





# AlpineQuest 2.x Online Help

Welcome to the AlpineQuest Online Help for 2.x versions.

Use the menu on the right of this page to get some help on a particular feature.

-  Use the language selector on the right to choose your preferred language.
-  A complete [PDF export of this help is available here](#) (en) for offline use (available [here](#) as separate zipped files).
-  Korean users can find great tutorials, help and information at the official [South Korean AlpineQuest Board](#) founded by Solro. There is a complete up-to-date [offline help available here](#).
-  If you don't find your answer in these pages, or if you have any question or suggestion, visit our support forum: [www.alpinequest.net/forum/](http://www.alpinequest.net/forum/).



## Using the application

The main view of the application is the map. This is the view displayed when you start the application.

By default, it covers the whole screen, hiding the system status bar (this can be changed in the application settings). Just press the application **main menu button**  to temporarily display the status bar.

**i** You can change the map display resolution from the [application settings](#).

## The information boxes

**Information boxes** **2** can be displayed in the top-left part of the screen. They are all related to a particular feature, you can choose to display or hide them from the related sub-menu.

For example, you can change the screen center coordinates format or visibility [as explained here](#).

## The zoom controls

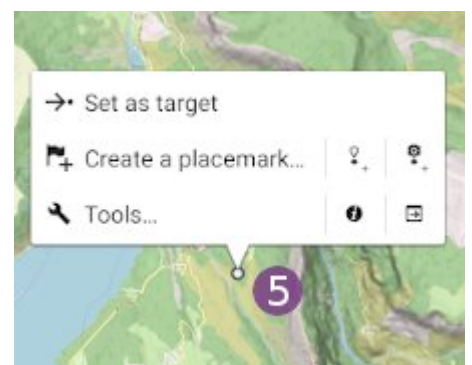
The zoom controls allow you to change the scale of the map. If your device supports multi-touch, you can use two fingers to zoom in or out. Alternatively, you can use the zoom buttons or the zoom slider.

The **zoom buttons** **3** allow you to jump to the next scale level of the current map (if it has multiple levels). If no more levels are available for the current map, the application can automatically load a new map that matches the new requested zoom scale.

The **zoom slider** **4** allows you to finely control the map scale. The scale level of the current map will be chosen accordingly. The zoom slider will only change the scale level of the current map, it will never load a new map like it's the case with the zoom buttons.

**i** By default, the zoom slider is hidden. Use the [application settings](#) to display it and configure its behavior.

## The map center point



The **map center point** **5** shows the exact map center location, which coordinates are given in the coordinates information box.

When you tap it, the map center point menu is displayed, allowing you to manage the current target, create placemarks or access tools.

[See here how to add shortcuts in the map center menu](#)

## The features menu

This menu displayed at the bottom of the screen gives access to all the features and tools of the application. They are sorted in five main categories, there is one menu button for each one:



- ① Application related functionalities, like [custom menu buttons](#), [settings](#), etc.;
- ② [Maps & layers](#): list available maps, change the maps, etc.;
- ③ [Placemarks](#): save and retrieve placemarks like waypoints, [search locations](#), etc.;
- ④ [Positioning](#): show/hide real-time GPS location on the map, [record tracks](#), etc.;
- ⑤ [Orientation](#): display the compass and get orientation information.

You can:

- Click a menu button to display its sub-menu that lists main functionalities for that feature;
- Double-click a menu button to display its sub-menu and expand it to display all options;
- Long-press a menu button to call the main functionality of the sub-menu. For instance, long-press the first menu button to reduce the features menu.

[More details are available in the gestures page.](#)

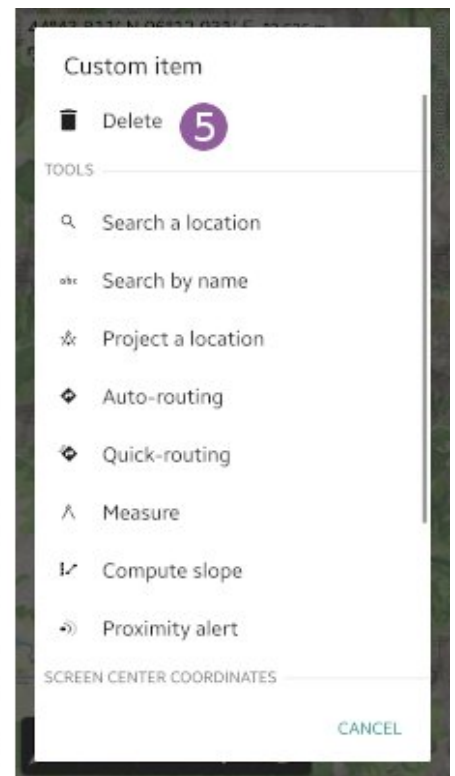
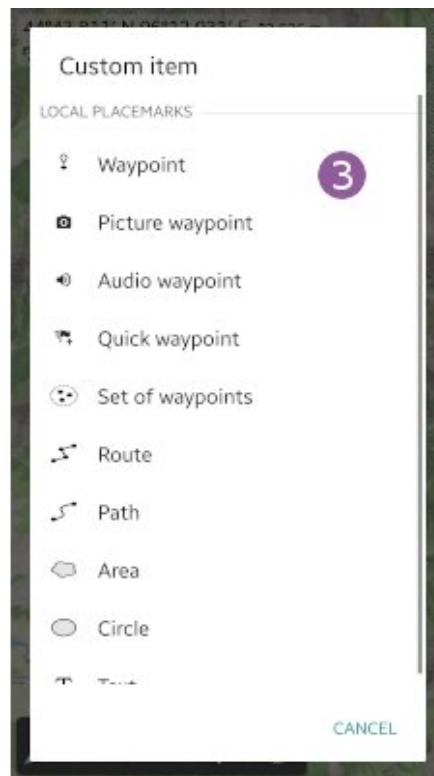
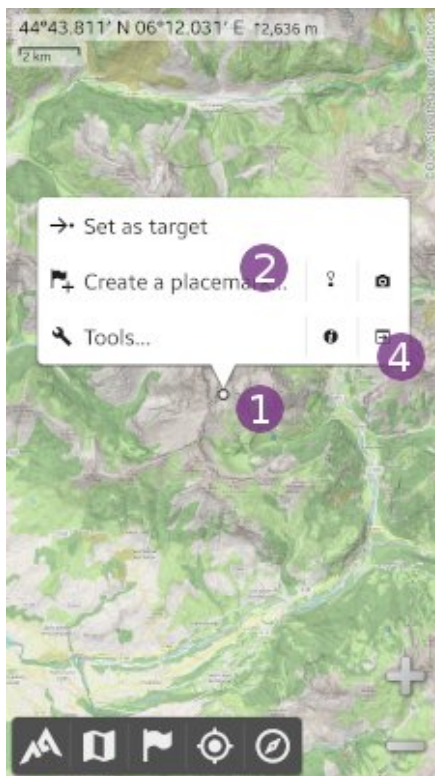
# The Map Center Point

The map center icon shows the exact map center location, which coordinates are given in the coordinates information box.

When you tap it, the map center point menu is displayed, allowing you to manage [the current target](#), [create placemarks](#) or access tools.

You can add or edit shortcuts for the **Create a placemark** and **Tools** entries:

- Tap the map center point icon **1** to display the map center point menu;
- To add a new shortcut for one entry, long press-it **2**, and choose a shortcut item from the list **3**;
- To edit an existing shortcut, long-press it **4** and choose a new item;
- To delete an existing shortcut, long-press it **4** and choose **Delete** **5**;





# Gestures

## On the map

- **Single-tap the map center point** ①: display the map center menu;
- **Double-tap the same point** ②: zoom-in the map;
- **Double-tap different points**: zoom-out the map;



- **Long-press the map** ②: proceed actions defined in the application [setting](#) “Long-press map actions”;
- **Stretch two fingers**: zoom-in the map (if the application [setting](#) “Pinch to zoom” is checked);
- **Pinch two fingers**: zoom-out the map (if the application [setting](#) “Pinch to zoom” is checked);
- **Turn around two fingers**: rotate the map (if the application [setting](#) “Manual map rotation” is checked);
- **Move two fingers down**: display the map in perspective (if the application [setting](#) “Perspective map view” is checked) and turn on the Explorer mode (if the application [setting](#) “Automatic explorer mode” is checked).

## On the main menu bar

- **Single-tap a menu item** ①: display/hide the related sub-menu;



- **Double-tap a menu item**: display the related sub-menu and expand its options (identical to a tap on the menu and a tap on “Options”);
- **Long-press a menu item**: call its top-most item (identical to a tap on the menu and a tap on the first item from the top), except for the “Positioning” menu item that turns on/off real-time location and for the “Orientation” menu item that turns on/off the compass.
- **Single-tap then long-press a menu item**: call its second top-most item (identical to a tap on the menu and a tap on the second item from the top), except for the “Positioning” and “Orientation”

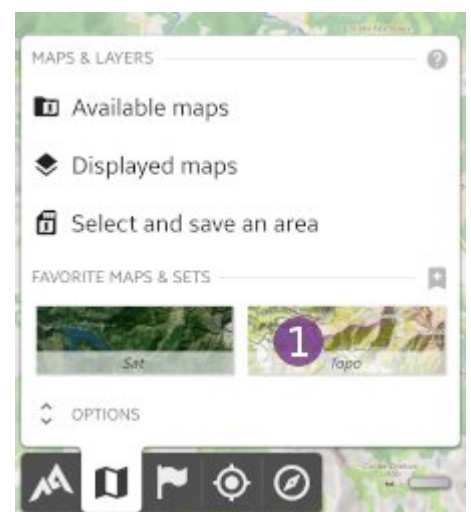
menu items that are identical to a simple long-press.

## On the zoom buttons

- **Single-tap the “+” zoom button** <sup>1</sup>: zoom-in the map;



- **Single-tap the “-” zoom button** <sup>2</sup>: zoom-out the map;
- **Long-press a zoom button**: temporarily decrease or increase the map display resolution (if the application [setting](#) “Zoom controls” → “Long-press zoom buttons change map display resolution” is checked). The display resolution reset after restarting the application (use the application [setting](#) “Map display resolution” to permanently change the display resolution).



## On a favorite map or set

- **Single-tap a favorite map or set** <sup>1</sup>: display the map or set of maps;
- **Long-press a favorite map or set** <sup>1</sup>: display the options for this map or set, including “Add as layer”, “Edit” and “Delete”.

## On physical volume buttons (while main map is displayed)

- **Single-tap volume up**: zoom-in the map (if the application [setting](#) “Zoom controls” → “Volume buttons zoom in or zoom out the map” is checked);
- **Single-tap volume down**: zoom-out the map (if the application [setting](#) “Zoom controls” → “Volume

buttons zoom in or zoom out the map” is checked);

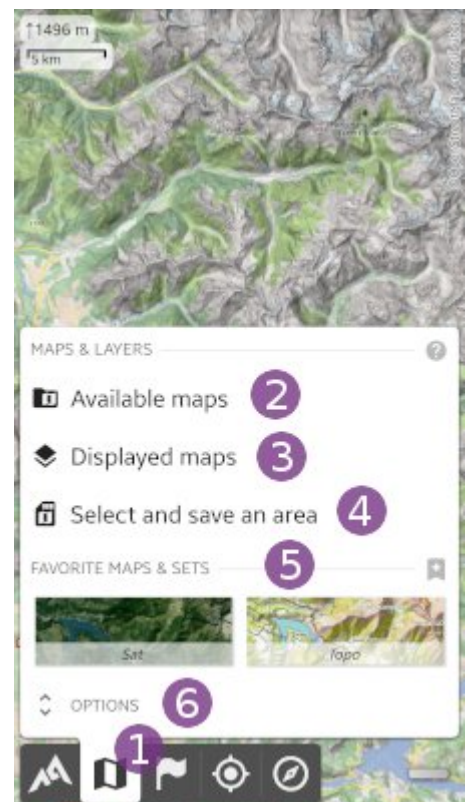
- **Long-press volume up:** activate the Explorer mode (if not active), or change the current Explorer mode display (if already active);
- **Long-press volume down:** lock or un-lock the map from touches;

# Maps & Layers

The application is able to display a wide variety of maps. They are made of images, each level of details consisting of a different set of them. Using images allows to have a larger variety of maps, with a better quality, more details, and use little power consumption (and so battery).

There are two main categories of maps, that can be both used without network:

- **On-demand maps** are maps retrieved on-demand from Internet and automatically stored on the device;
- **File-based maps** are maps stored in pre-created files, saved on the device, covering a particular fixed area. The application is able to read multiple file formats.



## The Maps & Layers menu

Tap the “**Maps & Layers**” ① menu button to display the menu that contains:

- “**Available maps**” ② opens the maps explorer to manage all available maps and add some more;
- “**Displayed maps**” ③ allows you to list and manage all currently displayed maps (remove, reorder, [change opacity](#), [edit color](#), [erase color](#), etc.);
- “**Select and save an area**” ④, only available if at least one on-demand map is displayed, allows you to [store on your device](#) a complete map area of one or multiple on-demand maps;
- “**Favorite maps and sets**” ⑤ allows you to select and manage [favorite maps and sets](#).

Tap on “**Options**” <sup>6</sup> to display the maps options:



- “**Use only local storage**” <sup>7</sup> forces the application to go offline: no map data is downloaded anymore, even if the displayed area is not stored;
- “**Show local storage coverage**” <sup>8</sup> displays on-screen information concerning the stored areas (only available if at least one on-demand map is displayed);
- “**Auto-download elevation data**” <sup>9</sup> makes the application automatically download elevation data for the current area (only available if the [elevations feature](#) is activated);
- “**Information box**” <sup>10</sup> allows you to select what to display in the top/left maps information box.

## On-demand maps

When a map is selected from the available maps list, the application will download, display and store on the device all displayed areas. Everything that has been displayed once remains stored and available for off-line use. When the same area is displayed again, the application will use the stored data instead of downloading it again (unless the stored data is too old and a new version can be downloaded).

### Managing maps list

The application offers a wide range of maps, with some being pre-installed by default. You can remove them or install new maps from the **community maps list**, an extended set of maps mostly suggested by users. Note that the community maps list is regularly updated and can change without warning.

[How to select another map?](#)

[How to add another map as a layer?](#)

[How to add maps from the community maps list?](#)

[How to update maps from the community maps list?](#)

[How to suggest a new community map?](#)

[How to create a custom map?](#)

### Managing stored data

The application also offers the ability to store a larger area than the one displayed, see [how to store a complete](#)

[map area for offline use](#). In order to store temporary data or store data in various locations, see [how to use workspaces](#).

[How to store a complete map area for offline use?](#)

[How to check the availability of locally stored data?](#)

[How to clear stored data?](#)

[How to store temporary data?](#)

## File-based maps

File-based maps are pre-created maps copied on your device. Some key features are:

- They can be created at home, using a hi-speed Internet connection, which is usually faster than a mobile connection;
- They consist in a single file, which can be easily copied to or removed from the memory card. They can be easily exchanged over Internet;
- They have clearly defined bounds that makes clear which map is available at which location.

However, with the always increasing connection speed and capabilities of mobile devices, several weaknesses compared to on-demand maps make them part of the legacy:

- The data cannot be updated, they become obsolete after some time;
- The area cannot be extended, if a larger area is needed, a new map must be created and used;
- The entire file must be on the device, even if only a small subset area is needed;
- It can take long time to move the maps on the device.

[How to use file-based maps?](#)

[How to import KML/KMZ map overlays?](#)

[How to calibrate an image to use it as a map?](#)

[How to create file-based maps for the application?](#)

## Maps features

[How to create favorite maps and sets?](#)

[How to modify the opacity of a map or layer?](#)

[How to modify the color \(contrast, brightness, saturation and tint\) of a map or a layer?](#)

[How to erase a color from a map?](#)

[How to switch between two maps in one click?](#)

[How to deal with multiple maps covering continuous areas?](#)

[How to export the displayed map as an image or to print it?](#)

[How to correct offset error of some maps over China?](#)

## Maps F.A.Q.

**How often are the maps updated?**

The application only display maps available from various online sources. Map updates only depends on the map editor of the map you've selected. In general, the application will display the last available version. For example, if you display the Google Satellite images, you'll see the most recent images available on the Google Maps website, however, those image can still be relatively old depending on the area displayed.

### **Is it possible to display real-time aerial imagery?**

No, the application allows you to display the latest version of major online maps, including Google, Bing, Esri imageries, but you cannot choose a different date, nor display more recent images than the respective website versions. The stored data is regularly updated by the application when newer versions are available online.

### **Is it possible to increase the download speed of maps?**

Each map uses its own map server and has a different download speed. Various factors can impact the download speed, including your physical location and the current server charge. We try to keep the default map as fast as possible to download, but don't hesitate [to select another map](#) that may be faster for you to access. If you need to download lot of map data, try to avoid rush hours to get a better speed.

### **Is it possible to change the language of names displayed on the maps?**

Each map has its own policy concerning how to display names. The default map uses the local language (i.e. localized names) so all users have familiar names displayed in their own languages. Other maps like Bing Maps only uses English names everywhere. You can also install an alternative version of Google Maps or Bing Maps displayed in various other languages, just [install the community map](#) called "Google Maps (Localized)" or "Bing Maps (Localized)".

### **Is there a size limit for the file-based map files?**

Yes, on older devices. Android versions smaller than the 3.0 cannot manage files bigger than 2GB. On those versions you will get errors while displaying parts of the maps which are stored after this size limit. Starting with Android 3.0, you will be able to read bigger maps correctly.

## **Problems with maps**

### **When displaying an on-demand online map, I'm only getting the error message "SSLHandshakeException"**

It probably means you're using a quite old device (Android 4.4 or less) which is unfortunately not compatible anymore with the more recent security protocols requested by this map. This only solution is to use a device with Android 5.0 or more. If it's already the case, please contact us by email to report this map.

### **What if no maps are displayed, zooming a lot displays "Area not stored"**

It means that you've activated the "Use only local storage" mode that prevent the application to download any new map data. Just [deactivate this mode as explained here](#).

### **What if some maps have an offset error over China**

Following Chinese regulations, most maps are intentionally distorted over China. [As explained here](#), the application is able to correct this distortion.

### **What if an on-demand map is not working anymore?**

First, be sure to [get the map again from the community maps list](#), in case it has already been fixed or updated. If it doesn't help, don't hesitate to [contact us](#), but please keep in mind that we may remove any community map if it can't be fixed.

### **What if a MemoryMap map doesn't work?**

The application doesn't support the new MemoryMap format ("\*.qc3" file extension), as well as encrypted maps. You can use the free Lite version to check if your maps are compatible.



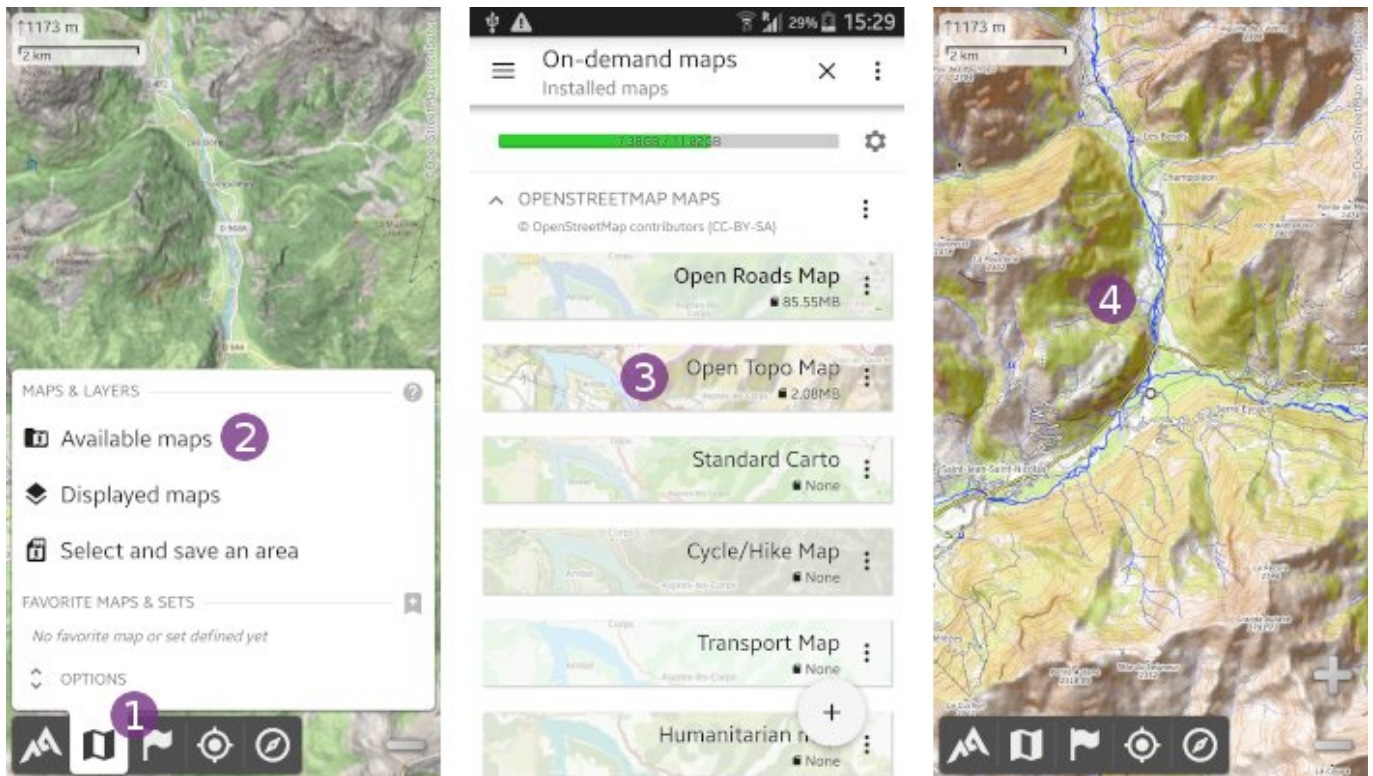
# How to select another map?

The application comes with a lot of different maps that fits various uses and area types. To change the displayed map:

- Tap on the **“Maps & Layers”** <sup>1</sup> menu and select **“Available maps”** <sup>2</sup>;
- The list of all currently installed on-demand maps is displayed;
- Tap on any other map from the list <sup>3</sup> to display it;
- The list is closed and the selected map displayed <sup>4</sup>.

<sup>i</sup> In order to quickly switch between different maps, you can use [favorite maps](#).

<sup>i</sup> In addition to the maps available by default, you can [add maps from the community maps list](#).

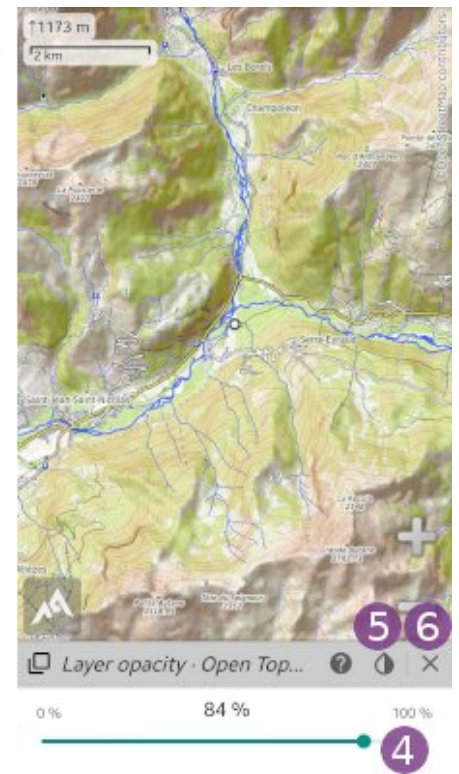
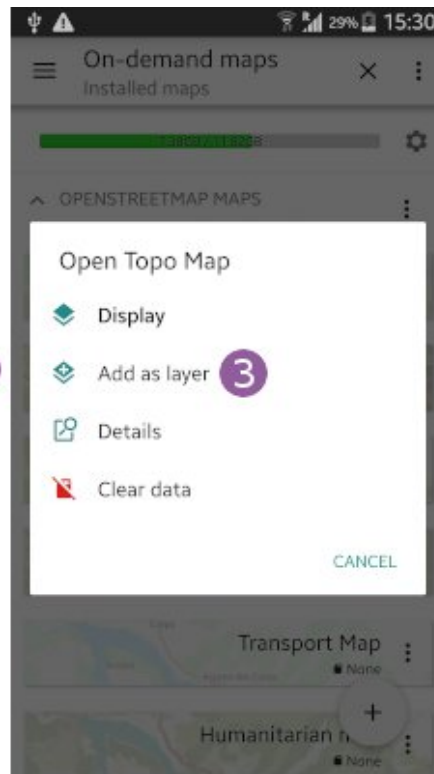
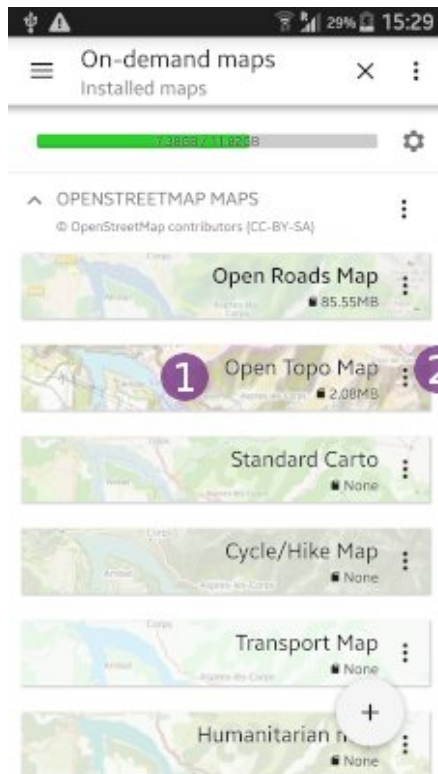


# How to add another map as a layer?

Instead of simply selecting a new map as explained above, you can also add a new map over the current one (so both maps are displayed together):

- In the list of your maps, long-press the map to add <sup>1</sup> or tap its menu icon <sup>2</sup>;
- Select **“Add as layer”** <sup>3</sup>;
- The new map (top map) is displayed over the current one (bottom map), and the map opacity tool is automatically displayed;
- If you want, you can adjust the new map opacity <sup>4</sup> or blending mode <sup>5</sup>;

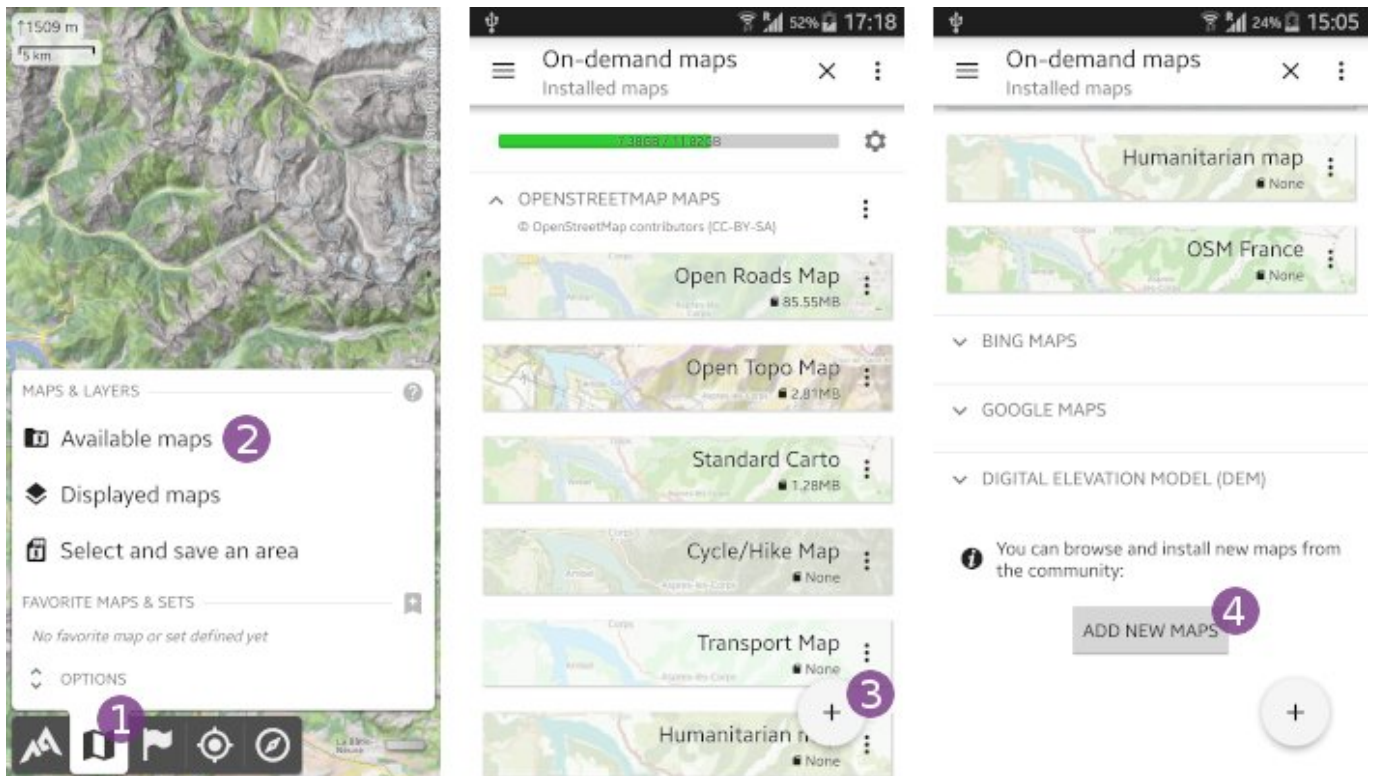
- When you've finished, tap on the **“Close”** <sup>6</sup> icon.



# How to add maps from the community maps list?

To install new maps from the community maps list:

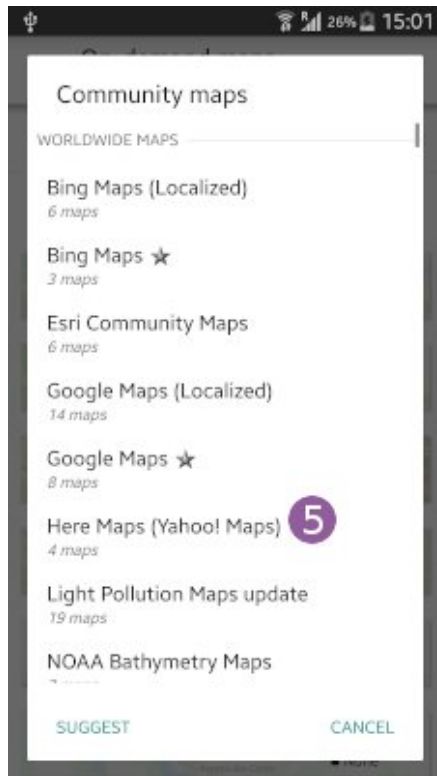
- Tap on the “**Maps & Layers**” **1** menu and on “**Available maps**” **2**;
- Tap on the “**+**” **3** button, or on “**Add new maps**” **4** at the end of the list;



- Wait for the community maps list to update and display, and select any available map set **5**;
- A new category is added to your installed on-demand maps list **6**;
- You can select any map **7**, the list is closed and the selected map displayed **8**.

**i** Maps with a star icon are pre-installed maps.





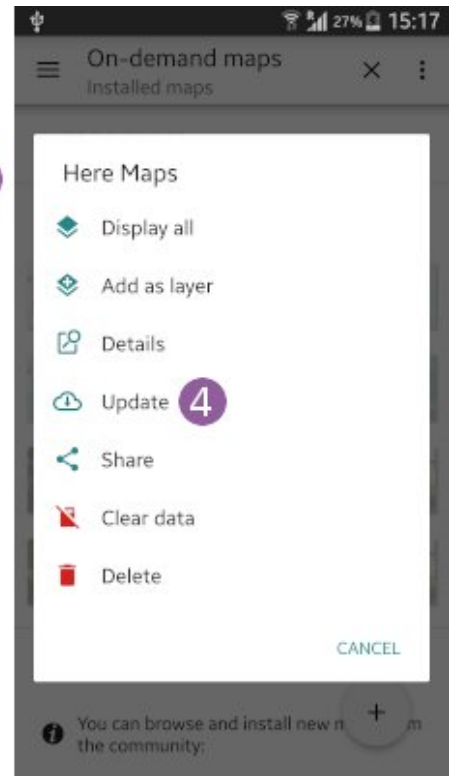
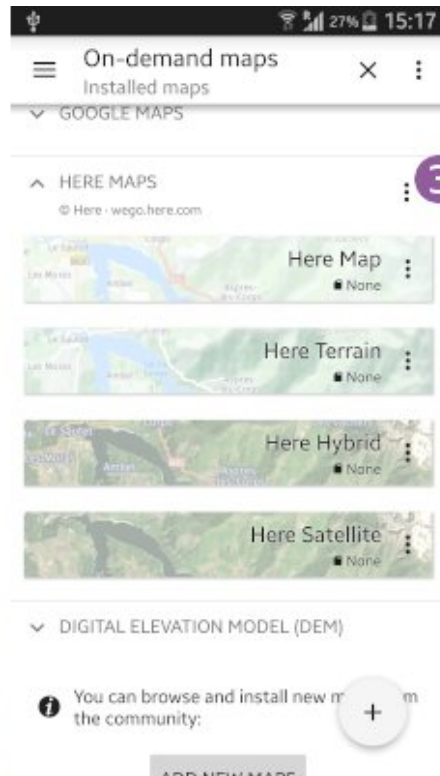
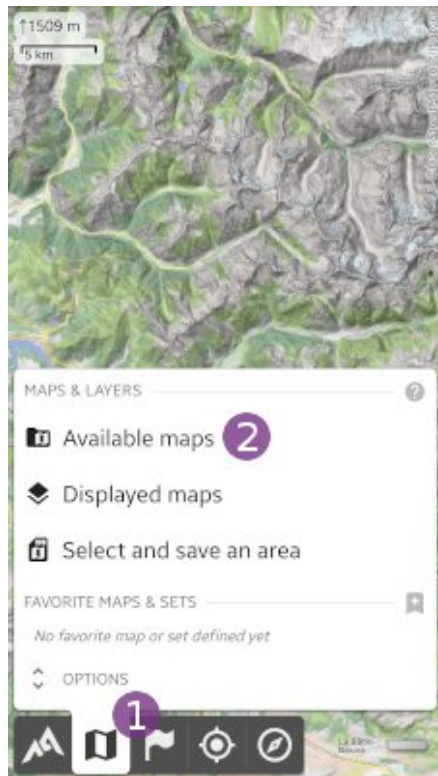
## How to update maps from the community maps list?

Map servers often change the way they provide maps, so we must update the community maps on a regular basis. However, those changes are not automatically updated on your device, so if you see that a map is not working properly, try to update its map group as explained here:

- Tap the **"Maps & Layers"** <sup>1</sup> menu and **"Available maps"** <sup>2</sup>;
- Tap the menu icon <sup>3</sup> of the map group you want to update. Do not tap the menu of a single map;
- Choose **"Update"** <sup>4</sup>.



During the update process, all the maps of the updated group are un-displayed, so you'll need to display your map again.

<sup>i</sup> If the map is still not working after the update, [contact us by email](#).










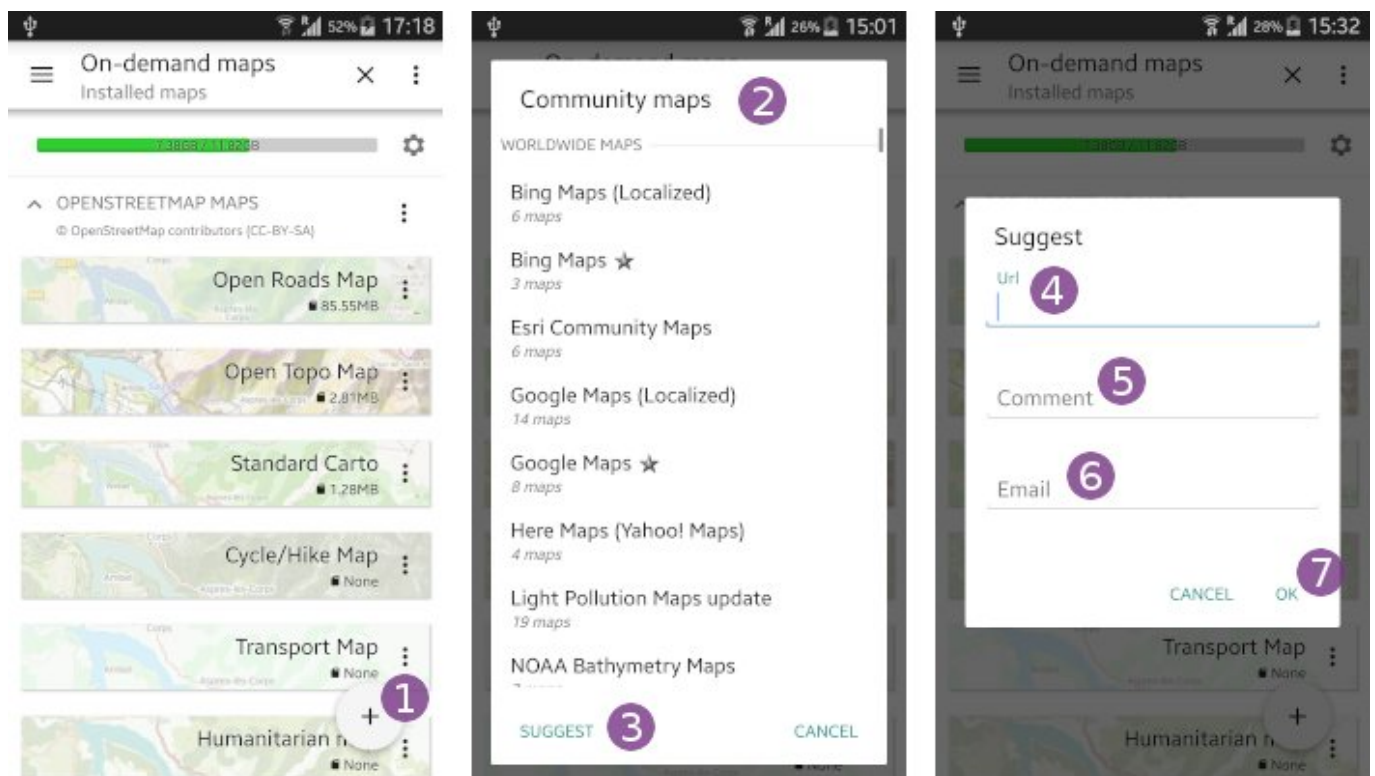
# How to suggest a new community map?

If you know a freely and publicly available online map, don't hesitate to suggest it so we can check if it can be added to the community maps list.

-  Copyrighted maps or with subscriptions cannot be added this list.
-  Please check that the map you want to suggest is not already available in the [community maps list](#).

To suggest a new map:



- Display the list of available on-demand maps [as explained here](#);
- Tap on the “+”  button and wait for the community maps list  to be displayed;
- Check if your map is not already listed;
- If not, tap on “**Suggest a map**” ;
- Enter the exact map server URL in the “**Url**”  text field, a small comment about the map in the “**Comment**”  text field and your e-mail address in the “**E-mail**”  text field so we can give you an update;
- Tap “**Ok**”  to submit your suggestion. We'll review the information you've submitted and see if we can add this map to the community maps list.













# How to store a complete map area for offline use?


Before starting, be sure to have at least one [on-demand map displayed](#). If you want to store more than one map at the same time, [you can add the other maps as layers](#).

The store area tool will download all the map data for the area and zoom levels you have chosen, and store it on the device. The downloaded data is added into the single storage of its map. Any data already stored won't be downloaded or stored twice. At any time, [you can check what is stored](#) for a map, or delete its entire data storage.

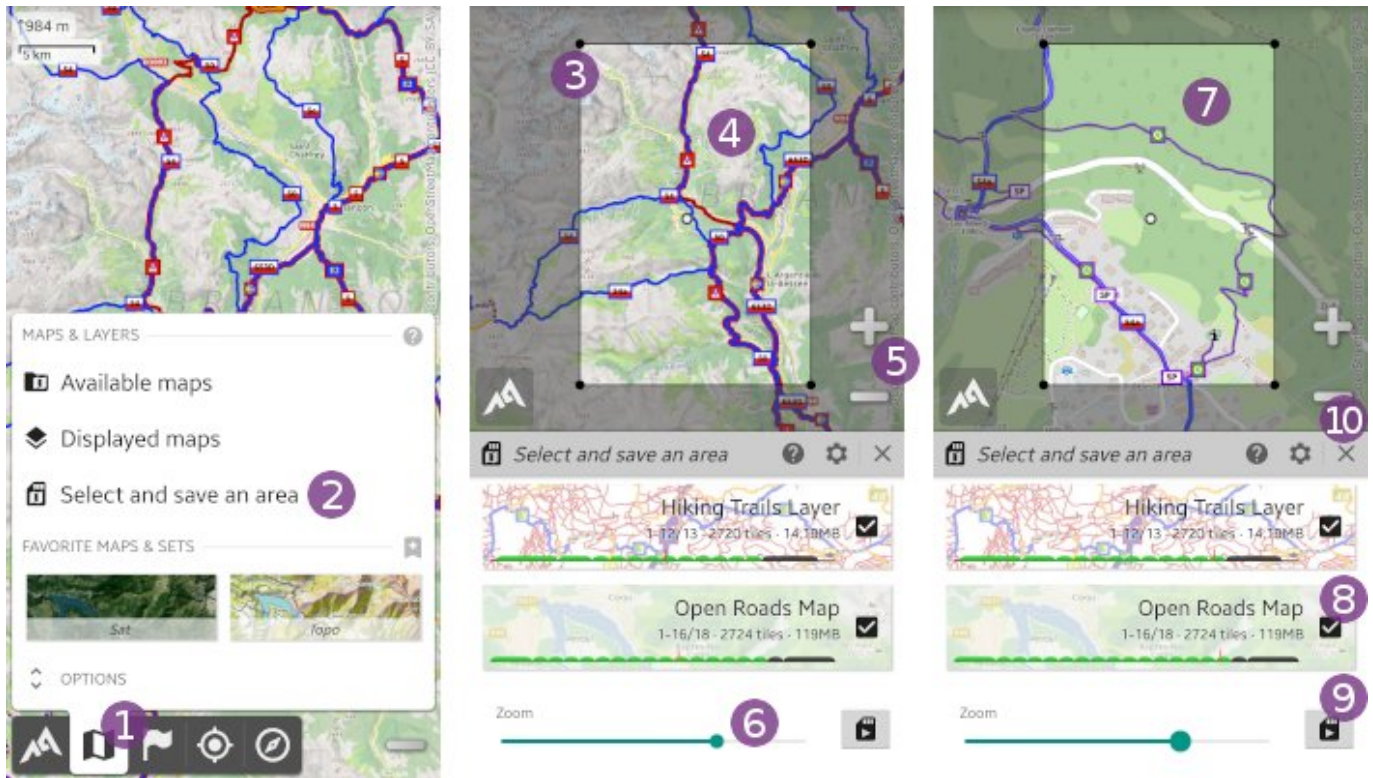
-  Storing areas extensively uses map servers, be sure to only store areas you need.
-  Some map servers limit the amount of accessible data per day and per user (using IP address), storing large areas increase the risk of reaching the amount limit.

## Configure the area and the zoom levels to store

- Tap on the “**Maps & Layers**”  menu and on “**Select and save an area**” .
- Adjust the area to store by moving the dots , the map  and the zoom level .
- Select the maximum zoom level to store<sup>1</sup> . When modifying the maximum level to store, this one is previewed on the map . Just release the zoom slider to return the map zoom to its original value;
- If needed, un-check  the maps you don't want to store;
- For each map, an estimation of the number of image tiles and size to be downloaded<sup>2</sup> is displayed;
- Tap on “**Start**”  to start the store area process. At any time you can tap on “**Close**”  to hide the store area side view, the process will continue in the background.

-  You can only download a limited amount of data at each storage process. When you've reach this amount for a map, the levels bar turns red. You can however re-start the process as many times as you want, all the data already stored won't be downloaded again.





1. On-demand maps are raster maps: each zoom level is composed by its own set of images containing different details, that's why all levels must be stored independently.
2. The size is an estimation based on the data already stored for this map.

## Checking the process

Once the process has been started, the progress of each maps is displayed <sup>1</sup> in the side view. The estimated remaining total time is displayed in an information box on the map <sup>2</sup>.

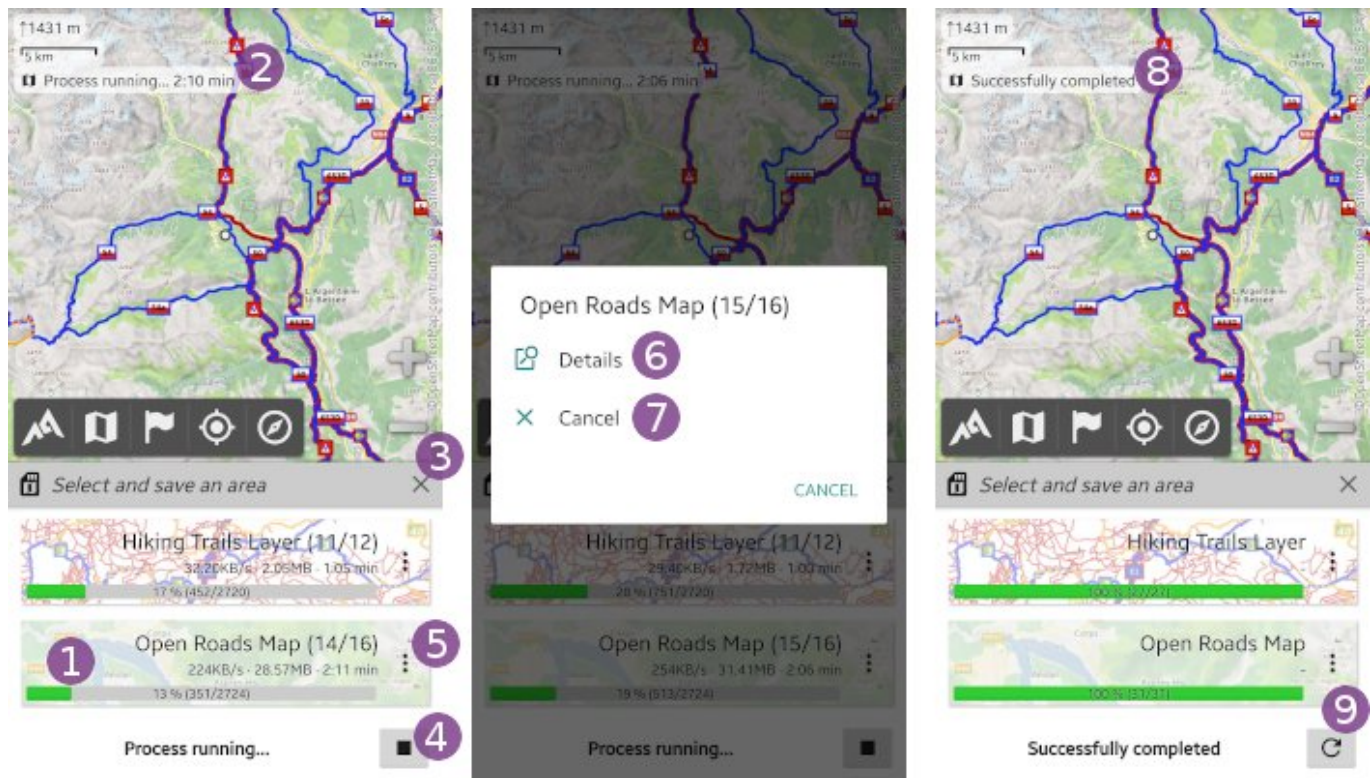
<sup>i</sup> At any time you can tap on **“Close”** <sup>3</sup> to hide the download progress side panel and continue to use the application as usual (move the map, select an other map, etc.), the download process will continue in the background.

If you want to cancel the store area process, tap on the **“Stop”** <sup>4</sup> icon.

By tapping on the **“Menu”** <sup>5</sup> icon of a map, you can:

- Tap **“Details”** <sup>6</sup> to display more information about the selected map process, including the list of errors if any;
- Tap **“Cancel”** <sup>7</sup> to stop the store area process for this map only.

When the store area process is terminated, the information box is updated <sup>8</sup>. If you want to re-display the store area tool with the same settings again, tap on the **“Start new”** <sup>9</sup> icon.

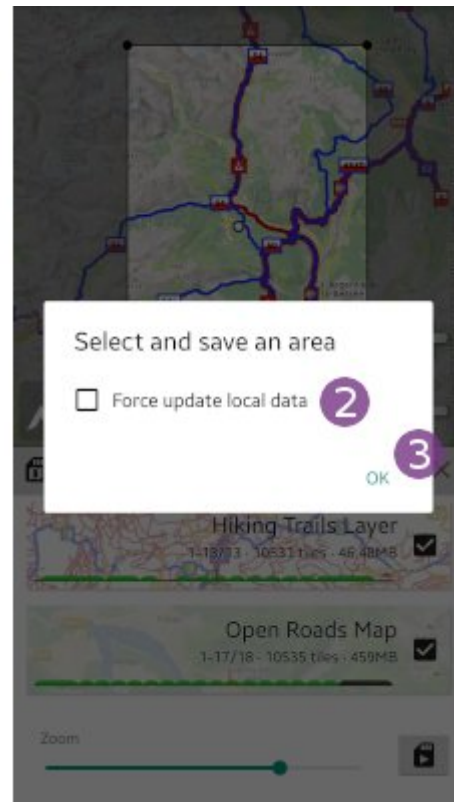


## Updating a map area

Stored map data is automatically updated when being displayed again after some time, usually between one and three months depending on the map. However, it is possible to force the application to update the stored data of an area using the store area tool:

- Before storing an area, tap on **"Settings"** (1);
- Check the **"Update data already stored"** (2) option;
- Tap **"Ok"** (3) to validate.

**i** This option is automatically un-checked on the next process.





# How to check the availability of locally stored data?

When at least one on-demand map is displayed, you can check the availability of locally stored data for this map using different ways.

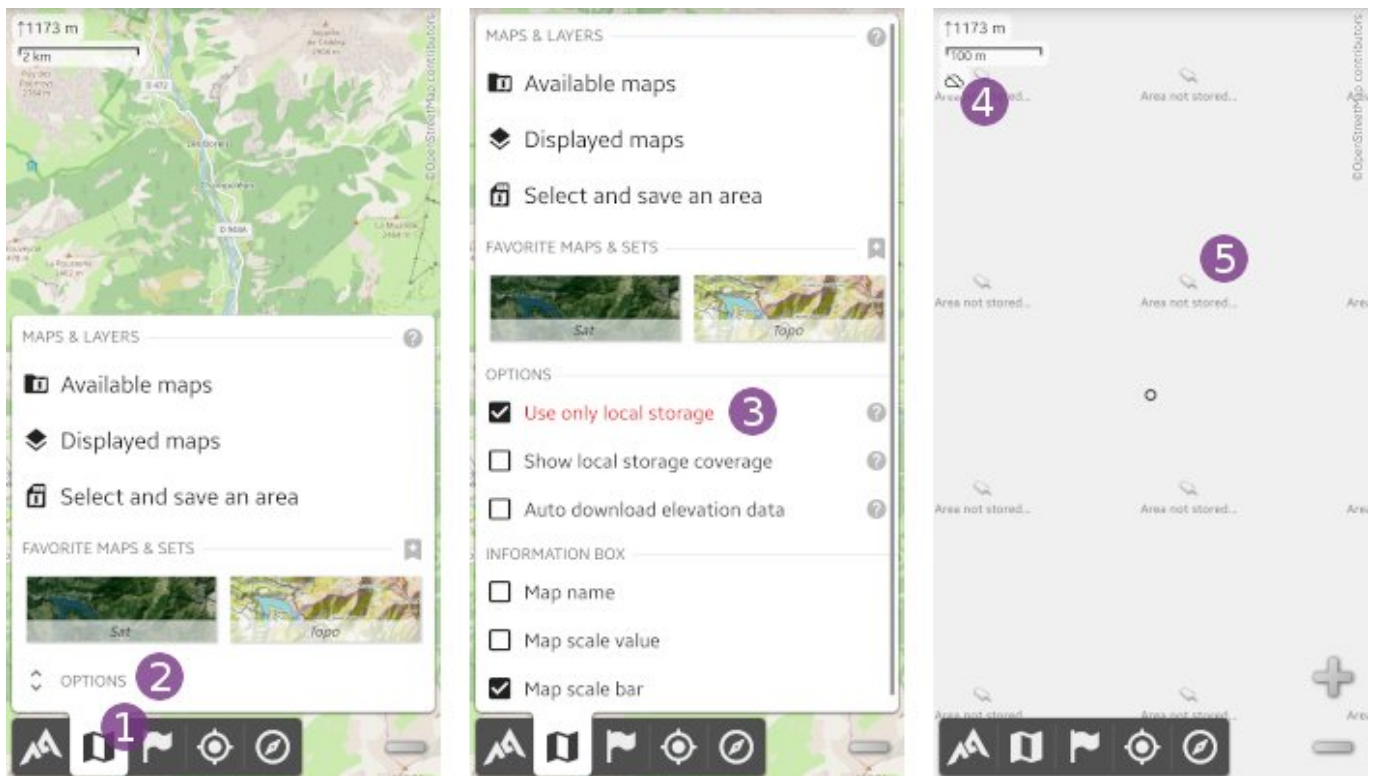
## Using the "Use only local storage" option

This option will prevent the application to download any new map data, and force it to only use the local storage. You can then be sure that all displayed areas are available for offline use.

- Tap on the **"Maps & layers"** <sup>1</sup> menu and on **"Options"** <sup>2</sup> to display more options;
- Check the **"Use only local storage"** <sup>3</sup> option, and tap on the **"Maps & layers"** <sup>1</sup> menu again to hide the sub-menu.

<sup>i</sup> When the **"Use only local storage"** option is checked, an small icon warns you that the application is in offline mode and won't download any new data <sup>4</sup>.

<sup>i</sup> When displaying an area with no stored data available, the application will display an **"Area not stored..."** <sup>5</sup> message to let you know that this option is currently active.



## Using the "Show local storage coverage" option

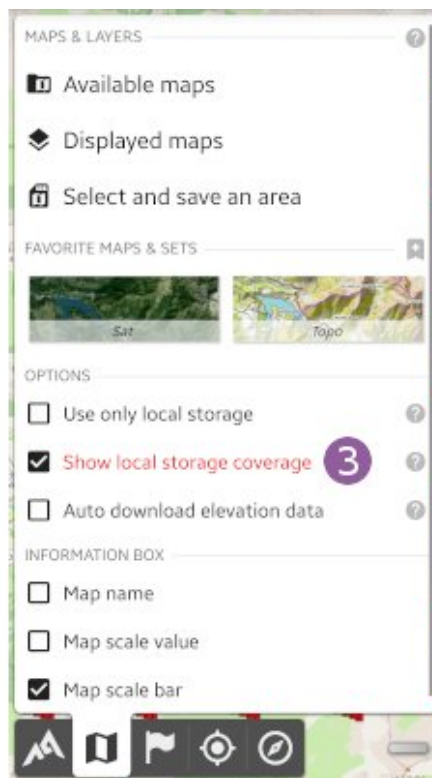
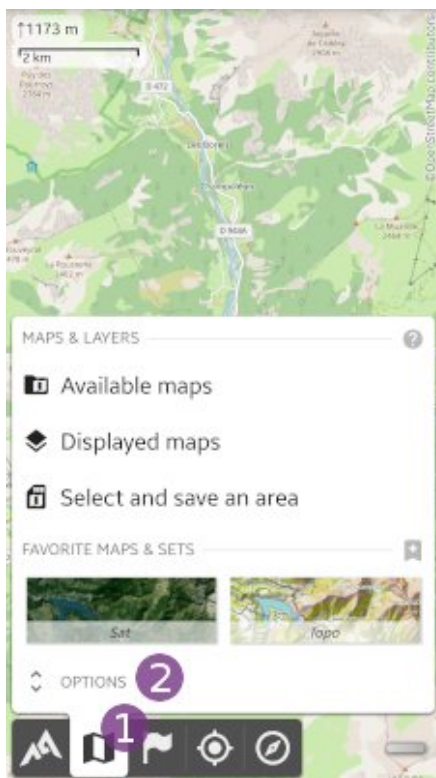
This option activates the display of on-map indicators showing the availability of locally stored data, available for offline use:

- For each group of squares, the first square (on the top) indicates the status of the following zoomed detail level, the second one indicates the status of the next zoomed level, etc.;
- A **green** square indicates that this area is stored;
- A **yellow** square indicates that this area is stored, but is older than the map update delay, so will be updated on the next display if Internet data is available;
- A **red** square indicates that this area is not stored.

**i** The indicators only show the status of the lower most on-demand map.

To display the coverage indicators:

- Tap on the **"Maps & layers"** **1** menu and on **"Options"** **2** to display more options;
- Check the **"Show local storage coverage"** **3** option, and tap on the **"Maps & layers"** **3** menu again to hide the sub-menu;
- The coverage indicators are now displayed **4**.



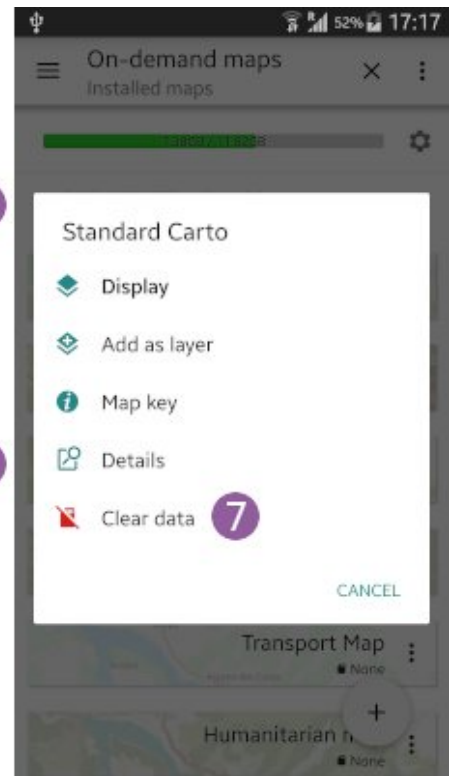
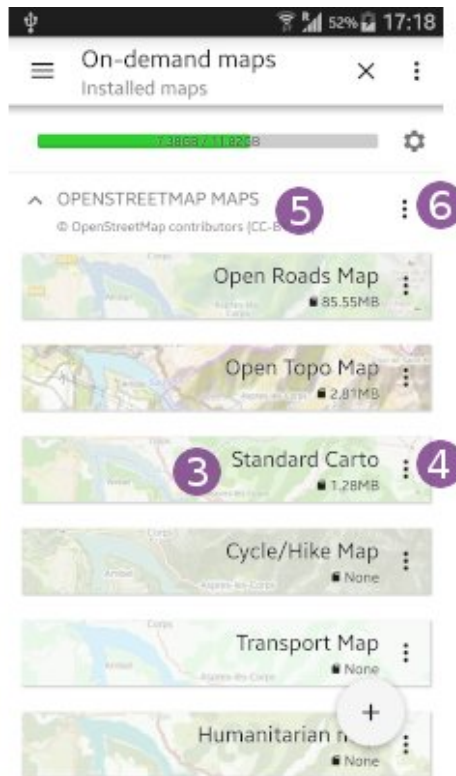
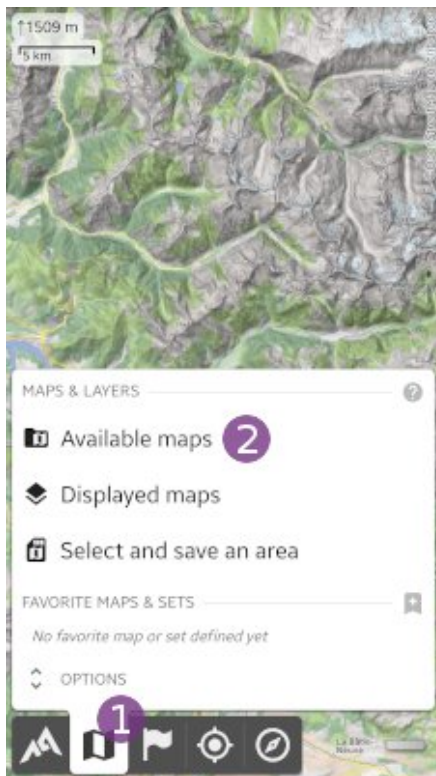
# How to clear stored data?

All the data you store for a map (by displaying it or using [the store area tool](#)) is added to its local storage space which will grow on demand. At any time, you can delete this data:

- Tap on the “**Maps & Layers**” **1** menu, and on “**Available maps**” **2** to list all your maps;
- If you want to delete the data of a single map, long-press it **3** or tap its menu icon **4**;
- If you want to delete all the stored data of a maps group, long-press it **5** or tap its menu icon **6**;
- Tap “**Clear data**” **7**;
- Tap “**Yes**” to confirm your action.

**i** If the selected map were currently displayed, it will be removed from the displayed maps.

**i** This action will clear all the data of the selected map. In order to store and clear data by pieces, you need to use [workspaces](#).




# How to use file-based maps?

The file-based maps support allows the application to read or import maps from various files, including well-known and commercial map formats.

For most formats, the application will read the map data on-the-fly, directly from the file, but for some particular ones, it will need to import the map data in its own optimized format before displaying it. This process is mostly transparent for the user.

## Which file-based map formats are supported by the application?

Here is the list of all supported file formats.

 Please check the notes and requirements for each format.

| Supported file-based map formats                                                                                                                                                                                                                                                                    | Read on-the-fly      | Import in *.pgd    | Read elevations |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-----------------|
| <b>AlpineQuest Maps (*.aqm)</b><br>Raster map format that can be created with <a href="#">MOBAC</a> (free and multi-platform map creator, <a href="#">see a tutorial here</a> ) and <a href="#">MAPC2MAPC</a> (able to convert a wide range of map formats, free and commercial versions available) | ✓ Yes                | ✗ No               | ✗ No            |
| <b>AlpineQuest Maps (*.pgd)</b><br>Fast raster map format created by the application when importing maps from other formats.                                                                                                                                                                        | ✓ Yes                | ✗ No               | ✗ No            |
| <b>OGC GeoPackage Maps (*.gpkg)<sup>1</sup></b><br>Open, non-proprietary and platform-independent data format for geographic information system defined by the Open Geospatial Consortium. It supports multiple layers and map projections.                                                         | ✓ Yes <sup>1</sup>   | ✗ No               | ✗ No            |
| <b>OziExplorer Calibrated Images (*.map + *.jpg/*.png/*.bmp/*.gif/*.webp/*.heic/*.heif)<sup>2,3</sup></b><br>Maps created from calibrated images. Images with a size up to 2018px × 2018px can be read on-the-fly.                                                                                  | ✓ Yes <sup>2,3</sup> | ✓ Yes <sup>2</sup> | ✗ No            |
| <b>OziExplorer Maps (*.map + *.ozf2/*.ozfx3)<sup>4</sup></b><br>Commercial and proprietary widespread raster map format.                                                                                                                                                                            | ✓ Yes <sup>4</sup>   | ✗ No               | ✗ No            |
| <b>CompeGPS Raster Images (*.rmap)<sup>2</sup></b><br>Commercial and proprietary widespread raster map format.                                                                                                                                                                                      | ✓ Yes <sup>2</sup>   | ✗ No               | ✗ No            |
| <b>MemoryMap QuickChart Maps (*.qct)<sup>5</sup></b><br>Commercial and proprietary widespread raster map format.                                                                                                                                                                                    | ✓ Yes <sup>5</sup>   | ✓ Yes <sup>5</sup> | ✗ No            |
| <b>MBTiles Raster Maps (*.mbtile)<sup>1</sup></b><br>Open source raster map format for storing arbitrary tiled data.                                                                                                                                                                                | ✓ Yes <sup>1</sup>   | ✓ Yes <sup>1</sup> | ✗ No            |
| <b>RMaps SQLite Maps (*.sqlitedb)</b><br>Simple raster map format using a SQLite database to store image tiles.                                                                                                                                                                                     | ✓ Yes                | ✓ Yes              | ✗ No            |



| Supported file-based map formats                                                                                                                                                                                                           | Read on-the-fly | Import in *.pgd                                | Read elevations                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------|-----------------------------------|
| <b>XYZ Zip Maps (*.zip)</b><br>Zipped raster tiles following the <a href="#">OpenStreetMaps</a> tile server specification.<br>Root folder must be called "XYZ/", next sub-level must contain "z" values, then next sub-level "x" values.   | ✔ Yes           | ✗ No                                           | ✗ No                              |
| <b>TMS Zip Maps (*.zip)</b><br>Zipped raster tiles following the <a href="#">Tile Map Service</a> tile server specification.<br>Root folder must be called "TMS/", next sub-level must contain "z" values, then next sub-level "x" values. | ✔ Yes           | ✗ No                                           | ✗ No                              |
| <b>GeoTIFF Raster Maps (*.tiff)<sup>2</sup></b><br>Open, non-proprietary and platform-independent raster image format embedded with georeferencing information.                                                                            | ✗ No            | ✔ Yes <sup>2</sup>                             | ✗ No                              |
| <b>Google Earth Image Overlays (*.kml, *.kmz)<sup>3</sup></b><br>Raster map format that can be easily created from geo-positioned images using Google Earth.                                                                               | ✗ No            | ✔ Yes <sup>3</sup><br><a href="#">see here</a> | ✗ No                              |
| <b>Plain images (*.jpg, *.png, *.bmp, *.gif, *.webp, *.heic, *.heif)<sup>3</sup></b><br>Create maps from images by using the application built-in calibration tool.                                                                        | ✗ No            | ✔ Yes <sup>3</sup><br><a href="#">see here</a> | ✗ No                              |
| <b>SRTM data files (*.hgt)</b><br>Binary format containing elevation data for an area of 1 square degree.<br>Both 1-arc-second and 3-arc-second resolutions are supported.                                                                 | ✗ No            | ✗ No                                           | ✔ Yes<br><a href="#">see here</a> |

1. Vector tiles/features/items are not supported.

2. Some encodings, map projection or datum may not be supported, contact us in case of any issue.

3. Size limits may apply based on your device configuration and Android version. WebP: Android 4.0+, HEIF/HEIC: Android 8.0+.

4. Some \*.ozfx3 and newer \*.ozfx4 maps are not supported (compatible with Img2Ozf 3.03 and older, MapMerge 1.15 and older).

5. QC3 (\*.qc3) and encrypted maps are not supported.

## How to copy your maps on your device?

The easiest way to put map files on your device is using your USB cable and connecting your device to your computer as a mass storage device. On your computer, browse your device like any USB key using the file explorer.

You can put your maps at any location, including the external SD card.

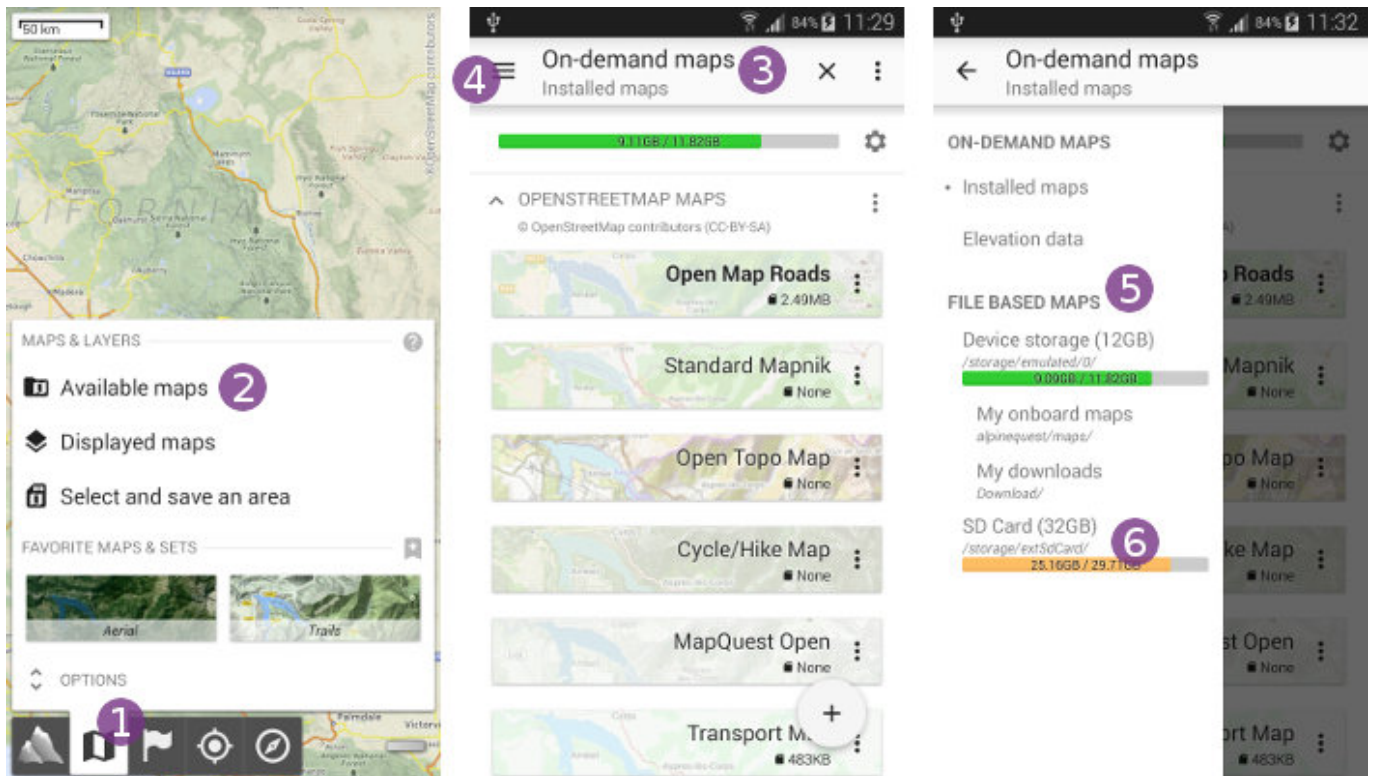


Be sure that your maps have been entirely copied before un-connecting your device.

# How to select your maps from the application?

Once you have correctly un-connected your device, you can start the application.

- Tap on the **“Maps”** <sup>1</sup> menu and on **“Available maps”** <sup>2</sup> to open the maps explorer;
- By default, the application lists the **on-demand maps** <sup>3</sup>;
- Tap on the left drawer menu <sup>4</sup>;
- Under the **“File based maps”** <sup>5</sup> section, select the folder in which you've put your map file. For example, if you've put your maps in a sub-folder of you external SD card, select **“SD Card”** <sup>6</sup>.



When selecting a folder from the drawer menu, the application will list its content <sup>7</sup>. If you maps are in a sub-folder, just select it. When a folder containing maps is displayed, they will be listed. Click on a map <sup>8</sup> to display it and close the maps explorer.

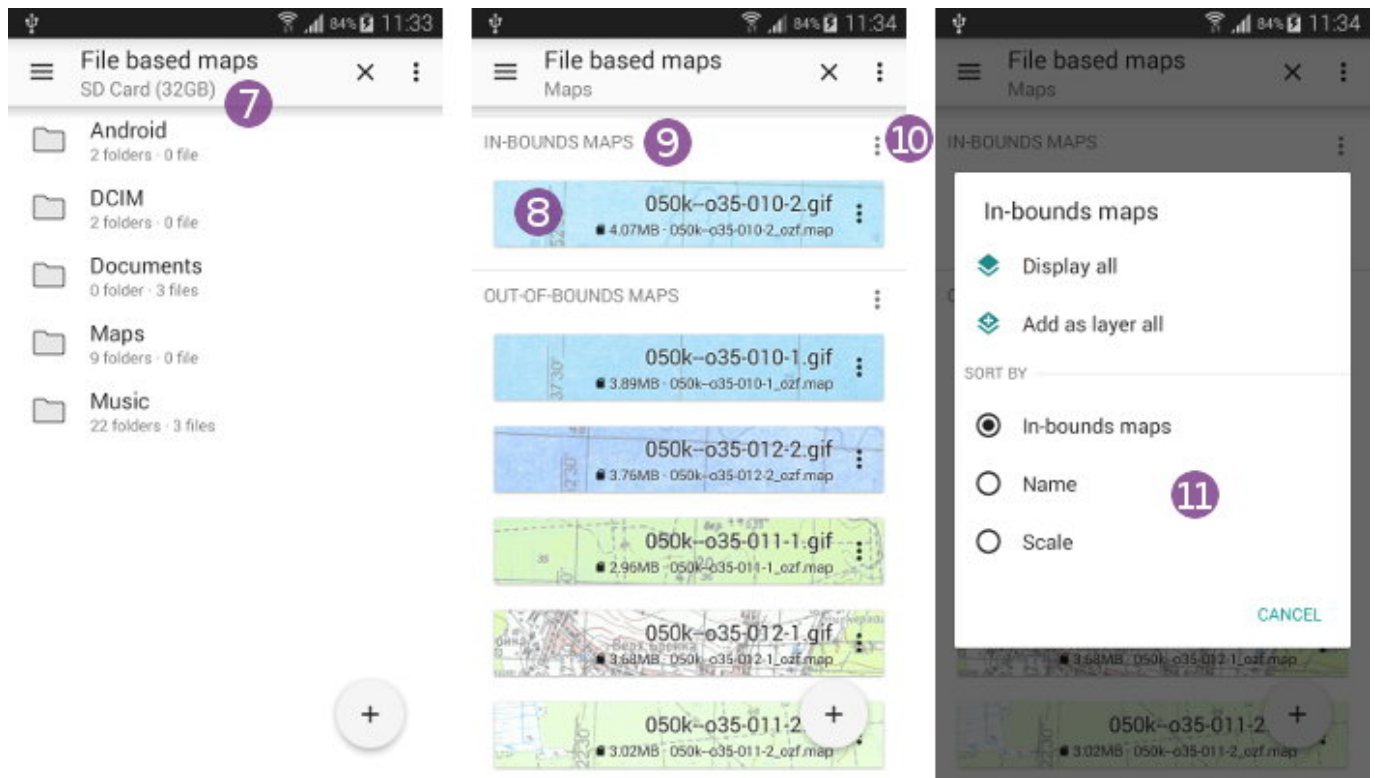
<sup>i</sup> If you don't see your maps on Android 11 and later, please put your maps in the application or media folder, [as explained here](#).

By default, maps are sorted in two categories. The **“In-bounds maps”** <sup>9</sup> are maps covering the area currently displayed, whereas **“Out-of-bounds maps”** are maps covering an area far away. To change this sort:

- Click on a maps category menu icon <sup>10</sup>;
- Select the desired sort from the **“Sort by”** <sup>11</sup>.

<sup>i</sup> When selecting a map from the out-of-bounds group, the application will ask you if you want to slide the view over the area covered by the selected map.

<sup>i</sup> When sliding the view out of the covered area, the application will automatically search for another map covering the new area in the last displayed folder. If one is found, it will be automatically selected.



## How to deal with multiple maps covering continuous areas?

Some file-based map formats store large areas as multiple maps covering smaller and continuous areas (as displayed in the screenshot on the right). It's often the case when the maps are created from scanned paper maps.



If you put all those continuous maps inside the same folder, the application is able to deal with them in various ways. The maps can even be in different formats.

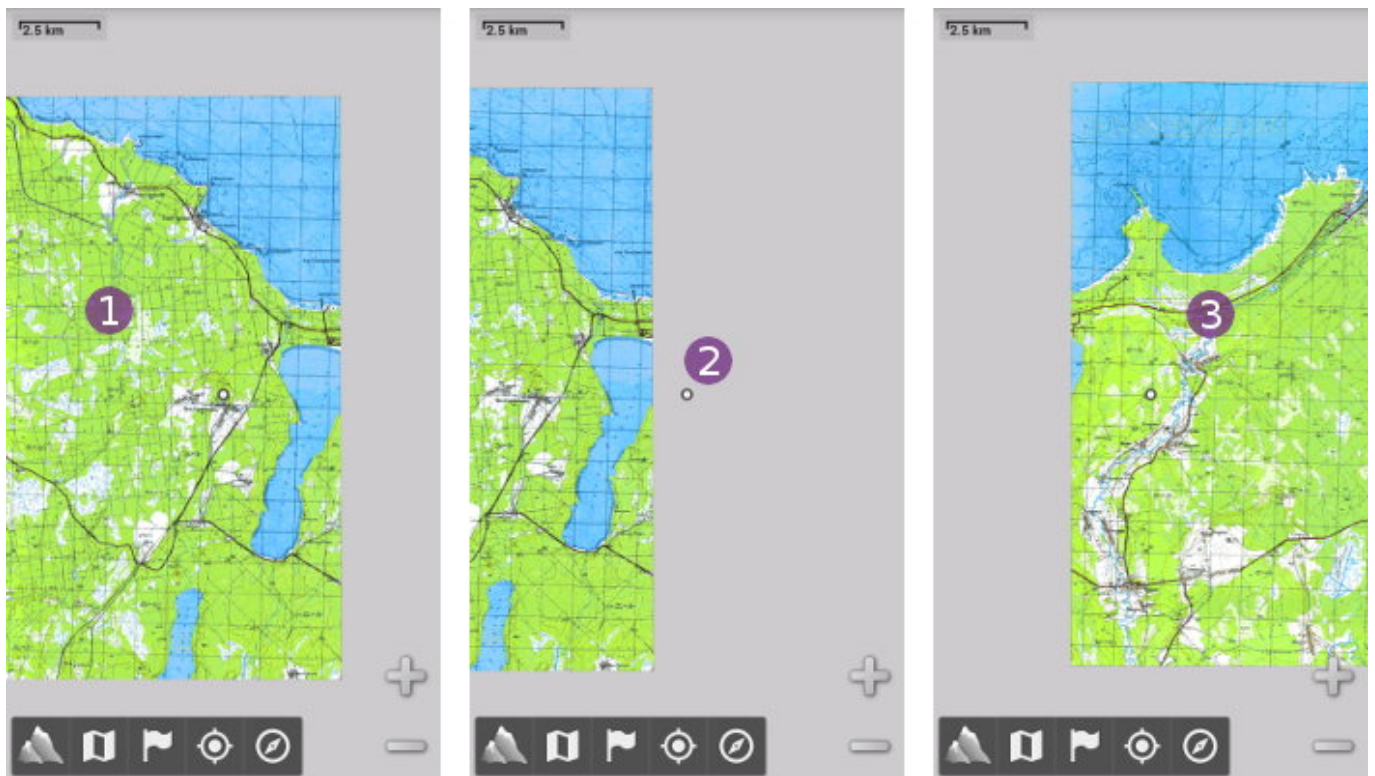
## Using continuous maps auto-loading

When you select a map from a folder containing multiple continuous maps, this one is displayed <sup>1</sup>.

As you slide the displayed area, if the screen center <sup>2</sup> moves over an area which is not covered anymore by the current map, but which is covered by another map from the same folder, this other map will be automatically loaded and displayed <sup>3</sup>.

<sup>i</sup> For the continuous maps auto-loading to work, only one file based map must be displayed at the same time.

<sup>i</sup> An auto-loading is also available if you have multiple maps covering the same area with different scales. When using the “+” and “-” zoom buttons, the application will auto-load the best scale matching map.



## Using the multi-map selection

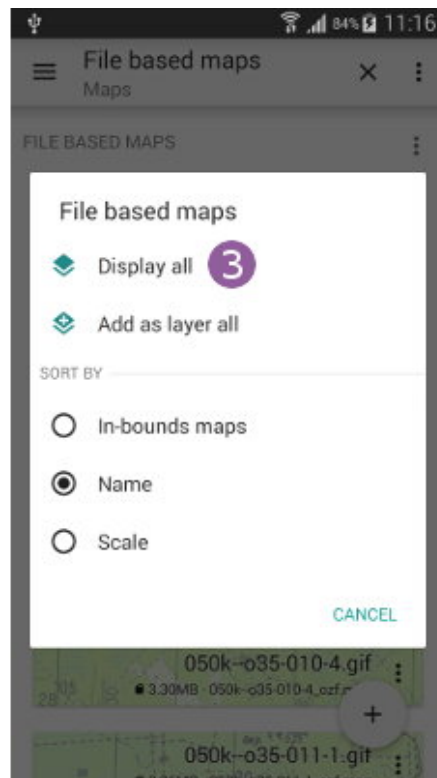
In order to create a virtually large map areas from small continuous map areas, you can display multiple maps at same time:

- List a folder containing multiple continuous maps <sup>1</sup>;
- Tap on the file-based maps header menu <sup>2</sup>;
- Select “**Display all**” <sup>3</sup>.

The maps are all displayed at the same time <sup>4</sup>.

<sup>i</sup> In order to re-display all those maps at the same time after having displayed any other map, you can create a [favorite map set](#).





# Create your On-board Maps

[Mobile Atlas Creator](#) (MOBAC) is a free software that allows you to download maps from a lot of sources, and save them in the map format used by AlpineQuest.

No installation is needed, you simply need to extract the content of the .zip archive. MOBAC is working on Windows, Mac and Linux.

You need to have the Java platform 1.6 installed on your machine (available [here](#)).

## Getting MOBAC

**1. Download** the latest version on the official MOBAC website: [Mobile Atlas Creator](#).

You can also get MOBAC from our website: [Mobile Atlas Creator 1.9.16.zip](#)

**2. Extract** the content of the .zip archive (for example on your Desktop).

**3. Double-click** on “**Mobile Atlas Creator.exe**” to start MOBAC.

If you are using Mac or Linux, launch “**Mobile\_Atlas\_Creator.jar**” using Java.

## Using MOBAC

Once you have started MOBAC, the default map is displayed.

**1. Use the mouse right button** you move the map.

**2. Use the mouse wheel** to zoom in our out of the map.

**3. Select another map source to display** using the Map source panel on the left (2nd from the top).

### Notes:

- Be careful that all map sources are not available for every part of the world.
- Some map source can take some time to display. Be patient.
- If a map source seems to be broken, try to perform an online update of sources: click on “**Settings**”, select the “**Map sources**” tab and click on “**Perform online update**”.

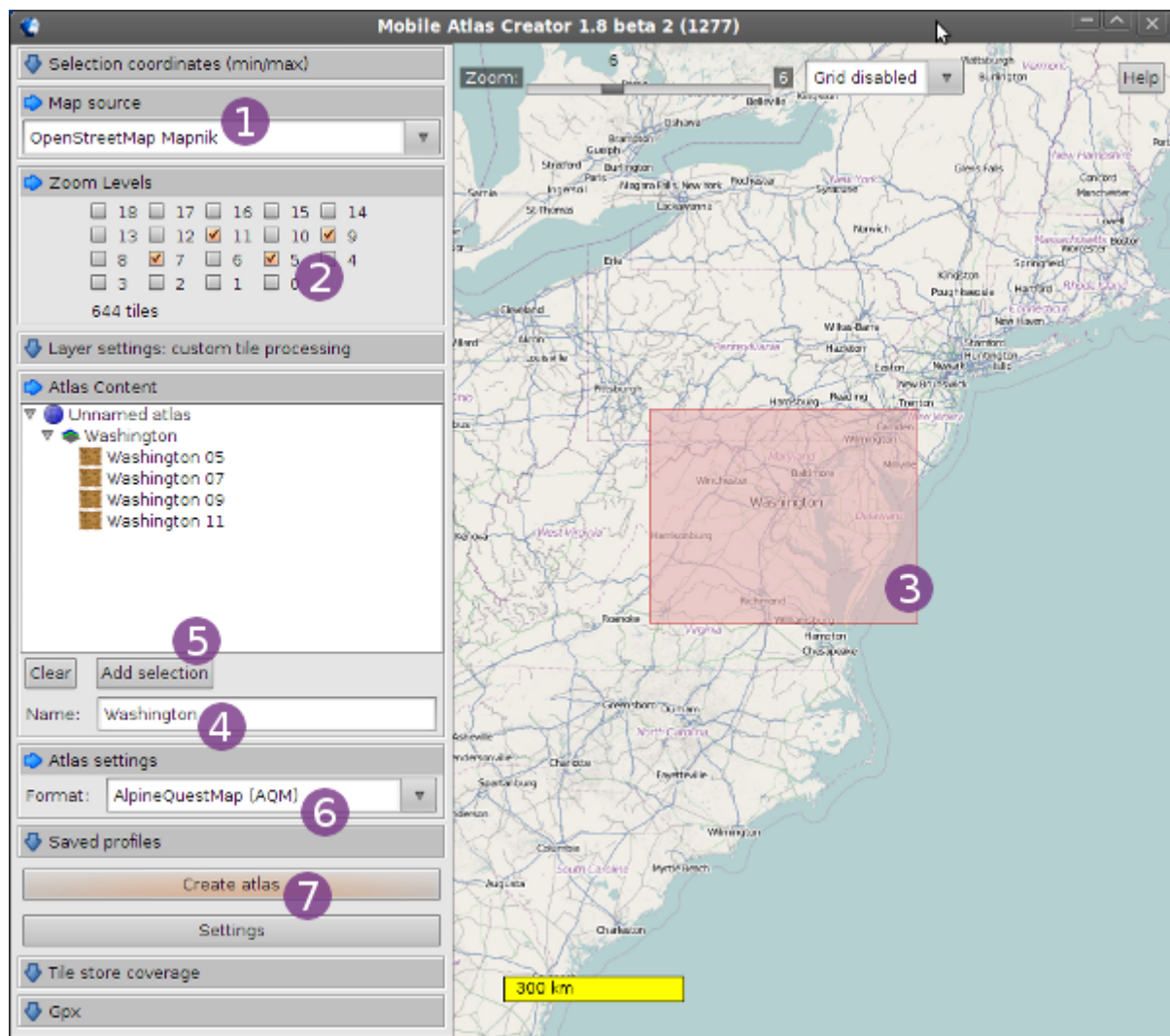
## Creating maps

**1. Select the map source** ① you want to use for your offline map.

**2. Select the zoom levels** ② you want to save. Have a look at the number of image tiles that will be downloaded (more than 10,000 is not recommended).

*Tip: selecting one level over two starting with the most detailed one you want to have, is a good idea to reduce the final map file size.*

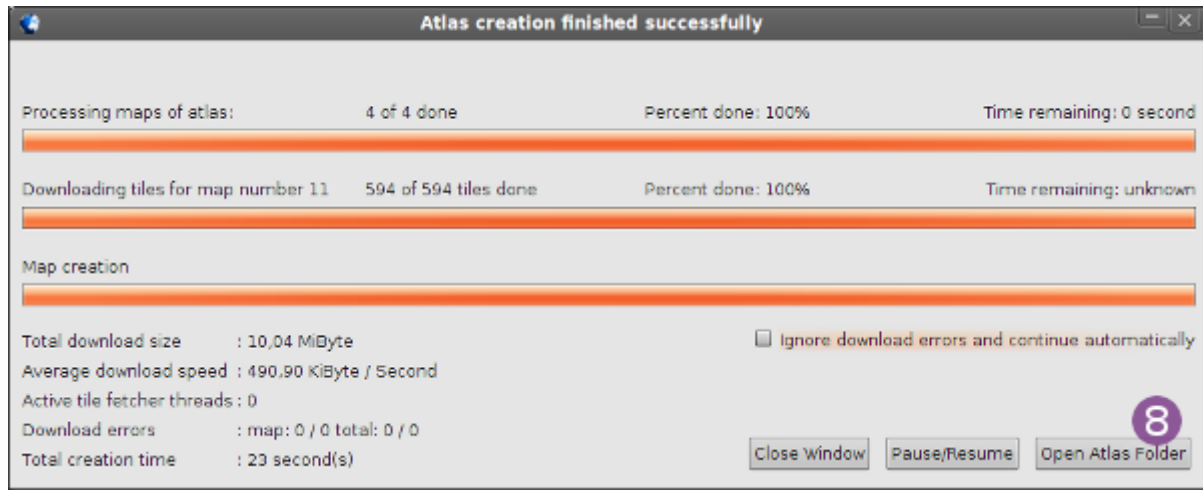
3. Select the map area <sup>3</sup> you want to save, using the mouse left button.
4. Choose a name <sup>4</sup> for your map, which will be displayed in AlpineQuest.
5. Validate your setup by clicking on the “Add selection” <sup>5</sup> button.
6. Select the AlpineQuestMap format <sup>6</sup> as output format.
7. Start the map creation process by clicking on the “Create atlas” <sup>7</sup> button.



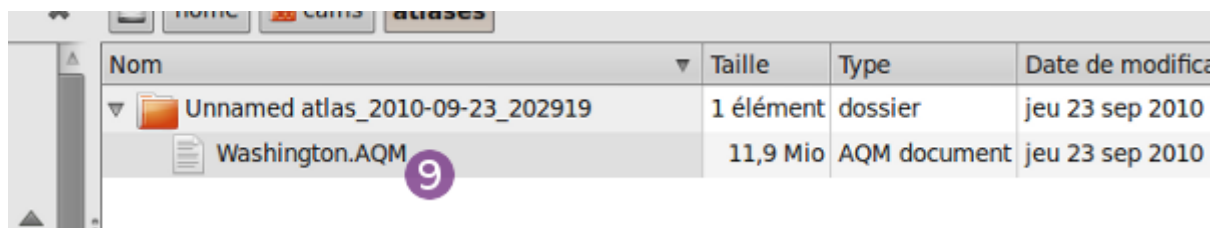
MOBAC will start to download the map images and store them in a .aqm map file.

Click on the “Open Atlas Folder” <sup>8</sup> button when the process is finished.





Your map is available <sup>9</sup> and ready to use.



## Uploading maps on your memory card

Once you have created AQM maps, you must upload them on your device.

Maps must be placed in the folder “/alpinequest/maps/” of your memory card. Use your USB cable to link you device to your PC.

To get your maps working, be careful of the following things:

- Maps must be in the AQM format, with a .aqm file extension;
- Maps must be copied in the exact AlpineQuest maps folder. This folder is created when AlpineQuest start, you should not have to create it;
- When you copy the maps from your PC to your device, be sure that all the files have been entirely copied before removing the USB cable. Do not remove the cable before ejecting the device from your OS. You should check the file sizes when the transfert is complete.

# How to calibrate an image to use it as a map?

The application allows you to use regular images as maps. In order to correctly locate items on this map (points, tracks, etc.), the application must know what is the exact area covered, this is done by the calibration process: after displaying the image, you must match 4 points with another existing and correct map. This process is done only one time, then the image is converted as a regular map file.

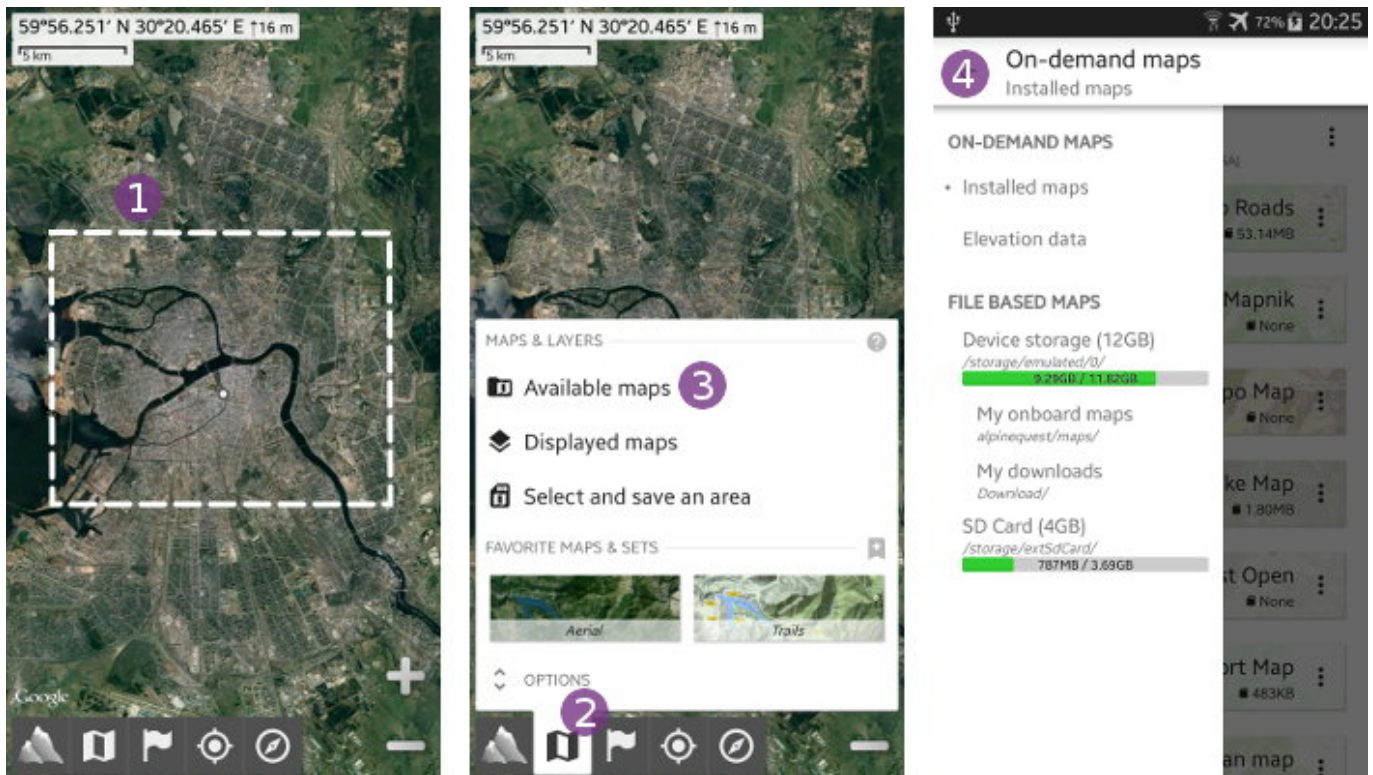
**i** The calibration process used by this application requires 4 points, which is enough to correctly match an image over a base map without knowing the exact map projection which is used, and gives satisfactory result for maps with limited areas.

The supported image formats are: JPEG, PNG, BMP<sup>1</sup>, GIF<sup>1</sup>, WebP<sup>1,2</sup>, HEIF<sup>1,3</sup>.

1: size limit may apply based on your device configuration; 2: Android 4.0+; 3: Android 8.0+

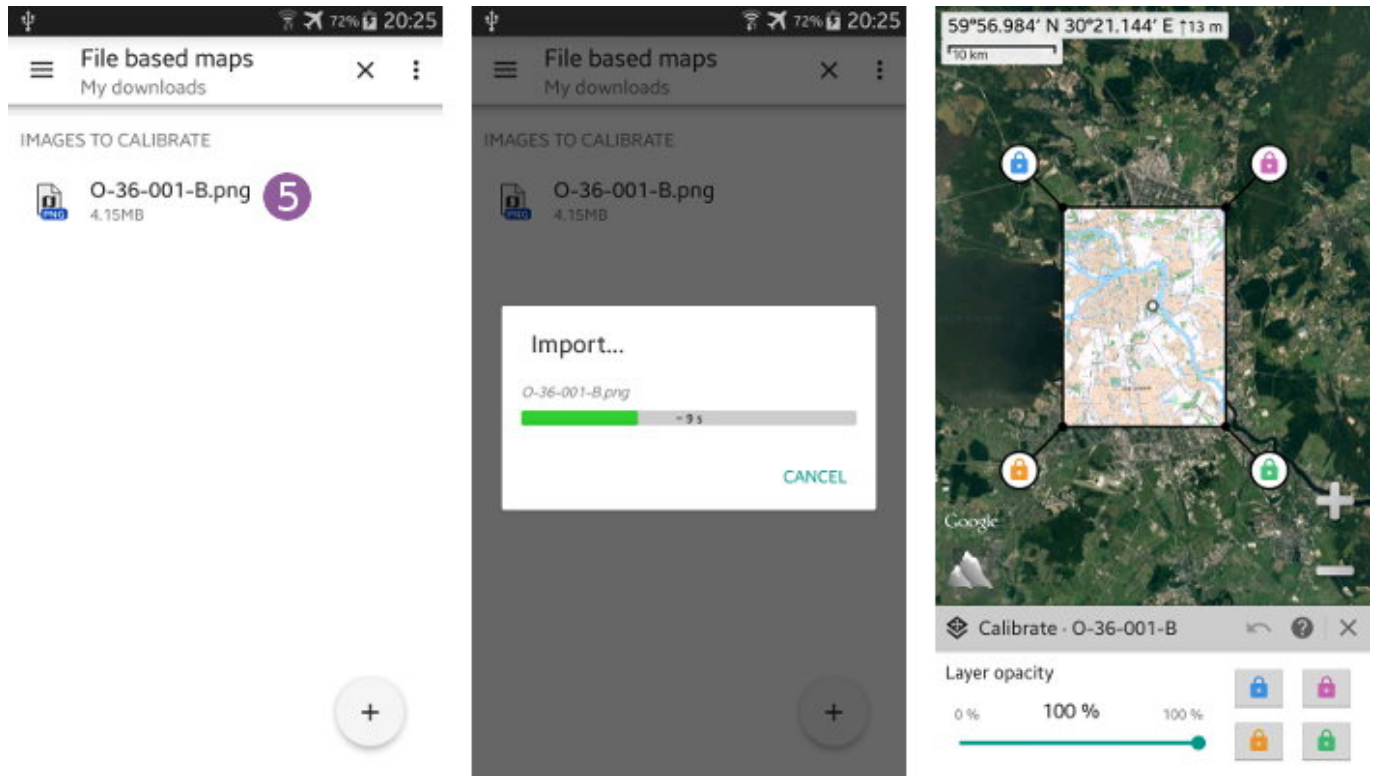
To calibrate an image:

- Select a base map over which one you'll calibrate your image. The application will display the imported image so that it almost covers the current view (as displayed by the white dotted line **1**). To make the calibration process easier, select a location and zoom level that approximately match the area covered by your image before importing it;
- Tap the **"Maps & Layer"** **2** menu and **"Available maps"** **3** to open the maps explorer;
- Tap the top/left menu **4** and under **"File based maps"**, select the folder where is located your image. For example, click on **"My downloads"** if your image has been saved in the downloads folder of your device.



When you've selected the correct folder, tap the image **5** to start the import process. When the image has been imported, it's displayed over the current map.

By default, the 4 calibration points are placed on the four corners.

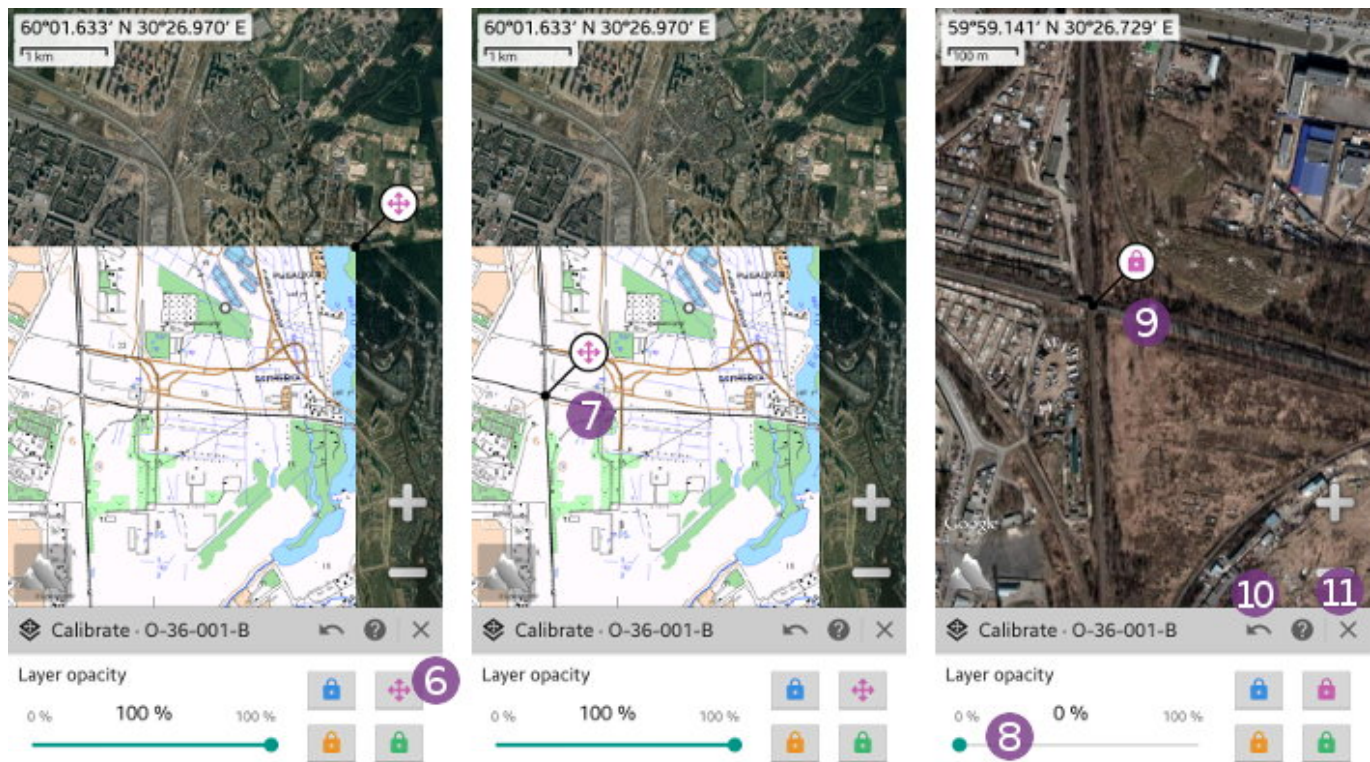


For each calibration point:

- Tap the button of this calibration point 6 to select the arrows icon. In this state, you'll be able to move the calibration point within the image to calibrate;
- Tap and hold the arrows icon on the map 7, and move the calibration point over a map feature that is clearly visible on both the base map and the image to calibrate. Here for example, we choose a railroad crossing;
- Tap the button of this calibration point 6 again to select the padlock icon. In this state, you'll be able to move the image over the base map;
- Reduce the opacity of the image to calibrate using the opacity slider 8 to make the base map visible, and move the calibration point to the correct location 9 on this one. Only pay attention to the point to calibrate and ignore other features around: they will only match when the four calibration points are correctly placed.

Repeat those steps for the three other calibration points.

**i** Be careful to choose a map feature that is stable across the two maps and small enough: a railroad crossing, a church, an historical building, etc. Note that some features like riverbeds are not stable: they can move with time.



In case you make a change by inadvertence, you can use the **“Undo”** <sup>10</sup> icon to cancel the last action.

When the four calibration points are correctly placed, tap the **“Close”** <sup>11</sup> icon to terminate the calibration process.



# How to import KML/KMZ image overlays?

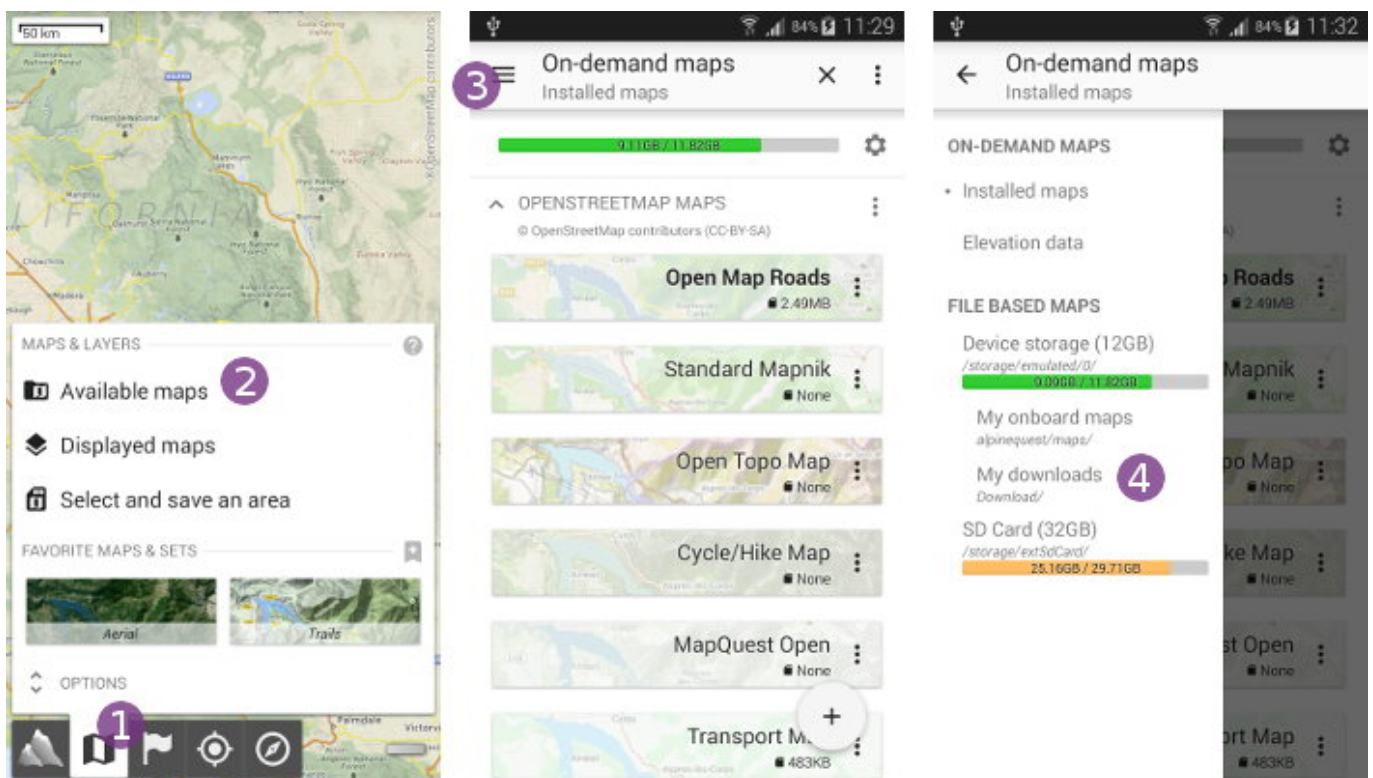
The KML/KMZ image overlays support allows you to import most image overlays based on “.jpg” or “.png” images from KML or KMZ files. Image overlays based on small “.gif” images are also supported.

**i** Those image overlays can be created from regular images (like scanned/pictured paper maps) and calibrated (placed accordingly on an existing map) using Google Earth, or any other compatible software.

Before displaying a KML/KMZ image overlay, the application needs to import it in its own optimized map format. This operation is transparent for the user. Once the image overlay has been imported, the original file is not needed anymore.

To import an image overlay in the application:

- Tap on the “**Maps & Layers**” menu **1** and on “**Available maps**” **2**;
- By default, on-demand maps are listed. Tap on the top-left drawer menu button **3**;
- Select the folder in which is saved your KML or KMZ file. For example, you can select “**My downloads**” **4** if your file is in the download folder of your device.



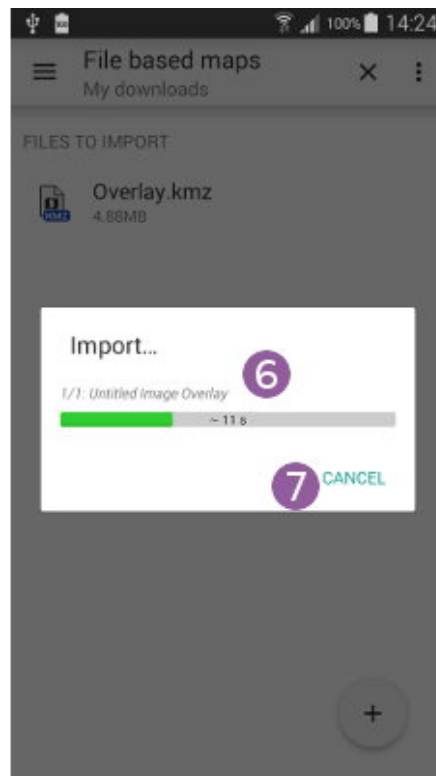
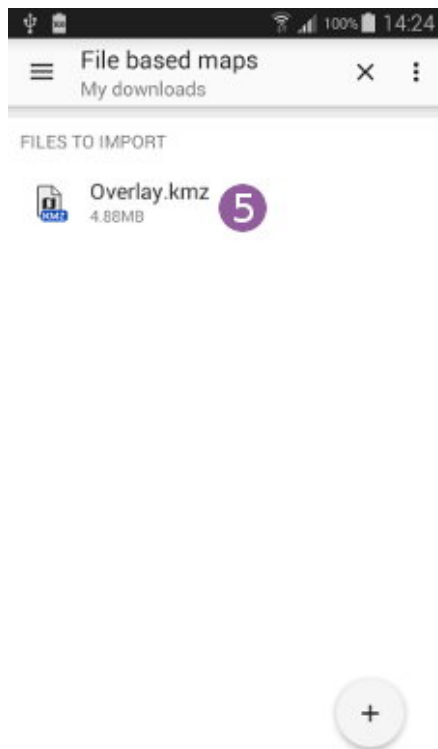
When your file is listed, Tap on it **5** to start the import. The application will display the number and name of the image overlay being currently imported **6**.

Depending on the size and number of image overlays in the file, the import process may take some time. At any time, you can tap “**Cancel**” **7** to stop the import.

**i** If your overlays contain images located on the Internet, be sure to have a working data connection so the application can download them.

Once the import process is finished:

- If one only image overlay has been imported, it is displayed **8**;
- If multiple image overlays have been imported, the application will ask you which one to display. You can tap **"All"** to display all imported overlays together.





# How to create favorite maps and sets?

The application allows you to save the configuration settings of displayed maps and layers in a favorite set, in order to restore it quickly when needed. The settings include the order of maps and layers, their [opacity](#), [contrast](#), [saturation](#) and [erased color](#).

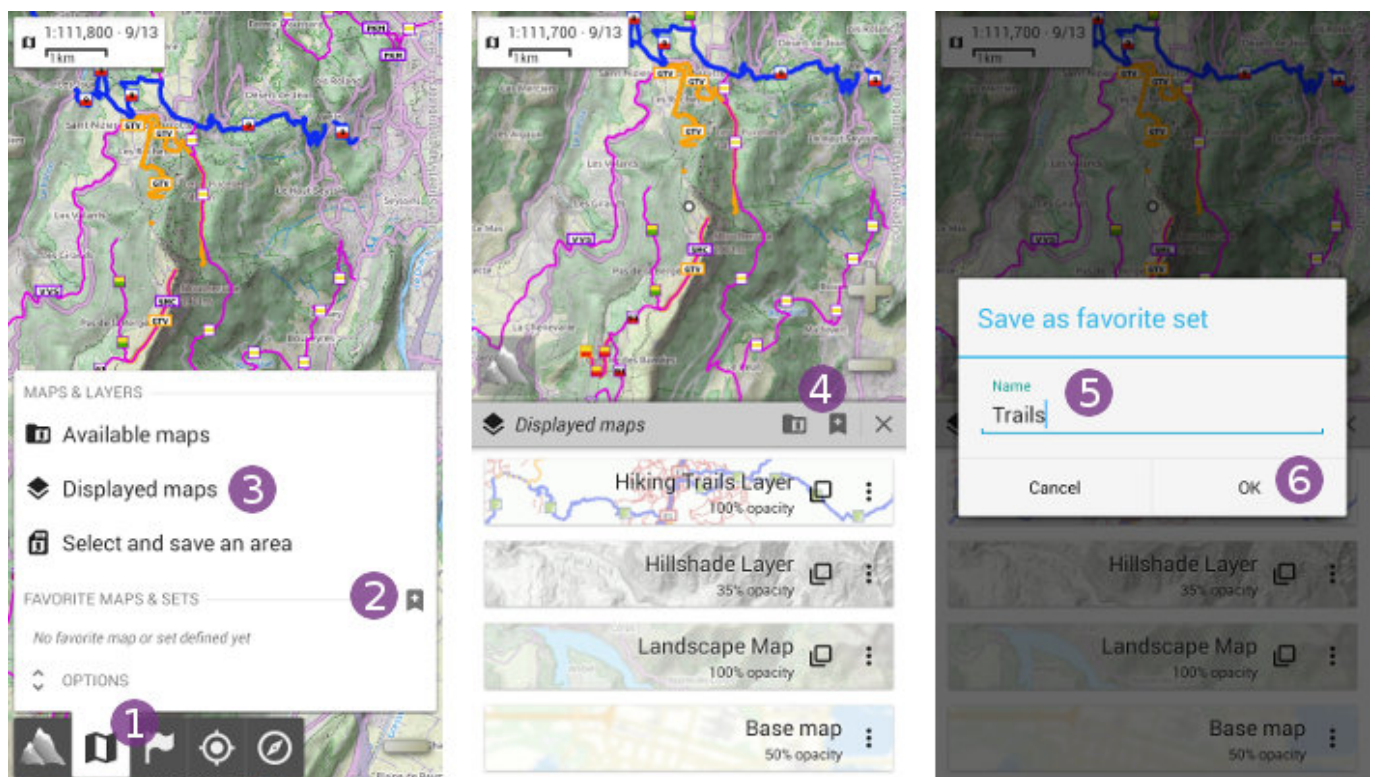
## How to create a favorite configuration?

To create a favorite map or set:

- Click on the **“Maps & layers”** menu **1**;
- Click on the **“Save as favorite set”** icon **2**;
- Optionally, choose a name for your set **5**, and click on **“OK”** **6**.

You can also create a favorite map or set from the displayed maps list:

- Click on the **“Maps & layers”** **1** and select **“Displayed maps”** **3**;
- Click on the **“Save as favorite set”** button **4**;
- Optionally, choose a name for your set **5**, and click on **“OK”** **6**.

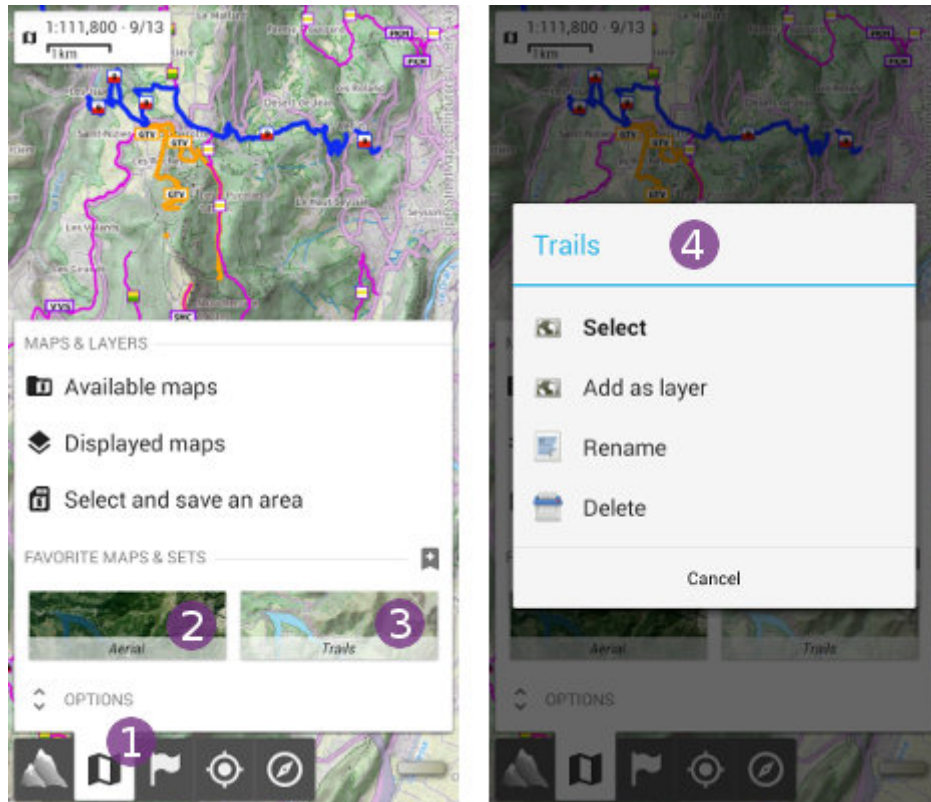


## How to display or edit a favorite configuration?

Favorite configurations are displayed in the **“Maps & layers”** menu, under the **“Favorite maps & sets”** section. To display a saved favorite configuration:

- Click on the **“Maps & layers”** menu **1**;
- Click on the favorite configuration preview to display **2**.

**i** To rename or delete a favorite configuration, long-press it **3** to display it's options menu **4**.

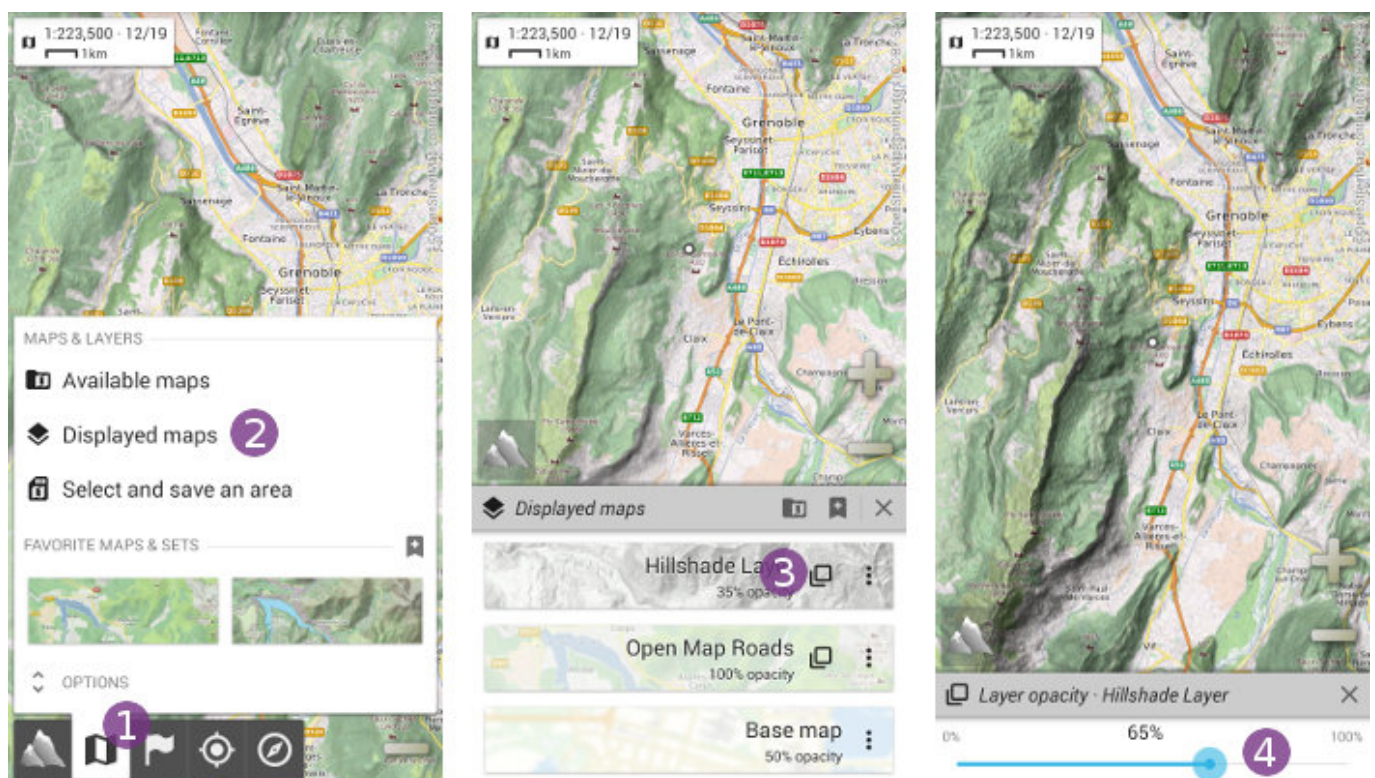


# How to modify the opacity of a map or layer?

To modify the opacity of any displayed map or layer:

- Click on the **“Maps & layers”** <sup>1</sup> menu and select **“Displayed maps”** <sup>2</sup>;
- Click on the **“Opacity”** <sup>3</sup> button of the map or layer you want to modify the opacity;
- Move the **“Opacity slider”** <sup>4</sup> to adjust the opacity. The display is updated in real time to reflect your settings.

<sup>i</sup> The opacity setting will be forgotten as soon as you un-display the map. In order to save it you can create a [favorite map](#).

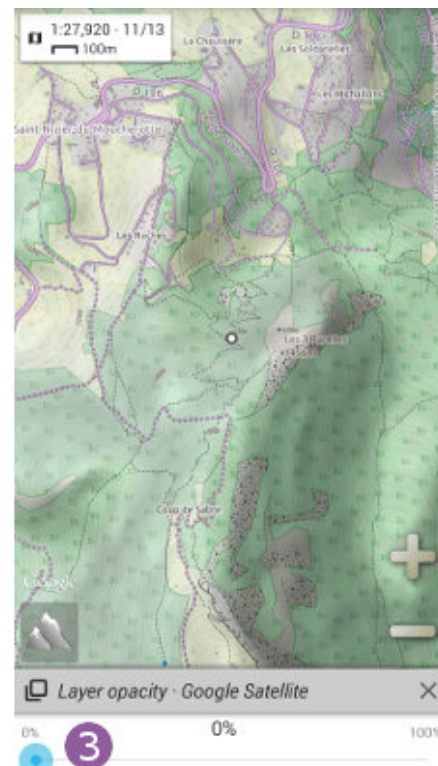
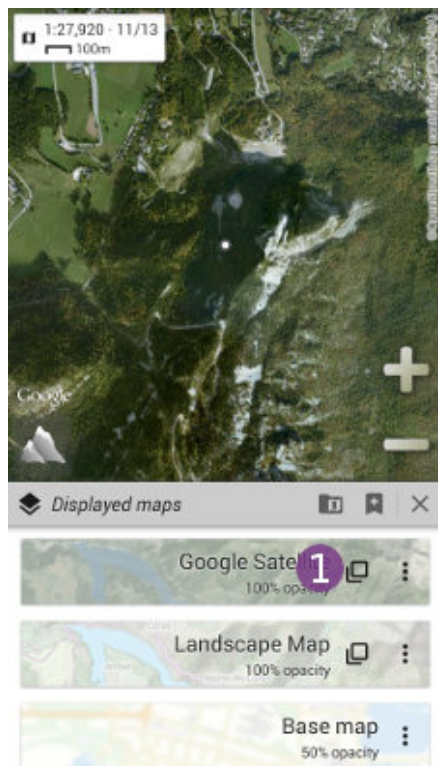


# How to switch between two maps in one click?

You can use the opacity setting explained just above to quickly switch between two displayed maps in one single click:

- Display your two maps at the same time, by [adding the second map on top as a layer](#);
- Click on the **“Opacity”** <sup>1</sup> button of the top map;
- Setting a opacity of **“100%”** <sup>2</sup> will only display the top map;
- Setting a opacity of **“0%”** <sup>3</sup> will only display the bottom map.

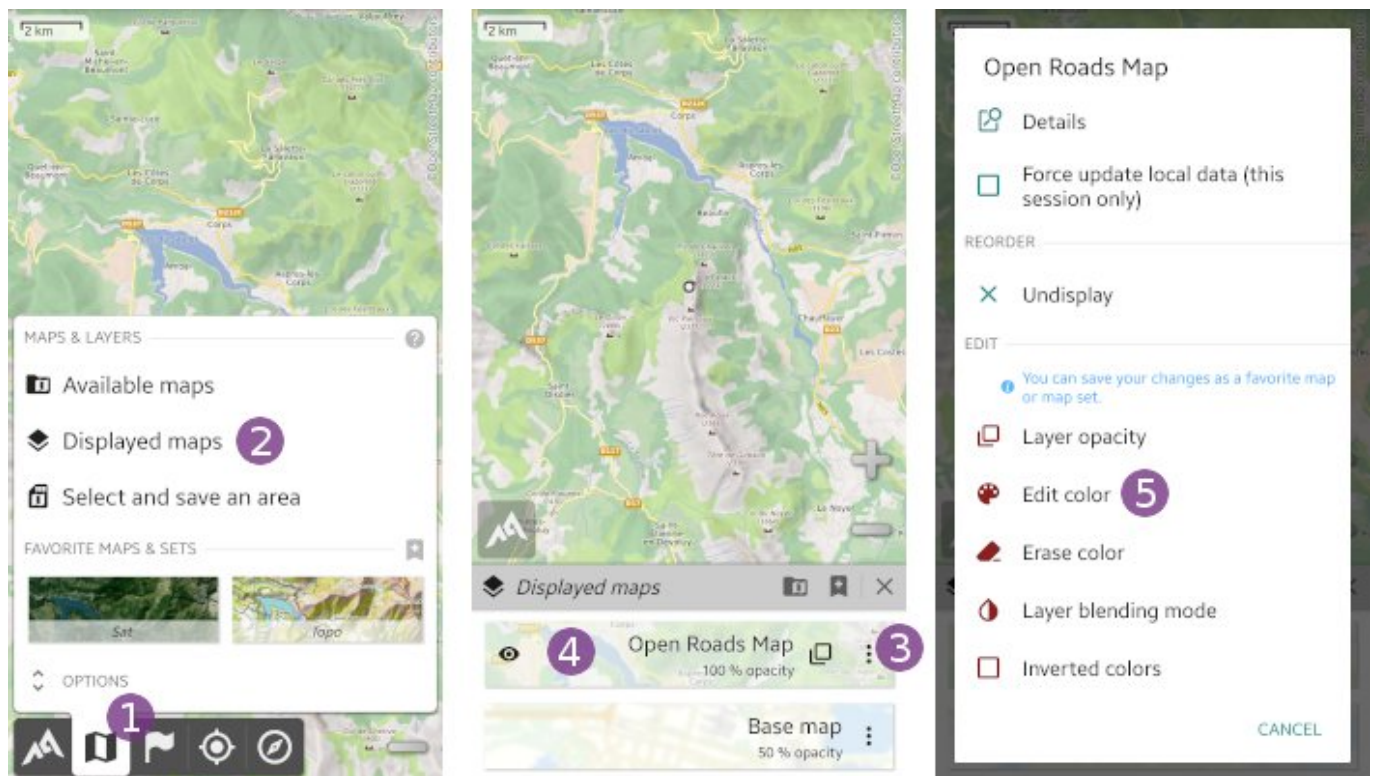




# How to modify the color of a map or a layer?

The application allows you to modify the colors (contrast, brightness, saturation and tint) of any displayed map or layer:

- Tap on the **“Maps & layers”** <sup>1</sup> menu and on **“Displayed maps”** <sup>2</sup>;
- Tap on the menu icon <sup>3</sup> of the map or layer you want to modify. Alternatively, you can long-press the map or layer <sup>4</sup>;
- Tap **“Edit color”** <sup>5</sup> in the displayed menu.



- Move the **“Contrast”** <sup>6</sup>, **“Brightness”** <sup>7</sup>, **“Saturation”** <sup>8</sup> and **“Tint”** <sup>9</sup> sliders to adjust the color. The map display is updated in real time to reflect your settings;
- If you want to display the map or layer with inverted colors, tap the **“Tools”** <sup>10</sup> icon and check **“Inverted colors”** <sup>11</sup>.

<sup>i</sup> Your changes will be reverted as soon as you un-display the map. In order to save them you can create a [favorite map](#).





0 % Contrast: 100 % 200 %



0 % Brightness: 100 % 200 %



0 % Saturation: 100 % 200 %



-100 % Tint: 0 % 100 %



0 % Contrast: 200 % 200 %



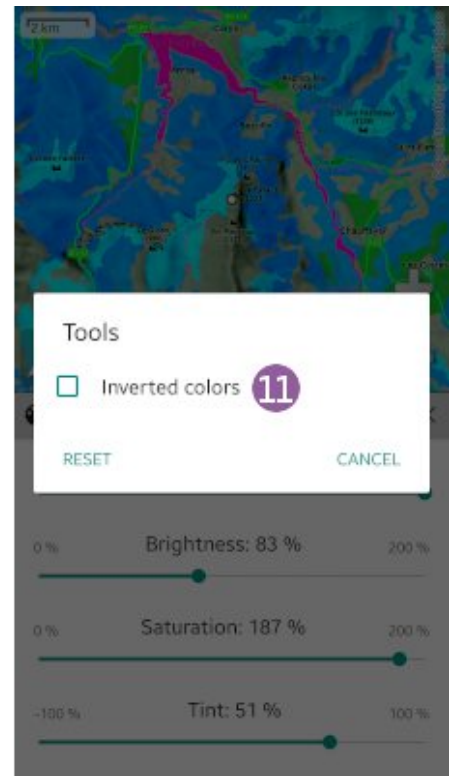
0 % Brightness: 120 % 200 %



0 % Saturation: 0 % 200 %



-100 % Tint: 0 % 100 %



### Tools

☒ Inverted colors 11

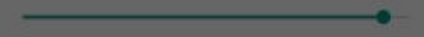
RESET

CANCEL

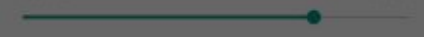
0 % Brightness: 83 % 200 %



0 % Saturation: 187 % 200 %



-100 % Tint: 51 % 100 %



# How to erase a color from a map?

When displaying multiple non-transparent maps at the same time <sup>1</sup>, only the top one will be visible. The application allows you to erase a color range from a map so that the map below can also be visible for those areas, which can be very useful for particular uses, such as turning a map into a layer.

<sup>i</sup> See [here how to display multiple maps](#) at the same time.

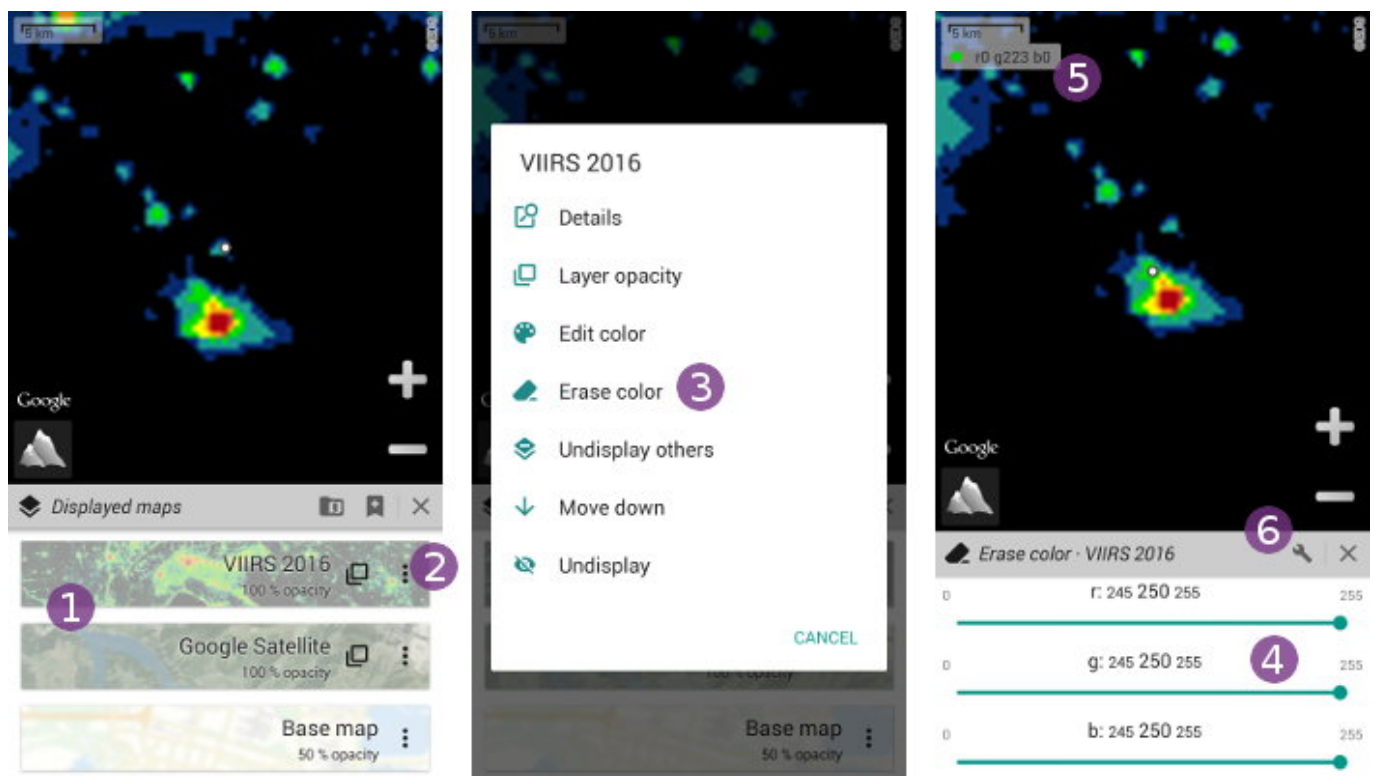
To erase a color range of a map:

- Tap the “Menu” <sup>2</sup> icon button of the map from the “Displayed maps” list;
- Choose “Erase color” <sup>3</sup>.

The erase color side view is displayed and allows you to choose the RGB color values to erase <sup>4</sup>. For each color component, three values are given: the minimum value of the range to erase, the center value and and maximum value.

To help you choose the right color, an information box is also displayed <sup>5</sup> which gives the RGB color values at the screen center (under the screen center icon).

<sup>i</sup> The erased color will be forgotten as soon as you un-display the map. In order to save it you can create a [favorite map](#).

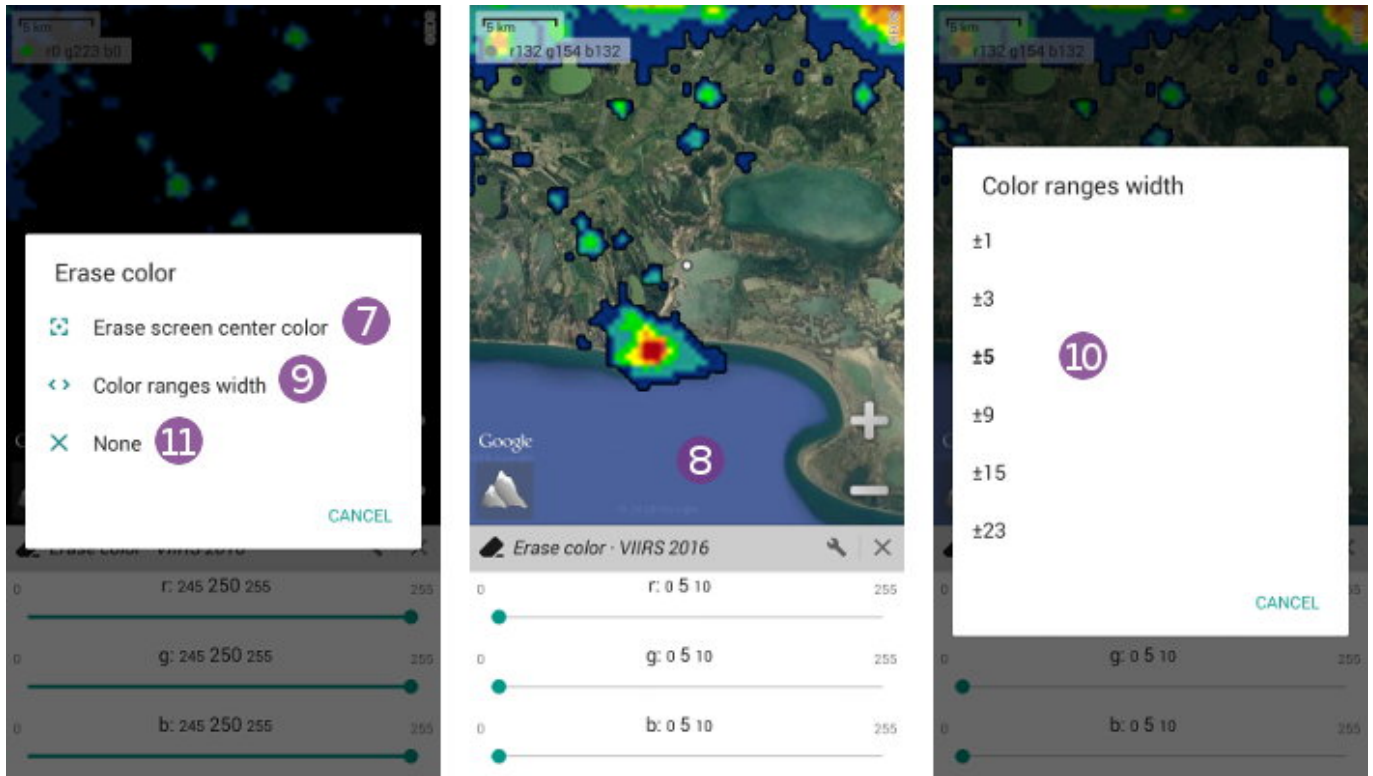


## How to automatically erase the screen center color?

Alternatively, to automatically erase the color at the screen center:

- Tap the **“Tools”** 6 icon button;
- Choose **“Erase screen center color”** 7.

The RGB color values are automatically chosen and the color is erased 8.



## How to increase the color range to erase?

By default, the width of the color range goes from -5 values to +5 values around the range center value (11 color values erased per color channel). In order to increase or reduce the accuracy of the selected color, you can modify the color values range:

- Tap the **“Tools”** 6 icon button;
- Choose **“Color ranges width”** 9;
- Select a smaller range to increase accuracy and erase less colors, for example **“+/-3”** (7 color values erased per component);
- Select a wider range to decrease accuracy and erase more colors, for example **“+/-9”** (19 color values erased per component).

## How to disable the erase of a color?

To not erase colors anymore:

- Tap the **“Tools”** 6 icon button;
- Choose **“None”** 11.

# How to export the displayed map as an image?

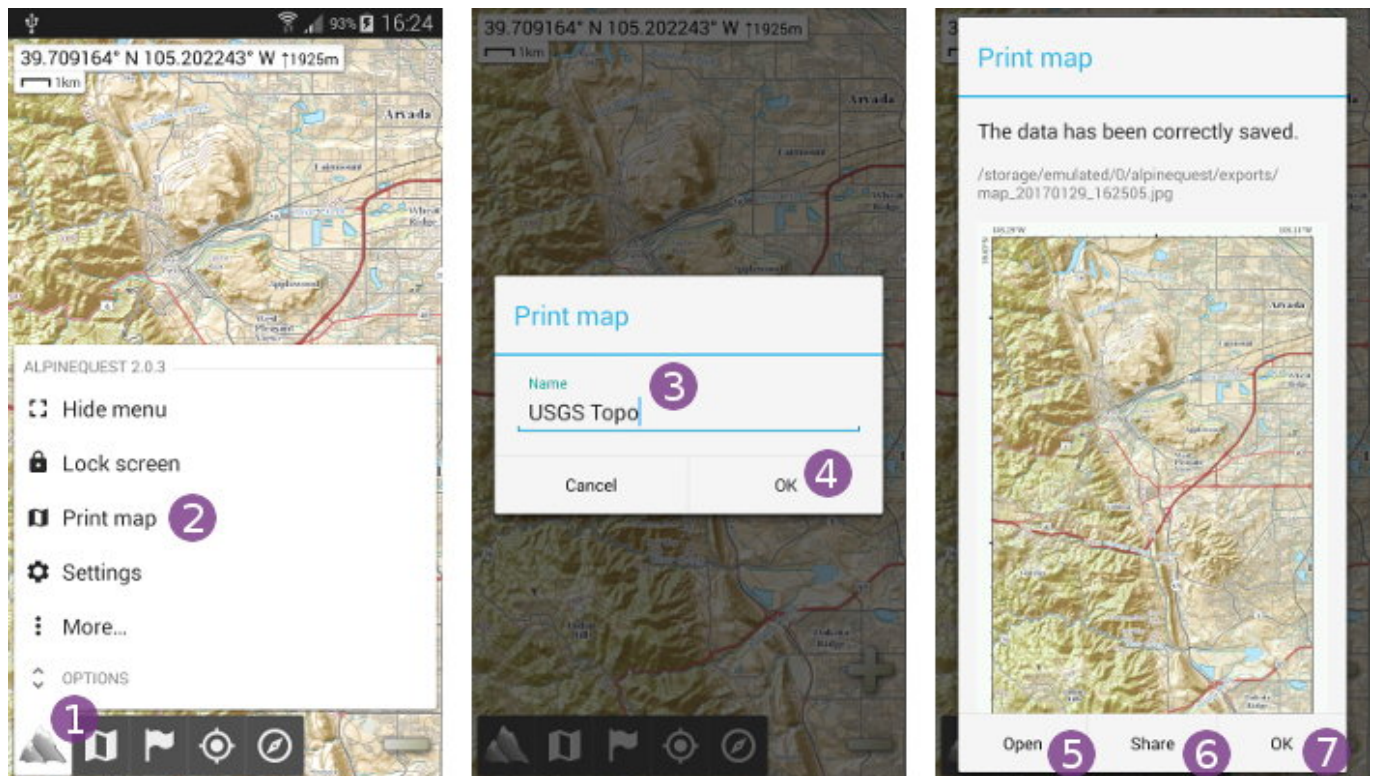
The application allows you to export any displayed map view as a JPEG image. When the map is exported, all control buttons are hidden.

Before exporting a map view, choose an orientation (portrait, landscape or any other custom rotation), adjust the view bounds and display any placemarks.

Then, to export the displayed map view:

- Click on the “**Main menu**” **1** icon and select “**Print map**” **2**;
- Optionally, type a name **3** for the exported image and click on “**OK**” **4**;
- Once saved, the exported image will be displayed. Click on “**Open**” **5** to display it in your favorite image viewer, on “**Share**” **6** to upload it online or to “**OK**” **7** to close the displayed image.

**i** For legal reasons, some maps (like Google Maps) cannot be exported.



## Exported maps examples

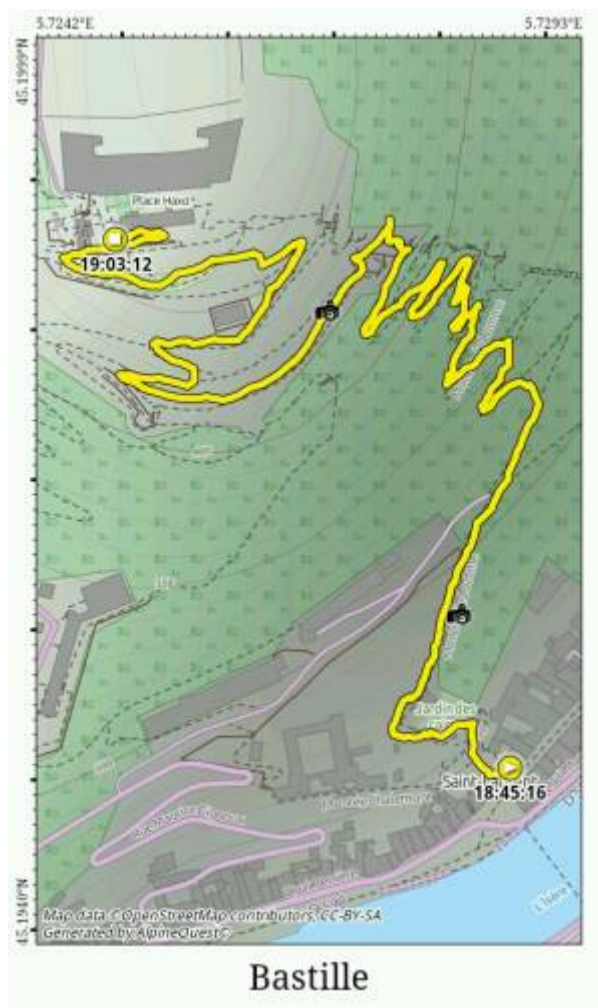
The following maps have been exported by the application and unmodified (click to enlarge them).

Here is a small scale of the Contiguous United States:





Here is a large scale of a recorded track:





And here are the English Heritage sites:



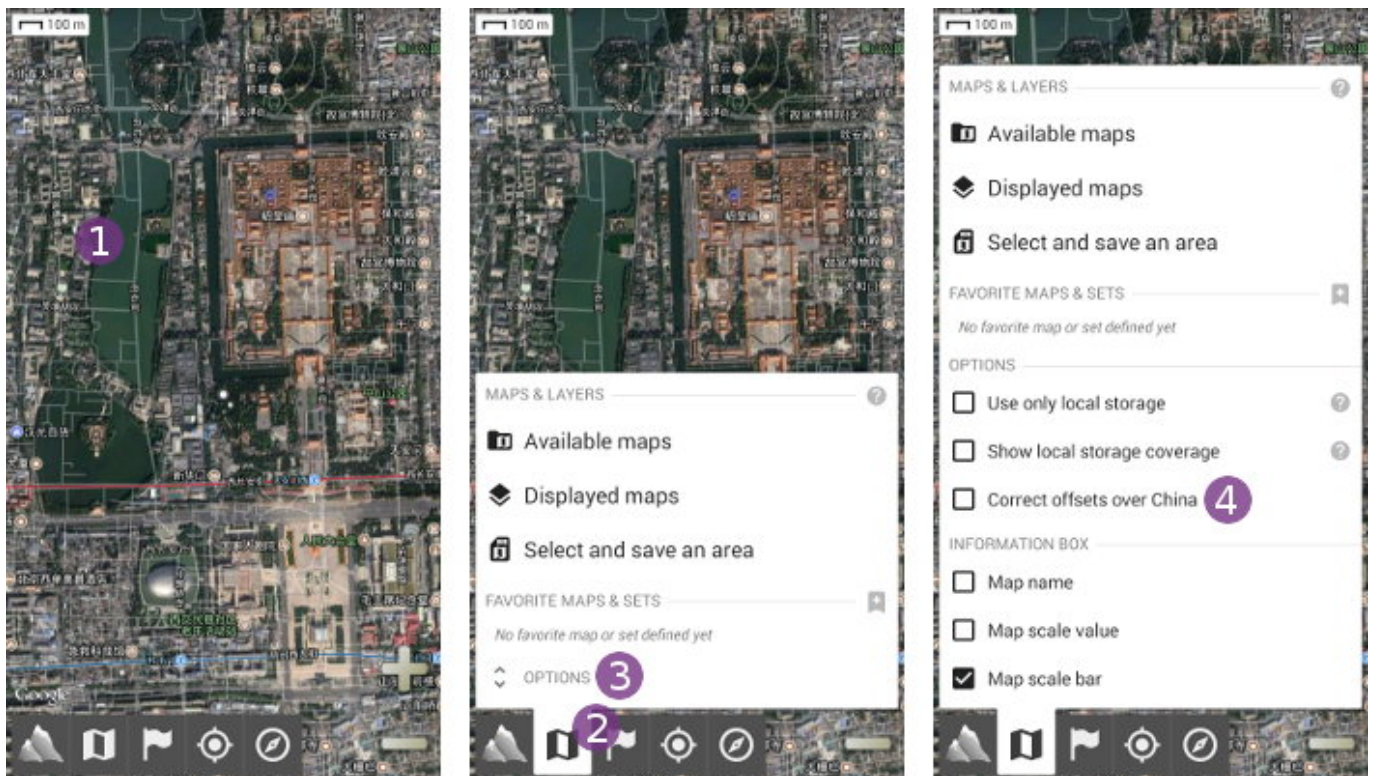
# How to correct offset error of some maps over China?

Following Chinese regulation, most maps (including Google Maps and Bing Maps) are intentionally distorted over China and will not match satellite images (as shown in **1**) or your current GPS location.

The application is able to correct this distortion:

- Tap on the “**Maps**” **2** menu icon;
- Tap on “**Options**” **3**;
- Check “**Correct offsets over China**” **4**.

**i** This option is only visible when you are displaying a map over China.



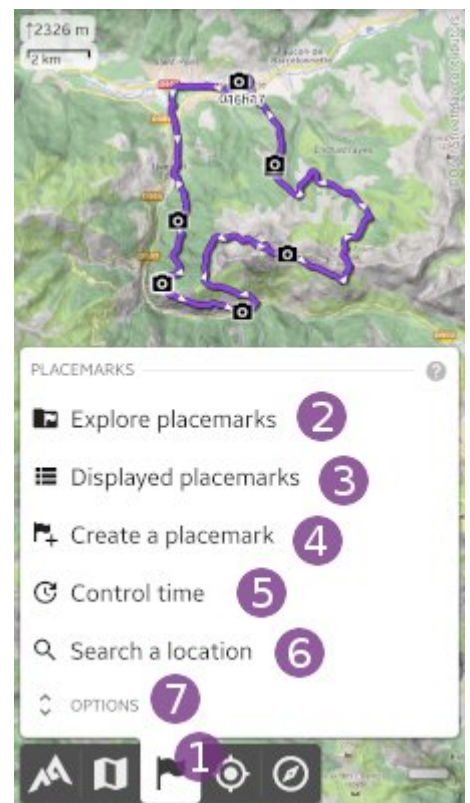
# Placemarks

Placemarks are various marks you can save on the maps, including points, areas and paths. You can create and display an unlimited number of those marks. They are not linked to any map; when you change the current map, all your displayed marks remain unchanged.

The application is also able to import and export placemarks from and to various well-known formats, like GPS, KML/KMZ, CSV/TSV, ShapeFile, etc.

## The Placemarks menu

Tap the **Placemarks** <sup>1</sup> menu button to display the menu that contains:



- **Explore placemarks** <sup>2</sup> opens the placemarks explorer that allows you to manage your saved placemarks ([see here for more details](#));
- **Displayed placemarks** <sup>3</sup> shows the list of all displayed placemarks (this menu item is not visible if there are no placemarks displayed);
- **Create a placemark** <sup>4</sup> allows you to create new placemarks;
- **Control time** <sup>5</sup> shows the time controller panel for all displayed tracks (this menu item is not visible if there are not time-tagged placemarks displayed);
- **Search a location** <sup>6</sup> allows you to search a location by name or coordinates ([see here for more details](#)).

Tap on **Options** <sup>7</sup> to display the placemarks options:

- **Placemarks labels** <sup>8</sup> controls whether or not to display the labels of placemarks on the map;
- **Display line to target** <sup>9</sup> controls whether or not to display a line from the screen center to the

current target ([see more details concerning the target here](#));



- **Target information** <sup>11</sup> controls whether or not to display the current target information box.

<sup>i</sup> You can configure the display size and lines thickness of placemarks from the application settings.

## Waypoints

A waypoint is a particular location marked on the map associated with some information like a name, a description, etc.

By default, waypoints are displayed on the map as small purple circle, but their display colors or icons can be changed. <sup>i</sup> From the Placemarks menu, you can specify if the names of waypoints must be displayed on the map. You can also configure the display size from the application settings.



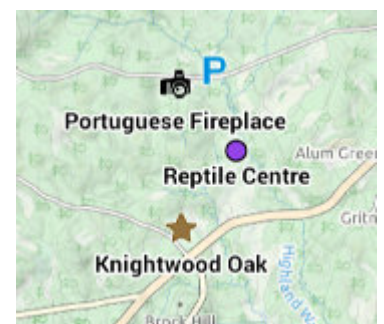
[How to create a waypoint?](#)

[How to edit or move a waypoint?](#)

[How to use custom icons?](#)

## Sets of waypoints

Several waypoints can be grouped into a set allowing an easier management. Sets are very useful when managing multiple waypoints of a common purpose.

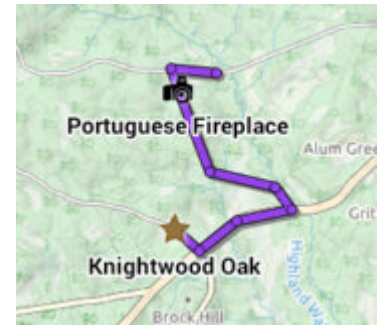


[How to create a set of waypoints?](#)

[How to add, move or delete points of a set?](#)

## Routes

A route is an ordered list of waypoints. All waypoints of the route can be edited like any regular waypoint.



Routes are mainly used when preparing a journey, and displayed with a line joining the subsequent waypoints.

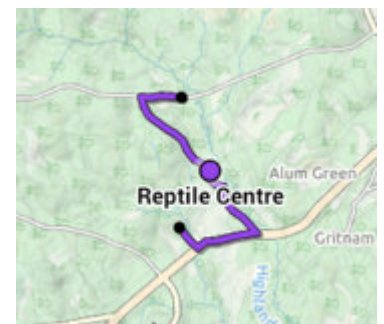
[How to create a route?](#)

[How to add, move or delete points of a route?](#)

[How to follow a route?](#)

## Paths & Tracks

A path is a list of locations along a way. A path can be made of multiple parts, called segments. It can also contain waypoints to store some information concerning surrounding places.



Paths are usually recorded using the [track recorder](#) (in this case they are preferably called “tracks”), but they can also be manually drawn on the map.

[How to manually draw a path?](#)

[How to split or edit points of a path?](#)

[How to merge paths?](#)

[How to automatically draw a path along roads?](#)

[How to change the display style a path?](#) (static or dynamic colors, dashes and arrows)

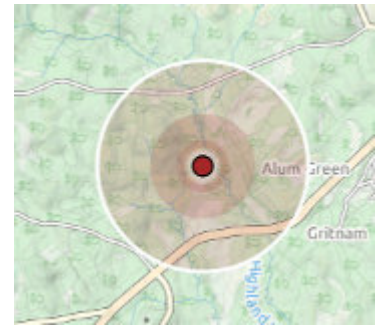
[Details and statistics on tracks](#)

Once recorded, drawn or downloaded, paths can be followed, allowing the application to warn you if you're getting too far away from it: [How to follow a path?](#)



## Proximity alerts

Proximity alerts allow you to be warned when you approach an area.



[How to use proximity alerts?](#)

## Tools

[How to set a location as target?](#)

[How to open the placemarks explorer?](#)


[How to display, export, copy, edit or delete multiple items?](#)

[How to search places by name or coordinates?](#)

[How to measure distances and bearings?](#)

## Import / Export

The application allows you to import placemarks (waypoints, routes, tracks, areas) from various file formats and display them on the map. Here is the list of all supported file formats.

 Please check the notes and requirements for each format.

| Supported file formats and types of placemarks                                                                                                                                                                                                                                        | Import                                        | Export                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------|
| <b>GPX (GPS Exchange Format) (*.gpx)</b><br><i>Waypoints, routes, tracks</i><br>Common GPS data format for software applications.                                                                                                                                                     | ✓ Yes, <a href="#">see here</a>               | ✓ Yes, <a href="#">see here</a> |
| <b>KML/KMZ (*.kml, *.kmz)</b><br><i>Waypoints, routes, tracks, areas</i><br>Common GPS data format for expressing geographic annotation and visualization within Internet-based two-dimensional maps.                                                                                 | ✓ Yes <sup>1</sup> , <a href="#">see here</a> | ✓ Yes, <a href="#">see here</a> |
| <b>CSV/TSV (*.csv, *.tsv)</b><br><i>Waypoints, routes, tracks, areas</i><br>Delimited text file that uses a comma to separate tabular data (numbers and text) in plain text. Each line of the file is a data record. Each record consists of one or more fields, separated by commas. | ✓ Yes, <a href="#">see here</a>               | ✓ Yes, <a href="#">see here</a> |
| <b>Shapefile SHP (*.shp)</b><br><i>Waypoints, routes, tracks, areas</i><br>Popular geospatial vector data format developed by Esri for geographic information system (GIS) software.                                                                                                  | ✓ Yes, <a href="#">see here</a>               | ✗ No                            |

| Supported file formats and types of placemarks                                                                                                                                                         | Import                          | Export                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|
| <b>GeoJSON (*.json, *.geojson)</b><br><i>Waypoints, routes, tracks, areas</i><br>Open standard format designed for representing simple geographical features, along with their non-spatial attributes. | ✓ Yes, <a href="#">see here</a> | ✗ No                            |
| <b>IGC (Flight Data Format) (*.igc)</b><br><i>Tracks</i><br>Open standard format published by the IGC (International Gliding Commission) containing flight data from FAI flight recorders.             | ✓ Yes, <a href="#">see here</a> | ✗ No                            |
| <b>OziExplorer PLT (*.plt)</b><br><i>Tracks</i>                                                                                                                                                        | ✓ Yes, <a href="#">see here</a> | ✗ No                            |
| <b>OziExplorer WPT (*.wpt)</b><br><i>Waypoints</i>                                                                                                                                                     | ✓ Yes, <a href="#">see here</a> | ✗ No                            |
| <b>Geocaching LOC (*.loc)</b><br><i>Waypoints</i>                                                                                                                                                      | ✓ Yes, <a href="#">see here</a> | ✗ No                            |
| <b>AutoCAD DXF (*.dxf)</b><br><i>Waypoints, routes, tracks, areas</i><br>CAD data file format developed by Autodesk for enabling data interoperability between AutoCAD and other programs.             | ✗ No                            | ✓ Yes, <a href="#">see here</a> |

1. Includes few icons and style elements. For ground overlays, [see here](#)

[How to import placemarks?](#) (all formats except \*.csv / \*.tsv files)

[How to export placemarks?](#) (all formats except \*.csv / \*.tsv files)

[How to import placemarks?](#) (\*.csv / \*.tsv files)

[How to export placemarks?](#) (\*.csv / \*.tsv files)

# The target location

When you set a location as the current target, the application will give you various information related to this location based on your current location, most importantly it's distance and direction.

## How to set a location as target?

To set a location as the current target:

- Move the map center point over the location you want to set as target, and tap it **1** to display the map center menu;
- Tap **Set as target** **2**;

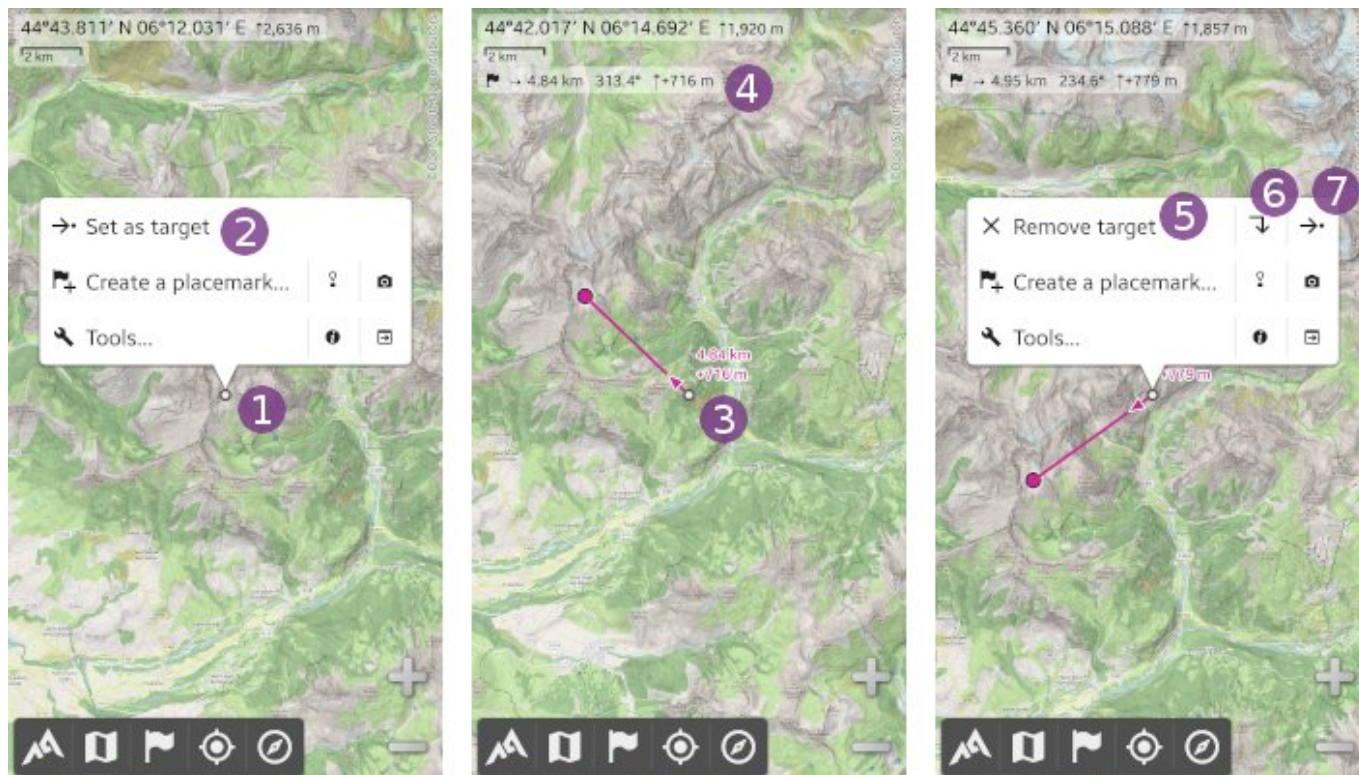
When you move the map center point over another location, an oriented line will be drawn from this new location toward the target location **3**. Various text information will also be displayed based on the context.

An information box **4** is also displayed, with the straight line distance and azimuth from the map center location toward the target location. If both locations have known elevations, the elevation difference is also displayed.

**i** A small arrow reminds you that the information is always given from the center location toward the target location.

In order to remove the target or change it, tap on the map center point again **1**:

- Tap **Remove target** **5** to remove the target;
- Tap the **Jump to** **6** icon to move the map center location over the target location;
- Tap the **Set as target** **7** icon to replace the target location with the current map center location;



## How to get the target distance along a path?

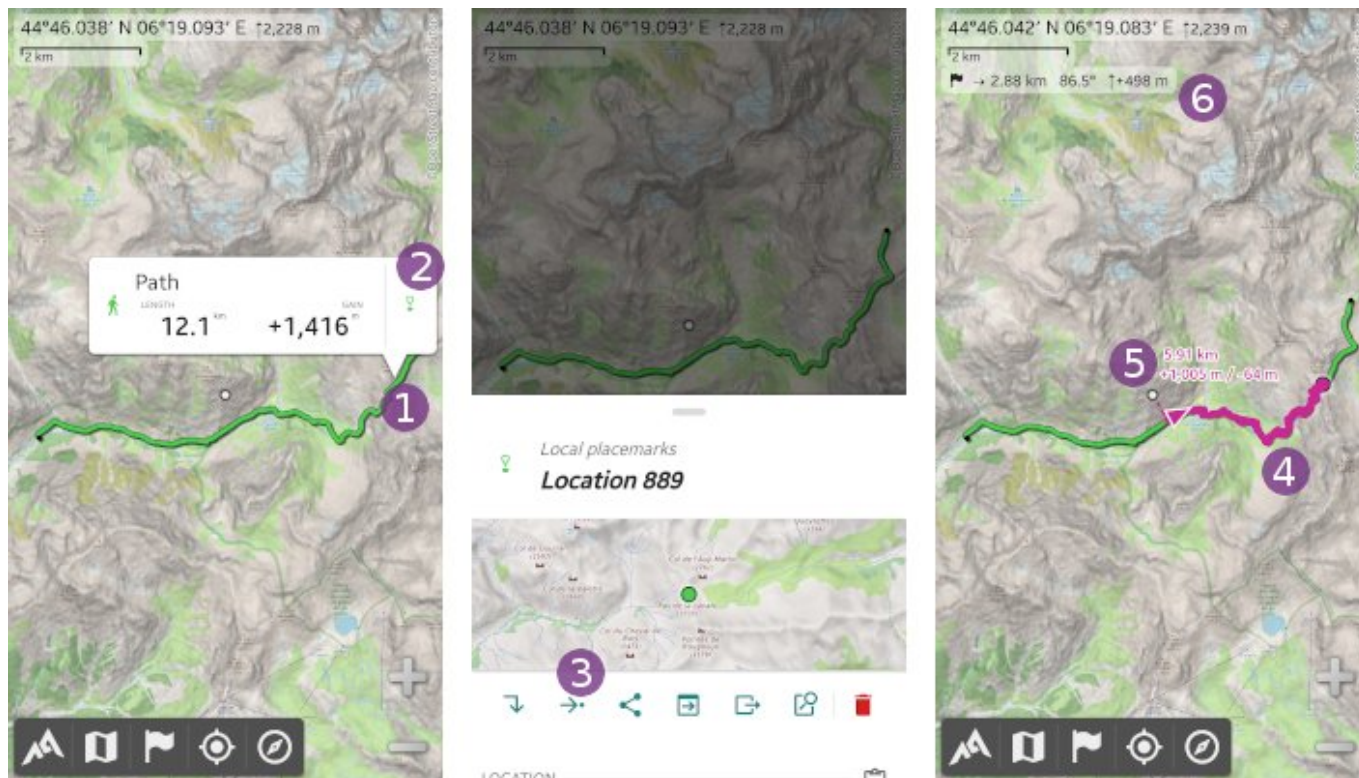
If you have a path displayed on the map, and want to know the distance along this path, from the map center location to any of its locations:

- Tap on the destination path location **1**;
- Tap on the location icon **2** (do not tap the path icon or name);
- In the sliding menu, tap the **Set as target** **3** shortcut icon;
- If you move the map center point close enough to the path, the section going from the closest location to the destination location will be enlightened **4**, and its distance will be displayed at the map center **5** (depending on the information available, the cumulated elevation gain and lost can be given, as the “ETE” and speed used to compute the “ETE”).

**i** The information given at the map center only takes into account the enlightened path section, and not the dashed line section from the map center point to the closed path location.

**i** The information given in the target information box **6** remains the straight line information.





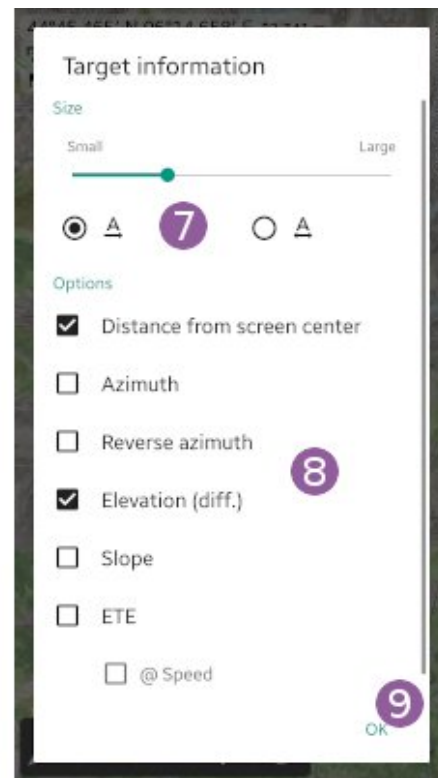
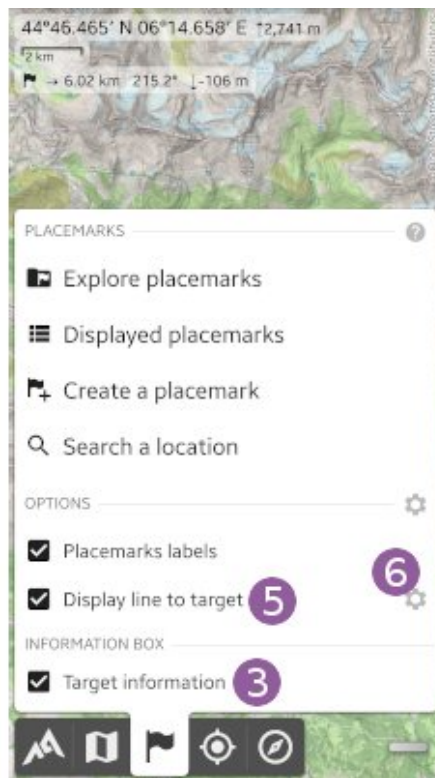
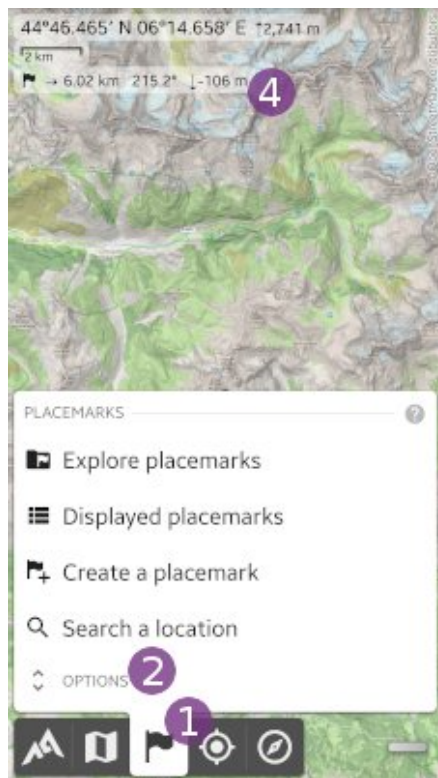
## How to change displayed target information?

You can change which information is displayed about the target:

- Tap the **Placemarks** ① menu item;
- Tap **Options** ②;
- Un-check the **Target information** ③ checkbox to hide the target information box ④;
- Un-check the **Display line to target** ⑤ checkbox to hide the line from the map center location toward the target location;
- Tap the wheel settings icon ⑥ to change the information displayed on the map center point, including the size and alignment of texts ⑦ and the information displayed ⑧ (see below);
- Tap **Ok** ⑨ to validate.

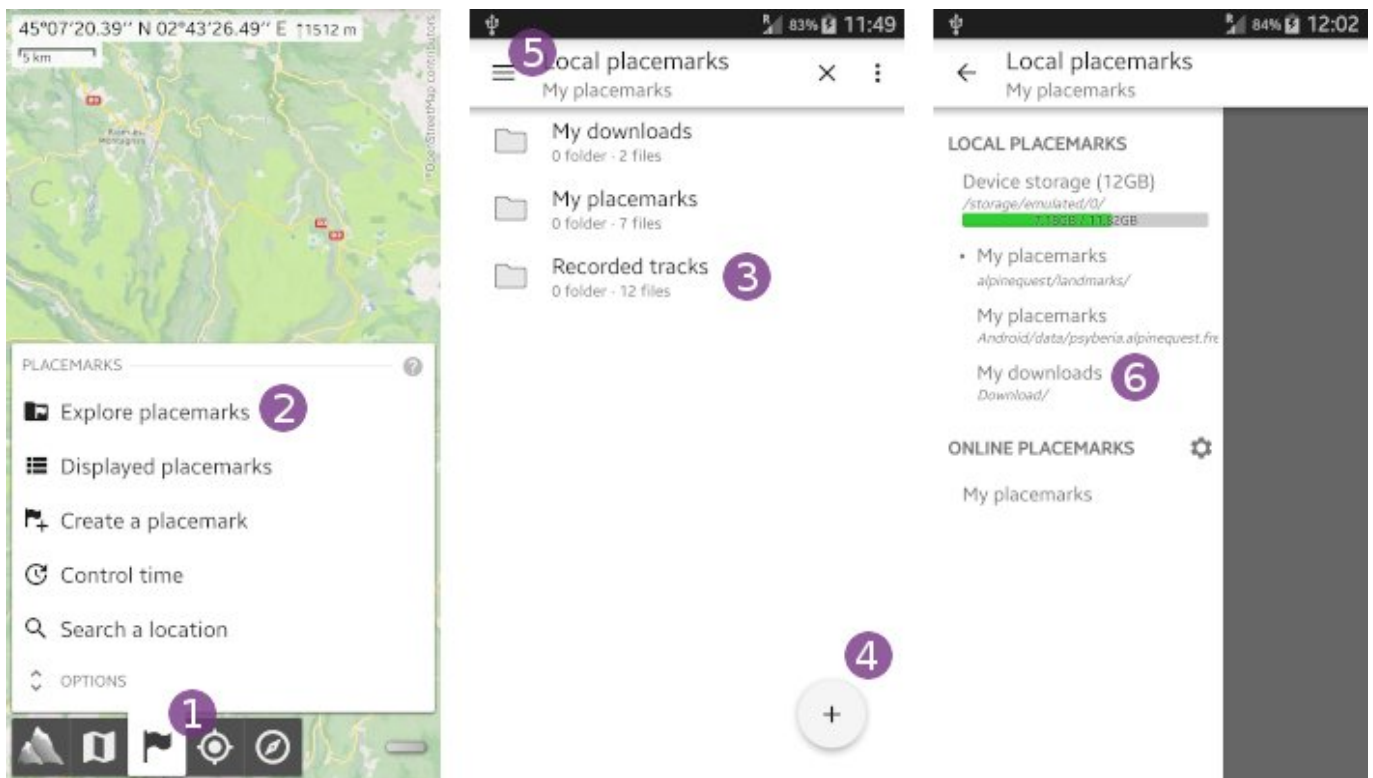
Available information is:

- **Distance from screen center**: the distance from the map center location to the target location;
- **Azimuth**: the azimuth (direction) from the map center location location to the target location;
- **Reverse azimuth**: the azimuth (direction) from the target location to the map center location location;
- **Elevation (diff.)**: the target location elevation minus the map center location elevation, if both locations have known elevations (intermediate locations are not taken into account);
- **Slope**: the mean slope computed from the map center location to the target location, if both locations have known elevations (intermediate locations are not taken into account);
- **ETE**: the “Estimated time en route”, which is the time needed to go from the map center location to the target location, at your current speed;
- **Speed**: the speed used to compute the “ETE”.



## How to open the placemarks explorer?

- Tap the **“Placemarks”** menu **1** and on **“Explore placemarks”** **2**;
- You can then tap a sub-folder to open it, like **“Recorded tracks”** **3** to list all previously recorded tracks;
- To create new items, tap on **“+”** **4**;
- To list even more folders, tap the left menu icon **5** and select another place, like the **“Downloads”** **6** folder where are saved all the items you've downloaded on your device.



## How to change the display mode?

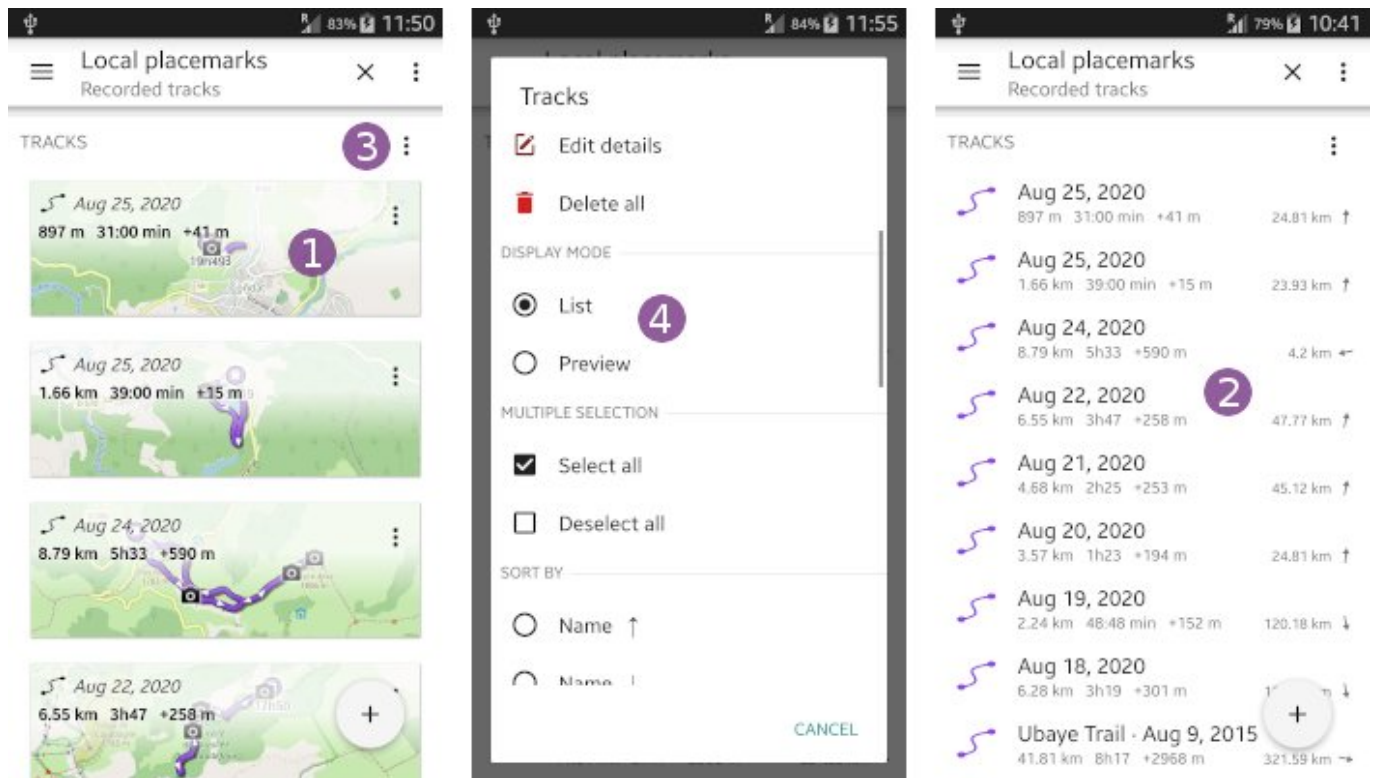
Items can be displayed in two different ways:

- The **“Preview”** mode **1**, in which you can see a preview image for all items;
- The **“List”** mode **2**, in which the items are displayed in a more compact way with some extra information.

To change the display mode:

- Tap the header menu icon **3** to display the menu of this placemarks category;
- Select the desired display mode, **“Preview”** or **“List”** **4**.

**i** Each category of placemarks has its own display mode which can be set independently.



## How to copy, edit or delete one single item?

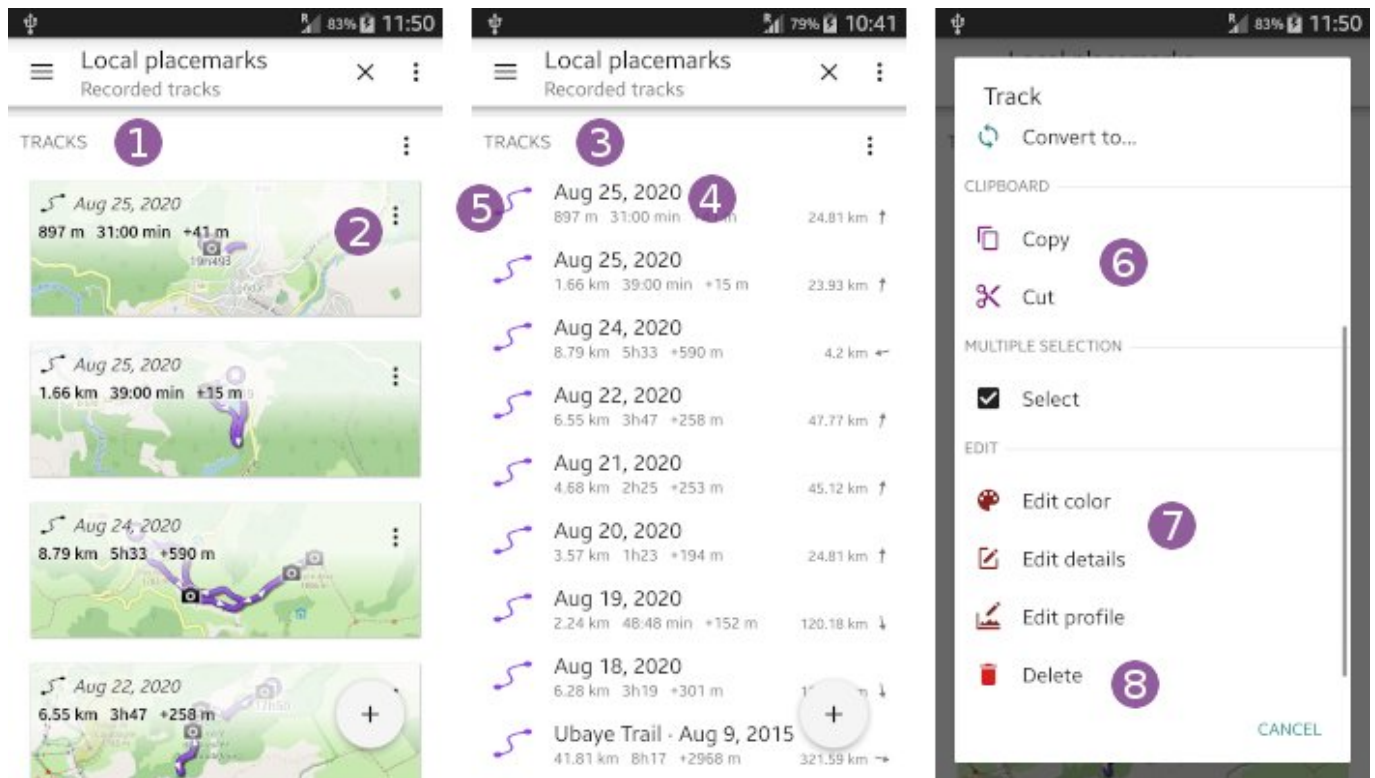
If your items are displayed in **"Preview"** mode **1**, tap the item menu icon **2** to display the item menu.

If your items are displayed in **"List"** mode **3**, long press the item **4** or tap its icon **5** to display the item menu.

From the item menu, tap the desired action:

- **"Copy"** or **"Cut"** **6** to add this item to the clipboard;
- Any edit action **7**;
- **"Delete"** **8** to permanently and irremediably delete this item.





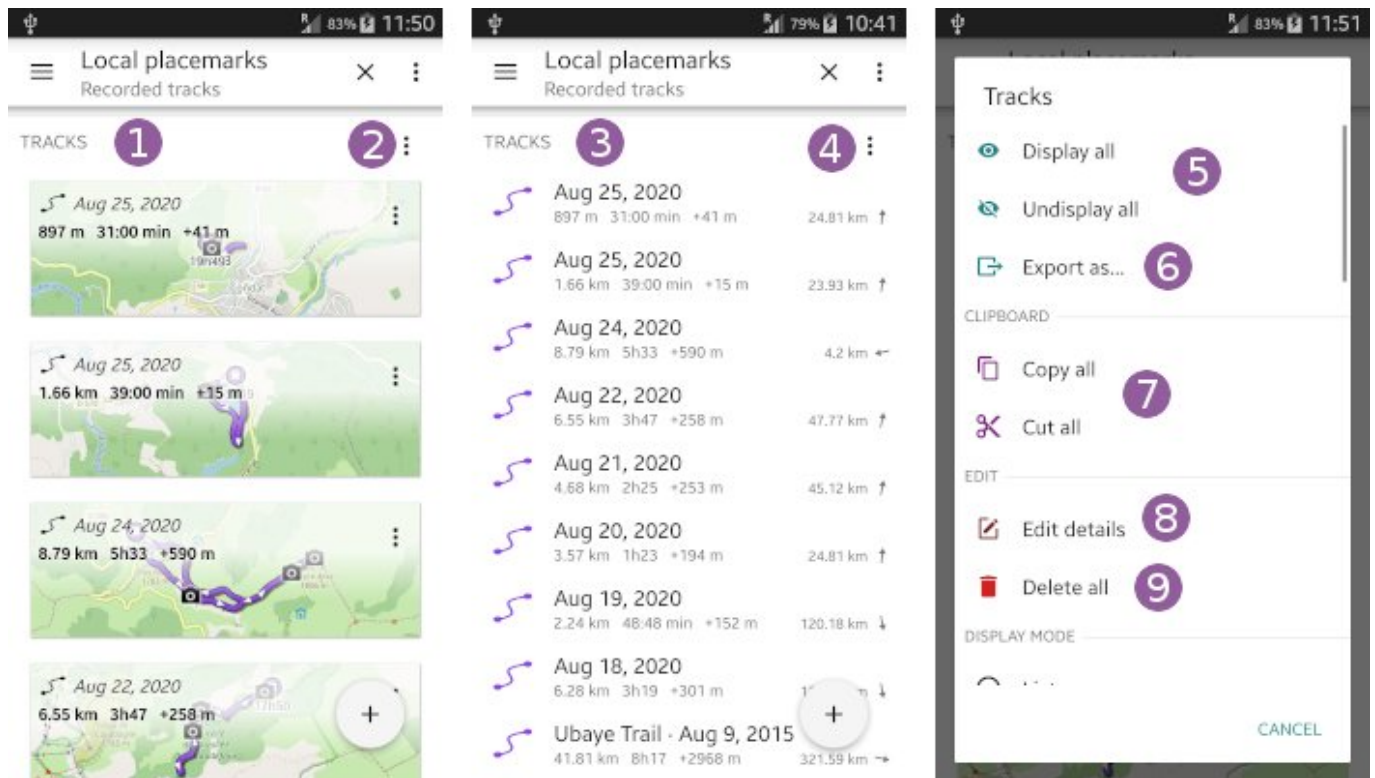
## How to display, export, copy, edit or delete all items?

If your items are displayed in **“Preview”** mode ①, tap the header menu icon ② to display the menu of this placemarks category.

If your items are displayed in **“List”** mode ③, tap the header menu icon ④ to display the menu of this placemarks category.

From the menu, tap the desired action:

- **“Display all”** or **“Undisplay all”** ⑤ to add or remove all items to/from the map view;
- **“Export as...”** ⑥ to export all items at the same time in an external placemark format file;
- **“Copy all”** or **“Cut all”** ⑦ to add all items to the clipboard;
- **“Edit details”** ⑧ to edit the name, color, etc. of all items at the same time;
- **“Delete all”** ⑨ to permanently and irremediably delete all items.



## How to display, export, copy, edit or delete multiple items?

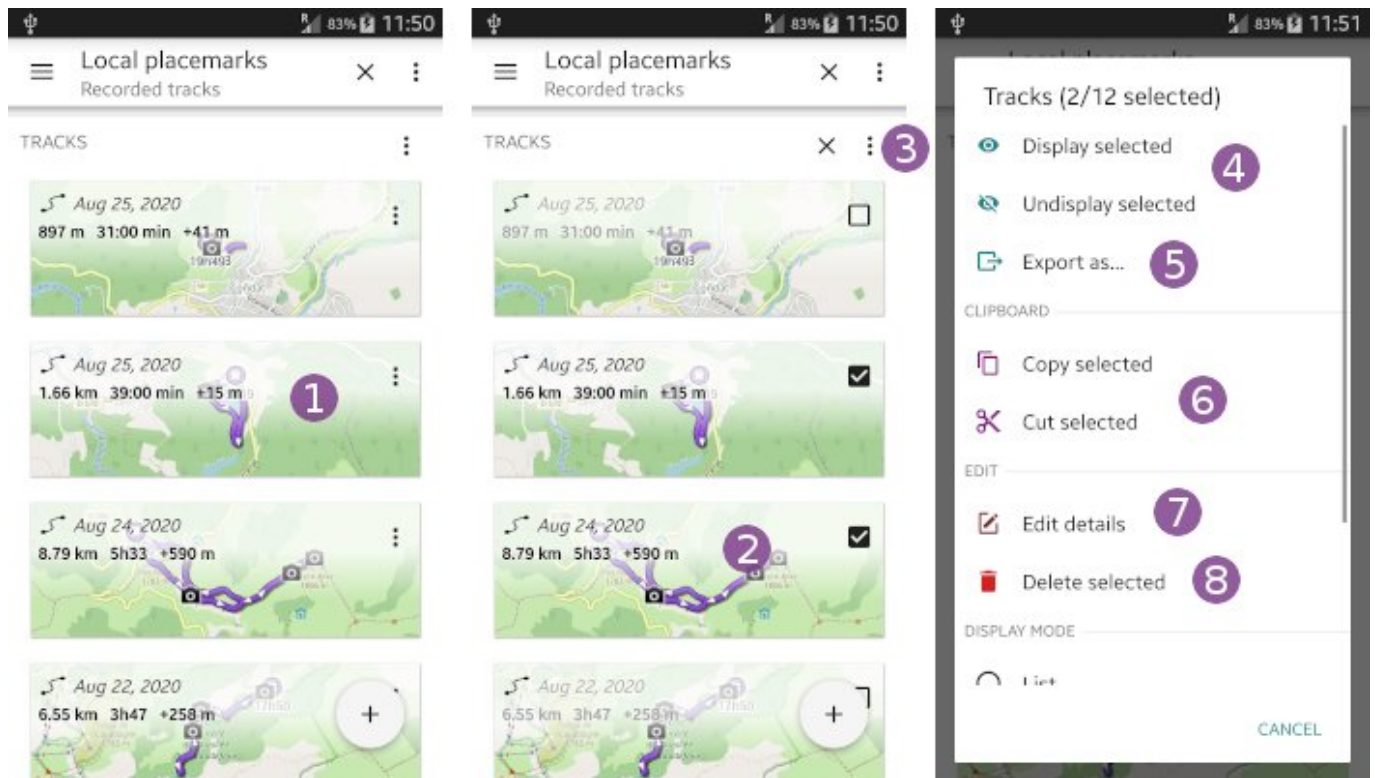
If your items are displayed in **“Preview”** mode:

- Long press a first item (1) to activate the multi-selection mode;
- Tap the other items you want to select (2);
- When all desired items are selected, tap the header menu icon (3).

From the header menu, tap the desired action:

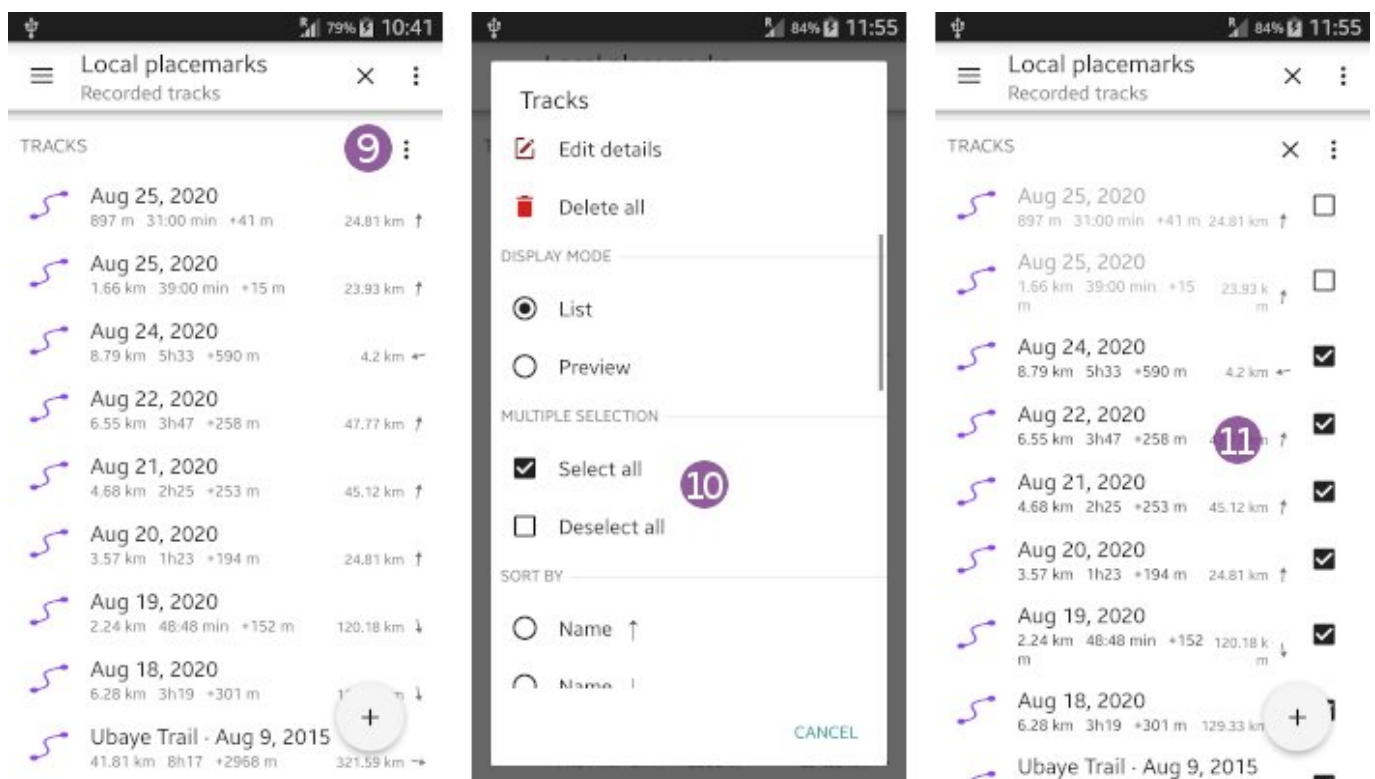
- **“Display selected”** or **“Undisplay selected”** (4) to add or remove all selected items to/from the map view;
- **“Export as...”** (5) to export all selected items at the same time in an external placemark format file;
- **“Copy selected”** or **“Cut selected”** (6) to add all selected items to the clipboard;
- **“Edit details”** (7) to edit the name, color, etc. of all selected items at the same time;
- **“Delete selected”** (8) to permanently and irremediably delete all selected items.

**i** The number of selected items is displayed at the top of the header menu.



If your items are displayed in “**List**” mode:

- Tap the header menu icon (9);
- Choose “**Select all**” or “**Deselect all**” (10) to activate the multi-selection mode and initially select or deselect all items;
- Tap the other items you want to select or deselect (11);
- When all desired items are selected, tap the header menu icon (9) again to display the header menu (see above actions (4) - (8)).

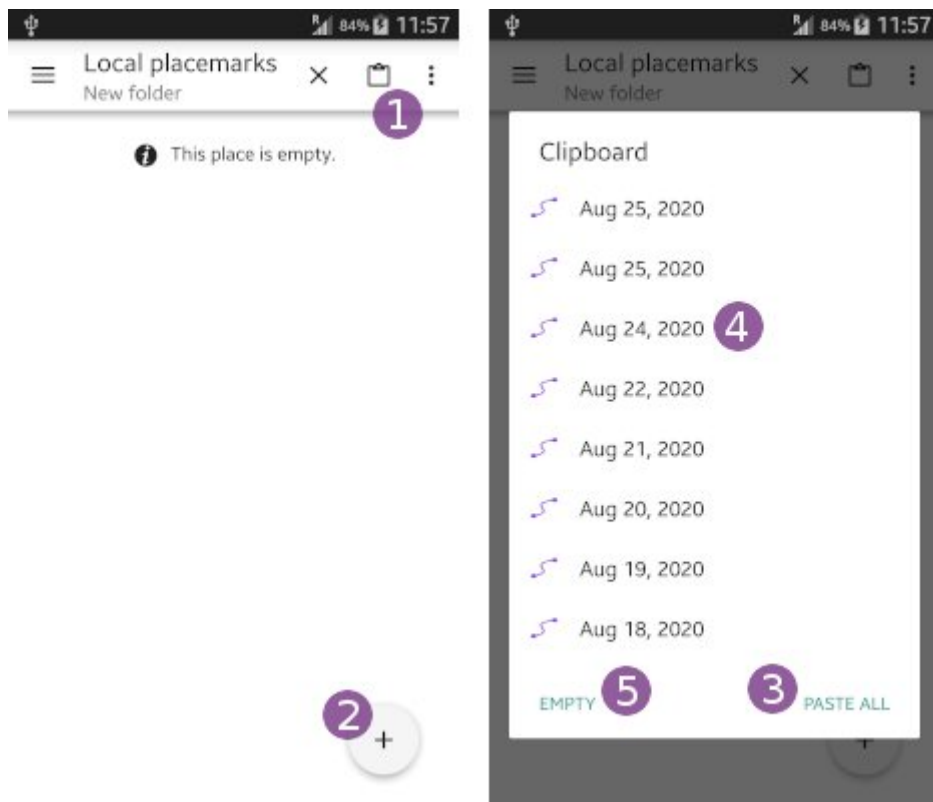


# How to paste items?

When some items are copied or cut, the clipboard icon **1** is displayed in the top toolbar.

To paste the items:

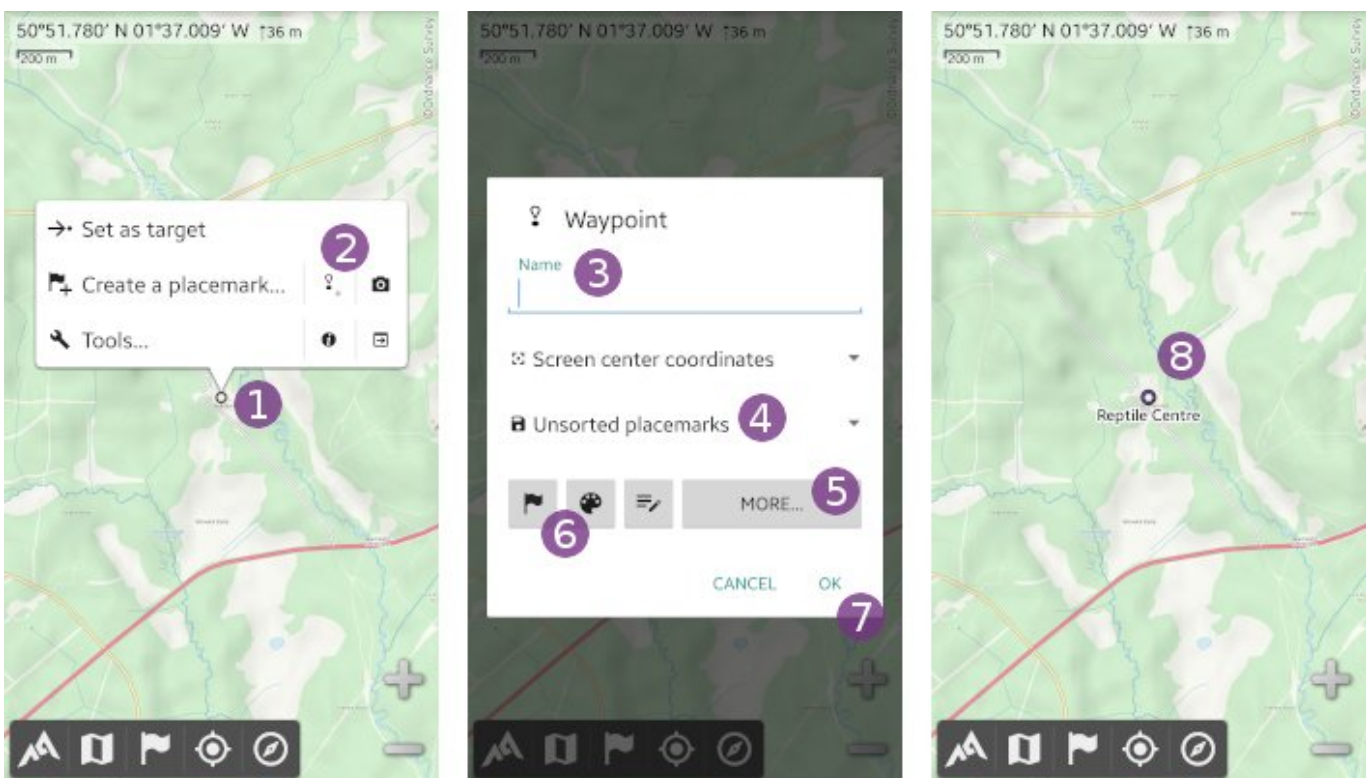
- Display the folder in which you want to paste your items. To create a sub-folder, tap “+” **2** and choose “Folder” in the list;
- Tap the clipboard icon **1** to display the clipboard content;
- Tap “Paste all” **3** to paste all items in the current folder;
- Alternatively, you can tap one single item **4** to only paste this one;
- To empty the content of the clipboard, tap “Empty” **5**.





## How to create a waypoint?

- Move the screen center icon **1** over the location where you want to create your waypoint and tap it;
- Tap the **“Waypoint”** **2** icon right to **“Create a placemark...”**;
- If desired, type a name in the **“Name”** **3** text field;
- If desired, change the folder **4** in which to save the waypoint;
- If desired, change other properties like the color or the icon by tapping on **“More...”** **5** or on an **“Icon”**, **“Picture”** or **“Comment”** shortcut icon **6**;
- Tap **“OK”** **7** to validate;
- The waypoint is saved and displayed on the map **8**.



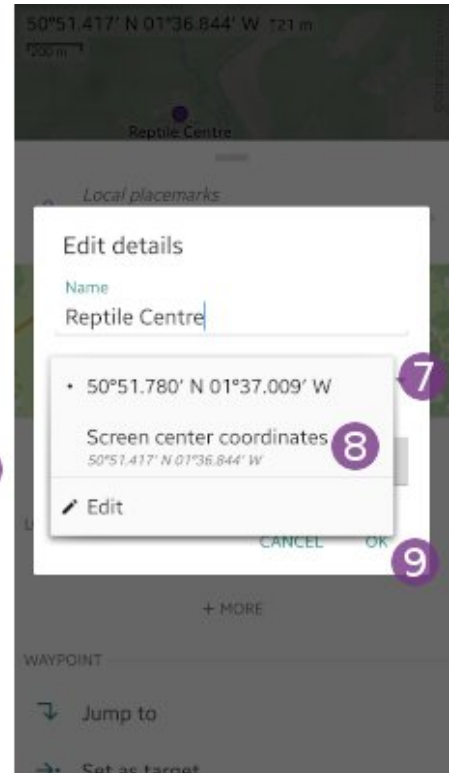
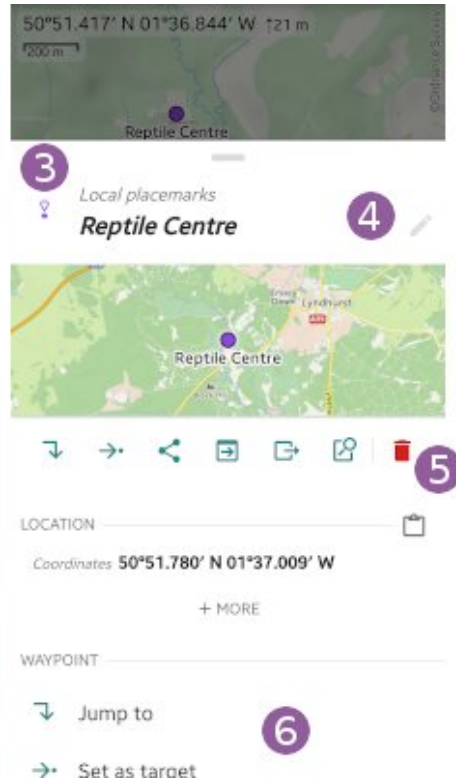
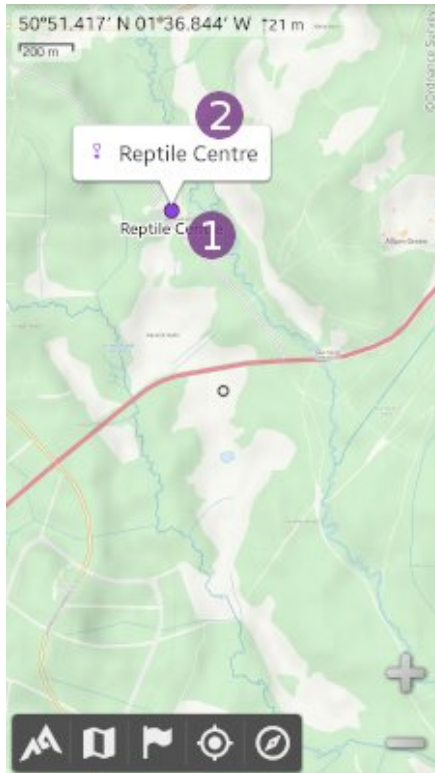
## How to edit a waypoint?

To edit the properties of an existing waypoint:

- Tap on the waypoint **1** displayed on the map, and on its name **2**;
- In the scrolling menu:
  - Tap on the waypoint icon **3** to quickly change its color;
  - Long-press the waypoint icon **3** to quickly change its icon;
  - Tap on the waypoint title bar **4** to edit all its properties;
  - Tap on the **“Delete”** **5** shortcut icon to permanently delete it;
  - Scroll down the menu **6** to access all other functions.

To move a waypoint to the map center location:

- Tap on the waypoint title bar **4** to edit all its properties;
- Tap the current waypoint coordinates **7**;
- Choose the **“Screen center coordinates” 8**;
- Tap **“Ok” 9** to validate.




# Custom icons


If you don't find the waypoint icons that suit your needs, the application allows you to import and use your own ones.


## Requirements and setup

Icon files must be saved in the “**icons/**” sub-folder of [application folder](#), and must meet the following requirements:

- **Image format:** SVG (recommended, only simple shapes supported), PNG, JPG, GIF, BMP. Alpha channel supported if any;
- **Image dimension:** 32px × 32px recommended for non SVG formats;
- **Maximum file size:** 100KB.





 The file name (without the extension) is used as the icon name. If you use an existing icon name, this one will be replaced by your custom icon. Names are *not* case sensitive.

 The center point of the icon is displayed on the waypoint's location.

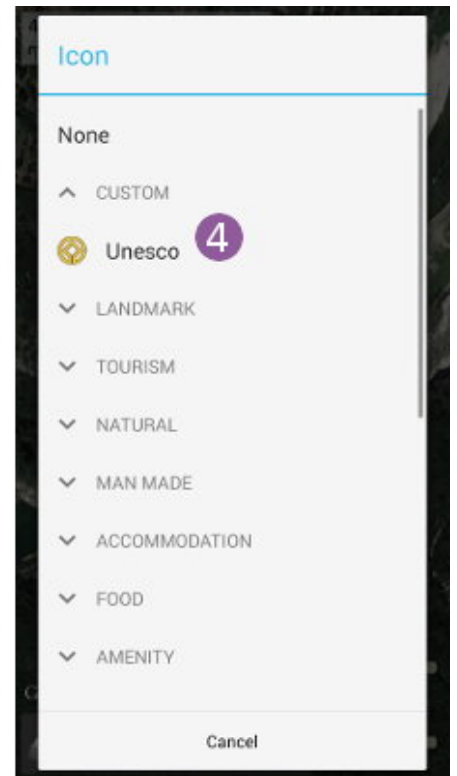
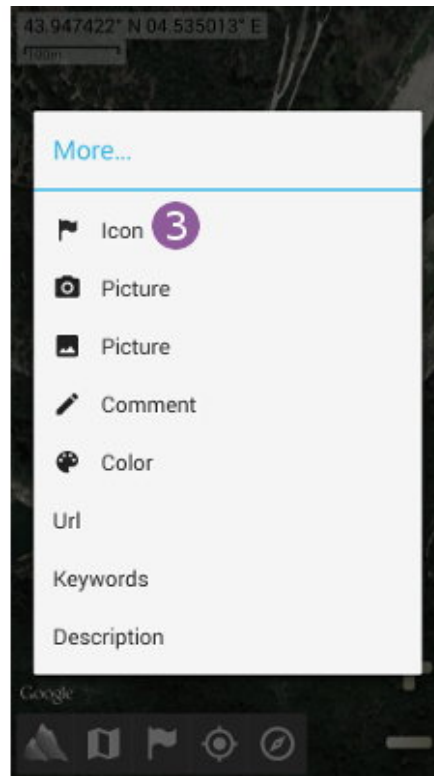
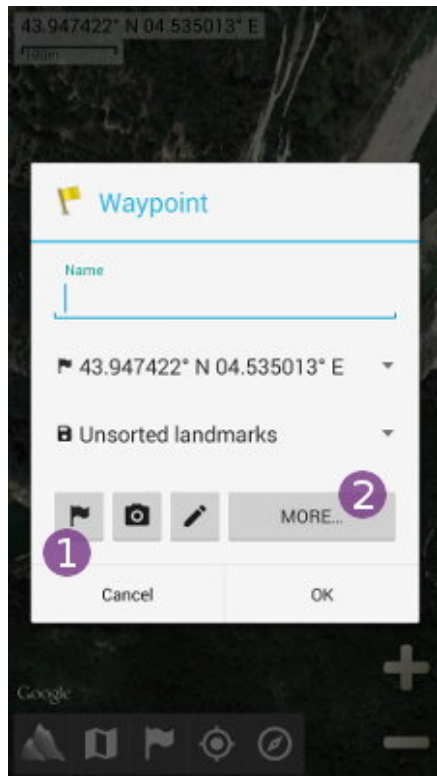
 You must restart the application after adding custom icons in order to be able to use them.

## Usage

To use a custom icon, [create a new waypoint](#) or [edit an existing one](#). In the edit waypoint dialog:

- Click on the “**Add icon**”  shortcut button, or alternatively click on “**More...**”  and select “**Icon**” .
- Under the “Custom” category, select your custom icon .

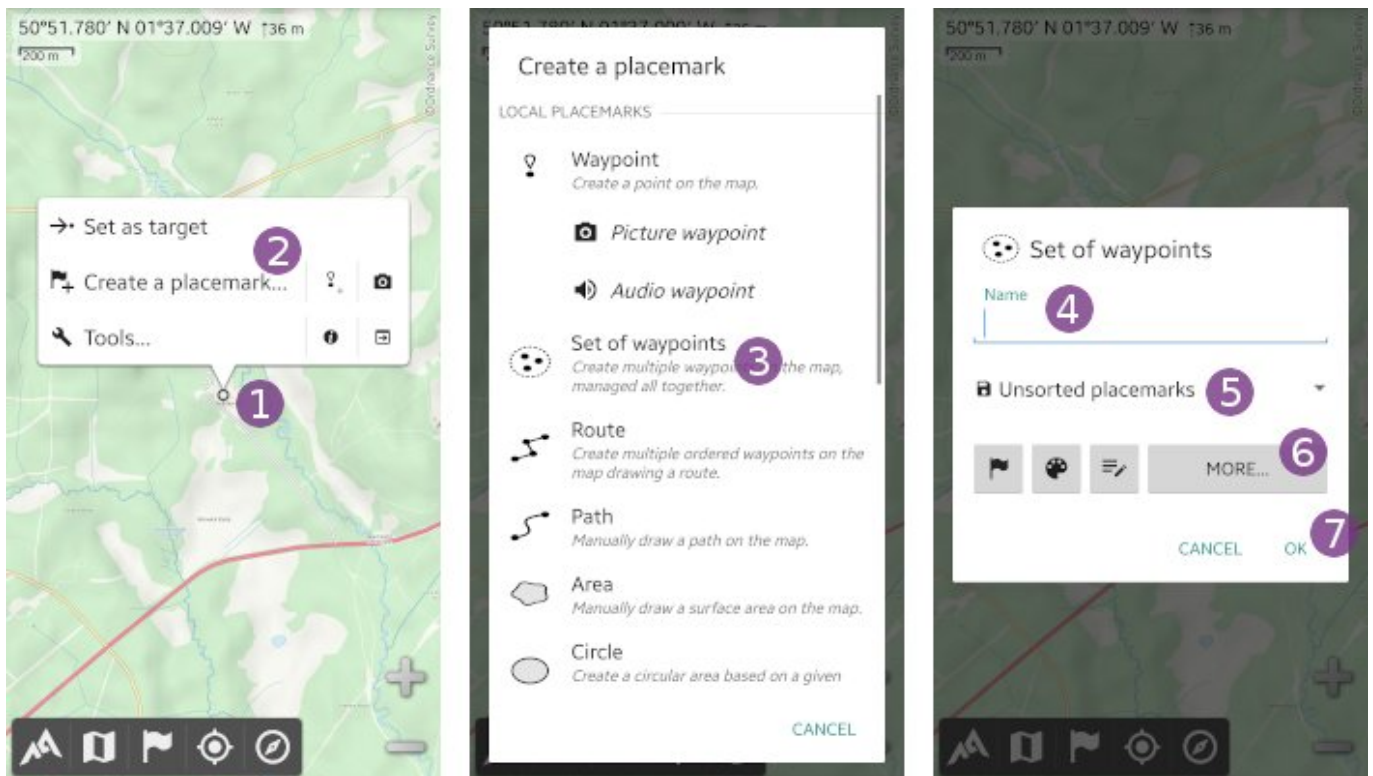
 By grouping some icons in a sub-folder, they will appear in a custom category named after the sub-folder.





# How to create a set of waypoints?

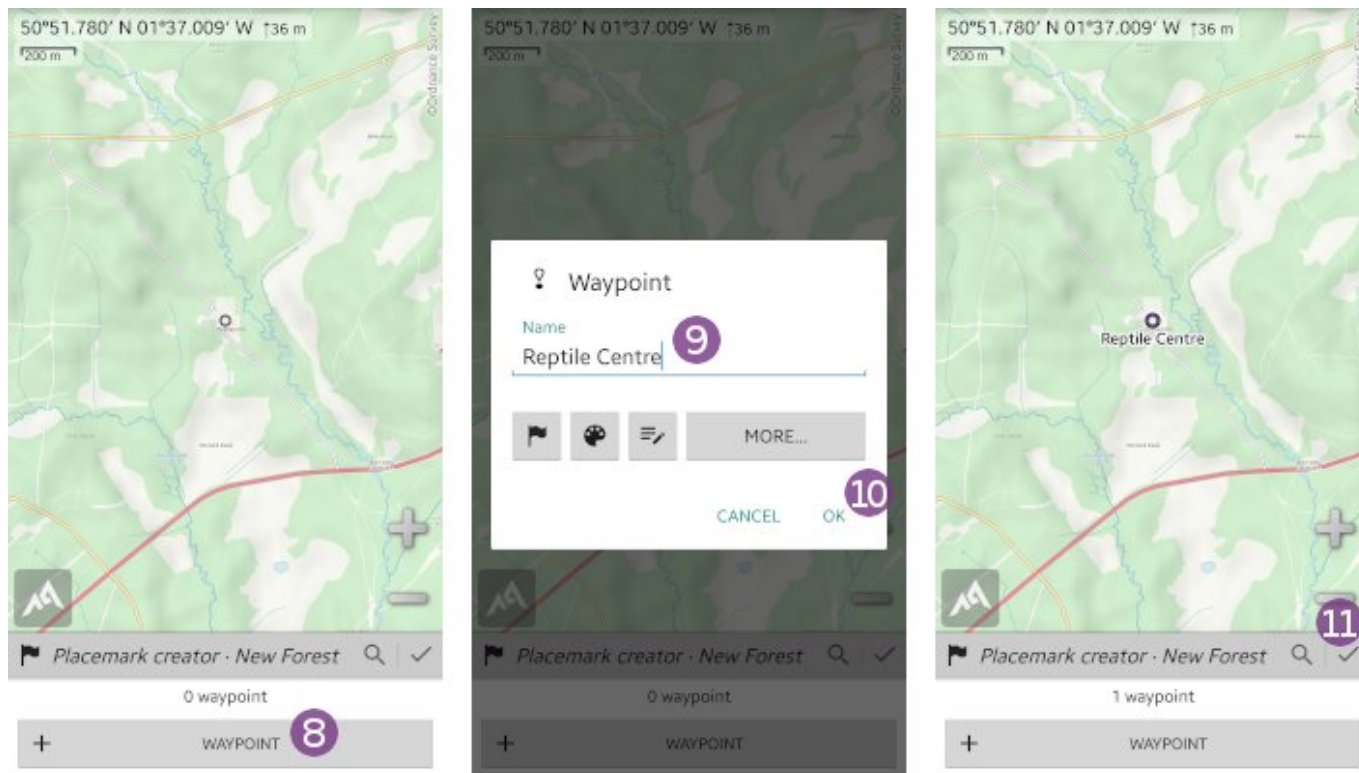
- Tap on the screen center icon **1** and on **“Create a placemark...”** **2**;
- Choose **“Set of waypoints”** **3**;
- If desired, type a name in the **“Name”** **4** text field;
- If desired, change the folder **5** in which to save the set of waypoints;
- If desired, change other properties like the color or the icon by tapping on **“More...”** **6**;
- Tap on **“Ok”** **7** to validate.



The edit mode is activated, you can now add waypoints:

- Move the screen center icon over the location where to add a waypoint and tap on **“Waypoint”** **8**;
- If desired, type a name for the waypoint in the **“Name”** **9** text field and change other properties by tapping on **“More...”**;
- Tap on **“Ok”** **10** to validate.

The new waypoint is displayed on the map. Add as many waypoints as wanted, and when finished, tap on the **“Save & close”** **11** icon.



## How to add, move or delete points of a set?

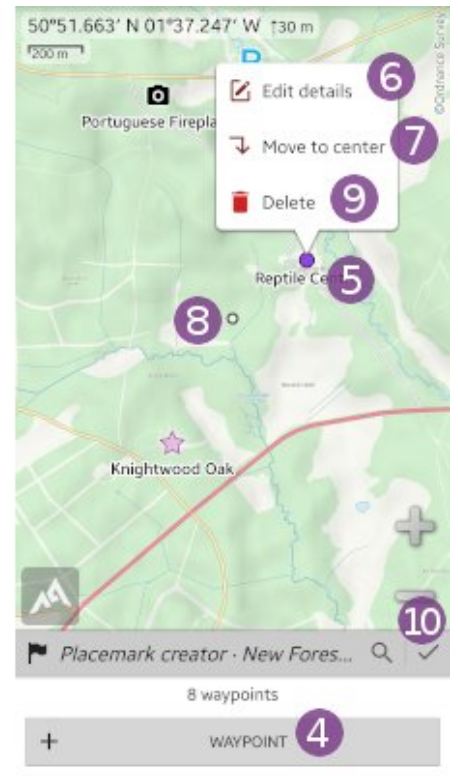
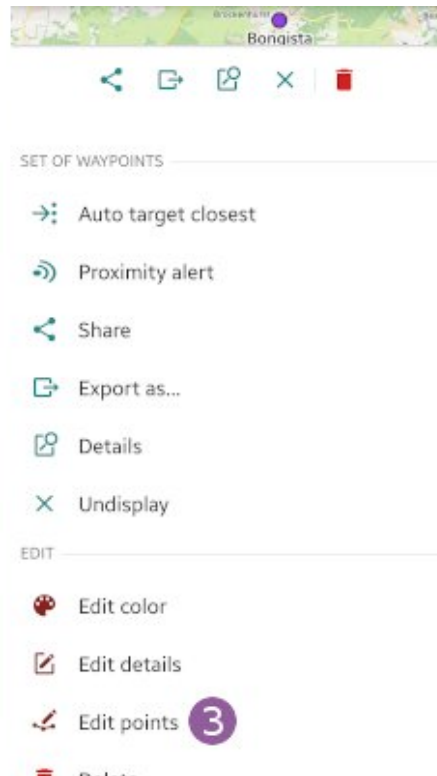
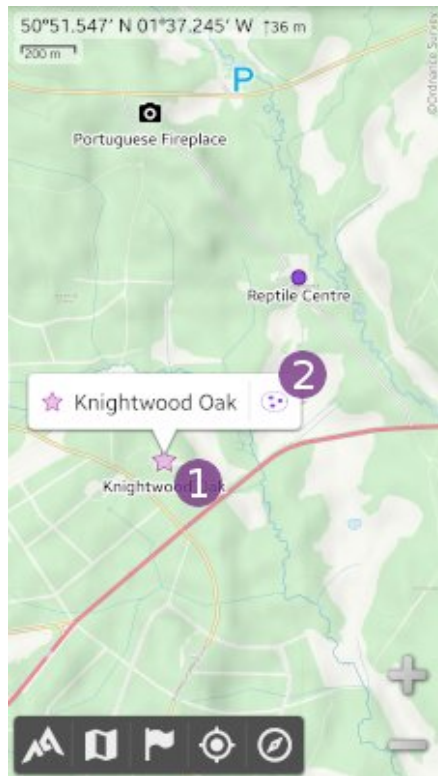
To add waypoints to a set:

- Tap on any waypoint of the set **1** and on the set icon **2** right of the waypoint name;
- Scroll the menu to the bottom and choose **“Edit points”** **3** to activate the edit mode;
- Tap on **“Waypoint”** **4** to add waypoints as explained above.

To edit, move or delete an existing waypoint using the edit mode, tap on one waypoint **5** of the edited set of waypoints, and tap on:

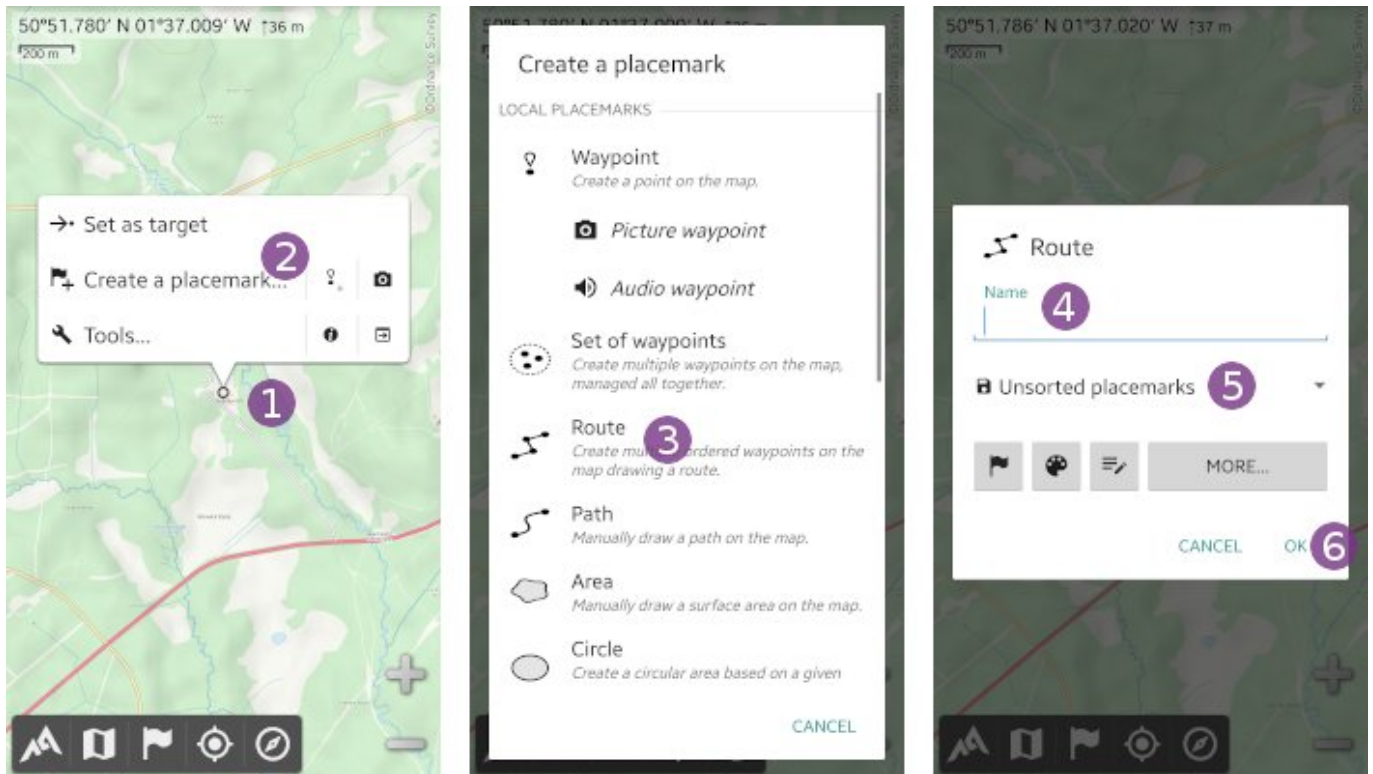
- **“Edit details”** **6** to edit the details of the waypoint (name, icon, description, etc.);
- **“Move to center”** **7** to move the waypoint to the screen center **8**;
- **“Delete”** **9** to delete the waypoint.

When you've done, tap on the **“Save & close”** **10** icon to close the edit mode.



# How to create a route?

- Tap on the screen center icon **1** and on **“Create a placemark...”** **2**;
- Choose **“Route”** **3**;
- If desired, type a name in the **“Name”** **4** text field;
- If desired, change the folder **5** in which to save the route;
- Tap on **“Ok”** **6** to validate.



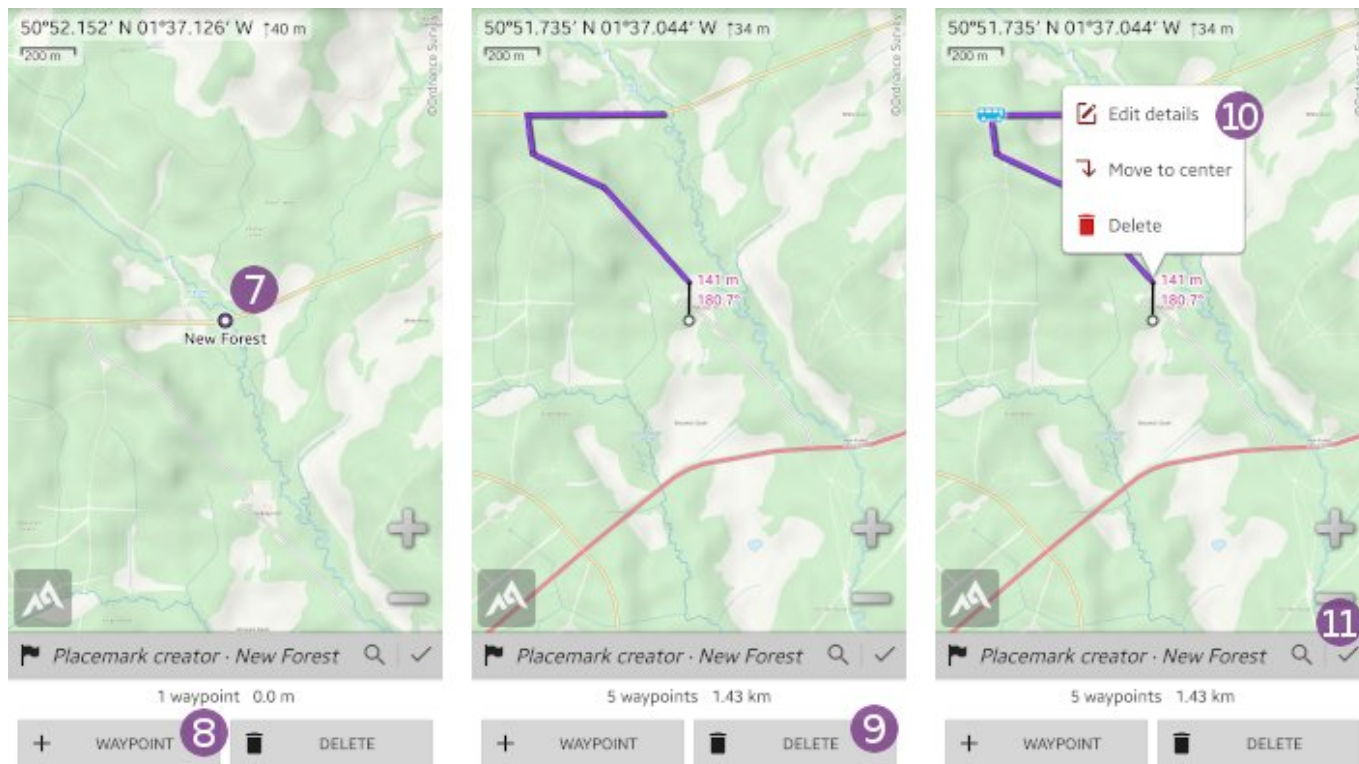
The edit mode is activated and a first waypoint is automatically added at the screen center **7**. To add more waypoints:

- Move the screen center icon over the next location and tap on **“Waypoint”** **8**;
- If needed, you can delete the last added waypoint by tapping on **“Delete”** **9**.

While in edit mode, you can also edit any existing waypoint by tapping on it to display a popup menu. Tap on **“Edit details”** **10** to edit the details of the waypoint (name, icon, color, description, etc.).

When finished, tap on the **“Save & close”** **11** icon.





## How to add, move or delete points of a route?

To add, move or delete points of a route you need to activate the edit mode of the route:

- Tap on any waypoint of the route you want to edit **1** and on the route name **2**;
- Scroll down the menu and choose **“Edit points”** **3** to activate the edit mode.

The edit mode of the route is activated. To add waypoints, just process as explained in the section above.

To move a waypoint:

- Move the screen center icon over the new location **4**;
- Tap on the waypoint you want to move **5** and on **“Move to center”** **6**.

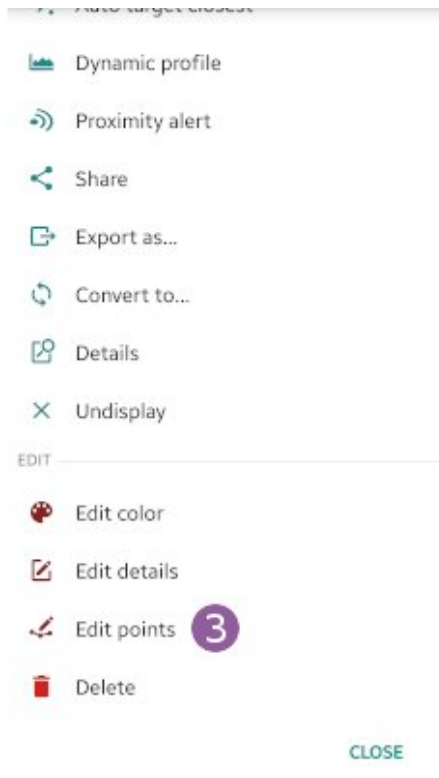
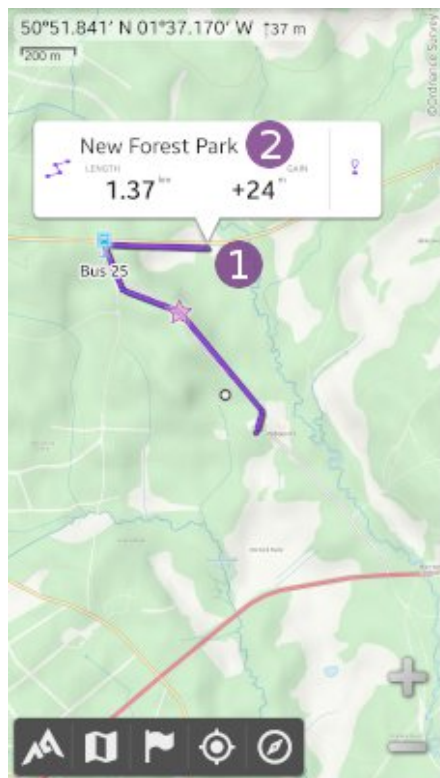
To insert waypoints after an existing waypoint:

- Tap on the existing waypoint **5** and on **“Insert here”** **7**;
- Tap on **“Waypoint”** **8** to add new waypoints.

To delete a waypoint:

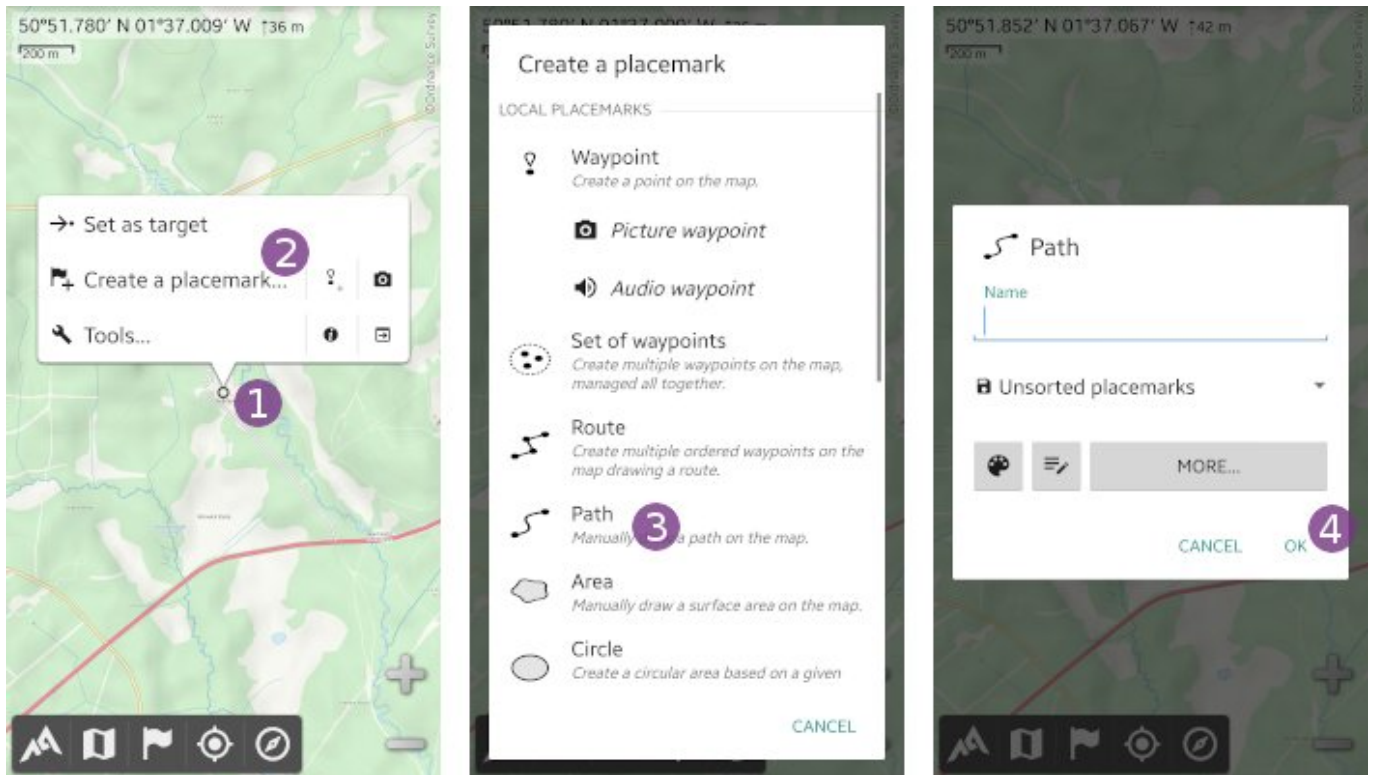
- Tap on the waypoint **5** and on **“Delete”** **9**.

When finished, click on **“Save & close”** **10**.



# How to manually draw a path?

- Tap on the screen center dot **1** and on **“Create a placemark...”** **2**;
- Select **“Path”** **3**;
- If you want, type a name in the **“Name”** text field, or change the place where to save the track;
- Tap **“Ok”** **4**.



The edit mode is activated, you can now:

- Move the screen center dot over the start location, tap **“Draw”** **5** to activate the drawing mode and move the screen center dot along the path you want to draw;
- If needed, tap **“Delete”** **6** multiple times to delete the last locations in the backward direction.

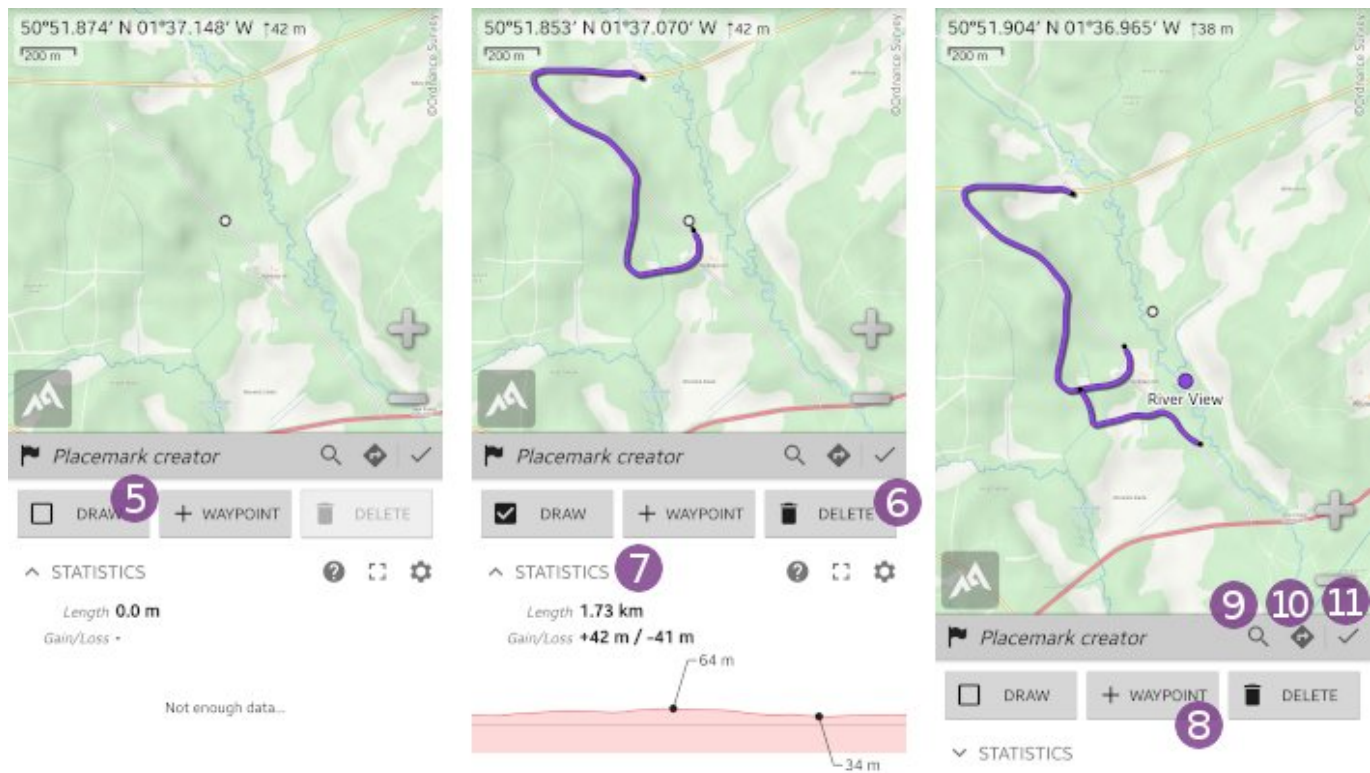
As you draw the path, the statistics update in the below panel. In case you've the [DEM elevations](#) turned on, the elevation profile is also displayed.

**i** If you need more space, tap **“Statistics”** **7** to hide the statistics panel.

If needed, you can:

- Deactivate and reactivate the drawing mode multiple times to draw distinct path segments;
- Tap **“Waypoint”** **8** to add waypoints associated to the path;
- Tap on the **“Search a location”** **9** icon to jump to remote locations by name or coordinates;
- Tap on then **“Auto-routing”** **10** icon to activate [the auto-routing mode](#).

When you have finished, tap on the **“Save & Close”** **11** icon to save your path and exit from the edit path mode.



## How to split or edit points of a path?

- Tap anywhere on the path **1** and on its name **2**;
- Scroll down the menu and choose **"Edit points"** **3** to activate the edit path mode.

When you tap on any location **4**, an edit menu is displayed allowing you to make various actions on the selected location:

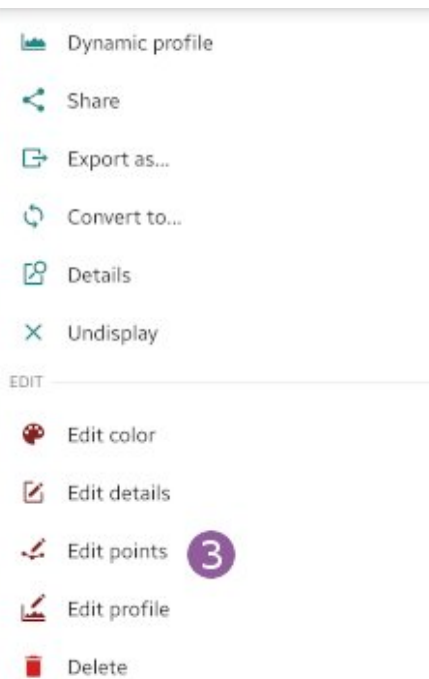
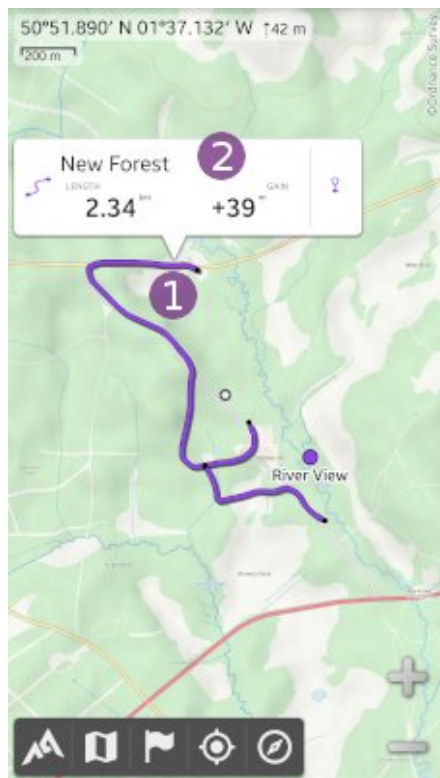
- **"Insert here"** **5** to insert new locations from here;
- **"Move to center"** **6** to move this location on to the screen center;
- **"Delete"** **7** to delete this location.

Or on the path segment that contain the selected location:

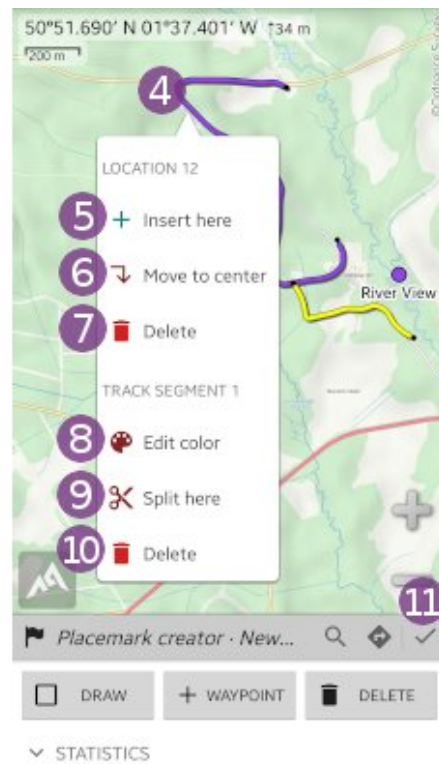
- **"Edit color"** **8** to change the color of this particular segment (it will override the track color);
- **"Split here"** **9** to split this segment into two different segments at the selected location;
- **"Delete"** **10** to delete the entire segment.

When you have finished, tap on the **"Save & Close"** **11** icon to save your path and exit from the edit path mode.





CLOSE

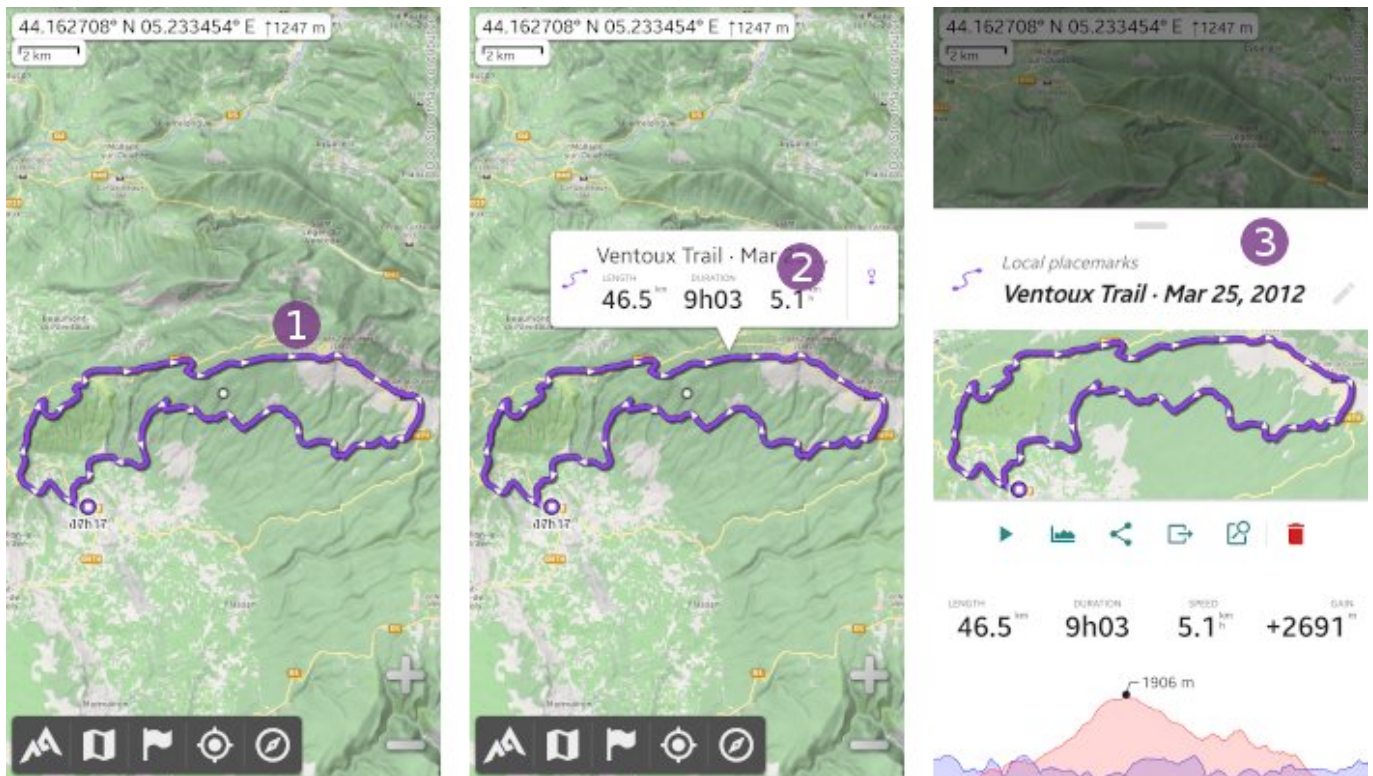




# How to change the display style of a track?

The display style of a track can be changed from the map:

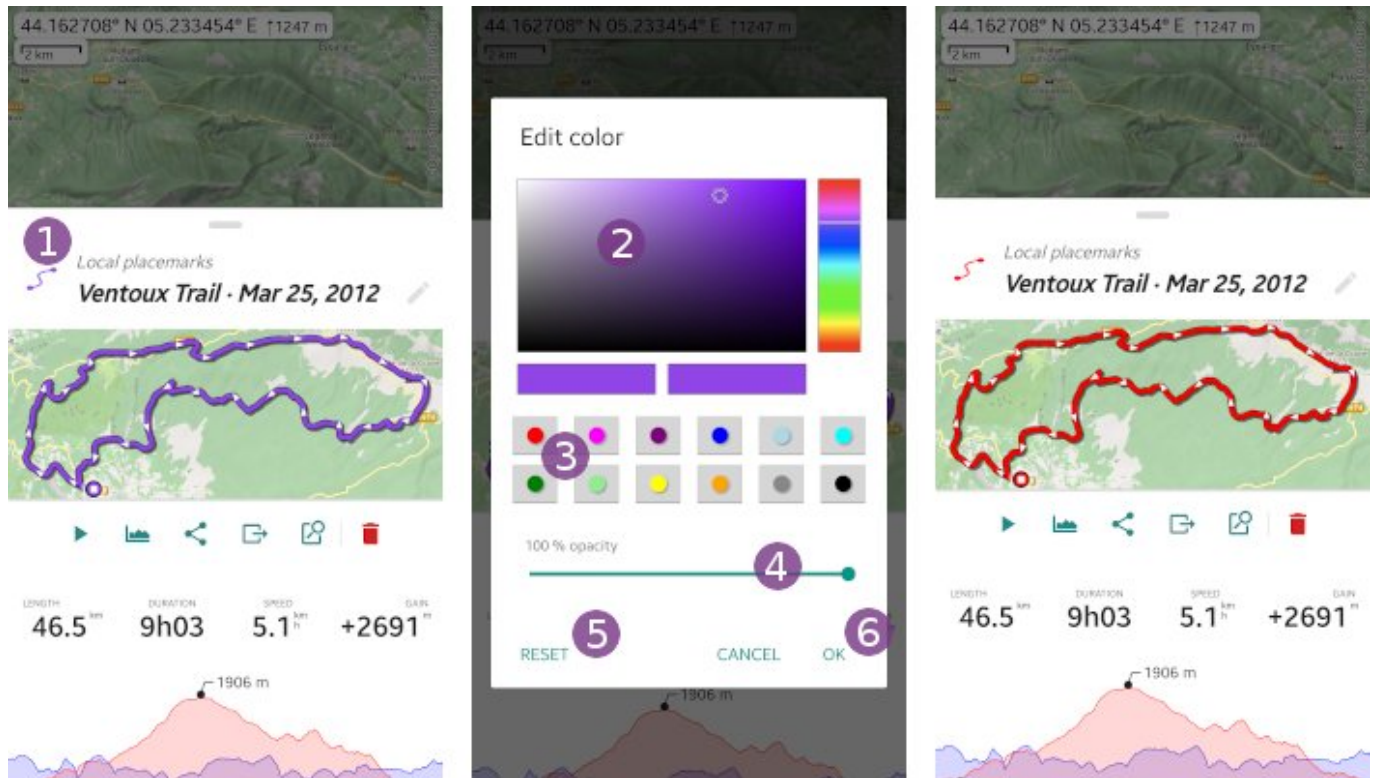
- Tap on a track displayed on the map **1**;
- Tap on its name **2** to display the item menu **3**.



## Coloring

To change the display color of a track, display its menu as explained above and:

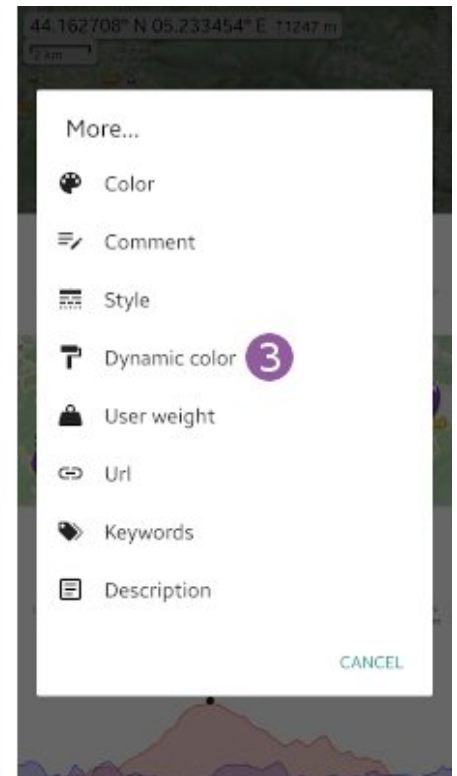
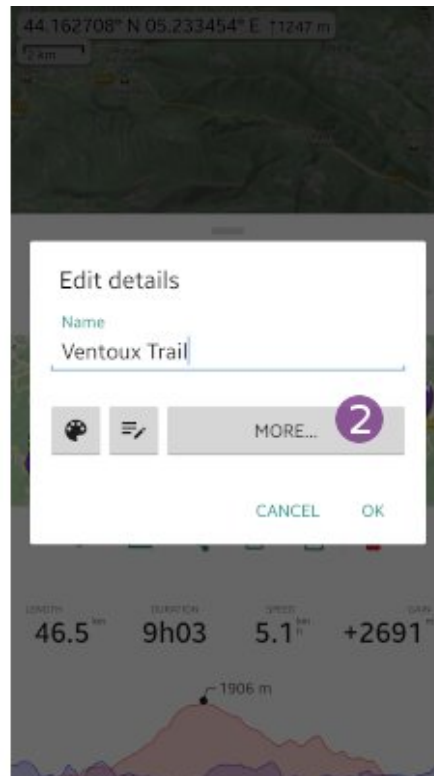
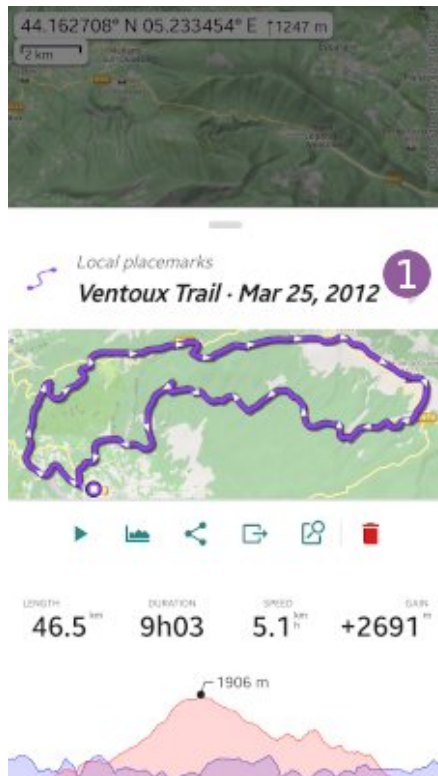
- Tap on the item icon **1** to display the edit color dialog;
- Choose any color from the “**Color**” **2** space or simply tap on a pre-defined color **3** (long press a pre-defined color **3** to choose it without closing the color dialog);
- Optionally, you can change the opacity **4** of the color;
- Tap on “**Reset**” **5** to use the default placemarks color (which can be changed in the application settings);
- Tap on “**Ok**” **6** to validate.



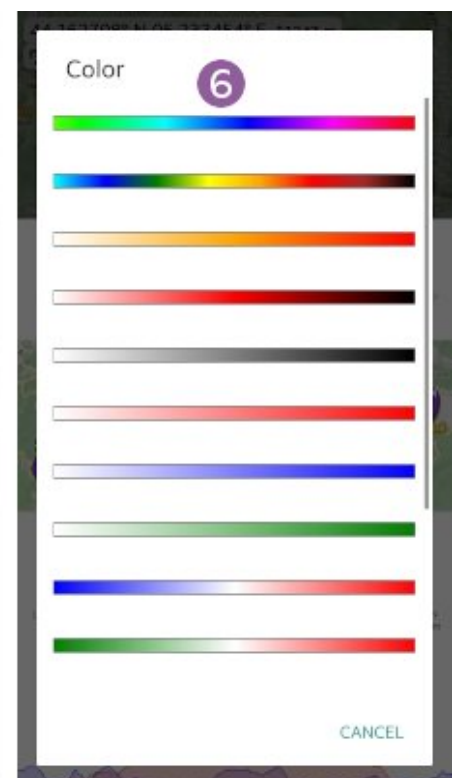
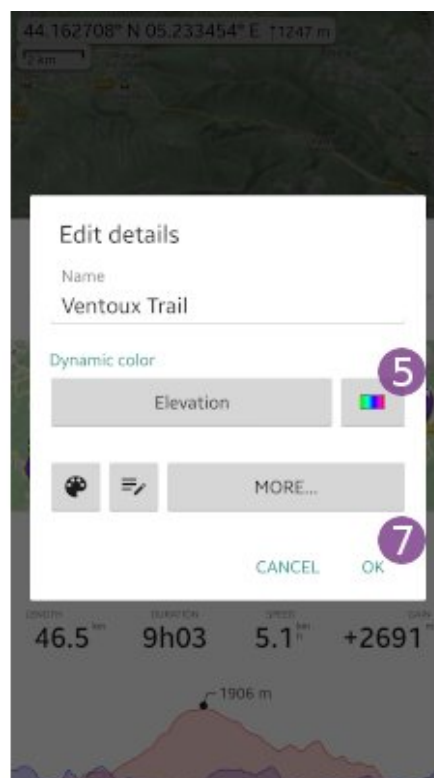
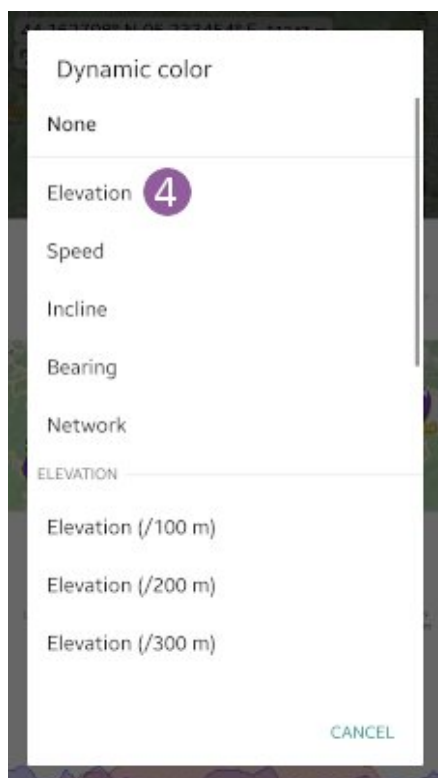
## Dynamic coloring

Instead of using an unique and static color, the application can use a color range based on some properties of the track (like elevation, speed, incline, etc.). To change the dynamic color, display its menu as explained above and:

- Tap on the item name **1** to display the edit details dialog;
- Tap on **"More..."** **2** to display more choices;
- Choose **"Dynamic color"** **3**.



- Select the property of the track to use to compute the color, for example **"Elevation"** 4 to vary the color based on the elevation;
- Optionally, tap of the color palette button 5 to choose a different color palette 6 (available choices depend on the selected property);
- Tap on **"Ok"** 7 to validate.

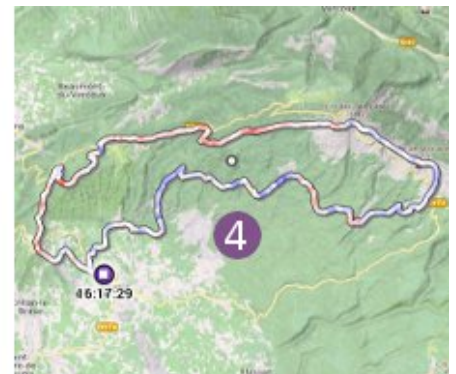




# Dynamic coloring examples

Here are some dynamic coloring examples:

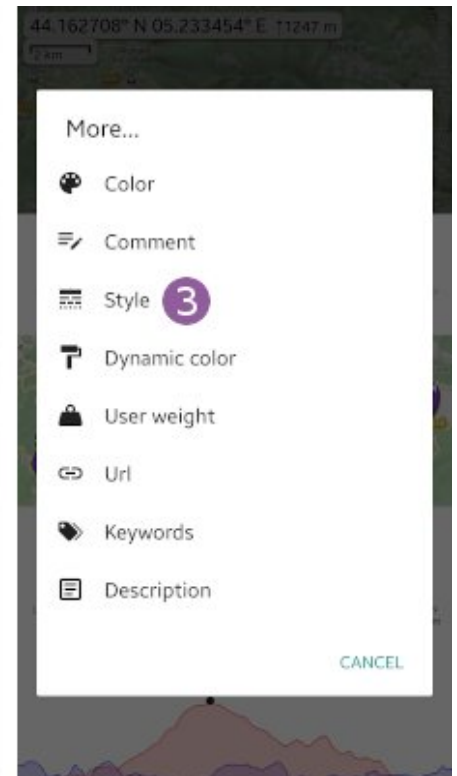
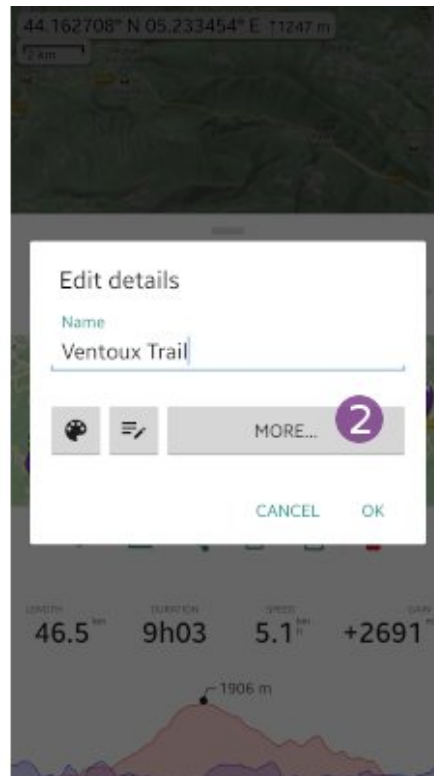
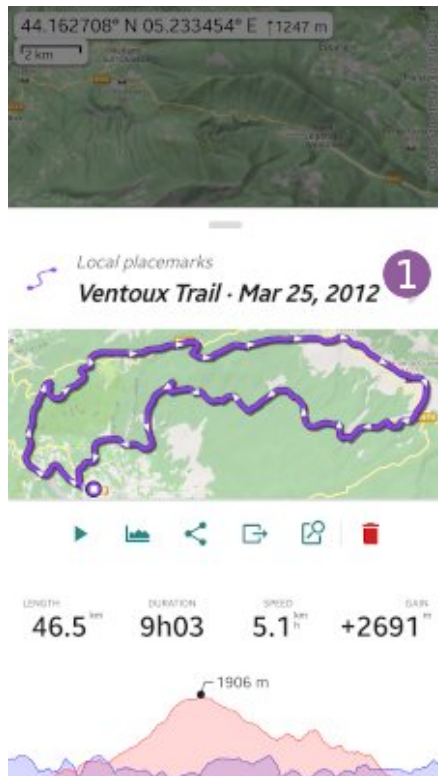
- **“Elevation”** ① with a multi color palette;
- **“Elevation”** ② with a white-red-black color palette;
- **“Elevation (/500m)”** ③ with a white-red-black color palette (same as ② but with elevation values in buckets of 500m);
- **“Incline”** ④ with a blue-white-red color palette (uphill parts are displayed in shades of red, flat parts in white and downhill parts in shades of blue);
- **“Distance (/5km)”** ⑤ with a black and white color palette.



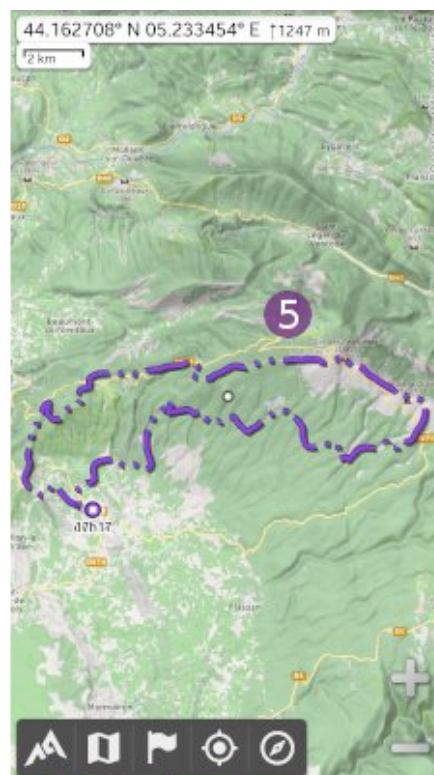
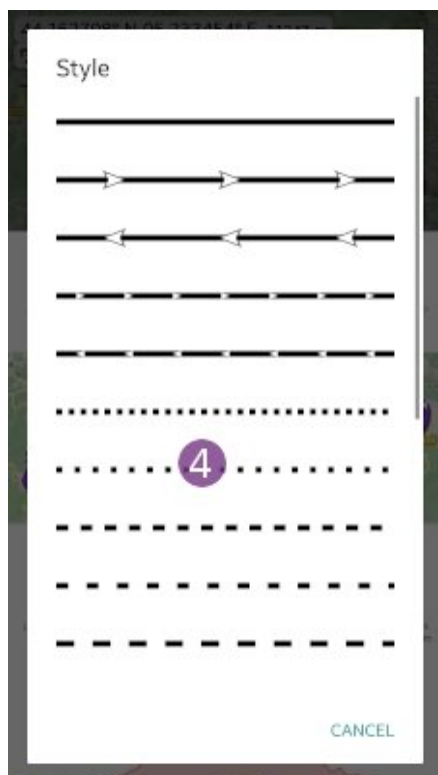
## Dashes and arrows

Instead of a plain line, the application can use dashes or arrows (forward or reward). Display its menu as explained above and:

- Tap on the item name ① to display the edit details dialog;
- Tap on **“More...”** ② to display more choices;
- Choose **“Style”** ③.



- Choose one of the available choices ④, like a dash style ⑤, or large arrows ⑥.



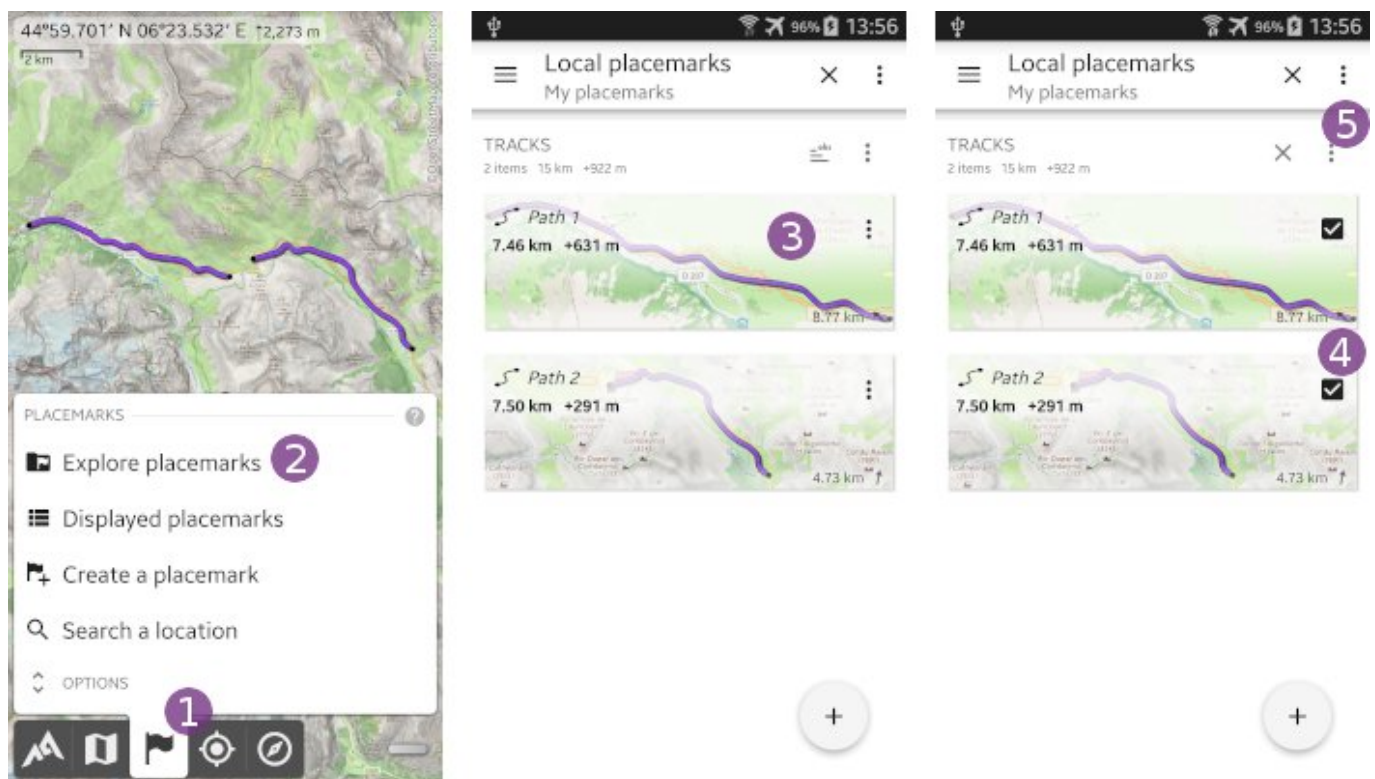


# How to merge tracks?

Tracks are made of parts called track segments. When merging multiple tracks, the application will create a new one that contains a copy of all segments of the merged tracks.

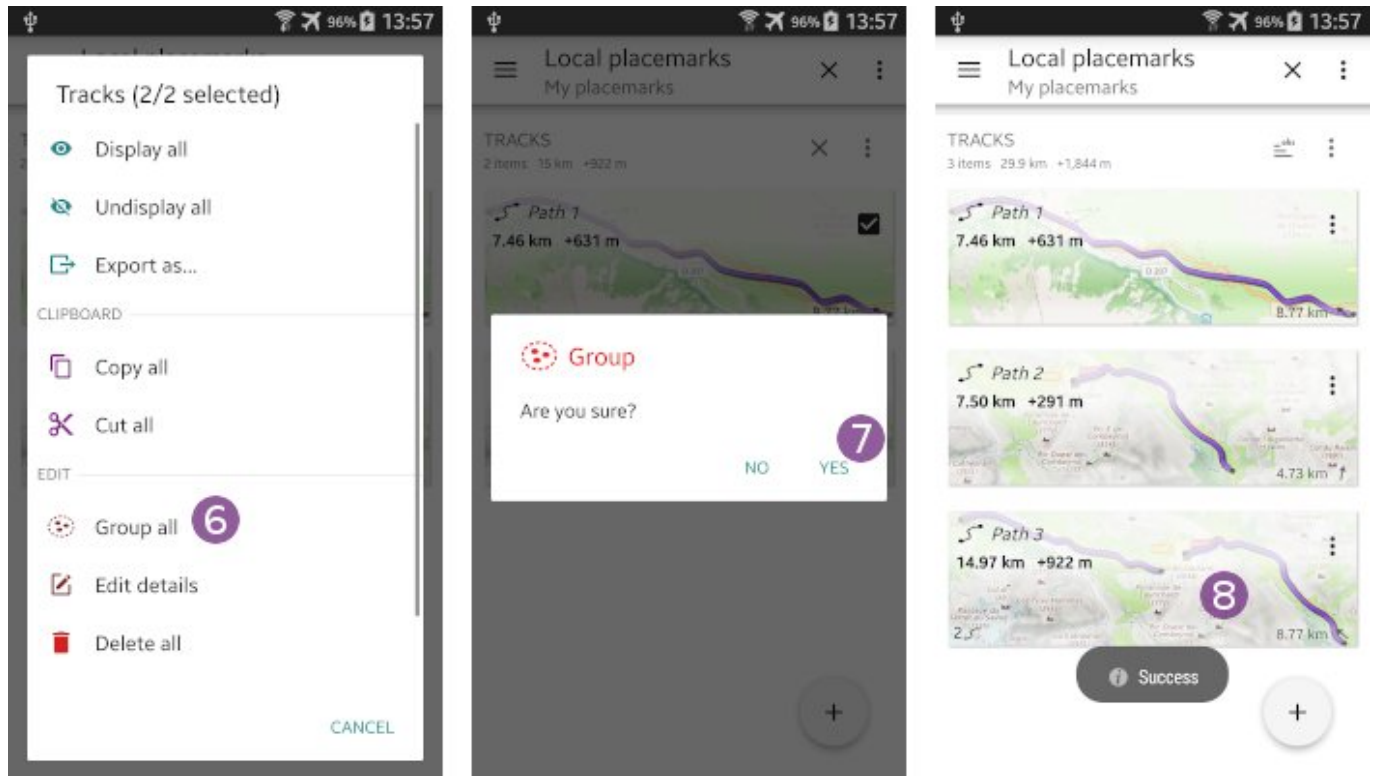
In order to list your tracks, tap on the “**Placemarks**” <sup>1</sup> menu icon and on “**Explore placemarks**” <sup>2</sup>. If necessary, browse to the folder where are saved your tracks. To merge tracks:

- Long-press a first track <sup>3</sup> to activate the multi-selection mode;
- Check all tracks you want to merge <sup>4</sup>;
- Long-press again any of the select track <sup>3</sup> to display the menu, or tap the menu icon <sup>5</sup> at the right of the tracks header.



- Choose “**Group all**” <sup>6</sup> and tap on “**Yes**” <sup>7</sup> to confirm;
- The new track containing a copy of all merged track segments will be added to the list <sup>8</sup>.

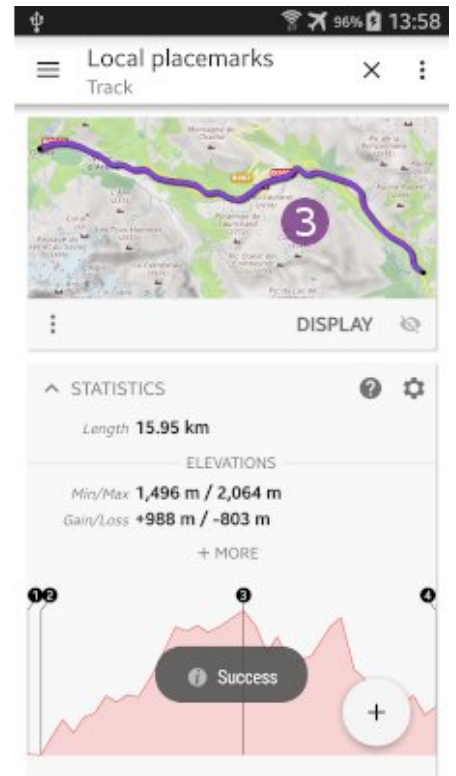
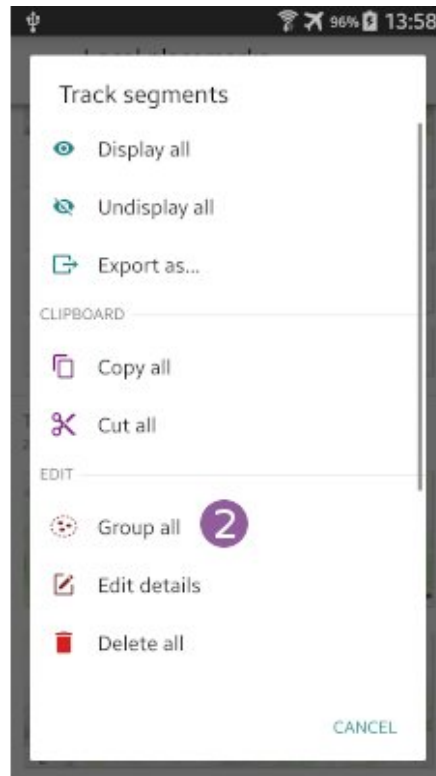
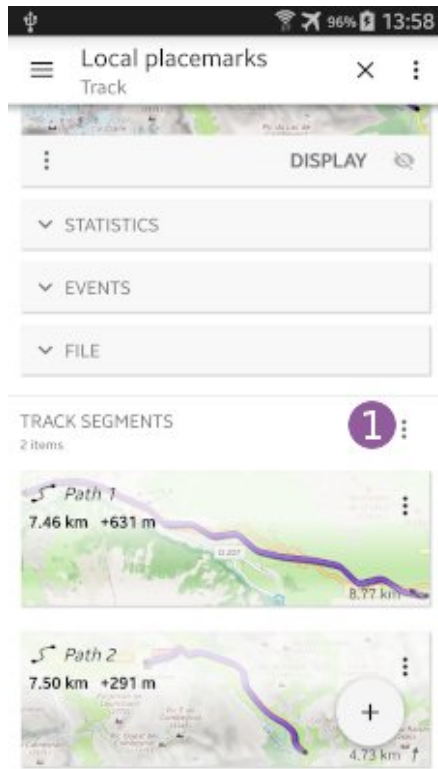
<sup>i</sup> Even if all the merged track segments are now part of the same track, they are still displayed independently as different parts. In order to display them as a single part, you can merge them as explained below.



## How to merge track segments?

In order to merge segments of a track:

- List your tracks as explained above, and tap on the track you want to merge segments to open its details;
- Scroll down the track details page, until the track segments are displayed;
- Tap on the segments menu icon **1**;
- Choose **"Group all"** **2** and tap **"Yes"** to confirm;
- All segments are merged into a single one, and the track is now displayed as a single part on the map **3**.



# Path following

By following a path, you indicate to the application what is currently planned, so it can:

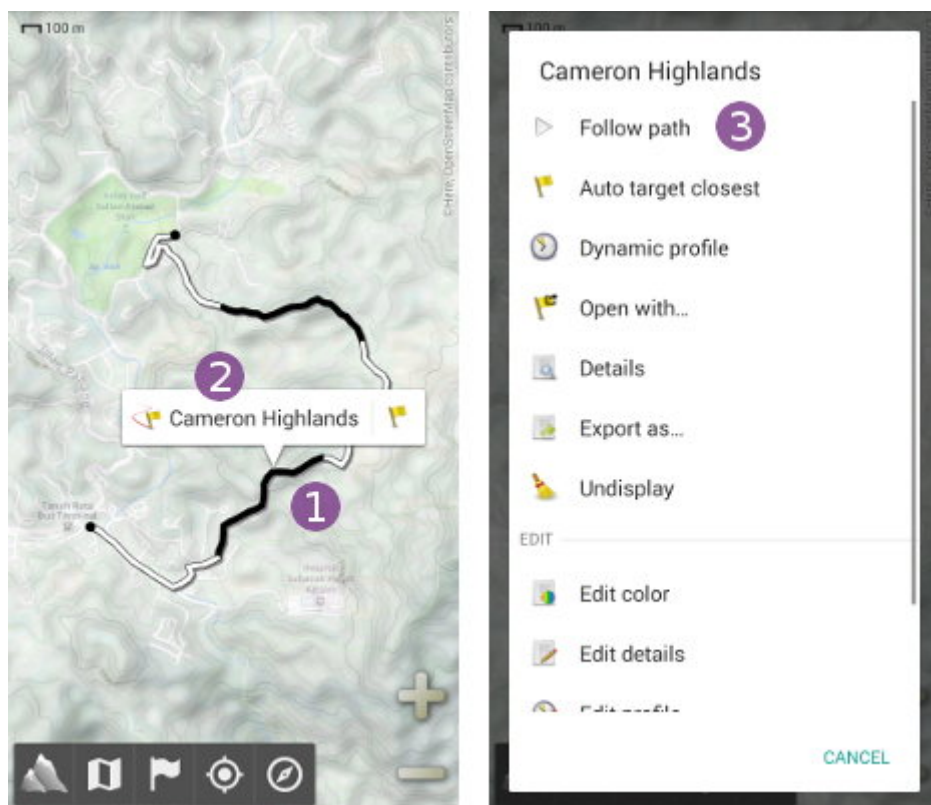
- Compute and display information on what's remaining;
- Automatically target a forward location on the path so you get a direction;
- Warn you if you are going too far away from the path.

**i** The GPS positioning must available and turned on to use this feature.

**i** You can completely close the application while using this feature, warning sounds will still be played. Be careful to leave your device access the open sky so the GPS can get your precise location and the process work properly.

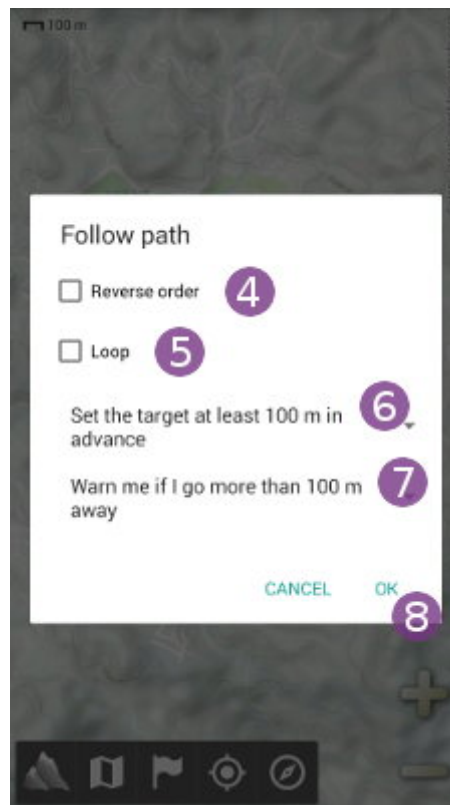
## How to follow a path?

- Display a path on the map (you can use any previously recorded or downloaded track, or simply [manually draw one](#));
- Tap anywhere on it **1** and on its name **2**;
- Select **“Follow path”** **3**.



The follow path options dialog is displayed.

- If you plan to follow the path in the opposite order it was recorded or created, check **“Reverse order”** <sup>4</sup>;
- If the path forms a loop and you plan to follow it more than once, check **“Loop”** <sup>5</sup>;
- If needed, change the distance of the automatically targeted forward location on the path <sup>6</sup>;
- If you want to be notified when you're going too far away from the path, select after which distance to do so <sup>7</sup>;
- Tap on **“Ok”** <sup>8</sup> to validate.



Once the follow path options have been validated, the dashboard is displayed where you can find information <sup>9</sup> on the remaining part: length, elevation gain and loss, ETA (estimated time of arrival) and estimated remaining time.

<sup>i</sup> In order to compute the remaining distance on the path, the application uses as the start point the closest location on the path from the screen center. Be sure to have this center location locked on your current GPS location in order to use this last one.

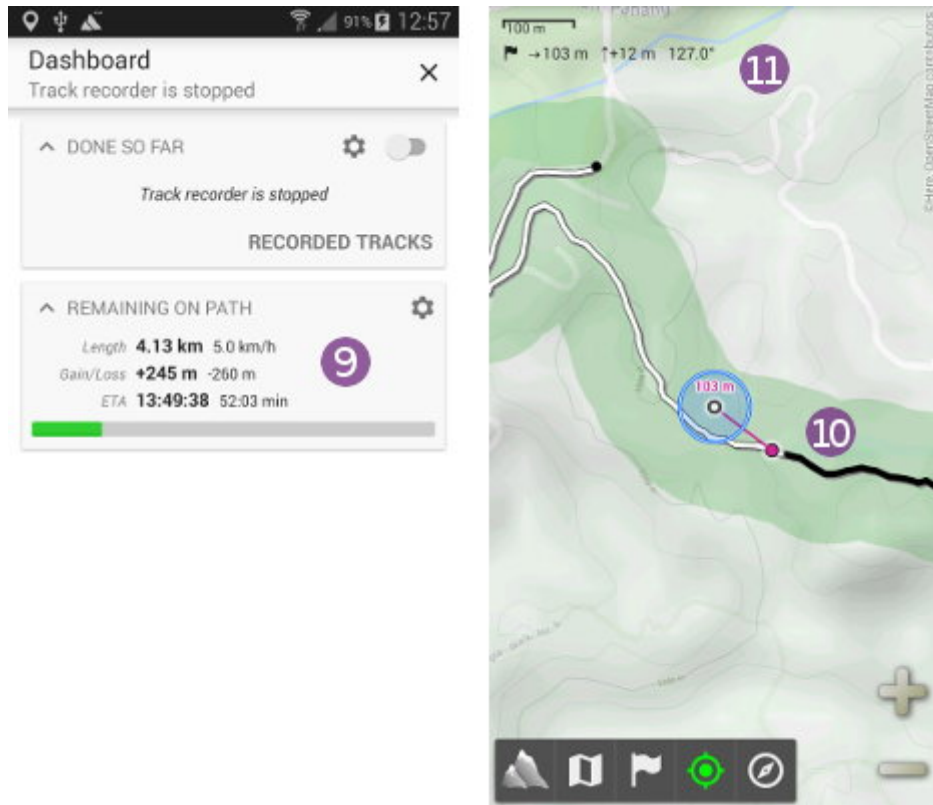
<sup>i</sup> The ETA is computed using the remaining distance on the path and your instant GPS speed, or the mean speed of your last locations if available. This speed is given in the “Remaining on path” section.

To close the dashboard, use the **“Back”** button of your device or click on the top right **“Close”** icon.

On the map, your current location is displayed in blue and a forward location on the path is targeted. If you've requested the application to warn you if going too far away from the path, the chosen threshold distance is displayed in transparent green <sup>10</sup>.

Some information on the forward location target is also displayed in an information box <sup>11</sup> at the top left of the map: the distance to the target, the elevation gain or loss (if the target location elevation is known) and the direction to the target.





## Notification signals when going too far from the path

If you've requested the application to warn you if going too far away from the path, a background process is started which will notify you by playing sounds.

As soon as you're more far than the chosen distance, the application will play notification sounds to help you find your way without handling your device:

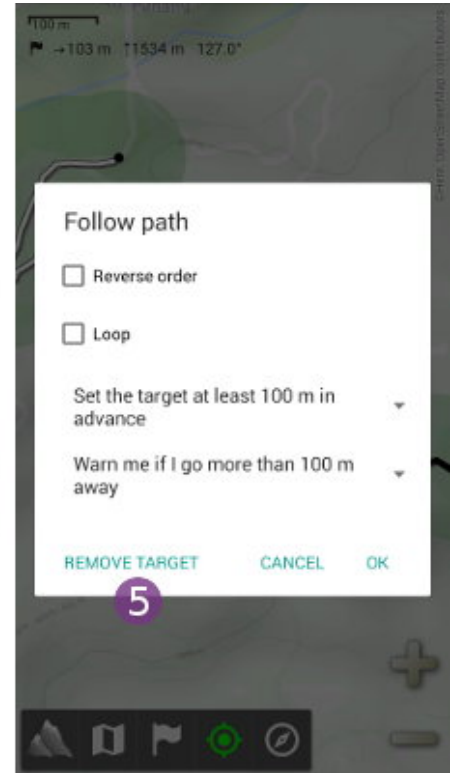
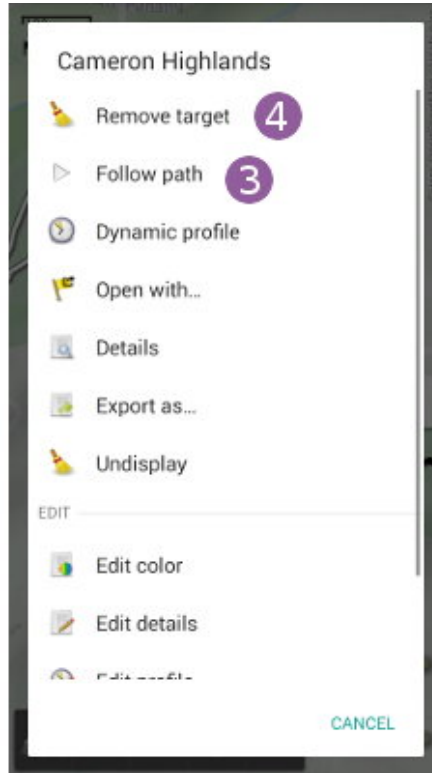
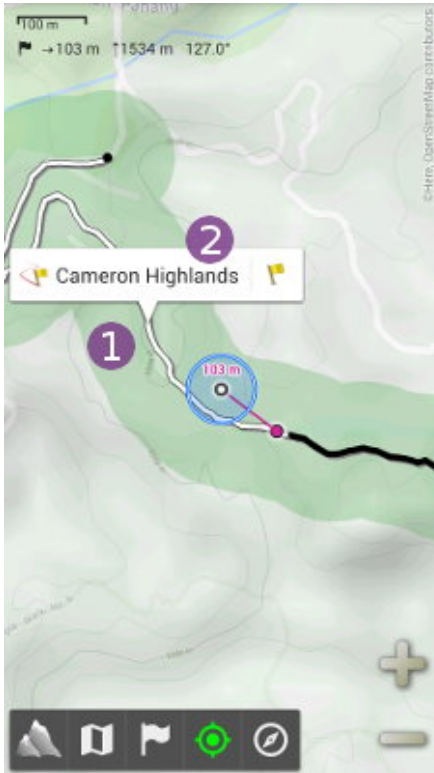
- When going even more far in a wrong direction, the application will play two (2) “**wrong way**” beeps;
- When being more far that 1.5 times the chosen distance and still going away, the application will play three (3) “**wrong way**” beeps;
- When going closer to the path, the application will play one (1) “**right way**” beep;
- When returning closer than the warn distance, the application will play two (2) “**right way**” beeps and then stop sounds.

 The application repeats the sounds approximately every 5 seconds.

## How to modify or cancel the path following process?

To modify the path following settings, tap on the followed path **1**, on its name **2** and select **“Follow path”** **3** again to re-display the options dialog.

To stop the path following process, do the same but select **“Remove target”** **4**. You can also select **“Remove target”** **5** from the options dialog.



# Details and statistics

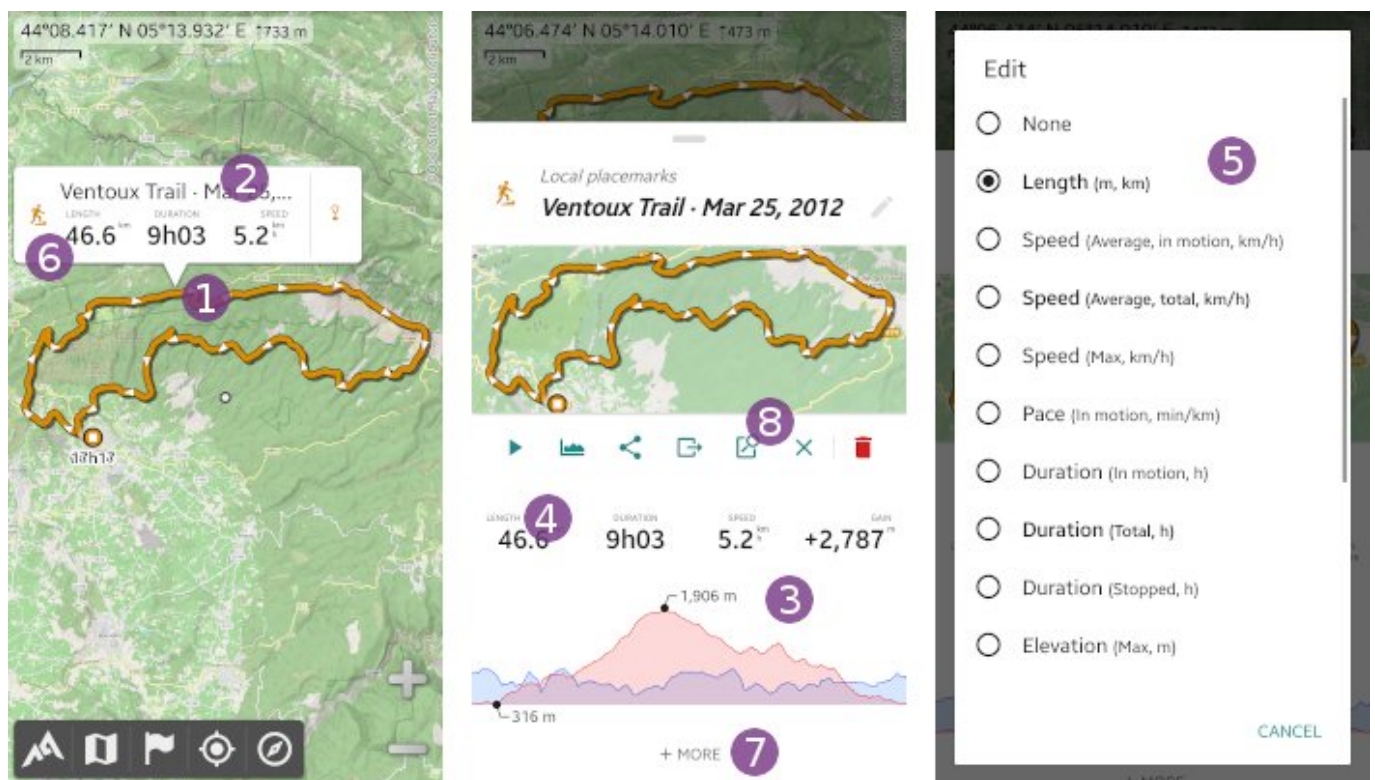
Statistics are given in the details page of placemarks.

To display the details page, tap on any track displayed on the map **1** and on its name **2** to display placemark menu.

The most important information and graphics are displayed in the placemark menu **3**. If you're interested in other information, you can long-press any data field **4** and select another information **5**.

**i** The first three data fields are also displayed in the placemark popup **6**.

In order to display the complete statistics, tap on **"More"** **7** or on the **"Details"** **7** shortcut icon.






## Statistics





The details page contains a preview of the track on the default map **1**, an elevation and speed profile **2**, as well as various statistics listed in three sections:

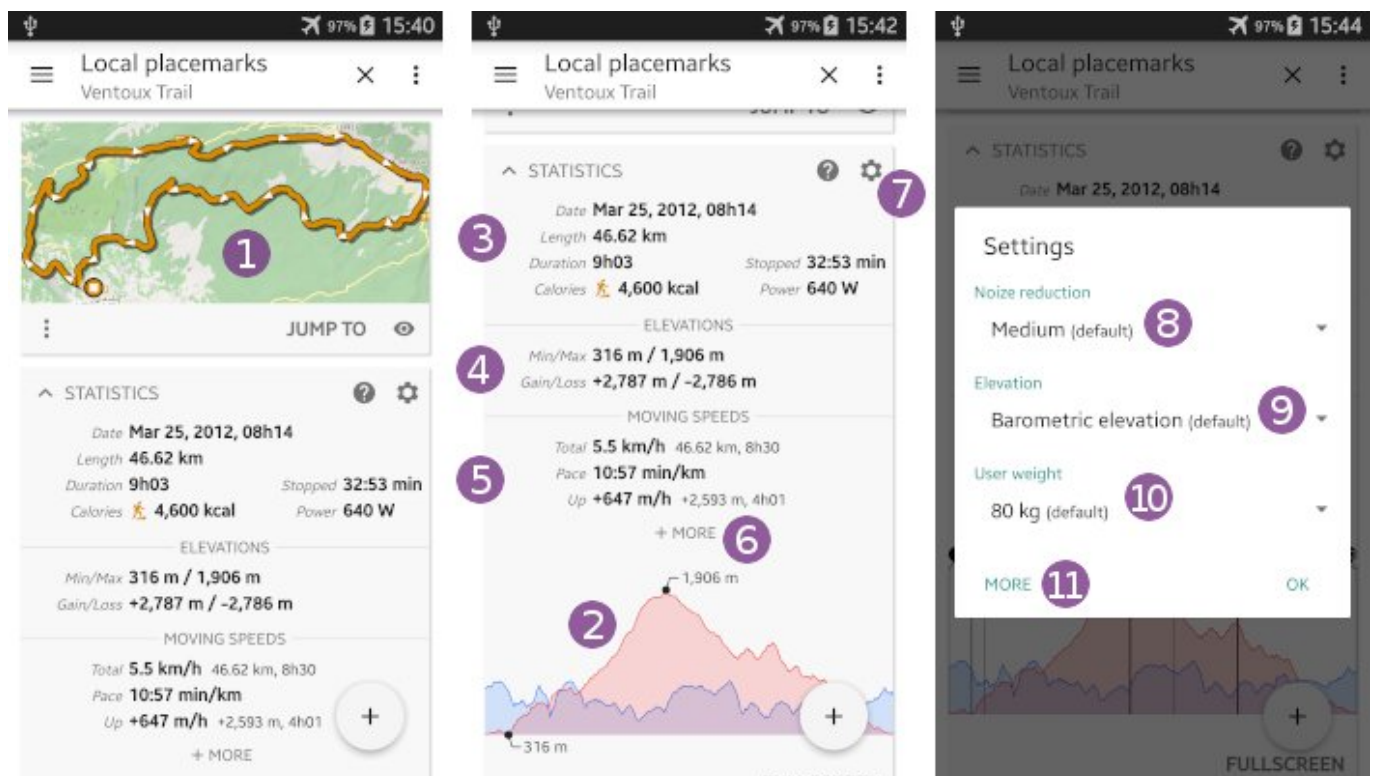
- The overall statistics section **3** contains **"Date"** (the start date and time), **"Length"** (the total length), **"Duration"** (the total time elapsed between the start and the end times), **"Stopped"** (the total time stopped, sum of rest time of all breaks), **"Calories"** (estimation based on the activity, length, speed, inclines and user weight) and **"Power"** (developed effort quantity);
- The elevations section **4** contains **"Min/Max"** (the overall minimum and maximum elevations) and **"Gain/Loss"** (the cumulative elevation gain and loss, see below for more details);
- Moving speeds section **5** (ignores parts with no movement) contains **"Total"** (the total mean speed

while moving, along with the total length and duration while moving), **“Pace”** (the total mean pace while moving) and **“Up”** (the ascent speed, along with the total ascent and duration while going uphill).


 Click on **“More”**  to get even more statistics and details.






In order to change how statistics are computed, tap on the statistics settings icon :

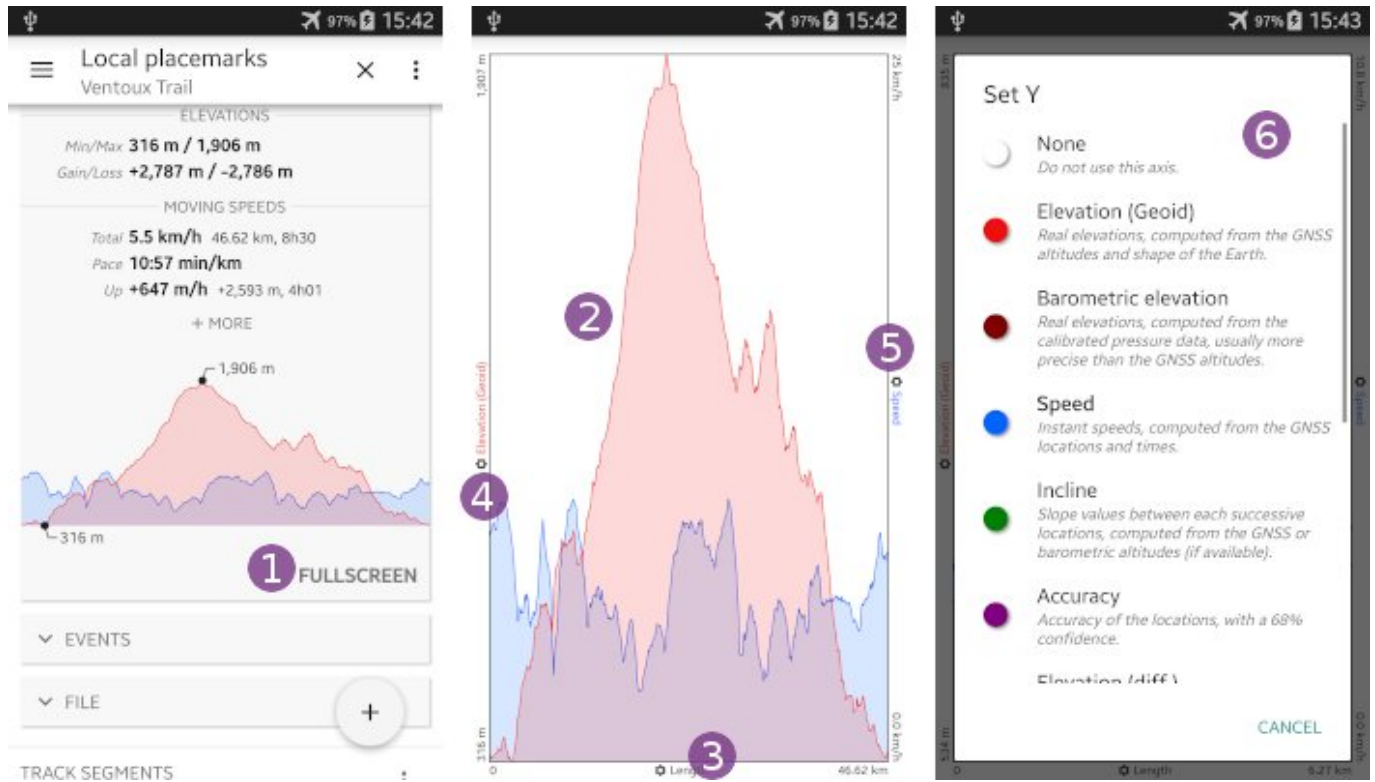
- **“Noise reduction”**  defines how much to filter noises and erroneous values before computing statistics. It mainly impacts the gain computation (see below for more details);
- **“Elevation”**  defines which elevations to use (if there selected elevations are not available, the other type will be used);
- **“User weight”**  defines the weight to use when computing calories, energy and power;
- Tap **“More”**  to change the **“Moving threshold”**, the minimum speed at which the user is considered as moving.



## Graphics

The statistics details page gives a static preview of the elevation and speed profile. In order to get a fullscreen and dynamic version, tap on **“Fullscreen”** . On the fullscreen page, you can:

- Tap anywhere on the profile  to get the exact values at this location;
- Tap on the bottom setting icon  to change the abscissa to **“Length”**, **“Time”**, **“Time (in motion)”** or **“Date”**;
- Tap on left  or right  setting icon to change one of the ordinates. The list of available fields  depends on the data included in the track file.



## Events

The “**Events**” <sup>1</sup> section list various events along the track: pictures and waypoints in blue, breaks in gray, minimum, maximum elevations and maximum speed (in black).

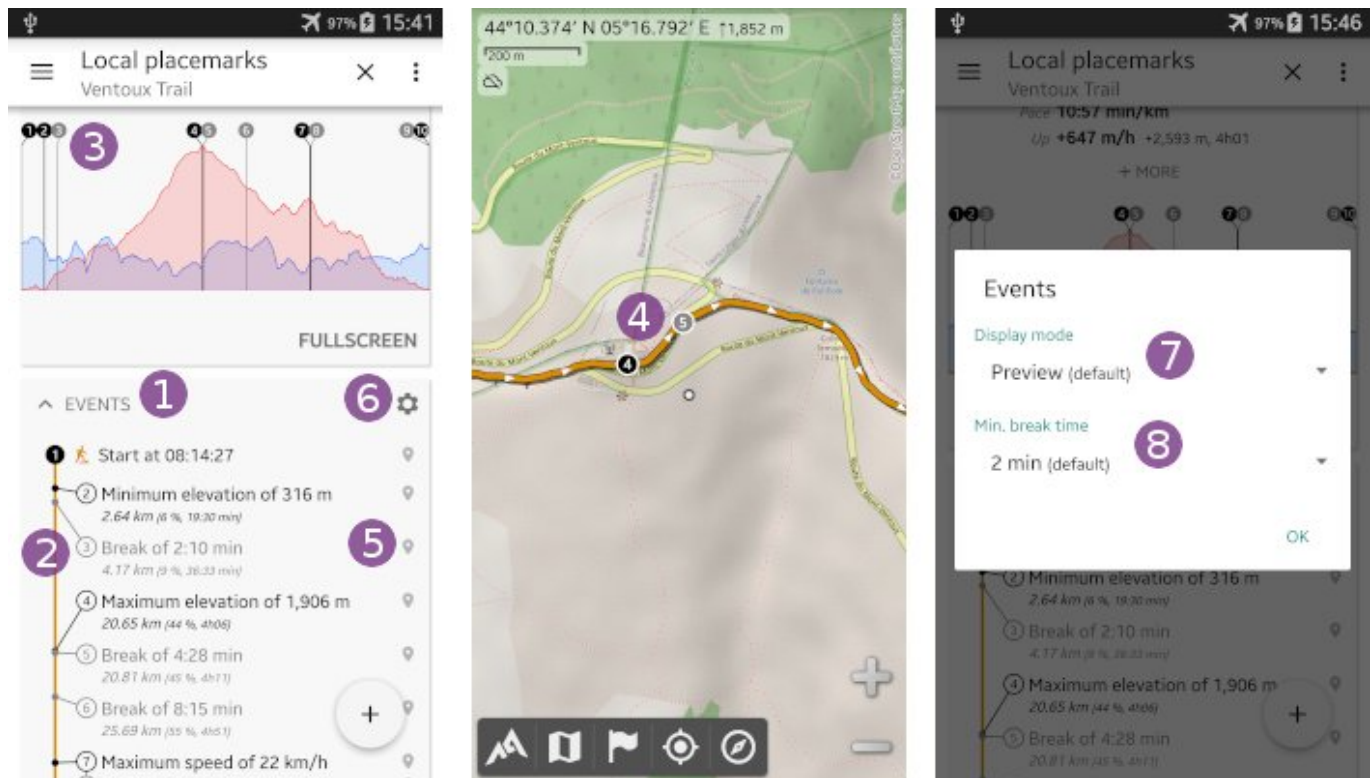
Each event has a unique number which is displayed on the track progress line <sup>2</sup>, on the elevation and speed preview profile <sup>3</sup>, and on the map at higher zoom scales <sup>4</sup>.

<sup>i</sup> Tap on the event location icon <sup>5</sup> to display this event location on the map.

In order to change how events are displayed, tap on the events settings icon <sup>6</sup>:

- “**Display mode**” <sup>7</sup> changes how events are displayed, either “**Preview**” (display all events on a graphical progress line), “**Waypoints**” (only display waypoints on a graphical progress line and ignore times, good for plannings) or “**List**” (display all events as a simple list);
- “**Min. break time**” <sup>8</sup> change the minimum time break events must have to be displayed.





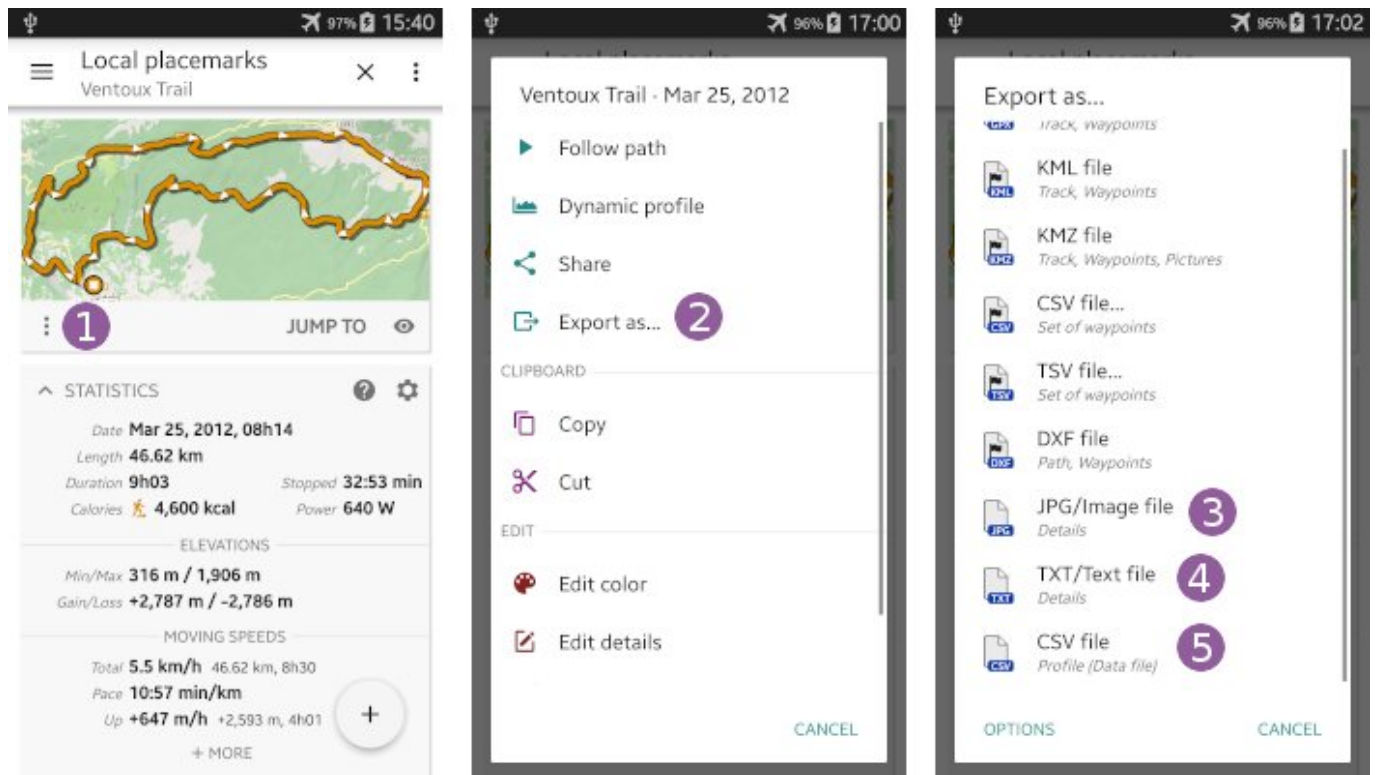
## How to export statistics and graphics data?

You can export the statistics as either an image, a text file, or a data file containing the raw data used to compute statistics and graphics:

- Tap on the menu icon **1** under the track preview;
- Choose **"Export as..."** **2**;
- Choose **"JPG/Image file - Details"** **3** to export the details page as an image;
- Choose **"TXT/Text file - Details"** **4** to export the details page as a text file;
- Choose **"CSV file - Profile (Data file)"** **5** to export the statistics raw data (be careful not to choose **"CSV file - Set of waypoints"**).

**i** After the export, you can easily share/upload the generated file using the **"Share"** button.

**i** See [more details here on how to export placemarks](#).



## Gain and loss computation

The gain is an important value that helps to appreciate the overall profile of a track. A small gain means that the track is mostly flat, a high gain means you'll have to climb a lot.

Strictly speaking,

- The **gain** is the sum of all **positive** altitude differences along the track;
- The **loss** is the sum of all **negative** altitude differences along the track.

In order to compute these values, it's important to define more precisely what means “along the track”.

A first definition would be to only take into account **the altitude differences between mountain passes and summits**. If you start a hike at +150m, climb to a summit at +500m, then go back to your start location at +150m, your gain will be 350m. In practice, trails usually don't go straight forward to the summit, but will go uphill for some time, then downhill a little bit, then uphill again, etc. This first definition doesn't take all these small changes into account, and will then lead to an **under-estimated gain**.

Another definition would then be to take into account **the altitude differences between all the locations that make the track**. Now imagine a track recorded with a GPS along the sea. The GPS, having an imperfect accuracy, will record altitudes of [+1m, +2m, 0m, +1m, -1m, +2m, ...]. With this small segment of 6 locations, we have a gain of +5m. With a track of 1000 locations, it would lead to a gain of more than +800m which is a very **over-estimated gain**, since the track is along a flat shoreline and should have no gain.

At then end, the “perfect” gain definition would be something between these two ones. In order to compute the best gain approximation, the application will first remove noises from the track (including the GPS inaccuracy) to create a smoother altitude profile, and then compute the gain based on each location altitudes.

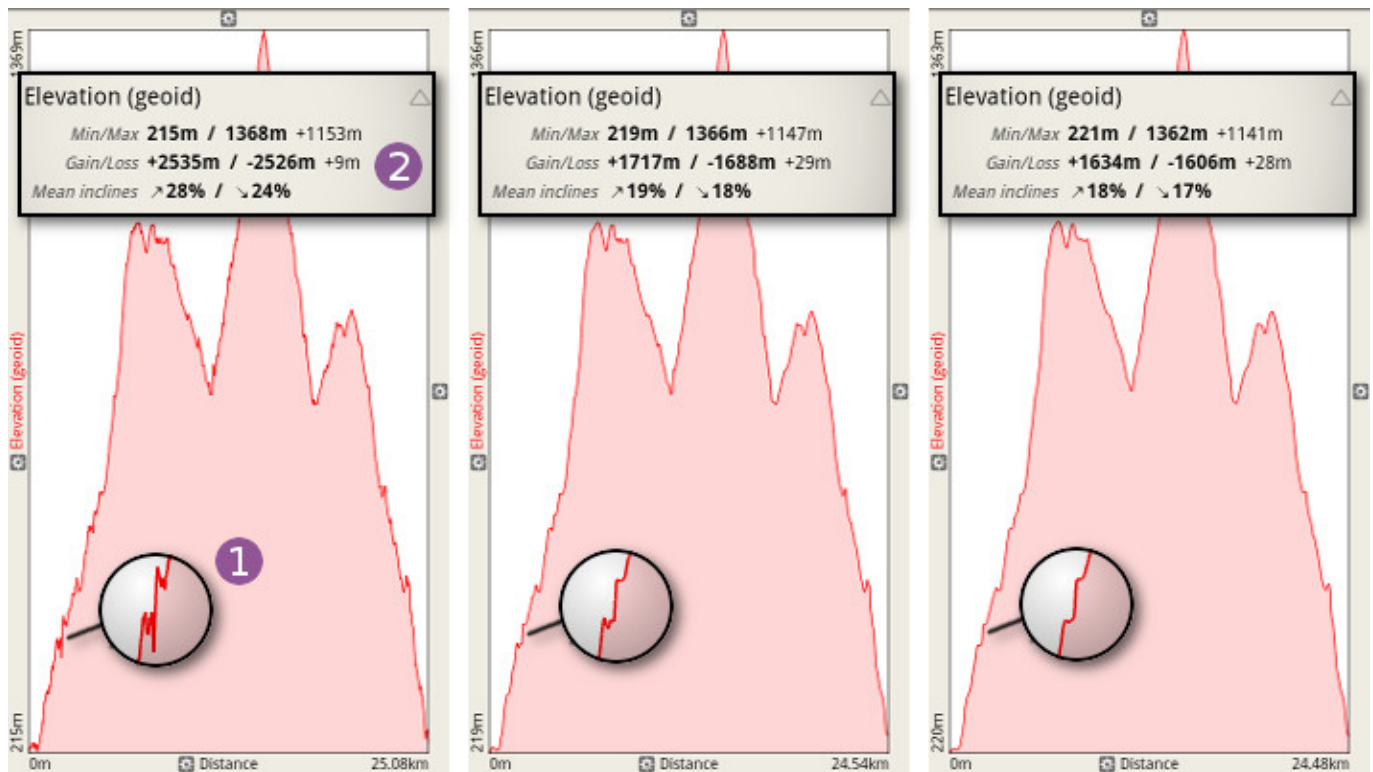


You can disable or increase the noise reduction amount in the statistics settings (see above).

Here is the effect of the noise reduction on a track profile and gain computation:

- On the left, the noise reduction is disabled. The profile displays the unmodified jagged and spiky altitudes **1** (mostly due to the GPS inaccuracies), resulting in a high gain value **2** (+2535m);
- In the middle, the noise reduction is on “**medium**”, which is the default setting. Most noises are removed, resulting in a much smaller and less polluted gain value (+1717m);
- On the right, the noise reduction is on “**big**”. The profile smooth, with minors altitude changes lost, resulting in an even smaller gain value (+1634m).

**i** The first gain definition given above, gives an approximate under-estimation value of +1600m for this same track.



# How to automatically draw a path along roads?

The application allows you to automatically draw a path between two points that follows the shortest way along existing roads and paths.

The application uses by default an online service that does not require any setup, but it can also use the [BRouter](#) application offline service in order to generate the paths completely offline.

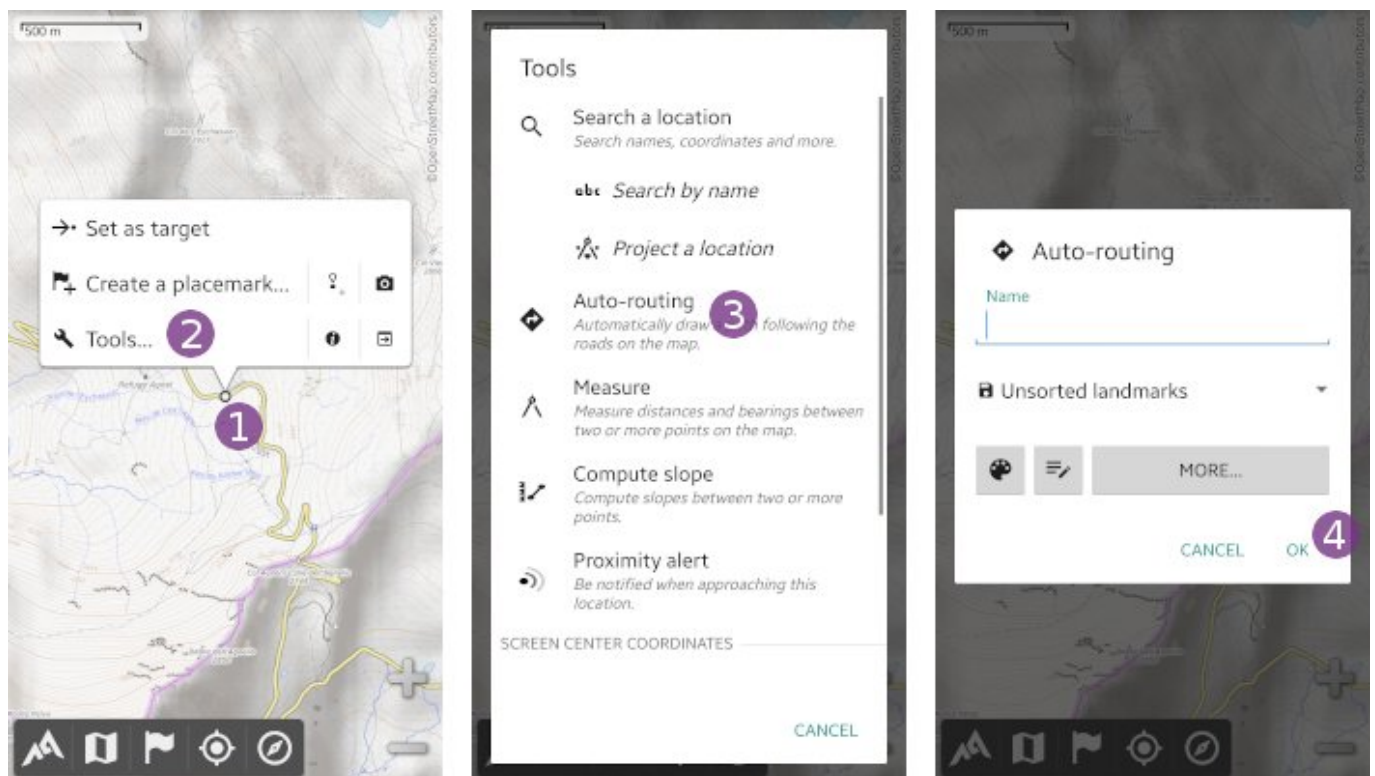
## Using an online routing service

This option uses an online service, so requires an Internet data access to work (either WiFi or mobile network).

**i** The auto-routing feature doesn't depend on the map currently displayed. It may use the Google routing service even if an OpenStreetMap based map is displayed.

To create an auto-routing:

- Move the map center icon over the start location and tap it **1**;
- Tap **"Tools..."** **2**;
- Choose **"Auto-routing"** **3**;
- If you want, choose a name for your path and the location where it's saved, and tap **"Ok"** **4**.



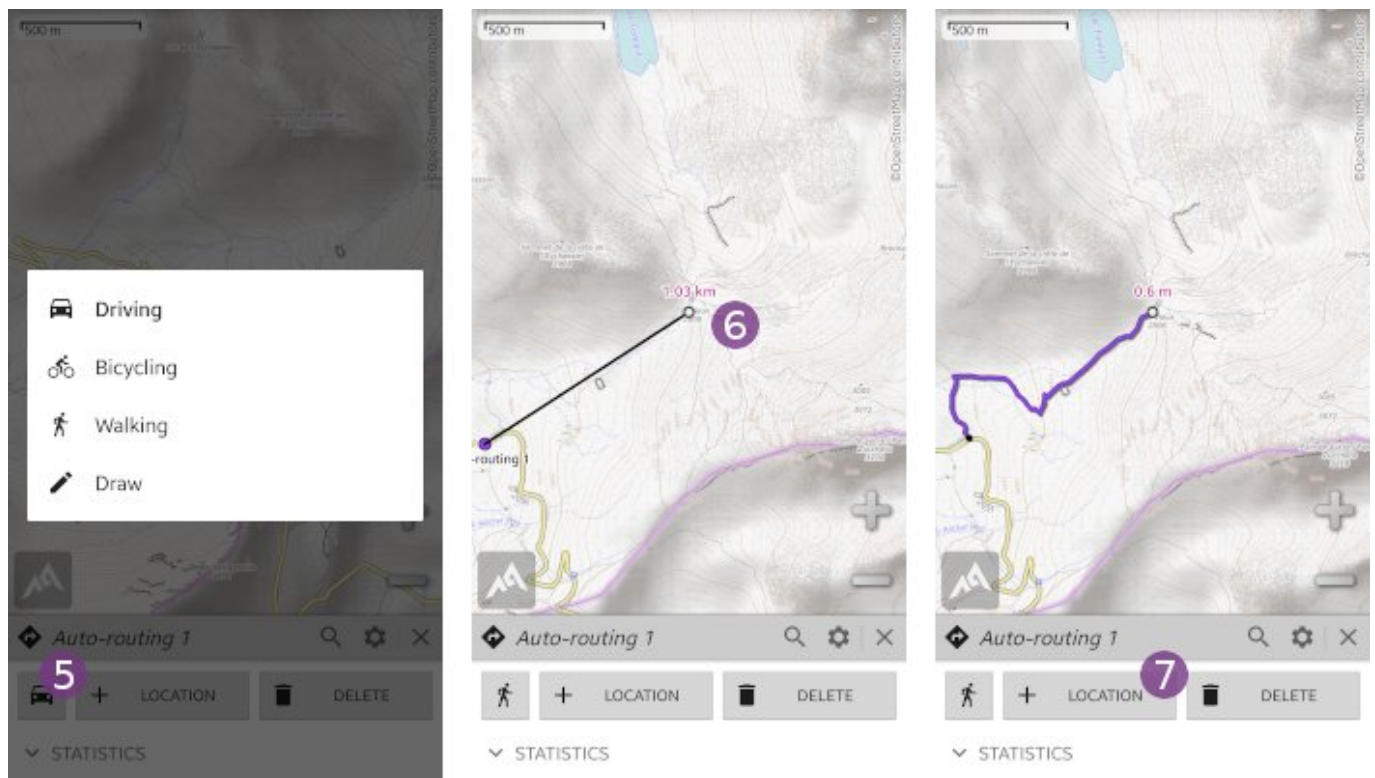
By default, the transportation mode is by car, so the path will only follow roads. In order to select another transportation mode, tap the transportation mode icon **5**, and choose **"Walking"** for example. Using this

mode, the path may also follow hiking trails.

- Move the map center icon over the destination location **6** and tap **“+ Location” 7** to start the computation of the path between the start and destination locations.

**i** Depending the path length and server load, this computation can take a few seconds. The auto-routing service may have disruption and not working properly during some periods and will result in a straight line between the start and destination locations. In this case, please try again later.

Once the path has been computed, it's displayed on the map.



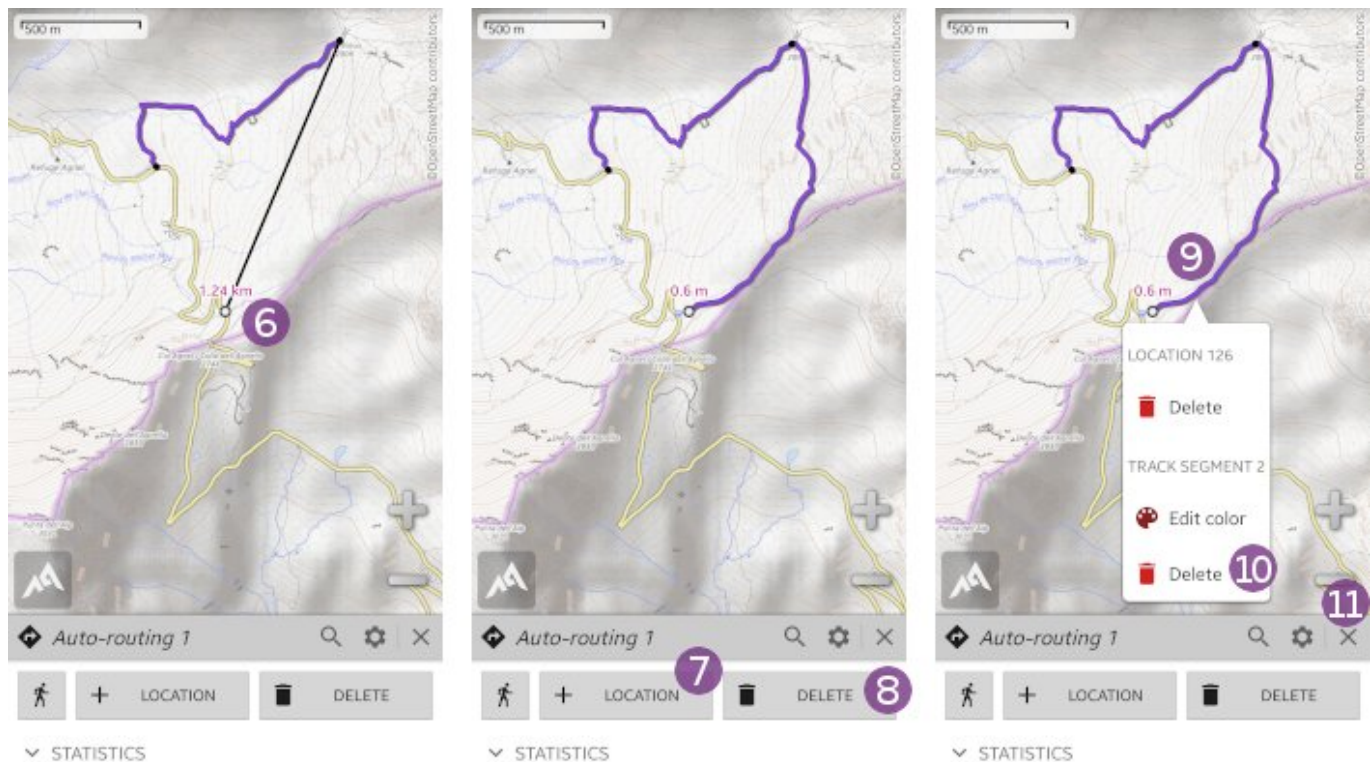
If you want, you can move the map center icon over a new location **6** and tap **“+ Location” 7** again to compute another path segment that will be appended to the previous path.

If you are not happy with the generated path, you can:

- Delete the last locations of the path by tapping **“Delete” 8** a few times;
- Delete an entire path segment by tapping anywhere on the path segment to delete **9** and tapping on **“Delete” 10** under the **“Track segment”** title.

When you're done, tap the **“Close” 11** icon. The path will be saved on your device and will remain displayed on the map.

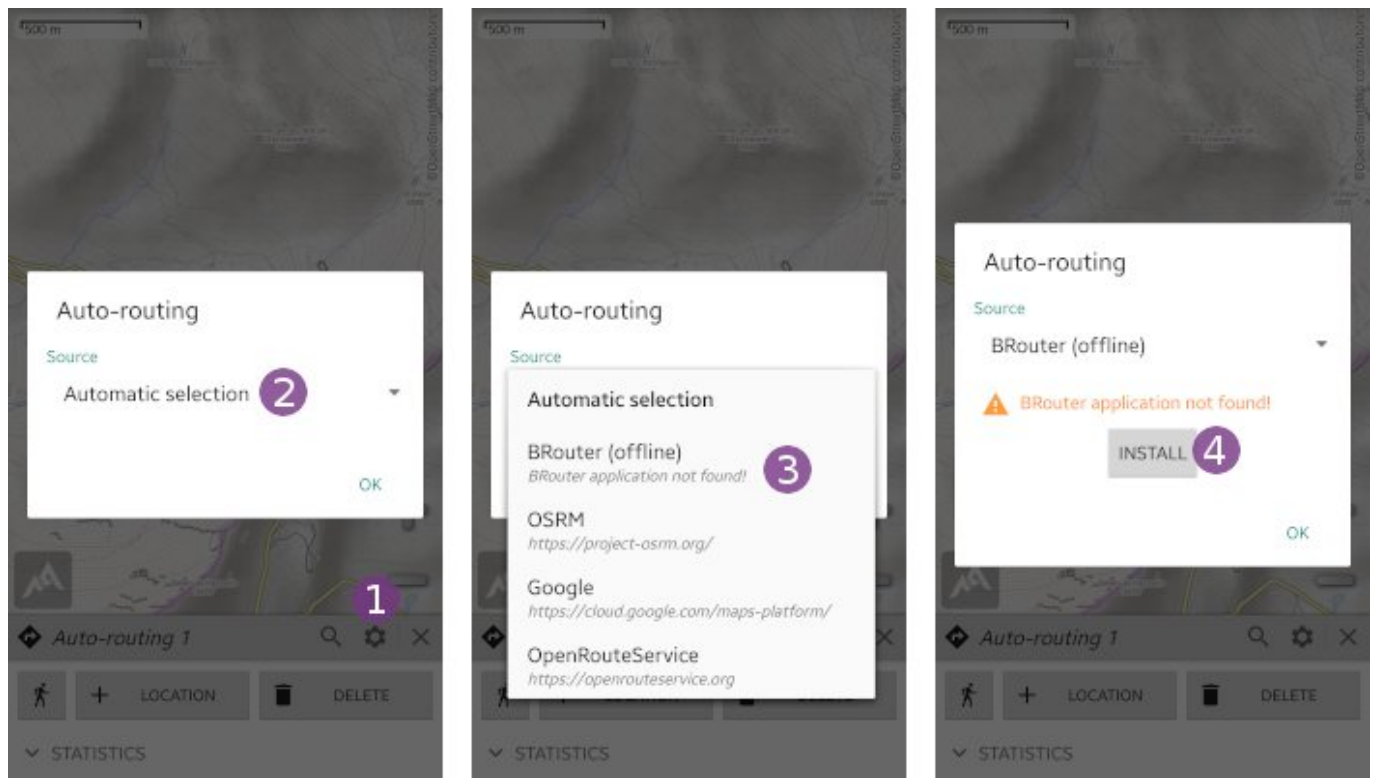




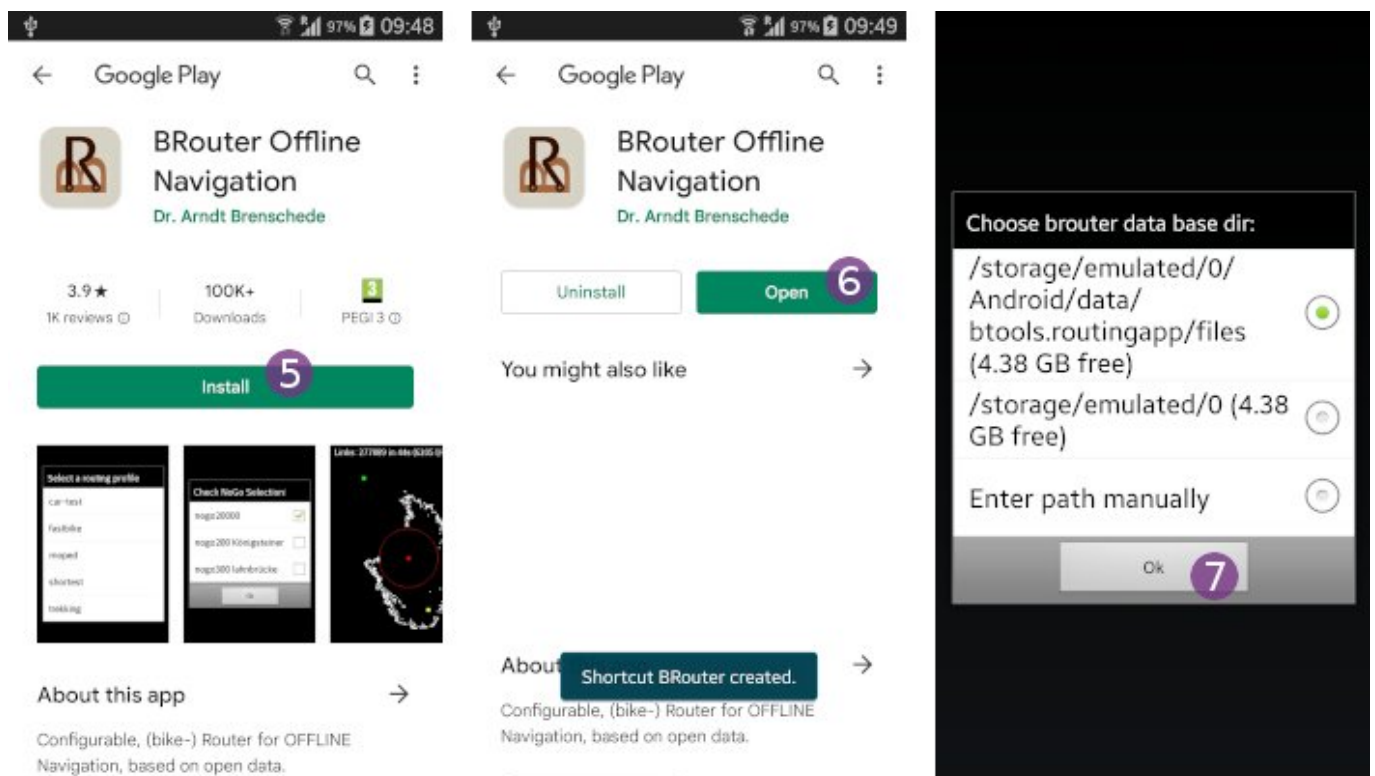
## Using the BRouter offline service

This option uses the external BRouter application that must be installed and correctly setup on your device. This tutorial will help you with all these steps:

- In the auto-routing creator (see above how to display it), tap the “**Settings**” **1** icon and on the “**Source**” **2** drop-down list;
- Select “**BRouter (offline)**” **3**;
- If the BRouter application is not installed on your device, a warning message will be displayed. Tap “**Install**” **4** to open the BRouter installation page on the Google Play Store. If you don't have access to the Google Play Store, you can download and install BRouter from the [BRouter website](#).



- In the BRouter installation page on the Google Play Store, tap “**Install**” (5);
- Wait for BRouter to be downloaded and installed, then tap “**Open**” (6);
- The first time you open BRouter, you'll be asked where to store the routing data needed to generate the offline routings. Leave the choice selected by default and tap “**Ok**” (7).



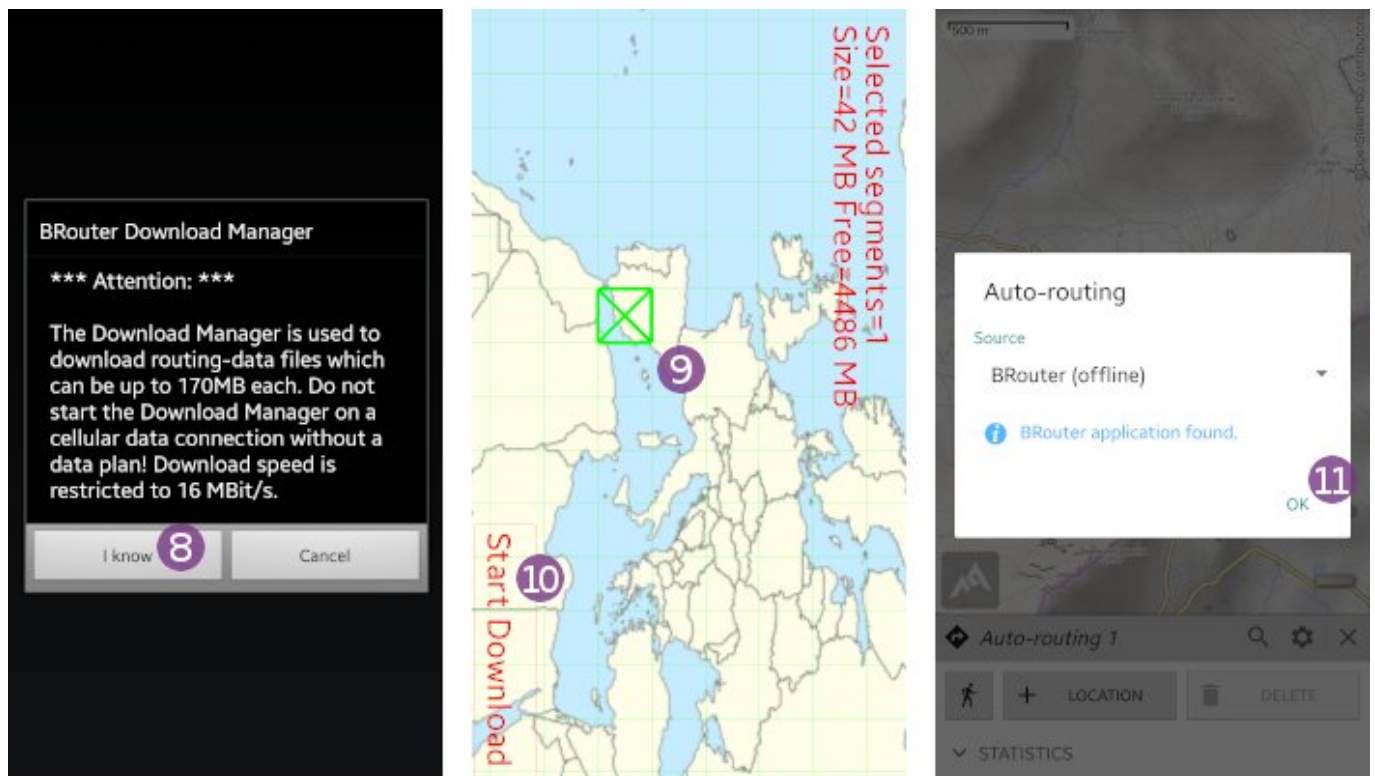
The BRouter download manager will be start, and explain that large amount of data may be downloaded depending on the areas you want to save for offline use. In order to generate offline routings in a specific area, BRouter needs the routing data of that area stored on your device. This data is not related in any way to the

map data you may have already stored to display maps offline, and is relatively much smaller in size.

- Now that you know, tap “**I know**” **8**;
- A map of the world will be displayed. Tap once on the approximate location you want to download routing data, then once again to select the exact areas to store **9** that will be displayed in green;
- Once you've selected all the areas you need, tap “**Start download**” **10**.

**i** The download process may take some time depending on the areas you've selected.

When the download is finished, tap the return button of your device to exit BRouter and return to the application. Tap the “**Settings**” wheel icon again, you should now see a message telling you that BRouter is correctly found. Tap “**Ok**” **11**, and start drawing auto-routings as explained in the first section of this page.



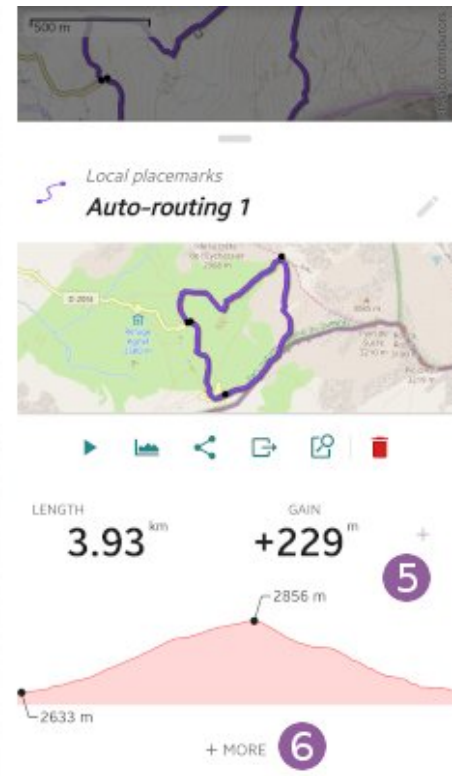
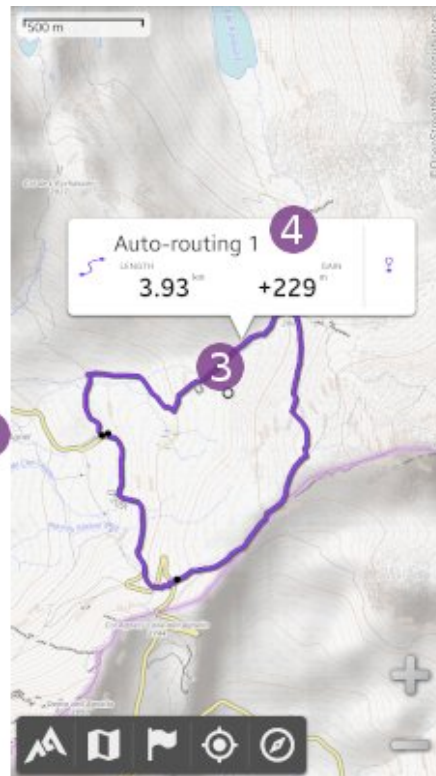
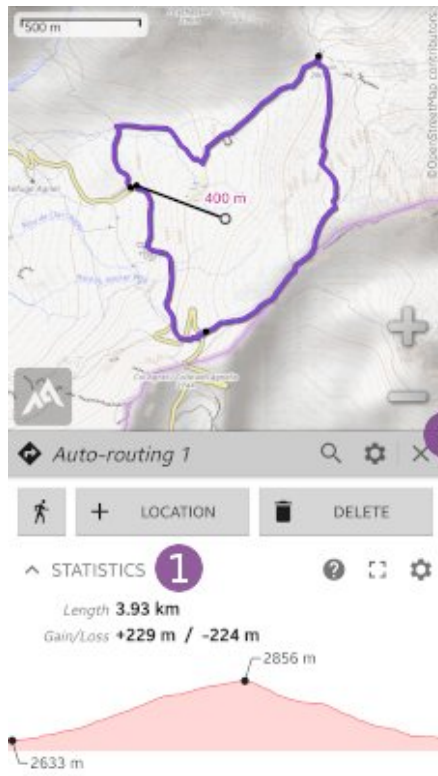
## How to get information on automatically drawn paths?

You can get basic statistics while creating your path, directly in the auto-routing side view. Just tap on the “**Statistics**” title **1** to display or hide the statistics panel.

If you have the [elevation feature](#) activated, the elevation profile will also be displayed.

**i** When using the offline BRouter auto-routing service, the application uses the elevations it provides. All other services don't provide elevations, so the application uses its own elevation data.

After closing the auto-routing side view by tapping on the close icon **2**, you can still get the statistics of the track by tapping anywhere on it **3**, then on its title popup **4**. Basic statistics are given in the displayed placemark menu **5**, tap “**+ More**” **6** to get [the full statistics](#).



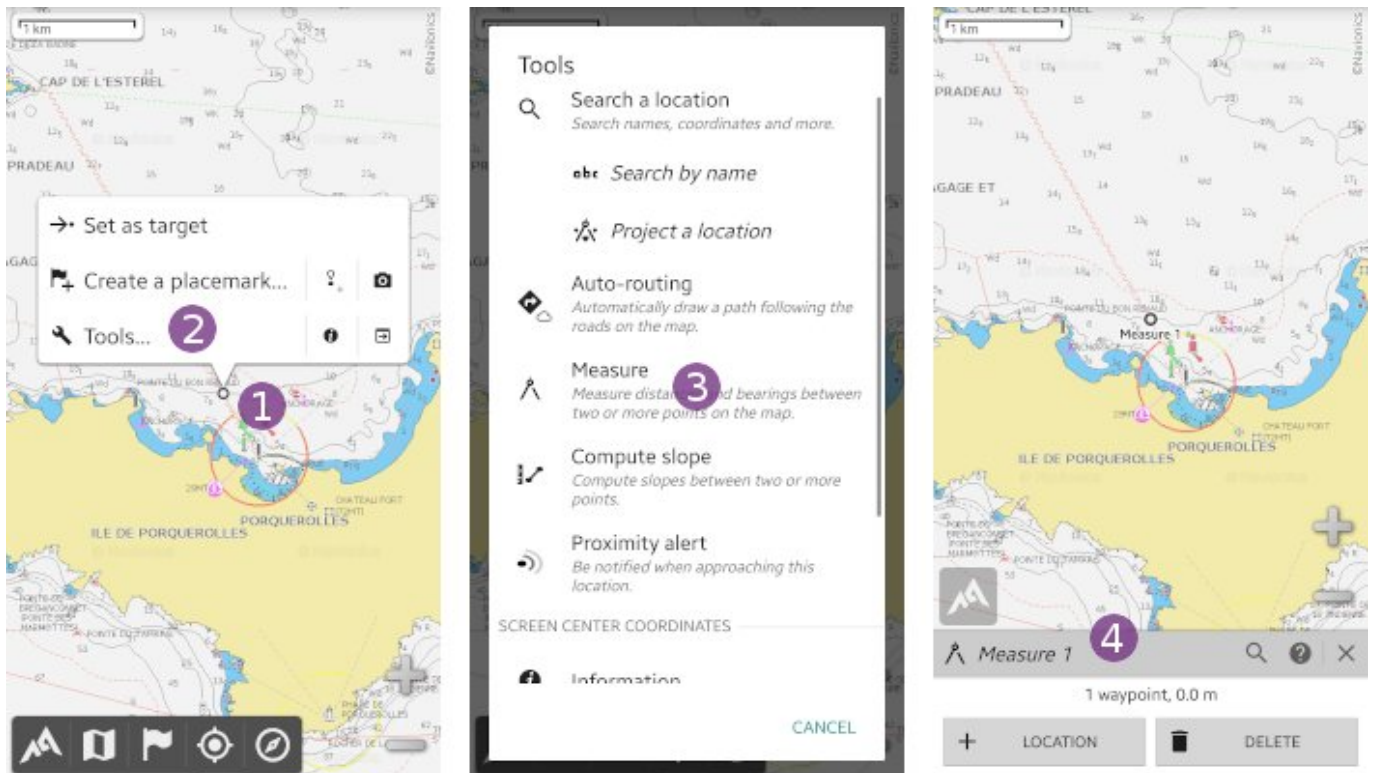


# How to measure distances and bearings?

To compute distances and bearings between any locations:

- Move the screen center over the initial location and tap it **1**;
- Tap on **"Tools..."** **2** and on **"Measure"** **3**.

The **"Measure tool"** **4** side-view is displayed.



When you move the map center over any other location, the distance and bearing from the initial location to the screen center is previewed **5**.

- Tap **"Location"** **6** to set a destination location. You can repeat this process for any number of locations;
- To move over a particular location using its coordinates, you can use the **"Search"** **7** tool;
- If you want to delete the last location, tap **"Delete"** **8**;
- When you've done, tap on the **"Close"** **9** icon to save your measure and close the measure tool.

Your measures remain displayed on the map **10** until you manually remove them or delete them.



**i** Lines between measured locations are colored depending on the bearing: red when going north, blue when going south.













# Proximity alerts

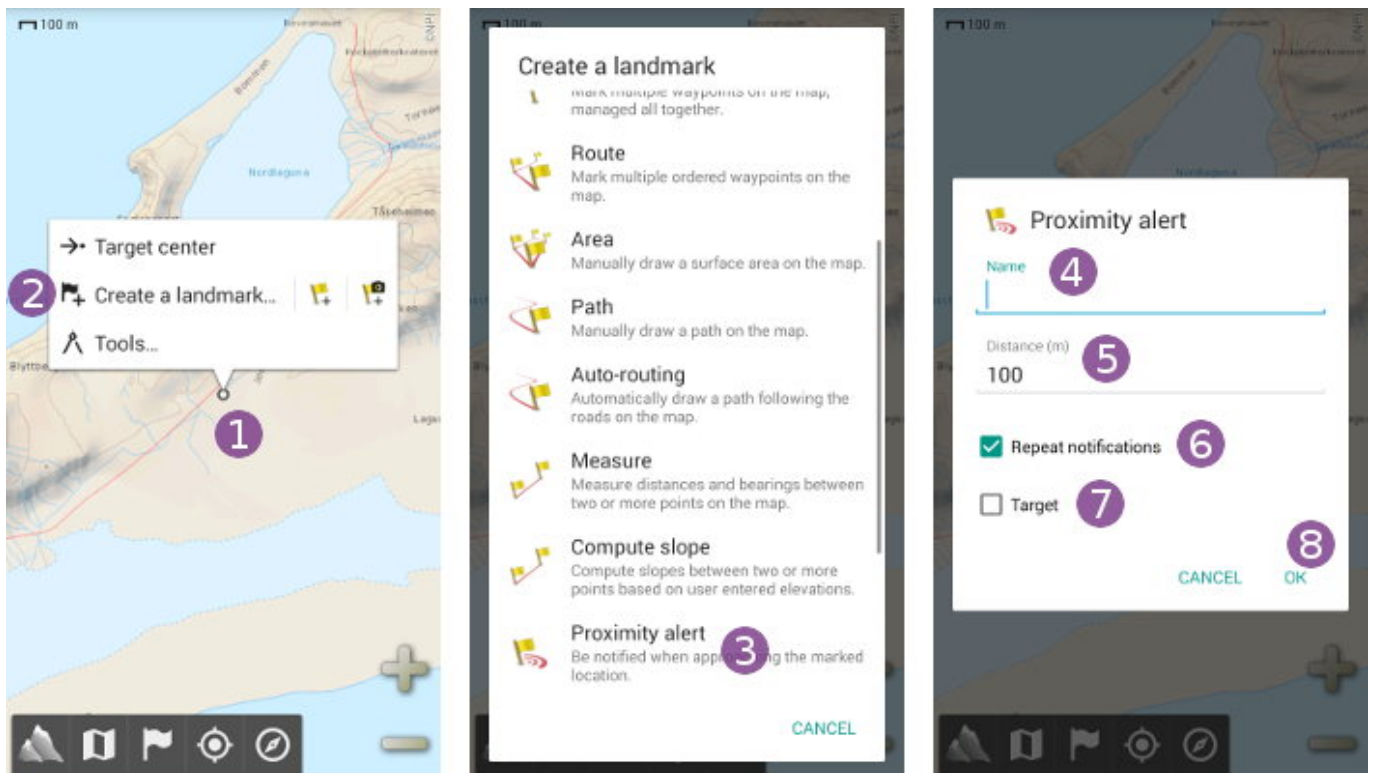
Proximity alerts allow you to be automatically warned by the application if you go close enough to a location.


-  The GPS positioning must be available and turned on to use this feature.
-  You can completely close the application while using this feature, notification sounds will still be played. Be careful to leave your device access the open sky so the GPS can get your precise location and the process work properly.

## How to create a proximity alert?

To create a proximity alert:

- Tap on the center screen icon  and on **"Create a placemark"** .
- Scroll down the list and select **"Proximity alert"** .
- Optionally, type a name for the alert in the **"Name"** field .
- Choose a distance at which you'll start to be notified in the **"Distance"** field .
- If you want the application to repeat identical notifications every few seconds, check **"Repeat notifications"** .
- If you want to set this new proximity alert as the current target, check **"Set as target"** .
- Tap on **"Ok"**  to validate.



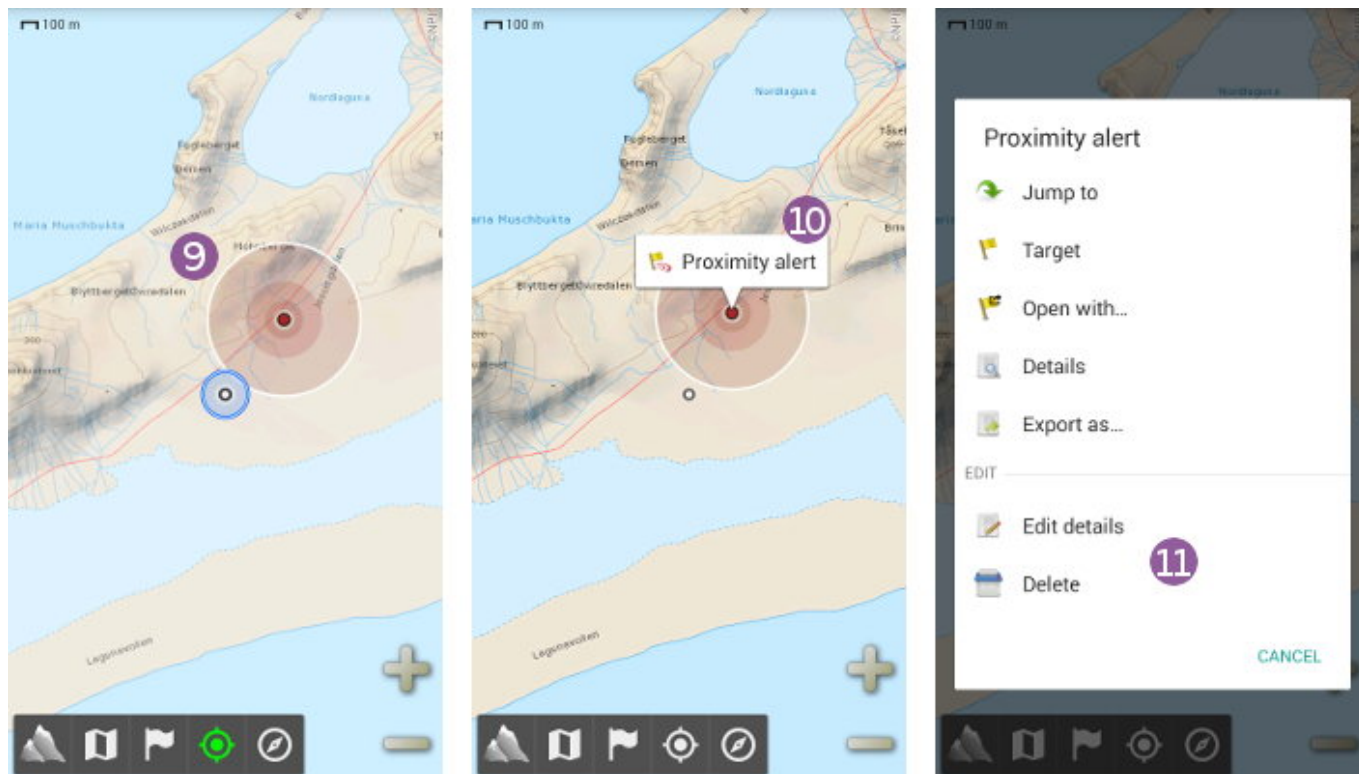
The GPS positioning is turned on and the proximity alert displayed on the map . Various shades of

transparency indicate the 1/4, 1/2 and 1/1 notification distances from the alert center location.

## How to modify or delete a proximity alert?

To modify or delete a proximity alert:

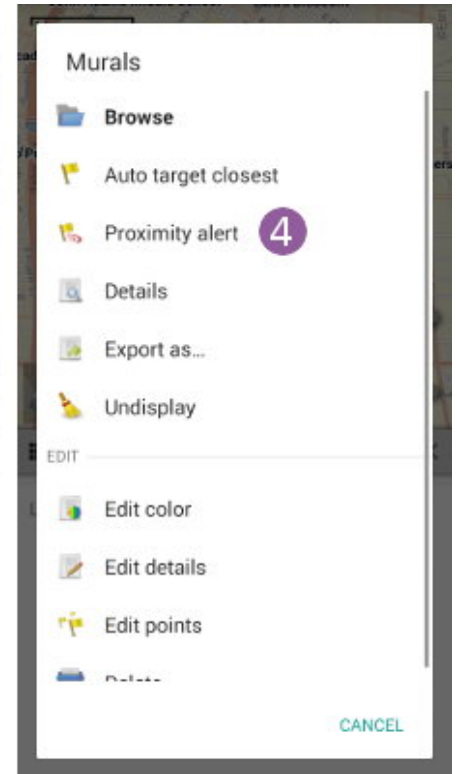
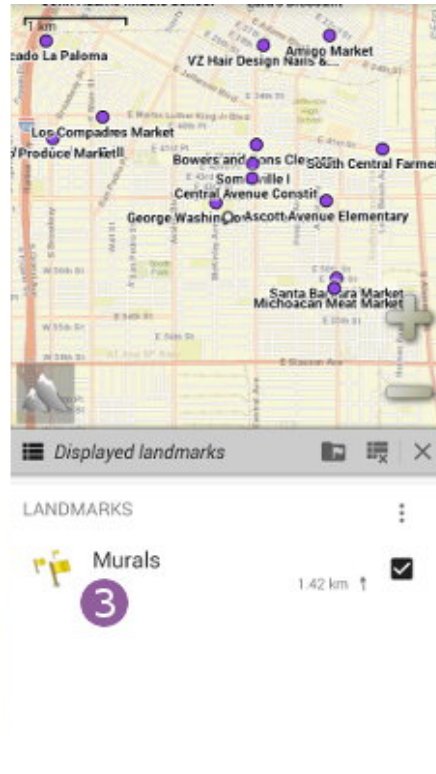
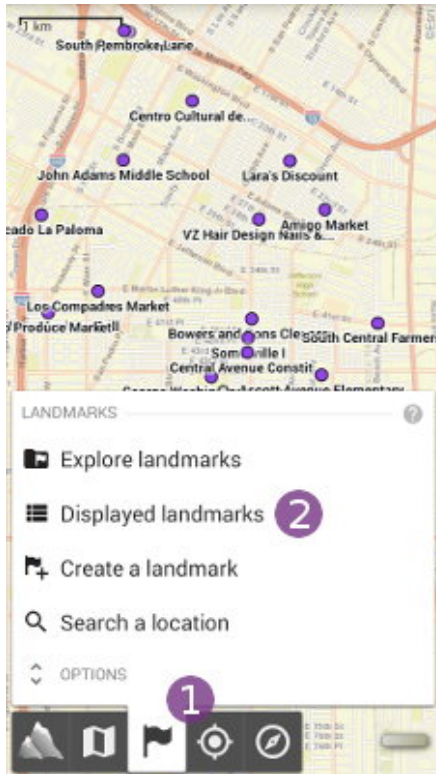
- Tap on the proximity alert center location and on its name **10**;
- Select **“Edit details”** **11** to modify the proximity alert or **“Delete”** **11** to delete it.



## How to create proximity alerts from an existing set of waypoints?

To create proximity alerts from a set of waypoints, be sure this one is displayed on the map. Then:

- Tap on the **“Placemarks”** **1** menu icon and on **“Displayed placemarks”** **2**;
- Tap on the set icon **3** or long-tap on its name;
- Select **“Proximity alert”** **4**.



## Notification signals when approaching an alert location

As soon as you enter a location alert circle, the application will play sound notifications to help you find your way to the location without handling your device:

- When going towards the location, while being in the external circle area (from 1/1 to 1/2 of the alert distance), the application will play one (1) **“good way”** beep;
- When going towards the location, while being in the middle circle area (from 1/2 to 1/4 of the alert distance), the application will play two (2) **“good way”** beeps;
- When going towards the location, while being in the center circle area (closer then 1/4 of the alert distance), the application will play three (3) **“good way”** beeps;
- When going away from the alert location, the application will play one (1) **“wrong way”** beep;
- When going out of the alert distance circle, the application will play two (2) **“wrong way”** beeps and then stop sounds.

 The application repeats the sounds approximately every 3 seconds.



# Proximity alerts troubleshooting

**If you don't see a constant notification in the Android status bar**, be sure that:

- At least one proximity alert is displayed on the map;
- The GPS is activated in the Android settings;
- You've granted the application to use the GPS (asked when you first start the application);
- The GPS positioning is activated in the application.

**If you don't hear alert sounds**, be sure that:

- The proximity alerts notification is displayed in the Android status bar (see above);
- The notifications have not been disabled for the application (see [here how to disable](#), be sure to do the opposite);
- The notification volume is high enough. Depending on the Android version you use, it can be called "Notification", "Alerts" or "Alarms" volume (see below);
- You're currently inside a proximity alert range, otherwise no sounds are played.



# How to import and export placemarks?

The import and export placemarks support allows you to import placemarks (waypoints, tracks, routes, etc.) from various files created by external softwares, or export them for external use.

Due to the vast number of existing formats and important differences among them, the application will need to import them in its own optimized format before displaying or modifying them, this is the import process. In order to use them again in an external application, you'll need to export them in the desired format, this is the export process.

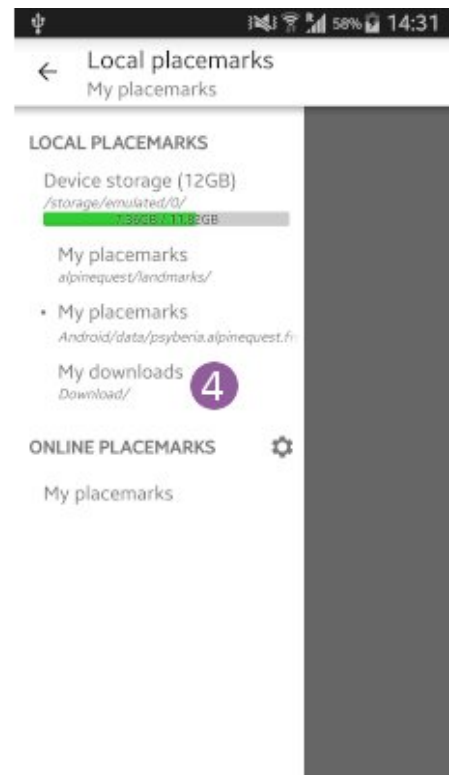
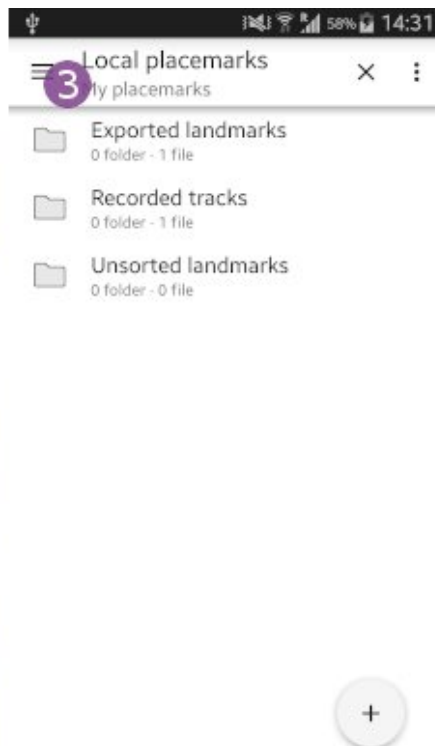
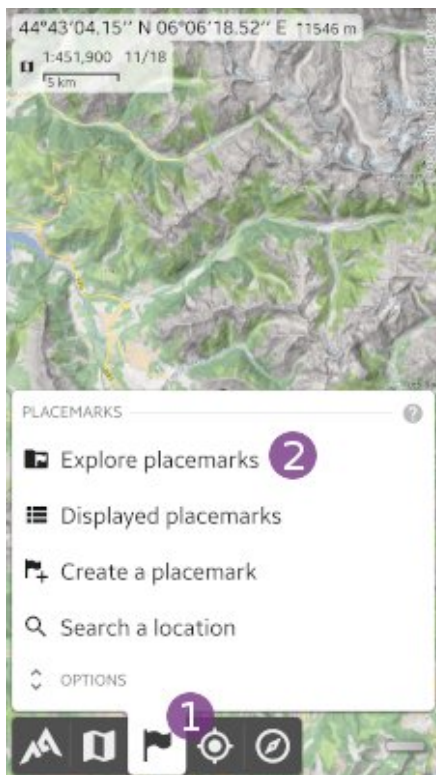
## Which placemark file formats are supported by the application?

The complete list of file formats than can be imported or exported [is available here](#).

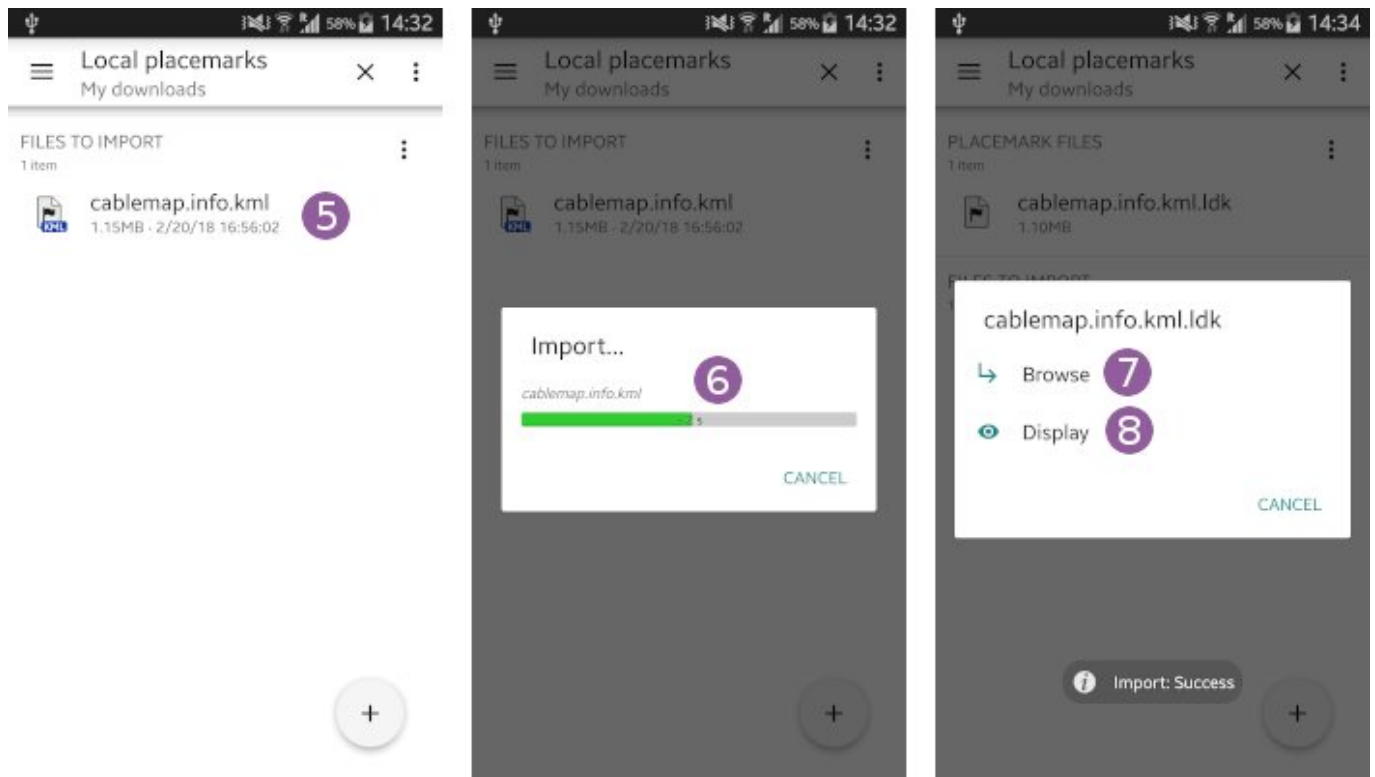
## How to import placemarks?

To import placemarks from external files:

- Tap on the **“Placemarks”** <sup>1</sup> menu icon and on **“Explore placemarks”** <sup>2</sup>. The default placemark folder is listed;
- Select the folder in which the file to import is located. If needed, tap on the top left menu <sup>3</sup> to list the main folders of your device. For example, tap on **“My downloads”** <sup>4</sup>.



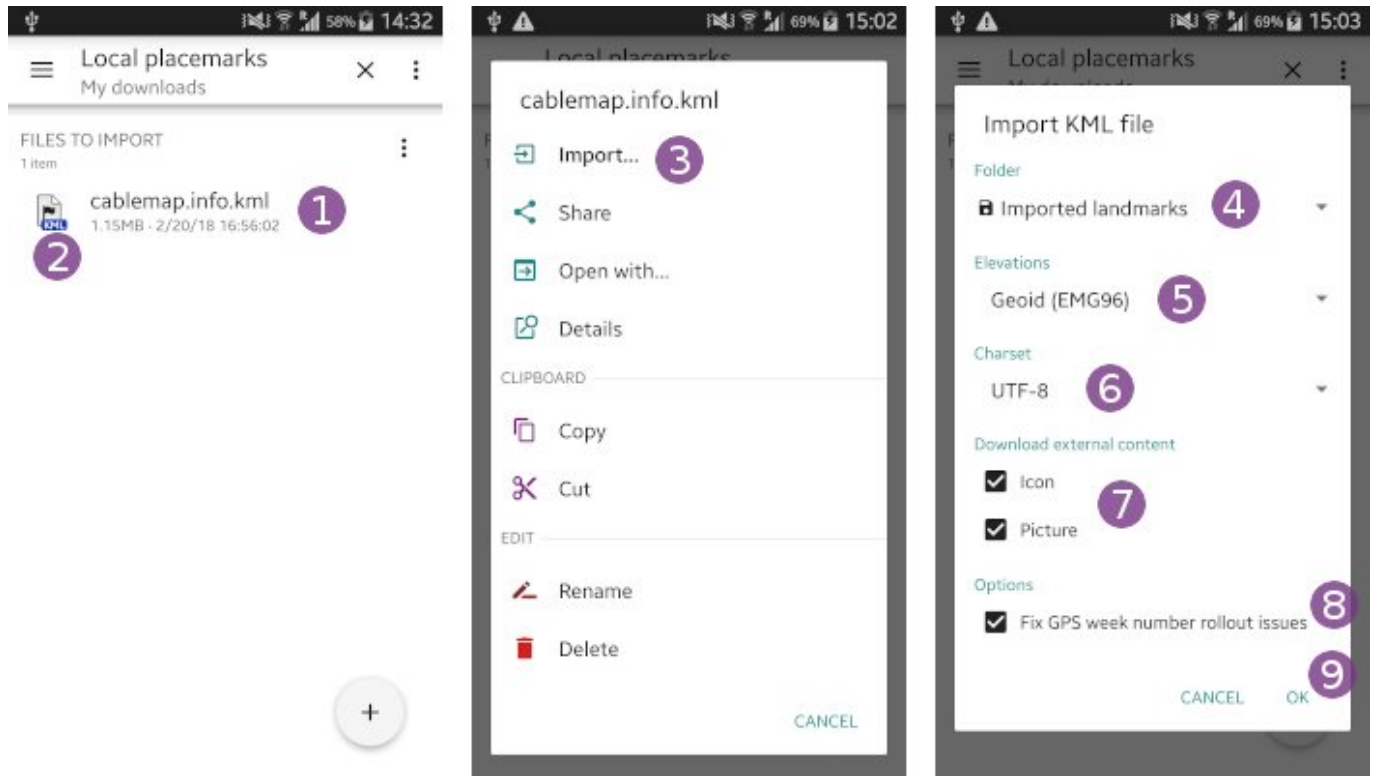
- Once the file to import is displayed **5**, tap on it to start the import;
- Wait some time **6** for the file to be imported (which depends on the file size);
- When the file is imported, you can either:
  - Tap **“Browse”** **7** to list the content of the imported file, for example to display only few items;
  - Tap **“Display”** **8** to display the entire file content on the map.



## Import with options

By default, the application will import files to the import folder and use the device charset. In order to choose something different:

- Long-press the file to import **1** or tap on its icon **2**;
- Tap **“Import...”** **3**;
- If needed, change the import **“Folder”** **4** to choose the current one;
- If needed, change the **“Elevations”** **5** to choose the unit used in the file (either **“None”** to ignore elevations from the file, **“WGS84”** to import GPS (WGS84) elevations, or **“EGM96”** to import geoid (EGM96) elevations);
- If needed, change the **“Charset”** **6** to choose the one of the file;
- If needed, select the items to also download and import from Internet **7**;
- If needed, check **“Fix GPS week number rollout issues”** **8** to automatically correct the [GPS week number rollover](#) error;
- Tap **“Ok”** **9** to start the import using the chosen settings.

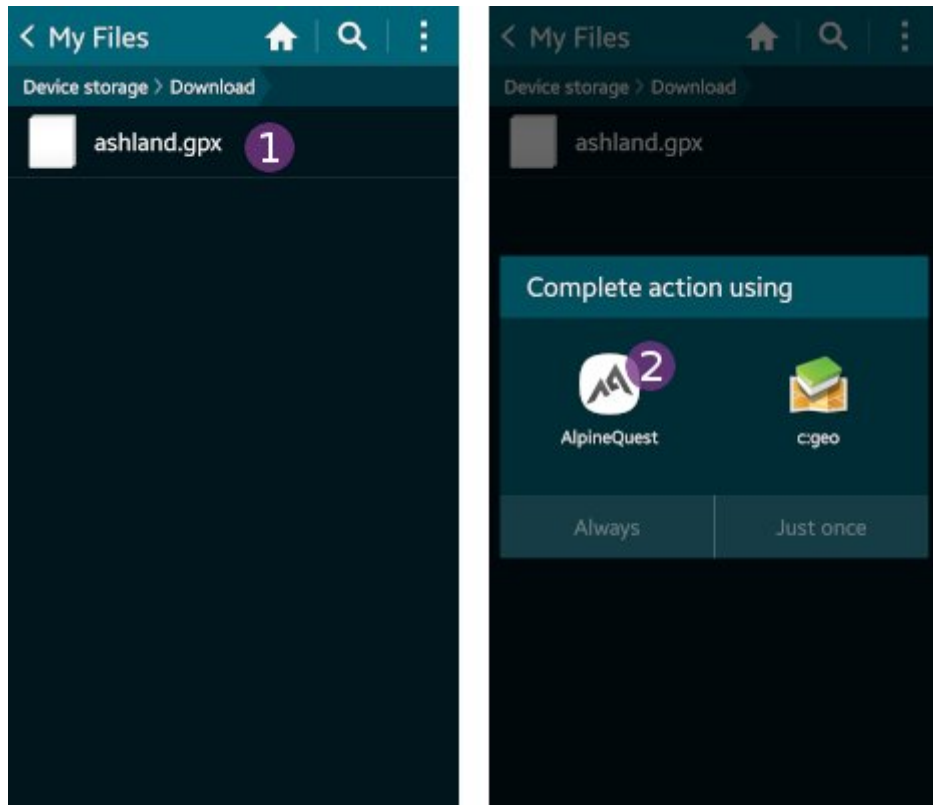


## Import from an external file manager

You can also import placemarks from any file manager:

- Open your file manager and browse to the folder where is saved the placemarks file to import;
- Tap on the file to import **1**;
- Your file manager will display a list of all installed applications able to deal with this kind of file;
- Tap on the application icon **2** to start the import process.



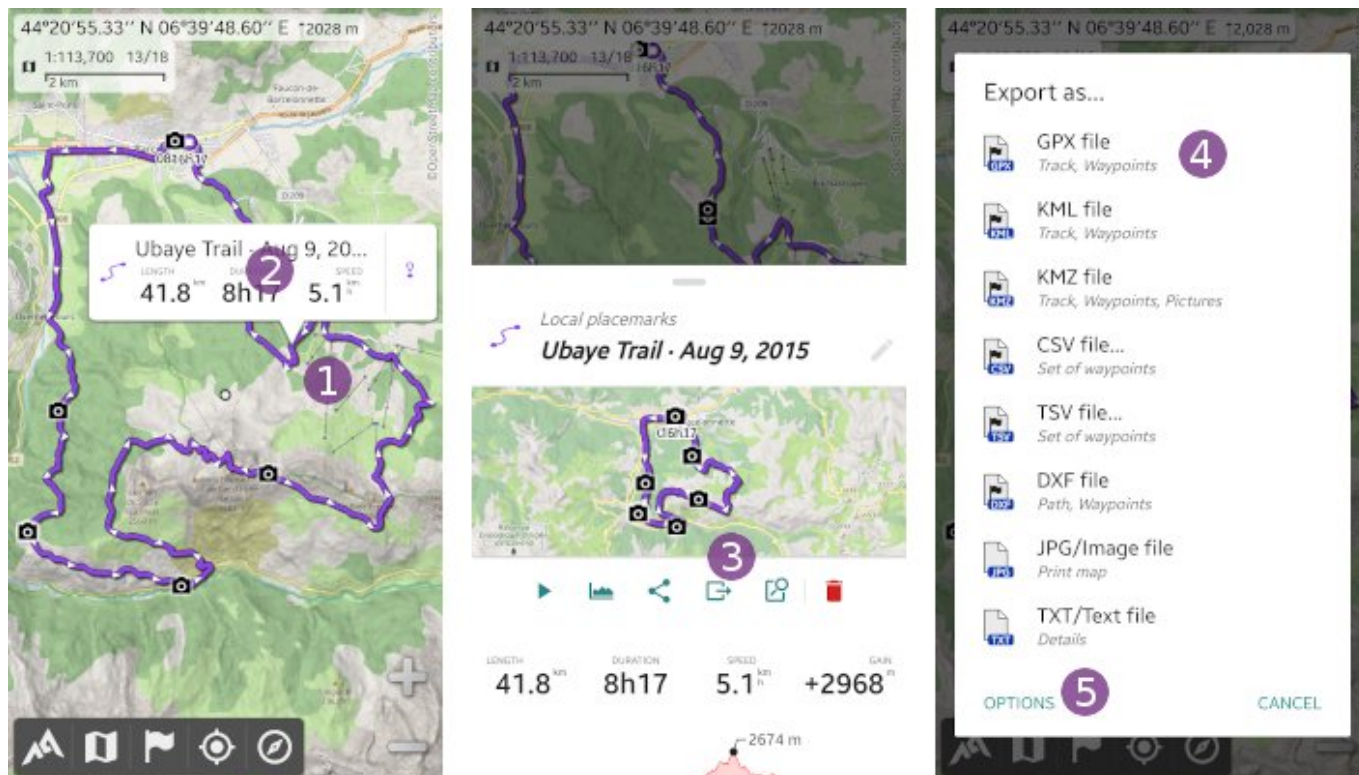


## How to export placemarks?

To export a placemark in another format and use it in an external application:

- Tap on a displayed placemark on the map (for example a track) ① and on its name ②;
- In the item bottom menu, tap on the **“Export as...”** ③ shortcut icon.

In the list of available export formats, choose the one that best fits the external application you want to use, for example **“GPX file”** ④ which offers a great compatibility, or **“KMZ file”** if you want to export some pictures within the file.



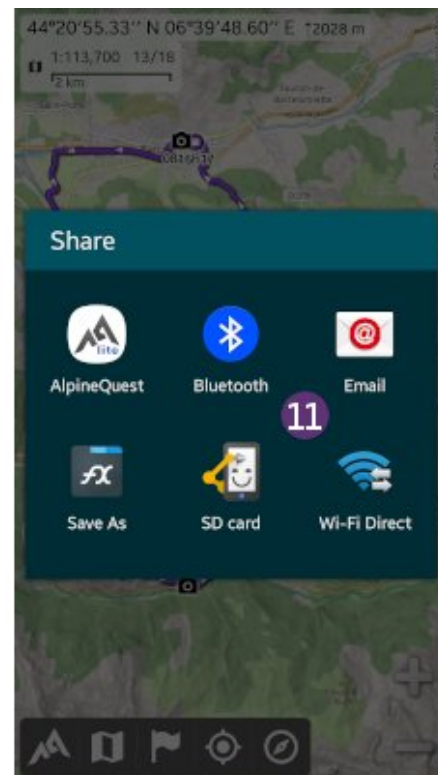
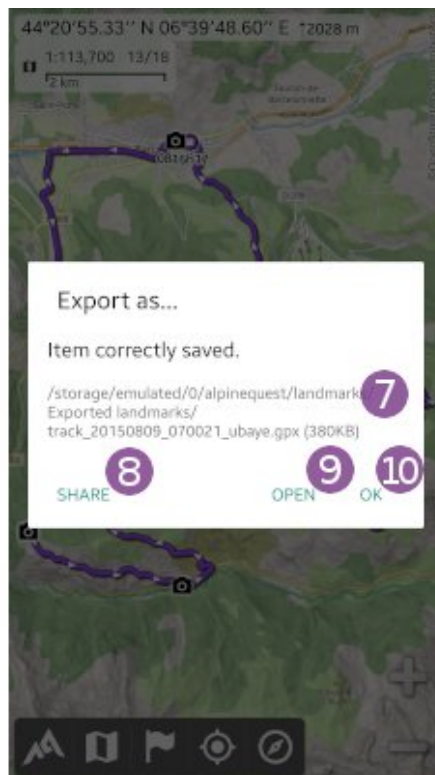
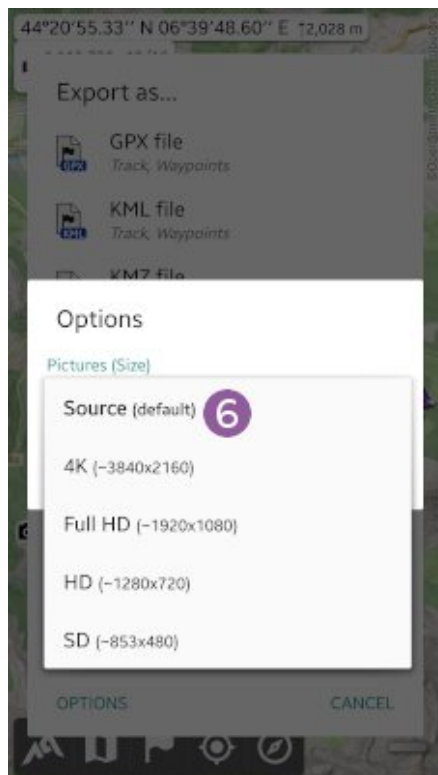
**i** By default, pictures are exported in KMZ files with the original quality and size of your camera, which can result in very large exported files if you have a lot of pictures. You can reduce the images sizes by tapping on **"Options"** **5**, on **"Pictures (Size)"** **6** and by choosing a reduced size format from SD to 4K (exact exported sizes will depends on the size ratios of your pictures).

Once the placemark has been exported, the full path of the exported file **7** is displayed.

- Tap **"Share"** **8** to share the file (send it as email, upload it on Dropbox, etc.), available actions **11** depend on the applications installed on your device;
- Tap **"Open"** **9** to open the file with a compatible application installed on your device;
- Tap **"Ok"** **10** to close the dialog.

**i** Be careful when trying to access the exported file from a computer using an USB cable, Android takes time to update the file list of your device, and newly created ones may not be immediately visible.

**i** [See here how to export multiple items at once.](#)



# How to import and export placemarks in CSV/TSV files?

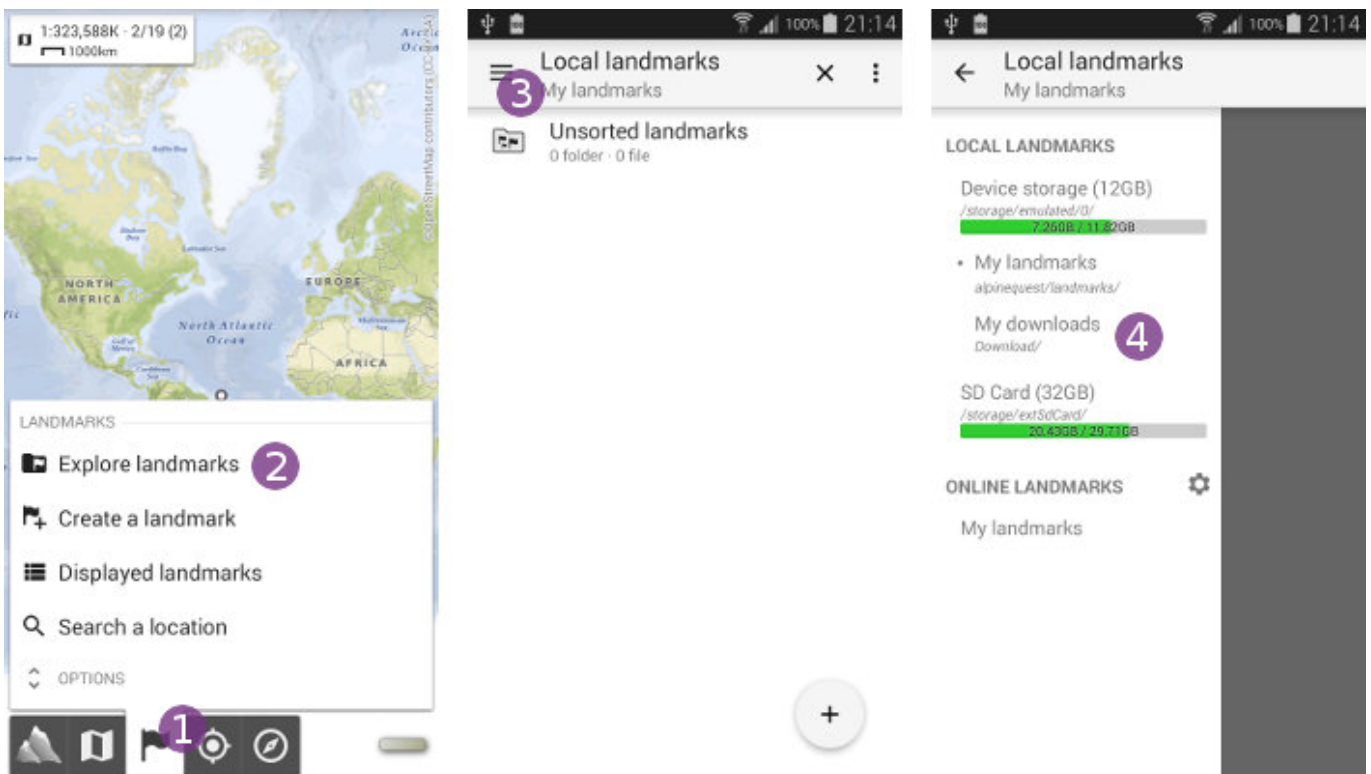
The import and export CSV/TSV files support allows the application to import placemarks from and export placemarks to CSV files ([comma-separated values](#), \*.csv) and more generally to [delimiter-separated values](#) files (like tab-separated values, or TSV).

Because this format is not primarily designed to store geographic data, you'll need to manually specify what type of data is stored by each column, especially in which columns are stored the latitudes and longitudes of the geographic points.

## How to import CSV/TSV files?

To import a CSV/TSV file:

- Tap on the **“Placemarks”** <sup>1</sup> menu icon and on **“Explore placemarks”** <sup>2</sup>. The default placemark folder is listed;
- Select the folder in which the file to import is located. If needed, tap on the top left menu <sup>3</sup> to list the main folders of your device. For example, tap on **“My downloads”** <sup>4</sup> to select the folder **“/storage/emulated/0/Download/”**.



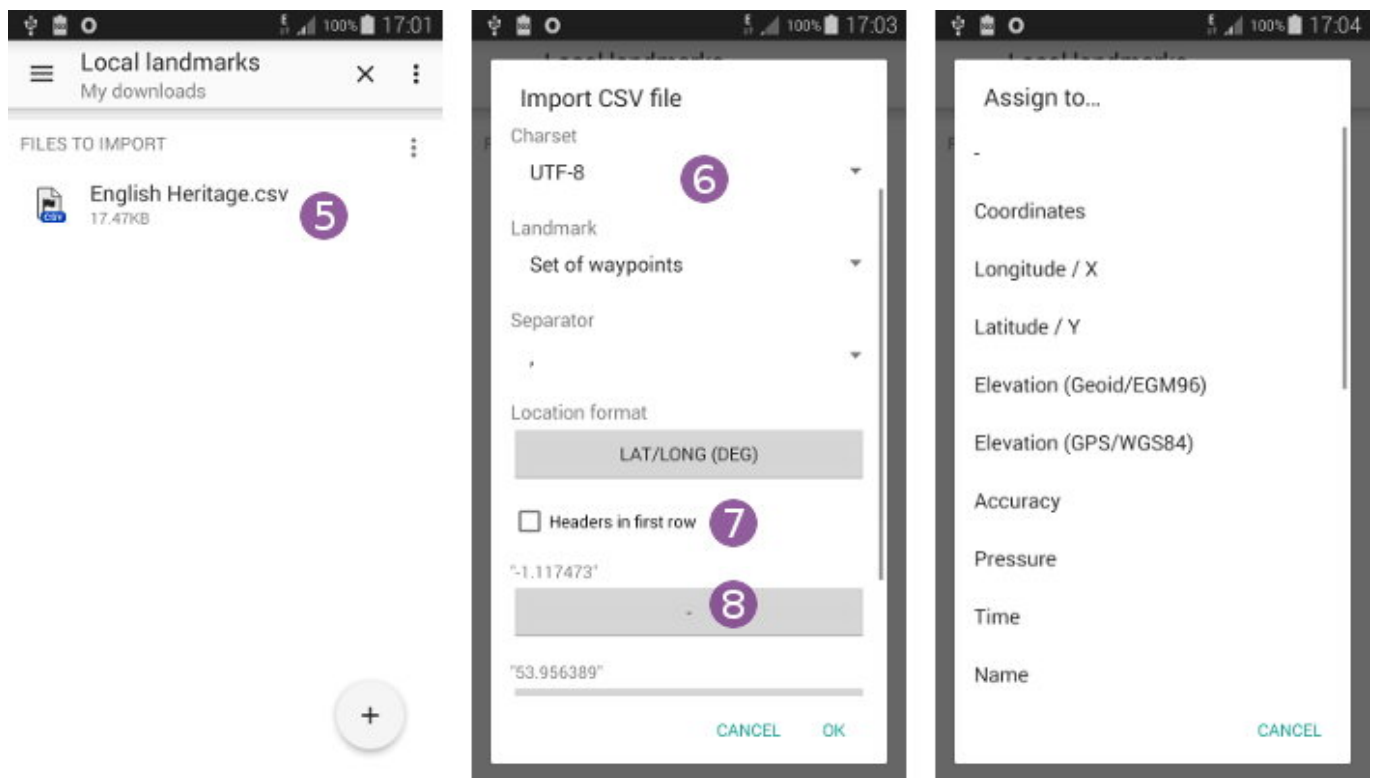
Once the file to import is displayed <sup>5</sup>, tap on it to display the import settings <sup>6</sup>:

- If needed, tap on **“Folder”** to import the file in the current folder instead of the default import folder;



- If needed, tap on **“Charset”** to select the file charset if it's different from the device charset;
- If needed, tap on **“Placemark”** to select the type of placemark to create from the imported locations;
- If needed, tap on **“Separator”** to select the column separator character;
- If needed, tap on **“Location format”** to select the coordinates format of the file;
- If needed, un-check **“Headers in first row”** <sup>7</sup> if the first line of the file is not used to store headers (column labels);
- For each column, tap on the assignment button <sup>8</sup> to select a corresponding type (you must select at least a **“Coordinates”** column or a **“Latitude / Y”** and a **“Longitude / X”** column);

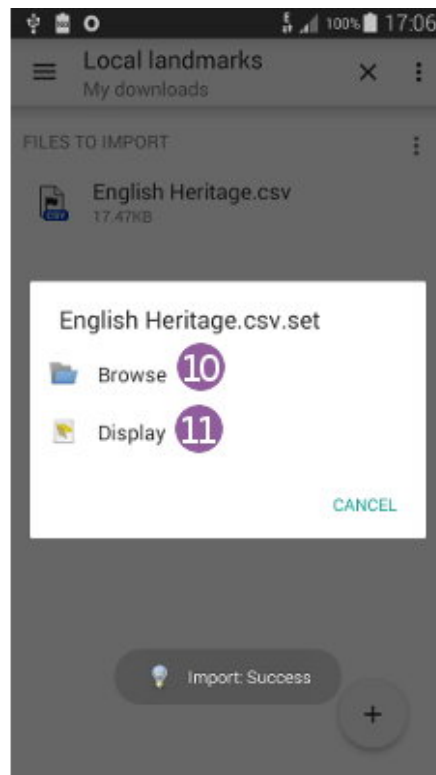
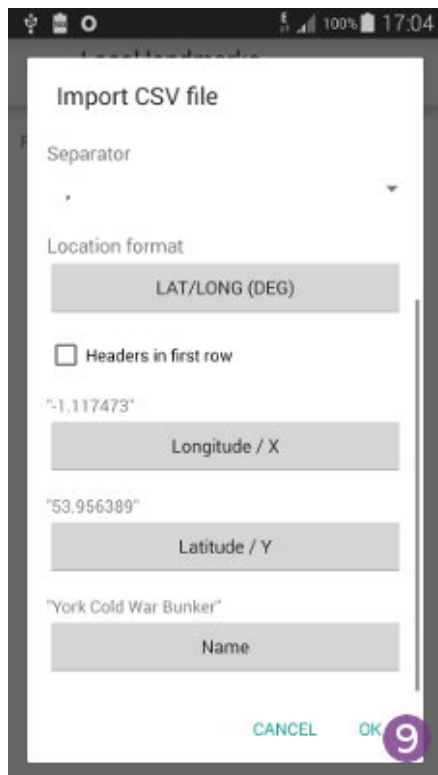
<sup>i</sup> Some of the columns may already be assigned since the application tries to detect them from the headers.



When you've assigned an import type to all the columns you want, tap on **“Ok”** <sup>9</sup> to start the import. In this example, the application will read the location longitudes from the first column, the latitudes from the second one, and the names from the third column.

Wait some time for the file to be imported. When it's done, you can:

- Choose **“Browse”** <sup>10</sup> to list the content of the imported file, for example if you want to display only few items;
- Choose **“Display”** <sup>11</sup> to display the entire file content on the map.

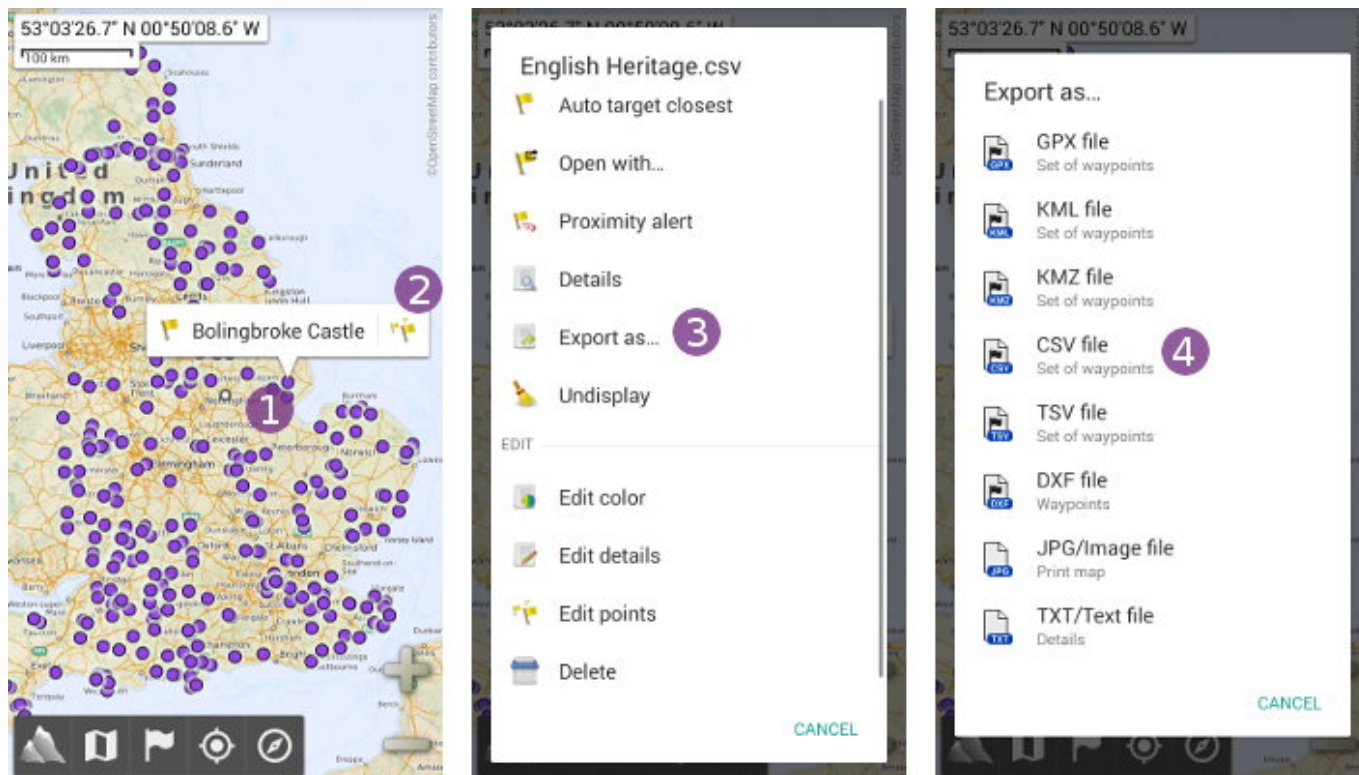


## How to export CSV/TSV files?

To export a placemark in a **.csv** or **.tsv** file and use it in an external application:

- Tap on a displayed placemark on the map **1** and on its icon **2** (you can either tap the waypoint icon to only export the selected waypoint or tap the set icon to export all the waypoints of the set);
- Choose **“Export as...”** **3**;

In the list of available export formats, choose **“CSV file”** **4** for comma-separated values, or **“TSV file”** for tabulation-separated values.



In the export settings, select all the columns you want to export <sup>5</sup>, and tap on “Ok” <sup>6</sup> to export the placemark.

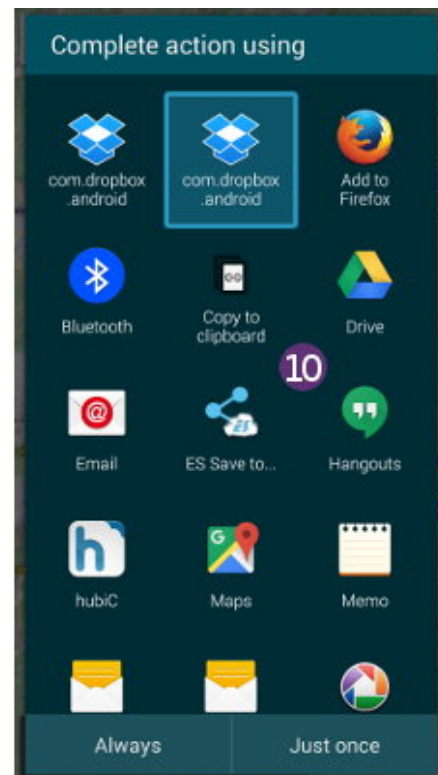
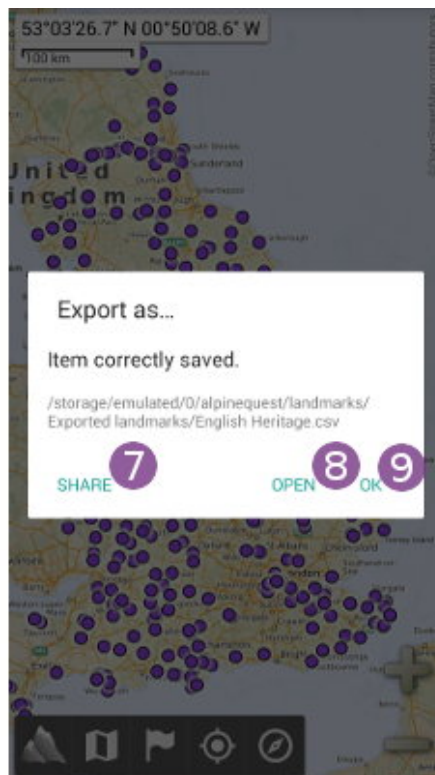
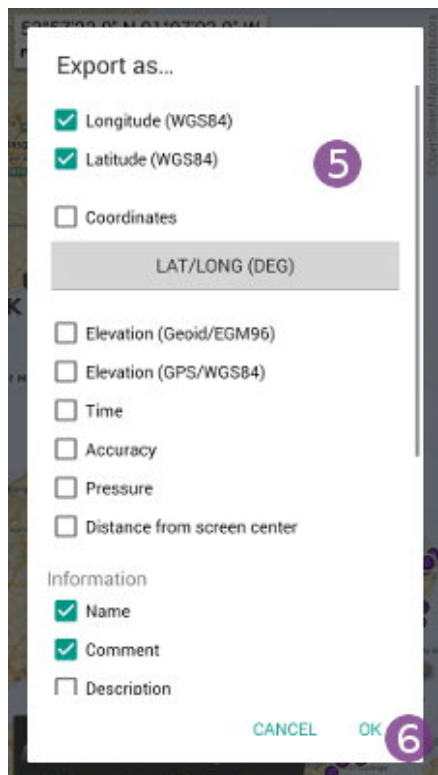
Among available fields (depending on what is recorded in the exported placemark), you'll find:

- **“Longitude”** and **“Latitude”**, the coordinates of the points in the WGS84 (GPS) datum;
- **“Coordinates”**, the coordinates of the points in another datum you can select;
- **“Elevation”**, the elevations of the points, either in the WGS84 (GPS) datum or in the EGM96 (Geoid) reference;
- **“Time”**, the dates and times recorded of the points in millisecond ([unix time format](#));
- **“Accuracy”**, the accuracies of the points in meters, with a 68% confidence;
- **“Pressure”**, the pressures recorded of the points, in hectopascal (hPa);
- **“Distance from the center”**, the distances from the current map center of the points, in meter (m).

Once the placemark has been exported, the full path of the exported file <sup>6</sup> is displayed.

- Tap on **“Share”** <sup>7</sup> to share the file (send it as email, upload it on Dropbox, etc.), available actions <sup>10</sup> depend on the applications installed on your device;
- Tap on **“Open”** <sup>8</sup> to open the file with a compatible application installed on your device;
- Tap on **“Ok”** <sup>9</sup> to close the dialog.

<sup>i</sup> Be careful when trying to access the exported file from a computer using an USB cable, Android takes time to update the file list of your device, and newly created ones may not be immediately visible.



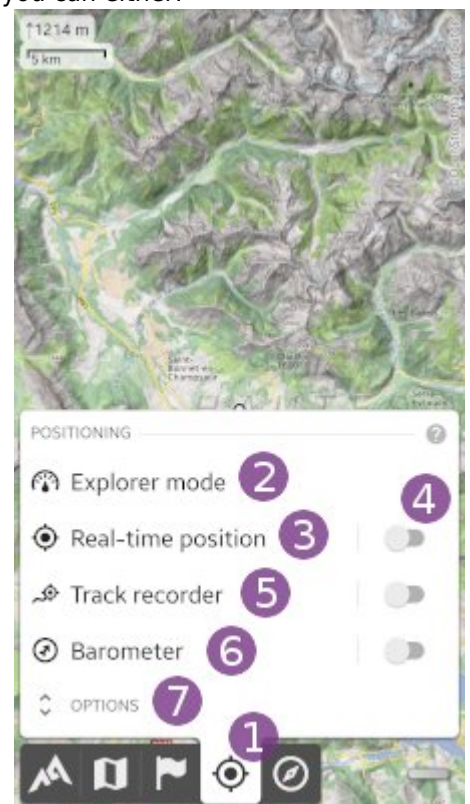
# Positioning

The application is able to use the navigation satellite systems (GNSS) chip available in most devices and locate your real-time location on the map. Depending of your device capabilities, your location can be computed using the GPS, the GLONASS or the Galileo systems, or a mix of them.

The GNSS provides an usually precise location, and does not require cellular network coverage. However, it must have a clear access to the sky, meaning that it cannot be used indoor.

**i** If your device doesn't have any GNSS chip, or if this one is disabled in the Android settings, the network location (much less precise) may be used.

To turn on the real-time positioning and display your location on the map, you can either:



- Long-press the **“Positioning”** ① menu button;
- Tap the **“Positioning”** ① menu button, and on the **“Positioning details”** ④ toggle.

**i** The GNSS systems may require up to few minutes to retrieve your precise location after being turned on.

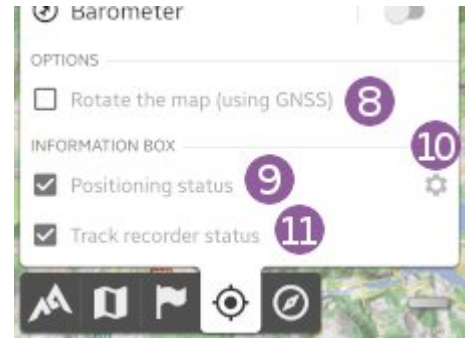
## The Positioning menu

Tap the **“Position”** ① menu button to display the menu that contains:

- **“Explorer mode”** ② activate the Explorer mode with perspective view and dashboard;
- **“GPS position”** ③ displays the positioning details side-view;
- **“Track recorder”** ⑤ allows you [to record your path](#);



- **“Barometer”** 5 displays the barometer side view (available only on devices with a pressure sensor).



Tap the **“Options”** 7 to display the positioning options:

- **“Rotate the map (using GPS)”** 8 activates or deactivates the map rotation to make it match your current direction (you must be moving);
- **“Positioning status”** 9 hides or displays of the top/left information box containing the most important positioning information. Tap on the settings wheel icon 10 to choose what information to display at the screen center;
- **“Track recorder status”** 11 hides or displays of the top/left information box containing [the track recorder](#) details.

## The menu icon

The **“GPS position”** menu button 1 icon and color let you know the current state:



When the icon is white, the GPS positioning is turned off. Long-press the button to turn it on.



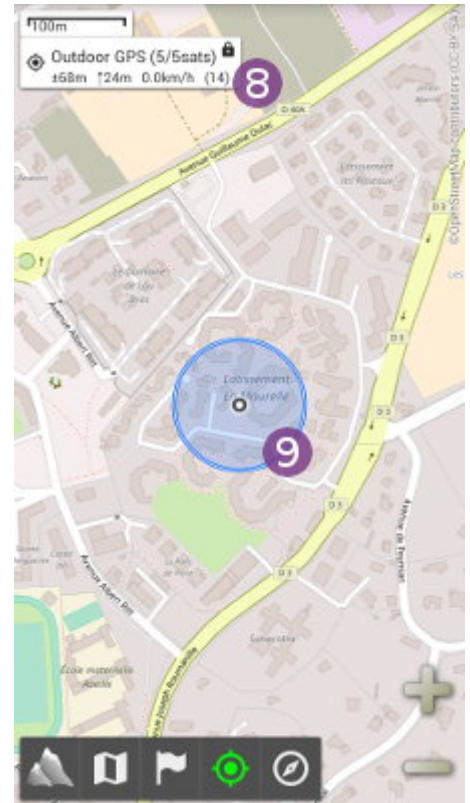
When the icon is green, the GPS positioning is turned on and the current location is displayed at the map center (or being retrieved). Long-press the button to turn it off.



When the icon is green with a lock key, the GPS positioning is turned on and the current location is currently not displayed at the map center (you're looking somewhere else on the map). Click on the button to center the map on the current location.

## The on-map positioning

When turned on, the GPS will try to compute your location based on the information retrieved from GPS satellites.



If the “**Positioning status**” option is checked, an information box <sup>8</sup> lets you know how much satellites have been found yet. In this case, **4/8sats** means that **8** satellites have been found in the sky, and **4** are being used to compute the current location. If **0** satellites are being used, then the current location has not been found yet.

If your current location has been found, this one is displayed in blue on the map <sup>9</sup>. A circle indicates the area of precision (your real location is somewhere inside the circle, usually but not necessarily at the center). An arrow indicate your direction (while moving), and the information box <sup>8</sup> gives you the following information:

- The current location accuracy, its elevation, speed, and fix number;
- The distance and bearing to the map center (if different).

<sup>i</sup> In some cases, while retrieving the current location, the application can display an older one. In this case, this old location is displayed in red.

<sup>i</sup> When the application is sent in the background (or when another one is started over), the positioning is temporarily deactivated to save the battery. This default behavior can be deactivated in the application settings.

## Elevations management

The elevation of a point is the difference between the altitude of this point and a reference surface of altitude 0 (usually the sea level).

However, depending on what is considered to be the surface of reference, elevations can be quite different. This surface depends on the representation of the Earth, which has been shaped in many ways over the last centuries.


Many countries have used their own measure systems, defining representations that best match the surfaces of

their own territories, and most of them are still used on paper maps. Unfortunately, as soon as used outside of their defined areas, these systems become inaccurate and useless.

The GPS, working worldwide, had to choose a system defining a shape that match the entire Earth. A particular oblate spheroid, called [WGS84](#) has been chosen as shape, because it provides a good overall approximation while remaining simple.

Based on this choice, GPS's "WGS84" elevations are a good approximation at the Earth scale, but compared to per-country systems elevations, we can have discrepancies up to 100m.

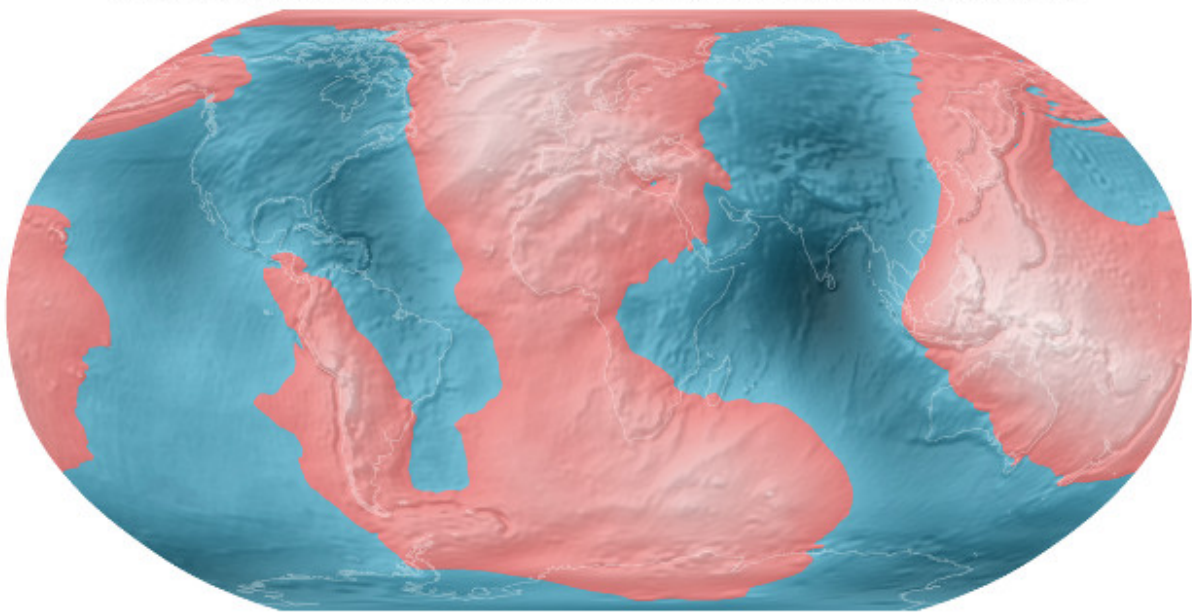
**To reduce these discrepancies and provide more precise elevations, the application convert all GPS elevations towards another system using a more precise shape of the Earth, the [Geoid](#), which is called EGM96. However, some slight discrepancies can still be found.**

 You can find detailed articles on [the Geoid](#) and on [the shape of the Earth](#) on Wikipedia.

Here is the difference between GPS and Geoid altitudes all around the world (from Wikipedia):

## Deviation of the Geoid from the idealized figure of the Earth

(difference between the EGM96 geoid and the WGS84 reference ellipsoid)



Red areas are above the idealized ellipsoid; blue areas are below.



# The track recorder

The track recorder allows you to record GPS locations at regular intervals along your path, so you can get detailed statistics and graphics of your hikes.

It runs in a light background service called the “AlpineQuest agent”, and can track your locations even if the main application is completely closed to save as much battery as possible. If you use any memory cleaning application, be sure to exclude the agent from being automatically killed.

All recorded tracks can be stored in the application or exported in various formats to be displayed in external softwares like Google Earth.

## How to start recording a track?


To start the track recorder:

- Tap on the “**Positioning**” ① menu icon and on the “**Track recorder toggle**” ②.

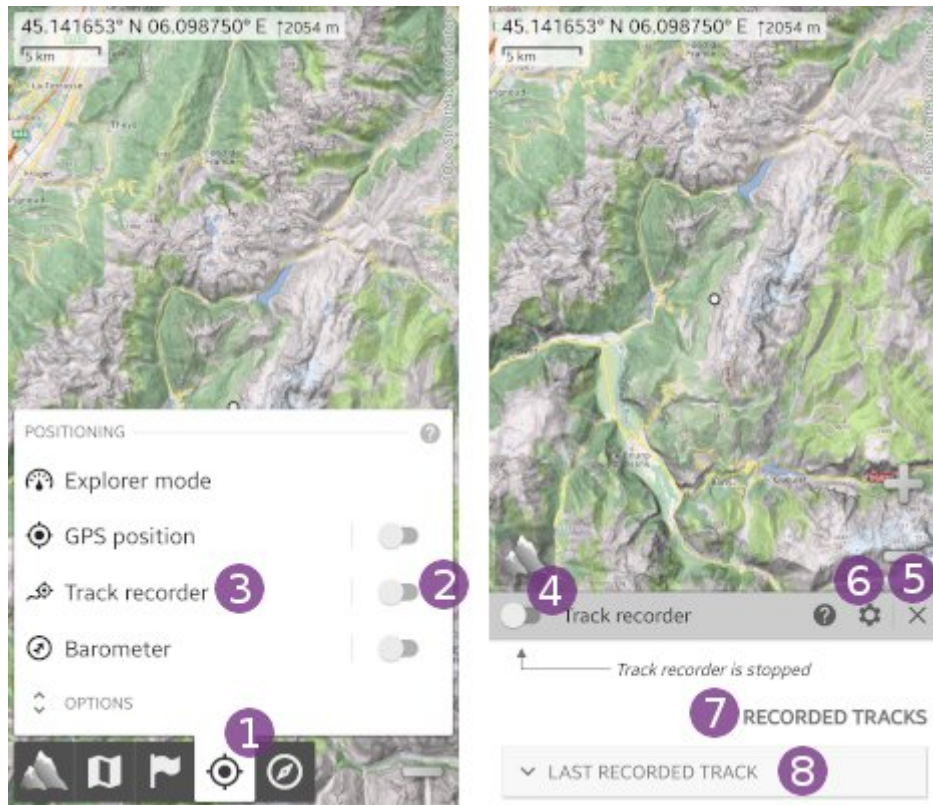
Alternatively, you can:

- Tap on the “**Positioning**” ① menu icon;
- Tap on “**Track recorder**” ③ to display the track recorder panel;
- Tap on the “**Track recorder toggle**” ④ at the left of the title bar.

This second method allows you to change the track recorder settings before starting it, by tapping on the “**Settings**” ⑥ icon.

 At any time you can close the track recorder panel by tapping on the “**Close**” ⑤ icon, or even completely close the application, the track recorder will keep on recording locations in the background.

If you have previously recorded some tracks, you can list them by tapping on “**Recorded tracks**” ⑦ or get details on the last recorded track by tapping “**Last recorded track**” ⑧.



## How to get information on the current track?

When the track recorder is started, an information box **1** is displayed giving the total length and time recorded so far. The positioning menu button **2** turns blue, and the recorded track is displayed in blue **3** on the map.

At any time, you can tap on the recorded track **3** to display the track recorder popup menu.

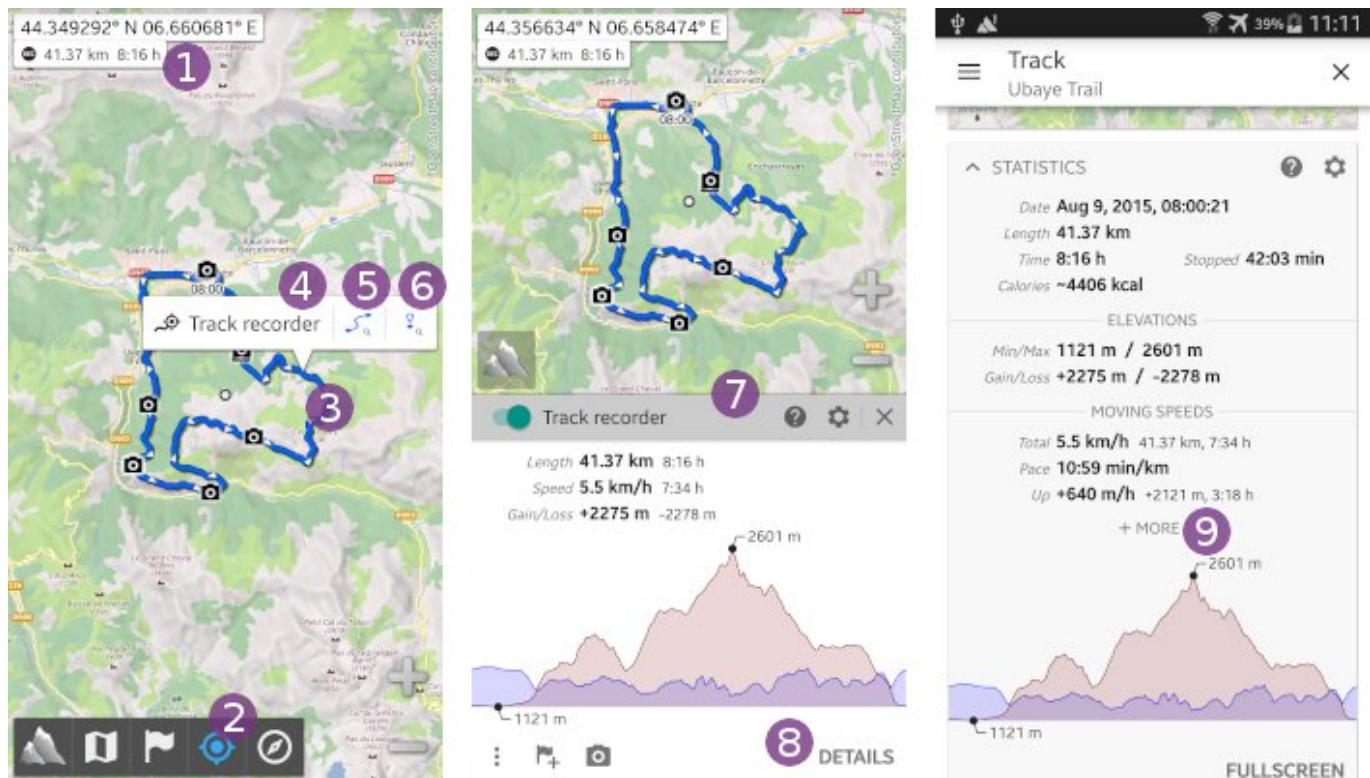
- Tap on **“Track recorder”** **4** to display the track recorder panel **7**;
- Tap on track icon **5** to get detailed information and statistics on the whole track;
- Tap on location icon **6** to get information on the selected location.

The **“Track recorder panel”** **7** gives you the main statistics on your track (total length, total time, moving speed, moving time, elevation gain and loss), together with the speed and elevation profiles.

Tap on **“Details”** **8** to get detailed statistics. In the information window, you can tap on **“More”** **9** to get even more statistics.

**i** More information on [statistics is available here](#).





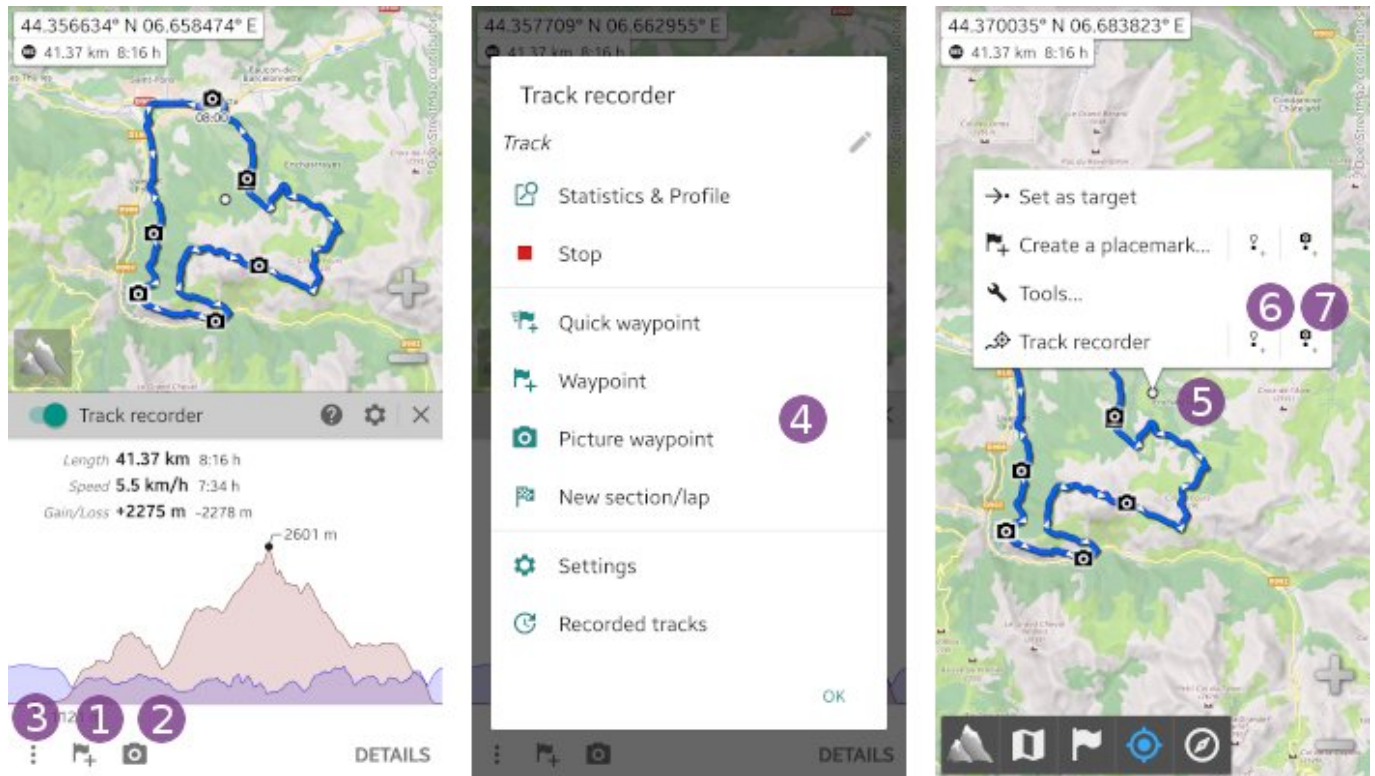
## How to add waypoints and pictures?

While recording a track, you can add waypoints and pictures to it.

- To add a waypoint or a picture at your current location, open the track recorder panel and tap on the **“Add waypoint”** ① icon to add a waypoint, or on the **“Add picture”** ② icon to add a picture.
- You can also display the track recorder menu ③ where you'll find more options ④.
- To add a waypoint or a picture at any other location, move the screen center icon ⑤ over the location you want to add the waypoint or picture on, and tap on it to display the track recorder popup. Tap on the **“Add waypoint”** ⑥ icon to add a waypoint, or on the **“Add picture”** ⑦ icon to add a picture.

**i** The application calls the default device Camera application to take pictures. If the default Camera application is not compatible, you won't be able to take pictures as explained here. The alternative solution is to take regular pictures with your Camera application, and add them later using waypoints linked to pictures taken from your gallery.

**i** Track waypoints are exported with the track when choosing the GPX, KML or KMZ formats. Pictures are only exported when choosing the KMZ format. The resulting file size may be large depending on the number of pictures.



## How to stop the record?

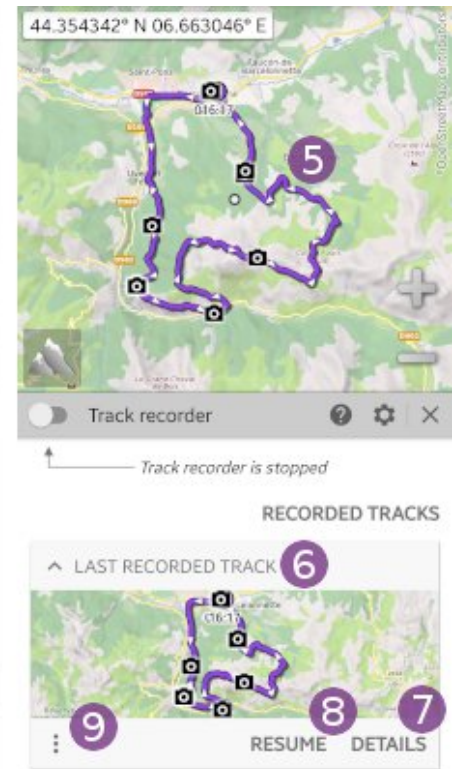
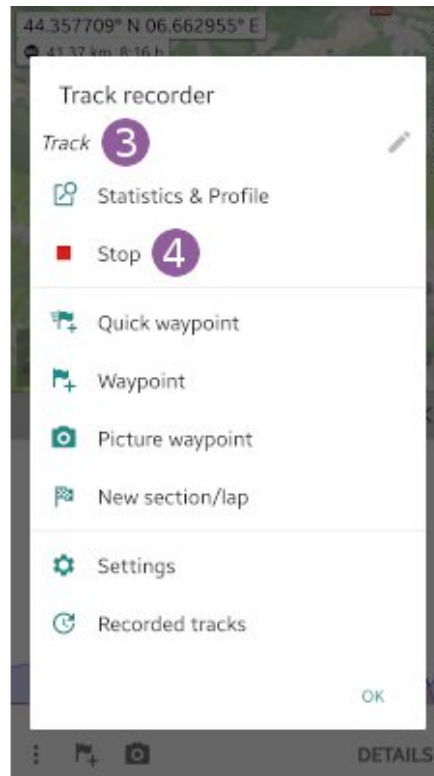
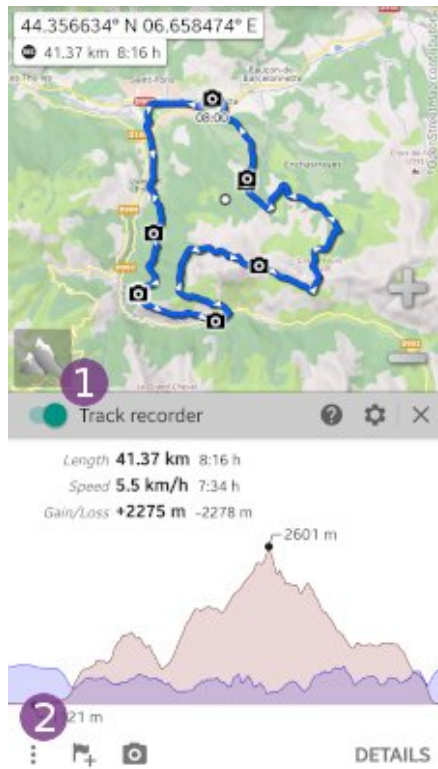
At any time, you can stop the track recorder by tapping on the location tracker toggle **1**. The background service will be completely stopped, the recorded track saved and displayed on the map with a (by default) purple color **5**.

**i** You don't have to stop the track recorder during small breaks, the application will automatically detect that you're not moving and will take this into account when computing statistics.

If you want to name the recorded track before stopping the recording, tap the track recorder menu icon **2**, and tap on the current track name **3**. You can name the recorded track at any time during the recording, or after stopping the track recorder by editing the track details. You can also stop the recording from this menu by tapping **"Stop"** **4**.

Once you've stopped the track recorder, the last recorded track will be displayed in the **"Last recorded track"** **6** section, from where you can:

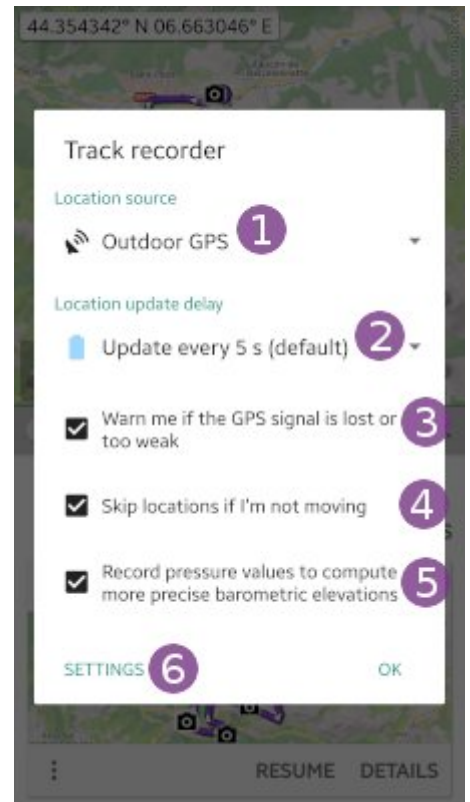
- Display details, statistics and graphics by tapping on **"Details"** **7**;
- Resume it by tapping on **"Resume"** **8**;
- Tap the track menu icon **9** to display the track menu where you'll find more options.



## How to manage recorded tracks?

[See here how to list, filter, manage and export recorded tracks.](#)

## The track recorder settings



- The **“Location source”** ① let you choose which locations to record. Most people will choose **“Outdoor GPS”**, but you can change it to **“External locations”** if you have an external bluetooth GPS you want to use;

**i** Some location sources can be disabled from the device settings. Tap on **“Settings”** ⑥ to open the device location settings.

- The **“Update frequency”** ② allows you to choose how fast the locations have to be recorded. For runners, a precise tracking like **“( /2 seconds)”** is recommend, whereas hikers should prefer a medium one like **“( /10 seconds)”**, since a fast tracking will use more battery.
- Check **“Warn me if the GPS signal is lost or too weak”** ③ if you want to be notified (by a notification sound) if the GPS signal is lost (recommended);
- Check **“Skip locations if I'm not moving”** ④ if you don't want to record multiple locations at the same place when you're not moving (recommended);
- If your device has a built-in pressure sensor, you can check the **“Record pressure values to record more precise barometric elevations”** ⑤ option. The application will compute elevation values based on the air pressure, in addition to the common GPS elevations. These barometric altitudes are much more accurate and reactive, and can be computed precisely even if the GPS signal is very poor.

**i** The pressure values are automatically calibrated by the application using GPS locations.

## How to correctly setup your device for background track recording?

In recent Android versions, multiple optimization tools have been added in order to reduce battery usage, especially targeting background applications. For example, the “Doze” mode will stop all applications on your device when your screen is turned off for some time. In order to correctly record tracks even when your screen

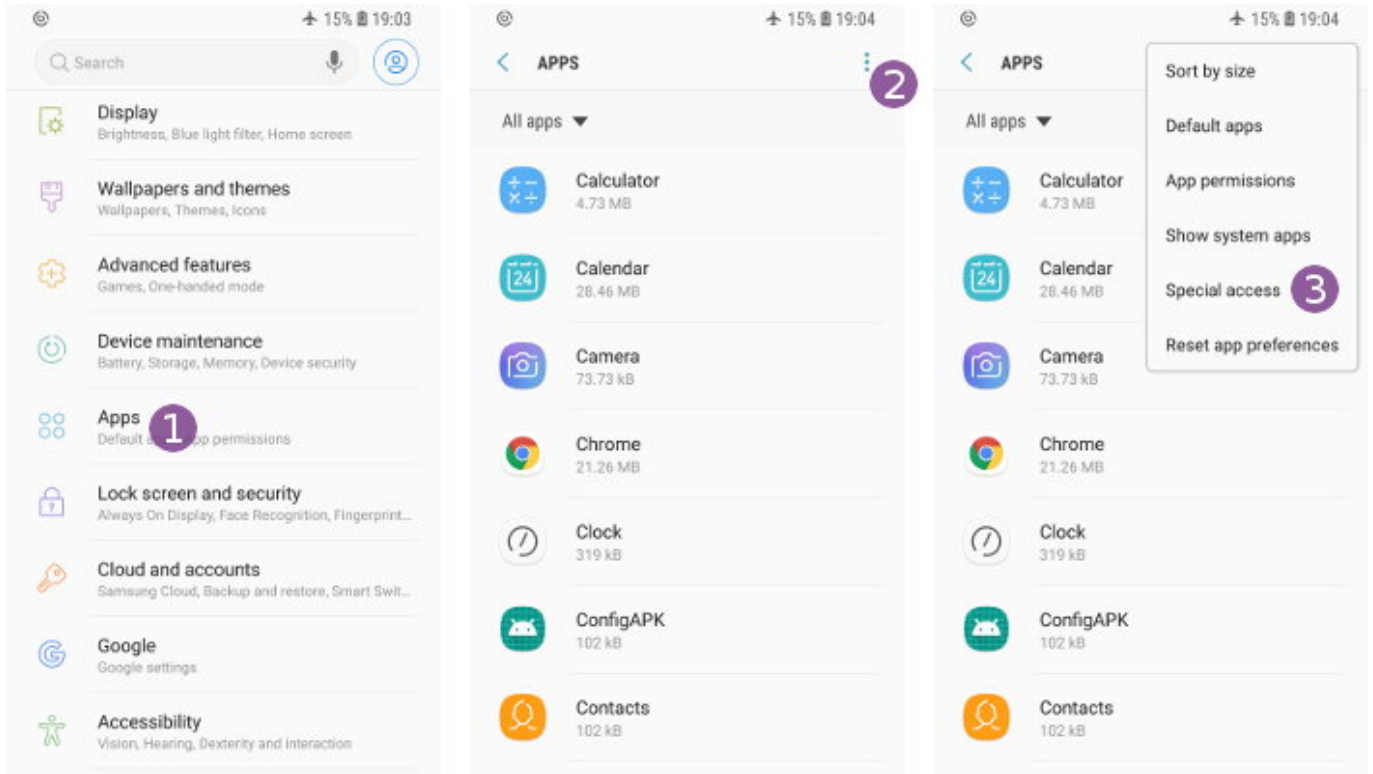


is turned off, you need to disable those optimizations for the application.

**i** Exact steps may vary depending on your device brand and system version.

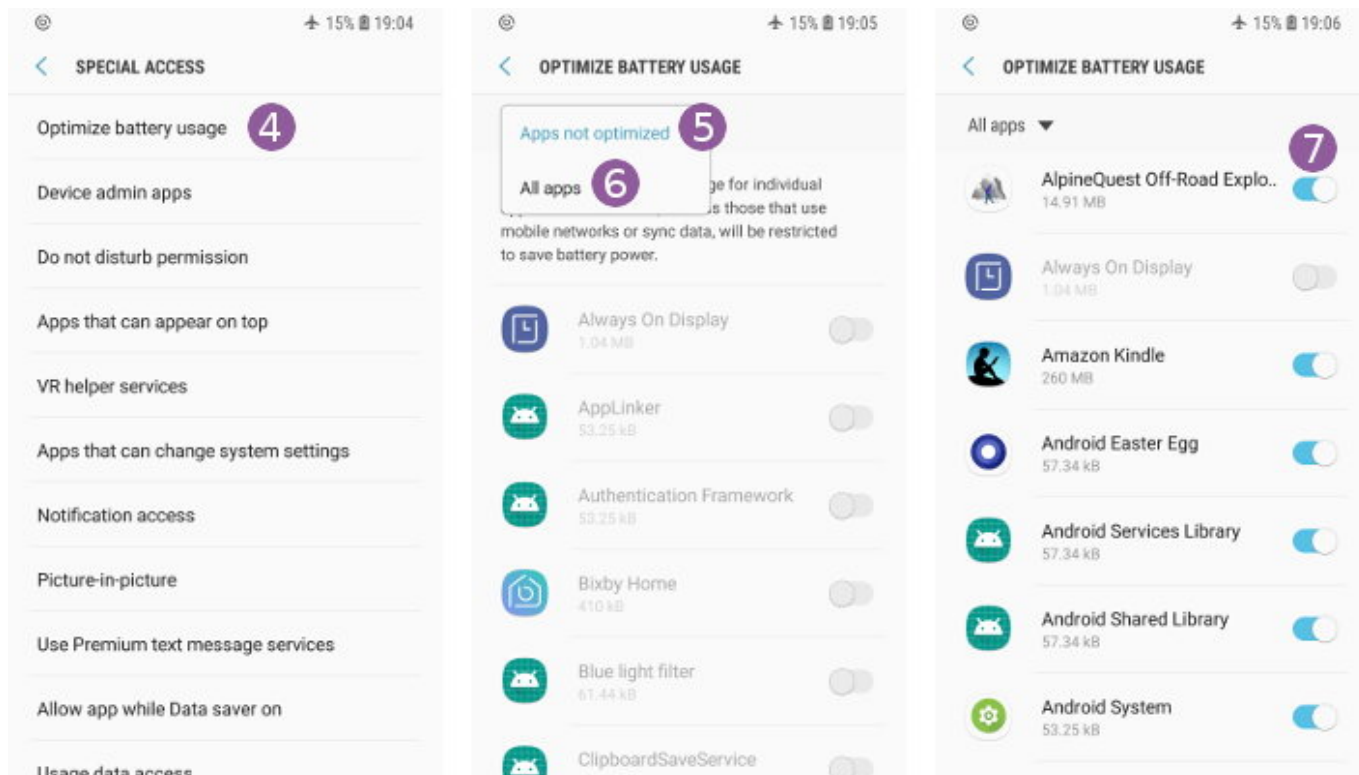
Example on Samsung devices:

- In your devices settings, tap “**Apps**” **1**;
- Tap the top/right menu icon **2** and “**Special access**” **3**;



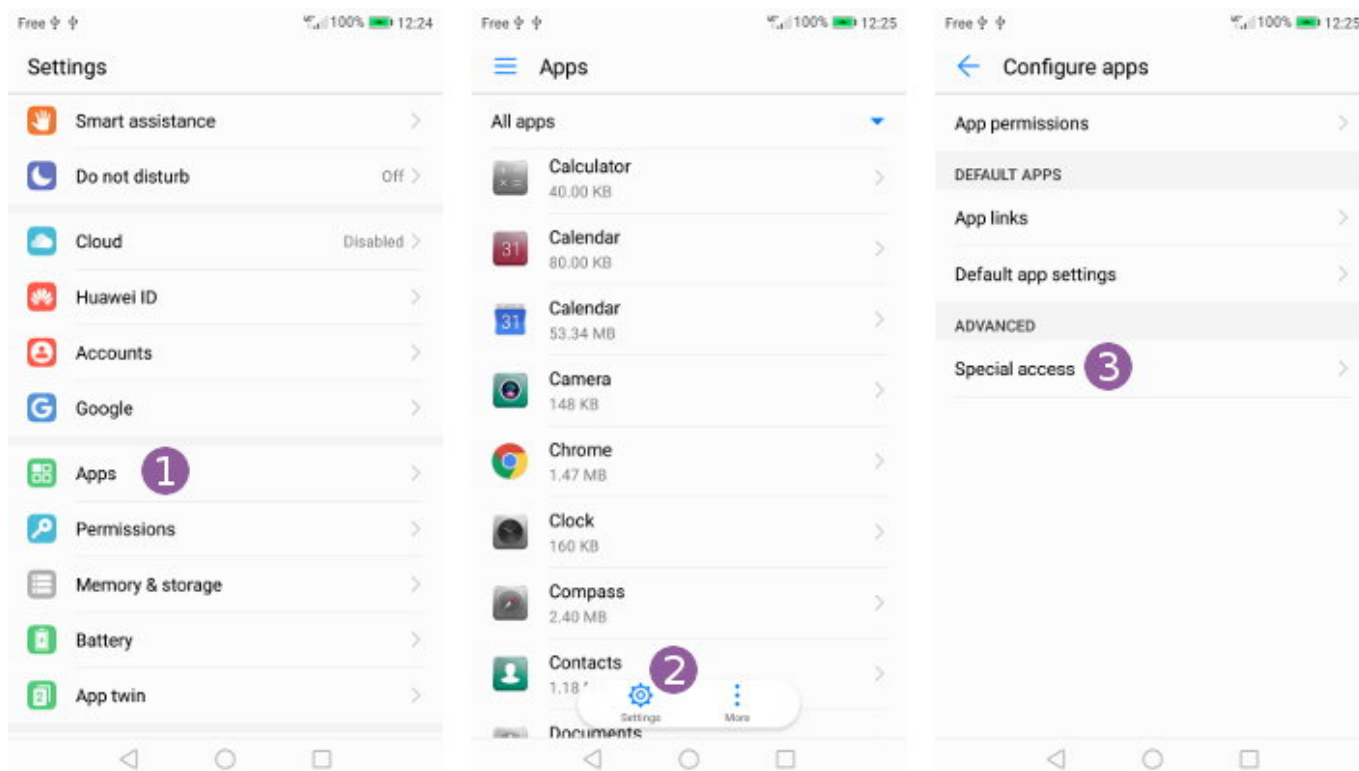
- Tap “**Optimize battery usage**” **4**;
- Tap on the “**Apps not optimized**” **5** drop down list and select “**All apps**” **6**;
- Locate and un-check “**AlpineQuest**” **7** do disable optimization for this application.



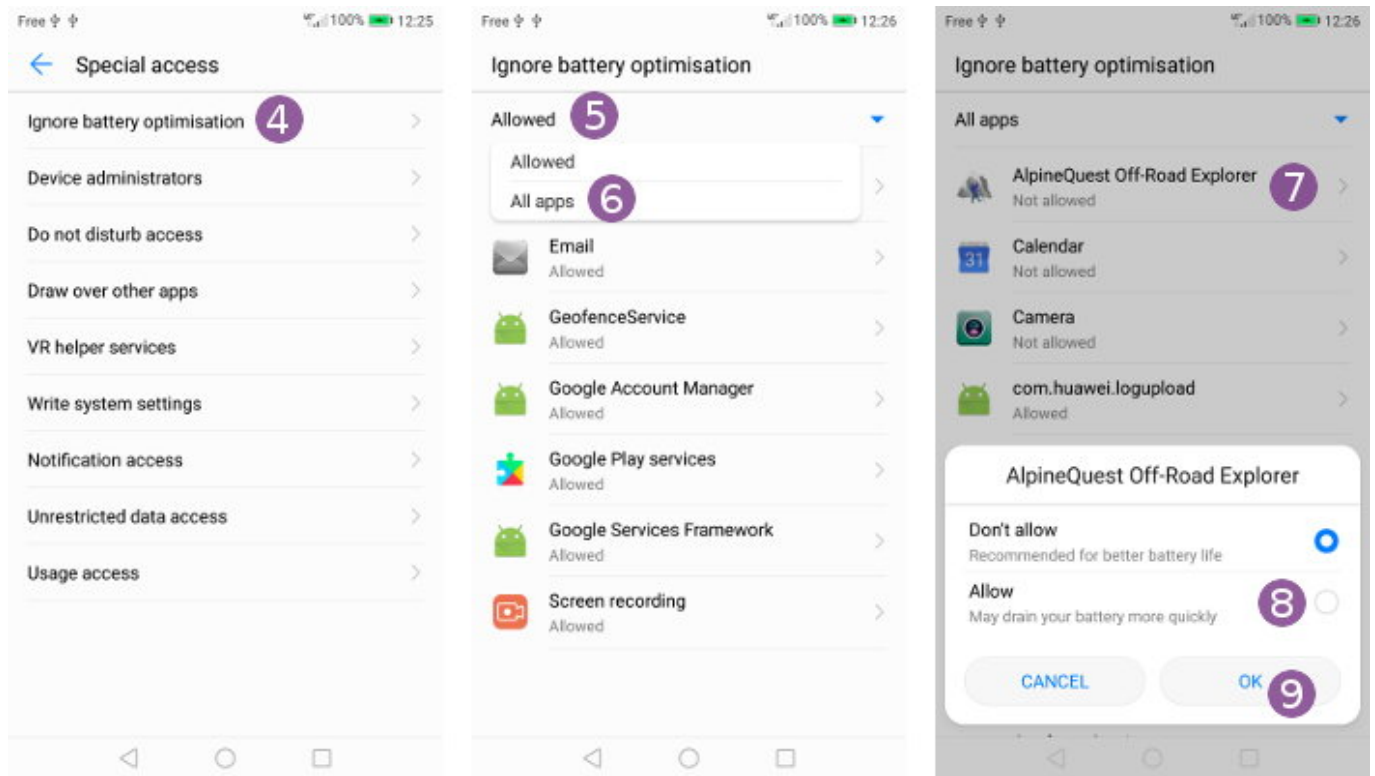


Example on Huawei devices:

- In your devices settings, tap “**Apps**” ①;
- At the bottom of the applications list, tap “**Settings**” ② and “**Special access**” ③;



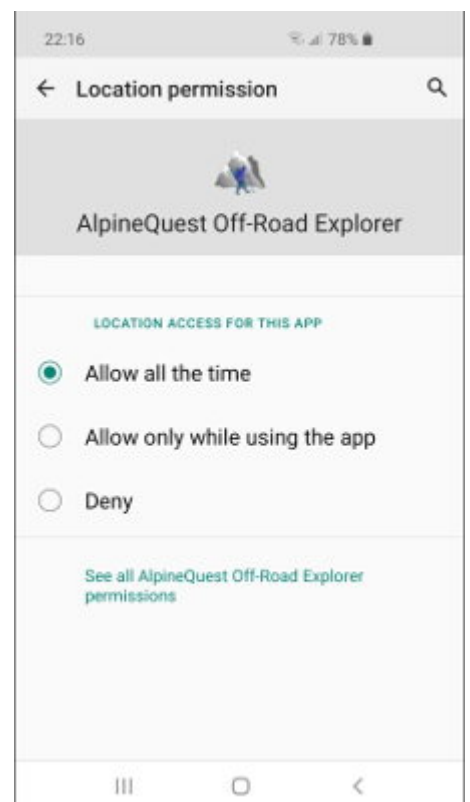
- Tap “**Ignore battery optimisation**” ④;
- Tap on the “**Allowed**” ⑤ drop down list and select “**All apps**” ⑥;
- Locate and tap “**AlpineQuest**” ⑦, check the “**Allow**” ⑧ option and tap “**Ok**” ⑨ to validate.



Additional information can be found here: [sleep.urbandroid.org](http://sleep.urbandroid.org).

**i** Depending on your device, you may need to configure additional settings as explained below.

## Problems with the track recorder



Most (if not all) of the tracking problems are due to the battery optimisations made by the Android system itself. Commonly, the GPS is disabled when the screen is turned off, or background applications are killed after some delay.

You need to correctly setup your device and be sure that:

- The application (it's tracking service) is not stopped by the system after some time;
- The GPS remains available to applications even if the screen is turned off.

There are usually only a few settings to change (see above section [here](#)), but some device brands add their own economy tools and more settings may need to be changed. In case of problems, please contact your device's brand help desk to ask how to disable battery optimisation related to the GPS.

 There is unfortunately nothing we can do if the device system stops the application or the GPS by itself.







## Track not correctly recorded when the screen is turned off

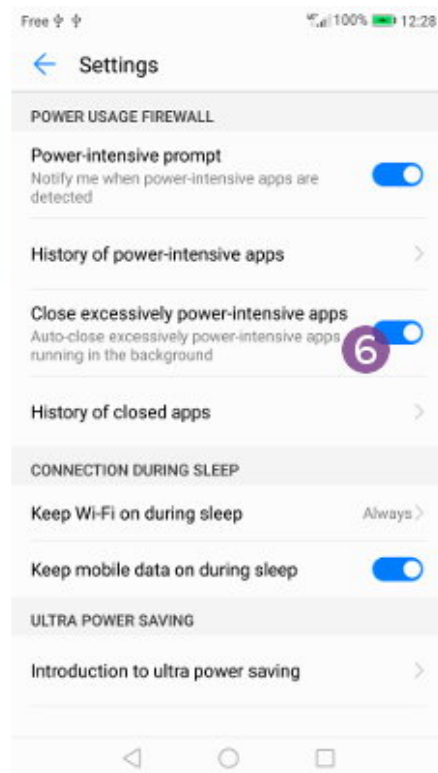
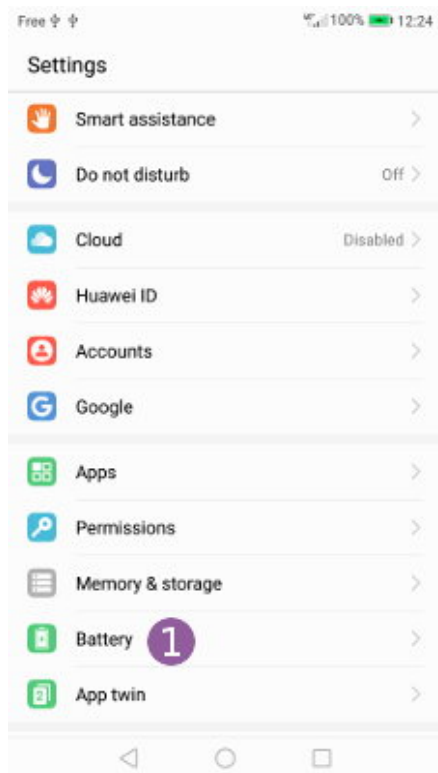
On top of the Android battery optimization tools (see above section [here](#)), some brands also include their own tools that may disable the use of GPS or network for background applications, and so prevent the good operation of the track recorder. Be sure to disable those behaviors or grant the application the correct permissions.

For example, you can check that the application is allowed to access to your GPS location even when the device is not used (screen off) as you can see on the right.

Here are some other examples:

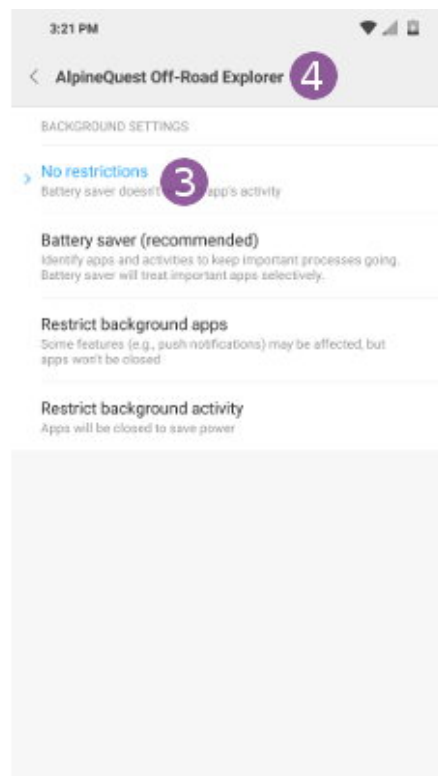
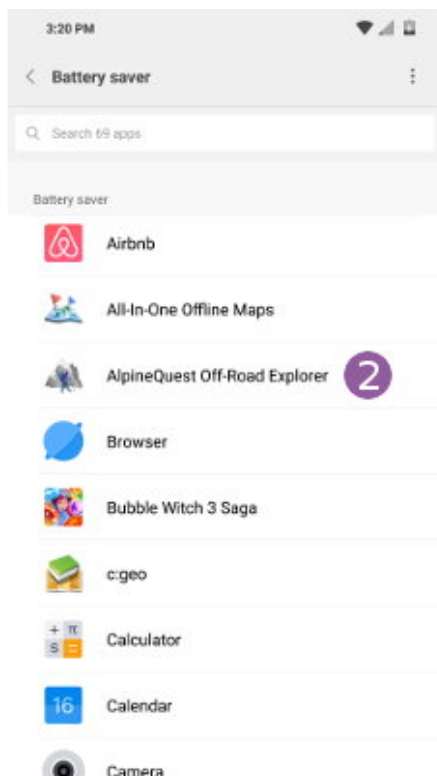
For Huawei devices:

- In your devices settings, tap **"Battery"** ;
- Be sure not to have activated the **"Power saving mode"**  or the **"Ultra power saving"** ;
- Be sure not to have the AlpineQuest listed in the **"Lock screen cleanup"**  list;
- Tap on the **"Settings"**  icon;
- Un-check **"Close excessively power-intensive apps"**  to prevent the application from being closed.



For Xiaomi/Vivo devices: ([see here](#))

- In your devices settings, tap “**Battery & Performance**”;
- In the battery saver category, tap “**Choose apps**” 1;
- Locate and tap “**AlpineQuest**” 2;
- Tap “**No restrictions**” 3 to allow the application to run in the background without being closed;
- Tap the top application name 4 to validate and return to the applications list.




For HTC devices:

[See here](#)

For some other devices:

- *Settings > Battery > Battery Optimization*
- *Settings > Battery > Manage apps battery usage > No restrictions*


For some devices (like Huawei Mate 10), a system update can also fix this problem.

 More information can be found on [dontkillmyapp.com](https://dontkillmyapp.com).



## The track recorder service stops

In addition of being closed by the system as seen before, some “device/memory cleaner/booster” applications automatically kill background processes. If you use such applications, be sure to add the track recorder service in the exclude list of your cleaning application so it doesn't get killed.

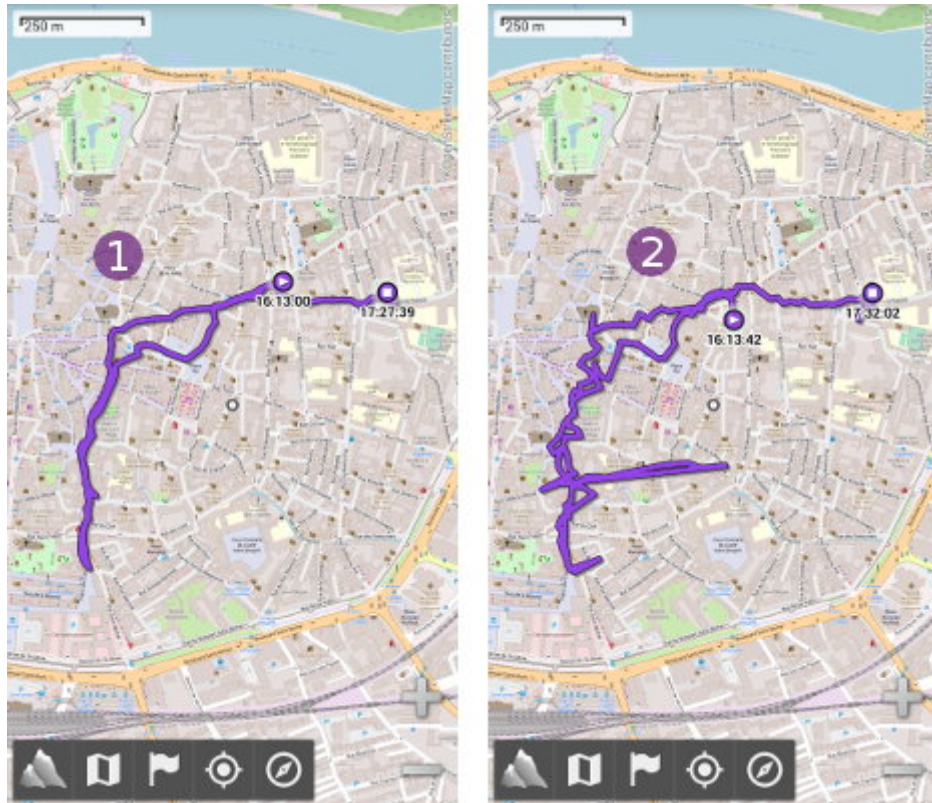
## Loss of the GPS signal

A common issue when recording a track is the loss of the GPS signal, leading to a missing part in the recorded track (seen as a straight line longer than usual). It usually happens because the device doesn't have a good enough access to the sky, for example when the device is placed in a deep pocket or in a bag. The GPS signal emitted by GPS satellites is weak and get easily lost when going through any material. If you have checked “**Warn me if the GPS signal is lost or too weak**”  option, the application will play a song when this happens.

## Recorded track doesn't precisely follow my real locations

Some devices perform better than others when using the GPS, depending on the quality of the hardware used and the internal conception (placement of the GPS chip inside the device). Some devices require a stronger GPS signal to give an acceptable accuracy. For example, here is the same track recorded at the same time by two different devices (one in the left pocket, one in the right) during a small outside walk with occasional stays inside buildings. We can see that the Samsung Galaxy S9  performs better than the Huawei P10 Lite . [Here is a very interesting list](#) describing the hardware used in a large number of devices.





## Device gets hot

Tracking a path requires frequent GPS location updates and some devices (mainly old or low-cost ones, but not always) doesn't support the GPS being turned on for long hours. Common symptoms in this case can be:

- The device becomes more hot than usual;
- The GPS doesn't report satellites anymore for some time, the location fix is lost, leading to a missing track part;
- The track recorder service is simply closed, the record is stopped.

If you encounter one of these symptoms, you can try to:

- Reduce the tracking frequency, a location per 10 seconds is a recommended setting for hours long tracks;
- Use an economy tracking frequency (starting at 1 location / 20 seconds), in which the GPS is completely turned off between update. Be sure to leave your device in view of the sky so the GPS can quickly retrieve a location for each update;
- Turn off the use of barometric elevations to leave the pressure sensor turned off (this one can also be the source of problems when continuously used for long time).

# Recorded tracks

The application stores all tracks by the [track recorder](#) in the **Recorded tracks** folder.

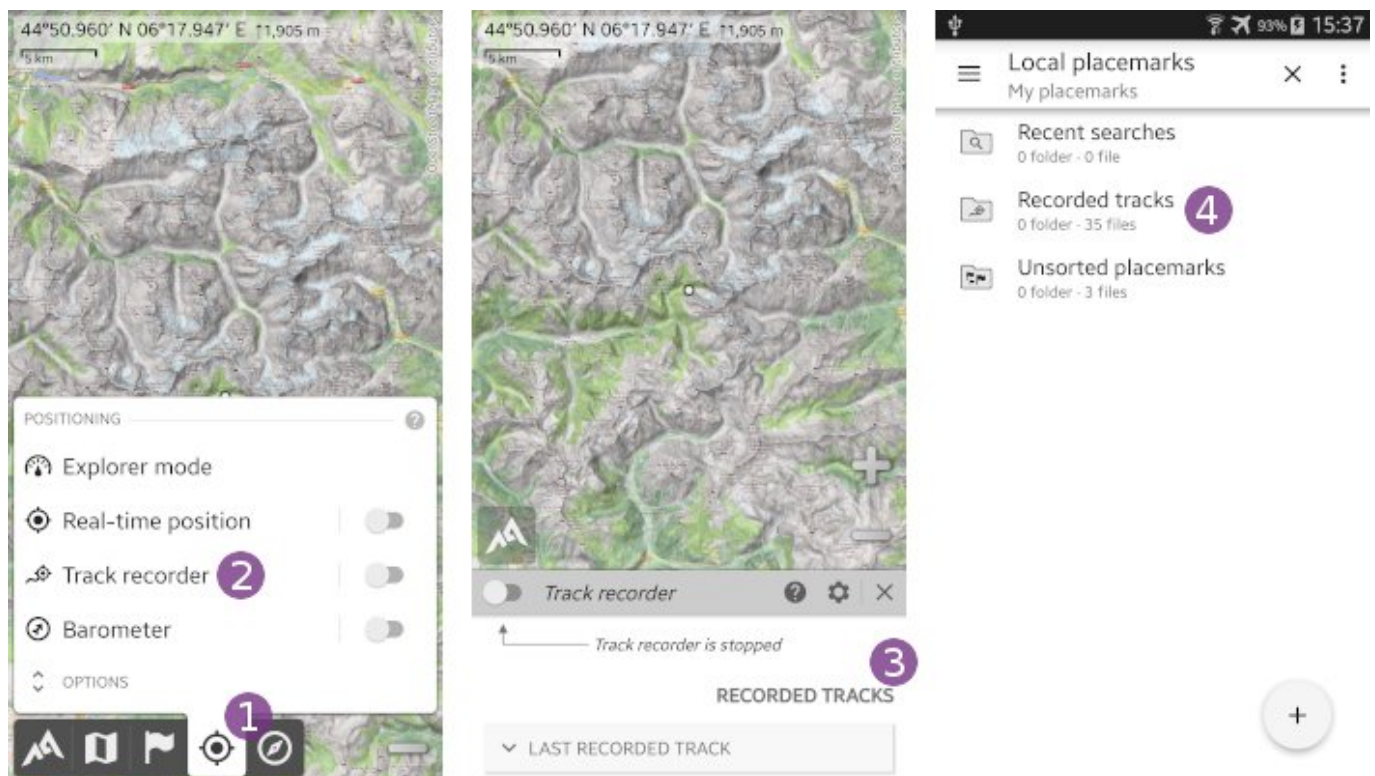
When you display this folder, you can access all your recorded tracks, filter them based on different properties, and get global statistics and graphics.

## How to list recorded tracks?

To open the recorded tracks list:

- Tap on the **Positioning** <sup>1</sup> menu item;
- Tap **Track recorder** <sup>2</sup>;
- Tap **Recorder tracks** <sup>3</sup>.

Alternatively, you can display the recorded tracks list from the [Placemarks Explorer](#), by navigating to the **Recorded tracks** <sup>4</sup> folder.



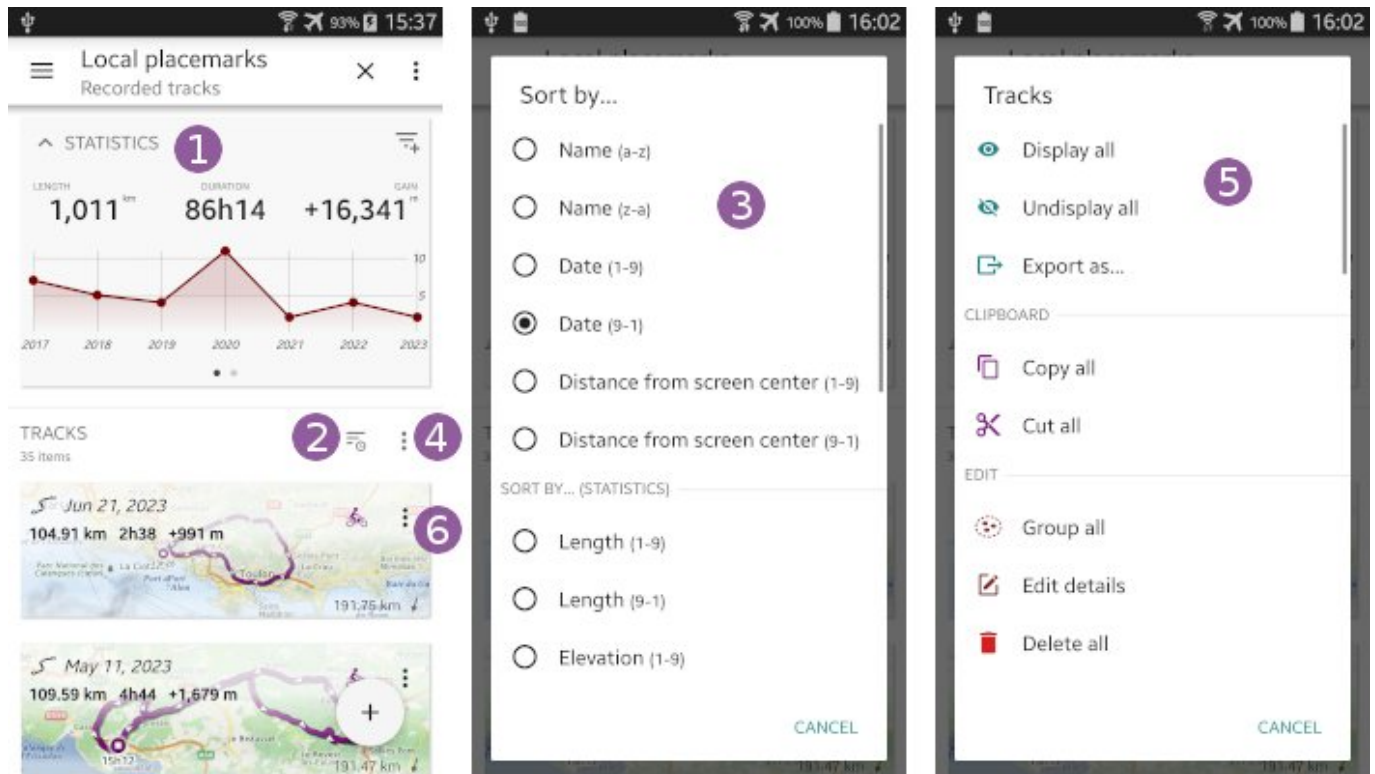
## How to use the recorded tracks list?

At the top of the **Recorded tracks** is displayed the **Statistics** <sup>1</sup> section where various information is given about listed tracks.

**i** If you are not interested by the statistics, tap on the **Statistics** **1** title to close this section.

Under the statistics, are listed all recorded track, where you can:

- Tap on the **Sort by...** **2** shortcut icon to change the display order of the tracks **3**, either by **Name** (ascending or descending), by **Date**, by **Distance from screen center** or by various statistics;
- Tap on the header menu icon **4** to access to various operation for the whole list **5**, like **Display all** to display all recorded tracks on the map, **Undisplay all** to remove all tracks from the map, or **Export as...** to export all recorded tracks in a single file.

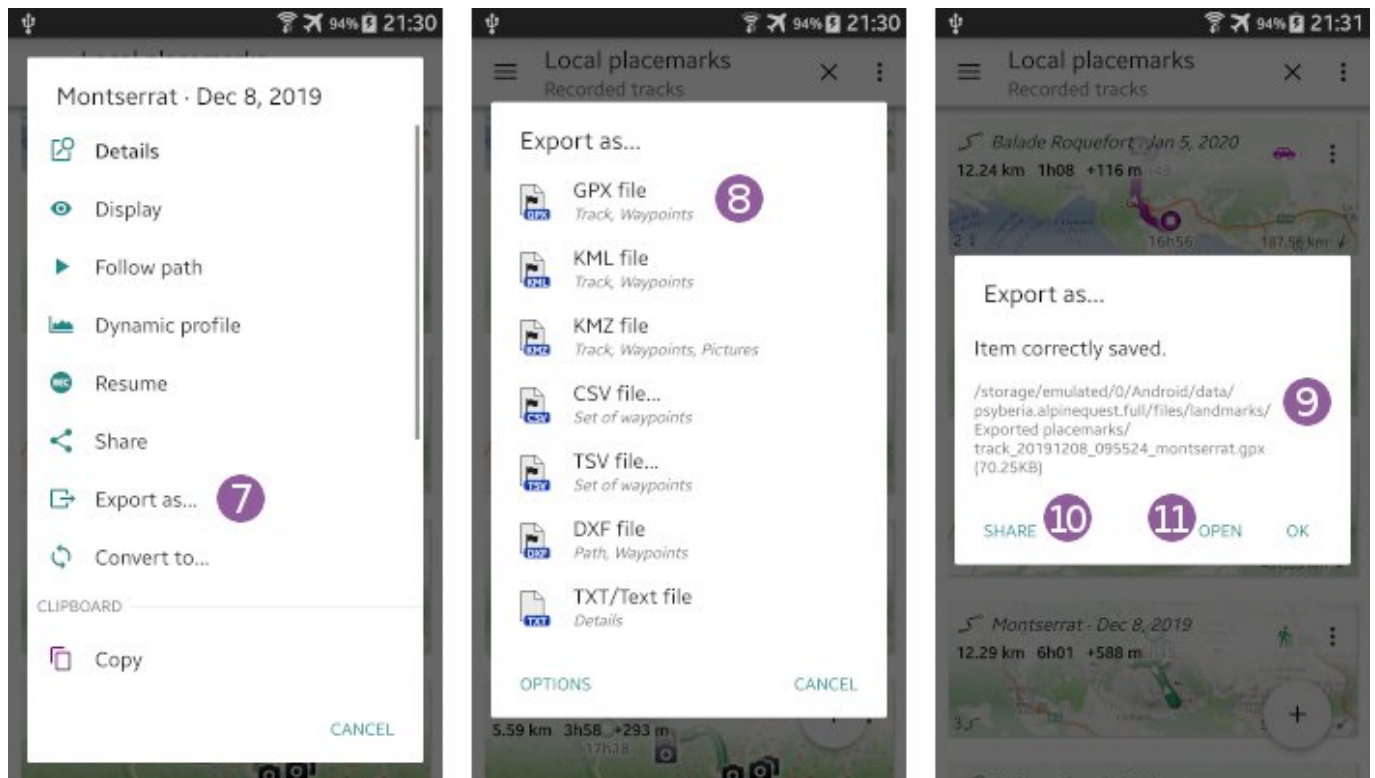


You can also tap on the menu icon **6** of a particular track to list all operation available for this track. For example, to export it to an external program:

- Tap **Export as...** **7**;
- Choose the format in which you want to export the track, for example **GPX file** **8** which offers a good compatibility.

Once the track has been exported, the full path of the exported file **9** is displayed.

- Tap **Share** **10** to share the file (send it as email, upload it on Dropbox, etc.);
- Tap **Open** **11** to open the file with a compatible application installed on your device (available choices depend on the applications installed on your device);
- Tap on **Ok** to close the dialog.



## Statistics and Graphics

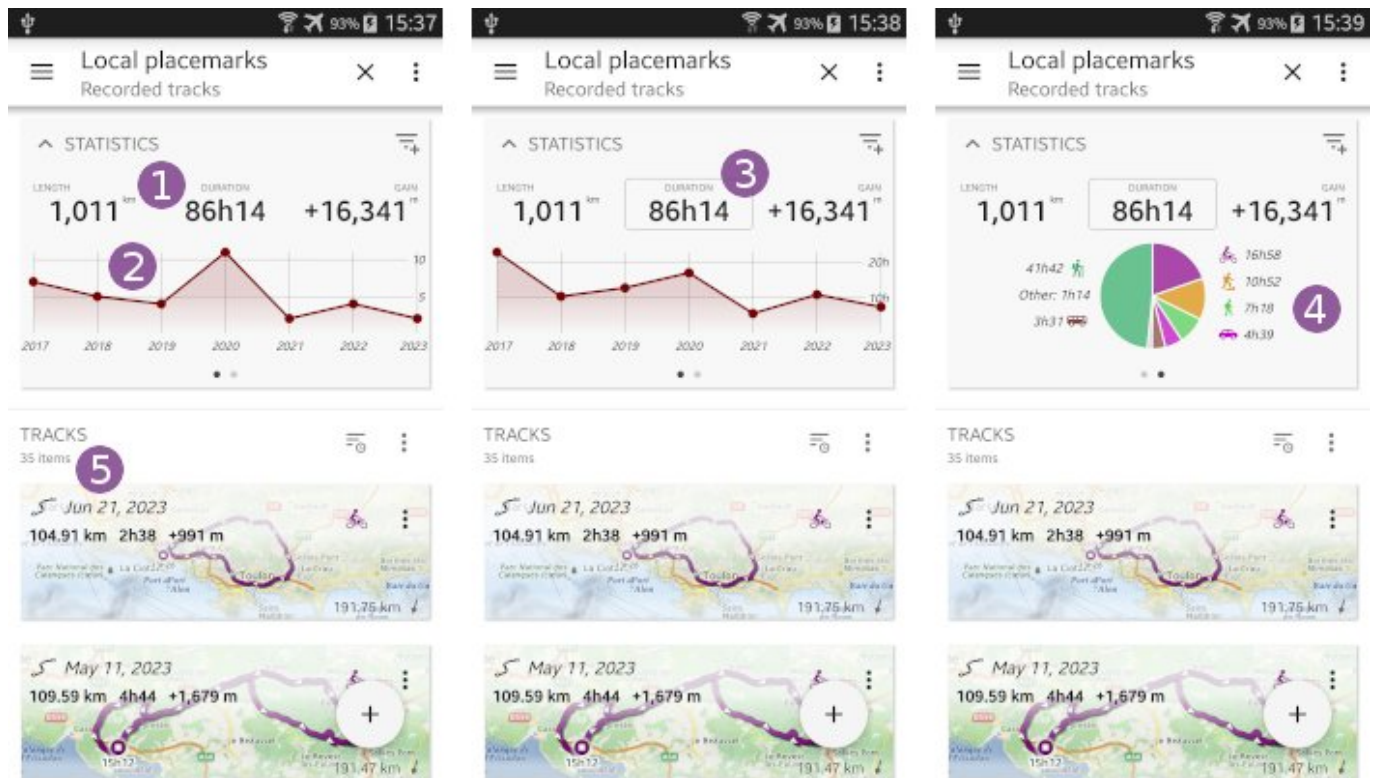
The top part <sup>1</sup> of the statistics panel contains the overall **Length**, **Duration** and **Gain** of all recorded tracks listed. The bottom part <sup>2</sup> contains a graphic of those statistics for the different years.

You can select any statistic field <sup>3</sup> to display this value by year. For example, tap **Duration** to display the recorded duration for the different years. When no statistic field is selected (outlined by a gray line), the number of recorded track segments is given.

Press the graphic and swipe your finger to the left to display the next graphic <sup>4</sup>, which displays the statistics by track activities instead of years.

<sup>i</sup> The statistics and graphics are computed from the recorded track segments, so the number of items may differ from the number of listed tracks <sup>5</sup>, in case you have multiple-segment tracks.



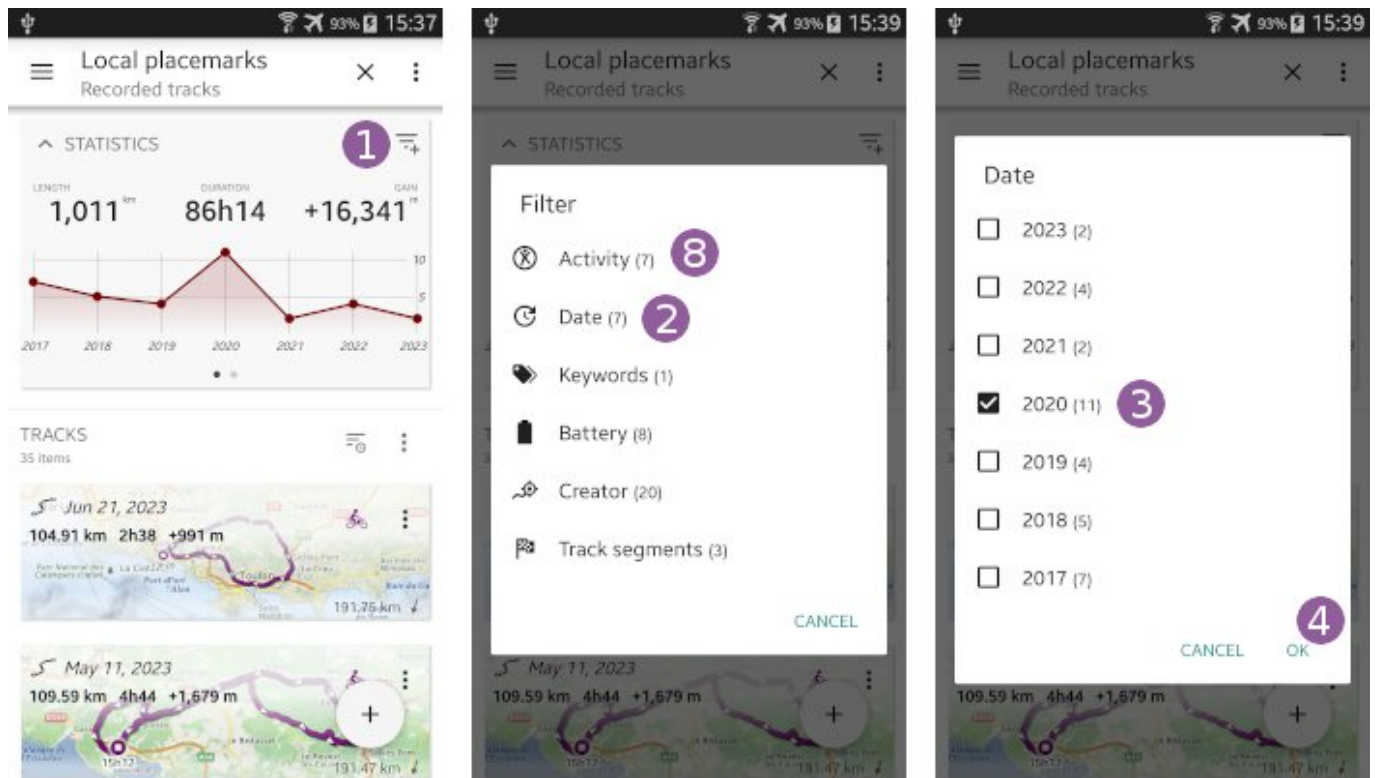


## Filters

You can add as many filters as you want in order to display a subset of the recorded tracks, and get the statistics and graphics on this subset:

- Tap on the **Filter** 1 icon;
- Select any filter from the list, for example **Date** 2 to only display the recorded tracks of particular years;
- Check the years you want to filter 3;
- Tap **Ok** 4 to validate.





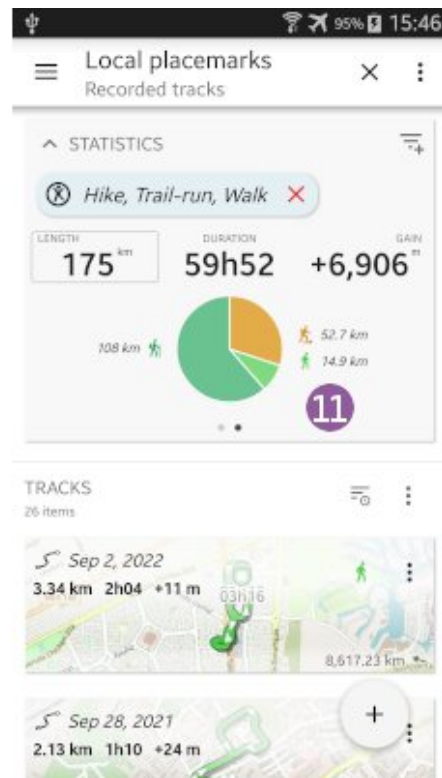
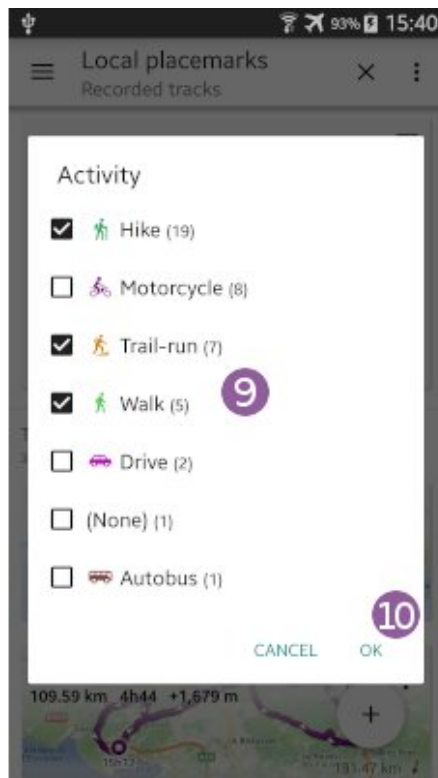
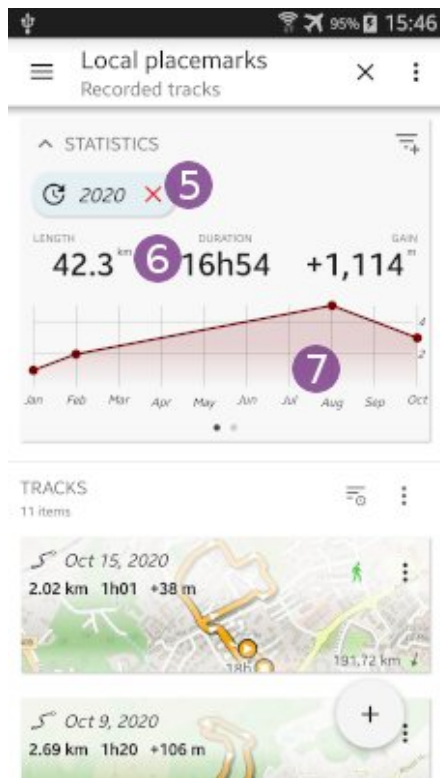
The filters currently applied (5) are displayed at the top of the statistics panel. You can tap any filter to edit it, or tap the red cross icon to delete it.

The statistics and graphics (6) are updated in order to take account only the recorded tracks that match all filters. If only one year is selected, the graphic will display months (7) instead of years.

Instead of selecting a date, you can also filter recorded tracks by activities:

- Tap on the **Filter** (1) icon;
- Select **Activity** (8) and check the activities you want to filter (9);
- Tap **Ok** (10) to validate.

The second graphic (11) allows you to compare the distances of each activities.



# Orientation & Compass

The compass feature uses the magnetic sensor of your device (if available) to give you orientation information.

To turn on the compass, you can either:

- Long-press the “**Compass**” ① menu icon;
- Tap the sub-menu toggle ③.

The “**Compass**” ① menu icon color lets you know the current state:

- When the icon is white, the “**Compass**” is turned off. Long-press the button to turn it on;
- When the icon is green, the “**Compass**” is turned on. Long-press the button to turn it off.

## The Orientation menu

Tap on the “**Compass**” ① menu button to display the compass menu, containing the following items:



- The “**Compass**” ② button opens the compass view;
- The “**Compass toggle**” ③ lets you turn on or off the compass easily;
- The “**Rotate the map (using compass)**” ④ check-box controls either or not to rotate the map based on the compass north to match the real direction you are looking at;
- The “**Display compass on the map**” ⑤ check-box controls either or not to display a compass ⑧ on the map;
- The “**Current heading**” ⑥ check-box controls either or not to display an information box ⑦ on the map with your current heading.

**i** You can un-check both “**Rotate the map (using compass)**” **4** and “**Display compass on the map**” **5** check-boxes to display your current **field of view** **9**.

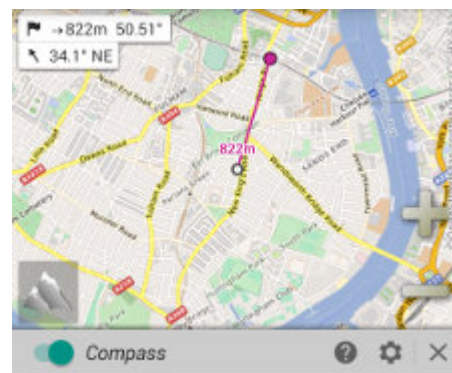
**i** You can replace the field of view **9** display by a heading line **10** from the main application **settings**, under “**Current heading display**”.



## The compass view



The “**compass view**” contains the following information:



- The “**direction to the north**”, pointed by a red arrow ①.
- The “**precise heading**” arrow ②, when this one is between  $-20^\circ$  and  $+20^\circ$ , including mils graduation;
- A “**pitch and roll**” level ③, helping you to keep the device flat;
- The “**magnetic declination**” at your current location ④, see below for more details;
- The “**direction to the target**”, pointed by a green arrow ⑤, if a location is set as target.

## Magnetic declination

A magnetic compass points the “**magnetic north**” (the top direction of the magnetic field) which is different from the “**true north**” (the top direction of the map, also called “**geographic north**” or “**map north**”).

In order to give you the direction of the true north, the application tries to compute the “**magnetic declination**” ④ (also called “**magnetic variation**”), which is the angle difference between the magnetic north and the true north, at your current location. It's usually just a few degrees, but may be more if you're close from a pole.

To compute this value, the application needs to know your physical location. It will first try to use the GPS location or the network based location if available, otherwise it will use the location displayed at the center of the map. When turning on the compass, be sure to point the map over your approximate current location to get a correct declination, in case your GPS location is not known.

## The compass settings

By default, the compass has a moving rose and graduations ① (the “**Topochaix**” style). You can change it to a

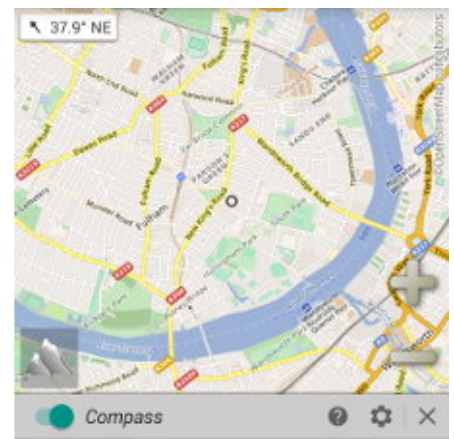
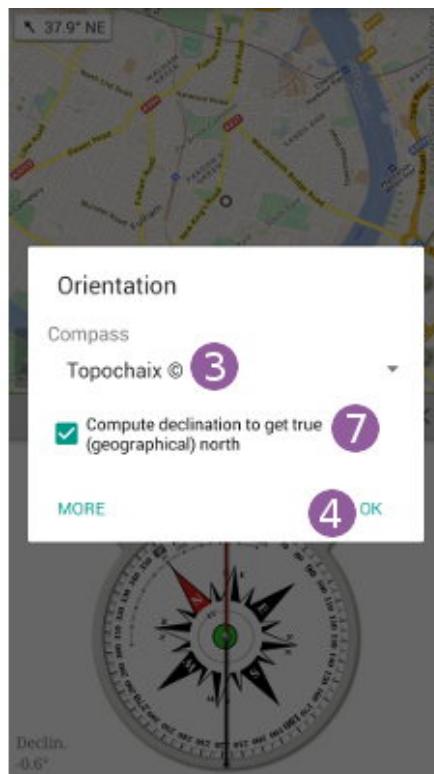
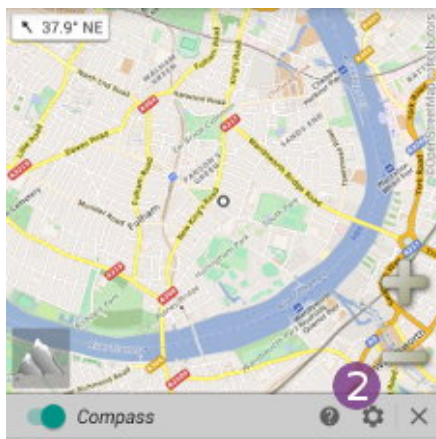


moving needle with still graduations <sup>5</sup>:

- Tap on the **“Settings”** <sup>2</sup> icon to open the settings dialog;
- Tap on the style list <sup>3</sup> and select **“Standard”**;
- Tap on **“Ok”** <sup>4</sup>.

If you need the magnetic north direction instead of the true north, or if you believe that your device already applies the declination offset <sup>6</sup>, you can turn this computation off:

- Tap on the **“Settings”** <sup>2</sup> icon to open the settings dialog;
- Un-check **“Compute declination to get true (geographical) north”** <sup>7</sup>;
- Tap on **“Ok”** <sup>4</sup>.

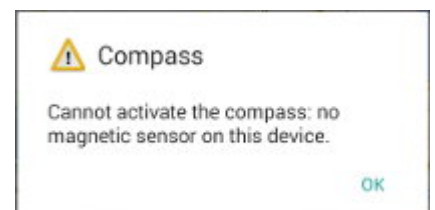


## Problems with the compass

### Compass won't turn on

If you can't turn on the compass, it means that your device doesn't have a built-in magnetic sensor, which is required to get the direction of the north. Recent versions of the application display this message when this case occurs:

Note that you can still use the map rotation using the GPS (if available), from the [Positioning](#) menu.



### Compass gives incorrect direction

When using the application compass (just like with mechanical compass), be sure to handle your device in the horizontal position, the screen facing the sky.

If you still get a wrong direction, it usually means that the magnetic sensor needs to be calibrated. This is fast and easy:

- Turn on the compass;

- Rotate your device in the air in all directions;
- Done!



### Wrong magnetic declination

If calibrating the compass doesn't help, or if you see a strange constant offset in the direction, check the magnetic declination **1**. As explained above, the application needs to know your approximate current location to compute a valid magnetic declination. Most of the time you just need to be sure that the map points your current location to fix your problem.

If you still believe the computed declination is incorrect or already applied by your device, you can turn off this computation as explained in the settings sections.

### Inverted poles

On some devices, when changing the screen orientation of 180° (jumping to the opposite screen orientation, ie landscape right to landscape left without the intermediate portrait orientation), the compass direction is inverted. Be sure to always select the portrait orientation, even temporarily.

### Sensor issues

In addition to the magnetic sensor, your device may use other sensors to compute a precise and noiseless north direction. Some sensors may not work or may not be as reliable as expected on some devices and some may be wrongly reported as available. In some cases, changing the default orientation computation method may provide a better accuracy.

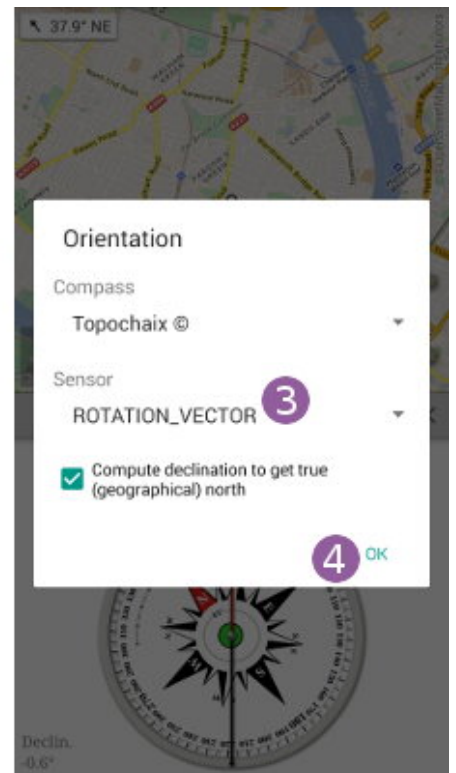
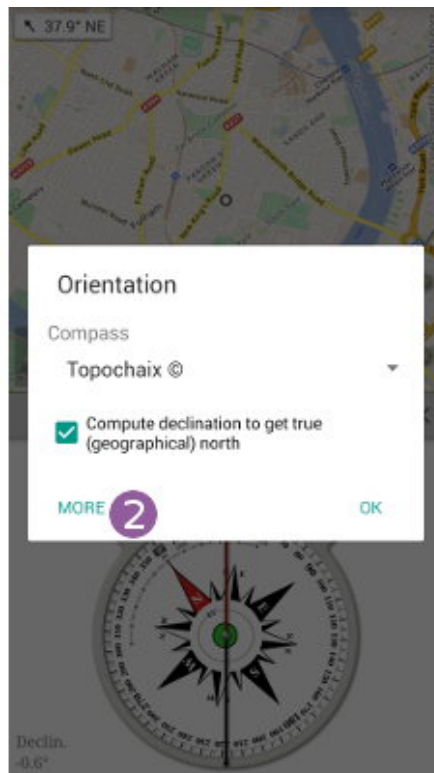
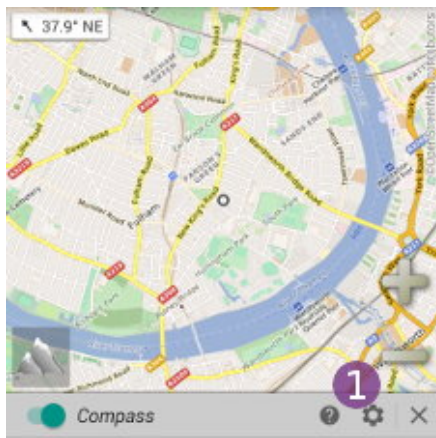
To do so:

- Tap on the **“Settings”** **1** icon to open the settings dialog;
- Tap on **“More”** **2**;
- Tap on the currently used **“Sensor”** **3** and choose another one;
- Tap on **“Ok”** **4**.

The list of available sensors depends on the device and system version, but usually contains:

- **“ROTATION\_VECTOR”** which uses the **“magnetometer”**, the **“accelerometer”** and the **“gyroscope”** sensors. When available, it usually provides the more precise value;

- “**MAGNETIC\_FIELD**” which uses the “**magnetometer**” and the “**accelerometer**” sensors;
- “**ORIENTATION**” which uses a device-dependent internal computation.



# Search

The application allows you to search placemarks using different ways:


- From a large variety of coordinates;
- By name, among all displayed placemarks;
- By name, from online search services (like [Nominatim](#) and [Google Maps](#)) when an Internet connection is available.

## How to search a place by name?

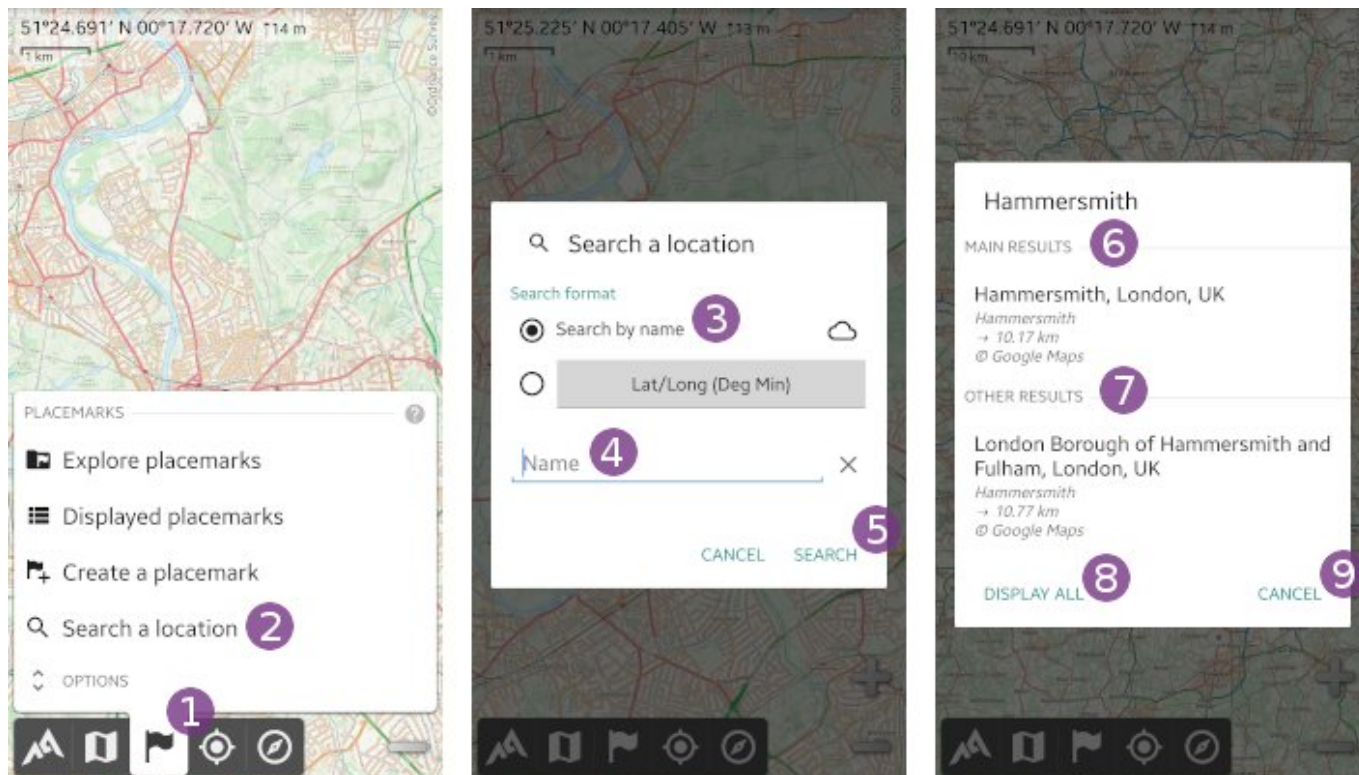
- Tap on the **“Placemarks”** ① menu and on **“Search a location”** ②;
- Be sure that **“Search by name”** ③ is selected;
- Type the name of the place to search ④ and tap on **“Search”** ⑤;
- Wait for the results to appear, which can take up to few seconds.

Results (if any) are sorted by distance from the current screen center location. The results that best match your search are listed in the **“Main results”** ⑥ section, the other ones in the **“Other results”** ⑦ section. You can:

- Tap on any result to move the map on it and display it;
- Tap **“Display all”** ⑧ to display all results as a set of waypoints;
- Tap **“Cancel”** ⑨ to search for another name.

 Results depend on the currently displayed map area. You can get more precise results by first displaying the map area you're interested in before searching for a location name.



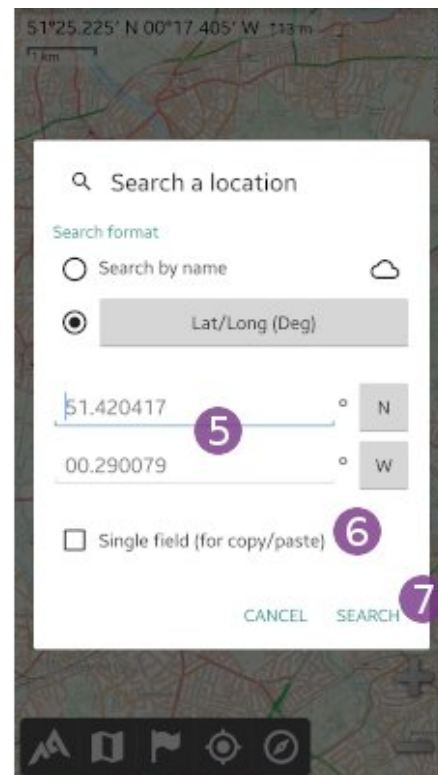
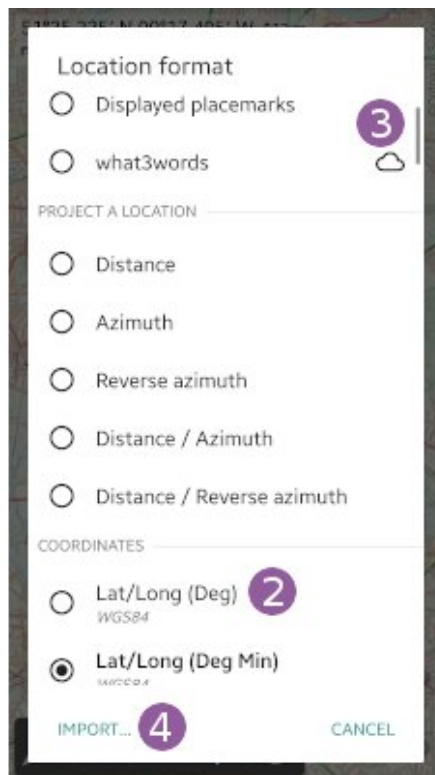
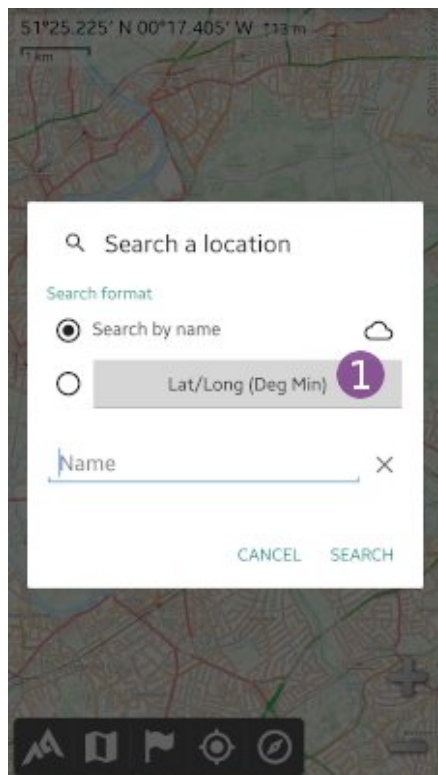


## How to search a place from its coordinates?

To find a location from its coordinates:

- In the “**Search a location**” panel (see above), tap on the current input format **1**;
- Choose the input format you need to search, for example “**Lat/Long (Deg)**” **2** to search for a WGS84 (GPS) latitude and longitude coordinates in the decimal degrees format;
- Input formats with a cloud icon **3** require an active internet access;
- If your format is not listed, you can tap on “**Import...**” **4** to import it ([more details here](#));
- Fill the coordinate fields **5**, like the latitude, the longitude and cardinal sectors, depending on the chosen format;
- If you need to paste coordinates copied from somewhere else, tap on “**Single field (for copy/paste)**” **6** to get a single text field in which you'll be able to paste your coordinates;
- Tap “**Search**” **7** to display the location.





# Digital Elevation Model (DEM)

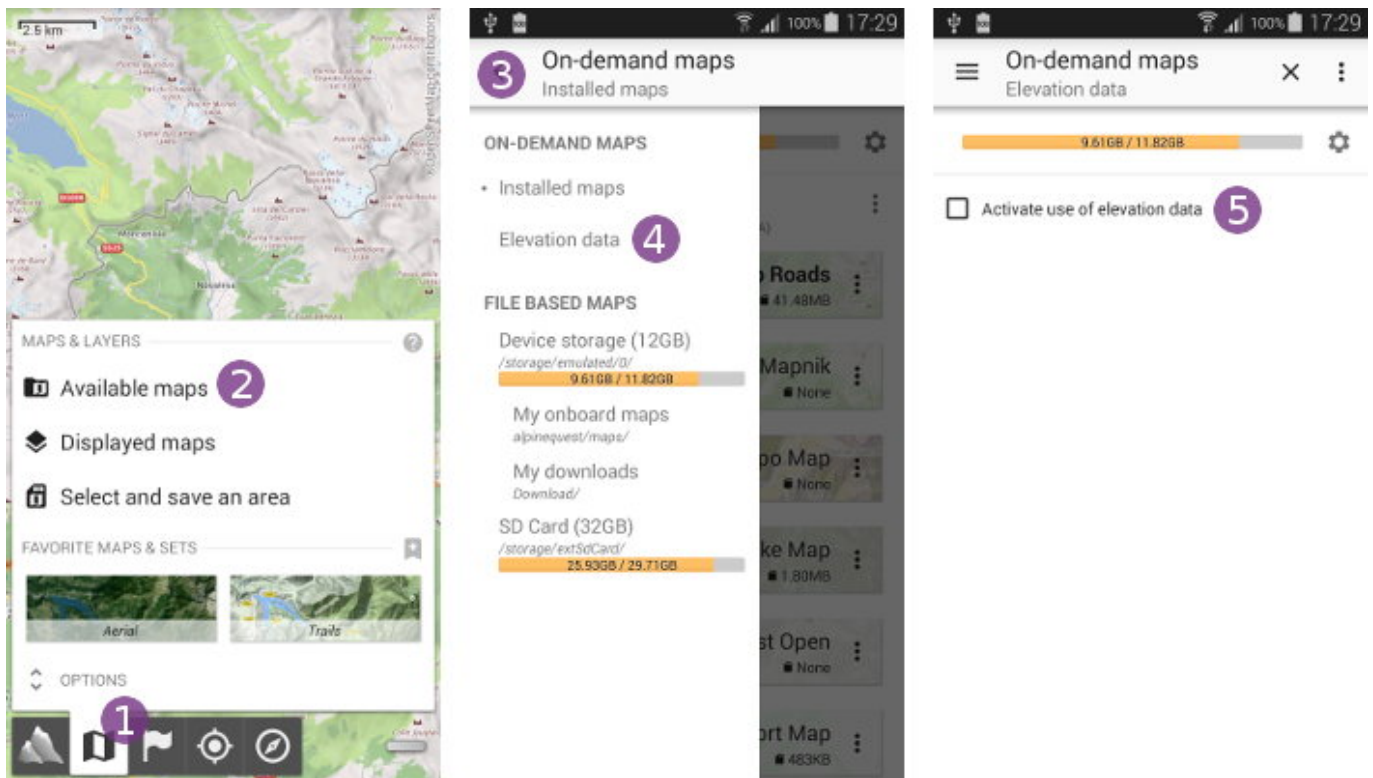
This feature allows the application to download and store elevation values of remote locations and let you use them in various ways, even while being offline.

Those elevations come from various sources including the SRTMGL1(v3) database and are currently available between latitude 56°S and 60°N (Norway, Sweden and Finland are entirely covered) with a precision of 1" (1 arc-second).

## How to activate the use of elevation values?

To activate the use of elevation values:

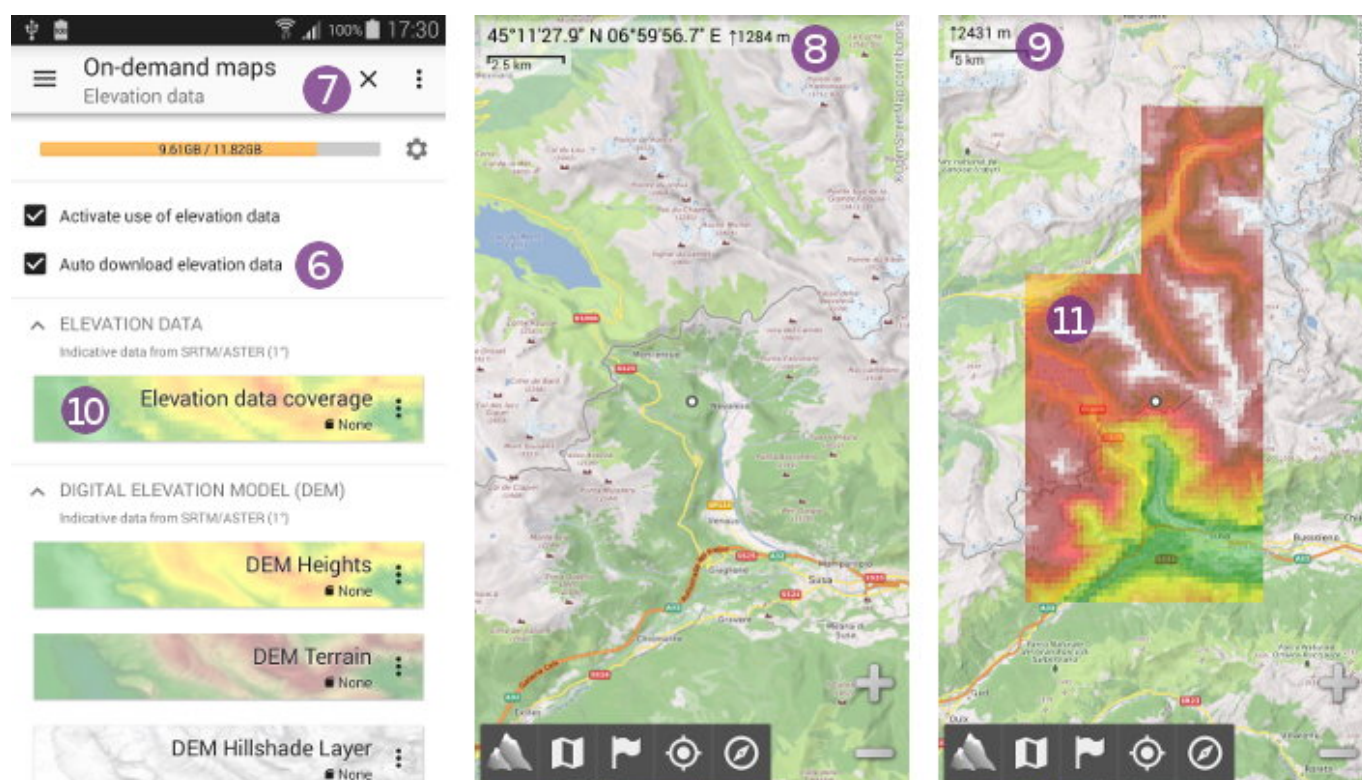
- Tap on the **"Maps"** menu <sup>1</sup> and on **"Available maps"** <sup>2</sup>;
- Tap on the top left menu <sup>3</sup> and on **"Elevation data"** <sup>4</sup>;
- Check **"Activate use of elevation data"** <sup>5</sup>.



Be sure to also check **"Auto download elevation data"** <sup>6</sup> so the application automatically downloads needed areas from our servers. If you want to use your own elevation data (see below), then un-check this option.

Close the maps explorer by tapping on <sup>7</sup>. As you move the map, the elevation of the screen center point <sup>8</sup> is given along with its coordinates. If the [screen center coordinates](#) are not displayed, the elevation on the center point will be displayed alone <sup>8</sup>.

If you want to check the coverage of stored elevation values, you can display the **“Elevation data coverage”** <sup>10</sup> layer by tapping it. Stored areas will be displayed <sup>11</sup> over the current map.



If you have troubles downloading elevation values, check that:

- Your Internet connection is active;
- The option **“Auto download elevation data”** is checked (you can also access it directly from the **“Maps”** menu, in the **“Options”** section);
- The option **“Use only local storage”** is not checked ([see here](#)).

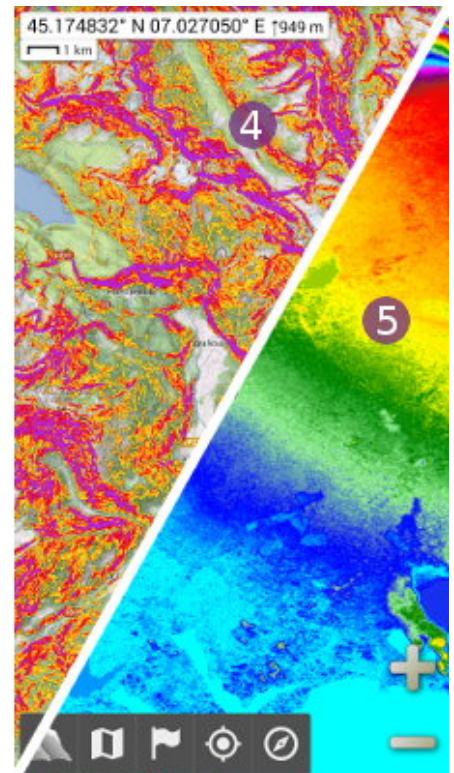
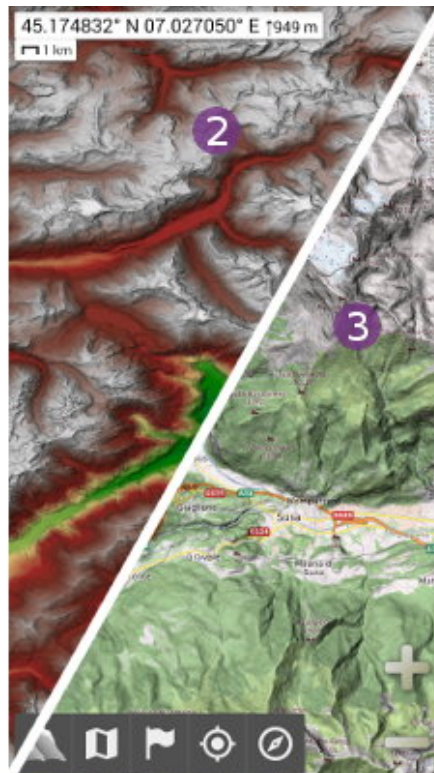
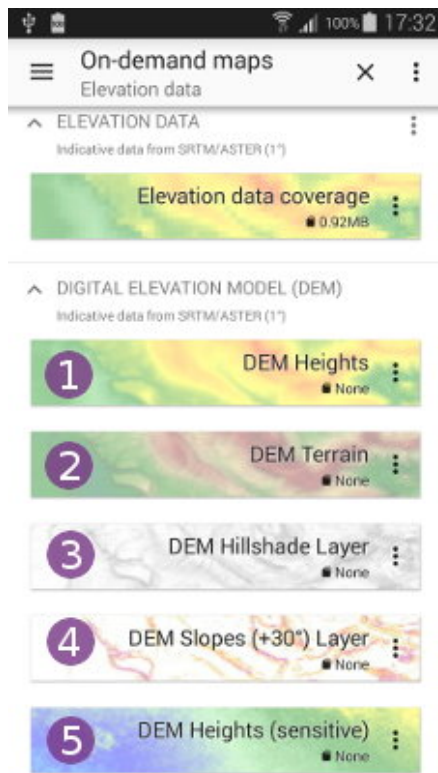
## How to use maps and layers based on elevation data?

When the use of elevation data is activated, a new set of maps and layers is added to the installed maps list. Those maps and layers are generated by the application based on the stored elevation data, they do not require any additional download.

The set contains:

- **“DEM Heights”** <sup>1</sup>: a map associating each elevation value with a different color;
- **“DEM Terrain”** <sup>2</sup>: a map with more close to reality elevation colors, hills-shading and grayed cliffs (>45°);
- **“DEM Hillshade Layer”** <sup>3</sup>: a layer that can be added over any map, emphasizing relief by simulating hill shades;
- **“DEM Slopes (+30°) Layer”** <sup>4</sup>: a layer that can be added over any map, emphasizing steep slopes: transparent to yellow (25° → 30°), yellow to orange (30° → 35°), orange to red (35° → 40°) and red to purple (40° → 45°);
- **“DEM Heights (sensitive)”** <sup>5</sup>: a map showing the smallest elevation variations;

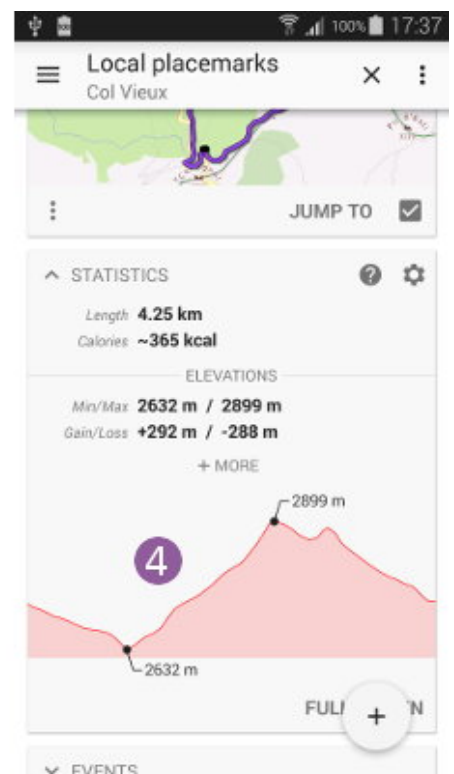
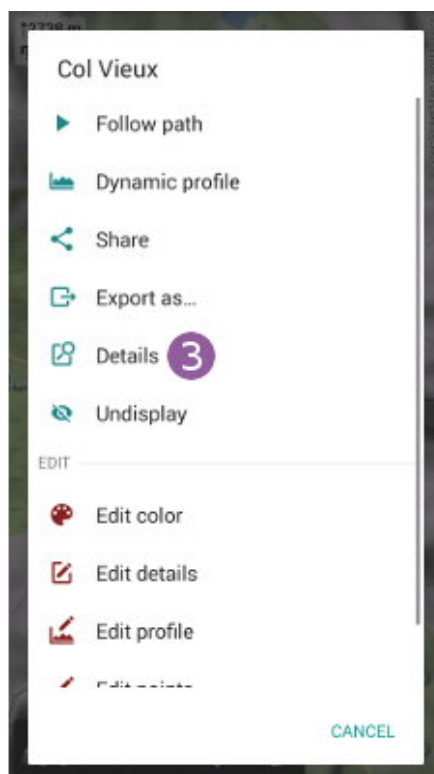
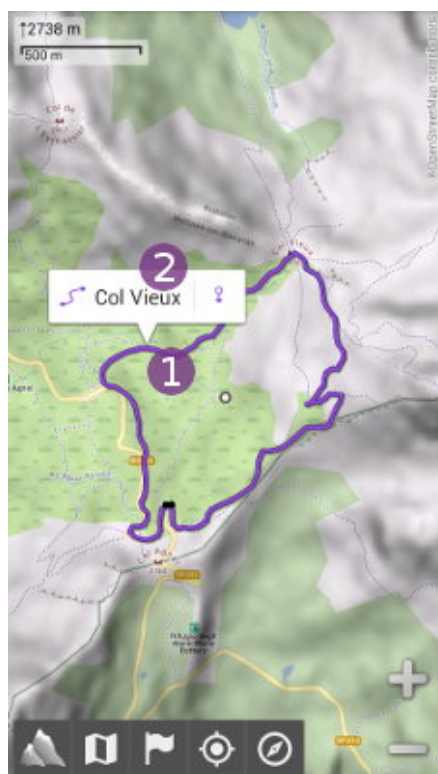




## How to get elevation profiles of paths?

When [manually drawing a path](#) or [automatically drawing a path along roads](#) over an area with elevation values stored, you can get the elevation profile and gain of that path:

- Tap anywhere on the path **1** and select its name **2**;
- Select **“Details”** **3** and check the **“Statistics”** **4** part.

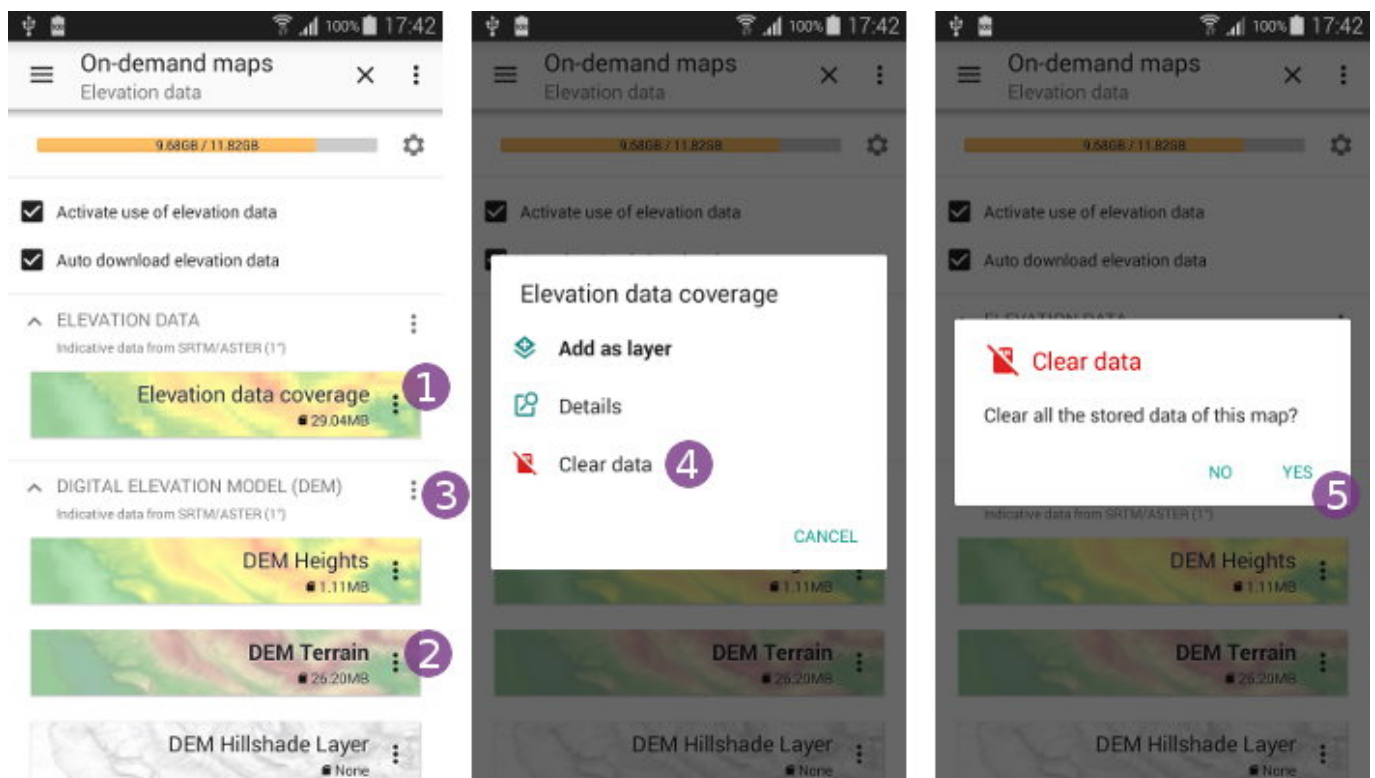


## How to delete stored elevation data?

In order to delete the elevation data stored on your device:

- Tap on the “**Elevation data coverage**” menu icon **1**;
- Select “**Clear data**” **4**;
- Tap “**Ok**” **5** to confirm;

In addition, you can delete the data used by maps and layers generated from the stored elevation data. To do so, use the menu **2** of the map you want to delete the data, or the group menu **3** if you want to delete the data of all maps.



## How to use your own DEM data files?

If you don't want to use DEM values automatically downloaded by the application, you can use your own files. As long as the application finds the elevation data it needs, nothing will be downloaded.

You must use DEM files in the “**.HGT**” format (either 1201 or 3601 values per lines), following the usual rules:

- File names must follow the .HGT naming convention;
- Files containing 1201×1201 values (3”) must have a size of “**2,884,802 bytes**”;
- Files containing 3601×3601 values (1”) must have a size of “**25,934,402 bytes**”;

The files must be copied inside the sub-folder “**/datastore/dem/**” of [the application folder](#) (the same folder used by the application to store the downloaded elevation data).

**i** If your own data doesn't cover a requested area, the application will automatically download the missing data in its own format which may interfere with your own data. Be sure to turn off the automatic download of



elevation data (see first paragraph).

## Problems with elevation data

### **What if I get error messages when using elevation data?**

It's likely because the elevation data storage is corrupted. Most of the time, this is due to “cleaning/optimizing” applications that delete parts of the storage (usually the biggest files) and claim to have freed space. If you use such application, be sure to correctly setup it. To fix the errors, you need to [clean up the stored elevation data](#).

# How to use workspaces?

Workspaces allow users to have different working environments in one single application. By having their own maps, workspaces are an easy way to work at different locations and with different maps.

Use cases:





- You're going to Italy for a trip, and need to store maps for various places. When coming back, you want to clear all the data stored for Italy, but you also want to keep the data previously stored for all other areas. Just create a workspace called "Italy", store all your related data in it, and when coming back, delete it.
- You use the application at various locations, and for each location often need to switch between different maps. Just create a workspace for each location, and for each workspace add the maps you need and save some of them as favorite maps. You'll be able to change the location by switching the workspace, and maps by switching the favorite set.

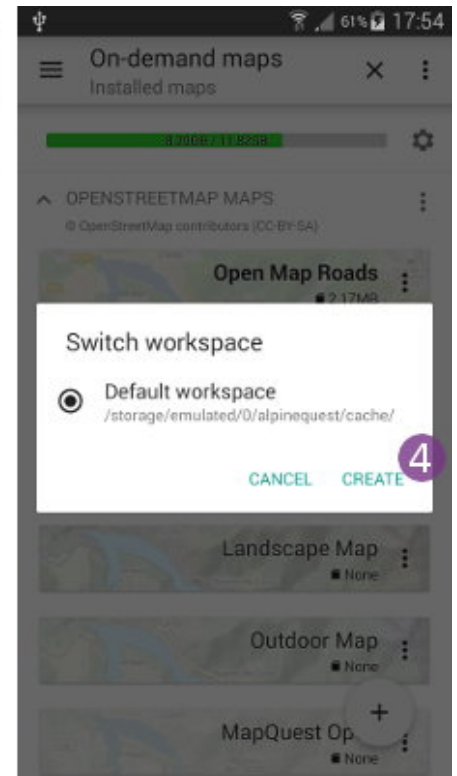
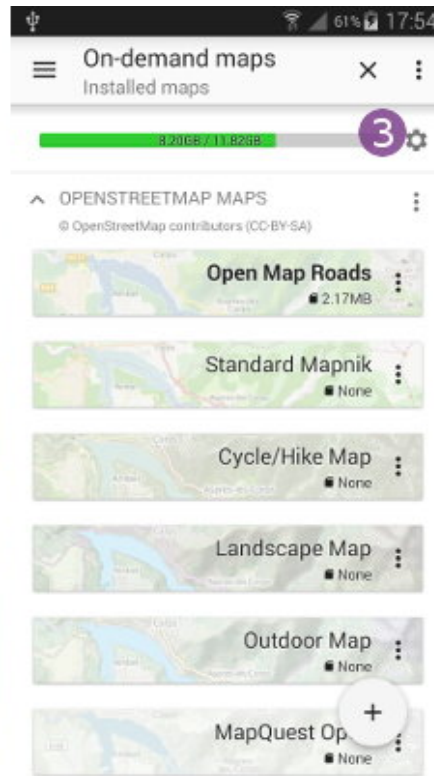
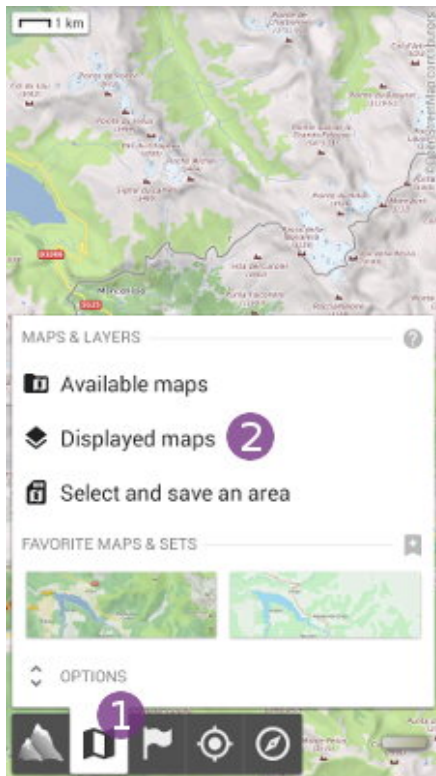
Here is the list of items specific to each workspace:

- Displayed location and zoom;
- Displayed placemarks;
- Displayed maps;
- Installed on-demand maps and their stored data;
- [Favorite maps and sets](#);
- [Custom menu buttons](#);
- [Proximity alerts](#);
- [Location formats and grids](#).

All other items are common to all workspaces.

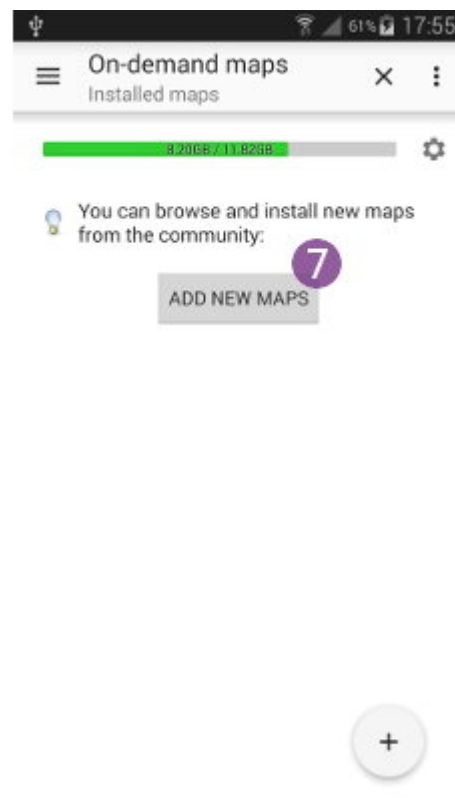
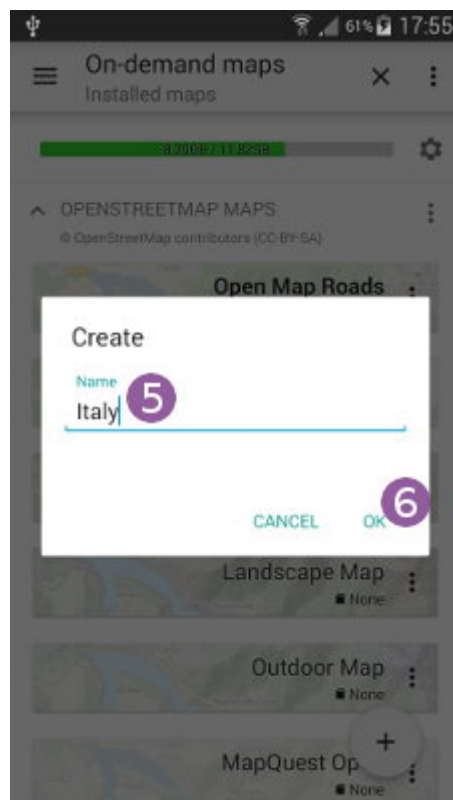
## How to create a new workspace?

- Tap on the **"Maps"**  menu icon and on **"Available maps"** ;
- In the installed on-demand maps list, tap on the **"Switch workspace"**  icon;
- Tap on **"Create"** .



- Type a name (5) for your new workspace and tap "Ok" (6) to validate;
- The workspace is created and selected;
- Tap on "Add new maps" (7) to add all the maps you need.

**i** Instead of a typing a name in (5), you can type the absolute path of an existing and empty folder to store all the workspace data (e.g. "/storage/sdcard/MapDataItaly/").

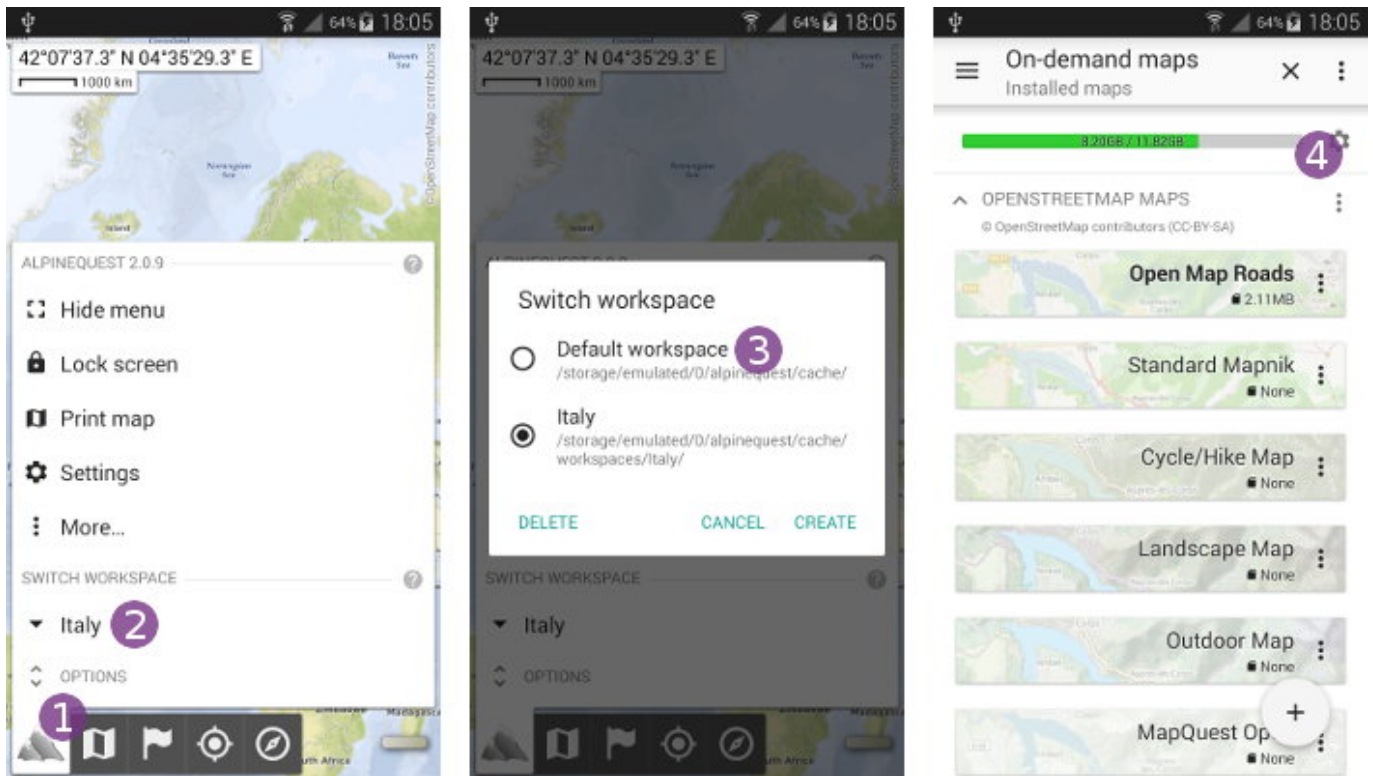


## How to switch to another workspace?

Once you've created at least one more workspace, a workspace chooser is displayed in the main menu:

- Tap the main menu icon <sup>1</sup> and on the current workspace name <sup>2</sup>;
- Select another workspace <sup>3</sup>.


Alternatively, you can also select another workspace from the “**Switch workspace**” <sup>4</sup> icon of the on-demand installed maps list.

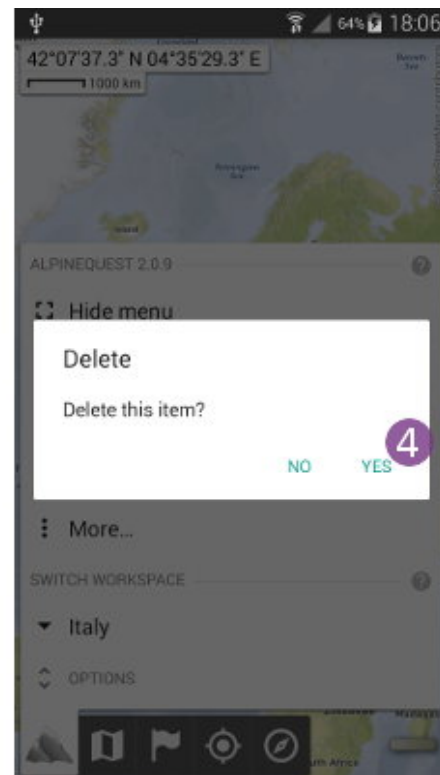
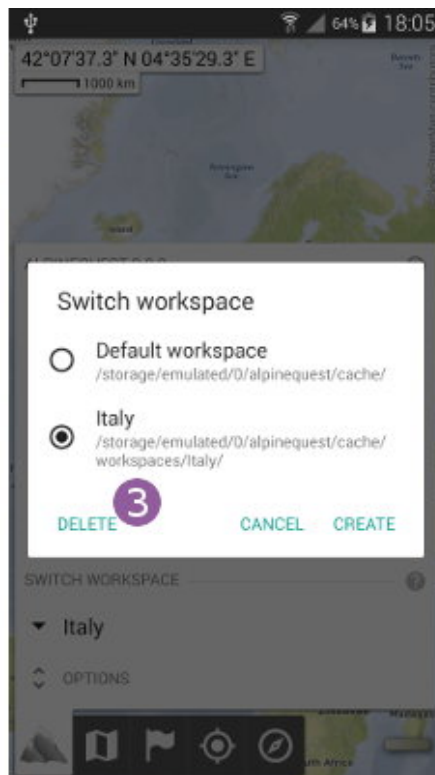
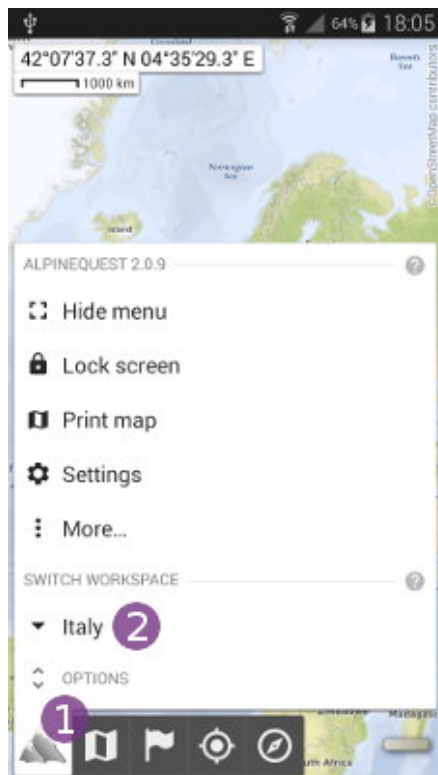


## How to delete a workspace?

To delete the current workspace:

- Tap the main menu icon <sup>1</sup> and on the current workspace name <sup>2</sup>;
- Tap on “**Delete**” <sup>3</sup>;
- Tap on “**Yes**” <sup>4</sup> to confirm your choice.

 Be careful that all the data associated to the selected workspace will be deleted, there is no way to restore it.

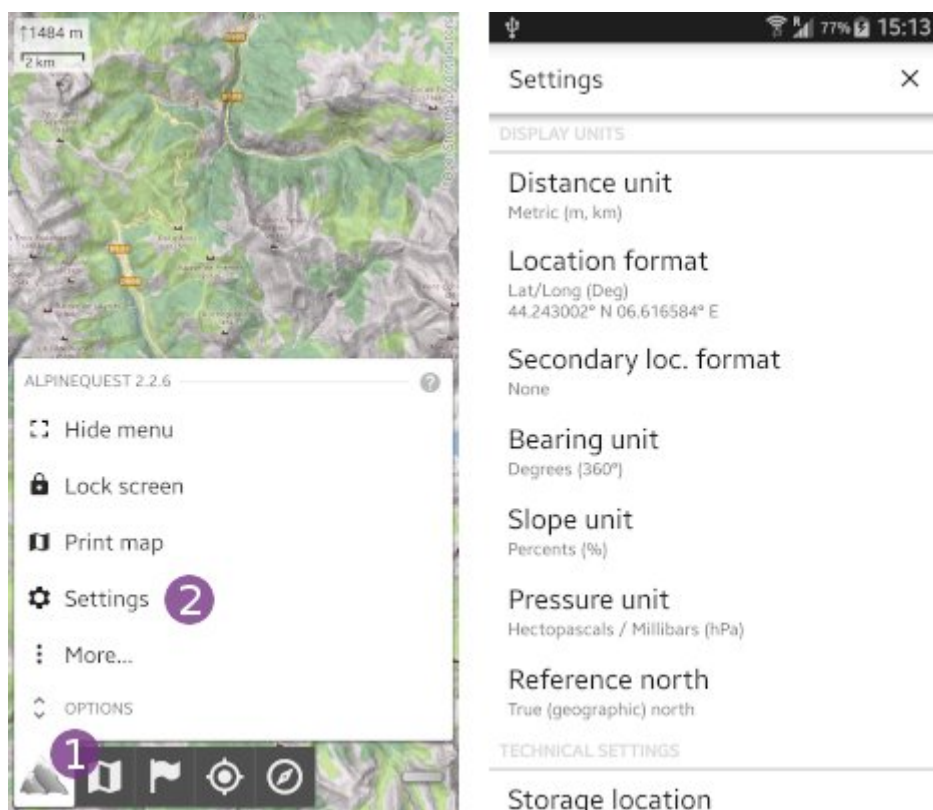




# Settings

The application main settings allow you to easily change some basic behaviors and configurations:

- Click on the main menu button **1**;
- Click on **“Settings”** **2**.



[How to configure the location format and grid?](#)

[How to configure the items of the main sub-menu?](#)

[Where does the application store its data?](#)

# Location formats and grids

The application can display and search locations in almost any coordinate system.

For all of them, the associated grid (geodetic or projected) can be displayed on the map, along with grid square notations for [UTM](#), [MGRS](#), [OSGB](#), [Irish Grid](#), [TPC Grid](#) and [DFCI](#) grid systems.

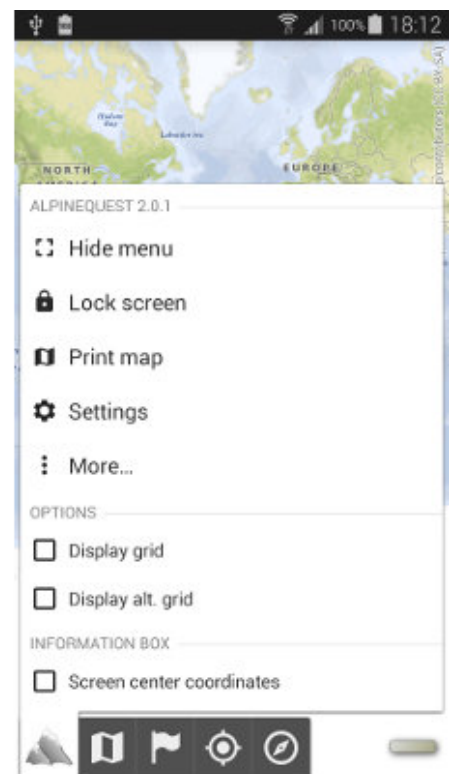
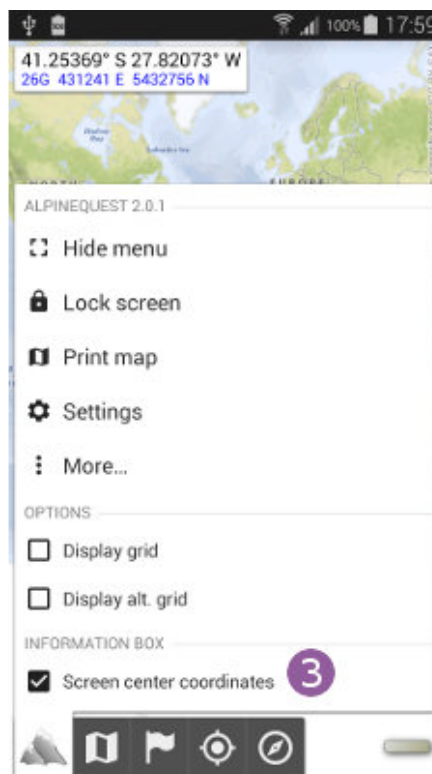
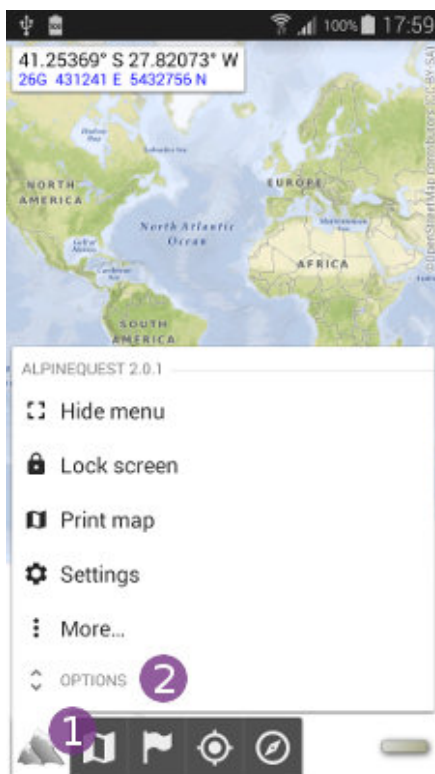


By default, the coordinates of the screen center location are displayed in an information box located at the top left of the screen. If an secondary location format has been chosen in the application settings, both are displayed. The coordinates and grid of the secondary format are displayed in blue.

## How to display or hide the screen center coordinates?

To display or hide the screen center coordinates information box:

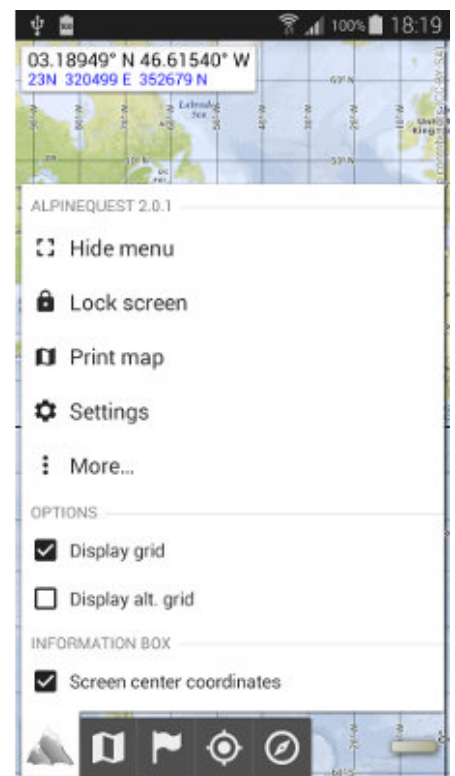
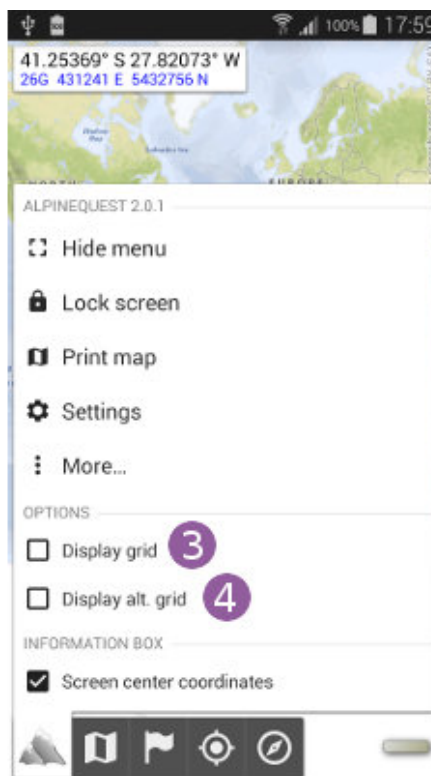
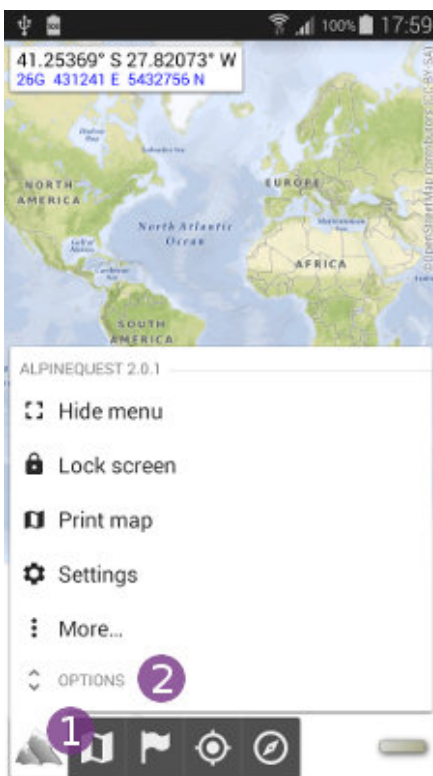
- Tap on the main application menu **1**;
- Tap on **“Options”** **2**;
- Check the option **“Screen center coordinates”** **3** to display the coordinates, or un-check it to hide them.



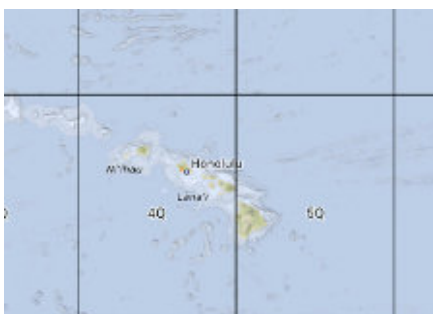
# How to display or hide the grid?

To display or hide the grid for one of the current location format:

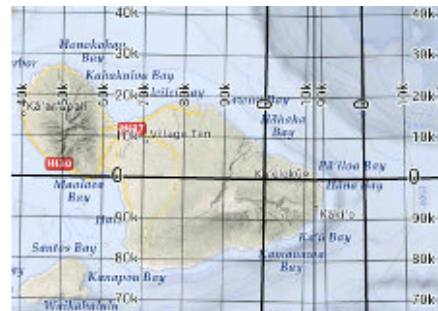
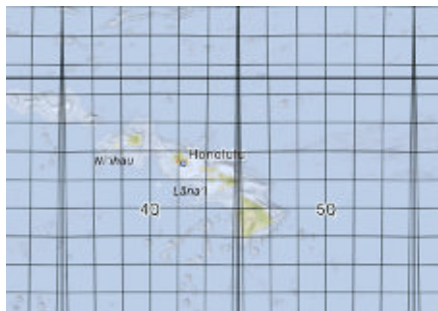
- Tap on the main application menu **1**;
- Tap on **"Options"** **2**;
- Check the option **"Display grid"** **3** to display the grid of the main location format, or un-check it to hide it;
- If you've chosen a secondary location format in the application settings, you can display its grid or hide it independently by using the option **"Display alt. grid"** **4**. The secondary format grid is displayed in blue.



Here is an example of the **UTM Grid** over Hawaii:



Here is an example of the **MGRS Grid** over Hawaii:



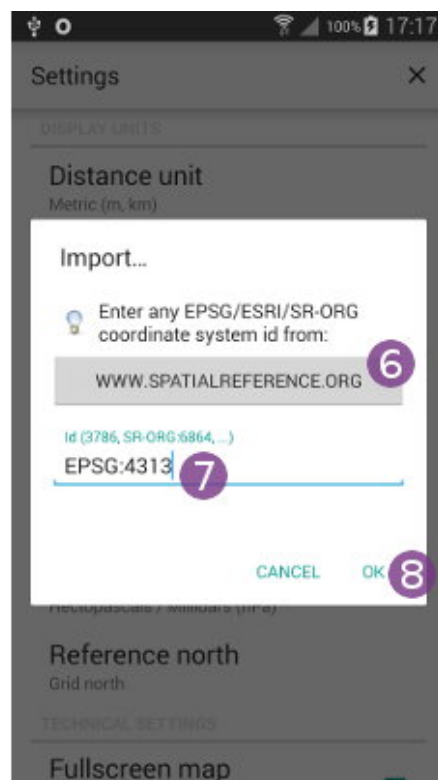
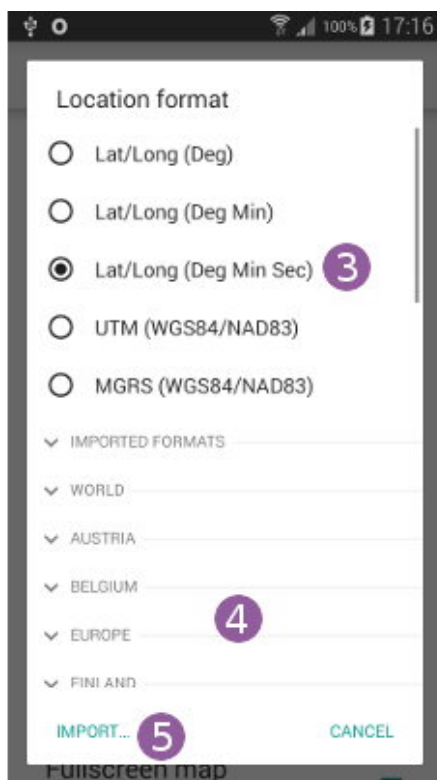
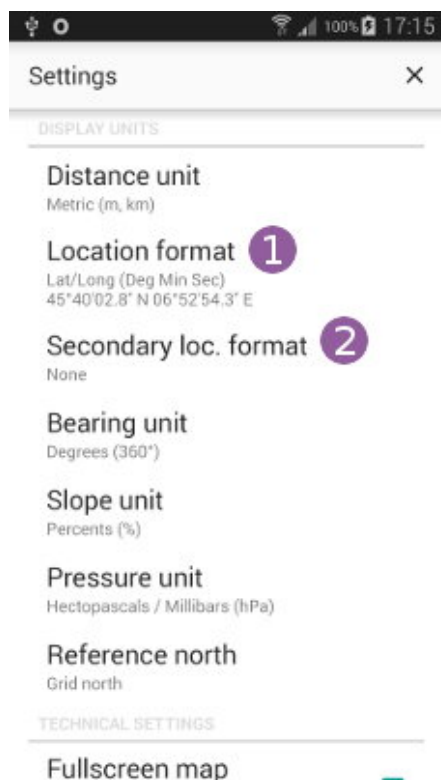
## How to change the location formats?

To change the location coordinates display format:

- Open the [application settings](#);
- Tap on **“Location format”** <sup>1</sup> to change the main location format, or on **“Secondary loc. format”** <sup>2</sup> to change the secondary location format;
- Common worldwide formats are displayed first <sup>3</sup>, local and less common formats are listed by area <sup>4</sup>.

If you cannot find the location format you need:

- Tap on **“Import...”** <sup>5</sup>;
- Type the EPSG coordinate format ID in the text field <sup>7</sup>;
- If you don't know it, tap on [www.spatialreference.org](http://www.spatialreference.org) <sup>6</sup> to visit this website that list almost all coordinate formats. You'll be able to make searches by name or country, and retrieve the list of corresponding coordinate format IDs;
- Tap on **“Ok”** <sup>8</sup> to validate;



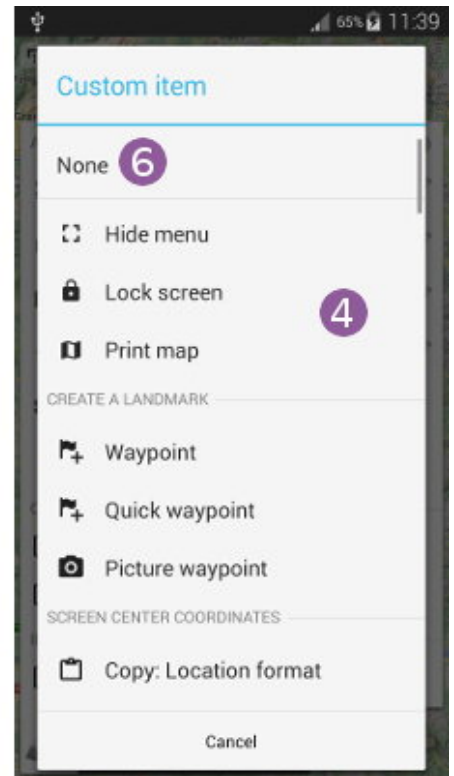
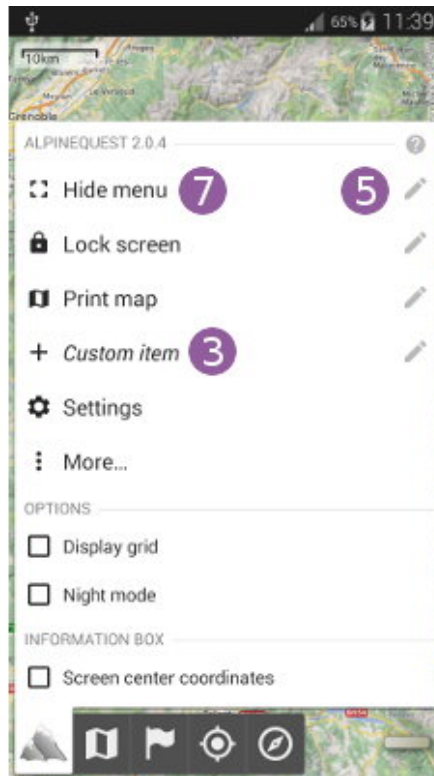
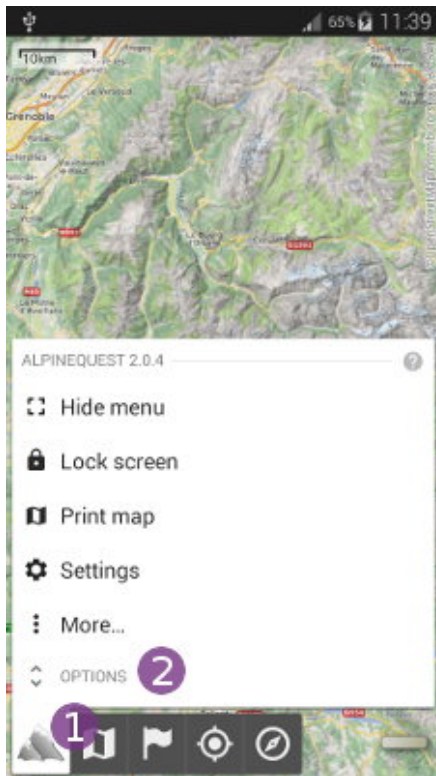


# Custom menu buttons

The application allows you to edit the items available in the main sub-menu in order to choose the actions you use the most:

- To enter in the edit mode of the sub-menu items, click on the main menu button **1** and on **"Options"** **2**.
- To add a new item, click on **"Custom item"** **3**, wait for the list of all available actions to be displayed and choose one of them **4**.
- To edit an existing item, click on the **"Edit"** icon **5** at the right of the item and select a new action from the available actions list **4**.
- To delete an existing item, click on the **"Edit"** icon **5** at the right of the item and select **"None"** **6**.

**i** Long-pressing the main menu button **1** does select the first item of the sub-menu **7**. You can set up here the action you use the most.





# Data storage and access

## Where does the application store its data?

The application folder is the unique folder used by the application to store all its data on the user device, including:

- Stored maps for off-line use;
- User placemarks, when using the default placemarks folder;
- Imported and exported placemarks, details or map images;
- Pictures used in waypoints;
- Various technical data.

This folder is automatically chosen during the first application start, and is usually located on the external SD card (if available) for devices running Android lower than 4.4, or on the device memory for Android 4.4 and after (SD card storage behavior has considerably changed since then).

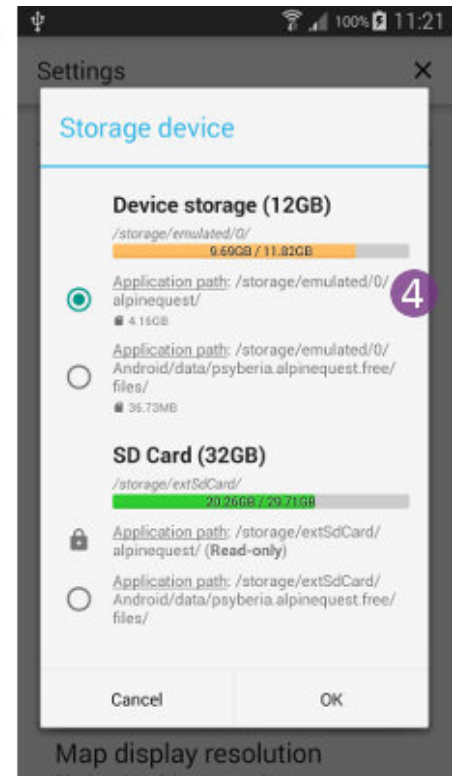
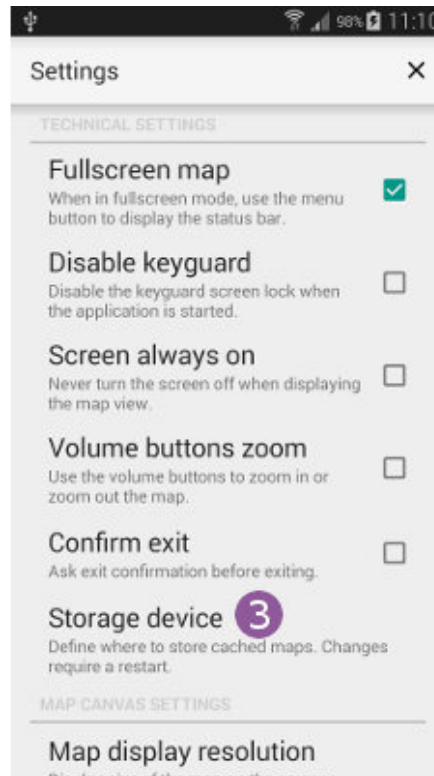
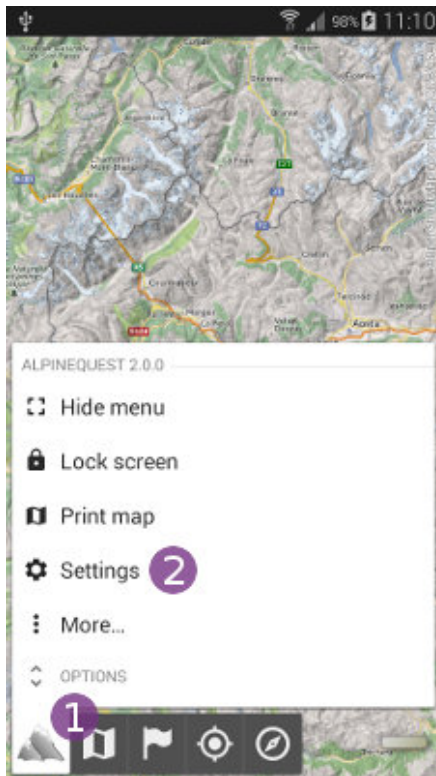
Inside the application folder, you'll find the following sub-folders:

- **/datastore/**, where the application stores downloaded data like [on-demand maps](#), [elevations](#), etc;
- **/icons/**, where you can store your [custom icons](#);
- **/landmarks/**, where the application stores (by default) the placemarks you create (waypoints, routes, tracks, areas);
- **/logs/**, where the application store its technical logs;
- **/maps/**, where you can store your [file-based maps](#);
- **/pictures/**, where the application stores pictures associated with picture waypoints (on some devices these pictures are saved in the device common media folder);

## How to locate the application folder?

To display the application folder:

- Click on the main menu icon ①;
- Click on **“Settings”** ②;
- Scroll the list and select **“Storage device”** ③;
- Locate the **“Application path”** ④ of the selected storage device.



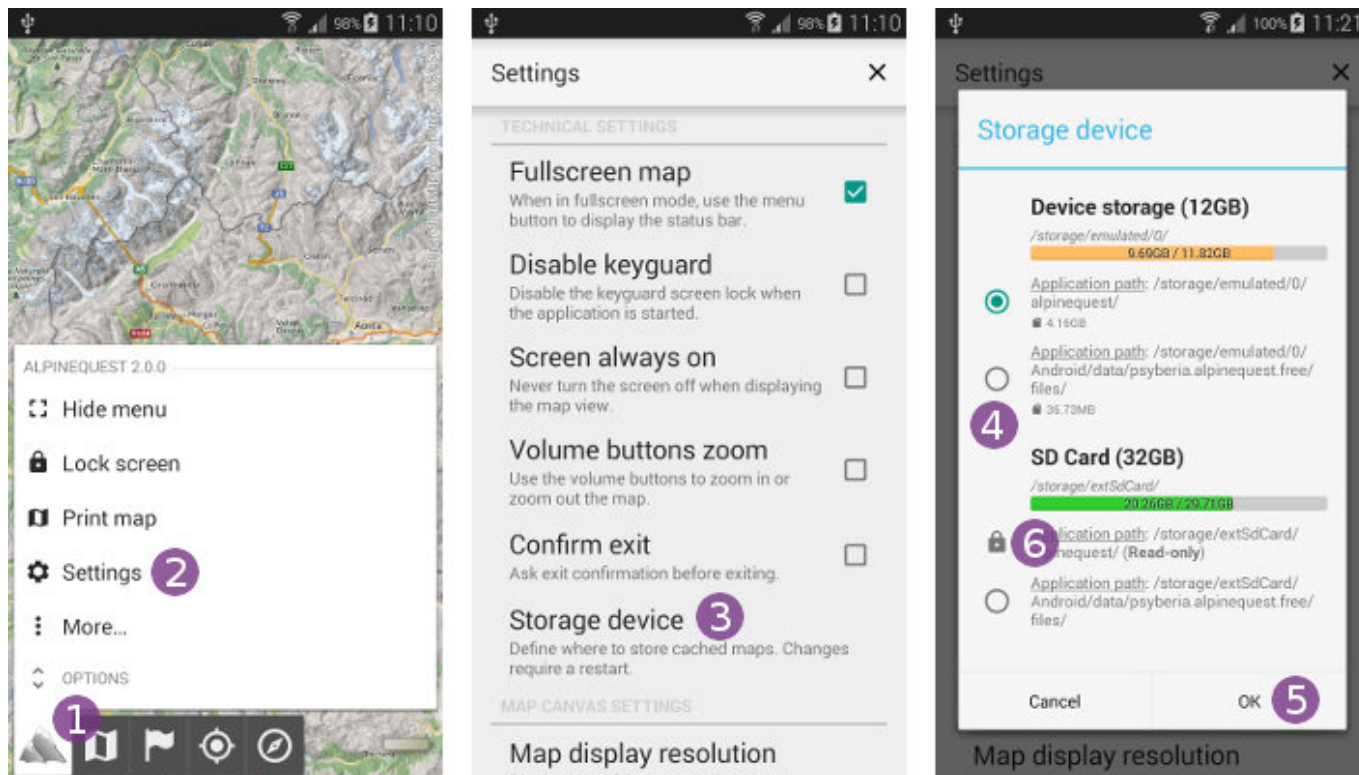
## How to change the application folder?

To modify the storage location:

- Click on the main menu icon (1);
- Click on **"Settings"** (2);
- Scroll the list and select **"Storage device"** (3);
- Choose one of the available locations (4);
- Click on **"OK"** (5) to validate the change;
- Restart the application.

**i** Be careful if you choose a storage location within the **"/Android/data/"** folder as Android will delete it when you un-install the application.

**i** If you see a small locker (6) icon, it means that the application isn't able to write in this location, and so it cannot be used. Check the troubleshooting section below for more details.



## Application folder on the external SD card troubleshooting

### Android 4.4

In Android 4.4 and above, the memory management has been modified:

- The device internal memory is called “*Primary external memory*”. This is the main storage memory, used by default by the application. This memory is usually quite large (up to hundred of GB);
- The SD card external memory (available on some devices only) is called “*Secondary external memory*”. This space is not freely editable by applications anymore, only a specific folder per application can be used, that's why you may only have one location available on the external SD card.

### Android 6.0

In Android 6.0 and above, you can now grant the application the right to write on the external SD card from the Android settings (“Applications” section). If no storage location choices at all are available on the external SD card:

- Be sure that your device is not currently plugged to a computer using an USB cable;
- Be sure that the SD card is not currently being checked for errors (usually happens after starting the device or removing the USB cable);
- If you have Android 6.0 or above, you must grant the application to write on the external memory from the Android settings (“Applications” section), [see more details here](#);
- Try to restart the device;
- Try to un-install and re-install the application (be careful if you have stored data you want to keep);
- In the Android settings (“Storage” section), try to un-mount your SD card and check it for errors.

### Re-using data stored before Android upgrade

If you stored data with the application on the external SD card before upgrading to Android 4.4, this data is now read-only and cannot be used any-more. Here is the solution to retrieve it:

- Configure the storage to use the new location on the external SD card as explained above;
- Quit the application, and connect your device to your computer using your USB cable;
- Using your computer's file manager, move all content of the legacy folder (usually


“/sdcard/alpinequest/”) into the new storage folder (usually

“/Android/data/psyberia.alpinequest.full/files/” for the full version). Overwrite all items already present if necessary;

- Disconnect your device, wait for the SD card to be checked (if needed), and restart the application. You should then be able to use your previously stored maps, and store new ones.

## How to access data stored outside of the application folder in Android 11 and above?

Starting with Android 11, drastic changes have been made by Google regarding how applications can access data stored outside of the application specific folders: except for file managers (and a few other specific cases), applications are only able to access media files from the shared storage spaces (internal device and removable SD card). It means that all your file-based maps and placemarks saved outside of the application specific folders are no more accessible.

 Those limitations don't apply if you update the application from version 2.2.9 (or below) to version 2.3.0 (or above).

However, applications still keep a total access on their application specific folders (read and write everything). There is one application specific folder on the internal device memory, and one application specific folder on the removable SD card (if any).

For AlpineQuest Pro, the path of this folder is “/Android/data/psyberia.alpinequest.full/files/”.

For AlpineQuest Lite, the path of this folder is “/Android/data/psyberia.alpinequest.free/files/”.

In addition, applications also have access to one “media” folder per storage device, if allowed by the user. For AlpineQuest Pro, the path of this media folder is “/Android/media/psyberia.alpinequest.full/”.

For AlpineQuest Lite, the path of this media folder is “/Android/media/psyberia.alpinequest.free/”.

Here are some workarounds:

For **Placemarks**, either

- Move your placemarks inside an application specific folder, inside the “/landmarks/” sub-folder. For AlpineQuest Pro, that would be “/Android/data/psyberia.alpinequest.full/files/landmarks/”;
- Or: Move your placemarks inside an application specific media folder. For AlpineQuest Pro, that would be “/Android/media/psyberia.alpinequest.full/”;
- Or: Open your placemarks from your file manager, the application will be listed in the possible choices for handling this file.

For **Maps**, either

- Move your maps inside an application specific folder, inside the “maps/” sub-folder. For AlpineQuest Pro, that would be “/Android/data/psyberia.alpinequest.full/files/maps/”;
- Or: Move your maps inside an application specific media folder. For AlpineQuest Pro, that would be “/Android/media/psyberia.alpinequest.full/”;
- Or: Add the file extension “.mp3” to your maps, this way the Android system will consider the map file as a media file and will allow the application to access it. For example, rename your QCT map “my\_map.qct” to “my\_map.qct.mp3” (do not remove the original “.qct” file extension).

## **How to move your files?**

In order to move your files from or into an application specific folder, the recommended way is to use an Android 11 compatible file manager ("Cx File Explorer" or "X-plore File Manager" for example).

Alternatively, you can plug your device on your desktop computer (using your USB cable) and use it to move the files (may not work for some setups);



# AlpineQuest FAQ

[What are the differences between both versions?](#)

[Does this application also work on an iPhone \(IOS\)?](#)

[Where can I purchase the complete version of the application?](#)

[Is it possible to try the paid version?](#)

[I have just purchased the application on the Play Store, but the download doesn't start or fails](#)

[I have a new device, can I install the complete version without paying again?](#)

[I have a new device, how can I reuse all the data I have on my old device?](#)

[I want to re-install the complete version on my device but the Play Store ask me to pay again](#)

[Is it possible to transfer the application from one Google account to another?](#)

[When trying to purchase the application, I'm getting the message "Not available in your country"](#)

[I have purchased the application but I cannot activate it](#)

[When is the application making sounds?](#)

[How to backup my data?](#)

[Is it possible to automatically synchronize my data on the Cloud?](#)

[Is built-in data synchronizing planned for the future?](#)

[How can I manage my files from Android 11?](#)

[How can I grant the "Allow all the time" location permission to the app?](#)

[How can I change the language of the application?](#)

[When and what for does the application use Internet?](#)

[What are all the Android Intents the application can handle?](#)

[Are there bulk conversion tools for the files in the own app format?](#)

## What are the differences between both versions?

AlpineQuest Lite is a free version (no ads, not limited in time) offering only a subset of the complete (paid) version.

All differences are [listed here](#).

## Does this application also work on an iPhone (IOS)?

Unfortunately not, this application is only for Android devices.

The reason is simple, the Android version does already take all of our time.

## Where can I purchase the complete version of the application?

The complete (paid) version is currently available using those purchase methods:

- [On the Google Play Store](#);
- [On the Huawei AppGallery](#);
- [On our website](#).

All those methods allow you to install the paid version on your new devices without paying again. However, when you choose a purchase method, you must stick to it. For example, if you purchase the paid version on the Google Play Store, you cannot install it from the Huawei AppGallery, and vice versa. If you want to switch to another purchase method, you must pay the application again.

## **Is it possible to try the paid version?**

Yes.

If you have tested the free [Lite version](#) and still cannot make your mind, simply install and enjoy the [Full version](#), and if you're fully satisfied uninstall it from the Play Store within 48 hours to get an automated and complete refund.

## **I have just purchased the application on the Play Store, but the download doesn't start or fails**

This is an issue in the Google Play application and unfortunately there is nothing we can do. You just need to wait some time and the download will start. Note that if you are installing multiple applications at the same time, they will not be installed altogether and some of them will be paused.

If the problem persists, you can contact [the Google Play support](#).

## **I have a new device, can I install the complete version without paying again?**

Yes.

If you have purchased the application on the Play Store, you just need to reuse the same Google account on your new device. Then open the Play Store application, click on the top/left menu, select "My Apps & Games" and all your purchased applications will be listed in the "Library" tab.

If you have purchased the application on our website using PayPal, install and activate the application [as explained here](#) (skip the payment step).

To reuse the data from your old device, please see below.

## **I have a new device, how can I reuse all the data I have on my old device?**

The application saves all its data in its application folder. In order to reuse your data, you need to copy this folder from your old device to your new device. [See here how to locate the application folder](#).

- If the application folder is located on an SD card, you can simply reuse the same SD card on your new device;
- Otherwise you need to manually copy the folder: you can use your USB cables and a computer, or create a ZIP archive of the application folder and copy this archive using a cloud application.

After moving the application folder, be sure to correctly setup the application on your new device [as explained here](#).

## **I want to re-install the complete version on my device but the Play Store ask me to pay again**

Be sure that:

- You have purchased the application on the Play Store and not on our website using PayPal;
- You are using the same Google account you used when you purchased the application;
- You didn't cancel your order, asked for a refund or received an automated refund.

If you have any doubt, contact us by email with your Google Play purchase order ID so we can check its status.

## **Is is possible to transfer the application from one Google account to another?**

Unfortunately not. Google doesn't allow it yet.

## **When trying to purchase the application, I'm getting the message "Not available in your country"**

It means you're currently located in a country where the Play Store doesn't offer paid application.

You must either use a VPN or [purchase the application using PayPal](#).

## **I have purchased the application but I cannot activate it**

If you have purchased the application on the Play Store, you don't have to activate the it. The complete version has been installed along with the Lite version, be sure to use this one now on. You can uninstall the Lite version if you don't need it anymore.

If you have purchased the application on our website with PayPal, you must [activate it](#).

- If the activation dialog shows "Locked by another device", it means that you are trying to activate more than one device with the same key in a short period of time. Wait some days or contact us by email

for more details;

- If the activation dialog shows “No network”, it means that you are currently not connected to the Internet. Internet is required when activating the application;
- If the activation dialog shows “Unregistered”, it means that your activation email is not recognized. Contact us by email for more details including your purchase details.

## When is the application making sounds?

The application does not make sounds unless you specifically request it by using one of those features:

- Record a track, with the setting “Warn me if the GPS signal is lost or too weak”. See setting ② [here](#);
- Follow a path, with the option “Warn me if I go more than...”. See option ⑦ [here](#);
- Use proximity alerts. See [here](#).

## How to backup my data?

The application saves all its data by default in its application folder. You can find how to [locate this folder as explained here](#).


In order to backup all your data, you can simply create a ZIP archive of this folder (it will include all data including stored areas), or only a sub-folder (for example the “/Landmarks/” folder that contains all your placemarks).

Finally, you can copy this ZIP file on your favorite cloud (Drive, Dropbox, ...) or on your computer using your USB cable.

You'll be able to restore it whenever you need, for example if you have a new device.

## Is it possible to automatically synchronize my data on the Cloud?

Yes, simply use your favorite Cloud application to synchronize any of the storage folders used by the application. [Here is a description on all folders that are used by the application](#). Most likely, you'll want to synchronize the “/Landmarks/” folder which is the default folder for all the placemarks you've created (waypoints, tracks, routes, areas).

 Please note that “synchronizing” does not mean “backeping”. If you delete some items on your device, they will also be deleted on your Cloud after a sync.

Here are some example of applications you can use (we are not related to any of them):

- Multi-protocols: [Syncthing](#) (open-source), [Syncthing-Fork](#) (open-source), [FolderSync](#);
- Google Drive: [Autosync for Google Drive](#);
- Dropbox: [Dropsync](#);
- OneDrive: [OneSync](#);
- Yandex: [Yandex.Disk](#);

- etc.

## Is built-in data synchronizing planned for the future?

No, for many reasons:

- It can be done using dedicated apps, we don't want to reinvent the wheel;
- We'll never done it better that it's currently done by dedicated apps;
- Based on the large number of Cloud providers, only supporting the main ones will require a huge amount of time;
- We try to make the application as much offline as possible;
- We try not to rely on third party frameworks;
- We are developing a mapping application, not a syncing application.

## How can I manage my files from Android 11?

From Android 11, applications cannot access the folders and files of other application. This is an Android limitation, we cannot do anything about it.


[For a very limited type of applications](#) (File managers and backup applications), Google can lift this restriction after a review process. However, those applications must apply for the review and must be updated, so it can take some time. [Here is more information on updated file managers](#).

## How can I grant the "Allow all the time" location permission to the app?

The location permission "Allow all the time" is only needed by applications that start by themselves and want to use your exact GPS location, without you making a action. You should avoid installing applications that request this type of location permission.

AlpineQuest only needs your GPS location after you start it, and turn on real-time location or the track recorder. If the application is completely closed (no main activity, even in the background, no track recorder), there is no reason for it to use your GPS location.

This is why the "Allow only while using the app" location permission is sufficient and safer for you.

 The Emails application is a typical example of an application that start by itself: every hours or so it starts, checks for new emails, display a notification if needed, and stops. If it would use you exact GPS location, it would need the "Allow all the time" location permission.



## How can I change the language of the application?

The application itself (excluding the maps) does use the same language than the device. If it hasn't been translated in this language, English is used. [Here is the list of available translations](#).

Concerning the maps, each of them have their own policy. The default maps displays the names using the language of their respective countries. Other maps only use English or a specific language. Please see more details in the [Maps F.A.Q.](#)

## When and what for does the application use Internet?

We do not use any third party libraries or any analytics framework.

| Feature                       | When?                                                                                                            | What for?                                                 | From where?                                                                                                 |
|-------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>On-demand maps</b>         | When you display an area with no map data stored (or that must be updated).                                      | To download and store the map data.                       | Depends on the on-demand map you've selected. The default map is from Psyberia servers (hosted in the U.K.) |
| <b>DEM Elevations</b>         | When you display an area with no elevation data stored and if the "Auto-download elevation data" option checked. | To download and store the elevation data.                 | Psyberia servers (hosted in France)                                                                         |
| <b>Add on-demand maps</b>     | When you select "Add more maps" from the on-demand maps list.                                                    | To get the list of all available on-demand maps.          | Psyberia servers (hosted in France)                                                                         |
| <b>Add coordinate systems</b> | When you select "Import" from the "Location format" application settings.                                        | To import the definition of the coordinate system.        | Psyberia servers (hosted in France)                                                                         |
| <b>Search by name</b>         | When you search a location by name.                                                                              | To give you some results.                                 | Nominatim and Google Place services                                                                         |
| <b>Auto-routing</b>           | When you create an auto-routing.                                                                                 | To compute the auto-routing.                              | OSRM, OpenRouteService and Google Direction services                                                        |
| <b>Push-settings</b>          | When you start the application, every few days.                                                                  | To keep the URLs of the on-demand map servers up to date. | Psyberia servers (hosted in France)                                                                         |
| <b>Activation</b>             | When you activate the website version, and after each application update.                                        | To check your activation status.                          | Psyberia servers (hosted in France)                                                                         |

## What are all the Android Intents the application can handle?

You can find a detailed list [here](#).

## Are there bulk conversion tools for the files in the own app

## format?

Yes, the [file specifications](#) of the files used by the application are open, and some conversion tools exists:

- apq2gpx (perl) by phkehl: <https://github.com/phkehl/apq2gpx>
- alp2gpx (python) by jachetto: <https://github.com/jachetto/alp2gpx>