

Canada: To ADS-B or not to ADS-B, that is (no longer) the question

OPSGROUP Team
15 February, 2022



Canada is mandating ADS-B Out. Here is your heads up.

But don't worry...

It only comes in next year. On **23 February 2023, at 09:01z** to be precise.

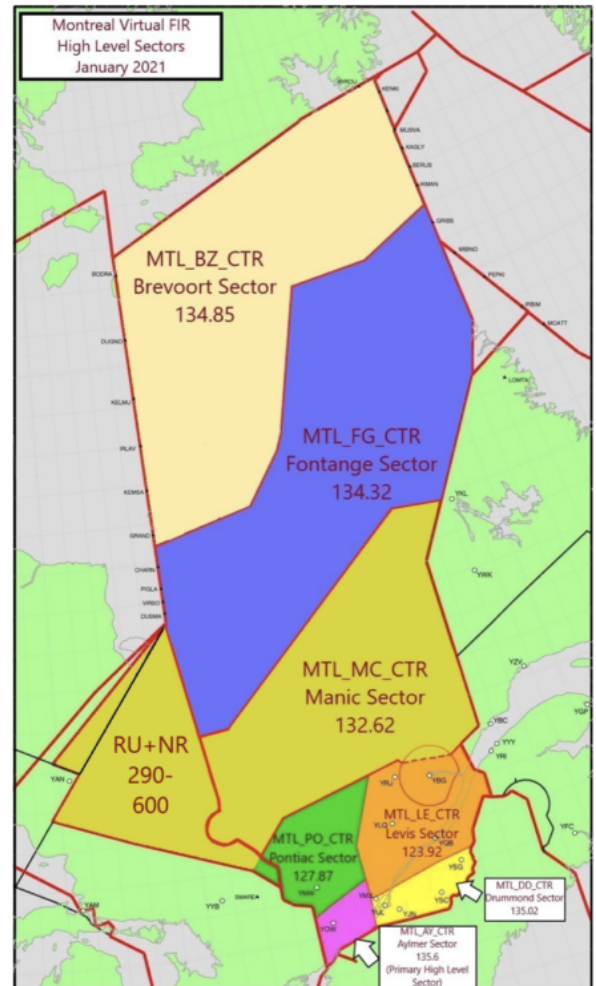
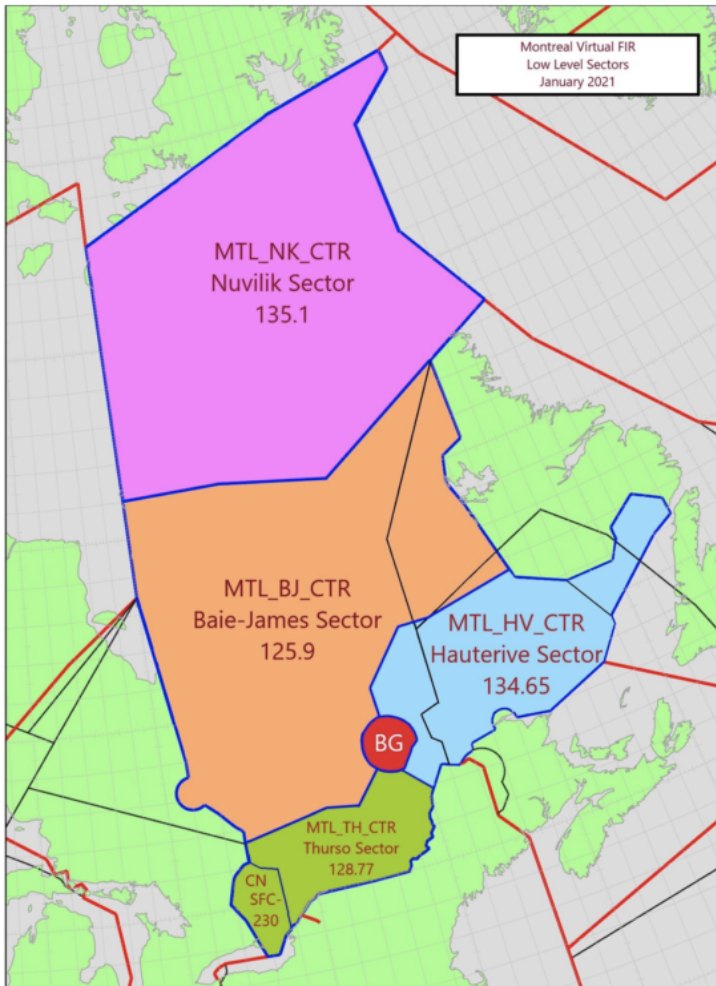
Canada have actually been providing ground based ADS-B surveillance services in portions of the CDA (Canadian Domestic Airspace) at **FL290 and above** since 2008, and they made space based ADS-B available in 2019 throughout all of it.

The Trials

They have been running a few of these. Actually, what they have been trialling is the use of ADS-B at lower altitudes to see how well it works down there.

This has been taking place in the **Montreal FIR and in the Edmonton FIR**, and if you are flying through these, you can participate in those trials if you are ADS-B equipped.

Not really related, but both CZEG/Edmonton and CYUL/Montreal have their own websites and they're interesting to visit.



The Montreal FIR Sectors.

Why has it taken Canada longer?

If you operate in US airspace then ADS-B Out requirements are not a new thing. So why is Canada only mandating it now?

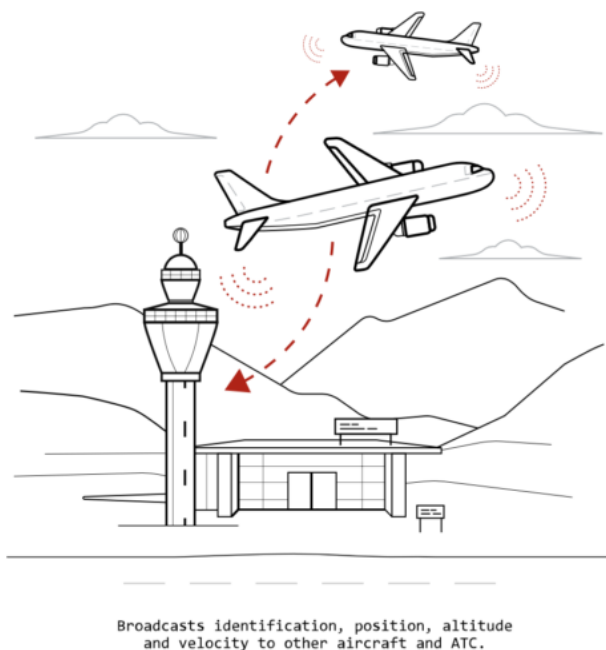
Well, it is something to do with diversity... of antennas.

If you operate in RVSM airspace, or fly an aircraft with more than 30 seats, which weighs more than 33,000lbs then chances are you have (and you really should) a **TCAS II** onboard. Which means you probably have **an antenna on the top and bottom**.

But not all aircraft do have this, which means not all aircraft can talk to the **satellites on 1090MHz**, and they want to make sure it is available for all. To solve this, they have been adding some **terrestrial bits** as well, and waiting for **cheaper systems** to come onto the market for aircraft owners to buy.

Anyway, that's basically the reason. If you want to read more on that, check out this handy AOPA post written by someone with a little more technical knowledge on it than us.

ADS-B OUT



ADS-B IN



A handy little graphic if you're not sure on the IN and the OUT of it.

Where will the mandate apply to?

Canada are initially mandating it only in their **Class A and B airspaces**. You can expect C, D and E to follow sometime in 2026.

If you want to check where that specifically is, then you can find it in their **Designated Airspace Handbook (DAH)**, TP 1820E. We found a 2020 copy here, there are probably more official sources out there too.

What do you need to comply with the mandate?

The 23/02/2023 mandate is for **ADS-B Out**.

You need to be:

- Equipped with an appropriate transponder with ADS-B out capabilities and performance with the applicable standard of Radio Technical Commission for Aeronautics (RTCA) DO-260B, "Minimum Operational Performance Standards", or newer
- Have antenna capability for broadcast toward space-based ADS-B receivers emitting 1090 MHz extended squitter. This requirement can be met either through antenna diversity (the use of a top and bottom antenna) or with a single antenna that is capable of transmitting both towards the ground and up towards satellites.

And you will also need to file the following ADS-B equipage in Item 10 of the ICAO flight plan:

- B1 ADS-B with dedicated 1090 MHz ADS-B "out" capability, or
- B2 ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability.

Any questions?

You have time to ask. NAVCANADA are a friendly, helpful bunch and you can reach them by phone: 1-800-876-4693, or email: service@navcanada.ca

You can also read the official Service Notice [here](#).