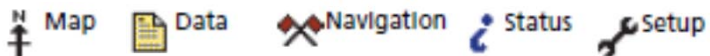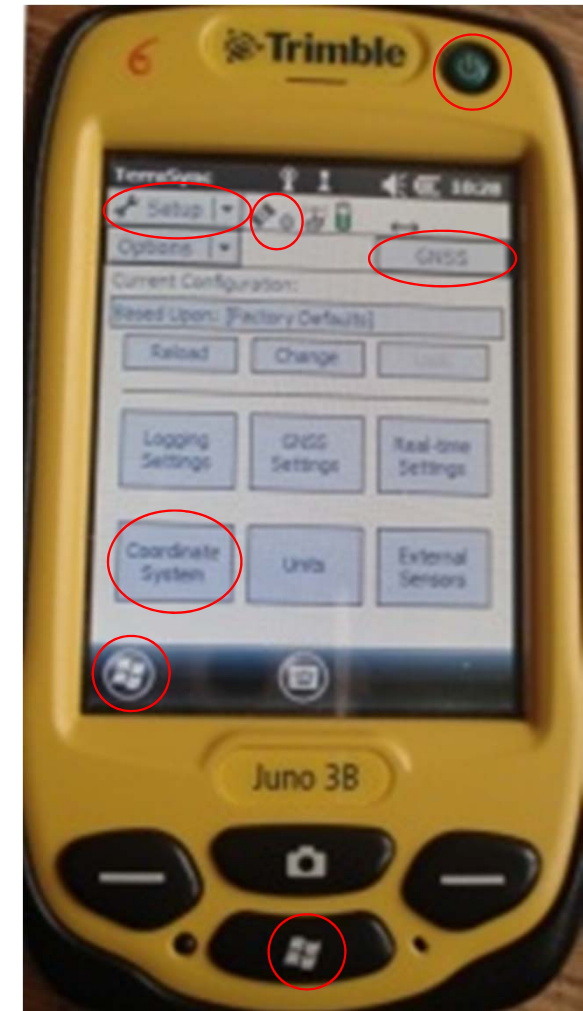# GPS receiver *Trimble Juno 3B*

## STARTUP & CONFIGURATION

- Press the **power button** for a few seconds

- Open the **windows menu** (by selecting on screen or pushing the windows-button)

- Select **TerraSync --> Professional Edition**.

- The upper pull-down menu enables 5 menus:

  Map  Data  Navigation  Status  Setup

- Connect to Satellites.
  - Go to **Setup**.
  - Click on the **GNSS** button.
  - Wait until you get a connection to **at least three satellites**. 8

- Set the coordinate system.
  - Select the **Setup** menu.
  - Select the **Coordinate System**.
  - For Göttingen -> System: Germany; Zone: UTM Zone 32; Datum: WGS 1984.
  - Confirm with **Done**.

*Trimble Juno 3B* SETUP menu

# GPS receiver *Trimble Juno 3B*

**NAVIGATION**

Set the background map.

- Select the **Map** menu.

- Click **Layers** and check **Background** to display selected background files.

- In **Layers** select **Background files...**. **Tick** all desired background files. Confirm with **Done**.

- To zoom in to your location on the map, select **Option --> Auto pan to GNSS position** or **Auto pan to selection** for manual zooming.

- Your position appears as **x** and the selected target as flag symbols on the map.



*Trimble Juno 3B* MAP menu

# GPS receiver *Trimble Juno 3B*
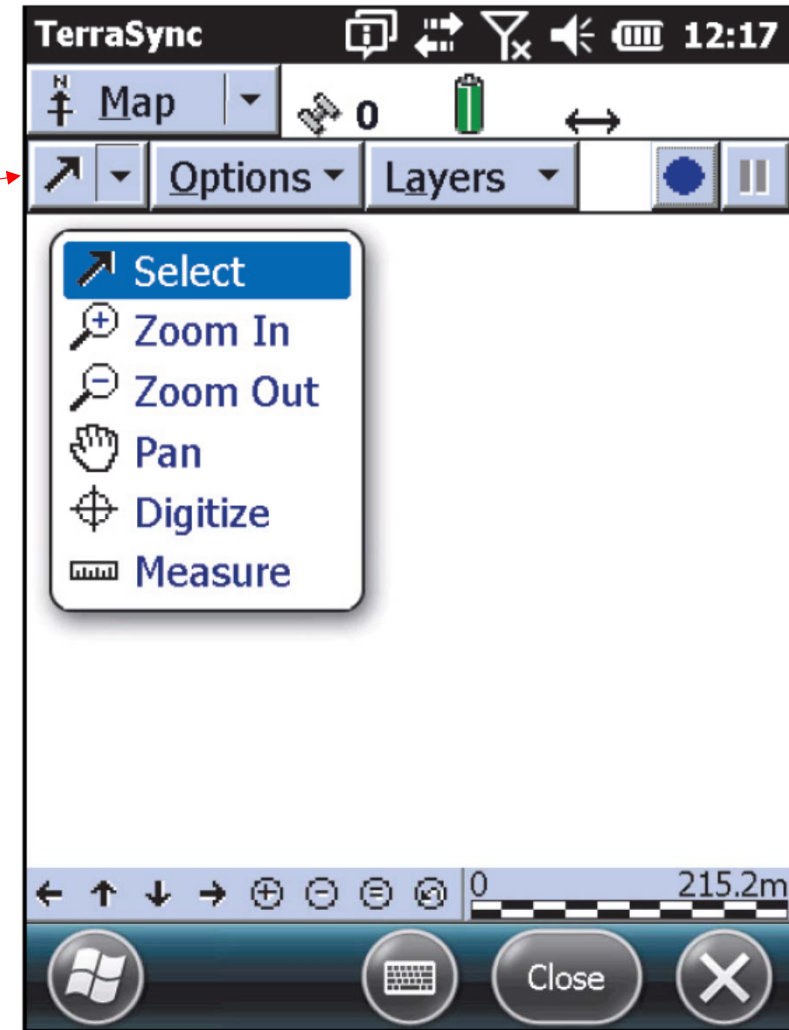
## NAVIGATION

Map Tools

*Select*: select point on the map to view its attributes (name, coordinates, height...) or to set them as navigation target.

*Zoom*: draw a quadrate around the area you want to zoom into or out of.

*Pan*: move the map.

*Digitize*: tap a point on the map to create a position for a feature.

*Measure*: measure distances between two points on the map.

Available tools in the MAP menu

# GPS receiver *Trimble Juno 3B*

## NAVIGATION

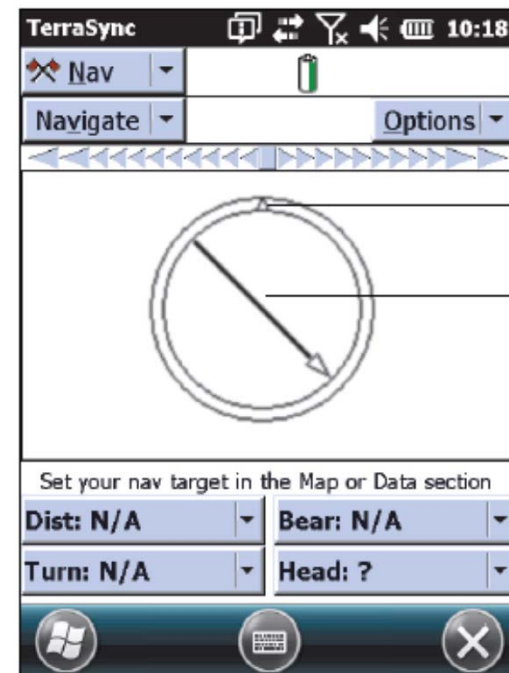Set a navigation target (2 options)

1. Select the respective point <u>on the map</u> by pressing the stylus onto the screen for ca. a second. A circle of points appears. Once the circle is complete, the option **Set Target** is chosen.

2. Select the respective point <u>in the data file</u>.
   - Go to **Data**, and select **Existing File** from the pull-down menu below.
   - As file location choose **Storage Card**. Select the file containing the plot centre locations ("*6PermanentPlots*") and click **Open**. Confirm the antenna height (1.300m) with **Ok**. A list of 6 points appears.
   - Select the point you want to navigate to (e.g. Plot4).
   - Click **Options -> Set Nav Target** and set the point you selected before.

# GPS receiver *Trimble Juno 3B*

## NAVIGATION

Navigate in the field

- **Navigate** menu.
- The compass shows the current direction of the device. The arrow points to the navigation target.
- 4 information fields display e.g. Bearing, Heading, Distance, Altitude, Velocity…
- Follow the direction of the arrow to reach the target. (except if obstacles need to be circumnavigated)



*TerraSync* NAVIGATION menu

# GPS receiver *Trimble Juno 3B*

**NAVIGATION**

…..to a permanent plot location:

- Load Background files.

- Open the file *6PermanentPlots*

- Set the respective point (plot) as a navigation target.

- Start navigating (navigate menu).

- Close to the target the GPS jumps (error).

- Use the plot imformation (azimuth, distance, dbh, species) to find the centre of a permanent plot.

# GPS receiver *Trimble Juno 3B*

## RECORDING A LOCATION

Background

The GPS device has an error (depending on site conditions, e.g. valleys, crown cover…)

Necessary to record the position of a given point several times.

The average of those positions is regarded as the position of the respective point.

# GPS receiver *Trimble Juno 3B*

**RECORDING A LOCATION**

In the field

- Create a new file for each point* that is recorded. (**Data -> New -> Create**)
- In **Data**, choose **Collect Features** in the lower pull-down menu.
- Choose the desired feature type (point, line, area); here: point.
- In the upper right corner of the screen a count of the readings starts.
- Click **Done**, when it reaches 100 (remain stationary while logging!!)
- The point including its 100 logged positions are saved in the open file now. Close file.
- Navigate to the next point and repeat.
- (* one file per point is required for the post-processing with the PATHFINDER software [Programms -> Differential Correction])

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