Trimble GPS Protocol

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ABSTRACT

Here we describe the standardised protocol used by the Canadian Airborne Biodiversity Observatory (CABO) to use the Trimble GPS with the NTRIP centimeter-level precision subscription from Cansel to record the precise location of a plot (corner or center) or a plant.

MATERIALS

<table>
<thead>
<tr>
<th>Equipment</th>
<th>NAME</th>
<th>BRAND</th>
<th>SKU</th>
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<tbody>
<tr>
<td>Trimble Catalyst GPS, NTRIP precision subscription</td>
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External link: http://cabsoscience.org/

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Protocol status: In development
We are still developing and optimizing this protocol

Created: Dec 02, 2019
BEFORE START INSTRUCTIONS

Ensure you are subscribed to a centimeter-level correction service (e.g.: Cansel).

GPS Connection

1. Connect the Trimble antenna to your field cellphone, by plugging the cable coming out of the antenna into your cellphone charging port.

2. Connect the external battery to the Trimble antenna, by plugging the USB port into the battery and the micro USB port into the antenna. Place the battery in its mount.
3 Open the *Trimble Mobile Manager* app on your fieldwork cellphone.

4 Sign in.
The following screen will show up.

5 Slide the Connect to Trimble Catalyst button.
If the following screen shows up (it does not systematically), tick the Use by default for this USB accessory box.
The app searching for GPS signal will show this screen.
8 Wait for the precision to go down.

9 Open the Fulcrum app on your fieldwork cellphone.

10 In Fulcrum, go to the plot or tree record you want to georeference precisely, then go under
Watch the value of Horizontal Accuracy and wait for it to stabilize.

**Note**

**DEFINITION OF A GOOD PRECISION:**

In forest environments, under a canopy with no leaves (i.e., after leaf fall), the precision can be under 30 cm.

In the best conditions in an open environment, the precision can get down to 2 cm.
Once the Horizontal Accuracy is stable at a good precision, click Update Location with GPS. You'll see the values next to Latitude, Longitude, Horizontal Accuracy and Altitude update.
Save your record.