

## With regard to the GPS100, what is a cold start?

When the GPS100 is started or powered up, it attempts to get a position fix in one of three modes,

- hot start (typically acquires a fix in 8 seconds),
- warm start (typically acquires a fix in 38 seconds), or
- cold start (typically acquires a fix in 45 seconds or more).

The GPS100 enters one of these startup modes based on several factors including the last position and time fix, (which was saved the last time the GPS100 was powered down), almanac data containing general satellite orbit data (also saved the last time the GPS100 was powered down), and ephemeris data containing precision corrections to the almanac data (also saved the last time the GPS100 was powered down but only valid for the next 2 to 6 hours). The GPS100 will enter the cold start mode for one of several reasons including:

- the time is unknown (internal battery discharges after 4 or 5 days and the clock stops),
- almanac data is lost (the GPS100 has been reset),
- the predicted satellites are overhead (as determined by time and almanac data) but the receiver is unable to receive the signal (the GPS100 is obstructed or receiving a weak signal), or
- the GPS100 has been moved and the predicted satellites are not overhead.

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