developed so as to ensure that the necessary safety of flight operations is maintained while minimizing exposure to noise on the ground. Data available indicates that NADP 1 results in noise relief for areas in close proximity to the aerodrome whereas NADP 2 provides noise reduction to areas more distant from the runway end. The procedure selected for use will depend on the noise abatement requirement and the type of aeroplane involved.

The following noise abatement departure procedures describe the methods for noise abatement when a problem is shown to exist. They have been designed for application to turbojet aeroplanes.

NADP 1

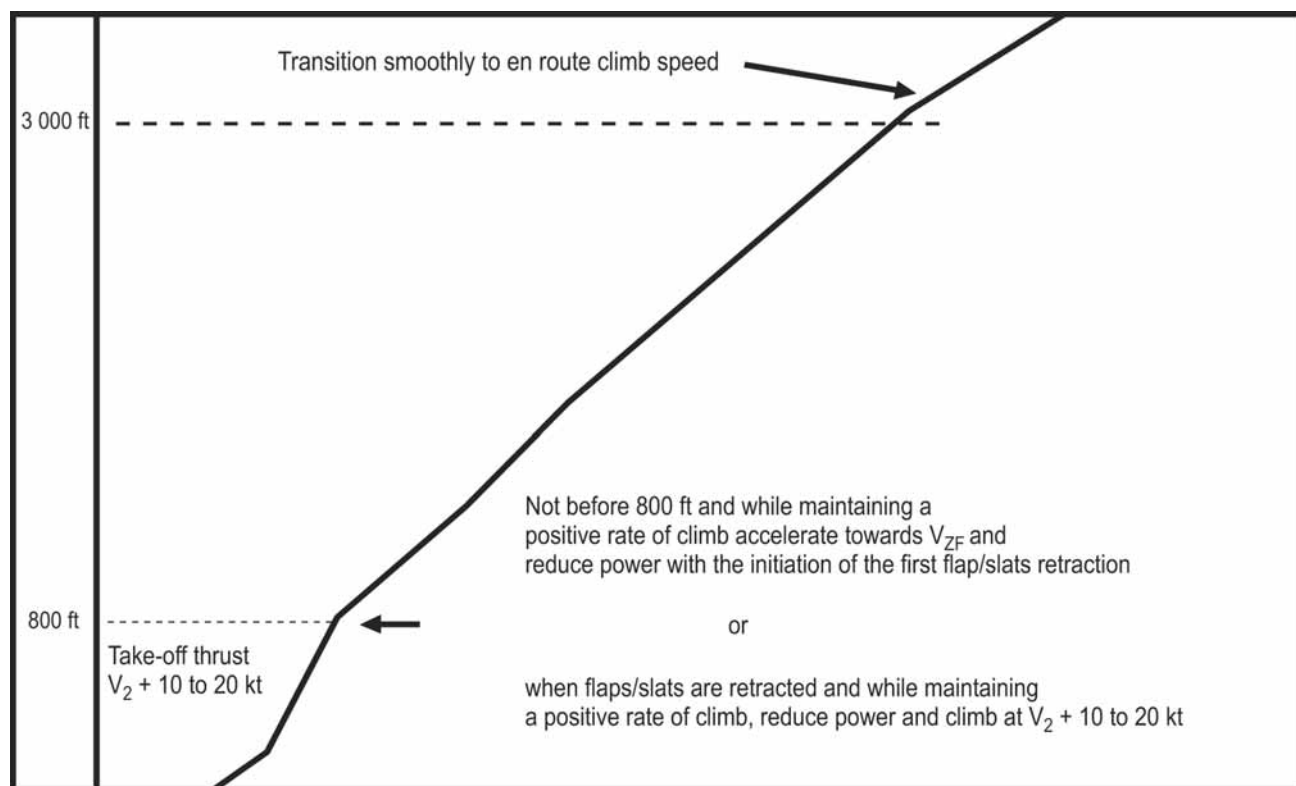
- (a) Initial climb to 800 ft AAE
 - (i) Power as set for takeoff
 - (ii) Flaps/slats in take-off configuration
 - (iii) Climb speed $V_2 + 10$ to 20 kt
- (b) At or above 800 ft AAE
 - (i) Initiate power reduction;
 - (ii) Maintain a climb speed $V_2 + 10$ to 20 kt
 - (iii) (Maintain flaps/slats in take-off configuration
- (c) At or below 3 000 ft AAE
 - (i) Maintain positive rate of climb
 - (ii) (Accelerate to en route climb speed,
 - (iii) Retract flaps/slats on schedule.
- (d) At 3000 ft AAE, transition to normal en route climb speed.



Example of a procedure alleviating noise close to an aerodrome (NADP 1).

NADP 2

- (a) Initial climb to 800 ft AAE
 - (i) Power as set for takeoff
 - (ii) Flaps/slats in take-off configuration
 - (iii) Climb speed $V_2 + 10$ to 20 kt
- (b) At or above 800 ft AAE
Maintain a positive rate of climb and accelerate towards V_{ZF} , and either
 - (i) Reduce power with the initiation of the first flap retraction; or
 - (ii) Reduce power after flaps/slats retraction.
- (c) Continue the climb to 3000 ft AAE at a climb speed of $V_{ZF} + 10$ to 20 kt
- (d) At 3000 ft AAE, transition to normal en route climb speed



Example of a procedure alleviating noise a distance from the aerodrome (NADP 2).

Merlin Preuss
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 1/02

GEOGRAPHIC AREA SAFE ALTITUDE REPLACED BY AREA MINIMUM ALTITUDE

The use of the term *geographic area safe altitude (GASA)* now portrayed on IFR enroute charts will be removed as of April 18, 2002. GASA provided 2 000 ft of clearance, rounded up to the next 100-ft increment, over known obstacles or terrain within the delineated geographic area. Instead, the *area minimum altitude (AMA)* will be provided on IFR enroute and terminal charts. The definition is found below.

Area minimum altitude (AMA): The lowest altitude to be used under instrument meteorological conditions (IMC) that will provide a minimum vertical clearance of 1 000 ft or, in designated mountainous terrain, 2 000 ft above all obstacles located in the area specified, rounded up to the nearest 100-ft increment.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 6/01

POTENTIAL INTERFERENCE FROM FM BROADCASTING STATIONS ON VHF RADIONAVIGATION RECEIVERS ON BOARD IFR AIRCRAFT OPERATING IN FRANCE

Introduction

The purpose of this circular is

- to specify the regulatory provisions applicable to aircraft operating under IFR in the airspaces controlled by the French authorities that specify interference immunity against emissions of FM broadcasting stations for airborne radionavigation equipment (instrument landing system (ILS), localizers (LLZ) and very high frequency omnidirectional range (VOR) beacons);
- to provide information about the transition period before implementing these provisions; and
- to provide information concerning the operational provisions that will be taken when a potential interference is identified.

International Background

In 1979, the International Telecommunication Union (ITU) decided to extend the frequency band assigned to broadcasting stations from 104 to 108 MHz, particularly in Europe.

In 1995, in order to remedy the interference risks to VHF radionavigation receivers caused by this extension, the International Civil Aviation Organization (ICAO) adopted new protection standards aimed at enhancing the immunity of these receivers.

Initially, the equipment modifications were to have been carried out in two phases:

- After January 1, 1995: immunity of new installations.
- After January 1, 1998: immunity of all airborne receivers.

However, for more flexibility and to take into account certain other technical changes, the immunity requirement for airborne VHF radionavigation receivers of aircraft operating under IFR began on January 1, 2001, in most of the European states.

Regulatory and Operational Provisions in France

In the airspaces controlled by the French authorities, the requirement for installing immunized VHF radionavigation receivers (ILS and VOR), in accordance with the standards set out in *Annex 10 to the Convention on International Civil Aviation* will begin on January 1, 2002, for aircraft operating under IFR.

This provision will be specified by order of the Direction Générale de l'Aviation Civile (DGAC; France's civil aviation authority).

Between the January 1 and December 31, 2001, the DGAC will identify the risks of interference during each modification of the frequency plan for FM broadcasting stations.

The use of certain standard instrument departures (SID), standard terminal arrivals (STAR), and instrument approaches (ILS, LLZ and VOR) will be prohibited for aircraft operating under IFR whose VHF radionavigation equipment are not in compliance with the FM immunity standards set out in *Annex 10 to the Convention on International Civil Aviation*.

Operators should note the importance of observing these restrictions for safety reasons. For example, in the case of intermodulation interference, a procedure performed using non-standard equipment may cause a crew to follow a totally erroneous flight path during an ILS procedure without triggering an alarm (flag) on board the aircraft.

Operators will be informed of these restrictions through the aeronautical information service of France.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 5/01

EMERGENCY SECURITY CONTROL OF AIR TRAFFIC (ESCAT)

Introduction

The purpose of this aeronautical information circular is to inform air operators and private operators that when there is an air defence emergency or any situation that threatens our national security or vital Canadian interests, the ESCAT Plan is implemented under the delegated authority of North American Aerospace Defence (NORAD) region commander or the Chief of the Defence Staff (CDS), as applicable.

Applicability

The information in this circular applies to commercial as well as private pilots flying in Canadian airspace and/or over Canada's territorial waters.

References

- *Emergency Security Control of Air Traffic (ESCAT) Plan (TP 1258)*—issued in April 2000

Authority

- (a) *Aeronautics Act.*
- (b) *Commander-in-Chief, North American Aerospace Defence Command, (CINCNORAD), PLAN CONPLAN 3310-96.*
- (c) NORAD area of operations: the CINCNORAD/Deputy CINCNORAD and NORAD region commanders have been designated as appropriate military authorities for the implementation of ESCAT under emergency conditions.
- (d) The CDS has been designated as the appropriate military authority for those situations that fall within the national interest but are outside the NORAD mandate. The CDS has the authority to implement ESCAT upon a Governor-in-Council order for contingency operations.

ESCAT Plan

The Plan has been developed in co-ordination with Department of National Defence (DND), Transport Canada, and NAV CANADA. The plan provides guidelines for identifying and controlling air traffic within a specified air defence area. This will enhance the use of airspace for defence and defence supported activities and allows use of airspace by civil aircraft consistent with air safety. The Plan is intended to meet two types of situations:

- (a) In the first situation, an emergency condition exists that results in the declaration of an air defence emergency by the appropriate military commander. In this situation, ESCAT is authorized for implementation by the appropriate military commander.
- (b) In the second situation, a contingency operation requires ESCAT implementation. In this situation, Governor-in-Council approval is required prior to implementation by the appropriate military authority.

Implementation

The ESCAT plan may be implemented in four phases to facilitate a smooth transition from normal peacetime air traffic identification and control to the more restrictive identification and control procedures.

- Phase One: Conduct an ESCAT test to verify connectivity of the system and to permit agencies involved to review this plan.
- Phase Two: Require all aircraft in the designated areas to file instrument flight rules (IFR)/defence visual flight rules (DVFR) flight plans in accordance with established procedures and this Plan.
- Phase Three: In accordance with the Plan, all aircraft operating in designated areas will be assigned a wartime (WATPL) priority list number. A list comprising eight priorities designed to control the volume of air traffic will be developed when ESCAT is implemented.
- Phase Four: The Commander CANR will restrict aircraft movements within designated areas. To ensure effectiveness of communications during implementation of the ESCAT Plan, periodic tests may be conducted without any prior notice.

To ensure effectiveness of communications during implementation of the ESCAT Plan, periodic tests may be conducted without any prior notice.

In an emergency situation, NAV CANADA area control centres (ACC) through an air traffic service (ATS) unit, under the directions of Commander, CANR, will broadcast the following message three times at two-minute intervals on all frequencies:

"ATTENTION ALL AIRCRAFT—AIR DEFENCE EMERGENCY—ALL AIRCRAFT WILL COMPLY WITH THE PROCEDURES FOR THE EMERGENCY SECURITY CONTROL OF AIR TRAFFIC."

In accordance with CAR 602.146, the pilot-in-command of an aircraft who is notified by an ATS unit of the implementation of the ESCAT Plan shall:

- (a) before take-off, obtain approval for the flight from the appropriate ATC unit or flight service station;
- (b) comply with any instruction to land or to change course or altitude that is received from the appropriate ATC unit or flight service station; and
- (c) provide the appropriate ATC unit or flight service station with position reports
 - (i) when operating within controlled airspace, as required under CAR 602.125, and
 - (ii) when operating outside controlled airspace, at least every 30 min.

Conclusion

During the implementation phase of ESCAT Plan, all commercial and private pilots must comply with the above procedures. Failing to comply may result in an enforcement action with a maximum penalty of \$250 and/or suspension of an aviation document for up to seven days. For information about ESCAT, please contact national Air Operations Centre at 1-877-992-6853 or (613) 992-6853 or NAV CANADA at (613) 563-5732.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 4/01

IMPLEMENTATION OF EUROPEAN REDUCED VERTICAL SEPARATION MINIMUM AIRSPACE

Introduction

In the late 1970s, faced with rising fuel costs and growing demands for a more efficient use of the available airspace, the International Civil Aviation Organization (ICAO) initiated a comprehensive project of studies to examine the feasibility of reducing the 2 000ft vertical separation minimum (VSM) applied above FL 290 to the 1 000ft VSM used below FL 290. Studies conducted in the 1980s demonstrated that this concept was safe and feasible. Reduced vertical separation minimum (RVSM) was implemented in the North Atlantic (NAT) Region in a phased approach, commencing in 1997. RVSM was implemented in the Pacific Region (PAC) on February 24, 2000. In conjunction with the implementation of RVSM in the NAT and PAC regions, two RVSM transition areas were established in Canadian Domestic Airspace. Canada is planning to implement RVSM in Canadian airspace (from approximately 57° North latitude to the North Pole, from FL 290 to FL 410) on April 18, 2001. RVSM is planned to be implemented in the West Atlantic Route System (WATRS) on November 1, 2001, in the Western Pacific/South China Sea in February 2002, in the Middle East in 2003, and in U.S. domestic airspace in 2004.

Within the European Region, RVSM is scheduled for implementation on January 24, 2002. Operators intending to conduct flights within European RVSM (EUR RVSM) airspace will require an RVSM approval either from the State in which the operator is based or the State in which the aircraft is registered. (Canadian operators receive their approval from Transport Canada.) Operators intending to operate in EUR RVSM airspace are required to obtain RVSM approval.

Intention of Circular

The intention of this circular is to

- (a) notify aircraft operators of RVSM-approved flights to insert the letter “W” in Item 10 of the ICAO flight plan, regardless of the requested flight level, as part of a progressive implementation of European RVSM flight planning requirements;
- (b) notify aircraft operators when the Nattenheim and Geneva height monitoring units (HMU) will be operational; and
- (c) provide an update on other developments within the EUR RVSM Programme.

Flight Planning Requirements—EUR RVSM

Warning: Before January 24, 2002, insertion of the letter “W” in item 10 of the flight plan does NOT imply that a flight plan for an RVSM flight level in European airspace can be filed or that an RVSM level can be requested by the pilot, unless this is explicitly promulgated by a State for operations in the airspace of that State.

In preparation for the Go/Delay decision planning, the EUR RVSM Programme progressively identified the number of RVSM-approved flights operating within the RVSM airspace since November 30, 2000, in order to facilitate the monitoring of the RVSM compliance rate and to assist in the implementation planning process. The Go decision was made in July 2001.

When this AIC refers to an *RVSM-approved flight*, it refers to a flight by an aircraft and operator that have met all RVSM requirements, listed below:

- (a) the aircraft for which the RVSM approval is sought have the vertical navigation performance capability required for RVSM operations through compliance with the criteria of the RVSM minimum aircraft system performance specifications (MASPS);
- (b) the operator has instituted procedures in respect of continued airworthiness (maintenance and repair) practices and programs; and
- (c) the operator has instituted flight crew procedures for operations in the EUR RVSM airspace.

The activity that commenced on November 30, 2000, forms part of the progressive implementation of modifications to the Integrated Initial Flight Plan Processing System (IFPS) of the Central Flow Management Unit (CFMU) to comply with the RVSM flight planning requirements. The progressive implementation embraces three phases, which are outlined below. The scheduled release of CFMU software modifications in April 2001 included the RVSM requirements for the IFPS.

Phase 1, from November 30, 2000, requires the introduction of the letter "W" in Item 10 of the ICAO flight plan for RVSM-approved operations within the planned EUR RVSM airspace prior to RVSM implementation. This phase is aimed primarily at monitoring the number of RVSM-approved flights operating within the European region. The rate of equipage will also be compared against the total number of RVSM compliant airframes reported to the EUROCONTROL User Support Cell (USC). It is therefore essential that aircraft operators comply with the flight planning requirements, as the rate of equipage will be a determining factor in the EUR RVSM Go/Delay decision.

Phase 2, which began on April 19, 2001, involves a warning message generated by the IFPS in the Operational Reply Message (ORM) to each aircraft operator and/or originator filing a flight plan for a non-RVSM-approved flight at or above FL 290. This message will be in the form of a comment to indicate that this flight plan would not comply with the RVSM requirements if filed after January 24, 2002. Phase 2 coincided with the deadline of March 31, 2001, for aircraft operators to complete their RVSM approval process, as well as the release of the CFMU software changes, which will incorporate the RVSM requirements.

For the purposes of Phase 1 and Phase 2, the following are required of air operators after an RVSM approval has been received:

- (a) all operators of RVSM flights intending to operate within the lateral limits of the EUR RVSM airspace are required to indicate the approval status by inserting the letter "W" in Item 10 of the ICAO flight plan, *regardless of the requested flight level*;
- (b) all operators filing repetitive flight plans (RPL) are also required to insert the letter "W" in Item Q of the RPL when RVSM-approved, in the format "**EQPT/W**," *regardless of the planned flight level*. If a change of crew or aircraft operated in accordance with the RPL results in a modification of the RVSM approval status as stated in Item Q, the applicable flight plan modification procedures should be followed, including a modification message (CHG) or a new flight plan with the appropriate contents in Item 10; and
- (c) all operators of formation flights of State aircraft shall not insert the designator "W" in Item 10 of the ICAO flight plan, regardless of the RVSM approval status of the aircraft concerned.

Phase 3, planned to begin October 4, 2001, is when the IFPS will insert the warnings applicable to all the EUR RVSM flight planning requirements in the ORMs. This will essentially reflect the output of the IFPS as of January 24, 2002. This phase will serve primarily as a trial period for the mandatory RVSM flight planning requirements, to ensure familiarization with the new requirements for both air operators and air traffic services.

Canadian RVSM Approval Process

The process for obtaining authorization to operate in RVSM airspace requires co-ordination between the operator, the operator's Transport Canada Civil Aviation (TCCA) principal operations inspector (POI) and the operator's TCCA principal maintenance inspector (PMI). These individuals will need to co-ordinate support from the Regional Aircraft Certification office and the Headquarters Operational Standards office (AARXB). Operators that are not presently RVSM-approved and who wish to become RVSM-approved should refer to the Commercial and Business Aviation Advisory Circular (CBAAC) No. 0186 and contact their Regional TCCA office.

Height Monitoring Units (HMU)

In addition to the Strumble and Gander HMUs, three other Europe-based HMUs are operational. The Lintz HMU (coverage 45 NM around centre 48°12'N, 014°18'E) has been operational since May 24, 2000. Nattenheim (coverage 45 NM around centre 49°51'N 006°28'E) and Geneva (coverage 30 NM around centre 46°22'N 005°56'E) became operational on November 9, 2000.

Latest Developments

In December 1999 ICAO approved the amendment to ICAO's Regional Supplementary Procedures (Doc 7030/4 — EUR) regarding the "Means of Compliance" and "Area of Applicability" sections for EUR RVSM. On November 23, 2000, ICAO approved the amendments to Doc 7030 concerning the operational procedures applicable to in EUR RVSM airspace, including flight-planning requirements. It was incorporated into this document through Amendment Number 200 dated December 12, 2000. This material is available on the EUR RVSM Web site.

The EUR RVSM Programme commissioned a Research Report to provide an analysis of wake vortices as part of the overall assurance of the continued safety of flight within the European RVSM environment. The main conclusion of the Report was that the probability of encountering hazardous wake vortices is not expected to increase within EUR RVSM airspace, but that nuisance encounters would increase. One of the major recommendations of the Report was to commence a Europe-wide collection of wake vortex turbulence reports so that any change following the introduction of RVSM would become apparent. With the assistance of the International Air Transport Association (IATA) and the International Federation of Air Line Pilots Associations (IFALPA), wake vortex report forms (based on those in already in use over the NAT) have been circulated to operators. Reporting of wake vortex encounters commenced August 1, 2000. The results of the Wake Vortex Study, the EUR RVSM Programme response and the wake vortex report forms are available on the RVSM Web site. Operators are encouraged to participate in the reporting process. Further information is available from the EUROCONTROL USC.

Contacts

For further information on the RVSM approval process and requirements, please contact your Regional TCCA office. For information related to RVSM regulations, standards and policy, and the Canadian RVSM database, please contact

Ron Tidy
Commercial and Business Aviation
Transport Canada Building
Place de Ville (AARXB)
330 Sparks St.
Ottawa ON K1A 0N8
Telephone: (613) 990-2600
Fax: (613) 954-1602
E-mail: tidy@tc.gc.ca

For specific information on EUR RVSM please contact

EUROCONTROL User Support Cell (USC)
Airspace Management & Navigation Unit
96, Rue de la Fusée
B-1130 Brussels, Belgium
Telephone: 32-2-729-4633/3785
Fax: 32-2-729-4634
E-mail: amn.user.support@eurocontrol.be

Information on all aspects of the EUR RVSM Programme is available through the Internet by visiting the EUROCONTROL RVSM Web site at < www.eur-rvsm.com >. This Web site also provides documentation that can be downloaded (such as JAA TGL6 Rev1) and provides information on monitoring results.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 3/01

EXEMPTION FROM PARAGRAPH 804.01(c) OF THE CANADIAN AVIATION REGULATIONS AND FROM CHAPTER 4 OF THE *MANUAL OF SURFACE WEATHER OBSERVATIONS*

The purpose of this AIC is to advise persons who provide aviation weather services who meet the criteria set out below that an exemption has been issued that they may be able to use.

Criteria

Persons providing aviation weather services must have met the following criteria in order to operate under the authority of this exemption:

- (a) the aviation weather service must be measurements provided from a comparison of a minimum of two aircraft altimeters as defined in Technical Standard Order C-10b; and
- (b) the aviation weather service must consist only of meteorological observations of the meteorological element of atmospheric pressure.

The exemption will permit persons who meet the application conditions and criteria set out in the exemption to provide meteorological observations that do not meet the standards for observation of atmospheric pressure in Chapter 4 of the *Manual of Surface Weather Observations*.

Details on the application process and complete copies of the exemption are available from local Transport Canada offices.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 14/00

EXEMPTION FROM THE *CANADIAN AVIATION REGULATIONS* (AS LISTED IN THE APPENDIX TO THIS EXEMPTION)

Medical Validity Period of Medical Certificates

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that this exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt holders of, and applicants for, the following:

1. Student Pilot Permit—Gyroplane, Balloon and Helicopter;
2. Private Pilot Permit—Gyroplane; and
3. Private Pilot Licence—Balloon, Aeroplane and Helicopter;

from the current regulatory validity period of either 12 months or 24 months for the applicable medical certificate, subject to the conditions contained in this exemption.

The exemption applies to the following regulations and standards: subsection 424.04(3), paragraphs 404.04(6)(c), 404.04(6)(f), 421.20(2)(b), 421.25(2)(b), 421.26(2)(b), 421.27(2)(b) and clause 421.19(2)(c)(iv)(b) of the *Canadian Aviation Regulations*, details of which are found in the Appendix to this Exemption.

Purpose

The purpose of this exemption is to change the maximum medical validity period for the holder of, or applicant for, a medical certificate associated with

1. Student Pilot Permits—Gyroplane, Balloon and Helicopter,
2. Private Pilot Permit—Gyroplane, and
3. Private Pilot Licence—Balloon, Aeroplane and Helicopter

so that the current medical validity period is changed to 60 months for student pilot permits; and, depending on the age of the pilot permit or licence holder, is changed from 12 months to 24 months or is changed from 24 months to 60 months.

Application

This exemption applies to the holders of, or all applicants for, the above noted permits or licences provided that the associated medical certificate was valid on or after July 15, 2000, and did not contain, pursuant to subsection 404.05(2) of the *Canadian Aviation Regulations*, a decreased medical validity period;

Conditions

This exemption is subject to the following conditions:

1. The applicant or holder of the medical certificate continues to abide by all other relevant regulatory requirements; and
2. The medical certificate is not endorsed, in accordance with subsection 404.05(2) of the *Canadian Aviation Regulations*, with a decreased medical validity period.

Validity

This exemption is in effect until the earliest of the following:

- (a) the date on which an amendment to the appropriate provisions of the *Canadian Aviation Regulations* comes into effect;
- (b) the date on which any one of the condition to this exemption is breached; or
- (c) the date this Exemption is cancelled in writing by the Minister where he is of the opinion it is no longer in the public interest or is likely to affect aviation safety;



Art LaFlamme
Director General
Civil Aviation

APPENDIX A

CAR 404.04 Issuance, Renewal and Validity Period of Medical Certificate

- 6) The maximum period of validity of a medical certificate is
- c) 24 months for the holder of a student pilot permit–helicopter or a private pilot licence–aeroplane or helicopter;
 - f) 24 months for the holder of a pilot licence–balloon;

CAR 424.04(3) Issuance, Renewal and Validity Period of Medical Certificate

Since the assessment of an applicant's fitness or revalidation of a permit or licence is normally restricted to the period of validity of the permit or licence, the maximum periods of validity are listed below. If the aviation medical examiner deems it advisable to limit the assessment to a shorter period, this shall be recommended in the medical examination report.

Validity Period

Airline Transport and Commercial Pilots–Aeroplane or Helicopter (under 40 years old)	12 MONTHS
Airline Transport and Commercial Pilots–Aeroplane or Helicopter (40 years and over)	6 MONTHS
Private Pilots–Aeroplane or Helicopter (under 40 years old)	24 MONTHS
Private Pilots–Aeroplane or Helicopter (40 years old and over)	12 MONTHS
Glider Pilots	60 MONTHS
Recreational–Aeroplane Pilots (under 40 years old)	60 MONTHS
Recreational–Aeroplane Pilots (40 years old and over)	24 MONTHS
Balloon Pilots (under 40 years old)	24 MONTHS
Balloon Pilots (40 years old and over)	12 MONTHS
Flight Engineers	12 MONTHS
Air Traffic Controllers (under 40 years old)	24 MONTHS
Air Traffic Controllers (40 years old and over)	12 MONTHS
Ultra-light Aeroplane Pilots and Flight Instructors	60 MONTHS

CAR 421.19 Student Pilot Permit–Requirements

2(c)(iv) Validity

The medical validity period for a permit holder shall be:

- (a) in the case of a Student Pilot Permit–Ultra-Light Aeroplane, a Student Pilot Permit–Glider, or a Student Pilot Permit–Aeroplane category permit, 60 months (i.e. five years); and
- (b) in the case of all other aircraft category permits,
 - (i) 24 months if the holder is under 40 years of age; or
 - (ii) 12 months if the holder is 40 years of age or over.

CAR 421.20 Gyroplane—Requirements

(2) Medical Fitness and Validity

- (a) An applicant shall hold a Category 3 Medical Certificate valid for a Pilot Permit—Gyroplane.
- (b) The medical validity period for the permit holder under 40 years of age is 24 months and for a permit holder 40 years of age or over, is 12 months.

CAR 421.25 Balloons—Requirements

(2) Medical Fitness and Validity

- (a) An applicant shall hold a Category 3 Medical Certificate valid for a pilot licence—balloon.
- (b) The medical validity period for the licence holder under 40 years of age is 24 months and for a licence holder 40 years of age or over 12 months.

CAR 421.26 Aeroplanes—Requirements

(2) Medical Fitness and Validity

- (a) An applicant shall hold a Category 3 Medical Certificate valid for a Private Pilot Licence—Aeroplanes:
 - (i) where an applicant holds a Category 4 Medical Certificate for the purpose of a Student Pilot Permit, the applicant shall upgrade to a Category 3 Medical Certificate prior to making application for the Private Pilot Licence—Aeroplane.
- (b) The medical validity period for the licence holder under 40 years of age is 24 months and for a licence holder 40 years of age or over is 12 months.

CAR 421.27 Helicopters—Requirements

(2) Medical Fitness and Validity

- (a) An applicant shall hold a Category 3 Medical Certificate valid for a Private Pilot Licence—Helicopter.
- (b) The medical validity period for the licence holder under 40 years of age is 24 months and for a licence holder 40 years of age or over is 12 months.

AERONAUTICAL INFORMATION CIRCULAR 10/00

MEDICAL CERTIFICATES

General

Transport Canada Civil Aviation is introducing a simplified fee structure for medical certificates and an increased medical validity period for some medical certificates, as outlined below.

Simplification of Fees

Schedule IV, item 20 of Subpart 104 of the *Canadian Aviation Regulations* (CARs) is to be amended to introduce a new single fee of \$55.00 for the processing of a medical certificate. This will replace the current fee structure and its 14 different fees. The combination of the \$55.00 fee and the increased medical validity period will mean a net savings for most pilots currently paying for a medical certificate.

Who is affected by these changes?

All licence and permit holders who are currently charged a fee for a medical certificate are affected by these changes.

When will the new single fee be implemented?

The planned implementation date for these changes is **July 15, 2000**.*

How will the single fee be implemented?

All holders of licences and permits who are currently charged a fee for the issue of a medical certificate will be subject to the new fee beginning on **July 15, 2000**. Medical examinations and declarations completed on or after that date will trigger the issue of an invoice for the new single fee of \$55.00.

Increased Medical Validity

Transport Canada and the Canadian Aviation Regulation Advisory Council (CARAC) have approved changes to Part IV of the CARs to increase the medical validity period of the medical certificate attached to certain licences and permits.

Who is affected by these validity period changes?

The following table and note show the increase in medical validity periods and which pilots are affected.

Validity Table

	Current Validity	New Validity
Private Pilots—Aeroplane or Helicopter (under 40 years old)	24 MONTHS	60 MONTHS
Private Pilots—Aeroplane or Helicopter (40 years old and over)	12 MONTHS	24 MONTHS
Gyroplane Pilots (under 40 years)	24 MONTHS	60 MONTHS
Gyroplane Pilots (40 years old and over)	12 MONTHS	24 MONTHS
Balloon Pilots (under 40 years old)	24 MONTHS	60 MONTHS
Balloon Pilots (40 years old and over)	12 MONTHS	24 MONTHS

Note: Pilots with an airline transport pilot licence (ATPL)/commercial pilot licence (CPL) may exercise private pilot licence (PPL) privileges until the end of the validity period based on the pilot's age as per the table above.

When will these changes be implemented?

The planned implementation date for these changes is **July 15, 2000**.

How will these changes be implemented?

If you are a pilot affected by these changes and are medically valid on the implementation date, your medical certificate is automatically extended to the new medical validity period (see example 1). A new medical certificate (which includes the table of increased medical validity) will not be issued to you until after your next medical examination.

ATPL and CPL holders whose medical validity for commercial privileges has expired but is still valid for PPL privileges on the date of implementation will have these privileges automatically extended (see example 2).

Pilots who are **not** medically valid on **July 15, 2000**, will not have their validity periods extended.

International Flight

Medical certificates with validity periods exceeding 24 months are not valid outside Canada.

Examples

1. If you are one of the affected pilots (as per the table or note above) and your medical certificate is valid on July 15, 2000, you will benefit from an extended medical validity period of either 1 or 3 years, as follows:

Pilot's Age and Date of Medical Examination	Current Expiry Date	New Expiry Date
under 40 at the time of previous medical (October 1998)	November 1, 2000	November 1, 2003
40 or over at the time of previous medical (October 1999)	November 1, 2000	November 1, 2001

2. There is no increased validity to CPL/ATPL privileges. However, if the CPL/ATPL validity period has expired but the private validity period has not (see note under "Validity Table"), you will then benefit from an extended medical validity period for PPL privileges of either 1 or 3 years, as follows:

CPL/ATPL Pilot's Age and Date of Medical Examination	Current Expiry Date for CPL/ATPL Privileges	Current Expiry Date For Private Privileges	New Expiry Date For Private Privileges
under 40 at the time of previous medical (October 1998)	November 1, 1999	November 1, 2000	November 1, 2003
40 or over at the time of previous medical (October 1999)	May 1, 2000	November 1, 2000	November 1, 2001

* **July 15, 2000, is the proposed date for implementation of both the simplification of fees and the increased medical validity periods. This date may be delayed as a result of the regulatory amendment process. Please refer to the Transport Canada Web site (www.tc.gc.ca/aviation/general/index_e.htm) for information on any delays.**



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 7/00

EXEMPTION FROM PARAGRAPH 804.01(c) OF THE *CANADIAN AVIATION REGULATIONS*

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after having taken into account that the exemption is both in the public interest and is not likely to affect aviation safety, I hereby exempt persons who provide aviation weather services from the requirement in paragraph 804.01(c) of the *Canadian Aviation Regulations* that the aviation weather services be provided in accordance with the sections 1.8.4.1 and 10.2.8.8 of the *Manual of Surface Weather Observations* (MANOBS), in accordance with the purpose and application and subject to the following conditions.

Purpose

The purpose of this is to exempt persons who provide aviation weather services from the requirement for a backup ceiling projector, as set out in sections 1.8.4.4 and 10.2.8.8 of the 7th Edition of the MANOBS.

Application

This exemption applies only to staffed observing stations that are equipped with a ceilometer.

Conditions

Each weather observing station must have in place a method to ensure that all required elements are included in each observation. If the ceilometer becomes unserviceable, backup manual instrumentation must be available or parameters must be estimated, as appropriate.

Validity

This exemption is in effect until the earliest of the following:

- (a) the date on which an amendment to section 804.01(c) of the *Canadian Aviation Regulations* or related standards in MANOBS comes into effect; or
- (b) the date on which this exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest or is likely to affect aviation safety.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 6/00

EXPOSURE TO LASER AND OTHER DIRECTED BRIGHT LIGHT SOURCES

PILOT PROCEDURES

Purpose

This aeronautical information circular contains information and guidelines for flight crews encountering "laser illuminations" or other directed bright light sources while in flight. It also contains a reporting format for pilots to report directed bright light illumination incidents.

Background

Directed bright light sources projected near airports or into any airspace can create potential flight control disruptions and/or eye injury to pilots, crew members, and passengers of aircraft. The number of laser illuminations of aircraft has significantly increased during the past few years. In particular, the reporting of laser incidents involving law enforcement helicopters has substantially increased.

The U.S. and UK have both recorded numerous instances of laser exposures that have been disruptive to flight operations. The effects of these occurrences to flight crews have ranged from startle to glare and, in some instances, flashblindness and afterimage.

Definitions

Afterimage—The perception of light, dark, or coloured spots after exposure to bright light that may be distracting and disruptive. Afterimages may persist for several minutes.

Directed bright light source—Devices capable of emitting a beam of high-intensity light, such as a laser, searchlight, spotlight, or image projector.

Flashblindness—A temporary vision impairment that interferes with the ability to detect or resolve a visual target following exposure to a bright light.

Glare—A reduction or total loss of visibility, such as that produced by an intense light source in the central field of vision, e.g., oncoming headlights. These visual effects last only as long as the light is actually present and affecting the individual's field of vision. Visible laser light can produce glare and can interfere with vision even at low energies, including levels well below that which produce eye damage.

Laser—An acronym for "light amplification by stimulated emission of radiation." A device that produces an intense, directional, coherent beam of light.

Startle—Sudden shock from surprise or alarm, which can cause an adverse psychological or physiological effect.

Discussion

Directed bright light sources, particularly laser beams, projected near airports or into any airspace can cause two flight safety concerns:

1. The primary concern is when non-injurious, bright levels of directed light unexpectedly enter the cockpit. Depending on the brightness level, the light could startle the pilot(s); could cause glare, making it difficult to see out the windscreen, or could even create temporary vision impairment (flashblindness and/or afterimage). The illumination and glare may be short—one or a few bright flashes—but the startle and afterimage effects could persist for many seconds or even minutes.
2. A secondary concern is if a laser beam is so powerful that it causes temporary or permanent eye injury to anyone (pilot, crew members, passengers) viewing it. Fortunately, this is only a remote possibility because the laser power required to cause eye injury to a pilot in flight greatly exceeds that of lasers in common use today.

Therefore, the most likely in-flight safety hazard is that of a bright non-injurious flash causing disruption in the cockpit workflow. Such effects pose significant flight safety hazards when the cockpit workload increases below 10 000 ft above ground level (AGL); in critical phases of flight (approach and landing); in dense traffic areas (terminal environment and en-route areas); and in proximity to airports. This safety hazard is applicable to both single or dual aircraft cockpit operations.

Even laser pointers can cause adverse effects that could cause pilots to be distracted from their immediate tasks. Exposures to pilots from persons using laser pointers have been reported in increasing numbers, particularly against law enforcement helicopters.

Procedures

The primary purpose of this section is to outline preventative measures and incident procedures pilots can follow to either prevent potential illuminations or minimize cockpit disruption if one occurs. For simplicity, the following procedures refer to laser illumination incidents; however, the same procedures should be applied regardless of the source, whether it be laser or any other directed bright light, such as a searchlight.

Preventive procedures—During aircraft operations into navigable airspace where laser or other directed bright light activities are anticipated, flight crews should:

1. Consult NOTAMs for temporary laser activity. The NOTAM should include the location and time of the laser operations.
2. Avoid known permanent laser displays, (e.g., Disney World). In the U.S., these sites are published in the Airport/Facility Directory. Currently, there are no permanent sites within Canada; however, when one is established it will be advertised and published in flight publications.
3. Turn on additional exterior lights to aid ground laser safety observers in locating aircraft so they are able to respond by turning off the laser beam.
4. Turn on thunderstorm lights to minimize cockpit illumination effects
5. Engage the autopilot.
6. Keep one pilot on instruments to minimize the effects of a possible illumination while in the area of expected laser activity.
7. If flying a helicopter engaged in surveillance or medical evacuation, consider using notch filter eye spectacles that protect against 514- and 532-nanometer laser wavelengths.

Laser incident procedures—If a laser beam illuminates a pilot in flight, the pilot should:

1. Immediately look away from the laser source or try to shield the eyes with a hand or a hand-held object to avoid, if possible, looking directly into the laser beam.
2. Immediately alert the other pilot(s) and advise them of the illumination and its effect on your vision.
3. If vision is impaired, immediately transfer control of the aircraft to the other pilot. If both pilots have been illuminated, engage the autopilot.
4. Be very cautious of spatial disorientation effects (the "leans"). After regaining vision, check cockpit instruments for proper flight status.
5. Resist the urge to rub the eyes after a laser illumination as this action may cause further eye irritation or damage.
6. Contact air traffic control (ATC) and advise of a "laser illumination." Use this terminology for all laser incident/accident reports. If the situation dictates, declare an emergency.
7. When time permits, provide ATC with an incident report, which would include the location, direction, beam colour, length of exposure (flash or intentional tracking), and effect on the crew.

NOTE: As a follow-up, to ensure Transport Canada has sufficient information to analyze and investigate occurrences, please complete and submit the attached report form.

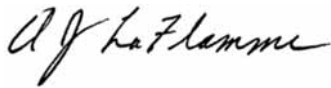
Medical follow-up procedures—After an in-flight illumination:

A crew member who has been subjected to a significant illumination causing persistent symptoms, such as pain or visual abnormalities (e.g., flashblindness and/or afterimage), should seek immediate medical attention. In addition, contact a Regional Aviation Medical Officer (RAMO) or Aviation Medical Officer (AMO) at the earliest opportunity. They will provide assistance in locating the nearest ophthalmologist or medical facility with experience in evaluating laser injuries. If outside Canada, contact the Civil Aviation Medicine (CAM) Branch in Ottawa. An eye damaged by a laser beam starts to repair itself immediately. Therefore, it is strongly recommended that an ophthalmologist, familiar with laser injury examination requirements, evaluate the crew member within five hours of the exposure to determine the nature of the injury and if it needs further followup action.

NOTE: Because diagnosis can be difficult, especially for medical personnel who rarely, if ever, see laser eye injuries, it should not be automatically assumed that a particular symptom, abnormality or injury was caused by a given laser exposure.

For assistance, please contact one of the following:

CAM—OTTAWA	CAM—OTTAWA
Dr. Hugh J.O'Neill Director Civil Aviation Medicine Branch Telephone: (613) 990-2048 Fax: (613) 990-6623 E-mail: oneillh@tc.gc.ca	Dr. Jim Wallace Senior Consultant Operations, Policy and Standards Civil Aviation Medicine Branch Telephone: (613) 990-1310 Fax: (613) 990-6623 E-mail: wallacj@tc.gc.ca
RAMO—QUEBEC	RAMO—ONTARIO
Dr. François Dubé Telephone: (514) 633-3258 Fax: (514) 633-3247	Dr. Jim Pfaff Telephone: (416) 952-0561 Fax: (416) 952-0569 E-mail: pfaffj@tc.gc.ca
RAMO—PRAIRIE & NORTHERN	AMO—PACIFIC
Dr. Jay Danforth Telephone: (780) 495-3848 Fax: (780) 495-4905 E-mail: danforj@tc.gc.ca	Dr. Paul Cervenko Telephone: (604) 666-5600 Fax: (604) 666-0145 E-mail: cervenp@tc.gc.ca



Art LaFlamme
 Director General
 Civil Aviation

Directed Bright Light Illumination Incident Report

Please take a few minutes to complete this report and submit as soon as possible after the incident.

Name _____ Telephone _____

Aircraft type _____ Flight number/call sign _____

Crew member(s) age _____ Glasses/contact lenses _____

Date and local time of incident _____

Weather conditions and relative darkness _____

Location: Closest airport/city _____

Radial and DME _____ Phase of flight _____

Name of approach or dept. _____

Aircraft heading (heading passing if in a turn) _____

Altitude _____ Bank and pitch angles _____

Light source location: position _____

Angle from aircraft _____

How did it hit you? (Straight in the eyes or off axis?) _____

How did it enter the cockpit? (12 o'clock/left side window?) _____

Light description: colour _____ Static/moving? _____

Relative intensity (flashbulb, headlight) _____

Duration of exposure _____

Beam angle from ground _____

Steady or flickering _____

Was light visible prior to the incident? _____

Effect on crew member(s) _____

Any after effects? _____

Post-flight medical attention sought? When, where? _____

What cockpit tasks were you performing when the exposure began?

Did the illumination startle you? _____

How long do you estimate your attention was partly or fully averted as a result of the illumination?

After the initial illumination, were you able to concentrate fully on flying, or were you partially preoccupied by what happened?

Did the illumination cause any interruption to your vision? _____

Could you see well enough during the illumination to adequately focus on instruments and outside references?

Did the vision interruption cease immediately when you looked away from the source?

Did "spots" persist in your vision after you exited the light beam? For how long?

After leaving the light beam, was your vision "bleached" to the point where you could not adequately focus on objects inside or outside the cockpit? _____ For how long? _____

Were you distracted to the point where cockpit tasks were delayed or overlooked? Please elaborate.

Were you visually or psychologically incapacitated to the point where you wanted to, or did, relinquish control of the aircraft to the other pilot? _____

How long did this exist before you felt comfortable with resuming control of the aircraft?

Did the illumination interrupt the normal orderly flow of cockpit duties? _____

Please elaborate.

Did you experience eye pain? _____

Describe (location, intensity and persistence) _____

Did you rub or touch your eyes at the time of the incident? _____

Did you feel disoriented at any time? _____ Vertigo? _____

Did the aircraft enter an unusual attitude? _____

If so, describe it. _____

How long did any symptoms you experienced from the exposure persist? _____

Did the light appear suddenly, and did it become brighter as you approached it? _____

Was the light coming directly from the source, or did it appear to be reflected off other surfaces?

Was there more than one source of light? _____

Describe any evasive manoeuvring you attempted _____

Did the beam follow you as you moved away? _____

Additional Comments: _____

NOTE: Please forward this incident report to:

Director
Air Navigation Services and Airspace
Tower C, Place de Ville
330 Sparks St.
Ottawa ON K1A 0N8

Fax: (613) 998-7416
E-mail: maurstj@tc.gc.ca

AERONAUTICAL INFORMATION CIRCULAR 2/00

IFR APPROVAL OF GLOBAL POSITIONING SYSTEMS IN NORTH ATLANTIC MINIMUM NAVIGATION PERFORMANCE SPECIFICATIONS AIRSPACE

(Supersedes Aeronautical Information Circular 6/98)

General

This aeronautical information circular sets out the general provisions for the operational approval of Canadian-registered aircraft to use the global positioning system (GPS) in North Atlantic minimum navigation performance specifications (NAT MNPS) airspace.

The purpose of this revision is to provide a single source document for GPS operations in NAT MNPS airspace by combining the approvals from the former Aeronautical Information Circulars 1/98 and 6/98.

GPS can be approved for use in NAT MNPS airspace for supplemental- and primary-means operations as described below.

Supplemental-means Approval

GPS may be used for instrument flight rules (IFR) flight guidance in NAT MNPS airspace if the following provisions and limitations are met:

- (a) The GPS navigation equipment must be approved in accordance with the requirements specified in *Technical Standard Order (TSO) C-129a* (Class A1, A2, B1, B2, B3, B4, C1, C2, C3 or C4), installed and approved in accordance with the appropriate sections of the *Airworthiness Manual*, and operated in accordance with the approved flight manual or flight manual supplement.
- (b) The GPS navigation equipment is used in conjunction with another approved means of long-range navigation (inertial navigation system (INS) or inertial reference system (IRS)).
- (c) Should GPS navigation capability be lost, the INS/IRS equipment must allow navigation along the planned route or suitable alternate route. Monitoring of the INS/IRS is not necessary if there are sufficient satellites in view for receiver autonomous integrity monitoring (RAIM) to operate.

Note that aircraft approved under this section are also approved for flight in Canadian minimum navigation performance specifications (CMNPS) and required navigation performance capability (RNP) airspace as described in AIC 1/00.

Primary-means Approval

Primary-means GPS avionics meet the RAIM requirements of TSO C-129a and meet requirements for fault detection and exclusion (FDE). This feature allows the avionics to detect a malfunctioning satellite, exclude it from the navigation solution and continue to operate. This decreases the probability of losing guidance during a North Atlantic (NAT) crossing to the point where primary means GPS avionics can be used as the only required means of long-range navigation. To account for on-board equipment failures, the aircraft must carry two separate primary-means systems.

The use of primary-means equipment requires that flights be planned for times when GPS signals will support operations. This pre-flight planning is achieved through the use of a RAIM/FDE prediction program and certain dispatch conditions apply. The failure of a primary-means navigation system may require reversion to a non-normal means of navigation (e.g., dead reckoning).

The approval to use GPS as a primary-means navigation system in MNPS airspace requires equipment, installation and operational approvals, which will be based on the following documents:

- (a) RTCA DO-208, *Minimum Operational Performance Standards for Airborne Supplemental Navigation Equipment Using the Global Positioning System*;
- (b) TSO C-129 (Class A1, A2, B1, B2, C1, or C2), *Airborne Supplemental Navigation Equipment Using the Global Positioning System*; and
- (c) FAA Document No. 8110.60, *Guidance on GPS as a Primary Means of Navigation for Oceanic/Remote Operations*.

Operators seeking approval to use GPS as a primary means navigation system in MNPS airspace can do so by means of an application to the appropriate Regional Manager, Commercial and Business Aviation.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 2/99

EXEMPTION FROM PARAGRAPH 602.43 OF THE CANADIAN AVIATION REGULATIONS

ROCKETS

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, I hereby exempt any person launching a rocket that meets the application requirements from the prohibition, set out in section 602.43 of the *Canadian Aviation Regulations*, against launching a rocket without an authorization from the Minister, subject to the conditions set out below.

Purpose and Application

The purpose of this exemption is to permit a person to launch a small rocket, which is larger than the definition of a model rocket as defined in the *Canadian Aviation Regulations*, without requiring the person to be authorized to do so by the Minister.

This exemption applies only to rockets

- (a) equipped with model rocket engines that will not generate a total impulse exceeding 160 newton-seconds,
- (b) of a gross weight, including engines, not exceeding 1,500 g (3.3 pounds), and
- (c) equipped with a parachute or other device capable of retarding its descent.

Conditions

The rocket must not be launched into cloud or in a manner that is or is likely to be hazardous to aviation or public safety.

Validity

This exemption is in effect until the earliest of the following:

- (a) the date on which an amendment to the definition of "model rocket" in the *Canadian Aviation Regulations* comes into force;
- (b) the date on which any condition of this exemption is breached; or
- (c) the date on which this exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest, or is likely to affect aviation safety.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 9/98

OPERATION OF PRECISION APPROACH PATH INDICATOR (PAPI) UNITS

Purpose

This aeronautical information circular is to advise pilots of Transport Canada's investigation of Precision Approach Path Indicator (PAPI) units producing false signals due to the buildup of frost contamination on the front lens or cover-glass and the actions being taken to address this matter.

Testing Program

Transport Canada undertook a study of the problem. The results of the testing program indicated that:

- contaminants such as ice, dew or frost on the PAPI front lens surface does affect the projected signal;
- if contaminants existed on the PAPIs and the units were operated at their maximum current setting of 6.6 amperes, approximately a half hour was required to remove contaminants at temperatures down to -30 degrees Celsius to the point where a true signal was produced; and
- using continuous operation, it was found that providing a **minimum** current of 4.8 amperes to the PAPIs was sufficient to keep the lens and/or cover-glass free of contaminant which would cause a false signal.

The testing concluded that false slope indication produced as a result of contamination on the lens is a design problem. It is the responsibility of PAPI manufacturers to come up with a satisfactory solution to this problem.

Interim Action

Based on the test results and the concerns about the safety hazard that this issue posed for aircraft operations into airports with PAPI units, Transport Canada requires that aerodrome operators with PAPI units take the following action:

1. At aerodromes having ARCAL, the PAPI shall be operated continuously at a minimum current level of 4.8 amperes.
2. At aerodromes with 24-hour ATS service, the PAPI shall be operated at the maximum current level of 6.6 amperes (maximum brightness) for at least a half hour before the arrival of the first morning flight.
3. At aerodromes with 24-hour ATS service, if there is a duration of several hours between the flights during the day and those expected at night, the PAPI shall again be operated for a minimum of a half hour prior to the arrival of the first flight at the maximum current level of 6.6 amperes.
4. Where there is more than one PAPI at the aerodrome, these shall be operated simultaneously in accordance with requirements 1, 2, and 3 above.
5. Where a PAPI is not producing a proper signal after the warm up period, a NOTAM must be issued that the PAPI is out of service.

6. If the PAPIs have to be used before completion of the warming period, they shall be visually inspected for the absence of frost.
7. Should the aerodrome not be able to accomplish any of the above, the PAPIs shall be taken out of service.

Pilots are urged to report any observed anomalies on this matter to Transport Canada by telephone at (613) 991-9939 or by facsimile at (613) 990-0508.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 8/98

AMENDMENT TO THE STATEMENT ON MEDICAL CERTIFICATES REGARDING “FIT ASSESSMENTS” JANUARY 1, 1999

On the recommendation of the Canadian Aviation Regulation Advisory Council (CARAC), Transport Canada Aviation Regulatory Committee (TCARC) has approved the recommendations of the Medical Streamlining Working Group regarding the endorsement of medical certificates for the full validity period by Civil Aviation Medical Examiners (CAMEs).

The new medical certificate will be issued to the pilot as soon as possible following the next medical examination. Licence or permit holders will be required to calculate the validity period of their own licence or permit in accordance with the table below. The table will appear on the reverse side of the new medical certificate.

The new medical certificate will have four renewal blocks in which CAMEs will be able to endorse the applicant's medical fitness for the full validity period of the applicable licence or permit. Following the fourth CAME endorsement on the reverse side of a medical certificate, Transport Canada will issue a new medical certificate.

In order to introduce the new medical certificate efficiently and cost-effectively, each pilot will be issued with the new medical certificate following the successful completion of the next medical examination. This means that the result of the licence or permit holders next medical examination will be endorsed on the existing medical certificate. The existing medical certificate specifies that a “fit assessment” keeps the certificate in force for three months from the date of medical re-examination. Regardless, all “fit assessments” endorsed on or after January 1, 1999 will keep the medical certificate valid for the **FULL MEDICAL VALIDITY PERIOD FOR THE LICENCE OR PERMIT** validated by the medical certificate.

Permit / Licence	Validity Period	
	Under 40 Years	40 Years and Over
Commercial or ATPL	12 months	6 months
Private	24 months	12 months
Ultra-light Aeroplanes	60 months	24 months
Gyroplane	60 months	24 months
Recreational	60 months	24 months
Balloon	24 months	12 months
Glider	60 months	60 months
Air Traffic Controller	24 months	12 months
Flight Engineer	12 months	12 months

NOTES

1. The period of validity of the medical examination is calculated from the first day of the month following the date of the medical examination.

2. Category 4 medical certificate holders who have obtained this certificate by a self-declaration or a self-declaration attested by a licensed medical practitioner must continue to submit their declaration to Transport Canada and receive a medical certificate to validate their permits. Licensed medical practitioners who are not CAMEs are not permitted to endorse these new medical certificates.
3. There are no changes to the recurring pilot fee [*Canadian Aviation Regulations (CARs) 104, Schedule IV, item 20*].



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 7/98

EXEMPTION FROM PARAGRAPH 404.18(2) OF THE CANADIAN AIR REGULATIONS

PERMISSION TO CONTINUE TO EXERCISE THE PRIVILEGES OF A PERMIT, LICENCE OR RATING

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, I hereby exempt Civil Aviation Medical Examiners (CAMEs) appointed pursuant to section 404.16 of the *Canadian Aviation Regulations* (CARs) from the requirement in subsection 404.18(2) of the CARs and related paragraph 424.04(3)(b) of the *Personnel Licensing and Training Standards* that where the holder of a medical certificate undergoes a medical examination for the purpose of obtaining permission to continue to exercise the privileges of the holder's permit, licence or rating and the medical examiner has endorsed the applicant's medical certificate as "fit", the certificate is valid for a period of 90 days from the date that it was endorsed or the date of expiry of the certificate, whichever is the later.

Purpose

The purpose of this exemption is to allow Civil Aviation Medical Examiners to renew a medical certificate of a document holder seeking permission to continue to exercise the privileges of a permit, licence, or rating as "fit" pursuant to clauses 404.18(1)(a)(i) and 404.18(1)(a)(ii) of the CARs for the maximum validity period defined in the *Personnel Licensing and Training Standards*.

Condition

This exemption is subject to the following condition:

1. When a Medical Certificate is endorsed by the Civil Aviation Medical Examiner, the permit or licence to which it relates is valid for the maximum period of validity defined in the Validity Period Table under subparagraph 424.04(3)(a) of the *Personnel Licensing and Training Standards*.

Validity

This exemption comes into effect January 1, 1999 and remains valid until the earliest of:

- (a) the date on which an amendment to subsection 404.18 of the CARs and related standards come into effect; or
- (b) the date on which this exemption is cancelled in writing by the Minister where he is of the opinion that it is no longer in the public interest, or that it is likely to affect aviation safety.



Art LaFlamme
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 3/97

EXEMPTION FROM SUBSECTIONS 602.77(1) AND (2) OF THE *CANADIAN AVIATION REGULATIONS* REQUIREMENT TO FILE AN ARRIVAL REPORT

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, I hereby exempt the pilot-in-command of an aircraft, who meets the application condition set out below, from the requirements in subsections 602.77(1) and (2) of the *Canadian Aviation Regulations*, subject to the following condition.

Purpose

The purpose of this exemption is to permit this pilot to close his or her flight plan or flight itinerary prior to landing at the destination aerodrome.

Application Condition

This exemption applies to a pilot-in-command who is terminating a flight in respect of which a flight plan or flight itinerary has been filed with an air traffic control unit, flight service station, or community aerodrome radio station.

Exemption Condition

The pilot-in-command must close the flight plan or flight itinerary with an air traffic control unit, flight service station, or community aerodrome radio station, prior to landing at the destination aerodrome.

Validity

This exemption is in effect until the earlier of the following:

- (a) the date on which an amendment to the appropriate provision of the *Canadian Aviation Regulations* comes into force; or
- (b) the date on which this exemption is canceled, in writing, by the Minister, where he is of the opinion that it is no longer in the public interest, or that it is likely to affect aviation safety.



D. Spruston
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 2/97

ALTITUDES APPROPRIATE TO THE DIRECTION OF FLIGHT

It has recently been observed that a high number of aircraft are flying at inappropriate altitudes for the direction of flight. While aircraft separation and turbulence account for a number of these aircraft, it was also observed that many aircraft requested a higher (or lower) altitude for "ride", "fuel considerations", or did not provide any reason for the requested use of a "wrong-way" altitude.

Canadian Aviation Regulation (CAR) 602.34(2) is very clear regarding the use of inappropriate altitudes for the direction of flight.

A.I.P. Canada, RAC 8.6.2 provides further guidance with regards to altitudes and direction of flight. Pilots are required to comply with CAR 602.34 (2) and are encouraged to apply the guidance provided in *A.I.P. Canada*, RAC 8.6.2. With the increased usage of direct and minimum time tracks, pilots operating aircraft at appropriate altitudes for the direction of flight provide an additional defence mechanism for air safety at a time when the tracks make it more difficult for controllers to identify traffic conflicts.



D. Spruston
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 1/97

EXEMPTION TO SUBSECTION 602.129(3) OF THE CANADIAN AVIATION REGULATIONS

APPROACH BAN – GENERAL

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, I hereby exempt the pilot-in-command of an IFR aircraft conducting an instrument approach from the requirements set out in the *Canadian Aviation Regulations* (CARs), subsection 602.129(3), subject to the following conditions:

Where the RVR is reported to be below the minimum RVR as described in subsection 602.129(1) or (2), the pilot-in-command shall discontinue the approach unless

- (a) when the RVR report is received, the aircraft
 - (i) has passed the outer marker or the fix that serves as the outer marker, and
 - (ii) is in descent to the runway;
- (b) the aircraft is on a training flight where a landing is not intended, and the appropriate air traffic control unit is informed that a missed approach procedure will be initiated at or above the decision height or the minimum descent altitude, as appropriate;
- (c) the RVR is fluctuating above and below the minimum RVR;
- (d) the RVR is below the minimum RVR and the ground visibility of the aerodrome where the runway is located is reported to be at least one-quarter mile; or
- (e) the pilot-in-command of the aircraft is conducting a precision approach to CAT III minima.

This exemption is valid until the earliest of:

- (a) the date on which the amendment to the appropriate provision contained in CARs comes into force; or
- (b) the date on which this exemption is cancelled in writing by the Minister of Transport, where he is of the opinion that it is no longer in the public interest, or that it is likely to have an adverse effect on aviation safety.



D. Spruston
Director General
Civil Aviation

AERONAUTICAL INFORMATION CIRCULAR 4/95

AMENDMENT TO THE WASTE DISPOSAL CLAUSE IN THE AIRPORT ZONING REGULATIONS

Airport Zoning Regulations are established at a number of airports to ensure that the construction of new obstacles will not adversely affect flight operations in the vicinity of an airport. The boundaries of the affected lands are normally defined by the obstacle limitation surfaces established for that airport. These surfaces are:

- (a) the outer surface;
- (b) the approach surfaces; and
- (c) the transitional surfaces.

In addition to protecting an airport from obstacles, a "Waste Disposal Clause" has been used in many regulations to prohibit the establishment of garbage dumps that would present a bird strike hazard. The intent of this provision was to affect lands within an 8km radius of the aerodrome reference point. However, in some cases, the waste disposal clause was made applicable to the lands affected by the height restrictions. This allows disposal sites to be established as close as 4 km in some sectors and as far as 15 km in others.

The intent was to prevent land use that would induce bird migration onto an airport, and the application of a waste disposal clause beyond 8km is assessed as not contributing to this objective. Future revisions to the applicable registered airport zoning will amend this discrepancy, but, in the interim, an exemption is required.

Accordingly, pursuant to subsection 5.9(2) of the *Aeronautics Act*, persons wishing to establish a waste disposal site in an area where such a use of land is prohibited by the "Waste Disposal" provision of the Airport Zoning Regulations listed in Appendix A on the reverse side are exempted from the application of the prohibition if the waste disposal site is more than 8km from the airport reference point. Pending revisions to the Airport Zoning Regulations, these exemptions are conditional and may be withdrawn if a waste disposal site is established which attracts birds to the extent that they create a hazard to aircraft. Appendix A on the reverse side provides a list of the relevant zoning regulations and their waste disposal clause references.



Gilles Rodrigue
Director General
Air Navigation System

APPENDIX A

RELEVANT ZONING REGULATIONS AND THEIR WASTE DISPOSAL CLAUSE REFERENCES

Airport Zoning Regulation	Registered Zoning Clause Dealing With Waste Disposal
ABBOTSFORD, BC	7
BOUNDARY BAY, BC	6
BRANDON, MB	6
CAMBRIDGE BAY, NT	5
CHARLO, NB	7
CHARLOTTETOWN, PE	6
CHURCHILL, MB	6
CRANBROOK, BC	6
DAWSON CREEK, BC	6
DEER LAKE, NF	6
DRYDEN, ON	6
EARLTON, ON	6
EDMONTON INT'L, AB	7
FORT ST.JOHN, BC	6
FORT NELSON, BC	6
FORT SIMPSON, NT	6
FORT SMITH, NT	6
FREDERICTON, NB	6
GOOSE BAY, NF	7
GRAND MANAN, NB	7
HALIFAX INT'L, NS	7
HAMILTON, ON	7
HAY RIVER, NT	7
INUVIK, NT	6
KAPUSKASING, ON	6
KENORA, ON	7
KINGSTON, ON	6
LA RONGE, SK	6
MONCTON, NB	7
MOOSONEE, ON	6
NORMAN WELLS, NT	6
OSHAWA, ON	6
PEACE RIVER, AB	6
PEMBROKE, ON	6
PORT HARDY, BC	6
PRINCE ALBERT, SK	6

Airport Zoning Regulation	Registered Zoning Clause Dealing With Waste Disposal
REGINA, SK	7
ST.ANTHONY, NF	7
ST.CATHARINES, ON	6
ST.JOHN'S, NF	7
SAINT JOHN, NB	7
SARNIA, ON	6
SASKATOON, SK	6
SMITHERS, BC	6
STEPHENVILLE, NF	6
SYDNEY, NS	7
THOMPSON, MB	6
TIMMINS, ON	7
TORONTO CITY CENTRE, ON	7
VANCOUVER INT'L, BC	7
WABUSH, NF	6
WATSON LAKE, YT	6
WIARTON, ON	6
WINNIPEG INT'L, MB	6
YELLOWKNIFE, NT	6