Santa Maria HF – Unauthorised Transmissions

Chris Shieff
17 January, 2024

An OPSGROUP member recently reported they experienced **extended interference** on Santa Maria Radio (HF frequency 11309). They were unable to use it for nearly ten minutes due to a continuous broadcast in a foreign language.

This was reported directly to Nav Portugal, and the member was kind enough to share their response with the group. Here is what they had to say.

Unknown Broadcasts

The Radio Supervisor did report **significant voice interference** on the same day for a period of nearly twenty minutes. It didn't coincide with the time the member's aircraft was inside the Santa Maria FIR, but they were quick to point out this may mean it hadn't been reported yet.

In other words, this is likely not an isolated issue.

Nav Portugal advised that in the past twenty-four months, they've observed **increasing levels of interference** on the HF frequencies assigned by Santa Maria. These are often caused by voice transmissions, but have also included radar signals – essentially 'pinging.'

These have been confirmed to originate from Eastern Europe, and the Middle East.

There is no evidence the broadcasts are malicious

While they seem to emanate from regions of high political tension, there are no indications the broadcasts are an attempt to impede the communication of air traffic.

They are simply an inconvenience. Nevertheless, they are occurring in one of the largest FIRs on the planet serving hundreds of flights per day, a number of NAT tracks, and traffic in and out of the Azores.

So, it is important to know what to do if you encounter this on your next crossing.

I don't care, I have CPDLC

It's true that CPDLC services are available to all FANS 1/A equipped aircraft in the Santa Maria FIR (logon LPPO).

But look out for this chestnut, from Santa Maria themselves…

…attention is called to flight crew that the use of data link services do not exempt the requirement of establishing voice communications with Santa Maria Radio at or before the FIR Boundary, whether on HF or VHF, even if a CPDLC connection is established…

So HF interference begins to matter for everyone, when outside of VHF coverage.

Try the other line

Your next option is the ol' sat phone.

Santa Maria's contact information is listed in NAT Doc 003, but to save you some time, their Inmarsat short code is **426305**, and the direct dial for the supervisor is **+351 296 820 401**.

There are also alternative HF frequencies listed in the attached document. As a general rule, **lower frequencies work better at night, and higher during the day.**

Appendix B-5 - SANTA MARIA Radio Station Information

Station Name:	Santa Maria Radio
Country: Portugal	**State:** Santa Maria - Azores
City: Vila do Porto	**Geographic Location:** 36°58´21N025°09´54W
Transmitter site(s) location(s): Cabrestantes (36°59´44N025°10´14W)	**Receiver site(s) location(s):** Faneca (36°59´44N025°07´48W)

Frequencies

Family	Frequency bands								
	3 MHz	3.5 MHz	4.7 MHz	5.6 MHz	6.6 MHz	9 MHz	11.3 MHz	13.3 MHz	18 MHz
A	3016			5598		8906		13306	17946
E	2962				6628	8825	11309	13354	
H		3491			6667				

Contacts

AFTN Address: LPAZYSYX	**Aircraft in Flight Address:** LPAZZZZX
SATCOM short code number: 426305	
Station Manager	**On Duty Supervisor**
Post Address: **Name:** NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO **Phone:** + 351 296 820 509 **Fax:** **Email:** **AFTN/SITA** **Address:** LPAZYFYA	**Post Address:** NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO **Phone:** + 351 296 820 401 **Fax:** + 351 296 886 045 **Email:** smaradio@nav.pt **AFTN/SITA Address:** LPAZYSYX
Remarks: Santa Maria radio is collocated and is a department within Santa Maria OACC. Backup receiver site is also located in the vicinity of Santa Maria OACC.	

If ionospheric propagation floats your boat, we're not here to judge. You can read more about it here.

Phone a Friend

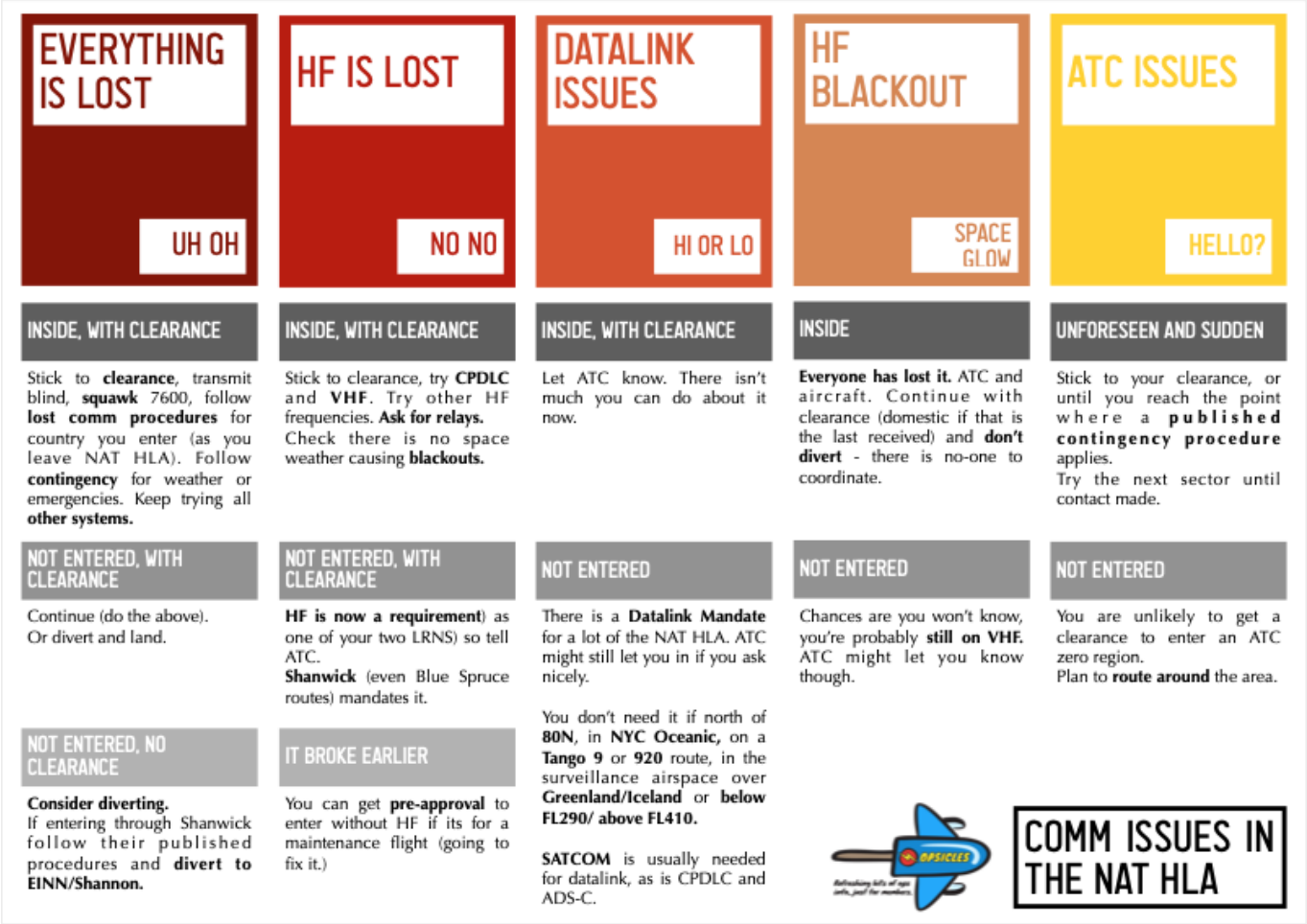
If you're not satvoice equipped, and you can't reach Santa Maria Radio directly – what then?

In the first instance, attempt to **raise a nearby aircraft on 121.5 or 123.45** who can relay your position report for you.

Or you can try and contact adjacent ATC oceanic sectors – namely Shanwick, Gander, New York Oceanic or Piarco. Nearby radar units may also be able to assist too – Lisboa, Canarias, Sal or Madrid Controls.

Failing that, you're into the **lost comms procedure.** You can find that here.

Here's a quick sheet the team previously put together...



OPSGROUP members: click to download PDF.

Keep Reporting

If you encounter HF frequency interference, it is important that you **report it.** The more detail the better – including the UTC time, position, altitude, duration and any other identifying details. It's likely you're not the only one who will encounter the problem.

We'd also love to hear from you too – you can reach us on team@ops.group

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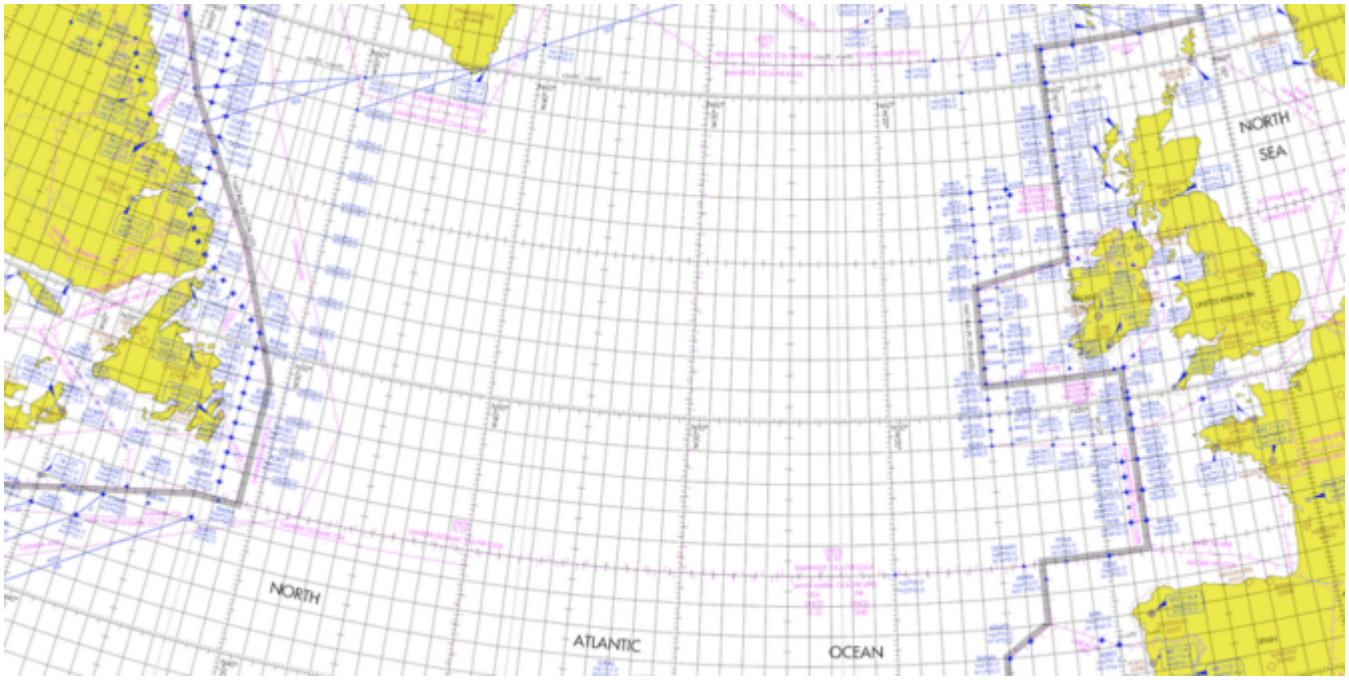
July 2020 North Atlantic Ops Update

David Mumford
17 January, 2024



July 2020: There's a bunch of new things to tell you about the North Atlantic this month! Here's a summary:
– Two new ICAO NAT Ops Bulletins
– An updated NAT Doc 007 from ICAO (aka the North Atlantic "Ops Bible")
– A guide for pilots from the FAA about what to do if ATC suddenly has to suspend services
– Some juicy Notams from all the NAT FIRs extending the relaxation of the North Atlantic datalink mandate rules until the end of September.

ICAO NAT Ops Bulletins

Two new ICAO NAT Ops Bulletins have been published this week, but it looks like there's no need to panic.

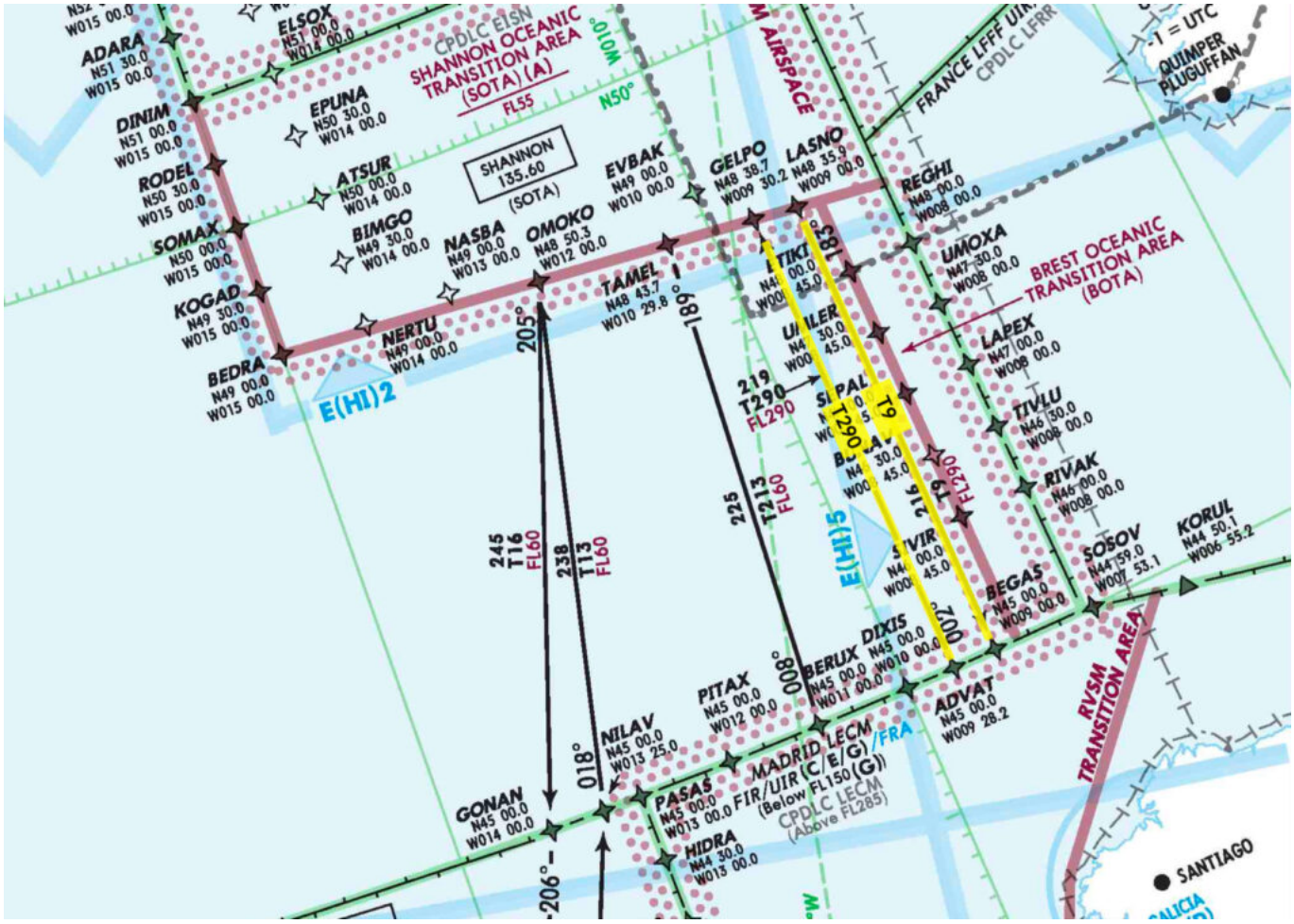
First up, there's **2019_003 Rev 2: Data Link Performance Improvement Options**, which is just an updated list of common datalink errors and what to do about them.

Second, there's a new Bulletin called **2020_002: Surveillance Service in the NAT Region / Flight Crew Operating Procedures**. This is a strange one. The message seems to be this: back in the old days, you used to get a call from ATC saying "radar service is terminated" or "surveillance service is terminated" when heading out into the NAT, or when crossing from one oceanic control centre to the next. But nowadays, with improved SSR equipment and ADS-B more widely implemented, you might not get this message anymore.

ICAO NAT Doc 007 (2020, Version 2)

ICAO has published an updated version of the NAT Doc 007, applicable from July 2020. There are only some minor changes from the previous version, concerning the **Tango Routes**:

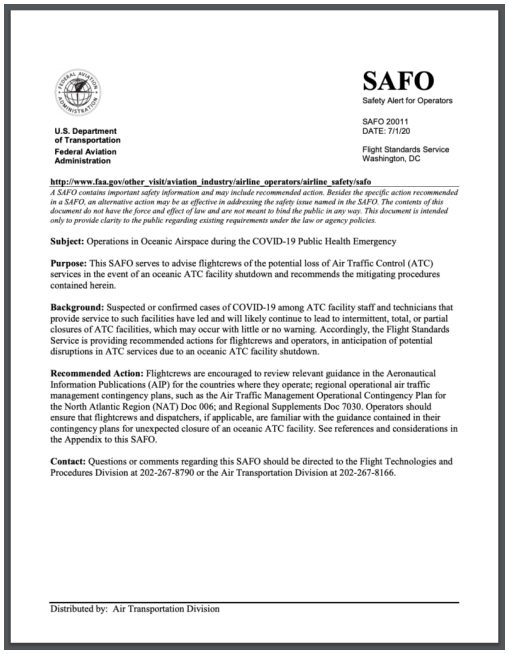
- There's now a specific note saying that **state approval** is required to operate on these.
- There's also a change to the **transponder procedures** when using **T9** or **T290**: normally you change transponder code to 2000 30mins after NAT entry, but because of the limited time spent in the NAT HLA when flying on T9 and T290 you should instead make this change 10mins after joining either of those routes.



T9 is southbound only, even levels between FL300-400. **T290** is northbound only, odd levels from FL290-410. For more info on the Tango Routes, check out our article here.

What to do during “ATC Zero” events

You’re halfway across the Atlantic when ATC declares that they are suspending all services. TIBA procedures are now in effect. **Would you know what to do next?** As Covid infections impact ATC facilities, short notice closures are currently a constant risk.



SAFO
Safety Alert for Operators

SAFO 20011
DATE: 7/1/20

U.S. Department of Transportation
Federal Aviation Administration

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO. The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

Subject: Operations in Oceanic Airspace during the COVID-19 Public Health Emergency

Purpose: This SAFO serves to advise flightcrews of the potential loss of Air Traffic Control (ATC) services in the event of an oceanic ATC facility shutdown and recommends the mitigating procedures contained herein.

Background: Suspected or confirmed cases of COVID-19 among ATC facility staff and technicians that provide service to such facilities have led and will likely continue to lead to intermittent, total, or partial closures of ATC facilities, which may occur with little or no warning. Accordingly, the Flight Standards Service is providing recommended actions for flightcrews and operators, in anticipation of potential disruptions in ATC services due to an oceanic ATC facility shutdown.

Recommended Action: Flightcrews are encouraged to review relevant guidance in the Aeronautical Information Publications (AIP) for the countries where they operate; regional operational air traffic management contingency plans, such as the Air Traffic Management Operational Contingency Plan for the North Atlantic Region (NAT) Doc 006; and Regional Supplements Doc 7030. Operators should ensure that flightcrews and dispatchers, if applicable, are familiar with the guidance contained in their contingency plans for unexpected closure of an oceanic ATC facility. See references and considerations in the Appendix to this SAFO.

Contact: Questions or comments regarding this SAFO should be directed to the Flight Technologies and Procedures Division at 202-267-8790 or the Air Transportation Division at 202-267-8166.

Distributed by: Air Transportation Division

The FAA has published a safety alert for international flight crew with contingency procedures in the event of loss of ATC services in **Oceanic airspace**. It's a good one to have in your flight bag. Dispatchers and flight crew are reminded to be thoroughly familiar with AIP specific procedures and traffic management contingency plans for the regions they are operating in. You can read the FAA's alert here.

They have also published another one for ATC Zero events in **Terminal airspace**, which you can read here. There have been multiple 'ATC Zero' events at major air traffic control centres due to Covid prevention and the subsequent cleaning required. The alert contains important information regarding instrument approach selection, TCAS use, alternate minima, aerodrome lighting and other CTAF procedures at unattended airports. There are also important considerations applicable to Part 121 operations discussed.

NAT Datalink Mandate

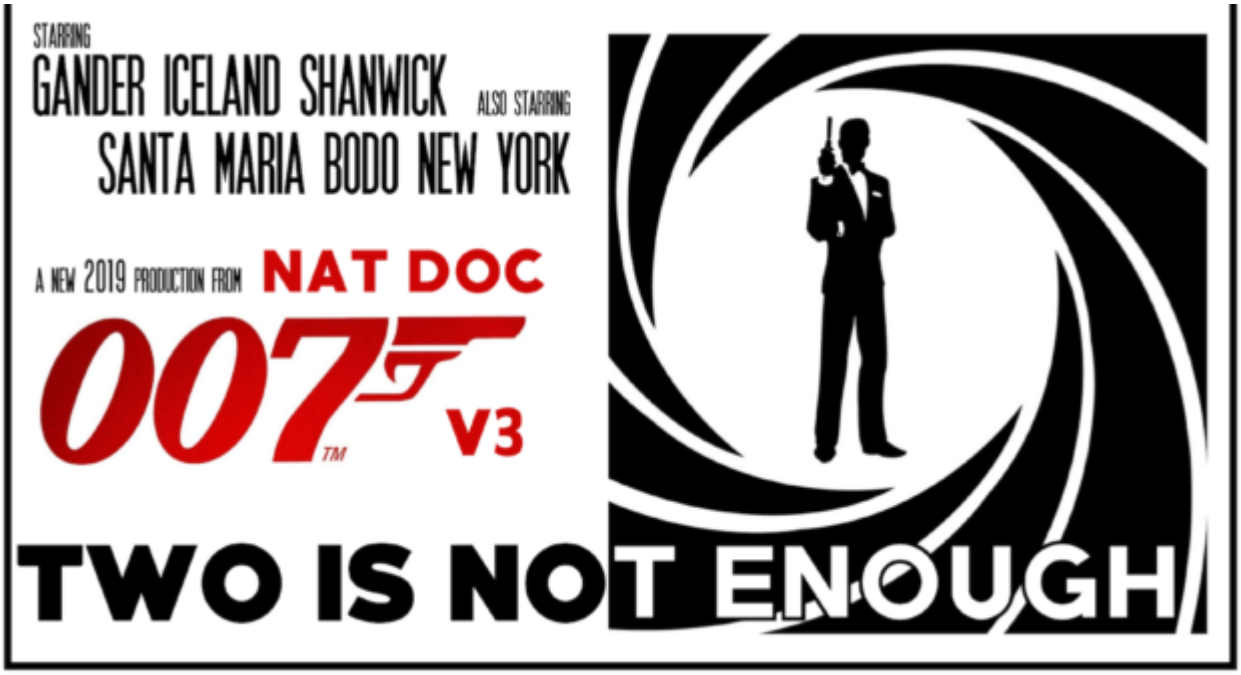
EGGX/Shanwick, BIRD/Reykjavik, CZQX/Gander, KZWY/New York Oceanic West and LPPO/Santa Maria have all published Notams extending the relaxation of the North Atlantic datalink mandate rules until the end of September. This is due to the fact that there's still significantly less traffic because of all the Covid restrictions. **Non-datalink mandate compliant aircraft may therefore continue to flight plan and operate across the North Atlantic between FL290-410 until Sept 30.** For more info on the NAT Datalink Mandate, check out our article here.

In addition, ICAO are saying that due to the decrease in traffic, there is a significantly higher chance of flights being cleared as requested, and are encouraging operators to file and request their optimal profiles at all stages of the flight. Read ICAO's guidance here.

For a brief history of the most significant North Atlantic-related ops changes, check out our dedicated article here.

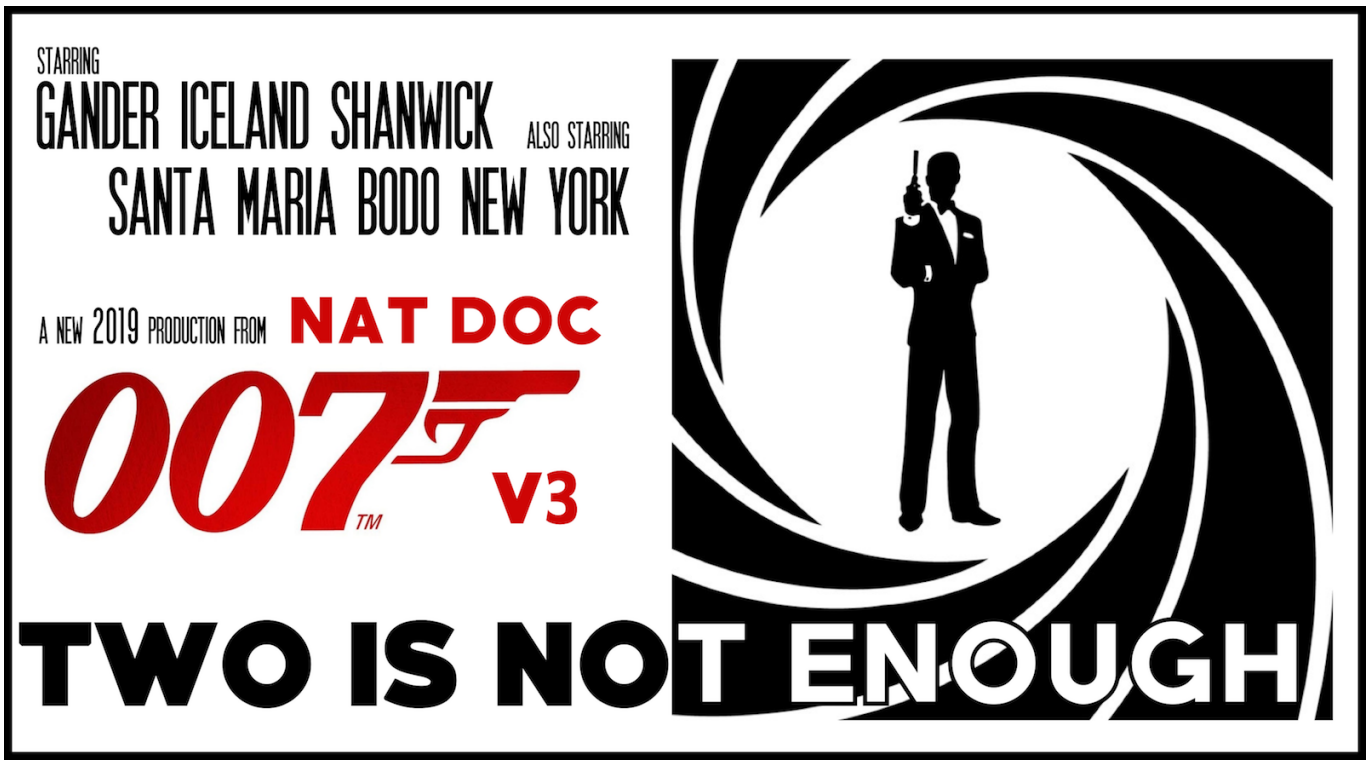
Two is Not Enough: New NAT Doc 007 (Version 3) – August 2019

Mark Zee
17 January, 2024



NAT Doc 007 is the Bible of the North Atlantic. It's full of NAT goodness – all the specifics about how to operate your aircraft safely through the complex airspace of the region is here.

And there's another new edition!

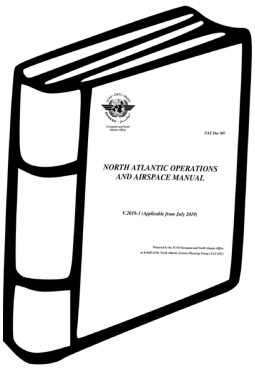


The NAT changes over the last few years have been coming thicker and faster than the sandwiches at Katz's Deli on the Lower East Side. And now, there's more. **Effective August 7th, 2019, NAT Doc 007, Version 3**, is the latest tome to digest. As aviation documents go, it's written in pretty digestible language. There's just a lot in it. But this is the first time we've had 3 editions of this in one year.

So, we're going to start naming them after 007 Movies to keep track of them all. This is the "**Two is Not Enough**" edition.

NAT Doc 007, Version 3, 2019:

Download the full NAT Doc 007.



So, here are the three things that have changed this time:

1. **We got new SLOP rules!** This is a biggie. Instead of the three previous choices (0, 1, or 2nm), we now have **Twenty One choices!** More on this below.

2. **99 problems and Datalink is one**. The short version: check that you've got the latest software update for your datalink.

3. **The next datalink mandate (2C) is capped at FL410**. This comes in January 30th next year. And so, the Checklist for Dispatchers is updated.

The new SLOP rules

Now, let's take a closer look at the big change – SLOP (Strategic Lateral Offset Procedure). To get up to speed, check out our full article on SLOP – the how, and why (and where).

The change here is that instead of just being able to SLOP 1 or 2 nm right of track, (or fly the centreline), you go from these three choices to twenty one – you can use any one of 21 **Micro-SLOP** offsets. Specifically: 0.0 nm, 0.1 nm, 0.2 nm …. OK, you get it. All the way up to 2.0 nm Right of track.

Simple, right?

Not quite. It's not yet fully clear which of the OCA's have given the green light for this, even though NAT Doc 007 now says you **should** Micro-SLOP if you can.

But, phoning around the Oceanic Houses, we've got this to tell you:

1. **Gander** – you can micro-SLOP right now! An AIP amendment will follow soon.
2. **Shanwick** – you can micro-SLOP right now! A Notam will be published soon, and the AIP will be updated in Dec 2019.
3. **New York** – they will allow micro-SLOP from 12th Sept 2019, and will update the AIP in Jan 2020.
4. **Santa Maria** – you can micro-SLOP right now! Nothing published officially yet, but that's what the good people from the oceanic control centre have told us.
5. **Iceland** – just like New York, they will allow micro-SLOP here from 12th Sept 2019 as well. When that happens, you will still not be allowed to SLOP below FL285 within the Reykjavik CTA (that's the domestic part over Iceland, and the airspace over Greenland above FL195). We asked them to publish a Notam about this – and they actually did!! Check it out!
6. **Bodo** – Nothing official yet, but ATC say they "have no objections" to operators micro-SLOPing right now. (Currently, SLOP is only allowed here above FL285 within the OCA.)

That's the current picture as of 1100z on Monday 19th Aug.

We will **update** this as soon as we get more info. Got something for us? Email us!

Fly it like you stole it – free speed on the NAT

Mark Zee
17 January, 2024

This is a new one, and it's a good one for pilots! Being introduced slowly is a new flexibility – flying without a fixed Mach speed. In simple terms, you get to decide how fast you fly.

Like all new things on the NAT, we have an acronym. This one is **OWAFS**. *Operations Without an Assigned Fixed Speed*. But you'll also see it as referred to as "Variable Mach", and "Resume Normal Speed".

When does this start?

It already has! It's starting out as a trial (everything on the NAT starts out as a trial), and some members are already reporting getting "RESUME NORMAL SPEED" messages from Shanwick. The official start date is April 8, 2019. Three OACC's are doing this – Shanwick, Santa Maria, and New York Oceanic (not WATRS).

For no good reason, here's a picture of the Shanwick Oceanic control room in 1989. Much has changed since!

How does it work?

You'll get a normal oceanic clearance, with a fixed Mach Number, like you always did. Somewhere after the Oceanic Entry Point, if you are selected for the trial, you'll get a CPDLC message saying **RESUME NORMAL SPEED**. You should reply with **WILCO**. What that means is: **Fly ECON, or a Cost Index with Variable Mach**.

So, once I get that, no restrictions on speed?

Correct! But, ATC will expect you to fly ECON/Cost Index, and normally, that should be pretty close to your cleared Mach (within 0.01 up or down). If you're doing something different, tell them. If the resulting speed differs from your Oceanic Clearance Mach by **0.02**, or more, you must tell ATC.

Rules for Shanwick (Don't ask for it)

• Flight must be data link connected to EGGX
• Flight must be eastbound and operating solely in Shanwick Oceanic airspace and exiting into UK/Ireland/Continental European airspace
• Flight cannot exit into Santa Maria
• RESUME NORMAL SPEED will be offered on a "manual" tactical basis
• **Do not request** RESUME NORMAL SPEED

Rules for New York and Santa Maria (You can ask)

• Flight must be data link connected to LPPO or KZWY
• Flights must be wholly within Santa Maria and New York East Oceanic airspace and not enter Gander or Shanwick airspace
• Flights can enter New York East Oceanic airspace or Santa Maria airspace from Gander airspace or Shanwick airspace and receive RESUME NORMAL SPEED uplink message
• New York West (WATRS airspace) is excluded
• RESUME NORMAL SPEED **can be requested** if not offered

Background and History

(Thanks, Jeff Miller @IATA, for this and the condensed info above!)

Both Airbus and Boeing advocate cost index (ECON) as the most efficient way to fly. Operators use cost index (ECON) globally, except for the North Atlantic (NAT) where flights are assigned a fixed Mach by ATC and flight crews are required to fly the assigned Mach. Depending on the distance from the departure airport to the oceanic entry, most operators flight plan the aircraft with cost index to the oceanic entry point and again after oceanic exit. Flight crews use the desired fixed Mach number from the computer flight plan that is generated by the cost index, as the requested Mach number for the crossing. It is possible the flight crew may request a Mach greater than or less than the flight plan Mach to improve scheduled arrival time. IATA led the ICAO NAT, Operations Without an Assigned Fixed Speed (OWAFS) project team to enable the use of a variable Mach in the NAT. The North Atlantic Systems Planning Group (NAT SPG) is expected to fully endorse OWAFS late June 2019 for an official implementation in late 2019 for all NAT OCAs. Full automation for all Air Navigation Service Providers (ANSPs) is expected by Q1 2020.

So I can use this for turbulence speed changes?

Yep, but remember, if you're slowing down or speeding up significantly (0.02 or more), tell ATC your new speed.

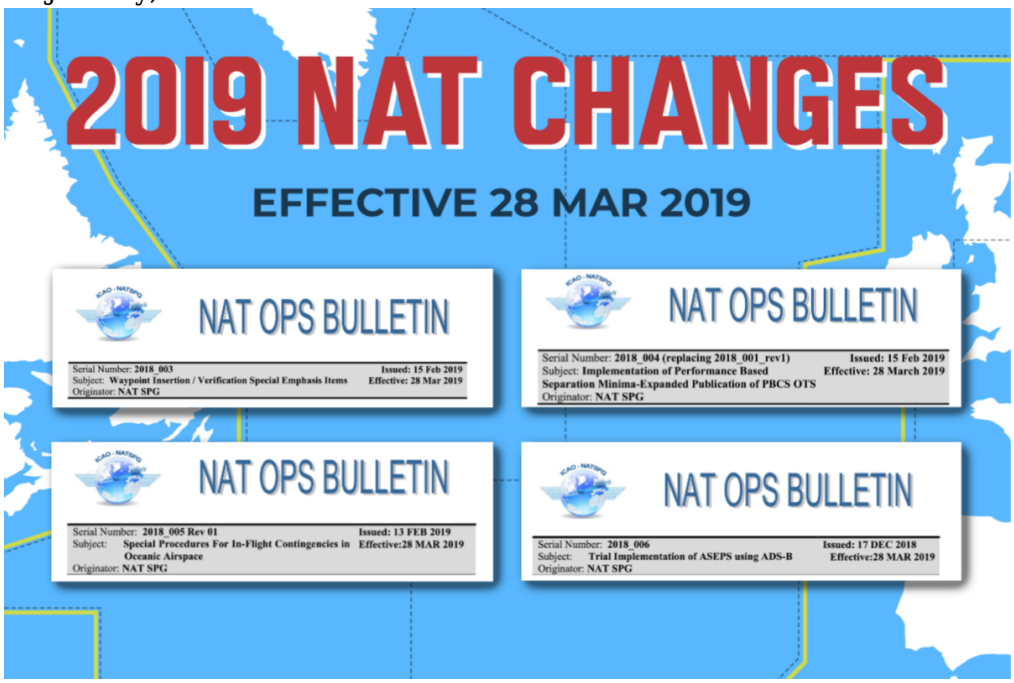
Anything else?

That's it for now. Remember, it's a trial – later in the year full implementation is expected. Don't ask for it if you aren't offered, unless you're in New York or Santa Maria airspace. Tell ATC if you're changing by 0.02 or more from the Oceanic Clearance.

And most importantly, keep us posted on your experiences with this!

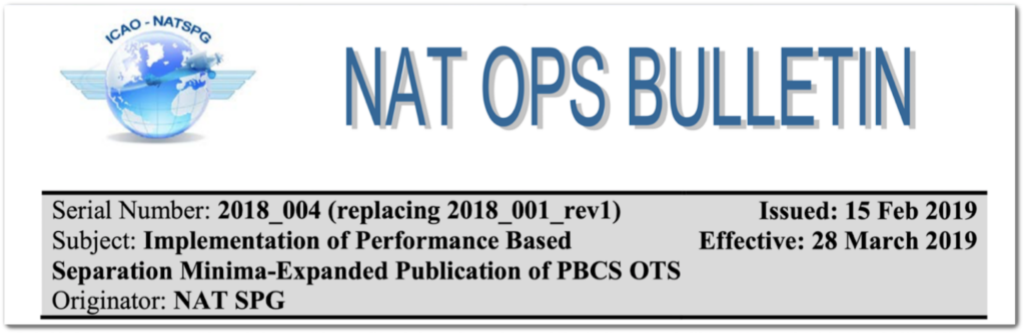
2019 North Atlantic changes

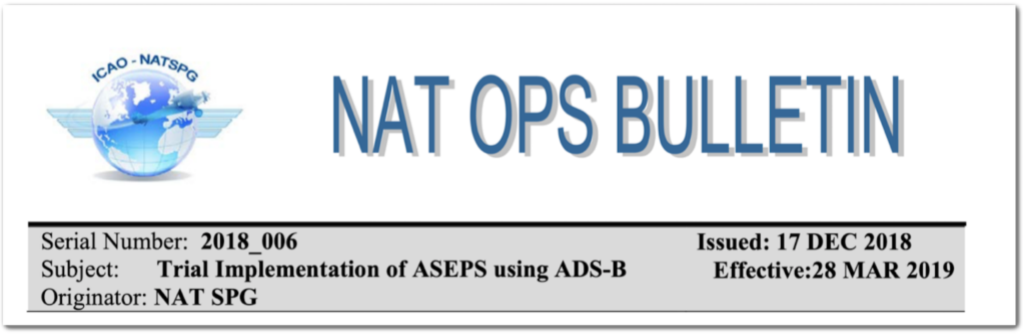
David Mumford
17 January, 2024



There are four ICAO NAT Ops Bulletins due to go into effect on March 28th, 2019. The PBCS tracks will be expanded, real-time Space-Based ADS-B surveillance and reduced separation standards will be introduced, and the regional contingency and weather deviation procedures will be changed.

You can click on each one, and read them in full:





We have had a good look at each of them. Here's the lowdown:

ICAO NAT Ops Bulletin 2018_03: Waypoint Insertion / Verification Special Emphasis Items
Lowdown: There are some specific procedures that need to be incorporated into Pilot and Dispatcher training programs. The bulletin details proper waypoint insertion and verification procedures. Operators must ensure their training programs, appropriate manuals, and SOP's incorporate these special emphasis items and that their dispatchers and flight crews employ them. This is considered a critical method of mitigating the risk associated the rapidly changing procedures (contingency) as well as reduced separation operations (ASEPS and PBCS) within the North Atlantic.

ICAO NAT Ops Bulletin 2018_04: Implementation of Performance Based Separation Minima-Expanded Publication of PBCS OTS
Lowdown: Performance Based Communication and Surveillance (PBCS) tracks may be extended beyond the current three track maximum. They will continue to be identified in each track message and may vary day to day as traffic requires. They will continue to be only FL350 to FL390 inclusive and only on the designated tracks during the period the tracks are in effect. There may be days where there are no PBCS

tracks, 3 PBCS tracks, 5 PBCS tracks, potentially even all the tracks.

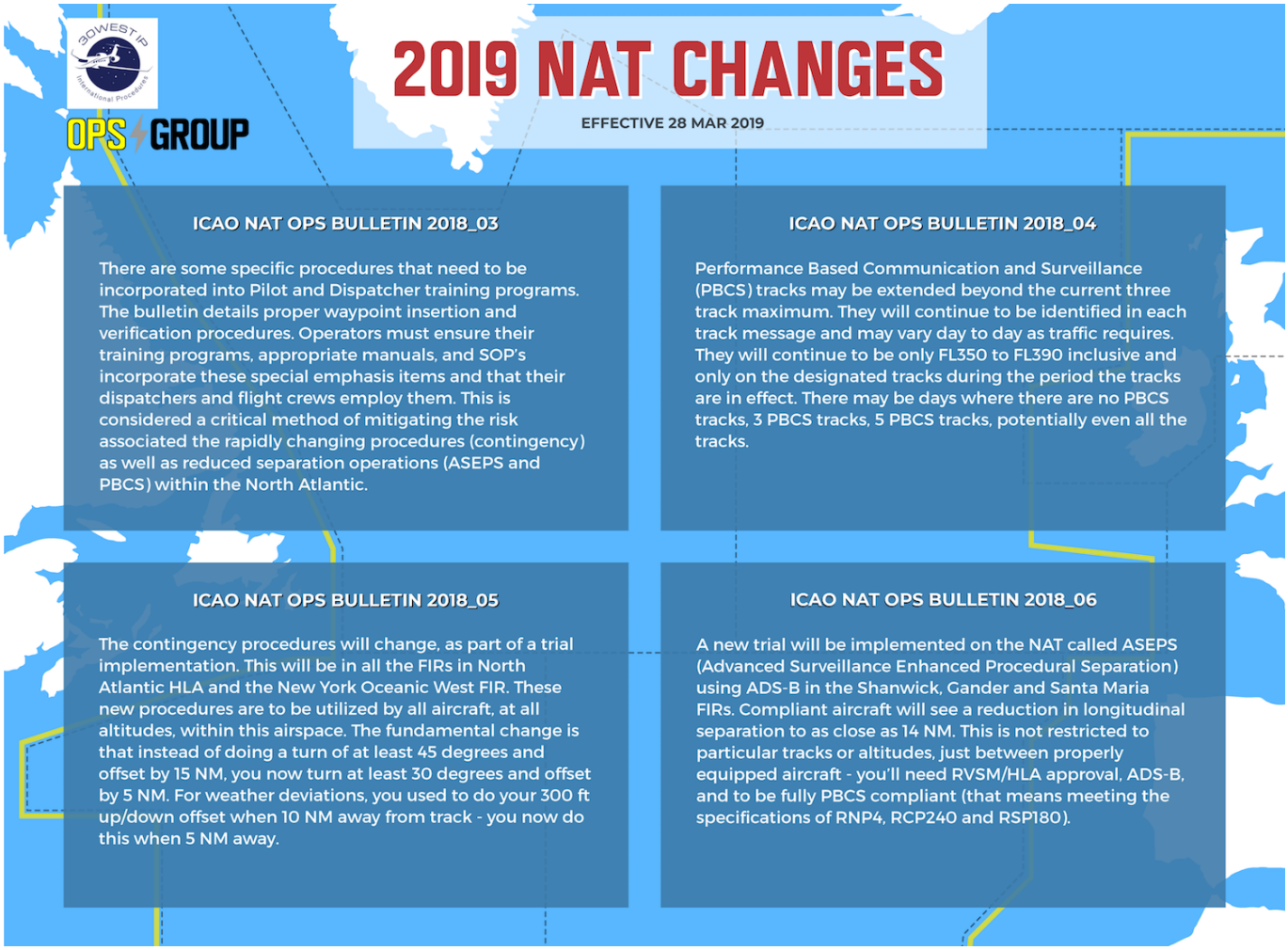
ICAO NAT Ops Bulletin 2018_05: Special Procedures For In-Flight Contingencies in Oceanic Airspace

Lowdown: The contingency procedures will change, as part of a trial implementation. This will be in all the FIRs in the NAT Region and the New York Oceanic West FIR. These new procedures are to be utilized by all aircraft, at all altitudes, within this airspace. The fundamental change is that instead of doing a turn of at least 45 degrees and offset by 15 NM, you now turn at least 30 degrees and offset by 5 NM. For weather deviations, you used to do your 300 ft up/down offset when 10 NM away from track – you now do this when 5 NM away. For more info on this, read our article.

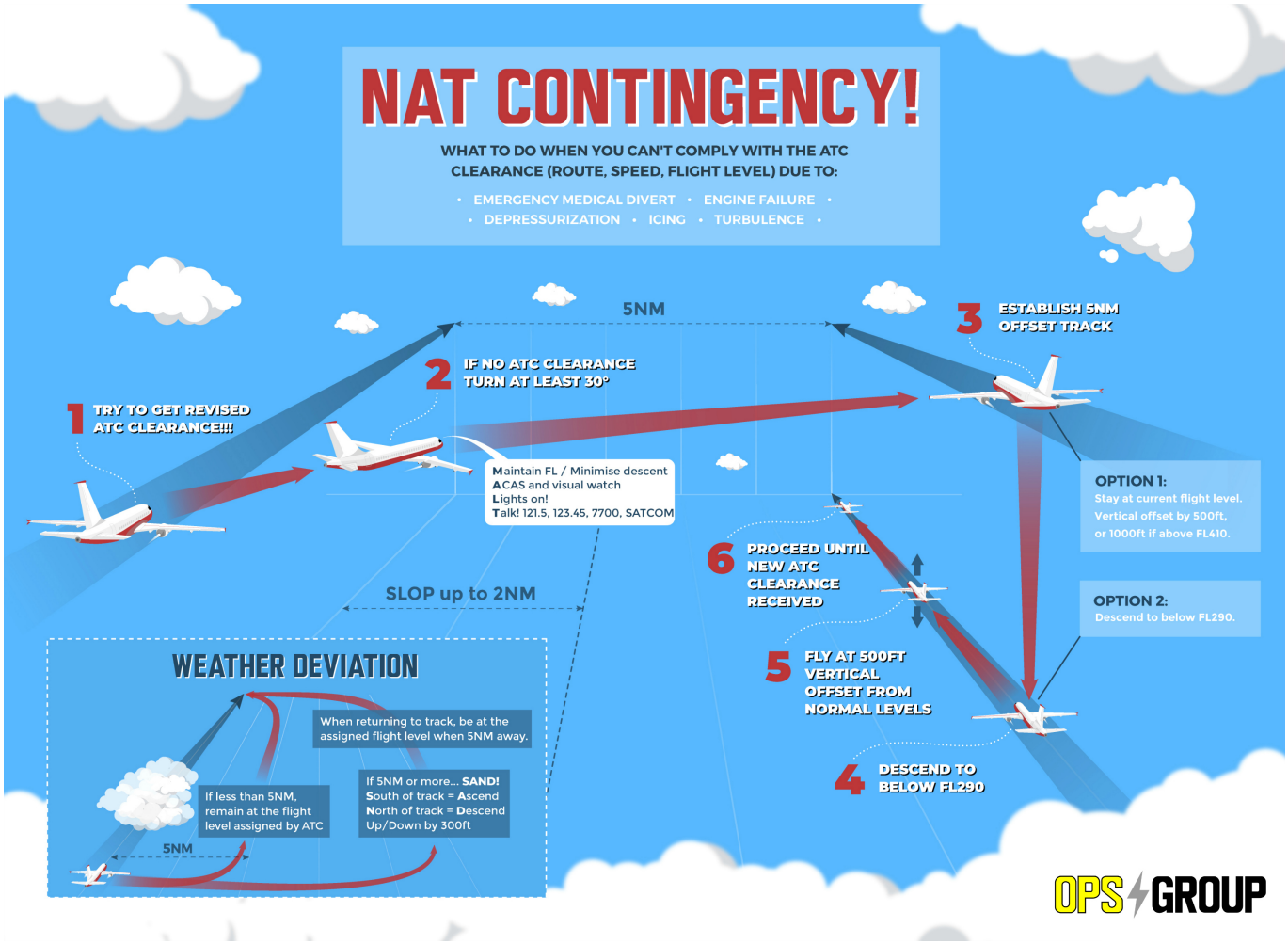
ICAO NAT Ops Bulletin 2018_06: Trial Implementation of ASEPS using ADS-B

Lowdown: A new trial will be implemented on the NAT called ASEPS (Advanced Surveillance Enhanced Procedural Separation) using ADS-B in the Shanwick, Gander and Santa Maria FIRs. Compliant aircraft will see a reduction in longitudinal separation to as close as 14 NM. This is not restricted to particular tracks or altitudes, just between properly equipped aircraft – you'll need RVSM/HLA approval, ADS-B, and to be fully PBCS compliant (that means meeting the specifications of RNP4, RCP240 and RSP180).

So there you have it. We made a couple of handy graphics for all this. Print them out and sellotape them to your cockpit. (If you actually do this, please send us a photo!)



click on the image to open larger version



click on the image to open larger version

For a bit more of an in-depth look at the contingency and weather deviation procedures as shown in the image above, read our article.

And if you're still hungry for more NAT info, we highly recommend you check out the replay of the webinar hosted by Mitch from 30WestIP, titled: **'A North Atlantic Game Changer, 4 NAT OPS Bulletins all go into effect in one day'**. This really breaks down each of the four new Bulletins which take effect from 28th March 2019 – essential viewing if you operate over the North Atlantic! View it here.

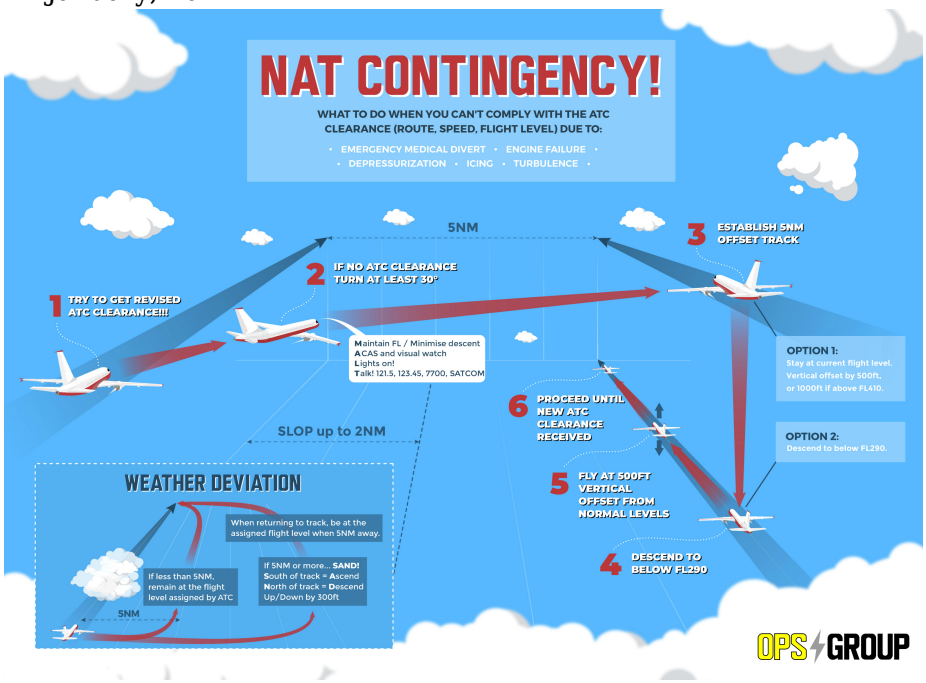
Further reading:

- On 1st Nov 2018 we had **a call with 140 OPSGROUP members about upcoming changes on the NAT in 2019**, and how we can effect change. OPSGROUP members can find the PDF notes of this in your Dashboard.
- A big thing driving the ASEPS trial is the **rollout of Space-based ADS-B**, which is scheduled to complete its deployment by 30 Dec 2018, giving us worldwide, pole-to-pole surveillance of aircraft. For more on that, and how it will affect operations on the NAT specifically, read the article by Mitch Launius here.

- Use our quick guide to **figure out where you are welcome on the NAT**, depending on what equipment and training you have.

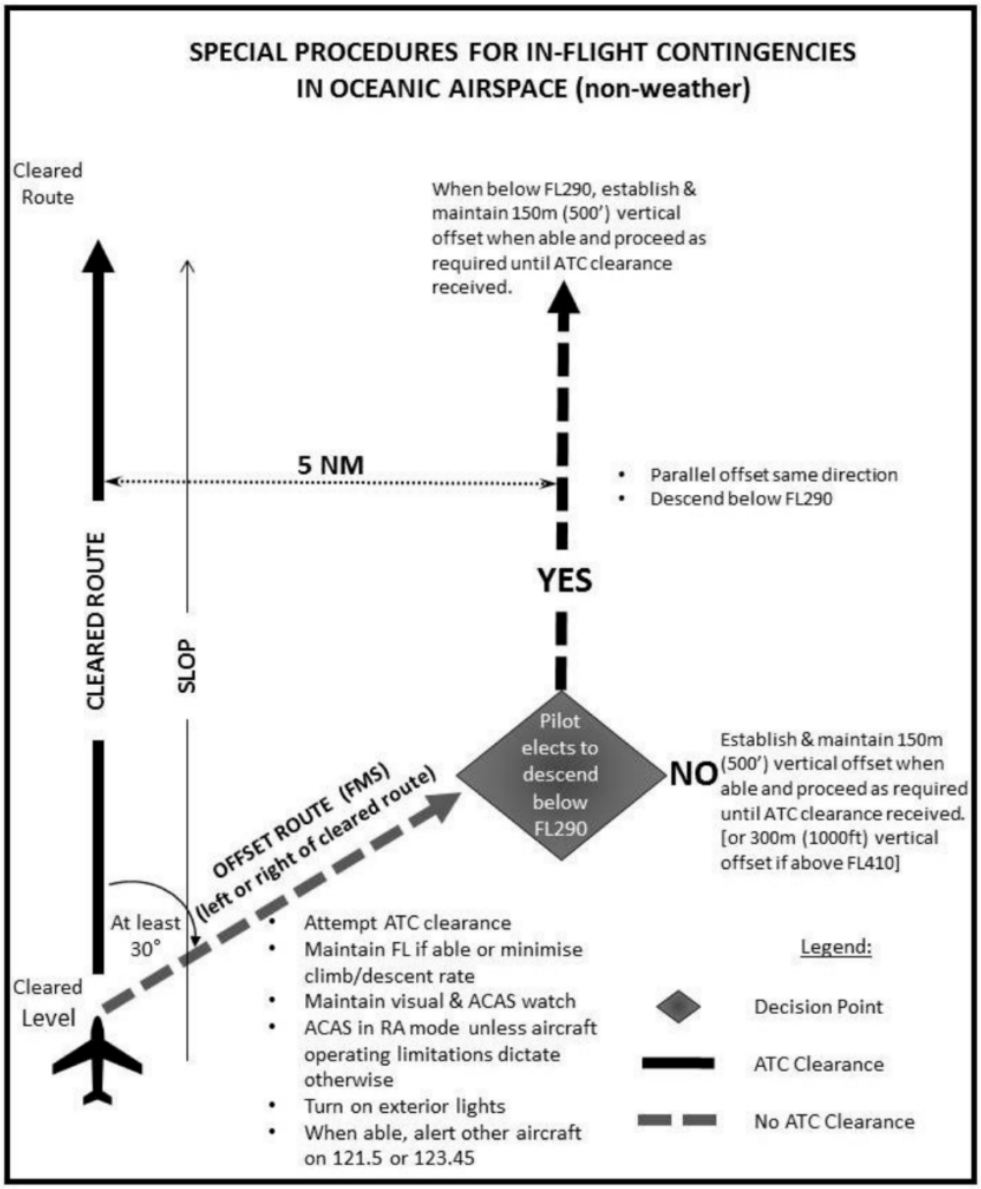
New NAT Contingency Procedures for 2019

David Mumford
17 January, 2024



Starting 28th March 2019, there will be some **changes to the contingency and weather deviation procedures on the NAT**. ICAO has published a new NAT Ops Bulletin with all the details.

Before, there was a lot of confusion around the wording of these two procedures – but ICAO has now made this much clearer, and they have even included a little graphic to help us understand how it will work.



Thing is, it's still a little clunky. So we decided to make our own version!

What's new?

The simple answer is this: **contingency offsets that previously were 15 NM with actions at 10 NM are basically now all 5 NM offsets with a turn of at least 30 degrees (not 45 degrees).**

Rarely do we see ICAO oceanic contingency procedures undergo a formal revision. The last time a major revision occurred was in 2006 when ICAO standardized a 15 NM offset executed with a turn of at least 45 degrees. Prior to that, the North Atlantic and the Pacific had used different offset distances and a 90 degree turn.

Where and when?

A trial implementation is scheduled to begin in the NAT Region and New York Oceanic West starting 28th March 2019. ICAO is expected to formally publish the Standard in an update to PANS-ATM (ICAO Doc 4444) on 5 November 2020.

Why?

To support reduced separation being implemented in conjunction with Advanced Surveillance Enhanced

Separation (ASEPS), Space Based ADS-B surveillance. The details for the ASEP trial can be found in NAT OPS Bulletin 2018-006 Trial Implementation of ASEPS using ADS-B.

Old version vs New version – full wording

Here's the **old version**, as per the latest version of the NAT Doc 007, paragraph 13.3. (Note – this will be valid **UNTIL** 27 March 2019):

The aircraft should leave its assigned route or track by initially turning at least 45° to the right or left whenever this is feasible.

An aircraft that is able to maintain its assigned flight level, after deviating 10 NM from its original cleared track centreline and therefore laterally clear of any potentially conflicting traffic above or below following the same track, should:
a) climb or descend 1000 ft if above FL410
b) climb or descend 500 ft when below FL410
c) climb 1000 ft or descend 500 ft if at FL410

An aircraft that is unable to maintain its assigned flight level (e.g due to power loss, pressurization problems, freezing fuel, etc.) should, whenever possible, initially minimise its rate of descent when leaving its original track centreline and then when expected to be clear of any possible traffic following the same track at lower levels and while subsequently maintaining a same direction 15 NM offset track, descend to an operationally feasible flight level, which differs from those normally used by 500 ft if below (or by 1000 ft if above FL410).

Before commencing any diversion across the flow of adjacent traffic or before initiating any turn-back (180°), aircraft should, while subsequently maintaining a same direction 15 NM offset track, expedite climb above or descent below the vast majority of NAT traffic (i.e. to a level above FL410 or below FL290), and then maintain a flight level which differs from those normally used: by 1000 ft if above FL410, or by 500 ft if below FL410. However, if the flight crew is unable or unwilling to carry out a major climb or descent, then any diversion or turn-back manoeuvre should be carried out at a level 500 ft different from those in use within the NAT HLA, until a new ATC clearance is obtained.

And here's the **new version**, as per the NAT OPS Bulletin 2018-005 Special Procedures for In-flight Contingencies in Oceanic Airspace (Note – this will be valid **FROM** 28 March 2019):

If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received:

Leave the cleared route or track by initially turning at least 30 degrees to the right or to the left, in order to intercept and maintain a parallel, direction track or route offset 9.3 km (5.0 NM).

Once established on a parallel, same direction track or route offset by 9.3 km (5.0 NM), either:
a) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or if an ATC clearance has been obtained, proceed in accordance with the clearance; or
b) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410) from those flight levels normally used, and proceed as required by the operational situation, or if an ATC clearance has been obtained, proceed in accordance with the clearance.

Note. — Descent below FL 290 is considered particularly applicable to operations where there is a predominant traffic flow (e.g. east-west) or parallel track system where the aircraft's diversion path will likely cross adjacent tracks or routes. A descent below FL 290 can decrease the likelihood of: conflict with other aircraft, ACAS RA events and delays in obtaining a revised ATC clearance.

So to reiterate, the important change is that contingency offsets that previously were 15 NM with actions at 10 NM are basically now all 5 NM offsets with a turn of at least 30 degrees (not 45 degrees).

Weather deviations

If you have to deviate from your assigned track due to anything weather-related, there's a whole different procedure to follow. Again, the NAT Ops Bulletin has all the details for this, but the bottom line seems to be:

For deviations of **less than 5 NM**, remain at the flight level assigned by ATC.

For deviations of **5 NM or more**, when you are at the 5 NM point initiate a change as follows:

If flying **EAST**, **descend** left by 300ft, or **climb** right by 300ft.

If flying **WEST**, **climb** left by 300ft, or **descend** right by 300ft.

In other words – **SAND!** (**S**outh of track = **A**scend, **N**orth of track = **D**escend; Up/Down by 300ft)

But remember, going right is probably better – it gets you out of the way of all the SLOP offset traffic that might be coming at you from the opposite direction!

Turnback procedure

In both the NAT Ops Bulletin and the new NAT Doc 007 which will take effect from 28 Mar 2019, ICAO has left out any specific reference to how to divert across the flow of traffic or turn-back procedure, and instead simplified it to just "proceed as required by the operational situation". Turning back would assume you either employ the 5NM offset as per the new contingency procedure, or else get a new revised clearance.

Bottom line

If you operate in the NAT HLA, we recommend you read and review the NAT Ops Bulletin in its entirety. It's relatively short but, beginning 28 March 2019, the procedures are expected to be implemented. You might want to prepare changes for your Ops Manuals and checklists too.

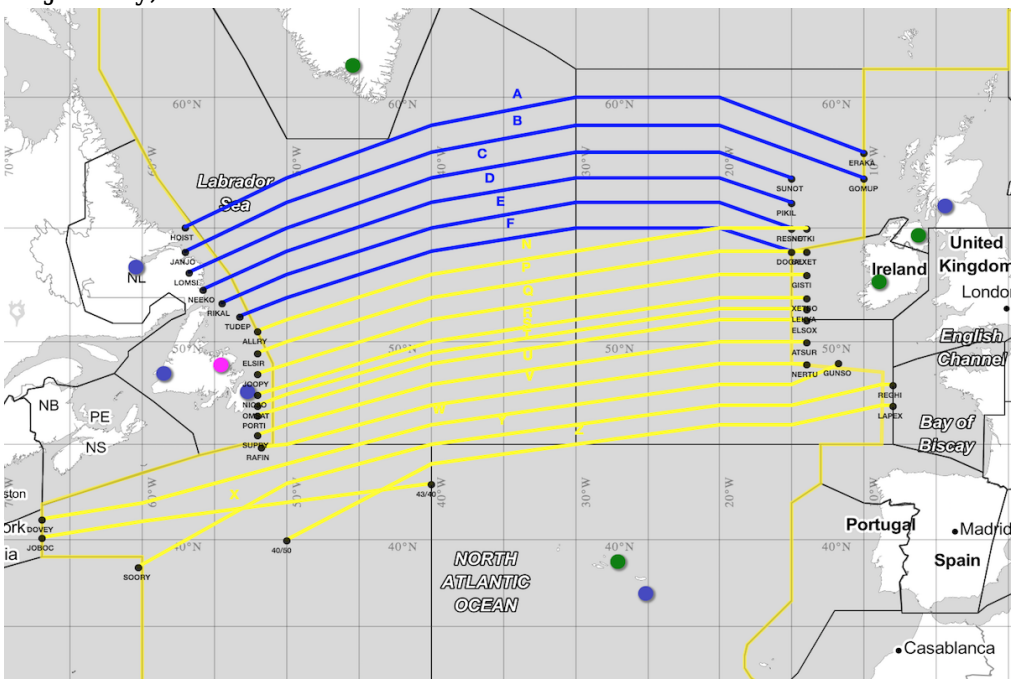
Make sure you stay tuned to OPSGROUP for changes that may occur as we approach 28 March 2019!

Further reading:

- On Nov 1st we had **a call with 140 OPSGROUP members about upcoming changes on the NAT in 2019**, and how we can effect change. OPSGROUP members can find the PDF notes of this in your Dashboard.
- A big thing driving the ASEPS trial is the **rollout of Space-based ADS-B**, which is scheduled to complete its deployment by 30 Dec 2018, giving us worldwide, pole-to-pole surveillance of aircraft. For more on that, and how it will affect operations on the NAT specifically, read the article by Mitch Launius here.
- Use our quick guide to **figure out where you are welcome on the NAT**, depending on what equipment and training you have.

First look at NAT changes for 2019

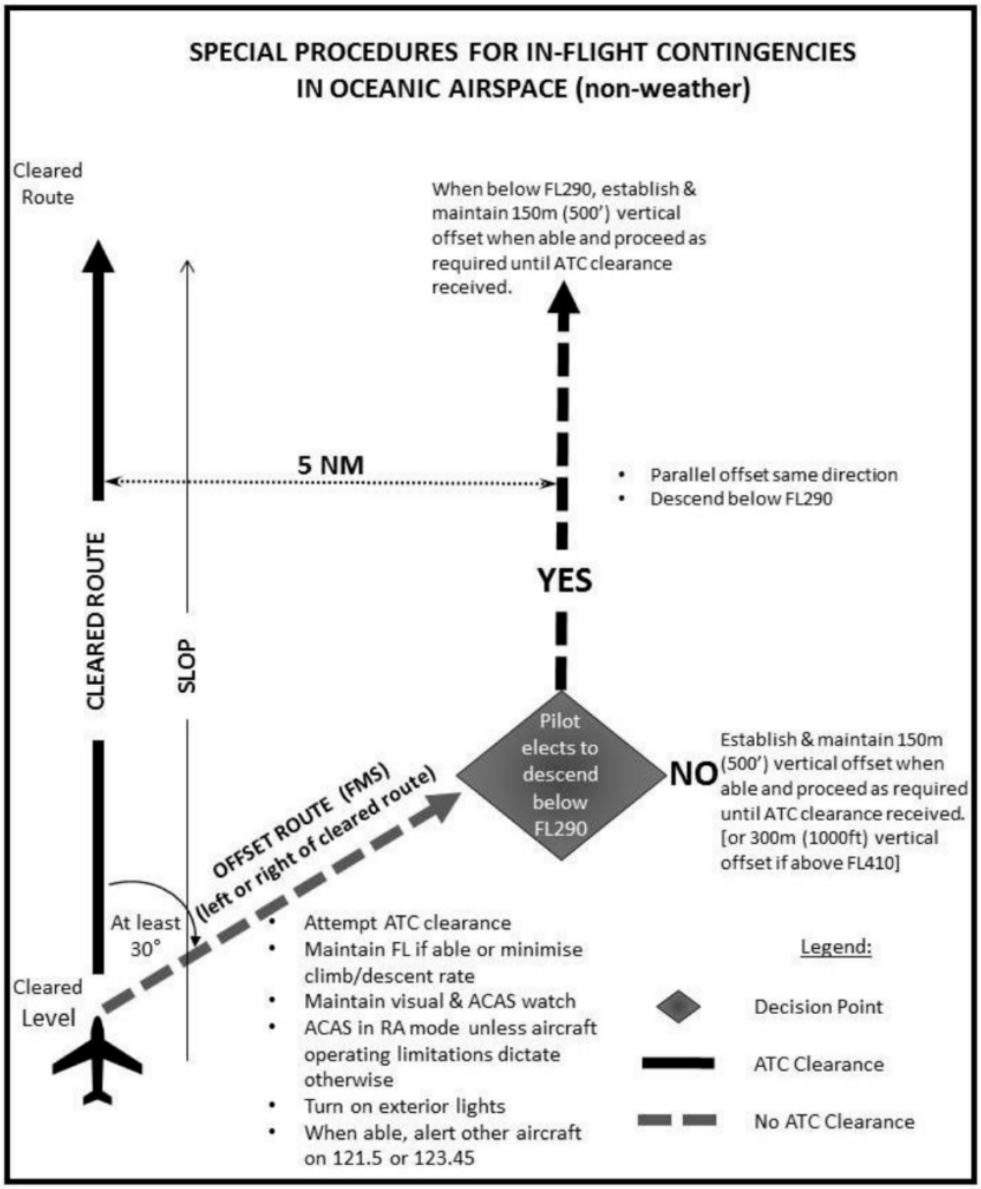
David Mumford
17 January, 2024



Starting 28th March 2019, a new trial will be implemented on the NAT called **ASEPS (Advanced Surveillance Enhanced Procedural Separation)** using ADS-B in the Shanwick, Gander and Santa Maria FIRs.

Compliant aircraft will see a reduction in longitudinal separation to as close as 14 NM. This is not restricted to particular tracks or altitudes, just between properly equipped aircraft – you'll need RVSM/HLA approval, ADS-B, and to be fully PBCS compliant (that means meeting the specifications of RNP4, RCP240 and RSP180). Read this ICAO Bulletin for all the details.

When the ASEPS trial starts, there will also be some changes to the **contingency and weather deviation procedures**. Before, there was a lot of confusion around the wording of these two procedures – this has now been made much clearer, and they have even included a nice little graphic to help us understand what to do. Read this ICAO Bulletin for all the details.



ICAO have published all these changes in their updated NAT 007 Doc valid for 28th March 2019.

Further reading:

- On Nov 1st we had **a call with 140 Opsgroup members about upcoming changes on the NAT in 2019**, and how we can effect change. Opsgroup members can find the PDF notes of this in your Dashboard.
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- Use our quick guide to **figure out where you are welcome on the NAT**, depending on what equipment and training you have.
- All the **big changes on the NAT in 2018** are covered on our page here.

My first North Atlantic Flight is tomorrow – NAT Ops Guide (Updated 2018)

Declan Selleck
17 January, 2024

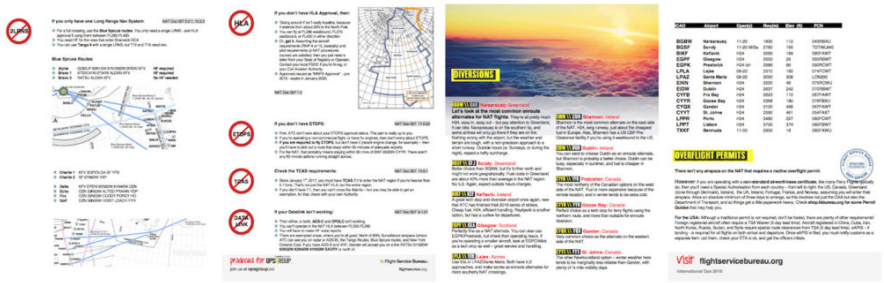
> For the **latest changes and updates on the North Atlantic**, including our most recent **Guides and Charts**, use our NAT reference page at **flightservicebureau.org/NAT**.

Of all the hundreds of questions we see in OPSGROUP, one region stands out as the most asked about – the NAT/North Atlantic. So, we made one of our legendary guides, to get everything into one PDF. It's called "My first North Atlantic Flight is tomorrow" – **and now we've updated it for 2018!**

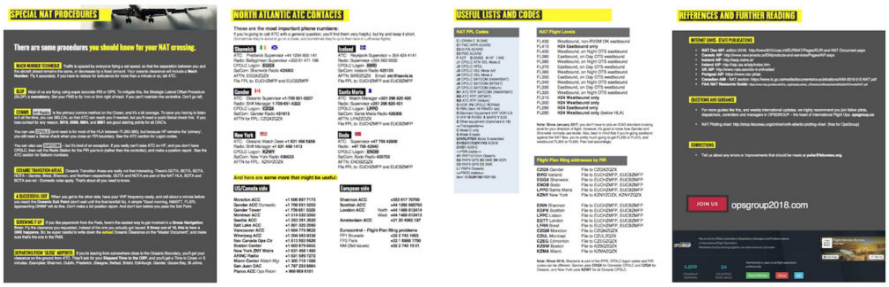
Contents:

- 3. NAT Quick Map – Gander boundary, Shanwick boundary
- 4. Routine Flight Example #1 – Brussels to JFK (up at 5.45am)

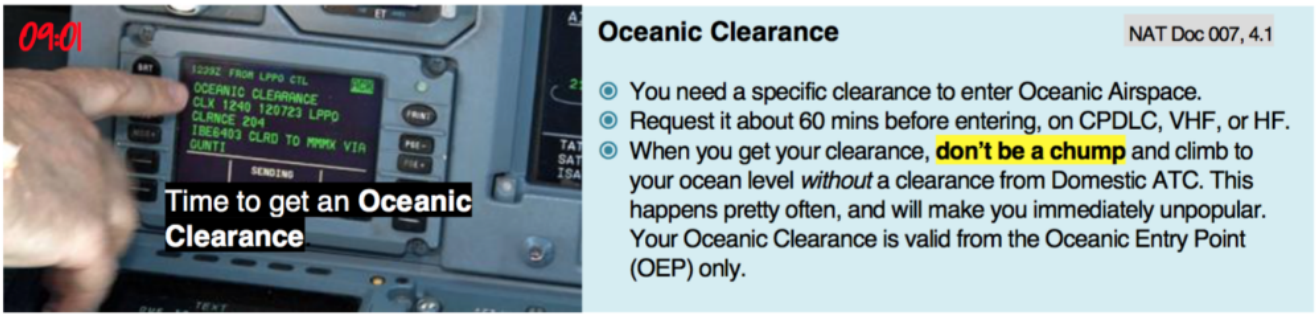
- 5. **Non Routine-Flights**: No RVSM, No RNP4, No HF, 1 LRNS, No HLA, No ETOPS, No TCAS, No Datalink – what you can do and where you can go
- 6. **Diversion Airports guide**: Narsarsuaq, Sondy, Kef, Glasgow, Dublin, Shannon, Lajes, Fro Bay, Goose Bay, Gander, St. Johns
- 7. **Airport data**
- 8. **Overflight permits** – routine and special

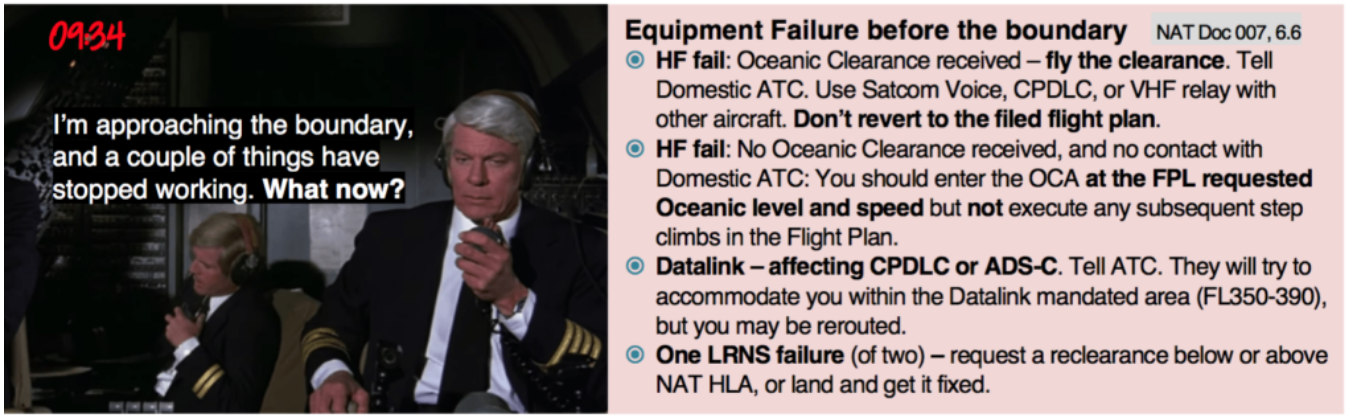


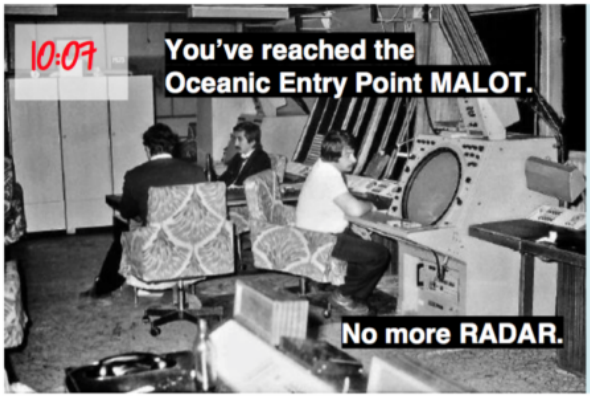
- 9. **Special NAT procedures**: Mach number technique, SLOP, Comms, Oceanic Transition Areas, A successful exit, Screwing it up, Departing from Close Airports
- 10. North Atlantic **ATC contacts** for Shanwick, Gander, Iceland, Bodo, Santa Maria, New York – ATC Phone, Radio Station Phone, AFTN, Satcom, CPDLC Logon codes; and adjoining Domestic ATC units – US, Canada, Europe.
- 11. NAT **FPL Codes**
- 12. NAT **Flight Levels**
- 13. **Flight Plan Filing** Addresses by FIR
- 14. Links, Questions, Guidance



Excerpt from the Routine Flight #1:







Entering the Ocean NAT Doc 007, 4.1

- Say goodbye to the radar controller, you're on your own now.
- Select an offset for **SLOP** – 1nm or 2nm right of track, your call.
- Logon to **EGGX**, and call Shanwick on HF for a radio check.
- Expect a "Confirm Assigned Route" message on CPDLC .
- Check next waypoint is correct, and that you're going there.
- Set 123.45 for turbulence complaints + baseball scores, and 121.5.
- **Squawk 2000**, 30 minutes after passing the OEP.

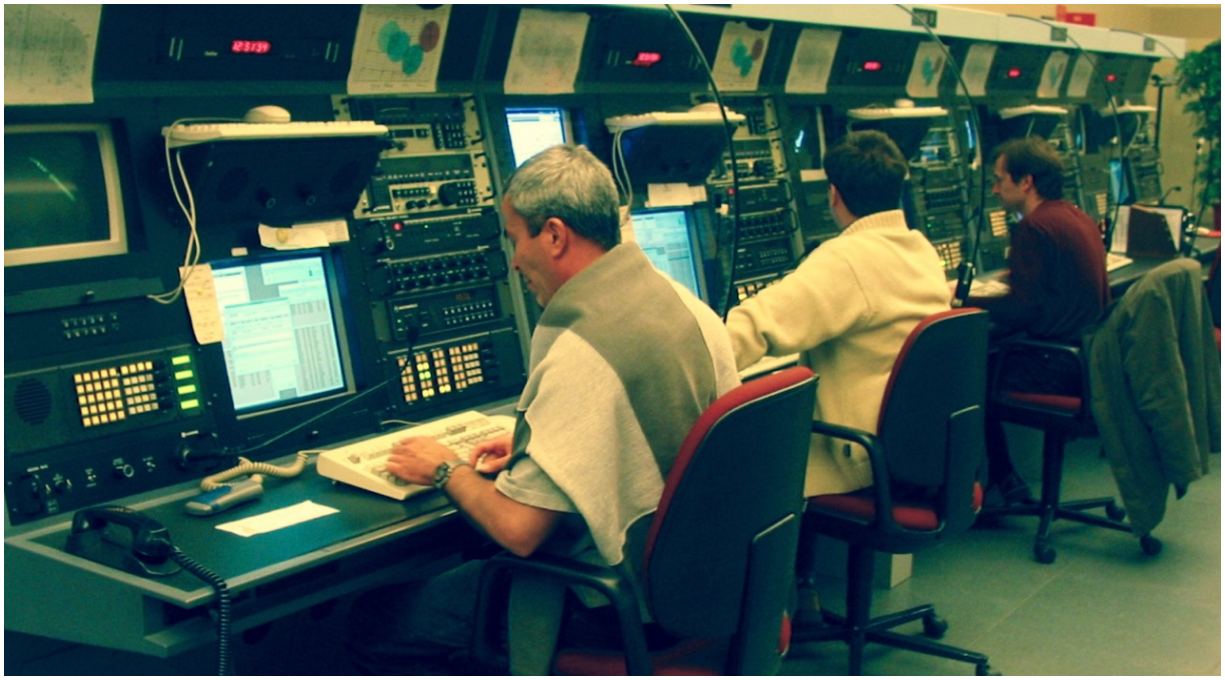
If you do have to make a voice position report, then do it like this:
***Position, Swissair 100**, RESNO at 1235, Flight Level 330,*
Estimating 56 North 020 West at 1310, 56 North 030 West Next.

Going around Weather NAT Doc 007, 13.4

- Unless you've spotted the CB late, request a deviation from ATC. Otherwise, follow the **contingency deviation procedure**:
- Turn away from the tracks, turn on your lights
- Call on 121.5 and 123.45 to tell others
- If deviating >10nm, if **north of track** descend 300 feet; if **south of track** climb 300 feet, but only once you are 10nm off track.
- Once clear, and back within 10nm of track, return to level.

Santa Maria Strike: Four Routes

Declan Selleck
17 January, 2024



Update: 1730Z/Weds – we have received notification that Portuguese Industrial action may be being withdrawn. We will update and confirm when certain.

LPPO/Santa Maria Oceanic has published four special routes for use during the upcoming "July Friday Strike Series" ATC Industrial Action.

If you happen to be crossing the LPPO FIR on a Friday morning in July, then expect a hefty reroute if you didn't file per the plan.

The Strike Time Period is : 0700-0900Z, during which time only these four routes will be accepted.

–**ROUTE A**– 45N020W 40N030W 37N040W

–**ROUTE B**– DETOX 39N020W 36N030W 34N040W

–**ROUTE C**– LUTAK 36N020W 33N030W 29N040W

–**ROUTE D**– ULTEM 27N040W

The cutoff time for these routes is when you enter the LPPO/Santa Maria FIR

Traffic entering prior to 0700Z: unrestricted

Traffic entering the FIR between 0700-0900Z: Must file and fly one of the four Routes above.

Traffic entering the FIR after 0900Z: unrestricted

Oceanic Errors

Declan Selleck
17 January, 2024

Unfortunately, we don't fly with three in the cockpit anymore – or even four. The navigators job falls squarely onto the front two seats. Over one weekend in April there was one **Gross Navigation Error**, and two close calls reported on the North Atlantic.

April 22nd (Friday)
Democratic Republic of the Congo Boeing 727 100 (9QCDC/DRC001) from Santa Maria Island, Azores (LPAZ) to St. John's NL (CYYT)
At 1235Z, Observed on radar to be over position 4720N 4745W, which was approximately **60 miles** north of the cleared route 45N 45W – 47N 50W. The crew reported correctly while in oceanic airspace. The flight was cleared direct to YYT and landed without incident at CYYT. There was no traffic, and no other impact to operations.

April 24th (Sunday)
Neos Airline Boeing 767-300 (INDDL/NOS730) from Ferno, Italy (LIMC) to Havana, Cuba (MUHA)
Cleared via 49N030W 48N040W 45N050W. At 30W, the flight reported 48N040W 44N050W. The aircraft recleared to 45N050W prior to proceeding off course.

Apr 25th (Monday)
Transportes Aereos Portugueses Airbus A330-202 (CSTOO/TAP203) from Lisbon, Portugal (LPPT) to Newark, NJ (KEWR)
Cleared 46N030W 46N040W 45N050W. The aircraft reported proceeding via 46N030W 46N040W 44N050W, as per the original flight plan. The aircraft was recleared via 45N050W prior to proceeding off course.

Did you notice how hard it was to find the error in the above two examples?

Gross Navigation Errors are a really interesting topic, and relevant not just on the North Atlantic but in any Oceanic or Remote airspace where ATC cannot monitor the aircraft tracking.

What defines a GNE? Normally, 25nm: That is, when on "own navigation" the aircraft departs the cleared route by more than 25nm. The NAT Central Monitoring Agency (CMA) now defines a Gross Navigation Error as 10nm instead of 25nm.

Annually, the biggest offenders in order of "market share" are: 1. Corporate/Private, 2. Military/State 3.

Civil airlines.

How to Avoid a GNE?
(***aka How to avoid a Nastygram from the Authorities***):

In general, when operating outside of ATC Radar coverage in any airspace:

- Crews: Don't have more than one paper copy of the Flight Plan in the cockpit. Mark the active one "Master Document". Hide any other copies where you won't find them.
- Ops: If you send a new Flight Plan to the crew, tell them what the changes are – especially if you've filed a different route in Oceanic or Remote Airspace.
- **Fly the Clearance, not the Filed Plan**. This is the biggest gotcha. As soon as you reach the Oceanic Entry Point, or leave radar airspace – refer only to the most recent Clearance from ATC. The filed plan is a request only – sounds obvious, but most GNE's occur because the crew fly the filed plan although there was a reroute.
- **Be aware of the 'ARINC424 problem'**: In the aircraft FMS, and map display, the current common waypoint format is 5230N for position 52N030W (as prescribed by ARINC 424). To show position 5230N030W – ARINC 424 offers a format N5230. The potential for confusion is clear. ICAO, in NAT Ops Bulletin 3/15, have recommended that operators use the format H5230, if a five-letter FMS format waypoint is required. In addition pilots are recommended to cross check any waypoints that don't have a 'name'.
- Use a **plotting chart** – it's mandatory. You don't have to use ours, but use one.
- Use an **Oceanic/Remote Area Checklist** (sample link below).

And specifically on the Atlantic:

- Read the advice on the Daily Track Message – waypoint cross check, Fly the Clearance (and be sure it is the clearance!)
- Know the weather deviation procedures: Even with the new "Half Tracks", there are no changes to the in flight contingency procedures and weather deviation procedures as detailed in PANS ATM Doc444 Para15.2 & 15.2.3.

Here's some links and resources that we think are really useful:

- **Sample Oceanic Paperwork**
- **Oceanic Checklist**
- **Oceanic Plotting Chart**
- **ICAO: Gross Navigation Errors: NAT Ops Bulletin 02/2014**

For regular notices and content like the above, consider joining **OPSGROUP**.

Did you know MNPS is over? Meet HLA, the new North Atlantic Airspace.

Mark Zee
17 January, 2024

From Feb 4th, 2016, **MNPS** (Minimum Navigation Performance Specifications) Airspace is being dumped as a term (no loss, really), and replaced by the much more user friendly **NAT High Level Airspace or NAT HLA**. MNPS first came into being in 1977, and this change is significant in that the requirements for approval to enter the new NAT HLA are updated – you must now have RNP4, or RNP10. Also, the rest of the Atlantic welcomes Bodø Oceanic to the fray – it joins Shanwick, Gander, Reykjavik, New York, and Santa Maria to make up the new NAT HLA, which keep the original vertical profile of FL285-FL420.

In short, that's all you need to know. You should read our **International Ops Notice 01/16** for the full story.