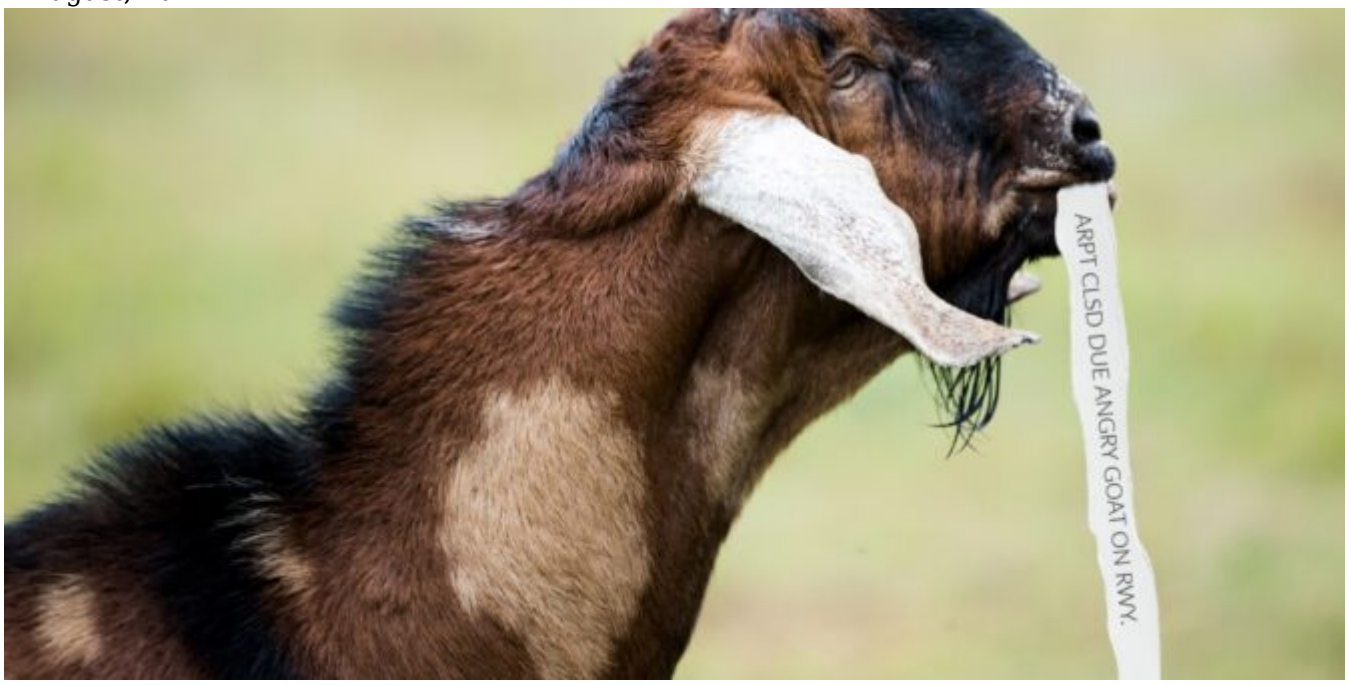
Canada: The AGN and what to do with it

OPSGROUP Team
1 August, 2022



What's an AGN, I hear you cry? Aviation Grid Network? Active Galactic Nucleus? Angry Goat Notams?

Well, unless you're a Canadian operator, operate a regular scheduled service there, or work in the tiny room in the corner of the basement in Transport Canada's Ellesmere Island Office where this was invented then you possibly won't know.

But if you operate *at all* into Canada then you *probably-might not-but maybe should-know* what it is. It is the **Aircraft Group Number**, and because someone asked us about it and we didn't have a clue, we figured some of you may not either.

Disclaimer: We have no idea if there is a Transport Canada office on Ellesmere Island, we made that up. We just found it really, really hard to find anyone at Transport Canada who seemed to know anything about it until we emailed a really important person whose name was on one of the advisory circulars. They were really helpful.

The Aircraft Group Number.

Anyway, so the AGN is basically the Canadian equivalent of the FAA's ADG stuff for aircraft classification and airport design (we think).

It is published for Canadian airports, and the whole point is to **provide information on stuff like runway or taxiway width, length and other physical characteristics**, and also things like **separation from obstacles in the runway environment.**

Basically, a lot of important stuff you need to know if you want to operate there. **It is measured based on the 'most critical' aircraft operating in.** They measure, consider and then the relevant AGN plops out the other end and is assigned.

Any given aircraft might actually end up with more than one AGN depending on the airfield element being looked at.

- So it *'aligns the certification standards to the actual (or planned) operation at the site by linking the standards to specific aircraft characteristics, aerodrome operating visibility conditions, and level of service."*
- In other words, it provides a simple *"method for interrelating the numerous technical specifications concerning the aerodrome and the characteristics of the critical aircraft."*
- In *other* other words, it checks what can safely get in and out, and then **anyone wanting to go there can see if its suitable for their aircraft type (and its AGN).**

Here's the Advisory Circular on it if you want a read.

Table 3.1.1.1 - Minimum Runway Width in metres		
Aircraft Group Number *Table 1-1 Column III*	Non-Instrument / Non-precision Runways	Precision Runways
I	18	23
II	23	30
III (A & B)	30	30
IV	45	45
V *(2)*	45	45
VI *(2)*	60	60

TABLE 1-1 (Runway Environment)		
Column I	Column II	Column III
Aircraft Group Number	**Wing Span**	**Outer Main Gear Span (a)**
I (for approach speed category C or D use AGN IIIB)	Less than 14.94 m	Less than 4.5 m
II (for approach speed category C or D use AGN IIIB)	14.94 m up to but not including 24.10 m	4.5 m up to but not including 6 m
IIIA (for approach speed category C or D use AGN IIIB)	24.10 m up to but not including 36.00 m	6 m up to but not including 9 m
IIIB (Includes Groups I - IIIA with C & D approach speeds)	24.10 m up to but not including 36.00 m	6 m up to but not including 9 m
IV	36.00 m up to but not including 52.12 m	9 m up to but not including 14 m
V	52.12 m up to but not including 65.23 m	9 m up to but not including 14 m
VI	65.23 m up to but not including 79.86 m	14 m up to but not including 16 m

Apparently this is how you work it out.

So why are we telling you about it?

It is actually something you are probably familiar with even if you didn't know the acronym, and when you're thinking about heading to an airport you (hopefully) check stuff like this anyway.

But, what we aren't sure about is whether it is **a guidance thing or a restriction thing?**

	phone numbers where pilot can be reached prior to dep.
ACC	(IFR only) Moncton 506-867-7177 or 866-480-8200.
WX	METAR AUTO H24 (see COMM) ALTIMETER H24 (see COMM) TAF 10-04Z‡, issue times: 10, 14, 20, 02Z‡. WxCam
SERVICES	
FUEL	JA-1, SP
S	4,5,6
SUP FL	D-ice
JASU	10/15
RWY DATA	Rwy 10(100°)/28(280°) 5613x100 ASPH Thld 10 displ 462' Rwy 10 c RESA: 10/28 492'
RWY CERT	Rwy 10/28 AGN IIIA
TWY CERT	Twy B AGN I
TWY	Twy B day use only, no win maint, clsd Nov 1 - Apr 30
RCR	Opr CRFI
LIGHTING	10-AS(TE ME) P2, 28-AS(TE ME) P2 ARCAL-122.8 type K
COMM	

There it is for RWY CERT.

The original question

The question which sent us spiralling into an endless pit of Advisory Circulars and uncertainty came from **a non-canadian BizAv operator** (you know who you are, and thanks for that!).

They did have a valid question though.

They wondered if they could still plan and airport for things like tech stops and medical emergencies if it's a category below the aircraft AGN (but is perfectly landable at)? **Because your AGN varies for different elements…**

So we read through the bundle of ACs and frankly still didn't have a clue. So we started emailing everyone at Transport Canada and finally got a nice response from someone pretty important and knowledgable.

The answer.

Well…

Let's start in Advisory Circular 602-005 (effective 2021-06-04), the subject of which is *'Publication Enhancements to Airport Information in the Aeronautical Publications.'* Don't be put off by the title, this is *all about* the AGN.

First up we get to the background and its in Section 3.0 that we discover this very important statement straight out of the **Canadian Aviation Regulations –**

"Before taking off from, landing at or otherwise operating an aircraft at an aerodrome, the pilot-in-command of the aircraft shall be satisfied that

(a) there is no likelihood of collision with another aircraft or a vehicle; and

(b) the aerodrome is suitable for the intended operation."

So, the AGN helps determine this.

But then there is this…

If an air operator is conducting **scheduled passenger services at the airport then they are bound by Part VII regulations in respect to the AGN limitations and any other limitation related to the airports' certification…**

So we still weren't entirely sure…

A non-scheduled flight (so a lot of BizAv sorts) doesn't fall under that particular regulation, **but the AGN is considered a limitation and part of an airport's certification.**

Given it is telling us whether (very simply) our aircraft will fit (ok, whether obstacle clearance, runway width, etc etc is suitable), then it doesn't sound like something you would really want to shrug at and say *"ah well I reckon I still will…"*

But by the same token, **AGNs are determined using the most critical aircraft currently doing scheduled operations**. So if you're looking at a military base (that is available for civilian ops when needed) then that AGN might not "work" on paper, but the airport may well work for you in reality.

Then came the answer

Hot off the press – **"It's the pilot-in-command's decision to verify if the aerodrome is capable of accommodating the AGN of the aircraft. The published AGN serves as a tool and aids in the decision making."**

There it is, clear as can be.

You still have to make the decision!

For that, throw in some common sense and airmanship.

On fire? All bets off, anywhere works.

Tech stop of medical diversion? Probably not the wisest to plan to use an airport whose AGN falls below the category you require. Chances are if you mess up there are going to be some pretty big insurance and legal questions getting asked like *"the AGN literally told you the obstacle clearance wasn't enough so why did you try?"*

And remember it isn't the whole picture.

Just using the AGN also isn't a good idea because **it doesn't take into account all the info you need.** It doesn't, for example, cover airport operating hours which is quite important if you're intending on using an airport because – if it ain't open, then that's going to be difficult.

There is a whole load of information you'll need beyond just the AGN in order to determine suitability. The AGN is only *one piece* of information (albeit it a piece filled with a lot of smaller pieces of information).

We are happy to ask some more questions if you need.

We hadn't come across this before and this isn't a solid answer, so **get in touch if this impacts your**

planning, and if you've spotted an airport whose AGN is lower than your aircraft's. Especially if you know for a fact your aircraft has operated into there perfectly safely.

Send us some specific details and we'll dig deeper! Email us at: news@ops.group

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It's raining space junk over Europe

OPSGROUP Team
1 August, 2022

Update July 31: *Space debris from a rocket launch in China last week splashed down harmlessly in the Indian Ocean on July 30. It made headlines for a few reasons – it was very large, was on an uncontrolled trajectory, and could have landed in Western Europe. Future launches may carry the same risks – the next one is planned for October.*

———————

Something big this way falls.

A large bit of space junk is due to re-enter, and so far they aren't exactly sure where.

The Space Junk.

It is part of the **Long March CZ-5B** – the core stage of the rocket launched July 24 to send models of the Chinese Space Station up into space.

This hefty lump of junk is actually one of the **biggest bits to ever re-enter,** weighing in at an impressive 17 to 23 tonnes and measuring 53 meters. That's after bits have burnt off…

The Re-Entry.

It is due to fall back around **July 30 or July 31.**

It is being tracked by the **EUSST (EU Space Surveillance and Tracking) agency** which you can visit here.

Here is the **current re-entry window.** The latest is saying Sunday July 31 at **1107z** (but with a +/- 29 hour uncertainty window which is about 38 orbits).

And here is the **current re-entry track…**

It is predicted to most likely effect parts of Southern Europe – **Bulgaria, France, Greece, Italy, Malta**, **Portugal, Spain** being the most likely "fall" areas. Again, as it falls closer, this will be narrowed down.

Are we worried?

Not really. They're tracking it and as it gets closer and a clear idea of where it will fall is available, **Notams on airspace closures** will be issued.

Here is the EASA SIB with all their information and advice to date on it.

And here are a few other Space related things to read while you wait for CZ-5B to make its blazing appearance in our skies.

Feeling the Heat

OPSGROUP Team
1 August, 2022

It's getting hot outside. *Actually scrap that, it already is hot out, and in some places it's getting even hotter!* Which means our poor little airplanes are suffering, struggling, sweating their little airplane socks off.

We've written up some bits on this before, and you know it all already – *watch the temperatures, watch the performance, watch the climb gradients, watch the big old storms puffing up around hot spots.*

If you want a full recap then you can read that all here.

Here's a quick refresher.

A swig of cool lemonade for the pilot brain…

- **Planning:** Make sure you're not at risk of heading outside the operating envelope.
- **MELs:** Check the APU, the packs, basically anything that produces cold air because if there are problems there, you might need to think about your crew, passengers and freight too.
- **Engines:** Keep an eye on them, particularly during start.
- **Brakes:** Watch them brake temps. Plan the taxi, and think about how best to brake to keep them as cool as you can.
- **Fuel:** It has hot limits as well as cold limits.
- **Performance:** Yup, hot = not so dense = not so good.
- **Climb:** Hot, high, heavy? You might not meet those restrictions and it's better knowing that before you go than trying to drag your airplane up over stuff.
- **Approach and Landing:** Turbulence from thermals can get testing.

And here are some pointers on the really 'scorching' issues…

Batteries.

The one in your airplane is fixed so not much you can do about it other than turn the APU on/ plug in some cold air tubes or push your airplane into a shady hanger. But all the other removable bits filled with **Lithium Ion batteries** are worth considering.

Things like your **Defibrillators** for example. These usually have max temperatures (50 degrees rings a bell) so you may find you need to **move them, remove them, take them off** with you overnight.

Cargo

Passengers can complain and you can throw water on them. Cargo less so.

A sad result of excessive heat at KMIA/Miami airport was the death of thousands of baby chicks recently. Whilst air temperature might be reading ok, **asphalt can be 40-60 degrees F** hotter than the air around it.

Storms

Hot weather means storms. If you see something in front of you, or on the weather radar, be careful about going over the top – if they are building then you're going to meet some pretty rough air up there if you aren't well clear.

A general recommendation is 5000' for big'uns.

Then there are tornadoes.

Actually, the number of days each year that see tornado activity has fallen, but the **number of mega outbreaks** (30 or more in a day), the density of clusters and the general strength have gone up. So 3:1 to tornadoes really.

NOAA has a tornado watch page that is worth watching (checking out during the season).

The National Weather Service Twitter account is also a good spot for live updates.

They can be hard to predict, but do cause disruptions if they are near airports (not to mention potential damage). Texas is the most hit state, but there have been numerous warnings and watches out across the US including Pennsylvania, Ohio of late.

And then there are fires.

Wildfires are cropping up across the US. This site is good for monitoring these.

The risk of fires to aviation is less *burning destruction*, and more *smoky ash visibility reduction.* They can also create a secondary risk from **increased airborne firefighting traffic** in the areas.

Europe has seen a big increase in serious wildfires this this year, with the **Mediterranean area particularly badly affected.** Portugal, Spain, Greece, Italy, Croatia – all burning to varying degrees. This may cause some inflight disruption, and may cause parking issues and ground disruption particularly at smaller airports.

Humidity

This is for you and your passengers.

India in particular has been hitting the 'wet-bulb' limit for human survival. Sounds doomsdayish? Well, it can be.

The wet-bulb temperature is basically what you get if you wrap a water soaked cloth around a thermometer. If this exceeds around 35 degrees C then that't the time to really start sweating, so to speak, because above this we actually become unable to reduce our body temperature even by sweating, sitting in the shade, or drinking water. Prolonged exposure to this will result in potentially fatal heatstroke.

So keep an eye on the temperature, the dew point, and **any staff you have outside!**

Environmental stuff.

The real reason I wrote this post…

It was so hot in England (yes, England!) that **EGGW/Luton airport's runway melted.** OK, melted might be an exaggeration, but a chunk of asphalt shifted and caused a lot of disruption for a day, and it was only **only 37 degrees C.**

EGVN/Brize Norton experienced a similar problem.

Airports, or rather the folk who manage them, in the likes of Dubai and the Middle East are used to these temperatures and what it can do to asphalt, which is probably why they regularly overhaul them. But places *less familiar* with soaring temperatures aren't.

Watching those Notams is the best advice for this.

Keep an eye on airports in countries with less infrastructure as well. Again, **India has been struggling with power cuts** and blackouts due to extreme temperature and this may well impact airports just as much.

Climate change?

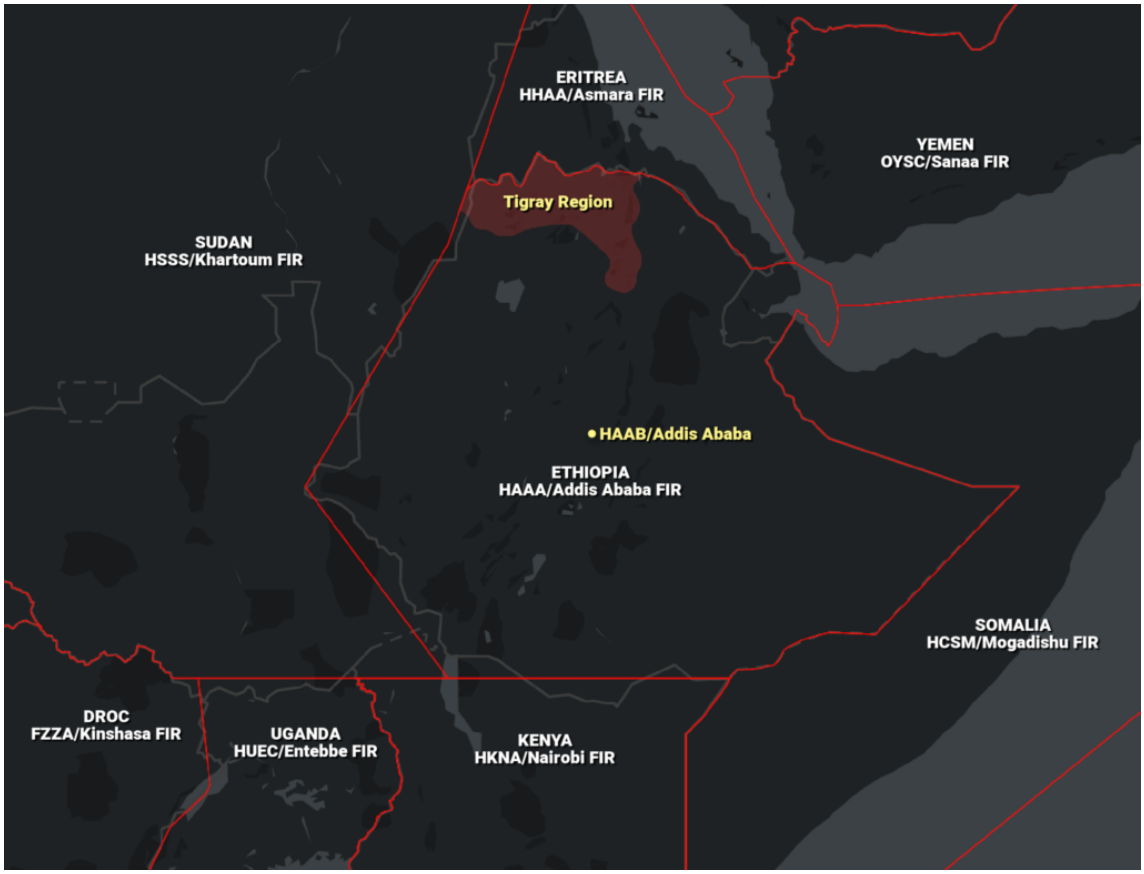
Here is something Eurocontrol said about it all. Don't worry, it's not a *"what to do about it"* lecture, but more *"things to look out for because of it"* guidance.

Ethiopia Airspace Update

Chris Shieff
1 August, 2022

Update – July 26, 2022

There has been no major fighting in Ethiopia's northern Tigray region since late Dec 2021. A ceasefire agreed in March 2022 has mostly been upheld, and Ethiopia's federal and Tigray regional governments look set for negotiations soon.

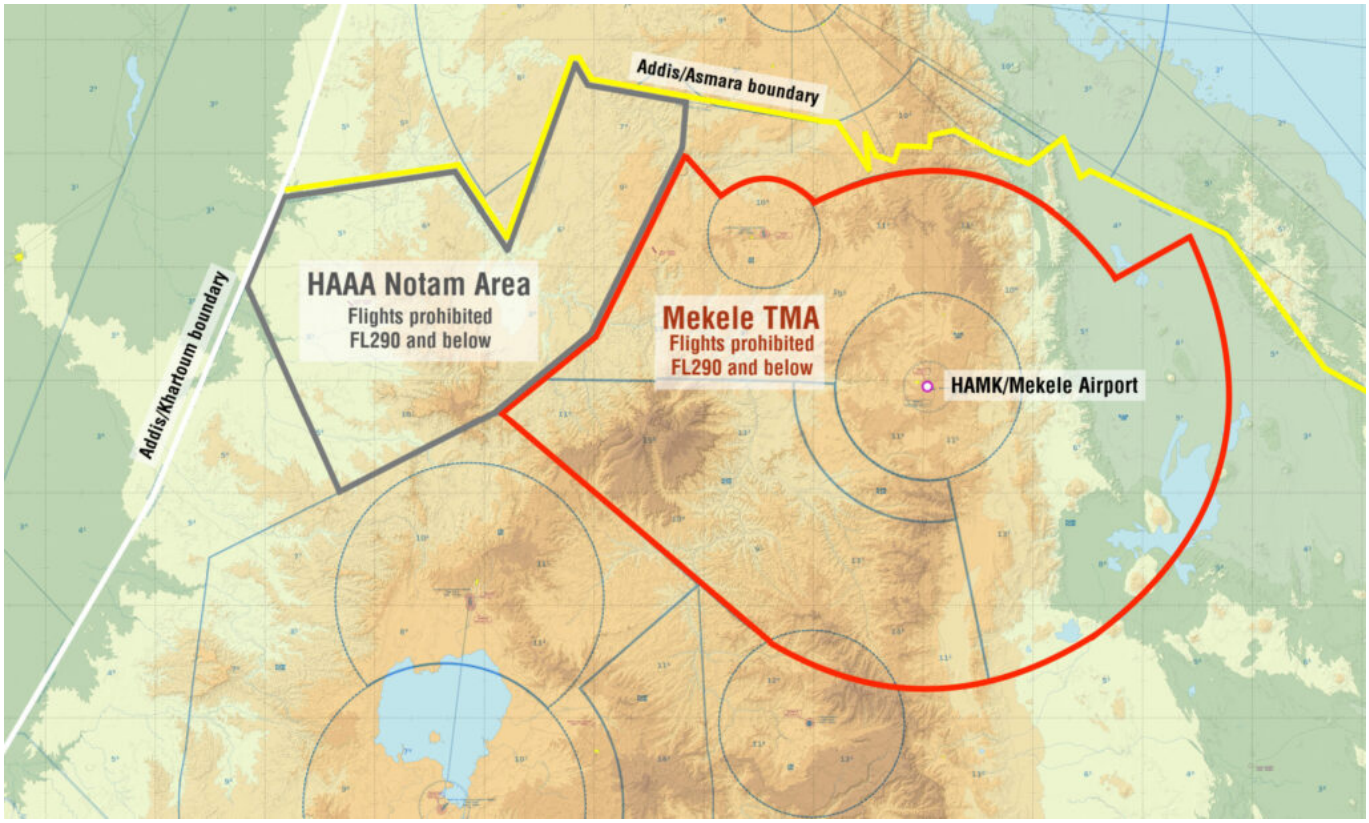


For the time being though, **airspace in the north of the country should still be avoided** – several states maintain active airspace warnings for the HAAA/Addis FIR, and Ethiopia still have a Notam in place banning all flights at FL290 and below.

Here's the current version of the Notam, the content of which hasn't changed since its first iteration:

HAAA A0220/22 - FLIGHT IS PROHIBITED TO FLY AT OR BELOW FL290 WITHIN
MEKELE TMA AND WITHIN THE AIRSPACE DEFINED BY JOINING
THE FOLLOWING SUCCESSIVE POINTS AND LINES
135914.7N 0362048.9E
130042.8N 0365122.9E
ETOBU(132132N 0373433E)
TILUD(134116N 0375950E)
EVITO(142911N 0382424E)
THE COMMON FIR BOUNDARY BETWEEN ADDIS AND ASMARA AND
THE COMMON FIR BOUNDARY BETWEEN ADDIS AND KHARTOUM
REF AIP SUP A 04/2021. GND - FL290, 27 MAY 09:00 2022 UNTIL 27 AUG 09:00 2022.
CREATED: 27 MAY 09:00 2022

Better yet, here's a picture of what this actually looks like:



Update – Nov 18, 2021:

- The US published a new airspace warning and Background Information Note for Ethiopia, cautioning against overflights of the HAAA/Addis Ababa FIR below FL290. The conflict between the Ethiopian military and opposition forces had intensified. Aircraft below FL290 were at increased risk from anti-aircraft fire.
- The US, the UK, Germany and France all issued security warnings advising their citizens to leave immediately.

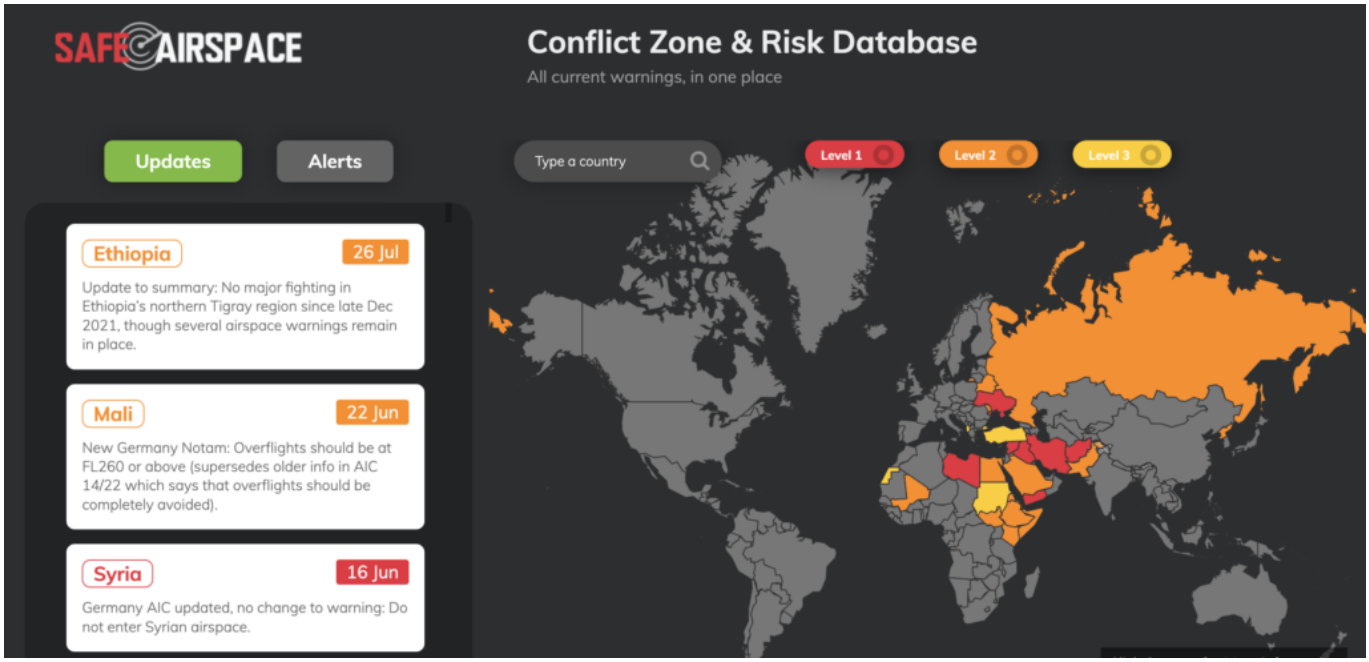
Update – Nov 9, 2021:

- Ethiopia is on the verge of civil war. The government declared a six-month nationwide state of emergency on Nov 2, following increased fighting between the Ethiopian military and opposition forces in the Tigray region in the north of the country.
- Concern that ATC services in the HAAA/Addis FIR may be affected with little notice. Overflights of Ethiopia may be at increased risk of anti-aircraft fire at all levels.
- Several factors impacting risk to overflights: military aircraft being used in combat roles, unmanned aircraft operating in region, unstable political situation on the ground, and conflict spilling over into adjacent regions. All of this pointed to an increased risk of misidentification and miscalculation – aircraft mistaken for something of military interest, or simply caught in the crossfire.
- Opposition forces in Tigray have access to conventional surface-to-air missile systems that can reach aircraft as high as FL260. They have also previously shown an intent to target aviation interests with rockets and ballistic missile attacks on airports within the region, as well as across the border in Eritrea. Other military interests in the area have weapons capable of reaching much higher – including the Ethiopian military. More sophisticated systems are

present in or near the region that are capable of reaching as high as FL490. For context, in August 1999 the Ethiopian military shot down a Learjet near the border with Eritrea. Then in May 2020 they also downed an Embraer 120 in Somalia. Both were misidentified.

Further reading

SafeAirspace.net is our conflict zone and risk database. Click here for a full briefing on the situation in Ethiopia.



Hedging Bets: Why Africa is Low on Fuel

Chris Shieff
1 August, 2022

Scour the OPSGROUP vault over the past twelve months, and you'll find a bunch of alerts we've posted about **jet fuel shortages**. In fact, we even wrote an article about the problem.

You'll also see that a disproportionate number of them are for **Africa** – or more accurately, *Sub-Saharan* Africa. Also known as the epicentre of 'tricky tech stops.'

Cape Verde, Nigeria, Sierra Leone, Senegal, Zimbabwe, Burundi, and South Africa have all graced our news feed in recent times for being low on gas. The problem for ops is that it is no coincidence. And for the next year at least, **fuel availability** is set to become public enemy number one there for flight planners and pilots alike…

Feeling the pinch.

From an air travel perspective Covid is (more or less) behind us, and demand for jet fuel is surging. But at the same time, the world's ability to produce it has fallen for the first time in three decades. Sanctions on Russia have been a big part of this – not surprising considering it produces ten percent of the world's oil.

The pinch becomes **higher prices** for everyone. In more developed economies, supply isn't a problem – the turbulence of the market is absorbed with price hikes. Which is why refuelling jets at your local FBO has become so eye-waveringly expensive. But if your pockets are deep enough, the fuel is there to be used.

But this just isn't the case in less developed regions – especially Africa, which is facing its worst supply shortage in forty years.

Drip Feeding

Many sub-Saharan countries have limited ability to refine their own oil domestically. And the refineries often operate below capacity. And so they are **reliant on imports** – so much so that the continent ships in three quarters of what it needs.

The problem then becomes the balance sheets of importers. Their pockets aren't that deep, so they can only import small amounts at a time, effectively drip feeding their economies.

Combine the two issues, and there just isn't much room for **fuel reserves** to ride out any bumps in the road. This strategy of storing less and refining less can be risky, especially in 2022. It leaves African

countries extremely vulnerable to market forces they can't predict or control – exactly what is happening right now. Local crises such as civil war can also deepen the problem.

Hedging Bets

It's no secret that oil exporters are in it to make money – like most businesses. The big gamble is **what will happen next**. When prices are low, exporters may store oil in expectation of things picking up again. This often takes the form of full oil tankers, which can supply African countries with small shipments of oil while in transit.

But right now, jet fuel is in demand. **Fuel hedging** doesn't help either. Importers hedge their bets and if they think that more prices rises are coming, they enter into contract to secure prices now as it will save them money later. That's where the cash flow to buy and store it comes in handy. Many African countries aren't that lucky, and their lines of supply have been drying up as bullish prices charge on.

The result? **Long term fuel shortages,** and no guarantees things will get better in a hurry.

Crystal Ball

So, if fuel shortages at African airports are so intrinsically related to global prices, what does the future hold? There may be some relief on the horizon.

The super-charged rise of oil (and therefore jet fuel prices) is set to slow down, and in some forecasts even abate. But none show an outright collapse from the giddy heights they have reached today.

But of course, this is all conjecture. As Covid taught us, the world and the reaction of markets are **unpredictable.** Things have a habit of going either way, driven by forces we often don't see coming. But while the cost of jet fuel remains high, shortages are set to become a feature of the landscape for operations in Africa for some time yet.

US LOAs: What's the point of the C052?

OPSGROUP Team
1 August, 2022

Someone asked us about C052. Here's the answer.

Do you need it?

Well, my friend, to answer that you will need to answer these:

1. Are you Part 91, registered in the US?
2. Do you want to fly approaches that uses GPS RNAV stuff?
3. Do you want to fly these outside the US National Airspace System?

If you answered 'yes' to the above 3 then you probably need a C052

Are you now wondering *'Why exactly do I need it?'* or *'I have no clue about the C052!*"?

If you answered yes, read on. If you answered no, then move on.

Tell me about the C052

The C052 is a LOA.

In fact, it is *'an optional LOA provided upon the request of part 91 operators in order to show evidence of authorization and training to conduct Area Navigation (RNAV) Global Positioning System (GPS) approaches should they be required to provide such evidence to a civil aviation authority (CAA) outside of the United States.'*

So you need C052 if you want to **fly RNAV GPS approaches outside of the the US**, in countries where approval from your home state is required. Like anywhere that falls under EASA for example.

The C052 tells foreign authorities that you are trained and approved to fly GNSS based approaches, and this keeps them happy.

Hang on, do I actually want to fly GNSS based approaches?

Well, take a look at airports you visit and see if they have the following –

- A non-precision approach without vertical guidance, like an LNAV or an LP?
- An approach with vertical guidance like an LNAV/VNAV or LPV?
- A GLS approach?
- Titles which say RNAV (GNSS) or RNP approach?
- PRM?

Ok, then yeah, C052 is still for you.

I don't fly to Europe though. So where else do I need it?

Europe is the main spot, but there are others as well. **Hong Kong** for example. This LOA will allow you to fly them **anywhere that authorisation is required.**

One of the best ways to confirm is on the approach charts (it might say authorisation required) or in the Country Rules and Regs.

The UK used to have more stuff like **LPV approaches**, but since the UK lost access to EGNOS after Brexit, these LPV approaches haven't been possible.*

**Good news here though – Inmarsat have recently run tests on the new satellite system stuff that will replace EGNOS access for the UK. Watch this space for LPVs again. And C052 requirements for the UK. We aren't sure yet if it will be needed (it wasn't in the past).*

Something else to know about it.

The older LOA C052 used to mention LOA B034, but this is now out of use.

Because you also don't need approval to fly RNAV GPS approaches in US airspace, the best way to confirm your aircraft is eligible and airworthy for C052 stuff is **through your airplane flight manual** (from the manufacturer).

You might also want to get the C052 if you want a C073. **The C073 authorises you to use MDA as a DA/DH**, and you gotta have the C052 to get the C073

These guys can help.

Aviation Manuals can help you actually get the LOA if you want. We've mentioned them before, and actually they've mentioned the subject of C052 LOAs before, so here's a link to that.

I'm sure there are other places who can help too, we just happen to find these guys really helpful because they always answer our questions on stuff.

Some useful other things to read.

- The FAA advisory circular.
- An FAA notice about the C052, effective May 2022.
- A post about LOAs – a quick rundown of what each one is for.
- Another post about LOAs – a guide on getting your LOA approved.

No SELCAL On The NAT?

Chris Shieff
1 August, 2022

ICAO are hurriedly upgrading the **SELCAL** system to allow for new codes. There's only a finite number of them available, and double ups are becoming are a problem. The potential for more than one aircraft to receive the same call in the same airspace is cause for concern.

ICAO have been onto it for some time, and on November 3 there is a soft deadline for Air Navigation Service Providers (ANSPs) to upgrade their ground equipment to communicate with the new codes.

But there is a **problem** on the NAT. Most of the ANSPs won't be ready in time. Which means if an aircraft has one of the new codes, for up to six months they will not have SELCAL when crossing the pond.

Here's a quick rundown of why, and what the impact will be.

SELCAL 101

If you are one of the few who already know what **'32-tone' SELCAL** is, top marks and feel free to skip this part.

If you don't, fear not. This ain't no radio shack, but a little bit of tech stuff will help here. All you need to know is the alphabet and how to count to ten. Chances are if you're flying a plane, you already have that covered. Let me explain.

Unless you actually like the soothing sounds of static for hours on end, or distorted mumblings from halfway across the globe, chances are you have heard of Selective Calling (SELCAL). It does the listening, so we don't have to.

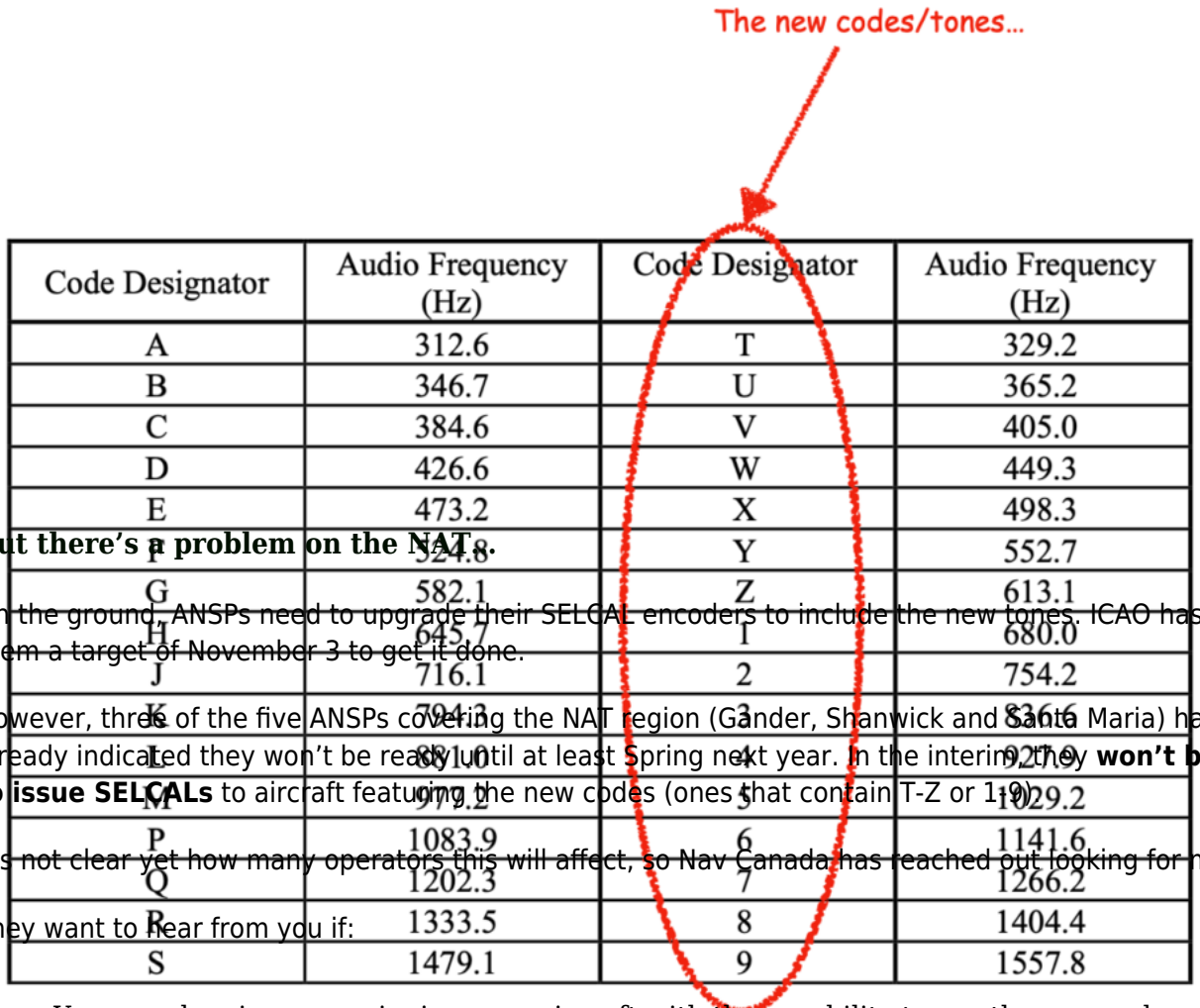
In a nutshell it is **a signaling system that lets us know via HF or VHF when ATC is trying to get a hold of us**, so we don't need to listen out all the time.

Here’s how it works. On the ground a SELCAL encoder transmits four audio tones at a time. Each tone is assigned a letter. When the four tones correspond to your aircraft’s four-letter code, a decoder in your avionics hears it and triggers a SELCAL with a noise and flashing light. That’s your cue to call ATC back. Simple.

Enter the problem. Until now, only 16 letters (and therefore tones) have been available. That means there are just shy of 11,000 codes for aircraft to use. And so far, 37,000 have been allocated. Which means **double ups.** And the problem isn’t going away.

There is an increasing risk that multiple aircraft in the same airspace may receive the same SELCAL, and that could spell **danger**. ICAO knows that, and so they’re adding 16 new tones (comprised of letters and numbers). That will bring the total to 32. And voila, ‘32-tone’ SELCAL.

This will create almost a quarter of a million unique code options and will cut the problem off at the knees.



Code Designator	Audio Frequency (Hz)	Code Designator	Audio Frequency (Hz)
A	312.6	T	329.2
B	346.7	U	365.2
C	384.6	V	405.0
D	426.6	W	449.3
E	473.2	X	498.3
F	524.8	Y	552.7
G	582.1	Z	613.1
H	645.7	1	680.0
J	716.1	2	754.2
K	794.3	3	836.6
L	881.0	4	927.9
M	977.2	5	1029.2
P	1083.9	6	1141.6
Q	1202.3	7	1266.2
R	1333.5	8	1404.4
S	1479.1	9	1557.8

But there's a problem on the NAT.

On the ground, ANSPs need to upgrade their SELCAL encoders to include the new tones. ICAO has set them a target of November 3 to get it done.

However, three of the five ANSPs covering the NAT region (Gander, Shanwick and Santa Maria) have already indicated they won't be ready until at least Spring next year. In the interim, they **won't be able to issue SELCALs** to aircraft featuring the new codes (ones that contain T-Z or 1-9).

It's not clear yet how many operators this will affect, so Nav Canada has reached out looking for more info.

They want to hear from you if:

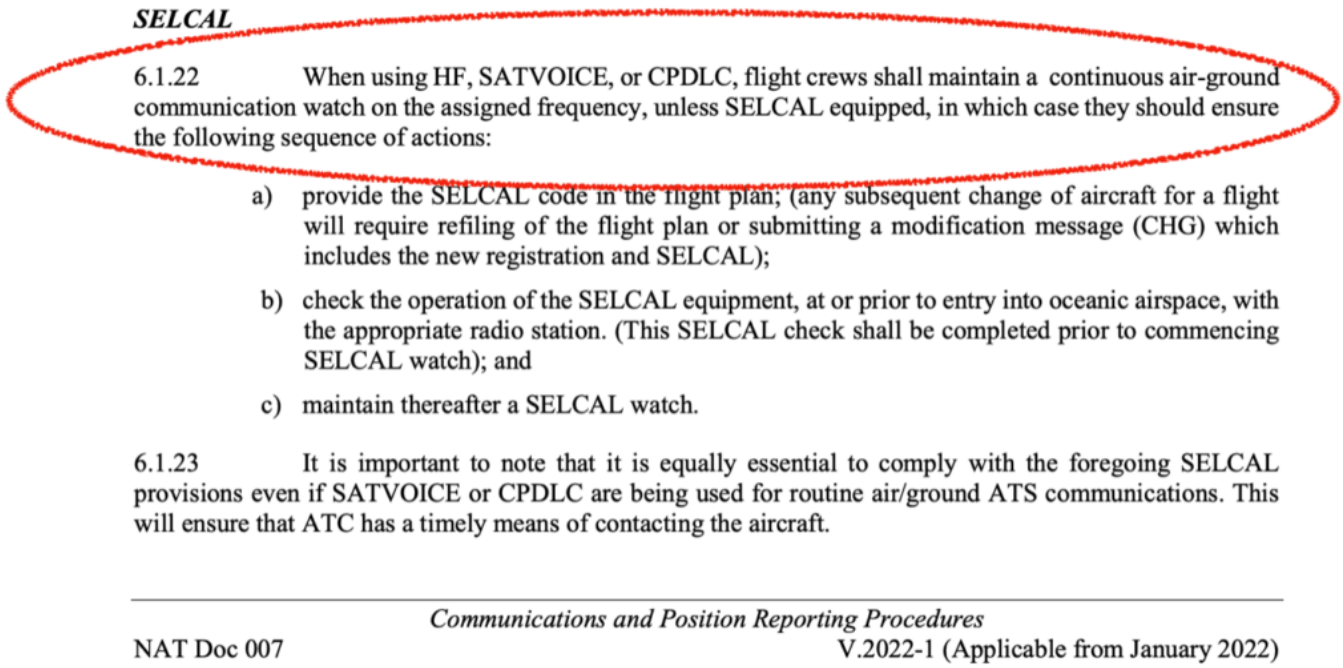
- You are planning on equipping your aircraft with the capability to use the new codes.
- You have already applied for one.

You can email that info to kelly.mcilwaine@navcanada.ca, and cc in ocarrollk@iata.org. They want hear from you before August 31.

What will the procedure be without it?

NAT Doc 007 (6.1.22) seems to have the answer, and it's not great. As a general rule, any aircraft that

can’t be reached by SELCAL **must maintain a listening watch** on the assigned frequency – and unfortunately that means hours of annoying static (even if your CPDLC is working just fine). Hardly ideal.



SELCAL

6.1.22 When using HF, SATVOICE, or CPDLC, flight crews shall maintain a continuous air-ground communication watch on the assigned frequency, unless SELCAL equipped, in which case they should ensure the following sequence of actions:

a) provide the SELCAL code in the flight plan; (any subsequent change of aircraft for a flight will require refiling of the flight plan or submitting a modification message (CHG) which includes the new registration and SELCAL);

b) check the operation of the SELCAL equipment, at or prior to entry into oceanic airspace, with the appropriate radio station. (This SELCAL check shall be completed prior to commencing SELCAL watch); and

c) maintain thereafter a SELCAL watch.

6.1.23 It is important to note that it is equally essential to comply with the foregoing SELCAL provisions even if SATVOICE or CPDLC are being used for routine air/ground ATS communications. This will ensure that ATC has a timely means of contacting the aircraft.

Nav Canada has confirmed to us that this will indeed will be the case. An AIC will soon be published, which is due out in September.

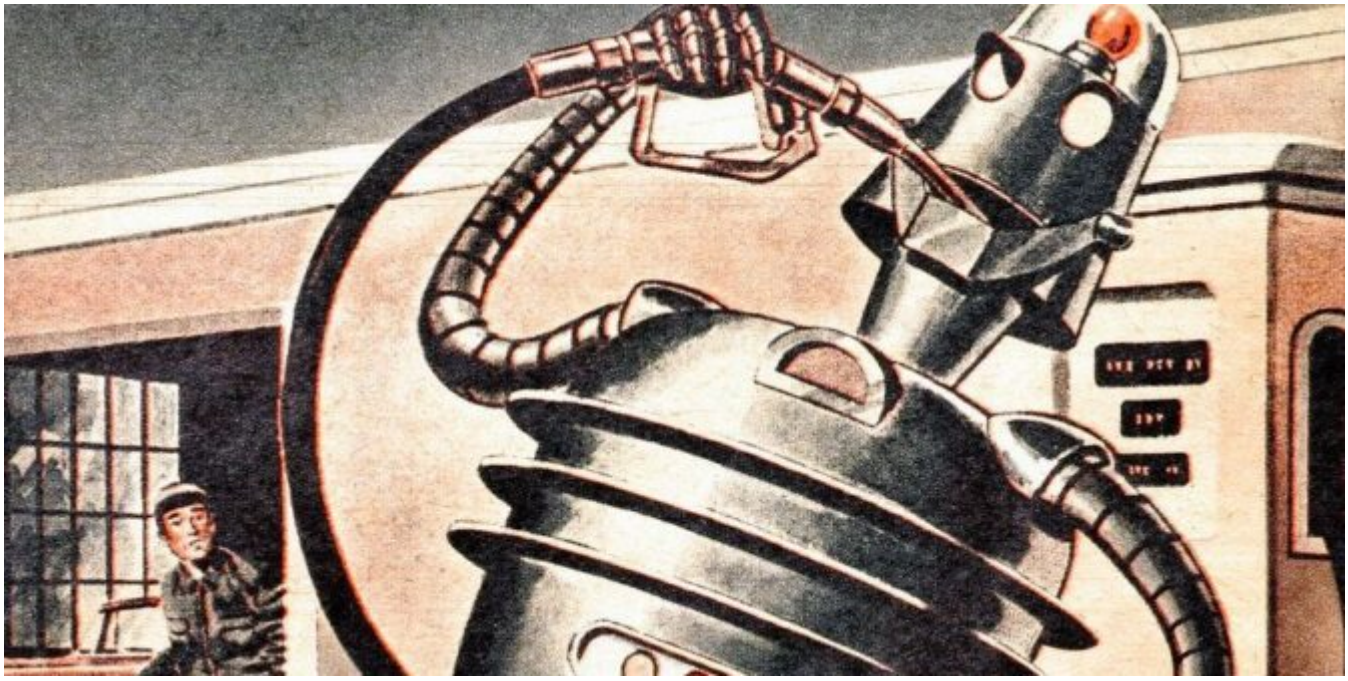
Need more info?

You can read more on ICAO’s SELCAL upgrade project here.

Or feel free to reach out to us directly on news@ops.group and we’ll do our best to help find the answers you’re looking for.

EASA Fuel Rules: A Picture Book

OPSGROUP Team
1 August, 2022



The new EASA Fuel Rules. A horrendous, confusing document that seems to have been written in the form of an unsolvable riddle. Last time I tried to read it I did actually give up and read some (generally quite lame) aviation riddles instead to relax.

Here's my favourite.

You are sitting on an aeroplane. There is a horse in front of you, and a car behind you. Where are you?

Back to the EASA riddle.

We are on attempt four thousand now and are slowly managing to wade through it, with the help of some **useful input from other people** along the way. Thanks *people,* you know who you are.

We have taken what (we think) we know, and have made a book. Well, a PDF actually which you can download here.

Before you read this, we do think you should read this though. **It's our first post on the EASA fuel rules** and it covers who this actually applies to.

Click above for the PDF version (which you can also download directly).

If you prefer, try this "Book" version …

What it is.

A handy thing in PDF form, filled with old Sci-Fi book covers, because I like them, which you can maybe **use alongside the actual EASA document** to help you wade through it a lot more easily.

What it isn't.

A replacement to EASA's document, something to actually use as an official fuel policy decider guide or an actual textbook.

Think you've spotted an error?

Well don't be shy, share it! We'll even add your name into the book (only if you want us to). Email us at: news@ops.group

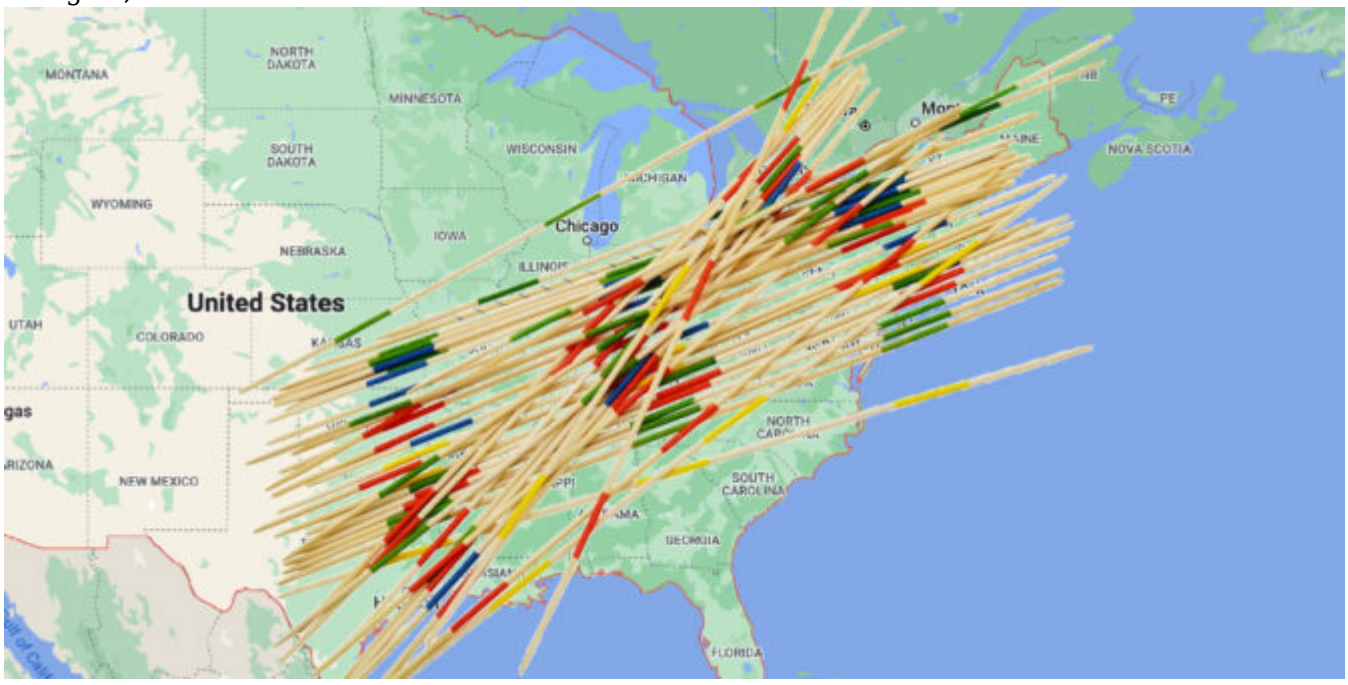
Don't worry, we won't be offended. Like I said, fourth or fifth thousandth attempt and still not sure we've totally *got to grips* with it. We're also not an actual fuel planning operator so chances are a lot of you do know more than us on this so let us know and we'll let others know, and hopefully the combined heads of all might help us finally and definitively solve this riddle.

If you want more (official) info, then check out the Webinars EASA has recorded on it all here.

FYI, the answer to the other riddle is: On the aeroplane.

The FAA Northeast Corridor Atlantic Coast Routes Project

OPSGROUP Team
1 August, 2022



Update 18 July 2022: The FAA has postponed the final phase of its 'Northeast Corridor Atlantic Coast Routes Project.' A whole bunch of new and modified routes along the East Coast were meant to become active from Nov 3. This has been pushed back until 20 April 2023 to avoid the busy summer and winter peaks. The new procedures will still be published in September, but will not be authorized for use until then.

Where are we talking about?

The Airspace: All along the Atlantic East coast of the US.

The Airports:

- KBWI/Baltimore Washington
- KIAD/Dulles
- KDCA/Ronald Reagan
- KHEF/Manassas
- KADW/Joint Base Andrews
- KPHL/Philadelphia
- KEWR/Newark
- KTEB/Teterboro
- KLGA/La Guardia
- KDOV/Dover Air Force Base
- KWRI/McGuire Air Force Base
- KCHS/Charleston
- KJZI/Charleston Executive
- KATL/Hartsfield-Jackson
- KRDU/Raleigh-Durham

What's changing?

Q, Y and J Routes are changing – some have been amended, some have been deleted and some are brand new. There are also someone SIDs and STARs. Basically, the whole airspace is getting PBN-ed up!

The main change is a large number of new or modified routes (more than 150 in fact) which will replace the existing **high-altitude route structure** up and down the East Coast. Basically, J Routes are out, new or amended Q and Y Routes are in.

Why? Because PBN (less ground-based Navaids).

This will include **super high sector routes** (that's FL400 and above). The full details of the Sector 30 super high sector routes are not yet known but we are expecting:

- 09 DIW Ultra High from FL360-390.
- 50 YKT Ultra High between FL360-390.
- 30 MSN Super High FL400 and above.

Tell me the specifics.

22 Q-Routes (including 9 new ones) and 4 Y-Routes are getting amended.

If you want the full list, go check out the official FAA presentation which you can download via the NBAA site.

What does it all mean for folk flying there?

It means much more **efficient ATC** as it will help reduce their workload, and also the messiness of the

current route structure. This means time and fuel savings for the operators operating in this region, as well as increased safety!

What has happened so far?

You're going to have been seeing a lot of this already, it's been going on since 2019 with 106 route changes implemented so far.

- In May 2021 two Q-Routes (Q75 and Q475) were amended.
- Through the rest of 2020 a large number of J-Rouete were deleted, and modified Q-Route were brought in.
- AR7 and AR25 were removed.
- There was also the whole **Florida Metroplex** stuff, which we mentioned before here.
- And a bunch of new, amended, deleted SIDs and STARs at the major airports along this region

So what do you really need to know?

The route changes will be published September 8. They will go active 20 April 2023. If you do absolutely nothing else, just be aware that **if you file a flight plan from that date you're going to be filing the new Q-Routes**, and you're also going to be PBN-ing a lot more.

Where can you go for more info?

The official FAA presentation is probably the best spot to find the answers to your questions. Here the link (to the link) is again.

And here is some other stuff on NAS changes like the Northwest Corridor.

You can also ask folk directly, depending on where you are/which area you want to know about, or contact the lead FAA people on the project: paul.m.withers@faa.gov /joseph.b.tinsley@faa.gov

ARTCC	Name	Phone	Email
Boston Center	Terry Drew	(603) 879-6808	terrence.drew@faa.gov
	Dennis Tennett	(603) 879-6668	dtennett@natca.net
New York Center			
	John Higgins	(631) 468-1373	john.higgins@faa.gov
Washington Center	Adam Searcy	(386) 235-5220	adam.searcy@natca.net
	Chris Porta	(703) 771-3443	christopher.l.porta@faa.gov
Atlanta Center	Dwayne Copley	(770) 210-7707	billy.d.copley@faa.gov
	Kevin Condon	(770) 210-7960	kevin.w.condon@faa.gov
Jacksonville Center	Andrew Day	(904) 477-7305	zjxoapm@gmail.com
	Ross Gibson	(904) 845-1768	ross.gibson@faa.gov
Miami Center	Dave Petersen	(305) 716-1782	dpetersen13@hotmail.com
	Andre Ferguson	(305) 716-1783	andre.a.ferguson@faa.gov

Go-Arounds Aren’t Normal

Chris Shieff
1 August, 2022

Go-arounds are often described as *routine*. And the guiding principle is that we should be ready to execute them safely, accurately, and immediately on every approach, and without hesitation.

It sounds good on paper, but this expectation is among a myriad of niceties we tell ourselves that all competent pilots have covered. And I’m not sure I agree.

For starters go-arounds *aren’t routine*. They’re just not.

We know this to be true. On average, a long-haul pilot will do one every five to ten years.

Secondly there are the reasons behind them. Weather related go-arounds tend not to be the ones we’re struggling with. Why? Here’s one suggestion – because when conditions are marginal, we are ready for it – we’ve briefed it, we believe it may happen. Our brains are *primed* for action.

But what about when we’re not expecting it – when we’re not primed? When the weather is good, the airplane is on rails and sign-off is within arm’s reach. Are we as prepared then?

Incident histories are littered with **go-arounds gone awry,** and they often have a major trend in common – the crew *weren’t ready* for them. Because the reason for the go-around was unexpected, it *wasn’t routine*.

And when we encounter a non-routine event, we become fallible to limitations that all pilots possess in times of surprise or emergencies. Enter our ‘inner ape.’ It’s hard to tame, so when we have an emergency we fall back on one particular mantra. **Ape repellent, if you will – ‘aviate, navigate, communicate.’** The idea is to break down an overwhelming situation into manageable chunks.

So why then are we failing to apply the same idea to *unexpected* go arounds?

A healthy dose of ‘deer in headlights’ might be the answer. It’s no secret that when we are surprised, **our brains stop** for moment. It is hard wired into us from the days when we were running away from woolly mammoths.

Our instinct is to act now, and think later. And those big ol' TOGA switches are a huge trigger. Once we push them, it's on. We are bombarded with rapid fire mode changes, oodles of thrust, noise, configuration changes, high nose attitudes, and typically we're going up faster than a fart in a bath.

Our brains can switch into overload mode – there is too much information coming at us and too fast to **stay ahead** of the airplane, or even with it.

Here's a couple of scenarios to mull over – how would you manage your airplane?

- You're instructed to go-around above the published missed approach altitude.
- ATC instructs you '*caution traffic 1 o'clock 2 miles. Cancel published missed, maintain 1500′, turn left heading 180 degrees, expect visual circuit.*'
- The pilot flying is about to bust through your missed approach altitude, but isn't responding to you or ATC.

Had we not briefed the missed approach as routine, along with the runway lighting, expected taxiway turn-off and our parking bay, we might be more prepared. But the evidence is suggesting that we're not.

Our approach to go-around training, along with other abnormals, needs to focus on the **unexpected**, the *non-routine*. The industry has already discovered that we learn less when we know what is coming in the sim, and that the real world is rarely as forgiving.

Danger Club returns!

We're starting the conversation at sunset. **Almost dark**. A French Bee A350 is landing in Paris Orly, after an 11 hour flight from SFO. Almost home. But 3 miles out, the machine says "**WINDSHEAR**", and the flight goes from routine to *go-around circus* in about 10 seconds.

The F/O checks out. Startled and frozen. The captain is now single pilot, but doesn't know it. The airplane doesn't know it either, so keeps flying- busting the altitude, heading for departing traffic. **But nobody's flying it**.

Here's your challenge: park any judgement on the crew at the door. Step inside DANGER CLUB, and ask, with your curious-raccoon-mind: "How could this happen to me?"

This is where we might start, but we don't know where we're going with this one …

> Go-Arounds ain't always easy (even if they tell us they should be)
> How bad can startle be?
> How do we get ourselves back in the game?
> Was this all the Captains doing? (Even if the report focuses on the FO)
> Do we HAVE to go-around right away?

That's where we start … this Thursday, July 14, at 1730Z.
Will you join us, curious raccoon?

> The (very readable) accident report is here.
> Also, there is an excellent – as always – video from Mentour Pilot about the whole incident. Highly recommend!

EASA All Weather Ops Changes: Part I

OPSGROUP Team
1 August, 2022

EASA are bringing in new "All Weather Ops" stuff and like usual, they've published the up-and-coming changes in an online document that is harder to wade through than a murky swamp, during monsoon season, filled with hungry hippos.

So we've tried to wade through it a bit for you. Full disclaimer, we might have missed a *hippo* or two,

which is why this is Part I…

You can read it yourself if you want to.

The full 330 page draft document is on the EASA website, along with a 2 hour webinar involving all stakeholders. So if you really want to, go have a listen.

We don't particularly recommend it though. It's not that their *'Holistic Rules Making Tasks'* aren't super interesting, or that hearing what the aerodromes are doing to implement isn't gripping stuff, but **a lot of it won't apply to you** and you'll have to try and work out what does and there is a lot of blue highlighting fog to find your way through.

So instead, if you read on, we have actually done most of it for you.

But before we get to that…

Before we get into the specifics of what you really need to know, here is a *'quicker than a fly with a jet pack'* summary of what is going on.

EASA are taking a 'Total System Approach' to AWOs. Currently airports have equipment, airplanes have equipment, there are no real standards between the certifications of each. Plus, runway suitability really should be determined by aircraft type because trying to define what is *regular, irregular, suitable, not suitable* doesn't really work unless you're thinking about what the aeroplanes can actually do…

So, a Total System Approach has been taken to create a regulatory framework that fits for everyone. A one-size-fits-all (and hopefully looks good on everyone) pair of lovely AWO unisex pants.

- On March 30 the **aircraft equipment manufacturers** got filled in
- **Aerodromes** will be from August 1
- Then from October 30, **Air Operators and all the flight crew licensing stuff** will have its 'entry into force'. Which sounds very Star Warsy but basically mean you'll probably want to have read about it all by then.

What are we reading at the moment?

We are reading the **New CS-AWO Issue 2.** It is divided into three subparts. Subpart A has all the info on the 'Enabling Equipment' (ALS, HUD, EFVS, SVGS, CVS…) and Subparts B and C basically contain the performance requirements and airworthiness type stuff.

The (very basic) idea

The (very basic) idea is aerodromes won't change – their existing equipment already pretty much works for this. You (the operator) can check out the new AWOs and look at your aircraft equipment, and look at the performance specs and work out what you can do where *allweatheropswise.*

90% of airports basically fit with this already. Of the remaining 10%, if you've been operating safely into them already then you're going to be able to sort out some "grandfather" rights to keep operating into there. All the rest (ie if its a totally new route) you'll need to get talking to your aircraft manufacturer equipment provider folk to get approval.

What does it mean?

It means for smaller operators, and especially ones who don't have CAT II/III approval it should be a lot

easier for you to operate into places during nasty weather conditions.

It also means a lot of those gadgety bits and bobs you might use are now going to be included in it making permissions to use it much easier.

OK, so October 30 – What do you need to know?

If you're an operator then we think these are the questions you'll want to be asking (and the new AWO stuff will hopefully be answering for you):

- What equipment do I have?
- What do I want to do with it?
- Does it meet the performance specifications?
- What do I need to do to get the approval?
- What training does my crew need?

If you're a pilot then these are your recommended questions:

- Where am I going?
- What are the new limitations and regulations (in terms of DH, RVR etc)?
- What occurrences do I need to report?

The answers

Sorry! We don't have them for you (yet)! But we reckon if you're heading into this then do so with these questions in mind, and watch this space for our 'answers' once we get that far with it.

If you have answers then email us at team@ops.group and help us out.

Safety used to be SEXY

Mark Zee
1 August, 2022

You know those Safety magazines I'm talking about, right?

The ones that sit in the corner of the crew room.

The ones that literally nobody reads, but might be useful to scribble on, kill a fly, or jam a window open.

These ones.

They all look the same, right?

What you probably **don't know**, is they are all the same because they are all put together in the same place.

This place.

This is Aviation Safety Publishing Ltd. They are in the south-east corner of the Croydon Business Park (between Wendy's and Push Pilates). Their Company Number is 2713662 and their VAT No. is GB444553891.

Each month, the creative team gets together in the "Lindbergh" conference room. There's free (drip) coffee and donuts (the dry supermarket ones). It's a good time.

“**Shall we do something different this month**?”, asks the intern. After a moment of silence and some side-eye, everyone has a good laugh and gets back to selecting the airplane type for the front covers. The meeting is wrapped up by eleven. Back to the desks.

It’s been the same since 1990. That’s when computers came along and ruined everything. Before that, pilots actually read safety magazines. Instead of “What airplane goes on the cover”, the editors asked a different question: “**How can we make this engaging and actually get pilots to read this stuff**“?

That’s weird, huh: in the old days, **the safety people cared whether or not pilots read it!**

They had (actual) creative meetings. They had artists, and cartoonists, and designers. They pushed boundaries. They weren’t afraid to use humour, swear words, and satire. They weren’t even afraid to make it **actually sexy**!

Now, chill. I’m not saying this is a perfect example. Stripes are very 1950’s. But let’s have a look at some of the artwork and artistry from the pre-1990 era of aviation safety!

That feels different, doesn't it?

Could it be, that if we are brave enough to **think differently** about safety, that we might get more pilots reading the very important messages that we want them to?

Here's the thing. If **safety is SEXY** (my byword for engaging, exciting, attention-grabbing, and attractive), then it cannot feel sterile, corporate, empty, and aloof. And these are the reasons I don't read the 2022 magazines.

But in the past, the whole vibe was different. It's light, it's easy, it's fun. When I read that "olden days" safety magazine, it makes me want to **participate**. I want to read the articles, enjoy the art, and get involved. I'll pass it along to a colleague. I'll leave it on the flight deck for the next person.

These days, the only reason I'd leave a safety magazine for the next person, is for that fly I didn't manage to swat before we landed.

Further reading

- A treasure trove of **old-time safety magazines**: Air Force Safety (but make sure to read the pre-1990 ones!)
- A **trove** (minus the treasure) of present day ones featured in the image:
    - FAA Safety Briefing (June 2022, PDF)
    - Airbus Safety First (2013, PDF)
    - Vector – CAA NZ (Winter 2022, PDF)
    - RAF Air Clues (2021, PDF)
- **Office pictures** are in fact from Steve Algren, view the story here.

Hong Kong: New Runway Opening

Chris Shieff
1 August, 2022

In Honkers, things are about to change. The airport's shiny new **northerly runway (07L/25R)** will become operational on July 8 – earlier than expected. Although there will still be some restrictions on its use.

AIP SUP 6/22 (an 111-page 'über-sup') which literally swallowed a bunch of other smaller sups, was published back in April with everything you might want to know about the new runway.

Now that you stand a pretty good chance of actually using it, let us help you out by hand-picking some of the more vital 'need-to-know' info to keep you out of trouble.

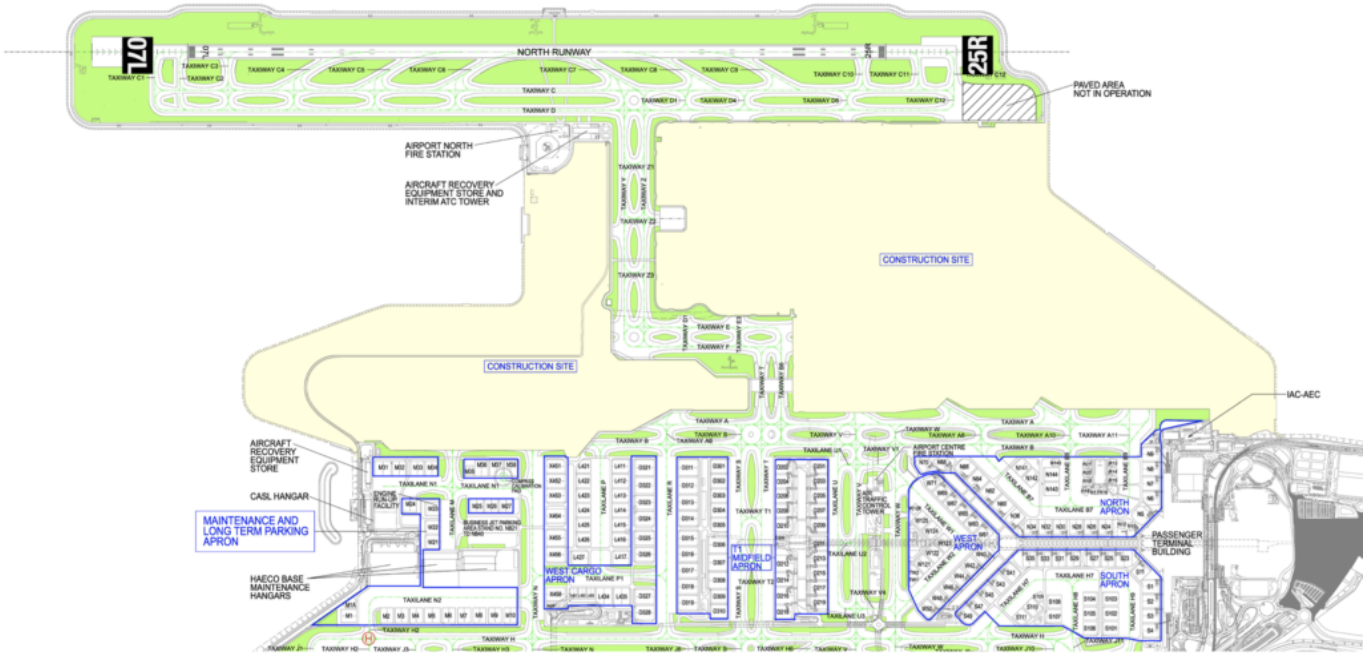
The basics.

The recently constructed 07L/25R is 12,467′ (3,800m long) and 197′ (60m) wide.

There are ILS/LOC approaches at both ends. There are also RNP (AR) approaches, but as their names suggest, you'll need **prior approval** to shoot those.

Runway 07L is also equipped with **CAT II** goodies (25R is CAT I only). A big head's up though – you need to get permission from HK authorities to conduct low viz ops at VHHH *before* you get there. There's a form to fill out, and of course you'll also need to provide evidence of your state-issued approval (OpSpec C060 for US operators).

As you would expect, along with the runway will be a bunch of new taxiways too. The layout is quite straight forward:



The new 'normal' configuration.

The new runway (07L/25R) will normally be used for arrivals, while the southerly runway (07R/25L) will be used for departures. When winds are light or easterly, expect to land on 07L for noise abatement which is preferred.

Squashed in the middle is 07C/25C. It will be **closed** from July 7 until further notice, but recalled if another runway becomes blocked.

Keep an eye out for routine closures for maintenance, which may reduce the airport to single runway ops at quieter times. The weekly schedule for those closures has been published in this (much more bite-sized) SUP.

Watch those 'fly-overs.'

There are new RNAV SIDs and STARs for 07L/25R. Tracking is straight forward, but the major thing to look out for are **fly-over waypoints.** They can be lost a little in the noise of a chart, but if there is a circle around a waypoint, turn-anticipation is a no-no. Make sure the fly-over is correctly coded in your FMS. There are also speed restrictions to keep your turn radius down. The reason for these is to keep traffic well clear of high terrain just a stone's throw away – spot heights within a mile or two of the airport reach as high as 2000.'

Wind shear.

High terrain north of the airport means that in some conditions, wind shear is a real problem.

The new runway is the closest of all of them to those hills, which means it may be the most susceptible.

Be on alert when the wind is from the Northwest through to the Northeast above 20kts, it's going to be sporty – especially if landing on 25R. Carry **fuel** for a comfortable missed approach, and possible diversion.

Bad signals and false captures.

ILS interference has long been reported at VHHH due to the effects of the terrain around it. It can lead to

nasty stuff like **false captures** and **excessive descent rates**. Boeing aircraft are especially susceptible (although don't ask us why). It is often recommended that the LOC is captured first, *before* arming the glide slope. This has been reported on both existing runways, and so it stands to reason the new one (07L/25R) will be no different. Keep an eye on the chart notes for this one. If it happens to you, its really important to report it – there's a form available here.

IFALPA warning...

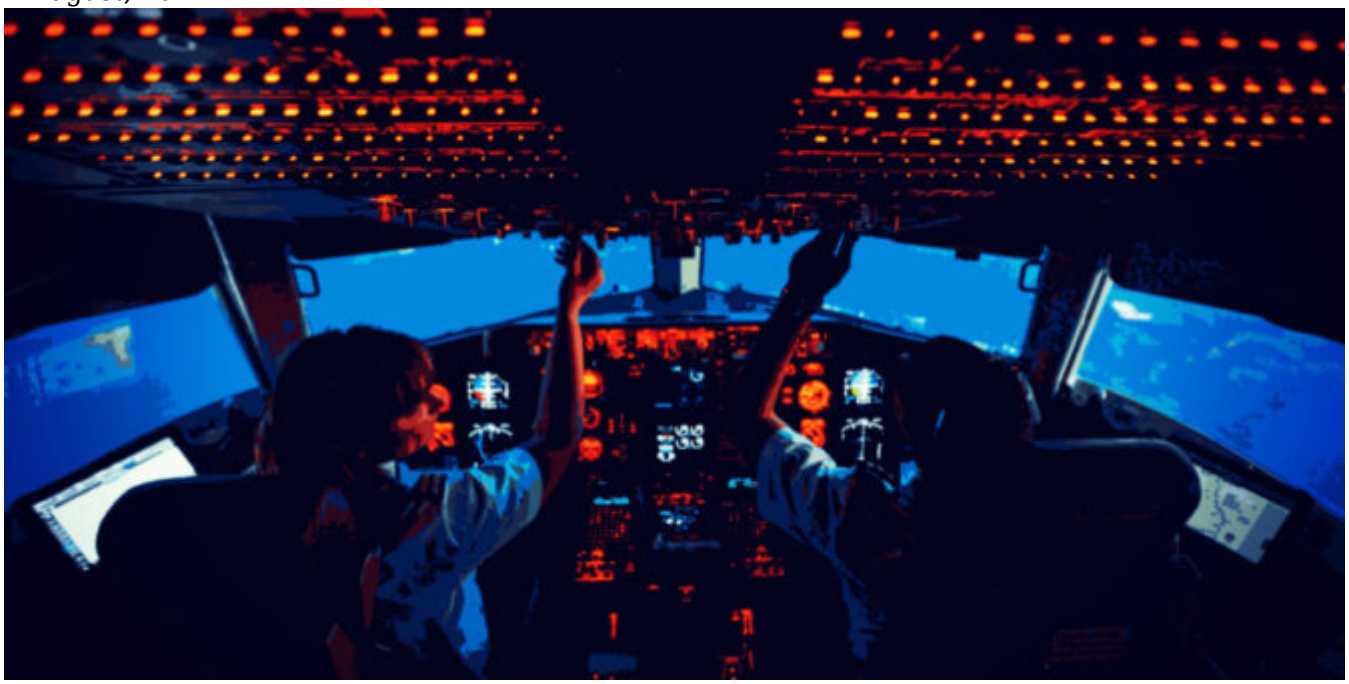
IFALPA has issued a safety bulletin for the new runway (07L/25R). Due to terrain, the ILS is broken into two parts – an RNAV transition, and the approach itself which are found on two different charts. The bulletin has useful recommendations to **stay on the correct profile**, and to avoid **nuisance GPWS warnings** – essentially slow down and configure early. It's also important not to arm the glideslope before the point TOPUN, due to the risk of false captures.

We need your help!

As the new runway configuration gets up and running, we'd love to hear any feedback from operators heading in there. You can reach us on news@ops.group. Or if you'd prefer, you can submit a report to Airport Spy.

The DOs and DON'Ts of Controlled Rest

OPSGROUP Team
1 August, 2022



Fatigue and tiredness are big topics in aviation, and something we definitely need to have more conversations on. *Particularly with some CEOs who are helping add the 'ZZs' into their airlines name...*

But today we are focusing on just one thing: **In-flight rest.** Actually, we're focusing on three things to do with in-flight resting. Basically, the *what to do* in flight when you find yourself in those *"I'm tired, getting tired, think I might get tired, probably should have gone to bed earlier before my flight but now it's too*

late" type situations.

You're there, in the airplane and are tired, so **what can you do about it?**

It's not too late.

Actually, it is too late to not get into that position. If we could zoom back in time and somehow sleep better then that would be great, but for obvious reasons (the lack of time machine) we can't.

Additionally, complaining about being tired, moaning about how your airline pushes FTLs to the limit, preparing a ranting post for PPrune, or lecturing the other pilot (because they're the tired one) on better sleep management are not going to help.

Why not? **Because they aren't going to change the fact that right then, sat in that flight deck, you're tired** and do still have to eventually land the damn thing.

But, good news, it isn't totally too late to try and fix it. So, here are some things that might help, right then and there:

1. **Take your allocated rest, and make the most of it**
2. **Take some controlled rest (if you're allowed)**
3. **Some other things which other pilots say also help.**

This isn't a "treat your body as a temple" post.

If you're looking for diet tips, exercise info or any of that, move on. That's not what this post is about. It also isn't a 'Let's learn about sleep science and Circadian Rhythms and Fatigue Risk Management' post. If you want all that then you can read the ICAO thing on it here.

Allocated rest strategies.

Right, let's start with these.

These are the **things all operators have to let you do if you fly over a certain length of time.** If you have more than two crew onboard for a flight and one or two of them are referred to as **'augmenting' crew**, then you can take some allocated rest.

How you take it depends on the strategies your operator publishes and also what works best for you.

Don't be *that* captain that hogs the entire cruise for themselves. Not cool. The aim here is to split the rest fairly (doesn't always mean evenly) between the crew. **The focus is on making sure the operating crew are best rested** because they're the ones who are going to have to land the airplane. So most recommend they take the last rest period, and **wake up about an hour or so before landing** so they're fresh and ready for it.

Now, to get these really right, you do need to plan it before you even get on the airplane because you'll need to manage your sleep, think about those timezones and all that joyous stuff. We've posted some pretty generic ones for you.

If you are reading this for the first time and work for an airline or operator that uses different strategies and you like 'em, then tell us about them! We won't share your info, just the strategy details to help others.

'How to do it' – generic strategies

- Make sure the **temperature** is set to something normal
- Think about your **liquid consumption** before hand because having to go to the bathroom halfway through will be annoying
- **Don't watch a movie** or play on your phone, this won't help
- **Don't keep checking the time.** Also won't help

To be honest, these are all fairly common sense 'how to sleep better 101' facts so I'm going to stop there, and instead move onto the *'my allocated rest didn't work/ isn't for hours/ I don't get any and I'm really, really tired'* section.

My allocated rest didn't work/isn't for hours/I don't get any and I'm really, really tired.

Also known as **'Controlled Rest'.**

Now, I take controlled rest for granted and am particularly good at it, but I realise a lot of places don't actually allow it? Or authorities haven't approved it? This is frankly ridiculous. **If you're doing long flights at weird hours then you're going to get tired** because no brain can overcome the perfectly natural and necessary requirement to sleep.

Which is why **controlled rest should be allowed** and if it isn't, get onto your operator and make them let you do it. I will add that it does need to be done properly though. There are some times when it isn't appropriate.

Times when controlled rest isn't appropriate:

- When you're about to land
- When the other pilot is also taking it
- When there is something going on that probably needs the attention of both pilots like a huge section of stormy weather up ahead, or anytime you're in Chinese airspace, or if something has broken on the airplane that's quite important…

There are also ***ways*** to do it.

First of all, don't wait until your head is bouncing off the MCP from repeated micro naps. You want to start it when starting to feel snoozy. Having some caffeine before hand is also a good idea because this starts to kick in around the 30 minute mark which means when you wake up, you hopefully won't feel even more dreadful.

Different operators have different rules and methods, but the ones I know are these:

- **Let the cabin crew know** so they don't bug you during it
- **Set a time with the cabin crew** where if they haven't heard from the other pilot by, they check in. In case the other pilot has fallen asleep as well
- **The other pilot should wear their headset.** You should turn your speaker up, but only **have 121.5 on** it. That way, if other pilot nods off, you'll hopefully wake up to the bellowing voice of ATC trying to get hold of you

Then get a pillow and blanket, slide your chair back, put your eye mask on, sleep…

Or just rest. **Resting is also good.** Maybe not as good as a full out snooze fest, but it will help. You should be woken up around the 45 minute mark, and take another 15 minutes to get back to fully alert.

Just to be clear, there are a few things the other pilot shouldn't do:

- Also sleep
- Watch downloaded Netflix on their iPad (had this happened to me once)
- Call a cabin crew member in and talk incessantly because they're bored
- Not wake you up if something starts going wrong

The basics, in juicy Opsicle format

The other things you can do

You're in flight, you can't take allocated rest or controlled rest and you're fast approaching exhausted. What other things can you do?

I mean, this feels like common sense again but here we go.

- **Drink coffee. Caffeine helps.** But don't drink so much you're constantly having to go to the toilet because that gets annoying for everyone else.
- **Stand up and stretch them limbs out.** A good old stretch and walk around can be invigorating
- **Turn the temperature down**. Not to artic cold, but fresh keeps you more alert

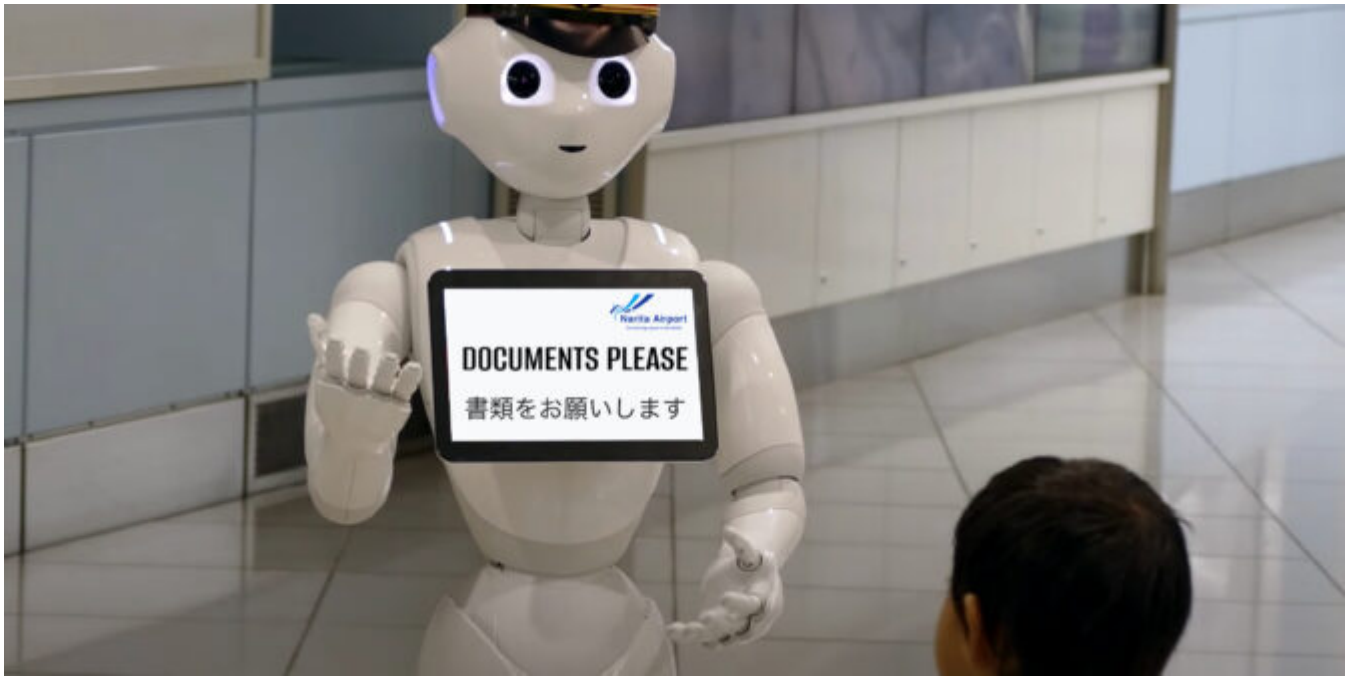
I want controlled rest and my operator says no.

They suck. To help convince them here are some more resources.

- A thing on it from FlightSafety.
- Some more on it from us that we wrote before.
- A pretty shoddy looking presentation, but its by some clever folk at NASA, talking about controlled rest.
- Our email address – so your operator can send in their questions and concerns about it, and we can tell them how foolish they're being.

Declassified: New Crew Rules in Japan

Chris Shieff
1 August, 2022



On June 13, **crew entry rules** were eased – under certain conditions, you **no longer have to isolate** in your hotel room. It's great news for layovers – icy cold Asahi beer and delicious gyoza await.

The problem is where to find that information. The guidance online is all for passengers. So, we reached out to a local agent, who provided us with an 'Administrative Circular' recently issued by Japan's CAA with all the rules just for crew.

But for some reason, **we are not allowed to share it.** *Why?* We're not sure – it is apparently top secret. Before it becomes mission impossible and self-destructs, here is a rundown of what it contains. But you'll have to take our word for it…

Blue, Yellow and Red

Japan has broken the world's countries down into three categories – yep you guessed it, the colours above.

Countries and Regions of each category

	Asia and Oceania	North America	Latin America	Europe	Middle East and Africa
RED	Pakistan, Fiji			Albania	Sierra Leone
YELLOW	India, North Korea, Kiribati, Cook Islands, Samoa, Sri Lanka, Solomon Islands, Tuvalu, Tonga, Nauru, Niue, Nepal, Vanuatu, Bhutan, Brunei, Viet Nam, Marshall Islands, Macao, Micronesia, Maldives		Antigua and Barbuda, Uruguay, Guyana, Cuba, Grenada, Suriname, Saint Cristopher and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Dominica, Trinidad and Tobago, Nicaragua, Haiti, Bahamas, Barbados, Venezuela, Belize, Peru, Honduras	Andorra, Ukraine, Uzbekistan, Kazakhstan, North Macedonia, Cyprus, Kosovo, San Marino, Georgia, Tajikistan, Turkmenistan, Vatican , Belarus, Portugal, Malta, Moldova, Liechtenstein	Angola, Yemen, Egypt, Eswatini, Eritrea, Oman, Cabo Verde, Gabon, Gambia, Guinea, Guinea-Bissau, Kuwait, Comoros, Republic of Congo, Democratic Republic of Congo, Saudi Arabia, Sao Tome and Principe, Syria, Zimbabwe, Sudan, Seychelles, Equatorial Guinea, Senegal, Somalia, Chad, Central African Republic, Tunisia, Togo, Turkey, Namibia, Niger, Western Sahara, Palestine, Burkina Faso, Burundi, Botswana, Mali, Mauritius, Mauritania, Libya, Liberia, Lesotho, Lebanon
BLUE	Indonesia, Australia, Republic of Korea, Cambodia, Singapore, Thailand, Taiwan, China, New Zealand, Papua New Guinea, Palau, Bangladesh, East Timor, Philippines, Hong Kong, Malaysia, Myanmar, Mongolia, Laos	Canada, United States of America	Argentine, Ecuador, El Salvador, Guatemala, Costa Rica, Colombia, Jamaica, Chile, Dominican Republic, Panama, Paraguay, Brazil, Bolivia, Mexico	Iceland, Ireland, Azerbaijan, Armenia, Italy, United Kingdom, Estonia, Austria, Netherlands, Greece, Kyrgyz, Republic, Croatia, Switzerland, Sweden, Spain, Slovakia, Slovenia, Serbia, Czech Republic, Denmark, Germany, Norway, Hungary Finland, France, Bulgaria, Belgium, Poland, Bosnia and Herzegovina, Monaco, Montenegro, Latvia, Lithuania, Romania, Luxembourg, Russia	Afghanistan, United Arab Emirates, Algeria, Israel, Iraq, Iran, Uganda, Ethiopia, Ghana, Qatar, Cameroon, Kenya, Côte d'Ivoire, Zambia, Djibouti, Tanzania, Nigeria, Bahrain, Benin, Madagascar, Malawi, South Africa, South Sudan, Mozambique, Morocco, Jordan, Rwanda

The rules you need to follow depend on where you have been in the past fourteen days – the **most restrictive country** applies.

Blue Countries:

This includes the US, Canada and much of Western Europe. If you haven't been outside the list of blue countries, you will only need to provide a Covid test that is **less than 72 hours old** – more on that in a moment.

There is no need to provide proof of vaccination.

Yellow Countries:

Many South American, Caribbean and Eastern European countries fall into this category.

If you've been in one of these, you will need the same test as above with the additional requirement of being **triple vaccinated** – yep, all three jabs of an approved vaccine.

Red Countries:

There's only a few of these. At the time of writing, just Pakistan, Fiji, Albania and Sierra Leone .

Unfortunately, if you have been in one of them, you will need to **isolate** in the hotel in addition to all the other requirements.

What Covid tests are accepted?

You can view the list in full here, which of course includes the gold standard PCR test.

The biggest gotcha is that **rapid antigen tests** (the super easy ones you can do at home) are not allowed. They are what are known as ‘qualitative’ antigen tests, and Japan has said no bueno. ‘Quantitative’ antigen tests are allowed, but they are not the same thing.

Here’s a little graphic that might help you get your head around which tests are okay for entry. Some of the details are in Japanese, but effectively the ones on the left in are okay, the ones on the right with crosses are no good.

厚生労働省・検疫所

(2022. 6. 10)

日本入国時に必要な検査証明書の要件（検体、検査方法、検査時間）

※ 有効な検体、検査方法等が記載された検査証明書のみ有効と取り扱います。

検体

＜有効な検査証明書として認められる要件＞

○ **Nasopharyngeal/Nasopharynx/NP (Swab/Smear)**
Rhinopharyngeal/Rhinopharynx (Swab/Smear)
（鼻咽頭ぬぐい液）
○ **Nasal Swab**（鼻腔ぬぐい液）
※Nasal Swab（鼻腔ぬぐい液）は核酸増幅検査のみ有効
（Anterior nasal/nares）
○ **(Deep throat)Saliva**（唾液）
○ **Nasopharyngeal（※）(and /, /+) oropharyngeal(throat) (swabs /smear)/NP&OP**
（鼻咽頭ぬぐい液・咽頭ぬぐい液の混合）
（Naso and oropharyngeal/Rhino and oropharyngeal/oro and nasopharyngeal（※））
（※)Nasopharyngeal/Nasopharynx/Rhinopharyngeal/Rhinopharynx）

＜有効な検査証明書として認められない主な例＞

×**Oral (swab/smear)**（口腔ぬぐい）
×**Throat (swab/smear)**（咽頭ぬぐい）
×**Gargle Water**（うがい液）
×**mixture of sample "A" and "B"**
（「鼻咽頭ぬぐい液と咽頭ぬぐい液の混合検体」を除く、複数箇所から採取した検体の混合検体）
（なお、**"A"、"B"は検体を指す**）
<Example>
×Nasal and throat (swab/smear)　（鼻腔・咽頭ぬぐい）
×Pharyngeal and nasal (swab/smear)　（咽頭・鼻腔ぬぐい）
×Nasal and oropharyngeal/oropharynx (swab/smear)
（鼻腔・口腔咽頭ぬぐい）

検査方法

○**核酸増幅検査**
Nucleic acid amplification test (NAAT)
- **PCR法**（real-time (RT-)PCR、（RT-）PCR、Q-PCR、Fluorescence-PCR、Multiplex-PCR）
- **LAMP法**（LAMP、RT-LAMP）
- **TMA法**
- **TRC法**
- **Smart Amp法**
- **NEAR法**（例：ID-NOW®）
- **Next generation sequence**(次世代シーケンス法)

○**抗原定量検査**
Quantitative antigen test (CLEIA/ECLIA)

※日本で無症状者への検査として推奨している検体・検査方法。

×**Antigen (test/kit)**
（抗原検査）

×**Rapid antigen (test/kit)**
（迅速抗原検査）

×**Antibody (test/kit)**
（抗体検査）

※日本で無症状者への検査として推奨されていない検体・検査方法。

検査時間

○**検体採取**が
出国前の**72**時間以内

×**結果判明**が
出国前の**72**時間以内

※今後、国内外の状況に鑑み、上記取扱いを変更する可能性があります。
参考：新型コロナウイルス感染症（COVID-19）病原体検査の指針第5.1版（https://www.mhlw.go.jp/content/000914399.pdf）

A word about vaccines too.

Any **vaccine certificate** must be issued by the government, or other official source. In either English or Japanese is fine.

You need to have received one of the following:

- Pfizer
- Astra Zeneca
- Moderna
- Janssen
- Bharat Biotech
- Novavax

In some cases, a single dose counts as two. You can also mix vaccine doses. More on that here.

I don't meet some of these requirements – can I still go?

Yep! But you'll have to isolate in a hotel and use private transport to and from the airport.

Can I present a 'Certificate of Recovery' instead of a Covid test?

It's not mentioned in the official guidance, but local agents advise the answer is no. At this stage, you'll have to stick to the guidelines above if you don't want to isolate.

What do operators have to do?

Effectively screen all crew for **symptoms** beforehand – anyone with signs of cold and flu are not allowed to operate to Japan.

In flight, if someone starts feeling unwell, the operator needs to let the authorities know – the crew member will be tested on arrival. It will then be on the operator to get the rest of the crew tested too.

Just a note though – pilots and cabin crew are considered as being in 'segregated' areas. So there is no need to test a pilot if a flight attendant becomes unwell, and vice versa.

So, there you have it.

Crew are free to enjoy their layovers in Japan, as long as they meet these requirements. It also goes without saying that **common precautions** apply when out of your hotel – including hand washing and mask wearing.

Never washed your hands before? We've got you covered. Here is a detailed 'how-to' video along with some **soothing electric keyboard.**

Still have a question?

Reach out to us on news@ops.group, and we'd be happy to help.

Shush! Keep the Sound Down!

OPSGROUP Team
1 August, 2022

Sometimes, folk who live in and around airport areas get cranky because, well, airplanes are quite noisy. So airports have some methods in place to help reduce complaints – noise sensitive areas, decibel monitoring, night flight restrictions, noise level regulations, and the thing we're going to look at in this post – **noise abatement procedures.**

Where do we use noise abatement procedures?

Contrary to popular belief **these aren't just for departure.** You get noise abatement routings, and noise abatement approaches.

These are fairly boring though, and by boring I really mean fairly obvious. A noise abatement routing just doesn't fly you low over sensitive areas. Noise abatement approaches generally say stuff like *"try and do a CDA"* or *"don't fly level for more than 2 nm"* or *"don't fly in with all your flaps dangling out from 10,000"*.

EGLL/London Heathrow has a particularly exciting bunch of rules for the arrivals and approaches (probably because English people really like to complain a lot) if you do want to check these out.

The Takeoff ones

For folk who've been around a while, you might remember **TKOF Proc A and B.** Well, forget 'em. They don't exist anymore.

Actually, just checked and some random airports do still use these, but most use **NADP I or NADP II** so that's what we're going to talk about.

NADP I

Also known as **the "close in" procedure**, this keeps folk living directly next to the airport, and birds and

things happy.

You take-off, **reduce your thrust at 800 feet** (that's above ground level!) then climb at a speed somewhere between **V2+10 and V2+20 to 3000 feet,** at which point you accelerate to your en-route climb speed.

Accelerate smoothly is what it actually says, and as you do it, retract them flaps and slats and any other dangling bits you have hanging out.

NADP 2

The "distant" procedure. Although not that distant.

This one has you take-off and **at 800 feet you clean up** all the sticky-outy stuff, and then you **reduce your thrust** and fly at your **Vzf speed**. Which is probably something near to your minimum clean speed. So climb away at something safe and sensible, until you get to 3000 feet, then accelerate.

Right. You knew that already. So why are we talking about them?

Well, you'd be surprised how many people don't entirely '*get*' NABTs. There are a few pointers to consider to as well…

- **The amount of noise reduction gained is going to vary a lot depending on aircraft type**. These are a sort of "fits all" procedures. Which means that just because you think your aircraft is particularly quiet, you shouldn't think you don't have to do them. You do – they're a regulation.
- **However, you can change up your procedure to suit your aircraft** so long as it conforms to the general intent of the procedure – which is to reduce noise! In other words, you can do something else so long as it maximises the noise benefits obtainable from your aircraft.
- **You also shouldn't follow these at the risk of safety.** Obviously, that comes first. Which means if it's mega windsheary out, you can take TOGA and blast the eardrums away of anyone under you if you need to (particularly if you need to in order to avoid crashing on them. They'd probably prefer the noise over that.)

Some questions (and answers).

These are based off genuine questions folk have asked on this subject. The answers are what we'd have given if they had sent those questions directly to us.

V2+10 to 20 knots is too slow and my aircraft will buffet and potentially stall.
No, it won't! V2 is literally called your "takeoff safety speed". If it's gusty and windy out then you have a margin there anyway. If it's windsheary out then you can disregard the procedure. But no, flying at V2+anything is not going to result in your aircraft stalling.

20 degrees + nose up is uncomfortable for my passengers.
Again, *margin*. You don't have to rocket climb, and you can adjust the procedure for your aircraft type. Just use a little common sense. If you're light and empty and tiny and quiet then do something appropriate.

An engine failure at V2+15 with huge nose up attitude would cause a dangerous yawing motion and stall if you're not on top of it.
Presumably V2+15 is above VMCA? Yes, it is. Which means no, it won't cause a *dangerous yawing motion* and make you stall, unless you don't know how to handle an engine failure. Which you should because we

practice them all the time. Also, surprisingly, this is actually something the aircraft manufactures test.

Departures with larger flap deflections are bad for the flaps.
I checked and there is no flap warranty sticker saying *"don't use me for more than x number if flights or I might get all wobbly"* attached to the flaps of my aircraft, or stuck anywhere in the FCOM.

These procedures are designed for a 777 taking off at MTOW, not my little Embraer G-whatever.
Actually, they're designed to ensure noise limits are met. They are regulatory procedures so follow them, or get something approved in your OM-A as an alternative. A lot of Aircraft Operating Instructions do specify that NABT departures are based on a certain climb rate that needs achieving, for example. So you don't have to blindly apply NABT I if you can meet the requirements without it.

I won't be able to meet the climb constraints if I follow the NABT procedure.
It's unlikely you're going to find a NABT at an airport that has incredibly horrifying terrain right at the end of the runway. But if there is, the best way over that terrain is going to be to climb at the best rate you can. Which probably isn't going to be altogether that different from what the procedure requires anyway.

If you really do find somewhere where the NABT procedure will genuinely impact your safety margins, then safety is the priority and you might just want to tell ATC about it before taking off to avoid some hefty fines.

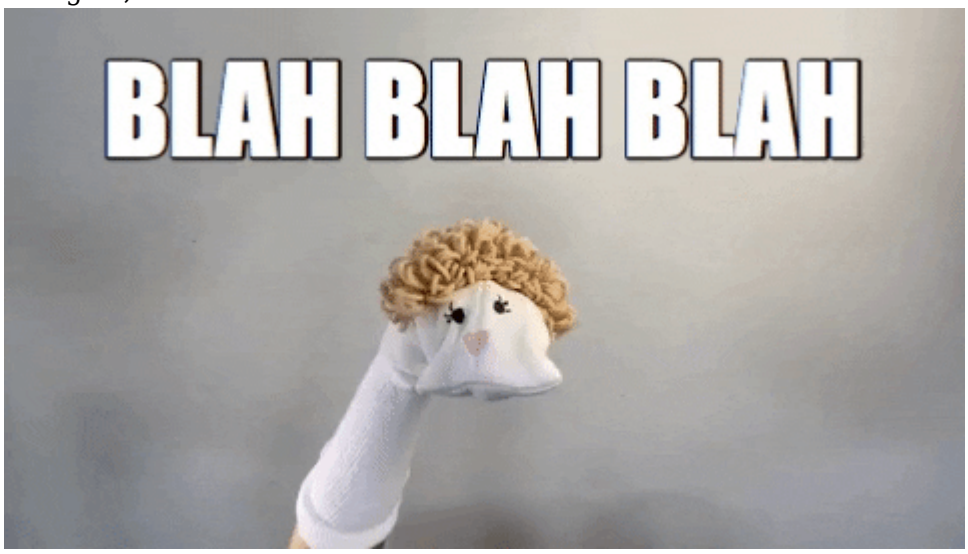
So there we go...

The Opsgroup guide to NABTs. If you're still unsure then here are some handy references to read:

- Skybrary stuff on it.
- ICAO stuff on it.

The Art of the Threat Based Briefing

OPSGROUP Team
1 August, 2022



Have your briefings become a *"one-size fits all solution serving as a repository for redundant verbal crew crosschecks of highly automated, highly reliable systems"?*

If the briefings at your operation sound a bit like that, then read on for some suggestions on ways you might fix 'em up…

First up, a reminder of why we brief?

We brief because we want to **try to identify anything that might mess up our flight up,** and work out how to stop it before it gets the chance to. That includes identifying anything silly the other person might be planning on doing, so it's good to include them on it too.

The word 'brief' actually means a bunch of things – *of short duration, a set of instructions, underwear* – which all seem fairly appropriate to what we are using it for (underwear being the inner line of support, defence and protection when things get really scary…)

So, what do we want our brief to contain?

We want our briefing to cover **any threats and possible errors** we spot out in the big wide world, and we also want it to involve some ideas on how to mitigate against these.

If you're not sure then we find this list handy. If you say yes to any of these, talk about it:

- Does something feel **scary?**
- Does something look **hard?**
- Does anything seem **weird?**
- Is there a chance you'll do something **stupid?**

And what don't we want it to contain?

- Too much waffle.
- Too much explaining 'how to fly' to the person next to you (they probably know already).
- Stating the obvious or listing SOPs that you both know anyway.
- A plan for absolutely everything possible, including what to do if a Pterodactyl attacks. It just isn't necessary.

Any of these will definitely result in your co-pilot shutting off and not listening even to the bits you do need them to hear.

So how do we do this?

Well, we can play a sort of 'I-Spy' game.

"*I spy with my little eye, something beginning with M."*

"Merr.. Muu…Maaa…Mountain?"

"Yes, one point to the co-pilot!"

Or we can be a little more structured about it and **follow a method** which helps remind us of the big stuff

to look out for. We have one to share, which is summed up in the nice tidy acronym: **C-TWO-F-U.** You might like it, you might not. But here it is.

C is for Charts

We probably want to take a fairly close look at these since they are what we need to follow, and they often lay out some of the big threats for us.

Taxi charts, arrival, departure, approach charts… A quick **confirmation of the date** to make sure it is the valid one is important, but after that really you are looking to do two things here:

1. **Look for anything unusual, threatish or dangerous on the charts.** A lot of them include some really useful little notes actually.
2. **It is no good briefing a chart to death if it isn't what you then fly.** A confirmation that what you're talking about is what you've programmed into the box (tracks, altitudes, speed constraints etc) is also important. Think of it as briefing your airplane too.

T is for Terrain

Why does terrain get its own section? Well, because it's big and if you get it wrong it's nasty. **C-FITs (Controlled Flight Into Terrain) are one of the biggest common accident types.** From 2001-2020, CFIT accidents were the second largest category (21%) behind LOC-I (33%).

So, take a look at the terrain and more importantly what it might do to you.

- Turbulence.
- Weird turns required.
- Mega RODs (after you're over it).
- Constraints on the way out. Or the way in for that matter.
- High elevation.
- Climb performance problems.
- Missed approach gradient problems.

But remember – don't just scare the pilot next to you with a list of horrifying 'death threats' – try to explain how you reckon you should deal with it all as well.

W is for Weather

Another big one. **Review it for that specific flight**. No point talking about wind shear if it's a lovely calm day – what would be the point?

It isn't a lovely calm day? Well, whatcha gonna do about it? Which heading do you want to avoid that mega storm? Do you maybe want to run the performance again since the runway is covered in ice?

O is for Operational

You might have covered some of this earlier so don't go re-listing it all again. Here are some ideas though:

- **Aircraft:** Talk about any MELs, CDLs, random or specific procedures you might have to consider for *that flight.*
- **Airport:** Are there any NOTAMs, specific procedures (Noise Abatement Procedures perhaps?), altimeter setting procedures (metric, or low transition alts)?
- **Crew:** Talk about yourselves, any threats there? I like to mention things like how irritable I might be because I didn't have lunch.
- **How you'll fly it all:** Share your autopilot usage plans and stuff like that.
- **Performance:** A good time to check this and make sure you've done it, and you've set it up in the box properly in terms of speeds, flex, all that stuff.

F is for Fuel

Check you have what you wanted and check it's still what you need.

U is for yoU?

I added this in because I thought 'FU' sounded funny. Really this is just a last *"any questions?"* Or a *"anything I've missed* that yo**U** can think of?" moment.

How do we brief?

If we do the briefing out loud then it definitely helps – few of us are mind readers. If you make it **interactive** – well then now you've got two pilots both thinking about it and working it out together. Bonus.

I said it before, a quick reminder again – a good threat based briefing is about **identifying threats specific for that day, for that flight, and then coming up with strategies for preventing them.**

What?: *A steeper than normal approach gradient? Ok, great, spotted it.*

Why?: *That could be a threat to our stabilisation and speed control. So what to do about it?*

How?: *Configure early, get the PM to keep an eye on that speed, be prepared to go-around if it becomes unstabilized.*

Any other methods?

Airbus have recently changed their recommended briefing method and it is now super simple. All SOPs, standard stuff, checks etc are out, and the briefing now follows this format:

PM: Begins the briefing with the general **plan** – runway, SID, stop altitude and any extra fuel

PF: Talks through the general **strategy** – how to get to the runway (including any taxi hotspots), how to fly the SID (use of automation), any Notams or operational stuff to affect it all, and any other relevant stuff specific for that flight on that day.

PM: Raises any **threats** they spot

PF: Talks through how to **mitigate** those threat.

Watch it in action here (and you don't have to be Airbus to use this!)

Brief done!

That's the why, the what and the how...

A decent threat based briefing any time you head in or out of any airport is important. If you've just been there earlier that day, maybe don't repeat the whole thing all over again though.

And what about when you are heading to an airport you are not familiar with? At Opsgroup we like to put together **Airport Lowdowns.** These are briefing aids that you might find handy because they include information from other members (other people who have been there before!) to try and give you a heads up on what to expect.

They are just trying to capture some of those Big Threats that you might want to think about and talk about in your briefings. You can find them in the Documents Library on your Dashboard, but if you want email us and we'll see if we can put together one for you.

Further Reading

- Here's the article on how arrival and departure briefings might not be up to scratch, which sparked the lightbulb for us with our article.

ACARS Oceanic Clearances on the NAT

OPSGROUP Team
1 August, 2022

There is a revised NAT OPS Bulletin that was issued June 14. Bulletin 2020_001 is all about **ACARS Data Link Oceanic Clearances.**

It puts all the procedures for **CZQX/Gander, BIRD/Reykjavik, ENOB/Bodø, EGGX/Shanwick and LPPO/Santa Maria** into one spot, instead of having them spread between all the different individual ANSP

NAT OPS Bulletins.

When we compared the old version of the Bulletin with this new one there aren't really any big differences at all. Essentially none, in fact. But since we recently confused ourselves a lot over all things ACARS related, here is a refresher summary of what it says…

Have a read of the intro first

Point 2.2 of the introduction says this:

"The ACARS Data link oceanic clearance service is provided by means of VHF and satellite to ACARS equipped aircraft via communications service providers ARINC and SITA. It should not be confused with FANS 1/A CPDLC."

(I totally confused these earlier, despite having used both.)

"Operators intending to participate in the ACARS data link process are required to contact their communications service provider and indicate they would like to receive the service."

So that means the likes of ARINC and SITA.

The Procedures (in short)

1. Put the **ACARS logon** in, along with your flight number and the OCA facility.

2. Make sure you request your clearance at the **right time** (not too early, not too late). Here is the current table of timings:

(This is the only change we spotted from the old one – Gander used to say 90-30 minutes, now it says **90-60 minutes.**)

3. Make sure your RCL has **all the right stuff** in it:

- The OEP *(this means Oceanic Entry Point, not to be confused with OAPs which mean old person)*
- Your ETA for the OEP
- The requested flight level
- The highest acceptable flight level you could reach by the OEP. *This goes in the free text section by putting MAX F123*

4. If you don't get some sort of **"RCL Received" message within 5 minutes** of sending it then you're going to have to use voice instead.

5. Once you get your clearance, **check it well.** That means checking the LATs and LONGs in your FMC. If the clearance doesn't match your flight plan, then both pilots should independently confirm the coordinates and points. If you don't like your clearance then negotiate by voice, otherwise send your CLA (clearance acknowledgement). If you don't have that function, do it with your mouth.

11. FLIGHT CREW CHECKLIST

1	Complete ACARS logon
2	Send the RCL
3	Ensure confirmation message is received
4	If error message received, revert to voice
5	Receive ACARS data link oceanic clearance
6	Confirm call sign in clearance matches the call sign in the flight plan
7	Confirm that route coordinates match the full Lat/Long coordinates in the FMS and on the NAT Track Message (if on the OTS)
8	Send CLA
9	Ensure confirmation message is received
10	If error message received, revert to voice

Some peculiarities with each of the OCAs

Gander

- If you're departing somewhere **less than 45 minutes** from your Gander OEP, then get your clearance 10 minutes before you depart.
- Sometimes you might get an ACARS oceanic clearance before you've even sent the RCL.
- If you fly an aircraft that is **not able to send an RCL**, then you can set yourself up for Gander's special service but need to do it in advance:
    - Get in touch with your comms service provider and NavCanada
    - Put AGCS in item 18 of your flight plan
    - Expect to receive your clearance automatically once you logon

Shanwick

- **You must not enter Shanwick without a clearance.**
- If you're flying between and **Irish and a Scottish airport**, its not very far, so might want to get your clearance before departure.
- You get **2 chances** with Shanwick. If at first you don't succeed (you don't get the RCL received confirmation) then try again.
- If you've left it too late and are **within 15 minutes of your OEP**, you ain't going to get your clearance via ACARS.

Reykjavik

- They don't give clearances via ACARS if you're **departing from an airport in Iceland, Greenland or the Faroe Islands.** Get it from whoever you're talking to on the ground before you go.

Santa Maria

- You don’t need an RCL if you’re **departing from the Azores,** you’ll get it through the (VHF) radio or possibly get a CPDLC route confirmation before you head out into the great blue yonder.

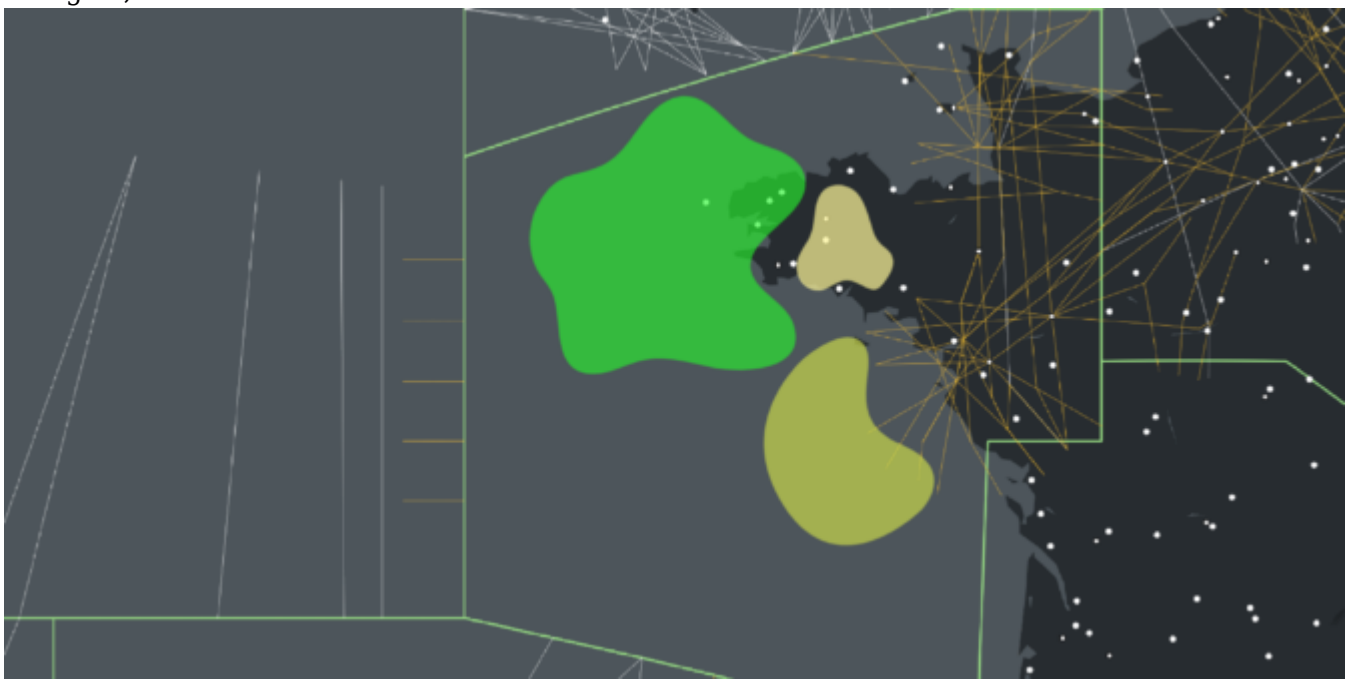
Other helpful stuff in the bulletin

Inmarsat datalink probably won’t work above **N82°**. Iridium and HF datalink should.
The flight level in the clearance is not a clearance to climb. ATC need to clear you, and need to make sure you reach it before the OEP. But… if you lose comms then this is the cleared oceanic flight level.
Contacts:

Gander: Robert Fleming robert.fleming@navcanada.ca
Reykjavik: Bjarni K. Stefansson bjarni.stefansson@isavia.is
Bodo: Kenneth Berg Kenneth.volden.berg@avinor.no
Shanwick: Iain Brown iain.brown@nats.co.uk
Santa Maria: Jose Cabral jose.cabral@nav.pt

There’s a blob of airspace causing issues in the NAT

OPSGROUP Team
1 August, 2022



Why is there a huge blob of restricted airspace (and several smaller blobs too) **right over the spot where folk like to leave the NAT HLA?**

Thanks, France. Their big chunk of military airspace bordering the NAT, that they regularly activate, definitely does cause a lot of planning issues, so we figured we would take a look at it…

What (where) is the problem?

The problem is in the **LFFF/Brest FIR,** which as you can see below borders the NAT HLA BOTA bit. In fact, every exit/entry from the NAT into French airspace is via the Brest FIR/UIR border, so as you can imagine, a **whopping great military danger zone** just the other side of it is going to be a little in the way.

Which is exactly what the problem is.

That big danger zone means when folk submit their flight plans which have them routing over the Atlantic and into France another neighbouring places, they are getting rejected.

Sometimes, an alternative routing option is offered, but the NAT exits are way up on EGTT/London airspace which means **significantly longer routings,** which nobody wants.

There is also a bit of an issue with **the automated Eurocontrol flight planning system.** It doesn't always immediately reject your flight plan – sometimes it waits until midnight so you get a nice message in the morning, not too long before your flight which you now have to replan…

So the military are to blame?

That might not be entirely fair, but it is down to some **active military zones** that most of these route plans seem to not be successful.

The main one we've seen causing trouble is in AIP SUP 045/22, which is valid from **24 March 2022 to 22 March 2023.** Activation of the area is possible H24, and they activate it a lot.

You can find all the **temporary activated areas and timings** here on the French AIP SUP page.

We also saw one from June 15-23. *"Ocean HIT 2022"* uses the same sort of area and **irritatingly coincides with a different exercise (HYDRA) on June 20.** This means poor old EGGX/Shanwick is going to be dealing with most of the crossing traffic that day and there is likely to be a **medium impact for flights.**

What can you do about it?

Not a huge amount really. If the areas are active you aren't going to be able to operate through them. We asked around, and folk said they've been doing **a lot of LIZAD and NAKID routings.** Some folk have reported simply planning higher levels and that's apparently worked.

You can attempt to get inflight re-routings. You can also try these chaps who provide the actual time slots of activation to give you a better picture:

CCMAR ATLANTIQUE Phone : +33(0)2 98 31 82 69 / +33(0)2 98 84 49 57 (backup).

Anything else to know about?

The French and German Navy have been using some airspace in **EGGX/Shanwick** which occasionally gets in the way of some of the Tango routes.

All of the upcoming military exercises in Europe are notified through the Eurocontrol Network Operations Portal.

US: 5G Rollout Near Airports Delayed Until 2023

Chris Shieff
1 August, 2022

Six months have passed since the FAA hurriedly reached an agreement with Telecoms AT&T and Verizon to **delay switching on powerful new 5G antennas near major airports.**

That agreement was set to expire on July 5. And the original concerns haven't gone away – **5G can still interfere with radio altimeters**, and the industry is still scrambling for a fix. If safety buffer zones were to stop buffering at larger airports, where low visibility landings are more common, the impact would have become even worse.

However, on Friday the FAA released its first update since February – and the news is good…

A new agreement

AT&T and Verizon have agreed to **extend the delay until July 2023** to allow the FAA and operators more time to get their ducks in a row.

There is compromise happening on both sides of the deal. While the FAA hasn't gone into the specifics, they have said there is now a **phased rollout plan** to make sure that both sides are kept happy.

The FAA will begin work to identify which airports are safe enough for the Telecoms to start *enhancing* their services there right away, without turning everything on.

On the flip side, there will be **more time for operators of aircraft fitted with radio altimeters vulnerable to interference to replace them, or install special filters.** Regional aircraft are particularly affected by this.

Considering that the first customers are only just now receiving these filters from the radio altimeter manufacturers, the original goalposts were always fairly ambitious.

A new FAA deadline for operators to complete work on their fleets is set for the end of the year, and this time it looks to be firm. The Telecoms are expecting to be let loose at the end of the new deal.

In the meantime

The status quo – existing restrictions will remain in place. Back in January over a thousand Notams (1,478 to be precise) were issued when 5G hit the proverbial fan. Many of them restrict the use of Autoland, HUD to Touchdown, and Synthetic Vision Systems at specific airports. The FAA has also published a guide that explains the different types of Notams and what those limitations mean for operators at various airports.

The FAA has also since provided a number of **exemptions** for more common passenger jets to continue with **low visibility landings.** You can view those through the FAA's handy map here.

Unfortunately, the support for **business jets** has not been as forthcoming. If your aircraft doesn't have an exemption, you'll have to stick to the Notams, which means paying extra special attention to the weather

and alternate planning when it’s looking murky out there.

Buffers will also remain in place at several major airports to make sure that low visibility landings can continue without causing major headaches for operators. You can view that list here.

Other things to look at

If you’d like to know more about the problem with 5G networks and aviation in more detail, we wrote a blog article earlier this year that would be a great place to start.

There’s also the FAA’s official 5G website, where updates like the one above are published.

Get in touch

If you have other questions, we’d be happy to help. You can reach us on news@ops.group.

Big Summer Slots (a Storybook)

Mark Zee
1 August, 2022

This summer is going to be **worst ever in Europe for delays** (so we’re told), which means if you’re going there you’re going to get a **nasty CTOT** sooner rather than later.

So rather than writing a long and helpful blog post to help you navigate the slot rules, instead we’ve put together a vacuous and infantile story book.

But, it **might still help a little to figure out how NMOC** (the artists formerly known as CFMU) **at Eurocontrol works**, how to deal with a bad slot, requesting improvement, how and when to file, and when you should or should not contact NMOC for help.

Once you’ve enjoyed (or not) storytime, be sure to scroll down for some more “adult” links to the in-depth

material

Click above for the PDF version (which you can also download directly).

If you prefer, try this “Book” version ...

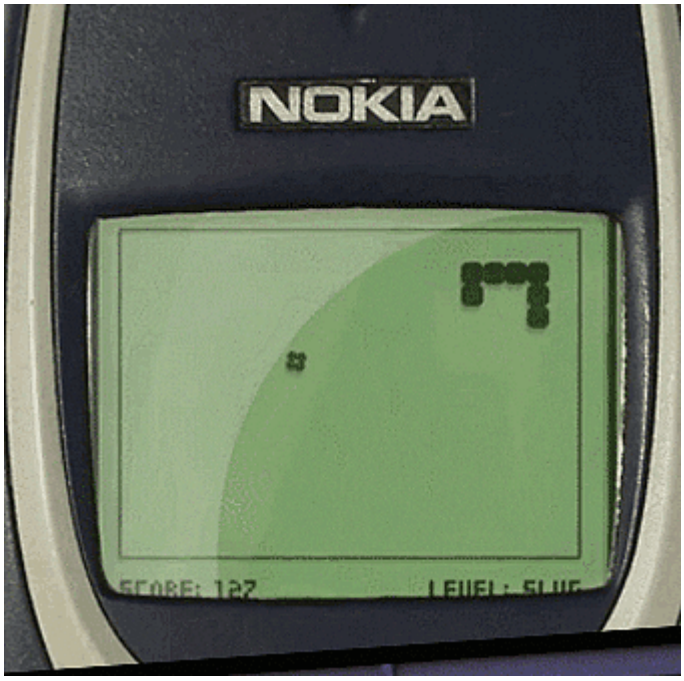
So, onto the adult version... Eurocontrol NMOC have published a **really useful guide to slots** this month, for the Summer of 2022. Download that here as a PDF (31 pages)

For the full bible, you want the IFPS users manual, and the ATCFM operations manual.

Do you have any other useful links or documents about European slots? Tell us! ops.team@ops.group.

Kathmandu got RNP-AR (and so should you)

OPSGROUP Team
1 August, 2022



RNP AR approaches are not your standard stuff. They need special authorisation and training for you to fly them. But it is worth it because these complex looking approaches are generally used in some of the most challenging places, to make your life easier (and safer).

So here is a quick look at them, some insights into why you might want to fly them, and how to sort that out.

What does this acronym mean then?

RNP means Required Navigation Performance. Which is something under the whole 'PBN' thing which basically lets aircraft fly along a nice, precise path with a lot of accuracy.

It's the newer, better version of RNAV that has **performance monitoring and alerting** involved.

You've probably come across it in a bunch of different places and with different numbers after it. RNP 4 over the oceanic and remote spots, RNP 1 on approaches… the number is the **accuracy requirement.** So 4 means accurate to 4nm 95% of the time. Or your system tells you (that's the alerting bit).

AR means authorisation required.

RNP-AR you allowed?

You can **get that authorisation with an LOA** and a bunch of training. In the US this is covered under section 9 of your En-Route / General Rules and Procedures / Holding, Approach and Departure Procedures which you can find here.

The FAA issues RNP AR authorization via operations specification (OpSpec), management specification (Mspec), or letter of authorization **(LOA C384)**. There are no exceptions. Operators can find a lot of info on RNP AR aircraft eligibility, operating procedures, and training requirements in **AC 90-101.**

Which (because we're generous with our links) can be read here.

Like anything, it comes down to the equipment you have in your aircraft as well. It requires certain GNSS and an on-board inertial system (IRU/IRS) setup, an FMS navigation with multi-sensor capability (so there is something as a backup to maintain RNP if the GNSS is lost)…

Surprisingly few BizJets seem to have what is needed. Good news though, companies do offer retrofit options.

So, what does an RNP AR look like?

Well, it should look **accurate to 0.3** (that's about 40m with SBAS), and sometimes even 0.1.

If you're in the US then your RNP AR APCH is probably going to be called an **RNAV (RNP)**. It should have **AUTHORISATION REQUIRED** scribbled somewhere on the chart too because, *you know, you need it…*

You do also get ones for departures too.

Why do we like them?

"An RNP AR APCH (approach) is a procedure that allows for narrow, linear obstacle clearance corridors in the procedure design…"

In other words they **help you get into tough places by giving more guidance** in a more sort of 3D way.

This means they can have some real funky stuff going on in them like swirly turns, RF (radius-to-fixes) and all that sort of stuff. But if you know how to fly them and are allowed to then this is going to save you a whole bunch of woe in some challenging spots.

Like VNKT/Kathmandu…

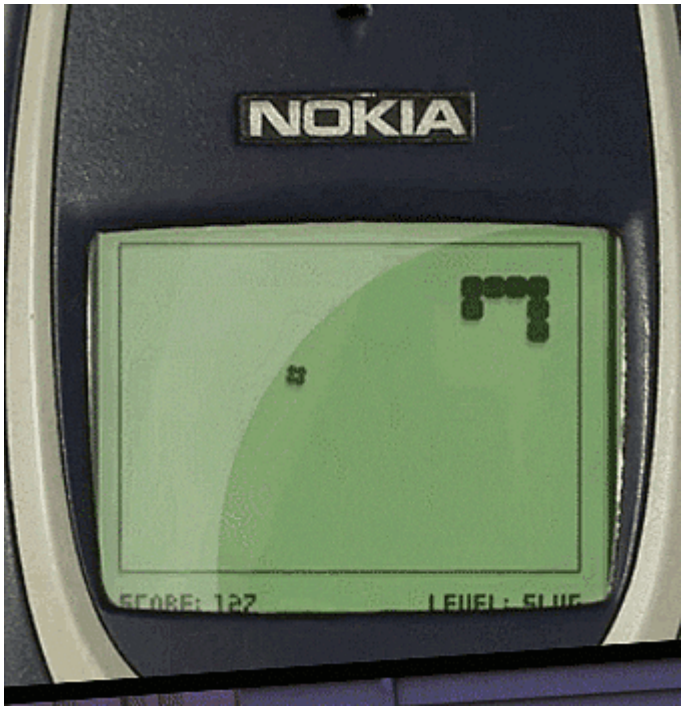
Kathmandu?

Yep, Nepal's main international airport. (They only just built their second international airport in April 2022 over at Bhairahawa).

At VNKT/Kathmandu, they just installed some **RNP AR approaches** which came into effect **May 19**. And about time too, because this is a mean airport with all that terrain, and before these new approaches you just had some VORs.

You can find the full AIP here.

If they remind you of that old snake game then that's because there is **a lot of vicious terrain in Kathmandu.** Which is why RNP AR approaches which let you zigzag between all the mountainy bits are helpful.



Where else are these handy?

Anywhere there is nasty terrain. Alaska, New Zealand, Peru, Chile, Ecuador, Indonesia… There is one for Cape Town that massively reduces track miles, another in Guatemala for departure that will help with your payload restrictions…

KPSP/Palm Springs makes excellent use of them, and you will even **find them at some major airports** which don't have terrain, because they can ensure **traffic remains clear** of other airports in particularly congested airspace (KMDW/Midway and KORD/O'Hare for example).

Want more info?

This is a good article from AvBuyer which goes into more depth for those of you looking to retrofit your aircraft.

Here is a presentation from ICAO on it, because who doesn't love a good powerpoint.

Aloha, RIMPAC: Major Military Exercise in Hawaii

Chris Shieff
1 August, 2022

From **June 29 – August 4**, the world's largest military exercise will be happening near Hawaii. It's called the Rim of the Pacific Exercise, or RIMPAC for short.

It's a big deal – this year over twenty-six major nations (including the US, Canada, the UK, and Australia) are taking part in **extensive naval and aerial activity** happening every day through a lengthy period.

If you're operating into (or near) Hawaii during the exercise, it'd be a good idea to brief on what to expect. The FAA's Impact Statement is the official guidance, but it's a solid read. If you're after something a little more bite-sized, we've got you covered.

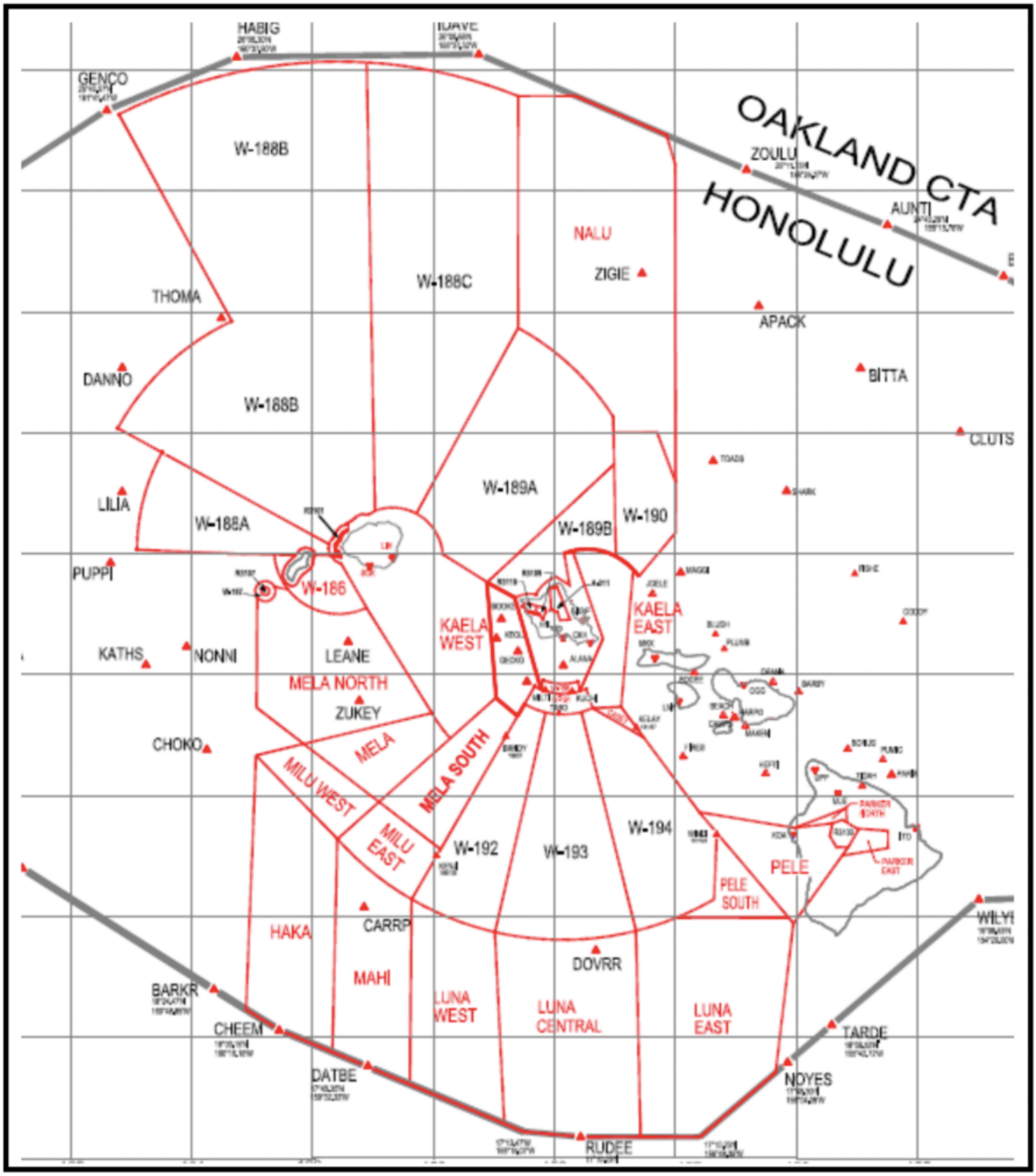
Here's a breakdown on the biggest need-to-know info…

Let's Talk About Airspace

The vast majority of RIMPAC will be contained within Special Use Airspace. The usual suspects will be included – all permanent warning and restricted areas on your charts, along with other types of special use airspace with scary looking abbreviations like 'ATCAA,' 'ALTRV,' and fancy names like 'Nalu,' 'Haka' and 'Luna.'

Big picture – don't go into the red boxes when they're active (more on that in a sec).

Before you tackle the official FAA Impact Statement, for the love of Pete **have a map open next to it.** Once you can see where all this airspace actually is, as I learned, things suddenly get a lot easier – luckily the FAA has put one together:



Righto, timings.

Even though RIMPAC starts earlier, most of the actual flying won't kick off until **July 11.**

As a general rule, any restricted airspace that goes high (Surface to FL600) will be active each day between **07:00 – 22:00 HST (17-08z)**. Outside of these times, any restrictions will generally be low level (less than 12,000').

But, there are some **exceptions** to look out for. Got that map ready? Bueno…

The big one is that MILU East, MILU South, W-192/3/4 (all south of Oahu) **will remain in effect 24/7**, and at all levels.

There are also some subtle differences to timings for W189B and W190 which also extend up high. These are only active from mid-afternoon.

What will be the impact?

Just remember: **15 minutes.** It seems to be the magic number.

You can still file as per normal, but if you're operating on an affected route (including some PACOTS), you'll have to accept delays for re-routes of up to 15 minutes. Which means more contingency fuel.

Here are the routes that the FAA's guidance specifically mentions:

To/from Asia:

PACOT tracks 11/12 and A/B between Hawaii and the Far East.

To/from the US:

If you're routing between the **Pacific Northwest** and Hawaii, try and plan above FL290. If you're unable to, 'Nalu' will get in the way. ATC will be able to vector you onto another airway (A331), but it will mean a reroute. If you can stay above, there will be no impact.

If you're headed to or from the **Pacific Southwest,** 'Mahi' and 'Haka' will affect flights at all levels, with the same delays.

To/from the South Pacific:

Flights between Hawaii and **Tahiti, Fiji** and **Samoa** will be impacted by Luna West, Central and East can also expect reroutes.

The FAA advise in all cases, the delays will not be worse than fifteen minutes (and that's a worst case scenario).

What about Hono?

Retractable barriers are present on three of **PHNL/Honolulu's** four runways, which are used to simulate carrier landings – pretty neat huh?

The only downside is that when a capture is needed, that runway will be **unavailable for forty-five minutes.** The FAA advise that this could cause delays of up to fifteen minutes while ATC juggles things around.

Then there's the two nearby military airports – **PHIK/Hickam** and **PHNG/Kaneoehe Bay.** As they will be used to house a number of military aircraft transiting to and from the exercise (the rest will be on a carrier), ATC may need to implement **flow control** at PHNL/Honolulu to keep things within capacity. Again, nothing worse than 15 minutes…see, the magic number.

I need to speak to someone.

The FAA has listed two contacts over at the Honolulu Control Facility:

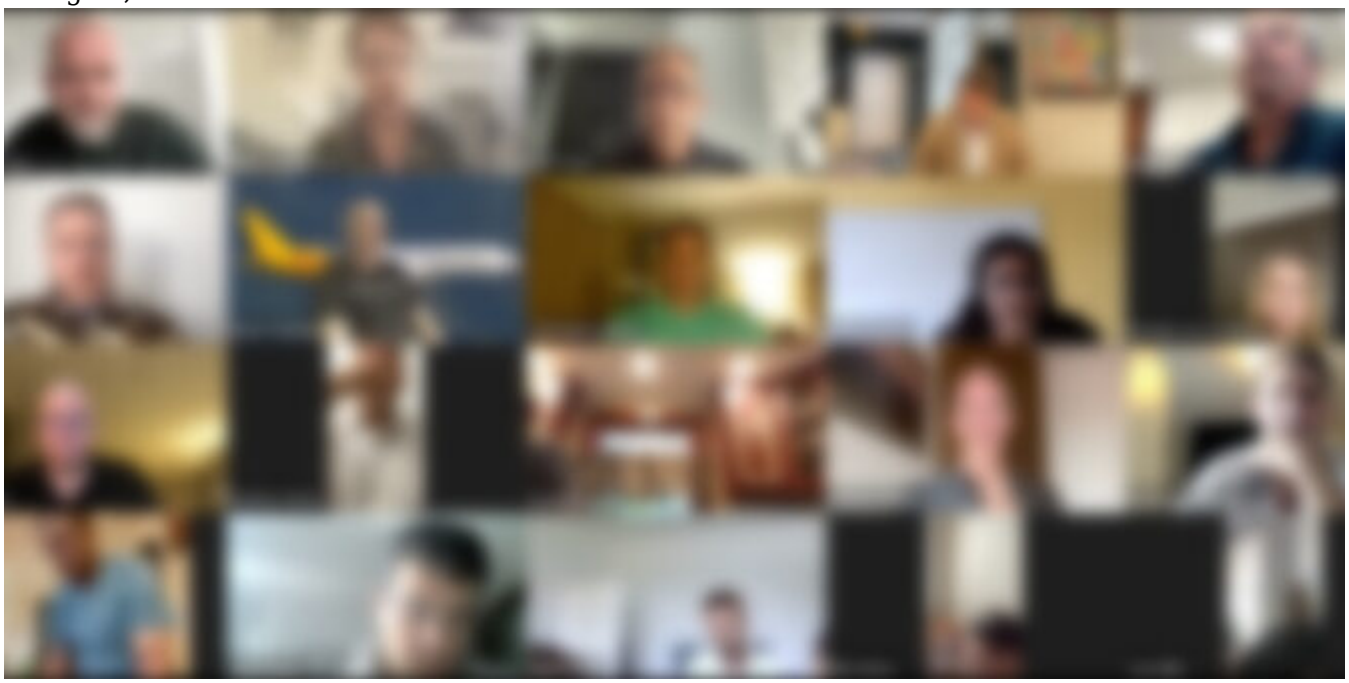
John Wennes – john.h.wennes@faa.gov, 808-840-6161

Antonio Carrilho – Antonio.a.carrilho@faa.gov, 808-840-6203

Or give the OPSGROUP team a shout on team@ops.group, and we'll do our best to help.

June 14 OPSCHAT Summary

OPSGROUP Team
1 August, 2022

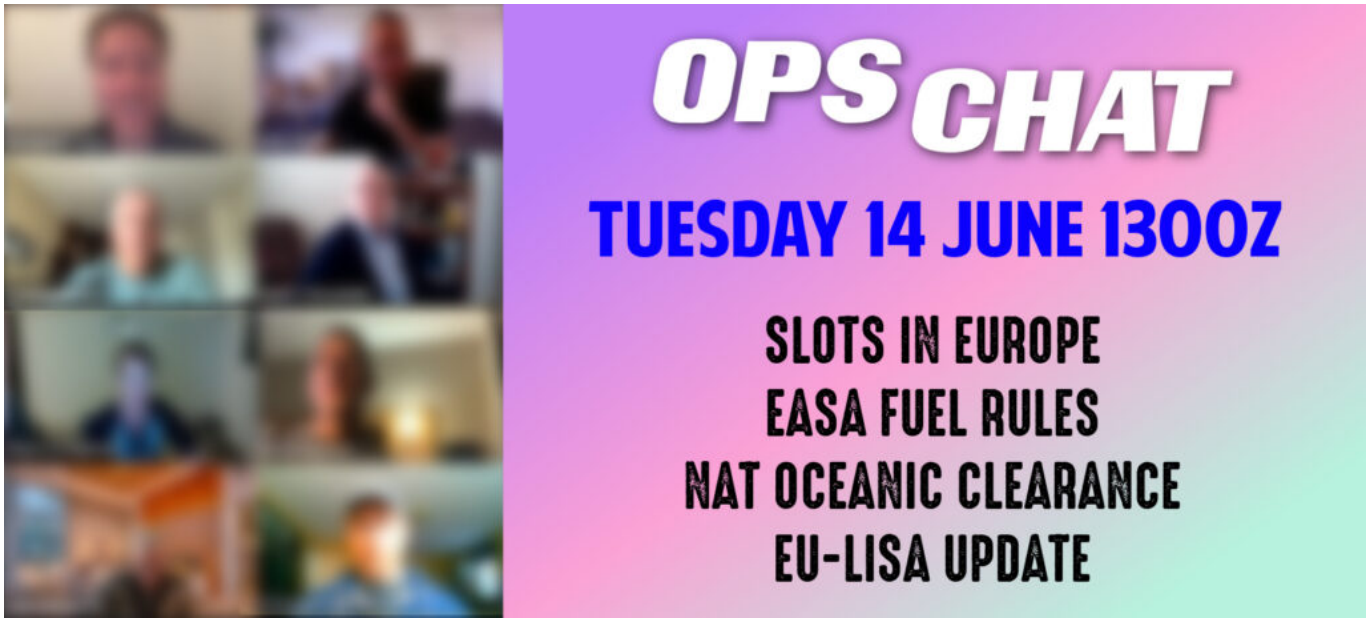


Hi Members,

And non-members reading this and thinking *“what did I miss out on by not joining in this OPSCHAT?”*

You can watch the full replay on your Member’s Dashboard.

Here’s went down this week in the world of international operations things…



The Big Things

The USA – revised LOA approval process. Basically, if you're a Part 91 new aircraft you can now get the top 10 things rolled into 1 LOA. No news yet on the process being made easier for older aircraft, but watch this space…

China – Now require proof of ownership of your aircraft if you go there. Because of Russia flying "re-registered" (stolen) aircraft. We've not seen any reports yet on what this involves but we think a few extra days for permits to be approved.

Europe – Strikes remain in vogue… LFPG/Charles de Gaulle are going mad with the strikes. Fire services, airport workers strikes. EBBR/Brussels as well as Tunisia are getting in on the action as well with various airports workers and an ATC strike.

Also in Europe – EU-LISA have been having secret meetings, and our little spies have reported back saying that *if you make a profit* or *if there is any business stuff that takes place because of the flight* then you need to register. So it's got a little more annoying again because we thought private flights were exempt but apparently not…

Hawaii – RIMPAC military exercise at the end of June which goes on for 35 days, mainly during the day. There is a big PDF document on it but it's not particularly useful for seeing what's really going on. Basically, some delays depending on which way you're routing, and look out for all the extra military aircraft.

Slots in Europe

It is a mess, and it's probably going to get worse, because there are loads of staff missing at airports. And there are some ATC problems as well. Which means slots. A lot of slots. NMOC, who run them, have some tips on how to handle all this, and how not to – like yoyo-ing *(bad)*, slot swapping *(good),* late filing *(bad)*, early filing *(won't help, but good*).

Send us your slot questions at news@ops.group if you have any.

EASA Fuel Rules

We think there are two big things to look out for and read up on:

- **Which policy applies to you:** They each have different monitoring and recording, safety measuring requirements etc. The main thing they seem affect is the contingency fuel.
- **New planning requirements:** Particularly for destination alternates seem to have changed – the planning minimas mainly, as have some things like what to include in your arrival routing planning etc (they say what is 'reasonably expected')

EGGX/Shanwick

Something which we're looking into, but here is what we know so far:

Shanwick want you to register with then if you want to get your clearance via ACARS. But there isn't a CPDLC or ADS-C list as far as we know. We are working on an article on this, and on CPDLC logon things to watch out for, so watch this space.

Danger Club

We've been inspired to start talking about Fatigue. So we want to run a Danger Club on this and get folk talking, and help solve it from the bottom up (because some of those at the top aren't helping…)

If you have any interesting incidents or accidents to share to talk on let us know, or come join us at the next Danger Club meetup!

OPS CHAT – every Tuesday!

OPSGROUP Team
1 August, 2022

Join the weekly international ops call!

OPS CHAT is a conversation about this week's changes and dangers affecting International Flight Ops,

open to everyone!

It's on **every Tuesday at 1300 UTC**.

It's for Pilots, Dispatchers, ATC, and anyone else involved in international ops – and here are the key things we look at every week:

- **New risks and changes** this week affecting airspace, ATC, airports, and international ops
- The top 5 **Ops Alerts** published for OpsGroup members this week
- Conversation and chat
- **Unsolved mysteries** – unanswered questions from the Ops Group/Flight Ops slack channels.
- New member intros and group updates
- A **general Q&A** – bring a good Q and we'll match it with an A.

When is it on? Tuesday at 1300 GMT/UTC/Z. That means: 6am LA (sorry!), 9am New York, 2pm London, 3pm Amsterdam. Bring a timezone appropriate drink (If you're in a Brooklyn a coffee, if you're in Berlin a coffee martini?) and join us for a group chat about all things ops.

If you're stuck on something in particular (a pesky overflight permit for Peru, perhaps …) – ask your question and we'll find someone that knows. For the weeks highlights, we'll pop up a few maps and things to help show what's happening, but mostly this is really just a chat and pretty casual. As you might have gathered.

How long is it on for? Ah, 30 minutes maybe? Or longer if things get interesting.

How do I join? You will need:

- 1x computer device (example here)
- Electrical power
- A face (because we like seeing you)
- A watch (set an alarm for Tuesday 12.59Z)
- Aaaand a Zoom registration: here.

So in short – register and then show up. Turn on your video, and take part. Easy!

Any other questions? Email the team!