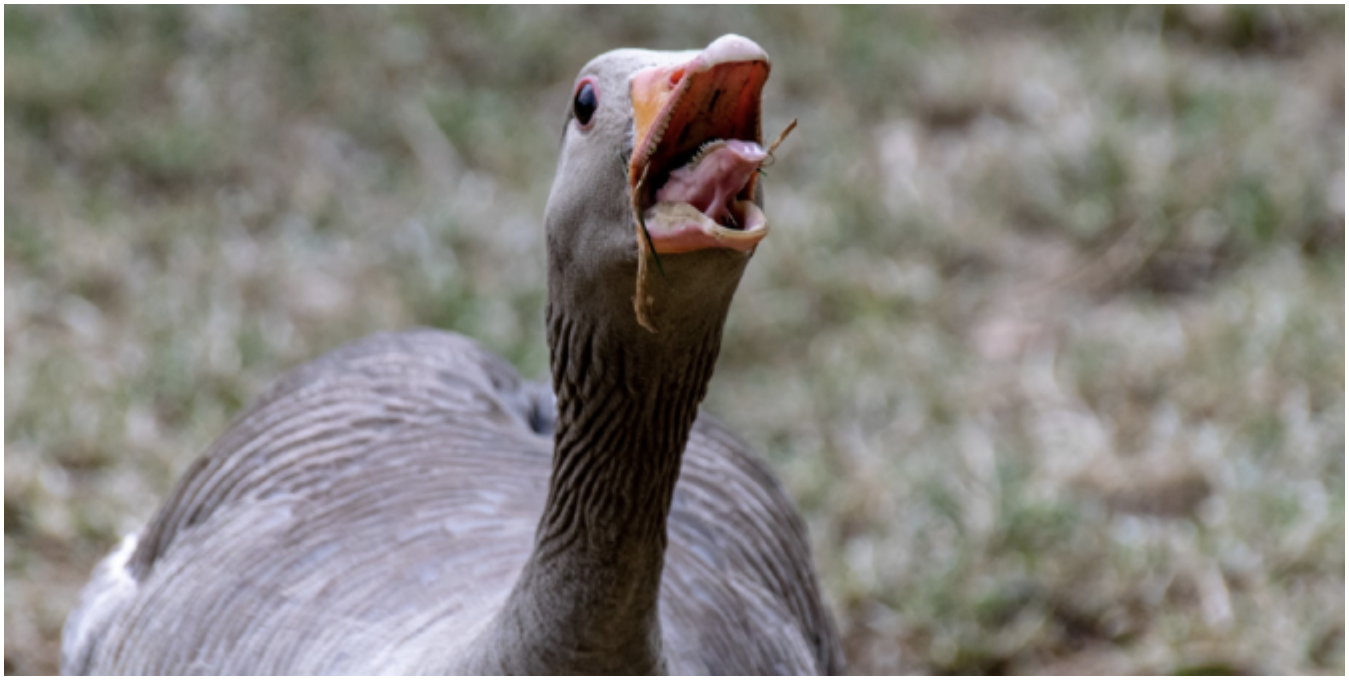
Toronto RNP-AR Plan

OPSGROUP Team
5 November, 2021



What does Toronto Pearson International airport and a Canadian Goose have in common?

They are both very noisy!

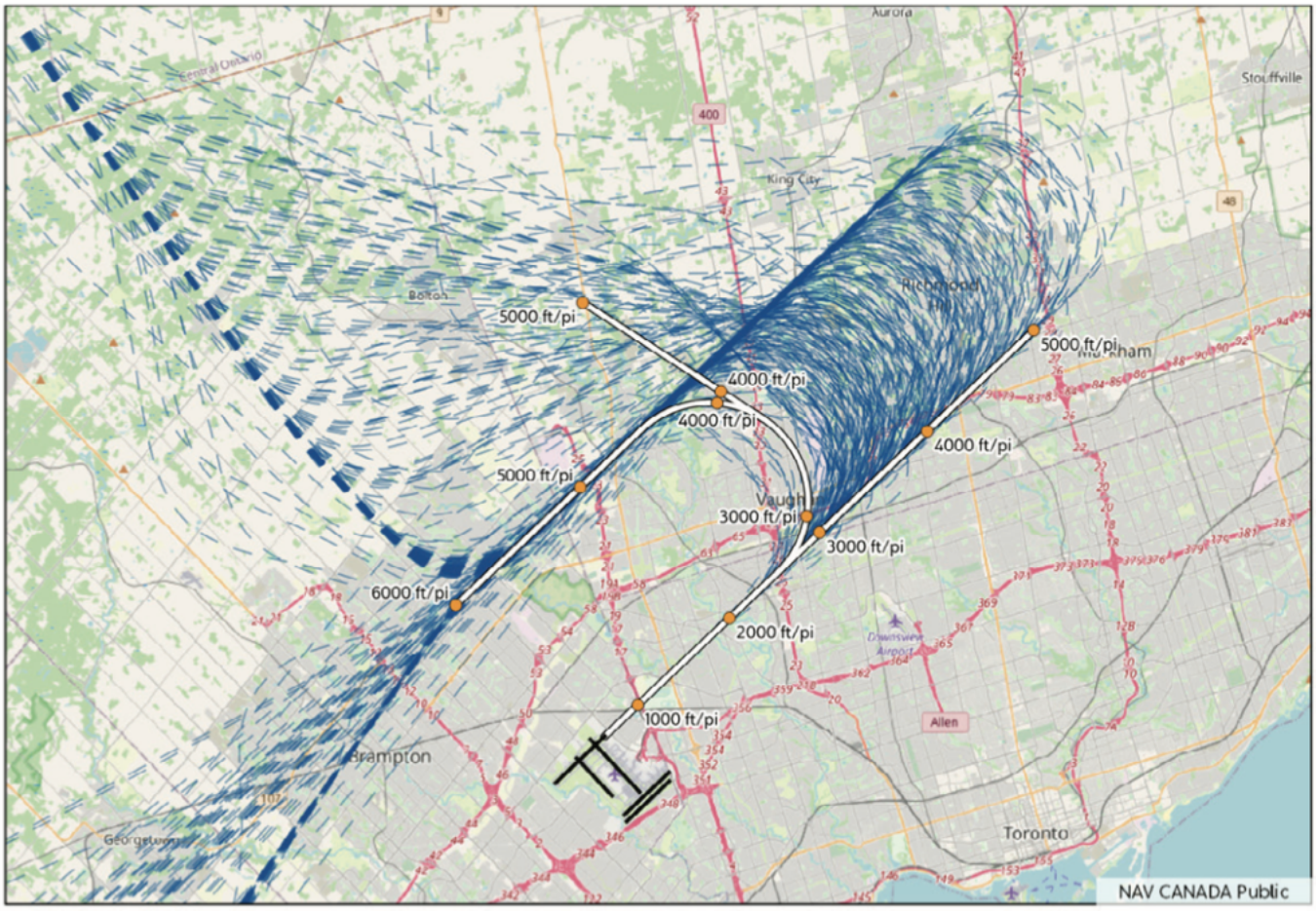
Which is why NavCanada are looking to change the airspace at the airport. More specifically, they are planning on implementing **RNP-AR approaches** in an attempt to make it *cleaner, greener, quieter.* Just like Canada itself.

Anyway, here's a quick look at the proposed routes and how they will help with noise and efficiency.

Runway 05/23

They are planning to introduce RNP AR approaches. The big benefit of these is they line you up with the runway sooner which means you **fly less and so burn less fuel.** They also help with continuous descent ops (see the traffic management bit below for how that works).

Here is a picture of how it will shorten the distances for you. The RWY23 plans can be checked out here, and the ones for RWY05 here.



The white bit versus the blue bits

Traffic Management

In standard simultaneous parallel operations, ATC apply a **1000’ or 3nm lateral separation** between aircraft which usually means folk on one runway head in at 4000’ for final approach while those going to the other runway head in at 3000’. Those dropped down to 3000′ often don’t fly a CDA and it is less efficient, but also **more noisy for those on the ground** with aircraft flying for longer periods at lower levels.

An RNP-AR means aircraft do not have to drop down to a lower altitude because those on the RNP-AR are already ‘established’ on the procedure during the downwind curved bit that bring you onto finals.

One of the current issues with Toronto is the approaches don’t tend to link with the arrivals so there is often a messy, inefficient in-between bit where you are just sort of flying along waiting for a vector.

So why do we care about proposals?

Mainly because it’s good to know what’s changing so you can get ready for it. But also because most of the feedback received during these stages of discussion tends to be from disgruntled folk who live near the flight paths and don’t always want to see changes brought in.

Visit the NavCanada site here for the full info.

EASA withdraws Iran airspace warning. Why?

OPSGROUP Team
5 November, 2021

EASA has withdrawn their Iran CZIB, so what does this actually mean for the safety and security of air operations there?

What is an EASA CZIB?

First up, a CZIB is a Conflict Zone Information Bulletin (if you aren't familiar with the term.)

These are put together by EASA based on aeronautical publications issued by worldwide states, and an assessment of the overall known risks and threats which EASA do via their *Integrated EU Aviation Security Risk Assessment Group*. Quite a mouthful. The point is they are **sharing info on conflict zones to help operators do their own risk assessment** on whether to head in there or not.

OK. So, when we take a look at EASA's CZIBs they actually are more of **a summary of references to other state and authority warnings.** EASA CZIBs do not *in themselves,* appear to make an assessment of risk. They just share what everyone else says and contain a recommendation which more often than not goes something like this –

"Operators should take this information and any other relevant information into account in their own risk assessments, alongside any available guidance or directions from their national authority as appropriate."

If you want to check out their active ones you can do so here.

EASA updated a large number of them in October 2021. 10 in fact, which included the likes of Iraq, Libya, Mali, Afghanistan, South Sudan… interestingly, **they did not update their Iranian CZIB.**

Instead, they withdrew it.

Why did they withdraw the Iranian CZIB?

That's the big question.

Given that the EASA CZIBs do little more than summarise actual risk statements from other states, and considering other major states still have valid warnings for Iran, it does seem rather odd.

EASA have suggested their decision to withdraw this CZIB is based off an agreement from a recent meeting in which they decided that *the situation in Iran has positively improved allowing to withdraw the current CZIB and to issue as replacement an Information Note shared within the European commercial aviation community on a* ***'Need-to-know'*** *basis.*

So, when EASA withdraws a CZIB, **this does not mean individual states have also withdrawn their own warnings.** We have not seen the 'Information Note'.

You can click below to read the (now withdrawn) EASA CZIB.

We think the risk remains.

In 2020, Ukraine International Airlines flight PS752 was shot down in the vicinity of OIIE/Tehran, by the Iranian Air Defense system when it was misidentified. **Iran possess significant anti-aircraft weaponry.** This weaponry is in place due to ongoing conflict within Iran, and that has not changed.

As with all risk, likelihood is dependant on **capability** (they have that), and **intent**.

Intent is an interesting one. The didn't *intend* to shoot anyone down with their Air Defense systems, and they don't usually fire their anti-aircraft weaponry without good reason, which means a **risk of misidentification is far higher during times of active attack**, when enemy forces are being targeted.

But the situation in Iran remains volatile, and so the risk level remains.

What is the risk?

A fair few airlines do overfly Iran. The ones that don't generally have political reasons not too – **this doesn't mean the risk isn't there**. The political tensions between some countries and Iran mean the risk of being targeted or experiencing security threats on the ground is far higher.

If the state your aircraft is registered in is on relatively good political terms with Iran then overflying the country above a safe flight level poses less risk *if you remain at that level.*

Descend below FL260-ish and it is a different situation. And if you overfly anywhere, there is a chance you will need to descend and even divert in for certain emergencies. So your risk assessment when "just overflying" needs to take that into account.

Remember – just because you only want to overfly and don't plan on going into Iran does not mean the risk does not apply to you. If there is a possibility you **might have to divert** in then the risk must be taken into account.

This is why operators who do fly into Iran generally have "TOD" checks – a SATCOM call, for example, to their company to confirm the security situation on the ground prior to heading in below that safe altitude. Basically, a check to ask if stuff is kicking off or not.

What do other states say?

The UK CAA Notam EGTT V0012/21 was issued in July 2021. This covers a "general" airspace security warning for a whole bunch of countries, including Iran, and suggests you go check the UK AIP En-route 1.1 section 1.4.5 for more info.

1.4.5 says there is a *"potential risk to aviation overflying this area at less than 25,000ft"* because of *"dedicated anti-aviation weaponry".* France say don't go below FL320. **The US says don't go at all.**

The risk is still there, and that risk was actually summed up pretty well in the now withdrawn CZIB – *"due to the hazardous security situation, and poor coordination between civil aviation and military operations, there is a risk of misidentification of civil aircraft."*

If you want a summary of all the current warnings and details, visit our Safeairspace page.

The current situation in Iran.

The situation is volatile. There is **significant political conflict** between Iran and some of their regional neighbours. There is also internal conflict. The **primary risk** remains the potential for misidentification from the air defence systems, or surface to surface missiles targeting rebels. There are **secondary risks** from ballistic missile tests (often tested without Notams) and GPS jamming.

Safeairspace Summary

Our view is that the removal of the EASA CZIB does not signify any change to the threat level in Iran. States have not removed their own warnings and so our Safeairspace warning remains the same until such time as further information is provided on how Iran have *positively improved* the situation.

Want a full briefing?

Just click here. SafeAirspace is our conflict zone and risk database run by OPSGROUP. We continually assesses the risk to operators the world over. It presents that information in a way that will always be simple, clear, and free. **You can also sign up to our new fortnightly risk briefing** that contains only what you need to know, simply by subscribing.

US FAA allows Iraqi overflights

Chris Shieff
5 November, 2021

On October 22, the US FAA cancelled a long standing Notam that barred US operators from entering the

ORBB/Baghdad FIR at all levels (KICZ A0036/21).

The standard SFAR for Iraq now applies, which allows overflights **at or above FL320**. *But does that mean it's safe?*

Iraq remains an active conflict zone which exposes aviation to high levels of risk. So, let's take a look at the dangers of operating in the Baghdad FIR and why those risks should continue to be carefully considered at all levels before you decide to overfly.

Hang on, why was there both a SFAR and a Notam in the first place?

The political and security environment in Iraq is unpredictable. Local and foreign military continue to fight against an armed insurgency there. Things can change quickly.

To allow the FAA more flexibility with the rules, they published the Notam (now cancelled) with extra restrictions over and above the SFAR.

The idea was that they could continually assess the threat to US aircraft in Iraqi airspace, and easily reduce restrictions again to allow some operations to continue through this air corridor. This is where we are now.

But the overflight risk remains.

The primary risk to overflying aircraft hasn't changed. Terrorist groups are still very much active in Iraq and may **intentionally target civil aircraft with anti-aircraft weaponry**. They are known to have conventional man portable air defence systems (MANPADS) – the ones you can move around and launch from your shoulder. These were previously assessed to reach aircraft as high as FL260, but the danger zone was later increased by the FAA to FL320.

Why?

Because these groups are being funded and armed by other political interests in the Middle East with increasingly sophisticated weapons.

Case in point. On October 21, news broke that militia in Iraq may have access to a new type high tech anti-aircraft missile. Intelligence suggests that it is 'loitering', or in other words that it hangs around for a while before selecting a target. While such a weapon hasn't been used yet in Iraq, the evidence that it is there is credible.

The same militia also have a long track record of **targeting US military interests at airports** such as ORBI/Baghdad with rockets. We have reported on such attacks more than a dozen times already this year alone.

Don't forget about the military – at all levels.

Iraq is an **active conflict zone**, so foreign and local military have their own air defences too.

The US military have systems that can reach higher than anyone can realistically fly, while the Iraqi military have surface-to-air missiles that can target aircraft as high as FL490.

In the last 12 months, there has been an increase in the use of weaponised drones by militant groups. Which means that if these air defence systems are used to target them, it may increase the risk that civil aircraft are misidentified or mis-targeted – or in other words, being in the wrong place at the wrong time.

Other recent events.

The *ability* is clear, but what about the *intent*?

It's important to remember that airspace risk can change quickly, based on what is happening on the ground. (Not just in Iraq, but everywhere.)

And in Iraq, there are two things to be aware of in recent times…

- The first is that Iraq is still politically unstable. There was a big election on Oct 10 which has since been disputed. Militant groups found themselves on the wrong side of the result, which may imply an increasing desire to make some kind of statement.
- The second is that the US Government has committed to withdraw US troops from Iraq by the end of 2021. As that time draws closer, political tensions are likely to rise. If anything, recent events in Afghanistan may serve as a warning of things to come.

I still want to overfly. Are some areas safer than others?

Based on active airspace warnings alone, authorities in France and the UK agree that eastern airways **UL602** (between TAMSI and ALPET), **UM860** and **UM688** are generally acceptable – but as always, it is up to operators to carry out their own risk assessments. The US FAA regs don't define any specific region and consider the **risk present below FL320 throughout the entire Baghdad FIR.**

Want a full briefing?

Just click here. **Safeairspace.net** is our conflict zone and risk database run by OPSGROUP. We continually assess the risk to operators the world over. It presents that information in a way that will always be simple, clear, and free. You can also add your email to our new fortnightly **airspace risk briefing** that contains only what you need to know, delivered every second Monday.

Bogged down in Bogota

OPSGROUP Team
5 November, 2021

Bogota International has a problem. **Severe delays.** It seems they are as long as the airport's official name – *El Dorado International Airport Luis Carlos Galán Sarmiento.*

And it isn't just the airport with the problem – delays cost money, they frustrate passengers, waste fuel, result in aircraft circling in the air, and make pilots angry.

Luckily IATA have a plan.

A set of recommendations were issued by them on October 7, 2021 suggesting how these severe delays might be severely improved.

For those who don't speak Española, here it is (briefly) in English:

- Elimination of the ground delay program.
- Prioritisation of commercial services during peak hours.
- Restriction of non-commercial services to off-peak hours without exceeding allocated quota.
- Ensure ATC centers and control towers are adequately staffed.

Before we get into all that though…

We thought we would take a look at the airport, procedures and current situation, and ask just how bad the "severe" delays are.

How bad are the severe delays?

The main problem seems to be with the **ground delays.**

Since May 2021 the Ground Delay Program (the one that holds aircraft at their departure airport because there isn't room for them at the destination) has been invoked some **300 times**. On one day alone it resulted in 130 affected flights, meaning 17,600 passengers.

And on average the delays were between 2 and 4 hours.

To compare, this is more than all the US airports combined (the August stat was 63), and more than KJFK/New York, EGLL/London Heathrow or RJTT/Tokyo Haneda which, let's face it, often have delays.

Interesting fact: It isn't just the airport. It is also the most congested city in the world. Drivers lose on average 133 hours of their life to traffic jams every year.

Elimination of the GDP

This is *normally used at airports that have some sort of bad weather type situation going on, and is designed to **prevent aircraft having to hold in the air** because, you know, *fuel issues...*

If you want to read more about it, then check out this handy article from the NBAA which is all about just that.

The way it is being applied at SKBO unfortunately is not entirely as intended and while it prevents holding in the air, it is having a **knock on effect** at departure airports with blocked stands, and for operators with aircraft utilisation and schedules.

So eliminating the program will hopefully *encourage better ATC traffic planning, or will require **better ATC traffic planning in order to eliminate the program**. Either way, that would be beneficial.

Prioritisation and Restriction

The plan is to **restrict peak hour slots** to scheduled commercial traffic only. The benefit of this is schedules are actually kept. Aircraft routing in will also be **prioritised if they are a scheduled carrier.**

For private or ad-hoc flights this will mean less availability of slots, permits (during peak times) and general flexibility in operation times.

Right now, the permit process for landing is pretty quick. If you are going to spend **less than 48 hours on the ground** at one airport only then you don't need a permit. The CAA is efficient and responsive and you can contact them at **+571 296 2208 /** sobrevuelos@aerocivil.gov.co

ATC

A lack of qualified ATC staff means **efficiency in their procedures cannot really improve.** One of the issues is poor labour and pension conditions – something ATC have previously gone on strike over, back in 2019.

The current shortage has seen shift times increase from **6 to 12 hours** leading to more sick leave and fatigue, leading to a cycle of longer hours.

New radio systems were installed across 36 more airport in Colombia earlier in 2021, adding to the 80 already benefiting from a system which enables a **centralised network area** and **better redundancy** for controllers. In addition, there is a specific plan for ATC at Bogota Airport. It involves installing better navigation communication systems, surveillance and management systems and more automation.

A new El Dorado

El Dorado II was under construction, due to open **2022,** and the new airport would have substantially improved the capacity for the region. In 2018, the government suggested they would scrap this and **expand the existing airport instead.** The expansion plan includes the moving of military operations to a dedicated military base, and new terminals and infrastructure.

Anything else?

- GDP are not the only delays you can expect coming to SKBO. Reports of **3 hour waits for fuel trucks,** issues obtaining departure clearance, and hold-ups in Customs (related to passports, not bandits) are relatively common.
- The "*operational concept of TMA BOGOTA is based on defined trajectories and the homogeneity in speeds to be able to maintain an orderly, safe and efficient flow.*" In other words, **fly the speeds you're told to fly**, they are pretty strict on it.
- The airport is high altitude which means your TAS will be around 15% higher than IAS. Which means you might find slowing down harder.

The Missile that Missed by a Mile (or 25)

OPSGROUP Team
5 November, 2021

On October 6, 2021, a Transavia Boeing 737-800 was routing from DTTJ/Djerba, Tunisia to LFPO/Paris Orly when they **reported seeing a missile explode** in what they thought was close proximity to the aircraft.

The Flight Report

TO-3367, registration F-GZHX was climbing through approximately FL300. Their position was around **80nm north west of DTTJ/Djerba**, and about 110nm south of DTTA/Tunis when they reported a missile exploding in their 10 o'clock position, **at the same altitude**, and in close proximity. A second aircraft in the area also confirmed seeing an explosion.

When reported, ATC advised there was an active military area approximately 25nm west.

Where did it happen?

The FlightRadar tracking of the flight suggests they were likely routing along the **UZ153 airway.**

Waypoint NEDOS appears to correspond with the approximate position of the aircraft, and this lies to the east of the **DTR-20C/DTR-20D military zone** suggesting this is likely to be the zone where activity was taking place.

What does the Tunisia AIP say?

ENR 5.1 – 4 details DTR 20c and 20D as being active for military exercises in VMC only. It is operational Monday to Friday from sunrise to sunset and on Saturdays from sunrise to 1300. The limits are FL105 to FL245.

Are there other active areas?

Search Notams for the DTTC/Tunis FIR and you will find a **long list of military activities and firing exercises.**

The 'firings' are for guns, rockets or missiles, but at low levels (below 2,500' msl for the most part). The military activities are of more interest because they are not all bounded by published restricted, danger or prohibited areas, meaning you are going to need to check these by plotting them out.

A2070/12 reserves an airspace which reaches from 13,000' to 30,000'. A second some extends from FL100 to FL250, advised via **Notam A2072/21.**

There are also Notams advising that *'due to military activities new corridors are being implemented'.*

While these did not impact the Transavia flight, and do not necessarily mean any risk for overflying traffic, they do pose a threat simply because of the upper limits and the sheer number of spots to avoid.

So was there a risk here?

The *unusual* element of the Transavia incident would be the **proximity of a major airway to an active missile firing zone**, or rather the firing of a missile which may have reached **altitudes above the published upper limits**, *in close proximity to a major airway.*

However, this assumption is based off the crew's observation of the missile altitude. Tunisia does not reportedly possess missiles which are capable of reaching altitudes of 30,000′, and the difficulty in accurately observing the altitude of an 'object' at a distance with little external context is extremely hard.

An investigation is underway but a highly probable explanation is that the **crew misjudged the altitude and proximity of this missile,** and no risk occurred.

Should we watch out for military exercises?

Military exercises are common, particularly across Europe, and **Eurocontrol notifies** of these via its Operations Portal. These often utilise airspace which has some impact on commercial operations.

The airspace closures are advised via Notam and AIP SUP, and where required, alternative routes are advised to ensure flights are not planned through the airspace.

For the remainder of October 2021 the following exercises are planned:

- **LFO 21** in the Sweden FIR/UIR from ground to FL320. Low operational impact is expected.

- **FLOTEX-21** will impact the LECM/Madrid and LECB/Barcelona FIR/UIRs, with low operational impact.
- **Fusee Sonde-Silene 21** will take place n the EISN/Shannon, EGPX/Scottish and EGGX FIRs. Operational impact is still low, however, it affects some routes through the Shanwick Oceanic region.

Flight planners and crew should be aware of these, but generally flight plans which attempt to route through prohibited or restricted airspace will be rejected, and ATC will prevent flights from entering areas during weather avoidance or other route detours.

What can we do to maintain safety near military zones?

During any operation operators, flight planners and the crew should **remain vigilant in reading Notams and ascertaining which military areas are active**, the altitude of activities and restrictions or prohibitions which might affect their safe routing.

GPS jamming around major military sites is also worth considering.

Safeairspace provides information on conflict zones, and airspace where risks are high for overflying traffic.

North Korea, and certain airways which route close to their airspace and the **Sea of Japan** are worth mentioning because of North Korea's recent number of **un-notified missile tests.**

The Golden (FAA) Rules for a Good Plot

OPSGROUP Team
5 November, 2021

Some people really enjoy plotting. If the other pilot has added some tiny krakens or miniature pirate ships

to find on the chart, it can be a fun way to pass the time on a dark and endless North Atlantic crossing. For most though it is an irritating thing not made an easier by the somewhat confusing requirements as to **how, when and why** you need to do it.

So here is a brief summary of the FAA Plotting requirements.

What do the rule books say?

The place to find the info is this – AC 91-70B

It is an advisory circular providing '*general information and guidance for commercial and General Aviation operators ("you") planning flights in oceanic and remote continental airspace'.*

Sounds good until you actually open and discover it is **114 pages long** and the first chunk is a very long list of links to other documents which you also need to refer to for information and guidance. We actually started writing this post in 2019 when the current AC came out…

So, this post is *just* looking at plotting. That's it. Just plotting.

Why do we need to plot?

We plot so that we can check that the airplane is actually going where it should be going, and that we are where we are supposed to be.

The North Atlantic is big and remote and unlike land, there aren't many places to put Navaids, which means you are **relying entirely on your Long Range Navigation Systems** (usually something to do with satellites) to ensure you are in the correct place.

The second problem is we make mistakes – sometimes we put the wrong things in the box (see the section on half degree waypoints below). So plotting can help **catch those navigation errors** before they become really 'gross'.

The FAA say "*you should use a chart, of appropriate scale, to provide yourself with a visual presentation of your intended route, regardless of your type(s) of LRNS." (6.3.1.11)*

And ICAO say… actually they pretty much say the same. (Position Plotting 8.2.10)

When do we need to plot?

The earlier FAA AC 91-70A had a whole section (3.6) on when plotting is required:

- **Turbojet aircraft:** If you are operating along a route segment where the distance between standards ground based navaids **exceeds 725nm**
- **Turboprop aircraft:** ditto ditto **450nm**

But – this was removed in the new AC. **So, do you still need to plot?**

Well, the simple answer is yes, and the more complicated answer is that "plotting" means something a little different now. **It isn't about drawing it on a map so much as checking and cross-checking** your position.

What is the difference between the cross-checking versus plotting?

Acceptable procedures are outlined in section 6.4.8 of AC 91-70B.

We used to plot manually in order to check we were where we were supposed to be. This cross-check hasn't really changed – we are still cross-checking the FMS and master document (OFP) against the currently effective route clearance to prevent inadvertent deviations from the cleared route. **The big difference is you don't actually have to do it on a paper map anymore (6.4.8.2).**

It is also required regardless of the distance from the nearest NAVAID.

So what do we do it on?

Up until 2019, manual plotting was required, but this changed when the FAA realised FMS-driven navigation displays and what-have-you were actually just as accurate

Opspec/MSpec A061 says you can used an electronic flight bag (EFB) for "interactive plotting" instead of a paper chart (6.3.1.11.2) – in other words an alternate "navigation display", where the alternate means not necessarily a paper plotting chart.

Back to how do we do it…

The aircraft position check should be made at a point approximately 10 minutes after a waypoint.

- Plot your current Lat/Long and record the time.
    - Use the "non-steering" LRNS to find your current lat/long because if your other one is lost it won't really help you to use it.
    - Confirm the circle/cross/miniature airplane symbol you are using (the nav system is using) to mark your current position agrees with your route clearance. I.e. **its on the right track and not out in the middle of anywhere it shouldn't be.**

- Next up, have a look at where you're heading:
    - Check the **active leg** by confirming the **FROM and TO waypoints** of the clearance against the active flight plan
    - Confirm what is in the **FMS matches the clearance**
    - Check you have the **right autopilot mode** in. LNAV/NAv is good. HDG is not good
    - Check the **"expanded" waypoint** to make sure there are no rogue minutes in there
    - **Confirm your ETA** over the next waypoint (and check you are the flying the assigned Mach number)
    - Check you're still **SLOP**-ing if you should be, and at some point, make sure the SLOP ends when it should as well
    - Give the wind a quick check as well. It's just handy to know in case you lose all your LRNS stuff

Re-clearances.

You've done all of the above, prepared a beautiful map ready to go and *horror of horror* ATC send you a new clearance. This is annoying and is the reason most GNE's seem to occur, or rather folk not doing it right is the reason.

- **Confirm the re-clearance** with the other pilot. You both have to "receive" it
- Make sure you tell the aircraft the new clearance otherwise it won't fly where it is supposed to. Both should double check the inputs as well to **catch any finger trouble**
- **Re-plot it** ready for your plotting checks
- It can be a good idea to **check the new distances between waypoints**
- Add in **a little fuel check** in case it is significantly different to your planned route.

A note on half degrees.

Half degree waypoint are fun little things. "Fun" because they are easy to mess up because no-one ever seems entirely sure how to type it into the aircraft computer.

Here is an ICAO paper on it. Well, actually it is on general **waypoint insertion**, but with a focus on half degree ones.

The issue tends to be with the identifiers. For example, ARINC 424 uses an "N-prefix" format which means you might see N5250 and be all *"that looks like half of north 50"* but actually this would mean 52030N 050000W. So you need to potentially check two things here.

- First, if you receive a clearance with a half degree waypoint, confirm the identifier (N5250) has been loaded with the half degree (52030N 050W) like in the picture below
- If you have a clearance with no half degree waypoints and are whacking in pre-loaded Idents, check they **don't** have half degrees – because N5250 night not mean N52000 W050000.

The ident doesn't show the half waypoint – so the full waypoint must be checkedStill confused about what to insert? Read this handy guide from Honeywell.

Watch this space.

The FAA are plotting a new draft – AC 91-70C – which will probably be out towards the end of 2021/ start of 2022.

All done?

We wrote a load of stuff on plotting back in February 2020. Most of it still applies and you can read it here.

We have also made a handy **Opsicle** (refreshing bits of ops info, just for members). This one is called **The FAA North Atlantic Plotting Guide** and if you are a member then you can download it here.

US to mandate vaccines for all foreign arrivals

Chris Shieff
5 November, 2021

The US Government has revealed big changes to entry requirements. **From November 8, all non-US citizens/residents will need to be fully vaccinated to enter the US – from anywhere.** For Americans, the rules around pre-travel testing will be tightened too.

Here's a quick rundown of how this will all work.

For Foreigners

Starting November 8, any foreigner who wants to board a flight to the US will need to prove that they have been fully vaccinated. This means that they will need to have received a full dose of either an FDA or WHO approved vaccine at least a full 14 days prior.

Exemptions

Spoiler alert: there are hardly any. A very small list of unvaccinated foreigners will be allowed to enter.

This includes people participating in vaccine trials, those with medical conditions or anyone travelling on non-tourist visas from countries where vaccines aren't readily available. Exemptions may also be granted

for humanitarian or emergency reasons with approval from the US Government in the form of a letter.

Seven days of self-quarantine and additional testing may be required.

Don't forget the kids.

Anyone under 18 will be exempt from the vaccine mandate. Instead they will need a pre-departure test. If their guardian(s) are fully vaccinated this can be done within three days of departure. If they're travelling with an unvaccinated adult or alone, this is reduced to just one day.

For US Citizens and Residents

The vaccine mandate will not apply. But the rules around pre-travel testing are being tightened.

From the same date, any US citizen or resident who isn't fully vaccinated will need to a negative viral test (PCR or Antigen) within just **one day** of departure. Those who have had the vaccine will still need to get a pre-travel test too. But they will have the existing three days to do so.

What about Crew?

Both foreign and local crew entering the US **will be exempt** from these new rules. Instead they will need to continue following existing CDC guidelines which you can read here.

Contact Tracing

There will also be a new requirement for air operators to collect contact information from all passengers and provide it to CDC 'quick smart' – just in case they need to get in touch with anyone. More details on this are set to follow.

Travel Ban

November 8 is a big day for US borders for another reason too. For the first time since the start of the pandemic the entry ban on passengers from the UK, Ireland, much of Western Europe, China, Iran, Brazil, South Africa, and India is finally being lifted. You can read more about that announcement in our recent article here.

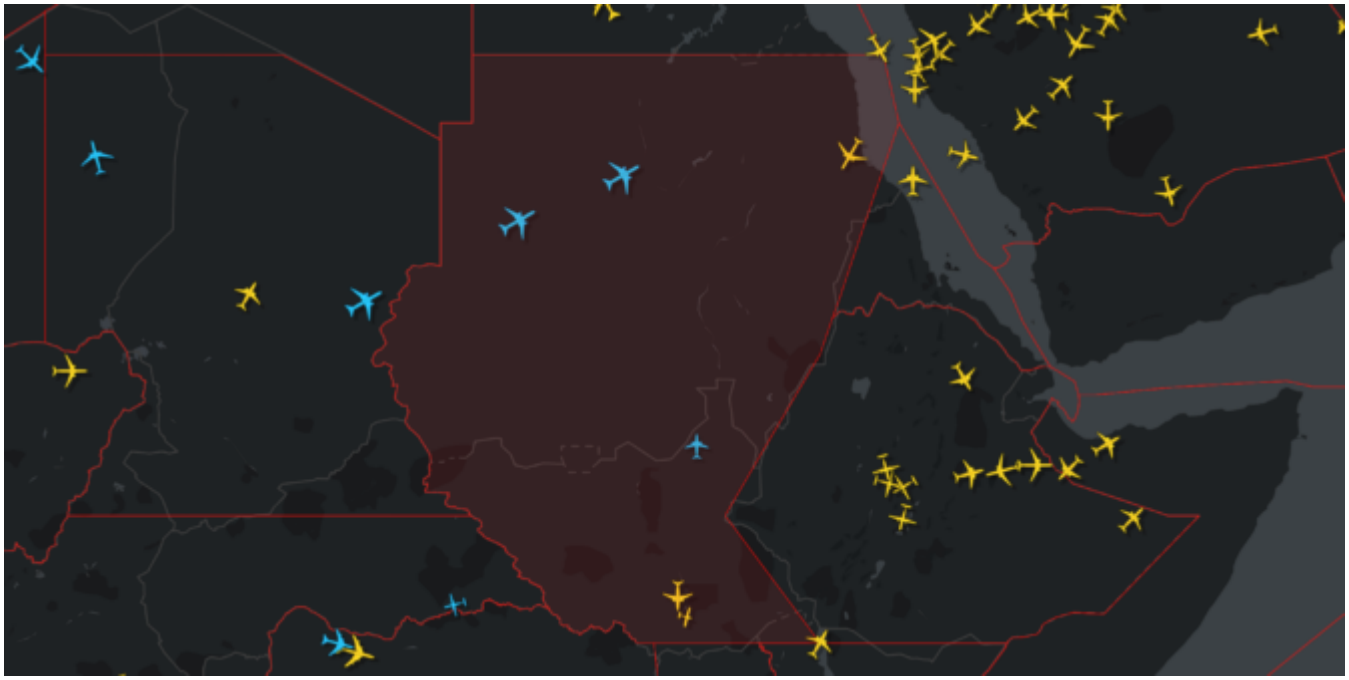
Handy Links

The official Presidential announcement of the vaccine mandate.

The official CDC Guidance on the new rules, including a useful FAQ section.

Military coup in Sudan: Impact to ops

OPSGROUP Team
5 November, 2021



A military coup is underway in Sudan – the second since late September. Troops have been deployed throughout Khartoum and the military chief has dissolved the transitional government.

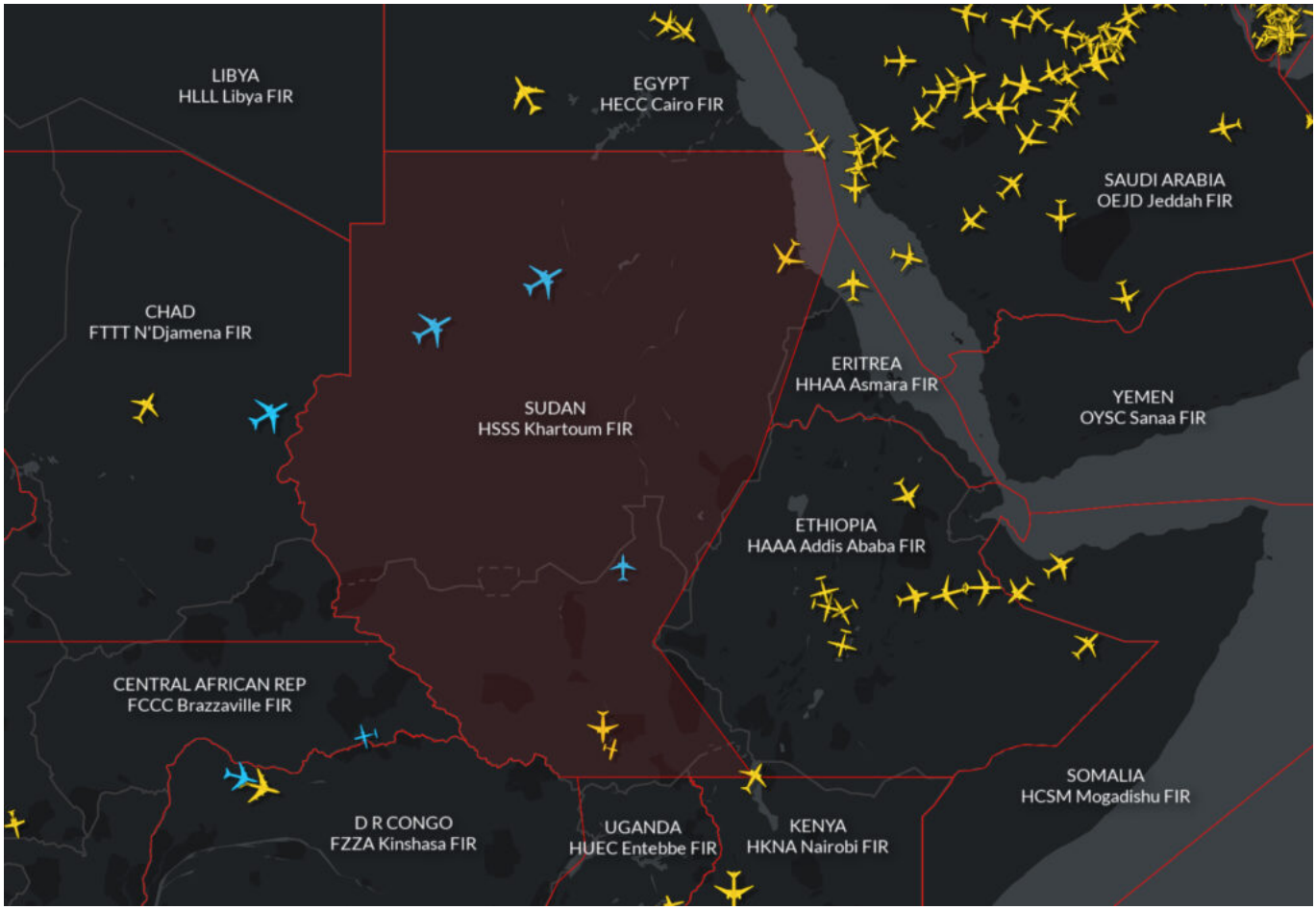
HSSK/Khartoum Airport is closed and all flights have been suspended (though no new Notams have been issued). Sudan's CAA has told the media that the airport will **reopen on Wednesday 27 Oct at 4pm local time** (1400 GMT).

Phone and internet networks have been blocked making it hard to contact local agents for situation updates. However, security forces clashed with anti-coup protestors on Oct 25 & 26, and there are additional demonstrations and roadblocks planned over the coming days across Sudan.

The US Embassy in Sudan issued a security alert on Oct 26 advising US citizens not to travel to the embassy or the airport. "When commercial flights are confirmed to be departing, an alert will be released" it said.

Overflight impact

HSSS/Khartoum FIR covers the whole airspace. **Overflights are still taking place** but there have been reports of delays due to thirty-minute separation being applied in the HSSS/Khartoum FIR. A coup in 2019 saw the airspace close for 24 hours.



There is **no immediate known risk to overflight safety** due to the military takeover.

However, Khartoum is a main en-route alternate for this part of Africa. With the security situation on the ground now unpredictable here, there is a general risk for overflights in terms of **limited alternative diversion options**, given that there are several **high risk airspaces** including Libya, South Sudan, Eritrea, Somalia and Ethiopia (Tigray region) in the vicinity.

Airspace warnings

There is only **one international airspace warning** (from France) which recommends **overflights above FL260** for the far southern and western edges of the country where it borders South Sudan. The risk is, in part, due to the lack of ATC services and standards below FL245 in South Sudan. Further information on this is available on our Safeairspace page.

For some more background info on the airspace safety concerns for Sudan and South Sudan, you can read our January 2021 update here.

Demystifying Singapore's Entry Rules

Chris Shieff
5 November, 2021

Ah, Singapore. The Lion City. Home to chilli mud crab, Clarke Quay, Raffles and some of the most **confusing entry rules we have ever seen.**

If you're feeling particularly motivated, they're all found on the official Safe Travel website. But brace yourself for bewilderment…

Or you could try this summary. It is a super simple break down of how the current entry rules work for passengers and crew alike. So hop aboard the Singapore Flyer and crack open a fresh Tiger Beer. We promise it'll be a smooth ride.

Lanes, Lanes and more Lanes

All foreigners must apply for entry using an approved 'travel lane'. Then they'll get an approval letter before they travel.

For the vast majority of foreigners, the options are limited. There are lanes for those who live in Singapore, have immediate family there, study there or work there.

Surprisingly there is no general lane for business travel. Only ones with special rules for travellers from select Asian countries.

Which means the vast majority of foreigners headed to Singapore right now will only be using one lane – **The Vaccinated Travel Lane**, and it's only for countries who have been good. It made headlines this week because **the US, Canada, and the UK** among others have been added to it.

Travellers from these countries can enter for any reason – as long as they're vaccinated. So, let's take a closer look.

The Vaccinated Travel Lane (VTL)

As the name suggests, all passengers must be fully vaccinated at least two weeks before they arrive. Click here for those requirements.

Passengers will need to prove it with either:

- From the US and Canada: The SMART Health Card

- From the EU: The EU Digital Covid Certificate
- From the UK: The NHS Covid Pass

All passengers need to apply at least 7 days in advance to use the VTL. Don't leave it until the last minute!

Here's what they'll need:

- Their pre-approval.
- A PCR test less than 48 hours prior to departure.
- A PCR test on arrival (book and pay beforehand).
- Travel insurance which includes at least $30K cover for Covid.

On arrival they will need to self-isolate in their hotel until the result comes back (about 24 hours). That's it!

Can private aircraft use the VTL?

Great question – yes! Despite causing some confusion among FBOs there, Singapore's CAA have clarified this with a new circular. If you're operating a charter flight there, make sure you follow the rules. This includes getting approval from CAAS – apply at least a week in advance.

Jet Aviation, the handling agent based at WSSL/Singapore Seletar Airport, provided this FAQ on Oct 18, which includes some good info here:

1. **How do business jet pax apply for VTL?**
   a) Foreign passengers must hold a valid VTP (Safe Travel). Take note that the trip must be a direct flight from VTL country to Singapore.
   Click on this link to apply for VTP – https://eservices.ica.gov.sg/STO/VTL
   Recommended Internet Browser to be used – Google Chrome
   Once approved, an email by Safe Travel will be sent to passengers via the contact details provided (eg. passenger's email address).
   Alternatively, operators can "Check VTP status" (as shown above)
   b) Once VTP is approved, another application to CAAS must be submitted at https://go.gov.sg/nsvtl1
   CAAS VTL application for entry should be made at least 7 calendar days before the start of the flight, and approvals will be issued at least 2 calendar days before the indicated start date of the flight.
2. **In case of fuel stops, does the routing below qualify for VTL?**
   VTL country > non-VTL country (fuel stop) > Singapore.
   (for example, London (origin) > Dubai (fuel stop) > Singapore. Is this a VTL?)
   No, this route arrangement does not qualify for VTL. Arriving from a VTL country, you must do a tech stop in another VTL country to qualify for VTL.
3. **What happens if there is a diversion of flight?**
   VTL will not qualify if a flight is diverted from VTL country, to a non-VTL country, prior to arriving in Singapore.
4. **Can VTL be applied to Part 135 flights?**
   Yes. Please ensure FOP and AT permits are in place first before VTP can be applied for the passengers.

5. **Do foreign crew qualify for VTL?**
   CAAS strongly recommends crew to apply for entry into Singapore via existing schemes. The different types of entry approval for crew are as follows:
   — CAAS BAGA LAYOVER (for non-scheduled flights)
   — CAAS ANNEX A C33 LAYOVER (for maintenance flights only)
   However, foreign crew does qualify if they apply
   via https://safetravel.ica.gov.sg/vtl/requirements-and-process.
6. **Maintenance-related aircraft?**
   Crew under VTP can perform post-maintenance Local Test Flights in Singapore.
7. **Will Long-Term Pass Holders (eg, EP), need both MOM approval and VTP?**
   Yes. LTP Holders must obtain the necessary approvals to enter Singapore (applies to both Commercial Airlines and Non-Scheduled).
8. **Do passengers still need to have MTI and PBP passes?**
   Yes. Passengers who have existing MTI and Pre-approved Business Passes approval must also apply for VTP to qualify for VTL. All passengers (if there are more than 01 passenger) must be fully vaccinated.
   We must emphasize that the purpose of VTL is to exempt passengers from serving SHN in Singapore.
9. **Are Guam and Hawaii considered part of the US territory, for VTL?**
   Both Hawaii and Guam are considered part of the US continent. As such, tech stops at Guam are allowed for flights carrying VTL passengers.
10. **Are Monaco and Vatican City considered part of France or Italy?**
    As for Monaco and Vatican City, these are city-states, and are not part of France or Italy respectively, so travel history for these locations within the last 14 days would disqualify pax from the VTL scheme currently.

Crew Layovers

So, you've scored yourself a layover in Singapore eh? Nice work! There are two options for crew:

The "I'd like to isolate in my hotel room" option.

Then follow the standard procedures found in CAAS Circular 2021/08. Both operating and positioning crew are allowed.

You'll need CAAS approval – make sure you apply at least two weeks in advance by emailing CAAS_FS_FOS@caas.gov.sg. When you get there, make sure you all have three bits of paper – your approval, a letter from your operator to say you are on layover and your crew passes.

For transport to your hotel you can only use one transport company – Woodlands Transport Service. You must then isolate in one of two hotels – the Crowne Plaza Changi Airport, or the Holiday Inn Orchard City Centre. Both are decent.

This is probably the easiest option if you're staying for less than 24 hours.

The "I'm sick of isolating, I want to enjoy my layover" option.

We don't blame you. In which case your only option is the Vaccinated Travel Lane – you'll need to meet all the same requirements as the passengers including pre-approval, and *24 hours of isolation.

** you have to isolate until you get the SMS with a negative PCR test result. This is likely to arrive within 24 hours, but for scheduled arrivals at Changi airport it is taking 6 hours or less (reportedly as few as 2).*

So probably only worth the fuss it if you're staying for longer.

The Other Lanes

If you've made it this far, well done! If you're only interested in the VTL the show ends here. But if you're carrying passengers in other lanes, there's one more thing you should know about – travel categories.

For almost all other lanes, testing and self-quarantine is required. The rules depend on where you have been in the last 14 days (including transit). Singapore divides the world up into four categories – 1 is the lowest risk, and 4 is the highest. The length of quarantine and where you have to do it depends on where you have been. You can find those breakdowns here.

We're here to help.

Navigating entry rules in these times can be confusing and frustrating. If you still have questions reach out to us on team@ops.group, and we'll do our best to help you find the answer you're looking for.

Headed to Seletar?

We wrote an article on ops there recently, check it out here.

Communication Breakdown on the NAT

OPSGROUP Team
5 November, 2021

Lost comm procedures in the NAT HLA (or when you're trying to get into the NAT HLA) are a complex and confusing thing, so here is our "Natter on the NAT" – **a recap on what to do when nobody wants to talk to you.**

You aircraft has lost everything it uses to communicate.

The likelihood of every communication system you have breaking all at once is fairly minimal, and given the equipment requirements to enter the NAT HLA, you are going to have more than just VHF onboard. You will also have HF, datalink, probably SATCOM…

But if it does happen (maybe a freak bolt of mega lightning or something) then the first thing to do is still **try each system, including back up boxes,** and your headset for that matter.

Still no luck? Don't panic. While you can't hear anyone, or talk to anyone, they can all still hear and talk to each other. So **you are the only uncoordinated thing out there** right now. First up, **let ATC know by squawking 7600.**

The next thing to do depends on where in the NAT you are.

Already in it? Great, simple. You already have a clearance and you already know where you are going, so carry on as you are, transmit blind, and once you exit follow the lost comm procedures for the place you are entering.

Not in it, but have a clearance? This is up to you really. You have your clearance (and have confirmed it) so ATC know that you know that they know that you know what you are cleared to do. So if you want to stick to in and head on in you can, but you are going to have to maintain your speed, level etc all the way through. **And if you have a weather issue or an emergency you are also going to be on your own.**

No clearance yet? This one is a bit tougher. It probably isn't the best plan to head in (following your flight planned route), especially if you are heading into Shanwick. **Shanwick have diversion procedures in place** to take you to Shannon and the best idea might be to head there and get yourself fixed.

The exact wording is *"it is strongly recommended that a pilot experiencing communications failure whilst still in SHANNON FIR/UIR/SOTA/NOTA does not enter SHANWICK Oceanic Control Area"*.

The Irish AIP have the procedures for comms failure if planning on entering and they are worth a read. They have a pretty handy summary of what to do for Shanwick in there.

You have lost HF

If you're already in, there isn't much you can do. Stick to your clearance and keep in contact on CPDLC. Remember, HF frequencies are pretty rubbish at the best of times so if you discovered the failure while trying to make an HF call, then try a different frequency.

Lower ones work better at night, higher ones by day, and always try the middle ones for good measure. Have a quick glance at space weather too because if there are geomagnetic storms forecast it could be there is a general HF blackout going on that is affecting everyone.

Collins Aerospace publish a **daily list of HF frequency assignments** for their side (the US side) of the North Atlantic and you can find them here. Worth a look before you fly, if you're going to be in the US North Atlantic area.

The Comms requirements changed a bit in February 2021, and basically, what they say, is that **you need two long-range comms systems** if routing anywhere outride VHF coverage. **One of these has to be HF.**

Here is a particularly horrible picture of where VHF has got you covered.

You can route through if your HF was already broken and you told ATC in advance (Item 18 on

the flight plan) and they gave you the thumbs up, but if you are heading there and it goes suddenly before entry then you are going to need to talk to ATC.

Shanwick OCA needs HF, no exceptions (not even the Blue Spruce routes that fall within the Shackwick OCA) so don't go diverting immediately but do get talking (on whatever else you have available) to sort it out before you enter.

We might as well cover HF blackouts while we're here.

These happen when space weather happens. They aren't super common and they are **usually minor (lasting 10 minutes or less)**. But when they do happen, everyone can lose HF, including ATC.

You probably should **make position reports on 123.45** to be on the safe side because there might be **no coordination between traffic and ATC for the period of the blackout.** Keep trying different methods to get hold of ATC as well (but don't get all crazy at them though – they will be busy and will contact you when able).

Now, because coordination between ATC and everyone else is an issue, they actually don't want everyone diverting all over the place, so stick with your clearances. The big point here is – **if you don't have a NAT clearance yet, you need to stick to your DOMESTIC clearance.** That means you have to stick with what you were most recently told to do, not what you filed for on your flight plan.

Datalink problems.

So your texting system is on the blink? Unfortunately, the **Datalink Mandate is in force** now so you need this to enter. If you ask ATC nicely (and have everything else working) they might still let you in.

You don't need it if you are **north of 80N, in NYC Oceanic, on Tango 9 or 290 route, or in the 'surveillance airspace' over Iceland/Greenland**. So if you can re-route via any of this, that might be a good plan. Otherwise you do also have the option of flying above or below the NAT HLA (so below FL290 or above FL410) if your aircraft (and your fuel) can do that.

Remember, **datalink uses CPDLC and ADS-C** so if either of them is broken, your datalink probably is as well.

SATCOM

Most datalink systems also require SATCOM – so while you don't need it to use it, if your aircraft needs it for the Datalink to work, then what we said above applies.

Let's talk ATC – Strikes.

An ATC strike is *usually notified in advance. The chances of them walking out without warning is fairly remote. So if you know about it beforehand, plan accordingly. If it happens while you're there, **treat it as an ATC Zero event.**

ATC Zero.

There is no-one out there. Maybe they had to evacuate? There was some sort of emergency or major technical issue that's has taken down an entire ATC provider? Occasionally it is Notam-ed, but in that case you won't have been given clearance to head through, so we are talking those **unforeseen sudden zero events.**

Each region has its own **contingency procedures** which you can find in their AIP, or better still in NAT Doc 006, which was also updated in Feb 2021.

These routes are really for when big stuff happens – the entire ATC for a sector is evacuated for example. In most cases, other units will try and manage control as best they are able, but it will be fairly limited.

So, if you're already inside, continue and start trying to make contact with the next sector (as they will hopefully be managing control as much as they can). If it is a big ATC zero event you are probably going to have to follow the contingency routes to exit the NAT HLA (rather than your clearance) but this will be 'activated' by whichever ATC is taking over control.

If you already have your clearance to enter you can, and you can transmit position reports on 123.45, but it is not really advisable. The best plan is to organise a re-routing.

If you don't already have a clearance then you aren't going to be able to enter the ATC zero bit and you will need to plan a re-route around the affected sector.

Feeling the need to read more?

Here are some handy links to things on the subject.

Changes to NAT Doc 006 – our blog post summarising what these were.

The Irish AIP (again) in case you missed the link earlier.

The GOLD Manual (2017 edition) – for all your Datalink info.

Opsgroup Member?

Then click here to download our handy little **Comms Issues on the NAT "Opsicle"** – a refreshing bit of ops info, just for members.

If you're not an OPSGROUP member, but you'd like to be, you can join here.

(Not so) New on the NAT

OPSGROUP Team
5 November, 2021

The helpful NAT OPS elves have put out some new NAT OPS info, so here is a summary on it.

The Sample Oceanic Checklist

First up, the Sample Oceanic Checklist which was effective from October 5. Here it is if you want to read it yourself.

Page 2 of this is actually really handy if you are not super familiar with oceanic ops because it lists everything you need to think about and do for each stage of the flight. The main change here is a clarification of SLOP (and micro slop) which is up to **2nm to the right, never go left, and in increments of 0.1nm.**

Page 5 has updated the info on **Long Range Nav Systems (LRNS)** saying ya need two of 'em, a single FMS doesn't count even if it is receiving from two separate nav sensors, and as far as your **LRCS (long range comm systems) go you need an HF** as one of them.

'Prior to Oceanic Entry'

A reminder here that both pilots must obtain the clearance. *This does not mean both have to do it separately.* It means both have to be there, check it, confirm it. They actually say that **dual checking of the oceanic clearance must be SOP**. So no toilet breaks in the middle of it.

Generally if you are going to get your **clearance by voice then give it 40 minutes**, if you're using Datalink (which you most likely will be now with all the mandates in place) then **25-90 minutes before entry will work.** The time varies from entry region to entry region so you'll need to confirm the exact timing. Reykjavik for example actually says 15-45 minutes.

Oceanic Errors

The second update, also effective October 5, is all about Oceanic Errors, and it starts out with a **'Safety Snapshot'.** We've posted on the safety reports each year and you can read last year's here.

This bulletin looks at the main issues that have been cropping up in the NAT – namely gross navigation errors, separation problems, weather deviations, and issues with CPDLC – and it provides some top tips on how not to mess up.

Here's our version of the *Top Tips.*

CPDLC

It seems some folk have been getting confused with **conditional clearances.** A conditional clearance means it isn't as simple as a "climb now" – it will have some sort of delay in it, like a climb after 20W, or a "to reach it by…", or even a "maintain FLXX, at 14:03 descend and maintain FLXX"

There is a lot of explanation on what these mean, what is expected and how to think about it. Really, it goes back to that infamous saying we all had drilled into us through school – **read the (insert swearword) question.** Or in this case, clearance. RTC.

Gross Navigation Errors

These seem to be happening because clearances are differing from flight plans and folk aren't checking and are missing the amendments. **You have to fly the clearance.** Which means you need to make sure your box (FMC, navigation thingamajig) has the new route programmed in.

Erosion of Longitudinal Separation

People aren't flying the speed they've been been told and are getting too close up the… of another aircraft. Or another aircraft is getting too close to them.

Stick to your assigned Mach. If you have to change it because of turbulence, or you messed up and can't actually fly that fast/slow by more than .01 of a mach, then tell ATC. ATC will tell you when you don't need to stick to it anymore by saying something like "Resume normal speed".

Contingencies

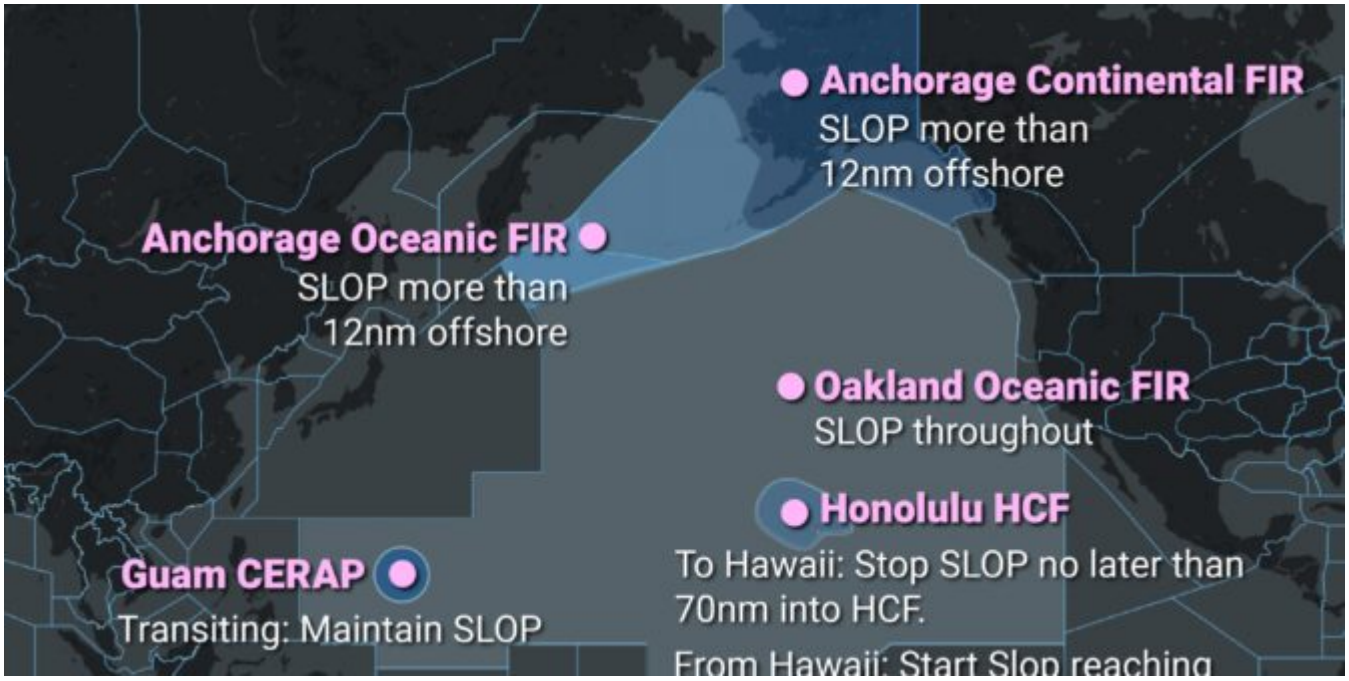
These came in back in March 2019. Check for convective activity early on, that way you have time to pull out the handy picture below and work out what you are going to do.

Also remember: **if you have to deviate *at all*, then you need to tell ATC.** Even if that deviation means a tiny little dog-leg around a storm that will move you off your track less than 5nm, you still need to tell them. They will see if you don't and they will get angry. If you can't get hold of them then that is when you will want to apply the weather contingency procedure.

Here is a picture to help.

FAA Airspace SLOP Mini Guide

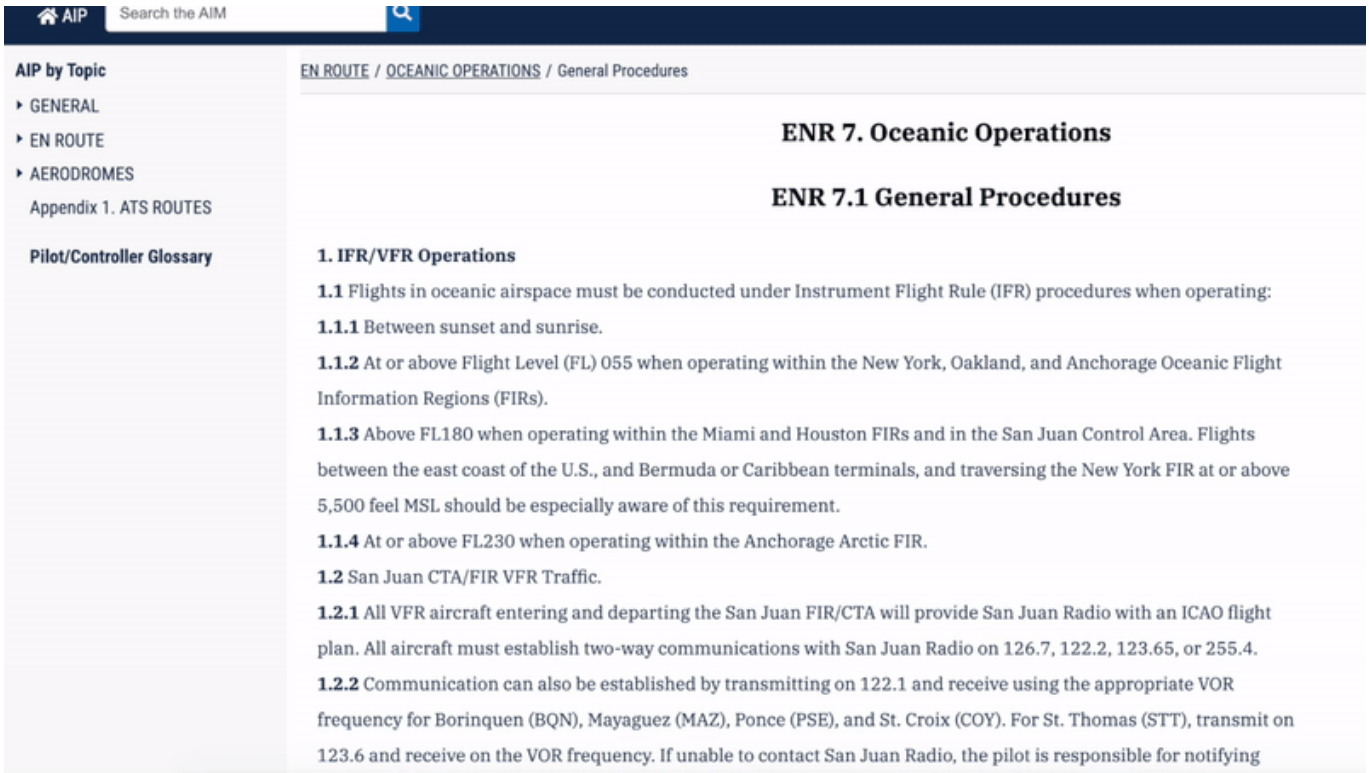
David Mumford
5 November, 2021



Strategic Lateral Offset Procedures (SLOP) in FAA-Controlled Oceanic Airspace and the Anchorage FIR are based off the **ICAO Doc 4444** SLOP rules, and can be found in the FAA AIP ENR section 7.1.

I don't want to read the FAA AIP ENR section 7.1

No, neither do we. Here's what that experience looks like:


AIP Search the AIM

AIP by Topic
- GENERAL
- EN ROUTE
- AERODROMES

Appendix 1. ATS ROUTES

Pilot/Controller Glossary

EN ROUTE / OCEANIC OPERATIONS / General Procedures

ENR 7. Oceanic Operations

ENR 7.1 General Procedures

1. IFR/VFR Operations

1.1 Flights in oceanic airspace must be conducted under Instrument Flight Rule (IFR) procedures when operating:

1.1.1 Between sunset and sunrise.

1.1.2 At or above Flight Level (FL) 055 when operating within the New York, Oakland, and Anchorage Oceanic Flight Information Regions (FIRs).

1.1.3 Above FL180 when operating within the Miami and Houston FIRs and in the San Juan Control Area. Flights between the east coast of the U.S., and Bermuda or Caribbean terminals, and traversing the New York FIR at or above 5,500 feel MSL should be especially aware of this requirement.

1.1.4 At or above FL230 when operating within the Anchorage Arctic FIR.

1.2 San Juan CTA/FIR VFR Traffic.

1.2.1 All VFR aircraft entering and departing the San Juan FIR/CTA will provide San Juan Radio with an ICAO flight plan. All aircraft must establish two-way communications with San Juan Radio on 126.7, 122.2, 123.65, or 255.4.

1.2.2 Communication can also be established by transmitting on 122.1 and receive using the appropriate VOR frequency for Borinquen (BQN), Mayaguez (MAZ), Ponce (PSE), and St. Croix (COY). For St. Thomas (STT), transmit on 123.6 and receive on the VOR frequency. If unable to contact San Juan Radio, the pilot is responsible for notifying

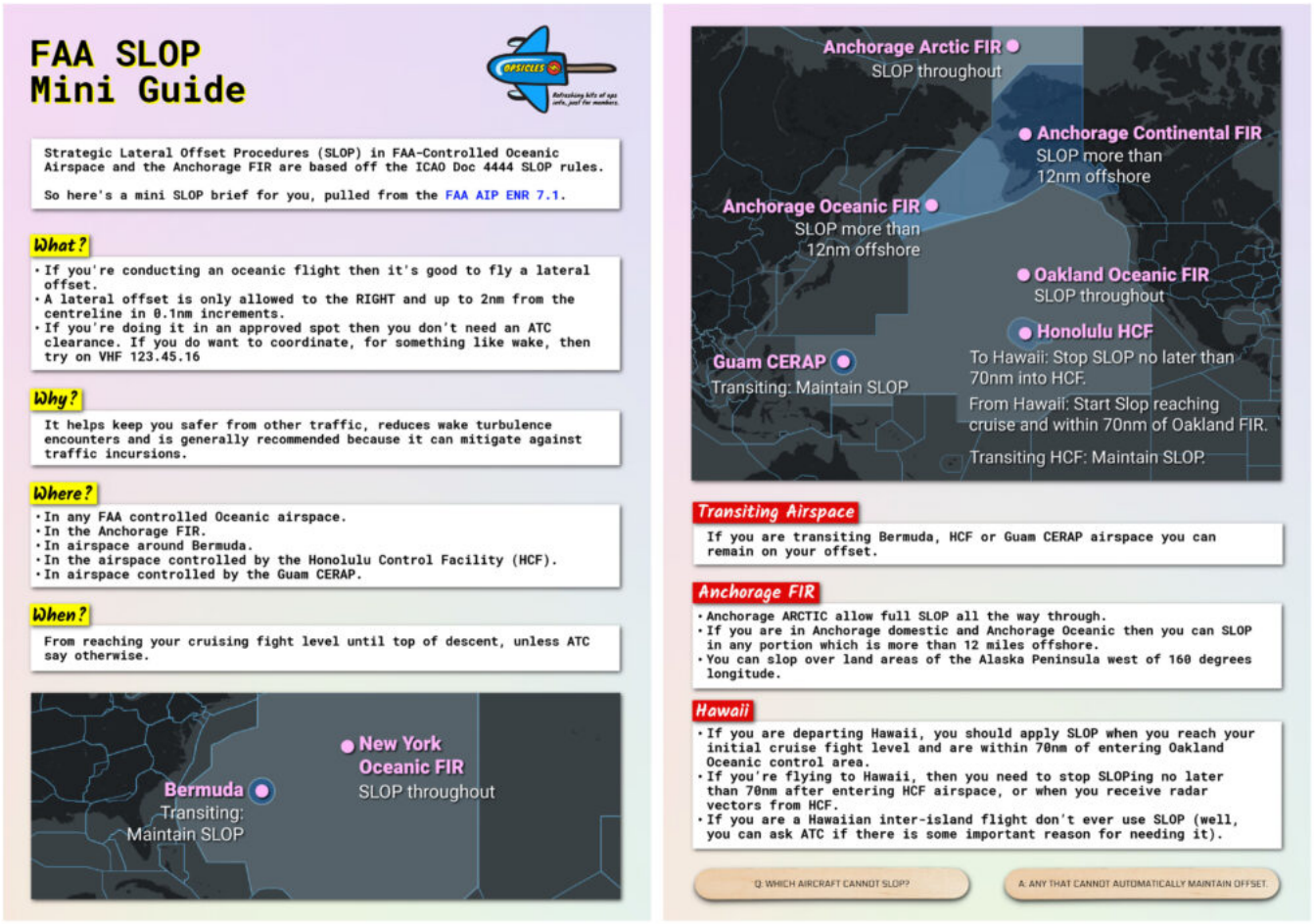
Handy info, but fairly brutal on the eyes and soul.

Is there another way to get this info?

Indeed there is!

We took all the excellent info provided by the FAA with regards to SLOP rules in FAA airspace, and turned it

into a quick guide – complete with a simple map of the rules for the different regions.



OPSGROUP members can download a copy for free here.

If you're not an OPSGROUP member, but you'd like to be, you can join here. (Or you could just screenshot the image above instead – if you'd like a grainy, pixelated JPEG instead of the full, juicy PDF).

We're going to be publishing more of these little docs over the next few months. **We're calling them "Opsicles" – refreshing bits of ops info, just for members.** So keep an eye out for the next installment!

US to lift travel ban for vaccinated travellers

David Mumford
5 November, 2021

From Nov 8, the US will lift its Covid travel restrictions to allow fully vaccinated passengers to enter from those countries currently on the banned list:

- The UK
- Ireland
- The 26 Schengen countries in Europe without border controls (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and Switzerland).
- China
- Iran
- Brazil
- South Africa
- India

The rules right now

The travel ban has been in force since March 2020, when the pandemic first began gathering pace. Under the current policy, **only certain people can travel into the US if they have been in a banned country within the previous 14 days:**

- US citizens and their immediate families.
- Green card holders.
- Flight crew if traveling to the US on C, D or C1/D visas.
- Those with national interest exemptions (NIE). (Amongst other things, these also allow foreign crew to enter to pick up aircraft and do delivery/maintenance flights etc despite their travel history.)

For more details on the **current restrictions and exemptions**, check the US CDC webpage here.

The rules from Nov 8

There are no guidelines yet on the new requirements due to take effect in November – these are expected to be announced in the coming days. The few crumbs of info we know so far:

- **Before departure –** Travellers to the US will need to show proof of vaccination in addition to a negative Covid test taken within three days of the flight. There will be some exemptions to the vaccine policy, including for children not yet eligible to be vaccinated.
- **On arrival** – Travellers will not need to quarantine upon arrival in the US, but airlines will be asked to collect their contact info for contact tracing purposes.
- **Which vaccines will be accepted?** All FDA and WHO approved vaccines will be accepted.
- **Any changes for US travellers?** – Yes. US travellers will also be subject to stricter requirements and will need to take a Covid test a day before they leave the US, and another one when they return.

We will update this page as new info is announced.

Terrain, Tehran, Terrain, Tehran

OPSGROUP Team
5 November, 2021

If you are operating to OIII/Tehran Mehrabad airport then watch out – **the minimum height thresholds might not be adequate.**

Sounds serious!

Well, earlier in the year it was.

A Zagros Airlines A320 operating from OIAW/Ahvaz to OIII/Tehran Mehrabad was cleared the SAVEH 1N arrival and descended, under radar control, to 6000 feet. They were then vectored to the KAZ NDB in order to intercept the ILS for runway 29L.

Which was when they received a **terrain alert and "pull up" order.**

A quick look at the radar minimum altitudes and there are a lot of high ones – there is a lot of terrain. The adjacent sector is 7,500′ but ATC take aircraft down to the 6000' (which covers the sector over the airport), and depending on where you arrive from this can be an issue.

There is a **5,036 foot hill** sitting in close proximity to the ILS approach, called *Bibi Shahrbanoo.* For ATC to ensure you are not too high for the ILS, they manage your descent down to 6000′, but that **6000' doesn't actually provide the typical 1000' separation** if you are near *Big Bibi.*

Combine all this with a higher rate of descent and you might get yourself a GPWS warning. The Zagros airlines incident was not the first.

Have they fixed the problem?

Well, Tehran's runway positions and terrain make it a complex spot to decide what heights should be used, but it does appear that they have looked into it a bit more since a significant number of new charts have been published of late, with **validity dates of October 1, 2021.**

So let's play spot the difference…

Let's take a look at the ILS 29L chart from August 2018 and the new October 2021 chart.

First up, **some of the MSA's actually appear to have shrunk.** The northerly sector from 090-270° used to be 17,000' but now it is divided into two sections of **15,000' and 16,200'.**

The circle-to-land restrictions have been revised, and they have also **amended the FAP** – it is now set to D7.5 and 6,500' as opposed to D4.2 and 5265' which was pretty low given the hills around.

You might also notice (at least on LIDO) a certain 5,600′ point from just beside the inbound course has now been removed… surprising given the hill is, presumably, still there.

This is a tricky airport anyway

The glide slope here is a **slightly steeper 3.3°**, and you only have precision approaches for runway 29 – runway 11 involves a fairly hideous circling approach.

The area is riddled with both high terrain, and also **restricted and prohibited areas,** so accurate navigation is important.

The conditions in Iran can be hot, and your **elevation is high – 3965ft,** leading to higher speeds, and higher rates of descent required. Having this in mind, monitoring your ROD and being aware of the GPWS risk is probably the best mitigation against warnings.

Runway 11R/29L is **currently closed for "recarpeting"** (not a Persian rug joke, it really is what they call it). So keep an eye out for temporary charts and WIP notams. **The runway is closed until March 2022** and the latest AIP SUP 27/21 covers it.

There is also a lot of GPS Jamming across Iran and there are some significant airspace safety concerns to take into account.

It's not the only spot to worry about

OIIE/Iman Khomaini is the "main" Tehran airport and to be honest, if you are heading to OIII/Mehrabad airport (a.k.a the "other" Tehran) it is probably because you are using it as an alternate for OIIE. The terrain threat at OIIE is marginally lower than OIII, but still requires prior consideration before jetting in – as do most airports in Iran.

While you're at it, checking the Notams is a good idea too – OIKK/Kerman, for example, has no less than 34 cavities on one side of one of its runways. OIII/Mehrabad is better maintained (just 1 hole related Notam to be seen).

Hong Kong: King of the Airports

OPSGROUP Team
5 November, 2021

What is happening at Hong Kong airport?

They are working on something...

They are indeed. Hong Kong is adding a new runway and they've just finished building it! Six years in the making and due to open 2022, the new runway is set to *transform Hong Kong from a city airport* to an *airport city.*

What's it got now?

Hong Kong currently has two runways **07L/25R and 07R/25L, both offering 12,467' (3800m)** and a bunch of CAT II/III approach options.

The new one will be no less decent – planned to be the same length, and 60m wide.

Why do they need it?

Hong Kong is a major hub and currently sees around 419,795 traffic movements a year, which amounted to 71.5million passengers and 4.8millions tonnes of cargo moving through it (back in 2019).

Here is the bit you are probably more interested in – it can handle just under **70 flights an hour at peak time** and has 119 passengers stands, 55 cargo, 26 maintenance and 12 temporary stands.

The airport expansion will enable them to handle an **additional 30 million passengers and will add 57 new parking spots.**

We mentioned the slot and parking issue a few years ago. It is deceptively green at the moment, but this is probably more to do with a certain pandemic than any real improvement.

The current runways also do not run 24/7 though, there are **regular maintenance closures.** AIP SUP 08/21 updated on October 13 2021 has the info.

- 07L/25R closes 3 nights a week, and 07R/25L closing for 4, between 1601-2315 UTC
- 07L/25R also closes daily between 0116-1025 UTC.

So more runway and more parking will mean a big improvement on your chances of ad-hoc ops in.

(OK, we'll slot in a quick slot summary)

This was issued in June 2021: The Hong Kong slot getting guide.

In brief, you probably want to do this:

- Apply for a landing permit www.cad.gov.hk/english/efiling_home.html
- Apply for parking https://extranet.hongkongairport.com/baps/
- Apply for Ground Handling http://www.hkbac.com/en
- Apply for your slots http://www.hkgslot.gov.hk/Online_Coordination.ht

It it a confusing a frustrating process so if it is your first time you might want to get some help from an agent. Hong Kong Business Aviation Centre (HKBAC) are based at Hong Kong (and you'll be talking to them for your ground handling anyway.

Email: hkbac@hkbac.com

Phone: +852 2949 9000

Back to the expansion plan: What stage is it at now?

The runway work is complete. This will be **designated the North runway**, while the current north (07L/25R) will become "Centre". The re-designation will happen at **0000 UTC on December 2** so don't get confused!

The full 'three runway system' is only due for completion in 2024 as the new terminal is yet to be

constructed.

What about arrivals and things?

The new charts are likely to only be introduced from 2022, however, the current set up bring aircraft into common points which link to approaches for either runway, so chances are they will just add the 07L/25R (new) to these as well.

The plan is to equip all three runways for takeoffs and landings, but primarily use the **northerly for landings,** the **central for take-offs** and the **southerly for both.**

The Hong Kong CAA is also working with the Chinese and Macao CAA to re-develop and **improve efficiency in the Greater Bay Area airspace.** This airspace refers to the areas utilised by Macao, Guangdong and Hong Kong airports which is high density.

VHHH/Hong Kong's traffic is restricted by the so called "air wall" between Hong Kong airspace and Pearl River Delta region airspace, and this will also be improved for better traffic efficiency.

The point of control handover is BEKOL, and traffic must reach set altitudes by this point.

Improvements to the airspace are not *un-needed* – separation issues have cropped up a few times in the past. So watch this space for changes to routings and handover procedures through to 2024.

Want some more to read?

A full rundown of the expansion plan is written up pretty decently here.

Or read about it on the official HKIA Three Runway System website here

The main page for all things slot is here.

Major runway works in Sydney

Chris Shieff
5 November, 2021

From October 15 until late November, major work is taking place on the threshold of YSSY/Sydney's world famous Runway 16R – **the most used, widest and longest runway at Australia's busiest airport.**

During that time it will **not be available for any arrivals** (around the clock), and there will be a reduced length for departures.

Here's a quick rundown of what this means for operations at the airport, and what to expect if you're visiting the Emerald City in the coming months.

Crunch time

The threshold slab is over half a century old. Pavement failures have been on the rise leading to **FOD damage and temporary repairs** have become a common occurrence. With things being quieter at the moment, the airport is finally biting the bullet and replacing it completely.

Airport authorities looked at simply displacing the threshold for Runway 16R for arrivals but decided that operationally it **wasn't safe or efficient**. So instead, procedures at the airport will temporarily change.

Arrivals

In southerly conditions (which is half the time), all arriving aircraft can expect to land on the **shorter Runway 16L.** It has 8,000'/2438m of hard stuff, and is narrower at 148'/45m wide. The ILS is CAT 1 only.

First of all, **carry extra fuel.** With all arrivals being sequenced for one runway, you can expect extensive holding and/or slow-downs during peak times. Just like the freeways, these are early morning and early evening.

Wide body traffic can expect to vacate at T6 – right down the far end. From there it's a much lengthier (and potentially confusing) taxi to the international side of the airport which may see you cross two active runways. Remember that progressive taxi instructions are always available if you're unfamiliar with the airport.

Runway 07/25 is also available if you need it operationally, and it is around the same length. You'll need to request this early from ATC. Remember to use the phrase '*operationally required*' – it will help ATC to accommodate your request.

In northerly conditions, **Runway 34L** will still be used for arrivals at reduced length. The LDA will be approx. 11480’/3500m. Expect to see workers and trucks at the far end. Also, a head’s up – the ILS won’t be available during the works. The GLS approach will still be an option, but if you can’t fly one in your ride, you’ll need to do an RNAV approach. They’ll cancel work for the day and switch the ILS back on if things are starting to look murky out there.

Here’s a picture of what this all looks like:

Departures

You will still be able to depart from **Runway 16R**, but you’ll need to roll from between taxiways Foxtrot and Golf. Small jets and turbo props may be be cleared for take off from Foxtrot, but heavier jets can expect to taxi forward to Golf first due to jet blast. TORA from there is 9347’/2849m.

And here’s what that looks like:

Wet Season

Sydney can experience severe convective thunderstorms late in the year (the warmer months down under). If the winds are southerly, and there are thunderstorms forecast it's time to think extra hard about **fuel planning** during this time.

Being part of one the busiest air corridors in the world, and with only a single runway for arrivals the queue may begin to back up in a hurry during storms. **Extensive holding times and diversions** are not uncommon in these conditions.

There are a few decent options as alternates, but they're not right next door. The closest is **YSCB/Canberra** (132nm). A few things to think about though – it can be a challenging place in bad conditions due to the high terrain that surrounds it. Apron space can also become limited if it is receiving lots of diversions.

Most international operators use one of the below:

- **YMML/Melbourne** (384nm) to the **south**.
- **YBCG/Gold Coast** (368nm) and **YBBN/Brisbane** (395nm) to the **north**.

Looking for the official word?

YSSY Notam H5212/21 is the place to start. IFALPA has also published a Safety Bulletin based on the info available from airport authorities.

Navigating the UK entry rules

David Mumford
5 November, 2021

England's entry rules became much simpler from October 4, with the scrapping of the traffic light system. Now, there is **just one red list**, and then the rest of the world. There's one set of rules for the red list, and one set of rules for everywhere else.

Red list rules

England **removed 47 countries from its red list** as of Oct 11. So from that date,the only countries remaining on the red list are now: Panama, Colombia, Venezuela, Peru, Ecuador, Haiti and the Dominican Republic.

Basically, passengers who have been to a red list country within the past 10 days can only enter England if they are a British/Irish National, or have residence rights in the UK. And when they arrive, they must stay in a managed quarantine hotel for 10 days.

Check here for full info.

Rules for everywhere else

This depends on whether a passenger has been vaccinated or not:

Vaccinated Passengers
There is no requirement to get a test prior to travelling, or to quarantine on arrival. Pax will still have to get

tested a couple of days later, but cheaper/easier options are coming.

Unvaccinated or Partially Vaccinated Passengers
It's not great news. Unvaccinated pax will still need to get a pre-travel test within three days of their flight but here's the real kicker: they will have to isolate for ten days on arrival (from anywhere). Fortunately, the test-to-release scheme is still be running to get out of self-isolation early.

Check here for full info.

Which vaccines are accepted?

Oxford/AstraZeneca, Pfizer BioNTech, Moderna, Janssen – plus a few other permutations.

On Oct 11, England added 37 more destinations to its list of countries and territories with approved proof of vaccination, meaning that arrivals from these places will be able to avoid more expensive post-arrival testing requirements.

The UK or England?

These rules in their entirety **only affect arrivals in England**. Scotland, Wales and Northern Ireland have all got their own sets of rules.

What about crew?

England has a dedicated page on the rules for crew, which you can read here.

The key points:

- Crew do not need a Covid test to enter England, even if they have been in a red list country.
- Crew who live in the UK do not need to quarantine, even if they have been in a red list country.
- Crew who **do not live in the UK** must quarantine in their hotel until departure if they are not fully vaccinated, or for a full 10 days if they have been in a red list country.

GPS Outages: The Hotspots

OPSGROUP Team
5 November, 2021

We are talking about it again. Satellite signal disruptions. Jamming. Issues with your navigation equipment…

IFALPA have just released a new “watch out for it” paper so we thought we’d have a mini recap on what it is, where it is and what you can do about it.

Here’s what we said earlier about the problem.

The Big Problem

A big rise in GNSS radio frequency interference occurred in 2018 and since then (with voluntary reporting) there has been a **2000% increase** sustained ever since.

A Eurocontrol Think Paper published in March 2021 suggests that **38.5% of European en-route traffic** operates through regions intermittently but regularly affected by RFI, and **5% of these needed special assistance,** which doesn’t sound like much until you check out the number of en-route traffic to Europe each day!

The Big Hotspots

The big hotspots remain around the **Mediterranean, Middle East and Caucasus** where they see, on average, 3,500 outages or so a year. Traffic routing along the UM860/688 airways in Iraq, and en-route crossing borders in **Turkey/Iraq/Iran** or close to the **Syrian border** are the most commonly reported areas of issue.

Reports from aircraft overflying regions near major Turkish airports have also reported signal jamming, while aircraft operating into **LCLK/Larnaca** or airports in the **Egypt/Israel/Jordan and Lebanon** areas have reported jamming during the climb, descent and approach phases.

Back in 2019, **LLBG/Tel Aviv Ben Gurion airport** was seeing a high number of issues with their RNAV departures and arrivals. Or rather, issues with aircraft not having the internal accuracy required (due to jamming through the Tel Aviv FIR) for them to fly RNAV procedures. Crew were advised to **plan for alternatives.**

IFALPA also reported on issues in Central Mexico, particularly in the area around **MMLO/Guanajuato airport.** The issue was further compounded by a lack of any Notams warning of potential signal

disruptions. A heads-up so you know to watch out for it is always helpful.

Other spots to watch

US Military tests on systems designed to block enemy signals are unfortunately indiscriminate in what they block – and so they often impact commercial aviation as well, sometimes affecting signal as far as 400nm and up to FL400. While Notams are issued for these tests, they often cover large areas and are overlooked by crew because of this.

A test back in 2019 in Washington state highlighted the big impact these can have – the possible area affected covered 67 airports including KSEA/Seattle-Tacoma.

The FAA is working with the military to find a solution to this. They previously made 25 recommendations including a requirement that N**otams be issued at least 120 hours** in advance. Here is what we mentioned on this before.

What to do if it happens to you

Your aircraft is going to have checklists covering it, but in a nutshell, if you think your aircraft's ability to accurately fly an RNAV procedure has been impacted then **plan for another approach and let ATC know.**

IATA and ICAO both have GNSS Interface Reporting Form which you can send to help them track areas of significant anomalies, and follow up with authorities to try and mitigate the problems.

If you experience an issue in **FAA airspace** then use their dedicated reporting site.

And keep up to date with outage areas here.

Any final thoughts?

The range of RFI jamming is a lot bigger than folk realise. While it is usually centered around conflict zones, it seems to go "*well beyond simple military mission effectiveness.*"

A cigarette light powered (illegal) personal privacy device is enough to disrupt the signals in an aircraft if the device is relatively nearby.

Thankfully ICAO, Eurocontrol, the FAA etc are on the case but until solutions are found, it will remain with the pilots to stay safe when signals are disrupted.

Kazakhstan: Improving Safety

OPSGROUP Team
5 November, 2021

Kazakhstan have been working with the UK CAA and ICAO to **improve their safety and compliance**, and they've done well. ICAO's recent audit of them, in August, noted an 84% effective implementation of ICAO standards and recommended practices.

So, what does this mean for you practically if you are operating into Kazakstan?

Some background info for you

Before all this, they were not doing so well.

The previous audit carried out in 2016 had them scoring pretty poorly on a bunch of areas, most noticeably their **Civil Aviation Organisation** was lacking and their **Accident Investigation** skills were poor, both scoring less than 50%. The operational impact of this was safety – a lack of information to operators and crew, and a lack of regulation and oversight.

Their Aerodromes and Radio Aids also fell short, scoring 60%. Which probably meant you would often see Notams advising of unserviceability, and potentially reduced approach or low visibility capabilities at airports, amongst other things.

And now?

Now they are 15% higher than the global average.

To improve their audit rankings they have done things like implement:

- better operational regulations
- improved oversight from the authority
- better trained technical personnel

Tell us what we need to know operationally

The new (and improved) Aviation Administration of Kazakhstan have **implemented legislation which aligns with EASA/EU legislation.** Their new regulator is bringing better technical control and is improving safety levels across the country to be more in line with international requirements.

This means **big changes to basic aviation law**, including 61 new by-laws and a bunch of legal acts. But if you operate into Kazakhstan, don't stress – this won't mean huge changes and new laws for you to learn – since they now are aligned with ICAO SARPs and EASA legislation it should be fairly familiar.

Airport names are changing

In June 2020, **UACC/Nursultan Nazarbayev** International Airport amended its **IATA code from TSE to NQZ** – the former code being one harking back to the old Soviet Union days when the capital city was called Tselinograd.

There are 25 certified airports in the country, including 18 international ones (although there are 9 main ones you would probably be interested in.) The point is – other airports may well follow suit and update their names and codes, so double check those IATA codes carefully.

They are implementing GRF

The new ICAO Global Reporting Format will be implemented meaning pilots should receive better contamination reports and standardised Snowtam info.

How else is safety improving?

They have done a big review of risks at airports. They've listed the problems, the risk scores, their targets and the trend for improvement.

The biggest problems seemed to lie in:

- Wildlife and habitat management seemed to be a big issue at some of the airports
- De-icing procedures, facilities and equipment was another high scoring risk
- Ground ops resulting in potential collisions, and FOD on the runway
- Contaminated fuel and general fuel and handling services

And all these are improving across the major airports.

I think I would like to head there now?

Great, well you are going to need an **overflight permit or a landing permit**, depending on what you want to do. They are easy to get direct from the authority.

Technically, the overflight permit requirement doesn't apply anymore, but it is easier if you do get one because they want all navigation fees paid in advance or they won't let you into the FIRs.

You can use **AFTN: UAAKQFNS / +7 7172 704 345 / caf@ans.kz**

Any recommendations on where to go?

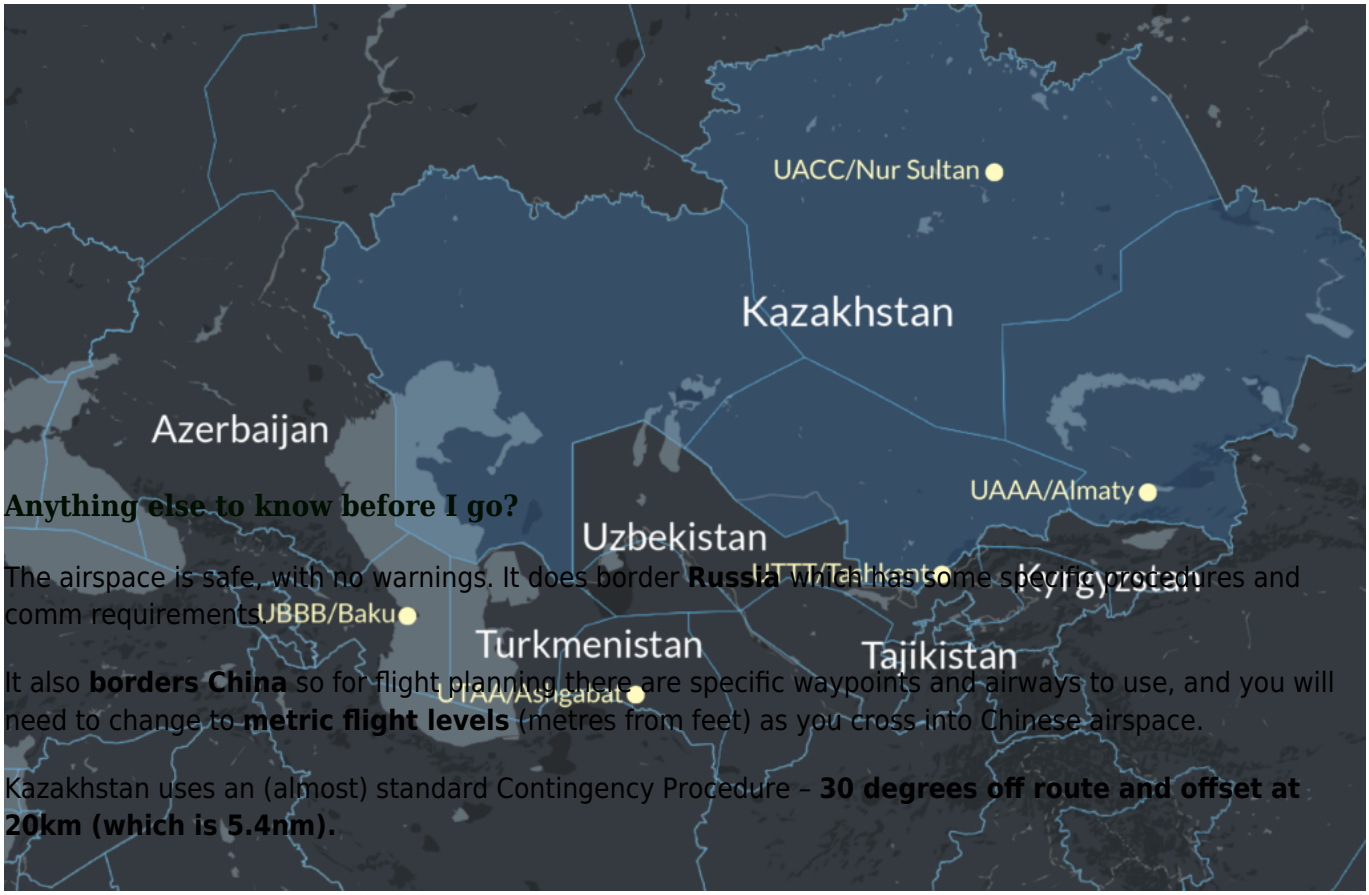
The main airports used for **Tech Stops** (if overflying) are:

- **UAAA/Almaty** Open H24 with a 14,764′ / 4500m and 14,436′ / 4400m runways with CAT III approaches
- **UACC/Nur Sultan (Astana)** H24 (but restricted) 11,483′ / 3500m runway with CAT III approach capability

Both airports apparently have Jet A1 fuel, although you might find TS-1 at other airports (the Russian “Jet A1′ with a -50°C freezing point).

You also have some decent ones in neighbouring countries:

- UBBB/Baku
- UTTT/Tashkent
- UTAA/Ashgabat



Anything else to know before I go?

The airspace is safe, with no warnings. It does border **Russia** which has some specific procedures and comm requirements.

It also **borders China** so for flight planning there are specific waypoints and airways to use, and you will need to change to **metric flight levels** (metres from feet) as you cross into Chinese airspace.

Kazakhstan uses an (almost) standard Contingency Procedure – **30 degrees off route and offset at 20km (which is 5.4nm).**

China steps up incursions into Taiwan's ADIZ

OPSGROUP Team
5 November, 2021

Relationships between Taiwan and China have become increasingly strained over the last month and officials are starting to question whether this might be impacting aviation safety in the region. Here is a look at the conflict and the potential impact it may have on commercial operations.

The background.

Taiwan and China have a long and ongoing dispute over whether Taiwan is *Taiwan – an independent country*, or *Taiwan – a breakaway province that is still part of China.* China is officially known as the People's Republic of China (PRC), while Taiwan refers to themselves as the Republic of China (ROC).

Similar to Hong Kong, Taiwan has retained a **high level of independence from mainland China**, and effectively governs itself, having its own constitution, democratically-elected leaders, and own armed forces.

Unlike Hong Kong however, **Taiwan rejected China's "one country, two systems" formula** which would have enabled them to retain autonomy, while reunifying with China. It remains a disputed country with few countries around the world recognising it as a sovereign nation independent of China.

This is at the root of this conflict, and in recent months China has become more assertive in their control over Taiwan.

Here is a good summary of the political situation.

What are China doing?

China have been "re-asserting" themselves over Taiwan by carrying out **repeated incursions into the Taiwanese Air Defense zone.** A recent incursion saw 39 military jets fly into the zone, for the second day in a row. The aircraft included 2 Y-8 anti-submarine aircraft, 26 J-16 fighter jets, 10 Su-30 fighters and a KJ-500 early warning and control aircraft.

They are reports of a 52 aircraft incursion which included 16 nuclear-capable H-6 bombers.

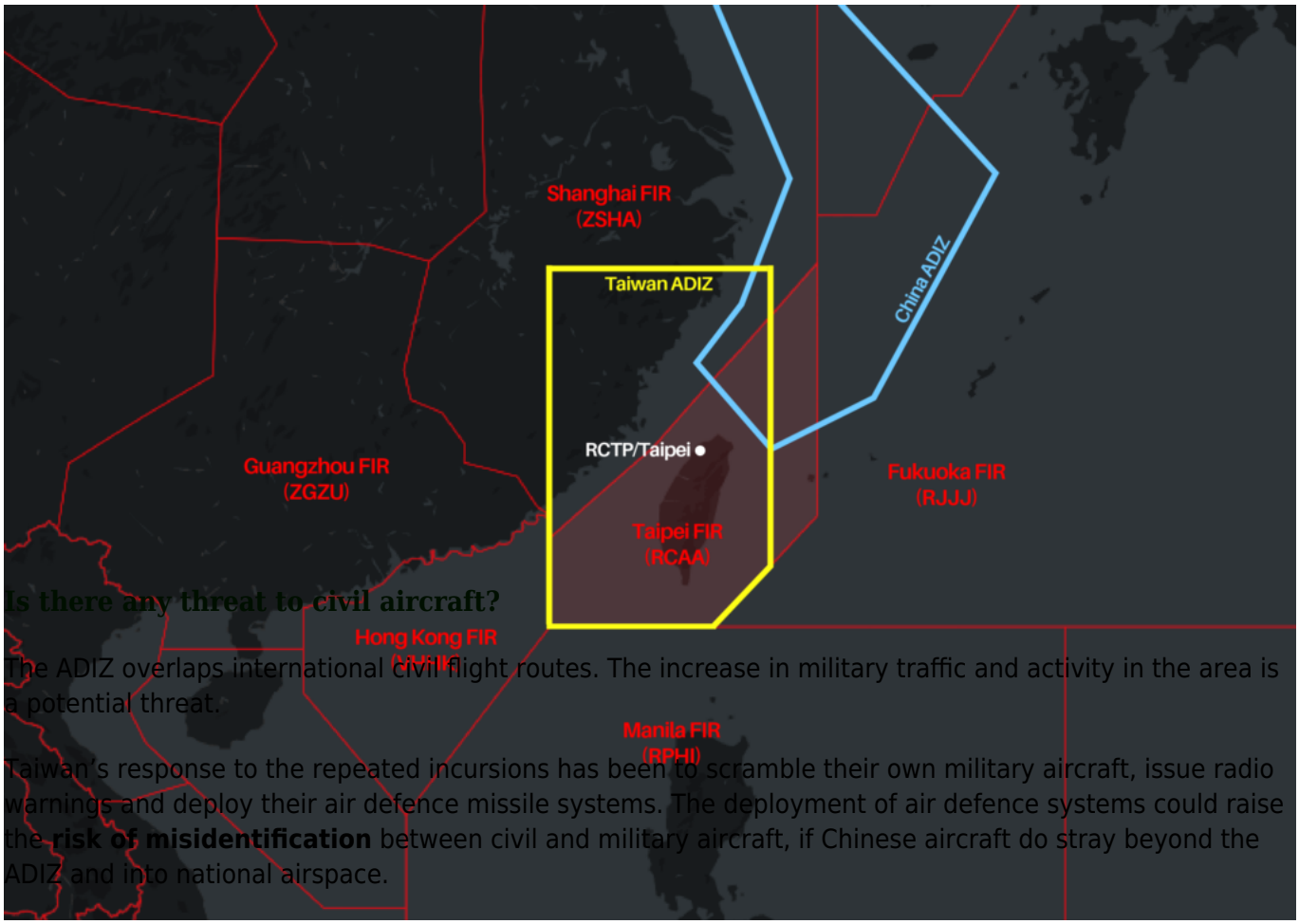
Where is the airspace?

Taiwanese national airspace is the airspace over Taiwanese land, extending to 12nm off their coast over the territorial waters. **Military aircraft are not allowed to enter any national airspace** without

express permission from the state. **China did not violate the national airspace**, but did violate the ADIZ.

An ADIZ is different to national airspace, and is specifically declared by a state for **reasons of military air defence**. Some states designate their entire airspace as an ADIZ (Iran being a good example).

Taiwan's ADIZ sits between Taiwan and continental Asia, over the South China Sea (the Taiwan Strait), shown (approximately) below. The ADIZ itself is disputed as well though since it overlaps and includes disputed territories.



Is there any threat to civil aircraft?

The ADIZ overlaps international civil flight routes. The increase in military traffic and activity in the area is a potential threat.

Taiwan's response to the repeated incursions has been to scramble their own military aircraft, issue radio warnings and deploy their air defence missile systems. The deployment of air defence systems could raise the **risk of misidentification** between civil and military aircraft, if Chinese aircraft do stray beyond the ADIZ and into national airspace.

The Vice Defense Minster for Taiwan suggested the incursions *"are affecting the safety of international flights,"* but the statement was possibly political and as yet there has been no report of civil aircraft being impacted by the situation.

Procedures in Taiwan's ADIZ.

You can read the procedures in full in Taiwan's AIP ENR 1.12.1, or download a PDF here. But here's a summary of how it works:

- There are restrictions for non-tactical aircraft in the area including **no flight below 4000'**, and to **maintain flight along designated airways.** ATC contact must be obtained prior to entry.
- Aircraft will be intercepted by the Chinese Air Force if they fail to follow ADIZ procedures, or if they exceed 5 mins ETA of a designated reporting point, deviate more than 20nm from the airway entrance or have greater than a 2000' difference from assigned altitude.
- Basically, if you are flying in the ADIZ, make sure you're in contact with ATC, and don't do

anything without telling them first. Pretty standard stuff for operating through an ADIZ.

General ops.

We wrote about operations to Taiwan back in 2019 and it is worth having a quick read because **if you are a foreign registered aircraft** because:

- You are not allowed to operate directly between China and Taiwan
- If you need to make a tech stop between the two then aim for VHHH/Hong Kong or VMMC/Macau
- You probably aren't going to get permission to overfly China if you are routing to Taiwan from anywhere else.

You can read more on this here.

Back in 2018, there was also a dispute over **China's M503 airway.** The airway is a main north-to-south route for aircraft heading to Hong Kong or Macau from Southeast Asia. Taiwan didn't like it because it lies so close to the FIR boundary separating Chinese and Taiwanese airspace.

The result of the dispute seemed to be a sort of "tough luck" from China, and aircraft still regularly use the airway. More on this here.

The risk level?

While the ongoing conflict and aggressions do threaten the general peace and stability of the region, there is no immediate threat to commercial operations. Maintain a good listening watch if operating in the area and ensure you are in contact with ATC if operating through the ADIZ.

BACE in Vegas: Special Airspace Procedures

Chris Shieff
5 November, 2021

Caution! This is previous year info – 2023 to come!

If you're headed to Las Vegas in October, look out for special airspace procedures at three main airports – KLAS/Las Vegas, KVGT/North Las Vegas and especially **KHND/Henderson Executive.**

What's going on?

The NBAA Business Aviation Convention & Exhibition ('BACE' for those in the know) is happening at KHND/Henderson Executive airport from Oct 12-14, and things are going to get busy.

To keep the traffic flowing, the FAA has published special airspace procedures you'll need to know about. They will apply from **14z on Oct 8 until 06z on Oct 14.**

Here's how they work.

Watch how you file.

For starters if you're within **100nm of Las Vegas** don't try to pick up an IFR clearance once airborne.

In fact, they want all flight plans bound for any of the three major airports filed at least 12 hours in advance (but no more than 22). Any requests to change destinations between the airports once wheels up will be denied.

There may also be other methods that ATC use to put the brakes on the flow. This may include the use of *'expect departure clearance times'* – IFR flights bound for Vegas will need to depart within five minutes of them. And of course, don't rule out the chance of dreaded ground holds.

To keep track of these delays, the FAA NASS website is the best place to start.

Headed to Henderson?

Here's what the FAA have to say about it…

From **0900:LT on Oct 9 until 22:00LT on Oct 10** all landings of aircraft not based here will need a PPR. Contact HND Ops on (702) 261 – 4858 to reserve yours (and get in early as they can fill up). Make sure you include your PPR number in the remarks section of your flight plan.

You'll need to fly one of three **RNAV arrivals**. From the NW, the GAMES ONE. From the NE, the BOEGY ONE. And anything from the south, the NTNDO ONE.

Once you've landed, they want you off quickly. Take the first available exit. Stay on tower until they tell you to change ground.

Then there's parking. You probably would like to *stop* your airplane at some stage after landing? Good plan, but **you'll need a reservation** for that. Get in touch with the HND FBO on (702) 261 – 4800 or you can do it online here. But don't show up unannounced – there's a $1,000 fine, and the house always wins.

What about departures?

Don't try and jump the queue. They don't want you to ask for taxi until you have an IFR clearance and are clear to enter a taxiway from the ramp.

Showing off a ride at the show?

If you're exhibiting, there's a lengthy set of rules you'll need to follow. You can access those here.

There are also special procedures for **demonstration flights**. Issues with airspace make these tricky for ATC who may not be familiar with the profiles of demo flights. Be sure to let Las Vegas TRACON know if you need anything special in advance, and they'll do their best to help. You can contact them on (752) 600 7011.

Planning to go IFR? You'll need TRACON's **approval** on the same number. Your call sign will be 'DEMO' followed by the last three characters of the aircraft reg.

There will only be two routes available:

- **FL230 and below:** KHND.OYODA2.BOJAC..BYSEN.NTNDO1.KHND
- **FL240 and above:** KHND.SCAMR2.IWANS..BOEGY.BOEGY1.KHND

What about if you want to go VFR?

Yep, that's okay too. You'll need to use the practice area to the northwest of KVGT. Listen out on 122.75, and let others know where you are and what you're doing. Click here for the Las Vegas VFR chart.

Keep an eye on NOTAMs

Other procedures may be published before the event.

If we've missed something, we'd love to hear from you. Get in touch with the OPSGROUP team on team@ops.group.

Introducing MEL: A guide to Minimum Equipment Lists

OPSGROUP Team
5 November, 2021

Setting up your MEL can be a tricky business. It is definitely not something we know anything about. Thankfully though, we know some folk who do. AviationManuals have just issued an updated version of their **MEL guide** for clear info on what you need, how to use it, and how to maintain it.

So here is *a little guide to their guide*, plus some other things we think you might find helpful as well.

Why are we telling you about MELs?

Because it's easy to get confused about **what equipment is needed in certain areas**, or to do certain things, or to go certain places.

So, first up, a quick **"what's the difference?"** – when do you consult your MEL, and when do you consult the AIP or some other regulation document?

The MEL is all about your aircraft.

Actually, probably a better way to put it is it is all about your **aircraft's ability to fly *safely,*** *a*s opposed to being about **specific operations** it might want to do. The MEL can tell you whether, if you try to get airborne, it might become a bit of a *Lethal Weapon…*

More accurately, it is what **"makes it possible to temporarily operate with inoperative equipment or instruments."**

Can it safety fly without Datalink? Yes. Can it safely fly without the nose wheel attached? No. The MEL will make that clear. It will also tell you **how long you can operate** without something being fixed, provides **amended procedures** (if needed) and **maintenance guidance.**

So – the MEL is a "Can I fly?" tool.

What you need to remember though is even if your MEL allows you to go fly, you still need to check that ***where you are going to fly*** doesn't need that bit equipment or instrument. This is the gotcha.

Can I safely fly without Datalink working? Yes, the MEL says I can. So I am good to go on my flight through the NAT HLA? Well, hang on, that's a different thing you're asking. Your aircraft can can fly perfectly well without it, but you are going to have some **planning considerations.**

Do you have anymore examples of this?

We said it once, and we'll add it in again – even after establishing via the MEL that it is safe to go, you still need to confirm you are **capable and compliant in the airspace you are planning on flying through**, and that is not what your MEL is telling you.

The NAT HLA is probably the best and clearest one, but there are a lot of places and situations that this might be the case.

Your autopilot for example is not necessarily an **MEL items**, meaning you could take that airplane without it functioning. It would be annoying. It would make drinking coffee more difficult, but you could. However, if you want to fly through **RVSM airspace then an autopilot is a requirement.** So what the MEL might let you go without, the airspace you want to go to might not.

So, the MEL is confirming what your airplane needs to safely fly, but it is not (necessarily) confirming that your aircraft will meet all the capability requirements for where it is planning to fly.

When should you use your MEL?

Basically anytime before you start your takeoff roll, because it is the document that is going to guide you on whether your airplane needs what just broke to safely get up (and stay up) in the air. Once rollin' though, your failure warning system is what you're going to want to be consulting.

But an MEL is also a handy reference to consult in the air (when you've done everything else) because it will help you plan for the other end – can you dispatch without that 'whatever just broke' working. When you're back on the ground the MEL is going to become the "controlling" document once more, so it is worth a look.

OK, I understand the MEL's purpose, but…

We have gotten to the bottom of how, and what, to use the MEL for, and what its intentions and limitations are. But I know what your next question will be –

*"I already have an **MMEL**, so why can't I just use that?"*

The MMEL is a Master Minimum Equipment list. This is made by the authority and the aircraft manufacturer for the aircraft type *in general.* Some of what is in it might not be useful for you though because you might not actually have all the equipment installed. Maybe you didn't want it, or maybe your airplane is just a way more modern version of the *type* that the massive all inclusive MMEL is covering.

Which is why you want an MEL.

It is tailored to your actual aircraft, and your operation and procedures. This makes it shorter, easier to use and more relevant (but not less restrictive).

Now, the FAA do allow **Part 91** operators to use their MMEL as an MEL. You need a **D095 LOA** and some other paperwork for this. But a lot of places don't allow this, or just aren't used to it, so you're probably going to need an MEL (not just the MMEL) if you're heading abroad.

An MEL is actually a requirement for dispatch so if they don't accept your MMEL as an MEL you could be in for some lengthy debates and delays if you're ramp checked.

Here's something we wrote about it back in 2019 when it started to become a thing.

The FAA are also planning to do away with the D095 in the possibly not too distant future, meaning all US operators will need a D195 – the custom MEL.

In case you aren't familiar with the terms, **Part ORO** *"establishes organisational requirements to be followed by an* ***air operator conducting specialised and non-specialised commercial air operations*** *and specialised and non-specialised non-commercial air operations with complex motor-powered aircraft."*

Part NCC refers to "*non-commercial operations with complex motor-powered aircraft."* So chances are this is going to apply to you and your aeroplane.

Our Guide to their Guide

The AviationManual folk put it better than we can so go check out the website for info on what is involved in the MEL setting up process.

It does look fairly simple though:

- Complete a simple questionnaire
- Get a copy of the draft manual for your review
- Send feedback (and probably some money at some point) and receive your Final Copy. And off you go.

That's it!

A summary of who to ask?

"I need an MEL written up" – Talk to the folk at AviationManuals, they can help. Here is the link direct to their guide.

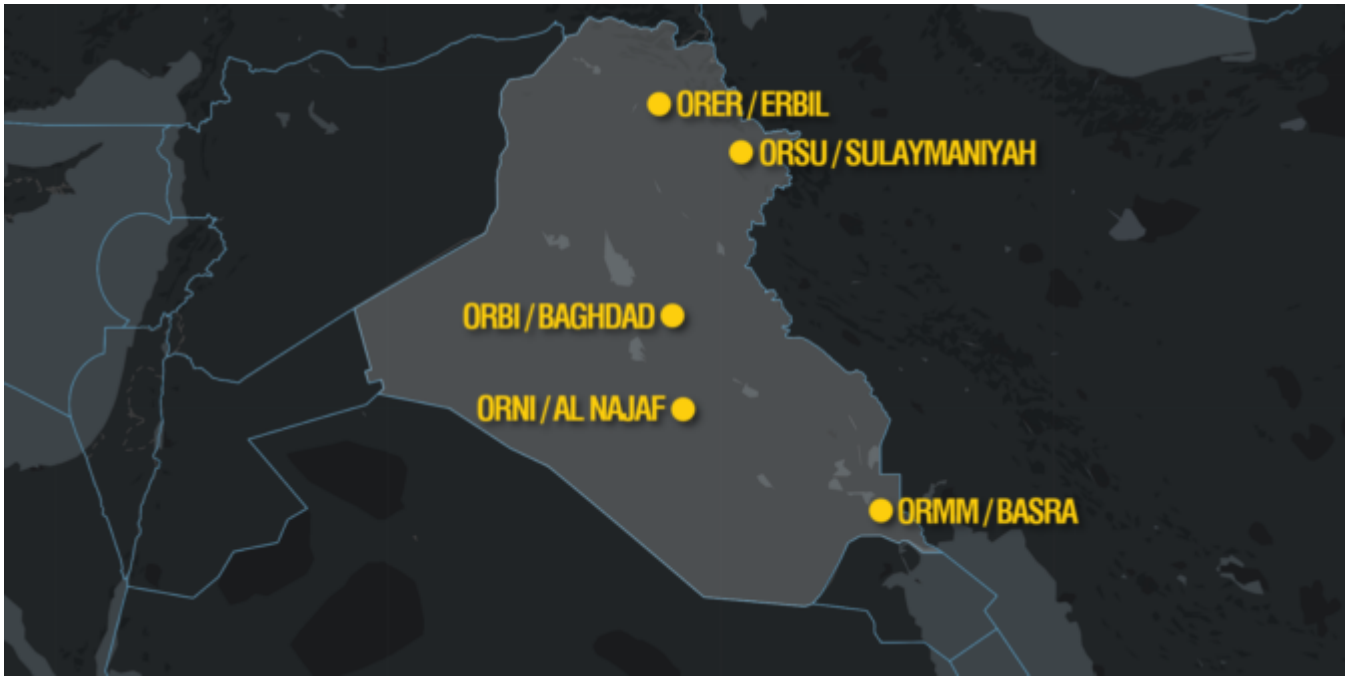
"I am on my airplane, ready to go on a flight and something has broken" – Consult your MEL.

"I am flying and something has broken, is my MEL useful now?" – Check your checklist and read through your FCOM. When you've done that, know the plan and have a few minute to spare, take a look in the MEL as well to see if it will cause issues for the return flight.

"I am a Flight Planning Person and I've just been told that an aircraft is flying tomorrow but its *insert something random* isn't working, can it still fly on the usual route?" – Check the AIP, or drop us a quick email and we'll see if we can fathom it out for you.

Oct 2021: Iraq Airport Closures

OPSGROUP Team
5 November, 2021



Please note the date on this story – Oct 2021. We're keeping the info here for reference purposes only.

Iraq is closing for a few days while their elections take place.

Here is a quick look at what this will mean for traffic who are planning to operate over or into Iraq over the closure dates.

Why and what are they closing?

They are closing all airports and border crossings for **security reasons.**

The election will take place Oct 10th. **The closures will run from 2300LT on Saturday Oct 9th to the morning of Oct 11th.** You will not be able to operate in or out of Iraq during this time.

Any further information on this has not yet been provided, but when elections took place in 2018, there were a number of strikes which reduced public services to nearly zero, as well as violent protests and riots across the country. This resulted in a 24 hour closure in May 2018.

In September 2018, several Katyusha rockets were fired directly at Basra airport during further protests against the government and elections.

It is volatile at the best of times.

ORBI/Baghdad airport is situated around 100nm southeast of a **major airbase** which is **often targeted by rockets and weaponised drones.** Baghdad itself is a target for rebel groups, and while attacks are generally low level, they do pose a risk to civil aviation and also heighten the **risk of misidentification** by air defense systems.

But can you still overfly?

The Notam published by ORBI/Baghdad Airport suggests you can:

A0239/21 - AD CLSD DUE TO IRAQ ELECTION DAY. WITH EXEMPTION TO EMERGENCY SITUATIONS DECLARED BY FLIGHTS OVERLYING IRAQ. 09 OCT 18:00 2021 UNTIL 11 OCT 03:00 2021. CREATED: 30 SEP 19:11 2021

ATC through Baghdad is provided by a large, international air traffic services provider, Serco, and you often hear US accents on frequency. Kuwait also provide some control of the southern sector when they hand over. So ATC control is not thought to be impacted.

The days leading up to and following the elections may well see some **increased traffic across Iraq** as dignitaries, government officials etc fly in, out and about.

Iraq and the ORBB/Baghdad FIR are a main connection between the Middle East and Far East to Europe. There are really only 4 options –

- Via Iraq
- Via Iran
- Via Saudi Arabia
- Via Pakistan into Eastern Europe

ORBB/Baghdad FIR Notams A0235/21 and A0236/21 advise on the routes available for civilian aircraft overflying the region. This is also covered in their AIP ENR 1.10-2 section 4.5.3.

Heading Northbound you can file TASMI SEPTU ROXOP UM860 NINVA

Heading Southbound you can file RATVO SISIN UM688 SIDAD

Airports

The airports will be closed. All international airports (ORER, ORSU, ORNI, ORMM) have published identical Notams to the one for ORBI/Baghdad, saying that they will remain available for emergency diverts, but they will not be available for "general" en-route alternates.

Iraq borders **Iran** (another region with airspace warnings in place) and **Syria** to the other side (which is a No Fly Zone) so you may be limited on where you can go – turning around and heading back to Kuwait and Saudi, or routing to Turkey (depending on which direction you are heading from).

Eastern Turkish airports are generally smaller and less capable than the larger ones to the West. There are also often skirmishes along the border between Iraq and Turkey, with military on both sides sometimes **closing portions of airspace during military activities.**

What should you do?

Continue to plan overflights, but be aware that diversions will likely not be supported during this time.

Be aware that government offices and services will likely be closed and unavailable during the election period, so don't submit overflight and permit requests last minute because they won't be handled until afterwards.

What is available (when they aren't closed for elections?)

Check out SafeAirspace – US Operators are banned from operating over or into Iraq, and other authorities **advise against flights below FL260.**

ORBI/Baghdad airport, in the capital, has a decent runway, however they do currently have **works on 15L/33R** and it is closed (when the weather permits) and between 0300-0500z.

Runway 15R/33L is only available during daylight hours and in VMC because the instrument approaches are suspended. 33L also currently has a **displaced threshold (400m)** and the declared distances are now 2901m.

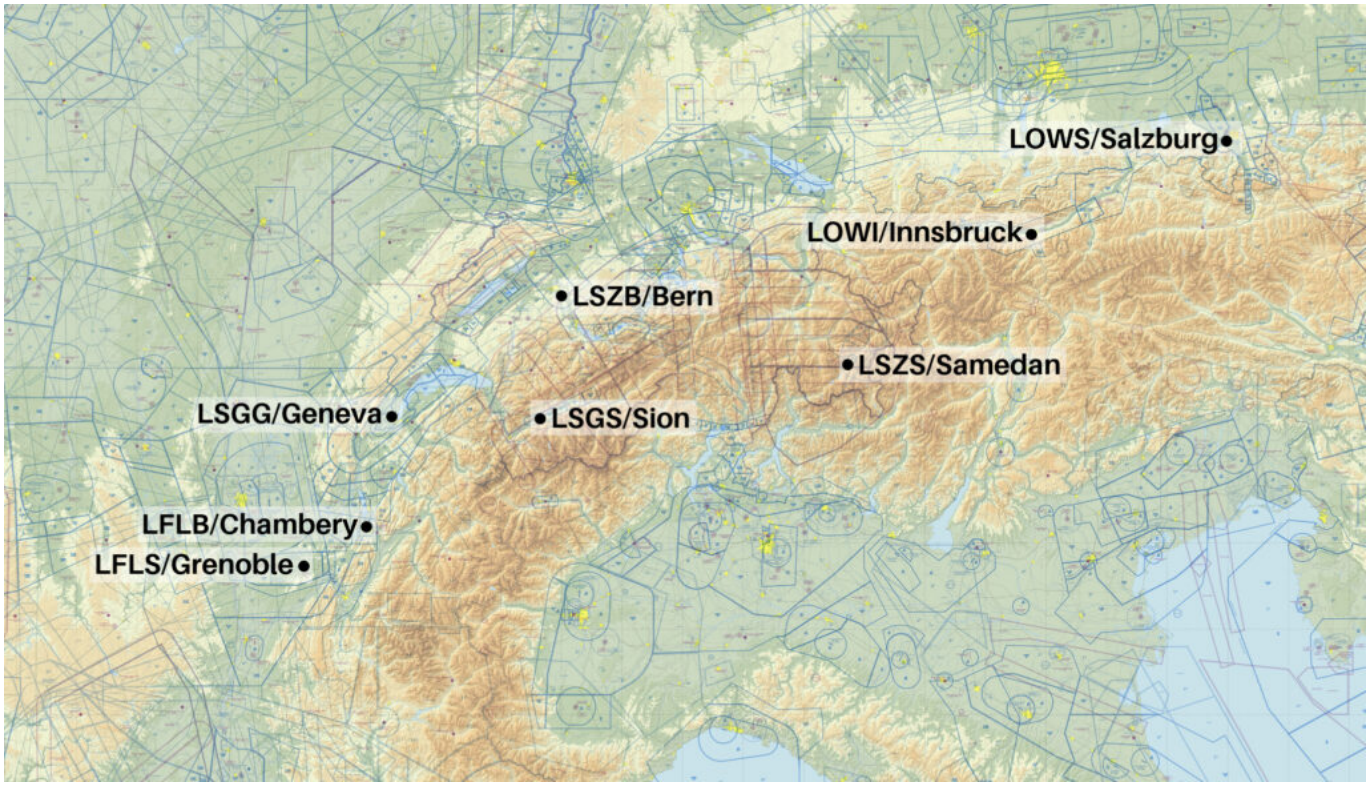
So keep an eye on the weather and be aware of what might or might not be available. **Notams A0222/21 and A0193/21** are the ones to read.

Don’t snow where to go? Here’s an Alps Ski Airports Guide

OPSGROUP Team
5 November, 2021

Winter is coming, and that means two big things to think about in aviation. Operating in **cold, wintery conditions** and operating into **cold, wintery ski destinations**.

So, to help you avoid getting ‘piste’ with airport restrictions, parking problems and other annoying operational obstacles, here is a look at some of the main Alpine ski destination airports which you might be thinking about flying into later in the year.



Innsbruck – Austria

LOWI/Innsbruck will get you as close as you can to **Lech, St Anton, Zurs and Kitzbuhel.**

It is 1hr 15 from Kitzbuhel by road, 90 minutes from Zurs or Lech, and 70 minutes from St Anton. Or about 25 minutes by helicopter from them all.

Innsbruck is one that you need to be familiar with, and have briefing material set up for, prior to operating in. The airport administration can provide a sample briefing, but you'll need to tailor it for your operation. ernst.wieser@austrocontrol.at / ernstwieser@hotmail.com can help with that.

The full info is available in the Austria AIP, but you basically needed to have **practiced in an FSTD before heading in** with weather less than 3000' ceiling or 5km visibility.

Slots are required here and the best folk to talk to are operations@innsbruck-airport.com

Innsbruck is not a big airport so parking is likely to be limited.

Airport Spy reviews give this a **3.5/5 rating.**

Salzburg – Austria

LOWS/Salzburg requires **special permissions** from Austrocontrol – special.procedures@austrocontrol.at

This is a larger airport with a **9022′ runway, ILS to 15 and CAT III capability.** However, terrain at the end of runway 15 means there is a specific and challenging missed approach procedure fo runway 15, and a very challenging RNP procedure for runway 33.

Historically, a PPR has been required during the busy season from mid-December. Notams are usually issued in November confirming this, along with confirmations of charter and corporate slot availability.

Get your requests in early with +43 662 8580-261 / sas.ops@salzburg-airport.at

Chambery – France

LFLB/Chambery is best used if you want to head into **Courcheval, Meribel or Val d'Isere.**

You have probably heard of **LFLJ/Courcheval Airport** – it is the one in the mountains that is always on the top 10 scariest airport list. Chambery is *less of a challenge but you're still going to need some training before heading in here, particularly if you plan to head in after dark, if the ceiling is less than 3500 or visibility is below 5000m. The airport has some terrain challenges of its own, sits at an elevation of 779′ and offers an **ILS (in only one direction) to a 6627'/2020m runway.**

The AIP says *"Due to mountainous terrain in the vicinity of Chambery APT, it is considered essential that pilots are well familiar with approach, missed approach, circling maneuvers, and departure procedures. Therefore, concerned operators have to set specific operational instructions for the use of Chambery APT as well as provisions for their pilots' training. The responsibility for the preparation of such information rests on the operator (or pilot-in-command for non-commercial flights)."*

If you need ops assistance, the main business aviation FBO is available at +33 4 79 54 49 52 / fbo@chambery-airport.com

All the fees and charges are available here on the airport website.

The first 60 minutes of parking are free, after which they start to charge you 0.36 euro per ton (MTOW) per hour. Parking is arranged though SEACA (handling@chambery-ariport.com).

There is a **dedicated business terminal** and a good 30 parking spots at the airport, however, during peak times where forecast traffic exceeds capacity, they do ave scheduling in place. This means **any take-off needs a PPR from the COHOR association.**

Peak time is weekends (and some Fridays) from mid December to April, and the first week of January. You can email hdqcoxh.scr@cohor.org or slots@chmbery-airport.com to organise, or cy.myhandlingsoftware.com if you are a general or business aviation operator.

Contact the BRIA de Bordeaux : +33 5 57 92 60 84 and ensure you have a gendec for customs at least 24 hrs before arrival/departure.

Airport Spy reviews give this a **4/5 rating.**

Grenoble – France

LFLS/Grenoble airport is well situated for at least **10 different ski resorts.** It is an hour's drive from Saint Pierre de Chartreuse, Chamrousse and Lans en Vercors, and up to 2 hours from other major resorts.

The airport has a **3050m runway and no specific qualification requirements** for the ILS or RNAV procedures. They also up their RFF to a level 7 during the peak winter season (normally an RFF 5 with 7 on request).

The opening hours during the winter season will be **0700 to 2100 local time** and can offer full security and customs without PPR.

However, it gets busy! It is the second most convenient after Chambery and particularly during February tends to fill up fast so you are going to need PPRs, slots and to confirm parking in advance. Slots and apron space are handled though the same myhandlingsoftware.

You can find the fees and charges on their main site.

We got in touch with businessaviation@grenoble-airport.com / +22 4 76 93 49 24 and they are very

helpful and can assist in handling support.

We don't have any Airport Spy reports for here yet! Send us one!

Bern – Switzerland

LSZB/Bern airport will get you close to **Gstaad.**

They have a very handy airport site with info for GA flights including an airport manual.

They don't require slots and advised that they **rarely see restrictions or capacity issues** even during the busy season. As with many of these airports, they are not H24, but can offer different hours on request if required.

There is **no pre-training required, but the airport is challenging**. They have **cold temperature corrections** for the terrain (highest MSA is 15,800') and the airport elevation itself is 1675'. The arrivals also take you through **Class E airspace and VFR traffi**c without transponder and radio is common in the vicinity.

Reports for the airport suggest you may get terrain alerts, and preparing for the circle to land runway 32 with waypoints is a good idea. Our **Airport Spy** reviews gave it **4/5 stars** and called it 'tricky'.

Ground handling is mandatory here so get in touch with groundservices@bernairport.ch / +41 31 960 21 31 for info.

Gstaad does have its own airport – LSGK/Saanen – which, like so many, requires pre-training before you head there. You will need a PPR as well, but only a few hours before. The airport can handle jets up to at least a **MTOW of 15,000kg** and requiring up to RFF 5, but in winter they don't have jets landing because of runway condition. So if you're anything other than a Pilatus PC-12 or equivalent, stick with Bern.

You can get in touch directly with them at +41 33 748 33 22 / info@gstaad-airport.ch

Engadin (Samedan) – Switzerland

LSZS/Engadin, also known by some as Samedan is the closest airport for the **St Moritz** ski spot. It is actually a **dedicated private jet airport *just* for St Moritz**, and is barely a 10 minute drive from the ski chalets.

Parking here can get tight during Christmas, New Year and White Turf (weekends in February). There are limitations for jets with fire & rescue category 4 and higher.

Engadin was built, literally, into the mountains and you need **prior training** (and have to pass an exam) before going here. The main website provides some good briefing info on all this.

There are also some specific **flight plan filing requirements** for the airport – which you can read about here.

For handling support, get in touch with +41 81 851 08 51 / info@engadin-airport.ch

Airport Spy reports rated this airport **4.5/5 stars.**

Geneva – Switzerland

LSGG/Geneva is the closest airport for the **Chamonix** resort, and is about 1 hour 20 minutes drive away, or has multiple helicopter transfer options.

There is no particular pre-training required to operate into Geneva, however it is a relatively challenging airport with very high terrain in close proximity. Check out our Airport Lowdown here.

Geneva is busy in the summer and busy in the winter. All year around really. But it does get *particularly* busy from December 15 to the end of April, and there are generally restrictions (and Notams) issued around this time.

You will need a **PPR slot for arrival and departure**. In the past there has been a maximum slot reservation window of 21 days.

This is where you need to head to check for info on all things PPR at Geneva.

Geneva has a **dedicated business aviation terminal** which is pretty convenient for the main terminal. There are three big hangars here, however, hangar space is limited during peak times and in the busiest part of winter often only the hangar run by the airport is available to "general public". So get in touch and make arrangements early if you need them!

The main FBOs are:

- Dassault Aviation Business Services +41 22 710 4434 / fbo@dassault-business.com
- Signature Flight Support +41 22 817 0123 / gva@signatureflight.ch
- Swissport Executive +41 22 306 1250 / eva.privatport@swissportexecutive.com
- Jet Aviation +41 58 158 1811 / gvafbo@jetaviation.com

You can find full details of Geneva Airport charges direct from the airport website.

Our **Airport Spy** reviews gave it **4/5 stars.**

Sion – Switzerland

LSGS/Sion is the main airport for the **Verbier, Zermatt and Villars resorts.** The really posh ones.

Before we go any further into planning and operating there, you need to know that **Sion does require special authorisation from the Swiss Authority** because of the challenging procedures due terrain.

This authorisation requires pilots to undergo training before operating there, but there is a decent list of places where you can do this training, including **training facilities in the US**. They also have some great airport briefing info on their website.

Possibly because it is so challenging (guessing less folk fly there), the FBO we contacted advised that they **don't have any parking limitations at the airport**, and that aircraft can stay for as long as they like, in a hangar too if needed.

For queries on handling, try Signature Flight support +41 27 305 2424 / sir@sigantureflight.ch

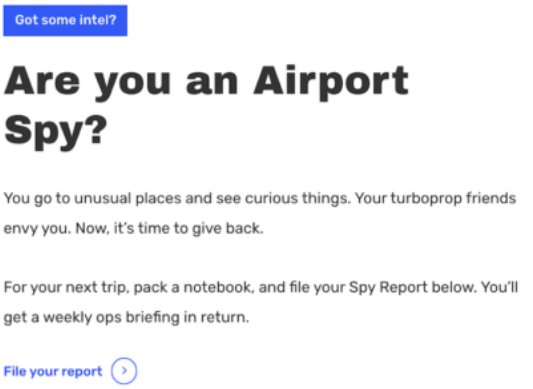
Our **Airport Spy** reports only rate this **3.5/5 stars.** The VFR traffic makes it tough, but less challenging than some.

Where else?

We haven't covered some of the **bigger European airports** which can be used for parking and to reach Alpine ski destinations.

LSZH/Zurich and the Milans (LIML/Milan Linate and LIMC/Milan Malpensa), as well as EDDM/Munich are all relatively convenient for ski destinations in the Alps and are larger airports which offer better parking, hangarage and easier operating options.

If you are familiar with other airports which are good options for winter ski destinations, then please share those "gotchas" or need to know "heads ups" – and we will share them on to everyone in the group. **You can file an Airport Spy report here:** ops.group/blog/spyreport



Canary Islands Volcano: What's the Operational Impact?

OPSGROUP Team
5 November, 2021

Eruptions have been ongoing since Sep 19 at the Cumbre Vieja volcano on La Palma in the Canary Islands.

Volcanic Ash

The latest VAAC report (eff 29 Sep 08:55z) shows the **ash cloud only up to FL050** around the vicinity of the volcano and GCLA/La Palma airport.

If the wind changes it may impact GCTS/Tenerife airport and arrivals from the south of Tenerife may be impacted.

GCLA/La Palma Airport

Operations were suspended at the airport on Sep 19 and again on Sep 25 after ash fall reduced visibility at the airport.

The volcano continues to release ash at low levels, and further short notice closures are possible.

La Palma is an international airport which also serves as an alternate for GCTS/Tenerife and GCLP/Gran Canaria.

The Airspace

UN741 is a major airway for routing south southwest. Currently the ash cloud is not impacting this area.

UN981 is a major northerly routing airway crossing the area of ash, but the level of the ash cloud is not impacting it.

GCCC/Canarias ACC, who control the airspace, have said they currently do not plan to close any airways due to the volcanic activity, but recommend using specific SIDs and STARs if operating to airports in the area – check the ‘Latest News’ section on the NOP homepage for details.