

HOW ACCURATE IS GOOGLE EARTH'S GPS PLOTTING & MOBILE PHONE GPS ???

Following is some recent comparisons I've completed while on the Cocos (Keeling) Islands between the following GPAS devices:

- A known +/- 1 cm accurate reference site of Geoscience Australia
- HTC Sensation Mobile Phone's inbuilt GPS
- Navig8r Model G35 vehicle / portable GPS

1.0 Background

I've been curious for some time on the accuracy of GPS devices especially that they are now commonly used for land survey work and wanted to determine the accuracy of my mobile phone inbuilt GPS.

2.0 Geoscience Australia (GA)

Before a recent work visit to Cocos I asked a frequent contributor to the BackShed Forum Trevor Dalziell (Talbit) who works for GA what was available re accurate GPS reference sites as I wanted to compare their known reference to some details on some island CAD drawings that I was referencing .

Trevor advised me that GA has a GPS antenna at the met office on the edge of the runway & the coordinates are.

-12 11' 18.0391" Lat +96 50' 02.2993" Long With an accuracy of +/- 1cm

He further directed me to a site that identifies accurate GPS reference sites worldwide that seem to monitor east movements in 3 axis. Follow this link and try clicking on the teardrops for a site in your area.

<http://192.104.43.25/status/solutions/analysis.html>

Following images shows the Cocos site on the side of the West Island runway at the MET Office.



The last photo above shows the proximity of my mobile phone to the centre of the GPS antenna where I assume the 3 axis sensor is located.

3.0 Cocos Demographics

Cocos (Keeling) Islands are a territory of Australia and comprise 27 islands around the rim of a volcano with a lagoon in the middle.

West island is where the international airport runway is located and has a permanent population of approximately 120 (maybe 60 adults & 60 children) & at times another 20 – 30 visiting contractors and some tourists.

The only other occupied island is Home Island on the other side of the lagoon with a population of approximately 650 Cocos-Malays who were originally imported to island as workers for a copra industry in the early 1800's.