

## Configuring the Garmin 18 LVC GPS

The Garmin configuration program (SNSRCFG) can be found here :

<http://www.garmin.com/support/collection.jsp?product=010-00321-05>

Default config for Garmin "18" LVC to allow KIWI OSD to meet spec. (using SNSRCFG version 2.80)

Selected Sentences : GPGGA & GPRMC

GPS Base Model : GPS 18 PC / LVC

**Latitude** : Your approx latitude  
**Longitude** : Your approx longitude  
**Altitude** : Your approx altitude  
**Fix Mode** : Automatic  
**Filter Mode** : Automatic  
**Baud Rate** : 4800 bps  
**Dead Reckon Time** : 30.0 sec  
**NMEA Output Time** : 1 sec  
**Position Averaging** : On  
**NMEA 2.30 Mode** : Off  
**Power Save Mode** : Off (Normal Mode)  
**PPS mode** : 1 Hz  
**PPS Length** : 20 msec  
**PPS Auto Off** : Off  
**Phase Output Data** : Off  
**Mask Low Speeds** : On  
**DGPS Mode** : None  
**Differential mode** : Automatic  
**Earth datum index** : WGS 84

NOTES :

Different versions of (Garmin's) SNSRCFG.EXE data files are not compatible, which is why this document is TEXT based.

- **NMEA sentences** : Only 2 should be enabled (GGA and RMC), adding more "could" impair timing precision.
- **Earth Datum** : WGS 84
- **Position** : (Latitude, Longitude, Altitude) Your approx position only needs to be given when initially setting up the GPS - thereafter the GPS will retain your location.
- **Fix Mode** : People who go 'mobile' may wish to set this to "3D Mode". When set to "3D" KIWI OSD will give a more accurate height value when first switched on if the GPS has been moved since last use. Users must note that with a reduced sky visibility - using "3D mode" can cause a much longer wait for first FIX to be obtained. Default setting is Automatic.
- **Differential Mode** : Leave in "Automatic" mode.
- **Baud Rate** : Must be set to 4800
- **Velocity Filter** : Automatic.
- **Pulse Per second** : Must be enabled (ticked) to enable 1PPS for KIWI OSD
- **Position Averaging** : If this is set to enabled (ticked) the GPS will average position over about a 30 second period, giving a more stable position than otherwise. For "true" (long term) averaging, a PC must be used.
- **Phase Output Data** : Do not enable (ie don't tick).
- **NMEA 2.30 Mode** : KIWI OSD does not use any 2.3 mode features, this can be left "Off" (ie don't tick).
- **PPS Auto Off Mode** : DO NOT enable (ie don't tick), otherwise when the GPS loses FIX status - the 1PPS stops working.
- **Mask Low Speeds** : State does not affect timing.
- **Dead Reckoning** : Leave as 30 sec.
- **NMEA Output Time** : If this is changed from 1 sec, the integrity code of KIWI OSD will stop the time from being displayed - so must be set at "1".
- **PPS Length** : This has been set to 20 msec to enable camera tests, but can be changed to any value that suits the user, it does not affect the accuracy of the KIWI OSD by changing this value. It determines how long the 1PPS LED is lit.
- **DGPS Mode** : If the user is in the USA, setting this to WAAS may improve position accuracy, otherwise "None".
- **Power Save Mode** : For continuous timing set to "Off" (ie don't tick).

The manual (and other information) for the Garmin 18 LVC, can be found here:

<http://www.garmin.com/products/gps18oem/>

Geoff Hitchcox (Christchurch, New Zealand) August 2005