

GPS Devices

The most cost effective GPS units for general geological mapping above ground that work well with **GeoMapper/PenMap** are “card” GPS units that slide into the PCMCIA card slot of pen tablets. We have tested many different card GPS units, and one such unit that we have used extensively is manufactured by **US GlobalSat**. The current model **BC 337 GPS** uses a **SiRFstarIII** GPS 20 channel chip set which is characterized by its ability to acquire and maintain a signal lock in urban or densely covered forest environments, and also by a short time to finding a location while working at a relatively low power during continuous operation. The **Globalsat BC 337 GPS** is a 20 channel, WAAS differential correction enabled, compact flash interface GPS unit. It usually can be found on the Internet for less than \$ 75 U.S including the **AT-65 external antenna** that allows a geologist to carry the tablet in an inside vest pocket while still having continuous GPS locations with the external antenna affixed to the shoulder of their mapping vest. Typical WAAS corrections give locations with an accuracy of 3 to 5 meters in plan view. The elevations are not as accurate and typically are 2.5 times the error of the plan view measurements.

<http://www.usglobalsat.com/p-140-bc-337.aspx>

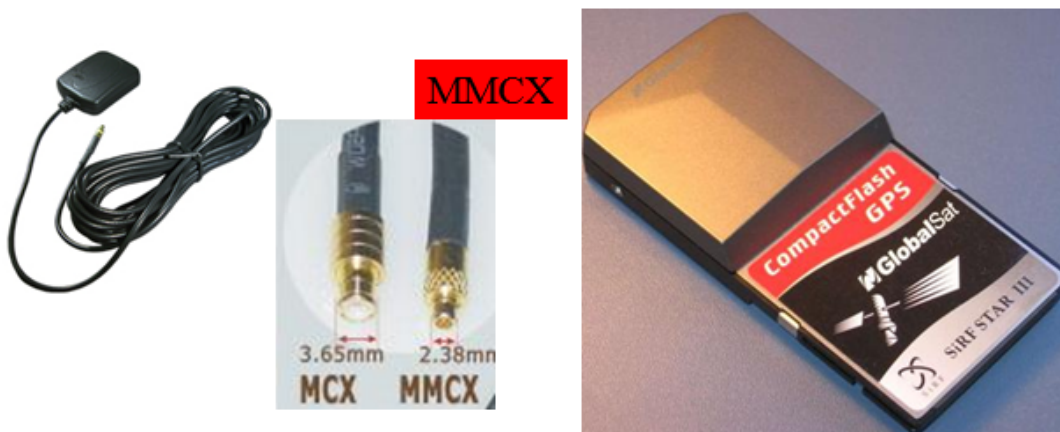
One supplier

US GlobalSat BC 337 GPS

<http://www.usglobalsat.com/p-140-bc-337.aspx>

Frequency: L1, 1575.42MHz

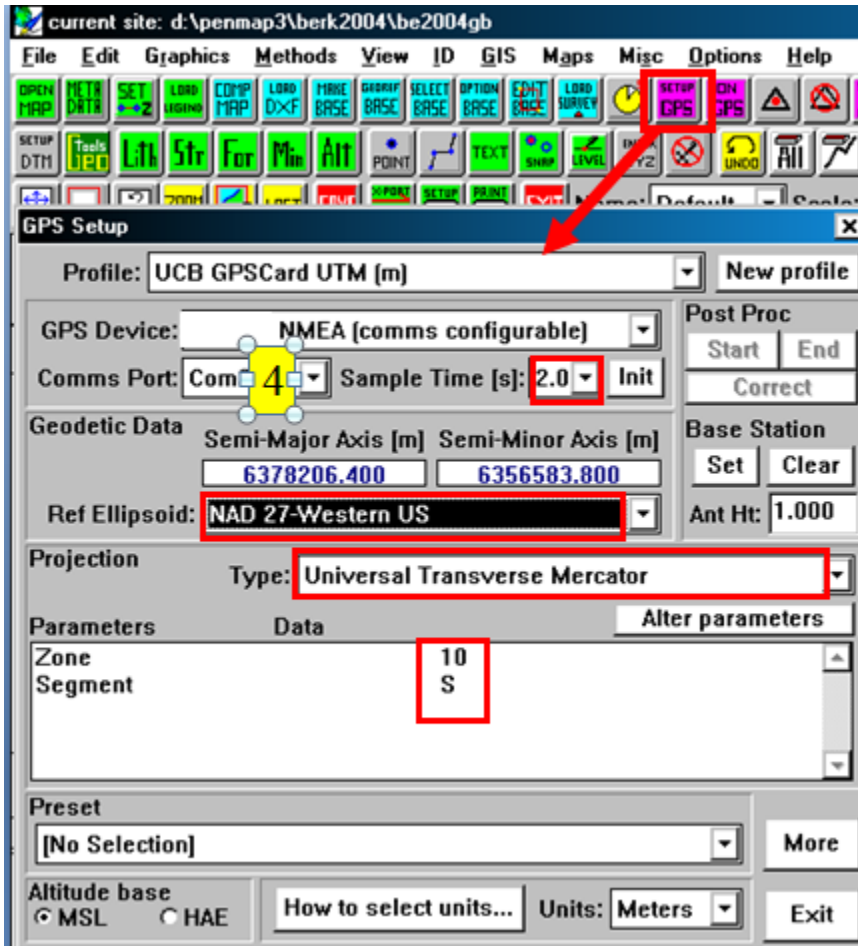
US Globalsat BC-337 GPS receiver with compact flash
20 channel
AT-65 external antenna



The plug end of the external antenna has a very small MMCX connector that snaps into the female connector on the edge of the GPS card. This connector is in practice too small for rugged

field conditions, and must be treated with care. It can be held in place by using a rubber band taped around the wire and secure din place by looping it around the GPS unit.

In GeoMapper the device driver for a card GPS uses NMEA protocol so select NMEA (Comms Configurable) after clicking on the purple SetUp GPS button.



Click on the **Init** button to set the baud rate to 4800 and select the communication port being used. Sampling time should be set to 1 or 2 seconds.