

An Overview of High-Precision GNSS with Collector, Survey123 & ArcPad

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Collector for ArcGIS: iOS Setup

- Pair Bluetooth receiver to Apple device
- Start streaming kinematic corrections(if needed)
- Open Collector's app settings
- Change **Location Provider** from "Internal Receiver" to the external Bluetooth receiver.
- Change **Correction Profile** from "Default" to custom profile(dependent on correction source)

Collector for ArcGIS: Windows 10 Setup

- Pair Bluetooth receiver to Windows PC/Tablet
- Start streaming kinematic corrections(if needed)
- Setup GPS Direct utility
- Open Collector's app settings
- Keep **Location Provider** as "Internal Receiver".
- Change **Correction Profile** from "Default" to custom profile(dependent on correction source)

What is a Correction Profile?

NAD83(2011)

- Most reference networks are based on NAD83(2011)
- Collector's map coordinate system is WGS84 Web Mercator Auxillary sphere
- This causes a shift that will produce inaccurate data.
- A correctly setup correction profile will handle the difference between the WGS84 and NAD83 datum
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Correction Profile for NAD83(2011) Receivers

- Correction profile consists of:
 - Receiver Coordinate System
 - Map Coordinate System
 - Datum Transformation
- Correct NAD83(2011) Setup
 - GCS NAD 1983 2011
 - WGS 1984 Web Mercator Auxiliary Sphere
 - WGS_1984_(ITRF08)_To_NAD83_2011

Survey 123

- Requirements:
 - High-accuracy receiver
- Setup
 - No setup required other than streaming corrections to receiver
 - Survey123 will get the location through **Location Service**
 - The stored coordinates will be referenced to the correction stream datum
 - Latitude/Longitude
 - No elevations!

ArcPad

- Requirements:
 - High-accuracy receiver with NMEA output
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 - Note: ArcPad supports elevations(Z coordinates)

ArcPad: Setup

- Set map coordinate system
 - Load Shapefile with correct **projection file**
- **Set GPS datum** under GPS preferences
- For more accurate elevations...
 - Set the **geoid separation** height under GPS preferences or
 - Install an ArcPad plugin that utilizes a **geoid model**(GeoBullseye by GeoMobile Inc.)

Questions?

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