TRI-GLOBAL
TECHNOLOGIES

Pairing the Asteri GNSS receiver to Orbitas on iOS

ORBITAS   ASTERI

Pairing the Asteri GNSS receiver to Orbitas on iOS

Table of Contents

Recommended Reading

- Pairing the Asteri

Pairing the Asteri Xi Series to Orbitas on iOS

Devices used:
- Asteri X4i GNSS Receiver
- iPad Pro
- iOS version 18.3.2

Initial Pairing to the iOS device

1. Turn on the Asteri receiver and place in clear view of the sky before you begin pairing to your iOS device.
2. On your iOS device go into the **MAIN SETTINGS** and ensure Bluetooth is **ON**.
3. Look for "**ASTERI-(last 4 digits of the serial number)**" in the list of Available Devices, and select it to connect.
4. It should now say "**CONNECTED**" next to the receiver name.

Settings

Search

Michael Bellrose
Apple Account, iCloud, and more

Image Creation Tools Are Here
Genmoji, Image Playground, and Image Wand are now available for your iPad.

Open Image Playground

Add AppleCare+ Coverage

There are 53 days left to add coverage for accidental damage.

Airplane Mode

Wi-Fi   iCharles

Bluetooth   On

Battery

General

Accessibility

Apple Intelligence & Siri

Apple Pencil

Camera

Control Center

Display & Brightness

Home Screen & App Library

Bluetooth

Connect to accessories you can use for activities such as streaming music, making phone calls, and gaming. Learn more...

Bluetooth

This iPad is discoverable as "iPad" while Bluetooth Settings is open.

MY DEVICES

ASTERI-0834   Connected (i)

OTHER DEVICES

General Settings menu on an iOS device showing Bluetooth is on and the Asteri device is connected.
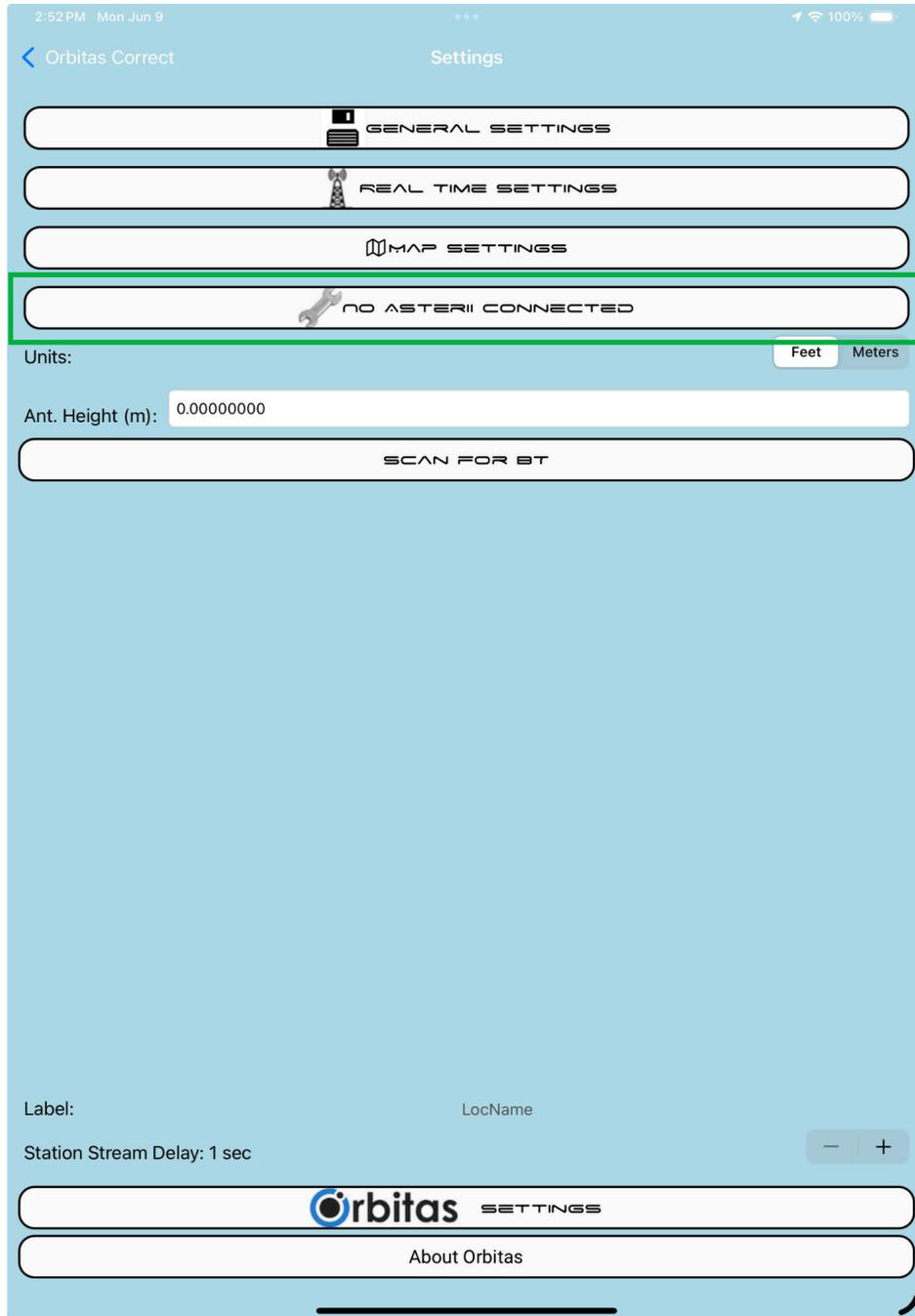
Pairing to Orbitas on iOS

- Launch Orbitas for iOS.
- Click on the **GLOBE and GEAR icon**.
- Ensure Integrated Location Services (ILS) is turned **OFF**.

The GPS Accuracy Status indications within Orbitas on iOS

RED: A red icon indicates that *you do not have an Asteri GNSS connected or that you have fewer than 4 satellites visible*.

There are two ways to tell the difference.

- Does the Accuracy Indicator state "Sats: 0" or is there a number next to it?
  Your Asteri GNSS receiver may need more time to track satellites. Please wait a few minutes. If it continues, please see the next steps below.
- If the Accuracy Indicator continues to read "Sats:0," does the Settings screen state "No Asteri Connected" (only valid with MFi series Asteri receivers)?
  Click the "No Asteri Connected" button to reconnect.

Settings

< Orbitas Correct

```
📁 GENERAL SETTINGS
📡 REAL TIME SETTINGS
📖 MAP SETTINGS
🔧 NO ASTERII CONNECTED
```

Units: | Feet | Meters |

Ant. Height (m):   0.00000000

```
SCAN FOR BT
```

Label: LocName

Station Stream Delay: 1 sec   − | +

```
Orbitas SETTINGS
About Orbitas
```

Orbitas on iOS main settings showing an Asteri GNSS receiver not connected.

If still unsuccessful, reference the Resolving Bluetooth connection issues support notes.

When the connection is successful you will see one of the following indicators..

ORANGE: An orange icon indicates "Autonomous" or uncorrected GNSS data. Tri-Global recommends waiting for a DGNSS correction at minimum (yellow icon).

However, with the all new Asteri X4i, even an autonomous signal can yield sub-meter precisions.

*Use with caution. Multipath can significantly affect uncorrected positions.

YELLOW: A yellow icon represents DGPS correction (usually SBAS).

Most SBAS positions will yield sub-meter results with the Asteri X2, X3, or X4i devices. The Asteri X4i will yield extremely good sub-meter results, especially with the multi-frequency external antenna. However, sub-foot estimated precision values are possible even with the Asteri X4i internal antenna.

BLUE: A blue icon indicates Satellite Assisted Orbitas Correct "Converging" and is only available while using the Asteri X4i.

The converging status means that the Asteri X4i is using the Orbitas Correct provided RTK position to "converge" the onboard PPP (Precise Point Positioning) datum and results. Even though the estimated precisions are good while converging, it is recommended to wait approximately 2-5 minutes for the results to "fix" before collecting.

BLUE LOCKED: The locked blue icon indicates that Satellite Assisted Orbitas Correct has "*fixed." This is the second most accurate status that can be achieved.

*Once fixed, the Asteri receiver should continue to achieve sub-foot or better precision, even after the loss of internet connection.

GREEN: A green icon represents a "Float RTK" solution.

In previous Orbitas versions, a green icon represented RTK with no differentiator of Fixed or Float. It is important to note that Orbitas Correct 10cm (released October 2024) may never "Fix."

GREEN LOCKED: The green locked indicates a Fixed RTK solution; this is the most accurate status available for Orbitas Correct.

It is the only method available to truly achieve "centimeter" results with Orbitas Correct or local RTK solutions. Note the "sub-inch" estimated precision in the example below.

Tr-Global recommends using the multi-frequency external antenna when using Orbitas Correct. When using only the Asteri device's internal antenna and RTK, the Float solution can sometimes degrade the precision values.
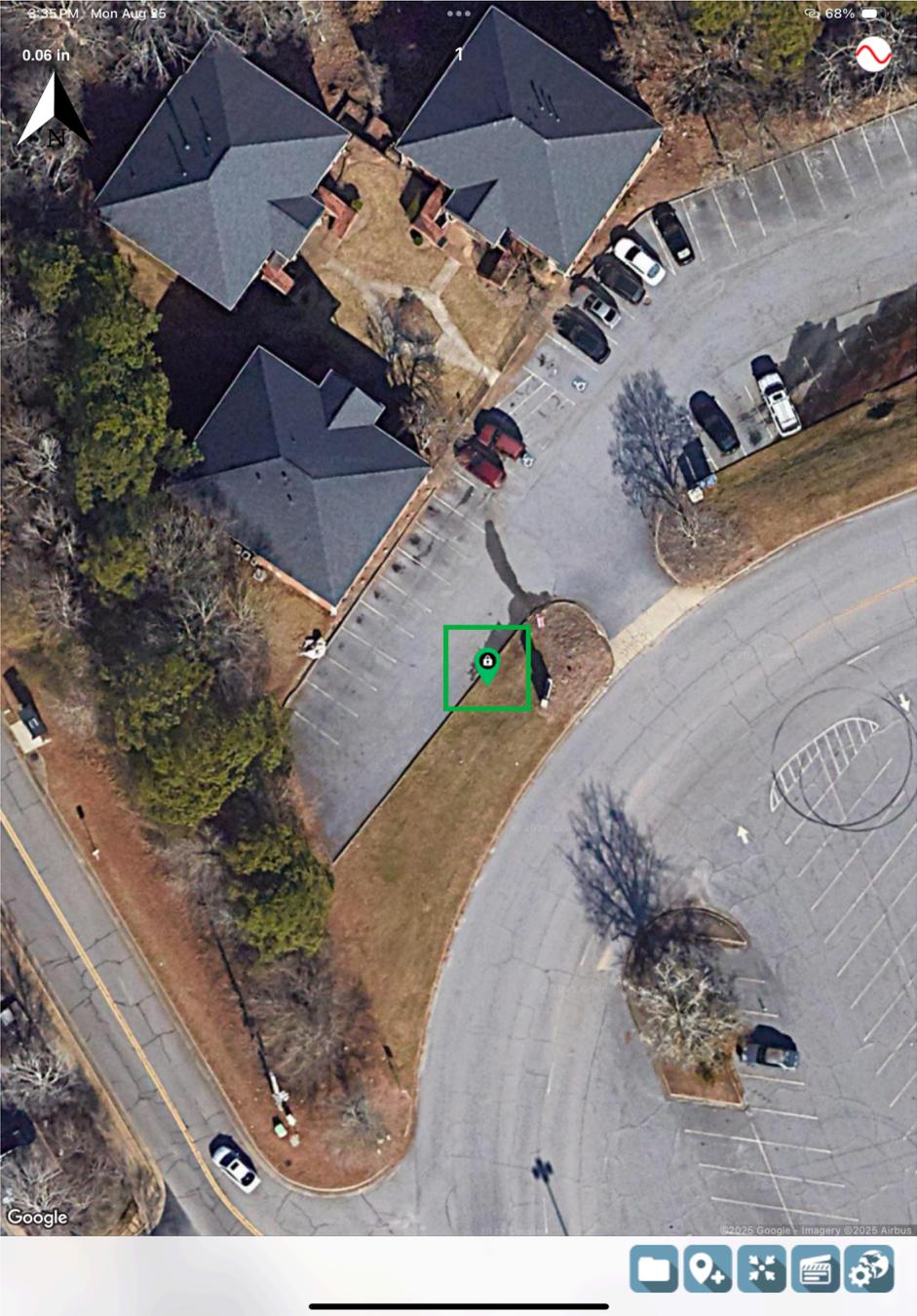
Green Locked icon within Orbitas on iOS showing high accuracy from the Asteri GNSS receiver.

# Using Orbitas and the Asteri GNSS receiver for RTK corrections.

*RTK corrections require an internet connection either through wi-fi or data plan.

*Tri-Global advises setting up the RTK correction within Orbitas, before launching FieldSyte / RC Map Engine.
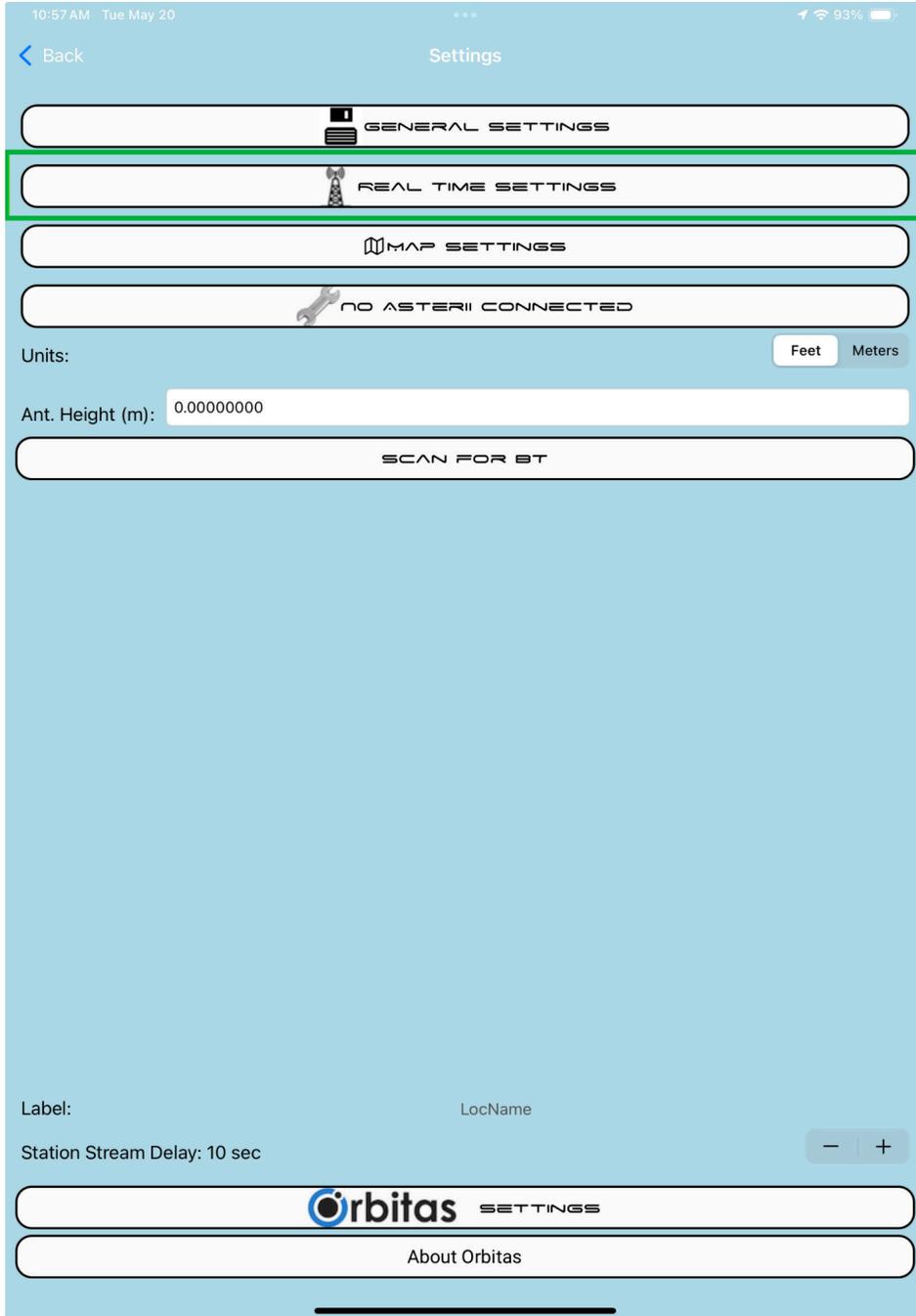
You can utilize Orbitas on iOS to apply RTK correction to the Asteri GNSS receiver in conjunction with FieldSyte.

Follow the steps listed in the first section of this guide above to make sure the Asteri GNSS device is connected to the iOS device via Bluetooth.
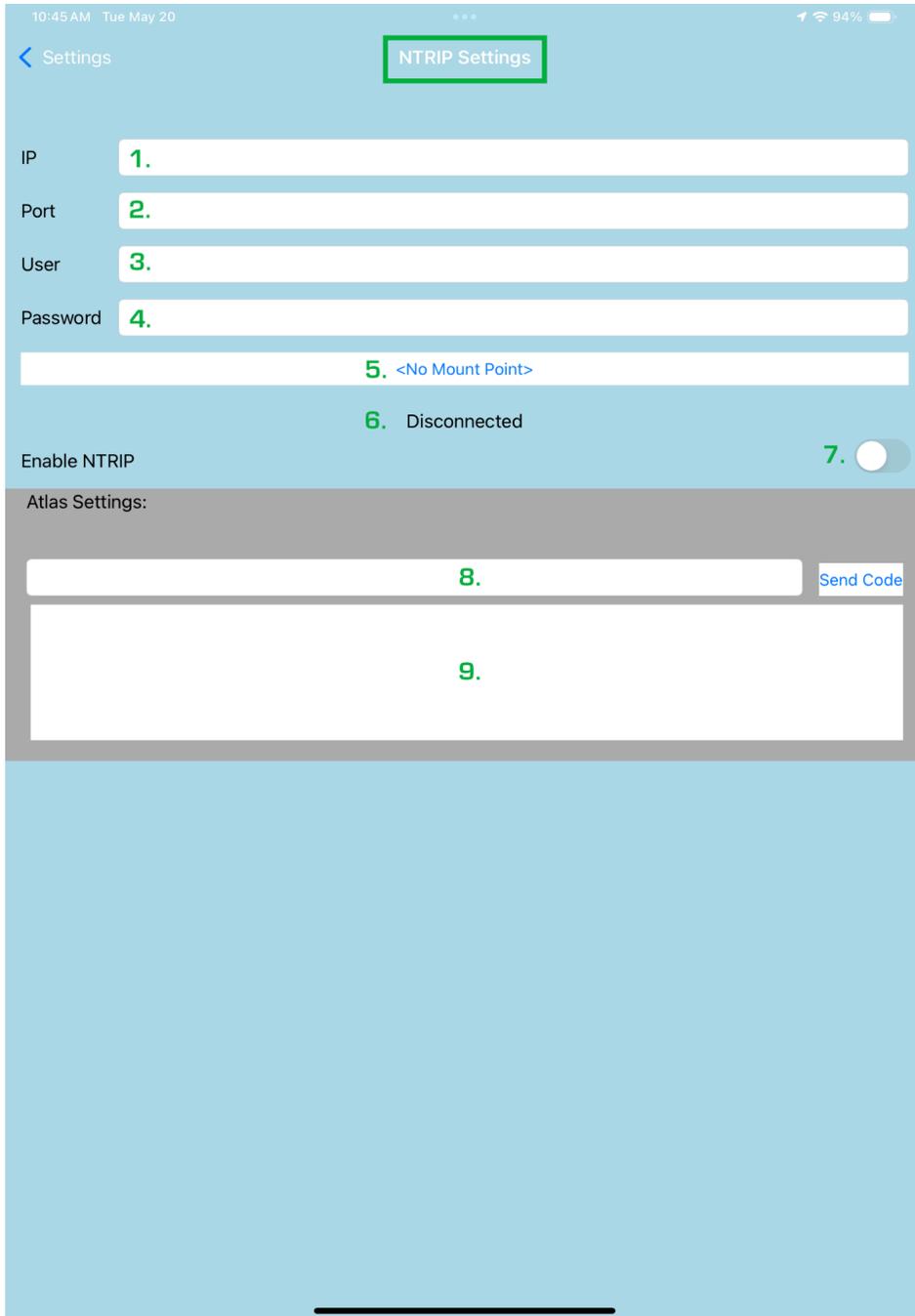
1. Launch the Orbitas on iOS app and ensure the Asteri is connected and tracking.
2. Go into the **SETTINGS** and select **REAL-TIME SETTINGS**.
3. Enter in your RTK credentials and select your mounting point.
   3.1. IP Address (address of your RTK server given by your RTK provider)
   3.2. Port (port number assigned by your RTK provider)
   3.3. User (username assigned by your RTK provider)
   3.4. Password (password assigned by your RTK provider)
   3.5. Mounting Point (available list of mounting points, refer to your RTK provider for more details)
   3.6. RTK Connection status (will state "Connected" once NTRIP is enabled)
   3.7. Enable NTRIP (turn this toggle ON once all above information has been provided)
   3.8. ATLAS / Tech code input (used for applying ATLAS correction codes)
   3.9. RTK log (return log for NMEA stream while connected to RTK correction services)
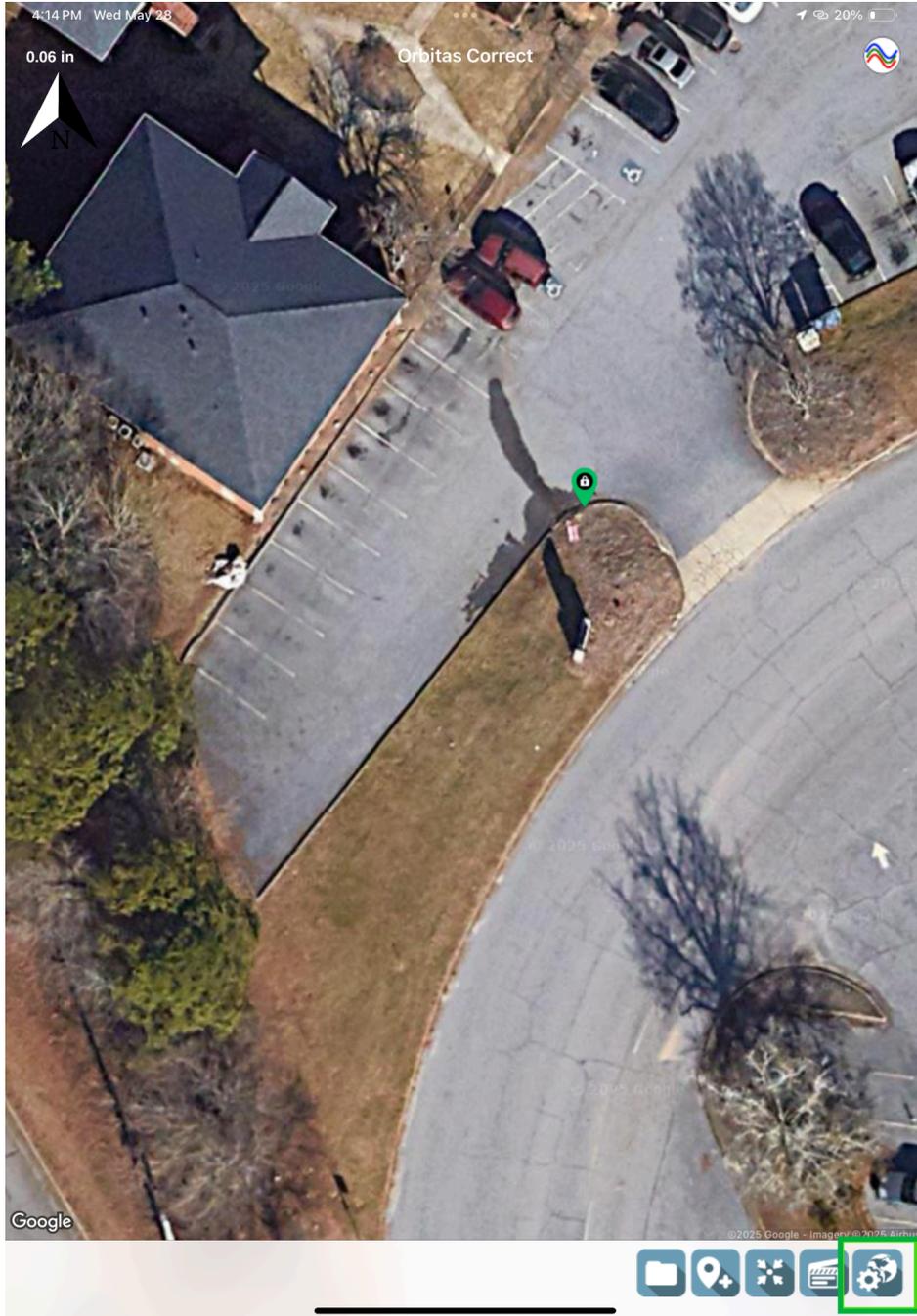
General Settings icon within Orbitas on iOS

Real Time settings within the main settings menu of Orbitas on iOS

< Settings   **NTRIP Settings**

IP   **1.**

Port   **2.**

User   **3.**

Password   **4.**

5. <No Mount Point>

6.   Disconnected

Enable NTRIP   **7.**

Atlas Settings:

8.   Send Code

**9.**

Real Time correction setup within Orbitas on iOS

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Orbitas Correct Settings

If you have an active and valid license of Orbitas Correct, Orbitas Correct will be applied automatically and there is no need to enter any credentials.

1. The default and recommended Orbitas Correct Reference is "Worldwide" (WGS84). The Local Reference is NAD83 2011 and would be used to align with data that has been collected in the NAD83 2011 reference.
2. Select if you wish to enable PPP (exclusive to the X4i) service or not. For more information on PPP refer to this article.
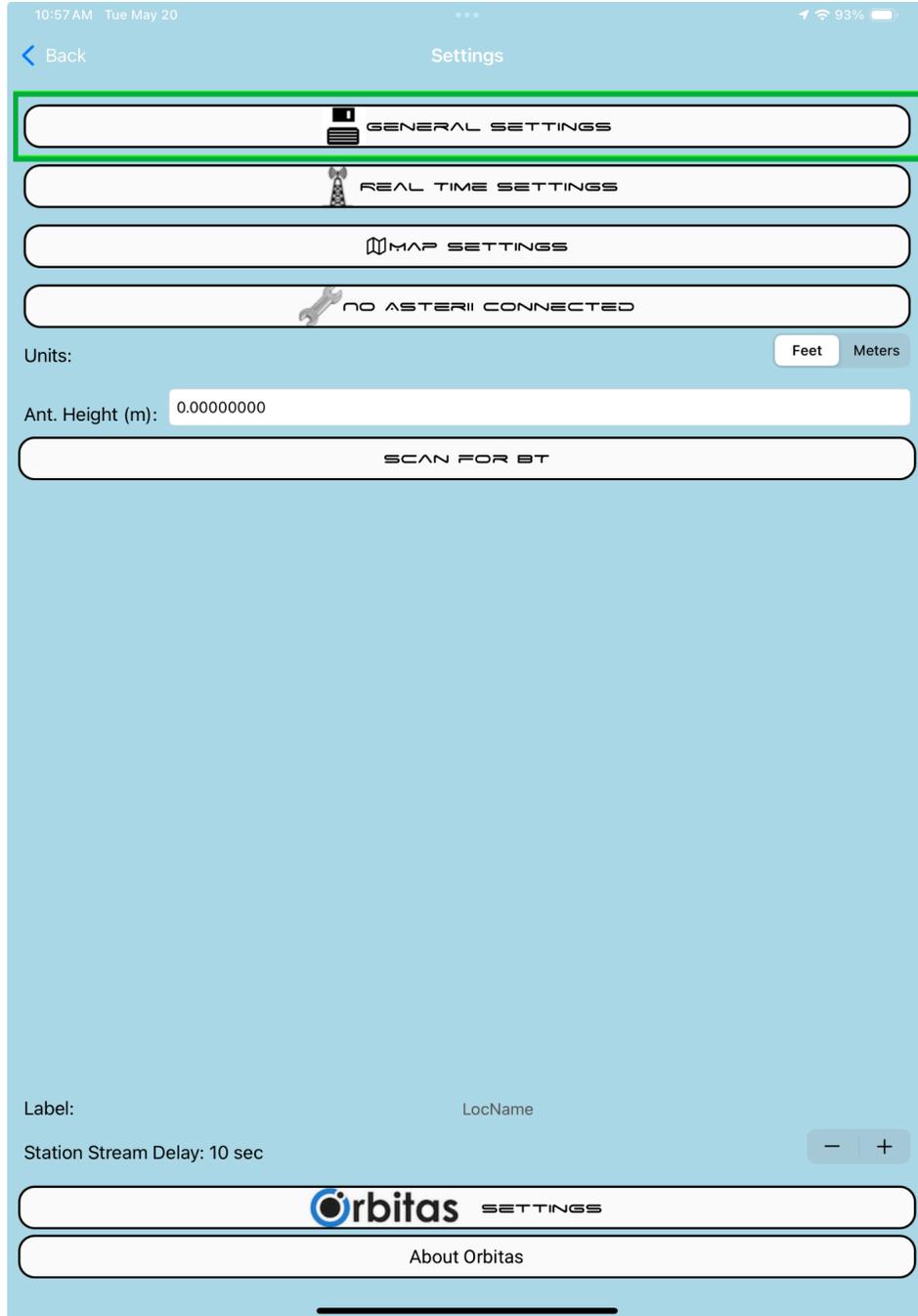
General Settings within Orbitas on iOS
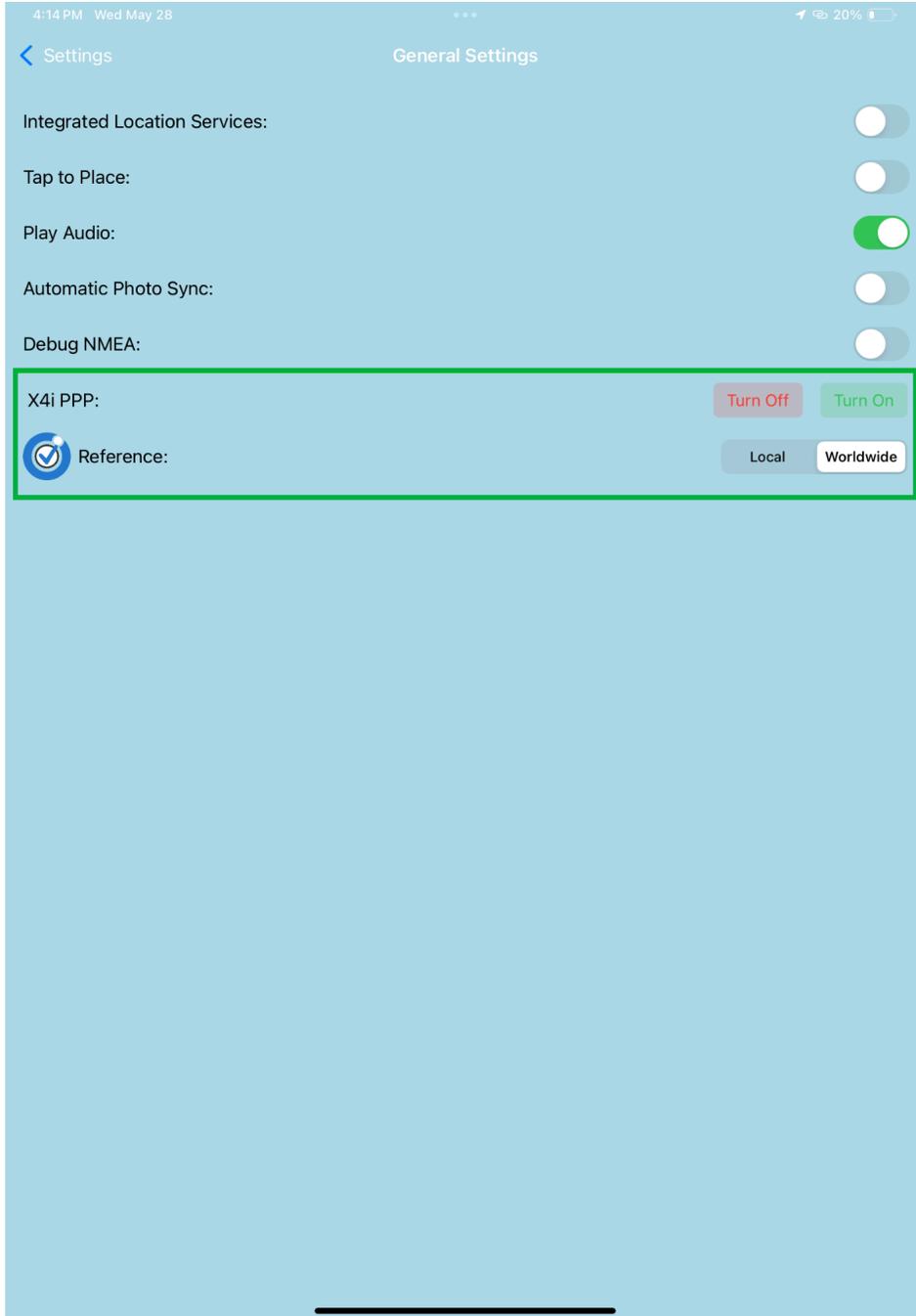
Orbitas Correct reference and PPP (X4i only) settings within Orbitas on iOS
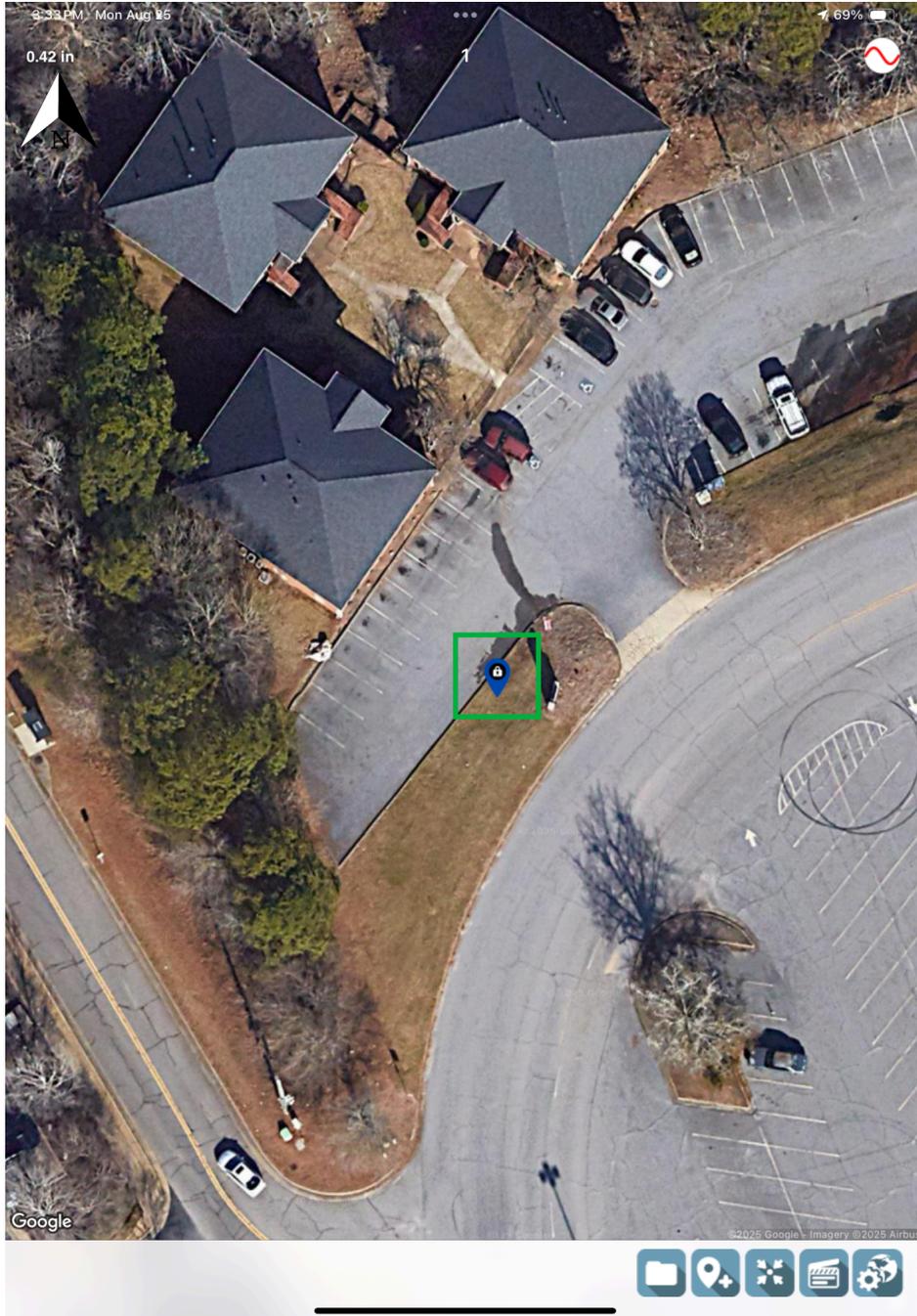
PPP option enabled on the Asteri X4i that is paired to Orbitas on iOS

Related Resources

- Resolving Connection Issues