

No SELCAL On The NAT?

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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 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.

The new codes/tones...

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	811.0	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 SELCALLs** to aircraft featuring the new codes (tones 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 refile 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.