

MIDG Series INS/GPS Transform Correction

NOTE: This instruction assumes that the MIDG Series INS/GPS Software and Utilities has previously been installed on the computer. This software needs to be installed prior to performing this operation.

1 Introduction. The MIDG Series INS/GPS may be mounted anywhere in a vehicle; however, for optimal performance, the unit should be mounted as close as possible to the center of the vehicle. The orientation of the MIDG Series INS/GPS is displayed on the Nav/GPS screen of the MIDG Display Utility.

Note: Vehicle attachment methods can vary according to the application. The MIDG II INS will fail to operate if vibrations of the operating environment exceeds $6G_{RMS}$, 10 Hz to 2000 Hz, random. See MIDG II INS Specifications for operational details.

2 Prerequisites. The following prerequisites will be needed to perform this operation: MIDG Series INS/GPS mounted in the vehicle; portable computer with the MIDG Display Utility installed; MIDG Series INS/GPS Interface cable (MBI#SLC2JUSB, SLC2J09SF, or user supplied); and this instruction.

Note: Refer to the MIDG Series INS/GPS User Manual for instruction on the proper mounting and interfacing of the unit.

*******WARNING*******

WARNING: DO NOT apply power to unit prior to connecting the interface cable. DO NOT use voltages higher than stated in the MIDG Series INS/GPS specifications sheet. DO NOT connect the GPS antenna to the unit while powered. Doing any of these actions may damage the unit. THESE DAMAGES ARE NOT COVERED BY WARRANTY.

*******WARNING*******

4 Configuring the MIDG Series INS/GPS. The following steps will instruct the user on how to correctly configure the unit to the local frame.

1. **Start an instance of the MIDG Display Utility.**
2. **Select the appropriate port from the "Port" drop-down menu.**
3. **Select the "Options" drop-down menu.**
4. **Select the "MIDG Config" option.** This will open the MIDG Config dialog box.
5. **Select the "XForm" tab (Figure 2).** All entries for Yaw, Pitch, and Roll axes should be zero (0).

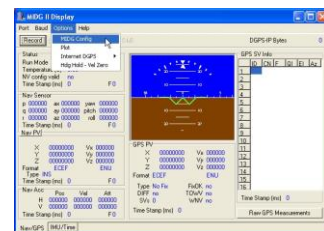


Figure 1. MIDG Config in the Options menu

Note: If the entries are not zero (0), delete all entries and press the "Set" button.

6. **Add or subtract, (in .01 degree increments) for Yaw, Pitch, and Roll axes.**
7. **Press the "Set" button to align the unit to the local frame.** The changes will not take effect until the "Set" button is pushed.

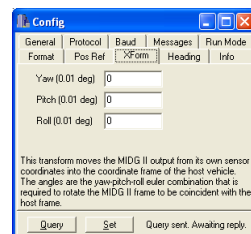


Figure 2. XForm tab

Note: Allow time for all corrections to be processed and take effect.

Note: Repeat step 7 until the desired alignment is achieved.

8. Select the "General" tab (Figure 3).

9. Press the "Save Configuration" button.

*****WARNING*****

DO NOT power down the unit until and "Ack" message is received. The "Ack" message appears in the bottom of the Config dialog box next to the grayed out "Set" button.

*****WARNING*****

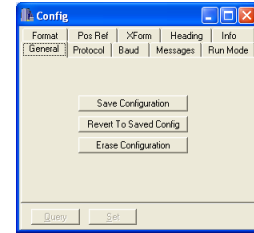


Figure 3. General Tab

10. Cycle the power to the unit and observe the changes. Repeat this procedure is necessary.

This completes the artificial horizon correction of the MIDG II INS. The settings will be saved until they are changed or erased by the user.

5 Help and Support. Microbotics, Inc. is dedicated to supporting the missions of our clients and offers free thirty (30) days of support for all of our products.

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