

Attitude Issues

Besides heading, pitch (θ) and roll (Φ) compose the attitude of a system. The attitude is calculated just as heading is calculated, so they share many similar issues. Any issues specifically relating to pitch and roll will likely be related to the orientation of the sensor or specific axes of a sensor failing.

- **Pitch, roll, or heading values are inconsistent with other axes.** Magnetic attitude sensors and IMUs both use independent sensors for each axis. Practically, it is very difficult to create a physical system that only affects one axis and does not affect the other two. If data from one axis becomes erratic but the erratic data is not shown in any other axis, it may be due to a failing sensor. You should be able to verify this by rotating the unit 90 degrees. If the erratic data switches to the orthogonal axis, it is most likely because of a failing sensor.
- **Pitch, roll, or heading is reversed.** This is likely due to the orientation configuration.

Article ID: 193

Source URL: <http://localhost:8888/kb2017/attitude-issues>