

Santa Maria HF - Unauthorised Transmissions

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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°58'21"N025°09'54"W								
Transmitter site(s) location(s): Cabrestantes (36°59'44"N025°10'14"W)	Receiver site(s) location(s): Faneca (36°59'44"N025°07'48"W)								
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:	Post Address:								
Name: NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO	Name: NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO								
Phone: + 351 296 820 509	Phone: + 351 296 820 401								
Fax:	Fax: + 351 296 886 045								
Email: AFTN/SITA Address: LPAZYFYA	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

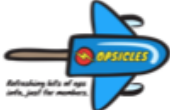
If you're not satvoice equipped, and you can't reach Santa Maria Radio directly - what then?

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...

<p>EVERYTHING IS LOST</p> <p>UH OH</p>	<p>HF IS LOST</p> <p>NO NO</p>	<p>DATALINK ISSUES</p> <p>HI OR LO</p>	<p>HF BLACKOUT</p> <p>SPACE GLOW</p>	<p>ATC ISSUES</p> <p>HELLO?</p>
<p>INSIDE, WITH CLEARANCE</p>	<p>INSIDE, WITH CLEARANCE</p>	<p>INSIDE, WITH CLEARANCE</p>	<p>INSIDE</p>	<p>UNFORESEEN AND SUDDEN</p>
<p>Stick to clearance, transmit blind, squawk 7600, follow lost comm procedures for country you enter (as you leave NAT HLA). Follow contingency for weather or emergencies. Keep trying all other systems.</p>	<p>Stick to clearance, try CPDLC and VHF. Try other HF frequencies. Ask for relays. Check there is no space weather causing blackouts.</p>	<p>Let ATC know. There isn't much you can do about it now.</p>	<p>Everyone has lost it. ATC and aircraft. Continue with clearance (domestic if that is the last received) and don't divert - there is no-one to coordinate.</p>	<p>Stick to your clearance, or until you reach the point where a published contingency procedure applies. Try the next sector until contact made.</p>
<p>NOT ENTERED, WITH CLEARANCE</p>	<p>NOT ENTERED, WITH CLEARANCE</p>	<p>NOT ENTERED</p>	<p>NOT ENTERED</p>	<p>NOT ENTERED</p>
<p>Continue (do the above). Or divert and land.</p>	<p>HF is now a requirement as one of your two LRNS) so tell ATC. Shanwick (even Blue Spruce routes) mandates it.</p>	<p>There is a Datalink Mandate for a lot of the NAT HLA. ATC might still let you in if you ask nicely.</p>	<p>Chances are you won't know, you're probably still on VHF. ATC might let you know though.</p>	<p>You are unlikely to get a clearance to enter an ATC zero region. Plan to route around the area.</p>
<p>NOT ENTERED, NO CLEARANCE</p>	<p>IT BROKE EARLIER</p>	<p>You don't need it if north of 80N, in NYC Oceanic, on a Tango 9 or 920 route, in the surveillance airspace over Greenland/Iceland or below FL290/ above FL410.</p>		<p>COMM ISSUES IN THE NAT HLA</p>
<p>Consider diverting. If entering through Shanwick follow their published procedures and divert to EINN/Shannon.</p>	<p>You can get pre-approval to enter without HF if its for a maintenance flight (going to fix it.)</p>	<p>SATCOM is usually needed for datalink, as is CPDLC and ADS-C.</p>		

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