



**D10G1.1 iMan GPS\_Listener Manual**

**January 2013**



*This documentation applies to the product iMan manufactured by BioControl, Norway.*

*Documentation version 1.1 completely replaces previous versions.*

*Modifications since last documentation version:*

- *none – version 1.0*
- *version 1.0 - version 1.1*
  - a) small additions*

**Note:**

All information in this document describes product and details 'as is'. BioControl can not be held liable for (consequences of) incorrect or missing information in this document.

Check our website for latest version of this document and information on this product.

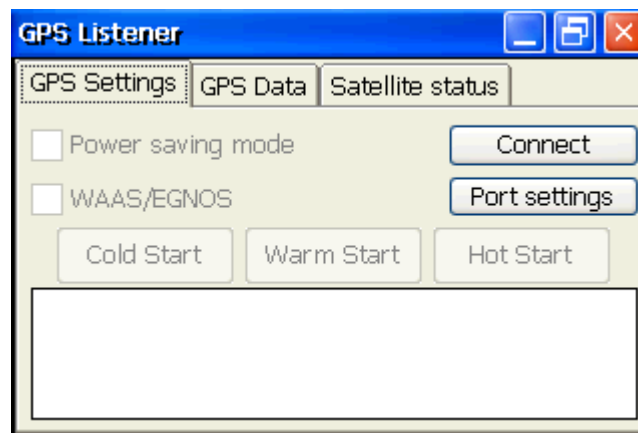
## 1. Connecting with the GPS Module

**Note:** Before beginning make sure that the GPS Module is on.

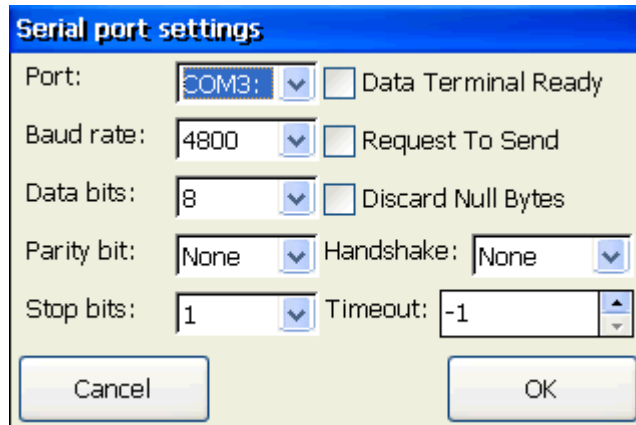
- 1) Open GPS Listener application using the link on the iMan Menu:



- 2) Click **Port settings** button to check if port configuration is correct:

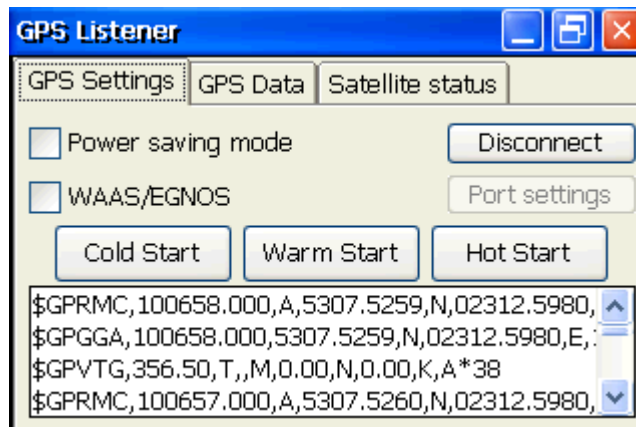


- 3) In *Serial Port Settings* window that will show up, make sure that serial port configuration is set as following:



If the configuration is any different – change appropriate properties and click **OK** button to save changes.

- 4) When *Serial Port Settings* window closes, click on **“Connect”** button. After a few seconds, you should see NMEA<sup>1</sup> messages showing up in bottom (white) part of the window:



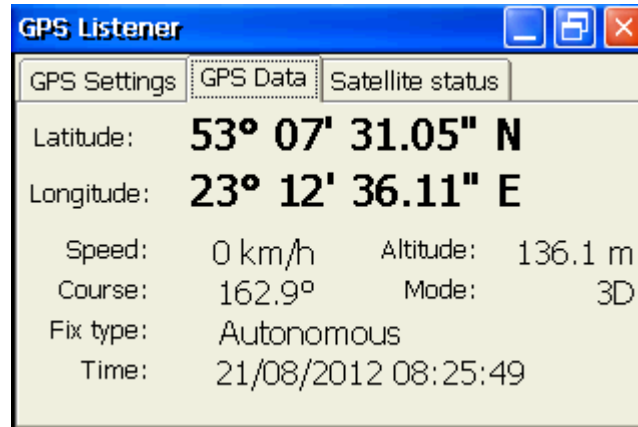
That indicates successful connection with GPS module.

**Note:** If after 10 seconds there is no messages showing up, try clicking on **“Disconnect”** button and then on **“Connect”** again. If that doesn’t solve the problem, please re-check serial port settings.

<sup>1</sup> NMEA is both electrical and data specification for communication between many GPS receivers.

## 2. GPS Data tab

When GPS Listener is successfully connected to GPS Module, **GPS Data** tab shows information about position (longitude, latitude and altitude), course, speed and fix time (in UTC timezone):



*Fix type* describes source of position signal (see *Fix quality* on *Satellite status* tab). Possible values are:

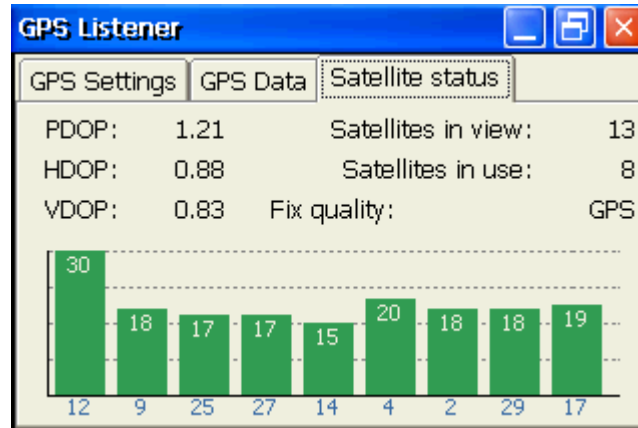
Value:	Source:
NotValid	None (error occurred)
Autonomous	Standard GPS
Differential	Differential GPS
Estimated	Computed basing on previous readings (position, speed)
Simulator	None (demo mode)

*Mode* indicates how precise GPS signals are:

- N/A – abbreviation for Not Available, there is no satellites in GPS receiver range;
- 2D – there are only three satellites so position can only be precise on ground level;
- 3D is used when there is signal from at least four satellites and both: ground level position and altitude can be acquired.

### 3. Satellite status tab

**Satellite status** tab shows information about satellites to which receiver is listening.



*PDOP*, *HDOP* and *VDOP* values are as follow: **P**ositional, **H**orizontal and **V**ertical **D**ilution of **P**recision (DOP).

*Fix quality* indicates method that receiver is using to determine position.

Possible values are:

Value:	Method:
Invalid	Error occurred
GPS	Standard GPS
DGPS	Differential GPS
PPS	GPS with Pulse Per Second signal
RealTimeKinematic	GPS with RTK extension
FloatRTK	GPS with less precise RTK extension
Estimated	Based on previous readings
Manual	Manual set
Simulation	Demo mode (no actual GPS position is transmitted)