

# **Summary**

Introduction	5
References	5
General consideration	6
Purpose of the software	6
Warranty	6
Reports	
Manual conventions	6
First start	7
Terms of use	
Permissions	8
Permissions	
Folders and files	
Advice for optimal use	
App performance	
Data quality	
General features of the app	
Screen organization	
Background mode Orientation of the device	
Scrollable pages	
List functions	
Sorting functions	
Filter functions	
Entering the coordinates	28
File types managed by the app	30
GPX files	
MbTiles files	30
DEM files	31
Map	32
Organization of the map	32
Objects drawn on the map	33
Indicators	35
Toolbar	
Menu	36
Waypoint	
Mark waypoint	
Mark waypoint with photo	36
Map	37
Change map	
Set zoom level	
Zoom on GPX data	
Zoom to copied coordinates	
Close all popups	
Mode	
Follow the user	
Rotation	
Distance mode	
Compute distance	
Compute Area	38

Clear distance, area	
Show	
Show custom maps	
Show geographic grid	
Show metric grid	
Show DEM grid	
Show the compass	
Show tracks	
Show tracks points (zoom >= 17)	
Show routes	
Show viewfinder	
Show AR limits	39
Search	40
Search for a waypoint	
Search for the start of a track	
Search for the end of a track	
Search for the start of a route	
Search for the end of a route	
Search for an address	
Search for coordinates	
Info coordinates	
Copy coordinates	
Copy coordinates (text format)	
Reset copied coordinates	
Generate waypoint	
Download DEM data	42
Download waypoints from OSM	
External services	
Data	
Autorouting	
Create/modify waypoint  Create track	
Modify track	
Create route	
Modify route	
·	
PS and navigation	47
rip computer	49
aypoints augmented reality	
mpass	
tive track statistics	54
tive track graphs	56
st waypoints	57
Aodify a waypoint	58
et altitude DEM	
Open the link (if specified)	59
Opens the associated application (e.g. browser) for the URI (Uniform Resource tring specified in the waypoint link field	
how	59

List tracks	60
Modify a track	61
List track points	
New segment Divide track	
Show	
Track statistics	64
Track graphs	64
Set altitude DEM	64
Set travel times	64
Adjust altitude	
Adjust time	
Smoothing	
Smoothing altitudes	64
Duplicate	64
Create an inverted track	64
Add to JOIN	65
Merge segments	65
Export data	65
Open link (if specified)	65
Show start	65
Show end	65
List routes	66
Modify a route	67
List route waypoints	68
Duplicate	
Create an inverted route	69
Add to JOIN	69
Export data	
Open link (if specified)	69
Show start	
Show end	
GPX files	70
Custom maps files	
DEM files	
Web maps	
Custom web map	
Layers	
List datum	76
	_

List projections	77
Preferences	78
Units of measure	
Coordinates	
Maps	
Web API Keys	
Geographic grid	
Metric grid	
DEM grid	
Waypoints	80
Tracks	80
Routes	80
Distance, area	80
DEM	82
Navigation	82
Graphs	
Photos	
AR waypoints	
Send data	
Notifications	
Screen	84
Permissions	85
About	86
1	

# Introduction

# References

OkMap web site	http://www.okmap.org
OkMap Forum	http://www.okmap.org/forum
OkMap Mobile for Android	https://play.google.com/store/apps/details?id=com.OkMap.Mobile
OkMap Mobile for iOS	https://apps.apple.com/us/app/okmap-mobile/id949554920
This manual	http://www.okmap.org/download/okmapMobileXam_en.pdf
OkMap Desktop	http://www.okmap.org/en_okmapdesktop.asp

### General consideration

## Purpose of the software

The software should never be used as a single source of information for navigation.

You should always use your experience and make use of charts, compasses and any other tools before making any kind of orientation or navigation decision.

## Warranty

The software is as it is and we will not be responsible in any way for its proper or improper use and for any direct or indirect damage caused by the use of the same software.

The use of the software is at the sole risk of the user.

#### **Reports**

We are willing to do our best to remove errors or inaccuracies in the software, so your every report will be precious to us.

Reports can be sent through the OkMap forum or by sending an email to this address.

Before submitting negative reviews, please let us know your considerations so that we will be able to better meet your needs and, consequently, improve the app.

#### **Manual conventions**

The presence, at the beginning of a paragraph, of the icons and indicates a specificity of the Android and iOS systems.

Sample images were produced with an Android mobile phone. In the iOS version the images are completely similar except for differences which will be highlighted on a case-by-case basis.

#### First start

Thank you for purchasing OkMap Mobile.

The OkMap Mobile app was designed to be installed on both mobile phones and tablets with the Android or iOS operating system.

The first time you use OkMap Mobile a sequence of pages is displayed to accept the terms of use and provide some permissions.

#### Terms of use



The software is as it is and we will not be in any way responsible for the use or abuse or for any damage resulting directly or indirectly from use of the software. The use of the software is at the sole risk of the

Software must never be used as the only source of information for navigation. It is always necessary to use the own experience and to make use of maps, compasses and any other tools before begin any type of decision about orientation or navigation.

ATTENTION: At the end of the initial process of granting permissions, we recommend that you close the app, grant permission to display app notifications, and restart the app.

Next

I accept the terms of use

To use the app, you must accept the terms of use shown in the figure on the side.

Read the information carefully and check the **I** accept the terms of use checkbox.

It is not possible to proceed further, if the terms of use are not accepted.

Press the **Next** button.





## **Permissions**

This app collects location data to enable to log your tracks during outdoor activities and for other important navigation functions even when the app is closed or not in use.

To allow this, you need to set the Location permission to "While use the app" and then, when prompted, to "Allow all the time".

Please tap on the "Set permission" button and then on the "Next" button.

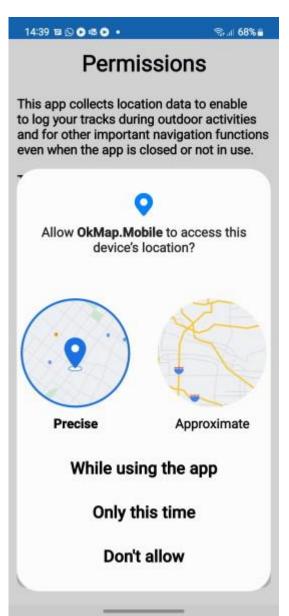
Set permissions

The first permission required concerns the use of the user's location (GPS).

Carefully read the note on the page and press the **Set permissions** button.

This permission is required to make full use of the app's features, and in particular track recording and navigation functions even when the app is closed or not in use.

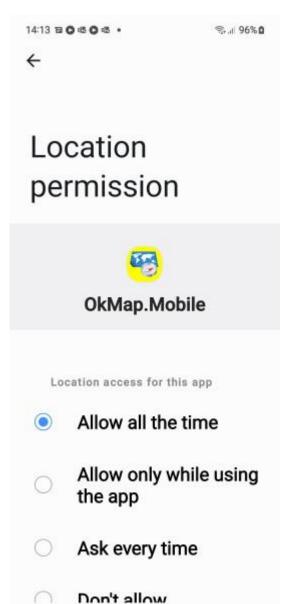




Select the item **While using the app** to allow the app to access the location of the device.

This permission can also be granted later in the system settings.

The path to follow in the Settings is indicated on the next page.



Subsequently, the opposite page is displayed.

This authorization once again concerns the user's location (GPS) and in particular the use of this even when the app is not in use.

Select **Allow all the time** to ensure track recording and navigation functions even when the screen is off or the app is closed (background).

In addition, it is necessary to turn on (if not already) the **Use precise location** switch in order to obtain the most accurate positions possible from the GPS.

Once these choices have been made, to return to the app you need to press the button at the top left depicting a small arrow.

This permission can also be granted later in the system settings using the following path (in Android 13): Settings -> Privacy -> Permissions manager -> Location -> OkMap.Mobile -> **Allow all the time**.

Alternatively: Settings -> Apps -> OkMap.Mobile -> Permissions -> Location -> **Allow all the time**.

Press the **Next** button.



**Permissions** 

This app can take photos and associate them with waypoints of a GPX file.

To allow this, you need to set the Camera permission to "While use the app".

Please tap on the "Set permission" button and then on the "Next" button.

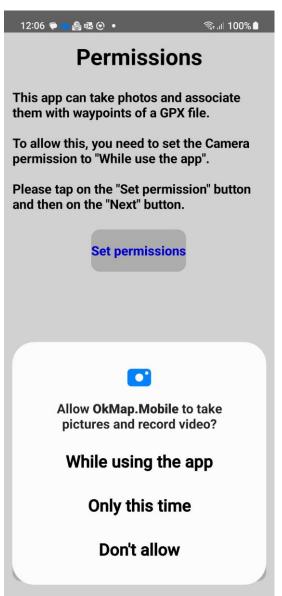
Set permissions

The third authorization concerns access to camera.

The app can take photos and associate them with waypoints in a GPX file. Photos will be stored in the Pictures public folder.

Press the **Set Permissions** button.





The consent is required to access camera. Press the **Set permissions** button and choose **While using the app**.

This permission can also be granted later in the system settings.

The path to use in Android 13 is as follows: Settings - > Apps -> OkMap.Mobile -> Permissions -> Camera - > Allow only while using the app.

Press the **Next** button.

## Permissions

In order to allow this app to collect location data even if the app is not in use, the battery usage won't be restricted.

Please tap on the "Set permission" button and choose "Allow".

In some devices, you need to disable power saving in Settings - Battery and device care - Battery - Power saving -> off.

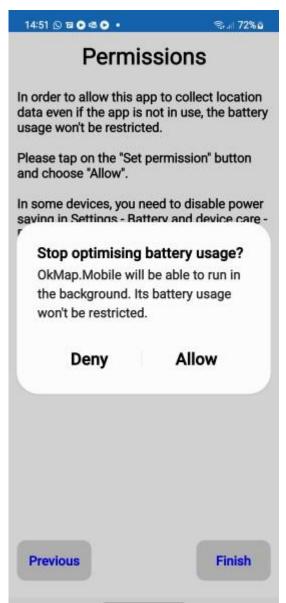
Set permissions

An additional authorization grants the app to be able to run in the background, i.e. with the screen off or the application closed.

Consequently, the use of the battery will not be limited.

Press the **Set Permissions** button.





You are asked to stop optimizing battery use. Press the Allow button.

This permission can also be granted later in the system settings.

The path to use in Android 13 is as follows: Settings -> Apps -> OkMap.Mobile -> Battery -> **Unrestricted**.

Finally, a warning reminds you that in some devices it is necessary to disable energy saving to allow the recording of the track with the screen off or with the app closed.

The path to use in Android 13 is as follows: Settings - > Device and battery assistance -> Battery -> Power saving (off).



## Permissions

This app notifies you when you receive your location from GPS. GPS is used even if the app is in the background or closed and in this case the battery is consumed more.

If you don't want to use GPS and save battery, open the app and on the "GPS" page and Navigation", disable the GPS switch.

To understand if the app is working in the background with GPS turned on you must allow notifications. Tap the "Set Permission" button and choose "Allow", then press the "Next" button.

Set permissions

If your Android version is 13 or higher, an additional permission allows the app to send notifications.

It is important to receive notifications to understand when the app is using GPS.

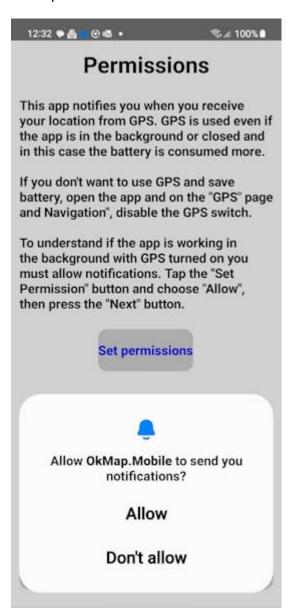
It should be remembered that the app is able to receive data from the GPS even when it is inactive (background) or closed and in these circumstances battery use is greater.

Press the **Set Permissions** button.

This permission can also be granted later in the system settings.

The path to use in Android 13 is as follows: Settings - > Applications -> OkMap.Mobile -> Notifications -> Allow notifications.





You are asked to allow the app to send notifications. Press the **Allow** button.





The first permission required concerns the use of the user's location (GPS).

## Permissions

This app collects location data to enable to log your tracks during outdoor activities and for other important navigation functions even when the app is in background.

To allow this, you need to set the Location permission to "Allow while use the app".

Please tap on the "Set permission" button and then on the "Next" button.

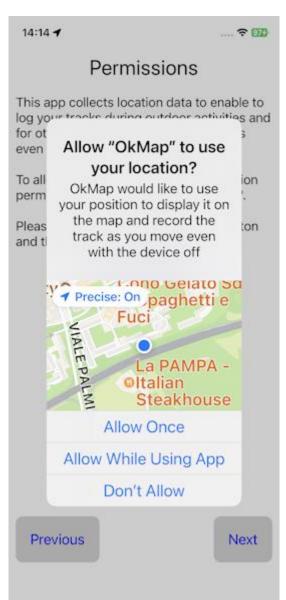
Set permissions

Carefully read the note on the page and press the **Set permissions** button.

This permission is required to make full use of the app's features, and in particular track recording and navigation functions even when the app is not in use.

Previous

Next



Select the item **While using the app** to allow the app to access the location of the device.

This permission can also be granted later in the system settings.

Location permission can also be granted later in the system settings.

In iOS 16 the path is the following: Settings - Privacy & Security - Location Services - OkMap - **Always**.

Press the **Next** button.

14:14 ◀ .... 🗢 📆

## Permissions

This app can take photos and associate them with waypoints of a GPX file.

To allow this, you need to set the Camera permission to "Ok".

Please tap on the "Set permission" button and then on the "Next" button.

Set permissions

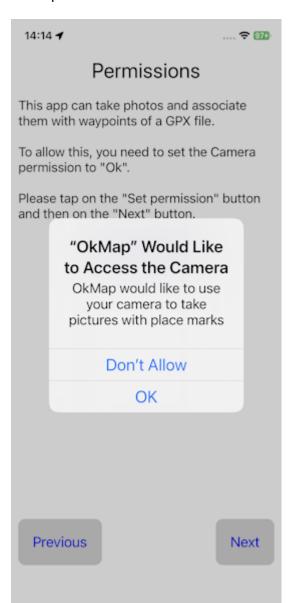
The second authorization concerns access to camera.

The app can take photos and associate them with waypoints in a GPX file. Photos will be stored in the pictures public folder if request in <a href="Preferences - Photos">Preferences - Photos</a>. In any case they are saved in the app sandbox in the subfolder Pictures.

Press the **Set Permissions** button.

Previous

Next



Consent is required to access the camera. Press the  ${\bf OK}$  button.

This permission can also be granted later in the system settings.

In iOS 16 the path to use is the following: Settings -> Privacy and security -> Camera -> OkMap.Mobile -> **ON**.

Press the **Next** button.

14:14 🕇 .... 🗢 📆

Permissions

To allow this app to collect location data even when not in use, you may need to disable power saving. Read the notice and, if necessary, disable Energy Saver.

Once the authorization process has been completed, press the **Finish** button.

The Map is displayed.

Attention! After the first start the map is positioned at the coordinates 0,0. Just restart the app.

This behavior will no longer occur the following times as the user's last position is stored.

Previous

Finish

### Folders and files

At the first start OkMap Mobile creates some folders in the app *sandbox*. Each app has its own storage space (*sandbox*) whose files are not visible to other apps.

In the case of OkMap Mobile, the sandbox address is as follows: Android/data/com.OkMap.Mobile/files/.

It in turn contains the following folders:

- **ActiveLog**: this folder stores the GPX file named ACTIVELOG.gpx containing the track being recorded and all the GPX objects (waypoints, tracks and routes) that have been created with the app. This file is temporary and the user has the ability to store it in the GPX folder with a proper name (see GPX Files page).
- DEM: all DEM files (elevation data) downloaded from the app are stored here (see
   <u>Menu Viewfinder Download DEM data</u>). These files can also be downloaded
   manually from the <u>OkMap</u> site and copied from the PC to the device, in the DEM
   folder.
- **GPX**: contains all the GPX files that the app or the user has loaded or stored (see <u>GPX</u> <u>Files</u> page).
- Logs: contains log files that the app creates in the event of an error (bug) and that
  must be sent together with the report in order to make the necessary changes to the
  software.
- **CustomMaps**: contains all MbTiles files that the app or user has loaded (see <u>Custom maps files</u>).
- Pins: contains placeholder images to be used in graphical representation of waypoints. To ensure compatibility between the <u>OkMap Desktop</u> software and OkMap Mobile, use the same images of the OkMap Desktop software that can be downloaded <u>here</u>. Once the images have been downloaded, copy them to the device's Pins folder.
- **Export**: contains the files produced by export functions (tracks or routes) in csv (comma separated value) format. These file types can be opened with Microsoft® Excel.

If you were to inadvertently delete some of these folders, they will be automatically recreated the next time the OkMap Mobile app is restarted. Of course, the original content will be lost.

Both user maps (*custom maps*) and GPX files can actually reside in any folder accessible from the app (internal memory, removable memory, or Google Drive, or iCloud) and can be loaded directly into the app.

However, in the case of loading GPX files (since these are editable), they will first be copied to the GPX folder described above, thus responding to the concept that *only files in the sandbox can be modified*.

The same rule applies to custom maps.

Therefore, if you load a GPX file (or a custom map) from an external archive, you will still find it (with any changes made) in the GPX (CustomMaps) folder.

The **GPX**, **DEM** and **Pins** folders can be populated with files by connecting the device with a USB cable to a PC and using iTunes.

If you use the Save Waypoint with Photo function, the following folder will be created:

• **Pictures**: The image files in .jpg format containing the photos taken are stored in this folder. A copy of the files can be stored in the **Pictures** public folder if the **Save to Album** option on the <u>Preferences - Photos</u> page is activated.

## Advice for optimal use

Here are some tips for optimal use of the app.

#### **App performance**

We must always keep in mind that the Android device on which we have installed OkMap Mobile, although of the latest generation, will never be as powerful as a desktop PC of the same age.

Consider that the heaviest operations are those of drawing data on the map, therefore the advice to keep in mind are:

- Do not upload user maps that are not strictly necessary for the excursion you are about to undertake.
- Do not create MbTiles maps with a large number of tiles and which cover areas not relevant to the excursion.
- Do not load GPX data with many waypoints or tracks or in any case with data that is not useful for the excursion. Better to create multiple GPX files with little data than a few GPX files with a lot of data (some of which are useless for the excursion).
- Before uploading your GPX files to the device, clean the tracks of GPS errors and the redundant points that inevitably arise during breaks.
- Simplify your tracks that have hundreds of points with fewer significant points, using for example the Windows software <a href="OkMap Desktop">OkMap Desktop</a>.

#### **Data quality**

To obtain a good quality track recording, keep in mind the following considerations:

- When you activate the app and you are about to record a new track, immediately turn
  on the GPS and wait a few minutes before activating the recording, especially if you
  have moved several kilometers from the last detected position or it has been a long
  time. In the meantime, you can always check your bike or put your boots on.
- Do not keep the GPS inside your backpack or pocket, it is preferable to put it, for example, in a container tied to the shoulder strap of the backpack.
- Consider that in places with little sky in sight, the accuracy of the GPS can decrease significantly (for example in canyons or in narrow streets in the midst of tall buildings).
- When you return home, use a PC app capable of post-processing and cleaning the recorded data. This operation will guarantee much more precise statistics on the recorded track. You can always use the <a href="OkMap Desktop">OkMap Desktop</a> Windows software for this.

## General features of the app

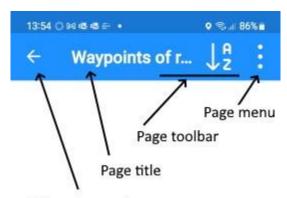
## **Screen organization**



All the main pages of the app display a bar at the top as shown in the figure on the side.

The bar is organized like this:

- On the left is the main menu of the app. Pressing this button opens the list of main functions. Each chapter of this manual describes each of these items.
- Below is a short **title** of the current page which in some cases can be displayed abbreviated.
- The **toolbar** follows. The buttons displayed depend on the current page. It may not be present on some pages. The meaning of the buttons is explained in each specific paragraph of the page.
- Finally, the **page menu** which, if pressed, opens a secondary list of the functions of the current page. The meaning of the buttons is explained in each specific paragraph of the page.



In some cases, the main pages may display secondary pages in cascade.

The secondary pages are organized as shown in the figure on the side.

The only difference with the main pages is that instead of the main menu an arrow is displayed which allows you to **return to the previous page**.

Return to previous page

Many sub-pages have two buttons that allow you to cancel (Cancel) or confirm (OK) the changes made to the page.

In any case, you will then return to the calling page.



Warning: using the return to the previous page (arrow at the top left) is equivalent to the **Cancel** button.

#### **Background mode**

The app also works in *background* mode to give the possibility to record the track that the user is following even with the screen off.

Furthermore, even if the app is closed, the registration is not interrupted.

For more information see the paragraph GPS and navigation.

#### Orientation of the device

The app can work both in *portrait* mode (device in vertical) and in *landscape* mode (device in horizontal).

The choice of horizontal or vertical orientation of the device is essentially personal and depends on your habits and the type of information you are viewing.

The positions of the page elements are automatically adapted, based on the orientation of the device, to facilitate reading.

However, most of the pages have been designed to have a better use in *portrait* mode.

The <u>Compass</u> page can only work in *portrait* mode as it displays the north direction and consequently cannot be readjusted.

## **Scrollable pages**

Most of the pages and menu items can be scrolled up or down as the size of the screen does not allow full viewing.

To scroll through a page or menu, use a finger swipe on the screen.

#### **List functions**



Some pages show data in the form of lists.

In these pages there are often some functions (usually one or two) that act on the single line.

To activate these features, simply drag your finger on the row from right to left.

This reveals the buttons that activate the functions (*swipe menu*).

These functions typically refer to changing or deleting row data.

To return to the row view and hide the buttons, drag your finger from left to right.

It should be noted that in some particular lines these functions can be blocked and consequently the buttons cannot be displayed.

For example, it is not possible to delete the definitions of the system web maps while those defined by the user can be deleted (see <u>Web maps</u>).

## **Sorting functions**

In almost all the list functions there is the possibility to sort the rows according to some criteria.



The sorting functions are activated with the toolbar button shown at the side (see Screen organization).

A list opens where you can choose the sort order.

If you choose the same criterion twice in succession, the ordering takes place in reverse.

At the bottom of the list of sorting criteria there is always the CANCEL button which cancels the function in progress and leaves the previous sorting criteria active.

#### **Filter functions**

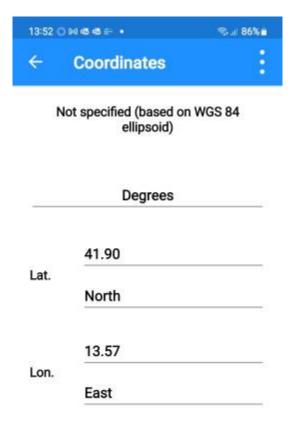
In almost all the list functions there is the possibility to filter the data in order to reduce the number of rows displayed in order to find what you are looking for more easily.

To set the filters, use the *Set filters* item in the page menu (see <u>Screen organization</u>). A page is displayed where you can enter some values that act as a filter on the data. The required conditions must all be verified (logical *and* operator).

To cancel all filters and return to the complete list, use the Cancel Filters menu item.

#### **Entering the coordinates**

Cancel



In some circumstances it is necessary to enter the geographical coordinates and in this case the app provides a special page (see figure on the side).

This page shows the reference datum of the coordinates at the top (default *WGS 84* but can be modified in the <u>Preferences - Coordinates</u> page).

Below is the coordinate representation format that can be changed by tapping on it. The possible values are:

- Degrees
- Degrees -Minutes
- Degrees -Minutes-Seconds
- Radians
- UTM Universal Transverse Mercator
- ECEF Earth-centered, Earth-fixed
- OCL Open Location Code
- GeoRef World Geographic Reference System
- USNG United States National Grid
- MGRS Military Grid Reference System
- BNG British National Grid
- IG Irish Grid
- Metric

If you select some formats such as BNG or IG, the datum, displayed at the top, is adapted to the requested grid.

In case of BNG, IG or Metric format, the projection is also displayed.

The projection can be changed on the <u>Preferences - Coordinates</u> page.

Naturally the chosen coordinate format affects the fields to be entered which are adjusted accordingly.

All conversions are automatic and managed by the system.

Ok

At the top right there is a menu with the following items:

### Copy and paste

- o **Copy Coordinates**: Copies coordinates into memory for future use.
- Copy Coordinates (text format): Copies coordinates into the clipboard in text format.
- Paste coordinates: pastes previously stored coordinates (if available) into the page.
- o **Clean coordinates**: clears the page for entering new coordinates.
- Paste home coordinates: pastes the home coordinates defined in the <u>Preferences - Coordinates</u> page into the page.
- Paste GPS coordinates: paste the coordinates of the user's position into the page, if available.

#### Waypoints

- Select waypoint: opens a page to select a waypoint present in the GPX files loaded in the app. Once selected, the waypoint coordinates will be pasted on the page.
- Save Waypoint: opens a box for acquiring the name of the new waypoint. A
  new waypoint will be created with the coordinates on the page.

#### Others

- Info coordinates: displays a message with the address corresponding to the coordinates on the page (Reverse geocoding).
- o **Open Google Maps**: opens the <u>Google Maps</u> website in the position indicated by the coordinates on the page.
- Open Geocaching.com: opens the <u>Geocaching.com</u> website and displays the caches near the coordinates on the page (authentication required).
- o **Open Peakfinder.org**: Opens the <u>Peakfinder.org</u> website and displays a view of the surrounding mountains at the coordinates on the page.

## File types managed by the app

#### **GPX** files

Waypoints, routes and tracks are data typically processed by **GPS**. They are usually stored in a standard format called **GPX**.

The acronym GPX stands for *GPs eXchange format*. It is an **XML**-type data format specially designed for the interchange of GPS data between applications and web services on the Internet. GPX files have a .gpx extension.

XML stands for *eXtensible Markup Language*. It is a markup metalanguage, that is an extensible (eXtensible) marker language as it allows you to create custom tags.

More information on the GPX format can be found at <a href="http://www.topografix.com/GPX">http://www.topografix.com/GPX</a> for developers.asp.

More information on XML can be found at <a href="http://www.w3.org/XML">http://www.w3.org/XML</a>.

OkMap Mobile can open one or more GPX files at the same time.

#### **MbTiles files**

**MbTiles** files have .mbtiles extension and contain the user maps (custom maps) displayed on top of the base map (see <a href="Map - Objects drawn on the map">Map - Objects drawn on the map</a>).

These maps are stored in an *SQLite* database and are divided into tiles to ensure good performance in the visualization phase.

User maps differ from online maps, made available by servers from various manufacturers (Apple, Google, Microsoft, Nokia, etc. ...), in that:

- They are offline, therefore always available even in the absence of a connection.
- They are raster and therefore can represent the morphology of the territory in a much more captivating way than any other vector map.
- They are thematic and therefore meet the specific needs of many categories of users who use the app while carrying out their outdoor activities (search and rescue, trekking, mountain biking, off-road, sailing, flying, hunting and fishing, look for mushroom, geocaching, soft air and many others).
- They can be easily produced, even starting from a paper map, using the <a href="OkMap">OkMap</a>
  <a href="Desktop">Desktop</a> software.</a>

#### **DEM files**

The acronym **DEM** stands for *Digital Elevation Model* and refers to a model capable of returning the altitude above sea level of any geographical point of the globe.

OkMap uses in particular **STRM** type altimetric data (returned by the *Shuttle Topographic Radar Mission*). These data cover all longitudes and latitudes between 56 ° South and 60 ° North.

The resolution in the USA is one second of arc (about 30m at the equator) while in the rest of the world it is three seconds of arc (about 90m at the equator).

The data is organized in files, each relating to a degree of latitude and one of longitude and can be downloaded from the internet at this <u>address</u>.

OkMap Mobile is however able to download these files upon request, thus creating a local archive of the elevation data of the favorite places (see <a href="Map - Menu - Download DEM data">Map - Menu - Download DEM data</a>). The files are stored in the DEM folder (see Folders and files).

Having these files available, OkMap is able to show the altitudes of the various points on the map (see <u>Trip computer</u>) and use this information in the creation of waypoints and tracks, thus being able to create the altitude profile of a track even during design.

Furthermore, knowing the altitudes, OkMap can make a more correct estimate of the travel times of the designed tracks.

The elevation data can be interpolated to obtain more precise values (see <u>Preferences - DEM</u>).

## Map

## Organization of the map



The map page is organized as shown in the figure on the side.

- At the top is the map **scale** in meters. The scale is adjusted according to the zoom factor.
- On the right there are 4 small buttons that allow you to **zoom** the map, **center the map** on the user's position (highlighted by a blue dot), and **orient** the map to the north. This last button is rotated together with the map and is therefore useful for understanding the orientation of the map respect to the north.
- A viewfinder is displayed in the exact center of the map which is useful in some functions of the Menu - Viewfinder.
- At the bottom a black line allows the visualization of 6 statistical indicators of the <u>trip computer</u>. These indicators can be customized by tapping on their respective labels.
- The attribution of the map displayed is described at the bottom of the page. The current map can be changed (see Menu - Map).

**Moving** the map is done with a simple gesture of sliding your finger on the map itself.

**Zoom** + is achieved with a gesture of two fingers moving apart while **zoom** - with a gesture of two fingers moving together.

The **rotation** of the map is achieved with a gesture of two fingers that rotate left or right.

## Objects drawn on the map

The following objects are drawn in the map container:

- Background containing the selected web map (see Menu Map).
- Drawing in overlapping of the **user maps** (see <u>MbTiles files</u>, <u>Custom maps files</u>).
- **User position** represented by a blue dot.
- Drawing the map grids:
  - Geographic grid: (see Show geographic grid) it is adapted to the zoom of the map and covers an extension a little larger than the extent of the map displayed. It is not adapted to the zoom variation for performance reasons. However, it can be automatically readjusted by turning off and on the switch that allows it to be displayed. The grid shows the coordinates in degrees, minutes, seconds.
  - Metric grid: (see <u>Show metric grid</u>) the same considerations apply as for the geographic grid. Reports the coordinates in meters (or in the unit of measurement of the projection selected in the <u>Preferences Coordinates</u>). If the selected projection uses UTM, the area and the relative hemisphere will also be displayed.
  - o **DEM grid**: (see <u>Show DEM grid</u>) is a grid that highlights the limits of each existing elevation file (1 x 1 degree). If the DEM file is available locally, it is drawn with a solid green line, otherwise with a line of red dots.
- GPX data overlay drawing (see <u>GPX files</u>, <u>GPX files</u>):
  - Waypoint: Waypoints: they are punctual data and represent points of interest; are drawn with the default placeholder. The placeholder can be edited in the tab of each waypoint (see Modify a waypoint). If the waypoint was saved with the Waypoint with photo function, a thumbnail of the photo taken can be displayed instead of the placeholder (if the Show photo preview switch on the Preferences Photos page is activated).
  - o **Tracks**: they are drawn with lines of a predefined blue color; the beginning and the end of the track are drawn respectively with placeholders . The track you are recording (active track) is drawn with a red default color. The thicknesses, colors and styles of the lines can be customized in the tab of each track (see <a href="Modify a track">Modify a track</a>). Tracks are divided into their component segments.
  - o **Routes**: they are mainly used in boating and are drawn with default red lines; route waypoints are drawn with the placeholder. Line thicknesses, colors and styles can be customized in the tab of each route (see <u>Modify a route</u>).

Tapping on these placeholders (*pins*) opens a balloon that displays the description. To close the callout, simply tap the placeholder again.

On the other hand, tapping on the description of the placeholder opens a list of possible functions.

## Waypoint functions (see <a href="Modify a waypoint">Modify a waypoint</a>):

- Modify waypoint
- Hide waypoint
- Copy to ACTIVELOG.qpx file
- Set altitude DEM
- Open link (if specified)
- Send waypoint to server (see <u>Preferences Send data</u>)
- Delete waypoint

## Track functions (see <a href="Modify a track">Modify a track</a>):

- Modify track
- Hide track
- List track points
- Track statistics
- Track graphs
- Copy to ACTIVELOG.gpx file
- Set altitude DEM
- Set travel times
- Adjust altitude
- Adjust time
- Smoothing
- Smoothing altitudes
- Duplicate
- Create an inverted track
- Add to JOIN
- Merge segments
- Export data
- Open link (if specified)
- Show start / end
- Delete track

## Route functions (see <a href="Modify a route">Modify a route</a>):

- Modify route
- Hide route
- Modify waypoint of route
- List waypoints
- Copy to ACTIVELOG.gpx file
- Duplicate
- Create an inverted route
- Add to JOIN
- Export data
- Open link (if specified)
- Show start
- o Show end
- Delete waypoint
- Delete route
- **Navigation line to a waypoint**: This is a line that connects the user's position and the position of the destination waypoint in real time (see <u>GPS and navigation</u>).
- **Anchor position**: it is a placeholder that identifies the position in which the anchor is dropped. This function is used to generate an alarm in the event that the vessel moves too far from the anchor (see <a href="GPS">GPS</a> and <a href="navigation">navigation</a>).
- **Copied coordinates**: it is a placeholder that identifies the position of the copied coordinates (see <u>Menu Copy coordinates</u>).

### **Indicators**

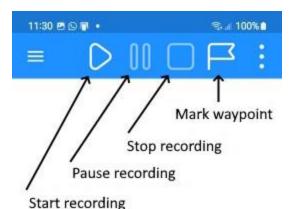
In the lower part of the map, it is possible to view 6 indicators of the <u>Trip computer</u> by tapping on the thick black line at the bottom of the page.

A further tab on the black line closes the display of the indicators.

The 6 indicators can be customized by tapping on their labels; a list is displayed from which you can select the desired item.

To know all the possible indicators, see the <u>Trip computer</u>.

## **Toolbar**



The Map page menu is presented as shown in the figure to the side.

 The first button starts recording the track or restarts it after a pause. The track is drawn on the map in real time as the user moves. The track is stored in the ACTIVELOG.gpx file (if this file does not exist, it is created).

- The second button pauses track recording and can only be activated if track recording has previously been activated. This function is useful in the case of prolonged stops that could dirty the track being recorded due to GPS inaccuracy. This is especially the case if the distance filter (see <u>Preferences - Navigation</u>) is less than the accuracy of the GPS.
- The third button stops track recording and can only be activated if track recording
  has previously been activated.

  If at least a track point has been recorded, you are prompted for the name to be
  assigned to the new track.
- The fourth button **saves a new waypoint** in the user's position. A page is displayed to acquire the name, description and comment of the waypoint to be saved. The waypoint is stored in the ACTIVELOG.gpx file (if this file does not exist, it is created).

To use these functions, you must first activate the GPS on the <u>GPS and navigation</u> page and wait a few seconds to give time to the GPS to make the *fixing* or to calculate the precise position based on the position of the satellites in sight.

If the user has moved several kilometers from the last position received or a long time has passed, it is possible that the *fixing* may take longer than expected.

Of course, if the device is indoors or there are not enough satellites in sight, it is possible that these functions cannot be used due to the absence of the signal or due insufficient accuracy.

## Menu

The menu items on the Map page are organized into groups according to their purpose.

# Waypoint

# Mark waypoint

It saves a new waypoint in the user's position. A page is displayed to acquire the name, description and comment of the waypoint to be saved. The waypoint is stored in the ACTIVELOG.gpx file (if this file does not exist, it is created).

# Mark waypoint with photo

It saves a waypoint with a photo in the user's position. The camera to take the photo is displayed. Once the image is confirmed, it follows the same procedure as the previous button.

#### Map

#### Change map

This button allows you to select one or more maps other than the default one.

When you press the button, a page containing a list of web maps is displayed.

In this list it is possible to select the maps to be displayed (see <u>Web maps</u>). Only active maps are listed (*Active* indicator selected). You can select from 1 to 3 different maps.

In the toolbar of this page there is a button which allows you to cancel all the selections made.

With the menu it is also possible to filter or not the listed data.

#### Set zoom level

Set the zoom level to the desired value.

#### Zoom on GPX data

It positions the map and set the zoom in order to view all the GPX data present in the device.

If the GPX data has not been loaded, this function has no effect.

#### **Zoom to copied coordinates**

It positions the map and zoom in on the point corresponding to the copied coordinates (see Copy coordinates menu).

If the coordinates have never been copied, a message is issued.

## Close all popups

Closes all popups on the map opened by the user.

### **Reset indicators**

This function resets the indicators displayed at the bottom of the page to the factory settings.

Confirmation is requested.

#### Mode

#### Follow the user

When this switch is activated, the map is automatically moved to the point where the user is and is constantly centered on its position.

When this function is active it is not possible to move the map manually but only to act on the zoom and orientation.

To reactivate manual movement, turn off the switch.

#### **Rotation**

Set the map rotation as follows:

- Normal rotation
- Rotation based on terrain
- · Rotation locked

#### Distance mode

Calculates the distance from the initial point to the central red viewfinder.

Two placeholders are drawn at the beginning and at the end of the measurement and a line that joins the two points.

Distance, direction, and reverse direction are shown in the description of the destination placeholder.

The thickness, color and style of the line can be changed on the <u>Preferences - Distances</u> page.

To exit distance mode, turn off the switch.

#### Compute distance

Calculates the distance by drawing a broken line on the map.

A keypad opens on the top left, very similar to that of the <u>Create track</u> function. The functions for inserting, deleting and moving points are similar to those of the <u>Create track</u> function.

The distance is shown in the automatically opened popup at the end point.

The line can take on different colors depending on whether or not there is visibility in a straight line, i.e. in the absence of terrestrial obstacles. Colors can be customized on the Preferences – <u>Distance, Area</u> page.

#### Compute Area

The function is completely analogous to the **Compute distance** function.

## Clear distance, area

Delete the drawings created with the **Compute distance** and **Compute area** function.

#### **Show**

## Show custom maps

This switch shows or hides the user maps (custom maps) loaded in the app.

### Show geographic grid

This switch shows or hides the geographical grid of the map (see Objects drawn on the map).

## Show metric grid

This switch shows or hides the metric grid of the map (see Objects drawn on the map).

#### Show DEM grid

This switch shows or hides the DEM data grid (see Objects drawn on the map).

## Show the compass

This toggle shows or hides a protractor in the center of the map. The color of the protractor can be customized in the Preferences – Maps page.

## **Show waypoints**

This switch shows or hides the waypoints contained in the GPX files loaded into the app.

#### Show tracks

This switch shows or hides the tracks contained in the GPX files loaded into the app.

# Show tracks points (zoom >= 17)

This switch shows or hides track points. The points of the tracks are highlighted with arrows oriented in the direction of the track. Every 5 points a label containing the segment-point of the track is shown.

The colors and font used can be changed in the <u>Preferences – Tracks</u> page.

#### Show routes

This switch shows or hides the routes contained in the GPX files loaded into the app.

#### Show viewfinder

This switch shows or hides the red viewfinder drawn in the center of the map. The viewfinder is useful in the functions of the <u>Viewfinder</u> group.

#### **Show AR limits**

This switch shows on the map the area containing the waypoints visible in the <u>Waypoint</u> augmented reality function.

#### Search

## Search for a waypoint

This function is used to search for a waypoint on the map.

A page is displayed with the list of waypoints present in the GPX files loaded into the app.

To select the waypoint to search, tap on the corresponding line.

Two blue bars are displayed on the sides to indicate the selected item.

You can use the sort and filter functions.

Press the OK button to confirm or the Cancel button to cancel the operation in progress.

The map will be moved so that the selected waypoint is displayed in the center of the map (position of the viewfinder).

## Search for the start of a track

This function is very similar to the Search for a waypoint function.

# Search for the end of a track

This function is very similar to the <u>Search for a waypoint</u> function.

# Search for the start of a route

This function is very similar to the <u>Search for a waypoint</u> function.

#### Search for the end of a route

This function is very similar to the Search for a waypoint function.

# Search for an address

This function is used to search for an address or any point of interest on the map. A dialog box is opened to enter the subject of the search.

Here are some examples of possible searches:

- "Piazza Venezia, 56 Rome"
- "Colosseum"
- "Santo Spirito Hospital, Rome"
- "00186"

The address found will be displayed in the center of the map (in the viewfinder position).

## Search for coordinates

This function is used to position the map at certain coordinates.

The page for <u>entering the coordinates</u> opens.

#### Viewfinder

# Info coordinates

A message is displayed with the address corresponding to the center of the map (in the position of the viewfinder). This function is called *Reverse geocoding*.

# Copy coordinates

The coordinates corresponding to the center of the map (at the location of the viewfinder) are copied to memory for future use.

The copied coordinates appear on the map with a pin.

# Copy coordinates (text format)

The coordinates corresponding to the center of the map (at the location of the viewfinder) are copied into the clipboard in text format.

# Reset copied coordinates

The copied coordinates are canceled and the corresponding pin on the map is hidden.

# Generate waypoint

This function is used to create a waypoint starting from the coordinates of the center of the map (viewfinder), knowing the distance and the direction (or reverse direction).



The following information are required:

- Waypoint name (required)
- Description (optional)
- Comment (optional)
- Distance (mandatory)
- Direction (or reverse direction depending on the appropriate switch) (mandatory)

Press the OK button to confirm the creation of the waypoint or the Cancel button to cancel the operation in progress.

The new waypoint created will be stored in the ACTIVELOG.gpx file.

### **Download DEM data**

Download the DEM elevation data of the STRM type relating to the area indicated by the red viewfinder in the center of the map. Each file covers an area of  $1 \times 1$  degrees. For more information read the paragraph DEM file.

During the download, a scroll bar is displayed showing the progress. If the DEM file is already present in the DEM folder, it will be notified.

# Download waypoints from OSM

This feature allows you to download information from OpenStreetMap.

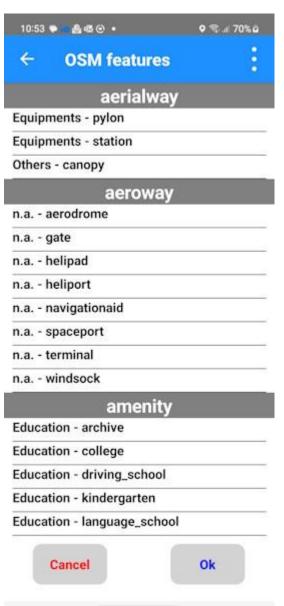
In particular, it is possible to create new waypoints with the information contained in the *nodes* stored in the OpenStreetMap database.

Information is defined by:

- Key
- Subkey
- Value

More information can be found on this web page: <a href="https://wiki.openstreetmap.org/wiki/Map\_features">https://wiki.openstreetmap.org/wiki/Map\_features</a>.

A page appears to select the type of waypoint to download:



The information is grouped by *Key*, while the details contain the *Subkey - Value* information.

The lines have a *swipe* menu that allows you to view the description of the information represented in the current row.

With the menu it is also possible to filter the listed data or not.

Press the OK button to confirm the selection of the waypoint type or the Cancel button to cancel the operation in progress.

Once downloaded the new waypoints will appear on the current map.

# **External services**

Opens a list of web services that you can access.

The services report information of various kinds related to the position indicated by the red crosshair in the center of the map.

The services available are:

- Google Maps Place
- Google Street View
- OpenStreetMap
- Geocaching.com
- Peakfinder.org
- Meteogram
- Zoom.Earth
- Earth.NullSchool
- NOAA Declination
- NOAA Magnetic field
- Sky chart

#### Data

#### **Autorouting**

Automatically creates a track from one address to another.

The starting address (leave blank for the center of the map) and the destination address (leave blank for the center of the map) are requested.

After calculating the track you are asked for its name.

## Create/modify waypoint

Set the map page in waypoint creation / modification mode.



A keypad opens at the top left to allow waypoints to be created and edited.

The + key creates a waypoint at the position of the center of the map (viewfinder).

The waypoint name is requested.

The - key deletes a waypoint near the map viewfinder.

The <> ^ v keys move the waypoint near the center of the map (viewfinder) in the 4 directions and by a certain number of pixels.

The lower the zoom factor of the map, the greater the distance of the move and vice versa.

The X key closes the waypoint creation / modification mode.

#### Create track

First, the name of the track to be created is requested.



A keypad opens at the top left to allow track creation operations.

The + key creates a new point at the location of the center of the map (viewfinder).

The points are highlighted with a circle.

The - key deletes a point near the map viewfinder.

The <> ^ v keys move the point near the center of the map (viewfinder) in the 4 directions and by a certain number of pixels.

The lower the zoom factor of the map, the greater the distance of the move and vice versa.

The X key closes the track creation mode.

# Modify track

A keypad opens at the top left to allow track editing operations. The keypad is completely the same as the one already seen in the creation of the tracks.

The + key creates a new point at the location of the center of the map (crosshair).

The new point will occupy the position next to the point closest to the center of the map (viewfinder) in the sequence.

In this mode the points are highlighted with a circle.

The - key deletes a point near the center of the map (viewfinder).

The <>  $^{\circ}$  v keys move the point near the center of the map (viewfinder) in the 4 directions and by a certain number of pixels.

The lower the zoom factor of the map, the greater the distance of the move and vice versa.

The X key closes the track edit mode.

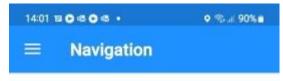
#### Create route

The function is completely analogous to the **Create track** function.

# **Modify route**

The function is completely analogous to the Modify track function.

# **GPS** and navigation



This app collects location data to enable to log tracks during outdoor activities and for other important navigation functions even when the app is closed or not in use.

Activate GPS when you want to record a track or activate other navigation functions.

GPS and track recording remain active even when you close the app and in this circumstance the battery consumption increases considerably.

When the use of GPS is not necessary or you intend to stop using OkMap Mobile, it is recommended to deactivate the GPS.



selecting the track to be used.

This page handles GPS and navigation.

It is important to carefully read the note at the top of the page.

The first switch, **GPS on/off** activates or deactivates the background service that handles receiving positions from the location device (GPS).

A notification warns that the GPS is active and therefore the app is monitoring your location. The notification can arrive a few seconds late.

When you start the app, the GPS is turned on automatically.

When you do not intend to use the app, it is not enough to close it but you must first deactivate the GPS which otherwise would continue to run in the background.

Turning off GPS is also a significant advantage in increasing battery life.

Some navigation functions can only be activated if the GPS is turned on.

The **Go to waypoint** switch allows you to set a waypoint as the navigation destination and consequently obtain the values for the selected destination in the <u>Trip computer</u>.

When the switch is turned on, a page is opened to select the destination waypoint (see <u>List waypoints</u>).

A line is drawn on the map that connects the user's position to the destination waypoint.

The characteristics of this line (thickness, color and style) can be changed in the <u>Preferences - Navigation</u> page.

The activation of this function is subject to the activation of the GPS. Sometimes it takes a few seconds before you can activate this function.

The **Follow a track** switch allows you to set the end of a track as the navigation destination and consequently obtain the values for the selected destination in the <u>Trip computer</u>.

When the switch is turned on, a page opens for

The activation of this function is subject to the activation of the GPS. Sometimes it takes a few seconds before you can activate this function.

When this function is active, the *Off-course* is calculated in the <u>Trip computer</u>, that is the distance between the user's current position and the line of the track being followed. If the value of this distance exceeds a maximum value, a warning is issued.

The off-course distance can be configured on the <u>Preferences - Navigation</u> page. The use of the speech synthesizer, the acoustic signal or the mute can be configured in the <u>Preferences - Notifications</u> page.

The **Follow a route** switch works in a similar way to the Follow a track switch.

The three navigation functions seen so far are exclusive, i.e., only one can be activated at a time.

The **Waypoint proximity** switch allows you to select a waypoint to use for the proximity alert. In practice, the app warns us when we get too close to the selected waypoint with a synthesized voice or with a short sound.

It can be used to keep away from dangerous areas such as sinkholes or other during the journey. Of course, it can be used for other purposes.

This function can be used in conjunction with the other navigation functions.

The distance to the proximity waypoint can be configured in the <u>Preferences - Navigation</u> page. The use of the speech synthesizer, the acoustic signal or the mute can be configured in the <u>Preferences - Notifications</u> page.

The **Anchor alarm** switch fixes the anchor position in the current position of the boat and allows you to receive a warning if the boat moves too far from the anchored position.

The maximum distance of the anchor, from which you can move away without the alarm being triggered, can be configured in the <u>Preferences - Navigation</u> page. The use of the speech synthesizer, the acoustic signal or the mute can be configured in the <u>Preferences - Notifications</u> page.

The **Send position by email** button prepares an email that has as an attachment a GPX file containing the user's current position.

The app to use (among those installed) is required for sending the file (email, WhatsApp, etc.).

The **Send current GPX by email** button prepares an email that has the GPX ACTIVELOG.gpx file as an attachment, containing the track recorded so far and other data created with the app.

If the current GPX file does not contain any data, a warning is issued.

The app to use (among those installed) is required for sending the file (email, WhatsApp, etc.).

The **Send track to server** switch is used to enable/disable the real-time transmission of your position as trace points to the OkMap Desktop application configured as a remote data reception server (see OkMap Desktop documentation).

Before activating these last two functions, it is necessary to configure the data for transmission on the <u>Preferences - Send data</u> page.

The OkMap Desktop server is able to receive data (waypoints and tracks) from multiple remote devices and is able to represent them on a previously loaded map.

# Trip computer

north



This page collects all the Trip computer values updated in real time by the app.

In the toolbar there is a first button that allows you to **sort** the list by *Measure* or *Type*.

Sorting by Measure is shown in detail below.

Sorting by *Type* provides for the same items but grouped according to a different scheme that prefers the type of values:

- Status
- Map
- Current values
- Initial values
- Total values
- Average values
- Minimum values
- Maximum values
- Final destination

A second button on the toolbar allows the reset of the cumulative values. Basically, it allows you to start the counts from zero (useful at the beginning of the path).

The values are updated in real time without the need to drag the list down to refresh the list.

On the Map and Compass page you can select 6 of these indicators to have them handy.

Below all the possible items organized by *Measure*:

Label	Value	
Status		
Battery status	Charging - Discharging - Complete - Not charging - Not present - Unknown	
Battery level	Value between 0 and 100 (fully charged)	
Navigation status	Not enabled - Not supported - No permission - Poor signal - Started - Stopped or no signal - Unable to get data	
Compass status	Not supported - Started - Stopped - Unable to get data	
Barometer status	Not supported - Started - Stopped - Unable to get data	
Magnetometer status	Not supported - Started - Stopped - Unable to get data	
Sender to server status	Started – Stopped – Unable to send data to remote server	
Navigation accuracy	In the short distance unit of measure (see <u>Preferences - Unit of measure</u> )	
Navigation vertical accuracy	"	

	Tax day day day day day		
Track points sent to the server	Number of track points sent to the server when the <i>Send</i> track to server function is active on the <u>GPS and Navigation</u>		
	page		
Waypoints sent to server	Number of waypoints sent to the server with the function that can be activated from the waypoint balloon		
Errors while sending to the	Total errors that occurred while sending data to the server		
server	(track points and waypoints)		
Coordinates			
Current coordinates (format 1)	In format 1 coordinates (see <u>Preferences - Coordinates</u> )		
Current coordinates (format 2)	In format 2 coordinates (see <u>Preferences - Coordinates</u> )		
Мар			
Map center coordinates (format 1)	In format 1 coordinates (see <u>Preferences - Coordinates</u> )		
Map center coordinates (format 2)	In format 2 coordinates (see <u>Preferences - Coordinates</u> )		
Map zoom	Value between 2 and 20		
Map resolution	In m/pixel		
Navigation			
Name of target navigation	Name of waypoint, track or route being navigated		
Description of target navigation	Description of waypoint, track or route being navigated		
Coordinates of end target	Coordinates of the waypoint, the last point of the track or the last waypoint of the route being navigated		
	Directions		
Direction of course	In the unit of measure of direction (see <u>Preferences - Unit of measure</u> )		
Direction of magnetic north	"		
Direction of end target	"		
	Distances		
Distance traveled	In the unit of measure of distance (see <u>Preferences - Unit of measure</u> )		
Distance traveled on the flat	"		
Distance traveled uphill	"		
Distance traveled downhill	"		
Distance to end target	"		
Off course	In the unit of measure of short distance (see <u>Preferences - Unit of measure</u> )		
Times			
Total travel time	In the format hours: minutes: seconds		
Time in stop	"		
Time in motion	"		
Time traveled on the flat	"		
Time traveled uphill	"		
Time traveled downhill	"		
E.T.E. end target	"		

Altitudes and differences			
Pressure	If the barometer is available, in the unit of measure of pressure (see <a href="Preferences">Preferences</a> - Unit of measure)		
Altitude	In the unit of measure of altitude (see <u>Preferences - Unit of measure</u> )		
Map center altitude	"		
DEM altitude	W.		
Departure altitude	W.		
Minimum altitude	W.		
Maximum altitude	W.		
Total ascent	W.		
Total descent	N N		
Times en route			
Departure time	In date-time format		
Time of last GPS point	"		
Time of sunrise	In the format hours: minutes: seconds		
Time of sunset	"		
E.T.A end target	In date-time format		
Speeds			
Current speed	In the unit of measure of speed (see <u>Preferences - Unit of measure</u> )		
Minimum speed	n .		
Maximum speed	и		
Average speed	и		
Average speed in motion	"		
Average speed on the flat	"		
Average speed uphill	и		
Average speed downhill	"		
	Rates		
Rate of uphill	In the unit of measure of rate (see <u>Preferences - Unit of measure</u> )		
Rate of downhill	n n		
Slopes			
Average slope uphill %	Slope in percent		
Average slope downhill %	"		
Average slope uphill °	Slope in degrees		
Average slope downhill °	"		

# Waypoints augmented reality



With this function you can view in the camera the waypoints loaded in your device.

The position of the waypoints respects the position, altitude and distance of the waypoint itself so as to be displayed in the position where the human eye would see it.

By tapping on the icons, you can view/hide a balloon containing the following information:

- Waypoint description
- Waypoint altitude
- Distance of the waypoint from the user position
- Direction of the waypoint from the user position

By moving your finger on the camera view you can more precisely align waypoints by taking a known waypoint as a reference.

The original position can be restored with the Auto button (see below).

Only waypoints with the following characteristics are displayed:

- Visible waypoints
- Waypoints with altitudes
- Waypoints whose distances from the user's position fall within the range of the selected distances and exceed the selected minimum altitude (see below)

Functionality (right side buttons):

- Main menu
- Ruler: Opens/closes the left sidebar for defining the distance range and minimum altitude
- Camera: Take the photo
- Auto: Automatic position reset

Clicking on the balloons relating to the waypoints, opens a menu containing the following functions:

- Edit waypoints
- Hide waypoints
- Open link (if available)
- Delete waypoints
- Show (waypoints on map)

# **Compass**



Direction of magnetic north	103.6 deg
Off course	1 m
Distance to end target	0.145 km
Direction of end target	-175.9 deg
E.T.E. end target	00:00:02
E.T.A. end target	31/08/2022 14:40:24

The page displays a rotating compass that looks in the direction the device is pointing (indicated by the red triangle).

This page remains locked in *portrait* position and cannot be rotated in order not to create confusion about the orientation of the device itself.

In the lower part of the map, 6 <u>Trip computer</u> indicators are visible.

The 6 indicators can be customized by tapping on their labels; a list is displayed from which you can select the desired item.

To know all the possible indicators, see the <u>Trip</u> computer.

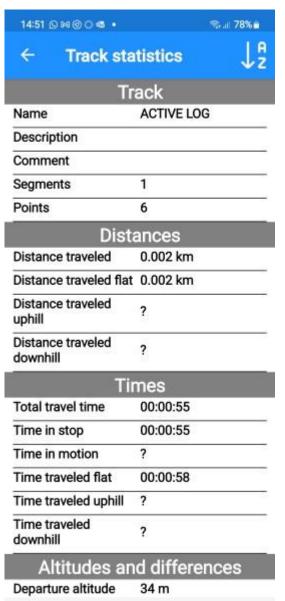
In the toolbar there is a button that activates the **speech synthesizer** which reproduces the direction in degrees.

This feature can be very useful if you are pointing the device at a target and cannot read the screen content.

If you were using the Go to waypoint, Follow a track or Follow a route functions (see <u>GPS and navigation</u>), the direction of your destination is indicated by a second green triangle that rotates around the compass crown.

In the menu there is the only item **Reset indicators** which restores the indicators displayed at the bottom of the page according to the factory settings (default). Confirmation is requested.

## **Active track statistics**



This page shows the statistical values of the trace being recorded (ACTIVE LOG).

It can only be activated if this trace exists.

In the toolbar there is a single button that allows you to **sort** the list by *Measure* or *Type*.

Sorting by *Measure* is shown in detail below.

Sorting by *Type* provides for the same items but grouped according to a different scheme that prefers the type of values:

- Track
- Initial values
- Final values
- Total values
- Average values
- Minimum values
- Maximum valuesOther stuffs

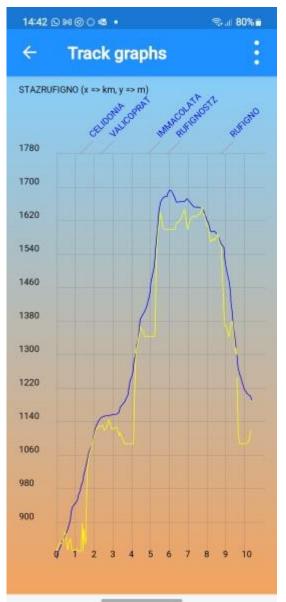
The values are updated in real time without the need to drag the list down to *refresh* the list.

Below all the items organized by *Measure*:

Label	Value	
Track		
Name	Alphanumeric value	
Description	"	
Comment	"	
Segments	Number	
Points	"	
Distances		
Distance traveled	In the unit of measure of distance (see <u>Preferences - Unit of measure</u> )	
Distance traveled on the flat	"	
Distance traveled uphill	"	
Distance traveled downhill	п	

Times			
Total travel time	In the format hours: minutes: seconds		
Time in stop	"		
Time in motion	"		
Time traveled on the flat	"		
Time traveled uphill	"		
Time traveled downhill	"		
Altitudes and differences			
Departure altitudes	In the unit of measure of short distance (see <a href="Preferences">Preferences</a> <a href="Unit of measure">- Unit of measure</a> )		
Arrival altitudes	n n		
Minimum altitude	"		
Maximum altitude	"		
Total ascent	"		
Total descent	"		
Times en routes			
Departure time (local)	In date-time format		
Arrival time (local)	"		
Speeds			
Minimum speed	In the unit of measure of speed (see <u>Preferences - Unit of measure</u> )		
Maximum speed	"		
Average speed	"		
Average speed in motion	"		
Average speed on the flat	"		
Average speed uphill	"		
Average speed downhill	"		
Rates			
Rate of uphill	In the unit of measure of rate (see <u>Preferences - Unit of measure</u> )		
Rate of downhill	"		
Slopes			
Average slope uphill %	Slope in percent		
Average slope downhill %	"		
Average slope uphill °	Slope in degrees		
Average slope downhill °	n n		
Other stuffs			
Calories for trekking	In the unit of measure of calories (see <u>Preferences - Unit of measure</u> )		
Lost body weight	In the unit of measure of lost body weight (see <a href="Preferences - Unit of measure">Preferences - Unit of measure</a> )		

# **Active track graphs**



It represents the graphs of the track being recorded (ACTIVE LOG).

It can only be activated if this trace exists.

The name of the track and the units of measure of the x and y axes appear in the header.

The graphs can be of various types:

- Distance / Altitude
- Time / Altitude
- Distance / Speed
- Time / Speed
- Time / Distance
- Distance / Slope
- Time / Slope

The type of the graph can be selected with the first menu item which shows the type of active graph.

The switches in the menu act on the drawing of the graph:

- **Show segments**: displays, between the header and the graph, the interruptions in the different segments of the track.
- Show waypoints: displays, between the header and the graph, the waypoints close to the track (the distance between waypoint and track point can be configured in the <u>Preferences - Graphs</u> page).
- **Show DEM data**: displays the elevation line (yellow) determined not based on track altitudes but based on DEM data (if any).
- **Show Grid**: Displays a grid below the graph lines to make them easier to read.
- **Apply smoothing**: the smoothing algorithm is applied to soften the edges of the graph.

The graph can be zoomed using the classic pinch gesture.

Once zoomed in, the graph can be moved by dragging your finger on the page.

A double tap switches from the normal view to the zoomed view at maximum and vice versa.

# **List waypoints**



Test waypoint

30 m 0.180 km

### wptLazioAbruzzo.gpx **ACQUAVIVAV** Summit Vetta del monte Acquaviva (Maiella) 130.261 km 2737 m BLOCKHAUSP Parking Area Parcheggio Blockhaus (Maiella) 2073 m 129.867 km FUSCORIF Residence Rifugio Fusco (Maiella) 2440 m 129.774 km CAVALLOV Summit Vetta del monte Cavallo (Maiella) 129.220 km 2171 m **FOCALONEV** Summit Vetta monte Focalone (Maiella) 2676 m 129.098 km PONTEPIETR Bridge Ponte di Pietra (Orfento) 126 936 km 974 m

Lists all waypoints present in the ACVIVELOG.qpx file and loaded GPX files.

The list of waypoints is grouped by file (lines in gray).

Each row shows the following waypoint information:

- Name
- Symbol
- Description
- Altitude
- Distance from the user's position (if known)

The list can be sorted by:

- Name
- Description
- Comment
- Symbol
- Altitude
- Distance

The menu contains the following functions:

- Add new waypoint (similar to Modify a waypoint function)
- Make everyone visible (makes all waypoints visible on the map)
- **Set filters**
- Reset filters

The rows have a *swipe* menu that allows the following functions:

- Delete (waypoint)
- Other
  - Modify waypoint 0
  - Set altitude DEM
  - Open link (if specified)
  - Show

# Modify a waypoint



This page allows you to change the attributes of a waypoint.

You can edit:

- Name
- Description
- Comment
- Symbol (selectable from a predefined symbol list)
- Coordinates (see the page for <u>entering the</u> <u>coordinates</u>)
- Time (in local date-time format)
- Altitude (in the short distance unit of measure (see Preferences - Unit of measure)
- Pin image (the first button allows you to select the placeholder image from a list of files contained in the Pins folder, the second button restores the default image)
- Visible (switch to make the waypoint visible on the map or not)
- Source
- Link (if a photo is taken, it contains the link to the image file; alternatively, a link to a web resource can be specified)
- Type

The menu contains the following functions:

• **Open the link** (available only if the Link field is specified)

To confirm the changes, press the OK button otherwise the Cancel button.

# **Set altitude DEM**

Attributes altitude to a waypoint using locally available <u>DEM</u> data. A message signals the possible unavailability of altimetric data.

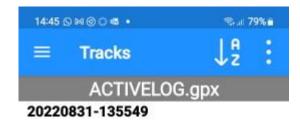
# Open the link (if specified)

Opens the associated application (e.g. browser) for the URI (Uniform Resource Identifier) string specified in the waypoint link field.

# **Show**

Return to the Map page and center the displayed map at the coordinates of this waypoint.

## List tracks



trkSagittario.gpx

AL\_ARGATONECR

31/08/2002
07:08:24

AL\_BOCCACAMPO

14/10/2001
08:53:57

AL\_CASTRO-ANV

28/12/2001
10:23:05

AL\_CASTRO-OAS

Lists all tracks present in the ACVIVELOG.gpx file and loaded GPX files.

The list of tracks is grouped by file (lines in gray).

Each line shows the following track information:

- Name
- Description
- Date-hour

The list can be sorted by:

- Name
- Description
- Comment
- Date-hour

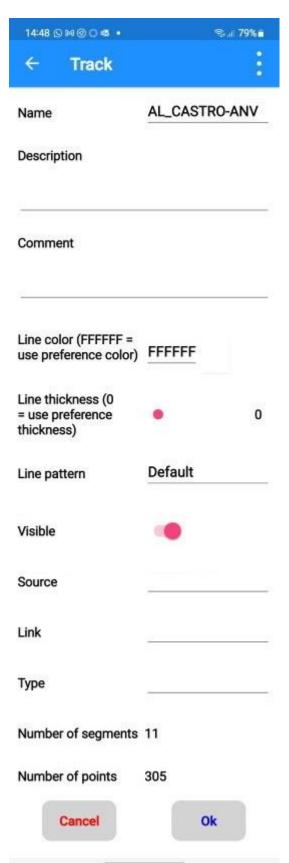
The menu contains the following functions:

- Add new track (similar to <u>Modify a track</u> function)
- **Make everyone visible** (makes all tracks visible on the map)
- Set filters
- Reset filters

The rows have a *swipe* menu that allows the following functions:

- Delete (track) if it is not the track being recorded
- Other
  - Modify track
  - o List track points
  - Track statistics
  - Track graphs
  - Set altitude DEM
  - Set travel times
  - Adjust altitude
  - o Adjust time
  - Smoothing
  - Smoothing altitudes
  - Duplicate
  - Create an inverted track
  - o Add to JOIN
  - Merge segments
  - Export data
  - Open link (if specified)
  - Show start
  - o Show end

# Modify a track



This page allows you to change the attributes of a track.

#### You can edit:

- Name
- Description
- Comment
- Line color (in hexadecimal. The color FFFFFF (white) uses the default color in the <u>Preferences - Tracks</u> page); tapping on the box on the side opens a page to select the color in RGB format using three sliders)
- Line thickness (if set = 0, use default thickness in <u>Preferences - Tracks</u> page)
- Line pattern (from a list of predefined styles)
- Visible
- Source
- Link (if a photo is taken, it contains the link to the image file; alternatively, a link to a web resource can be specified)
- Type

# It also shows:

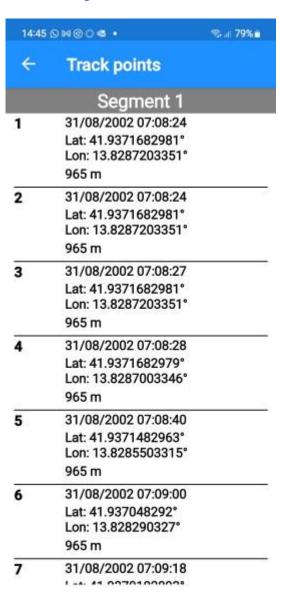
- Number of segments
- Number of points (total for all segments)

## The menu contains the following functions:

- List track points: Opens the <u>List track points</u> page
- **Track statistics**: Opens the Track Statistics page (similar to <u>Active track statistics</u>)
- Track graphs: opens the Track graphs page (similar to <u>Active track graphs</u>)
- Open the link (available only if the Link field is specified)

To confirm the changes, press the OK button otherwise the Cancel button.

# **List track points**



Lists all points of a track.

The list of tracks is grouped by segment of belonging (lines in gray).

Each line shows the following track point information:

- Point number within the segment
- Local date-time
- Coordinates
- Altitude

The list cannot be sorted.

There isn't a menu.

The lines have a *swipe* menu that allows the following functions:

- Delete (track point)
- Other
  - New segment
  - Divide track
  - Show

# **New segment**

A new track segment is created starting from this point.

The section that goes from the last point of the previous segment to the first point of the new segment is not drawn on the map (the track stops) and is considered a section in which the GPS did not have a signal good enough to determine the coordinates.

## **Divide track**

Track points, between this point and the end of the track, are moved to a new track with the name preceded by "N.".

#### **Show**

Return to the  $\underline{\text{Map}}$  page and center the displayed map at the coordinates of the track point in question.

## **Track statistics**

Opens the statistics page of the track in question.

The page is exactly the same as the <u>Active track statistics</u> page.

# **Track graphs**

Opens the page relating to the graphs of the track in question. The page is exactly the same as the Active track graphs page.

## **Set altitude DEM**

Attributes altitudes to track points using locally available <u>DEM</u> data. A message signals the possible unavailability (even partial) of the altimetric data.

# Set travel times

Attributes the times to the points of the track using an algorithm that considers the slopes (suitable for trekking).

The walking speed on the flat specified in <u>Preferences – Tracks</u>, is used as a basis. The speed is automatically adjusted according to the slopes of the track.

# Adjust altitude

All the altitudes of the track points are corrected with a user requested relative value in meters.

# Adjust time

All the times of the track points are corrected with a user requested relative value in seconds.

# **Smoothing**

All track point coordinates are processed by a smoothing algorithm. The number of points used by the algorithm is defined in the <u>Preferences - Tracks</u> function. A new track is created with the name preceded by "H.".

# **Smoothing altitudes**

All the altitudes of the track points are processed by a smoothing algorithm. The number of points used by the algorithm is defined in the <a href="Preferences - Tracks">Preferences - Tracks</a> function. A new track is created with the name preceded by "A.".

# **Duplicate**

The track is duplicated into a new track with the name preceded by "C.".

## Create an inverted track

A new track is created with the name preceded by "I." having the order of segments and points reversed.

# Add to JOIN

If no track named "JOIN" exists in the loaded GPX files, the current track is duplicated into a new track named "JOIN" in the same GPX file.

If instead a track named "JOIN" exists, the segments and points of the current track are added to that track, starting from a new segment.

# **Merge segments**

A new track is created with the name preceded by "U." having a single segment containing all the points of the track in question.

# **Export data**

A file with the csv extension (comma separated values) containing all the information (some calculated) of the track in question is created in the "Export" folder.

At the end of processing, the user is asked whether to open the file.

The most suitable app to view the contents of this file is Microsoft® Excel.

In the Excel app it will be possible to save the file in another folder of the user's choice.

# **Open link (if specified)**

Opens the associated application (e.g., browser) for the URI (Uniform Resource Identifier) string specified in the link field of the track.

#### **Show start**

Return to the <u>Map</u> page and center the displayed map at the coordinates of the track start point.

# Show end

Return to the <u>Map</u> page and center the displayed map at the coordinates of the track end point.

# **List routes**



Lists all routes present in the ACVIVELOG.gpx file and loaded GPX files.

The list of routes is grouped by file (lines in gray).

Each line shows the following route information:

- Name
- Description
- Date-hour

The list can be sorted by:

- Name
- Description
- Comment
- Date-hour

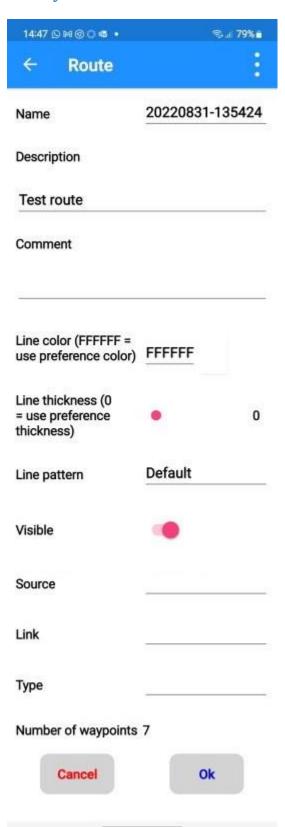
The menu contains the following functions:

- Add new route (similar to <u>Modify a route</u> function)
- **Make everyone visible** (makes all routes visible on the map)
- Set filters
- Reset filters

The rows have a *swipe* menu that allows the following functions:

- Delete (route)
- Other
  - o Modify route
  - List waypoints
  - Duplicate
  - o Create an inverted route
  - Add to JOIN
  - Export data
  - Open link (if specified)
  - Show start
  - $\circ$  Show end

# Modify a route



This page allows you to change the attributes of a route.

#### You can edit:

- Name
- Description
- Comment
- Line color (in hexadecimal. The color FFFFFF (white) uses the default color in the Preferences - Routes page); tapping on the box on the side opens a page to select the color in RGB format using three sliders)
- Line thickness (if set = 0, use default thickness in Preferences - Routes page)
- Line pattern (from a list of predefined styles)
- Visible
- Source
- Link (if a photo is taken, it contains the link to the image file; alternatively, a link to a web resource can be specified)
- Type

# It also shows:

Number of waypoints

The menu contains the following functions:

- **List route waypoints**: Opens the <u>List route</u> waypoints page
- Open the link (available only if the Link field is specified)

To confirm the changes, press the OK button otherwise the Cancel button.

# **List route waypoints**



Lists all waypoints of a route.

Each line, in addition to the waypoint information, shows the distance from the user's last position (if known):

Each row shows the following route waypoint information:

- Name
- Symbol
- Description
- Altitude
- Distance from the user's last position (if known)

The list can be sorted by:

- Name
- Description
- Comment
- Symbol
- Altitude
- Distance

The menu contains the following functions:

- Add new route waypoint (similar to <u>Modify</u> a waypoint function)
- Make everyone visible (makes all waypoints visible on the map)

The rows have a *swipe* menu that allows the following functions:

- Edit (waypoint)
- Delete (waypoint)

# **Duplicate**

The route is duplicated into a new route with the name prefixed with "C.".

## Create an inverted route

A new route is created with the name preceded by "I." having the waypoint order reversed.

# Add to JOIN

If no route named "JOIN" exists in the loaded GPX files, the current route is duplicated into a new route named "JOIN" in the same GPX file.

If instead a route named "JOIN" exists, the waypoints of the current route are added to this route.

# **Export data**

A file with the csv extension (comma separated values) containing all the information (some calculated) of the route in question is created in the "Export" folder.

At the end of processing, the user is asked whether to open the file.

The most suitable app to view the contents of this file is Microsoft® Excel.

In the Excel app it will be possible to save the file in another folder of the user's choice.

# **Open link (if specified)**

Opens the associated application (e.g., browser) for the URI (Uniform Resource Identifier) string specified in the link field of the route.

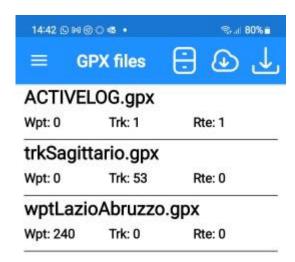
## **Show start**

Return to the  $\underline{\text{Map}}$  page and center the displayed map at the coordinates of the initial route waypoint.

## Show end

Return to the <u>Map</u> page and center the displayed map at the coordinates of the final waypoint of the route.

#### **GPX** files



With this function it is possible to load and close GPX files (see <u>File types managed by the app - GPX</u>).

The list shows all the GPX files that have been loaded into the app, and in particular for each line:

- File name and extension
- Number of waypoints
- Number of tracks
- Number of routes

When you start the app, all the files loaded in the previous session are automatically loaded (if requested in the <u>Preferences – Maps</u> page).

The first button on the toolbar **archives** (renames) the ACTIVELOG.gpx file with a name provided by the user and creates a new ACTIVELOG.gpx file.

This function can only be activated when track recording is stopped and the GPX file contains at least one element (waypoint, track or route).

The second button **loads** one or more GPX files into the app from the device memory, from the removable

memory or  $\stackrel{\longleftarrow}{\longleftarrow}$  from Google Drive or  $\stackrel{\bigcirc}{\blacksquare}$  from iCloud.

The selected files are copied to the GPX app folder (see <u>Folders and files</u>). If any file is already present, the user is warned and asked whether to load the file present in the app folder.

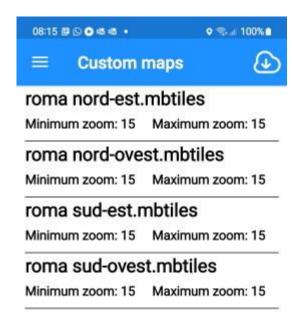
The third button **loads** the GPX files that are already available in the GPX app folder into the app.

It is not possible to load the same file more than once.

The rows have a *swipe* menu that allows the following functions:

- **Close**: closes the file indicated in the row and its content is no longer displayed on the map.
- Other: open the follow submenu:
  - Show: displays the map and centers it on the GPX data contained in the file indicated in the line.
  - Send: send the GPX file indicated in the line by email.
  - o Rename: Rename the selected file.
  - Delete: Permanently delete the selected file.

# **Custom maps files**



With this function you can **load** and **close** files containing user maps (MbTiles) (see <u>File types</u> managed by the app - MbTiles).

The list shows all the MbTiles files that have been loaded into the app, and in particular for each line:

- File name and its extension
- Minimum zoom
- Maximum zoom

When you start the app, all the files loaded in the previous session are automatically loaded (if requested in the <u>Preferences – Maps</u> page).

The toolbar button **loads** one or more MbTiles files from the device memory, from the removable memory or from Google Drive or from iCloud into the app.

The selected files are copied to the CustomMaps app folder (see <u>Folders and files</u>). If any file is already present, the user is warned and asked whether to load the file present in the app folder.

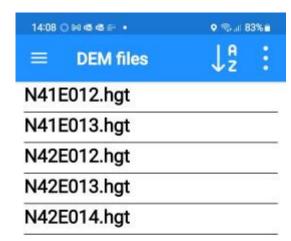
The third button **loads** the custom maps, that are already available in the CustomMaps app folder, into the app.

It is not possible to load the same file more than once.

The lines have a *swipe* menu that allows the following functions:

- **Close**: closes the file indicated in the row and the user map is no longer displayed overlapping the base map.
- Other: open the follow submenu:
  - Show: displays the map and centers it to show the custom map indicated in the line.
  - o Rename: Rename the selected file.
  - o **Delete**: Permanently delete the selected file.

### **DEM files**



With this function it is possible to list the DEM files downloaded in the app memory (see <u>File types</u> managed by the app - DEM).

The list shows for each row:

• File name and its extension (.hgt)

With the first button of the toolbar, it is possible to **sort** the list by:

- Latitude
- Longitude

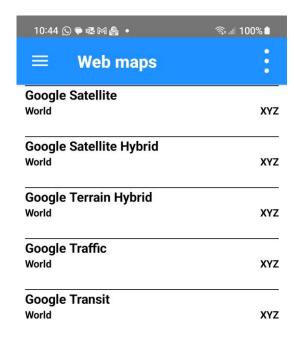
The menu shows the following functions:

- **Delete all files**: used to delete all DEM files and free up space in the device memory
- Set filters
- Reset filters

The rows have a *swipe* menu that allows the following functions:

• **Delete**: delete the file indicated in the row

# Web maps



Greece ktimanet
Greece Orthophoto
Greece wms



Lists all available web maps (both predefined by the app and defined by the user).

Selected maps are numbered in red in stacking order.

User-defined maps are highlighted with a red warning.

Similarly, maps that require an API key (see <u>Web API Keys</u>) are highlighted with a red warning.

The menu shows the following functions:

- Add new web map: used to create a <u>custom</u> web map (not available in map selection mode)
- **Deselect All**: Cancel all selections made (only available in map selection mode)
- Set filters
- Reset filters

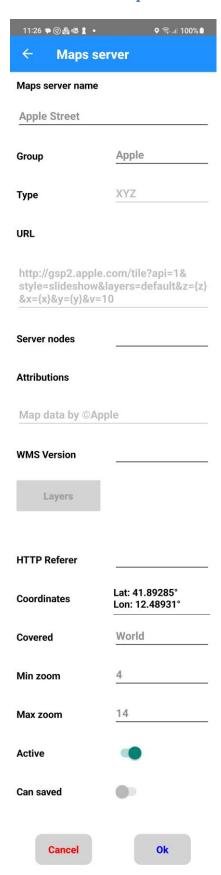
Rows have a swipe menu on the right which allows the following functions:

- + Adds the map to the list of maps to view (only available in map selection mode)
- Removes the map from the list of maps to view (only available in map selection mode)
- **Other** (not available in map selection mode):
  - <u>Edit</u> a web map
  - **Duplicate** a web map
  - Delete a custom web map (only available for custom maps)

There is also a swipe menu on the left which allows the following functions:

- **Test**: to preview the map at the specified coordinates
- Capabilities: to view the capabilities of the web service in XML format (only available for WMS maps)

### **Custom web map**



Allows you to create a custom web map.

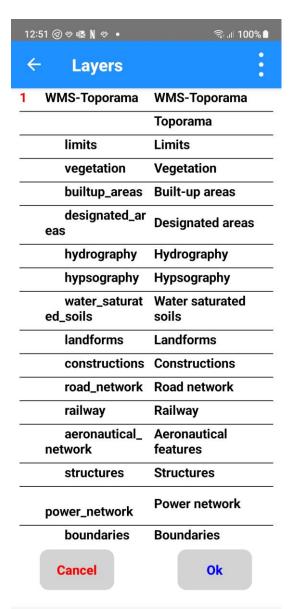
This function is reserved for more experienced users who are familiar with the operation of XYZ and WMS maps.

The information requested are:

- Map Server Name: Identification name by which the map is recognized
- Group: it is used to group all the maps provided by the same web service
- Type: type of service (XYZ, WMS)
- URL: web address of the server
- Server Nodes (optional): Can be used when the server has multiple access nodes
- Map Attributions (optional): These are the credits displayed at the bottom of the map
- WMS version
- <u>Layers</u>: WMS layer names. A page for choosing the WMS layers (one or more than one) is displayed
- HTTP Referer header value
- Coordinates: Coordinates for the map test
- Coverage: coverage area of the map
- Minimum zoom
- Maximum zoom
- Active: to list or not the web service in the function of choosing the maps to display
- Can be saved: prepared for future use

To confirm the changes, press the OK button otherwise the Cancel button.

### **Layers**



Allows you to choose one or more layers related to a WMS map.

The menus display the following functions:

• Deselect All: Cancels all selections made

Rows have a swipe menu on the right which allows the following functions:

- + Adds the layer to the list of those to be displayed
- Removes the layer from the list of those to be displayed

There is also a swipe menu on the left which allows the following functions:

• **Test**: to preview the layer in the specified coordinates

#### List datum



With this function it is possible to **list** all the Datums present in the OkMap database.

The list shows for each row:

- EPSG code
- Name of the datum
- Area of competence of the datum
- Ellipsoid

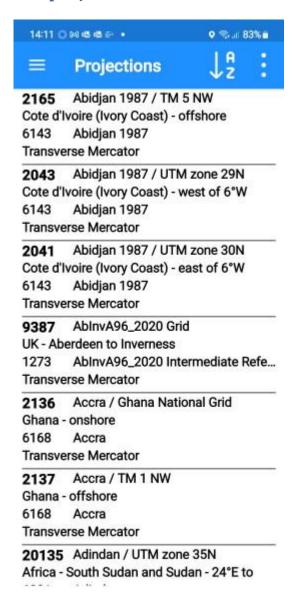
With the first button of the toolbar, it is possible to **sort** the list by:

- EPSG datum
- Name
- Zone
- Ellipsoid

The menu shows the following functions:

- Set filters
- Reset filters

# List projections



With this function it is possible to **list** all the Projections present in the OkMap database.

The list shows for each row:

- EPSG CRS projection code
- Name of the projection
- Area of competence of the projection
- EPSG datum code
- · Name of the datum
- Name of the projection algorithm

With the first button of the toolbar, it is possible to **sort** the list by:

- EPSG projection
- Name
- Zone
- EPSG datum
- Datum name
- Projection name (algorithm)

The menu shows the following functions:

- Set filters
- Reset filters

#### **Preferences**

After selecting the Preferences menu, a list of items appears that group preferences by theme.

Each page has a button in the toolbar that allows the factory settings to be restored limited to the values described on the page itself. Confirmation is requested.

The changes to the data must in any case be confirmed with the OK button. To discard the changes, press the Cancel button.

#### Units of measure

This page allows you to define the units of measure for the system.

These are pairs of values that define the unit of measurement (selectable from a list) and the number of decimals with which to represent the relative values (selectable with a dot that slides on a bar).

The list of couples is described below:

- Distance: used for example to represent the values of the distances traveled
- Short distance: used for example to represent off course or other short distances
- Altitude
- Rates: of ascent and descent
- Area: currently not used
- Speed
- Direction
- Pressure: used if the barometer is present
- Body weight
- Weight of the backpack
- Loss of body weight

#### **Coordinates**

- Coordinates datum: used to represent coordinates
- Coordinates projection: used for the calculation of metric coordinates
- Format 1 coordinates: used in the trip computer and other pages; it can be:
  - Deg: Degrees
  - DMM: Degrees -Minutes
  - o DMS: Degrees -Minutes-Seconds
  - Rad: Radians
  - UTM: Universal Transverse Mercator
  - o ECEF: Earth-centered, Earth-fixed
  - o OCL: Open Location Code
  - GeoRef: World Geographic Reference System
  - USNG: United States National Grid
  - MGRS: Military Grid Reference System
  - o BNG: British National Grid
  - o IG: Irish Grid
  - Metric: metric coordinates
- Format 2 coordinates: used in the trip computer (similar to format 1)
- Decimals with which to represent the coordinates:
  - o Degrees
  - Minutes

- Seconds
- Radians
- Metric coordinates
- Home coordinates: coordinates stored and recalled in the coordinates page
- Default box coordinates: specifies the default coordinate type in the <u>coordinates page</u>

### Maps

Allows you to define:

- Indicator whether to automatically load custom maps (on restart)
- Indicator whether to automatically load GPX files (on restart)
- Alpha user maps: value from 0 to 1 where 0 is total transparency and 1 is opacity
- Compass color: blue, green, red
- Zoom web map preview: used in the web map list to produce previews

# **Web API Keys**

Allows you to define the API keys used in some map delivery web services. It involves multiple pairs of values consisting of:

- Web server group (see <u>Web Maps</u> function)
- Web API key

Any custom maps can include the API key encoded with the string @apikey@ in the url.

# Geographic grid

Allows you to define:

- Grid line width: establishes the thickness of the grid line in pixels
- Grid line color: establishes the color of the grid line through a window where it is possible to indicate the RGB value using three sliders (0-255)
- Grid line pattern: establishes the style of the lattice line; the possible values are:
  - Default
  - Solid: solid line
  - o Dash: dashed line
  - o Dot: line of points
  - DashDot: dash-dot line
  - DashDotDot: dash-point-point line
- Label background color: establishes the background color of the labels through a window where it is possible to indicate the RGB value using three sliders (0-255)
- Label font size: determines the font size of the labels
- Label color: establishes the color of the labels through a window where it is possible to indicate the RGB value using three sliders (0-255)

# Metric grid

It allows you to define the parameters for drawing the metric grid in a way that is completely similar to the Geographical grid.

# **DEM grid**

It allows you to define the parameters for drawing the metric grid in a way that is completely similar to the <u>Geographical grid</u>.

There is the possibility of differentiating the color and pattern of the grid lines according to the local availability of the DEM file.

# **Waypoints**

### Allows you to define:

 Maximum name length: establishes the maximum length of waypoint names for compatibility with some GPS models

#### **Tracks**

#### Allows you to define:

- Maximum name length: establishes the maximum length of track names for compatibility with some GPS models
- Tracks line width: establishes the thickness in pixels of the track lines
- Tracks line color: establishes the color of the track's lines through a window where it is possible to indicate the RGB value using three sliders (0-255)
- Tracks line pattern: establishes the style of the track's lines; the possible values are:
  - o Default
  - o Solid: solid line
  - Dash: dotted line
  - o Dot: line of points
  - DashDot: dash-dot line
  - DashDotDot: dash-point-point line
- Active track line width: as above but applies to the track being recorded
- Active track line color: as above but applies to the track being recorded
- Active track line pattern: as above but applies to the track being recorded
- Background color of the point label
- Point label font size
- Point label color
- Average speed on the flat: it is used to estimate travel times
- Point smoothing: Number of points to use in the smoothing of track points or altitudes
- Body weight: used for estimating calories burned while trekking
- Backpack weight: as above

#### **Routes**

#### Allows you to define:

- Maximum name length: establishes the maximum length of route names for compatibility with some GPS models
- Route line width: establishes the thickness in pixels of the route lines
- Route line color: establishes the color of the route lines through a window where it is possible to indicate the RGB value using three cursors (0-255)
- Route line pattern: establishes the style of the route lines; the possible values are:
  - o Default
  - o Solid: solid line
  - Dash: dotted line
  - o Dot: line of points
  - DashDot: dash-dot line
  - DashDotDot: dash-point-point line

### Distance, area

- Distance line width: establishes the thickness of the distance line in pixels
- Distance line color: establishes the color of the distance line through a window where it is possible to indicate the RGB value using three cursors (0-255)
- Distance line pattern: establishes the style of the distance line; the possible values are:
  - o Default
  - Solid: solid line
     Dash: dotted line
     Dot: line of points
  - DashDot: dash-dot line
  - DashDotDot: dash-point-point line
- Width of the visible distance line: characteristic of the visible distance line
- Color of the visible distance line: characteristic of the visible distance line
- Pattern of the visible distance line: characteristic of the visible distance line
- Width of the not visible distance line: characteristic of the distance line not visible
- Color of the not visible distance line: characteristic of the distance line not visible
- Pattern of the not visible distance line: characteristic of distance line not visible
- Area line width: establishes the thickness in pixels of the line that delimits the area
- Area line color: establishes the color of the line that delimits the area through a window where it is possible to indicate the RGB value using three cursors (0-255)
- Area line pattern: establishes the style of the line that delimits the area; the possible values are the same as for the distance line
- Area fill style: establishes how the area should be filled; the possible values are:
  - Default: the area is not filled
  - Hollow: the area is not filled
  - Solid: the area is filled with a solid color
  - o Dotted: the area is filled with colored dots
  - o Horizontal: the area is filled with horizontal lines
  - Vertical: the area is filled with vertical lines
  - o Cross: the area is filled with small crosses
  - DiagonalCross: the area is filled with a diagonal grid
  - ForwardDiagonal: the area is filled with diagonal lines from left to right
  - o BackwardDiagonal: the area is filled with diagonal lines from right to left

#### **DEM**

#### Allows you to define:

- DEM data interpolation: allows you to interpolate DEM data to obtain altitudes in a continuous rather than discrete way; the possible values are:
  - Plane: discrete values without any interpolation
  - Bilinear: the bilinear algorithm is applied to make the values continuous

# **Navigation**

- GPS timeout: it is the maximum time allowed to the GPS to return the geographical position
- GPS accuracy: is the accuracy of the geographical position
- Time interval between GPS requests: it is the time that elapses between one request for the geographical position and the next
- Minimum distance between GPS points: the point returned by the GPS must be at least this value away from the previous one to be considered. The higher this value is, the more the points of the track will be spaced. It can be calibrated according to whether the march is on foot, by bicycle or by car

- Increase accuracy in curves: if turned on and a change of direction greater than the next value occurs, the distance filter is ignored
- Minimum course change for track recording: represents the minimum course change value so that the distance filter is ignored (only if the previous switch is turned on)
- Maximum off course distance: Used when navigating along a track or route.
   Establishes the distance of the off course beyond which the off-course warning is issued
- Proximity waypoint distance: Used when selecting a proximity waypoint. Represents
  the distance between the user and the proximity waypoint below which the proximity
  warning is issued
- Alarm anchor distance: used when the anchor alarm is activated. Establishes the distance between the vessel and the anchor beyond which the anchor alarm is issued.
- To waypoint line width: if navigation to a waypoint is activated, it establishes the thickness in pixels of the line that connects the user's position and that of the waypoint
- To waypoint line color: establishes the color of the above line; the color is selected through a window where it is possible to indicate the RGB value using three sliders (0-255)
- To waypoint line pattern: establishes the style of the above line; the possible values are:
  - o Default
  - Solid: solid line
     Dash: dotted line
     Dot: line of points
     DashDot: dash-dot line
  - DashDotDot: dash-point-point line

# **Graphs**

#### Allows you to define:

- Number of comment lines in the graphs: it is the number of lines used to describe the proximity waypoints in the display of the graph of a track
- Proximity waypoint distance for graphs: establishes the maximum distance between
  the waypoints encountered along a track and the points on the track itself; if this
  value is too low there is the risk of not displaying waypoints along a track, vice versa if
  it is too high waypoints may be displayed that have nothing to do with the track itself
- Distance for slope calculation purposes: it is the distance between two points used to calculate the slopes of the track

#### **Photos**

- Folder organization: photos can be organized into sub-folders to improve their organization. The possible values are:
  - None: No sub-folder is created
  - YYYY: photos are organized into sub-folders by Year
  - o YYYYMM: photos are organized into sub-folders by YearMonth
  - YYYYMMDD: photos are organized into sub-folders by YearMonthDay
- Save to album: if activated, a copy of the photo is saved in the Pictures public folder; in any case, the photos are saved in the Pictures app folder
- Allow cropping: allows you to crop the image
- Compression quality: defines the quality of image compression (values 0-100, but it is advisable not to go below 70 in order not to degrade the image too much)
- Custom photo size: resizing percentage of photos saved in the app folder (values 10-100 where 100 represents the photo in its original size)
- Show photo preview: if activated, it allows you to display a thumbnail of the photo on the map instead of the waypoint pin

• Photo thumbnail width: defines the width in pixels of the photo thumbnail (values 50-150) displayed on the map

# **AR waypoints**

### Allows you to define:

- AR circle width: establishes the thickness in pixels of the circle that delimits the mountains display area
- AR circle color: establishes the color of the circle through a window where it is possible to indicate the RGB value using three cursors (0-255)
- AR circle pattern: establishes the style of the circle; the possible values are the same as for the distance line
- AR circle fill style: establishes how the circle should be filled; the possible values are:
  - Default: the area is not filled
  - Hollow: the area is not filled
  - Solid: the area is filled with a solid color
  - Dotted: the area is filled with colored dots
  - o Horizontal: the area is filled with horizontal lines
  - Vertical: the area is filled with vertical lines
  - o Cross: the area is filled with small crosses
  - o DiagonalCross: the area is filled with a diagonal grid
  - o ForwardDiagonal: the area is filled with diagonal lines from left to right
  - o BackwardDiagonal: the area is filled with diagonal lines from right to left

### Send data

#### Allows you to define:

- My identification: is a string used to identify the user when sending data to the remote OkMap Desktop server
- Host: is the public IP address of the OkMap Desktop server
- Port: it is the port on which the data is sent (by default OkMap Desktop uses port 5150)
- Encoding: it is the encoding of the text transmission (ASCII, UTF7, UTF8, UTF32, Unicode, BigEndianUnicode)
- Track line width: establishes the thickness in pixels of the trace line represented on the server
- Track line color: establishes the color of the above line; the color is selected through a window where it is possible to indicate the RGB value using three sliders (0-255)
- Request to center the maps on sent track points: Forces the movement of the maps loaded in the server in order to center the received track points
- Request to center the maps on sent waypoints: Forces the movement of the maps loaded in the server in order to center the received waypoints
- Request to alert the operator on sent waypoints: Notifies the operator with an acoustic signal when the waypoints are received from the server
- Time interval between points sending: it is the time that elapses between sending owns positions

#### **Notifications**

Defines whether notifications are to be issued for certain events.

#### The events are:

- Low battery level: it is triggered when the battery charge level is below 10%
- Poor or no GPS signal
- Off course
- Proximity waypoint reached

• Anchor alarm

In addition, the type of report can be specified:

• Speech synthesizer or acoustic signal

# Screen

Defines under which circumstances the screen should remain on:

- While recording the track
- While navigating to a destination
- When the device is powered on
- All time

# **Permissions**

This function repeats the authorization process displayed when the application is first launched.

It can be useful if the user has forgotten to provide some authorization necessary for correct use of the application.

The sequence of pages is the same as already seen in the First start chapter.

#### **About**



OkMap Mobile version: 1.4

The software is as it is and we will not be in any way responsible for the use or abuse or for any damage resulting directly or indirectly from use of the software. The use of the software is at the sole risk of the user.

Software must never be used as the only source of information for navigation. It is always necessary to use the own experience and to make use of maps, compasses and any other tools before begin any type of decision about orientation or navigation.

Web site www.okmap.org www.okmap.org/forum Forum Email info@okmap.org Libraries github.com//Mapsui/... Mapsui Brutiles github.com//BruTile/... Geolocator github.com//jamesmo... sqlite-net-pcl github.com/praeclarum/... www.flaticon.com Icons

This page provides all the information and references of the app.

It also contains links to the official website and the websites of the libraries used.

**Important**: read the disclaimer at the top of the page.

# Help

View this manual directly from the app.