# Why doesn’t Maretron offer a WSO100 with a built in GPS or compass?

3 Frank Emnett May 23, 2014 GPS100(Discontinued), WSO100 (Discontinued) 0 8.06K

The WSO100 is generally placed at the highest point on the vessel so that it is not obstructed from the wind. Unfortunately, the highest point on a vessel is often the worst possible placement for a GPS or compass. Take for example a GPS mounted at the top of a sailboat mast where there is often more lateral movement than there is forward movement (i.e., in rolling seas). All though the GPS will provide a fairly accurate position from the top of the mast, the Speed Over Ground (SOG) and Course Over Ground (COG) as computed within the GPS will not be accurate since the GPS is not necessarily moving in the same direction and speed as the vessel (i.e., the top of the mast might be moving twice as fast as the vessel when the vessel is pitched forward or the top of the mast might be moving faster laterally than the vessel is moving forward when the vessel is rolled). Furthermore, compasses are generally mounted near the Center of Gravity (CG) of the vessel where they experience the least amount of acceleration. Placing a compass at the highest point on a vessel puts it in a position of highest accelerations and the lowest accuracy. The entire vessel navigation system relies on accurate speed, course, and heading and Maretron believes that placing a GPS or compass at the highest point compromises the vessel navigation system.

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