

# Santa Maria HF - Unauthorised Transmissions

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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

<b>Station Name:</b> Santa Maria Radio									
<b>Country:</b> Portugal	<b>State:</b> Santa Maria - Azores								
<b>City:</b> Vila do Porto	<b>Geographic Location:</b> 36°58'21N025°09'54W								
<b>Transmitter site(s) location(s):</b>  Cabrestantes (36°59'44N025°10'14W)	<b>Receiver site(s) location(s):</b>  Faneca (36°59'44N025°07'48W)								
<b>Frequencies</b>									
<b>Family</b>	<b>Frequency bands</b>								
	3 MHz	3.5 MHz	4.7 MHz	5.6 MHz	6.6 MHz	9 MHz	11.3 MHz	13.3 MHz	18 MHz
<b>A</b>	3016			5598		8906		13306	17946
<b>E</b>	2962				6628	8825	11309	13354	
<b>H</b>		3491			6667				
<b>Contacts</b>									
<b>AFTN Address:</b> LPAZYSYX					<b>Aircraft in Flight Address:</b> LPAZZZX				
<b>SATCOM short code number:</b> 426305									
<b>Station Manager</b>					<b>On Duty Supervisor</b>				
<b>Post Address:</b>					<b>Post Address:</b>				
<b>Name:</b> NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO					<b>Name:</b> NAV PORTUGAL APARTADO 47 AEROPORTO SANTA MARIA 9580-909 VILA DO PORTO				
<b>Phone:</b> + 351 296 820 509					<b>Phone:</b> + 351 296 820 401				
<b>Fax:</b>					<b>Fax:</b> + 351 296 886 045				
<b>Email:</b> AFTN/SITA <b>Address:</b> LPAZYFYA					<b>Email:</b> smaradio@nav.pt <b>AFTN/SITA Address:</b> LPAZYSYX				
<b>Remarks:</b> 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...

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

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](mailto:team@ops.group)