

GW-52 Introduction

GW-52 is a GPS instrument optimized to measure speed using GPS-Doppler effect.

Performance:

- Screen speed resolution: 0.01 km/h
- Screen update: 5Hz
- Speed and GPS parameters update & log frequency: 5Hz in SBP data format
- Log speed resolution 1 cm/s
- Standard deviation of log speed is recorded as SDOP for each speed sample (resolution 1cm/s)
- SDOP bar on screen to indicate speed measuring precision and quality of the satellite signals seen by GW-52
- Speed Genie function with "current speed" (delayed by ~1s) or N-second average speed display
- 10-second average speeds above 60km/h measured with precision of 3cm/s and 99.9% certainty. This means that most of measurements will have higher accuracy.
- Inaccurate measurements can be easily identified using SDOP (Standard Deviation for each speed sample).

Additional information about GW-52

- GW-52 relies on line-of view satellite positions for maximum speed measurement accuracy
- GW-52 speed measuring precision increases with measured speed due to physics of GPS-Doppler process (signal reflections and interference from stationary objects are filtered away by GPS receiver when it moves. The higher the receiver speed, the better this filtering is resulting in more precise speed measurement). For this reason GW-52 speed measuring precision has been tested for speeds in the range 60-100km/h