



# Avenza Maps Field Guide

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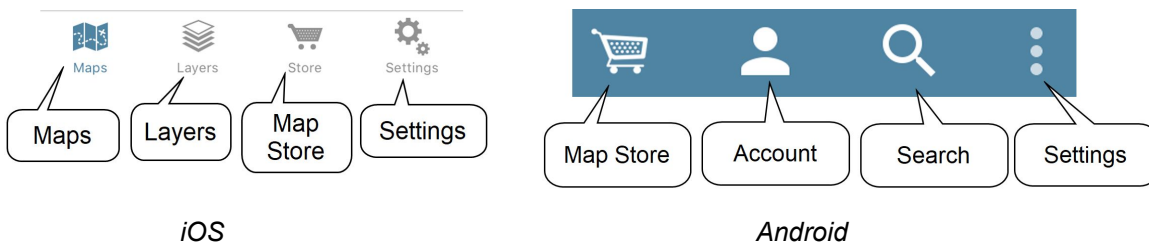
# 1 - Getting Started

## 1.1- Introduction

Avenza Maps is a powerful app for Android and iOS devices that provides a variety of tools for use with georeferenced maps both online and offline. Maps can be imported from your own source, or downloaded from our Map Store, which currently contains over 500,000 maps across the world. This section will provide an overview of the app which allows you to get started.

### Maps List

When the Avenza Maps app is opened, the default screen is known as the 'Maps List'. This displays any maps that you have downloaded or imported as well as various icons and tabs for navigating around the app. By default maps are categorized based on whether they are Map Store maps or imported maps. Users without a subscription (Unlimited Import or Pro) are restricted to 3 imported maps at a time. All users are allowed an unlimited number of Map Store maps.

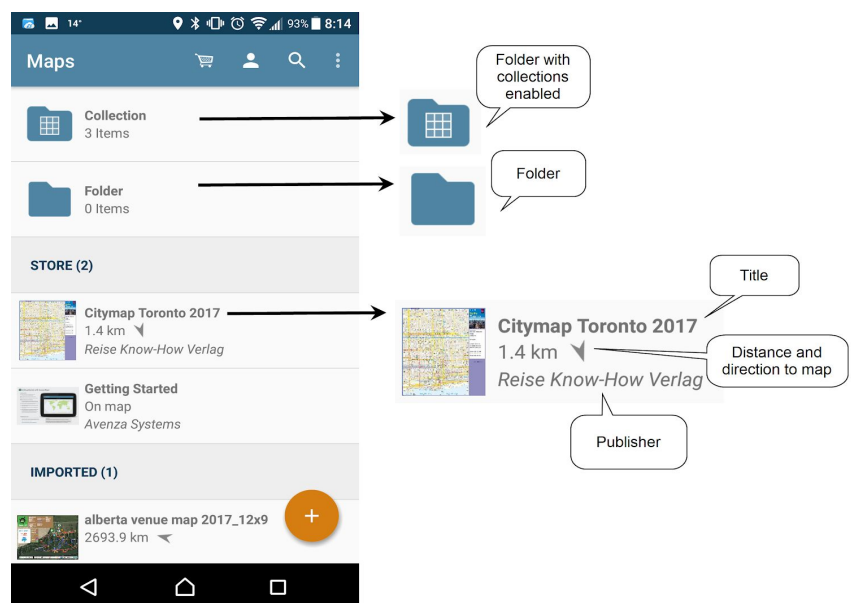


### Map View and Toolbar

When you select a map from the Maps List, the map opens displaying the Map View. The Map View allows you to view your location, add placemarks, record tracks, as well as several other functionalities.

## 1.2 - Maps

The Maps List provides access to any maps that you have downloaded or imported onto your device. The map's title, publisher, distance and direction from your current location are displayed. In place of distance and direction, you may see "On map" displayed, which signifies that you are currently located within the extent/coverage of that map. Additionally, the list also indicates whether a map is part of a collection and if it was obtained from the Avenza Maps Store or imported from another source. You can add and manage maps from here.



Maps List - Android

## 1.3 - Layers (iOS only)

Layers can contain map features: placemarks, lines, tracks, areas, photos, and schema. All map features stored in the database are listed in the Layers tab. Map features can be managed here, including adding, deleting, and editing map feature information (Features cannot be exported from the Layers tab - Section 6). The Layers tab also displays the map that features are linked to (Section 5).

## 1.4 - Store

The Avenza Map Store contains spatially referenced maps created by professional mapping companies, agencies, and cartographers from around the world. Maps are available for free and for purchase in the Map Store. It is highly recommended that users make purchases while logged in with their Avenza Maps Account, so that purchases can be accessed across devices (up to 5).

### 1.4.1 - Account

An Avenza Maps account is free to create and allows you to purchase maps, as well as access purchased maps on up to 5 devices. Please note that the Map Store account is separate from any Avenza Maps Subscriptions.

### 1.4.2 - Browsing keywords, basemap, categories, etc.

Users can search for Map Store maps by using a series of categories, keyword searches, filtering, as well as using the Map View (your location) to find maps of interest.

## 1.5 - Settings

This section provides all of the various settings available within Avenza Maps. See section 7 for more details.

# 2 - Getting Maps

Maps can be added into Avenza Maps one of two ways: imported from a custom location or source, or imported from the Avenza Map Store.

## 2.1 - Importing Custom Maps

Custom imported maps are any map that is imported from a source other than the Avenza Map Store.

### 2.1.1 - Formats

Avenza Maps currently supports the following map formats:

- GeoPDF (.pdf) - A PDF embedded with geographic information. GeoPDF is the proprietary format of TerraGO
- Geospatial PDF (.pdf) - A PDF embedded with geographic information
- GeoTIFF (.tiff, .tif) - A GeoTIFF is a TIFF file embedded with geographic information
- JPG (.jpg) - a JPG is an image file that must be packaged with either a TFW & PRJ or JGW & WKT in a ZIP file
- Avenza Maps File (.avenzamaps, .pdfmaps) - A format used to import multiple custom maps at once (such as for a folder or map collection)
- Custom Scheme (avenzamaps://, pdfmaps://) - Creates a clickable link that can be shared via email, messaging, etc. and will automatically prompt Avenza Maps to open when clicked

### 2.1.2 - Methods

Avenza Maps currently supports importing map from the following sources:

- Avenza Map Store - Allows the user to access the Avenza Map Store for maps (Section 2.2)
- iTunes File Sharing (iOS only) - Allows the user to connect their device to iTunes File Sharing, copy the files over, and then import into the app

- Device Storage (Android only) - Allows the user to access the device storage, or SD card to import maps
- Dropbox - Allows the user to connect to Dropbox and access files
- QR Code - Allows the user to use the device camera to scan a valid QR code for a map, and import it
- Web - Allows the user to enter a valid address for a georeferenced map to import into the app
- Custom URL Scheme - A clickable link that users can click and automatically import a map into the app

### 2.1.3 - Importing a Map

To import a map into the app:

1. Open Avenza Maps
- 2a. Android devices - Tap the '+' icon in the lower right corner, and select "Download or import a map"
- 2b. iOS devices - Tap the '+' icon
3. Choose the appropriate import location
4. Navigate to the desired file, and select it
5. Tap Import
6. The map will now be added to the Maps List


## 2.2 - Map Store

### 2.2.1 - Account

An Avenza Map Store account is highly recommended when purchasing maps from the Map Store as it provides a record of all maps purchased, and allows you to move between devices and maintain access to your maps by simply logging into your account.



#### Register

To register for an account

1. Tap on the Map Store (shopping cart icon) > Account (.
2. Tap on the "Register" link below the login space
3. Enter the required information and submit. You will be sent a confirmation/activation email and your account will be activated right away.



#### Login

To login to your account:

1. Tap on the Map Store () > Account ()
2. Enter your login credentials (email and password) for your Map Store account



#### Forgot your password?

If you have forgotten your password and need to reset it:

1. Tap on the Map Store () > Account ()
2. Tap on the "Forgot Password" link below the login space
3. Enter the email associated with your Map Store account. If you had previously granted permission to receive emails, you will receive an email with a link to reset your password. If you run into any problems please visit [help.avenzamaps.com](http://help.avenzamaps.com)

#### Access previously downloaded maps

To access previously downloaded maps (both purchased and free):

1. Tap on the Map Store () > Account ()
2. If not already logged in, please log into your account
3. Once logged in a list of available maps will be displayed to select from to re-download

## 2.2.1 - Categories section (iOS only)

The Avenza Map Store has many map categories including:


Free maps only	<input type="checkbox"/>
Type of Maps to Display	
Aeronautical	✓
Historical	✓
Hunting & Fishing	✓
Imagery	✓
Map Bundles	✓
National Geographic	✓
Nautical	✓
Parks, Forests & Grasslands	✓
Recreation	✓
Regional, Country & World	✓
Special Interest	✓
Topographic	✓
Tourist	✓
Transit	✓


*Map Store Categories and Filters - iOS Only*

## 2.2.3 - Search



### *Android Devices*


To search for maps, tap Map Store (  )

1. Navigate the search map to find a map near you (use the GPS) or pan to another area of interest.
2. Enter a search term to find maps.
3. Tap the Menu icon (  ) to view results as a list, filter results, or zoom to your current location
4. When you find the desired map, select it to see more information and purchase/download it.



### *iOS Devices*

To search for maps, tap Map Store (  ) and tap Find Maps.

1. Navigate the search map to find a map near you (use the GPS) or pan to another area of interest.
2. Enter a search term to find maps.
3. Filter results using the filter icon (  ) to select one or more categories of maps to search
4. Tap List to see a list of search results.
5. When you find the desired map, select it to see more information and purchase/download it.

### *Map Details*

To see more information about a desired map, select it from either the Map View or the List View. Selecting a map will display the extent that it covers, as well as the name of the map. Selecting it further will open the specific map listing which provides details such as description, publisher, size (MB), language, and publish date.

## 2.2.4 - Purchasing/Downloading a Map

To download or purchase a map:

1. Once you find the desired map, tap the map listing to go to the map details screen.
2. Tap INSTALL or the Price listing. If you have chosen a map that has a cost associated with it, complete the purchase process using the respective app store (Google Play or Apple Store)
3. Go to the Maps List to open the map

## 2.3 - Managing Maps

From the Maps List, users are able to manage their maps, which includes the ability to move maps, delete maps, and create folders and collections.


### 2.3.1 - Folders

A folder is one method to organize maps and allows the user to group together certain maps as required. Folders can contain both Map Store and Imported maps.



#### *Android Devices*



To create a folder:

1. From the Maps List, tap 
2. Select "Add Folder"
3. Rename the folder
4. Tap "OK"
5. A folder with the desired name is added to the Maps List



#### *iOS Devices*

To create a folder:

1. From the Maps List, tap "Edit"
2. Tap Add Folder (  )
3. Tap "Folder"
4. A folder is added with the name "New Folder"
5. Tap  to rename the folder


### 2.3.2 - Map Collections

A Map Collection is a different type of folder that allows you to move between maps based on movement, rather than having to go and open a new map. Map Collections also allow you to share features between maps without having to import the features onto each map individually.



#### *Android Devices*

To create a Map Collection:



1. From the Maps List, tap 
2. Select "Add Collection"
3. Rename the collection
4. Tap "OK"
5. A collection with the desired name is added to the Maps List





### *iOS Devices*

To create a Map Collection:


1. From the Maps List, tap “Edit”
2. Tap Add Folder (  )
3. Tap “Map Collection”
4. A collection is added with the name “New Folder”
5. Tap  to rename the collection

### *2.3.3 - Turning a Folder into a Collection*



### *Android Devices*


To convert a folder to a collection:

1. From the Maps List, long press on the folder
2. Tap 
3. Under ‘Collection’, toggle “Folder is a map collection” ON
4. Tap the back arrow
5. The folder will now be a collection. The reverse toggle can be done to convert a collection back into a folder



### *iOS Devices*

To convert a folder to a collection:

1. From the Maps List, tap “Edit”
2. Tap 
3. Toggle “Collection” ON
4. Tap Close
5. The folder will now be a collection. The reverse toggle can be done to convert a collection back into a folder


### *2.3.4 - Moving Maps*

Once you have folders or Map Collections created, it may be necessary to move maps around.



### *Android Devices*


To move maps:

1. From the Maps List, long press on the map you wish to move to select it.
2. Select any additional maps (if required) that you want to move
3. Tap Move Folder (  )
4. Select the desired location
5. Selected maps are moved to the chosen folder



### iOS Devices

To move maps:


1. From the Maps List, tap “Edit”
2. Select the maps you wish to move
3. Tap Move Folder (  )
4. Select the desired location
5. Selected maps are moved to the chosen folder

### 2.3.5 - Deleting Maps



### Android Devices

To permanently remove maps from your Maps List:

1. From the Maps List, long press on the map(s) you wish to delete
2. Once all maps are selected, tap Delete (  )
3. You will be prompted to confirm the process, tap OK
4. The map, and any associated data will be deleted



### iOS Devices

To permanently remove maps from your Maps List:

1. From the Maps List, tap Edit and select the maps you wish to delete. Alternatively you can swipe the map to the left
2. Once the maps are selected, tap Delete (  )
3. You will be prompted to confirm the process, Tap Delete
4. The map will be removed. Please note that on iOS devices, any features are maintained in the Layers tab, regardless of whether the map is deleted

## 3 - Viewing Maps

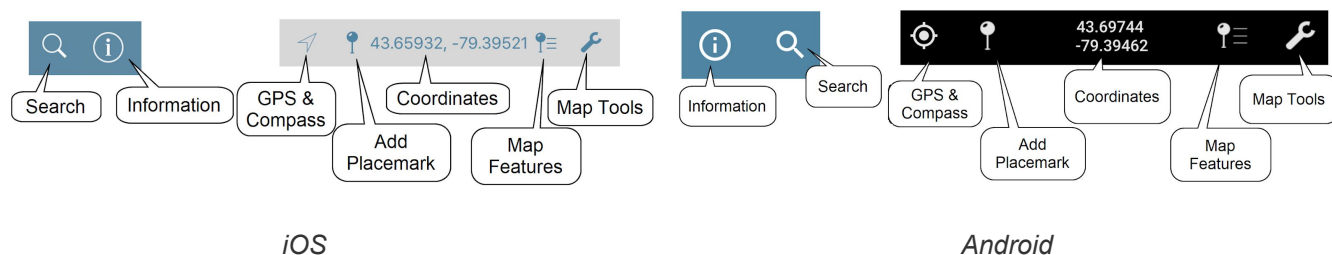
### 3.1 - Overview of Map View

When you open a map, this is known as the Map View. It is from within the Map View that the majority of Avenza Maps’ features can be accessed. This section will go over the basic fundamentals of the Map View including the icons and gestures that you can use when viewing a map.

#### 3.1.1 - Icons

To begin viewing a map, simply tap a map in the Map List to open it.

When a map opens, you'll see the map view which consists of several components:



### 3.1.2 - Gestures

The following is a list of supported gestures and what they perform:








- Single tap and drag: pan the map
- Single tap and flick: pan the map quickly
- Single tap: hide all placemark labels, show/hide toolbar and title bar
- Single tap and hold: pick up a placemark, drag to reposition
- Double tap: zoom-in and centers
- Two-finger tap: zoom-out and centers
- Two-finger rotate: rotates the map
- Expand: Zoom-in
- Pinch: Zoom-out

## 3.2 - Location

Tap the GPS button to find your location on the map. Your location is displayed as a blue dot, but can be customized in the Display Settings (Section 7.2.1). The blue transparent circle is an indication of the accuracy of the GPS fix, the smaller the circle, the more accurate of a fix. If you're not physically within the extent of the map, "Not on map" will be displayed where the map coordinates are. On devices with built-in GPS, your location will be triangulated within a few seconds. Depending on your device and available services, your location is determined using a combination of cellular, Wi-Fi, Bluetooth, and GPS.

### 3.2.1 - Compass

Avenza Maps has two different compass options when viewing a map. Follow-mode, and Compass-mode. To use the compass:


1. Tap the compass to enable it (Android - , iOS - ). The default is Follow-mode (map is in the default orientation), and the crosshair will move as you move. The symbol will change to  (Android) or  (iOS)
2. Tap the compass again to change to Compass-mode (symbol will change to the following: Android - , iOS - ). With Compass-mode enabled, the map will rotate based on the direction you are facing. A compass also appears in the top-right of the map view.
3. Tap the compass in the top-right of the map view to reset the map view to default or to exit GPS mode ()
4. Tap the compass icon (in the toolbar) to exit GPS mode but remain with an oriented map rotation

## 3.3 - Placemarks

A placemark marks a position on the map. At its most basic, a placemark is indicated by a default icon and stores geographic location. For more details on editing placemarks see section 4.1.


### 3.3.1 - Adding a placemark

To add a placemark:

1. Open the desired map
2. Pan to a position on the map centered by the crosshair
3. Tap Add Placemark (). A placemark is added with the default icon color (can be changed in the Display Settings - Section 7.2.1) and default name

### 3.3.2 - Placemark details

To view placemark details:

1. Open the map that has the feature
2. Tap the placemark on the map to display the label
3. Tap  icon on the placemark label to see details about the placemark
4. On the placemark detail screen, you can change the placemark title, icon, enter a description, add photos, edit the location coordinate, and edit attribute schema.

### 3.3.3 - Moving a placemark on a map

To move a placemark on the map:

1. Tap and hold a placemark
2. Drag the placemark to another position and release

### 3.3.4 - Sharing a placemark


Depending on the device you are using, there are two ways to share a placemark (iOS only) One way is to export the placemark and all accompanying information so that it can be imported either into the app elsewhere or for use in GIS software (available for both Android and iOS devices - please see section 6 for details on exporting features). The second is to share a GIF image of the placemark (iOS only).

To share a GIF of a placemark (iOS only):

1. Tap on the information icon for the placemark you want to share
2. Tap the export icon
3. Choose how you want to share it (e.g. message, email, etc.). Please note: this does not export any data that can be re-imported into the app.

### 3.3.5 - Deleting a placemark

To delete a placemark:

1. Tap the 'i' icon on a placemark label to see details about the placemark
2. Tap Delete (  )

## 3.4 - Coordinates

### 3.4.1 - Format

With a map open, the user can view coordinates of their location or placemarks. Map coordinates are displayed in the toolbar at the bottom (iOS) or top (Android) of the Map View.

To change the coordinate display format:

1. Tap the coordinates to reveal the coordinate display list
2. Scroll through to choose the desired format
  - a. Map Default
  - b. WGS 84
  - c. UTM
  - d. MGRS/USNG

### 3.4.2 - Copy to clipboard



#### *Android Devices*


To copy the current coordinates to the device clipboard:

1. Long-press on the coordinates display
2. A message will display that coordinates are copied to clipboard
3. Paste the coordinates in another application



#### *iOS Devices*


To copy the current coordinates to the device clipboard:

1. Tap the coordinates to reveal the format list
2. Tap Export (  ) at the top of the dialog
3. A message will display that coordinates are copied to clipboard
4. Paste the coordinates in another application

## 3.5 - Map Features

Map Features can be any feature that you add to a map. These include placemarks, tracks, lines, areas, and photos. All map features are displayed on a single layer by default. The active layer (the layer where active feature collection will occur) is denoted by an orange title (Android) or blue thumbnail icon (iOS).

To see the Map Features for a map:

1. Open the desired map
2. Tap Map Features (  )


On the Map Features screen, there are several actions that you can take:

- Add Layer (Section 4.4.1)
- Move Layer (Section 4.4.2)
- Edit Layer (Section 4.4.3)
- Delete Layer (Section 4.4.4)
- Search for Features (Section 4.4.5)
- Import Features (Section 5)
- Export Features (Section 6)

## 3.6 - Tools

Avenza Maps has several tools to let you interact with maps.


To access the tools:

1. Open the desired map
2. Tap Tools (  ), and a list of available tools will be displayed.

### 3.6.1 - Draw and Measure



Avenza Maps features a newly redesigned Draw and Measure tool that allows users to draw, measure and save lines, areas, and circles.

### *Accessing the Draw and Measure Tool*

1. Open the desired map that you want to draw/measure lines or areas on
2. Tap Tools (  )
3. Tap 'Draw and Measure'





### *Drawing and Measuring a Line*

To draw and measure a line:

1. With the Draw and Measure tool open, pan around the map until the crosshair is centered where you like to create your first point
2. Once the crosshair is in place, tap anywhere on the map view to create the first vertex
3. Continue in this fashion until your line is complete. If you need to undo a point you just made, tap the back arrow (  ) on the toolbar to remove the last vertex
4. While drawing, you will see the line measurements at the top of the screen for the current segment, and a total of all lines
5. Once satisfied with your line, tap the checkmark (  ) to save the line. It will now be listed in your Map Features list




### *Drawing and Measuring an Area*

To draw and measure an area:

1. With the Draw and Measure tool open, pan around the map until the crosshair is centered where you would like to create your first point
2. Once the crosshair is in place, tap anywhere on the map view to create the first vertex
3. Once you have a minimum of 3 vertices (2 lines), tap the Line icon to toggle it to Area (  - Android,  - iOS). If you need to undo a point you just created, tap the back arrow (  ) to remove the last vertex
4. When you switch to Area mode, you will see the current measurements at the top of the screen for the current area and perimeter of the feature you are drawing
5. Once satisfied with the area, tap the checkmark (  ) to save. It will now be listed in your Map Features list

### *Drawing and Measuring a Circle*


To draw and measure a circle:

1. With the Draw and Measure tool open, pan around the map until the crosshair is centered where you would like to create your first point
2. Once the crosshair is in place, tap anywhere on the map view to create the first vertex
3. Once you have 2 vertices (1 line), tap Circle (  ) to enable it. If you need to undo a point you just created, tap the back arrow (  ) to remove the last vertex
4. When you switch to Circle mode, you can continue drawing in and out to increase or decrease the size of the circle. With the Circle mode enabled, you will also see the current measurements at the top of the screen for the current area and perimeter of the feature
5. Once satisfied with the circle, tap the checkmark (  ) to save. It will now be listed in your Map Features list

### *Drawing Using Point-By-Point, or Course and Distance*



To draw a feature using Point-By-Point or Course and Distance options:

1. With the Draw and Measure tool open, pan around the map until the crosshair is centered where you would like to create your first point (Course and Distance only), and long press on the map. This will display the new options at the top of the screen

2. The default option is Course and Distance. To access Point-By-Point, tap the arrow next to the heading
  1. Course and Distance - allows the user to enter the heading and distance they would a line drawn. This will be drawn from the initial location of the crosshair
  2. Point-By-Point - this does not require the crosshair to be centered on a location and uses known coordinates to draw from point to point
3. Once you are satisfied with your feature, tap the checkmark (  ) to save

### *Accessible Settings*

While drawing or measuring there are certain settings that are available.


1. With the Draw and Measure tool open, tap the Settings icon in the top right corner of the display box (  )
  - Android,  - iOS
2. From here you can change the stroke and fill settings for the feature

### *3.6.2 - Record GPS Tracks*

Within Avenza Maps users have the ability to record their tracks through the use of GPS. Please note that in order to use the Record GPS Tracks feature, users need to have a device that is GPS enabled. See section 7.2.4 for information on adjusting the GPS settings for tracking.

#### *Recording a Track*


To record a GPS track:

1. Have an appropriate map open that covers the desired area
2. Tap Tools (  ) and select Record GPS Tracks
3. Once a signal has been established ("Start" will be displayed for iOS, "Ready" will be displayed for Android), tap "Start" (iOS) or the Play icon (Android) to begin recording. Your tracks will continue recording, even if you minimize the app
4. When you are done recording, tap 'Stop' (iOS) or "Done" (Android) and the track will be saved as a Map Feature.

#### *Viewing a Track*


Saved tracks can be viewed on the map or exported for use elsewhere.

For more detailed track information:

1. Tap the track to show its label
2. Tap 
3. Tap the distance information or "Show Graph" to display information on speed, elevation, distance, and the related graphs

### *3.6.3 - Find by Coordinates*


To find a location using known coordinates:

1. Tap Tools (  ) and select Find by Coordinates
2. Enter the desired coordinates (format must be the same as the coordinate display format). Please note, you do not need to enter the degree symbol (e.g. 43 50'52",-79 42'35")
3. If the location is found on the Map View, the crosshair will automatically zoom and center on that location

### *3.6.4 - Open in Maps (or Google Maps)*

Use Open in Google Maps to open the current map view in the Google Maps app. For iOS devices, you can specify in the Settings to use Google Maps as the display engine. If this is not selected, or Google Maps is not installed, the default Maps application will be used.


To open the map view in the Google Maps app:

1. Open the desired map
2. Tap Tools (  ) and select Open View in Google Maps
3. Current map view will be opened in Google Maps

### 3.6.5 - Plot Photos

Plot Photos is an alternate way to create a placemark and add the photo. Plot Photos uses geotagged photos to automatically create a placemark based on the coordinates embedded within the photo.

To plot a photo:


1. Open the desired map
2. Tap the Tools icon (  ) and select Plot Photos.
3. On the Photo Browser, select photos, and tap Import.
4. A placemark will be added at the location based on the geotagged photo.

## 4 - Data Collection and Management



### 4.1 - Editing Map Features

Map feature information, which includes the name, styling details, description, and attributes can be accessed through the Map View, Map Features list (Android only) or Layers tab (iOS only).


To access Map Feature information while in the Map View (Android and iOS):

1. Tap the feature on the Map View to display the label.
2. Tap 
3. The Edit Map Feature screen will open

To access Map Feature information using the Map Features list (Android only):

1. Tap Map Features (  )
2. Select the layer that contains the feature you would like to view
3. Long press on the feature, and tap Edit (  )
4. The Edit Map Feature screen will open

To access Map Feature information from the Layer's tab (iOS only):

1. Tap the Layers tab (  Layers )
2. Tap the layer that contains the feature you are interested in
3. Tap the feature
4. The Edit Map Feature screen will open

#### 4.1.1 - Icon

This displays the current icon used for the feature.

To change the icon used:

1. Tap the icon symbol beside (Android) or below (iOS) the placemark name
2. Select the new symbol you wish to use



#### 4.1.2 - Name

By default placemarks are named “Placemark #” (with the # being replaced for the appropriate number of the placemark).

To change the placemark name:

1. Select the name
2. Change it to the desired name. It will be saved automatically

#### 4.1.3 - Description

This field allows you to enter in any details that are relevant to the feature.

To enter a description:

1. Tap the Description field
2. Enter in the appropriate description
3. When complete, tap OK (Android) or the back arrow (iOS devices)

#### 4.1.4 - Photos


To attach a photo (or multiple) to a feature:

1. Tap the Photos field
2. If permissions to access photos, media and files on your device has not been previously granted, you will need to do so now



3a. Android devices - Using either the camera or photo library, select the photo you wish to add. Repeat this process for each photo you want to add to that feature



3b. iOS devices - Tap , and then using the camera or photo library, select the photo you wish to add. Repeat this process for each photo you want to add to that feature

#### 4.1.5 - Location

This provides the coordinates for the feature. Tapping on this will allow you to view the feature location in an alternative mapping app (e.g. Google Maps), as well as change the coordinates if required.

#### 4.1.6 - Attribute Schema

This section allows you to create, or fill out attribute information for a specific feature. Please note that at the feature level, created attributes will not be accessible for all features. For more information on Attribute Schemas, see section 4.4.

### 4.2 - Custom icons/line colours

To add your own icons to Avenza Maps you will need to create a KML/KMZ with the icons and import it. One way to create a KML is through Google Earth

To create a KML in Google Earth for custom symbology:

1. With Google Earth open, create a point on the map
2. Right click on the point and select Properties
3. Select the pin icon and change it to the desired icon. Please note, if using your own icons, the recommended format is .png in order to allow transparent backgrounds
4. With the new icon in place, right click on the layer
5. Select “Save Place as” and save it as a .KMZ file
6. Import the newly created .KMZ into Avenza Maps (Section 5)

7. Once imported, you will see the new symbols listed in the icon library


## 4.3 - Map Feature Layers

### 4.3.1 - Default Layer


All features created are placed in a single layer known as the default layer. Features contained within the default layer include: areas, lines, points, and tracks. Layer information can be accessed from the Layers tab (iOS only), as well as the Map Features icon within a Map View (Section 4.3.4).

### 4.3.2 - Adding Layers



To create a new layer:

1. Open the desired map
2. Tap on Map Features (  )



- 3a. Android devices - Tap Menu (  ), and select "Add Layer". Name the layer accordingly and tap OK




- 3b. iOS devices - Tap Edit, and select Add Layer (  ). Tap  to open the Layer information screen and rename the layer.
4. Once created the layer is considered to be linked to the map (iOS), however, in both Android and iOS, the new layer is not necessarily the 'Active Layer' (Section 4.3.4)

### 4.3.3 - Moving Map Features



#### *Android Devices*


To move a map feature or entire layer to another layer:

1. From the Map Features list, locate the desired layer or map features you wish to move
2. Long press on the layer or feature(s) to enter the Edit state
3. Select all the appropriate layers or features you wish to move
4. Tap Move (  )
5. Choose the destination where you wish to move the features
6. You will be asked if you want the destination layer's styles to be applied to the new features
  - a. If you select Yes, the features will be moved and will take on the new styling for the destination layer
  - b. If you select No, the features will be moved but will keep their original styling





#### *iOS Devices*

To move a map feature or entire layer to another layer:

1. From the Map Features list, or from the Layers tab, select Edit
2. In edit mode, tap a layer in the list to select it (or to move features, select the specific features).
3. Tap Move Layer (  ).
4. In the layer tree, tap the layer where you want to move the selected feature(s)/layers to
5. You will be asked if you want the destination layer's styles to be applied to the new features
  1. If you select Yes, the features will be moved and will take on the new styling for the destination layer
  2. If you select No, the features will be moved but will keep their original styling

#### 4.3.4 - Editing Layers


To view or change the Layer settings from the Layers tab (iOS only):

1. Tap on the Layers tab (  )
2. Tap  next to the desired layer
3. The Layer details will be displayed


To view or change the Layer settings from the Map View (iOS and Android):

1. Open the desired map
2. Tap on the Map Features icon (next to the wrench)




3a. Android devices - Long press on the desired layer, and select Edit (  )




- 3b. iOS devices - Select  next to the desired layer
4. The Layer details will be displayed

#### Setting the Active Layer


To set the active layer for data collection:

1. Open the desired map
2. Tap Map Features (  )



3a. Android devices - Long press on the desired layer, and select Edit (  )





- 3b. iOS devices - Select  next to the desired layer
4. Select “Set to Current Layer” (Android) or “Set as Active Layer” (iOS)


#### Locking Layers

Locking layers will prevent their deletion.


To lock the layer from the Layers tab (iOS only):

1. Tap on the Layers tab (  )
2. Tap  next to the desired layer
3. Toggle the “Lock Layer” on or off

To lock the layer from the Map Features list (Android and iOS):

1. Open the desired map
2. Tap Map Features (  )



3a. Android devices - Long press on the desired layer, and select Edit (  )




- 3b. iOS devices - Select  next to the desired layer
4. Toggle the “Lock Layer” on or off

## Visibility



### Android Devices


To toggle visibility of a layer or feature on or off:

1. Open the desired map
2. Tap Map Features (  )
3. Long press on the layer (this can also be done with individual features)
4. Tap the 3 dot icon and select “Toggle Visibility”



### iOS Devices



To toggle visibility of a layer on or off:

1. Open the desired map
2. Tap Map Features (  )
3. Tap the layer thumbnail to the left of the name to toggle visibility


\*Please note that with iOS devices only layers (not individual features) can be hidden.

## 4.3.5 - Unlinking or Deleting Layers


To unlink a layer (iOS only):

1. Open a Map and go to the Map Features list (  )
- 2a. Tap Edit, select the layer, and tap Delete (  )
- 2b. Swipe the layer to the left, and select Delete
3. A warning message will be displayed with the option to Delete or Unlink the layer
4. Select Unlink
5. The layer will no longer be attached the map, but will remain accessible in the Layers panel. For information on how to link this layer to another map, see section 5.4.2)


To delete a layer:

1. Open the map and go to the Map Features list (  )




- 2a. Android devices - Long press on the layer you wish to delete, and select Options (  ) followed by Delete



- 2b. iOS devices - Tap Edit, select the layer, and tap Delete (  ). Alternatively, you can swipe left on the layer and tap Delete
3. When the warning message is displayed, confirm the action (tap Yes for Android devices, and Delete for iOS devices)

## 4.3.6 - Searching for Map Features

To search for existing Map Features:

1. Open the desired map
2. Tap Search (  )
3. Enter the name of the Map Feature you are looking for

4. A list of Map Features containing that phrase will be displayed, as well as the option to search OpenStreetMaps for that feature (e.g. “coffee shop”)

## 4.4 - Attribute Schemas

An attribute schema allows users to create a series of attributes for a layer to make data collection more efficient. The schema defines the name, type, and associated properties such as an optional pick list.


### 4.4.1 - Creating an Attribute Schema

To create an attribute schema for a layer:




- 1a. Android devices - From the Map Features dialog, long press on the desired layer and tap Edit (  )



- 1b. iOS devices - From the Map Features dialog, or Layer tab tap  next to the desired layer
2. With the Edit Layer screen open, you can change the layer name, set a new icon, as well as create your attribute schema. Tap the '+' icon to create a new attribute
3. Rename the attribute as desired
4. Set the type of attribute
  1. String - alphanumeric characters
  2. Boolean - yes or no values
  3. Real - numbers that can contain decimal values
  4. Integer - whole numbers
5. If desired, set a picklist value (repeat this step for each value required)
6. Tap the back arrow when the attribute is set
7. Repeat steps 2-6 for each desired attribute

### 4.4.2 - Importing an Attribute Schema


To import a custom schema:

1. Open the desired map that you want the schema on
2. Tap Map Features (  )



- 3a. Android devices - Tap on Menu (  ), and select Import Map Features




- 3b. iOS devices - Tap Import Map Features (  )
4. Select Import Schema
5. Navigate to the schema you wish to import. Please note that the schema must be in KML format.

Once imported, the schema will be on its own layer and may require additional changes in order to be the active layer for data collection (changes required may include moving the schema to the appropriate layer, setting it as the active layer, making any last minute changes to the attributes/picklist values - Section 4.3.4).

### 4.4.3 - Exporting an Attribute Schema

To export a custom schema:

1. Open the desired map that you want to export the schema from
2. Tap Map Features (  )



- 3a. Android devices - Tap on Menu (  ), and select Export Map Features





### 3b. iOS devices - Tap Export Map Features ( )

4. Once open, fill out the desired information (filename, format - must be KML if you want to re-import into the app), and set the Data type to 'Schema Only' (iOS only), or select Export Schema Only (Android only). Please note that this option will not export any data, just the schema. If you wish to export data as well, use the regular export option (Section 6)

#### 4.4.4 - Using Attribute Schemas

With an active layer schema, users can begin collecting data using the pre-designed attributes, icons, and other styling settings.

To collect data using a schema please follow the steps below:

1. Set the schema as the active layer on a map (please see section 4.3.4 for help on how to do this)
2. Add a placemark, line, track or area to the map (  )
3. Tap on the feature and go to the Edit Map Feature screen (  )
4. In the Attributes section, tap the attribute you need to enter data for
5. If the attribute has a picklist, choose the appropriate value, or enter a new value
6. Tap the back arrow to return to the Edit Map Feature screen
7. Repeat steps 4-6 for each remaining attribute
8. Close the Edit Map Feature screen when you are satisfied
9. Repeat for any other features

## 5 - Import

Avenza Maps allows the import of custom map features for use on maps when both online and offline. Map Features include placemarks, tracks, lines, and areas.

### 5.1 - Methods

You can import from several sources including:

- Manage Existing Layers (iOS only) - Allows you to access features from the Layers tab. This includes layers that may already be on other maps
- Recently Used (Android and iOS)- Allows you to choose from a list of previously used layers (ideal when importing Map Features from Email, or if using the same feature on multiple maps). This option can be used for offline importing
- From iTunes File Sharing (iOS only)- Allows you to connect to iTunes and drag/drop files for use in the app
- From Device Storage (Android only) - Allows you to import features stored on the device or SD card
- From Dropbox (Android and iOS)- Allows you to connect to Dropbox to import features. Please note this option does require an internet connection and access to a Dropbox account
- From the Web (Android and iOS) - Allows you to import data from a website. Requires a full HTTP, HTTPS, or FTP (with proper credentials if required) address
- Import Schema (Android and iOS) - Allows you to import an attribute schema with no extra map features or data

### 5.2 - Formats

Currently, imported features must be in either KML/KMZ format or Shapefile. The importing of Attribute Schemas can only be done through the KML/KMZ format. Please note that the importing of Shapefiles requires a Pro subscription, as well as the appropriate files combined together in a ZIP folder in order to successfully import (.shp, .shx, .prj, and .dbf).


## 5.3 - Features vs Schemas

When importing features, you have the option to import features and the schema, or schema only. The importing of Attribute Schema only, means that no features are imported, just the styling and attribute information (e.g. attributes, etc.). To import a schema the format must be KML or KMZ.

## 5.4 - Importing Features

### 5.4.1 - Importing via Map Features


To import map features using the Map Features dialog:

1. Open the desired map
2. Tap Map Features (  )




- 3a. Android devices - Tap on Menu (  ), and select Import Map Features



- 3b. iOS devices - Tap Import (  )
4. Navigate to the file location, and select it for import
5. Tap Import
6. The layer will now be visible in the Map Features list, as well as visible on the Map View

### 5.4.2 - Importing via Layers tab (iOS only)

To import layers using the Layers tab:

1. Tap on the Layers tab (  Layers )
2. Tap on the '+' icon at the top of the screen
3. Select Import Layers, and choose the appropriate location
4. Select the file for import
5. Tap Import
6. The layer will be visible in the Layers list. Please note that when imported this way, the layer is not linked to a map. See the steps below on how to do this.

To link an imported layer to a map:

1. Following the steps laid out in section 5.4.1, select "Manage Existing Layers" as the import option
2. Choose the appropriate layer that was imported to the Layers tab
3. Tap Apply
4. The layer will now be listed in the Map Features list, as well as visible on the map

## 6 - Export

Avenza Maps allows the export of custom map features for use either on another device, or for other means. Map Features include placemarks, tracks, lines, and areas.

### 6.1 - Methods

When exporting data, we currently offer 4 destinations that users can choose to export to.

- Email (Android and iOS) - Allows you to select the email client, or another software available on your device that can accept the file - e.g. Google Drive)
- Device Storage (Android only)
- Dropbox (Android and iOS)
- iTunes File Sharing (iOS only)

- AirDrop (iOS only) - This option is the only one available that allows you to use Bluetooth to transfer data and custom maps between users. This requires both users to have the same version of Avenza Maps installed. Both devices must have AirDrop enabled and be within Bluetooth range.

## 6.2 - Custom export selection (iOS only)

When exporting data on iOS, users have multiple options available to them to customize the data to export:

- Export all features: All features from the map features list
- All features and map (AirDrop only): Only imported maps can be exported, not maps from the Map Store
- Schema only: Only the attribute schema and styling data from each layer is exported
- Custom: Select from individual features and layers on the map and the map if it is Imported

## 6.3 - Formats

Currently we support exporting data as KML/KMZ, CSV, GPX, and Shapefile\*. Please note that if you are wanting to re-import the data into Avenza Maps, data must be exported as either KML/KMZ or Shapefile\*.

If Shapefile is the chosen export format, users are provided with the option to choose the desired coordinate system for export. They are able to choose from the map coordinate system, or WGS84. Shapefiles are exported as a ZIP folder containing all of the relative data files.

\*Exporting of Shapefiles requires a Pro subscription

## 6.4 - Track settings

When exporting data that contains tracks, users have the option to choose whether to export that data as a track, or a line. Depending on the data format chosen, this options will determine what tag/feature type is assigned to track features, and should be chosen based on the desired output and end goal of the data in mind.

## 6.5 - Image settings


When exporting images, users have 4 options available to them.

- No Image
- Small
- Medium
- Large

The resolution of these sizes varies based on device. Please note that the only formats that support image export are KML/KMZ (the exported file will be a KMZ with the photos contained in a folder within), and Shapefile (also exported as a ZIP file).

## 6.6 - Exporting Features


To export map features:

1. Open the map that has the features you wish to export
2. Tap Map Features (  )



3a. Android devices - Tap on Menu (  ), and select Export Map Features



3b. iOS devices - Tap Export (  )

4. Choose the desired export settings
5. Select Export. The features will be exported to the desired location



## 7 - Settings

### 7.1 - Pro subscriptions

Avenza Maps Pro requires that a Subscription ID be entered into the app before the Pro features can be utilized. A network connection is required to register a subscription but is not necessary to access Avenza Maps Pro features. Here is a step-by-step process to register your device with an Avenza Maps Pro subscription ID.

1. Tap the 'Settings' icon at the bottom right of the screen.
2. Under the 'Subscription' heading, tap 'Enter Account Details'. (In-app subscription purchasing does not require this process. If switching from an in-app purchase to an Enterprise Subscription, you must deregister your iTunes subscription first.)
3. Enter your username (subscription ID), password (only applicable if your organization has implemented a password, by default this is blank), name, email and organization into their respective fields.

Note: After successfully registering, tap 'Account Details' to view the details and status of the subscription.

### 7.2 - Settings

You can access and define settings for the app here. While some settings vary and some are completely optional, they're simple to use and may help you customize some of the features in the app. The main sections for Settings are as follows:

- Help
- Account Information
  - Enter Account Details\*
  - Upgrade Account\*
  - Restore Previous Purchases
  - About
- Settings
  - Display
  - Units of Measurement
  - Map View
  - GPS
  - General

\*When a subscription is applied, these will be replaced with Account Details

#### 7.2.1 - Display

Options available within the Display Settings include:

- Crosshair Color - Allows you to change the default color of the crosshair
- Selection Color - Set the highlight color of a feature when it is selected. Helps with the easy identification of a selected feature
- Current Location Color - Allows you to change the Location Dot to a different color
- Lines and Areas Style - Allows you to set default styling for lines and areas. Is applied when drawing new features, or importing features that do not have styling attached
- Vibrate on Tap - Allows you to use your device's haptic (vibrate) feature within the app.

#### 7.2.2 - Units of Measurement

Options available within the Units of Measurement settings include:

- Use Metric Units (iOS) / Tracking and Display Units (Android) - Allows the user to enable Metric units as the default for tracking and display (map distances) distances
- Line Units - Allows the user to specify what unit of measurement line features will use. Custom units can be added.

- Area Units - Allows the user to specify what unit of measurement area features will use

### 7.2.3 - Map view

Options available within the Map View Settings include:

- Keep Screen On (Android and iOS) - Stop the system from turning off the screen while viewing a map.
- Use Google Maps (iOS only) - Uses Google Maps as the default for viewing location. Requires Google Maps to be installed
- Disable Placemark Aggregation (iOS only) - By default, Avenza Maps will group placemarks together (occurs when a threshold of 400+ points in close proximity is met) when zoomed out. You can disable this feature and choose to have all features displayed regardless of zoom level
- Scale Bar (iOS only) - This option allows you to specify whether you want the scale bar shown all the time, always hidden, or shown but will disappear when there is no activity
- Show Unlimited Number of Features (Android and iOS) - Removes the restriction on the number of features to display on the Map View. This could impact responsiveness within the app

### 7.2.4 - GPS

The GPS Settings allows the user to specify various settings for GPS data collection, specifically in relation to GPS tracks. The settings available include: only use satellite fixes (Android only), horizontal accuracy, distance threshold, time threshold, and the ability to ignore suspicious fixes.

#### *Horizontal Accuracy*

This setting will ignore any GPS location fixes that are greater than the distance specified. The default setting for this is 32m. To change this setting, tap on it, and you will be able to select from the following options:

- Keep all fixes: Allows location fixes of any accuracy. Suitable when you are not concerned about recorded track quality
- 8m: Allows for high accuracy location fixes only. Suitable for use outdoors when there are few obstructions (e.g. on a hiking trail). This can result in gaps in data if there are lots of obstructions.
- 16m: Allows for normal accuracy location fixes. Suitable for use outdoors with partial obstructions (e.g. in a city)
- 32m: Allows for low accuracy location fixes. Suitable for use outdoors with lots of obstructions (e.g. dense urban environment)

#### *Distance Threshold*

This setting specifies the distance that must be traveled from the previous point before a GPS location fix is recorded. The default setting is 2m. To change this setting, tap on it and you will be able to select from the following options:

- Keep all fixes: Records all location fixes regardless of distance traveled. This will result in a high volume of data, including redundant fixes. Suitable for the highest accuracy required, but should only be used for short tracks in order to remain manageable.
- 2m: Suitable for recording accurate tracks in most situations
- 50m: This will record fewer location fixes. Suitable for very long duration tracks with a reduced accuracy

#### *Time Threshold*

Once specified, this setting will record, at most, one GPS location fix in the specified time interval. The default setting is 2 seconds. To change this setting, tap on it and you will be able to select from the following options:

- Keep all fixes: Records all location fixes regardless of the time interval. This will result in a high volume of data, including redundant fixes. Suitable for the highest accuracy required, but should only be used for short tracks in order to remain manageable.
- 2 seconds: Suitable for recording accurate tracks in most situations.
- 30 seconds: This will record fewer location fixes. Suitable for very long duration tracks with a reduced accuracy.

### *Ignore Suspicious Fixes*

When enabled, this setting will ignore GPS location fixes that may be incorrect. Examples of these fixes include fixes that are very old or fixes that are suddenly very far away (outliers). By default, this setting is enabled.

### *Reset to Defaults*

This will reset all of the above settings back to their default settings.

### *Pairing Bluetooth Devices*

Avenza Maps supports external GPS devices that can provide additional accuracy than the internal GPS chip in your mobile device. We have verified compatibility with Garmin and Bad Elf varieties, though in general if the device pairs with your mobile device, then it will work with the app. To pair a Bluetooth device with Avenza Maps, all that is required is to ensure that the device is paired with your mobile device. There is no mechanism within Avenza Maps (with the exception of the Windows version) that allows for specifying the GPS to use.

To pair a Bluetooth device with your mobile device, please follow the instructions specified on the device itself (some require a third-party software to be installed).

## *7.2.5 - General*

Options available within the General Settings include:

- Allow Usage Reporting (Android and iOS) - Sends anonymous feedback about what features are used in the app to help future development of the app
- Specify Map Folder (Android only) - Maps loaded from a source other than the Map Store will be saved to a specified location (e.g. SD card)
- PDF Resolution on Import (Android only) - Allows the user to specify what resolution to import maps with
- Use Memory Aggressively (Android only) - Uses as much memory as possible when processing maps. This can result in a crash
- Use Multiple Cores (Android only) - Uses multiple processor cores when rendering maps. This can result in a crash
- Always Use High Resolution (iOS only) - When enabled, maps will always be rendered in high resolution
- Clear Search History (Android and iOS) - Clears all values from the history sections within the search functions
- Debug Settings (Android and iOS) - Provides additional options for troubleshooting, as well as Map Store settings





















