

## SGP Antenna requirements

A requirements for participation in the World Final Sailplane Grand Prix 10th series at St Auban France, installation of a FLARM/OGN tracker external antenna on the outside of the glider.



The external antenna will be connected to the OGN/IGC tracker provided by the organization. For the Flarm unit we recommend to have a similar antenna inside the cockpit. In Europe the Flarm/OGN frequencies are on the **ISM band (868.2 MHz) unique frequency, so we require an antenna for that frequency with at least 3dbi or better**, and we recommend the following antennas:

<https://es.aliexpress.com/item/Antenna-868-Mhz-3dbi-Rubber-antenna-with-SMA-Plug-straight-connector/1553321879.html?spm=a2g0s.9042311.0.0.YYNVa2>

<https://www.aliexpress.com/item/Antenna-868-Mhz-3dbi-Rubber-antenna-with-SMA-Plug-straight-connector/1553321879.html?spm=a2g0s.9042311.0.0.ESjmQy>

<https://www.aliexpress.com/item/868MHz-whip-wireless-antenna-RF-Solution-antenna-SMA-Male-1pcs/32811207766.html?spm=a2g0s.9042311.cb0001.5.dEvlvK&scm=1007.13441.76633.0&amp;pvid=1343b7f0-0e92-45cc-aa62-1bc6e298ae76&amp;tpp=1>



You can use a low profile antenna like the one from Dolba & Dolba Flarm Antenna, you can find the details at:

[https://www.navboys.com/DOLBAANTENNA\\_BD9.html](https://www.navboys.com/DOLBAANTENNA_BD9.html)



The antenna has to be placed below the cockpit pointing down and requires a 7 mm diameter hole on the fuselage (the drain hole could be used for this purpose), the antenna is connected to a coaxial cable (**50 ohm**, we recommend Aircell7 or Ecoflex10 given the frequencies that we use) to the OGN/IGC tracker external antenna SMA male connector.

Location of the external antenna: The antenna has to be located vertical as shown on the following pictures, taken from current installations.



The antenna has a SMA male connector see picture above, so the termination of the cable has to be female connector going to the antenna and a termination SMA male connector going to the OGN/IGC tracker.

Although the installation of the cable and socket is relatively simple, we suggest you install the coaxial cable and antenna socket prior to arriving with your sailplane. If this is not possible and you need help with the installation, it can be done by our staff with a cost, before the scrutineering, assuming the sailplane arrives in good time prior to the event. This is the tracker (there will be two different models). It has to be placed inside the cockpit as GPS receiver is internal. It requires 12V power supply only.