Memory-Map for All

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1. About Memory-Map

Thank you for installing Memory-Map for All!

Memory-Map allows you to navigate with your phone, tablet, PC or Mac using a wide variety of maps available for many parts of the world. It is designed for outdoor, off-road use, with topographic maps, marine charts and aeronautical charts. Maps are stored locally on your device, so that they can be used without any connection to the internet.

In mathematics, the symbol ∀ means "for all". Memory-Map for All is a new version for all platforms (iOS, Android, Windows and Mac). You will find the same user interface on your PC or Mac as you have on your phone and tablet. The app works with a touchscreen, with a mouse or trackpad, regardless of the platform.

We hope you find the software to be useful and fun. If you do, please take a few moments to send in a review to the App store. It really helps! On the other hand, if you ever have a problem with the app, do not hesitate to contact us via our support web page.

This manual has been updated for Version 1.3.1 (What's New? See Changes)

2. Installation and Compatibility

Memory-Map for All Version: 1.3.1

What's New? See Changes

*Note, you can install **Memory-Map for All** on a device with the old Memory-Map app, without interfering with the operation of either app.*

iOS

Requires: **iOS 13.0 or later**

Available on the App Store

Please ensure "Share with App Developers" is enabled under Settings > Privacy > Analytics & Improvements. It really helps if we get the data from any crashes that occur.

Android

Requires: **Android 8.0 or later**

Available on Google Play

Please enable "Usage & Diagnostics" in the Android Settings app > Privacy. It really helps if we get the data from any crashes that occur.

Windows

Requires: **Windows 10 or later, x86 64 bit**

First download and install the Microsoft VC Runtime (2019, 64bit):

- vc_redist.x64.exe

Then download the installer (MSI file) using the link below:

- MMfA-1-3-1-2201.msi

After installation, double-click the MMfA icon on the desktop or use the Start menu to run the app.

Mac

Requires: **MacOS 11 (Big Sur) or later.** Universal app for Intel or M1 chip

Click the link below to download the DMG file:

- MMfA-1-3-1-2201.dmg

Click the DMG file in your Downloads folder, then drag the MMfA icon from the DMG window into the "Applications" icon in the Finder sidebar. You can then run the app from the Launchpad.

Note, by default the Mac only allows apps installed from the mac app store. In order to install non-appstore apps, you have to go to the System Settings, Privacy & Security, Allow applications downloaded from: App Store and identified developers.

🐧 Linux

Requires Ubuntu 22.04, or equivalent distribution on the x86_64 architecture.

Download the tar file below, extract it to a suitable location, and run the MMfA executable from a command prompt. (Note installation does not use apt, yum or other package manager).

An install.sh script and a desktop file are provided as an example of how to add the MMfA icon to the app launcher in Ubuntu. However, we recommend running the MMfA executable from the command console, as there may be useful diagnostic output on console, which you won't see if you use the app launcher. See this FAQ for more tips on Linux installation.

- MMfA-1-3-1-2201.tar.gz

3. Getting Started

When you first run the application, it prompts you to enable the device's Location service, which is used to identify the best available free basemap for where you are. If you choose not to enable the location service, you can use the Maps button to select a map.

An internet connection is required when you first run the app, otherwise it will not be able to display any map. A mobile connection is fine - It is not necessary to download a large amount of map data in order to get started. If you want a large amount of data available offline, there are options to bulk-download the map.

When the map is displayed, you can scroll and zoom. Data is automatically downloaded as you move about the map. Remember this is just a free basemap, more detailed maps are available for many areas.
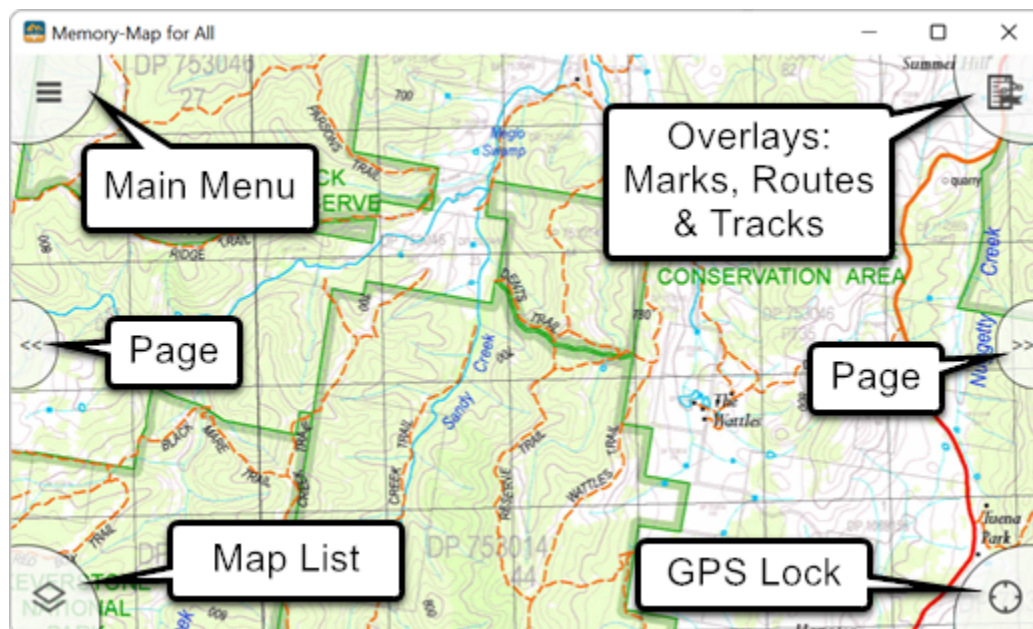
3.1. Video walkthrough

3.2. Basics

Memory-Map for All is an iPhone/iPad app, an Android app, Windows PC app and Mac app (It might be available for other platforms too). The appearance and operation of the app is the same across all platforms. As a consequence, it may not use some of the normal layout conventions you expect on a particular platform. That is why I feel it is necessary to start with some of the basic controls and conventions.

Most apps are designed to be used in the comfort of your home or office. In contrast Memory-Map users are outdoors, hiking in all weathers, driving down a bumpy road in a 4x4, flying a light aircraft, crashing through waves at sea, guiding a search-and-rescue helicopter at night... and many other activities. We've been doing this since year 2000, when the first color PDAs became available (long

before the iPhone was invented). This app is the distillation of all of our experience into a next-generation navigation product.

Memory-Map for All is designed to work with a touchscreen, a mouse, or a trackpad. The user interface is designed to accommodate differences in method of interaction. For example, with a mouse you can just drag a mark to re-position it on the map. However, on a touchscreen your finger covers up the mark so you can't see where you are dragging it. We have a special dragging control that appears only when you are using a touchscreen. All the lists and menus insert extra space between items when using a touchscreen, and the way you perform multi-selection in a list is also different.

On something like a Windows tablet, you can switch seamlessly between using a mouse, trackpad or touchscreen any time and the app will respond appropriately for the method you are using.

Just as you can use a touchscreen on Windows, and you can use a keyboard and mouse with iOS and Android. In practice, there are some rough edges: on the iPad, a mouse justs acts as a virtual finger touching the screen. There is no "hover" response and only one-button operation is supported. Android mouse support is much better, but it does not support the scroll wheel. Mac does not have any touchscreen support (although there are third party drivers, we have not tested them). Our vision is that you can choose any device, choose how to interact, and the app remains the same... and maybe in time the operating systems will move closer to supporting this.

I use the term "click" or "tap" interchangeably. In general there is no difference between clicking with the mouse or tapping the screen.

In many places there is a pop-up context menu, accessed with a right-click (option-click on the Mac) or using a tap-and-hold on a touchscreen. On a trackpad, use a two-finger tap.

Some of the more commonly-used context menus are accessed with a special button 🔽 on the touchscreen. This is quicker and easier than tap-and-hold.

Dialog controls look like this:
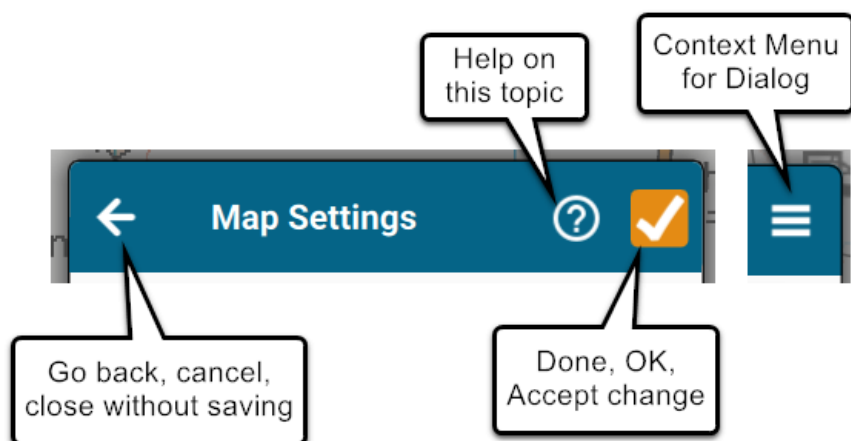
3.3. Using Maps

Tap the Maps button ◇ to open the Map List. This initially displays a list of maps that are already installed on the device, and that cover the geographic location that you were looking at. If you are just getting started, there is probably just one free basemap in the list.

The M key is a shortcut to access the Maps list.

To download additional maps, tap the **Digital Map Store** button. This changes the list to show available maps, that cover the same *geographic location*.

If you wish to find maps covering another location, tap **Maps Everywhere**. You are prompted to enter a search, which can be a place name, such as a city or country, or it could be a keyword such as the name of a map publisher.

The app defaults to showing just Topo maps and Basemaps, but Digital Map Store contains many different types of specialist maps, for marine use, aviation, historical maps, street maps, etc. To access these additional types, explore the expanding sections in the map list.

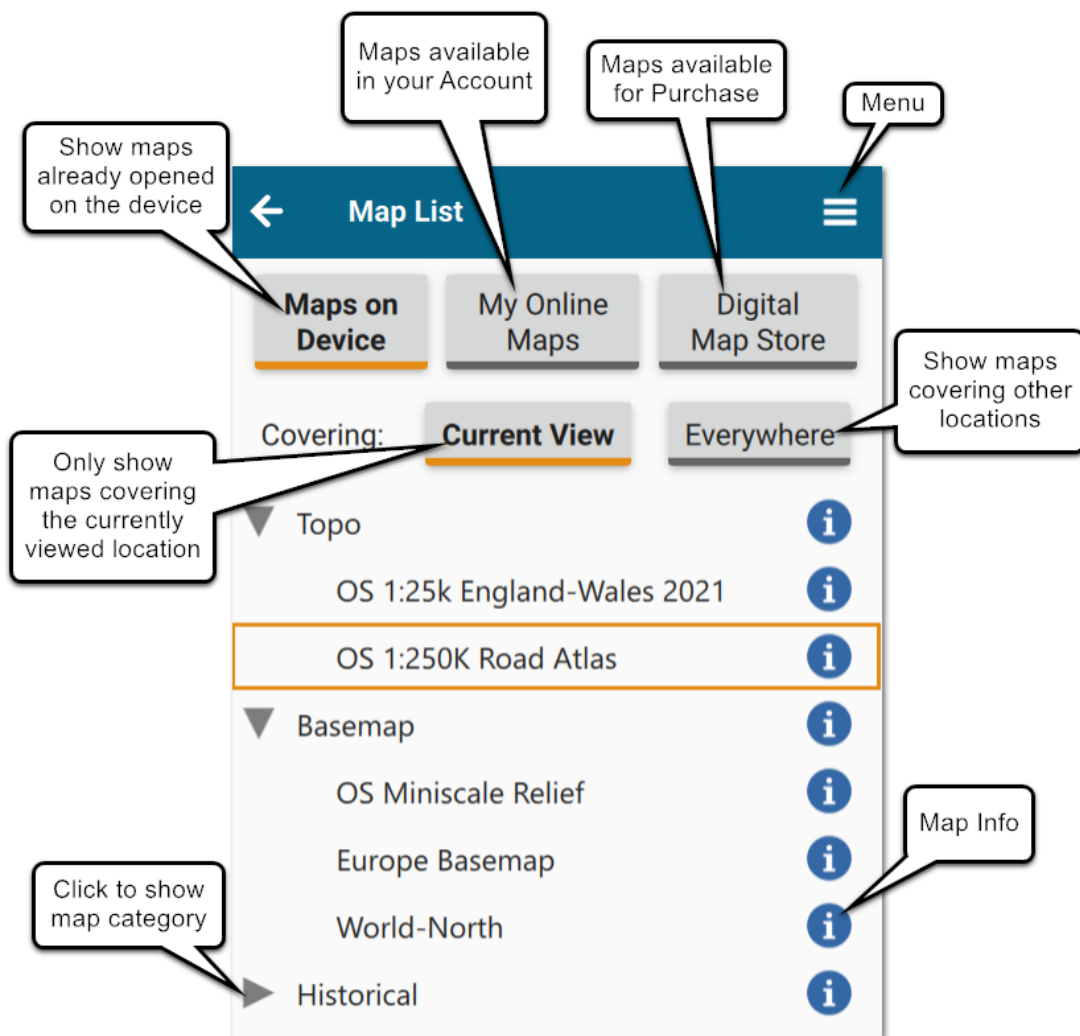You can select **My Online Maps** to show a list of maps that you have purchased as well as free maps. If you have a Memory-Map account, you have to sign in to show all your maps.

You may see status icons next to some of the maps:

☁ The cloud-download symbol means the map is downloaded on demand, and it may need an internet connection to display the map. If you are using "Current View", this symbol means the map is not fully download in the area of the current view. If you are using "Everywhere", the symbol means the complete map is not downloaded. See Downloading Maps for Offline Use

🔒 The padlock means that a map installed on the device has not been activated. If you have purchased the map, go ahead and select it and it should be activated. An internet connection is required to activate the map. If you have installed the wrong map from the Digital Map Store, you can use the Menu > Map Storage > Delete unactivated maps to get rid of it.

⌛ The hourglass means that you have a time-limited preview of the map, or you have a

subscription license that is close to expiration. Go ahead and select the map, and it will prompt you to buy or renew the subscription.

✔ When viewing My Online Maps or Digital Map Store, the checkmark means the map is already installed on the device. Selecting it will open the map, but nothing new is installed on the device.

3.3.1. Scrolling and Zooming the map

To scroll the map, simply drag it with your finger on the touchscreen or with a mouse using the left button.

If you are using a touchpad to control the mouse pointer, you can drag the map using two fingers together on the touchpad.

If you have a keyboard, the cursor arrow keys may be used to scroll the map.

To zoom using a touchscreen or touchpad, use two fingers to "pinch" in or out.

The scroll-wheel on on a mouse is the best way to zoom in or out when using a desktop computer. Some high-end mice don't have a wheel, but honestly you are better off using a cheaper mouse with a wheel. Mice designed for PC work fine on a Mac.

You can also use the + and - buttons on the keyboard to zoom.

On some devices, the media Volume + and - buttons are yet another way to zoom.

Sometimes it is convenient to have a simple on-screen button to zoom in or out (for example when wearing gloves). These can be placed wherever convenient for you, using the Layout customization. By default they only appear on the second map page on tablet-size devices, but it is easy to add the buttons to any page.

In Memory-Map, the maps are raster images, often taken from a printed map. When we talk about zooming, we mean making that image larger or smaller. It doesn't change the contents of the map. When you zoom out, the text and other details on the map become smaller and when you zoom in they become larger. When you change the image to a different scale of map, you are viewing a different map in the map list. By default, the app will automatically change maps for you when you zoom in or out a certain amount, but this requires loading a suitable range of maps at different scales. You can turn this feature off in the Map Settings.

Changing maps with a touchscreen requires using the Map List ⬦ or just using the automatic change maps by zooming default.

With a mouse, you can right-click to see a list of the maps that cover that point at the cursor.

With a keyboard, you can use the I and O keys to scale in and out.

3.3.2. Sign-in / Creating an account

To use any premium maps or to use our cloud sync feature, you will need a Memory-Map account. If

you do not yet have a Memory-Map account, you can create the account on the web page at https://memory-map.com (click **SIGN IN** and **Create New Account)** or you can click the **Create Account** button in the app when prompted.

When creating a password, we strongly recommend you use a password manager to generate and store a secure password. Do not use the same password for Memory-Map as you use for other services. There are no requirements to use special characters, numbers or upper and lower case.

You must enter a valid email address. This is used to confirm your registration, and is used to recover your account name and password if you forget them.

If you have forgotten your user ID or password, you can recover them by clicking here, or using the **Forgot** button in the sign-in page. This only works if you entered a valid email address.

Do not create more than one account!

After you have created your account on the web site, go back to the app. You can use the user ID and password to sign in when prompted, eg when downloading a premium map. Alternatively, you can use the Main menu, Settings, Account, Sign-in command.

3.3.3. Purchasing Maps

Memory-Map uses an online account for activation of maps and software features.

When you open a map in the app from the Digital Map Store, it prompts you to sign into your account, if you are not already signed in. You can then either **Activate** the map, if you already have the activation rights in your account, or you may be prompted to obtain a **preview** of the map, or to purchase the map. The **How to Buy** button takes you to a website providing details of the packages and license options that are available. For example, you may be eligible for upgrade pricing. Some maps area available as a either a subscription or as a perpetual license, and some may be available in a "Platinum" bundle, with other maps. **How to buy** will show all the choices.

Most maps allow a time-limited preview of 10 days, so you can try it out in the field. If you are not sure whether you have selected the map you want to buy, first **Preview** the map.

Most maps permit a free fully-functional preview

Enable an item that is already available in your account
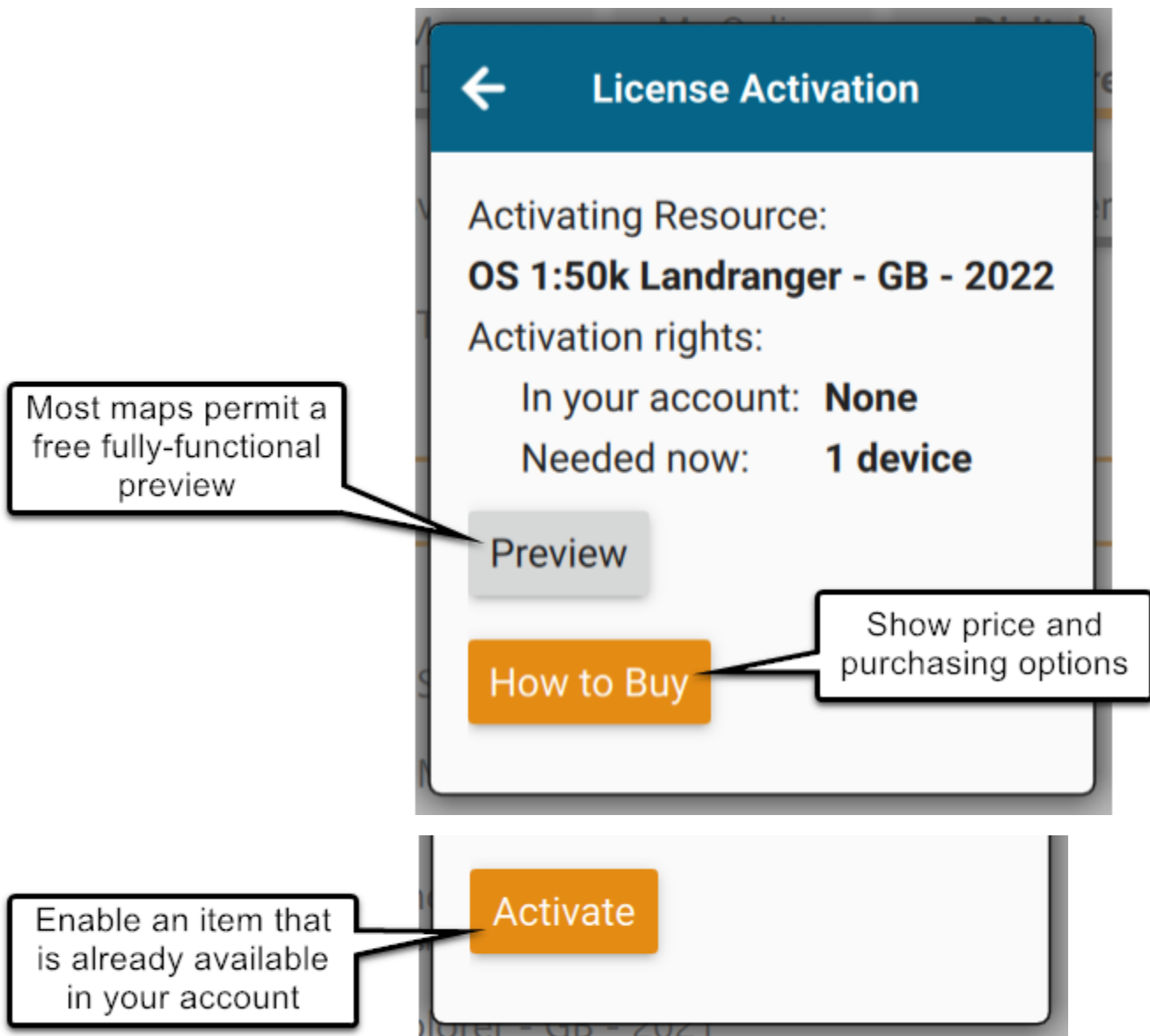
When you buy a map or feature, it is recorded in your Memory-map account. You can view your account online at https://memory-map.com

3.3.4. How to access purchased maps

With Memory-Map for All, it is easy to download your purchased maps:

- Tap the Maps button ⬙ to open the Map List.

- Then tap **My Online Maps**, and **Maps Everywhere**. Sign-in if prompted.

- Some map types may be hidden with a **>**. Tap to expand all the categories.

- Note that some maps may be shown under **Old Editions**

- After you select a map it may prompt you to **Activate**

If you bought maps using Apple "In-App" purchasing within the old Memory-Map or in the Hema app, these are unfortunately not usable in Memory-Map for All. Apple's rules require the purchase to be used only within the app in which you made the purchase.

Optional: Some maps are downloaded in full when you select them in the Digital Map Store, but larger topo maps are downloaded as needed. Some of these maps are very large, and you can select an area of interest to download. See [Downloading Maps for Offline Use](). If you want to download the whole map, then press Maps > ⓘ > Bulk Download > Download Whole Map.

Sometimes people accidentally install the wrong map on their device, and accidentally open that map. If you find when using the app that it prompts you to buy a map, it is best to delete the map. The best way to do this is to use the Menu button ≡ in the Maps dialog, and tap **Map Storage** > **Delete Un-licensed maps**. This will delete all maps that have not been activated.

3.3.5. Downloading Maps for Offline Use

Maps automatically download data on-the-fly as you scroll around the map. All the areas you view are saved on the device and may be viewed again without access to the internet. But if you are planning a trip outside an area of internet connectivity (or if mobile internet data is expensive), you can download the detailed coverage you need in advance. There are a number of ways you can do this:

+ For seamless topo maps, such as **OS Landranger** and **OS Explorer** maps:

Along a planned route:

Plan the route you are going to travel (See [Routes]()). Include any side trips or escape routes you might need.

Open the detailed map you want to download/activate.

Right-click on a waypoint, or tap a waypoint then tap the blue context button 🔽 to show the menu

Select **Route Operations**, **Download map along route**

A typical route takes only seconds to download, so this is the recommended technique to use at the trailhead or any time you have a mobile data signal.

Downloading a custom area:

Create a route that encloses the area of map you want

Place the last waypoint close to the first one. It does not need to be exact, as the polygon is automatically closed

Open the detailed map you want to download/activate.

Right-click on a waypoint, or tap a waypoint, then tap the blue context button 🔽 to show the menu

Select **Route Operations**, **Download enclosed map**

It only takes a few minutes to download an area as large as, say Yorkshire, or the Simpson Desert. So this is the recommended technique to quickly download a region before a trip.

Downloading the whole map:

Some detailed topo maps are *extremely* large (tens of GBytes), which is why we provide the route-based tools (above) to enable you to easily download just the areas you need, without filling up your device with data that you will never need to look at.

However, some seamless topo maps are a more reasonable size, and there are times when it is convenient to have the whole map downloaded for unexpected use in the field. For example, search and rescue personnel may need a map of any part of their area at short notice.

In the map list ⬙, **tap the blue info button** ⓘ beside the map you wish to download, and tap **Bulk Download**. If this feature is enabled for the map, click the **Download Whole Map** button.

This operation may take several hours. Plug your device into a power supply, leave it turned on with Memory-Map running in the foreground.

With iOS and Android, there is no guarantee that the operating system will retain large files that are seldom if ever used. If you install large amounts of mapping on a phone you must ensure there is ample space free at all times after installation. Most people fill up their phones with photos, videos and movies. If you let the phone memory fill up, the operating system will automatically delete large unused files, and your map will not be on the phone when you need it! We recommend you keep your phone's storage no more than 75% full at all times.

+ For maps provided as a set of individual sheets, such as the *Hema 4WD* maps *or* nautical charts:

Download a Package

Scroll to view any part of your area of interest

In the map list ⬙, select **My Online Maps** in the top row of buttons

Look for a listed item under "**Packages**"

When you tap that it will download all the maps in the package

At a later time, you can tap **Maps**, **Menu**, **Check for Map Updates.** This will ensure you always have a complete set of up-to-date charts for all the packages you have downloaded.

+ Downloading all activated areas (for DMS selections maps)

If you have a map that was purchased by the square kilometer (only a few maps sold around 2010-2014), and you have migrated your license from another computer, you can download the areas of the map that have been activated.

In the map list, tap the blue button beside the map you wish to download, and tap **Bulk Download**. If this feature is enabled for the map, click the **Download Activated Areas** button.

Note that we no longer sell any square-km maps. They have been complex to use. If you are struggling with installing or activating an old map, we recommend deleting the old map from your device and buying a new edition map. You will find it much easier to use.

If you are going to leave the phone unattended while it downloads the data, plug it into a power supply and leave it turned on with Memory-Map running in the foreground.

All the map data, once loaded, is cached for future off-line use. If you want to free up some of your iPhone's memory, bring up the Map list, tap **Maps on Device** and **Maps Everywhere**. Decide which map you want to delete and tap the blue info button to the right of the map. Tap **Delete Map**. If the map is licensed, this does not delete the license. You can download the map again in the future and

use it any time.

You can also [back-up and restore](#) your map data using a thumb-drive or other storage service supported by your device.

3.3.5.1. Visualizing downloaded and activated areas

- Tap the Maps button ⬦

- Select a small scale basemap that shows an overview of the whole area you want to look at, such as the 1:1M scale Route Planner.

- Tap the Maps button again.

- Tap the blue ⓘ button to the right of the map you want to inspect.

- Tap **Chunk Status**

You may have to zoom out or select a smaller scale map to see the areas displayed.

Areas not enclosed in a colored box have not been fully downloaded. If you may have viewed an area while zoomed out, it only downloads enough data to show the zoomed out view. It is best to use the **Download Enclosed Area** or one of the other [Bulk Download](#) methods to ensure you have downloaded the full resolution of the map.

Tap the orange **Done** button to clear the result.

See also: [Downloading maps for Offline Use](#)

3.3.6. Map Storage

Memory-map for All keeps maps stored in a secure folder that is internal to the app. If the internal storage on the device is sufficient for your map needs, we strongly recommend you just leave everything at the default settings.

Please understand that device operating systems strictly control what file locations apps are permitted to access, to protect the system from malware. If files are publicly accessible, a malicious app can disrupt or take control of another app. Often mistakes are made by the user, and a slip of the finger can remove valuable files. It is no wonder that map storage issues are one of our top technical support topics!

However, Memory-Map caters for all levels of computer proficiency, and we do permit you to change the map storage.

Windows, Mac and Linux

On the desktop computers, you can choose any directory to be used for Map Storage. Tap the Maps button ⬦ then the Menu button ☰ , **Map Storage** > **Set Map Folder.** You can then browse to the

storage location to be used for maps. Any maps already within the selected folder are added to the map list.

> **WARNING:** Be careful what folder you select! The entire folder and all sub-folders are scanned every time the app starts, and whenever you click the Maps button. If you choose a slow network drive, or a folder like C:, the app will not respond for a long time and will not be usable!

Once the map folder has been changed, it is used as the destination for storing new maps downloaded from the Digital Map Store (or from My Online Maps), and when you copy maps in from a backup folder. Any maps that were previously installed in the internal folder remain where they are. If you want to move maps already downloaded, proceed as follows:

- If you've already changed the map folder, undo it by selecting **Map Storage > Revert to Internal**

- Now make a backup of the internal maps using **Map Storage > Backup Maps To**. Use your new maps folder as the destination of the backup (See [Backup and Load Maps](#)).

- No go ahead and **Map Storage** > **Set Map Folder** your new folder. You should see two copies of each map, one in internal, and one in the new folder.

- Finally, use **Map Storage** > **Delete Duplicate Maps** to remove the older copy of the maps.

Android

On **Android**, the operating system can provide a secure app-specific storage area on a SD Card. To use this for maps, tap the Maps button ⬙ then the Menu button ☰ , **Map Storage** > **SD Card**.
This storage area is not shared with other apps, and is not visible to the user in a file explorer app. The only way to place maps on the SD Card is to download them or to copy them using the app.

When you change the map storage option, it is used as the destination for storing new maps installed from the Digital Map Store (or from My Online Maps), and when you copy maps in from a backup folder. Any maps that were previously installed in the internal folder remain where they are. If you want to move maps from internal to SD Card, you will need another storage location such as a thumb drive:

- If you've already changed the map to SD card, undo it by selecting **Map Storage > Internal**

- Now make a backup of the internal maps using **Map Storage > Backup Maps To** onto your thumb drive (See [Backup and Load Maps](#)).

- Now go ahead and do **Map Storage** > **SD Card**.

- Restore the backup using **Map Storage** > **Copy Maps From**

- Finally, use **Map Storage** > **Delete Duplicate Maps** to remove the older copy of the maps from internal storage.

Tips

- You can use **Show Folders** in the Maps menu to reorganize the map list by folder instead of by map type.

- The Map Info button 🛈 on a folder shows the total size of maps within that folder, and allows you to delete all maps in the folder.

- Also, use the Map Info button 🛈 for an individual map to see the storage path of the map file.

- Note that, unlike the old Android app, Memory-Map for All does not use the /Download/Memory-Map folder at all.

3.3.7. Backup and load Maps from storage

Maps files used in Memory-Map for All are **not** designed to be accessible to the user. We have found that too many people accidentally move or delete the maps, and they may also be attacked by malicious apps, causing Memory-Map to malfunction. The best way to install maps is to download them from the Digital Map Store (See Using Online Maps).

However, **Memory-Map for All** does allow you to backup your maps, so they may be re-installed later, or installed on another device (subject to the terms of the license). To make a backup copy of the current set of maps, tap the Maps button ⬨ then the Menu button ☰ , **Map Storage** > **Backup Maps To...** You can then browse to the storage location where you want to save a copy of the maps.

To restore maps from a backup device, tap the Maps button ⬨ then the Menu button ☰ , **Map Storage** > **Copy Maps From...** Select your device backup folder, and the maps are copied from the device into the secure internal storage managed by the app.

Note that older versions of Memory-Map allowed you to access maps directly from folders outside the app. Unfortunately, Memory-Map files have been a target for malicious activity in the past, and they are also vulnerable to accidental deletion by the user or "clean-up" utility apps. We now make a secure copy of the maps, which should prove to be much more reliable.

There are times when you may want to manually install maps. For example custom maps that you have made yourself or imported from third parties using the Memory-Map Navigator PC app. Any maps that you use with the old Memory-Map desktop mapping products can be used with **Memory-Map for All**. This includes Memory-Map map CDs, or any third party maps that are compatible with the desktop product. You must buy a Navigator license to use 3rd party maps or certain older Memory-Map classic maps. The software will prompt you to buy if this is needed when you open the map.

The first step is to place your maps on a device or in a folder where **Memory-Map for All** can access them. If the the files are larger than 4GB then a USB stick might not work. You can copy the files from a PC directly to the Files app on the device, using a cable or networking. Consult someone familiar with managing files between devices if you need help with this step.

Once you have the files on the device, tap the Maps button ⬨ then the Menu button ☰ , **Map Storage** and **Copy Maps From...**

The operating system provides the user interface allowing you to browse the folder containing the maps. Select a folder and they will be copied into the private storage area within the map. The user interface to browse the device depends on the device manufacturer and other file management apps on the device. You may be able to use a local network, or cloud storage. These facilities are provided by file management apps and Memory-Map is not responsible for what you see in the file browser app.

If you have used an old version of Memory-Map on your PC, maps may be found in the folder

C:\Maps or C:\Maps_V5 on your PC hard drive.

USB Thumb drives are useful for copying data from one device to another. However, there are a number of "gotchas" that you need to be aware of.

- Some drives are formatted with the FAT32 file system. This is fine unless you want to copy large files over 4GB. Maps downloaded from the Digital Map Store are always stored in files 4GB or less, but some of your legacy maps may be much larger. In this case, use a drive with the exFAT file system.

- Before you unplug a thumb drive, you must tell the device to "Eject" or "Unmount" the drive, before you unplug it. Failing to do this will result in corrupted data.

- iOS does not provide a way to eject or unmount a drive and seems to regularly corrupt exFAT drives. We have had better luck with FAT32 drives. Even powering off the iphone seems to leave the drive in a corrupt state.

3.3.8. How to delete a map

- Open the map list

- Tap the blue Info button next to the map (or category of maps)

- Tap **Delete**

You can alternatively use the Menu button in the Maps dialog, and tap **Map Storage** > **Delete un-licensed maps**. This will delete all maps that have not been activated.

There is also **Delete Duplicate Maps**, which identifies multiple copies of the same map and automatically determines which is the most recent.

Finally, you have the option to **Show Folders** in the map list menu. Instead of categorizing the maps by the type of map, it instead shows the file system folder organization of the maps. This may be useful for deleting a set of maps that you no longer want.

3.4. Pages

The app is organized as a series of pages, which can display maps, navigation data, graphics, or any combination of items. The number of pages and contents are completely configurable.

Use the and buttons to switch pages.

The PgUp, PgDn keys on the keyboard may be used to change pages, and the media buttons for Next Song and Previous Song also work on some devices.

The default layout has 4 pages: Map-only, Map with a selection of data items, a Route-following page, and a GPS/Tracklog focused page. It is easy to change the data items or move them around if you want. See Editing Pages.

There is a different set of pages depending on the size and orientation of your screen. If you rotate the device or plug in an external screen, the app will select the layout that best fits the physical screen.

The default layout has 4 screens (Portrait and Landscape for Phone and Portrait and Landscape for Tablet). On the PC or Mac you can resize the window to see the different layouts.

The map display may be different on each page. For example you could have an aviation chart on one page and a topo map on the next page, so you can easily flip back and forth between them. However, this means that you may have to select the map which switching pages, if you want to see the same map.

3.4.1. Editing Pages

The interface has two modes: "Normal" and "Layout Editing". Use the Main Menu > ✛ **Edit Layout** to enable the Layout Editing mode. When editing, you will always see the **Pages** button at the top-right. Tap Done to go back to Normal.
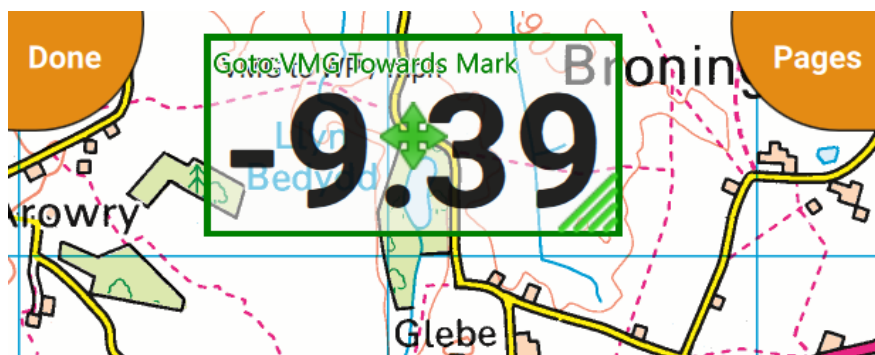
Layout editing allows you to drag items on the screen, resize items, change the type of data displayed, create new items, and it also enables special setup options in the context menu for some items.

In editing mode, tap the Pages button (top right). This shows a list of the different screen sizes/orientations (eg phone portrait) and a set of pages for each screen. When you rotate the device from portrait to landscape, it switches to a different set of pages. You can design the pages so the data best uses the screen real-estate. Use the context menu in the pages list to add/remove pages or change the page order.

Items can be "locked" to prevent accidentally moving/resizing them.

Each item has a "Layer" (1-9) which determines the behavior of overlapping items. Higher layers are drawn over the top of lower layers. Items in the same layer are not allowed to overlap and will rearrange themselves if you drag one on top of another, when editing the layout.

Layout files (*.pstf) are compatible between all the different platforms and can be imported/exported (However they are not compatible with dvtf files from the old app). You may find it easier to use a PC/Mac to edit the layout. On the desktop platforms, you can resize the window to easily preview different screen sizes. Save the file on iCloud, Drive or whatever to allow you to open it on your mobile device.

You can also Import or export individual pages in the layout.

A detailed description of all the available data items and buttons is [here](#). Right-click or use the drop-down menu and **Change Data** to select a different item.

To get started view the video below:

3.5. Finding a Place

To search in the app, use the Overlays button ⟨icon⟩ , and ⟨icon⟩ **Search**.

The first time you use this feature, the app may go online to download the appropriate index database for the map you are using. Once the database has been downloaded for the first time, the search feature subsequently works without any internet connection.

Enter some text that you want to search for and click the Search button. The app will search for place-names or points of interest that match. It also searches your overlays. It matches any part of the name with the text you entered.

The results are organized by category (City, Forest, Hill, Water, etc) and are sorted so that the items at the top are nearest to your currently displayed area on the map.

Click on an item in the listing to show that location on the map. The app will display the feature at the center of the map window, using the most detailed map that has been selected in the map list.

If you use the Overlays, **Add New Mark** command, immediately after searching, then it will create a mark at the location of the selected item.

Instead of a search text, you can enter a lat,long or grid position. The accepted format depends on what you have selected under the Main menu, Settings, Units, Position format. There is a wide variety of accepted grid systems, such as UTM, MGRS, British National Grid or Irish Grid.

If you are using a map that is manually copied into the app, it may not have the index database. We recommend only using maps downloaded from the Digital Map Store.

3.6. Using GPS

If your device has a built-in GPS, your location is shown as a red circle with cross-hairs on the map. The center of the circle flashes to indicate when the position is updated, usually every second or two if there is good GPS reception. If the circle turns gray, GPS reception has been lost.

At any time when the GPS has a valid position, you can touch the **GPS Lock** ⟨icon⟩ button at the bottom-right. This scrolls the map to show the position at the center of the screen. As you move the position is locked and the map scrolls automatically to keep the position in the same place on the screen (this effect is sometimes called a "moving map"). A dot in the GPS Lock button indicates that the GPS is currently locked and the map will move.

You can drag the map to re-locate the GPS position to one side, to show more of the map ahead in the direction you are traveling. Place the GPS icon anywhere you want on the screen, and as you move, the map will automatically scroll to keep the GPS icon in the same place on the screen.

As long as you don't drag the GPS position off the screen, it will remain locked at that screen location. If you drag the GPS location off the edge of the screen, GPS Lock mode is canceled.

If the GPS location is locked (moving-map mode), when the location moves off the edge of a map, then another map is automatically loaded.

The Home key, or the G key both act as a shortcut for GPS Lock.

If you are moving, you may also see a **Velocity Vector**. This is an arrow that shows your direction

and speed of travel. The length of the vector is scaled to show where you will be if you maintain the same speed and heading for 5 minutes. You can change the scale in minutes in **GPS settings**.

Connecting an external GPS

If your device does not have an internal GPS (eg, iPod Touch or iPad with WiFi only) there are some 3rd party GPSs that connect to the device by bluetooth and deliver position information to the app through the location service. No special settings in the app are required.

You can also connect to a NMEA 0183 data stream via a serial port, or a WiFi gateway. Use the **Settings** > **GPS Settings** > **Data Connection** button to configure the connection.

WiFi gateway devices available for marine instrumentation, and allow you to connect AIS, wind, depth and boat speed instruments. See Connecting to Marine Instrumentation.

On Windows, Mac and Linux, you can pair your system with a Bluetooth GPS. The GPS data is then available to Memory-Map as a virtual Serial port, and you connect to it using the Serial setting.

3.7. Compass Heading

If your device is equipped with a supported internal compass (currently only iOS and Android).

Note: The compass only works when the screen orientation is in the normal portrait orientation.

The position indicator has a red triangle that points in the direction the phone is pointing. This is a very useful feature for navigation on foot, as you can determine directions while you are standing still.

When using the compass, you may find it gives wildly inaccurate results. First make sure you are away from any magnets or steel objects (it does not work reliably in a car). Follow the directions for the phone to calibrate the compass - on some devices you can simply rotate the phone in a slow tumbling motion, about all three axes, to expose it to the field from all directions. Most phones do not need to be in any special mode to do the calibration.

There are two ways you can use the compass feature. First, point the Phone in an intended direction of travel, or in the direction of a feature you want to identify on the map. The indicator triangle then shows that direction on the map.

Another way you can use it, is to hold the phone in a horizontal plane and rotate it so that the indicator triangle points to the top of the screen. When it is pointing straight up, the map is now oriented geographically, so that directions on the map are the same as directions on the ground.

The compass uses quite a lot of battery power due to the high update rate. You can disable the compass in the Main menu, Settings, GPS Settings.

3.8. Using Marks

You can use marks to save locations, to record and access information about a location, and to navigate to a location. You can also use marks to measure the distance and bearing to a point, or read-off lat long or grid coordinates.

To create a Mark, use the Overlays, Add New Mark menu command. A mark is created at the center of the screen, and you can drag it to adjust its position with the green four-way arrow handle. If you touch anywhere else on the map, the handle disappears, but it is shown again if you tap on the

location of the mark. (Note, you have to select the point at the bottom of the flag-staff, not the top of the flag).

To record your current GPS position, first touch the Lock button ⊕ to move the map so the GPS is at the center of the screen, then touch the Mark button to create a mark. The places the mark at the precise GPS location.

It is also possible to use the configurable **Drop Mark** button, to create a custom mark at your current GPS location.

To measure a bearing and distance from your current location, or to view lat long or grid coordinates, create a mark and drag it to the point you are interested in. The coordinates, bearing and distance are displayed above the mark.

You can use Main Menu > **Settings** > **Units** > **Position format** to display and enter coordinates in your choice of grid system, such as UTM or British National Grid, instead of the default lat-long.

When using a touch-screen or stylus, a blue pop-up menu button is shown when the mark is tapped. Tapping this shows the context menu for the mark, which can also be accessed by right-clicking with a mouse. The context menu allows you to delete the mark, edit it, or, if it has an associated URL, open information about the mark in the web browser. For example, if you import a GPX file containing points of interest, you can access detailed information on the web about each point. Editing a mark allows you to give it a meaningful name, change the icon or color, edit the position using lat-long or grid coordinates, enter a text comment, or enter the linked URL.

Mark Context Menu
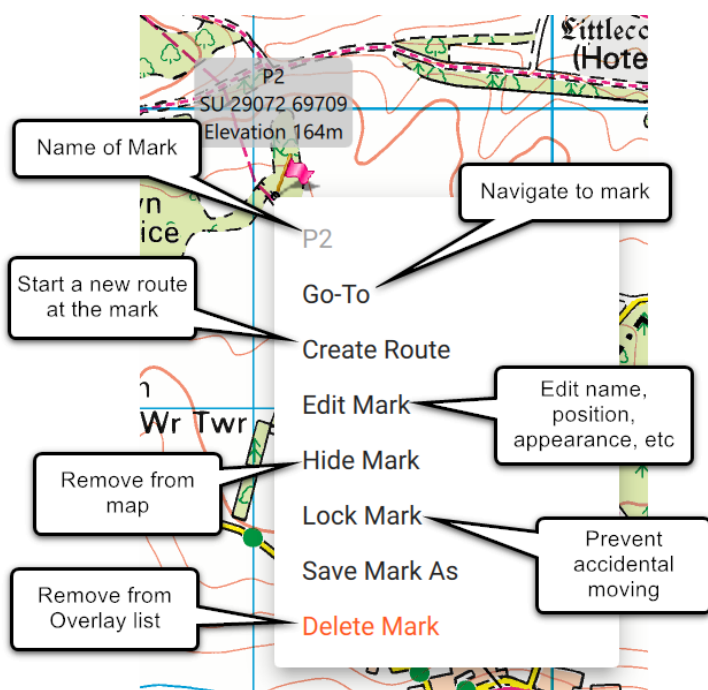
If you select "Go To" in the popup menu, you can use the on-screen arrow pointer and navigation data to help you get to that location. The data on the Goto page gives you more detailed information such as ETA, VMG, etc.

Selecting **Edit Mark** show this dialog

Close without saving changes

Close and save changes

Edit Mark

Name P2

Green tick indicates the position was understood

Position SU 29072 69709

Anchor: 0 meters

Proximity: 0 meters

Anchor and Proximity alarms require Pro license

Icon

Click to change icon or color

Link:

Enter a URL, which may be opened from the context

Notes:

Comments (multi-line if needed)

Category:

Organize the Overlay List using

☑ Visible ☐ Locked ☑ Syncable

Created: Tue Dec 20 2022
Modified: Tue Dec 20 2022

Allows the mark to be saved to the Cloud when you Sync

View Save as... Delete

Save as GPX file or share with other apps

If you want the name of the mark to be displayed on the map instead of an icon, edit the mark, click Icon, and select "Name" in the drop-down control. You can also display multi-line text on the map by selecting "Notes" as the icon.

When editing the position of a mark, you don't have to enter the degrees, minutes or seconds symbol in the Latitude and Longitude. Just about any non-numeric character will work, except the decimal point (which is interpreted as a number) , the hemispheres (N, S, E, W), and comma or space (which separate lat from long). For example, on the number keypad you could type "51+25+32.3n 1+34+59.7w" instead of 51°25'32.3"N, 1°34'59.7"W.

See below for information on importing and exporting marks.

3.9. Using Routes

You can use routes for planning or for measuring distances.

To create a route, tap the Overlays menu 🏃 , **Add New Route**.

If you are using a mouse, click anywhere on the map to place the first waypoint. If you are using a touchscreen, the first waypoint is placed at the center of the screen and you can adjust its position using the green drag button.

If you are using a Pen/Pencil/Stylus input device, you can simply draw the route with a stroke of the pen, and it will draw a smooth line.

A Done button appears at the top of the screen. Click the map to create each waypoint in your route. Don't worry too much if the waypoints are not exactly where you want them. When you have finished creating the route, you can zoom in, select each waypoint and drag it to the precise location later. While you are creating the route, you can scroll and zoom the map, and change maps. When you have created all the waypoints, touch the **Done** button at the top of the screen.

As you create or edit the route, the total distance is displayed at the top of the screen.

Click one of the waypoints. The name of the waypoint and the distance and bearing from the previous waypoint are displayed. If you touch the menu button, or right-click you can delete, insert or edit a waypoint, or delete or edit the route. If you insert at the last waypoint of the route, it allows you to continue adding waypoints to extend the route, until you touch the **Done** button.

It is easy to **measure a distance and bearing** with the Route tool. Create a Route with just two points and read off the distance and bearing just above. When you are finished, tap the menu button or right-click and Delete the route.

To display the elevation profile, touch the context menu button or right-click and select Route Profile.

Tap in the profile window and a red dot on the map is synchronized with the selected point on the profile, allowing you to easily cross-reference the profile with the map. The distance from the start and the height at that point is also displayed at the cursor.

To see a list of your routes, use the **List Overlays** button and open the Routes category.

Tapping a route or double-clicking with the mouse allows you to edit the name, comment, change the color, view it on the map or delete it.

To navigate along a route, touch the blue menu button or right-click, and select **Follow Route**. The on-screen arrow pointer and navigation data on the data pages provide all the information you need to accurately follow the route. You can customize the data screen to meet your needs.

See also: Auto-Routing

3.10. Recording a Track Log

Memory-Map has the ability to record your movements as a tracklog. It also calculates your distance traveled, maximum and average speeds, time spent stationary vs moving, and your altitude, ascent

and descent.

To start recording a tracklog, use the Overlays menu 🏃 **Record Track**, or use the configurable "Logging Button" (on the third page of the default layout). On iOS and Android, the app will record in the background if you use the home button to run another app or turn the screen off with the power button. Use the Overlay menu **Stop Recording** or the Stop Logging button, when you are finished.

If you wish to pause the track recording for a while, for example during a rest stop, you can Stop Recording as normal. After your break, you can **Resume Recording** using the context menu for the recorded track on the map, or using the context menu for any of the track-related data items, or you can use the "Resume" Button which is a configurable item shown on the third page of the default layout. When a track is being recorded this button displays "Pause Recording" but in fact there is no difference between "Stop" and "Pause". A "Start Recording" command aways starts a new track, while "Resume Recording" will continue an existing track. The phrases "Logging" and "Track Recording" have the same meaning and are used interchangeably in the app.

To view the statistics for a track, tap it and use the context menu (or right-click) and **Edit Track**. Or go

to 🏃 **List Overlays**, click Tracks, and select the track of interest in the table. This view let's you

rename the track, add notes, and change it's color. You can also delete a track here. Real-time data about your current recorded track is also shown by switching to the third page, which can be customized to suit your needs.

The track statistics include the amount of **Ascent** and **Descent**, as measured by GPS or barometer. See Altitude Settings. The accuracy of these readings is highly dependent on the quality of the sensors on your device.
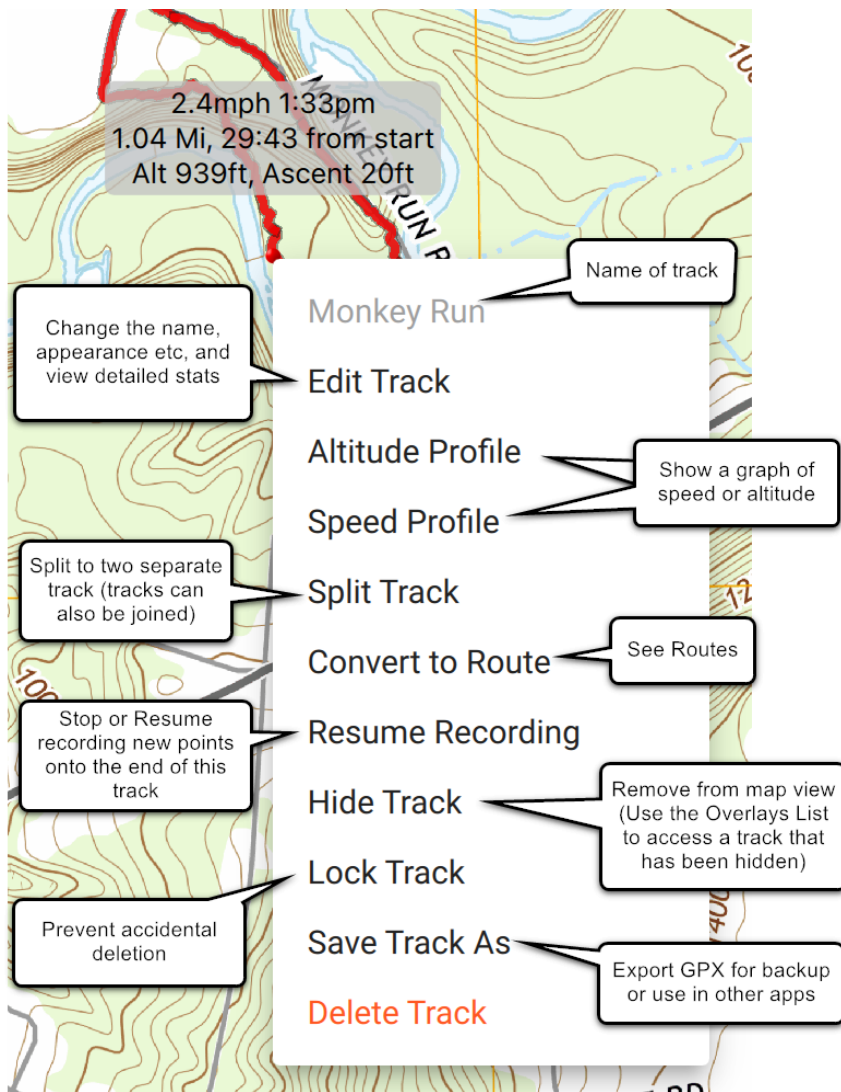
The Speed profile shows a graph of your speed against distance. Touch or drag in the profile to see the track details at that point and to highlight the corresponding point on the track. Click on the track to highlight the corresponding point on the profile.
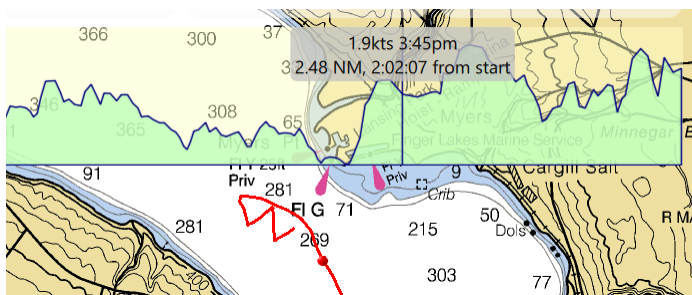
Similarly, the Altitude profile will show a graph of the recorded altitude against distance. You have a choice of several methods of measuring altitude (see Altitude Settings) or you can select "No Altitude" to enable a 2D mode and turn off this feature. If you would like a graph of terrain altitude instead of the altitude measured by the GPS (which is often very noisy) you can convert the track into a Route and view the Route profile.
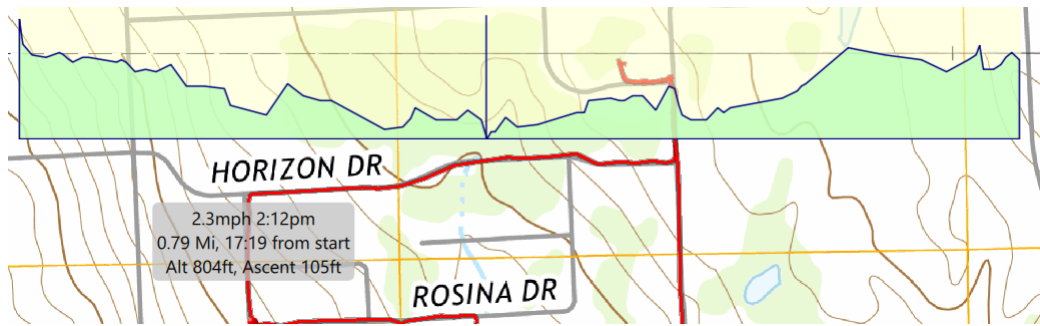
3.11. Cloud Sync

The cloud sync feature is used to maintain identical overlay data (marks, routes and tracks) on a set of devices using the same Memory-Map account. For example, if you have a phone, a tablet and a Mac, you can create a route on the tablet, then take your phone outdoors to follow the route. While you are out, you record a tracklog and mark some interesting locations. Once back home your field data is all synced on to your Mac.

Another common use is if you get a new phone, or if you need to reset/reload your phone, you can use the sync to provision your new device with all the data you had on the old one.

To use it, any time you have an internet connection, tap **Overlays** 🐾 then ☁ **Cloud Sync**. You are prompted to sign in to your Memory-Map account, if you are not already signed in. This copies any data that has changed between your device and Memory-Map's cloud storage.

There is also a web interface to access your data from any browser: Sign into your account (https://memory-map.com) to access your cloud-synced data on the web.

Purchase options

There are two tiers of service that we offer. Casual users, who only use the sync feature once or twice a week with a limited amount of data, are able to use the service for free. Regular users can pay a one-year subscription fee to increase the usage limits.

- Free: up to 2MB of data synced up to 10 times per calendar month.
- Subscription: over 2MB of data, synced on all your devices, 10000 per month.

There is a free evaluation period for the paid level, so you can figure out if the feature is going to be useful.

The web portal allows you to upload, download and manage your data in GPX format. Click HERE to sign-in, and click **My Overlays.** The subscription service includes an "**Archive**" facility, which off-loads data from your devices and stores it in the cloud.

Note, if you have over 2MB of data on your device (ie many thousands of marks or dozens of long complex track logs) then the performance of the app is quite severely degraded. If you don't have a good reason to need that much data, you can use the Sync Archive feature to off-load the app. The app will work much better and your battery will last longer if you do a bit of housekeeping! You can

save your data as GPX files and/or move it into the Archive

For price information, and to purchase, click here.

Syncable overlay objects

Memory-Map has the ability for you to turn off syncing for an individual overlay or for a whole category (such as, all tracks). If you edit an overlay,the dialog allows you to enable or disable syncing for that object. In the Overlay list, you can use the context menu to make items syncable or non-syncable.

- If an item is non-syncable, it will not be sent to the cloud storage when you do the Cloud Sync command. In addition, it will never be modified by a Cloud Sync, in the event that has been previously synced and has been modified on another device.

- If you set an item to be non-syncable, you can delete locally, and it will not delete the object from the cloud. If an item has been synced, and is then deleted on another device, it will not be deleted locally if it is set to non-syncable.

So, setting an object to be non-syncable isolates that object from any changes in the cloud.

If you change an object from Non-syncable to be Syncable, and then do a Cloud Sync, then the cloud will updated to contain your version of the object.

The Sync Archive

When you have synced your data, you can go to this web page to see a list of your synced data. From here you can download it to a PC for safe-keeping, or delete it, or whatever.

Another option is to use the Archive feature of the Sync web page. Select some overlay objects and click the **Archive** button. The object is now removed from the list and placed in your archive. When you sync any of your mobile device, the object will be removed from the device (thereby freeing up the resources of the device).

To get the data back, sign into the sync web page again, and click **Show Archive** (at the bottom of the page). From here, you can select the archived overlay objects, and click **Restore** to add them back to the synchronized data set. You can also download the data from here, and delete it if it is no longer needed.

Sharing data with others

Note that the account used for syncing is the same as the license management account. If you want to share overlay data with other people, the way to do that is using GPX files. If you give other people your account details, they may unintentionally use your license resources, and will make it hard for you to manage your licenses. *Do not use the sync feature as a way of sharing your overlay data with other people.*

Data changed on more than one device

If your have a synced overlay that is subsequently changed on two different devices, only the most recently changed version is used. This can cause changes on the other device to be overwritten. If your data is valuable and they are being used other devices at the same time, save it as GPX before syncing. Alternatively, you can use **Send to Cloud** in context menu in the overlay list. This will send the selected object(s) to the cloud, overwriting any changes from other devices.

Another thing you might want to do, for example if you have accidentally changed an object on the device, is to discard your changes and revert to the version in the cloud. You can use the Overlay List, Menu button, **Fetch All From Cloud**. Another option if you want to start over from a clean slate is to use the Overlay List, Menu button, **Discard All**. This removes all overlays from the device, without affecting the cloud. Next time you sync, you will get a complete set of overlays from the cloud.

Privacy and security

While the data is transmitted using SSL encryption and securely stored, Memory-Map makes no guarantee about the security of the data. Do not rely on this feature to store valuable data: make a backup using GPX. The data synced can include your location history (while the track logging feature is enabled). This data could be synced to family members if they are using the same license management account. If that's a problem, or if you have any other privacy concerns, don't use the sync feature!

3.12. Sharing and Importing GPX data

In addition to the Cloud Sync feature, Memory-Map has other powerful tools to help you backup and manage your overlay data and share data with other apps.

First, you can save your data in named GPX files.

To do this, click the ⚐ **List Overlays** menu command, Tap-and-hold or Right-click on the Category or individual overlay item you wish to save, and **Export** (or **Share** on mobiles)

After saving the data all the important data in the app as GPX files, you might want use the Overlays List, Menu to **Discard All**. This deletes all Marks Routes or Tracks currently loaded in memory. It does not delete the saved files.

Later, you might want to re-load the set of data you saved. Touch **Menu** and **Import** in the Overlays List.

If you are using multiple categories, you can tap-and-hold or Right-click on a category, and use the **Import Here** menu command to import GPX data under that category.

If you have collected some data on the iPhone, and you want to store or analyze it on your desktop computer or another device, we recommend using the Cloud Sync feature.

When you export data, you can share it using AirDrop, email, Google Drive, or transfer it to any other app on the device that understands GPX data.

GPX is a open file format supported by all Memory-Map's software as well as many other tools. For example you can transfer the overlay data to a Garmin GPS, to use as a backup for your iPhone. The GPX data does not include the map images.

There are also many websites that allow you to share trails and so on, using the GPX format.

If you receive a GPX file as an attachment in an email, you can tap on it, and the mail app may give you the option to open it with Memory-Map. However, we can not guarantee that **Memory-Map for All** will show up in the "Open With..." list. If it is not in the list, just save it as a file, then use the **Import** command in the app to open that file.

4. Advanced Use

4.1. Auto-Routing

Auto-Routing

The app is able to use an on-line service to find the optimum route for driving, cycling or walking between two points, using roads and trail data.

This could be used to find the quickest driving route by road to your destination. However, Memory-Map is for off-road use, and the user interface is not intended to be used while driving. This is not an attempt to replace Google Maps!

Suppose you are planning a bike ride along some winding roads, and you want to know the total distance of your ride, and to navigate some intricate turns along the way. First, manually plot the approximate route, (see Using Routes) using just a few waypoints. Then tap one of the waypoints and tap the Menu button, then **Route Operations**, **Optimize Route**, **For Cycling**. The app will add intermediate waypoints to direct you along roads and cycle paths. If the result is not what you want, use the **Revert** menu command to put it back to the original.

Tips for using routes

Tapping on any waypoint will display the total length of the route near the top of the screen.

Tap the menu button or right-click and **Follow Route**.

With your phone in a secure mount on your handlebars, you can use the Main Menu, **Settings**,

Display Settings, **Keep Screen On**. Your phone will then remain on without interaction while Memory-Map is running (this will, however, drain the battery faster).

Then, enjoy your ride!

Notes

The Route Optimization is an online service that is only available while you are connected to the internet. You may incur mobile data transfer costs.

The service has limited knowledge of hiking and cycling trails, and it may not be able to place the route where you expect.

It is designed to find the fastest route, which may not be the more challenging, or the more scenic, route that you want to take. You can use intermediate waypoints to direct it along the scenic route.

Using routes with a large number of points may degrade the performance of your phone and run down your battery faster than normal.

4.2. Alarms

Alarms

Operating System Notifications are used for various alarms in the app.

Alarms are used for AIS collision alerts, DSC or AIS distress signals, and you can set alarms based on your distance from a mark.

In the System Settings app, you can choose to disable all notification. In this case, the alarm text simply pops up on the map at the top of the screen.

Mark Proximity / Anchor Alarm

You can set an alarm on a Mark, and get a notification when you approach that point (Proximity Alarm), or when you stray to far from it (Anchor Alarm).

Use of this feature requires the Memory-Map Professional license. Sign in to activate your Professional license, or use a free 10 day demo period for evaluation.

Create a Mark, Tap the drop-down menu (or right-click), and Edit the mark. When you enable the alarm, you can set the Anchor and the Proximity alarm distance separately. To set a Proximity alarm, leave the Anchor alarm distance at zero.

When you set an anchor alarm, typically you don't want the alarm to go off when you are a long distance from that point. So if you enter an Anchor alarm distance and leave the Proximity alarm distance at zero, the app automatically suppresses the alarm when you are double the distance plus 1km from the point. You can change this behavior by entering a different Proximity alarm distance.

The Anchor alarm radius must be smaller than the Proximity alarm radius. The alarm zone is actually the annulus between the two.

Alarm Notification

When the alarm goes off, the app displays a system notification, and plays a sound. You can dismiss

the notification by tapping it. The notification is automatically dismissed when the alarm condition ends (eg, you move out of the area).

The notification is continuously updated, giving the name of the mark causing the alarm, and your distance from it. If you have an Apple Watch or similar device, it displays the updated notification text.

4.3. Connecting to Marine Instrumentation

Connecting to Marine Instrumentation

The app can connect to an external GPS or NMEA data stream using WiFi (TCP/IP or UDP). Gateway devices are available for marine instrumentation, and allow you to connect AIS, wind, depth and boat speed instruments.

Note, a professional license is required to use this feature. You are prompted to upgrade when you use the feature and you can get a free evaluation period

Under **GPS Settings**, tap the **Data Connection** button.

The app can connect to a specific IP address and/or port number using TCP or UDP, and is compatible with most NMEA to WiFi adaptors or AIS units with built-in WiFi. Compatible WiFi gateway devices include Vesper, Digital Yacht, Yakbitz and others.

NMEA 0183 data

The app processes most NMEA sentences commonly used in marine instrumentation, such as water depth, boat speed, wind speed and direction. It can display any of this data on the Navigation data screen. You will need to customize the Navigation data screen to select the information. When connected via TCP, the app will also output the Autopilot RMB sentence if you are following a route or navigating to a waypoint.

If connected to a DSC equipped marine radio, the app will display the location of DSC position reports and DSC Distress signals, as a mark on the screen. It also sends a system Notification when a distress signal is received.

AIS is a powerful system for avoiding collision at sea that works by radio transponders on commercial ships. See the next page for details.

Simulation File

The app can replay raw NMEA data stored in a txt file. When the replay reaches the end of the file, it automatically restarts at the beginning.

4.4. AIS

AIS (Automatic Identification System) is a system of VHF transponders carried by commercial ships and many smaller vessels. It works by sending and receiving vessel's position, speed, heading, and

identification data over VHF radio. This can then be plotted by Memory-Map on the digital chart. With your own GPS information and you'll see all ship movements relative to your position and be alerted of a potential collision or near miss.

- See ships plotted on the chart.

- Audible collision alert.

- Find the ship's name, radio call-sign, size, type of ship, size, rate of turn, destination port and ETA.

- Velocity vector shows ship's course and speed over ground on the chart.

- Table showing all ships sorted by closest point of approach.

- Ships are color coded to show status and possible collision

- Shows class A (commercial ships) and class B (voluntary) AIS transponders.

- Receives AIVDO (Own Ship) sentences, or GPRMC for your own location, speed and direction

- Compatible with Pilot Plug data for commercial ship pilots.

Note: Use of AIS requires activation of the [Professional license](#).

AIS targets displayed on the chart

The AIS targets are shown on the chart as animated icons. Each vessel is shown as a triangle, oriented according to its compass heading.

Each moving target has a velocity vector that shows its course and speed over the ground. All the velocity vectors are drawn on the same time scale, so you can judge the relative speed of different targets. You can determine, for example whether you will pass ahead or astern of a ship by looking at the heads of the velocity vectors. You can change the time-scale in the GPS Settings dialog.

The ship colors are as follows:

- Targets with status "Moored" or "Anchored" are shown in gray.

- Targets with a status "Restricted Maneuverability", "Constrained by draft", "Fishing" or "Aground" are shown in purple.

- Targets "Under way using motor" are green.

- Targets "Under way Sailing" are blue.

- Targets on a collision course are red.

- Targets nearly on collision course are yellow.

- If no transmission has been heard from a target in the last 4 minutes, it is white.

Tapping on a target shows its information at the top of the map screen, including the name of the ship. If the signal has only just been acquired, the app will not yet have received the "static information" broadcast by the ship, and it is identified only by its MMSI. The position, speed and direction of the ship is transmitted frequently (depending on the class of transponder and the speed of the ship) but the name of the ship, its size and destination port is only broadcast every few minutes. If you want to be able to call the ship by name on the radio, it is best to have Memory-Map running continuously while you are under way.

AIS Target List

~~Click **Overlays** and select the **AIS** category to view a list of active AIS targets. If the AIS category is not present, that means no AIS signals have been received. Targets are sorted in two groups, those getting closer to you (taking into account your own motion) are sorted by the predicted closest approach distance. Those moving away from you are sorted by straight distance.~~

~~Tap on an item in the list to view it on the map.~~

Collision Alarm Notifications

The software uses the course and speed of each target and your own course and speed to calculate your closest point of approach. If this is less than a given threshold, a warning is given. When you are on a collision course, a device notification is sent and the collision targets are shown in red.

Targets near the threshold are shown in yellow.

You can adjust the closest point of approach threshold, in terms of time and distance in the **AIS Settings** menu. (Note this menu item is hidden until the first item of AIS data is received. If you want to explore the settings at home, use a NMEA simulation data file containing AIS data). Targets that will pass closer than the specified distance, and within the specified time, are considered dangerous. These cause the Notification and red target color. The time and distance thresholds are both doubled for the yellow warning targets.

Note that the size of each ship (LOA) is added to the threshold, so you will still get some alarms if you set the distance to zero. If you want to disable the collision detection feature, set the time to zero instead, or just disable the alarm.

You can adjust the alarm threshold for Class B transponders separately from Class A. Typically, you would be comfortable with a closer crossing with a pleasure craft than class A ship.

4.5. Locking the Screen

If you want to see the screen, but you don't want any accidental touches to interact with the application, use the Main menu > **Lock Screen** command. This will ignore all touches and clicks on the screen, so that the application does not respond to any touch events. Press-and-hold the **Unlock** button on unlock.

The lock-screen feature is useful if you are using a touchscreen device in heavy rain or sea spray, and you want to be able to see the display, as it i set up without interacting with it. Note that the lock screen does not prevent operating system gestures from being registered. If you need to interact with the app in extreme wet conditions, be aware that some devices are very difficult to use in the wet. You may need to dry the screen and dry your fingers to get it to work. Some devices work fine in wet conditions.

Memory-Map has the ability to use the GPS and record a tracklog while the app is in the background, or even with the screen turned off. You can enable this option in the Settings > GPS Settings dialog.

4.6. Details of Navigation Data Items

The Live Navigation data pages can be customized as described here. When you do a "Change Data", the items available are listed below:

Note that the displayed units can be changed in the Settings, Units menu.

GPS

Course over Ground: Your direction of travel relative to the earth

Speed over Ground: Your instantaneous speed relative to the earth

Position: Your current Latitude and Longitude, or position in the selected position grid (see Settings > Units)

Accuracy: Some measure of how accurate the GPS fix is. If you are using an external NMEA format data source, this is the HDOP. If you are using the location service, the precise meaning may be different.

Altitude: Your height above sea level, or your height above some other datum on some devices. (Note, GPS is less accurate for altitude than for horizontal position)

Time: Time of day reported by the GPS, converted to the device's selected timezone

24h Time with seconds: Time of day with seconds, usually accurate to UTC +/- 1 second.

Average Course: Direction of travel averaged over the past 30 seconds

Average Speed: Speed averaged over the last 30 seconds

Satellites: Satellite signal strength (NB, only works with external NMEA data, not from the built-in location service).

Drop Mark Button. Creates a mark at the current GPS location. You can customize the icon etc, and use a set of buttons to record the location of different types of items. Use the item context menu in Edit Layout mode to change the mark icon for each button. The name of the mark can be expanded with, date, user name, etc using the same syntax as the overlay creation templates (see Default Overlay Templates). It is a good idea to enable the "Locked" option, so that any marks you drop cannot be accidentally moved. Note that the "Add Mark" menu command places a mark at the center of the map display, while "Drop Mark" places it at the current GPS location.

Odometer: Measures total distance traveled, independent of track recording. In Layout mode you can change the name of the Odometer using the layout context menu. In normal mode, the context menu allows you to reset or pause the odometer. If you have multiple odometers with different names, then reset/pause is independent of each other. So for example, you can have a daily distance which you reset each day, as well as a total distance for a trip, or season.

Speedometer: graphical analog speedometer dial.

Sensors

Compass Heading: The direction the device is pointing based on the magnetic field sensor in your device. See Compass Heading

Barometric Pressure: Data from device pressure sensor in mBar

Goto

(Note, these fields are active when you tap a mark or waypoint, and use the popup menu to navigate towards a point or follow a route.)

Distance: Your distance to the next waypoint

Bearing: Compass bearing to the next waypoint

Turn Angle: Angle between your current course-over-ground and the direction to the waypoint

Turn after Mark: When following a route, the angle between your current course-over-ground and the direction to the waypoint after the next one (helps you to plan for turns before you reach the waypoint).

CrossTrack: The perpendicular distance from your current position to the course line.

(Note, if you are navigating to a mark, or if you have not yet reached the starting waypoint of a route, then a "course line" is set up from your current position when you initiate navigation. If you are following a route, the course line is the closest leg of the route)

Arrow: Graphical indication of turn angle. The arrow is red or green to indicate how it has determined the direction.

- Red: the direction is relative to the way the phone is pointing using the magnetic compass. If this is not working you can try calibrating the compass. You can turn off the compass if the red arrow gives totally inconsistent results. Menu > Settings > GPS Settings.
- Green: the direction relative is the "COG" reported by the GPS chipset, ie, your instantaneous direction of travel. If you are not moving and you have poor GPS signals, then the green arrow may point in random directions. You need to move for it to work.

Time to Next WP: Estimate of the amount of time it will take to reach the waypoint, based on your current averaged speed and direction.

ETA Next WP: Estimated time of arrival at the next waypoint

Dist to Route End: Distance from your current position to the next waypoint, plus the total distance of remaining legs in the route

Time to Route End: Estimate of the amount of time it will take to reach the end of the route, based on your current averaged speed and direction.

ETA End of Route: Estimated time of arrival at the end of the route

VMG Parallel to Leg: The component of your instantaneous velocity in the direction parallel to the course line.

VMG Towards Mark: The component of your instantaneous velocity in the direction towards the next mark

Waypoint name: The name of the next waypoint.

Coming Up: A list of the next few waypoints in your route, with the distance to each waypoint.

% Along Route: Shows your distance along the route as a %age of the length of the route.

See also Using Marks and Using Routes

Track

(Note the "latest track" is the track is the track you are currently recording, or the one you were most recently recording)

Logging Button: A button to start/stop recording your track

Resume Button: Allows you to pause and resume recording of a track. Note that resume will add to

the end of the most recent tracklog. You can also resume recording a specific track using the context menu for the track.

Distance traveled: The length of the latest track

Moving Time: The elapsed time of the latest track, minus the amount of time spent stopped

Elapsed Time: Elapsed Time of the latest track

Time not moving: Amount of time spent when the amount of movement is less than 30ft.

Average Moving Speed: Average speed while moving (ie not stopped) since beginning of the track.

Average Speed Overall: The length of the track divided by the elapsed time between the first and the last points.

Max Speed: The maximum speed recorded, discarding anomalous spikes.

Ascent: Total vertical distance ascended along the track, based on GPS and/or Barometer readings. See Altitude Settings

Descent: Total vertical distance descended along the track, based on GPS and/or Barometer readings. See Altitude Settings

See also Recording Tracks

Instruments

(Note these data items require connection to a marine instrument system, and you must activate a Professional License)

Boat Speed: Speed through the water from the VHW sentence

Apparent Wind Angle: Wind angle to the bow, from the MWV sentence

Apparent Wind Speed: Wind speed relative to the vessel, from the MWV sentence

True Wind Direction: Wind direction relative to the earth, from the MWD sentence

True Wind Speed: Wind speed relative to the earth, from the MWD sentence

Depth of water: Water depth, adjusted for transducer depth if known, from DBT sentence

Water Temperature: Water temperature from MTW sentence

Rudder Angle: Rudder angle from RSA sentence

Average Rudder Angle: Rudder angle from RSA sentence, averaged over about one minute. (use to see effect of sail trim on helm)

Engine RPM: Engine revolutions per minute, from RPM sentence. Shows both engines if two are present

Instruments / Timer

These items provide a count-down / count-up timer, designed for sailboat racing, but can be used for any purpose

(Use Tap-and-hold, Timer settings menu to configure the count-down period, or to set the count-down to a specific time of day)

Time to start: Shows the amount of time. A + sign indicates the timer is counting up, after the start

Start countdown sequence: Button to restart the count-down.

Ping Start Line Right Mark: Button to store the GPS position of a point at the right-hand end of the start line (or on an extension of the start line)

Ping Start Line Left Mark: Button to store the GPS position of a point at the left-hand end of the start line (or on an extension of the start line)

Distance to line: Perpendicular distance from your position to the start line (line is extended both ends). A negative value means you are over the line.

ETA Early/Late at Start: If you continue your current course and speed, indicates the timer value when you will cross the line. Ignores line end-points - the line is extended both ends. Shows a + sign if you are late for the start, a - sign if you are early.

(Note, device built-in GPS units are typically not accurate enough for use on the start line. An external high precision GPS is recommended)

Start-Line Bias vs True Wind: If you have a True Wind input (from the MWD sentence), you can display the angle of the start line to the wind, to help decide which end of the line is favored. (Note this does not take any current into account.)

Start-Line Bias vs Axis: Set the axis as your estimate of the wind direction, or as the bearing to the first mark, and this will let you know if the line is skewed relative to the axis.

Instruments / Axis

This section allows you to setup a reference direction, know as the Axis, and display various data items as a bearing relative to the axis. You can use it as a course-to-steer, or for monitoring changes in heading or wind. Press-and-hold any of these to setup the Axis.

Axis: Just shows you the current Axis setting.

Heading vs Axis: Shows the compass heading relative to the axis. Plus means you are steering to the right of the axis, minus means you are to the left.

COG vs Axis: Shows the GPS course-over-ground relative to the axis. Plus means you are traveling to the right of the axis, minus means you are to the left.

True Wind vs Axis: If you have True Wind (from the MWD sentence), this shows the wind direction relative to the Axis. Plus means the wind has shifted to the right, minus means it has shifted left.

Toolbar

Allows you to add various menu commands as buttons on the screen. Each button can be placed anywhere you like and resized to show an icon with text or just the icon.

Other

Logo: just for branding

Map: The map display is itself a configurable item on the display. You can have more than one map on the screen to provide an overview and a detailed view, for example.

Background image: Add a customizable background image. Note that the image is not saved with the

layout file. It has to be set up on each device.

Battery level: shows % of energy stored and charging status

Blank: sets an empty item

Static text: Allows you to add your own message to label things on the screen

4.7. Default Overlay Templates

When you create a new Mark, Route, or record a Tracklog, the app uses a template to set up the name, category and visual appearance of the new item. These templates can be customized to your preferences.

You can also use these template format specifiers when editing multiple-selected marks, routes or tracks.

First open the Overlays List 📑, click the Menu ▤ at the top right of the dialog, and select **Edit Defaults** > **Mark Template** (or **Route Template** or **Track Template**).

Click **Appearance** or **Icon** to change the line-style or icon. These options are used when you create a new overlay, and when you import GPX data that doesn't contain color or line style information.

You can change the name of the newly created overlay item, or the category, using the following format specifiers:

> %*date-time-format*% eg: %yyyy-dd-MM hh:mma%

d	The day as a number without a leading zero (1 to 31)
dd	The day as a number with a leading zero (01 to 31)
ddd	The abbreviated day name ('Mon' to 'Sun')
dddd	The long day name ('Monday' to 'Sunday')
M	The month as a number without a leading zero (1 to 12)
MM	The month as a number with a leading zero (01 to 12)
MMM	The abbreviated month name ('Jan' to 'Dec')
MMMM	The long month name ('January' to 'December')
yy	The year as a two digit number (00 to 99)
yyyy	The year as a four digit number
h	The hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display)
hh	The hour with a leading zero (0 to 23 or 1 to 12 if AM/PM display)
m	The minute without a leading zero (0 to 59)
mm	The minute with a leading zero (00 to 59)
s	The whole second, without any leading zero (0 to 59)

ss	The whole second, with a leading zero where applicable (00 to 59)
AP or A	Use AM/PM display. A/AP will be replaced by 'AM' or 'PM'
ap or a	Use am/pm display. a/ap will be replaced by 'am' or 'pm'
t	The timezone (for example "CEST")

In addition you can use:

%U	User name
%V	Device name
%%	%
#	Counter

The User name and the device name are from the license management system, and are designed to help you figure out where an item came from when overlays are shared or synced between devices.

The default name templates are simply P# for the marks, R# for the routes and T# for the tracks.

The # template creates a counter that increments with each object. Only the last # in the template is replaced, so a template containing ## expands to #1, #2, #3, etc.

The way this works is as follows. First all the time/date and other % formating is done. Then it takes the template up to the last #, and looks for other objects matching the name up to that point. The number chosen is one more than the maximum of the existing matching objects. For example if you have a template of **%ddd%##** that would expand to Mon#1, Mon#2, Mon#3, Tue#1, Tue#2, etc.

Customizing waypoints

You can also customize the waypoints in a route, and select a different icon or naming convention.

First open the Overlays List 📑, click the Menu ▤ at the top right of the dialog, and select **Edit Defaults** > **Route Template**, then click **Waypoints**

In the name, the **%R** is replaced by the route name, and **#** is replaced by a count. Note that if you insert waypoints in a route, the waypoints are not renumbered. The new waypoint has the highest count number.

Click **Icon** to change the default waypoint icon symbol and color.

You can also change all the waypoints in an existing route. Edit the route, click **Waypoints**. In the Waypoint template dialog, you can change the icon and the name. Leave the name blank in the template if you don't want to change waypoint names. If you do enter a name, the waypoints are numbered sequentially from the start.

Drop Mark button

Using the **Edit Layout** menu command, you can add a **Drop Mark** button to any page. Each button has its own customizable template. For example, if you are doing a field survey and you want to mark the position of several different kinds of objects, you can configure up a whole set of Drop Mark buttons, each with its own icon, category and naming convention. See Editing Pages.

4.8. Using custom mark icons

Memory-Map for All allows you to use custom icons to represent your overlay data.

If you've used custom icons in the MMNav program for Windows, the same icon files can be used in Memory-Map for All on all your devices.

You can design your own icons using a graphics editor, saving them in the SVG format (which is recommended for sharpest display on devices with different screen resolutions) or PNG format. BMP is supported for legacy compatibility but is not recommended.

Creating custom SVG icons

SVG stands for Scalable Vector Graphics, and it defines a graphic item that can be resized to fit the required screen resolution of the device. That is why we recommend using SVG if you are creating custom icons. You can use the free Inkscape graphics editor to create the icons.

SVG files should have a maximum viewbox of 32 x 32. In Inkscape, you can use File>New from Template>Other>Icon32x32 to create a new icon, or use the File>Document Properties, and ensure the width and height is 32 pixels. This dimension controls how large the icon is displayed in Memory-Map for All. You can use larger or smaller viewboxes if you want to make the icon appear larger or smaller.
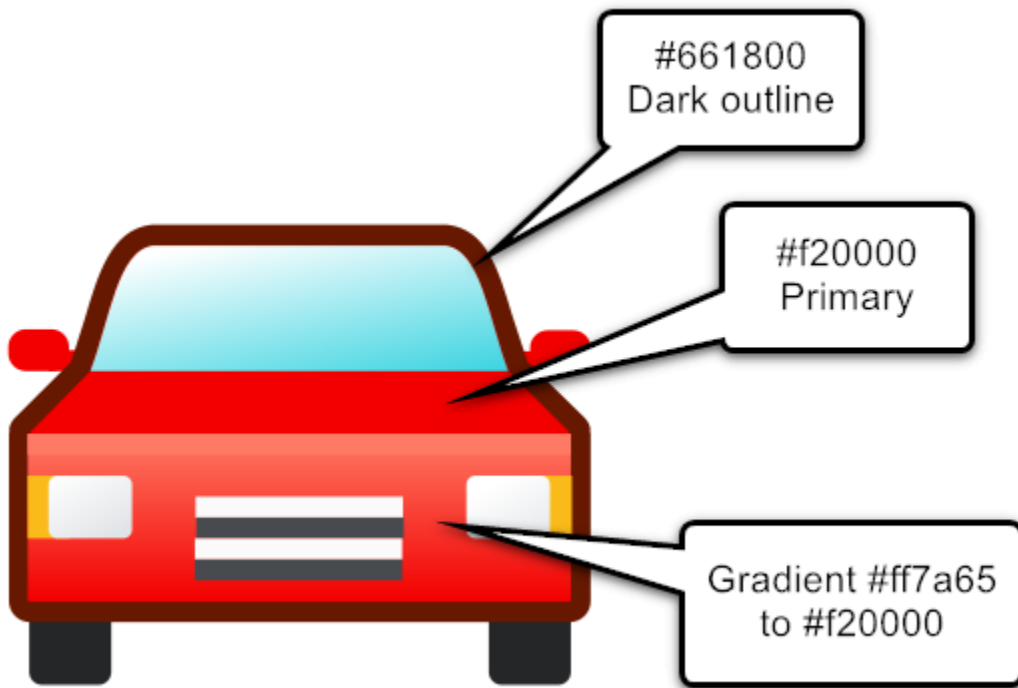
Creating Colorizable SVG icons

You can use any colors you want in the SVG but certain specific colors are used to allow Memory-Map for All to change the color of the icon. The special colors are
"#ff7a65"
"#661800"
"#f20000"
If these colors appear in the SVG file using the exact representation given above, then they can be replaced with other selected colors.

Specifying the center position

If you just provide the graphic file (SVG or PNG), the geographic location where the icon is pinned (as you zoom the map) is assumed to be at the center of the image. You can specify another offset location using an "_xy.txt" file. This is a plain text file containing two floating point or integer numbers that specify the pinned coordinates in the icon image.

Importing Custom Icons

Place your custom icon files in their own folder without any other files. Then in MMfA, open the Overlays List 📑, click the Menu ▤ at the top right of the dialog, and select **Custom Icons** > **Import**. Select the folder containing the icons. Your icon files are copied into a special folder within the app, so if you want to make changes to the files, you have to re-import them into the app.

Using Custom Icons

You can select the custom icons by editing a Mark or Waypoint as normal. The custom icons are taken from the file names and appear at the bottom of the list after the standard icon names.

Sharing Custom Icons

When you share overlay data that uses your custom icons, the name of the icon is put into the GPX file, but the graphic representation is not included. That means the other person who opens the file won't have the correct representation and the mark will default to a Flag icon. You have to share your folder of custom icon data, and import it into the other device.

5. Reference

5.1. Altitude Settings

For many users, Altitude gained or lost is as important as distance traveled, and Memory-Map for All has advanced tools to collect and record the altitude on your device.

GPS altitude readings tend to be very noisy, and are much less accurate than the horizontal position. A typical mobile device might have random errors of 10 ft horizontally, and up to 50 ft vertically.

Most mobile phones have a built-in barometer, that gives highly accurate *differences* in altitude, but it can be affected by the weather.

If you go to the Main menu, Settings, Altitude Settings you can select from 4 modes.

- **No Altitude**. The barometer is turned off and no altitude data is recorded in the tracklog. This also disables various height-based features, and is appropriate if you are only interested in 2D navigation.

- **Barometer only**. Records changes in altitude based only on the barometer. You have to set the starting altitude at a known position.

- **GPS Only**. The barometer is turned off and altitude is taken from the GPS only. The data is smoothed so rapid changes in altitude are filtered out, but you should expect to see occasional step-changes.

- **Blend GPS + Baro**. Records a blend of smoothed GPS with accurate changes from the barometer.

- **Terrain Elevation**. Your altitude is assumed to be at the mapped height of the ground (ignores GPS height and barometer)

Note. Barometer is available on iOS and some Android devices only.

With any of the altitude modes (except "Terrain"), you can adjust the current altitude reading. This sets an offset which is added or subtracted to the sensor readings, so that the result agrees with the vertical datum of your topo map.

You can adjust the smoothing time constants that the app uses for filtering both the GPS Altitude and Barometric altitude. Depending on the noise characteristics and smoothing built-in to your device, you may need to adjust these to get good results on your device. If you find the Ascent and Descent are reading too high, you may try increasing the smoothing time constants.

In "Blend" mode, we recommend using a long smoothing time for GPS, up to say 60 minutes. This will totally smooth out any weird jumps in GPS altitude, while providing a stable reference for the Barometric hight and correcting for slow changes in the weather.

If you are using an external GPS make sure it sends the GGA sentence if you want altitude data

Recommendations for best results:

- If you are only interested in changes in height over a few hours, use Barometric-only mode

- Set the Altitude correction before you start recording a track. If you adjust it during a recording, the track will have a jump in altitude.

- If using GPS or Blend mode, allow the GPS to run for several minutes before setting the

altitude.

- For the iPhone, we recommend a 20 minute GPS smoothing and zero barometer smoothing. Settings for Android devices will vary widely, but 20 minute GPS smoothing and 60 seconds barometer smoothing is a good place to start.

- Not all devices are able to record a meaningful altitude profile due to GPS and barometer sensor performance. In our testing we found the iPhone 12 mini produced the most consistent readings, while some android phones were not able to give meaningful ascent/decent data with either GPS or barometer.

- The terrain setting will give the same altitude profile as you would see on a planned route. Note, this method also over-estimates ascent/decent when you are traversing a steep hillside or walking along a sharp ridge, due to quantization noise.

5.2. Route Settings

Select the main menu > Settings > Route Settings to view or edit these settings.
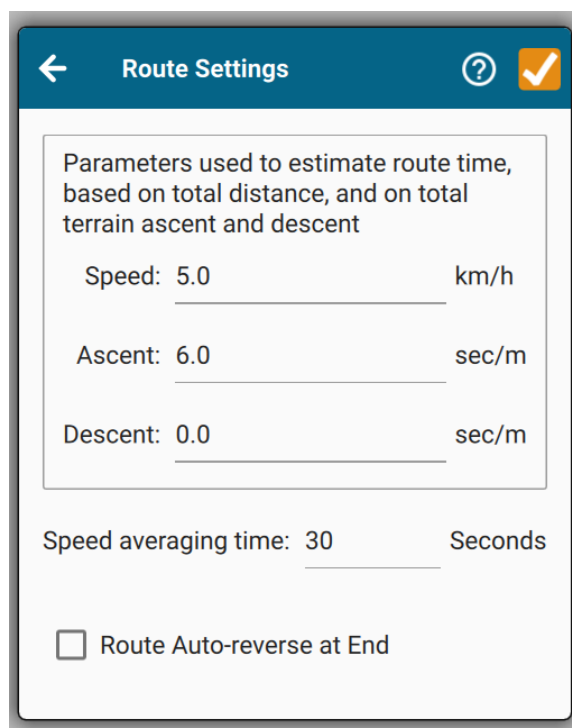
- The assumed level-terrain speed, ascent and descent parameters are used to calculate the estimated time for a route.

  The default values are in line with Naismith's rule (5 km/h + 1min per 10m ascent). For cycling, you could use a negative coefficient for descent, as you go faster downhill. Experiment to find values that work for your activities.

- The **Speed averaging time** is used to calculate your ETA, etc, based on your average speed over this number of seconds.

- **Route Auto-reverse at End** will reverse the route direction when you are close to the end of a route and you turn back along the route (useful for navigating laps).

5.3. Axis

For many of the data values that use bearings, it is possible to set up a reference direction, or "Axis", and measure bearings relative to the axis. For example, if you want to display your direction of travel relative to the rhumb line of your route, you can choose "COG vs Axis", and set the axis to the current leg of the route.

To change the direction of the Axis, press-and-hold on any of the data items that use the axis.

5.4. Display settings

You can use the Memory-Map app with a light, or dark theme. The dark theme may use less battery power and may be easier to see at night. The default is to use the same theme as your system is set to when the app is started.

Note that if you change the system theme preference, you may have to restart the app to see the change in Memory-Map.

Many devices are too bright to use at night time, if you want to keep your night vision, even if you turn the system brightness down to a minimum.

Memory-Map has a "Brightness" control that allows you to dim the colors displayed on the screen. We recommend using the dark theme if you are using a low brightness setting.

The app also has a "Backlight" control (available on some devices only - currently just Android). This allows you to control the display backlight to further dim the screen. On some devices you can dim the screen below the minimum value that is possible with the system settings.

Both of these only apply to the app. If you switch to another app it will show at the normal brightness.

The setting is not saved. If you exit the app and restart it, it displays at normal system brightness (this is necessary because if you set it to a low level, you won't be able to see the screen at all in bright conditions).

By default, the interactive controls such as the menu buttons are hidden from the display after a few seconds, allowing you to view the full screen without any clutter. The controls re-appear when you touch the screen. In the Display settings, you can change the time after which the controls are hidden, or set them so they are never hidden. Just slide the **Hide Controls After** setting to the desired value.

On Android, you can select **Show When Locked**. If this is enabled, when you turn off the device and later turn it on again, the app is immediately visible and you don't have to unlock the device to see the map.

On iOS you can achieve a similar effect using the Accessibility > Guided Access (a mode designed to allow a child to use an app without being able to switch apps). Enable the Side Button option to allow yourself to turn the device off. Note that Memory-Map does not offer a support service on using Guided Access. It is a feature of the phone, not the app.

5.5. Map settings

Change Map Scale by Zooming

First let me explain that maps displayed in Memory-Map are "raster images". They are pictures of what you would see on a paper map. When you zoom in and out, the picture gets larger of smaller.

By default the **Change map Scale by Zooming** option is enabled, so that when you zoom out so far that the text on the map image is too small to read, it automatically changes map to the next smaller scale. When you zoom in, it automatically changes to a larger scale map to show more detail.

Sometimes you don't want this behavior and you want to be able to zoom out to see an overview of the map, or perhaps you want to zoom in to see the detail without needing your reading glasses. This can be achieved by turning off the **Change map Scale by Zooming** option.

Note that you can control which types of maps are automatically zoomed by closing down unwanted types in the map list. If it zooms to a map type you don't want (say, a historical map), you can tap the Maps button ⬦ then tap the triangle on the left to close the displayed map type, and select a different map. Now, when you zoom in and out, it does not show the map type you closed.

Show Scale Bar

When selected, a rectangle is shown at the bottom of the map window indicating the scale of the map. Use Main Menu, Settings, Units to change distance units.

Automatic Download

When selected, the app will automatically download map data when needed. If you turn this off, the app will only download map data when you use one of the bulk download methods, and you may see blurred area where the map data is not completely downloaded (see Troubleshooting). Normally, we recommend you leave this on. When you are in an area with a weak mobile data signal you might want to turn it off, but in fact it is usually better just to put your phone in airplane mode.

5.6. Overlays List

Use the Overlays button 𝕝 (top right) and **List Overlays** to access the overlays list. The L key on they keyboard is a shortcut.

Overlays (marks, routes and tracks) are presented in a hierarchical tree, allowing multiple levels of categories and subcategories. If you have organized your data using Categories in Memory-Map Navigator on the PC, you can save your data as a GPX file. When this file is imported into MMfA, your categories are imported too.

Checkboxes control visibility of objects on the map, or of all objects in a category

Sorting
Tap the Menu at the top-right of the dialog, and select one of the sort modes.
You can sort your data by any of the following criteria
- Name

- Date created
- Date modified
- Size of the bounding box (width plus height)
- Distance from the geographic location you are viewing on the map
- Reverse (toggles the direction of sort)

Categories are sorted by the same criteria as objects, including size, distance, etc. Creation date is the earliest creation date of the objects in the category. Modification date is the latest modification date of the objects.

Search

You can enter a search text, which causes the list to only display items that match the search string. The match may be in the category, overlay name or in the notes.

Context Menus

Right-click or Tap-and-hold to bring up the context menu on an object or on a category.

- View: takes into account all the selected objects, categories
- Move to: changes the category of selected objects. (There is no drag-and-drop or cut-and-paste)
- Import Here: Load a GPX file, placing objects within the selected category. Categories in the GPX file are ignored
- Remove Category: all contained objects are moved up to the parent category

Multi-selection

You can select multiple objects, which can be in different categories, and apply the context menu operation to objects of your choice. Note that you cannot select multiple categories, only the final overlay objects.

The user interface depends on whether you are using Touch-screen or Mouse:

Mouse / Trackpad
Click to select Item
Ctrl-Click: toggle the clicked item
Shift-Click: select range between previous click and clicked item (only within a category)
Double-click: edit the selected item
Right-click: context menu applies to all selected items

Touchscreen
Tap to open/edit item
Tap-and-hold to access the context menu
Use "Multi-select" in the context menu to enable selection mode
In selection mode:
Tap toggles the selection of an item
Tap-and-hold on un-selected item : select range between previous tap and tapped item
Tap-and-hold on selected item : context menu applies to all selected items
"Cancel Selection" exits selection mode

5.7. Keyboard shortcuts

The app allows use of a keyboard to access certain frequently used features.

Main app screen, (not editing layout)

- **Page Up, Page Down** : Change pages

- **Q** : Main menu. Cursor keys and enter may be used to navigate the menu

- **L** : Overlays List

Map screens

- Cursor keys : scroll map

- **-** or _ : zoom out

- **+** or = : zoom in

- **I**, **O** : scale in or out

- **M** : Map List

- Del, Backspace: Delete the selected mark/waypoint

- Insert, **N** : Insert waypoint

- Enter or Esc : Done (finish route, etc)

- Home or **G** : GPS Lock

Editing layout

- Cursor keys : Move item

- Ctrl + cursor keys : Adjust item size

Any text field

- Standard system shortcuts: Ctrl-C Copy, Ctrl-V Paste, Ctrl-X Cut, Ctrl-Z Undo

Media Keys

- Volume +, Volume - : Zoom map

- Next Song ⏭, Prev Song ⏮ : Change page

  (Note, media keys don't work with iOS)

5.8. Timer

The app provides a flexible count-down / count-up timer, designed for sailboat racing, but can be used for any purpose.

Use the Edit Layout to add timer items to your screen.

See here for details of the available items. In addition to the timer, you can show your distance from the start-line and various other specialized data read-outs.

Tap-and-hold or right-click on any timer item and select **Timer settings** to configure the count-down period, or to set the count-down to a specific time of day.

5.9. License Information Dialog

Click **Main Menu** > **Settings** > **Account** > **Show Licenses** to see a list of all the resources that have been activated in the app.

You can also see the account user ID that you used to sign-in, and the device name that the system has attached to the device hardware ID.

IMPORTANT: If you are struggling with license issues, you need to read "How to Access Purchased Maps". The most likely cause for problems that you have downloaded the wrong edition of a map.

Note that it is possible to have multiple devices having the same hardware ID, which are seen as the same device in the license management system. If you see the wrong device name here, don't worry as it is not a problem. You can still activate your purchased maps.

You can click on any of the license items that are expired or close to expiry in order to purchase a new license or activate the license.

5.10. Version History

1.3.0
Fix duplicated maps on Windows
Fix spurious track log when resuming after overnight stop
Fix crash if you switch pages while app is starting up
Remember search text
Better-looking icons on all screen resolution
Import MMNav CSV files
Import custom mark/wp icons
Edit multi-selected marks, routes and tracks
Added Insert & Delete key support for editing routes
Android: Improved GPS tracking
Android: Added Bluetooth GPS connection
Android and iOS: select multiple GPX files to import in one go

1.2.2 - 1.2.5: Android only maintenance releases

1.2.1
Added terrain elevation data (Automatically downloaded)
Added Route Profile graph (context menu for Route)
Added Track Altitude and Speed profile graphs (context menu for Track)
Option to use terrain elevation in tracklog instead of GPS/Barometer (Altitude Settings)
Show terrain ascent, descent, max elevation and estimated time for planned route (Edit Route)
Added Route settings to adjust time estimation parameters for Naismiths rule, averaging time and Auto-reverse
Added Search in the Overlay list
Added "VMG along Axis"
Allow selection of multiple GPX files to import at a time

Allow resizing of Overlays and Map list dialogs
If you move or resize a dialog, the new position is remembered
Added Scale-in and Scale-out toolbar button items
Added PageUp/PageDn/Home/End key handling for list dialogs
Improved ETA estimation when near a turn in the route
Improved Route navigation when the route doubles back on itself
Fixed Overlay List > Settings > Show All and Hide All
Remember directory for file load/save dialog
Fixed suggested filename for file save
Support for app-links (Install maps, view a location or create marks using web links from browser)
Bug fixes

1.1.3
Android Settings > Display > Show When Locked
More bug fixes
Updated tooling to Qt 6.3.2

1.1.2
Just Bug fixes

1.1.1
Added Irish Grid (Settings>Units>Position Format)
Windows: Prevent from sleeping during map download.
Windows: Display>Keep screen on

1.1.0
Fixed spurious invalid positions while GPS is valid
Option to use a text label at mark/WP instead of icon (Name or multiline Notes)
Added altitude settings with option to use barometer, GPS or a blend.
Added tracklog Ascent/Descent metrics
Added support for Pen/Pencil/Stylus
Draw detailed routes with a stroke of the Pen/Pencil, or Ctrl-drag with mouse.
Busy indicator while online
Button to dismiss status message
Adjustable Auto-hide UI controls timeout in Display Settings
Separate setting for Height units
Several bug/crash fixes
Cloud Sync: Force upload of selected objects in Overlays list
Cloud Sync: Fetch all objects from cloud, discarding local changes.
Added Static text layout item
Added Keyboard shortcuts

1.0.19
Fixed shift of map when changing pages
Changing overlay visibility does not change "modified" date or cause it to sync
Fixed crash when a dialog fails to open
Resume button icon

1.0.18
Edit Layout: allow shrinking of items to fit available space
Added Satellite Status for Location service
Improved tracklog glitch-rejection
GPS lock_point preserved when changing pages
Added Arm V7A build for older Android devices
More robust map package download
Various bug-fixes

1.0.16
Android: Fixed opening files from Gmail (Unknowns file extension)
Added "Create Account" dialog in the app instead of in browser
Fixed spurious directory creation on exit
Fixed Overlay Move-to missing categories
Route-to-track and Track-to-route hides the object instead of deleting
Overlays list, save category status when all categories are closed
Removed "Resume Recording" from Overlays menu. Flatten "Start" or "Stop"
Fixed hard to join tracks, increased distance threshold
Map Info dialog: Show path within app container
Fixed wrong layout for iPhone Max Pro
Fixed bug: Overlapping Map item, right-click
Dialog boxes may be dragged by the title bar
Added "Lock-screen" configurable Toolbar button
Improved layout edit usability
Layout Pages list shows all items with context menus
Show bulk-download progress when map data is already downloaded
Fixed Chunk Status crash
Added Mac "Open with MMfA" for all file types
Added Map Storage > Choose Map Folder for desktop OS's
Android: Added Map Storage > SD Card
Tracklog storage: retain more detail
Windows: fixed timezone issue
Android: Fixes for Full-screen mode (you still have to exit and restart the app when switching to full-screen)

1.0.15
Using GPS "Data Connection" doesn't require Pro license.
Tap on Track gives total distance in Status
Tap on Route WP gives distance to that point
Color selection: added black/grey
Fixed crash on Mac when Copy-Maps-From is canceled
Linux: added "choose folder"
Fixed Android Full-screen on start-up
Settings/About shows Qt build environment
No "Full Screen" option for Mac (built in to MacOS)
Fixed Windows QC3 file size
Fixed crash when deleting a route that is being followed
Location is valid whenever it has altitude or speed and direction
Android error messages on map copy
Fixed loss of overlay data when saving large database on Android
Fixed random app lockup on Android

1.0.12
Android background recording fix

1.0.11
Layout Pages menu > Revert to Saved Layout
Fixed Android start-up jitter
Settings>Display>Fullscreen (mobile: allows you to show system status & nav bar. Windows: full screen, Esc to cancel)
Open GPX files in MMfA from files or other apps
Added Volume keys for zooming (Android & Windows)
Android using "Share" API instead of file save
Desktop single-application and command-line processing
Updated overlay template, more flexible date/time formatting (see docs)
Track template was not saved
Edit Mark Links

Odometer "Invalid"
Show extent of data on the map after GPX import
Added Save/Share in overlay context menu on map
Save As shows the suggested name on Windows
Package download deletes any partial files if download fails
Fixed map download crash after cancel
Always expand Packages in DMS listing
Add paste buttons to login dlg
Fixed resume/shutdown crashes on Android

1.0.10
Android sign-in dialog bug fix

1.0.9
Windows location service
Tooltip bearing and distance from start point of route
Overlay list > Edit defaults
Track: Overall Average speed (in addition to Average Moving speed)
Show Licenses dialog shows account user ID and Device name, and allows changing of the device
name
Fixed Cloud Sync objects deleted count

1.0.8
Top-level Menu Icons
Added detail text to overlays list
Added map status icon in map list
Added configurable toobar button items
Added Create New Route
Tooltip data for Track: added time and distance to that point on the tracklogs
Overlay list and Find Place save the expanded category state
Select object on map, then show Overlays List -> now object is selected in list
Added Compass and Barometer sensors (iOS & Android)
Added Menu > Quit App (for tech support trouble-shooting)
Added Map Storage > Delete Un-licensed maps
Layout editing with touch, use button for pop-up context menu instead of press-and-hold (allows fine
adjustment of items without accidentally invoking the menu)
Default behavior is to keep screen on when device is plugged in.
Option in display settings, keeps screen on even when not plugged in.
Track context menu > Stop Recording & Resume Recording
Default to enable background recording, logging off
Fixed Optimize Route, with no internet access (retain original route)
Enable "How to Buy" and "Preview" without account creation
Fixed Total size estimate when downloading Whole map
Bug fix on Error in Progress Dlg
Added Maps > Map Storage > Backup to... and Restore from... (iCloud, thumbdrive, etc)
Bug fix: Crash when pressing buttons in the map list while the DMS request is in progress
Fixed Android camera display cut-out in the corners

1.0.7
Change scale at zoomed/popup screen position
Show coordinates while dragging mark
Dont fade-out buttons while dragging mark
Fixed keyboard focus issues

5.11. Offline copy of this manual

If you would like a copy of this manual to print or read offline, there is a PDF version of it: [download here](#).

6. Troubleshooting

- **Screen is totally black**
  You may have set the brightness/backlight to a low value last time you used the app. Close the app and restart it to set it to the default brightness.

  If the map screen is black, or has black squares, it means the map file is corrupted. Delete the map and download it again, using **My Online Maps**.

- **Map screen is totally white**
  You may be looking at an area of the map where there is no data, such as an area of the sea, or an area outside the coverage of the map. Tap **Maps** and choose a smaller scale map, then scroll to an area you want to view before zooming in.
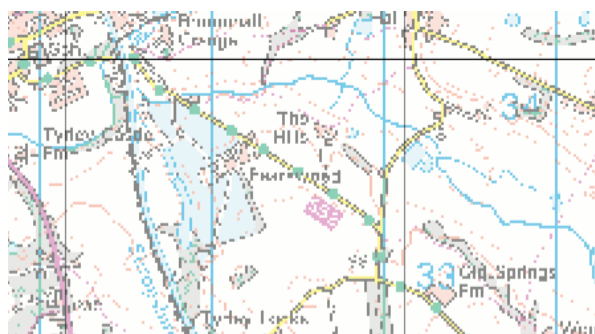
- **Map screen is white with black squares**
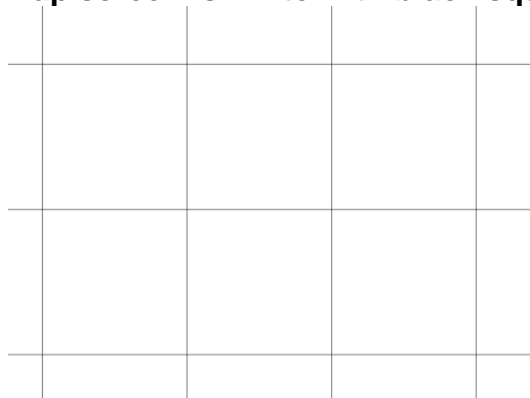
  The app is unable to download the map content at the displayed area.
  - Is the device connected to the internet?
  - Do you have a firewall that is preventing the app from using http?
  - Check Menu > Settings > Map Settings. Automatic Download should be enabled.

- **Map is blurred, like this**


  Or, blocky, like this:

  The Map License has not been activated. Connect your device to the internet, then switch to a different map, and back to this one. It will prompt you to sign in to your account and activate the map.

If it prompts you to buy the map, when you expect to be able to activate it:

- Are you signed-in to the correct account? Check your email receipt, or the web account portal to view details of your purchase (go to Memory-Map.com and Sign-in there, click Activity, Purchases).

- The map you are viewing may be a different edition to the one you purchased. Map subscriptions include automatic updates to the latest edition, but if you bought a perpetual license, then you have to use the edition of the map you purchased, which has probably been listed under "Old editions". Delete the current map, and download the correct map using **My Online Maps**.

- **Map is pixelated, like this**
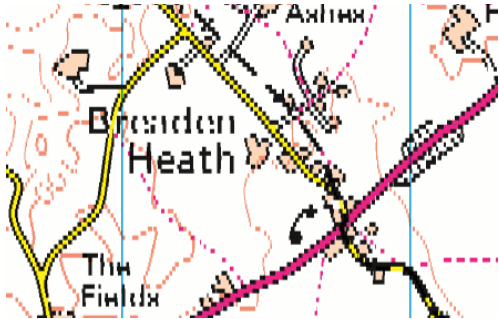
The map is shown in full color, but is blocky. This means the map data has been downloaded interactively by viewing it while zoomed out, but it is not downloaded in full detail. Unlike the feint colors used where the map is deliberately blurred, the map license has been activated.

- Is the device connected to the internet?
- Do you have a firewall that is preventing the app from using http?
- Check Menu > Settings > Map Settings. Automatic Download should be enabled.
- Also see Downloading Maps for Offline Use

7. Feedback

Once again, thanks for using Memory-Map. If you have any comments, questions or suggestions, please don't hesitate to contact us using the form below.

If you are enjoying the app, don't forget to write a nice app store review!

Click here to go to the Apple App store.

Click here to go to the Google Play store.

If you have questions, you can search using the search bar on this page, search our support knowledge-base, or use this form to contact us.