AIRMATE

PILOT GUIDE

iOS v3.9 - Android 1.7.1

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Welcome to Airmate community!

Airmate is a social app aiming to provide pilot community a free, efficient application to help design, plan and follow their flights, but also promote exchanges between pilots, the sharing of useful information and flying together.

Airmate allows to download free of charge AIRAC aeronautical database updates as well free civilian topographic maps and airport plates for most countries. Airmate is a social aviation application provided free of charge to the aviation community. No subscription or fee is needed to use all civilian Airmate features and download civilian aeronautical data. Few options are chargeable; such the filing of flight plans outside the US to cover costs incurred by Airmate or the purchase of commercial charts or plates from authorities or map publishers. Access to military data, such military UHF frequencies, military charts and NOTAM and other military information requires an annual subscription to Airmate Military. Airmate Military subscription and commercial charts can be purchased from Airmate Shop (https://www.airmate.aero/shop).

AIRAC data are mainly sourced from official aeronautical authorities (in Europe, the USA and other countries). They may be completed by open source and unofficial data. Cartography is based on open source OpenStreetMap data.

Even if the greatest care is applied to aeronautical data check, the aeronautical data supplied free of charge may contain errors and missing information. Therefore, Airmate should never be used as main source of information for flight planning or navigation, and Airmate publishers decline all liability in case of incorrect or invalid data.

Prerequisites

You need to own an iPhone or iPad running at least iOS version 12.0, or an Android phone or tablet to be able to use Airmate. Most but not all Airmate app flight planning features are also available on the Web (https://fly.airmate.aero). Your data are automatically synchronized between your mobile phone or tablet and the web (you could disable this sync).

This manual applies to both the iOS and Android Airmate releases. However, as the iOS version offers more features for now, the manual will point out features only available on iOS.

Airmate relies on the GPS integrated in the phone or tablet to get real time aircraft position and data in Flight mode, so the Flight mode will not be available on iPad or Android devices without either embedded GPS or a supported external GPS device.

Disclaimer

Airmate use mandates the full acceptance of our terms of use, please read carefully and accept all detailed terms and conditions directly from the app or on Airmate web (https://www.airmate.aero/airmate-disclaimer-en.html). A summary is shown below at at app launch, only the complete terms and conditions at https://www.airmate.aero/airmate-disclaimer-en.html are binding:

You should read and accept the below terms before using Airmate.
Airmate is not intended to replace a certified navigation device. Your use of this application is at your sole risk.
Location data may not be accurate. The embedded navigation database is provided for informational purpose only. It may not be complete and may contain erroneous data. You should always use official aeronautical documentation when planning and performing a flight. You should always use certified navigation devices when performing a flight. The software is provided 'as-is', without any express or implied warranties. In no event will the authors be liable for any incidental, consequential, or indirect damages arising our of the use or the inability to use the application, or any information, or transactions provided on the service, or downloaded from the service, or any delay of such information and service.

If you do not fully accept the complete Airmate Terms of Use available at https://www.airmate.aero/airmate-disclaimer-en.html, all flight planning and navigation

functions will be disabled and should not be used. The only feature available will be the display of Aviation Events.

What's new in Airmate iOS version 3.8 to 3.9

Airmate version 3.0 main release brought major new features such Synthetic Vision, Advanced Route Editor, SID/STAR and IFR approaches support and Terrain Warning. Latest updates 3.8 and 3.9 added various improvements:

- ➢ added informational Weight & Balance computation with graphs. The weight & balance computation takes into account the planned trip and loaded fuel, it is only informational and has to be checked against aircraft POH for the aircraft flown.
- ➢ improved aircraft configuration tools to define aircraft data for weight & balance computation.
- ➢ default weight & balance data profiles may be imported automatically for convenience, the imported profile should be carefully reviewed and edited using the aircraft approved pilot manual for the actual aircraft flown.
- ➢ the advanced route editor may now be displayed on top the map, either while planning or during flight, in order to change easily the route. A new Route button toggles the route editor display on top of the map.
- ➢ display realistic photo scenery in the Synthetic Vision for supported countries (starting with France, other being added soon). Photo scenery can be downloaded free of charge, but their continuous display on Synthetic Vision requires a subscription to Photo option.
- ➢ it is possible to pan on the Synthetic Vision display to look around.
- ➢ airfields nearby are now shown on Synthetic Vision display as well the next waypoint in the route.
- ➢ a radar reflectivity layer covering most of Europe is now available.
- ➢ allow to send recorded flight track to partners for debriefing (Click & Takeoff).
- ➢ fix issues in GPX and PLN import, fix a crash when exporting waypoint or flights on iPad.
- ➢ improved Satellite view bringing a much higher resolution for flight planning.
- ➢ temperature scale may be selected between °C and °F (°F being the default in the USA).
- ➢ preflight briefing printed pages are now generated using the preferred page size (A4 or US Letter)

- ➢ seaplane bases added on the map display.

- ➢ fix various display issues on some devices, especially when device rotated in landscape mode.

- ➢ embeds worldwide aeronautical database for cycle 2304 (April 20th, 2023), automatically updated.

- ➢ Includes worldwide aeronautical database at cycle 2304 (released on April 20th, 2023), automatically updated to latest cycle at launch.

- ➢ Other minor bug fixes and improvements.

On iOS 14, to connect with external devices on the local network (such flight simulators or ADS-B traffic and weather receivers), make sure you allow Airmate to access your local network if prompted.

What's new in Airmate Android version 1.7.1

Airmate Android version 1.7.1 brings the following fixes and improvements:

- ➢ Add an EFIS / AHRS view displayed during flight by clicking on the attitude indicator button at the right of the aviation map. The EFIS view will display aircraft attitude and main flight parameters such as speed and altitude. The AHRS data is obtained through the Android device own accelerometers, so the device should be affixed before use. The EFIS / AHRS view cannot be displayed by devices without appropriate sensors.

- ➢ embeds aeronautical database at cycle 2211 (effective date November 3th, 2022, automatically updated to latest cycle at launch, you could also update the cycle using the Settings menu).

Next releases roadmap

Next iOS versions will feature:

- • Coverage extension of the procedure database, to cover more countries.

- • New vector aviation map (currently experimental, may be tested from Settings/Map/Map Engine)

- • Obstacles shown on profile view

- Additional weather information

- Additional social features

- And new exciting features to be discovered soon!

Next Android versions will add features successfully tested on the iOS version:

- flight plan filing in the USA and the rest of the world

- alerts for areas and NOTAM crossed by flight path, both during flight planning and navigation.

- ADS-B receiver support for traffic display and in-flight weather reception.

- AHRS display

Airmate roadmap is improved to cater best to user requirements, so don't hesitate to send your comments and improvement requests to airmate@airmate.aero

Migrating from another app

Many Airmate users were using previously another aviation apps, often paying ones. You could install Airmate on the same device than any other aviation app, without any conflict. Furthermore, Airmate Web Flight Planning and Airmate iOS now allows you to easily import in Airmate personal waypoints created with other apps and exported to a supported format (GPX, KML, CSV).

First launch

Connect to your account

Once Airmate downloaded on your device, you should first connect to your account. Initial connection is performed over Internet, so you should perform it when your device is within Internet coverage.

You can either create your free account at www.airmate.aero or create it from the application.

If you already have an account created at www.airmate.aero, enter your existing username and password to activate the account from your device.

If you do not have an account, you can create it from Airmate application. At Airmate first launch, choose your username, your password, and indicate your email address (a password confirmation is also asked by Android version). An activation code will be mailed to your email address. We recommend indicating your home airport and country during this step. This will help Airmate to propose charts most suited for you and activate location based social features.

It is possible your selected username already exists:

- if this username is yours and already in use on another device, indicate your password to associate the new device to your existing account. In this case, all your flights, aircrafts and user waypoints will be automatically synchronized between your devices (you could disable this synchronization if wished)

- if this nickname is not yours, you need to select another one not already in use. Airmate will suggest to you an available username, you could use it or make another suggestion.
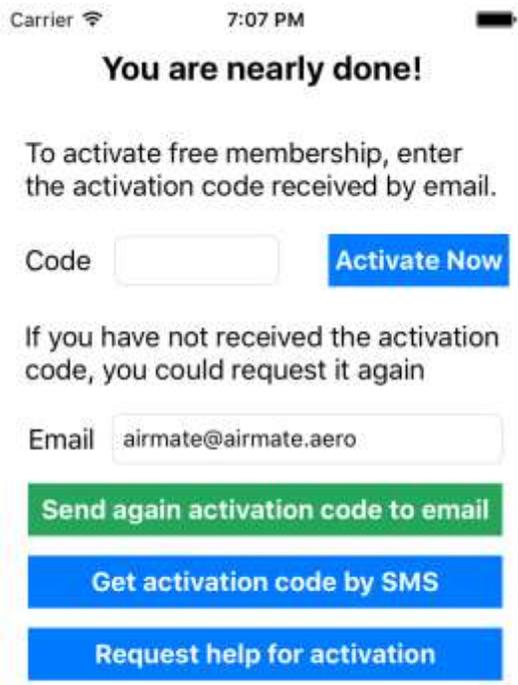
Once activation request sent, Airmate will ask you to enter the 6 digits activation code sent to your email address to complete the activation procedure. When done, activation is completed.

If you have not received the activation code in your mailbox, please check the activation email was not sorted in your spam folder.

You can request the activation email to be sent again to the same or a new email address. As sometimes activation emails are sorted as spam, you can also request to get the activation code by text message (hotmail.com, outlook.com, btinternet.com often sort our activation email as spam).

In case of persistent issue to receive the activation email, please send an email to Airmate support (airmate@airmate.aero), indicating your username and email address or request the activation code by text message. An embedded button allows to send the email help request directly from Airmate.

> Warning: please note that some email providers may not deliver properly our activation emails. If you have not received the activation email, please check in your spam mailbox and then if not found request it again either by email or using text message.

Chart Download

Once your account is activated, Airmate will automatically look out for relevant charts for you. 3 kinds of charts may be proposed to you:

- **AIRAC aeronautical database** update. Download of those updates are strongly recommended. They are issued every 28 days for each AIRAC updates.

- **recommended charts**, that are those of your home country. Free topographic charts are available for all listed countries. In some countries, optional commercial aeronautical charts may be available as options. Free aeronautical charts from authorities such US Sectionals or open source providers such OpenFlightMaps may also be available.

- **other available charts** for other countries

We recommend to always download the **AIRAC navigation database update** (if proposed), as well the **recommended free topographic charts** for your home country.

Airmate embeds a low-resolution worldwide topographic chart. This worldwide low-resolution chart is not accurate enough for navigation, so you need to download the detailed topographic charts for the countries where you intend to fly to. You don't need to download them all in advance, only when flights are planned in those areas. You can anytime install additional charts from the Settings menu.

Free open source OpenStreetMap topographic maps are available for most countries in both raster and vector formats. Additional free aviation chart overlays such US Sectionals or OpenFlightMaps are also available free of charge, along with paying charts from commercial suppliers. AIRAC navigation database updates are supplied free of charge to all users at every new AIRAC cycle.
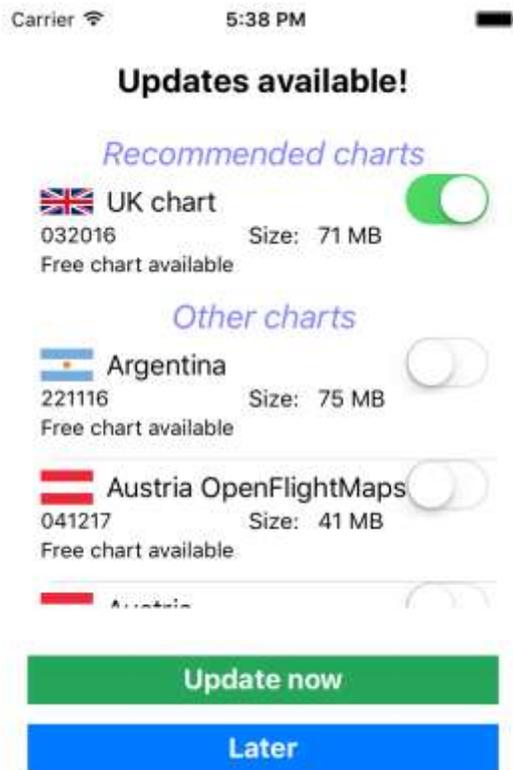
Elevation Data Download

When you select topographic charts for download, Airmate may propose you to download associated elevation data for the whole topographic area chart(s), in order to display terrain profile view. Elevation data have a significant size, you could choose to postpone the download, in this case it will be proposed again when you open a planned flight for which terrain data is missing.

Additional Data Download

Airmate may download automatically other additional data needed for flight planning, such obstacle or location names databases for your home country or the countries for which you

downloaded topographic charts. Those additional data may be managed in Settings if needed.

Using Airmate on several devices

You can use Airmate on several iPhone, iPad and Android devices belonging to you, with the same user account. All your optional purchases (e.g. additional commercial charts) will be available on all devices, thanks to the Restore purchase function available in the Settings menu.

To activate Airmate on another device, simply fill in your existing username and password on the new device, go to the email field but leave this field blank. Click then on the Activate free Membership button.

All your planned flights, defined aircrafts and user waypoints are automatically synchronized in the cloud and shared between all your devices. After initial Airmate install on a new device, or anytime you launch Airmate on one of your devices, Airmate will look if some of your data has been updated on another device and will sync it if needed, a screen will allow you to follow the progress of the sync operation. You could disable cloud synchronization if you wish in Settings/Advanced/Storage & Cloud.

Airmate Web Flight Planning

Using your Airmate account, you could connect to Airmate Web Flight Planning on Airmate web https://fly.airmate.aero to view aviation data as in the Airmate app. The web flights are synchronized with your mobile app, allowing you to use the Web to plan the flight at home and then fly it with your mobile device.

On Airmate Web, after logging in with your Airmate username and your password, you can also import and export your personal waypoints.
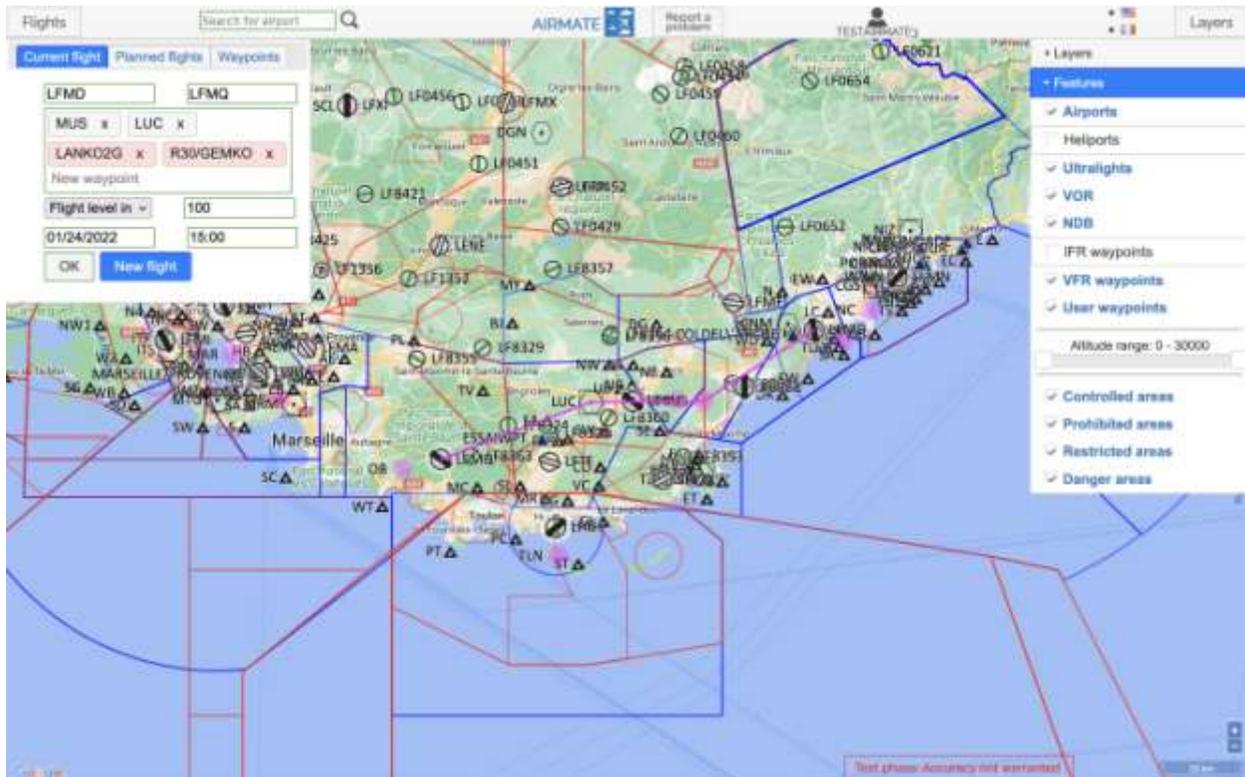
Your Airmate Home Page

You could anytime view all your Airmate data on your https://my.airmate.aero personal page. You will find your own data (planned flights, recorded past flights, personal waypoints, NOTAMs on your home and preferred airfields) and useful data shared by the community: ratings, fuel prices, landing fees, aviation events, shared waypoints, shared recorded flights…

If you wish, you could using this page set some of your data (personal waypoints, recorded past flights) as shared with the community. By default, your data may be seen only by yourself.

Ratings

type	date	location	user	rating
fuel	Jun 03 22	LIPV (Venezia, IT)	ALBERTOLIRI22	AVGAS 100LL...
fees	Jun 01 22	LFCA (Chatellerault, FR)	BB972	5EUR
fuel	Jun 01 22	LFCA (Chatellerault, FR)	BB972	1.95EUR/L
fees	May 27 22	TAA (Middleburs, US)	TOMS	5USD (507kg)

Events

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start date	airport co...	city	title
Oct 23 22 09:00 UTC	LTFM	Istanbul	SAHA EXPO Defence & Aerospace
Aug 15 22 00:00 UTC	LFLB	Voglans	TAJF 2022
Aug 13 22 10:00 UTC	1W1	Camas	The SW Washington Pilots Assoc. S...
Aug 13 22 10:00 UTC	LOAS	Krems - Austria... Bsflontage Krems - Langenlois

My past flights

start date	origin	destination	duration	distance
May 06 22	SHFB	SHEC	00:01	2.43 NM
May 06 22	SHFB	SCEL	00:02	14.75 NM
May 06 22	SHFB	SCEL	00:02	14.75 NM
May 06 22	SHEI	SCBG	00:05	3.76 NM

My planned flights

start date	from	to	duration	distance	status
not set	SBBP	SBJD	00:00	3 NM	planned
not set			00:00	3 NM	planned
not set			00:00	5 NM	planned
not set	KBJC	KAME	00:04	5 NM	planned
not set	KSEA	CFEJ	00:01	5 NM	planned
04/30/2022 00:00Z	LFMD	EDNY	00:04	5 NM	expired

Planning a new flight

After account activation and chart updates, Airmate will display the list of planned flights or trips. If you have several devices activated under the same Airmate account, Airmate will synchronize the list of planned flights between all your devices (iPhone, iPad, Android and Web).

If there is no existing flight, such as first launch, Airmate will create a template planned flight ("Template flight plan"). You can select this template to define the parameters of your first flight. Alternately, you can click on either the **Browse Map** button to browse the aeronautical map near your current location or on the **Start Flight** button to switch Airmate in Flight mode without any advance planning.
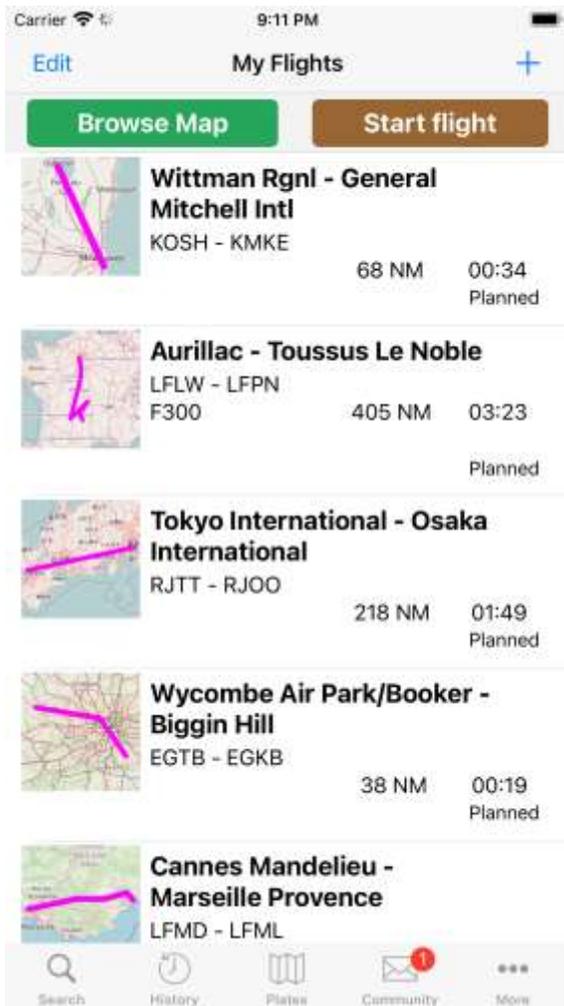
The **+** button at the upper right of the flight plan list allows to add a new flight plan to the list. The Airmate free version allows to create and manage 250 different planned flights that you could modify and manage as you wish. Airmate Pro and Military versions allow to store an unlimited number of planned flights.

On the lower part of the screen, navigation buttons give access to other features:

- $\bigcirc$: Search: advanced search tool
- $\bigcirc$: History of recorded past flights and playback, pilot flight log
- $\square$ airport VFR/IFR approach plates manager
- $\boxtimes$: Community/social features, Messaging, help and support
- $\boxed{24}$: Event calendar
- $\nleftrightarrow$: Aircraft management (iOS only)
- $\textcircled{\tiny \$}$: Settings to configure Airmate and its options
- on an iPad or tablet, all above choices are displayed on the bottom of the screen. On a narrower phone, the first buttons are displayed

and a ••• More button allow to view remaining choices.

Plan a flight

To plan a new flight, you need only to indicate:
- **origin airfield**
- **destination airfield**

If you wish, you can enter more data about your trip, including detailed route, alternate airfields, flight speed and altitude, flight date/time, and so on.

You have two ways to enter the trip route and the origin, destination and alternate airfields:
- **from the flight plan main edition page**, by entering their airport codes. If you don't know the airport code, you may also search airports using part of the airport name or served city name.

- or **selecting them graphically on the map**, with the ability to finger swipe the route anywhere on the map to select the path you want to use.

By default, the map is displayed when you select a flight in the list or create a new flight, and you can click on the Edit tab to switch to flight planning entry form. You can change this behavior in Settings/General to display the flight planning entry form at flight selection.

Planned Flight creation from map

To create a planned flight from the map, you can either:
- click on the **Browse Map** button that will launch the map in Planning mode centered on your current location.

- select a planned flight from the list. The map will be displayed in **Planning** mode and may be switched to **Flight** mode later thanks to the aircraft button at the upper right.

If you have not indicated any origin and destination airport on the planned flight edition page, in Planning mode the map will be displayed centered on your current location. You can move or zoom the chart as needed. In order to declutter the map, some aeronautical information may not be displayed until you zoom in at appropriate zoom level.

You could click on any point (airfield, radio beacon, IFR, VFR or user waypoint) to view its characteristics and:

- **Center** it on the map.

- **Add it to Route** if not already in the route or **Remove from Route** if already part of the route.

- for airfields:

  - select it as **origin** or **destination** airfield if they are not already set, using the Set as origin or Set as destination choices.

  - you can also select an airfield as **Alternate 1** or **Alternate 2** if they were not specified.

  - request the **display of the airfield IFR or VFR georeferenced plates** on top of the aviation map, even if the airfield is not part of the trip (if airport has associated georeferenced plates).

  - add or remove the airfield to/from the list of your preferred airports.

  - the Info ⓘ button will display airport detailed information

Please refer to next chapter for more details on how to use charts.

As soon as departure and destination airfields are defined, the tabs NavLog, Wx (Weather) and NOTAM become active.

Importing a flight

It is also possible to import an already defined flight in PLN or GPX file from another app or from EuroFPL flight plan filing platform. To import a planned flight, click on the PLN or GPX file to open it (e.g., from your mail application or from a file browser), the select "Copy to Airmate". Airmate will open the flight and propose to add it to your planned flight list.

Rubber banding the route

As soon as departure and destination airports are defined by selecting them on the map or on the flight planning form, a magenta route between airport and destination is shown. This route may include intermediate waypoints.

In Planning mode, both the route and the intermediate waypoints may be rubber banded with your finger to change the route graphically, you can then define the route to pass through any itinerary of your choice. In Flight mode, rubber banding is disabled to avoid unwanted mistakes, however rubber banding during flight may be enabled in Settings.

If you rubber band an intermediate waypoint, its position will change and will be recorded. This temporary waypoint will be assigned a name based of latitude/longitude in degrees, minutes, seconds and hundreds of seconds, and will be shown as white circle.

If you bring the temporary waypoint near a defined point, such IFR waypoint, VFR waypoint, radio beacon or airport, the waypoint will stick to this near point, takes its name and exhibit a green dot to show the waypoint is a known waypoint. You can move away the waypoint to another position if you don't want to select this defined waypoint.

If you use your finger to move a part of the route, an additional temporary waypoint for the new route turning point will be created and added to your route.

You can act on temporary waypoints by clicking on them, for example to perform a direct to or delete them from the route. It is also possible to save the temporary waypoint as user waypoint (see below user waypoint management). If the temporary waypoint has not been saved as user waypoint, Airmate will assign a temporary name to it, based on its geographic coordinates (N/S, then latitude in degrees, minutes, seconds, hundreds of seconds and then longitude encoded in the same way).
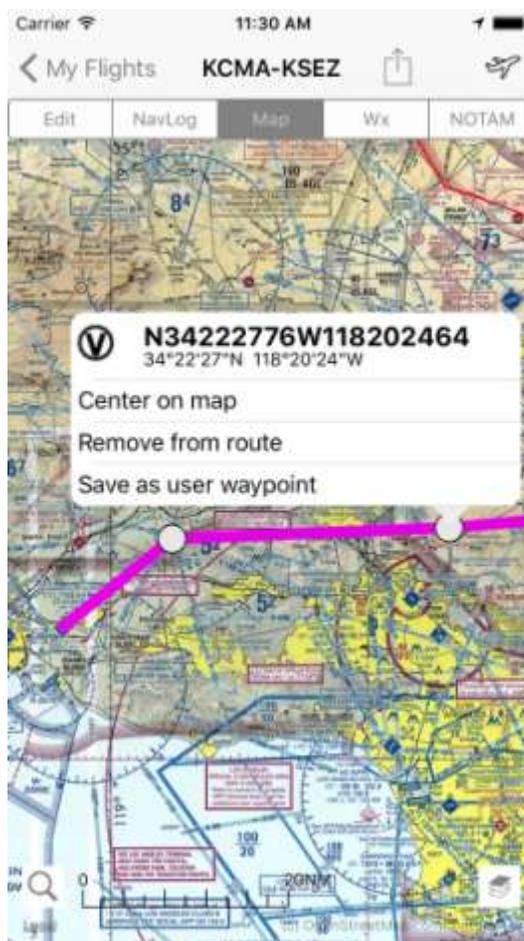
All route changes performed from the map view (either by rubber banding the magenta route or by selecting a point to add or remove it from the route) are recorded. The Undo button will appear when there is at least one change recorded, clicking on it will undo the change.

Using the Planned Flight Edition form

You may also use the Edit flight plan edition forms to enter origin and destination airfields and all details about your flight.

Please refer to the next chapter for a tutorial using the planned flight edition forms.

Flight Log

Your Flight Log is computed automatically from route waypoints and aircraft ground speed.

For every segment of the route, the Flight Log provides:

- segment points, including their geographic coordinates and radionavigation frequencies.

- Altitude reached on the leg

- Magnetic heading to follow

- Distance

- Speed

- ETE (Estimated Time En Route)

- Fuel usage estimate (iOS only)

On Android, the ground speed used is the one indicated in flight plan edition page (120 kt by default).

On iOS:

- If you have selected an aircraft with detailed

characteristics filled in, the Flight Log will take into account those characteristics for a more detailed flight log (climb, cruise and descent speed, vertical speed, fuel flow, and so on).

- Airmate takes into account wind speed at flight altitude to compute ground speed and heading corrected for drift.

- A Fuel tab at the bottom of the page will allow to display the planned fuel requirements for every leg.

- Top of Climb and Top of Descent are included in the Flight Log, using the aircraft detailed characteristics if they are known or otherwise a default of 500 fpm for climb or descent

- The share button ⬆ at the upper right will print out the flight log to any available Airprint printer in a user-friendly format easy to use in flight.

- a Warning tab at the bottom of the flight log allows to view the list of aeronautical areas crossed by the flight path for every leg, as detected by Airmate (list may not be exhaustive).

Weather

Weather tab **Wx** gives access to all weather information for your flight. You can click on bottom tabs to access:

- TAF and METAR for origin, destination and alternate airfields, either in aeronautical format Raw or in decoded form Decoded. If the airfield does not have a weather station, Airmate will look out for TAF and METAR at nearby airfields.

- SIGMET displays SIGMET information for your flight, the Filtered tab presents those most appropriate for your flight, the All tab shows all SIGMET in the global area, it should be consulted to get a global view.

- SIGWX displays weather charts. Thanks to tabs at the bottom of the screen you may quickly browse through several chart types and validity dates. Those contextual charts are selected according countries crossed by your flight: for example, in US you will get US weather charts (including significant weather, forecast, convective, winds, radar), in Europe you will get appropriate European weather charts, and so on.

- Wind displays wind charts. Here also, bottom buttons allow to select the area, validity period and altitudes. It is also possible to display wind barbs on top of the aeronautical chart for any altitude time during the next 5 days.

- Sat displays regional satellite charts, usually including visual and IR views.

To allow you to check weather at any airport, even in flight if you divert, Airmate will download regularly a worldwide weather database. This of course requires availability of an Internet access. When you request to access weather data for a given airport, Airmate will seek latest data over the Internet (if available) or if there is no Internet connectivity will display last weather for this airport in the database with its age. Other weather data fetched, such charts, are saved in cache and stay available for a few hours, allowing to access them outside Internet coverage, e.g. during a flight. The default weather data caching period is 3 hours and may be changed in the Settings menu. After this period, obsolete data will be trashed automatically.

> **WARNING**: weather data cached and accessed offline may not be up to date. It is paramount to use up-to-date data for air navigation, for example using VOLMET, Information or ATIS frequencies
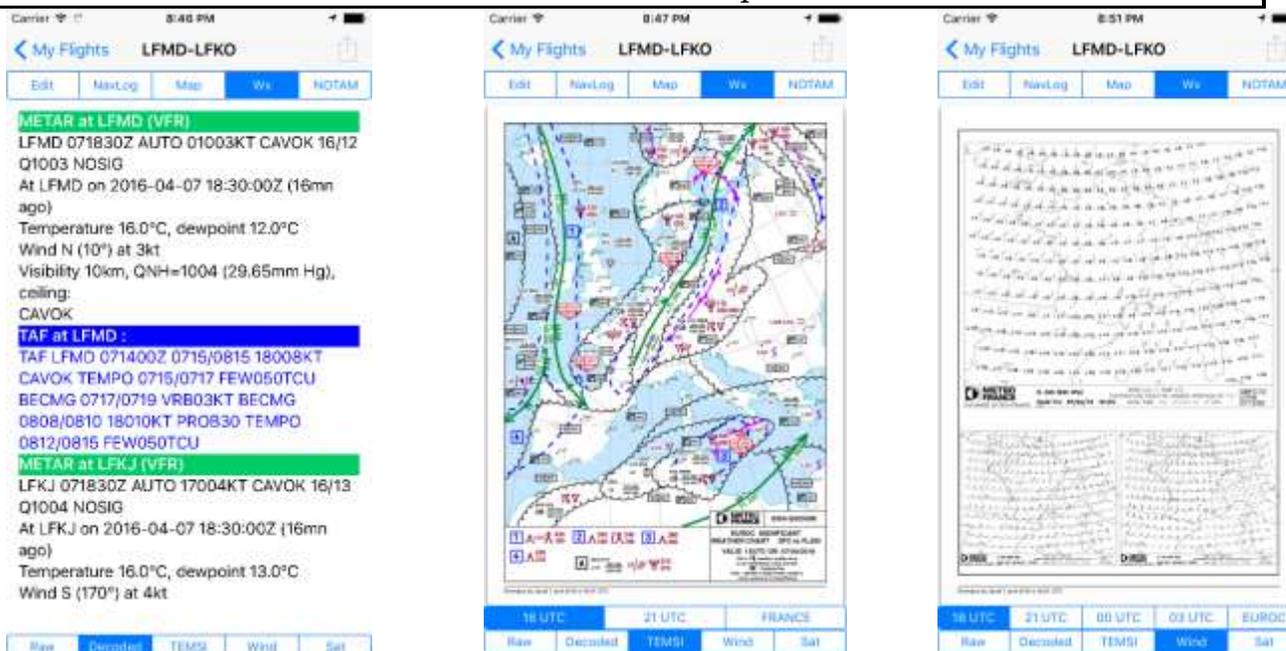
You can also access TAF and METAR directly from the aeronautical chart, by clicking on any airport with weather station, this feature is described in next chapter.

The share button ⬆️ at the upper right will allow to print the displayed weather data (TAF/METAR, SIGMET, SIGWX, WIND or other weather chart) to any available Airprint printer.

NOTAM

The NOTAM tab will display NOTAMs from an embedded worldwide NOTAM database automatically and regularly updated. This database is available even offline during flight. An advanced NOTAM module allows to display NOTAMs:

- **filtered NOTAM** for **origin**, **destination**, and all **alternate airports**

- **filtered NOTAM relevant to your route** (iOS only): Airmate will try to intersect your flight path with relevant NOTAMs and display them. This process is complex and will not necessarily retrieve all NOTAMs on the route, so a manual validation is always needed.

- **all NOTAMs in the crossed FIRs** (Flight Information Regions)

NOTAMs can be sorted out by categories (by default "All" is selected).

The module will also display SUP AIP (in European and few other countries) and TFR (Temporary Flight Restrictions, in the USA only), as well as the status of some regulated areas, see below for a more detailed description.

In the same way than for weather data, you need before flight Internet access to be able to have your embedded NOTAM database automatically updated. An update information message is shown every time the database is updated. If you have not seen such message recently, you could check the last update and fetch dates of the embedded NOTAM database in Settings/Map.

If the NOTAM database is too old, Airmate will no longer use it. It will fall back to backup mode, where NOTAM are retrieved online from the network only for the origin and destination airports (it will no longer be possible to view NOTAM en route or all NOTAMs in a specific FIR, neither SUP AIP or TFR). Such airport NOTAMs once obtained will be kept in cache for a few hours to remain available offline. They will be deleted automatically a few hours later. The default NOTAM caching period is 3 hours and may be changed in the Settings menu.

NOTAMs are retrieved from the FAA (Federal Aviation Administration), EUROCONTROL or directly from some Authorities and are usually displayed in English. They may be displayed in the country issuing language in some cases.

As explained in the next chapter, Airmate iOS will try to display graphically NOTAMs on the aeronautical chart when possible. This is a best effort display, so all NOTAM will not be rendered on the map.

The share button ⬆ at the upper right will print the selected NOTAMs to any available Airprint printer. You could also have NOTAM printed as part of your Briefing pack (see Full Briefing Pack (iOS only) on page 21).

TFRs (Temporary Flight Restrictions) and AIP SUP

In all countries, temporary flight restrictions may be specified by NOTAM in specific areas and timespan. In addition to NOTAMs, those flight restrictions may be defined in detail using either TFR (Temporary Flight Restrictions), specific to the USA, or using AIP SUP.

Although we do not warrant a complete coverage of TFR and AIP SUP, Airmate NOTAM database is fetching automatically TFR from FAA and AIP SUP from aviation eAIP in numerous countries.

The NOTAM tab of the flight planning will display the list of TFRs (for flights in the USA) or SUP AIP in the crossed countries (outside the USA), so the pilot may review the list and check if some TFR or SUP AIP are applicable to his/her flight. It is possible to click on any

TFR or SUP AIP in the list to access a more detailed information: either the FAA TFR description or the PDF file of the SUP AIP as issued by the authority.

Activation status of aeronautical areas (iOS only)

Numerous restricted areas may be activated / inactivated by NOTAM. Airmate will do its best to display real-time activation status indicated by NOTAM for aeronautical areas. If a NOTAM affects a given aeronautical area, it will be displayed before the aeronautical area description when a long press is performed to display area details.

In addition, in France, the status of very low altitude flying areas may be viewed in text format using the NOTAM tab / AZBA subtab.

Full Briefing Pack (iOS only)

Clicking on the Briefing tab at the bottom right of the planned flight edition forms will access the Briefing Pack creation module, able to build complete briefing pack for your flight, including all or part of the below data depending on your choices:

- Navigation log

- Fuel planning form (see chapter Fuel Planning (iOS only) on page 119)

- Weight & Balance form

- Flight Plan form

- TAF, METAR and SIGMET

- NOTAM

- Weather charts: Significant weather, winds, satellite

- IFR and/or VFR charts for departure, arrival and alternate airports

To create the Briefing pack, first select the data you want to include in your briefing using the Briefing
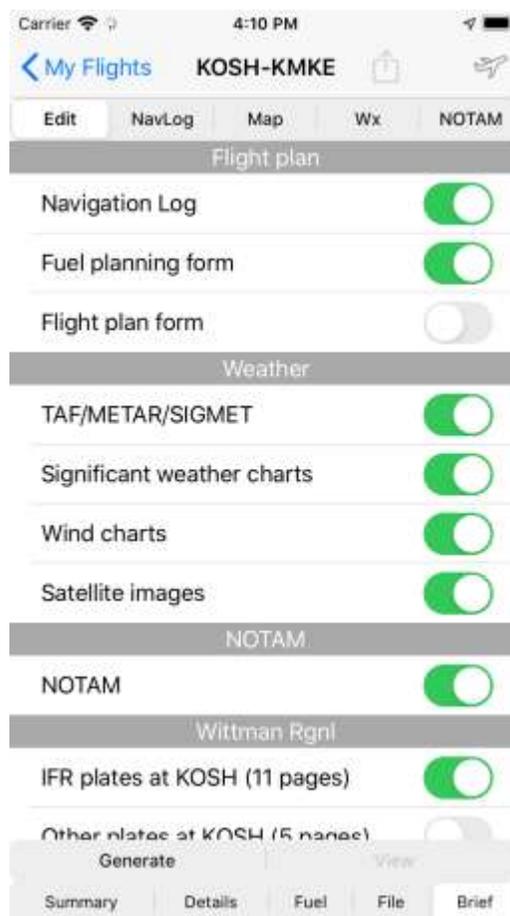
creation form. You could include navigation log and flight plan form, various weather data, NOTAMs, and IFR, VFR or other charts for the airports of your flight.

Then click on the Generate tab to generate your Briefing pack. This may take a few seconds as Airmate will check all weather and airport data and charts are up to date for your flight. Then, once the Briefing pack is generated, the View button will become active.

By clicking on the View button, you could display the Briefing pack that is a whole PDF document including all the data you selected. The **Share** button at the right part of the top navigation bar will allow you to save it as PDF document, print it or mail it.

The Briefing generation tool will do its best to select the most appropriate data. If the flight date is too far in the future, appropriate weather charts will not exist and will not be included.

> **Warning:** Although derived from operational data, the Airmate Briefing Pack is supplied for information only. It is not designed to replace an official briefing from aviation and weather authorities that you should obtain before flying.

Profile View and Automatic Elevation Data Download

Airmate displays a terrain profile view, if wished, along the planned route, elevation data is available free of charge to download in the whole world. You could enable or hide the profile view at the bottom of the screen using the Terrain button .
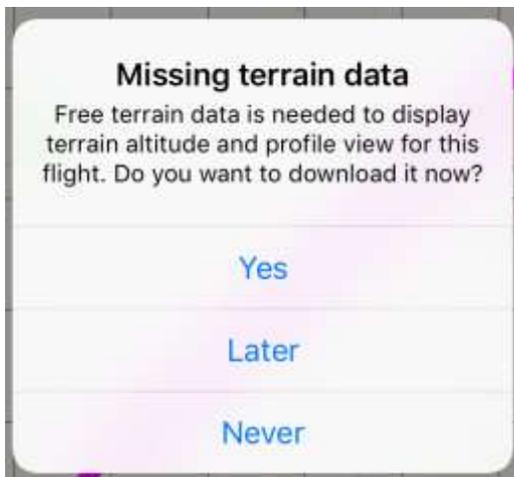
When you open a planned flight, Airmate automatically checks all needed elevation data is available to display the terrain profile view. If some elevation data is missing, Airmate will propose you to download them. You may:

- download the profile data right away

- postpone downloading for later

- postpone download and request not to be asked when opening again this flight. In this case, you could nevertheless download the terrain data by clicking on the Terrain button.

The profile view is available during planning, during flight and during flown flight replay. During planning, the terrain profile is shown along the planned route, during flight it will show terrain ahead of aircraft ground track, and during flight replay the terrain overflown.

The same terrain database is used on iOS to display Synthetic Vision, downloading of terrain information along the route is mandatory to have Synthetic Vision shown.

Aerial Imagery Automatic Data Download

When aerial imagery data is available for a given flight, Airmate will propose you to download it, so aerial imagery will be available during flight.

Please note aerial imagery data is fairly large, so download it only when you plan to use it. Aerial imagery is kept stored on the device for future flights, it could be managed and deleted using Settings/Map. Continuous display of aerial imagery requires the purchase of the Aerial Imagery subscription.

Define a Flight using the Planning forms

Introduction

Using the map to quickly define a flight by rubber banding your flight path is convenient for local and short cross-country flights, but this procedure doesn't allow to define all flight parameters.

A main summary flight planning form is available to quickly enter essential data about your flight, such selecting an aircraft or defining the speed, selecting an altitude, storing flight date. In addition to this **summary** form, other forms may be accessed through the bottom tabs:

- **Detailed** form allows to enter additional data for flight plan filing, flight sharing or flight tracking

- **Fuel form** displays fuel data (see chapter Fuel Planning (iOS only) on page 119)

- **Weight & Balance (W&B)** displays weight & balance computation form.

- **Filing** form is used to enter data specific to flight plan filing.

- **Briefing** generates a Briefing pack as explained in previous chapter.

Planned Flight Edition using the main summary form

The Edit flight plan edition page can be used to define origin and destination airfields.

Optionally, you can also indicate:

- the route to be followed: either VFR, User or IFR waypoints, or a full IFR route with airways. The **Auto** routing button will propose you a list of possible IFR routings for your flight. Refer to the next chapter for more information on the route editor features.

- the aircraft to be used for the flight

- flight rules to be used (IFR, VFR...)

- flight speed and flight level or altitude

- flight date and time

- on iOS, less used data may be entered in the "Detailed" and "Filing" pages. On Android, all data is entered on the single main edition form.

If you intend to file a VFR or IFR flight plan for your trip using the iOS app, you will need before validating and filing your flight plan to fill in all data in the flight planning forms, including selecting or defining an aircraft, settings the flight rules, indicating number of passengers and flight date/time.

In any airport field (origin, destination, alternates), you can:

- enter ICAO or domestic airfield code, it is also possible to enter a personal waypoint identifier if the waypoint is defined as "landing field".

- enter airfield or city full name or beginning of name

- if several airfields match the indicated name, their list is proposed, and you can select the right one

- at the right of airport fields, an Info ⓘ button allows to view detailed information about this aifield.

In the Route field, you may enter airfield codes, radio beacons, IFR or VFR waypoints or user waypoints. It is also possible to enter airways identifiers between waypoints. VFR waypoints associated with an airfield are encoded as the airfield code followed by a dash (-) and the point identifier, e.g. DR point of Cannes LFMD airport will be encoded LFMD-DR. For easier entry, you need only to enter the VFR point identifier to reference a point of the origin or destination airport, if you want to enter a VFR waypoint of an airport you will overfly you need to enter its full identifier.
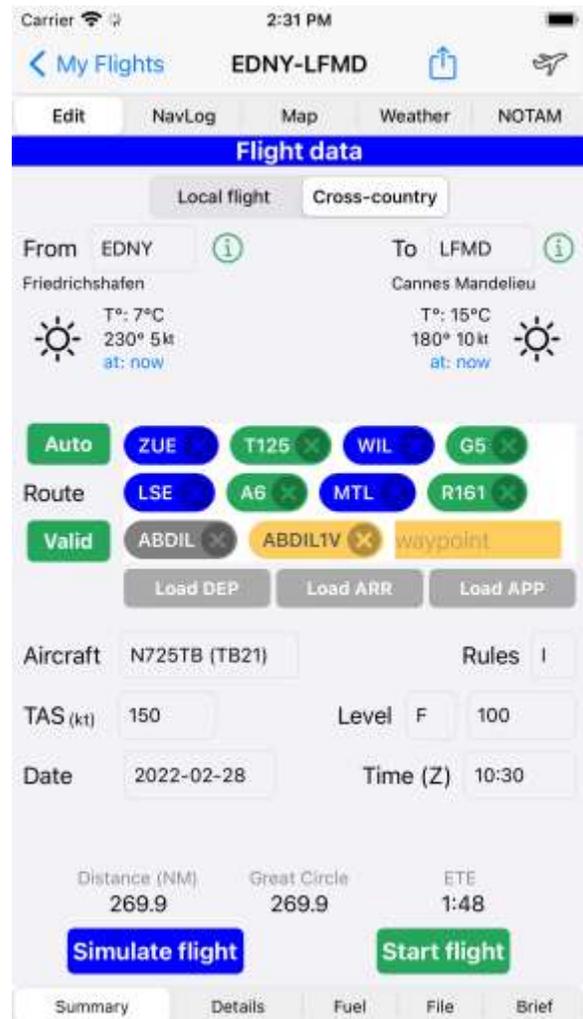
It is possible to enter directly or edit a temporary waypoint in its latitude/longitude format described above, but it is easier to either create it as user waypoint or swipe its graphically on the map.

For vertical navigation, you could suffix a waypoint with a slash followed by speed and altitude in the ICAO format, for example LUC/N0150F120 (for Flight Level 120) or LUC/N0150A120 (for a flight altitude of 12,000 feet), but on iOS it is easier to double click on a point to defined vertical navigation parameters. Such prefixes will be added automatically if you change the altitude of a waypoint using the profile view.

Once you type <enter> after an identifier, Airmate will check validity of the point you just entered in the route field. Recognized identifiers are color coded according their type, unrecognized identifiers are displayed in red (see next chapter for more information on the route editor). Unrecognized identifiers are not taken into account for flight log computation. If several points worldwide match a given identifier (VOR, NDB, waypoints may have several duplicates accross the world), Airmate will automatically selects the nearest one.

A **Start Flight** button allows to switch directly to Flight mode, showing aircraft position and flight data on a moving aeronautical map. A **Simulate Flight** button will play the flight on the map in flight simulation mode.

Airfield weather status (iOS only)

The summary flight form will display the weather status in graphical form for the departure airport and arrival airport. This status will be computed at planned takeoff time and planned arrival time if the flight date is specified and within the next 5 days, otherwise the current weather will be shown.

Friedrichshafen	Cannes Mandelieu
T°: 6°C	T°: 14°C
270° 12 kt G 19 kt	90° 1 kt G 3 kt
2020-02-19 10:30	2020-02-19 13:14

Weather status is indicative only and is computed either from METAR/TAF data if available or from a global worldwide weather status using a 30 NM grid. Depending on local conditions, the indicated forecasted weather may not be accurate, so it is to be used as a rough indication and completed by an official weather briefing.

You may click on the specified date/time for this forecast to select another time within the next 5 days.

Adding additional flight data

On iOS, albeit essential data are filled using the summary form, additional less used data may be specified using the Details form. On Android, those data are directly filled on the main form.

You may enter the following additional data:

- a **name** for your flight for easy recognition in the list. If you don't specify a name, the flight will be named "Template flight plan" until origin and destination airfields are specified and then renamed to origin / destination airfield full names.

- up to two **alternates airfields**.

- **fuel quantity** at start of flight. If you have selected an aircraft for which total fuel capacity is defined, a "*Full Tanks*" button will fill in the fuel quantity with total fuel capacity. You could also define this fuel quantity in the Fuel form.

- number of **pax**

- aircraft **endurance** with the specified fuel quantity

- **free seats** available for flight sharing

- **flight sharing** control, allowing to make your flight visible to other Airmate members if you have free seats

- **flight tracking** control, to allow friends and family to track your flight in real time (iOS only).

Flight Sharing (advertise open seats)

If you have available seats, you may choose to advertise your flight as a shared flight on the Detailed form, accepting additional passengers on board (please note this feature is disabled in US as advertising shared flights is not allowed by FAA).

To this end, simply indicate the number of free seats remaining and update the flight sharing status as **shared** with either only your friends or all Airmate community.
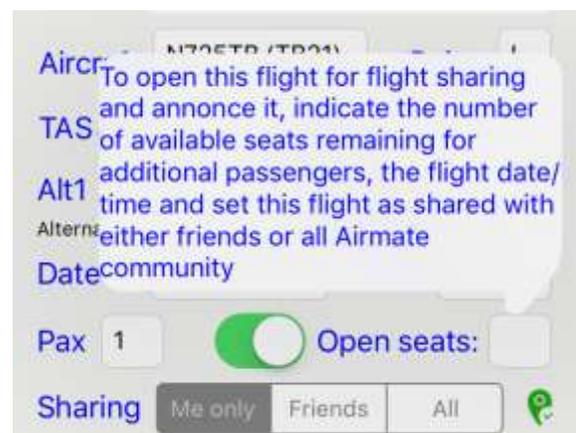
Depending on your sharing selection, either only your friends or all other members of Airmate community will be able to view your shared flight and to write to you using Airmate Messaging to ask you to allow them to board your flight.

Your shared flight will appear on the Community menu / Jump in a shared flight list. To avoid cluttering, this list of shared flights displays only the flights departing near the user home airport, but it is possible to select another airfield if wished.

> **Disclaimer**: Airmate is not checking in any way flights open for sharing. The pilot-in-command is responsible to comply with appropriate regulations in his/her country regarding flight sharing. For example, in some countries (Europe), aviation authorities allow a pilot to request sharing flight costs, in other (US - FAA) it is prohibited to do so if they advertise their flight on a bulletin board or using an application such Airmate.

Flight Tracking (iOS only)

Using the detailed form, you may enable Flight Tracking for one or several of your flights, allowing friends and family to follow your flight path on the web and optionally to receive automatically departure and safe arrival emails at takeoff and landing.

By default, Flight Tracking is not enabled. You can enable it by default for all your flights in the Settings/Privacy menu, or choose to enable it for a single flight by enabling the Flight Tracking switch on the Detailed planning form.

Enabling this switch displays the Flight Tracking menu in order to:

- enable or disable Flight Tracking for this flight

- show the tracking URL your friends could use to follow your flight

- enable to activate or deactivate the sending of automated emails at takeoff or landing, and enter the email recipients separated by commas.

- send an email to the authorized tracking recipients to provide them the tracking URL
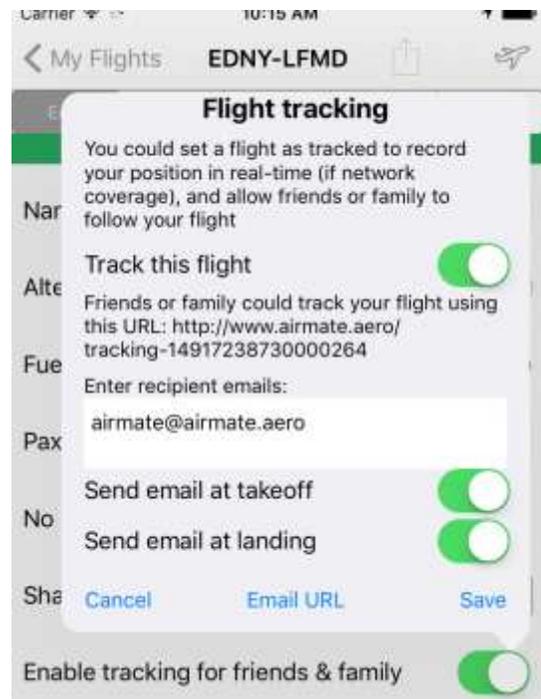
Flight Tracking could only work if **Airmate is turned on** and **switched in Flight mode** in the plane. **Internet coverage is needed**, at least from time to time, in order to send the position updates to the server. Depending on Internet coverage, parts of your flight may not be transmitted in real-time and recorded at the server, therefore the flight tracking may be incomplete or not updated. You don't need Flight Tracking to review your flights as you can from Airmate application view your complete flight path and sent it via email thanks to the Flight Recording function (History button), please refer to specific chapter.

Takeoff is detected automatically when the Ground Speed becomes higher than 30 kt, landing when it falls below 15 kt.

> **Disclaimer**: You need to use an approved device to connect to Internet during flight for flight tracking to work. Please note that in some countries mobile phones should be switched to airplane mode during flight and therefore cannot not be used for internet connectivity.

Export and share flight data

You could export flight data in a supported format, to either share it with a friend pilot or to import it in another application or in your preferred flight simulator. If you are connected to the Wi-Fi network of a supported avionic device (e.g. Dynon SkyView) you can send the planned flight to the avionic device.

There are two ways of sharing/exporting a flight:
- from the summary flight edition page displayed using the Edit tab, click on the Share button at top right.
- For the detailed flight edition page, you could also click on the **Export Data** button

This will open the Export planned flight popup that will allow you to select the desired export format and launch the export. You could select either:
- X-Plane .fms format: this .fms file may be read by X-Plane flight simulators. Importing .fms files in Airmate is currently not available but is planned in a next release.
- Microsoft Flight Simulator (MSFS) .pln format: the .pln file may be exported by flight simulator but also imported by another Airmate user. This is a
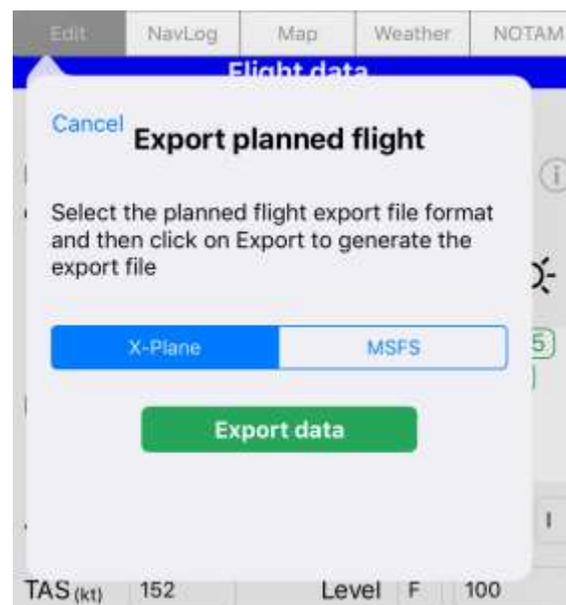
convenient way to share planned flights between Airmate users.

Once the export is completed, a Share dialog will open, so you could send the file by mail, share it with Airdrop, store in within your files or perform any other wished action.

When your iOS device is connected to a supported avionics, the same **Export Data** button could be used to send the planned flight to the avionic device. Please refer to the corresponding chapter for more information.

Import flight data

You can conveniently import a planned flight using major Microsoft Flight Simulator format (.pln). Such a planned flight file may be received by mail, shared by Airdrop, or stored in your files. It could have been generated by another Airmate user as explained below, this is an easy way to share planned flights in the Airmate community.

Simply click on any .pln file to open it, and then click on the Share button and select Airmate as destination.

Airmate will launch automatically and then propose you to add the received .pln flight to your flight list. If a planned flight is already defined between the origin and destination airports, Airmate will propose you to update it using the received data.
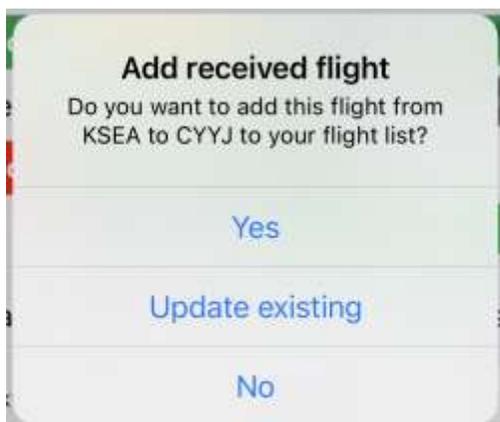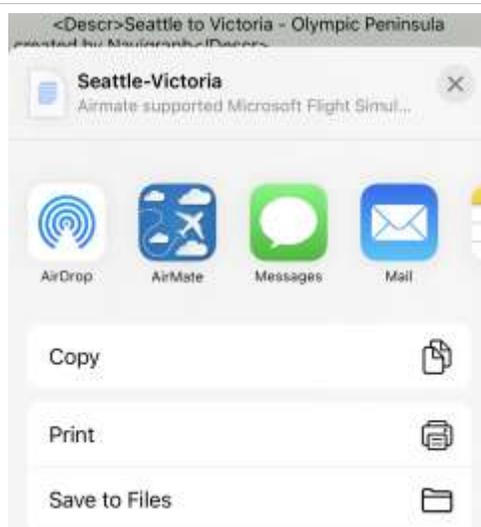
Avanced Route Editor (iOS only)

Edit quickly and easily your route

From iOS version 3.0, Airmate features an advanced route editor with easy-to-use features:

- loading any point in your route (airport, IFR or VFR waypoint, radio beacon). An autofill function will automatically propose you the nearest waypoints matching your entry.
- Vertical navigation: double clicking on any point will allow you to select speed and altitude for this point
- reshuffling points to reorganize the route: push on a point to select it, then move and drop it to change the route.
- airways with route expansion
- loading SID, STAR and approaches in selected countries
- viewing the detail of a procedure including missed approach
- automatically loading the georeferenced chart matching the selected approach

Enter a waypoint

The route editor will display a waypoint entry field at the end of the route. You could type in any point in this field (airport, IFR or VFR waypoint, radio beacon, personal waypoint).

When done, click on enter to add the point to the route. Airmate will process the point and display using a color matching its type:

- grey for an IFR or VFR waypoint
- blue for a VOR, VOR-DME, TACAN, VORTAC
- dark blue for an airfield
- light blue for an NDB
- green for a validated airway or procedure

- red or orange for an unrecognized waypoint or airway

As indicated below, the newly added waypoint is inserted at the end of the route. You could then make a long press to drag and drop it at the desired location in the route.

Autofill

Once you have typed at least 3 characters in the route editor entry field, Airmate will propose you the most appropriate and nearest waypoints near your route, you could click on one of the proposed points to select it.

Reshuffling and inserting waypoints

You could perform a long press on any waypoint (other than an airway identifier or a procedure identifier) to select it, and then drag and drop it at another location in the route.

This is also the procedure to use to add a new waypoint at a specific location in the route: use the route editor entry field located at the end of the route to add a new point, and then select it to move it from the end of the route to the desired location.

Defining Vertical Navigation

Double clicking on any waypoint (other than an airway identifier or a procedure identifier) will show its detail and allow you to define vertical navigation parameters by entering an altitude and optionally a speed at this waypoint.

You should enter altitude using ICAO recognized formats:

- F followed by a flight level on 3 digits (e.g. F090)

- A followed by an altitude in hundreds of feet on 3 digits (e.g. A055: 5500 ft)
- M followed by an altitude in tens of metres on 4 digits (e.g. M0150; 1500 metres)
- S followed by a standard metric level in tens of meters on 4 digits.

If you specify a speed, it is usually prefixed by N followed by a speed in knots encoded in 4 digits (e.g. N0150), but you can also use K followed by a speed in km/h on 4 digits or M followed by a Mach number in hundreds of units Mach on 3 digits.

Another way to define vertical navigation is by using the profile view and rubber banding the route, see an example in next chapter.

Route expansion along Airways

When you enter an airway designator between two route waypoints, and the bracketing waypoints are part of this airway, Airmate iOS will automatically insert in your flight route all intermediate waypoints along the airway between the waypoints. They will be shown graphically on the map and in the flight log. The airway designator will be displayed in green in the route editor.

Those intermediate waypoints automatically inserted are displayed on the map with a light blue dot. They are not listed in the Route field and it is not possible to change their crossing altitude (only waypoints listed in the Route may be used for vertical navigation).

When airway identifiers are part of the route, it is not possible anymore to finger swipe the route graphically on the map.

You could double click on any airway in the route editor to view all waypoints along the route between the waypoints before and after the route designator.

If you delete or reshuffle waypoints so the route designator is no longer bracketed by two waypoints belonging to this airway, the route designator will be displayed in red in the route editor and no waypoint expansion will occur.

Unvalidated route

If some points in your route are not recognized by Airmate, they will be shown in orange or red. In such cases where the route is not fully validated, several restrictions will affect services provided by Airmate:

- Airmate cannot compute full trip length and will then show great circle distance as trip distance.
- Airmate will be unable to detect the areas and NOTAM crossed by your flight path on the profile view and warning table.
- The trip fuel planning form will not be completed.
- The profile view will be unable to show you detailed terrain profile along the route, it will not be displayed automatically with the map even when terrain data is available.

In this case, please correct the route or remove the offending waypoints in order to avoid orange or red flagged data within your route.

Loading approach procedures, SID and STAR

Airmate allows you to enter departure (SID), arrival (STAR) or approach procedures in your route.

Below the route editor, a button **Load DEP** will be active (green) if departure procedures (SID) are available for the origin airport and two **Load ARR** and **Load APP** buttons will be active (green) if arrival procedures (STAR) or approaches procedures are available for the destination airport.

When you push one of those buttons, the list of the available procedures will be displayed. Once selected, you may be also proposed appropriate transitions (for example the departure runway for a SID) and/or the airway transition for a SID or a STAR).

The procedure is then loaded and will appear in the route using the procedure identifier used for flight plan filing (for example LANKO9K).

You could double click on any procedure in the route to view all points of the procedures, including identifier, track and distance to next point and mandatory altitudes.

You could at any time change a procedure by using the **Load ...** button to select another procedure and transition, it will replace the previous one.

The supplied procedure database now includes all procedures in the USA, and selected procedures elsewhere. The procedure database is being expanded regularly.

IFR procedures

When a georeferenced chart is available for an approach procedure, Airmate will automatically load this chart when the procedure is added to the route. The chart will be updated if you change the procedure later to always present you the georeferenced chart matching the selected procedure.

You could then easily follow your approach path along the georeferenced chart.

The missed approach will be displayed using a lighter magenta path, including its racetrack if applicable.

Using Route Editor from aviation map

You could toggle the route editor display on top of the aviation map, either on the ground or during flight, thanks to the route button⇄ on bottom left.

This allows to easily adjust the routing during flight, any change in the route done on the map by rubber banding the route is reflected in the route editor. Conversely, any route change in the route editor is shown instantly on the map.

Aeronautical Chart View

Free Charts and Updates

The top Map tab or the **Fly!** choice of a flight planning form or the **Browse Map** and **Start flight** buttons of the planned flight list display a detailed aeronautical chart. This chart is created dynamically by displaying aeronautical data overlays on top of the default open source OpenStreetMap raster or vector chart. Aeronautical overlays are built from AIRAC database and include airfields, radio beacons, aeronautical areas, airways, IFR, VFR and user waypoints. They will also display at high zoom level obstacles downloaded for selected countries (please note that not all countries publish an obstacle list).
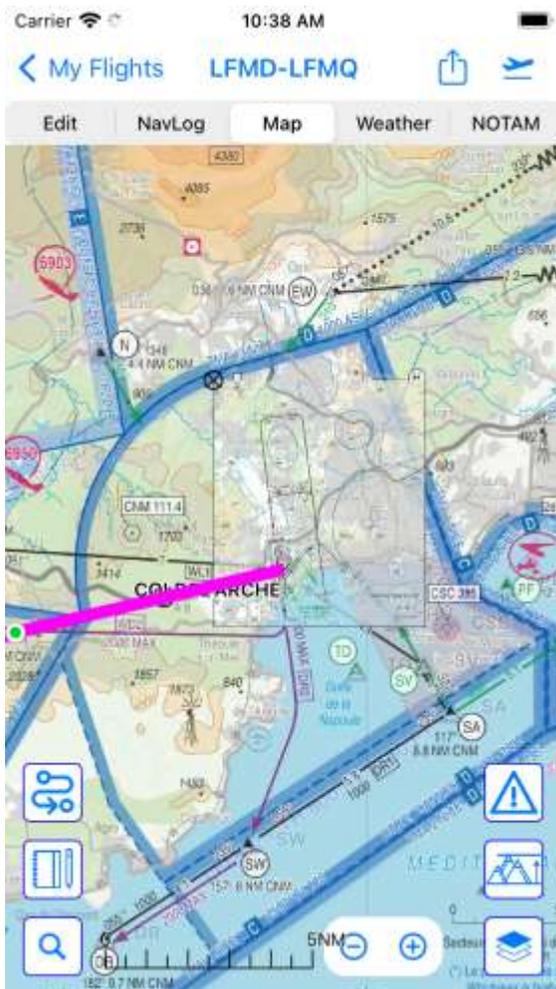
This default chart may be replaced by a downloaded aeronautical chart overlay (eg. Sectional).

You may zoom in or zoom out using zoom buttons at the bottom of the map or using two fingers, the details presented depend on zoom level:

- at very low scale, only basic map and route are shown as a magenta polyline, along with color dots showing weather status at weather airports (green for VFR, yellow for marginal VFR, red for IFR).

- when zooming in VFR mode, aeronautical areas start to be displayed with accuracy improving with zoom level. Restricted, prohibited or dangerous areas are displayed in red, control areas in blue.

- then airfields and radio beacons will be shown. By default, only public airports and airfields are displayed. The settings menu or the layer button at bottom right of the map allow to request the display of heliports, altiports, seaplane bases, ultralight fields and private airfields.

- increasing again the zoom level will show

the waypoints and their legends, along with unlicensed/ultralight airfields and obstacles.

- when zooming on the origin or destination airport, the georeferenced charts of the airport may appear if Airmate has georeferenced plates for this airport. You may request the display of georeferenced chart for any airport (even not part of the route) by clicking on the airport and selecting "**Show VFR georef plates**" or "**Show IFR georef plates**" (those choices are only proposed when either VFR or IFR georeferenced charts are available for the selected airport).
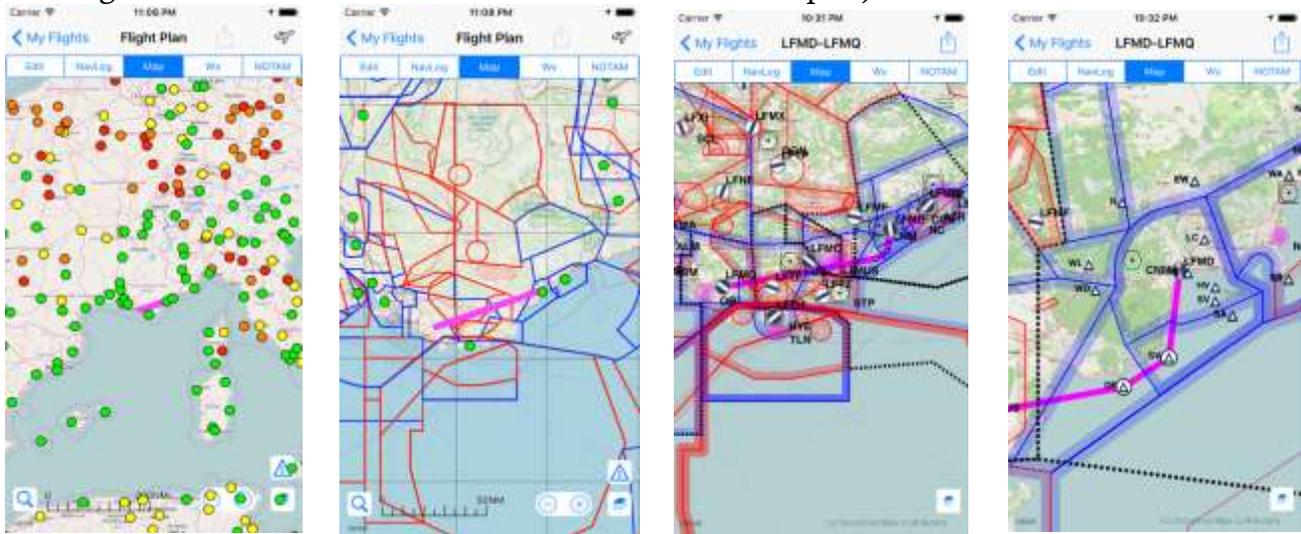
The "Layers" button at bottom right allows to switch the display mode between:

- VFR : displays airfields, radio beacons, aeronautical areas, VFR and user waypoints.

- IFR : displays airfields, radio beacons, IFR waypoints, low and high airways (airways are shown by iOS version only).

- Sat / Chart : in Sat mode, the background map is replaced by a satellite view of the Earth. Selected IFR and VFR data remains displayed on top. Toggling back to Chart will revert to standard chart mode.

Additionally to the VFR and IFR standard modes, it is possible to select or deselect using the **Layers** button every additional cartographic layer.

The aviation Map opens in **Planning mode**, by clicking on the upper right button, the chart will switch to **Flight mode**, centered on airplane, showing navigation data (speed, track, leg, altitude, and so on) and recording the flight data for future playback. You can also directly open the map in Flight mode by clicking on the Start flying now! button in

the planned flight list or the **Fly!** button on the flight planning form. Please refer to the next chapter for instructions on how to use the map in Flight mode.

On iOS, the **Share** button ⬆ at the upper right will print or share the map currently displayed on the screen.

Point Selection

Clicking on any aeronautical interest point (airfield, radio beacon, waypoint, airway) will display detailed data regarding this point.

If several interest points are nearby the tapped point, Airmate will display their list, allowing to select the one needed.

Airfield Information and Approach Plates

Clicking on any airfield will open a window showing detailed information for this airfield.

The header displays airfield name and altitude, as well sunrise and sunset time (UTC) for today. Thanks to Info ⓘ button and several tabs, it is possible to quickly access main airfield data (buttons not active are greyed out, e.g. the Wx weather button is greyed out if the airfield does not have a weather station):

- the $\boxed{\text{FPL}}$ tab is used to modify the current flight plan, eg to set the airfield as **origin**, **destination** or **alternate** if they are not already defined. When in Navigation mode, this tab also allows to perform a **Direct To** this airfield. You could also **add/remove** the airfield from your list of preferred airfields.

- the $\boxed{\text{Wx}}$ weather tab will display METAR and TAF for this airfield. Latest version is fetched using Internet when possible, otherwise the last fetched version is displayed

if already retrieved. This tab is not active if the airfield does not have a weather station.

- the |Freq| frequency tab will display airfield frequencies. For frequencies also reachable over phone, a phone 📞 button is available to call them directly. This button is not active if no frequency is recorded for this airfield.

- the |Rwy| tab will display runways with their heading, length, surface, LDA (Landing Distance Available) when known. This button is not active if no runway information is known (e.g. for heliports).

- The |Plates| tab displays airfield plates when available.

- a |NOTAM| tab will display the airfield NOTAMs, SUP AIP and TFR.

- The Info ⓘ button will display airport detailed data.

The kind of plates displayed depends on the country:

- IFR and/or VFR airport plates are available for the USA, all European countries and numerous other countries, as listed in Appendix A. More than 200 countries are covered, new countries are added at each Airmate release.

- In some countries such France, Belgium, Finland, free plates are also available for unlicensed/microlight and heliport fields1.

- When airport plates are not available for a given airport, the Plate tab will be greyed out in the airport detail display.
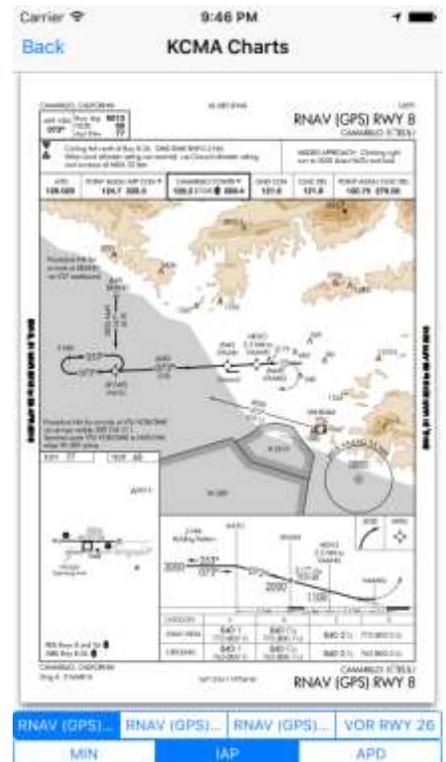
For airports having several plates, they will be sorted in categories for easier access. Tabs on the bottom of the screen allow to select first the plate category then the desired plate. Plates categories include:

- VAC or VFR: Visual Approach Charts
- MIN: IFR minimum
- APD or ADC: Airport Diagram
- IAP or IAC: Instrument Approach Procedures

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[1] Airport IFR and/or VFR plates are available free of charge in nearly all covered countries. In a few countries, VFR airport plates are provided by commercial suppliers and have to be subscribed to to be viewed: this includes Austria (Rogers Data), Germany (DFS), Italy (Avioportolano), Switzerland (Skyguide) and UK (Pooley's plates). Please note that viewing plates for military airports requires a yearly subscription to Airmate Military.

- SID or DP: Standard Instrument Departures

- STAR: Standard Terminal Arrival Routes

- HOT: Hotspots

- TEXT or AFD: text information on the airport

After selecting the tab of a plate category, chart selector tabs above will display all available plates in this category and allow to browse quickly the desired plate. If there are more than 5 plates in the category, the chart tab selector will be replaced by a scroll down menu. You could also browse quickly through all the plates in the selected category by swiping left or right.

Thanks to the **Plate Manager** (refer to appropriate chapter on page 92), it is possible to download in advance all plates for a specific country or a specific region within a country. Once fetched, the plates remain available offline. If plates are requested for an airport not fetched in advance, they will be retrieved from the Internet. In this case, they should be fetched when Internet access is available.

The share button ⬆ at the upper right will either print the displayed chart to any available Airprint printer or share it. A Rotate button allows to rotate the plate counterclockwise.

Profile View

The **Terrain** button 〽️ displays a profile view showing the terrain altitude for all legs of your flight. The profile view is updated in real time if you change your route path and waypoints. Please note your flight route should be valid to have terrain properly depicted.

In Planning mode, the profile view will zoom in/out and align automatically on main map view when you zoom in/out or you pan the main map view.
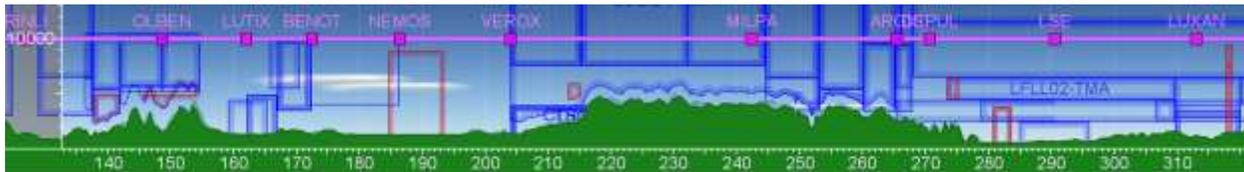
The profile view could only be displayed if terrain elevation data has been downloaded for the area of the flight. If those data are not available, Airmate will propose you to download

them automatically when you open the flight. You may download the data immediately, postpone the download for later, or request not to be reminded again if you decide you are not interested in the profile view for this flight. In this case, you can always click on the Terrain button later that will prompt you to download missing altitude data.

Elevation data files may be managed using Settings/Map/Manage elevation data.

The profile view shows the terrain profile. On iOS, aeronautical areas crossed by the planned flight path and forecasted weather (clouds) are also displayed. In a next release, it will be improved to show obstacles when flying at low level.

Defining vertical navigation on the Profile View
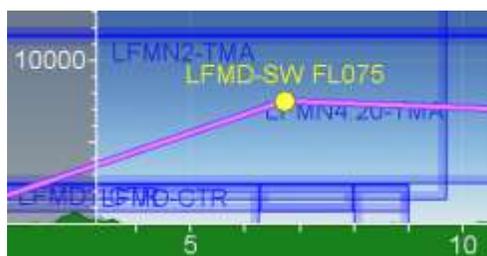
You could conveniently use the profile view to define your vertical navigation profile. To this end, you could touch and move up/down any waypoint in your defined route to change its altitude, by step of 500 feet. Once waypoint altitude is modified, this will also be reflected in the route field, where the waypoint will be suffixed by a slash, aircraft speed and altitude in ICAO format (for example LUC/N0150F95 for flight level 95 at 150 kt).

The altitude will be automatically recorded in F (flight level) format if the planned flight altitude mode is set to "F" on main entry form, otherwise it will be recorded in A (altitude in hundreds of feet) format.

You could only define an altitude for waypoints part of the planned flight route, in the Route field. For IFR routes defined using airways, Airmate will automatically expand the airway between its two boundaries to list all waypoints crossed: those expanded waypoints (shown in blue color on the map) could not be expanded.

Weather status at a glance

At low zoom level, the global chart is showing the global weather status, using color dots for every airport or weather station. Clicking on any of the dot will trigger the display of the detailed weather for this aiport, showing decoded METAR data and some additional

information such the computation of the airfield density altitude. Scrolling down this weather window will display the raw METAR and raw TAF. This airport detail window allows also to view the other airfield data (frequencies, runways, plates).

Some weather status dots are not located at an airport but are isolated weather stations.

Georeferenced VFR Plates

In specific countries, airport VFR plates have been georeferenced. In this case, when you will zoom in at any airport part of your trip having georeferenced plates, the plates will be automatically retrieved and displayed on top of the map, so you can follow your plane position over the plate on the map. This feature is very useful to view prescribed flight patterns.

To avoid cluttering, only airports parts of the trip (origin, destination) will show VFR georeferenced plates. You may click on any airport on the map and select Show VFR Georef Plate to display them for any airport. The Show VFR Georef Plate option will only be displayed for airports having at least one VFR georeferenced plate available.

Using **Settings/Map**, you can disable the display of georeferenced plates on the map or adjust their opacity. By default, opacity is set to **High**, so plates are clearly legible but some of the underlying map background is still shown behind. You may make the plate fully opaque or less opaque.

Some airports may have several georeferenced charts, for example a VAC chart for the traffic pattern, an VFR area chart and a taxi chart. In this case, Airmate will automatically select the most appropriate chart to be displayed depending on the detected phase of flight and the current zoom level (taxi charts are displayed at a higher zoom level than VAC or area plates).
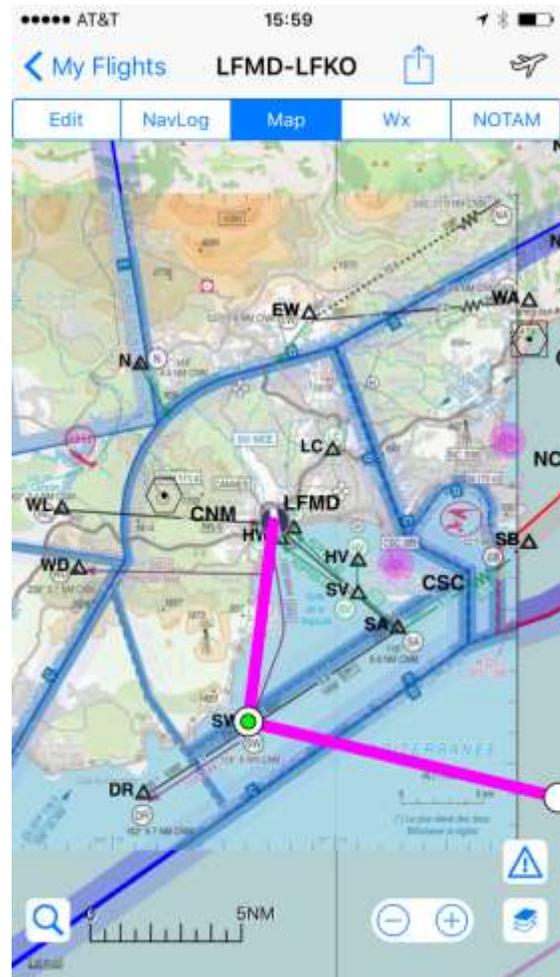
Georeferenced IFR Plates

In the USA and some other countries, airport IFR procedure plates are georeferenced. You can click on any airport icon and then select the Show IFR Georef Plate to get the list of approaches for this airport, selecting one of them will display the georeferenced approach plate on top of the moving aviation map (if there is only a single approach procedure for the airport, it will be displayed immediately).

The procedure plate will be displayed on top of the aviation chart, that may be the default Airmate aviation layer, an US Sectional (if selected) or the US High or Low IFR chart (if selected).

You could easily switch from one procedure chart to another one by clicking again on the airport icon and selecting Change IFR Georef Plate or remove the plate from the chart using the Hide IFR Georef Plate choice.

To the difference of VFR approach plates or taxi plates, the IFR procedure charts will be displayed automatically only when you select the approach to use in the Route Editor. Otherwise, you should request them and select which chart is to be shown where several procedures exist for a given airport.

Radio beacon and waypoint detail

Clicking on any radio beacon (VOR, NDB, DME, VORTAC, TACAN) will display its name, its identifier, the associated Morse code and its frequency. It is possible to add the radio beacon to the route (if not already listed) or to remove it (if already listed in the route).
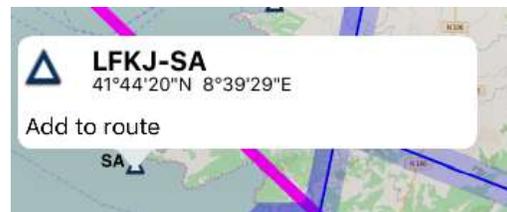
Behavior is the same for VFR or IFR waypoints, where geographical coordinates (latitude/longitude) are also displayed

Aeronautical area detail

Airmate iOS will display legends for the most important aeronautical aeras directly on the map is display space allows, including area name, upper/lower limits and contact frequency if known.

Using a long press on any area of the map will display a detailed list of all aeronautical areas above this point. Areas are displayed sorted by lower limit minimum height above terrain. The type and class of regulated areas is displayed when known. As described below, you could optionally request to have NOTAMs displayed on the map and shown with aeronautical areas.

The area display header provides several buttons and dual slider to filter areas according different criteria:

- the first button Create user waypoint is used to create a user waypoint (see below the paragraph on user waypoint management)

- buttons could select/deselect the area type to be displayed: R (restricted), D (dangerous), P (prohibited), Ctrl (controlled), FIR Flight Information Region, SIV Flight Information Sector

- it is possible to filter displayed areas according their upper and lower limits, using the dual slider.

A proposed frequency to contact may be displayed when it could be found for the specified area. This frequency is informational only and may not be the most appropriate, AIC information should be used for an authoritative reference. For some area where detailed area information is known, clicking on Info ⬜ button will display this information.

Clicking on an area in the list will temporarily highlight its boundaries in yellow on the map. On iOS, if the profile view is displayed, the area will also be highlighted in yellow in the profile view.

If the status of an area is affected by a NOTAM, Airmate will do its best to retrieve the NOTAM and displays it before the area detailed information when the area is listed using a long press on the map.

Viewing NOTAMs and TFR graphically on the map (iOS only)
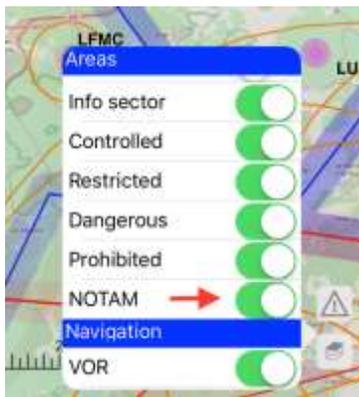
Most but not all NOTAMs and TFRs are associated with an affected location and could be displayed graphically on the aviation map. You may enable NOTAM/TFR display using the NOTAM checkbox in Layers, it is disabled by default as the large number of NOTAMs and TFRs could clutter the map.

When enabled, NOTAMs and TFRs are shown with orange borders. They are very often shown as circles around the affected location. Airmate does not display wide ranging NOTAMs encompassing huge areas. When the NOTAM is publishing an obstacle, a red obstacle symbol is displayed at the location instead of the NOTAM orange circle and clicking on the red obstacle will display the NOTAM (see next paragraph).

When the NOTAM checkbox in Layers is enabled, a long press in any area will show you detailed information not only for aeronautical areas but also for the NOTAMs and TFRs above the selected point. The list will contain all areonautical areas and NOTAM/TFR in the selected point and you can click on any item in the list to highlight its area in yellow on the map.

Some SUP AIP may also have associated areas, in this case they may have been indexed geographically or not for display on the map. As this operation depends on the boundaries provided in the text by the issuing authority and needs to be performed manually, not all such SUP AIP are indexed.

> **Warning:** Please note that not all NOTAMs are associated with a graphical display of the emcompassed area, also the NOTAM/TFR database may not be up to date or exhaustive. You should always check NOTAMs and TFRs relevant to your flight with aviation authorities of overflown countries.

Obstacle detail (iOS only)

When you zoom enough, Airmate does its best to display obstacles on the map for countries publishing obstacle data. You need to download the obstacle database for the overflown country, this is done automatically when you download the country topographic map. It is possible to install or remove obstacle database for any country using Airmate settings.

In addition to fixed obstacles stored in the database, Airmate will show when possible obstacles announced by NOTAM. Fixed obstacles are displayed in black, transient or new obstacles announced by NOTAM are displayed in red. Clicking on any obstacle will display obstacle details, including NOTAM text when applicable.

Airways detail (iOS only)

Airways are displayed on the chart either when IFR mode is selected or when airways display is requested using the 🗇 button. It is possible to select Low Airways, High Airways, or both. Airway legends on the map includes airway name and segment distance. By clicking on an airway segment (outside the waypoints), all main characteristics of the segment are displayed: airway name, segment points,

segment distance, track, minimum and maximum airway altitudes. Low Airways are displayed in black, High Airways in Blue.

When several airways overlap a given point, their list will be displayed when clicked.

Adding and managing your own user waypoints and private airfields

You can add and manage your own user waypoints, that are stored and may be used in your routes in the same way than any other point. Some of those waypoints may be defined as "*landing fields*", in this case they can be used as origin, destination or alternate of a planned flight. To add a waypoint, long press on any point of the map. The zone display popover appears, pressing the first button Create user waypoint will trigger the user waypoint creation process.

Please refer to the appropriate chapter for more information on personal waypoint creation, management and sharing.
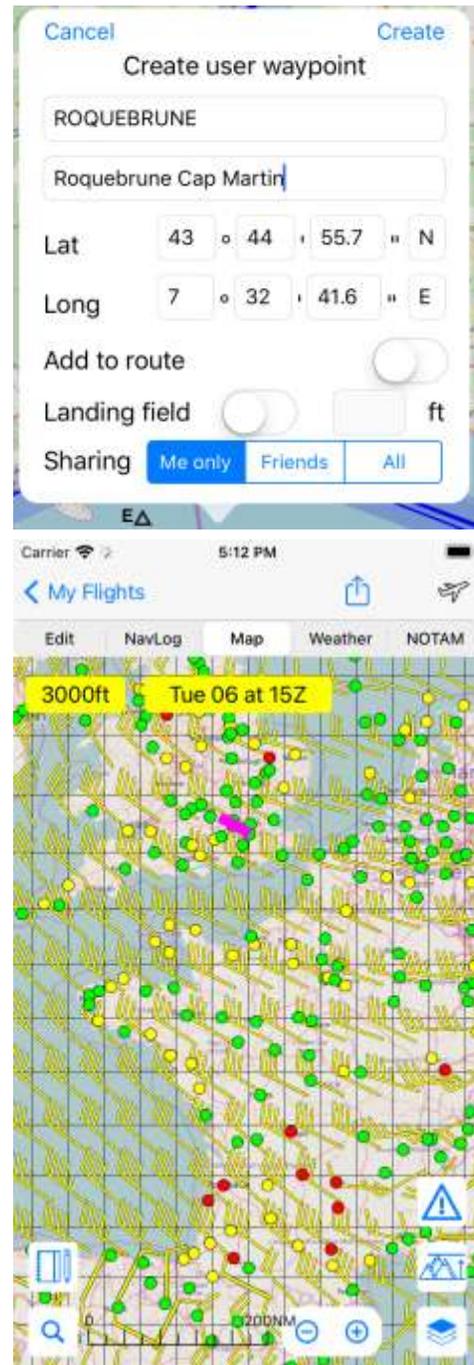
Wind barbs

Airmate automatically downloads a weather database providing detailed weather predictions including winds for the next 5 days, at all altitudes. The weather database is downloaded every few hours, internet access is needed for the download, but once downloaded the database will be available offline during the flight. Last update of the wind database could be checked in **Settings/General** menu.

When the **Wind** switch is enabled in Layers, wind barbs will be displayed on top of the aviation map.

By clicking on the yellow flight level button or the yellow date button at the top of the map, altitude and time may be changed to display wind barbs for any altitude and any time within the 5 days period.

The wind database is also used by iOS Airmate to compute navigation log and fuel advisory, weather data are also used to display the forecasted clouds on the iOS profile view.

Radar

In some countries, such the USA or the UK, radar rainfall data may be downloaded and displayed on top of the map.

Activate the radar switch in the layer to request the download and display of rainfall data. This display will only be performed in the countries for which Airmate could access rainfall data and requires internet connectivity. Once displayed, the radar overlay is updated regularly (usually every 5 minutes). The timestamp of last radar data download in displayed by the Radar layer button.

> **Warning:** please note the radar rainfall overlay is informational only and should not be used in flight to avoid weather. The rainfall data may become obsolete very quickly especially in a challenging environment, and only the on-board weather detection devices (weather radar, Stormscope) should be used during flight.

Map Split Screen, Graphical Infringement resolution (iOS only)

The **Warning** button above Layers at the bottom right of the map will split the map screen and display the list of warnings for your flights, for example the list of regulated, restricted, dangerous or prohibited areas that your flight path is crossing, the list may also include some (but not necessary all) NOTAMs and/or TFRs affected areas. In portrait mode, the list of crossed areas will be displayed at the bottom of the screen, you may orient the device in landscape mode to have the list displayed on the right.

The list of crossed areas is computed taking into account your flight altitude and using the climb and descent vertical speeds computed by the flight log. We recommend indicating your planned flight altitude to narrow the search to area spanning the altitude you are flying, otherwise numerous areas not relevant to your flight (above or lower) may be listed.

You can click on any infringed area in the list to highlight its boundaries in yellow on the screen. More importantly, you may change the route yourself on the map to view the list of warnings amend according your new flight path.

A list of crossed areas for every leg of the flight is also shown on the **NavLog** part of the planned flight.

Warning: Airmate does not guarantee the full accuracy of crossing area computation, only official documentation from authorities should be used as reference to plan and conduct flights.
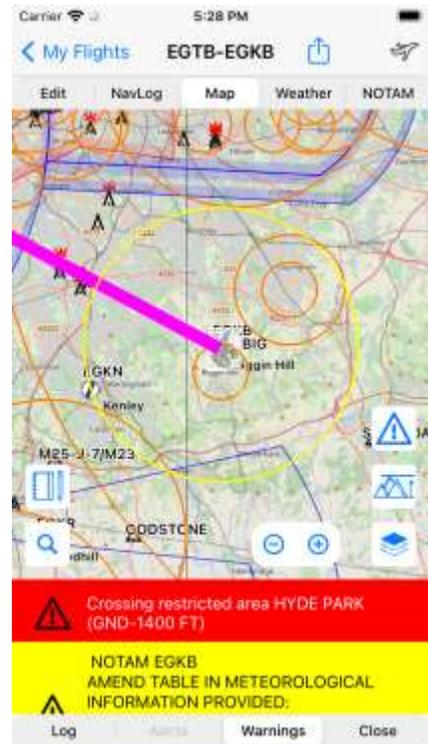
Map Split Screen with Navigation Log (iOS only)

From the Warning split screen, by clicking on the Log tab at the bottom of the screen, the split screen will display the flight log instead of the warning list.

You can click on any leg to highlight the leg in yellow on the flight path.

If approach plates are available for the destination airport, a Plates tab will allow to access them conveniently from the split screen.

The Close tab will stop the split screen mode and revert to full map screen.

You can use this split screen function with warning or navigation log also during Flight mode (see next chapter). Split screen and profile view modes are mutually exclusive.

Worldwide Global Search

 The Search button at the bottom left of the map performs an advanced search allowing you to retrieve any point of interest, from either:

- **Aeronautical data**: airports (from their code, name or associated city), radio beacons, IFR, VFR or personal waypoints. This search is performed worldwide.

- **Location data**: any city or village name. This search is performed using a locality name database storing all location information for the downloaded countries (you could select the countries of interest in Settings/Map/Manage Additional Data).

When several points are retrieved, they are sorted according their distance from your current location. Tabs allows to select conveniently airfields, radio beacons, waypoints or locations. In order to narrow the search, you could indicate in Settings/General the maximum distance allowed for the search.
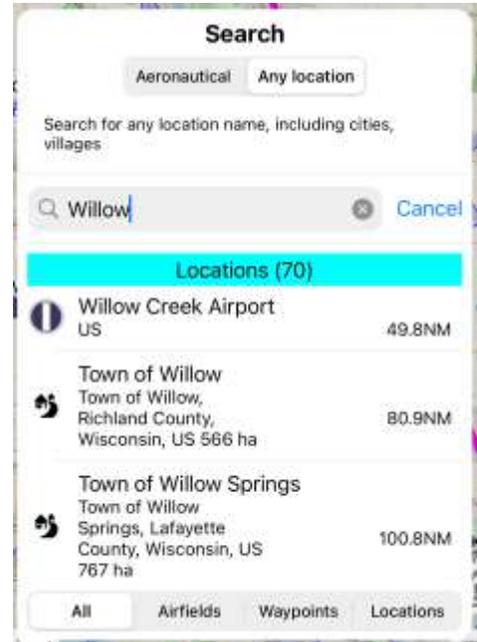
You could click on any point on the list of results to select desired action from a contextual list that may include:

- **Center on map**: center the map on the point

- **Add to route**: add the point to the route, it will be inserted automatically at a position minimizing the total flight duration

- **Set as destination**, if a destination is not already defined

- **Direct To**, when in flight mode

Ruler feature

A ruler is displayed at the bottom of the map and will automatically adjust according the zoom level.

In addition, a long press with two fingers on two different locations on the map will display a temporary black ruler showing course (both directions) and distance between those points.

You could then remove the long press and adjust the ruler by moving one of its ends.

Chart Configuration & Layer Management

The Layers button at the bottom right allows to select the aeronautical overlays to be displayed on the map, sorted in different categories:

- Optional **Chart Overlays** that are listed when installed (Germany OpenFlightMaps, DFS Germany and Air Million in the example screenshot). An **Overlay chart** switch requests the chart to be overlaid with Airmate aeronautical information, even if the chart already displays aeronautical data.

- **Weather**: Wx view will display weather status dot even at high resolution. Radar will display the radar overlay when available. Wind will display the wind barbs on top of the map.

- **Airfields**: Airports/Airfields, Heliports, Seaplane Bases, Ultralight airfields, Closed airfields, airport traffic circuits. By default, Airports and Ultralight/Unlicensed are enabled with their traffic circuits (Ultralight/Unlicensed airfields are displayed at a higher zoom level).

- **Navigation**: VOR (includes VOR, VOR/DME, TACAN, VORTAC), NDB, VFR waypoints (including user waypoints), IFR waypoints, Airways Low and High.

- **Aeras**: Controlled, Restricted, Dangerous, Prohibited, Flight Information Sector, Flight Information Region, ATZ/MATZ, RMZ (Radio Mandatory Zone), TMZ (Transponder Mandatory Zone), Natural protected areas, special Activity areas (e.g. parachuting) and NOTAM/TFR.

- **Map**: allow to select/unselect the display of map scale and map grid (latitude/longitude). Both are enabled by default.

Tabs are provided to perform quick selection of preconfigured layers:

- VFR : displays airfields, radio beacons, aeronautical areas, VFR and user waypoints.

- IFR : displays airfields, radio beacons, IFR waypoints, low and high altitude airways (airways are shown by iOS version only).

- Sat / Chart : in Sat mode, the background map is replaced by a satellite view of the Earth. This enables to easily find out and memorize landmarks to be used during flight. Please note the satellite view require Internet connectivity, so it could not be used during flight. Selecting Chart will revert to the standard chart mode.

The chart is displayed initially in **Planning** mode, by clicking on the upper right ✈ button, the chart will switch to **Flight** mode, centered on airplane and showing navigation data (speed, track, leg, altitude, and so on). Please refer to the next chapter for instructions on how to use the map in Flight mode.

Optional VFR Chart Overlays
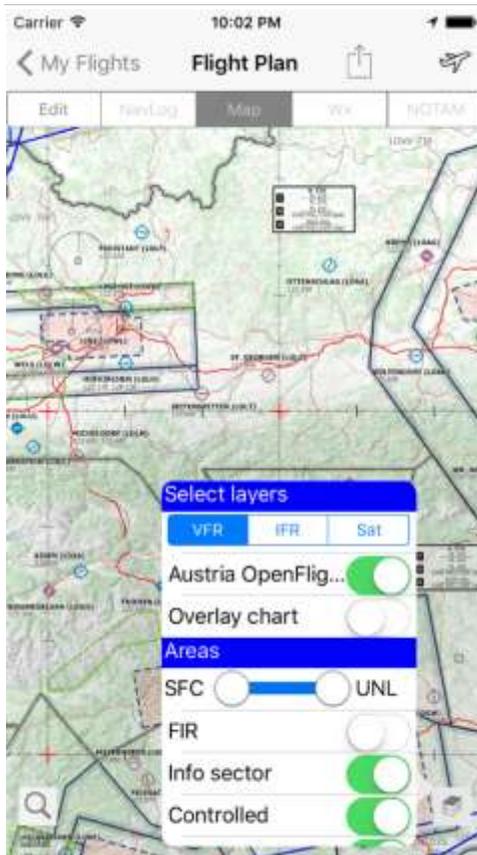
In numerous countries, additionally to the free cartographic display, you could also download chart overlays that will replace the standard OpenStreetMap chart. Most of those overlays are aeronautical charts already displaying aeronautical data (airfields, restricted areas, radio beacons...). For example, in US you can download FAA Sectionals, in Europe you could download OpenFlightMaps or commercial charts, in Brazil you can download WAC charts.

Those charts could be selected and downloaded from the **Setting / Manage Topographic Charts** menu. If the chart is a commercial one, it could be purchased online.

When an optional chart overlay is downloaded, it is automatically enabled and will be displayed instead of the standard free OpenStreetMap cartographic display. The **Layers** 📚 button at the bottom right of the map list all optional charts and could select or deselect them.

When the optional overlay chart already embeds aeronautical data, Airmate will not display its own data on top of chart to avoid cluttering. Airmate will still recognize tapping on any significant point to display its characteristics or

pressing 3 seconds on any point to display the areas characteristics or create/manage user waypoints.

The **Overlay chart** switch makes nevertheless possible to request the Airmate aeronautical data to be overlaid on top of the optional chart, for example to compare both datasets, to display Airmate data types not included on the commercial chart, or because Airmate data are more up-to-date than the chart thanks to its monthly update cycle.

Airmate allows download and select the display of multiple different overlay charts. When several charts belong to a single set, such US Sectionals, a single switch in **Layers** ⬗will appear in order to select or deselect the whole set.

When an update is available for an overlay chart, its download will be proposed at Airmate application launch.

If you no longer need it, you can delete a chart overlay using the **Manage topographic charts** choice in the **Settings/Map** menu, by deselecting the chart green switch in the Installed charts list. You will be prompted for a final confirmation before chart deletion.

IFR Enroute Chart Overlays

In addition to VFR aeronautical overlays, you could also download in many countries IFR enroute charts published by aviation authorities. Two layers are available:

- Enroute Low IFR (lower levels)
- Enroute High IFR (higher levels)

Selecting a Low or High IFR map overlay will automatically disable any VFR overlay (such US Sectional, OpenFlightMaps...), the reverse is also true.

The limit between lower and higher levels depends on the country, but usually the low enroute charts covers up to FL 180 or 200, and the upper charts above.

As with VFR charts, you could click on any point on the chart to get information about them (waypoints, radio beacons, airports). We recommend when displaying an

IFR overlay chart to also select "IFR" mode in the layers, ensuring recognition of IFR points when tapping on the map.

Satellite mode and landmark recognition

The Satellite mode is a very useful tool to prepare in advance VFR flights or review past flights. It allows to easily recognize landmarks to be memorized, especially points to be overflown during takeoff or landing phases.

Satellite mode is selected by clicking on the Sat tab on the Layers button. It will then replace the standard cartographic chart by a satellite view of the Earth. In the tabs, the Sat choice is replaced by a Chart choice allowing to revert to the standard cartographic layer.

Selected IFR or VFR data are displayed on top of the Satellite picture and could be selected/deselected in the same way than in the standard Chart mode. As satellite pictures are darker than charts, the point legends and IFR airways are displayed in white.

Cartographic data accuracy

Airmate is supplied with a worldwide low precision cartographic layer. It is necessary to download the high precision cartographic layer of countries where you fly, this could be done at application first launch or later when updates are proposed or through the Settings menu.

Downloaded cartographic layers for a given country are much more detailed than the low precision chart and are suited to aeronautical navigation. When the iPhone or iPad is connected to Internet, it is possible to zoom
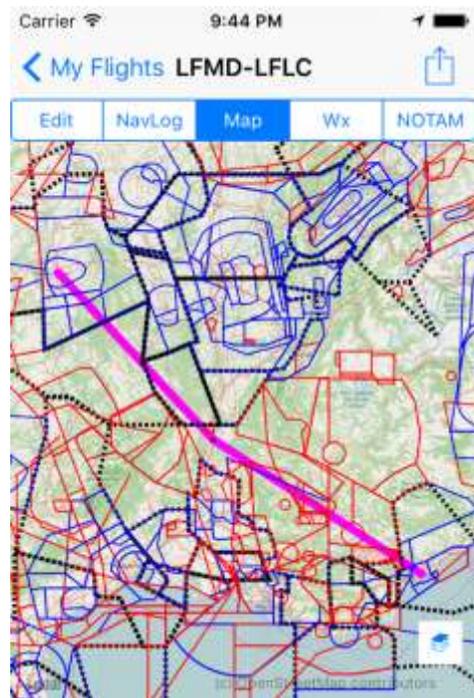
in to an even lower chart accuracy to get charts up to street level. Those cartographic layers are automatically downloaded and will be available offline.
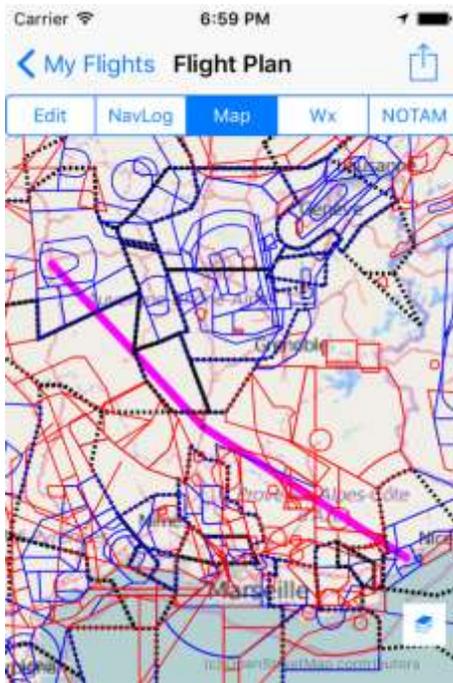
When zoom in is performed without Internet access up to a precision higher than stored charts, the available cartographic layer will first be displayed enlarged giving a fuzzier rendering. Then cartographic layer will disappear to shown only aeronautical data.

The example on the left is showing a flight from Cannes to Clermont-Ferrand, that is rendered without Internet access and without having first downloaded the French Chart. As French cartographic data is unavailable, the worldwide low-resolution chart is presented enlarged. This does not allow to zoom in for high precision but is enough to roughly visualize the planned route.

Flight Mode

Prerequisites

Flight mode requires GPS position information. Position data may be provided by the internal GPS of the device or from an external GPS that may provide a better accuracy and will lower the device current draw. Please note that iPads without mobile connectivity do not have embedded GPS and will require an external device. Please refer to the Appendix B regarding supported external GPS.

In **Flight mode**, the embedded GPS is used constantly; this is greatly increasing the power consumption. When Flight mode is no longer needed, use the **End Flight** button on the upper right to switch back to **Planning** mode. A confirmation window will open, as this action will end the flight data recording.

From the map, clicking on ✈ the upper right Flight icon will switch to Flight mode. You can also click on the `Start flying now!` button in the planned flight list or the `Start Flight` button on the flight planning form to launch immediately the map in Flight mode.

GPS Altitude	Ground Speed	Track	***	VS ft/mn	Time (UTC)	
4521 ft	**119 kt**	**344°**		**200**	**13:58:13**	🛰 📶 🔋 ✈
		Desired Track		Distance NM	ETE	SIM 100% Height above terrain (ft)
OBK →	**WIPED**	**345°**		**22.7**	**0:11**	**3754**

In Flight mode, Airmate will display and update the aircraft position and will present the below flight parameters on the top of the screen if the EFIS PFD view is not activated:

- approximate Altitude (either GPS altitude or Barometric altitude). When the iOS device is equipped with a pressure sensor, it is possible to click on this field to switch between GPS altitude and Baro altitude. Baro altitude should of course not be used in pressurized aircrafts.

- Ground Speed (GS)

- Leg followed

- Distance to next point

- ETE (Estimated Time Enroute) to next point

- Track followed (TRK)

- Desired Track (DTK)

- Vertical Speed VS ft/mn

- On iOS, a time field will display either current time UTC (default), by clicking on the field it is possible to display instead local time, elapsed flight time or one of the 2 available timers.

- Aircraft height above terrain (iOS only): this information is only displayed if the terrain data has been downloaded for the flight, enabling Airmate to get the terrain altitude for the overflown points. Height will be displayed in green above 1,000 ft, in red below.

- Icons: on iOS, a set of icons provide additional information:
  - Battery: the battery icon will provide at a glance the status of the battery: charging/discharging, capacity remaining
  - GPS/network: GPS and Internet status
  - ADS-B Towers (US only)

Warning: device sensors (such GPS or pressure sensor) used to obtain the above parameters are not certified for aircraft navigation and may be faulty or provide erroneous information. The computed height above terrain may be incorrect. Therefore, all parameters displayed by Airmate are for information only. The Pilot-in-Command should rely only on aircraft certified equipment for navigating.

The button ⊕ may be used anytime to center the map on the current aircraft position.

The upper right ✈ button is used to end Flight mode and revert to Planning mode.

Warning: in Flight mode using embedded GPS, battery consumption is much higher than in Planning mode.
For extended flights, we recommend to plug your device to an external power supply. You could also use an external device providing GPS inputs to lower the drain and get improved accuracy

Profile View

In Flight mode, the profile view displays the aircraft on the left and the terrain and crossed aeronautical areas ahead on the right. The data displayed are those crossed by the aircraft computed flight path at current heading, they will be automatically updated when the flight course change (e.g. when turning). The vertical scale will be automatically adjusted according aircraft current altitude. You could pan the display to view the forecasted next 100NM of the profile, provided the aircraft heading remains constant.

The profile view could only be displayed if terrain data for overflown terrain has been downloaded prior to flight.

The profile view also displays forecasted cloud layers en route, if the weather database is current. Please note this display is informational only as the forecasted weather may not match the actual weather encounter in real life, this display should not be used for weather avoidance.
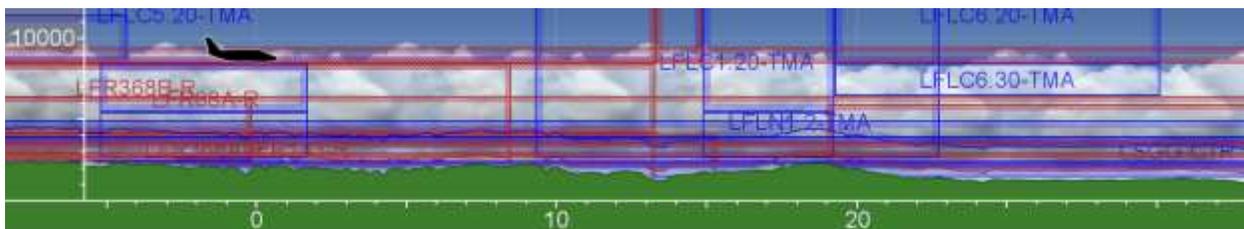
AHRS View & Synthetic Vision

Airmate can display and AHRS/EFIS view with Synthetic Vision during the flight, please refer to next chapter for details.

Center Aircraft

The map will automatically center on the aircraft position. When the map is moved, it will center back to aircraft position after 10 seconds of inactivity, and the Center Aircraft button will appear in the meantime at the bottom left of the map. This button will center the map immediately on the aircraft current position.

Direct To Function (iOS only)

In Flight mode, clicking on any point (airfield, radio beacon, waypoint) will display the point characteristics and allow selecting **Direct To** function to directly navigate to this point from present position.

The **Direct To** button also displays the bearing and distance to the point.

It is possible to end the **Direct To** mode and revert to normal navigation along the planned route by clicking again on the direct to point and selecting **End Direct To** mode.

North Up and Track Up modes, rotating map

By default, the moving map is displayed in **North Up** mode, oriented with North on the upper part of the screen. It may
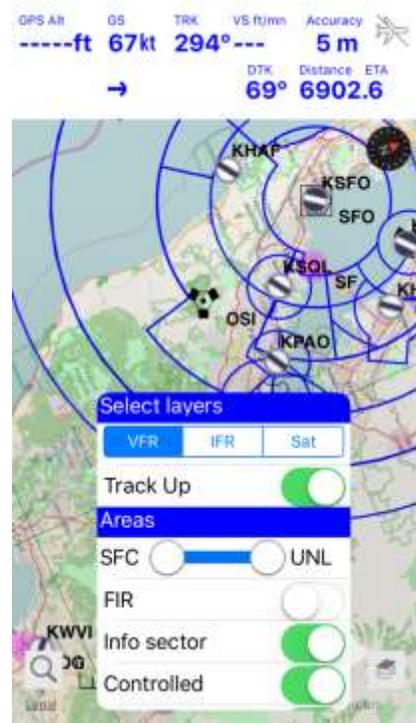
be changed to **Track Up** mode, where the map is oriented following the plane flight track.

You could anytime during flight toggle between North Up and Track Up mode using the **Track Up** switch listed in **Layers** . In Track Up mode, a compass appears at the upper right part of the screen.

In both modes, it is possible to rotate the map using a rotating gesture with two fingers. You could click on the compass to align the map with North.

Using Route Editor from aviation map

You could toggle the route editor display on top of the aviation map, either on the ground or during flight, thanks to the route button on bottom left.

This allows to easily adjust the routing during flight, any change in the route done on the map by rubber banding the route is reflected in the route editor. Conversely, any route change in the route editor is shown instantly on the map.

Undo Route Change (iOS only)

As in planning mode, all route changes performed from the map view (either by rubber banding the magenta route or by selecting a point to add or remove it from the route) are recorded.

The **Undo** button will appear when there is at least one change recorded, clicking on it will undo the change. This is especially important during flight, as unwanted route changes may be caused by turbulence.

In addition, by default, when in Flight mode, rubber banding the magenta route is disabled. You could enable again this action in **Settings/Flight**.

Traffic Awareness (iOS only)

When connected to a supported external ADS-B traffic detector or supported avionics, Airmate iOS will receive and display on the map traffic information received from the external device. Please refer to Appendix B for the list of supported devices.

Detected aircrafts will be shown as small targets in the form of an aircraft oriented according their flight path, a legend will provide approximate flight altitude difference between your aircraft altitude and each target, in hundreds of feet (eg: -15 will mean the other aircraft is 1,500 feet below you). Another legend will display the aircraft registration, that may alternate with the flight number.

Please note the altitude difference may be computed between your GPS altitude (that may be inaccurate) and the target aircraft broadcasted flight level (based on a standard altimeter settings), and could then be false.

Using supported devices (uAvionix Sky Echo 2), FLARM glider traffic may also be detected. A warning will be displayed when a nearby FLARM traffic is detected, the FLARM traffic may be shown on the map if a FLARM license subscription is purchased from FLARM. To activate the FLARM license subscription, go to **Settings/Advanced** page and select "**Display FLARM traffic**".

WARNING: Traffic Awareness feature is provided a secondary positional awareness aid, it is not a collision avoidance device. Airmate contains NO collision avoidance algorithms and will NOT give you any advice on how to avoid traffic. You assume total responsibility and risk associated with using all such information.
As Pilot in Command it is your responsibility to take all necessary actions to maintain safe flight, including collision avoidance.
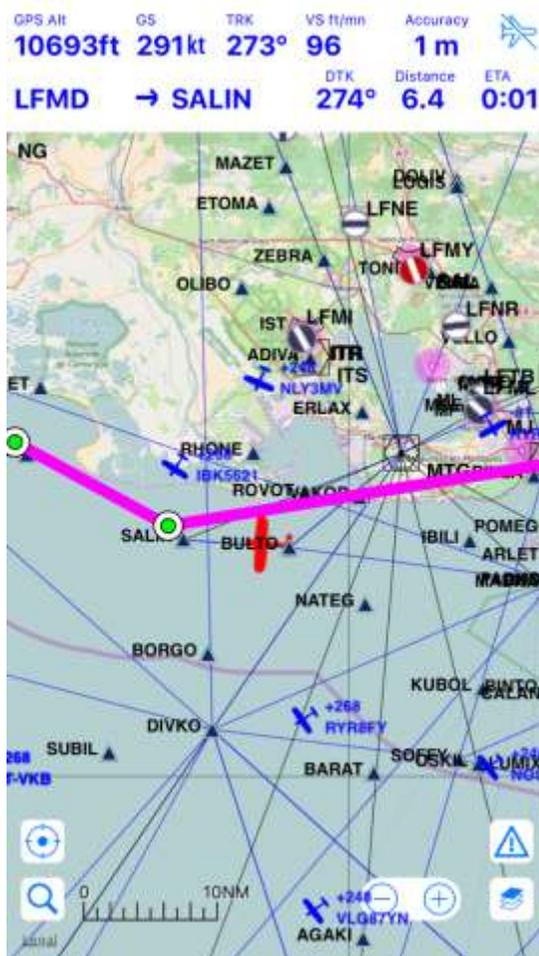
Status icons (iOS only)

In Flight mode, status icons are displayed topright of the screen to show you at a glance the status of your device.

Icon	Meaning	Usage
🔋	Battery status	Will show battery charging state (charging/discharging) and capacity remaining in %.
📶	GPS and network state	• Display GPS status and accuracy • Green if Internet connectivity is available
🗼	ADS-B Towers	• Show count of FIS-B messages received from ADS-B towers (see next paragraph)

Clicking on any of those icons will display a detailed status popup. Additionally to the device own battery, the charging status of an external connected ADS-B or GPS receiver may also be shown (device dependent).

Battery

Charging   90%

GPS Status

Horizontal accuracy   65m

Vertical accuracy   10m

ADS-B Info

No device   0 msg

FIS-B in flight reception (iOS only)

When connected to a supported external ADS-B received, Airmate may receive Flight Information Service (FIS-B) messages if broadcasted on ADS-B network. This broadcast is only available in the United States, although a few test ADS-B stations could be found here and there (e.g. in the United Kingdom).

When FIS-B messages are received, the number of transmitting towers detected is shown below the tower symbol.

By clicking on the tower symbol, Airmate summary status will be displayed, the status will include:

- detailed list of towers and last seen timestamp
- list of last FIS-B messages that could be browsed.

FIS-B Messages

METAR KIFA 291935Z AUTO 01005KT 10SM CLR 25/15 A3012 RMK AO2 T02470152=

PIREP SAM 291803Z EVV UA /OV SAM090045/TM 1803/FL350/TP E75L/TB CONT LGT CHOP OCNL MOD

PIREP GIJ 291752Z SBN UA /OV GIJ090020/TM 1752/FL370/TP B738/TB LGT CHOP / RM MTN WAVE +/- 10KTS

METAR KIFA 291935Z AUTO 01005KT 10SM CLR 25/15 A3012 RMK AO2 T02470152=

PIREP SAM 291803Z EVV UA /OV SAM090045/TM 1803/FL350/TP E75L/TB CONT LGT CHOP OCNL MOD

If a FIS-B messages pertaining to one of your destination or alternate airports is received, for example an updated METAR or TAF, Airmate will display it in a warning popup.

Flight recording

When switched in Flight mode, Airmate will record the whole flight, it is then possible later to review the flight path and play back the followed track. The flight will be closed when the **End Flight** button is clicked, so don't forget to click this button at the end of the flight. In case of application sudden stop during the flight, you could relaunch Airmate and start again the navigation mode within the next hour, the new flight data will be appended to the flight if it has not been closed.

You could switch temporarily from Airmate iOS to another app and then revert to Airmate during the flight: even when pushed in the background, Airmate will continue to record your flight path, provided you authorized Airmate to always monitor your location.

Flight track display (iOS only)

During the flight, the flown path is recorded on both iOS and Android devices, and could later be exported or viewed in the list of flown flights.

Additionally, on iOS, Airmate displays in real time this flown track on the map as a dotted line, allowing you to view at a glance your flown path.

This display is enabled by default, you could deactivate it using the **Airmate Settings / Flight / Display flown track** switch.

Flight tracking (iOS only)

When you define your flight, you may enable flight tracking using the Detailed flight plan form, allowing your aircraft position and track to be sent automatically at regular intervals on the cloud, provided there is internet coverage and Airmate has been switched to flight mode (before takeoff if possible).

Authorized friends and family can then follow your flight from a flight sharing page whose private URL is shown by the flight tracking menu and may be mailed to your friends. Airmate server can also send them automatically an email after your takeoff and landing, including the link to the flight tracking URL.

The flight tracking page may not track all parts of your flight, as it relies on Internet coverage to get position data from Airmate application in the plane. After your flight, once you switch off the Flight mode, you will be able to access the detailed track of your flight that is recorded in Airmate log and you may send the track in gpx format to friends by email.
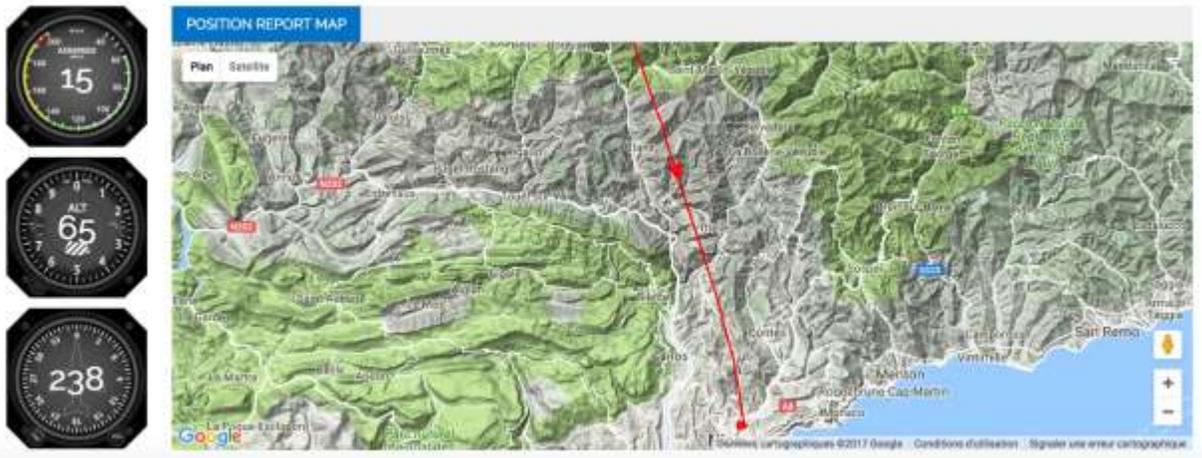
Taking pictures during flight (iOS)

A **Camera** button 📷 allows to easily take pictures during flight, without leaving the Airmate application. The pictures will be saved in your picture album, and will also be associated with the flown flight, with relevant flight parameters recorded (aircraft location and altitude).

After the flight, when you will replay the recorded flight thanks to the History button, you will be able to view your pictures on the map, send them by email or share them.

AHRS, Synthetic Vision & Photo Scenery

Introduction

Instead of displaying the basic navigation panel showing flight parameters, Airmate can display during flight an AHRS view (with Synthetic Vision and Photo Scenery on iOS): click on the attitude indicator button at the right to open this view. The view is displayed below the map in portrait mode, in iPad and larger iPhones, it is possible to rotate the screen in landscape mode to have the map shown at the right and the AHRS/Synthetic Vision on the left.

Since iOS version 3, AHRS embeds an advanced Synthetic Vision module. To the difference of most other EFBs, Airmate Synthetic Vision does not require the download of huge synthetic vision data, we reuse and process in real time the terrain data already used for Airmate profile view that offers a very high resolution (60 meters for standard version, 30 meters is also available for Airmate Military users).

In supported countries, Airmate may also display a realistic photo scenery when photographic data has been downloaded and the photo scenery display option purchased.

Display EFIS PFD view using AHRS

In Flight Mode, using either the motion sensors embedded in the iPhone/iPad, or an external device such an ADS-B receiver or even a flight simulator, Airmate is able to receive and display AHRS data that will be shown in an EFIS-like view.

This comprehensive display will show an attitude indicator with pitch and bank, heading, airspeed, altitude, vertical speed, G-meter. Your desired track and the route segment flown will also be displayed. In addition, some alerts, such area proximity or infringement warnings in VFR are displayed on the EFIS view.

EFIS display is enabled using the attitude indicator button at the right side of the map, only shown in Flight mode. Before enabling AHRS mode, make sure your device is securely fixed on the aircraft, and the aircraft is level and not moving. At EFIS display launch, a calibration is performed first to cage the attitude indicator.

If device screen size allows, you may display at the same time the aeronautical map (always at the top), the EFIS display, profile view and warning/navigation log views.

> **Warning:** Neither the iPhone/iPad/Android device nor Airmate or external AHRS sources are certified navigation devices.
>
> The EFIS-like view is informational only and is not to be used to conduct the flight, as the accuracy of the displayed data could not be warranted. You should operate your aircraft using only the certified instruments on your panel and visual data of your surroundings.

Flight parameters

The AHRS/Synthetic Vision will display all flight parameters, including:

- heading and track
- ground speed
- GPS or baro altitude
- Vertical speed
- Flight route leg followed
- The attitude indicator will show pitch and bank.
- Below 2,500 ft above terrain, the aircraft height above terrain is displayed, on a red warning background if the height is less than 1,000 ft.
- At the top left, a clock will display UTC time, local time, elapsed time or any of the 2 available timers.
- Area infringement warnings and alerts may be displayed on the left part of the screen.

Synthetic Vision (iOS only)

When terrain data has been downloaded for the flight route, the EFIS will display the terrain up and downs using Synthetic Vision for improved situational awareness.

You could enable a TAWS (Terrain Awareness Warning System) to display terrain data in the appropriate color: grey if no conflict, yellow if less than 500 ft below the aircraft, red if at or above aircraft altitude.

> **Warning:** Airmate is not a certified TAWS device and the terrain clearance displayed is informational only.

Split mode (iOS only)

When your device is in portrait mode, the EFIS view with Synthetic Vision is displayed below the navigation map, above the terrain profile view if displayed. On iPad and larger iPhone, you could rotate your device to have a larger Synthetic Vision panel at the left of the screen, and the navigation map (with terrain profile view if enabled) on the right of the screen.
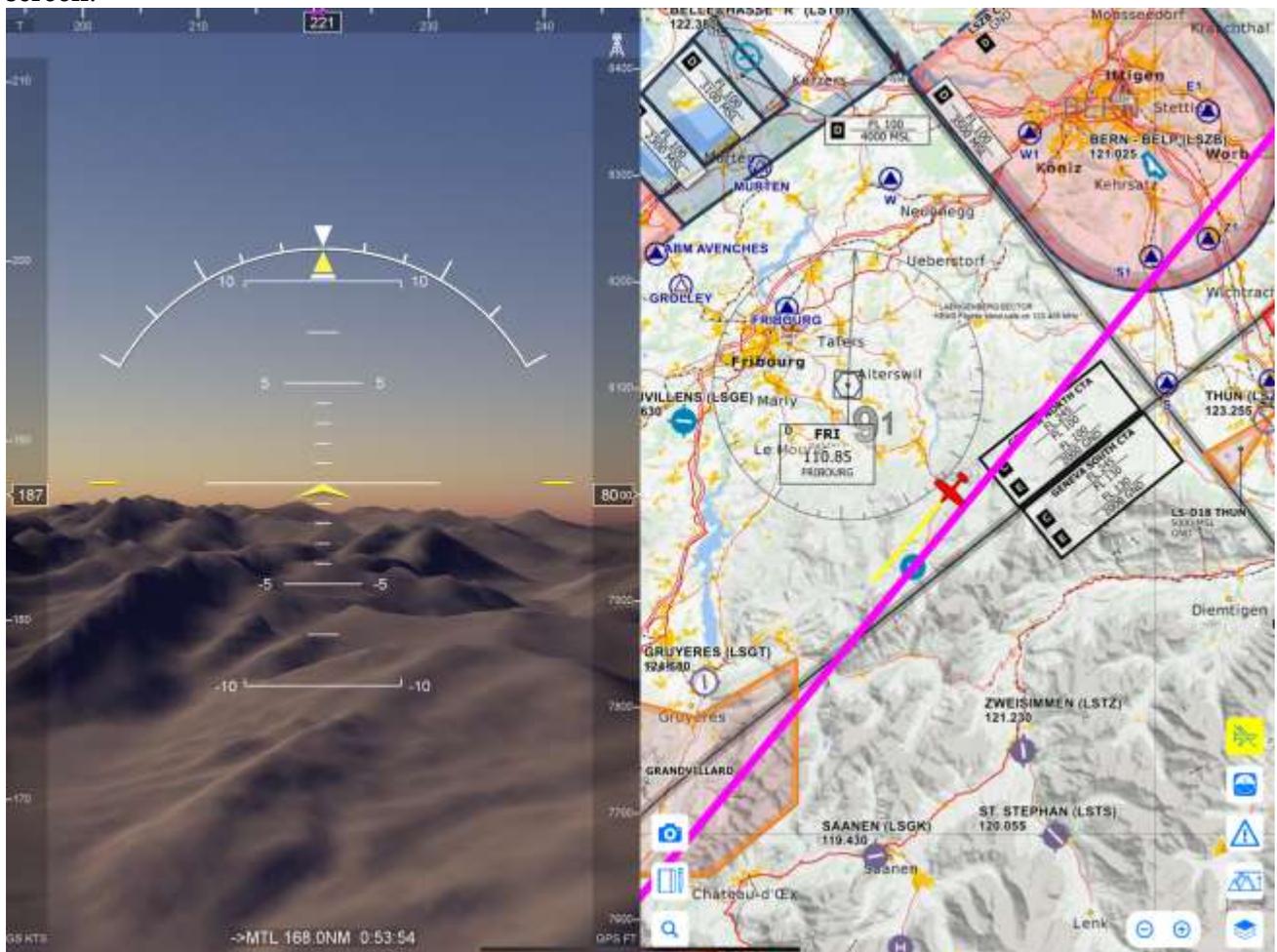
Look Around and Panels (iOS only)

During the flight, you could pan left of right the Synthetic Vision to look around the aircraft position. An indicator will display the viewpoint from which the Synthetic Vision is viewed, clicking on it will reset it to forward view.

Synthetic Vision displays panels showing the location of prominent aviation landmarks, including airports nearby and the waypoints of the planned route.

Realistic photo scenery (iOS only)

In supported countries, Airmate will propose you to download realistic photo scenery along your planned flight path.

The photo scenery is stored in the device and will allow Airmate to display a realistic view of terrain while flying. This photographic scenery is displayed in the AHRS view instead of the Synthetic Vision.

The continuous display of realistic photo scenery requires the subscription of this option.

Alerts

Introduction

Airmate will show alerts when specific events occur. Those alerts may be configured in Settings. Please note that Airmate is not designed to act as a navigation warning device. The pilot in command should not rely on Airmate alerts, but at any time use its own judgment and the certified instruments of his/her plane to fly safe.

Area infringement warnings and alerts (iOS only)

In Flight mode for VFR flights, Airmate monitors constantly (but in best effort mode) the aircraft flight path to try to detect actual or potential infringement of your route with regulated, restricted, dangerous or prohibited area. Alerts will be generated for detected infringements but also for potential infringements when the aircraft flight path is detected entering such an area in a configurable time period (by default 3 minutes).

When an actual or potential infringement is detected, Airmate will display a yellow (warning) or red (alert) popup on top of the map and highlight the concerned area, it is then possible to dismiss the popup, or to use previous < and next > buttons to browse through alarms when several are active at the same time. A button allows to dismiss the displayed alert, another one will allow you to stop having alerts displayed for the remaining of the flight (messages will remain shown on EFIS/AHRS/Synthetic view if active).

When the screen is split between the map and the navigation log, an Alert tab will list active alarms. If the EFIS-like AHRS view is shown, up to 8 area alerts will conveniently be shown on the EFIS display.
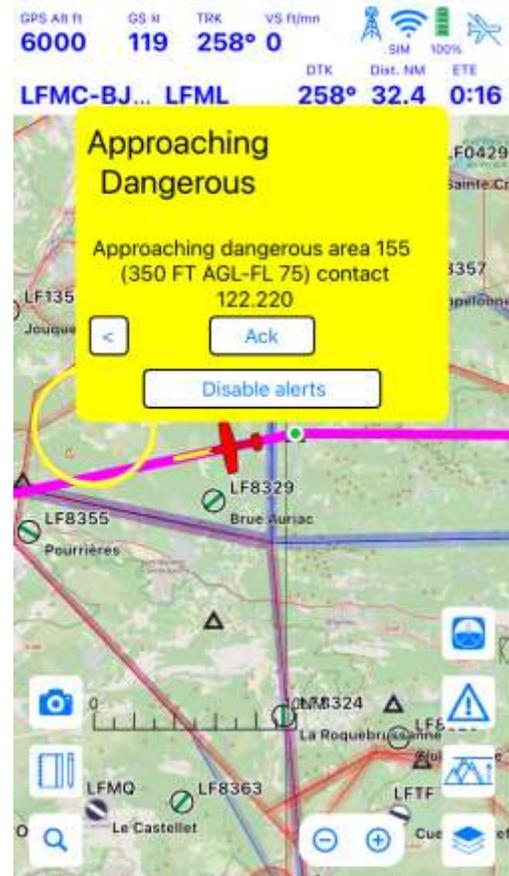
It is possible to configure which area kinds are to be monitored among:

- controlled areas (class D, C, B and A are monitored by default, class E may be added);
- restricted areas (monitored by default);
- prohibited areas (monitored by default);
- dangerous areas (monitored by default);
- NOTAM affecting navigation and TFR (please note that some of them may not be georeferenced and will then not be detected).

When the active flight is flown partly or completely using IFR regulations (flight rules I, Y or Z), all area infringements alerts are disabled.

> **Warning:** Although Airmate will do its best to detect such infringements, the algorithms used are not fool-proof and the aviation database itself may contains errors or omissions. Pilot-in-command should never rely on this feature as primary mean of avoiding airspace infringements but should rely on their own aircraft tracking and the official documentation

Hypoxia detection and alerts (iOS only)

As an additional safety service, Airmate will monitor the cabin pressure using the pressure sensor embedded in most iPhone/iPad (when available) in order to check the pilot is not exposed to hypoxia and will raise an alarm if the regulatory thresholds are exceeded, according the defined flight rules.

You could define the altitude threshold to monitor according the regulations you should comply with in **Settings/Flight/Hypoxia alert**. Additionally, you could also specify lower, more conservative, altitudes values for the warning threshold (after 30mn of exposure) and the immediate alert threshold.

Hypoxia Warning
You stayed for 30mn above a level where atmospheric pressure is lower than standard pressure at 10000ft. You should use oxygen or descent if safely possible.

Ack
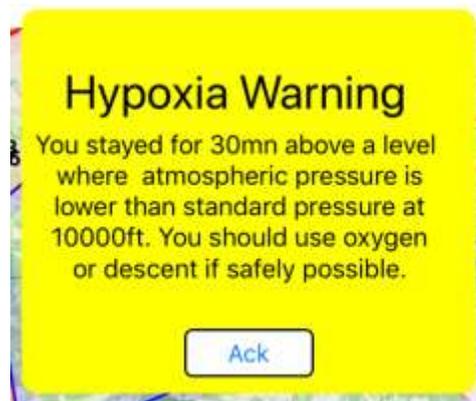
Flight rules	Alarm after 30 minute exposure	Immediate alarm
FAA	12,500 ft	14,000 ft
EASA	10,000 ft	13,000 ft

> **Warning:** The device pressure/altitude sensors are not certified for navigation and may provide erroneous information. The Hypoxia warnings are provided as an additional safety feature, but should not be relied upon as primary mean to avoid hypoxia during flight. The Pilot in Command is responsible to oversee altitude flown and duration and check its compliance with regulatory requirements.

FIS-B weather alerts (iOS only)

When a FIS-B message pertaining to one of your destination or alternate airports is received during a flight, for example an updated METAR or TAF, Airmate will display it in a warning popup.

Scratchpad (iOS only)

Introduction

From the map, you could directly access a scratchpad to quickly record useful information, such IFR clearance or ATIS information. You could access your scratchpad in both Planning and Flight modes.

Using the scratchpad

Click on the Scratchpad/Notepad icon at the bottom left to display the scratchpad. It will replace the map, a Back button will hide the scratchpad and return to the map.

The scratchpad content will be saved in the planned flight profile during the whole flight and then saved automatically if you exit Airmate. It will be shown again if you open again the same planned flight. You could use the Clear button to clear the scratchpad for this planned flight. Every planned flight is using its own scratchpad.

You could record information on the scratchpad using freehand drawing. The default drawing color is black, you could also select blue and red colors. A rubber button switches from the pencil drawing mode to a rubber erase mode allowing you to delete some drawings, clicking on the pencil button will revert to freehand drawing mode.
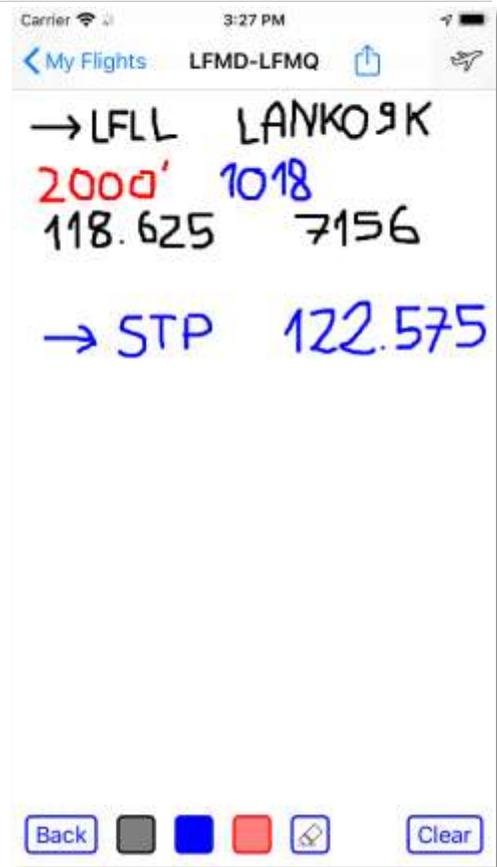
Managing Planned Flights

Adding a new Planned Flight

The + button at the right of the list will add a new empty planned flight to the list, named "*Template Flight Plan*".

Once created, you need at least to specify the departure and destination airfields, this may be done either in the Edit menu by indicating airfields codes or names, or graphically using the map. Please refer to the "Planning a new flight" chapter for step by step guidance on planned flight creation.

The **Browse Map** and **Start flying** buttons will also create an empty "*Template Flight Plan*" before switching to the map display, you could then graphically enter flight data.

The Airmate free version allows creating and managing up to 250 different planned flights that you could modify and manage as you wish. The Airmate Pro and Airmate Military versions allow to store an unlimited number of planned flights. You may purchase the upgrade to those versions online.

Your planned flights are automatically synchronized between all your devices connected using the same Airmate account. They may be accessed through Airmate Web Flight Planning https://fly.airmate.aero. You can disable this synchronization in Settings if you wish to manage different planned flights from your various devices or for confidentiality.

Delete, Copy or Invert a planned flight

The Edit button at the upper left of the planned flight list will switch the list in Edit mode. An edit symbol is displayed at the left of all planned flights, by either clicking on this symbol or swiping left the planned flight entry, several choices are shown:

- **Invert**: will create a copy of the planned flight, reverting departure and destination airfields.

- **Copy**: will copy the planned flight in a new entry

- **Delete**: will delete the planned flight. A confirmation window is displayed first, as this action could not be reversed.

Bars at the right of the planned flight name allows to move the planned flight up or down in the list.

Planned Flights automatic reshuffling

Airmate will automatically reshuffle the list of planned flights to show first the most recently accessed flights.

If you want, you can disable this automatic flight sorting, in the Settings. In this case, thanks to the Edit button described above, you could use bars at the right of the planned flights to move them. In this way, you may reshuffle and sort manually your planned flights in the list.

Flight Plan Filing (iOS only)

Introduction

In most countries, Airmate iOS allows you to file the VFR or IFR planned flight you have defined with aeronautical authorities. Once filed, the flight plan will be managed by air traffic control.

As a pilot-in-command, you are responsible to file flight plans you intend to fly and to amend them (cancel, delay) as necessary.

The filing of a flight plan through Eurocontrol is chargeable (a moderate amount of 1 € covers our flight plan filing costs). In US, flight plan filing is available free of charge using your Leidos (https://www.1800wxbrief.com) account.

Configuration for US flight plan filing

In the USA, flight plan filing and management are performed using your https://www.1800wxbrief.com account. You need to perform the following steps to file flight plans from Airmate:

- connect to 1800wxbrief.com using your account, go to Account and then "Service Providers Authorization". Tick the Airmate box to authorize Airmate to submit flight plans on your behalf.

To authorize your service provider select "Edit" then select the provider's "Yes" radio button, then select "Save".

Authorized		Service Provider
Yes	● No	AOPA Flight Planning Tools
● Yes	No	Airmate

- go to **Airmate Settings/Account**, select **Flight Plan Filing** and enter your username at 1800wxbrief.com

Flight plan filing	
US FPL provider	1800wxbrief
FPL Username	test@airmate.aero

Find best route for your flight

Finding the best routing between origin and destination airports may be a tricky matter, especially in IFR.

Airmate provides you an Auto-Routing feature that will propose several routes for your flight. You have the opportunity to review them, validate them to make sure they are valid in your flight context, and then select and modify them. Proposed routes may include routes provided by Eurocontrol (Europe) or FAA (USA), or past routes flown or filed before. Proposed routes should be validated to ensure they are still valid.

To launch Auto-Routing, click on the `Auto` button at the left of the flight plan route in the main flight edition form: a list of routing proposals will be searched and displayed.

In order to validate one of the listed proposals, click on the `Validate` button. Button will grey out during validation process and then change to either `Validated` or `Failed >`. In case of failure, you can click on the `Failed >` button to view the reasons for failure.

The `Use` button may be used to copy the flight plan proposal data to your flight planning form (route, flight rules, level). It is recommended to use data having passed validation, but you may copy data having failed validation and then modify them manually before validating your complete flight plan.
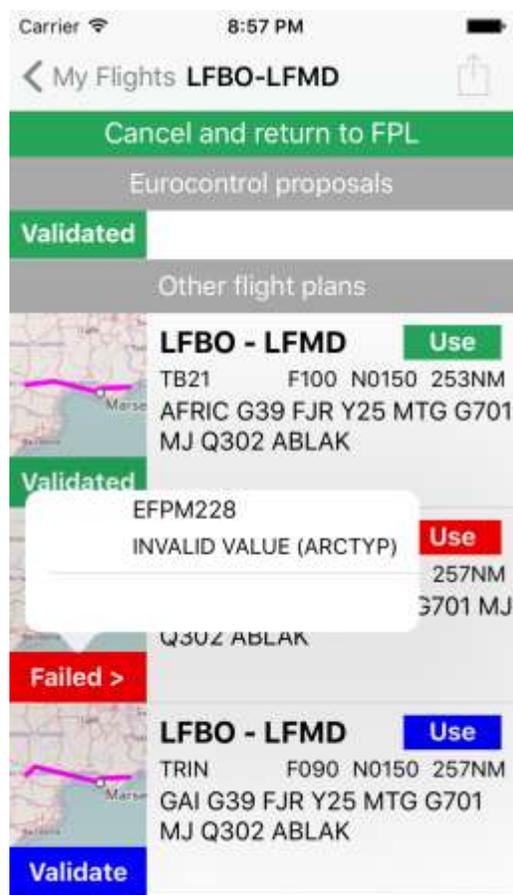
Select the aircraft to be used for the flight

You need to indicate the aircraft to be used for the flight, by selecting it from the list of your stored aircrafts. Airmate will use the following aircraft characteristics to finalize flight plan filing:

- aircraft cruise speed

- aircraft radio, transponder and RNAV/PBN capabilities

- aircraft survival equipment (jackets, dinghies, and so on).

- aircraft color and endurance

If you do not already have defined an aircraft, the aircraft list window will only list a template test aircraft (C172 NTEST) and will allow you to create your aircraft immediately.

By selecting **Create new aircraft**, you can define a new aircraft, set its characteristics and then use it right away for flight plan filing. Please refer to the Aircraft Hangar chapter for more information about aircraft profile definition.

Complete flight plan data in the planning forms

In order to file a VFR or IFR flight plan with aeronautical authorities, you need first to enter all data needed for flight plan filing in the flight planning forms.

This includes at least, in the main planning form:

- **origin and destination airports**

- **flight rules**: either I (IFR), V (VFR), Y (IFR then VFR), Z (VFR then IFR)

- **flight route**, either manually entered or found using the Auto-Route system

- flight **level** or altitude

- **speed**

- **aircraft** to be used: you need to select one configured aircraft in your aircraft list (see Aircraft Hangar chapter to learn how to create your aircraft)

- **flight date/time**: in Europe, it is possible to file flight plans up to 5 days in advance (120 hours). In other territories flight plan filing may have to be done within 24 hours of the flight.

You should also complete additional information in the **Details** planning form:

- **number of passengers**

- **alternate** airfields if selected

- **endurance** according to the fuel capacity available at takeoff

Once all the required information has been provided, the **Validate** button at the left of the route field will become active and launch flight plan validation.

Performing final validation before filing

Even if the route was found and validated with Auto-Routing, you will need to perform a final validation using the **Validate** button before filing the flight plan. This final validation will check with Air Traffic Control servers if your whole flight plan is valid in your context, taking into account your origin, destination and alternate airports, your proposed route, level, flight rules and your aircraft and its capabilities.

Once validation passed, a **File** button will replace the **Validate** button to trigger the flight plan filing with Air Traffic Control and you could use the **File the flight plan** button of the **Filing** form to file your plan. If you change any of the validated data before filing (eg your speed, aircraft or flight level), the **Validate** button will happen again as a new validation will be needed before filing.

If the validation fails, a **KO >** button will appear. You can click on this button to view the reasons for failure. You will then need to change at least one field in the flight plan in order to be able to validate again the changed data (**KO >** button will change back to **Validate**).

Completing Filing plan form

Selecting the **Filing** tab at the bottom of the screen will display the filing plan confirmation form, where you could enter flight plan options to be indicated in Field 18 of the flight plan and confirm Captain contact details:

- **Estimated Enroute Time**, as computed by Airmate according your route. You could amend this value.

- **Endurance** as indicated in Details form, by default set to the maximum endurance of your selected aircraft.

- **EET/**: not to be confused with the total enroute time, this value is used to specify the elapsed time after takeoff to reach a specific point, usually used for boundary crossing

- **OPR/**: indicates the flight operator, set to PRIVATE by default

- **RMK/**: used to enter various remarks. Is set by default to "IFPSRA" meaning "IFPS REROUTING ACCEPTED", allowing the flight plan to be changed if needed (rerouted) instead of being rejected.

- an empty box allows to select any additional value for the field 18 of the ICAO plan, that may be: **STS** (Special handling, e.g. for ambulance flights), **REG** (Registration), **SEL** (SELCAL code), **TYP** (Nbr/type of aircraft for grouped flights), **DLE** (Enroute delay) or **DAT** (Data capabilities).

At the bottom of the form, you should indicate your name as Pilot-in-Command and your contact details (mobile phone number and email). This information will be transmitted to Air Traffic Control in case it is needed to contact you. If your name and contact details were previously saved (either using Settings or automatically during a previous flight plan filing), they will be used to fill in by default the fields that you could modify, otherwise you must enter them to enable flight plan filing

Once this form is completed, click on the **File this flight plan** button to finalize flight plan filing.

Confirming flight plan filing

After confirming the flight plan options on the **Filing** page, the flight plan filing dialog box will present the flight plan to be filed and provides a final check of your name and mobile phone number.

Before clicking on the `Submit under my responsibility` button, please carefully review the flight plan details and check all information is correct:

- your name and phone number
- flight date and time (displayed in yymmdd hhmm format)
- origin and destination airports
- detailed flight plan information to be submitted
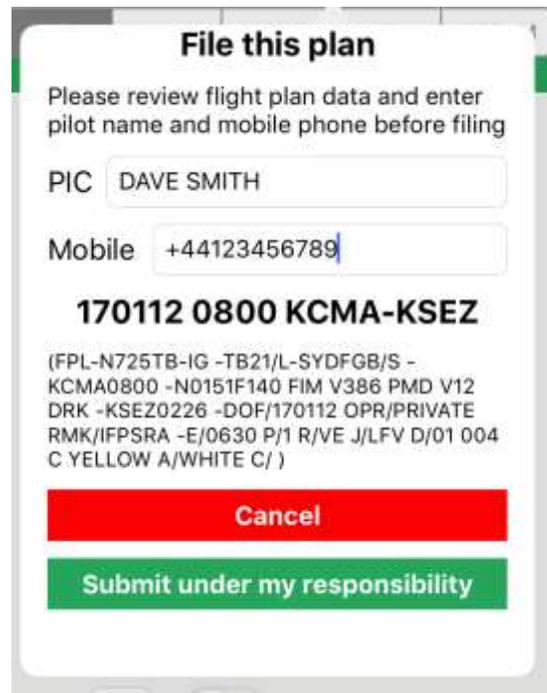
File this plan

Please review flight plan data and enter pilot name and mobile phone before filing

PIC   DAVE SMITH

Mobile   +44123456789

170112 0800 KCMA-KSEZ

(FPL-N725TB-IG -TB21/L-SYDFGB/S - KCMA0800 -N0151F140 FIM V386 PMD V12 DRK -KSEZ0226 -DOF/170112 OPR/PRIVATE RMK/IFPSRA -E/0630 P/1 R/VE J/LFV D/01 004 C YELLOW A/WHITE C/)

Cancel

Submit under my responsibility

You are responsible to file accurate data to the AFTN (Aeronautical Fixed Telecommunication Network)

Please make sure you file only flights you intend to fly.

Please cancel flights if you are unable to fly them as planned, so they are removed from the network.

In the USA, flight plan filing is free of charge.

Purchase flight plan filing

Flight plan filing in Air Traffic Control is chargeable. Please purchase a flight plan filing token to file your plan: (€0,99)

Yes, Purchase   No, thanks
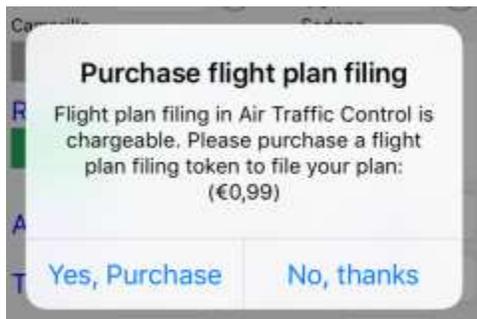
In Europe, flight plan filing is chargeable (as we incur costs for flight plan submission), so if you do not already have at least one flight plan filing token credited to your account, you will have to purchase one before filing. This is done online immediately.

If the filing of a flight plan fails for any reason, your flight plan filing token will be credited back to your account and can be used to request again a flight plan filing for the same or another flight plan. If a flight plan is later on cancelled or rejected, the flight plan token could not be reused. If you feel that a flight plan token has been unduly charged, please contact Airmate team (airmate@airmate.aero).

Checking filing acknowledgment and messages

Even when validated, a flight plan may be rejected or delayed by the global Aeronautical Fixed Telecommunication Network (AFTN) that is routing and processing flight plans.

For this reason, it is very important to check after filing the acknowledgement or error messages received after flight plan submission. The acknowledgement message is usually available one minute after filing. For VFR flight plans, often no acknowledgment message is returned.

Once filed, a **Msg >** button appears and allow you to view messages pertaining to your filed flight plan. According to the received messages, you could take appropriate action.

Status	Explanation	Example
ACK	**Acknowledge**: the flight plan has been successfully filed. Please note that slots may be imposed later, so it is good practice to check messages one to two hours before flight departure time to make sure you don't have to comply with a slot. The EOBT field (Estimated Off-Blocks Time indicates planned departure time.	**Filed flight plan** -TITLE ACK -MSGTYP IFPL - FILTIM 102315 -ORIGINDT 1701102315 -COMMENT MANDATORY 8.33KHZ RADIO EQUIPMENT REQUIRED FROM 01/01/2018. LFMM AND LIMM FIR MAY Msg >
REJ	**Rejected**: the flight plan has not been accepted and will need to be filed again after correcting the error indicated in the error message. In the example shown, the flight plan is conformant to international regulations allowing to file up to 5 days in advance, but has been rejected by US filing system that require a filing within 24 hours before departure.	-TITLE REJ -MSGTYP IFPL US FILING SYS REJ FPL KZLA INVALID DATE OF FLIGHT FPL-N725TB-IG -TB21/L-SYDFGB/S -KCMA0800 - N0151F140 FIM V386 PMD V12 DRK -KSEZ0226 -DOF/170112 Msg >
SAM SRM	**Slot Allocation Message** and **Slot Revision Message**: in this case, you should look at the CTOT field (Calculated Takeoff Time) that indicates the slot takeoff time. Take care to make sure you could comply with the CTOT that indicates the takeoff requested time (to the difference of EOBT that indicates	
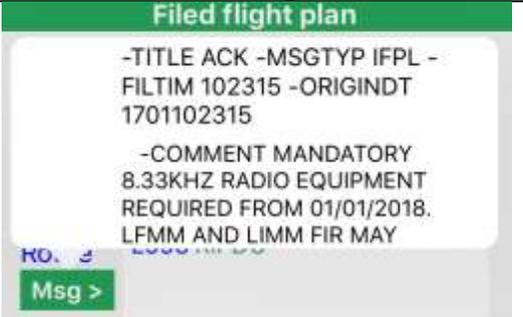
	the planned off block time)	
SLC	**Slot Cancellation Message** : you do not have to comply with a slot CTOT.	
FLS	**Flight Suspension**: this message is seldom issued, for example it may be issued in case of airport or airspace closure. The flight could not be flown, flight plan should be cancelled and reissued after making changes appropriate to the situation.	
DES	**De-Suspension**: flight could be flown again.	

Delaying or cancelling a filed flight plan

On the flight plan list, a Delay button allows to delay a filed flight plan. When delaying a flight plan, you will be prompted for the new flight departure time on 4 digits (hhmm). New departure time should be entered in UTC.

On the flight plan list, a Cancel button allows to cancel a filed flight plan. Cancellation could not be reversed, but it is possible to file again the flight plan if needed.

Camarillo - Sedona
KCMA - KSEZ   N725TB
F140 368 NM   02:26

2017-01-12   08:00   Flight plan filed

Cancel   Delay

It is recommended to use Delay instead of Cancel and filing again, because this avoids using another flight plan token for filing. It is not authorized to advance the flight time in AFTN network, so if you may be able to takeoff earlier than planned, it is best to file the plan with an earlier time and delay it, otherwise a Cancel / File again operation will be needed to advance flight time.

Flight plan synchronization between devices

The planned flight list is automatically synchronized between all your iOS devices using the same Airmate account, including the filing status. You can then plan and file a flight plan on one device (e.g. iPhone) and then delay the flight plan and navigate the flight using another device (e.g. iPad).

Flight plan synchronization with your 1800wxbrief.com account

In the USA, flight plans filed using your 1800wxbrief.com account could be managed using your 1800wxbrief.com account.

Flight Recording & Playback, Pilot Flight Log

Select a past flight
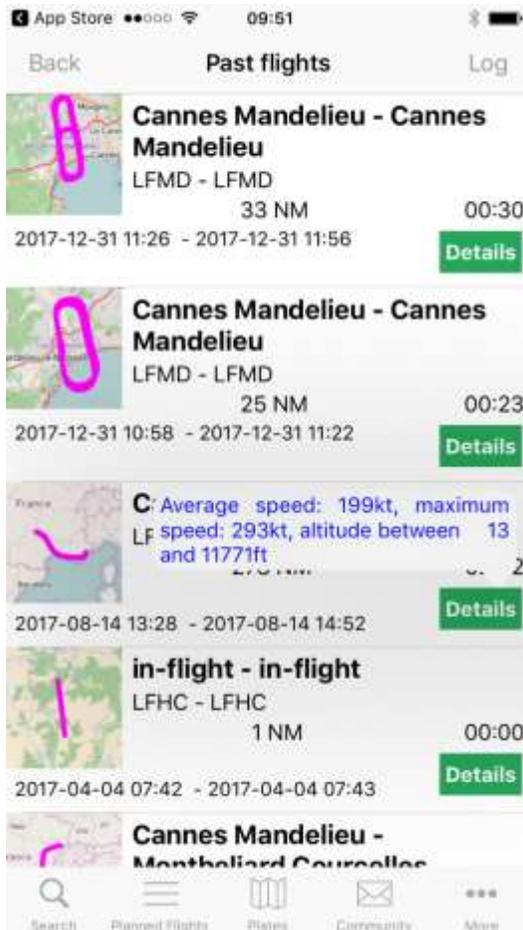
In flight mode, Airmate records automatically at regular intervals all flight data and flight track. The flight recording is closed when the ✈ End Flight button is clicked, if you forget the close the flight Airmate will close it automatically when you access the recorded flight menu.

To view flown flights, click on the 🕐 History button on the flight plan list. If flights have been recorded, their list will be displayed with flight summary data (start/end date/time, origin, destination, trip distance and duration). The origin and destination airfields are automatically found out from departure and end position. If the flight recording start or end during the flight "in-flight" will be indicated as position, if this position is near an airfield "near airfield" will be shown.

Using the recorded flight menu, it is then possible to select a flight and review it. You could also click on the Details button to view essential flight data.

When pictures have been taken using the picture button during flight, a Picture button allows to view pictures and their characteristics.

The flight recording interval is set by default to every 2 seconds, it is possible to change it using Settings/Advanced (e.g. it is often set to 1 second to record training for flight competitions).

From the recorded flight list, Airmate will also compute and display the pilot flight log, displayed thanks to Log button.

Play back a past flight

When a past flight is selected, it will be displayed on the map and played back. Buttons allow to browse and review every recorded flight position:

- ⏮ will jump to beginning of flight recording
- ◁◁ will animate aircraft position from current position to the beginning
- ▷ will move to next aircraft position
- ▷▷ will animate aircraft position from current position to the end of flight
- ⏭ will jump to end of flight recording

For every flight position, Airmate will display its recorded time, aircraft speed, altitude, and track. A picture symbol will be displayed at every location where a picture has been taken, you may click on this icon to view the image.

It is also possible to move the aircraft quickly along its map track using the slider.
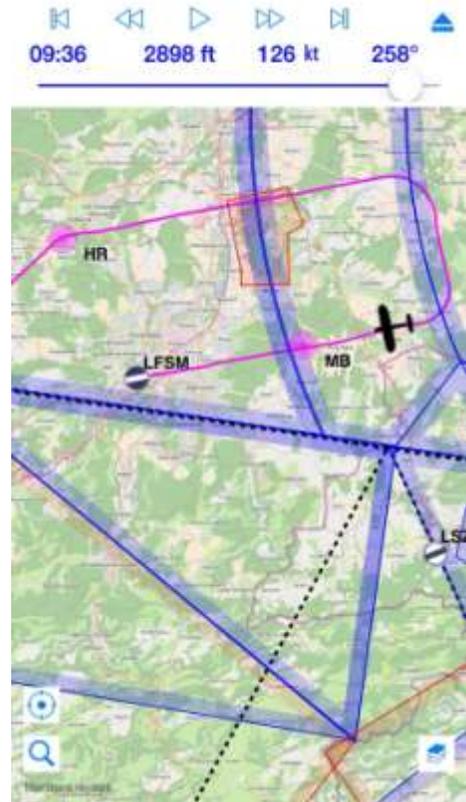
The flight track is displayed on top of Airmate map. In this playback mode, Airmate map controls allows to view characteristics of any point or to manage the map layers. Flight planning functions such **Direct To** or **Add to Route** are not available in playback mode.

The ⏏ button will exit the flight record display and return to the list of recorded flight.

To exit the list of recorded flights and return to the list of planned flights, click on the Back button or on the list button at the bottom of screen.

Airmate iOS is also able to import flown paths stored as gpx tracks (trkpt) shared by other apps. Airmate will display them using the flown flight track viewer

Selecting layers and Satellite mode

In the same way than when planning a flight, the layers button at the bottom right allows to select the aeronautical overlays to be displayed on the map during replay. It also allows to select the Satellite view, so landmarks could be recognized.

Enabling Profile View and Synthetic Vision (iOS only)

As during flight planning or flying, you can enable the profile view at the bottom of the map using the Terrain button. The profile view will show terrain across the recorded flown path.

In the same way, you could click on the Attitude Indicator button to display the AHRS view with Synthetic Vision.

Viewing pictures (iOS only)

When pictures have been taken during a flight using the **Camera** button, those pictures will be associated with the flight and displayed on the map.

For every picture, an ⬇ annotation will be shown on the map at the location where the picture was taken. You can click on a picture annotation to view a thumbnail of the picture.

You could use the ⬙ **Layers** button to switch from Map to Satellite mode to help you find the exact location of the pictured landscape on the map.

Managing pictures (iOS only)

When pictures have been taken during a flight using the picture button, a Picture button on the recorded flight list allows to display pictures pertaining to this flight.
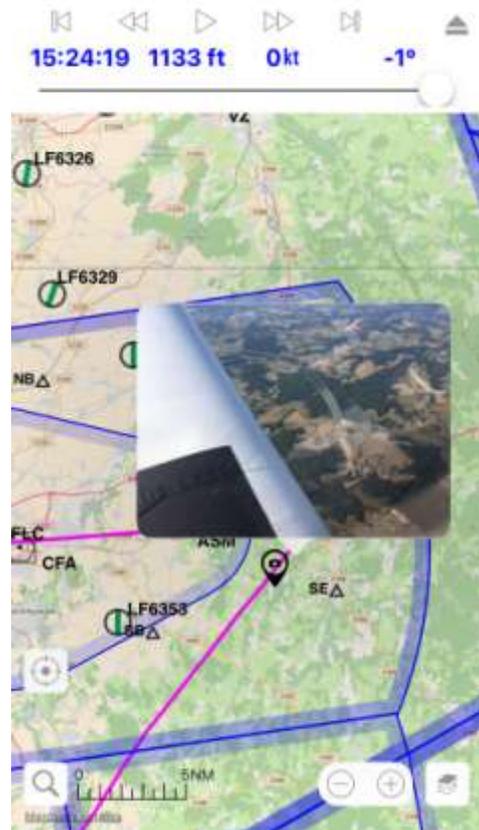
The list of flight pictures will show:

- a thumbnail of the picture

- picture timestamp

- geographical location (latitude/longitude)

- altitude

- camera heading

- a sharing segmented control allows you to share this picture with other Airmate users. By default, pictures are never shared (Me only). You can explicitly request the picture to be shared with either your friends or all Airmate users, shared pictures will be shown to authorized viewers by a next version of Airmate Web.

Picture #1
28 Aug 2018 at 17:11:08
45°46'16"N 3°28'15"E

6791 ft   0 °

Me only | Friends | All
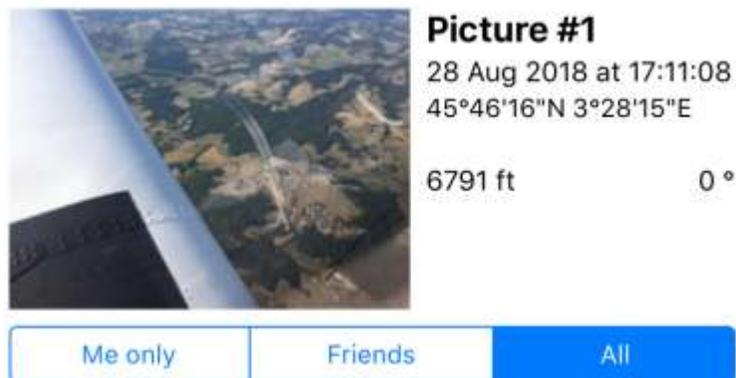
Swiping left a picture list row will display the allowed actions:

- **Email** the picture to any recipient

- **Remove** a picture associated with the flight. As this action could not be reversed, a confirmation window is displayed first. Please note that:

  o When you delete a picture, it is no longer associated with the flight and may no longer be managed using Airmate, however if it was taken with the same device it will still be stored in your device Camera roll. You should also delete the picture using the Photos app to remove it completely from your device.

  o if you remove a picture that you have defined as shared with other users, it will stop being shared with other users.

Managing and sharing past flights

On an entry of the past flight list, swiping left will display the allowed actions:

- **Email** the past flight track in GPX format to any recipient

- **Delete** this past flight data. As this action could not be reversed, a confirmation window is displayed first.

- **Send the flight to a debriefing server**; this choice is shown when a debriefing server has been defined in Airmate Settings/Advanced/Debriefing.

The recorded past flights are shared between your devices and saved in the cloud.

While viewing a past flight, a Share button also allows to store or share the map image.

Viewing past flight track on your computer

The GPX flight track recording file sent by email may be viewed using various utilities, for example Google Earth.

Using Google Earth, simply open the GPX file to have it converted to Google KML format and displayed on the Google Earth globe.
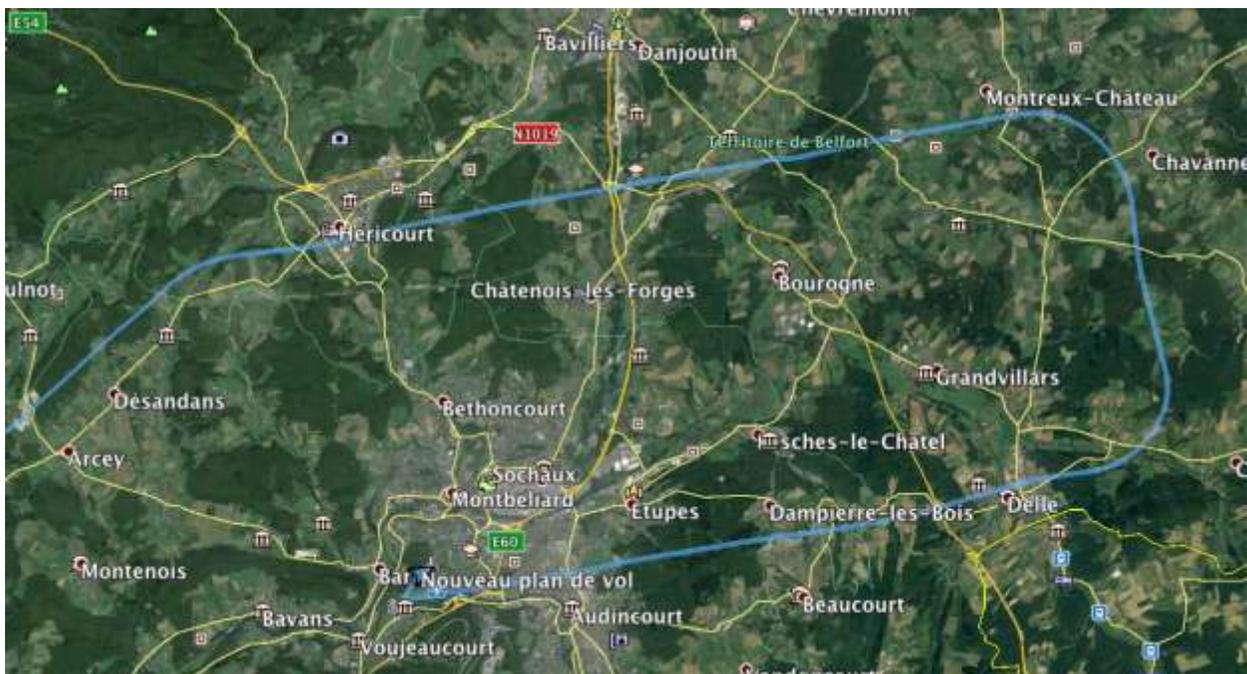
GPX files include altitude data and could also be viewed and analyzed using online Web tools, for example http://www.maplorer.com/view_gpx.html

Pilot flight log (iOS only)

Airmate will automatically process your recorded past flight data to show you the needed information to fill in your pilot flight log:

- start/end date/time of flight

- flight duration

- departure and destination airfields

- registration as defined in the associated planned flight from which the flight mode was activated

- number of recorded takeoffs and landings

The computed information will be accurate only if Airmate has been switched in Navigation mode before departure and navigation was ended after arrival.

Selecting the Log button at the top right of the planned flight list will show the **Pilot Flight Log**. In portrait mode, summary data are displayed in the list, rotating the device to landscape mode will present all data.

Date	From	at	To	at	Aircraft	Duration	T/O	L/D
31 Dec 2017	LFMD	12:26	LFMD	12:56		0:30:16	3	3
31 Dec 2017	LFMD	11:58	LFMD	12:22		0:23:55	3	3
14 Aug 2017	LFMD	15:28	LFLW	16:52		2:02:49	1	0
4 Apr 2017	LFHC	09:42	LFHC	09:43		0:00:45	0	0
3 Aug 2016	LFMD	08:01	LFSM	10:27		2:29:47	1	1
1 Aug 2016	LFSM	16:06	LF3869	17:11		1:21:29	1	0

Back — Flight log — History

Search | Planned Flights | Plates | Community | More

Airport Plates

Introduction

Airmate downloads and displays airport IFR and VFR approach plates from either aeronautical map (clicking on any airport symbol) or on the airport detailed data display. Once downloaded, plates are available during flight, outside Internet coverage.

Airmate also includes a powerful Plate Manager allowing to download in advance all charts for a specific country, or a specific region of a country. Plates are usually the official plates published by the aeronautical authority of the country, they may be completed by privately published plates, eg BasUlm in France for ultralight fields.

Airmate Plate Manager is very advanced and easy to use:

- free access without subscription to plates in more than 200 countries. In some countries, plates for heliports, ultralight or bush fields or seaplane bases may also be available. There are few countries where the only available ultralight/unlicensed or visual approach plates are paying charts from commercial providers, in this case it is possible to purchase them. The display of military approach plates requires a current subscription to Airmate Military.

- airport sorting using either ICAO code or airport name.

- most importantly, airports within a country are sorted by region, allowing to quickly view all airports in each region or download all those airports.
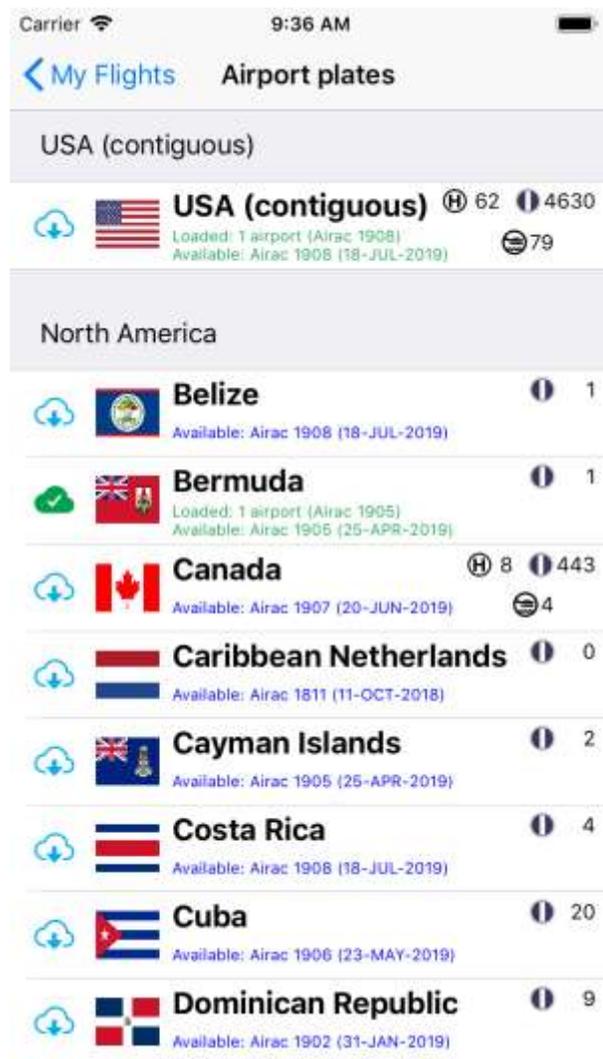
- for every chart displayed on the chart list, a thumbnail allows to quickly visualize chart content before opening it.

- background chart download, allowing to continue to use Airmate or even switch to another app during plate bulk download (don't close Airmate application that should remain in background).

Select desired country

The Plate Manager will first display the list of all countries for which airport plates are available. For each country, the available chart AIRAC cycle/last update date is shown, as well the number of downloaded plates and their date/cycle. The number of airfields with plates is shown, as heliports, ultralight fields or seaplane bases when available. Only airfields with published charts are listed, so airfields without published charts will not appear in this list, even if shown on the aviation map.
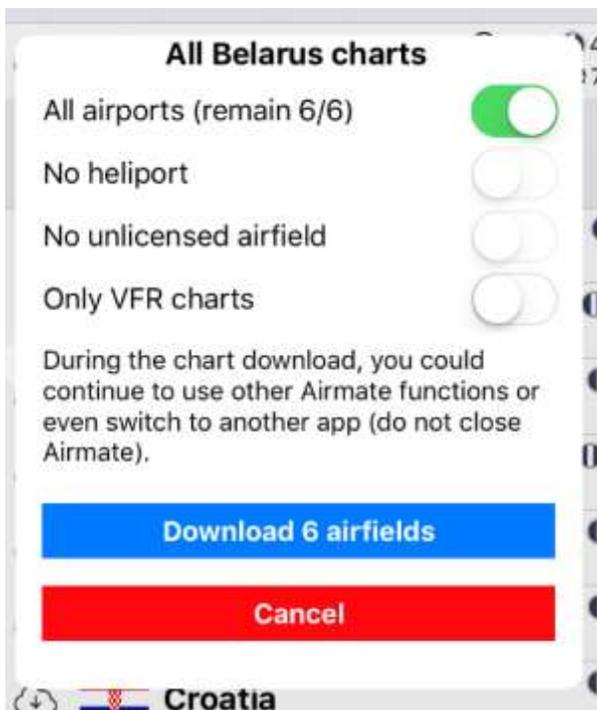
Countries are sorted by continent; the user home country is listed first (it is possible to change his/her home country in the Settings menu).

The Download ⬇ button at the left of every country will trigger the download of all charts for all airports in the country. A selection menu will be display first to narrow the list of airfields to download:

- airports (selected by default)

- heliports

- ultralight fields (also include seaplane bases)

- a switch allows to download only VFR (Visual Approach Charts) plates, excluding IFR plates. This choice will select only VAC charts, with if appropriate airport (ADC), taxi (TAXI) charts.

Once the bulk download of a set of charts is launched, a circular progress bar allows to follow the download progress.

A global download indicator progress will also be displayed at the top of the list for all download in progress.

Airport list
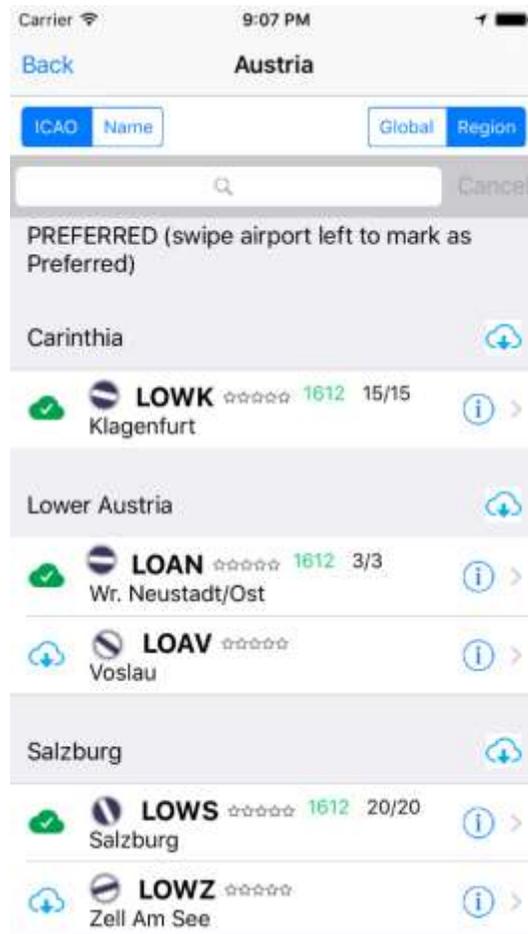
When a country is selected, the list of airports with published plates for this country is displayed.

Airports are by default sorted in region, allowing to easily view and download all airports charts in each region (to download all airports in a region, click on the ⊕ download button at the right of the region). Inside a region, airports may be sorted by ICAO code or airfield name thanks to ICAO et Name buttons. It is possible to request the global display of all airfields without regional sorting, using Global button.

Only airfields with charts are listed. When applicable, buttons may allow to request the display of heliports or ultralight airfields (seaplane bases are displayed with ultralight airfields). When your profile in Setting menu is asking for the display of heliports or ultralight airfields on the map, they will be also automatically displayed in the Chart Manager.

A search area allows to search directly an airport. The search will be performed by looking in the search string in either ICAO code, airport name, or associated city name.

For every airport listed, several actions are possible:

- when plates have not all been downloaded, the download ⊕ button at the left will trigger the download of all charts without displaying them. If plates have been downloaded but may not be up to date, the ↻ button will check and update them. When download starts, the download in progress symbol ⬇ is displayed and then replaced by a progress circle.

- clicking on the airport will either open directly the plate if a single plate is available or instead displays the list of plates for this airport.

- the info ⓘ button located on the right will open the aircraft detail window providing detailed information on the airfield: location, contact information, frequencies, runways, associated waypoints and radio beacons, weather and NOTAM. You can also view the airport rating as voted by Airmate users and view their comments on the airfield (and leave yours).

- sliding cell on the left will allow to mark or unmark the airport as a "**Preferred**" airport. Preferred airports are displayed first in the country airport list (they remain also sorted in their own region). Two other options could be accessed by sliding left:

  o **Check** the charts are still up to date and download updated version.

  o **Delete** all charts for this airfield to free up storage space.

ⓘ > Preferred   Check   Delete

Once charts have been downloaded for an airport, AIRAC download date and number of charts are displayed. The AIRAC download cycle is displayed in red when it is older than current cycle, the synchronize button will allow to update all charts. If all plates have been downloaded for an airport, the ☁ button is replaced by ☁. If the airport has only a single plate that has been downloaded, a thumbnail of the chart will be displayed instead of the ☁ symbol.

Listing airport plates

Clicking on the airport will either open directly the plate if a single plate is available or instead displays the list of plates for this airport. If the plate has not already been downloaded, it will be retrieved from Internet.

Plates are sorted by categories to allow easy access to relevant data:

- VAC or VFR: VFR approach plates
- ADC or APD: airport plate
- TAXI: taxi plate
- SID or DP: Standard Instrument Departure

Carrier 🔗   4:06 PM   ▬

Back   **UMBB charts**

PREFERRED (swipe chart left to mark as Preferred)

ADC

Aerodrome Chart
Last checked on 2016-09-24
1610   2016-01-07   204 kB

TAXI

Chart
Not downloaded

SID

RWY 29
Last checked on 2016-09-24
1610   2016-01-07   249 kB

RWY 11
Last checked on 2016-09-24
1610   2016-01-07   248 kB

IAC

ILS RWY 29
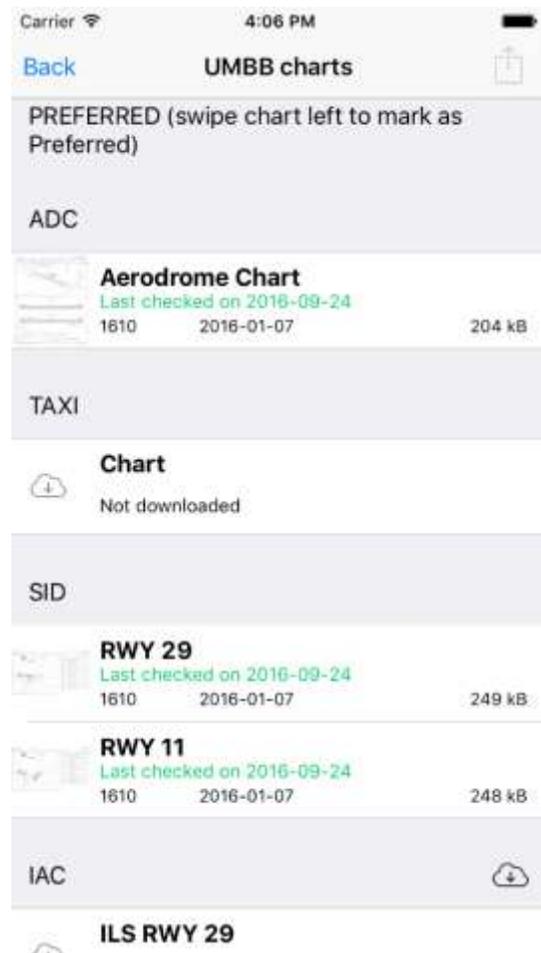
- IAC or IAP: Instrument Approach Chart
- STAR: Standard Terminal Arrival Routes
- MIN: Minimums
- HOT: Hotspots
- TEXT or AFD: text information
- OTHER: other charts
- DOCS: airport additional documents, such landing fees, local regulations, touristic information...
- PICT: airport pictures

If a plate has been downloaded, its thumbnail is displayed to allow quick identification and selection. Plate characteristics are also indicated:

- name

- date of plate download or last check, displayed in green if within current AIRAC cycle otherwise in red, in this case a validity check is strongly recommended.

- AIRAC cycle of last validity check.

- chart date, as specified by the authority server. It may exist a discrepancy between this date and the official issuing date as printed in the chart.

- chart size

When on the list, the ⬇ download button on the left of a plate will trigger its download without displaying it. The same ⬇ download button located on the right of a chart category will retrieve all charts in this category.

By sliding a chart left, several options are provided:

- **Preferred**: select the plate as Preferred, it will be displayed at the beginning of the list in a "Preferred" category. The plate will remain also listed in its own category.

- **Share**: the plate may be sent for printing to any Airprint printer, sent by email, copied or shared using Airdrop with any neighboring iPhone or iPad.
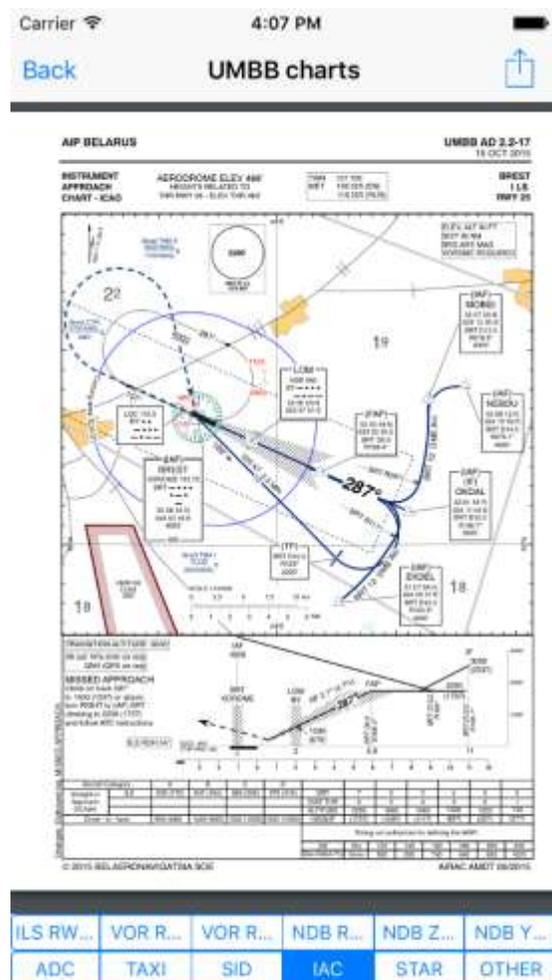
- **Delete**: delete the chart PDF file. The chart remains in the list and may be downloaded again if needed.
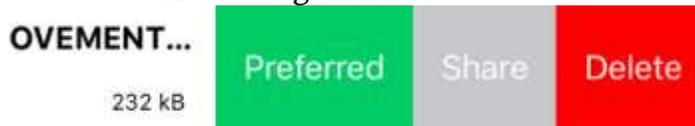
The ⬆ share button at the upper right of the list will trigger a share action on all plates of the list having been already downloaded. They can be printed in a single stroke to any Airprint printer, sent by email or shared by Airdrop. This action is performed only on downloaded files, so in order to print out all charts for an airport, download them first, for example using the ⬇ download button at the left on an airport that will download all charts for this airport.

Airmate will download by default IFR and VFR plates. If you have selected the switch "VFR Charts only" in the Settings menu, Airmate will only download VFR plates. The symbol ⬇ will be shown for airports for which IFR charts remain available for download.

Viewing plates

Clicking on a chart will trigger its display, after its download if needed.

Plate may be moved or zoomed in/out by pinching/expanding.

When there is a set of plates for a given airport, quick navigation tabs at the bottom of the screen may be used to switch from the current plate to another plate in the same category or to switch to another plate category. If numerous plates are available for a given category, instead of tabs, the plate selection is performed using a popup menu showing the full name of the currently displayed plate and once clicked showing all available plates. You could also quickly browse through plates in the same category by swiping the screen left or right.

On iOS, a **Rotate** button at the upper right of the screen allows to rotate the plate clockwise 90° for viewing alignment.

Another ⬆ **Share** button at the upper right of the screen will share the plate. It can be printed out to any Airprint printer, sent by email, copied, or sent to any nearby iPhone or iPad using Airdrop.

Chart updates

At every AIRAC cycle (every 28 days), Airmate will recommend the update of all downloaded charts. This matches the usual update cycle from most aeronautical authorities.

When Airmate detects some charts have been downloaded during a previous AIRAC cycle, Airmate displays a warning informing you that some charts may be obsolete. A synchronize button at the right allows to update automatically all downloaded charts.

Warning: some charts may be obsolete, please update them

> **Warning**
> Some authorities may update their plates using a different periodicity than AIRAC cycle or perform urgent updates. Those changes may not be detected by Airmate. Airmate publishers remind that Airmate information is not authoritative, and that official AIP should be used to plan flights.

Subscribing to commercial or Military plates

In some countries, visual approach plates are commercially published by authorities or suppliers for either all airfields (Germany, Switzerland) and/or ultralight/unlicensed airfields (Austria, Italy, United Kingdom).

Military approach plates could also only be viewed if you have an active Airmate Military subscription.

In those cases, you may purchase a yearly subscription to those commercial plates, allowing you to download those plates and access their updates for one year. Those paying plates are marked with the ⓢ symbol.

For convenience, we recommend connecting to Airmate Shop to subscribe to your preferred optional charts or Airmate Military (https://www.airmate.aero/shop/). Otherwise, it is also possible to subscribe directly from the app if internet connectivity is available.
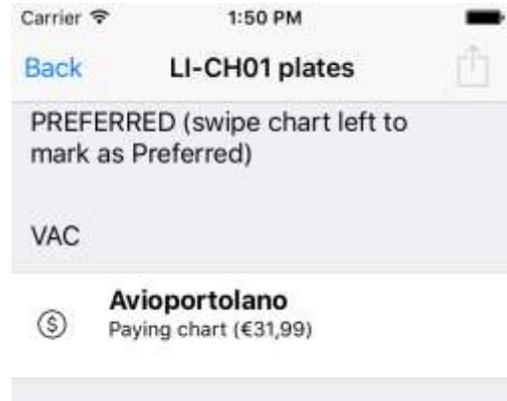
Airport information

Introduction

Clicking on the ⓘ information button associated to an airport will open a window displaying all airport information:

- administrative data

- sunrise and sunset times

- runways

- frequencies

- associated waypoints and radio beacons

- NOTAM

- weather (TAF and METAR)

- charts, including topographic data around the airport, satellite view and VFR and IFR approach plates when available.

- pilot feedback (rating) with a **Leave feedback** button to allow the user to leave his rating and comments on the airport.

- fuel prices reported by community, with a **Report fuel price** button to share price charged.

- landing fees reported by community with a **Report Landing Fee** button.

Those ⓘ airport Information buttons may be accessed:

- from the airport popover displayed on the aeronautical chart when an airport symbol is clicked.

- from the flight planning window next to departure, destination and alternate airfields.

- from the airport list in the Plate Manager.

- From any airport listed in the search engine result list

General Information

The upper Info tab will display general data about airport: location, geographic coordinates, elevation.

The current time at airport is indicated, as well as UTC time and sunrise/sunset times for the current day. You can click on the underlined current date to change it and get sunrise/sunset times computed for the new date.
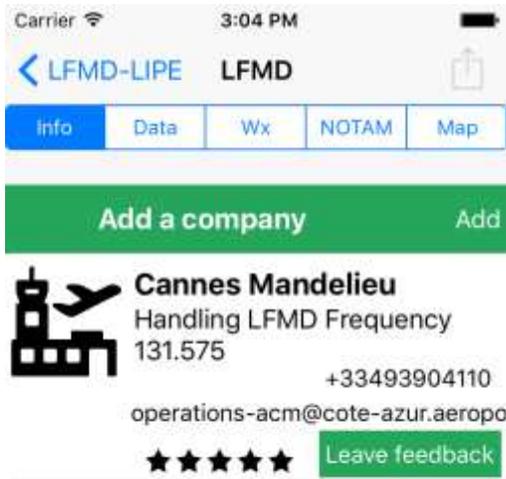
If the airport has been rated by Airmate users, its rating will be displayed (from 1 ★☆☆☆☆ to 5 stars ★★★★★). The rating is empty (no filled star ☆☆☆☆☆) if the airport has not been rated up to now. A Leave feedback button allows pilots to leave their own rating with comments (see below).

If either Fuel Prices or Landing Fees are known for this airfield, their mean value will be displayed. Clicking on the value will display the detailed list of reported prices, most recent first. Report fuel price and Report landing fee buttons allows pilots to report prices to the community.

FBO / Handlers, Fuel Providers, Aviation Clubs, and other aviation companies

The bottom Aviation tab will provide you the list of FBO/handlers, fuel providers, Aviation Clubs and other aviation-related companies ((including Repair Stations, Flight Schools and so on) located at the

airport, when their contact details are known. You can view their phone and email contact details.

All companies known to us or reported by the community are listed. However, companies advertising in Airmate will be listed first, have a link to their Web, and could easily be reached thanks to active phone and mail links. They will also be listed when offline, other companies will be retrieved only when Internet access is available.

Companies may be rated from 1★☆☆☆☆ to 5 ★★★★★ with optional comments. Companies still not rated have an empty rating (☆☆☆☆☆). For companies already rated, by clicking on their number of stars you will see the list of all ratings left by Airmate users with their comments. If you have used a company in the list, don't hesitate to rate it to share your experience with other users (you could leave only a single rating for a given company).

Airmate is a social app fueled by the community. The `Add a company` button allows to enter yourself information on a FBO/Handler, fuel provider, Aviation Club or other aviation related company not listed in Airmate directory. Data will be validated by Airmate team and put online shortly after.

View nearby businesses and activities

Clicking `Near` tab will allow you to view useful nearby services and activities. They include `Hotels`, `Dining` and `Transport` services as well as `Tourism` information when known. As for aviation companies, all known companies will be listed, but those advertising with Airmate will be listed first and enjoy increased visibility.

By clicking on the `Add a company` button, you can add new companies and share them with the Airmate community. Don't hesitate to share information about a good airport restaurant or a touristic activity nearby.

In the same way than airports, companies may be rated, by clicking on their number of stars you will see the list of all ratings left by Airmate users with their comments. If you have experienced the services of a company in the list, don't hesitate to rate it to share your experience with other users (as for
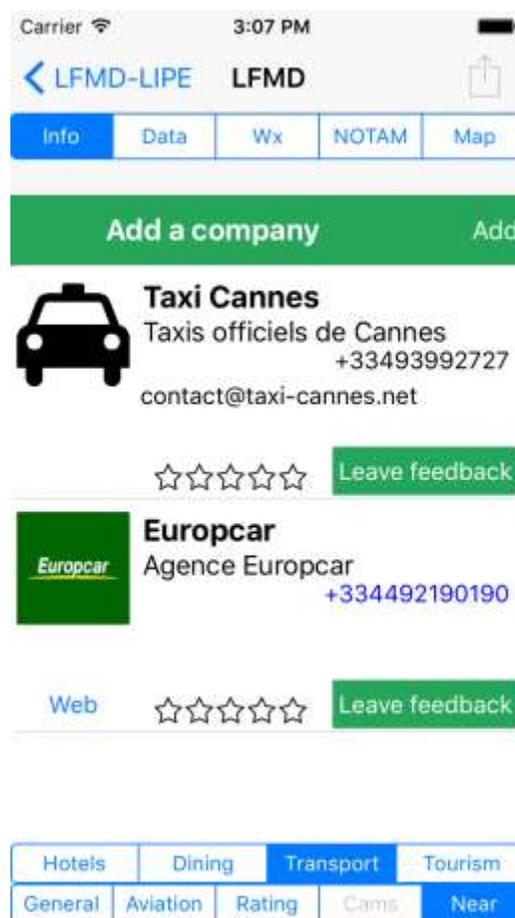
airports, you may leave only a single rating for a given company).

Rate the airport or nearby business and share your comments
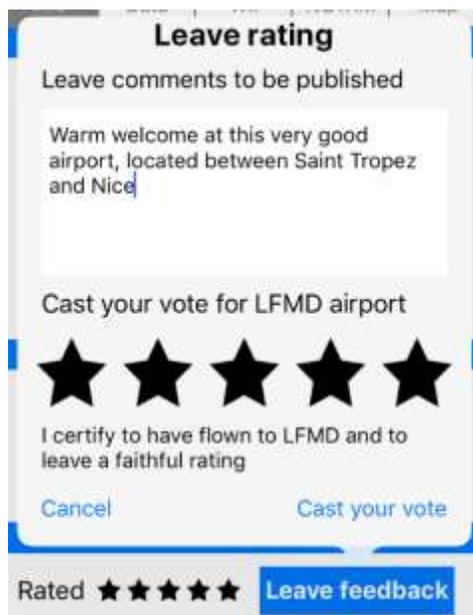
Airmate allows you to share your flight experience to an airport or any nearby business with other pilots. You can also review Airmate users' comments before flying to a new airport.

To ensure fair voting, you may leave only a single rating per visited airport or associated business.

To cast your voting, click on Leave feedback button on the Info page (that may be reached using the Info tab).

You can then rate the airport or company (from 1 to 5 stars). Although not mandatory, we recommend also leaving comments and advice for pilots travelling to this airport.

Rating rules:
To avoid multiple voting, you can only leave a single vote per visited airport or business.
Thanks to leave only fair and faithful ratings and comments.
Please vote only for airports or business you have really used as a pilot
Do not vote up your own business or vote down a competitor
Ratings are validated by Airmate team and shortly put online after submission.

Review other pilots ratings and comments

For airports, the Ratings tab at the bottom of the Information page will allow you to review the ratings and comments left by other pilots having visited this airport. This will help you to plan your trip.
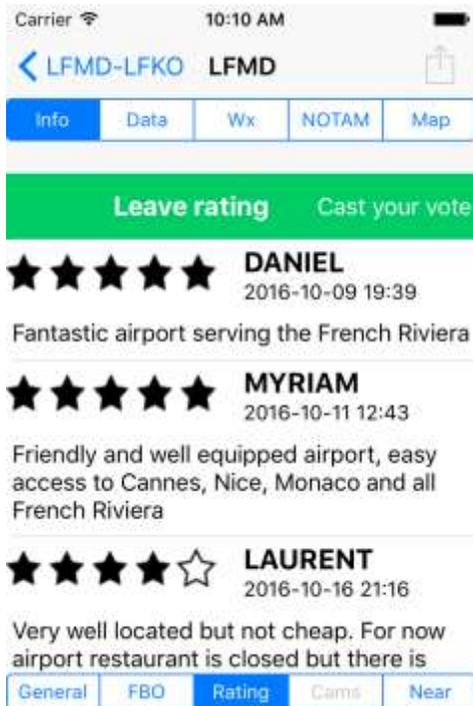
You can also view ratings left for businesses associated with the airport by clicking on their number of stars (5 empty stars mean no rating have been left up to now).

Listings show nickname of Airmate user having left the rating, the rating (between 1 and 5 stars), date/time rating was left and optional comments. We recommend leaving comments when voting for an airport.

Your own rating and comment will appear in the list if you have left one for this airport, after validation if it has just been left (validation is usually done the next day).

View and Report fuel prices

If there are fuel prices reported at an airport, the mean fuel price will be computed and displayed on airport Info page. You can click on the price link to view the details of all fuel price feedback left by fellow pilots, including:

- refueling date: make sure the report is recent

- fuel type: AVGAS 100LL, Jet-A or Jet-A1…

- price paid.

- comments

By clicking on the **Report fuel price** button, you can report the fuel price you have been charged at the airport. Don't forget to specify the fuel type and the price per fuel unit (either USG or liters), you need also to indicate the refueling date. You should only report public prices that any pilot would get, including all applicable taxes, not negotiated corporate rates or prices without VAT or other taxes because you operate using an AOC.

View and Report landing fees

If landing fees were reported for an airport, the mean landing fee will be computed and displayed on airport Info page. You can click on the price link to view the details of all landing fee feedback left by fellow pilots, including:

- landing date: make sure the report is recent
- aircraft weight, as landing fees are most usually computed according aircraft MTOW.
- landing fees paid.
- comments

By clicking on the **Report landing fee** button, you can report the landing fee you paid at the airport. Don't forget to update if needed the aircraft weight (set by default to 1,000 kg) and the weight unit (either Lb or Kg), you need also to indicate the landing date. You should only report public prices that any pilot would get, including all applicable taxes, not negotiated corporate rates or prices without VAT or other taxes because you operate using an AOC.

Adding a nearby businesses to the list

You can also enter a new entry in those categories, for example if you found a good restaurant nearby, shares this tip with other Airmate users by entering restaurant details. Data will be validated by Airmate team and shortly put online.

You can add businesses such as:

- Aviation related activities: Aviation Club, Flight School, Plane Rental, Repair Station, FBO, Handler, Fuel Supplier
- Hotels and Restaurants
- Transportation: Taxi, Car Rental, Bike Rental
- Touristic activities

When adding a business, enter all information:

- company type, to be selected in the list
- the airport code near the business is filled in automatically

- company name, address, city, zip

- contact: phone, email

- Web

- it is recommended to leave a comment and rating if this company is not yours.

If you own a business, you may add it to the list, but in this case, it is mandatory to cross the box "I own this business". You could not vote for your own business.

Web, Webcams and other data

Still on the bottom of the Information page, Web and Cams tabs allows to either browse the airfield Web or view the airfield Webcams if they exist and are stored in Airmate database. If this is not the case, those tabs will be greyed out.

Contact airfield

The Contact tab of the Information page will show main contact information for the airport when they are known:

- address

- phone (you can click on the link to call it from Airmate)

- email (you can click on the link to send an email from Airmate)

- web link.

Runways, Frequencies and associated data

The Data tab displays airport essential airfield data:

- **Runways**: identifier, QFU, length, paving, LDA (Landing Distance Available) if known. Distances are displayed in feet, but you may change the unit to meters in the Settings menu.

- **Frequencies**, with their type, frequency, call sign. When a phone number is associated (eg ATIS), a call button allows to call the number directly from the app. Airmate displays all civilian frequencies, military frequencies are shown only if you have an active subscription to Airmate Military option.

- airport-related **waypoints** and associated **radio beacons**. For VFR waypoints, a description may be associated.

NOTAM

From the airport detailed page, it is possible to retrieve the NOTAMs, SUP-AIP and TFRs affecting the airport.

NOTAMs will be displayed from the embedded NOTAM database updated automatically and will therefore be available even during flight for any airport.

Airmate strives to receive and display all active NOTAMs. However, NOTAM propagation between authorities is a complex matter and some NOTAMs may not be received from the channels we are using. NOTAM should always be checked directly from the authority own server.

Please note that military NOTAM are shown only if you have an active subscription to Airmate Military option. It is possible to subscribe directly from the app if internet connectivity is available.

Airport & Fleet Traffic Tracking (iOS only)

Introduction

For professional users (airport managers, handlers, dispatchers, aircraft operators), Airmate can help them to track in real time their IFR traffic.

Two optional yearly subscriptions are available to this end and can be ordered either from the app or on Airmate Web Shop (https://www.airmate.aero/shop):

- **Airmate Airport** is designed for airport managers and handlers and will track all incoming and outgoing IFR traffic at a given airport.
- **Airmate Dispatcher** is designed for aircraft operators and dispatchers and will track the status of all aircrafts in their specified fleet (all aircrafts created in the Aircraft Hangar described in next chapter).

To the difference of other solutions tracking live traffic through a network of ADS-B receivers capturing broadcast from aircrafts in flight, Airmate directly queries the status of all filed IFR flight plans from Air Traffic Control and could then provide much more detailed information:

- Airmate will display not only the status of aircraft in flight but also future filed planned flights (the same day, tomorrow), even if the aircraft has not departed.
- Slot allocation is shown
- Past flights (the same day, yesterday) are also shown for airports.

Aircraft operators, handlers or airport managers using Airmate mainly to track their traffic may use the Settings/General/Launch Screen menu to launch either their airport home page or their aircraft list (Aircraft Hangar) at Airmate launch, instead of the default planned flight page that is mainly designed for pilots.

This feature is for now only available in Europe (for flights managed by Eurocontrol) but we are working to expand it in other regions. In order to use either Airmate Airport or Airmate Dispatcher features, you must subscribe to those options, either on Airmate Shop (https://www.airmate.aero/shop) or using an in-app purchase. You should confirm being an aviation professional needing this information for flight planning and flow control management.
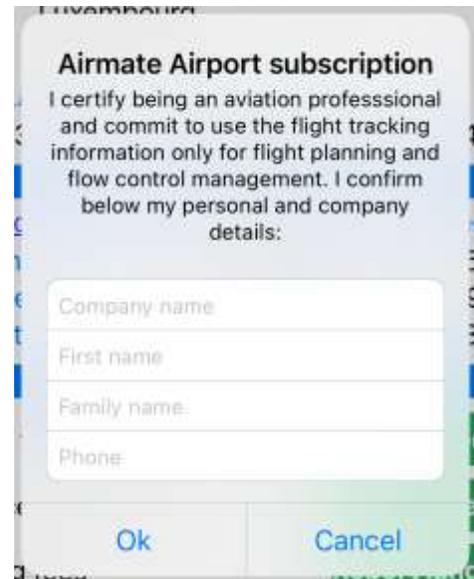
Airmate Airport

Airport Managers and Handlers can easily track inbound or outbound traffic to anticipate and regulate traffic, allocate parking space and better serve the needs of their customers.

The traffic is displayed by the Traffic tab on the airport information page and will display today's inbound and outbound traffic. The airport information page may be accessed using multiple ways (from airport search, airport list, airport information button…), but the most convenient way is for the handler or airport manager to set his/her airport as home airport in Airmate user settings, then define Airport Page as home page at app launch: the airport page will then be displayed immediately at launch.

For each planned flight, the following is shown:

- Flight number and/or aircraft registration
- Aircraft type
- An aircraft pictogram is also shown for most aircraft types
- Departure airport code and full name
- Arrival airport code and full name
- Expected departure and arrival times until aircraft departure, then replaced with actual block off and takeoff time and expected arrival time (actual arrival time when flight is completed).
- Flight status, may be:
    - Filed: flight plan filed; aircraft not departed
    - Activated: flight plan activated, imminent departure
    - Airborne: aircraft in flight
    - Terminated: flight completed
- Slot information if a slot has been allocated

Tabs at the page bottom allow to switch between Departures and Arrivals, or to view Yesterday or Tomorrow traffic (default is Today).

For airport managers wishing to get traffic information data in real time for integration in their business tools or display on information panels, APIs are available, contact Airmate at airmate@airmate.aero for more information on API subscription.

Airmate Dispatcher

Aircraft operators and Dispatchers could easily track in real time the status of all aircrafts in their fleet thanks to Airmate Dispatcher feature.

Go to **Aircraft Hangar**: for every listed aircraft in the fleet a button **View flights** is available. Clicking on this button will fetch and display all planned IFR flights for this aircraft.

For each flight planned for the selected aircraft, the following is shown:
- Flight number and/or aircraft registration
- Aircraft type
- An aircraft pictogram is also shown for most aircraft types
- Departure airport code and full name
- Arrival airport code and full name
- Expected departure and arrival times until aircraft departure, then replaced with actual block off and takeoff time and expected arrival time (actual arrival time when flight is completed).
- Flight status, may be:
  - Filed: flight plan filed, aircraft not departed
  - Activated: flight plan activated, imminent departure
  - Airborne: aircraft in flight
  - Terminated: flight completed
- Slot information if a slot has been allocated

For aircraft operators wishing to get their fleet traffic information data in real time for integration in their business tools, APIs are available, contact Airmate at airmate@airmate.aero for more information on API subscription.

Aircraft Hangar

Introduction

The Aircraft Hangar allows you to manage the aircrafts you are flying, define their performances and characteristics.

The list of aircrafts can be accessed from flight plans list, by clicking on the Aircraft icon. You can also select an aircraft, create a new aircraft, or modify an existing one by clicking on the aircraft field in flight planning form.

At startup, the aircraft list is populated with a single template C172 aircraft with only basic characteristics defined.

Your aircrafts and their characteristics are automatically synchronized between your devices (using the same Airmate account).

Creating a new aircraft
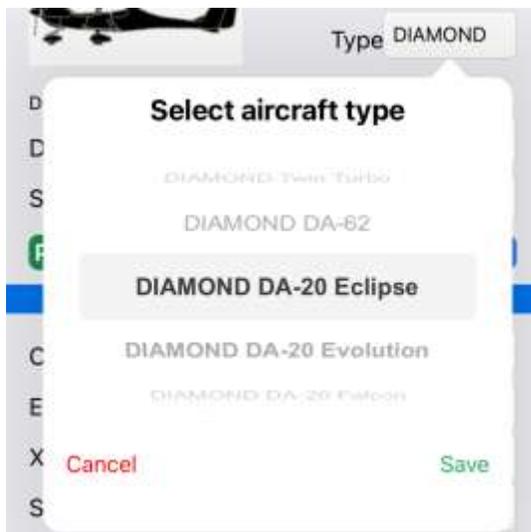
To create a new aircraft, either click + on the aircraft list or select Create in the aircraft selection box when entering an aircraft in the flight planning form.

The aircraft information main form appears: you need to enter **the aircraft registration** and the **aircraft ICAO designator** (from 2 to 4 characters), e.g. C210 for a Cessna 210. If several variants exist for the same ICAO designator, they will be listed, and you can select the one that is more appropriate to your aircraft.

You can also enter directly the aircraft brand or

model name, Airmate will present you the list of matching aircrafts so you can choose. Aircraft types having a stored Weight & Balance profile are listed in bold.

Airmate will first look out in the shared database for an aircraft with this registration created by another member and shared with other members. If such an aircraft is found, you will be asked if you want to import it with its characteristics.

If no shared aircraft with this registration is stored in the community database, Airmate will then search its database for the main characteristics of this aircraft ICAO type and will import them if they exist. Those characteristics include performance data (takeoff, climb, cruise, descent, landing), weight and balance information, stall speed, service ceiling and so on.

Whether aircraft characteristics are imported from a shared aircraft profile or from the Airmate database, it is mandatory you review those characteristics to check them against your Pilot Operating Handbook (POH) for the following reasons:

- a lot of ICAO aircraft designators are covering several aircraft variants that may have quite different characteristics. For example, various versions of Piper PA28 (P28A) or Socata Rallye (RALL) may have quite different engines and performances.

- Even if there is only one variant for your aircraft ICAO designator, those characteristics may not pertain to your specific aircraft configuration and may contains errors.
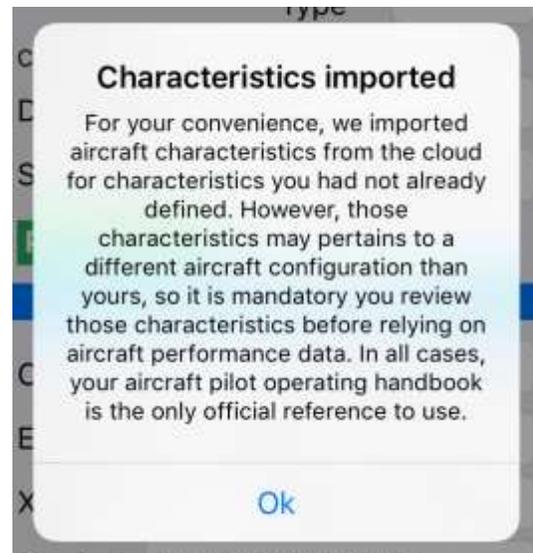
You should review aircraft characteristics against your Pilot Operating Handbook using Performance button before relying on those characteristics for operational use. In any case, the POH of your aircraft is the only official reference to be used for flight planning.

Importing an aircraft from the cloud

If the aircraft profile you want to add to your hangar has already been created by another pilot and set as shared with the community (or with friends, if you and the creator are friends), you can import it with all its characteristics.

When you enter the tail number of the aircraft you intend to create, Airmate will search in the cloud for a shared record matching this tail number. If the record exists and is shared with all the Airmate community or pilot's friends (if you are friends), Airmate will inform you such a record exist and will propose you to import this aircraft and all its characteristics. After importing the aircraft, you will be allowed to change its characteristics before saving its profile. The imported aircraft and its modified characteristics will belong to you, no change will be done on the record created by the other pilot.

If several aircrafts have been shared with the same tail number, Airmate will display their list so you could choose the one you want to import. You may decide not to import any aircraft from the list and create your own aircraft profile from scratch.

Updating aircraft characteristics

On the main aircraft detail form, you need to enter the following information:

- cruise speed
- default cruise altitude you usually use

Those data will be used by default when you create a new planned flight using this aircraft.

If you intend to file VFR or IFR flight plans, you will also need to enter all data needed for flight plan filing, as explained in the next paragraph.

Finally, in order to take advantage of all Airmate flight planning features, you should also click on the Performance button to either review the aircraft performance data if they have been successfully imported or create them if not.

Those data include:

- general aircraft information:
  - number of seats
  - aircraft home airport
  - is the aircraft available to rent and its hourly rental price? If you select this

Carrier 🔋	9:59 AM	
Back	**Configure aircraft**	
	General	
Type		C310
Number of seats		6
Fuel capacity unit		USG
Useable fuel (USG)		102.0
Range (VFR no reserves)		678
Service ceiling		21300
Stall speed IAS (dirty)		73
Home airport		LFPB
Available to rent		🟢
Pressurized		⚪
	Operating costs	

switch the aircraft will be found in the list of aircrafts to be rented in the neighboring area (this search feature is available in the **Community** menu).

- o is the aircraft pressurized?
- o approximate VFR range without reserves
- o stall speed (dirty)
- o glide ratio and best glide speed
- operating costs
- avionic information
- weight and balance information: usable fuel capacity, MTOW, basic empty weight
- takeoff performance data: fuel used for taxi, takeoff distance and roll.
- Performance data (speed TAS, fuel flow at usual power setting, climb/descent rate) for climb, cruise, and descent. Those data will be used to compute Flight Log and for fuel planning.
- landing performance data: landing distance, landing roll.

Configuring Flight plan filing details

If you intend to file IFR or VFR flight plans using this plane, you will need before flight plan filing to enter all aircraft information required by the flight plan filing system. This includes:

- Aircraft color, in plain text (we recommend using English)
- Endurance, encoded as hhmm on 4 digits, eg 0430 means 4 hours and 30 minutes
- Number of seats
- Radio equipment
- Transponder configuration
- RNAV PBN capabilities if your aircraft supports RNAV or GPS.

- Survival equipment: jackets, raft, emergency radio, specific survival equipment.

Entering this information is not necessary if you do not need to file flight plans using this aircraft.

Configuring Radio Equipment
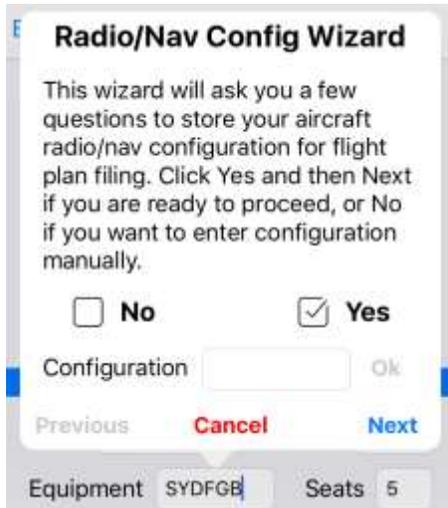
When a flight plan is filed, the aircraft radio equipment is transmitted to Air Traffic Control so it knows the aircraft radio capabilities, such 8.33 kHz spacing or navigation equipment on board. An invalid configuration may lead to issues such flight plan rejection (or even worse flight plan acceptance when the configuration is not appropriate to perform the flight).

This aircraft radio equipment has to be encoded in field 10a of flight plans using a rather complicated syntax. If you already know the radio equipment encoding for your aircraft, you can enter it right away, otherwise on iOS a radio configuration wizard will try to find out the right configuration encoding by asking you relevant questions.

On iOS, when you click on Equipment field, the wizard welcome window appears: you can click **Yes** to be prompted by the wizard to find out the encoding or **No** to enter configuration manually.

Please note the radio configuration wizard is only tailored for small general aviation aircraft, it will not manage advanced options found in large business jets such as ADS-C, FANS, HF radio and so on. For such advanced options, it is mandatory to enter manually the radio equipment string.

To enter manually the radio equipment configuration, select **No** when the wizard proposes to help you with configuration. Then simply enter the full configuration string when prompted.
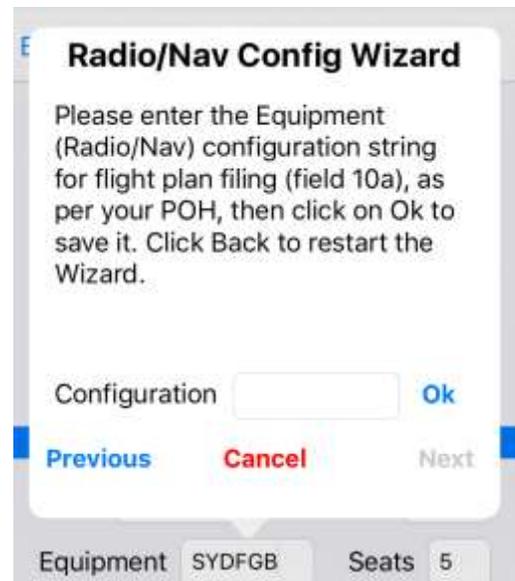
In all cases, please carefully check the Radio Equipment string proposed by the configuration wizard against your POH before using it.

Configuring transponder, RNAV capabilities and survival equipment

In the same way than for radio equipment, configuration wizards are available on iOS to help define the following flight plan configurations:

- transponder
- RNAV/PBN capabilities
- survival equipment, including jackets, raft, emergency radio, specific survival equipment

On Android, the field values are to be entered manually.

In the same way than for radio equipment configuration, you are responsible to carefully check the proposed configuration strings against your POH to make sure it is accurate.

Back	Configure aircraft	
Units		
Weight unit		Pounds
Length unit		Inches
Fuel capacity unit		USG
Empty aircraft		
Empty CG		39.100 in
Empty Weight		2248 Lb
Weight limits		
Ramp		3086 Lb
Takeoff		3086 Lb
Landing		3086 Lb
Zero Fuel		3086 Lb

Configuring an existing Weight & Balance profile

If a stored Weight & Balance profile is available for your aircraft type, it will be automatically retrieved from the cloud when you specify the aircraft type.

You will need to carefully review your Airplane Operating Handbook and latest Weight & Balance form to check and adjust if needed the value of every fields, including:

- empty weight
- empty center of gravity (CG)
- weight limits for ramp, takeoff, landing and zero fuel configurations.
- number and characteristics of each CG point of the Weight & Balance envelope profile.
- Number and characteristics of each station

Unfilled values will be displayed in red, for example the empty center of gravity is always blank and should be filled in.

CG limits	
47.441 in	1924.64 Lb
37.362 in	2755.78 Lb
42.165 in	3086.47 Lb
47.441 in	3086.47 Lb
35.945 in	2204.62 Lb
35.945 in	1924.64 Lb
Add a CG limit row	

Stations	
Baggage (max: 143.30Lb)	102.362 in
Front Seats (max: 661.39Lb)	45.354 in
Rear Seats (max: 454.15Lb)	80.000 in
Fuel (max: 86.12USG/495.91Lb)	42.283 in
Add a station	

Creating a Weight & Balance profile

If a Weight & Balance profile has not been retrieved from the web, you will need to create one for your aircraft, using your Airplane Operating Handbook and latest Weight & Balance form.

Even if a Weight & Balance profile has been retrieved, you need to enter the below data that are blank and also to check the complete profile against your Airplane Operating Handbook and latest Weight & Balance form to ensure the download profile matches your aircraft configuration:

- aircraft empty weight
- empty center of gravity (CG)

In order to create a new Weight & Balance profile from scratch, you will need to specify:

- basic information: empty weight, empty center of gravity, weight limits.
- for each CG point of the Weight & Balance envelope profile, the point information: distance and weight.
- For each station, the station characteristics: type, arm and if applicable maximum weight allowed for this station.

Entering basic information

As when modifying an existing profile, you will need to define:

- empty weight
- empty center of gravity (CG)
- weight limits for ramp, takeoff, landing and zero fuel configurations.

Specifying all CG points of your envelope profile

For every CG points of your allowed envelope profile, you should carefully enter the point characteristics: distance and weight. An Add CG limit row may be clicked in the list to add a new point. Swipe a row left to delete a CG point.

You don't need to enter the points in a particular order, Airmate will organize them to draw the envelope limits.

Specifying characteristics for every WB station

In the same you, every defined Weight & Balance station has to be entered, including:

- Name of the station (eg. Front Seats, Luggage…)
- Arm in the selected distance unit (inches or meters)
- Maximum weight if specified for this station, in the selected weight unit (pounds or kilograms).
- Station type: Seats, Luggage, Fuel or other.

An Add station row may be clicked in the list to add a new station. Swipe a row left to delete a station.

Sharing your aircraft with the community

As for all your other data, by default your aircraft data are private and can be seen only by yourselves (**Me only**).

You may change the privacy settings to either **Friends** or **All**, so your aircraft may later be viewed by your friends or all the Airmate community. For example, if you are a flight instructor, your students will be able to import your aircraft and its settings without having to define it again in their own Airmate profile. If your aircraft is available to rent, it will be found in the list of nearby aircrafts to rent.

Renting your aircraft

If your aircraft is available to rent, you can make this known to the Airmate community.

To this end:

- define the home airport where the aircraft is based

- enable the switch **Available to rent**

- optionally you could indicate the **hourly rental price** that will be displayed in the list.

- set the **aircraft sharing to All**, so all Airmate users located nearby the aircraft home airport will be able to see your aircraft. They may then contact you through Airmate Messaging, your email is not disclosed.

> **Warning**: you should advertise an aircraft to rent only if you are the aircraft owner or authorized representative and agree to be contacted by other Airmate users interested in renting this aircraft.

Fuel Planning (iOS only)

Introduction

Using the information supplied by the Pilot-in-Command (such flight route, aircraft speed, fuel flow, and other characteristics), Airmate will provide an informational fuel planning that is to be validated by Pilot-in-Command. The Fuel planning form is accessed through the Edit tab, selecting the Fuel tab at the bottom of the page.
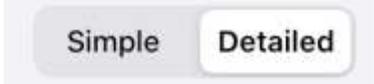
Two computation modes are available:

- **Simple mode**: the trip fuel consumption is roughly estimated using a mean hourly fuel flow supplied by the pilot.

- **Detailed mode**: Airmate will use the detailed aircraft performance characteristics validated by the pilot to compute more accurately trip fuel requirements.

When weather forecast is available for planned flight time, Airmate will use forecasted enroute winds to adjust the computation.

The fuel unit used for the computation will be those specified in the selected aircraft profile if defined or failing that the preferred fuel unit selected by the pilot in Settings/General.

WARNING
Fuel planning is provided for information only. The computed data may be invalid or erroneous or rely on incorrect characteristics or optimistic wind forecasts. They should not be used as main source of information for flight planning. The Pilot-in-Command should always check and validate the provided fuel planning data with its Aircraft Pilot Operating Handbook, accurate measurement of the onboard available fuel, and weather forecast provided by an official briefing from an aviation authority.

Fuel requirements according to regulations

Depending on the regulations pertaining to your flight, such flight rules (IFR, VFR), kind of flight (private, charter…), time of day (day or night flight), country (FAA, EASA…), operator rules, and so on, your legal fuel requirements may greatly differ.

On the fuel planning form, the pilot can choose the best options for his flight, they cover most usual cases but not all (e.g. flights in remote locations, ETOPS, and so on):

- **Taxi fuel** is to be entered; it is automatically retrieved from detailed aircraft profile if set.

- **Contingency reserve**: 10% is selected by default, 5% may be selected

- **Diversion fuel** is computed automatically using the first planned alternate, the value may be changed. No diversion fuel is considered if no alternate has been planned.

- **Arrival procedure duration** is set by default to 15 minutes, 10 minutes may be selected. Airmate will consider a single procedure if no alternate is defined or 2 procedures if an alternate is set.

- **Final reserve** is computed for 45 minutes of flight, the pilot may choose between 20 minutes, 30 minutes, 45 minutes or one hour.

Simple mode

The simple mode will be automatically selected and cannot be changed if no detailed aircraft characteristics are available. The mean hourly fuel burn field should be filled in to perform the computation of fuel requirements.

Burn 17.0 USG/h

Detailed mode

The detailed mode will be automatically selected if detailed aircraft characteristics are available from the selected aircraft profile, it is possible to toggle between Detailed and Simple modes. In Detailed mode, the mean hourly fuel burn field is no longer used for the computation.

To have best accuracy, the performance data specified in the aircraft profile should be carefully entered and checked (when an aircraft is created in the Aircraft Hangar using a known aircraft type, default characteristics may be imported from the cloud, but they should be validated against your aircraft Pilot Operating Handbook):

- TAS for climb, cruise and descent

- Vertical speed to use for cruise and descent
- Fuel flow for climb, cruise and descent

Fuel advisory form

The fuel advisory form conveniently lists all items considered for your fuel planning estimates to allow easy validation by the pilot:

- **Initial fuel** is specified by the pilot.

- **Taxi fuel** is the one either entered by the pilot or automatically retrieved from detailed aircraft profile if set.

- **Procedure fuel** is computed using cruise fuel flow during the arrival procedure time, set by default to 15 minutes. Airmate will consider a single procedure if no alternate is defined or 2 procedures if an alternate is set.

- **Trip fuel** is computed using either the Simple or Detailed method and is the sum of fuel used by every leg of the flight. The Flight Log will display for every leg of the flight the fuel used by this leg, along with distance and speed correctly by winds.

- **Contingency fuel**: it is computed as a percentage of the trip fuel (10% is used by default, 5% may be selected).

- **Diversion fuel** is computed automatically using the first planned alternate and the forecasted winds between destination and alternate, the value may be changed. No diversion fuel is considered if no alternate has been planned, but the pilot may add it manually.

- **Final reserve fuel** is computed by default for 45 minutes of flight, the pilot may choose between 20 minutes, 30 minutes, 45 minutes or one hour.

The printed version of the fuel form also lists as a reminder the fuel flow used for the computation.

Altitude advisor

Enroute Winds may vary greatly according to flight altitude. Airmate Altitude Advisor allows the pilot to select the flight date/time to displays the mean forecasted wind and its impact on flight duration and trip fuel consumption estimates for all altitudes from 2,000ft to 39,000ft.

This information is advisory only and of course, flight altitude selection should consider numerous other parameters such aircraft capabilities, rules of flight, weather enroute, oxygen availability, crossed terrain elevation, radio coverage, and so on.

Altitude	Wind	Duration	Fuel
2000'	4 kt tail	00:32	7.4
3000'	4 kt tail	00:32	7.4
4000'	4 kt tail	00:32	7.4
5000'	6 kt tail	00:32	7.3
7000'	8 kt tail	00:31	7.2
9000'	8 kt tail	00:31	7.2
11000'	7 kt tail	00:31	7.2
13000'	6 kt tail	00:32	7.3
15000'	6 kt tail	00:32	7.3

Wind optimizer on Thu 27 at 19Z

Weight & Balance (iOS only)

Introduction

Using the information supplied by the Pilot-in-Command (such loaded fuel and load at every aircraft station, defined Weight & Balance characteristics), Airmate will provide an informational Weight & Balance computation that is to be validated by Pilot-in-Command. The Weight & Balance form is accessed through the Edit tab, selecting the W&B tab at the bottom of the page.

The units used for the computation will be those specified in the selected aircraft profile if defined or failing that the preferred units selected by the pilot in Settings/General.

WARNING
Weight & Balance computation is provided for information only. The computed data may be invalid or erroneous or rely on incorrect characteristics. They should not be used as main source of information for flight planning. The Pilot-in-Command should always check and validate the provided Weight & Balance data with its Aircraft Pilot Operating Handbook, accurate measurement of the onboard available fuel, and weight at every station.

Weight & Balance initial configuration

Weight & Balance data for your selected aircraft should be defined before accessing the W&B page. If data has not been defined, an error message will be displayed. Weight & Balance information is defined using the Aircraft Hangar configuration tool.

Entering load at every station

The weight & balance page will display a graph showing data for your planned flight according the loads at every station.
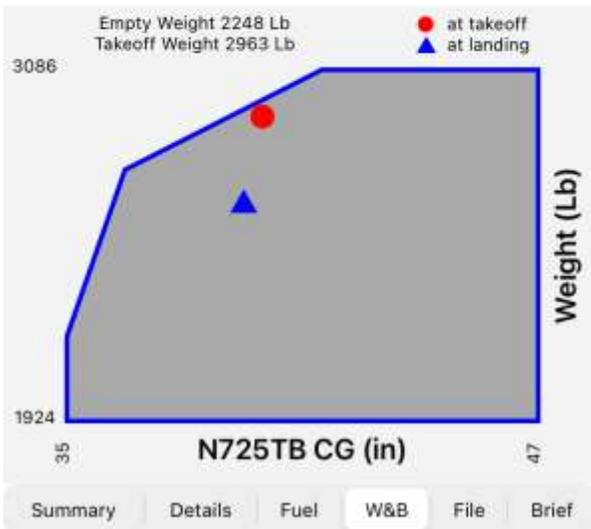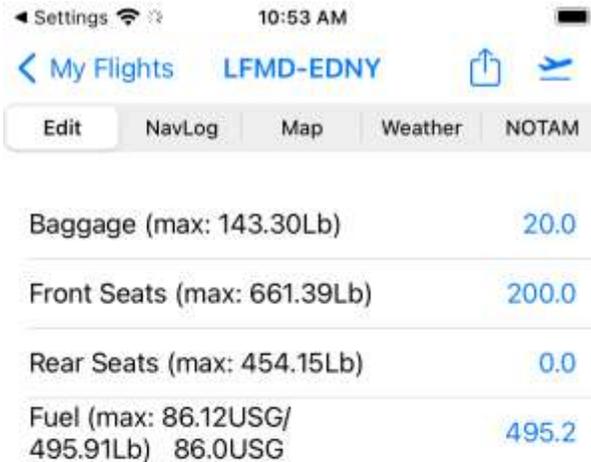
Click on any station to change the load at this station, the load cannot exceed the maximum load defined for this station, if any. Load unit will be either pounds or kilograms depending on the selected aircraft profile.

Airmate will automatically fill in the fuel station data with the fuel specified in the fuel form for the trip. If there are several fuel stations, Airmate will start fill in the first specified station and then will fill in the next fuel stations if the fuel quantity exceeds the first fuel station maximum allowed fuel.

Airmate will compute the weight and balance data for both takeoff and landing according to the fuel burn during the trip.

Any change in the fuel form or in the trip planned route will be reflected on the weight and balance form.

The weight and balance form may be printed by clicking on the Share button, it is also included in the trip Briefing Pack.

Personal Waypoints Management

Personal Waypoints

Airmate allows you to define and manage an unlimited number of personal waypoints. You may decide to share some of your own waypoints with the community or reuse waypoints shared by other users.

Your user waypoints are automatically saved in the cloud and synchronized between all your devices if you are using Airmate on several devices (you could disable waypoint synchronization in Settings if you do not wish them to be shared between your devices).

You could either export your personal waypoints in several formats (KML, GPX, CSV) or import waypoints created with another aviation application: this is directly supported by Airmate (click on the GPX or KML file to share it with Airmate) or you could use Airmate Web Flight Planning (https://fly.airmate.aero).

Adding and managing your own user waypoints and private airfields

You can add and manage your own user waypoints, that are stored and may be used in your routes in the same way than any other point. Some of those waypoints may be defined as "*landing fields*", in this case they can be used as origin, destination or alternate of a planned flight.

To add a waypoint, long press on any point of the map. The zone display popover appears, pressing the first button Create user waypoint will trigger the user waypoint creation process:

- you need to specify the user waypoint **identifier** that should be unique among user waypoints (it could be the same than an AIRAC waypoint). Waypoints identifiers should only include a maximum of 15 uppercase characters and digits without spaces
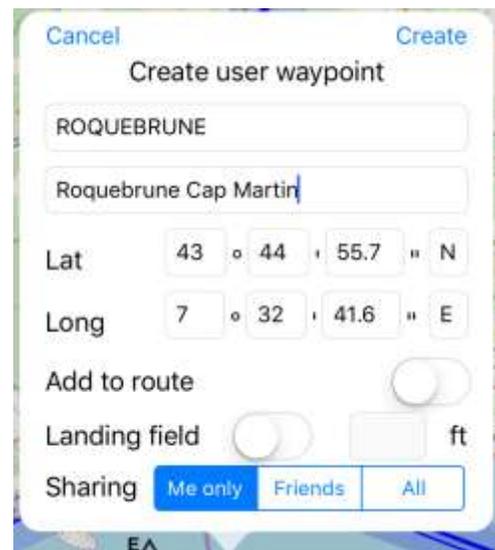
- it is recommended but not mandatory to enter a waypoint **description**

- the **latitude/longitude** of the pressed point are displayed, it is possible to modify them before saving the user waypoint

- the **Add to Route** switch enables to automatically add the user waypoint to the current route after waypoint creation or modification.

- the **Landing Field** switch allows the waypoint to be used as flight departure or destination airfield. For Landing Fields, the **altitude** may be specified.

- **Sharing**: user waypoints are private by default (Me only), you could indicate if you wish to share your waypoint with your friends (Friends) or all Airmate community (All)[2].

Once created, the user waypoint could be used in the same way than any other waypoint, either from the map or by typing its identifier in the route field. Waypoints defined as landing fields may also be used as origin, destination or alternate airfields.

Single tapping a user waypoint will display its characteristics and provide several options:

- **Add** the waypoint to the current route (when the current route is defined) or **Remove** it from the route (when already in route).

- **Edit** the waypoint

- **Delete** the waypoint (this choice is not proposed when the waypoint is part of the current route).

- **Direct To** waypoint (only when in flight mode).
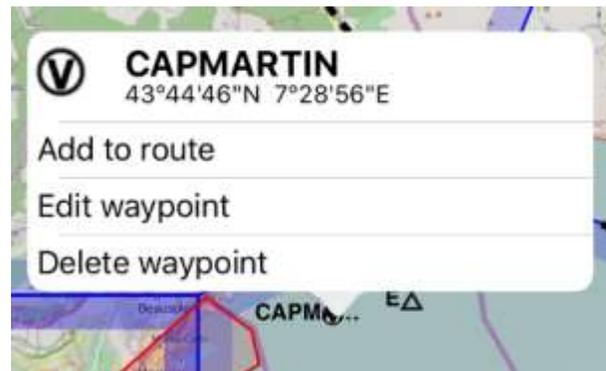
Your user waypoints are automatically saved in the cloud and synchronized between all your devices if you are using Airmate on several devices (you could disable waypoint synchronization in Settings if you do not wish them to be shared between your devices).

You could either export your personal waypoints in several formats (KML, GPX, CSV) or import waypoints created with another aviation application: this is directly supported by Airmate (click on the GPX or KML file to share it with Airmate) or you could use Airmate Web Flight Planning (https://fly.airmate.aero).

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[2] Airmate Community Web page allows other members to view and use waypoints you have created and defined as shared with all.

Manage Waypoints

The Manage Waypoints choice in the app **Settings / General** will display the list of all your personal waypoints and allow you to modify or delete them.
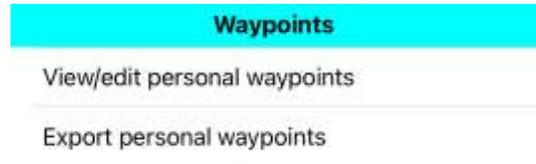
Clicking on a waypoint in the list will allow to modify all waypoint data. To permanently delete a waypoint, slide the waypoint entry left and select Delete. **Warning:** the waypoint will be deleted from all your cloud-synced devices.

Export waypoints from the app

The Export Waypoints choice in the app **Settings / General** will allow you to export all your personal waypoints in a text file that you could share with other people or applications.
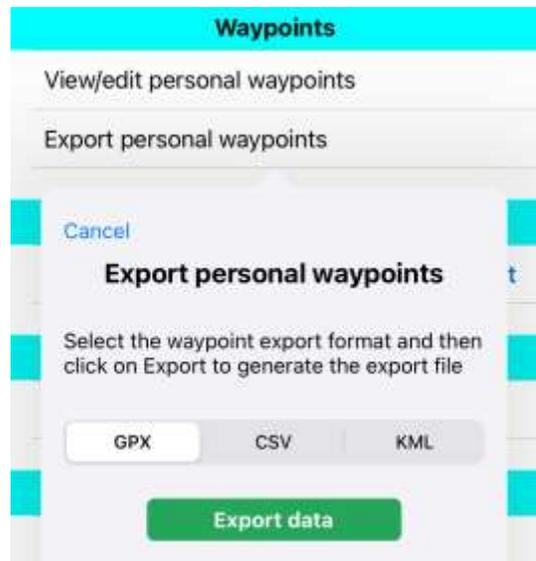
Select the desired format (GPX, CSV or KML) and then click on **Export data** button. Once the export is completed you could share it, selecting as destination either another app (e.g. another flight planning app) or save to your files.

It is also possible to export your cloud-synced waypoints using the Airmate Web Flight Planning tool, see below.

Import waypoints in the app

Airmate automatically imports waypoints files in gpx format. To import such a file, open it, click on the Share button and then select to share with Airmate app.

This will automatically launch the import operation. A confirmation window will display the number of detected waypoints and will propose you to complete the import operation. The import operation will sanitize the data and avoid duplicates:

- Waypoint identifiers are truncated to 15 characters.
- If the waypoint is at the same location than an existing personal waypoint, it will be skipped.
- If the waypoint is in conflict with an existing airport or waypoint of Airmate database having the same identifier and similar location, it will be skipped.

Import/Export/Management waypoints from Airmate Web

After logging into Airmate Web Flight Planning https://fly.airmate.aero with your Airmate nickname and password, you could select the Waypoints tab to view the list of your personal waypoints and manage them.

Import/Export features in many different formats are also available from Airmate Web Flight Planning.

Waypoints listed by Airmate Web Flight Planning are those that have been synced in Airmate cloud. No waypoint will appear if you disabled waypoint storage into the cloud using Airmate privacy settings.

You could also view your waypoints and manage their sharing status in the "Personal Waypoint" box of the Airmate Community page https://my.airmate.aero
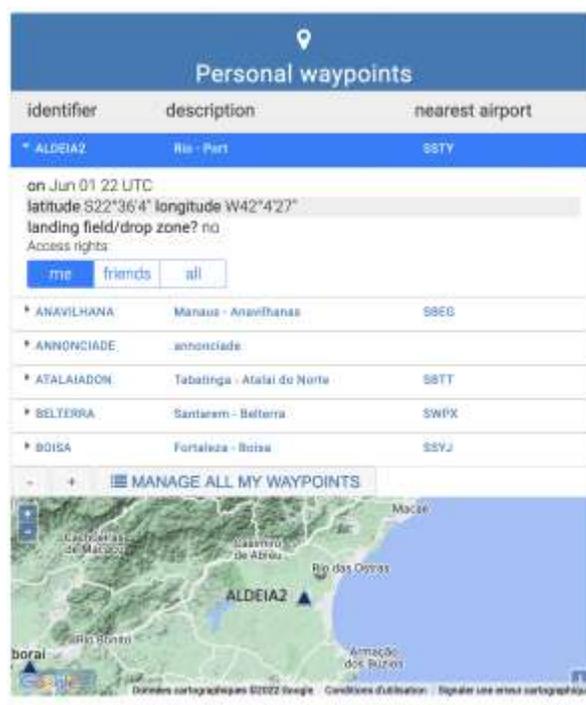
Sharing waypoints with Airmate community

When a waypoint is created, it is by defaut private and not shared with anybody (sharing set to "Me only"). You could choose to share a waypoint with the whole Airmate community

by selecting Shared with All. In this case, your waypoint will be displayed by Airmate Community page https://my.airmate.aero

From the Airmate Community page, the "Shared waypoints" box allows to search for all shared waypoints located at a given airport. A Nearby switch allows to search all nearby waypoints and another Wider switch will widen the search. Clicking on a waypoint in the list will display waypoint details and show its location on the map, an Import button will import the waypoint directly in your cloud-synced waypoint list. It will then be available both in Airmate Web Flight Planning and all your synced apps.

Community & Messaging Menu

Introduction

✉ The Community & Messaging menu can be accessed from flight plans list, by clicking on the Community icon

This menu provides access to social and messaging features, including:

- reading **Flight Briefing newsletter**, providing essential information on aviation data changes at last AIRAC cycle tailored to your home and preferred airports.

- find in the **Airmate community** near to your home airport:
    - pilot friends
    - interest groups
    - flights to share
    - flight schools, aviation clubs
    - instructors available
    - planes to rent
    - Aviation Medical Examiners

- reading received messages and sending messages to friends or to Airmate

- invite your friends to join the Airmate community, using Facebook, Twitter, email, or SMS

- rating Airmate app on the App Store

- send support requests

- inform Airmate of any error or missing data in the navigation database

- view and print Airmate user manual, that you could also get from https://www.airmate.aero
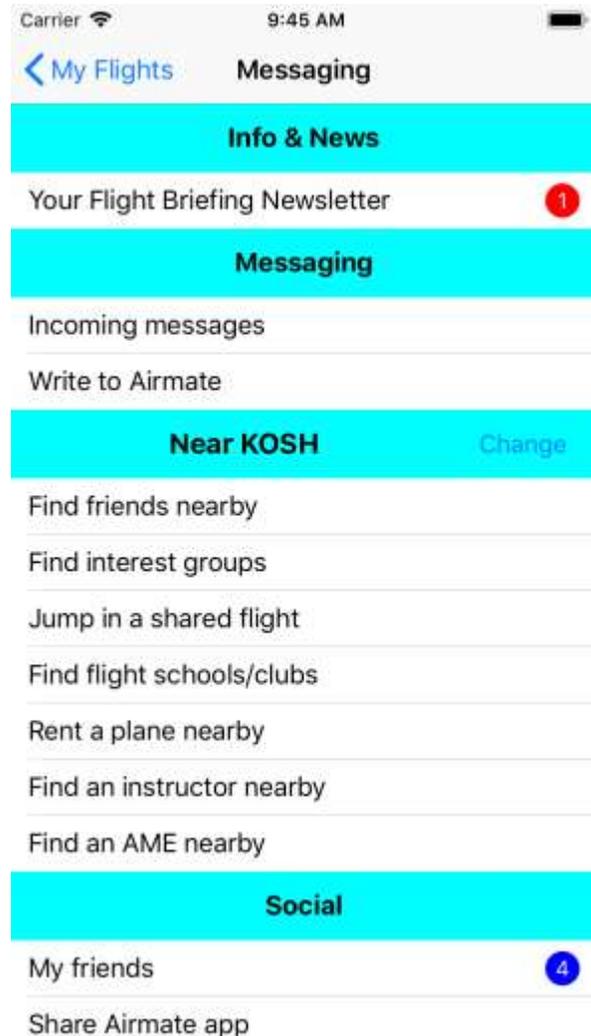
Most social functions will use your home airport to present you useful information located nearby. Make sure your home airport is correctly set, it can be defined in **Settings** menu if it has not been set at Airmate activation.

Flight Briefing Newsletter

Airmate Flight Briefing Newsletter is generated soon after every AIRAC aviation data update (roughly monthly) and will provide a wealth of essential operational data, computed for you according to your home airport and preferred airports:

- summary of NOTAM, SUP AIP and TFR at your home airport and neighboring airports (at time of newsletter generation, so make sure to check them every time before flight)

- new and changed airport plates for and near your home airport and preferred airports.

- changed frequencies for and near your home airport and preferred airports

- new members of the Airmate community at or near your home airport

- aviation events near your home airport and in your home country

Although all changed aviation data relevant to your flights may not be presented, this proactive information tailored for you is helping to be aware of important changes in aviation data nearby.

Airmate Flight Briefing should be delivered by email to your registered Airmate email address, but you may also access it directly from the Flight Briefing Newsletter menu, in case the newsletter has been discarded in your spam folder or if you have asked to opt out of our mailings.
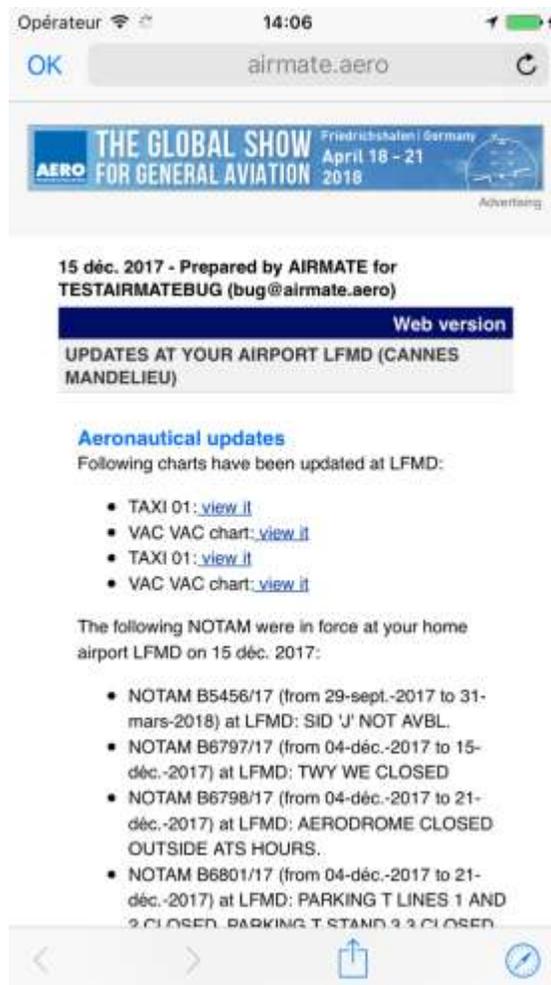
News and Incoming Messages
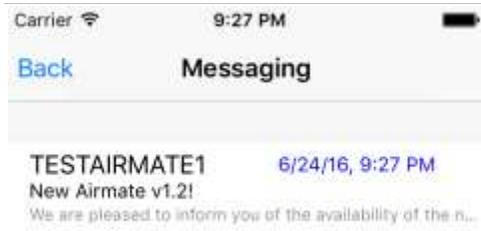
If news or incoming messages have been received, their list will be displayed, showing most recent messages first. You can click on a message in the list to display it. When reading a message, according to its content it may be possible to reply to it, to send an email or to view a Web page.

Messages will include the answers to the friendship requests you sent.

When new incoming messages are received, their number is displayed at Airmate launch on the Community menu icon.

Find friends nearby

This choice will display the list of Airmate members near your home airport. You can then send them friendship requests. Only the member username, home airport and picture (if the member has uploaded his picture in the **Settings** menu) are displayed, all member contact information are hidden. You may change the selected airport to look out for friends at another place, for example another airport you will fly to.

The list displays first all members located at the specified airport, and then those located nearby with the distance between their airport and your home airport.

Click on Invite to send your friendship request. It will be sent through Airmate messaging, without disclosing any of your contact details. Once accepted, you and your new friends could exchange messages through Airmate messaging. In all cases, your own email address will remain hidden. You can of course send a message to your new friends providing your contact details if you wish to share them.

Your friend list

This choice will display the list of your existing friends, and the list of the pending requests you have sent to other members.

Once you and another member become friends:

- each of you can access to flights and aircrafts marked as shared with friends.

- you could exchange messages through Airmate messaging

Jump in a shared flight

When a pilot plans a flight with Airmate, he may choose to make it known to other fellow Airmate pilots. To this end, simply indicate the number of available seats and choose to share the flight with all other members or only friends.

The flight will then be listed and can easily be retrieved by all nearby pilots. A **Contact Pilot** button allows to send a request using Airmate messaging to the pilot to request to participate to the flight.
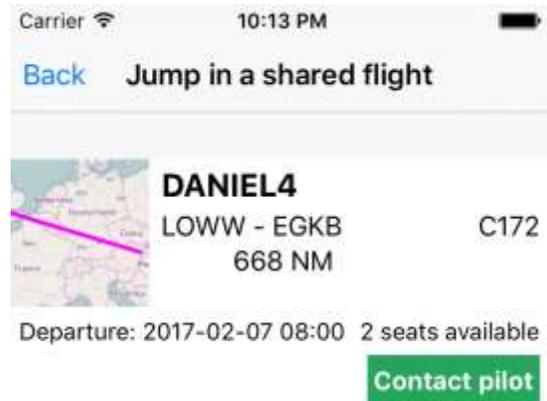
Carrier 🛜   10:13 PM

Back   **Jump in a shared flight**

DANIEL4
LOWW - EGKB   C172
668 NM

Departure: 2017-02-07 08:00   2 seats available

Contact pilot

> **Disclaimer**: Airmate is not checking in any way flights open for sharing. The pilot-in-command is responsible to comply with appropriate regulations in his/her country regarding flight sharing. For example, some countries (Europe) allow a pilot to request sharing flight costs, others (US) prohibit them to do so if they advertise their flight on a bulletin board or using an application such Airmate.

Find a nearby flight schools or flight club

This choice will display all flight schools and flight clubs located nearby, including those located at the selected airport and those located at nearby airports.

List is community-fed: if you are aware of a flight club or a flight school that is not listed, you can add it yourself to enrich the community database from the airport detailed view.

Find an instructor available nearby

This choice will look out and display the list of all instructors nearby having indicated in their Settings their instructor status and availability for instruction. You may then contact them through Airmate Messaging.

If you are an instructor, you can advertise your availability for instruction easily in the Settings menu, please refer to Setting menu chapter for more information.

> **Warning**: Airmate does not check in any way the instructor credentials when a member indicates his instructor status. You are responsible to check the instructor credentials.

Find a plane to rent nearby

This choice will look out and display the planes available to rent at the specified airport or nearby, with their rental price.

Any Airmate user may set a plane as available for rental. To this end, in the aircraft details modified using the Performance button, activate the switch **Available to Rent**, and indicate optionally the hourly rental price. The aircraft will be then listed in the nearby available planes to rent.
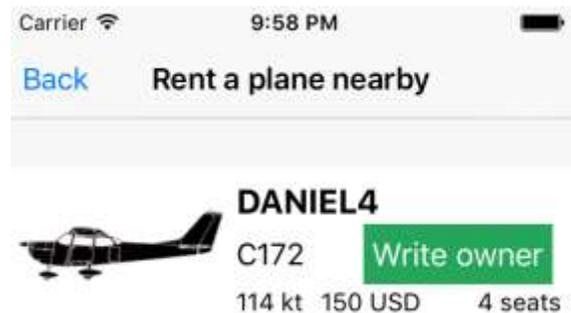
> **Warning**: Airmate does not in any way the accuracy of ads advertising planes available to rent. You are responsible to check listing accuracy and plane fitness for your purposes.

Find an Aviation Medical Examiner (AME) available nearby

In France and some other countries, it is possible to look for Aviation Medical Examiners near your home airport or any visited airport.

Send emails to Airmate

Three choices allow to conveniently send emails to Airmate team for several purposes:

- general questions (Write to Airmate)

- request help (Support Request)

- report any error or missing data in the navigation database (Report error or missing data)

View and Print User Manual

This choice will retrieve from the Web the Airmate manual matching the release in use. From the manual display page, it is possible to request the printing of the manual to any Airprint printer using the share button ⬆ at the upper right.

Depending on your user profile, the manual will be retrieved either in English or French language.

The manual could also be downloaded from our https://www.airmate.aero web site.

Events Menu

Introduction

The Event menu could be accessed from flight plans list, by clicking on the Event/Calendar icon.

Event menu will show you the list of aviation events, sorted according to their importance and distance from your home airport. Event database includes all major aviation events, but local events may also be added by event organizers (eg aviation clubs) and shared with other users.

To avoid cluttering, not all events are shown. Events shown include:

- all events at or near your home airport

- nation-wide events in your home country

- continent-wide events in your home continent

- large worldwide events anywhere in the world

If you are for example located in Manchester, UK, you will see all events in or near Manchester, country-wide events anywhere in Great-Britain that are of nationwide significance. You will not see an event in France if its scope is domestic only, or a small local event occurring at Edinburgh.

Using the Change button, you can always change local airport (by default set to your home airport), local country or local continent to select another airport, country, or continent to view what is happening there, for example if you plan to travel there.

The event list shows relevant events according your home airport, sorted in several categories:

- events are your home airport

- events happening nearby (more or less 100 miles around)

- nation-wide events (eg large exhibitions) happening in your home country

- continent-wide events happening in your home continent

- worldwide events happening anywhere. This list will show world scope events such Oskosh, Le Bourget or Reno events.

- on iOS, webinars are listed in a separate category.

You may filter events to view only those happening in the next 12 months, 3 months, 30 days or 7 days.

Headers in the list include a Change button, to change current airport (by default set to your home airport), current country or current continent to select another airport, country, or continent in order to view events there.

Event Detail

Clicking on any event in the list will show main event details:

- name

- short description

- location

- event dates

- a symbol will show the event type: exhibition, conference, air show, aviation club meeting or open house, and so on.

- phone and email contact details when known
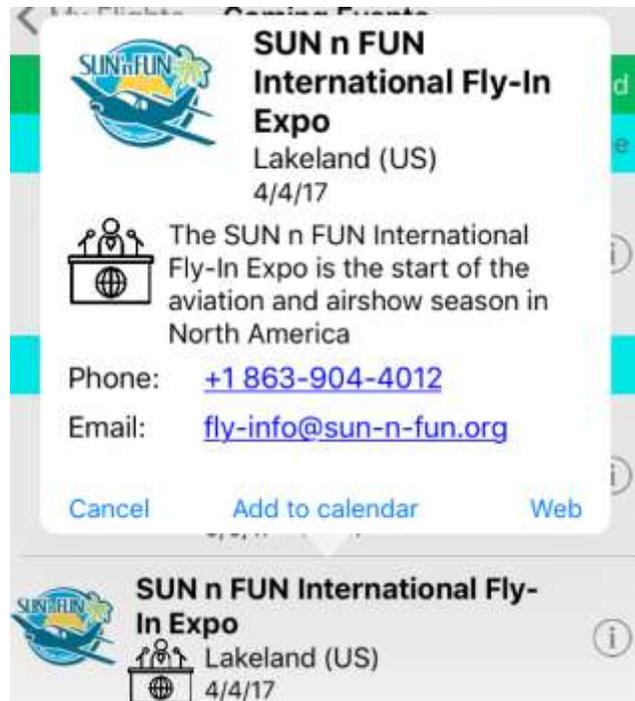
- a Web button allows to access the event web site
- you could click on Add to Calendar button to add the event to your default calendar.

Add your own events!

You can share with all Airmate aviation community new events, either those you are organizing or even events you are aware of that are not already listed. Events are reviewed shortly after submission and then shared with all Airmate users.

To add an event, click on the Share your event button on the event list. Then, fill in the event form:
- Event title
- Event short description
- Event type, to be selected among:
  - Exhibition
  - Lecture/Conference
  - Air Show
  - Competition
  - Course
  - Training
  - Aviation Club meeting
  - General Information
  - Congress
  - Organized trip
  - Webinar
  - Fly-in
  - Open House
- ICAO code of nearest airport
- City
- If desired, phone number and email of the event organizer.
- Event web page if any
- Event start and end dates

Web Event Map

In additional to Airmate app, you could also view events on a map using Airmate Web Event page at https://www.airmate.aero/events, that also allows to create new events and upload the event logo.

Flight Simulation

Introduction

Airmate may be used to simulate flights in two ways:

- **simulate any planned flight defined in Airmate**: the map will appear, and the plane will fly following the route you defined, allowing you to view crossed terrain and aeronautical areas

- **be used as an EFB connected to an external flight simulator** and receiving position, altitude, and speed data from the flight simulator. Airmate will use those data just as it would use data coming from a real GPS during actual flight.

Simulate a planned flight

From the planned flight form, click on the **Sim** or **Simulate** button to launch the simulation on Airmate map. You could then select the simulation speed between x1 and x100 (by default x 50, meaning 50 times quicker than in the real life). The plane will takeoff from origin airport and fly to destination airport on the map. You could interact with the map in the same way than during a real flight.

In Simulation mode, the the accuracy displays "SIM" instead of the GPS accuracy.

The simulation will end when the aircraft will have reached its planned destination.

Connecting to an external flight simulator

In this way, you can fly a flight on your preferred flight simulator and use Airmate as an EFB that will display your followed simulated flight path and flight parameters on the Airmate moving map.

This will be very useful in numerous cases:

- practice using Airmate while you are using the flight simulator, helping to learn to use Airmate feature you might not have the opportunity to explore during a real flight.

- build proficiency by flying first with the simulator unfamiliar routes and procedures before the real flight

- train using any scenario you could think of.

Airmate supports the connectivity with the following flight simulators:

- X-Plane

- Microsoft Flight Simulator (FSX and FS 2004)

- Microsoft Flight Simulator FS 2020

- Lockheed Martin Prepar3D

Airmate supports the reception of AHRS data and simulated traffic from the flight simulator. You will need to enable AHRS display by clicking on the AHRS button on the map to display the AHRS view. If your flight simulator generates simulated aircraft traffic around you, this traffic will be shown automatically on Airmate map.

Please note that, since iOS 14, Apple blocks app connectivity to devices on the local network until approved by the user. You will need to use at least Airmate iOS v2.1 to connect, don't forget to approve access to local network when requested. If you are upgrading on iOS 14 from a previous Airmate release, we strongly recommend to install latest Airmate version on at least iOS 14.2, as previous iOS 14 versions exhibit various issues managing local network and may require to fully deinstall and reinstall Airmate to enable connectivity.

Airmate configuration

Follow those steps to enable Airmate to receive position, speed, and altitude data from flight simulators:

- make sure your iPhone, iPad or Android phone or tablet Wi-Fi is turned on and connected to the same network as the computer running the flight simulator software.

- enable the connectivity to Airmate on your preferred flight simulator software using the below instructions.

- in Airmate, go to **Settings / Advanced / Flight Simulation** and then set **Simulator** mode to either "Once" or "Always". "Once" mode will work only for the duration of the session, if you always use Airmate with your flight simulator you could select the "Always" mode. Please note that when Simulator mode is enabled, internal

Airmate GPS position detection will no longer operate, as Airmate will only listen during simulation to inputs received from external flight simulator.

- you could select any flight in your planned flight list and either click on the Start Flight button on the flight edition page or switch to Navigation mode from the Map page. This will launch data reception from the flight simulator. The selected flight could be any flight, its data do not have to match the flight you are playing on your flight simulator.

- You could also click on the Start Flight button on the flight list to instantly switch to Navigation mode.

In Navigation mode when the Simulator mode is activated in Airmate Settings/Advanced, Airmate will display the aircraft symbol at the proper position on the moving map, showing also flight parameters updated in real time from simulator data (speed, magnetic track, altitude).

Connecting to X-Plane

On X-Plane, select Settings / Net Connections and then choose the iPhone/iPad tab. You need to select one of the below boxes:

- send AHRS data to [EFB list] on ONE iPad or iPhone

- send AHRS data to [EFB list] on ALL iPad or iPhone

The first option with broadcast aircraft data to your whole Wi-Fi network, your router should transmit them to your iPhone/iPad device. In case of connectivity issue, select the second option and indicate the IP address assigned to your iPhone/iPad that is displayed in Airmate **Settings / Advanced / Flight Simulation**.

Connecting to Microsoft Flight Simulator 2020

Follow those steps:

- FSUIPC or SimConnect can be used to connect to the flight simulator. SimConnect is integrated in Flight Simulator. If you prefer FSUIPC then download the FSUIPC4 or FSUIPC5 module from http://www.fsuipc.com/

- download the XMapsy V3 connector plugin from http://xmapsy.com/. Microsoft Flight Simulator 2020 do not output navigation data to external devices by default,

so you will need this connector plug-in to allow them to output aircraft data to Airmate.

- run your flight simulator, during its process confirm you accept the program to interface with the FSUIPC add-on.

- run XMapsy that should indicate it is connected to the flight simulator.

- Launch Airmate in Navigation mode after having configured it as indicated above.

Connecting to older Microsoft Flight Simulator (FSX, FS 2004) or Prepar3D

Follow those steps:

- download a connector plugin. Microsoft Flight Simulator X, Flight Simulator 2004 or Prepar3D do not output navigation data to external devices by default, so you will need this connector plug-in to allow them to output aircraft data to Airmate. You may use either:

  o XMapsy V3 from http://xmapsy.com/

  o FSXFlight plug-in (commercial software from http://www.fsxflight.com/)

  o FlightSimGPS (freeware), from http://www.flightsimgps.com/

  o in all cases, extract the plug-in anywhere on your computer. All plug-ins require Microsoft .NET Framework 4, freely available at https://www.microsoft.com/en-us/download/details.aspx?id=17851

- download and install the FSUIPC plug-in: this add-on allows Microsoft Flight Simulator to communicate with external programs such FSXFlight. Download the FSUIPC4 or FSUIPC5 module from http://www.fsuipc.com/ selecting the link appropriate to your flight simulator configuration.

- run your flight simulator, during its process confirm you accept the program to interface with the FSUIPC add-on.

- run XMapsy or FSXFlight that should indicate it is connected to the flight simulator (for FlightSimGPS it is recommended to launch it before the flight simulator).

- Launch Airmate in Navigation mode after having configured it as indicated above.

Exchanging planned flights with your flight simulator

You could easily export a planned flight from Airmate to your flight simulator or import in Airmate a flight simulator flight, using a flight plan file (.pln for Microsoft Flight Simulator or .fns for X-Plane).

To export a planned flight, open the planned flight, select Edit tab, then Details form and click on **Export data** button: you could then choose between X-Plane (.fns) or Microsoft Flight Simulator (.pln) formats. You could also click on the Share button at the top right of the Edition form.

To import a planned flight, click on the PLN or GPX file to open it (e.g. from your mail application or from a file browser), the select "Copy to Airmate". Airmate will open the flight and propose to add it to your planned flight list (importing an X-Plane FNS file is planned for next release).
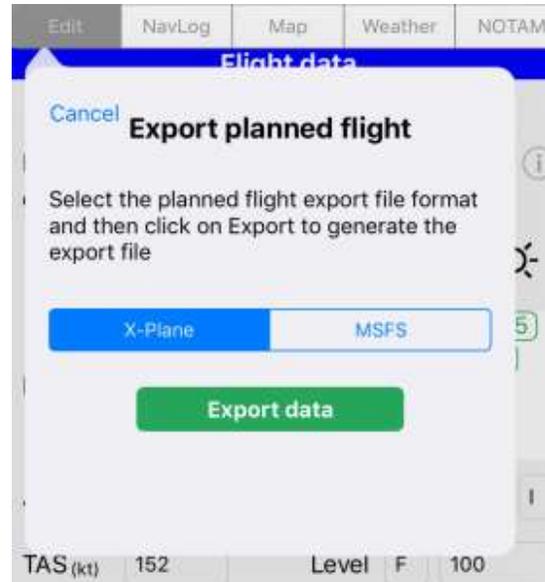
Settings Menu

Introduction

The Settings menu could be accessed from flight plans list, by clicking on the Settings icon.

It is split in several categories you could access directly using bottom tabs: **General**, **Account**, **Map**, **Flight**, **Advanced**.

General Configuration

This submenu allows managing Airmate and its general options.

It provides the following choices:

- **About** displays Airmate current version and main characteristics.

- **Subscription** shows active options. Options include the management of unlimited flight plans.

- **Restore options** will restore options purchased on this device or another device.

- **Current AIRAC cycle**, for example 2205. The AIRAC database update is automatically proposed at Airmate launch if it is needed, on the proviso the device is able to access the Internet.

- **embedded NOTAM database last update and last fetch** dates. If the update date is not fresh enough, Airmate will no longer use the stored database for NOTAM display if the device is connected to Internet and will fetch airport NOTAMs from the Internet.

- **Launch screen** is used to select the screen
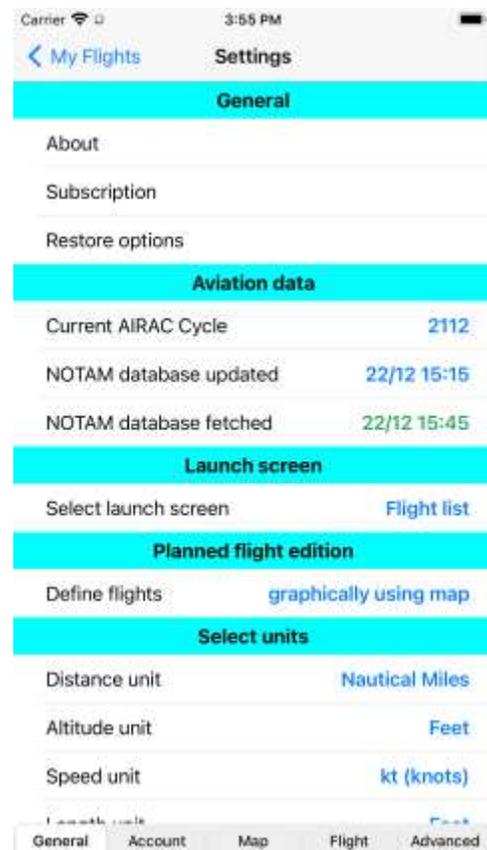
presented at app launch:

- o **Flight List** is the default choice, most useful to pilots

- o **Airport Page** will displays the airport page for the defined home airport, it is the usual choice for Airport Managers and Handlers.

- o **Aircraft List** will show the Aircraft Hangar and is mainly used by dispatchers, aircraft operators and fleet managers

- **Planned flight edition** allows selecting the screen displayed when a planned flight is selected: either graphically on the map (default) or using the data entry form.

- **Select units** allows to select the **distance, altitude, speed, runway length, vertical speed, volume, weight, pressure units** and the **temperature scale** (°C or °F, °F being the default in the USA) and the display/entry format of geographical **coordinates** (DD.dd°, DD°MM.mm', DD°MM'ss")

- **Default page size** for printing may be selected between US Letter (default in the USA) and A4 (default in the rest of the world).

- Accessibility choices can be used to adjust the default size of the map buttons or the segmented control size.

- **Weather**:

  - o From this choice, you can configure the caching period for weather and NOTAM data. By default, those data are stored in the cache for 3 hours and then deleted, in order to avoid displaying obsolete data. You may configure this time and extend it to the maximum of 9 hours.

Weather	
Auto download radar	
Weather caching time (h)	3
Weather data updated	22/12 15:45
Weather data fetched	22/12 15:45
Wind data updated	22/12 07:00
Wind data fetched	22/12 15:46

  - o You can also here request the automatic download of weather radar data, by default those overlays are downloaded only when you request their display.

  - o **Last update and last fetch** dates for the embedded Weather database and embedded Wind database are displayed so you could check their freshness. Data too old will no longer be taken into account by Airmate.

- **Manage and Export personal waypoints** will allow you to manage or export your personal waypoints. Please refer to the User Waypoint Management chapter for details.

- **Maximum distance** to be used when searching for airports and other points: by default there is no limit and the search is worldwide.

- **Help and Support**: allows to display the complete Airmate manual. Other support messaging options are also provided in the **Community** tab on the app main planned flight list.

- **Privacy policy** displays Airmate privacy policy.

- **Legal** displays Airmate terms of use that you should accept to use the software, and software attributions.

Account Management

From the **Account** tab, you could manage your account, including:

- **Username**: displays your Airmate username. You may log in your Airmate account from other devices and from Airmate Web, all your data (flights, waypoints, aircrafts) will be shared between all your devices.

- **Email**, to request email change. You will need to activate your new email as during Airmate first launch activation.

- A button can request to have incoming messages in your Airmate Messaging inbox copied to your email, so you get informed asap even if Airmate is closed. You may also request to receive a copy by email of the messages you will send using Airmate Messaging.

- **Home airport**. This information is very often used in order to retrieve useful nearby information and for social features, so it is important to enter this information accurately.

- **Country**: same remark than for home airport.

- **Language** allows you to change the language used for most dialogs. It is best to change the language in the iPhone/iPad settings.

- the list of your **Preferred airports** is show. Set or remove preferred status is done using the menu shown when you click on an airport icon on the aviation map or using the Plate Manager.

- **My picture** will associate a picture from your photo album to your profile. This picture will be shown to other community members in the nearby user list in the **Community** menu.

- This menu allows also you to indicate your pilot **license type** (private, commercial...) and also to indicate **you are an instructor**. You may check the box "**Available for instruction**", so you will be listed in the instructor list near your home airport, allowing Airmate users seeking an instructor to contact you.

- View number of flight plan filing tokens.

- If you plan to fill in flight plans, enter your **mobile phone** number, **first** and **last name**. This will allow to identify you as Pilot-In-Command and to contact you in case of issue with your flight plan. Those data will be used to fill in the flight plan validation form before transmission to air navigation authorities when you fill in a flight plan.

- **View your purchases** and upgrade to PRO version. Airmate is free, but you may purchase commercial aviation data provided by external suppliers (such commercial charts or plates) or flight plan filing tokens. You could also upgrade to PRO version in order to manage an unlimited number of planned flights (free version is limited to 250 flights you could modify as you wish, this is more than enough for all usual needs), PRO version is also needed to create and manage your own aviation groups (available next release).

- Manage **privacy** options (see below).

- Account management provides several choices to **manage your password** and your account. Once activated on your device, you do not need your password to use Airmate, but it is needed to associate a new device to your Airmate account, to log in on Airmate Web Flight Planning (https://fly.airmate.aero) and other tools such direct Web Airport data display such https://www.airmate.aero/airport/KOSH

  o **Password reminder**: if your iPhone or iPad has a fingerprint reader (TouchID), you can after such authentication get a password reminder showing your password securely stored on your device.

  o **Reset password**: If your device does not embed TouchID reader, as your password is stored on our server in ciphered form and could not be retrieved, you will need to reset it if you have forgotten it. During reset, a temporary password will be mailed to you, you could then change it.

  o **Password change:** during password change, you need to enter your former current password and then the new password of your choice.

  o An **account deletion** choice may be used to cancel your account and delete all your personal data. We will be sorry to see you go!

View purchases

The **My Purchases** choice in the **Account** category will retrieve and display the list of all your Airmate purchases, including:

- Airmate options, e.g. flight plan filing tokens

- Commercial aeronautical maps

- Commercial airport plates subscriptions (usually valid for one year since purchase date)

- Yearly subscriptions to Airmate Military, Airmate Airport, Airmate Dispatcher or unlimited Flight Plan Filing.

Your purchases can be used on all your devices using the same Airmate account. If a feature purchased with another device is not available on a device, click on the **Restore Purchases** Settings option to restore it on the current device.
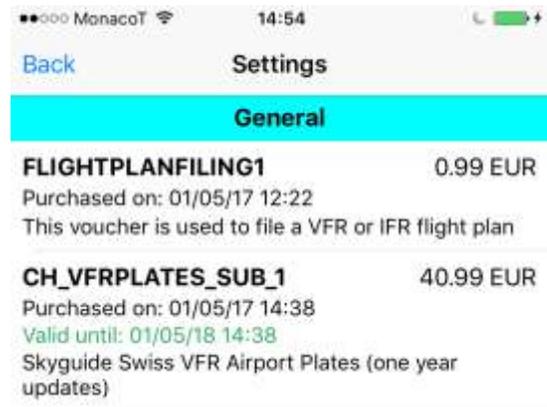
Privacy

The **Privacy** submenu of the **Account** tab allows you to configure privacy settings:

- **Activate flight tracking**: will activate by default flight tracking for your planned flights. Flight tracking will record your flight path at regular intervals on the cloud, you can grant access to your flight to your friends and request an email to be sent at takeoff and landing to your loved ones. By default, flight tracking is not activated, you may activate it for a specific flight on the flight planning page.

- When flight tracking is activated, you can also select to have a **status email sent automatically at takeoff and/or landing** to the email address of a friend or family member to inform them. The email provides the recipient with the URL of the real-time flight tracking page for your flight (you may view for every flight the tracking URL by clicking on the Flight Tracking button on the flight planning form).

- **Don't receive update info**: Airmate will send you every month its Flight Briefing information letter showing important changes in aviation data at your home and preferred airports. Selecting this choice will remove you from this distribution list.

- **don't appear in user list**: you may choose to be hidden and to not appear in the list of nearby users when another Airmate user searches for friends near his/her home airport. When you are hidden, you cannot send friendship requests to other users, as they will be unable to look for you.

Map Settings

The **Map** category displays the below choices:

- **Manage topographic charts**, **Manage elevation data** and **Manage additional data** choices are explained in detail below.

- **Map engine** is set by default to **raster (new)**. A vector mode is being implemented and could be tested by selecting **vector (new)**. If you encounter issues with the new raster mode on your device, you could switch back to the **raster (legacy)** mode. When the new raster map engine is used, transition between zoom levels or when panning are smooth. You could set **Zoom Transition** to **Quick** instead of **Smooth** to display instantly new map data, to the expense of a small flickering.

- The **Filters** choice controls the airfield display on the map. It is also possible to change them in real time from the map thanks to the **Layer** button. By default, only airfields and airports are displayed, heliports, seaplane bases, microlight/unlicensed, altitude and private airfields are not displayed:

  - Heliports
  - Microlight/Unlicensed airfields
  - Seaplane Bases
  - Private airfields
  - Closed airfields
  - a next release will also allow to filter airfields according their minimum runway size.
  - Airfield traffic circuits are displayed by default
  - Obstacles are displayed by default

- **Airport Plates:**

  - **Only download VFR charts**: this option will prohibit the download and display of IFR charts in the Airports Charts tab, if VFR charts only are available. By default, Airmate will search and display both VFR and IFR charts.

- **Show Georeferenced plates** is enabled by default, so the map will automatically display on top of the map a georeferenced plate when it exists for the origin or destination airport. Please refer to the Georeferenced Plates description for more information
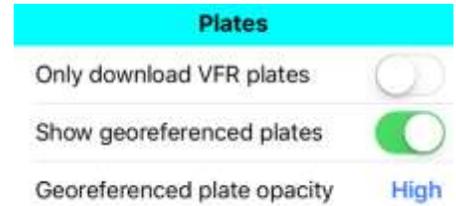
- **Georeferenced plate opacity** allows to select the opacity of georeferenced plates displayed on top of aviation map. It is by default set to **High**, and could be lowered to **Medium** or **Low** or increased to **Fully opaque**.

- **Weather**

  - display weather status barb on the map (may be changed from the map thanks to the **Layer** button)

  - display weather status dots

- **Traffic Awareness (interworking with ADS-B traffic detector)**

  - **Display traffic on map** enables the display of other aircraft positions on the map when a supported traffic detector device is connected.

  - **Altitude filter** for traffic allows to exclude from the display traffic either lower or higher than the altitude filter. Set by default at 40,000 ft, it could not be lowered at 2,000 ft or less for safety reasons. Please note that another filter that may be configured in your ADS-B receiver could additionally filter the traffic.
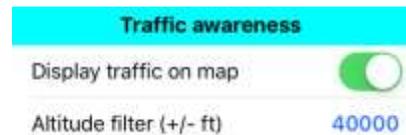
- You could also select by default the **areas shown in VFR mode**. They may also be selected on the aviation map using the Layers button. Available choices include FIR, Information sector, controlled, restricted, dangerous, prohibited, ATZ/MATZ, RMZ, TMZ, special activity (gliding, paragliding, parachute…), natural areas and NOTAM.

- Finally, you could select if you want the terrain profile view displayed automatically when you open a planned flight. This is enabled by default if the defined route is valid (no unrecognized waypoint) and the needed terrain data has been downloaded.

Manage Topographic Charts

The **Manage Topographic charts** choice requires an access to Internet, as it will query the Airmate server to fetch updates for available cartographic maps and charts. The list first displays the installed charts, then recommended charts (covering subscriber country) and finally other charts. It is recommended to download in advance only charts for countries where flights are planned, as chart size may be significant. This size is listed for every chart.

Charts include either **topographic** background OpenStreetMap maps and for some countries **aeronautical** overlay charts (IFR or VFR) replacing the aeronautical layers usually displayed by Airmate.

Using the bottom tabs, it is possible to select only **Topographic** charts or **Aeronautical** charts, and for each of them a subcategory, **IFR** or **VFR** for Aeronautical charts.

To download one or several charts, select them in the list and click on the Download now button. The downloading of the first chart starts and can be followed thanks to the progress bar. This step may take several minutes for large charts. Once the chart downloaded, Airmate will display "Installation in progress" and install it. Once the first chart fully downloaded and installed, Airmate will start the download of the next chart, if any.

Before launching the chart download, Airmate will check if elevation data is missing on your device for the area covered by the chart and will propose you to include those elevation data in the download. Answer yes if you plan to use the profile terrain view for flights in this region.

It is possible to cancel the download or install operations in progress by clicking on the red Cancel button.

Airmate always propose a free OpenStreetMap raster and vector cartographic map covering every supported country. In some countries, it may be possible to download additionally charts, either paying charts from commercial suppliers or free charts (such FAA US Sectionals or OpenFlightMaps). When downloading a topographic chart, both raster and vector versions are automatically installed (when available), to allow you to switch easily the map between raster and vector modes.

The Chart Management list also allows to delete an installed chart overlay: to this end, switch off the chart green switch. You will be prompted for a confirmation.

Manage elevation data
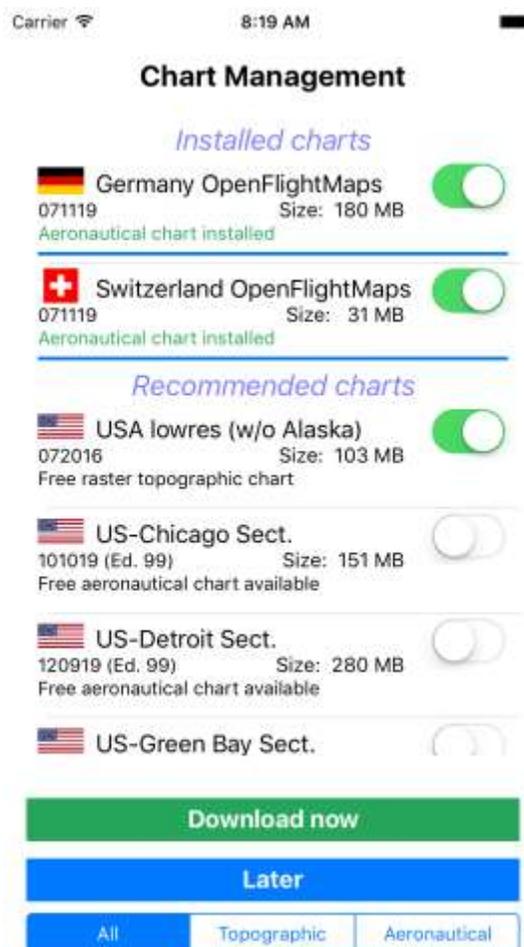
This menu lists all altimetry files downloaded and allows you to delete those you don't need anymore, as terrain altitude files may be quite large.

All listed elevation files show the countries they cover, to delete an elevation file simply swipe the cell left and click on the Delete button.

When you open a flight for which elevation files are missing, a warning will propose you to download the missing files, you could select **Never** to never be asked again for this flight. Terrain download will never be asked again, except if you request to display the profile view using the Terrain button.

Manage additional data

This menu is used to manage additional country-specific data that could include:

- **Obstacle data**: for some countries, obstacle data are stored in a separate obstacle package that will be downloaded automatically if this is your home country or if topographic charts are installed for this country. You could swipe to the left any country entry to delete the obstacle data if no longer needed (when installed) or download it (when not installed).

- **Geoname location data**: for all countries, you could download the geoname package providing the name of all locations (cities, towns, villages…) in order to search and plan flights to any location. This is done automatically for your home country and the countries with installed topographic charts. In the same way, swiping left a row will allow to delete existing data or download missing ones.

Flight

The **Flight** tab allows to configure:

- **Auto Zoom**: when enabled, Airmate will automatically zoom as needed during detected phase of flight (available on iOS only for now)

- **The aircraft icon type** (airplane, helicopter, jet, ultralight…) and **size** may be selected for the new map engines.

- Track up mode enabled by default

- **In flight route swiping allowed**: in Navigation mode, swiping the planned route using its fingers is disabled as the planned route may be changed by mistake. It is possible to allow again this behavior using this switch.

- **default TAS** for new planned flights when no aircraft is selected

- **default altitude** for new planned flights

- barometric altitude may be disabled, if you fly pressurized aircrafts.

- Display and anticipation period of the **flight path vector** that shows expected aircraft position at specified time (default 30 seconds).

Hypoxia alerts (iOS only)

You can define the altitude threshold to monitor according the regulations you should comply with in Settings/Flight/Hypoxia alert. Additionally, you may also specify lower, more conservative, altitudes values for the warning threshold (after 30mn of exposure) and the immediate alert threshold.
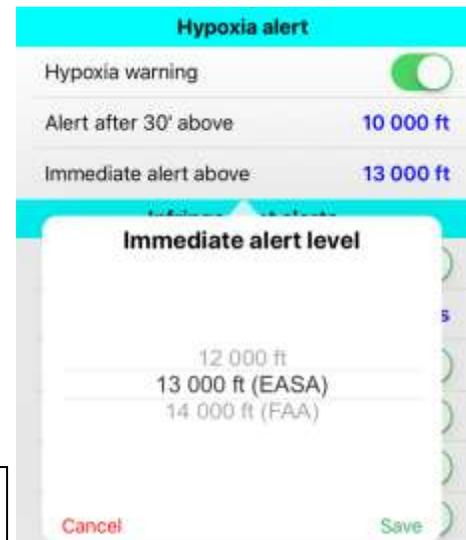
Flight rules	Alarm after 30 minute exposure	Immediate alarm
FAA	12,500 ft	14,000 ft
EASA	10,000 ft	13,000 ft

Infringement alerts (iOS only)

Those settings are used to tailor the infringement alerts that Airmate will do its best to show if you approach regulated areas in VFR flight. Some of them are also directly available on the map using the **Layers** button. You could enable/disable the computation of infringement alerts, define the advance warning time (default 3 minutes), and indicate the categories of airspace for which you want to be warned.

Terrain alerts (iOS only)

Those settings are used to request to color code the Synthetic Vision data or the terrain data in the Synthetic Vision and the terrain profile view. When selected, the terrain will be colored red, yellow or gray/green depending on the computed clearance between aircraft and terrain. This feature is informational only and not designed to replace a TAWS system.

AHRS & Synthetic Vision (iOS only)

It is possible to disable the Synthetic Vision view on the AHRS (by default Synthetic Vision is enabled if the terrain data is available over the followed route). You could also select the Synthetic Vision Night/Day mode, between Day (day display), Night (night display) or Auto (automatically adjusted depending actual local time).

Advanced

In the **Advanced** menu, you can configure advanced settings regarding **Cloud Synchronization**, **Flight Recording**, **Flight Simulation**, **ADS-B Traffic/Weather receiver** and the use of **external GPS**

Storage & Cloud

In the Storage & Could submenu, you may manage the cache storing automatically temporary data for offline viewing (e.g. weather, geolocalized charts, transient data such NOTAM or SUP AIP, and so on).

A choice allows to **view the cache size** and another one to **clear the cache**, purging all stored files.

Airmate will also automatically purge files that are too old. Please note this does not apply to Airport Plates that are managed by the Plates Manager.

You may disable the Auto Sort feature for planned flights: by default this feature is enabled and the planned flights list will always show first your most recently viewed or modified flights.

You may also disable if you wish the Cloud Synchronization feature that is enabled by default. In this case, your data (planned flights, defined aircrafts, user waypoints…) will no longer be synchronized between your devices or saved in the cloud, you will not be able to access your data using Airmate Web flight planning. You may selectively disable/enable cloud synchronization for:
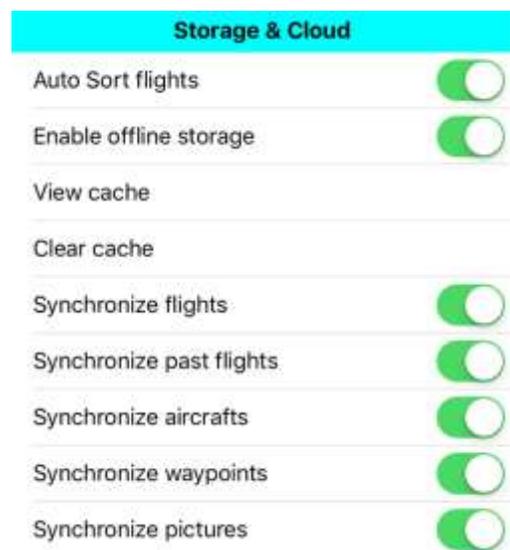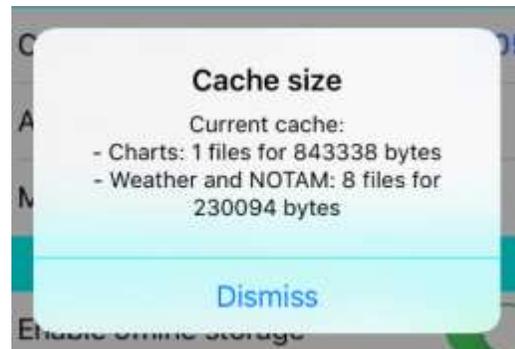
AIRMATE

- planned flights

- past flights

- defined aircrafts

- user waypoints

- pictures

Flight Recording

In this category, you can set the Flight Recording
Interval time between every flight data recording
performed by Airmate in Navigation mode, in order
to set the fine graining of the recorded flight path. The default is set at 2 seconds that is
enough for usual needs. Pilots training for competition events usually set the value to 1
second so it matches the recording interval time of GPS recorders using during competition.

ADS-B Receiver (iOS only)

Airmate may connect to supported external ADS-B
receivers in order to receive real-time traffic and
AHRS data. When connected to a Wifi network,
Airmate will try to detect a supported ADS-B device
and if found will display the device name. You need
to enter in appropriate fields the ADS-B received IP
address (by default 192.168.1.1), the IP port to use
for traffic/weather data reception, and if needed a
device PIN code (default 6000).
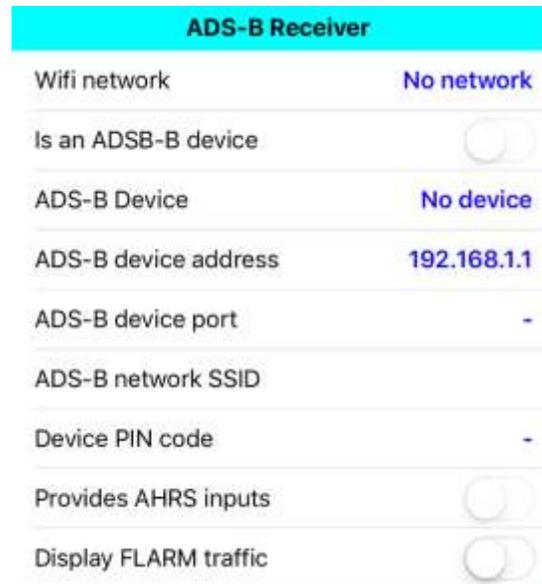
Please refer to Appendix B for a list of supported
and tested devices. Additionally to validated
devices, Airmate should also support devices
conforming to GDL-90 protocol: if you have such a
device, you could enter its Wifi network name
(SSID) in the **ADS-B network SSID** field to ask
Airmate to try to use this device as source of traffic data.

If the device supports AHRS data, you may have to switch on the **Provide AHRS inputs**
switch to ensure Airmate will use this AHRS data stream in its EFIS EFB view.

If you are connected to a uAvionix SkyEcho 2, you can purchase a FLARM Decoding
License to display FLARM neighboring glider traffic.

Please note that, since iOS 14, Apple blocks app connectivity to devices on the local network, until user approval. You will need to use Airmate iOS v2.1 to connect to ADS-B devices over Wifi, don't forget to approve access to local network when requested.

GPS Source

Here it is possible to switch between 3 different GPS sources:

- **Internal GPS (or external)** is either the own iPhone/iPad internal GPS receiver or any Apple compatible MFI GPS receiver that is paired using Bluetooth with the iPhone/iPad. In both cases, Apple device will process location data and forward them to Airmate. This is the default choice.

- **Simulator**: location data are received from a simulator on the port number specified in Flight Simulation submenu and will replace the actual GPS location. The aircraft symbol on the map will be black instead of red. In this choice, you could indicate **No** (flight simulator inputs not used), **Once** (flight simulator inputs used for this session only) or **Always** (always use flight simulator inputs, don't forget to disable this option when you want to use GPS inputs during a real flight).

- *Name_of_external_GPS (iOS only)*: if a specific GPS device to which Airmate could interconnect directly is found, its name will be shown there, otherwise **No external GPS found** will be displayed. Some devices, such Bad Elf GPS or ADS-B traffic receivers could provide GPS location using a direct channel to Airmate, bypassing the internal GPS of the iPhone/iPad.
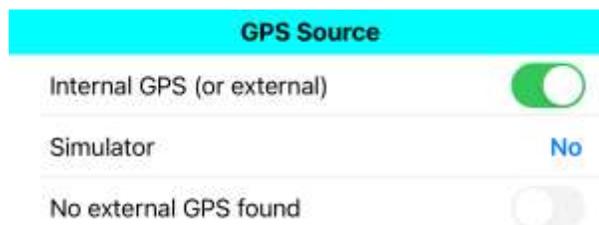
Flight Simulation

Here, you could define the UDP port number listened by Airmate for Flight Simulator aircraft data broadcast. The default port is 49002.

This menu also displays the iPhone or iPad own IP address on the Wifi network it is connected to, you may have to enter this address in the Flight Simulator configuration.
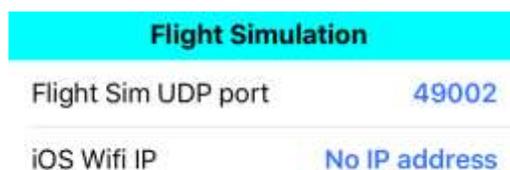
Finally, on this menu, you could request to have the flight path for simulated flights recorded and saved in the cloud, so you could share it with friends or review it later.

Debriefing

If you are using external debriefing servers, you could in this section select your debriefing server supplier and authorize the automatic transmission of your flight path to the server at the end of the flight. You will need to specify your username or email at debriefing server. Airmate is interfaced with Click & Take Off.

If a past flight has not been transmitted to the debriefing server, you could from the flown flight list swipe a flight to the left to send it manually to the server.

Discovery broadcast

In order to facilitate discovery of Airmate device by external systems such flight simulators, you could enable a discovery broadcast protocol that will transmit regularly a broadcast packet to all devices on the local network, on a configurable UDP port. Only enable this feature when needed to facilitate discovery by an external device.

Maintenance menu

This protected choice gives access to a Maintenance menu that is to be used only according Airmate Support Team guidance to debug issues happening on your device. On iOS, to access Maintenance menu, you should enter the current maintenance password supplied by Airmate team, follow then the instructions provided by Support team.

Interact with Airmate Community

Sharing information between pilots

Airmate is a social application designed not only to bring aeronautical information to pilots free of charge, but also to help pilots communicate between them and enrich the global community-shared information database.

So, please don't hesitate to enter information and ratings about airports, associated businesses, aviation events, aviation clubs.

Connect regularly to your Airmate Community page at https://my.airmate.aero to view a summary of your Airmate data and relevant information from the community.

Join Airmate team

You are very welcome to join Airmate team and become an Airmate Ambassador to help make Airmate widely known and improve it.

Airmate Ambassadors could help in numerous ways, they could pick up the activities they like:

- making Airmate known in their aviation community

- help translate Airmate in their own language: currently English, French, Spanish and German are supported but our goal is to have Airmate available in all major languages. Please contact us if you are willing to help with translations or advise us on translation errors you may have found.

- help improve the aviation database by pointing out any error and omissions, providing information on unlicensed airports or Visual Reporting Points in their country, help geo-reference charts at their home airport.

- add airport related activities and businesses, e.g. airport restaurants, handlers...

- add aviation events in their country in the event database.

- test beta versions and provide feedback

Appendix A - Supported Countries

Introduction

Airmate embeds a worldwide AIRAC database including all airports, waypoints, radio beacons, airways, regulated and restricted areas.

Depending on the countries, the availability of offline cartographic data, IFR or VFR airport plates may differ.

Airmate displays a cartographic chart background layer that is by default an OpenStreetMap image or vector chart. When online, cartographic data is always available because the data are downloaded from the Internet, however when inflight the display of background cartographic data requires prior downloading of the map for the overflown country.

Extended country coverage

Coverage is provided **worldwide free of charge** for the following data:

- airport information, including runway data
- radio beacons
- waypoints
- airways
- aeronautical areas (may be not fully extensive for some countries)
- obstacles in countries publishing obstacle data
- SID, STAR and approach procedures (partial coverage depending on the countries)
- terrain profile data

The table below provides information on extended coverage available in various countries, shown as ● if free and as ⓢ if commercial:

- additional free offline downloadable VFR maps (OpenFlightMaps, US Sectionals, WAC) or IFR enroute charts (usually from authorities)
- paying maps from authorities or commercial suppliers

- Visual Reporting Points (VRP)

- free topographic charts (OpenStreetMap)

- airfield VFR plates

- airfield IFR plates

- unlicensed / ultralight / private airfields data. Availability of plates is also indicated, marked with ⑤ if commercial plates

- obstacles

Please note the display of military data (military approach plates, military charts, military frequencies, MIL-NOTAM, MIL SUP) requires an active yearly subscription to Airmate Military (go to https://www.airmate.aero/shop to subscribe)

Country	Aviation data and map	Other free maps	Optional paying Maps	VFR Points	Topographic maps	Elevation data	VFR plates	IFR plates	Obstacles	Ultralight/Unlicensed/Bush fields
EUROPE										
Albania	●	●			●	●	●	●	●	
Austria	●	●	●	●	● ⑤	●	●	●		⑤ (+ plates)
Belarus	●	●			●	●	●	●		
Belgium	●	●	●	●	● ⑤	●	●	●	●	● (+ plates)
Bosnia/Herz.	●	●			●	●		●		
Bulgaria	●	●		●	●	●		●	●	
Croatia	●	●		●	●	●	●	●	●	
Cyprus	●				●	●		●	●	
Czech Rep.	●	●	●	●	● ⑤	●	●	●	●	●
Denmark	●	●	●	●	●	●	●	●	●	●
Estonia	●	●	●		●	●	●	●	●	
Faroe Islands	●	●			●	●	●	●	●	
Finland	●	●	●		●	●	●	●		● (+ plates)
France	●	●	●	●	● ⑤	●	●	●	●	● (+ plates)
Germany	●	●	●	●	● ⑤	●	⑤	●	●	●
Gibraltar	●				●	●		●	●	

Country	1	2	3	4	5	6	7	8	9	10
Greece	●	●	●	●	● Ⓢ	●		●		●
Guernsey	●		●	●	●	●	Ⓢ	●		
Hungary	●	●	●	●	●	●	●	●	●	●
Iceland	●	●			●	●		●		
Ireland	●		●		●	●		●	●	
Isle of Man	●		●	●	●	●	Ⓢ	●		
Italy	●	●		●	● Ⓢ	●	Ⓢ	●	●	● Ⓢ (+plates)
Jersey	●		●	●	●	●		●	●	
Kosovo	●				●	●		●		
Latvia	●	●	●		●	●	●	●	●	
Lithuania	●		●		●	●	●	●	●	
Luxembourg	●	●	●	●	●	●	●	●	●	
Macedonia	●				●	●		●		
Malta	●				●	●	●	●	●	
Moldova	●				●	●	●	●	●	
Monaco	●				●	●	●			
Montenegro	●				●	●		●	●	
Netherlands	●	●	●	●	● Ⓢ	●	●	●	●	
Norway	●		●		●	●	●	●		
Poland	●	●	●	●	●	●	●	●	●	
Portugal	●		●		●	●	●	●	●	●
Romania	●	●	●	●	●	●	●	●	●	●
Russia	●	●			●	●		●		
San Marino	●		●	●	●	●	Ⓢ			
Serbia	●				●	●	●	●	●	
Slovakia	●	●	●		●	●	●	●	●	●
Slovenia	●	●	●	●	●	●	●	●	●	
Spain	●	●	●		● Ⓢ	●	●	●	●	●
Sweden	●	●	●	●	●	●	●	●	●	
Switzerland	●	●	●	●	● Ⓢ	●	Ⓢ	●	●	
UK	●		●	●	● Ⓢ	●	Ⓢ	●	●	● Ⓢ (+ plates)
Ukraine	●				●	●	●	●	●	●
NORTH AMERICA										
Canada	●				●	●				
Greenland	●				●	●		●		
Guadeloupe	●	●		●	● Ⓢ	●	●	●		●
Haiti	●				●	●		●		
Martinique	●	●		●	● Ⓢ	●	●	●		●
Mexico	●	●			●	●	●	●		●

	1	2	3	4	5	6	7	8	9
Puerto Rico	●				●	●		●	
St Barthelemy	●			●	●	●	●	●	
St Pierre & Miquelon	●			●	●	●	●	●	
Turks and Caicos	●				●	●		●	
US Virgin Islands	●				●	●		●	
USA	●	●			●	●	●	●	●
USA (Alaska)	●	●			●	●	●	●	●
CENTRAL AND SOUTH AMERICA									
Argentina	●	●	●		●	●		●	●
Aruba	●				●	●			
Belize	●				●	●		●	
Bermuda	●				●	●	●	●	
Bolivia	●				●	●	●	●	●
Brazil	●	●			●	●	●	●	●
Cayman Islands	●				●	●	●	●	
Chile	●	●	●		●	●	●	●	
Colombia	●	●			●	●	●	●	●
Costa Rica	●				●	●		●	
Cuba	●	●			●	●	●	●	
Curacao	●				●	●			
Dominican Republic	●				●	●	●	●	
Dutch Caribbean	●				●	●	●	●	
Ecuador	●	●			●	●		●	●
French Guyana	●	●		●	●	●	●	●	
Guatemala	●				●	●		●	
Guyana	●					●		●	
Honduras	●				●	●		●	
Nicaragua	●				●	●		●	
Panama	●				●	●		●	
Paraguay	●	●	●		●	●		●	●
Peru	●				●	●		●	
Saint Barthelemy	●				●	●	●	●	
Saint Maarten	●				●	●	●	●	
Salvador	●				●	●		●	

Suriname	●				●	●		●		
Trinidad & Tobago	●				●	●		●		
Uruguay	●	●	●		●	●		●		●
Venezuela	●	●			●	●		●		●
AFRICA - MIDDLE EAST										
Algeria	●	●			●	●	●	●		
Angola	●					●	●	●		
Bahrain	●					●		●		
Benin	●				●	●	●	●		
Botswana	●									●
Burkina Faso	●					●	●	●		
Cameroon	●					●	●	●		
Capo Verde	●					●		●		
Centrafrican Republic	●					●	●	●		
Chad	●					●	●	●		
Comoros	●					●	●	●		
Congo Brazzaville	●					●	●	●		
Cote d'Ivoire	●				●	●	●	●		
Djibouti	●					●	●	●		
Egypt	●	●			●	●	●	●		
Equatorial Guinea	●					●	●	●		
Gabon	●					●	●	●		
Guinea Bissau	●					●	●	●		
Iraq	●	●				●		●		
Iran	●	●				●	●	●		
Israel	●	●			●	●	●	●	●	
Jordan	●				●	●		●		
Kenya	●					●	●	●		
Lebanon	●				●	●	●	●		
Libya	●					●	●	●		
Madagascar	●					●	●	●		
Mali	●					●	●	●		
Mauritania	●				●	●	●	●		
Mauritius	●					●		●		
Mayotte	●			●	●	●	●	●		
Morocco	●	●	●		●	●	●			
Mozambique	●					●		●		

Namibia	●	●				●	●	●		●
Niger	●					●	●	●		
Oman	●									
Qatar	●					●		●		
Reunion	●	●		●	●	●	●	●		●
Rwanda	●					●	●	●		
Saint Helena	●					●		●		
Sao Tome	●					●		●		
Saudi Arabia	●	●	●			●		●		
Senegal	●				●	●	●	●		
Seychelles	●					●		●		
Somalia	●					●		●		
South Africa	●	●			●	●	●	●		●
South Sudan	●					●		●		
Sudan	●					●		●		
Syria	●					●		●		
Tanzania	●					●		●		
Togo	●				●	●	●	●		
Tunisia	●	●	●		●	●	●	●		
Uganda	●					●		●		
United Arab Emirates	●	●	●			●		●		
CIS - EURASIA										
Armenia	●				●	●		●		
Azerbaijan	●				●	●		●		
Belarus	●	●			●	●		●		
Georgia	●				●	●		●		
Kazakhstan	●				●	●		●		
Kyrgyzstan	●				●	●		●		
Moldova	●				●	●		●		
Tajikistan	●				●	●		●		
Turkey	●				●	●		●	●	
Turkmenistan	●				●	●		●		
Uzbekistan	●				●	●		●		
ASIA										
Afghanistan	●					●		●		
Bangladesh	●					●		●		
Bhutan	●					●		●		
Brunei	●					●		●		
Christmas Island	●					●	●	●		

Cocos (Keeling) Islands	●					●	●	●		
Cook Islands	●					●	●	●		
Hong Kong	●					●		●		
India	●	●				●		●		
Indonesia	●					●		●		●
Japan	●				●	●	●	●		
Macau	●				●	●	●	●		
Malaysia	●	●				●		●		
Maldives	●				●	●	●	●		
Mongolia	●				●	●	●	●		
Myanmar	●					●		●		
Nepal	●					●		●		
Pakistan	●					●		●		
Philippines	●					●		●		
Singapore	●	●				●		●		
South Korea	●					●	●	●		
Sri Lanka	●					●		●		
Taiwan	●					●		●		
Thailand	●					●		●		●
Timor Leste	●					●		●		
Vietnam	●					●		●		
OCEANIA										
Australia	●				●	●		●		●
Fiji	●					●	●	●		
French Polynesia	●	●		●	●	●	●	●		
Guam	●					●	●	●		
Hawaii (USA)	●	●			●	●	●	●		●
Kiribati	●					●	●	●		
Marshall Islands	●					●	●	●		
Micronesia	●					●	●	●		
Nauru	●					●	●	●		
New Caledonia	●	●		●	●	●	●	●		
New Zealand	●			●	●	●	●	●		
Niue	●					●		●		
Norfolk Island	●					●	●	●		
Northern	●					●	●	●		

Mariana Islands										
Palau	●					●	●	●		
Papua New Guinea	●					●	●	●		
Samoa	●					●	●	●		
Tonga	●					●		●		
Tuvalu	●					●	●	●		
Vanuatu	●					●	●	●		
Wallis and Futuna	●			●	●	●	●	●		

Appendix B – Avionics & External Accessories on iOS

Introduction

Airmate allows you to connect supported accessories to your iPad or iPhone to provide additional services:

- **external GPS**, offering the following advantages:
    - source of GPS position for iPad without embedded GPS
    - lower battery drain or your iPhone/iPad device
    - higher accuracy
    - the external GPS unit may be positioned anywhere in the cockpit for a better GPS reception
- **External ADS-B traffic receivers**, some of them also provide AHRS data to be displayed by Airmate PFD EFIS view.
- **Avionics**, so you could send planned flights route and exchange data with your onboard avionics.

Supported GPS-only devices

Airmate works with **all MFi devices** directly paired with iPhone/iPad over Bluetooth.

Several kinds of services may be available:

- all MFi devices may be used to provide GPS location data to your iPhone or iPad instead of the embedded GPS.
- some devices offer an API allowing Airmate to access additional data, such better information on signal accuracy or information about GPS satellite coverage.

Brand	Model	Connectivity	Other services
Bad Elf	Bad Elf for Lightning	Plug-in	Satellite information
	GPS Pro	Bluetooth	Satellite information
	GPS Pro+	Bluetooth	Satellite information

	GNSS Surveyor	Bluetooth	Satellite information
Dual Electronics	XGPS 150		Only GPS location
	XGPS 160	Bluetooth	Only GPS location
Garmin		Bluetooth	Only GPS location

Supported Traffic Devices often providing GPS Location

Airmate supports most GDL-90 compatible traffic detectors and some others such PilotAware.

GDL-90 devices usually also provide weather data services in the USA over FIS-B, those extended services are supported by Airmate.

Most but not all GDL-90 devices also provide location data. Some of them provide also AHRS data depicted by Airmate EFIS view.

Brand (alphabetic order)	Model	Connectivity	Other services
Appareo	Stratus 3	Wi-Fi	Location, FIS-B, AHRS
CrewDog Electronics	Stratux	Wi-Fi	Location, FIS-B, AHRS
Dual Electronics	XGPS 170 XGPS 170D XGPS 190	Bluetooth	Location, FIS-B Location, FIS-B Location, FIS-B, AHRS
Dynon	DRX SkyView	Wi-Fi	Location, FIS-B, AHRS
Flying Neurons	Neuron	Wi-Fi	Location, FIS-B
Lynx	GDL-9000	Wi-Fi	Location, FIS-B
Open Flight Solutions	FlightBox FlightBox Pro	Wi-Fi	Locatiion, FIS-B Location, FIS-B, AHRS
PilotAware	PilotAware	Wi-Fi	Location, Broadcast position to other PilotAware users
Stratux	Stratux	Wi-Fi	Location, FIS-B, AHRS
uAvionix	Ping USB	Wi-Fi	only traffic
	Sky Echo 2	Wi-Fi	Location, FIS-B, FLARM
Others	any	Wi-Fi	Any other GDL-90-compliant device should be supported, by defining its wifi access point as traffic device in Settings / Advanced menu

Connecting to Stratux and other Wi-Fi GDL-90 Traffic devices

Airmate supports most traffic devices supporting the GDL-90 protocol and broadcasting traffic information on a private Wi-Fi network.

To connect to such devices, follow the below steps:

- turn on your device, wait for power up until you could see its Wi-Fi SSID on the list of Wi-Fi networks in the iPad/iPhone Settings. If the device is listed in the above list, the SSID will be recognized automatically as pertaining to a traffic detector device, otherwise you may have to go to Airmate Settings/Advanced to enter the Wi-Fi network SSID of your device.

- connect to the traffic detected Wi-Fi network

In Settings/Advanced/GPS Source, you could select the ADS-B device as GPS position source. Although not mandatory, it most case you will get a better fix than using embedded iPhone/iPad device. If you have not selected the ADS-B device as a GPS source, Airmate will automatically propose you to use it when you switch to Flight mode. You could then:
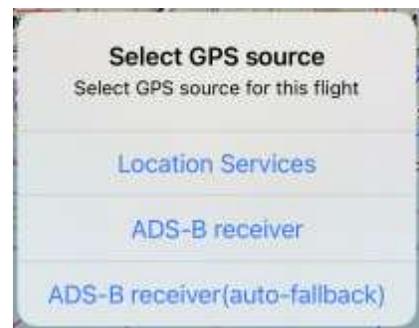
- Stick to the Apple device GPS (Location Services)
- Use only GPS data from the ADS-B device
- Use GPS data from the ADS-B device but fallback to Apple device own GPS is case of loss of communication with ADS-B device (recommended)

Once connected to your traffic detector Wi-Fi network, launch Airmate and switch to Flight mode, the traffic detector recognition should be automatic and traffic displayed by Airmate (please note the traffic is not displayed until you switch Airmate to Flight mode using the aircraft taking-off button at top right of the map).

If no traffic is shown (but you know some should be), troubleshoot the connectivity as instructed below:

- go to Airmate **Settings**

- select the **Advanced** tab

- then in the **ADS-B device** submenu check the below:

o   displayed Wi-Fi network is the traffic detector own network (if no, go to iPhone/iPad Settings and switch network)

o   ADS-B Device should display traffic detector SSID in green, showing it has been recognized (if it is not, click on the Wi-Fi network SSID in Settings to configure it).

o   ADS-B device port should usually be set to 4000

Airmate supports AHRS data reception from an ADS-B device. Depending on the device, you may have to select the "AHRS data source" in Settings/Advanced to ensure AHRS data are properly processed.

An example of correct ADS-B/Stratux configuration is shown on the right.

ADS-B Receiver	
Wifi network	stratux
Is an ADSB-B device	⬤
ADS-B Device	STRATUX
ADS-B device address	192.168.1.38
ADS-B device port	4000
ADS-B network SSID	
Device PIN code	-
Provides AHRS inputs	◯
Display FLARM traffic	◯

GPS Source	
Internal GPS (or external)	◯
Simulator	No
STRATUX	⬤

Connecting to DUAL Bluetooth traffic devices

To connect to a DUAL GPS/ADS-B receiver, follow the below steps:

- using iOS Settings, enable Bluetooth and pair the DUAL receiver and your iOS device. The DUAL device should be seen in "Connected" mode in the list of devices in Bluetooth menu (known restriction: in order to be detected by Airmate, only a single Bluetooth device should be in Connected mode).

- go to Airmate Settings/Advanced/GPS Source: the DUAL device should be listed as External GPS: enable this external GPS to allow data reception from the DUAL device.

- Traffic and FIS-B data will then be received from the DUAL device when Airmate is switched to Flight mode.

Connecting to PilotAware

To connect to PilotAware device, follow the below steps:

- turn on your PilotAware device, wait for power up until you could see its Wifi SSID (in the form of "PilotAware-*hexcode"*) on the list of Wi-Fi networks in the iPad/iPhone Settings.

- connect to the PilotAware Wi-Fi network

- launch Airmate, go to Settings, select the Advanced tab, then in the ADS-B device submenu check the below:

  - displayed Wi-Fi network is the PilotAware network (if no, go to iPhone/iPad Settings and switch network)

  - ADS-B Device should display PilotAware in green, showing it has been recognized (if it is not, check the PilotAware Wi-Fi SSID includes the PilotAware string)

  - ADS-B device address should be set to 192.168.1.1 (except if you changed it in the PilotAware device)

  - ADS-B device port should be set to 2000

  - Leave Device PIN code to default 6000

  - in GPS Source, you should have PilotAware listed as GPS position source. Although not mandatory, we recommend you select PilotAware as position source, as you will get a better fix than using embedded iPhone/iPad device.

An example of correct PilotAware configuration is shown below

ADS-B Receiver	
Wifi network	PilotAware-B827EB81D07F
ADS-B Device	PilotAware
ADS-B device address	192.168.1.1
ADS-B device port	2000
Device PIN code	6002
GPS Source	
Internal GPS (or external)	
Simulator	
PilotAware	

Dynon SkyView

Airmate provides a complete integration with Dynon SkyView, provided a Wi-Fi interface is connected to the Dynon unit. Please refer to the Airmate/Dynon Pilot Interworking Manual for a complete documentation.

To summarize, you need to connect to the SkyView Wi-Fi network. Once connected to your SkyView Wi-Fi network, you can:

- **use the SkyView as high precision GPS source**, **AHRS data source and ADS-B/FIS-B source**. To this end, you could select SkyView as GPS and AHRS source in Airmate Settings/Advanced or simply select Dynon SkyView as GPS source when you switch Airmate to Flight mode.
- **Send your currently active planned flight to the Dynon SkyView**, the route will be automatically imported and will become the current active route. In this way, you don't need to create again your flight route in the SkyView, saving time and

avoiding data entry errors.

To export a planned flight to Dynon, simply click on the Share button when showing the summary or detailed edition form, or click on Export flight button on the detailed edition form. After confirmation, the currently selected planned flight will be sent to the Dynon SkyView, the SkyView will display a confirmation message "Flight plan received from Airmate" and set the received flight plan as current route.

In addition, you can subscribe to Airmate Database for SkyView to use Airmate database, aeronautical charts and airport plates for your SkyView. Subscriptions are available at https://www.airmate.aero/shop for Europe, South America, North America, Africa and Oceania. Eastern Europe and Asia will be available soon.

Appendix C - External Accessories on Android

Introduction

Airmate allows you to connect supported accessories to your Android phone or tablet.

Connecting to external GPS receivers

Airmate supports most external GPS receivers supporting NMEA protocol and broadcasting GPS information on a private WiFi network.

To connect to such devices, follow the below steps:

- turn on your device, wait for power up until you could see its Wifi SSID on the list of Wifi networks in the Android Settings.

- attach your Android device to the GPS detected Wifi network

- go to Airmate Settings/Advanced to enter the Wifi network SSID of your device and the UDP port used by GPS receiver to broadcast NMEA packets.

Contact Us

For any question, comment or issue, please contact:

airmate@airmate.aero

Online help and support forum is also available at www.airmate.aero

You could purchase on Airmate Shop Airmate options, as well plates and maps from commercial suppliers: https://www.airmate.aero/shop

News are also posted on social networks:

- our web https://www.airmate.aero

- our Facebook page: https://www.facebook.com/airmate.aero

- Twitter https://www.twitter.com/airmate_aero

- Youtube: subscribe to our channel https://www.youtube.com/channel/UCLr-J2NGIAGk-MqyJ4XZ1nA

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- like us on Facebook.

- send a message from the app to your friends to give them the pointer to download the app.

- subscribe to Airmate video tutorials on Youtube.