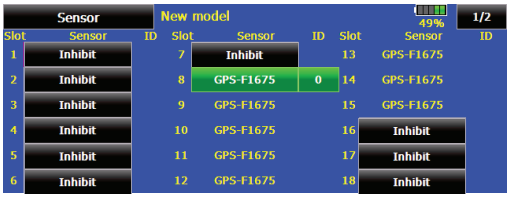
Operating Instructions for GPS2-Multi-Sensor
No. F 1675002

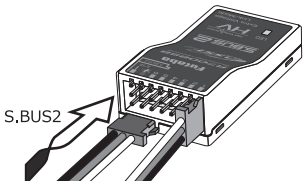


Dear robbe customer,
Please read the instructions thoroughly before installation

The GPS2 Multi Sensor is a development of the familiar GPS Multi Sensor F1675. The new sensor's higher clock frequency allows faster transfer of telemetry data, which means that the sensor is now also a very good choice for power models.

Fix the GPS2 Multi Sensor in place using Velcro tape in the fuselage of the model. The cooling inlets of electric models can lead to disturbance of the Vario and Altimeter readings.Find a place which is not in the direct air blast from these openings.Take care that no air dam occurs from these cooling inlets. If required the sensor can be wrapped in foam.
Also ensure that the GPS signal is not hindered from the sensor. The sensor must not be mounted under carbon fibre or metal covers or hatches.The sensor LED sensor should be also visible, to be able to see when the sensor has established a satellite connection.
Ensure the receiver aerial is kept as straight as possible. with a carbon fuselage, route the aerial externally. Furthermore, the aerial should not be routed parallel to other wiring or metal linkages, since these radiate and can considerably reduce the telemetry range.

Initial Setup of the Sensor:



Plug the GPS2 Multi Sensor into the S.BUS2 output of your telemetry receiver, either directly or via a Y lead or HUB lead.
The sensor has 2 through connections, so that on each free output a further S.BUS2 device or sensor can be connected.
The receiver supplies the sensor with the required voltage and serve to carry the sensor signal to the FASSTest transmitter as well as the telemetry or WiFi Rx box.
Using this second connection, the power supply as well as the sensor registration to the T18MZ can take place.

Introduction
The Multi Sensor uses air pressure measurement to establish height and variometer readings.The altitude measurement using air pressure is sensitive, in that pressure changes in closed spaces can lead to vario values of 0.3....0.5 m/s, thus small variances in vario and altitude values can occur outdoors. Pressure changes can happen due to weather changes, which can lead to altimeter reading variances of a few metres may occur during the flight.

Speed - and distance measurement as well as deriving position co-ordinates are made using the integrated GPS sensor.
In total, the GPS2 Multi Sensor required 8 time frames to determine all sensor data.
Following the registration of the sensor with the transmitter and the configuration of the vario display, in „Melodies", the modes 1... 4 can be selected. Thus the sound outputs will be set for the resolution in the sensor. Mode 1 is recommended for light thermal conditions, with turbulent or strong thermic conditions, Mode 2 or higher is recommended to increase the dead spot range

Try it out yourself to see which setting suits you the best.

Melody	Dead-spot	Sound output range
Mode1	+/- 5 cm	up to 2 m/sec
Mode2	+/- 10 cm	up to 4 m/sec
Mode3	+/- 20 cm	up to 8 m/sec
Mode4	+/- 40 cm	up to 16 m/sec

The LED status monitor shows the following modes:
Red LED =
Voltage on, but no sensor signal transmitting
Flashing green LED =
Voltage on searching for satellites
Continuous green LED =
Logged on to satellites. Sensor signal will be transmitted

Serial number
The sensor is issued with a unique serial number, with which it will be registered to the system. The number will be found on the unit as also in the instructions. It is vital to store the number safely in case you need to regenerate it.

Note:
As long as there is a GPS sensor in the model, it very easy to find a „flyaway" model as the co-ordinates of the sensor/model are shown in the transmitter display. Using Google Earth, the position is easily found. There is free-of-charge App, GPS Tour available for smartphones, which displays the route to the flyaway model.

Distance measurement:
The display of distance to the model in a straight line.

Speed Measurement:
The ground speed will be measured, therefore fly the model as level as possible and into wind to establish the speed over the ground. The middle value gives the average speed over the ground.

Specification
- Vario- measurement range: - 50m/s …50 m/s
- Vario sensor resolution: 10 cm/s
- Altimeter measurement range: -500 m + 3000 m
- Altimeter resolution: 1 m
- Speed range: 0...500 km/h
- Distance measurement: 0...5000 m
- Dimensions: approx. 45 x 30 x 15 mm
- Weight: approx. 21 g
- Operating voltage : 3.7 ... 8.4 V
- Current consumption: approx. 100 mA

Conformity declaration

robbe Modellsport GmbH & Co.KG hereby declares that this device fulfils the fundamental requirements and other relevant regulations of the appropriate CE directives. The original Conformity Declaration can be found on the Internet at www.robbe.com. Please select the specific device description, then move to “Downloads” and select “Conformity Declaration”.

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