InertialLabs
Attitude is Everything

Single & Dual antenna GPS-Aided Inertial Navigation Systems INS

STEP-BY-STEP QUICK START GUIDE

Revision	1.1

Revision History

Revision	Date	Author	Description
1.0	Jul.31, 2019	AK, WD	Released version.
1.1	Aug.23 2019	WD	Grammar correction, added pictures for test options, device options, com port in device manager

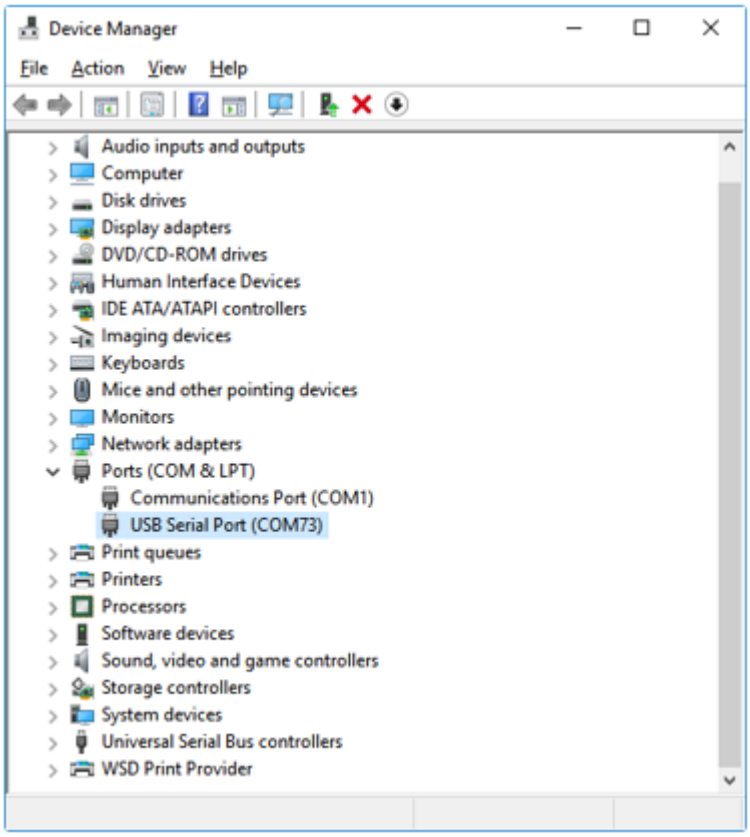
Purpose:

This purpose of this guide is to show how to start basic operation of the Inertial Labs INS using the INS Graphical User Interface (GUI). For detailed information please refer to the INS GUI Manual and INS ICD.

Step-by-Step Quick Start Guide:

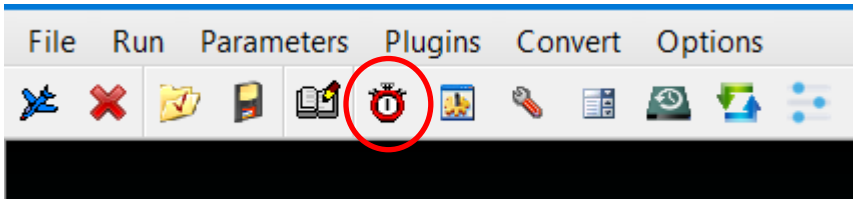
Setup. The COM1 of the INS should be connected to the PC using serial port (through COM-to-USB converter) or Ethernet. The INS should be powered.

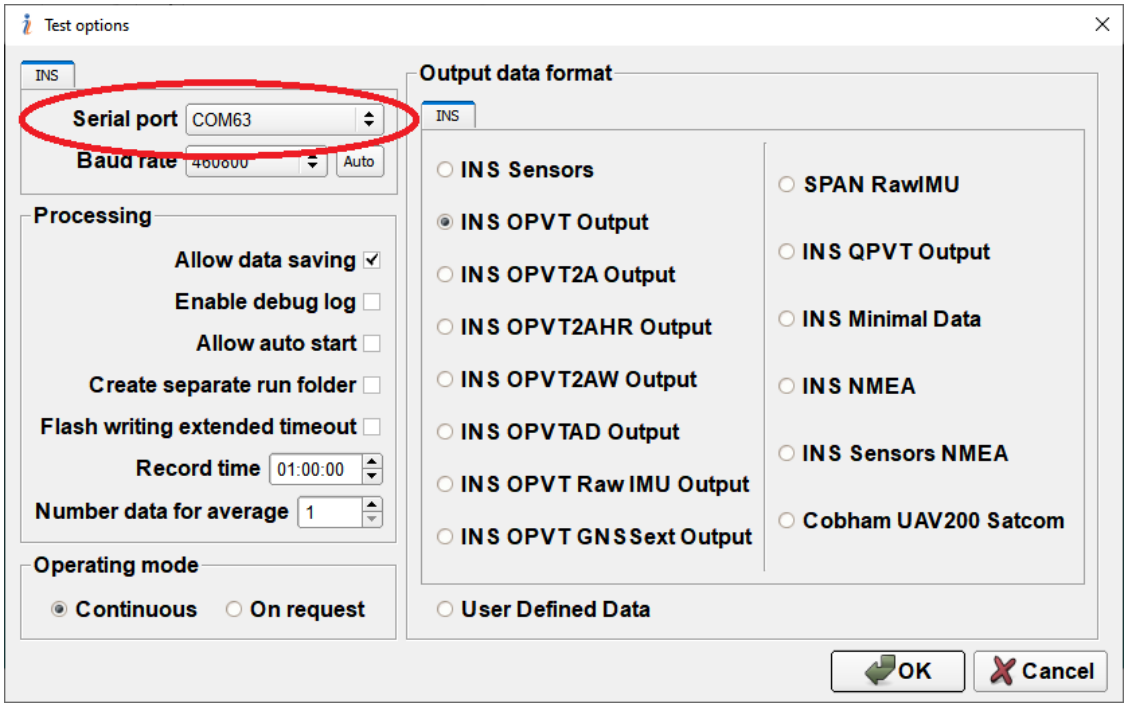
Before moving on, open «Device Manager» where you will see the COM ports which will be marked as «Ports (COM & LPT)». Remember which COM number the unit has been assigned.



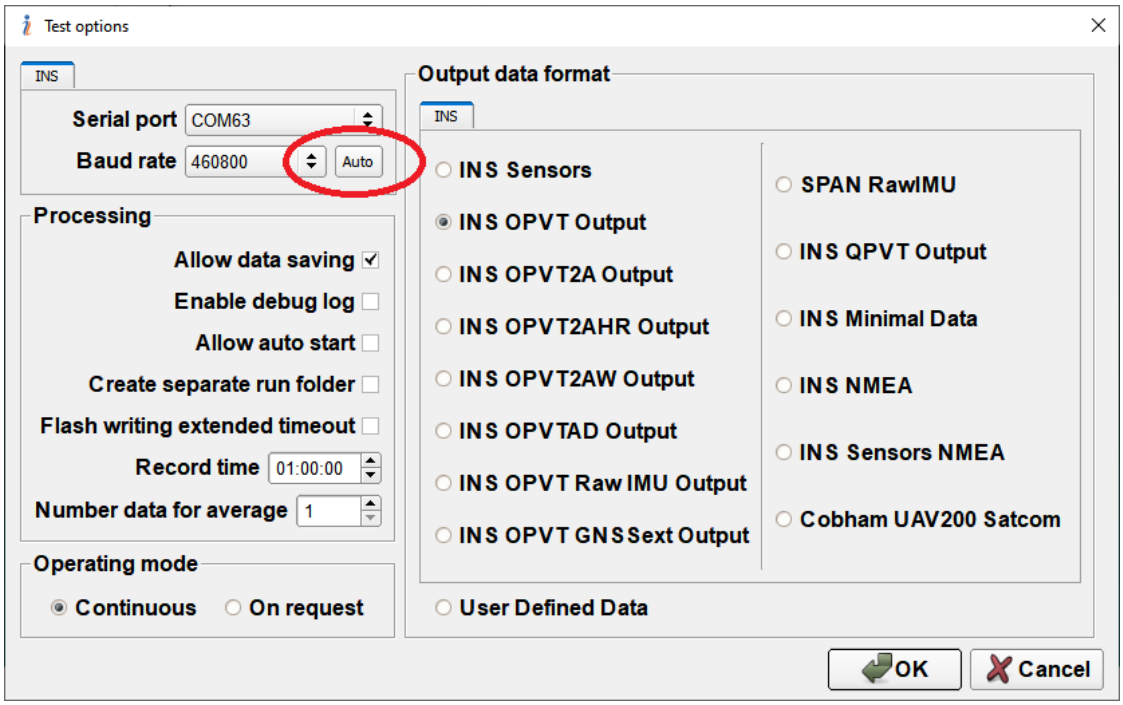
The "Inertial Labs INS GUI" software doesn't require any installation. Just copy the software folder into the working directory from the flash drive provided along with the device and run the INS_GUI.exe.

Step 1. In "Test options" menu choose the serial port number to that COM1 is connected

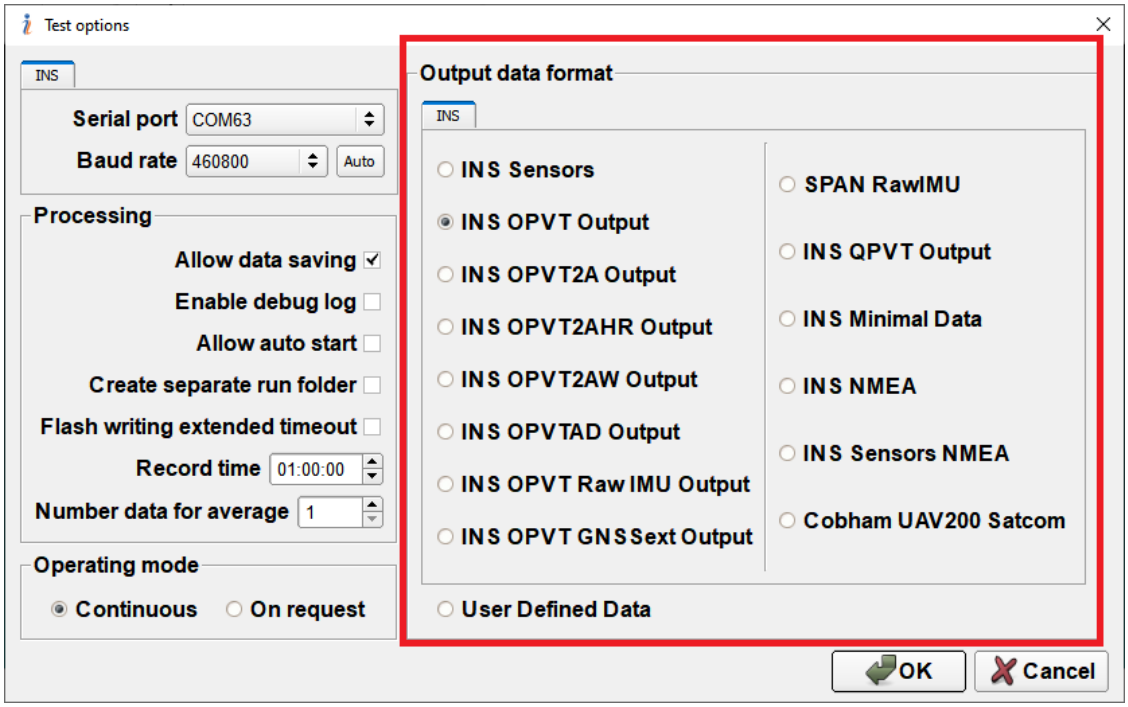




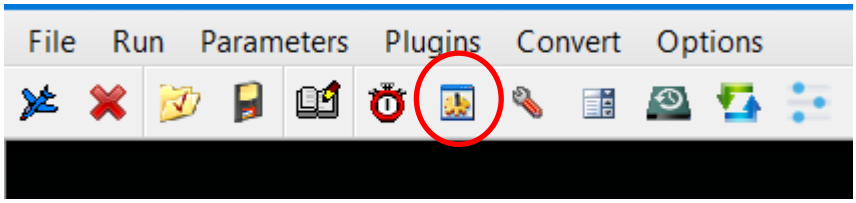
Step 2. To allow the GUI to determine the baud rate, click "Auto" button

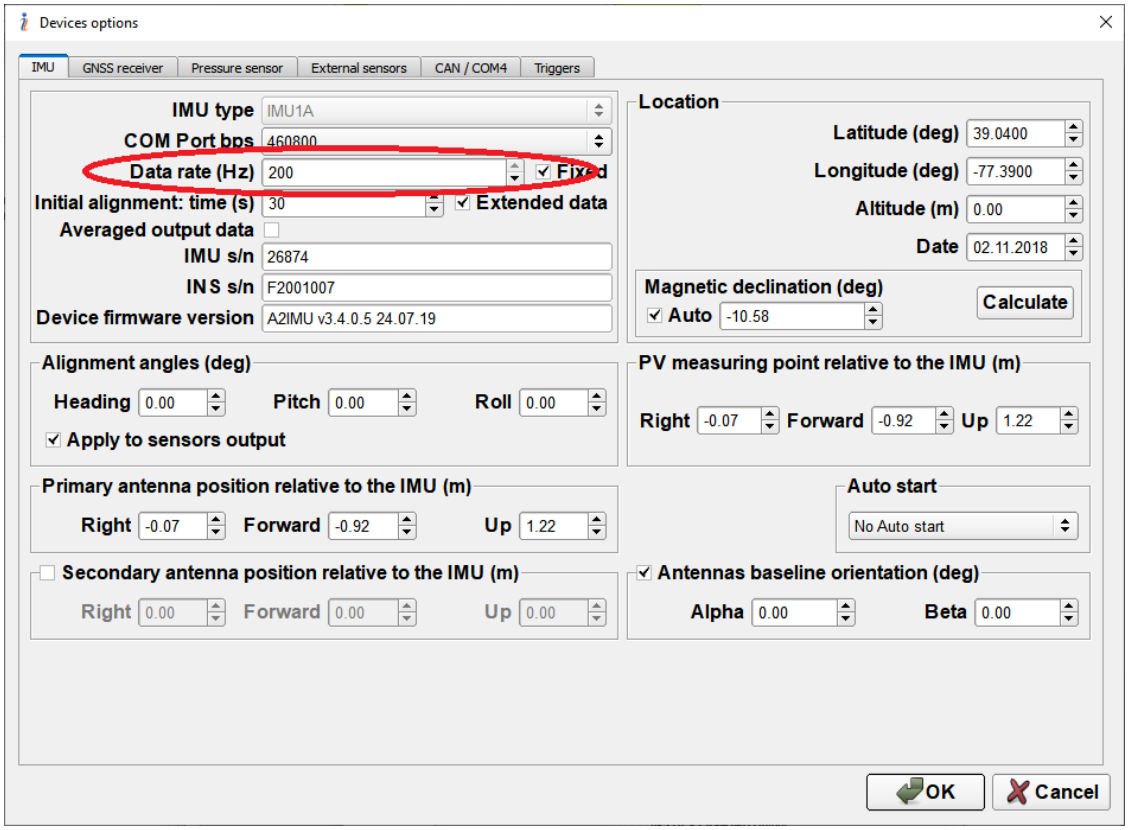


Step 3. Choose required output format. For the output formats description please see section 6.2 "Output data formats of the Inertial Labs INS" of the INS ICD.

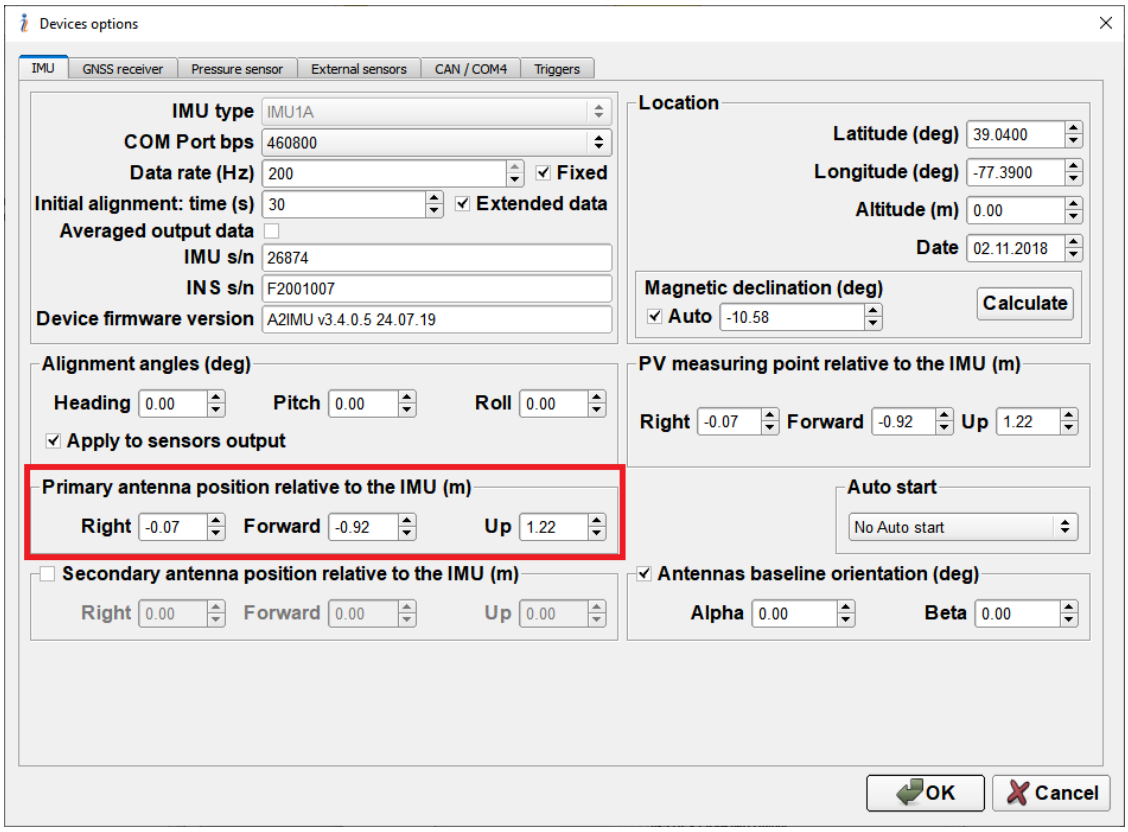


Step 4. In the "Device options" menu set required output data rate. Please note that there is a limitation of the data rate depending on the chosen output format and baud rate (for details please see section 4.2.8 "Limitation of the INS maximum output data rate" of the INS GUI Manual).

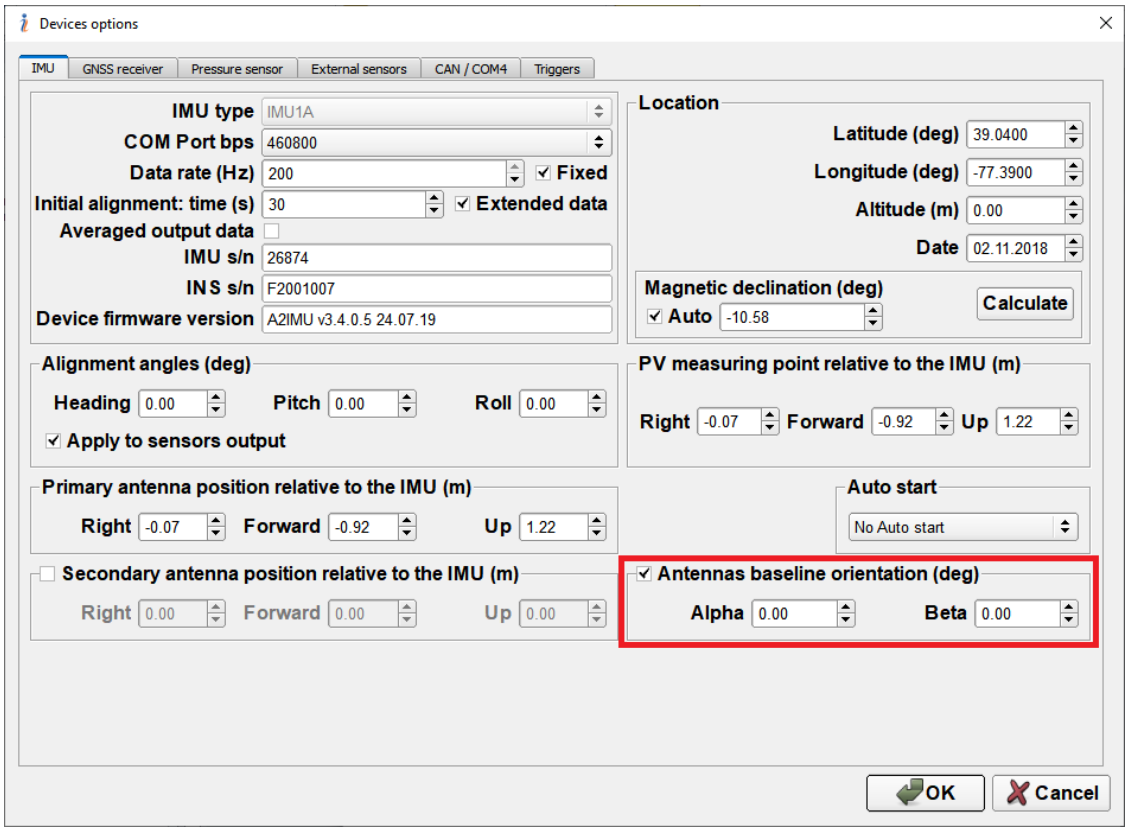




Step 5. Measure and set the primary antenna position.

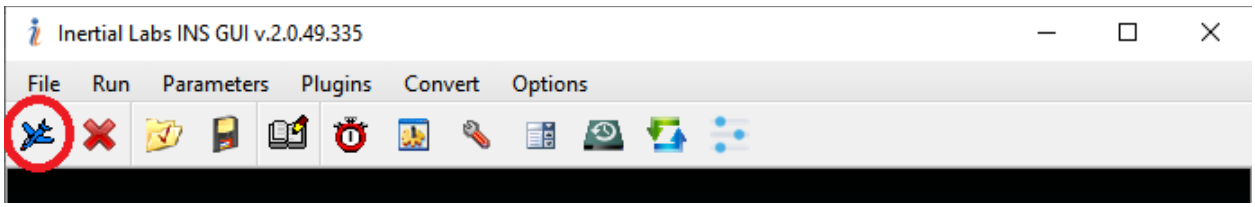


Step 6. For INS-D units measure and set secondary antenna position. There are two ways available: setting of the lever arm and antennas baseline orientation (please see section 4.2.1 "IMU tab of the Device Options window" of the INS GUI Manual).

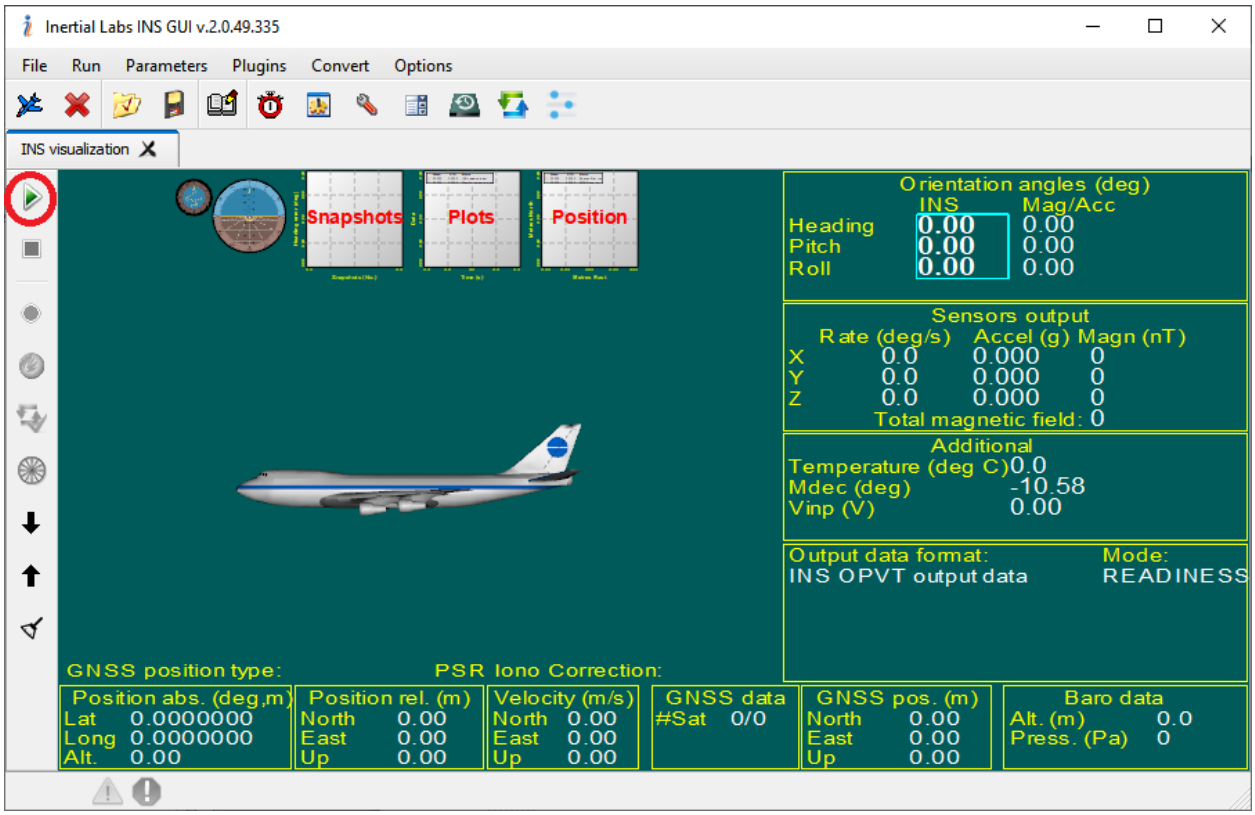


Step 7. Click "OK" to save the settings into the INS memory.

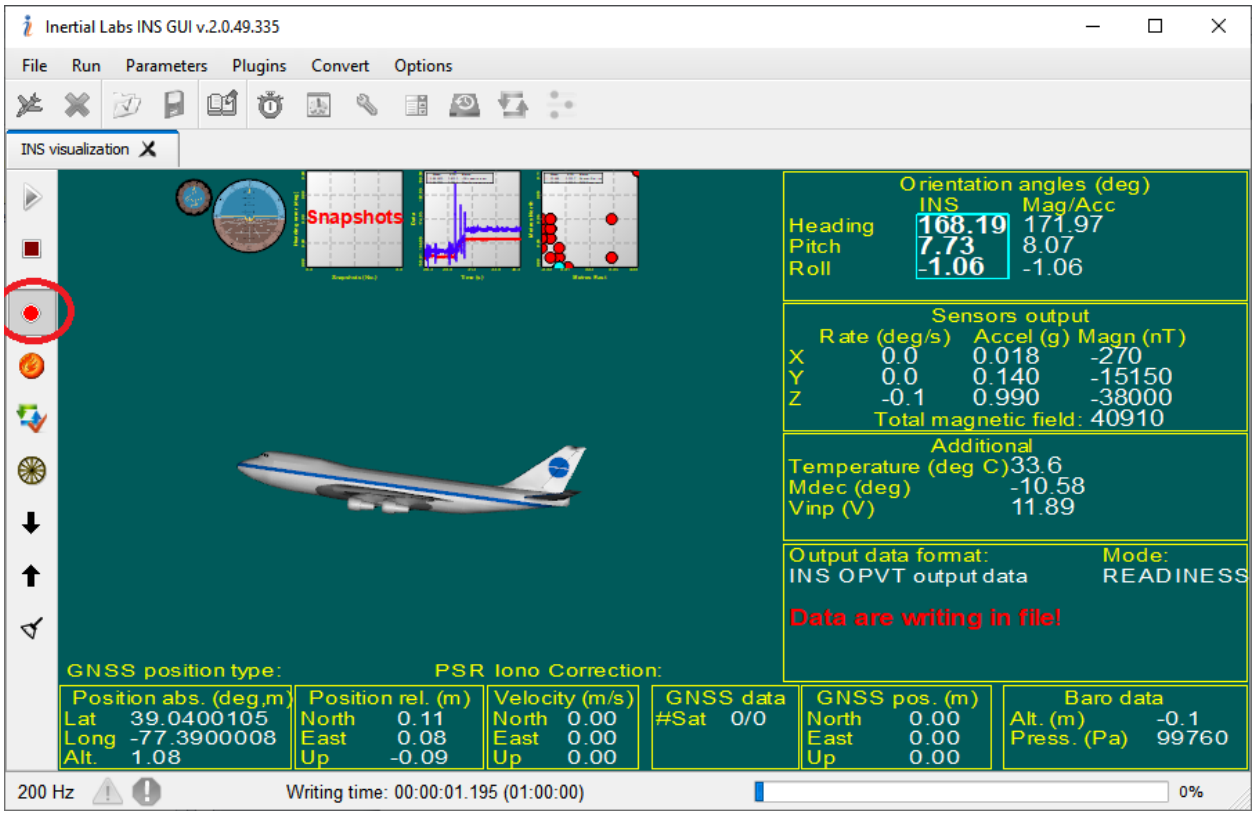
Step 8. Click on the  icon to open visualization tab.



Step 9. To start the INS operation click the "Start" button on the vertical toolbar of the "Visualization" tab



Step 10. (Optional) It is possible to record data in file by clicking "Write" button on the vertical toolbar.



Step 11. To stop the INS (and data recording) click the "Stop" button on the vertical toolbar.

INS Step-by-Step Quick Start
GUI User's Manual