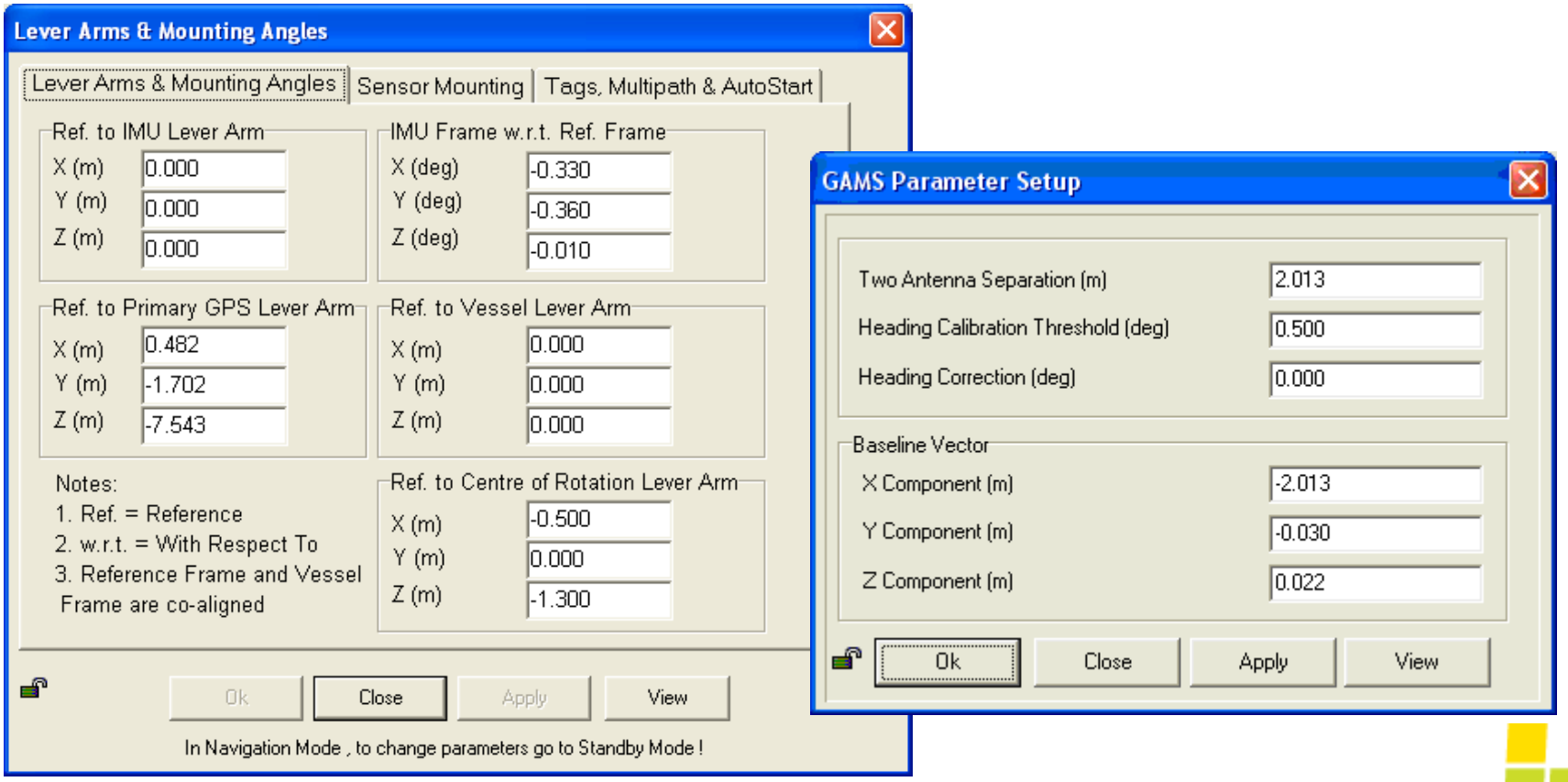
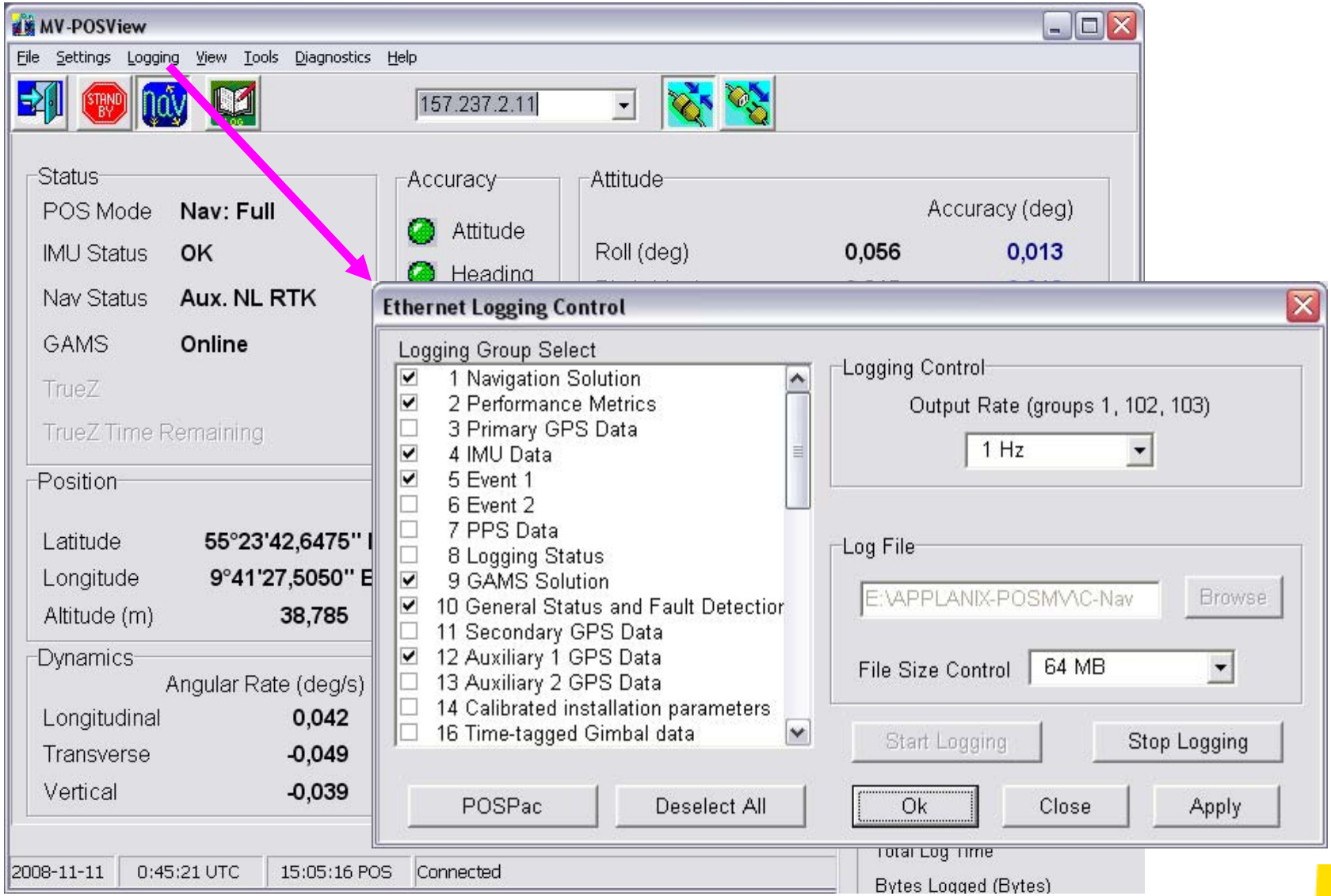
POS MV, Settings Check

POS MV has been configured with results of Land Survey.

By recording POSPac data during manoeuvres at sea, subsequent post processing of the POS MV data with nearby base station data allows the Primary GPS Lever Arm and the GAMS Lever Arm values to be checked.



POSView, Ethernet Logging



Procedure

1. With the POS MV running.. about half an hour before you reach the sea trials area..
2. Make sure POSView is CONNECTED to the POS MV
3. Settings, Installation, GAMS Parameters dialog:
   Set the following to zero (0.000)..
   - Two Antenna separation
   - Heading Correction
   - X component, Y component, Z component

   Set the Heading Calibration Threshold to 0.500 degrees.
   Click Apply, then OK to close the dialog.
4. Click STANDBY to set the POS MV is standby mode.
5. Wait 15 seconds, then click NAVIGATE, to restart the POS MV. Wait a minute of so for it to get up and running again which will be indicated by green LED's apart from Heading, but GAMS should be "Ready Offline".
6. POS MV, Logging, Ethernet Logging dialog:
   Click POSPac to select the correct records to be logged
   Leave 1Hz as the frequency
   Choose a folder and enter a filename
   Choose to split the files every 64mb
   Click START LOGGING (which opens a smaller logging status dialog). It is OK to close the main Logging Setup dialog, but leave the smaller logging status dialog open.

Procedure

7. Log at least 15 minutes of data, before starting the “figure of 8” manoeuvres.
8. As GAMS values are zero, GAMS is not available to POS MV, so the heading is purely inertial gyrocompassing. The “figure of 8’s” are used to exert accelerations on the inertial sensor and reduce the heading accuracy.
9. It is expected that at least half an hour of aggressive “figure of 8’s” will be needed to reduce the heading accuracy to 1 degree or lower.

   If heading accuracy lower than 1 deg is achieved quicker then the “figure of 8’s” can be stopped.

   If lower than 1 deg is not achieved after half an hour, make a note of the heading accuracy value and then modify the GAMS Parameters Heading Threshold to be larger than the achieved heading accuracy.

10. Stop the “figure of 8’s” and have the vessel drift.
    Using VIEW, GAMS, check that GAMS is “Fixed Integer” solution, if so..
11. Using SETTINGS, GAMS CALIBRATION CONTROL, choose START to initiate the GAMS calibration.

    So long as GAMS remains fixed integer, the calibration will complete in about a minute, and this will be indicated by GAMS going “Online” and the GAMS parameters being updated.

Procedure

12. Make a note of the calculated GAMS parameters. They are not expected to agree exactly with the Land Survey results as POS MV values are influenced by the GPS mode (C/A, AUX or DGPS / RTK).

13. Set the GAMS values to zero again, leaving the heading threshold value at a suitable value. Click Apply, then OK to save the settings.

14. Repeat the exercise…

    - Set the POS MV to Standby, wait, then back to Navigate
    - Wait for POS MV to be working apart from heading
    - Complete half an hour of “figure of 8’s”
    - Come to a stop
    - Initiate the GAMS Calibration so long as GAMS is “fixed integer” and the heading accuracy is lower than the threshold (when it is not, the POS MV will show “Cal Requested” and never “Cal In progress”)
    - When the Calibration is completed, note the calibrated values.

15. Repeat the exercise one last time.

16. After the third GAMS calibration, leave the POS MV logging for another half an hour, then stop the logging.

17. **LASTLY, replace the calibration values with the LAND SURVEY values. Click Apply, then OK to save the values, then set the POS MV to STANDBY, wait, then back to NAVIGATE. With the vessel sailing, making gentle turns the POS MV should be fully operational, all LED’s green and accuracies 0.0something…**