

Cyber Security Threats

GPS Jamming, GPS Spoofing, Simple Solution.

Cyber Security threats for ships are a major topic, and one of the most dangerous risks is the ability of hackers to Jam or Spoof the GPS.

GPS JAMMING can be done by a simple jammer, transmitting on the same frequency and prohibiting the genuine GPS signal from being received and processed. Risk to ships: No GPS position.

GPS Spoofing requires more advanced equipment, capable of “cheating” the GPS by sending dedicated signals that the GPS will interpret as genuine and consequently will show a wrong position. Such an attempt was reported on June 22nd and claimed that **more than 20 ships** were affected by such an attack that placed them about 20 miles off their true position (See below).

Simple Solution Totem Plus can offer **protection** against GPS jamming and spoofing, using a new military technology using unique RF algorithms (“Null Steering”). The Solution is an add on to existing GPS, will be connected between the Antenna and the receiver and will ensure that GPS positions are not compromised. Protection is given against both Jamming and Spoofing.



From the Press (New Scientist, August 2017): Ships fooled in GPS spoofing attack suggest Russian cyber weapon

*Reports of satellite navigation problems in the Black Sea suggest that Russia may be testing a new system for **spoofing GPS**, New Scientist has learned. This could be the first hint of a new form of **electronic warfare** available to everyone from rogue nation states to petty criminals.*

On 22 June, the US Maritime Administration filed a seemingly bland incident report. The master of a ship off the Russian port of Novorossiysk had discovered his GPS places him in the wrong spot – more than 32 kilometres inland, at Gelendzhik Airport.

*After checking the navigation equipment was working properly, the captain contacted other nearby ships. Their AIS traces – signals from the automatic identification system used to track vessels – placed them all at the same airport. **At least 20 ships were affected.***