Reason

The original Archer 1 GPS card was typically a GlobalSat SiRF Star III GPS receiver. SiRF receivers are "tuned" to receive GPS signal just about anywhere, including indoors and in the cab of a vehicle. The quality of the GPS is not always as good, but GPS is reliable.

The Archer 2 has built-in GPS, using an NVS GPS engine. The NVS GPS engine is more accurate than the SiRF Star III GPS card, but it doesn't track as well indoors or in the cab of a vehicle. GPS tracking may be intermittent as the vehicle moves around, depending on the environment. Some Archer 2s may work fine in some vehicles, but others may have problems maintaining a GPS fix. This in turn could cause problems with Adulticiding data collection, with gaps in collected data.

If GPS tracking has been a problem with your Archer 2, we recommend solutions discussed below.

If GPS tracking has not been a problem, then your environment (vehicle, terrain, geography, etc.) may be fine and the internal GPS may work without any trouble for you. You may still consider some of these solutions as a preventive measure or as a backup if you do experience problems.

Solution

1. If you are placing the Archer 2 on the seat next to you, purchase a device cradle to get the unit closer to the window and the GPS antenna oriented out the windshield. The GPS antenna is located at the top of the unit. Archer 2 cradles and accessories are available from Frontier Precision – contact us for details.
2. Use an external Bluetooth GPS receiver.
    a. We have tested several GlobalSat BT-GPS devices, all of which have extremely reliable GPS tracking. GlobalSat BT-GPS receivers are available for a low cost ($50 – 100) on Amazon.com.

    b. Higher accuracy Bluetooth GPS receivers are also available, such as the Geode from Juniper Systems and the R1 from Trimble. These are sub-meter (and better) accuracy, but the cost is higher ($1500 - $2000). The higher accuracy GPS receiver may be valuable in dense urban areas, or with other applications such as Storm Drain. The Geode and R1 are available from Frontier Precision – contact us for details.

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c. Here are instructions on connecting a Bluetooth device to your Archer 2:
http://blog.junipersys.com/how-to-connect-bluetooth-device-to-your-handheld/. After the device is connected, you just change the COM port that Sentinel uses to match what you set up in the Bluetooth manager. ArcPad and Sentinel will use the external GPS instead of the built-in GPS.

   i. Tap and hold or double tap on the Sentinel GIS icon to bring up Configuration.
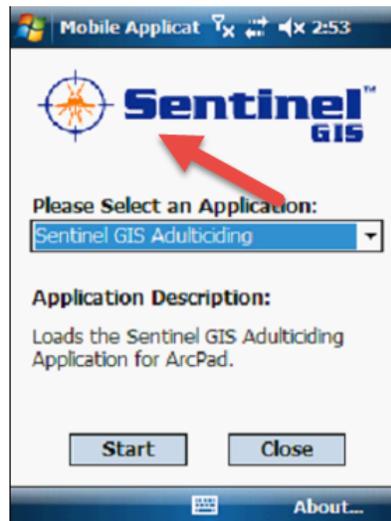
   ii. Uncheck "Use defaults". Change the GPS Port to the Bluetooth port you configured in the previous step. Set the GPS Baud to 4800. Click OK. This setting will be saved on the device and Sentinel will connect using that COM port whenever you run it.

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