



## GPS – How to achieve the best possible accuracy

GPS accuracy depends on many factors, including:

- GPS Mode (HD vs. ECO)
- Mounting method (Back, Tail, Leg or Neck)
- Time since first lock (how long the GPS has been running that day)
- Proximity to the ground (flying in the air is better than sitting on the ground)
- What's overhead (cloud cover, foliage, a roof) and what's around you (structures, hills)
- Number or space vehicles in the sky view and their relative position today
- Your latitude (the closer you are to the equator, the better the distribution of satellites)
- Activity of the bird (sitting in a tree, resting on the glove, or flying)
- Apple Device settings and Location accuracy

That's quite a few variables, some of which are out of the user's control. But fortunately, the correct pre-flight sequence and higher performance modes generally provide great accuracy and altitude readings.

To assure your transmitter starts out with the best possible GPS lock, follow these simple

### **Pre-Flight Steps**

1. Start AeroVision
2. Turn on PL (and wait till LED slowly flashes white)
3. While outside, with a clear view of the sky - Install Battery into your RT-GPS
4. Place the RT GPS on a motionless object with open sky above, and allow to acquire GPS lock, and "soak" for 5 minutes (this allows all visible satellites to be locked)  
Note: if holding in your hand, hold only the body of the transmitter, with the antenna pointing away from you. Do not touch start the transmitter in your car, or inside a building, nor hold the antenna during GPS acquisition as this will reduce GPS sensitivity.
5. After 5 minutes of soak time, install transmitter onto your falcon and fly

In addition to the correct Pre-Flight sequence, the most powerful controls you have on GPS accuracy are mounting method, and GPS Mode (HD/ECO), Apple Device Settings, and AeroVision Altitude Setting .

### **Mounting:**

For the best GPS and RF performance mounting the transmitter above the bird's body provides the best GPS reception. The TrackPack is the best mounting method for GPS performance, as the transmitter is free of obstruction from the bird's body, and the antenna remains clear, even when the bird is on the ground.

### **Operational Modes**

HD Mode – is High Definition mode and provides the highest accuracy attainable. Use this mode for flying to a drone, or for recording high accuracy metrics. HD Makes perfect tracks for 3D replay!

ECO Mode – which uses about half as much power, trades off accuracy for enhanced runtime. Use this mode for hunting and recovery, where longer battery life is more important than precise speed and height.



### **Apple Device Settings – Set to “Always Allow”**

Your Apple Device’s Settings for “Location Services” are very important for how AeroVision performs. AV obtains your position (red dot), heading (direction to the bird), and Pitch when altitude of the bird is set to “Above Me”. By default – when the App is first installed, the user is prompted to Allow location services (while using the app). This setting allows AV access to the phones positional data, but only while the App is actively being used (i.e. when you are looking at AV on your screen). As soon as the app is background, or screen is locked, the phone disables it’s GPS/Altimeter). And does not re-enable until the App is next opened. The next time the app is opened, Location services turn on, and the phone must re-lock to GPS, determine it’s heading, and get it’s altitude. Though you will quickly see a red dot, the accuracy of this location (and hence any metric referenced off of your location (distance / direction to bird, or alt. above me) will not be very accurate for up to several minutes.

The solution is to go into your Apple Settings Menu, scroll down to AeroVision5, tap, and change location services to “Always Allow”, “Precise Location” must be enabled as well. – These settings allow AeroVision to maintain an accurate position when connected to a PL, and backgrounded, and provide the best user experience.

### **AeroVision Settings**

For Customers looking for peak accuracy in Altitude – the Above Start option in the AV Settings menu will always provide the most accurate readings during a flight (as it uses only the GPS inside the transmitter).

For those users who end up driving (or moving up or down in altitude) during a flight – above me is a very handy tool, but as it uses the phones location services to give you that live altitude differential, it will always be less accurate than above start.