



Aeronautical Application (Aero App)

Android User Manual Version 1.2406

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1 Introduction

The aeronautical multi-platform application, Aero App, is a collaborative effort reaching across NGA and other government agencies, focused on supporting the Warfighters and NGA Vision.

The design of Aero App is to enhance the use of Aeronautical Flight Information Publication (FLIP) data and manage individual FLIP products. The key offerings of Aero App are as follows:

- Provides an interactive, high-performance, worldwide Map.
- Provides a library of current nationwide VFR Sectionals, worldwide IFR High and Low charts, Helicopter and TAC Maps, and a designated place to store and use personalized user maps.
- Various overlays such as Airports, Air Refueling Routes, Airspaces, Airways, Arresting Gear, ARTCCs, FIRs, International boundaries, MTRs, Pins, and many more including User Overlays.
- View detailed airport information and charts such as APD, IAP, Dep, Arr, Min, and more.
- View critical charts and documents such as Supplements, Planning, user documents, and Legends.
- View weather information such as METARs, TAFs, Winds, Temps, PIREPs, NOTAMs, and Air Force Weather.
- Create, save, edit, or delete points on the Route Panel.
- View navigational data such as Graphic Charts, CONUS Chart Graphics, Military Training Routes, and more.
- Use the integrated E6B calculator for flight planning on ground and air operations. Various calculations include Altitude, Cold Wx, Conversions, Coordinates, Descent, Distance, IFR Climb, Rwy Winds, and Winds Aloft.
- Manage and make modifications to files that have been downloaded and loaded into Aero App.
- Load and view PDF format.

2 About the Manual

The Aero App user manual is a comprehensive guide that describes the use and understanding of Aero App. It provides detailed information on worldwide map coverage, including aeronautical overlays and user maps, as well as displaying Air Force Weather, airport, and other navigation information. Pilots can view georeferenced FLIP and FAA charts that show your ownship location, Electronic-Instrument Procedure Library (E-IPL) and Host Nation charts, and much more. Whether you're an experienced pilot or new to the field, the Aero App user manual is an essential resource that will assist you in your mission.

3 Getting Started

The Aero App User Manual provides detailed instructions on using Aero App. It covers procedures such as app installation, data loading, and utilizing integrated features. Additionally, it includes conceptual explanations for the app's features, tools, overlays, and other offerings. Before getting started, it's important to ensure that your system meets the outlined system requirements, which are further detailed in the next section.

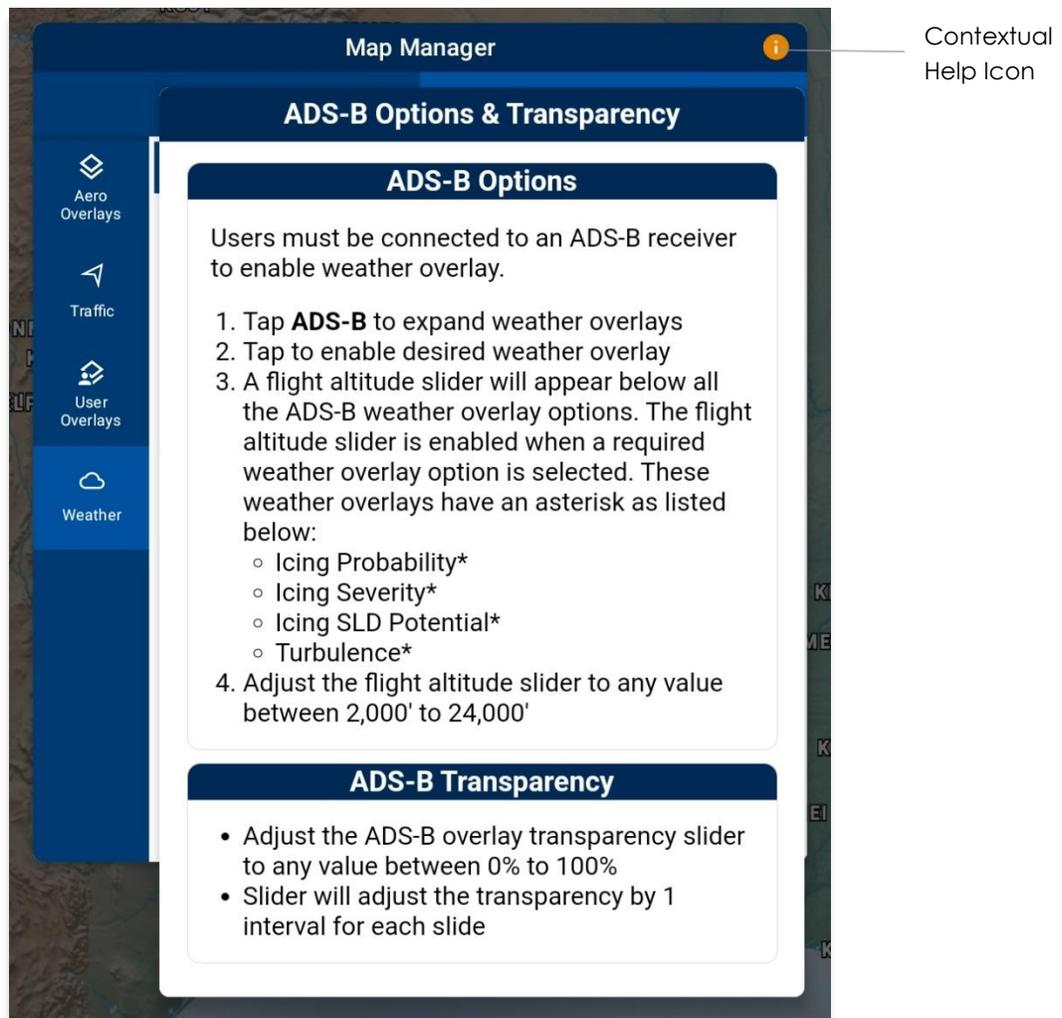
3.1 System Requirements

To install and utilize Aero App for Android, it is important to ensure that your device meets the necessary requirements. These include having a compatible operating system and sufficient memory and disk space. The system requirements are listed below:

- Required
 - Android 12 or later
 - 16 GB of available storage (for the installation of Aero App and one complete data cycle)
- Optional
 - USB cable to connect the Android tablet to a stand-alone computer
 - If loading the app from a Mac, you will need to install the Android File Transfer app on the Mac - this app is available at <http://www.android.com/filetransfer>
- Internet connection if downloading data or Aero App via the internet
- File sharing app (you can buy one on Google Play Store if your tablet does not come with an integrated file sharing app)

3.2 Contextual Help

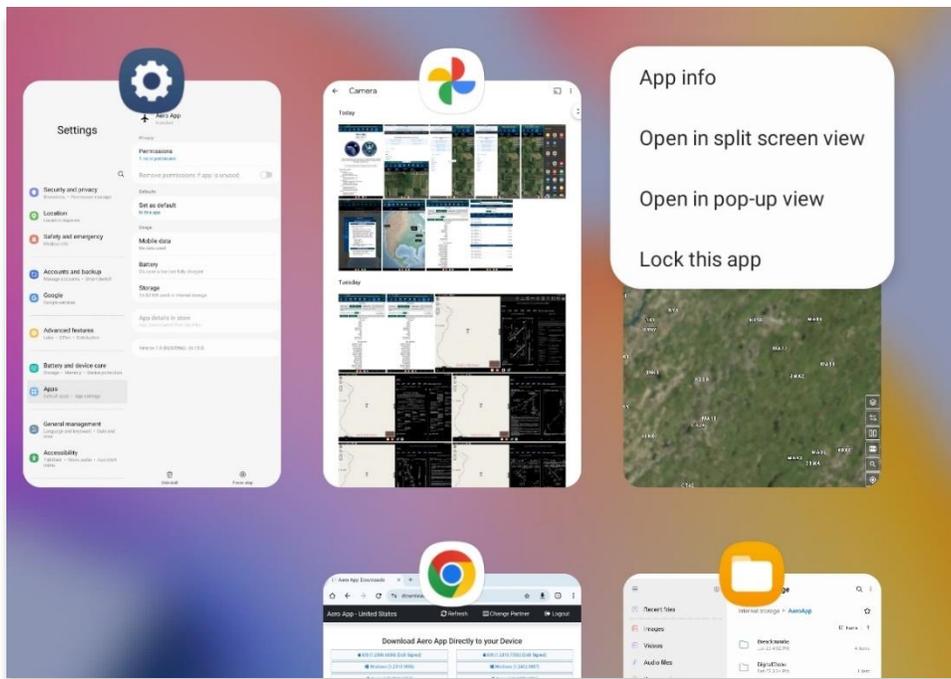
Contextual help in Aero App offers a great first-time experience for users to become familiar with specific tools and features. In Aero App, views that support contextual help are marked with an orange icon located at the top right of the view. Explore Aero App and tap on the icon to learn more.



4 Multitasking on Android

Aero App for Android offers multitasking capabilities, enabling users to seamlessly switch between different apps in split-screen view. The Route Panel view may not be available for pages on Aero App other than the Map when the screen is too narrow. Increasing the screen's width in split-screen mode may resolve this issue.

1. With Aero App open, tap the **Recents** icon located at the bottom-right of the screen.
2. All recently viewed apps will be displayed. Tap on the **app icon** of desired app.
3. A popup will display with the following options:
 - App info
 - Open in split screen view
 - Open in pop-up view (not supported)
 - Lock this app

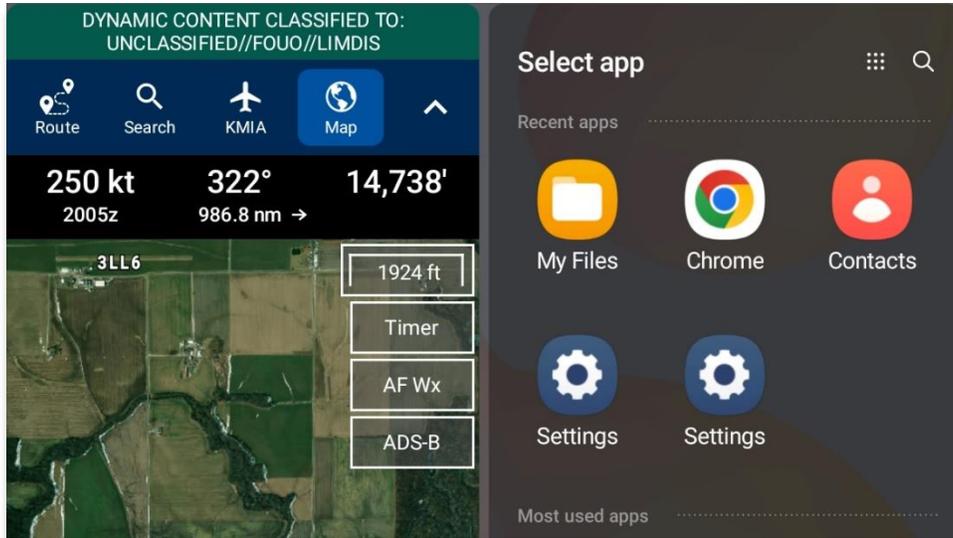


4. Select **Open in split screen view**.



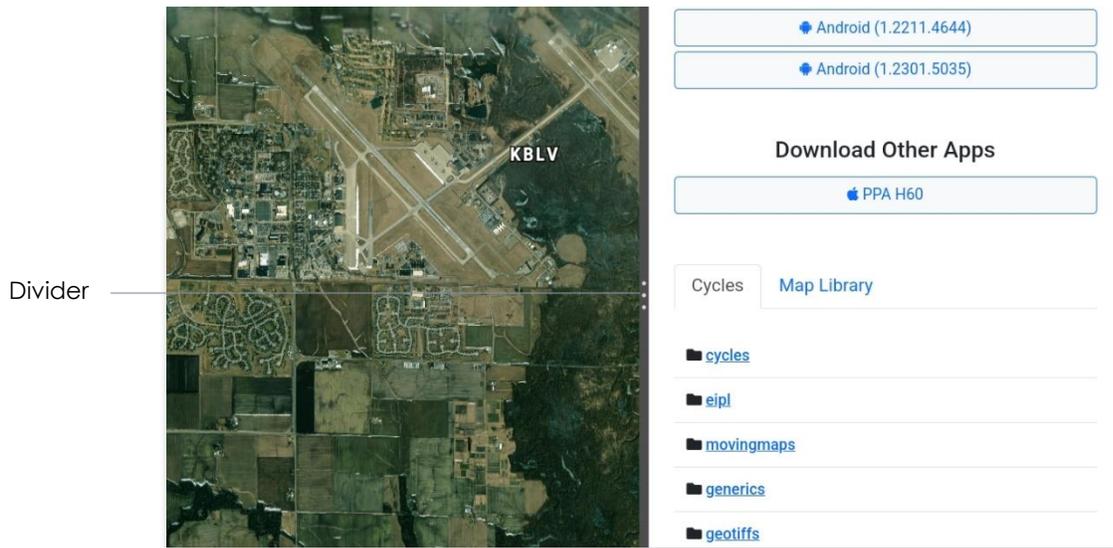
NOTE: Pop-up View is not supported by Aero App.

- Aero App will be pushed to the left side of the screen. Users will be prompted to select a split-screen app. Select desired app for side-by-side app experience.



NOTE: Not all apps support Multitasking.

- A divider is located between both apps to allow resizing of views when adjusted. Adjust your views to desired size preference.

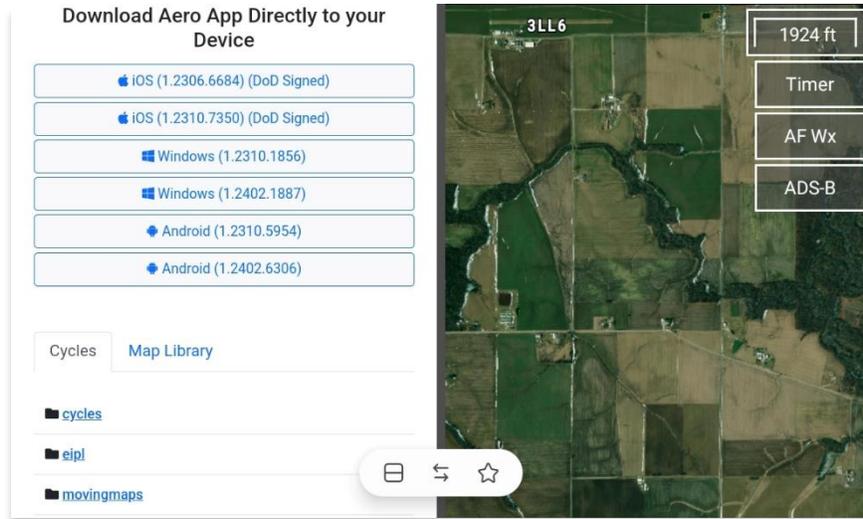


NOTE: For best practice, Aero App should be at 50/50 size to allow seamless user experience.

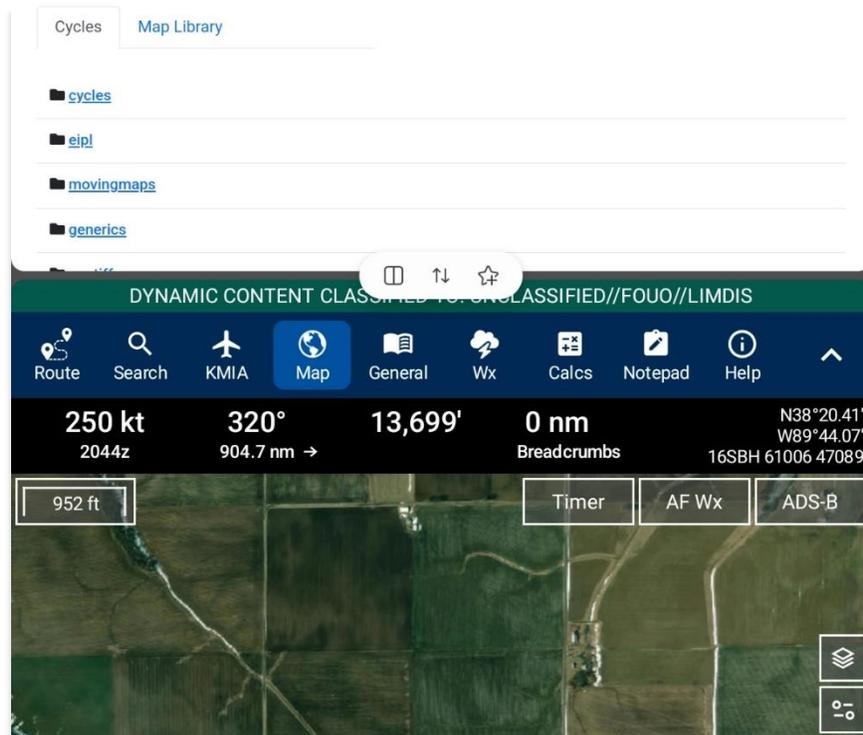


NOTE: Multitasking is available on both portrait and landscape mode.

7. To move the split screen view app to the opposite side of the screen, tap the **three dots** on the divider and select the **reverse** button.



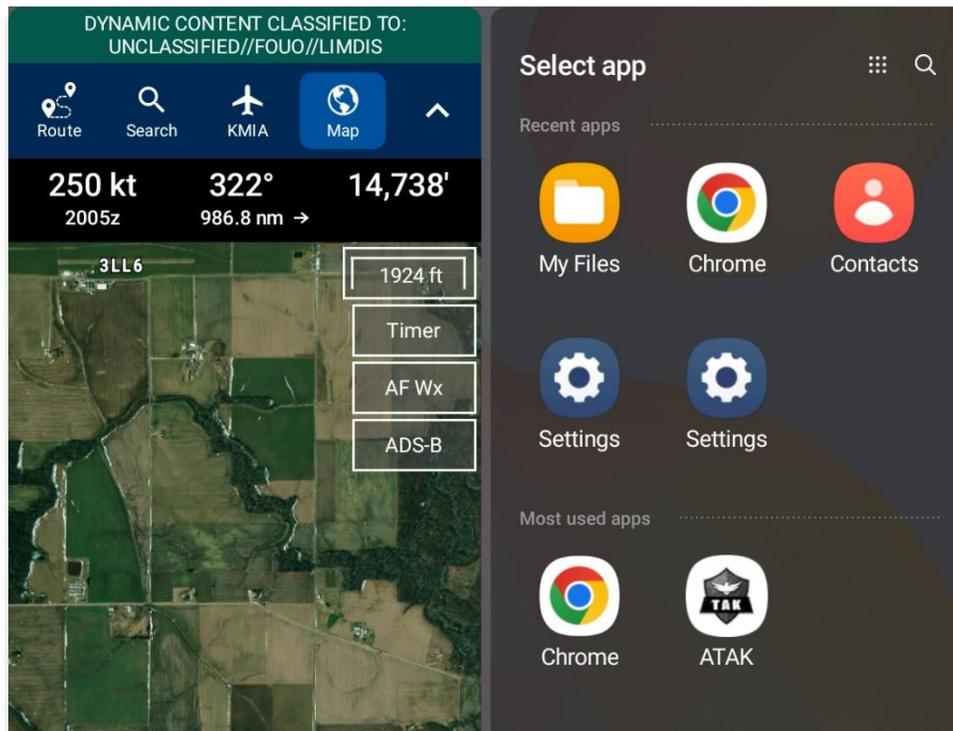
8. To switch your side-by-side view to a stack view, tap the **three dots** on the divider and select the **switcher** button.



4.1 Switch Between Apps in Split Screen View

Users can switch between different apps of their choosing.

1. To switch to another app in split screen view, navigate to the **Recents** icon and choose another app from the recently viewed apps selection.
2. Users will be prompted to choose another app. Select desired app for side-by-side experience. Alternatively, users can switch their side-by-side view to a stack view.



4.2 Close Apps in Split Screen View

There are several methods to close apps in split screen view. The following options are available to users:

- **Recents** – Navigate to the **Recents** icon to display recently viewed apps. Swipe up on the split screen view that you wish to close.
- **Drag divider to edge** – Drag the **divider** in the direction of the app that you want to close. The second app will disappear, and the first app will be viewed in Full Screen mode.

5 Troubleshooting

If you have problems that cannot be resolved, contact the Aero App Support Team:

Phone: 954-323-2244 ext. 412

Email: aeroappsupport@hiltonsoftware.com

Contact Form: <https://aeroapp.info/contactus/>

Hours of Operation: Monday - Friday 1000-1800 EST

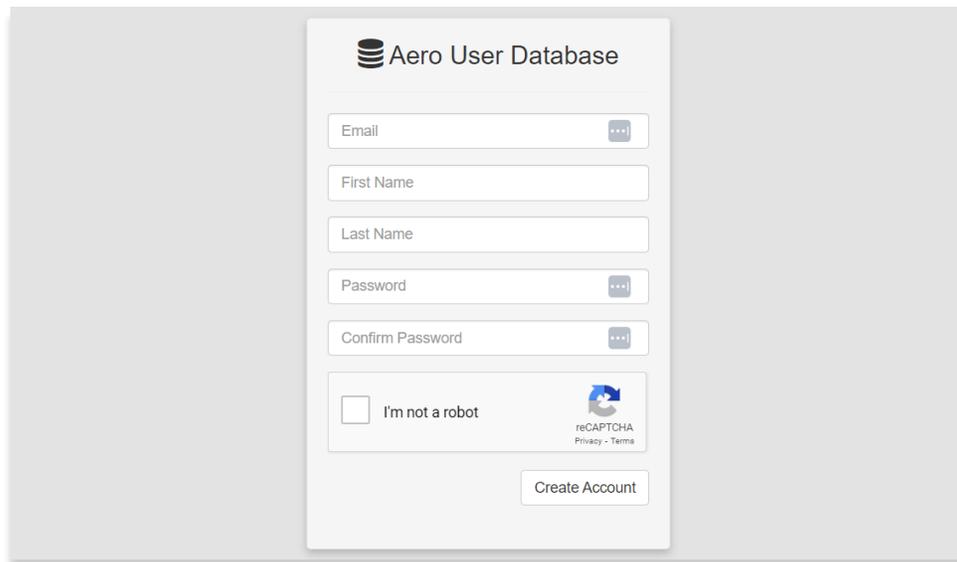
6 Accounts

To utilize Aero App's offerings, certain features require an active account respective to the action being made. Detailed information regarding the various account registration options will be provided in the sections to follow.

6.1 Aero User Database (AUD) Account Registration

Aero User Database (AUD) provides authentication for DOD and government foreign partners seeking access to Aero App software and data. Users who chose Aero User Database as a form of authentication for Aero App must register for an account.

1. Open an internet browser of choice.
2. Enter userdb.aeroapp.info/auth/register in the address bar.
3. The Aero User Database form displays. All fields are required to create an account; therefore, all fields must be filled.

The image shows a registration form titled "Aero User Database". It contains several input fields: "Email" (with a dropdown arrow), "First Name", "Last Name", "Password" (with a dropdown arrow), and "Confirm Password" (with a dropdown arrow). Below these fields is a checkbox labeled "I'm not a robot" next to a reCAPTCHA logo and the text "reCAPTCHA Privacy - Terms". At the bottom of the form is a "Create Account" button.

NOTE: A valid .mil and .gov email is required to create an account.

4. Click **Create Account** once all required fields have been filled. Once registered, a verification email will be sent to the user-registered email address.
5. Follow the instructions provided in the email to verify your AUD account.



NOTE: If a verification email is not found within your email inbox, ensure to check the junk folder, or contact the Aero App Support Team at aeroappsupport@hiltonsoftware.com for assistance.

6.2 NGA GEOAxis Account Registration

GEOAxis is NGA's Enterprise Identity and Access Management authentication system. GEOAxis unifies logins between AWS and the NGA App Store, which negates CAC access. Users who choose to use GEOAxis as a form of authentication for Aero App must register for an account. The initial registration requires users to have a CAC-enabled PC with their CAC card.

1. Open an internet browser of choice.
2. Enter <https://access.geoaxis.gs.mil/oam/west/servlet/login.jsp> in the address bar.
3. Select one of the listed credentials to authenticate.
4. Follow the prompts.



NOTE: A valid .mil email is required to create an account.



NOTE: For technical assistance, contact the NGA Enterprise Service Center at 1-(800)-455-0899.

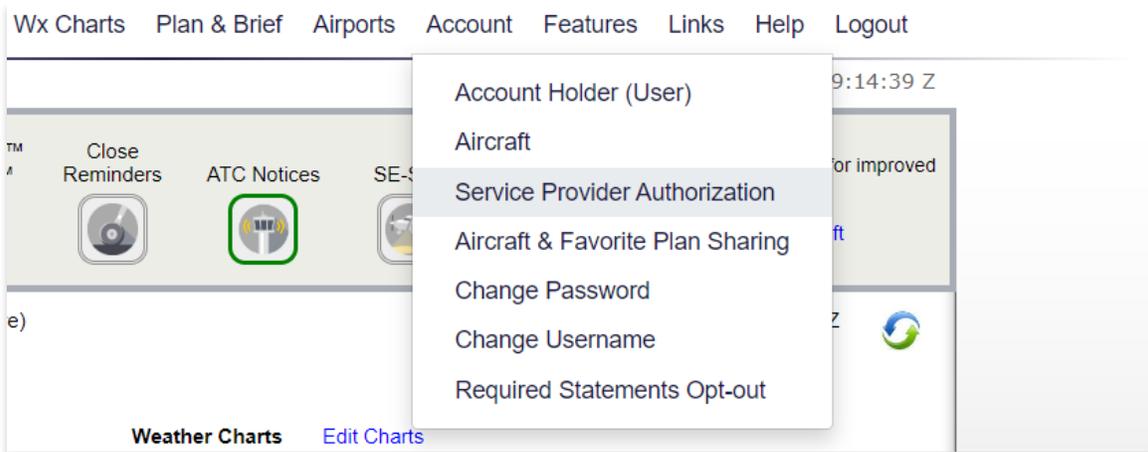
6.3 Flight Service Account Registration

A Flight Service account is required for those using the Flight Plan feature on Aero App.

1. Open an internet browser of choice.
2. Enter 1800wxbrief.com in the address bar.
3. Navigate to the *Login* section of the page.
4. Select **Create Account**. You will be redirected to an Account Creation page.
5. Follow the prompts then select **Create Account** once completed.

Once an account has been created, users must authorize NGA Aeronautical Application (Aero App) as the service provider. This will allow Aero App to connect to your account and perform actions on your behalf.

6. Log in using your Flight Service credentials.
7. Navigate to the *navigation bar* located at the top of the page.
8. Hover over **Account** to view additional account options.
9. Select **Service Provider Authorization**. The Service Provider Authorization page will be displayed.

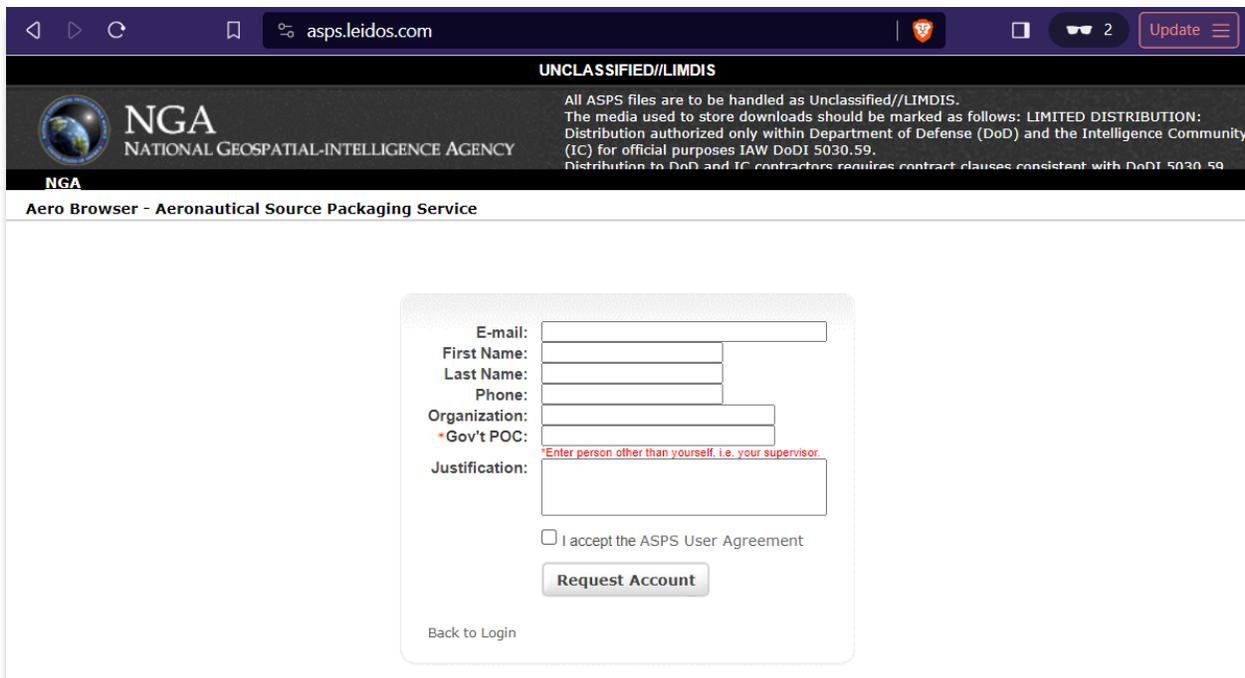


10. A button to *Edit* and Save is available. Select **Edit**.
11. From the provided table, locate *NGA Aeronautical Application (Aero App)* and select **Yes** on the radio buttons.
12. Click **Save**.

6.4 ASPS Account Registration

Pilots are required to possess an Aeronautical Source Packaging Service (ASPS) account to obtain Host Nation charts.

1. Open an internet browser of choice.
2. Enter asps.leidos.com in the address bar.
3. Select **Request Account**.
4. Follow the prompts.
5. Select **Request Account** once complete.



The screenshot shows a web browser window with the address bar displaying asps.leidos.com. The page header includes the NGA logo (National Geospatial-Intelligence Agency) and a security notice: "UNCLASSIFIED//LIMDIS. All ASPS files are to be handled as Unclassified//LIMDIS. The media used to store downloads should be marked as follows: LIMITED DISTRIBUTION: Distribution authorized only within Department of Defense (DoD) and the Intelligence Community (IC) for official purposes IAW DoDI 5030.59. Distribution to DoD and IC contractors requires contract clauses consistent with DoDI 5030.59." Below the header, the page title is "Aero Browser - Aeronautical Source Packaging Service". The main content area features a registration form with the following fields: "E-mail:", "First Name:", "Last Name:", "Phone:", "Organization:", "Gov't POC:" (with a red asterisk and a note: "Enter person other than yourself, i.e. your supervisor"), and "Justification:". Below the form is a checkbox labeled "I accept the ASPS User Agreement" and a "Request Account" button. A "Back to Login" link is located at the bottom left of the form area.

7 Aero App Installation

There are several methods to install Aero App. The following sections ahead will expand on the different installation options.

7.1 Where to Obtain Aero App

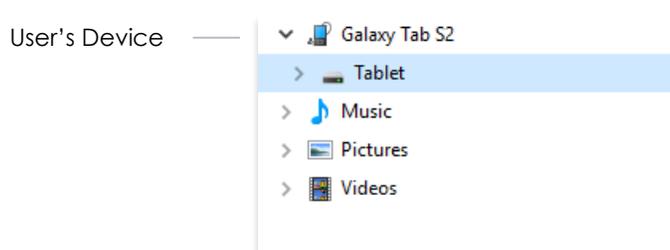
Aero App (National Stock Number [NSN] 7644016004225) can be installed from the following sources:

- **Aero App DVD** – National Geospatial Intelligence Agency (NGA) distributes the Aero App DVD to appropriate personnel.
 - **Defense Logistics Agency (DLA)**. If you have any questions or need additional information, contact Jorge Diaz (Jorge.Diaz@dla.mil).
 - **National Geospatial-Intelligence Agency (NGA)**. Aero App data can be downloaded via NIPRnet at (<https://dbgia.geointel.nga.mil/efb/index.cfm>). This link requires a PKI-enabled CAC card for access. See your security team for a PKI certificate if you receive the following message: "Certificate-based authentication failed."
- **Aero App Website** – Aero App's website (aeroapp.info) that requires GEOAxis or Aero User Database credentials.

7.1.1 Install Aero App From Aero App DVD

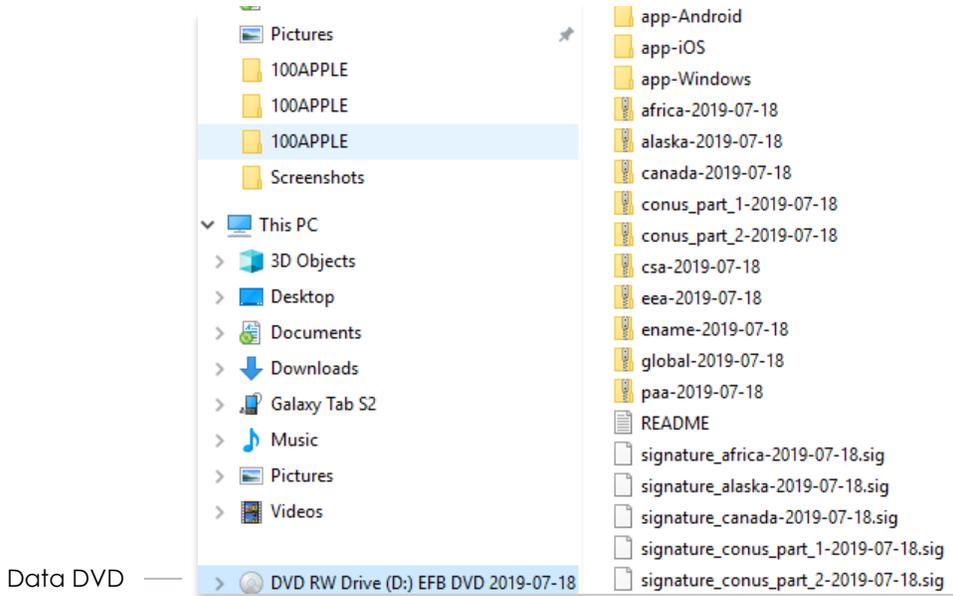
NGA distributes the Aero App DVD to appropriate personnel. For additional information, contact Jorge Diaz (Jorge.Diaz@dla.mil) from the Defense Logistics Agency.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **Device and Drive** to locate your Android tablet.
3. Double-click on the Tablet icon to open Internal storage.

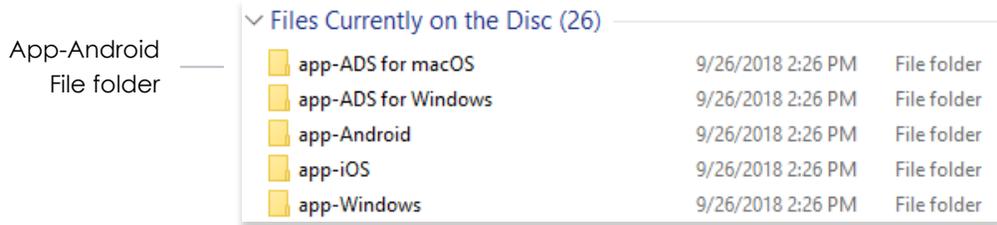


4. Insert the data DVD into the user's computer.

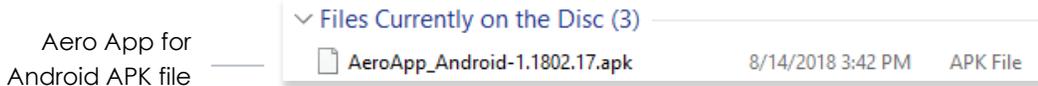
- With a new File Explorer window opened, locate and double-click on the **DVD drive**.



- From the Aero App DVD drive, open the **app-Android** folder.



- Both File Explorer windows should be open simultaneously. Drag and drop the Android APK file (**AeroApp_Android-<version number>.apk**) from the Aero App DVD drive into your device's **Internal storage**. The Aero App package should be stored in your Android device.



- The Aero App for Android APK file must be installed. On your Android tablet, navigate **My Files** app.
- Select **Internal Storage** from the app drawer to view files and folders.
- Locate and tap the Aero App APK file (**AeroApp_Android-<version number>.apk**).

11. You will be prompted to install the app. Confirm the prompt and the app will begin to install onto your device. Aero App will be successfully installed and ready for use. Refer to [Section 7.2](#) to grant Aero App the necessary permissions to fully utilize all features of the app.

Aero App
Version Number

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

Route Search KMLA Map General Wx Calcs Notepad Help

Aero App

Version 1.2406.6320
MAGTAB version v1.1.3

[Send Feedback](#)



The Aeronautical Application, Aero App, is a collaborative effort reaching across NGA, and other government agencies, focused on supporting the WarFighter and NGA Vision.

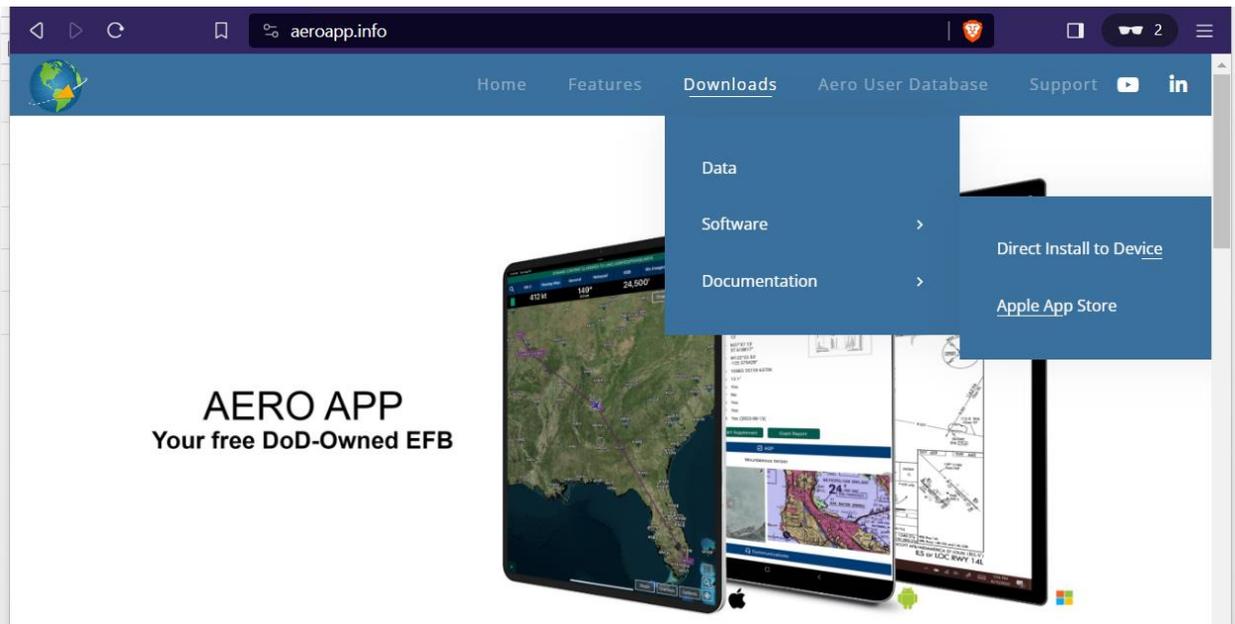
Aero App for Android Version 1.2406 requires Android 12 or later

Third Party Libraries

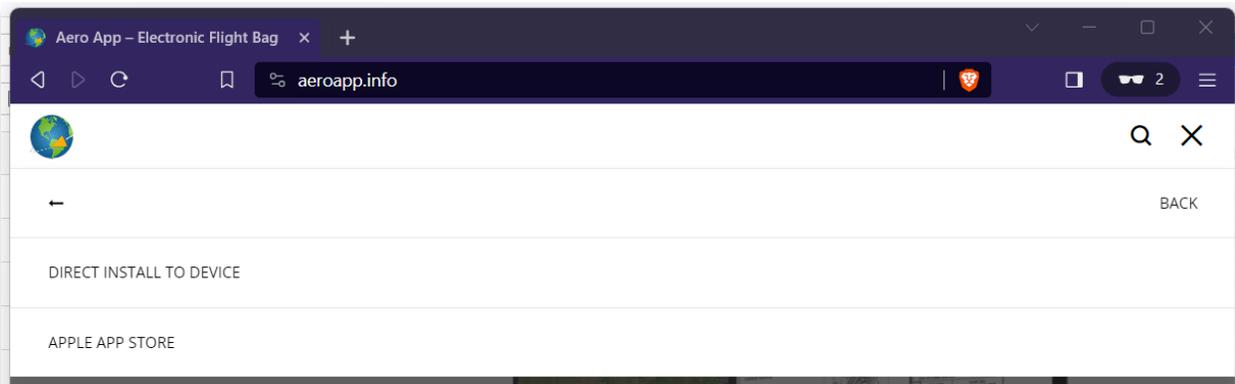
- WhirlyGlobe-Maply
(Mousebird Consulting)
Code License: Apache 2.0
(License included later in Document)
- Zoomable
(<https://github.com/usuiat/Zoomable>)
Code License: Apache 2.0
(License included later in Document)
- TouchImageView
(<https://github.com/MikeOrtiz/TouchImageView>)
Copyright © 2012 Michael Ortiz
Code License: The MIT License (MIT)
(License included later in Document)

7.1.2 Install Aero App From Aero App Website

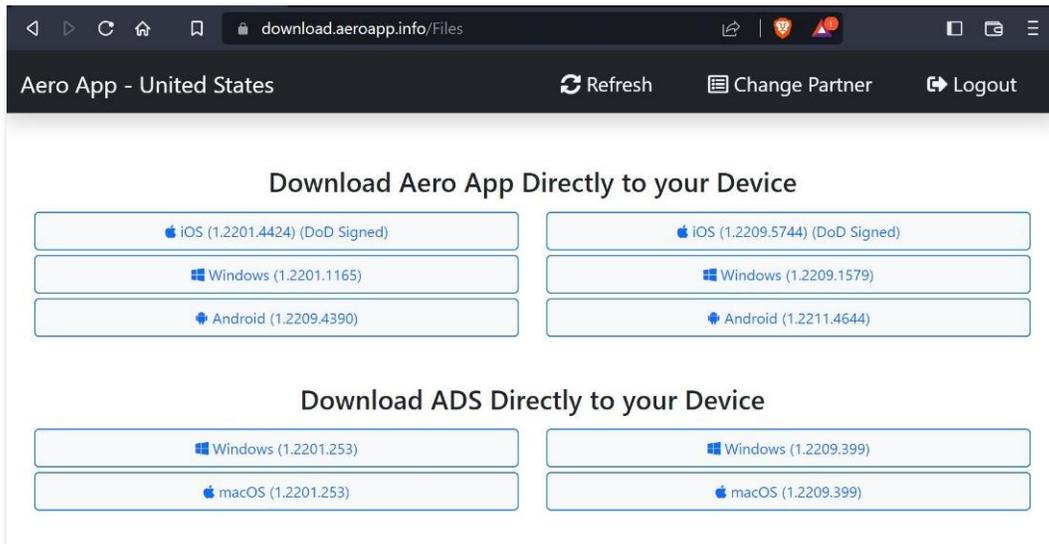
1. Open an internet browser of choice.
2. Enter aeroapp.info in the address bar.
3. Navigate to the *Downloads* menu. Option placement will vary depending on display size.
 - On larger screens, hover over **Downloads** from the navigation bar to reveal additional download options.



- On smaller screens, tap the hamburger button and select **DOWNLOADS** to display additional download options.



4. Select **Software**.
5. Users are presented with two methods to download Aero App:
 - Direct Install to Device
 - Apple App Store
6. Select **Direct Install to Device**.
7. Log in using *GEOAxis* or *Aero User Database* credentials. The Select Partner popup will appear for Aero User Database users who have access to multiple government foreign partners.
8. Navigate to the *Download Aero App Directly to your Device* section then select **Android (version number)**. Aero App will begin to install onto your device. Refer to [Section 7.2](#) to grant Aero App the necessary permissions to fully utilize all features of the app.

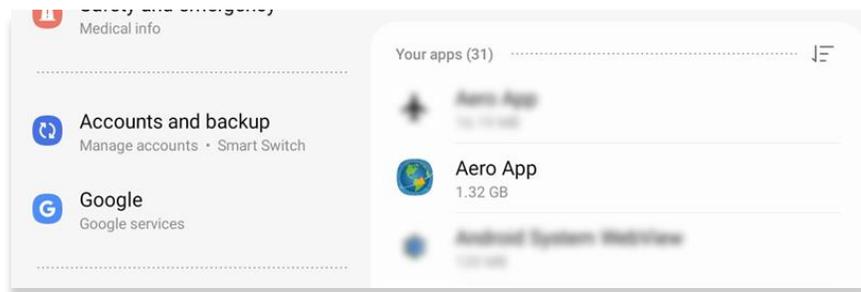


NOTE: Users must possess a GEOAxis or Aero User Database credentials to download the Aero App software from the Aero App website. Refer to [Section 6](#) for additional information.

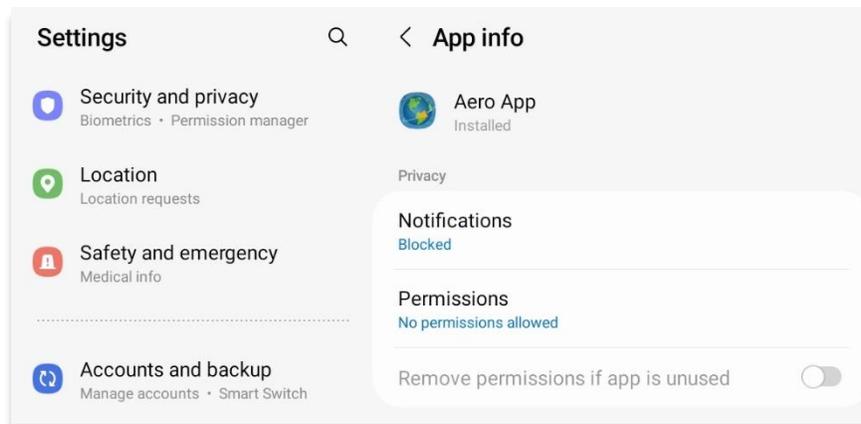
7.2 Aero App Permissions

Upon installing Aero App, users will be prompted to grant the necessary permissions for accessing the device's location, nearby devices, notifications, and shared storage. To fully utilize all features of the app, it is recommended to allow access to the device's files upon opening Aero App for the first time. If the permissions are denied initially, users can navigate to the device's settings to grant the required permissions. The steps in achieving this are as follows:

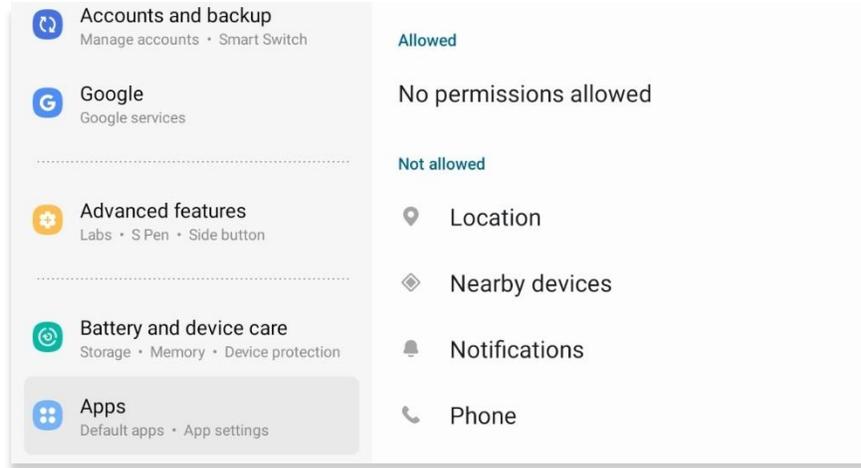
1. Open the **Settings** app on your tablet.
2. Tap **Apps**. The list of apps currently installed on your device will display.
3. Select **Aero App** from the list.



4. Tap **Permissions** from the *Privacy* section.

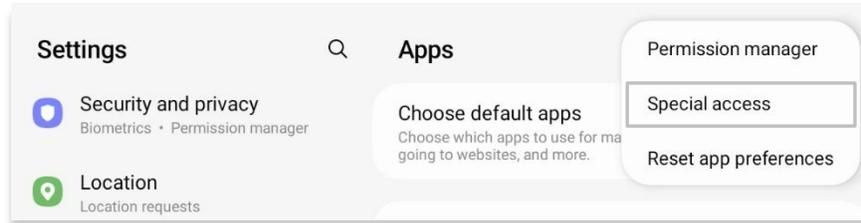


5. Navigate to the *Not allowed* section. Individually select from Location, Nearby devices, and Notifications then choose **Allow** to grant permission to each setting.

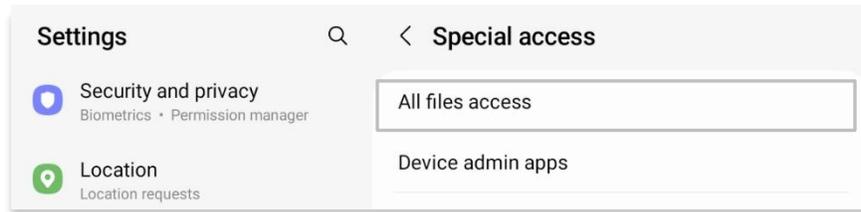


Shared Storage allows you to access any files stored on your device and fully utilize all features in Aero App. To grant access to Shared Storage, follow the steps below:

6. Navigate back to **Apps** from *Settings*.
7. Tap the **three vertical dots menu** on the top right of the Settings view.
8. Select **Special Access**.

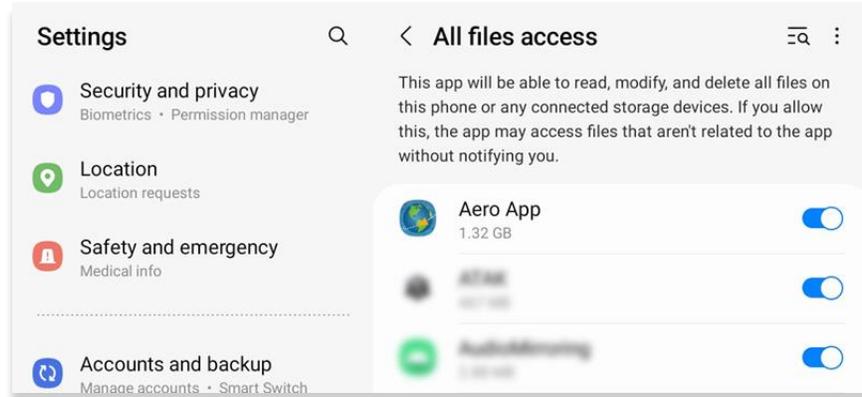


9. Select **All files access**.

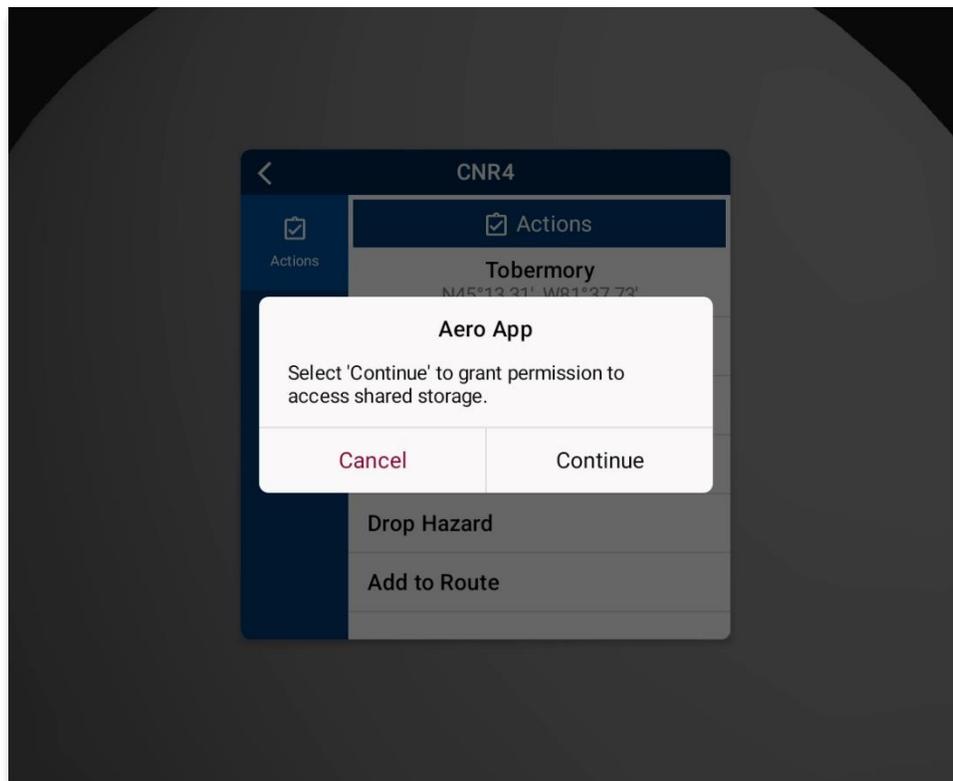


NOTE: Alternatively, you can search "All files access" from Settings to directly go to the All files access page.

10. Enable **Aero App** to grant permission.



Failure to grant the Share Storage permission may result in certain features such as dropping Pins and Hazards on the Map, or sideloading Pins, Hazards, Routes, User Maps, and User GeoPackages becoming non-functional. In such instances, users will be prompted to allow access to Shared Storage to enable these functionalities. In this case, refer to the Shared Storage steps of this section.



8 Where to Obtain Aero App Data

To obtain Aero App data, refer to the detailed instructions outlined in the following sections. Users can easily download Aero App data from the following sources:

- **Aero App DVD** – a physical DVD provided by the Defense Logistics Agency.
- **Aero Data Server (ADS)** – a server that handles the deployment of Aero App data to clients through mobile devices over a locally hosted Wi-Fi network (check with an administrator for computer configuration).
- **Aero App Website** – Aero App's website (aeroapp.info) that requires GEOAxis or Aero User Database credentials.
- **Aero App** – data can be downloaded directly from AWS. GEOAxis, and Aero User Database credentials are required, or set up your device with Mobile Device Management (MDM).

9 Aero App Data Overview

The following data is available for download:

- Aero App Maps
- Air Force Weather (AF Wx)
- Core Data
- Core Data Delta Files
- Maxar
- Electronic – Instrument Procedure Library (E-IPL)
- FAA Sectionals
- Georeference
- Giant Reports
- Helicopter and Terminal Area Chart (TAC) Maps
- Map Library
- Temporary Flight Restrictions (TFRs)
- Terrain
- User Files



NOTE: Some products and/or data may be limited in their distribution. This may include but not limited to E-IPL, AMC Giant Reports, Air Force Weather, Maxar imagery, and Contract Fuel Information. Contact NGA Aeronautical Dissemination Program office at aerodistro@nga.mil if you have questions regarding access to these products and/or data.

9.1 Aero App Maps

Aero App includes an advanced Map that displays VFR and worldwide IFR charts. Aero App enables pilots to easily download maps for their region of interest. Refer to [Section 14.4.5.1](#) for additional information on Maps.

9.2 Air Force Weather

Air Force Weather (AF Wx) is timely and accurate weather information from the Air Force. Aero App enables users to view real-time weather information for METARs and TAFs. Refer to [Section 14.4.3](#) for additional information on Air Force Weather (AF Wx).

9.3 Core Data

Core Data includes Global zip file and the Africa, Alaska, Canada, CONUS 1, CONUS 2, CSA, EEA, ENAME and PAA region files. Usable data products in the Core Data include, but not limited to, FLIP charts, Supplements, Planning Documents, Legends, Map Overlays including Airports, Air Refueling Routes, Airways, ARTCCs, and many more. Users can choose to download zero or multiple regions. However, the Global zip file is always required. Refer to [Section 10](#) for additional information in downloading data on Aero App.



NOTE: Users have the option to sideload data onto Aero App. Refer to [Section 11](#) for additional information.

9.4 Core Data Delta Files

Core Data Delta Files are significantly smaller files that contain only data that has changed from the previous cycle. Downloading Core Data Delta Files significantly reduces download time.

Aero App will automatically download the delta files if the previous cycle is already loaded in Aero App – this process is transparent to the user. After downloading the delta files, Aero App will apply Deltas to create the new cycle.

9.5 Electronic – Instrument Procedure Library (E-IPL)

Electronic – Instrument Procedure Library (E-IPL) charts are translations of Host Nation procedures drawn in the familiar DOD approach format. E-IPL charts are intended to fill gaps in instrument procedure coverage in existing DOD FLIP charts. E-IPL charts are available for download from ADS and AWS.



NOTE: E-IPL full cycle is available every 28 days.

9.6 FAA Sectionals

FAA Sectionals are Sectional Aeronautical Charts designed for visual navigation used for a flight under Visual Flight Rules and can be displayed as base maps on Aero App's Map. Users with GEOAxis and Aero User Database (AUD) credentials will have access to FAA Sectionals. Refer to [Section 14.5.1](#) to reference how to load FAA Sectional Charts. Refer to [Section 14.4.5.1.1](#) to reference how to display FAA Sectionals on the Map.



NOTE: All FAA Sectionals, Helicopter and TAC Maps, and IFR Enroute charts are updated on a 56-day cycle.

9.7 Georeference

Georeference is an alignment of accurate location data to a map coordinate system for Aero App. Aero App enables users to show their ownship on Airport Diagrams, Instrument Approach Procedures, and on the Map, perfectly georeferenced. Refer to [Section 14.11.3](#) on how to show Ownship on APD and IAP and show Airport Ring on APD and IAP.

9.8 Giant Reports

Giant Reports are PDF documents that are an assessment from the Air Force for safe operations. The PDF document can be downloaded and viewed within Aero App. Refer to [Section 14.2.1](#) for additional information on Giant Reports.

9.9 Helicopter and Terminal Area Chart (TAC) Maps

Aero App can display Helicopter – Gulf Coast charts, Helicopter – Route charts, and Terminal Area Charts (TACs) on the Map.

Displaying Helicopter and Terminal Area Chart directly on the Map results in perfect alignment on the underlining sectional (or other base map).

Georeferencing and spatial accuracy ensure that these charts can be used for an accurate, non-primary means of navigation. Refer to [Section 14.4.5.1.4](#) for additional information on Helicopter and Terminal Area Chart (TAC) Maps.



NOTE: All FAA Sectionals, Helicopter and TAC Maps, and IFR Enroute charts are updated on a 56-day cycle.

9.10 Map Library

Aero App includes Map Library charts that can be displayed on the Map. Map Library includes maps such as NavPlan charts, range charts, maps for Search and Rescue missions, and many others. Map Library can be downloaded from AWS using Aero User Database credentials or directly from ADS. Map Library data is available to DOD and specific government foreign partners. For information on downloading Map Library charts, refer to [Section 10.2.1.1](#) and [Section 10.3.1.1](#). For information on overlaying Map Library charts on the Map, refer to [Section 14.4.5.1.5](#).

9.11 Maxar

Maxar is a satellite imagery service that offers a visual depiction of ground conditions to enhance situational awareness. Maxar images can be zoomed, panned, and viewed online or downloaded for offline use. Refer to [Section 14.3.5.1.4](#) and [Section 14.3.5.3](#) for additional information.

"Maxar is the first company to deliver native 30cm resolution imagery, delivering clearer, richer images that empower better decision making through improved situational awareness." – Maxar

9.12 Temporary Flight Restrictions (TFRs)

Temporary Flight Restrictions (TFRs) are restricted areas for air travel. Aero App enables users to display graphical and textual TFRs on demand when connected to cellular data, Wi-Fi, or ADS-B receiver. Refer to [Section 14.3.6.1.24](#) for additional information on displaying TFRs on the Map.

9.13 Terrain

Aero App includes Terrain Coloring that provides situational awareness to flight crews. Users can overlay Terrain on the Map that includes an altitude-based color system that depicts the proximity of the pilot's ownship relative to terrain. Terrain can be downloaded from AWS using GEOAxis or Aero User Database credentials or directly from ADS. Terrain Coloring data will be listed under Other in the Data Download screen and is available to specific government foreign partners. Refer to [Section 14.4.5.2.1.22](#) for additional information.

9.14 User Files

The library of User Files, including User Map files and other PDFs, is displayed on the File Manager page, which provides file management capabilities.

10 Download Data

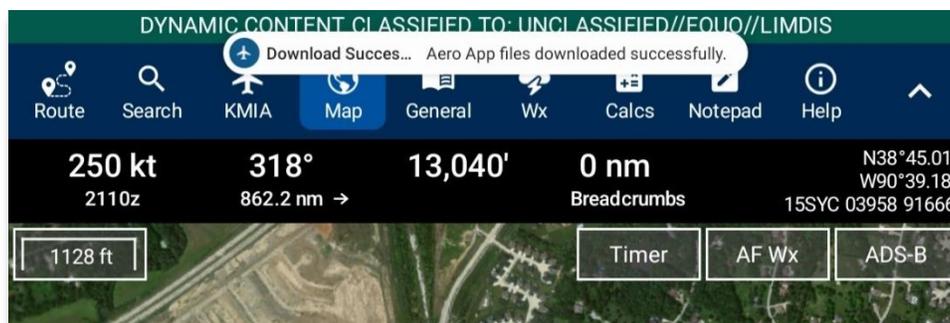
Aero App allows users to download data directly from the app. Sources such as Amazon Web Services (AWS) and Aero Data Server (ADS) are accessible within Aero App. Alternatively, users can visit the Aero App website (aeroapp.info) and download data directly to their devices.

An active internet connection (Wi-Fi or cellular) is required to experience an interruption-free downloading session.

10.1 Background Downloading

Aero App has background downloading capabilities that enable users to download data while switching screens within Aero App or while using another application. The sections ahead will elaborate on how to download data from Aero App.

1. Select desired method of authentication (AUD, GEOAxis, or MDM).
2. Follow the prompts then tap **Download** to start the downloading process.
3. Tap **Done** to return to the **Data Status** screen.
4. Navigate to desired screen within Aero App or an application in which you would like to proceed in normal operations.
5. Once the downloading is complete, a popup will notify users that the download was successful.



6. Navigate back to the **Data Status** screen. Notice the files you have selected to download display **Found**. This indicates that the files have successfully downloaded without any interruptions.



NOTE: In addition to switching screens within Aero App or using another application, users can lock their devices and the download will continue. A notification will be displayed on the device's lock screen.

10.2 Download Data Through Amazon Web Services (AWS)

Aero App enables users to download data from AWS using Aero User Database (AUD) or GEOAxis credentials or through Mobile Device Management (MDM), which requires users to set up their device with MDM. To obtain core data files, Global must be included when downloading data.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **AWS – Fast Cloud Downloading** option, if necessary.
4. Users are given the option to access data using GEOAxis or Aero User Database (AUD) credentials or set up your device with Mobile Device Management (MDM).



DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

AWS | Aero Data Server | File Manager

AWS - Fast Cloud Downloading

Aero User Database | GEOAxis | MDM

Username

Password

Connect

The Aero User Database is used for user authentication and is not related to GEOAxis. Therefore, the user name and password may be different to your GEOAxis credentials. CAC access is not required.

5. Below each user authentication option, you are presented with the options to *Sign Up For An Account* and *Reset Password*.

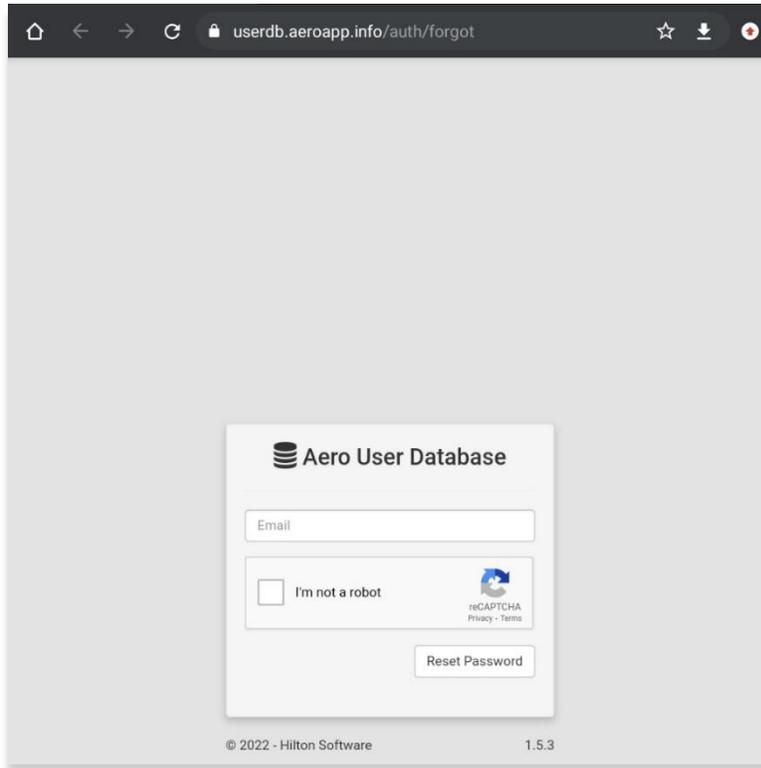


Sign Up For An Account | Reset Password

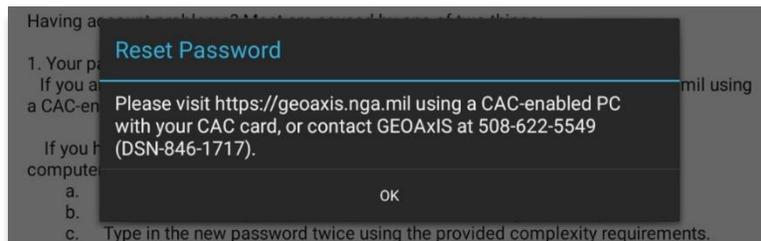
6. Tap **Sign Up for An Account** to create an Aero User Database (AUD) or GEOAxis account.

7. The following options are available for Reset Password:

- Tapping **Reset Password** under **Aero User Database** redirects users to the Aero User Database Management website.



- Tapping **Reset Password** under **GEOAxis** will provide instructions for how to reset password.



NOTE: The Background Downloading feature allows users to continue downloading data while switching screens within Aero App or while using another application. Refer to [Section 10.1](#) for additional information.

10.2.1 Download Data Using Aero User Database (AUD)

Aero User Database (AUD) allows for authentication of both DOD users and government foreign partners. Aero User Database credentials are not related to GEOAxis credentials and CAC card access is not required.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **AWS** option, if necessary.
4. Tap the **Aero User Database** option.
5. Enter credentials then tap **Connect**.

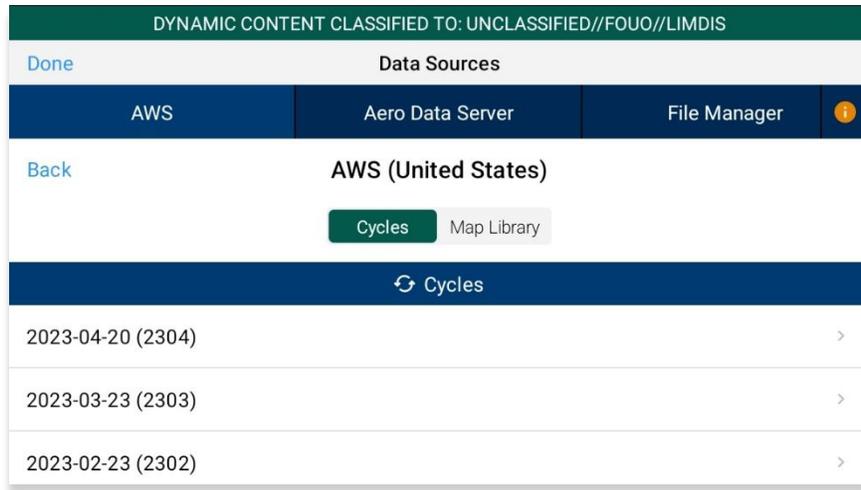
User's Credentials —

6. The Select Partner popup will display. Select from partners list.

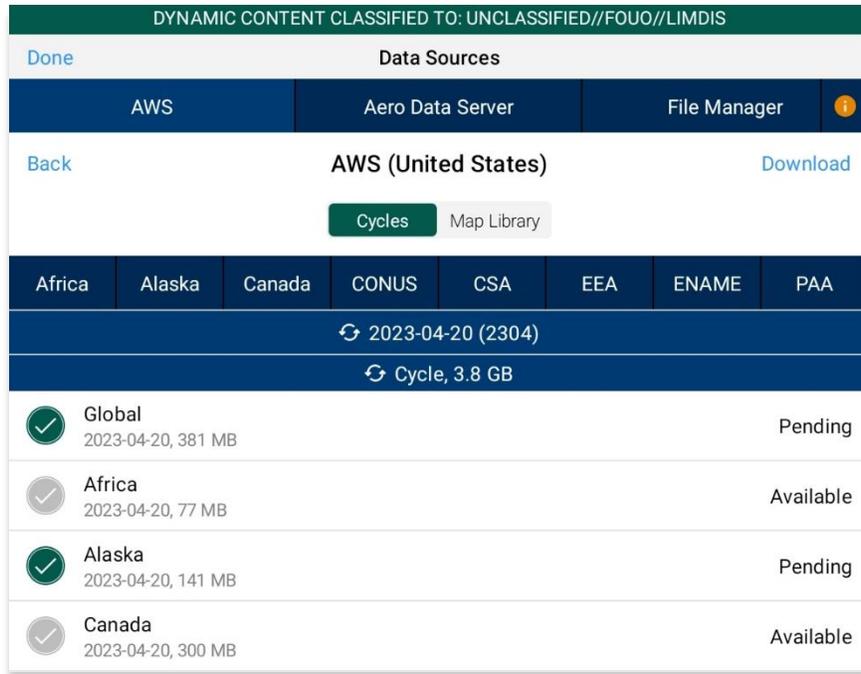


NOTE: The *Select Partner* popup will appear to those who have access to multiple government foreign partners.

- Users will be redirected to the Data Cycle Download screen. Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.



- Available data pertaining to the respective cycle will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files are selected.



NOTE: Refer to [Section 6](#) for additional information regarding registering for an AUD account.

10.2.1.1 Download Map Library Data Using Aero User Database (AUD)

Once credentials have been entered and the appropriate government foreign partner has been selected, users will be redirected to the Data Download screen. Follow the steps below to download Map Library data.

1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts will be displayed. The files are grouped into categories. Tap on the desired folders to *reveal* files. Tap again to *hide* files.
3. Tap on the header of the date column to display **Created**, **Effective**, or **Expiration** dates.

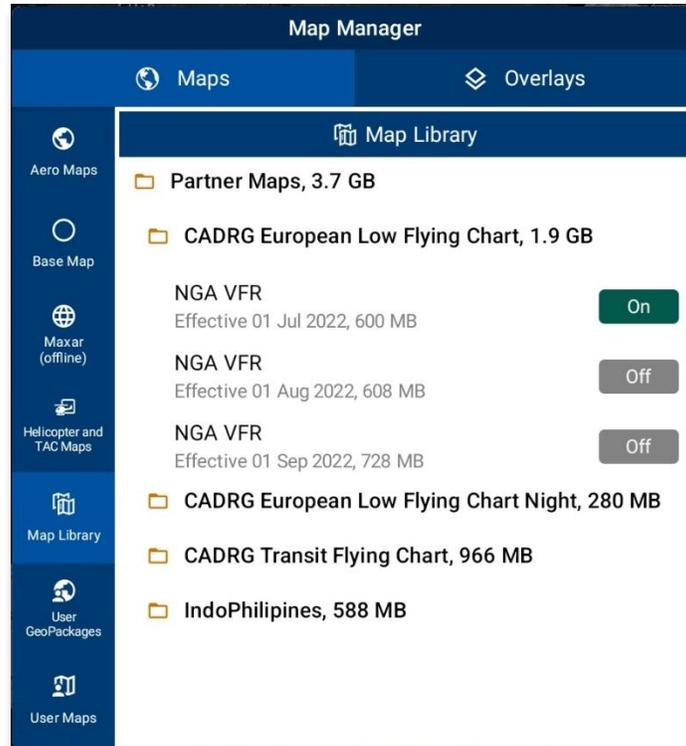


NOTE: If the files have expired, the Created time is replaced by "Expired".

4. Select desired map file(s).
5. Tap **Download** once desired Map Library files have been selected.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS				
Done		Data Sources		
AWS	Aero Data Server	File Manager	i	
Back	AWS (United States)		Download All	
	Cycles	Map Library		
Map Library i				
Filename	Effective	Size		
Partner Maps		17.8 GB		
Australia NavPlan Coverage		3.0 GB		
Central and South America NavPlan Covera...		5.6 GB		
Colombia NavPlan Coverage		2.0 GB		
<input checked="" type="checkbox"/> NGA JOG mm_nga_jog_colombia-2023-03-22.mbtiles	22 Mar 2023	2.0 GB	Available	
Costa Rica NavPlan Coverage		179 MB		
<input checked="" type="checkbox"/> NGA JOG mm_nga_jog_costa_rica-2023-03-22.mbtiles	22 Mar 2023	179 MB	Available	
Daytona Orlando OSM		38 MB		
<input checked="" type="checkbox"/> OSM Daytona Orlando osm_daytonaorlando-2022-09-28.mbtiles	28 Sep 2022	38 MB	Available	

- To verify that Map Library files were successfully downloaded, navigate to **Map** on the **Main Menu**.
- Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
- Select **Maps** from the navigational bar.
- Tap **Map Library** from the side menu and the downloaded Map Library charts will display.



NOTE: Map Library charts can be deleted from File Manager or the Map Manager view by swiping left then tapping **Delete**.

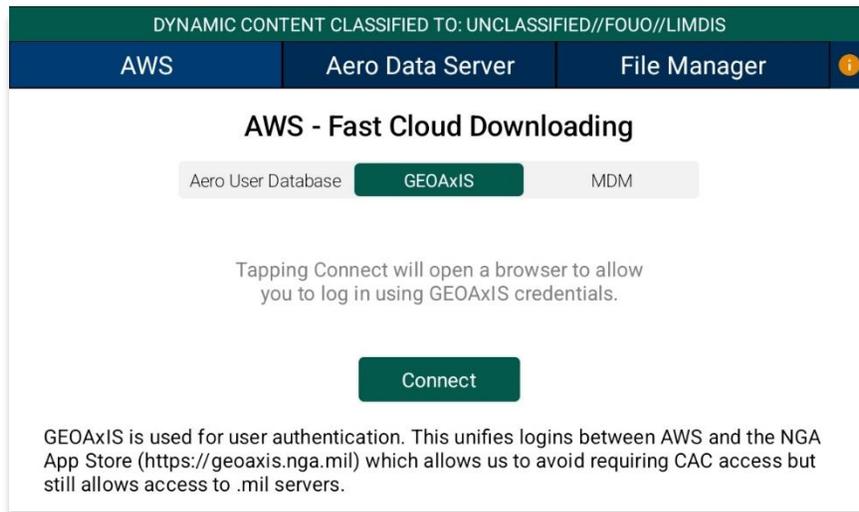


NOTE: Map Library charts can be displayed on the Map. Refer to [Section 14.4.5.1.5](#) for additional information.

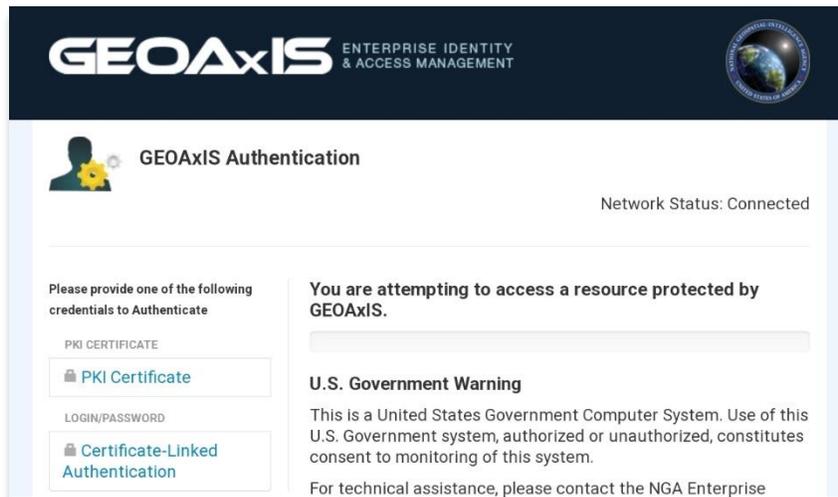
10.2.2 Download Data Using GEOAxis

GEOAxis is a form of authentication for Disadvantage Users – users without a CAC card. Users must possess a GEOAxis account to use GEOAxis as their login method to download Aero App data. Refer to [Section 6.2](#) for additional information.

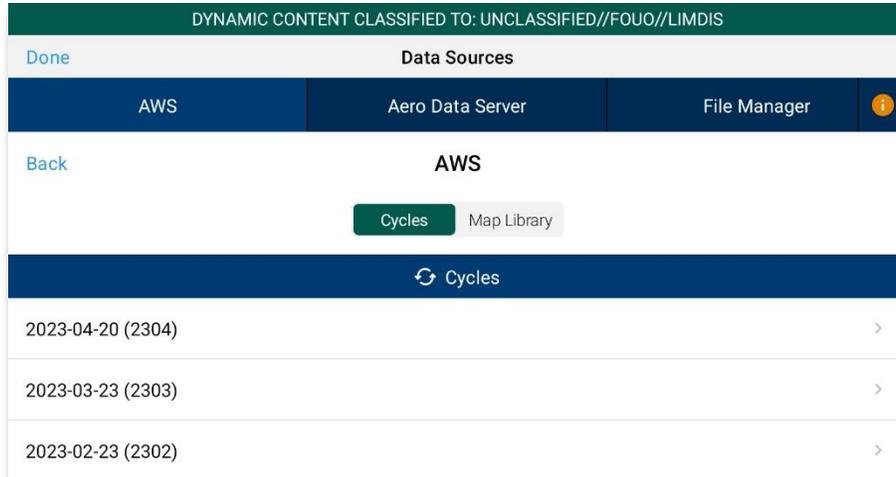
1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **AWS** option, if necessary.
4. Tap the **GEOAxis** option.



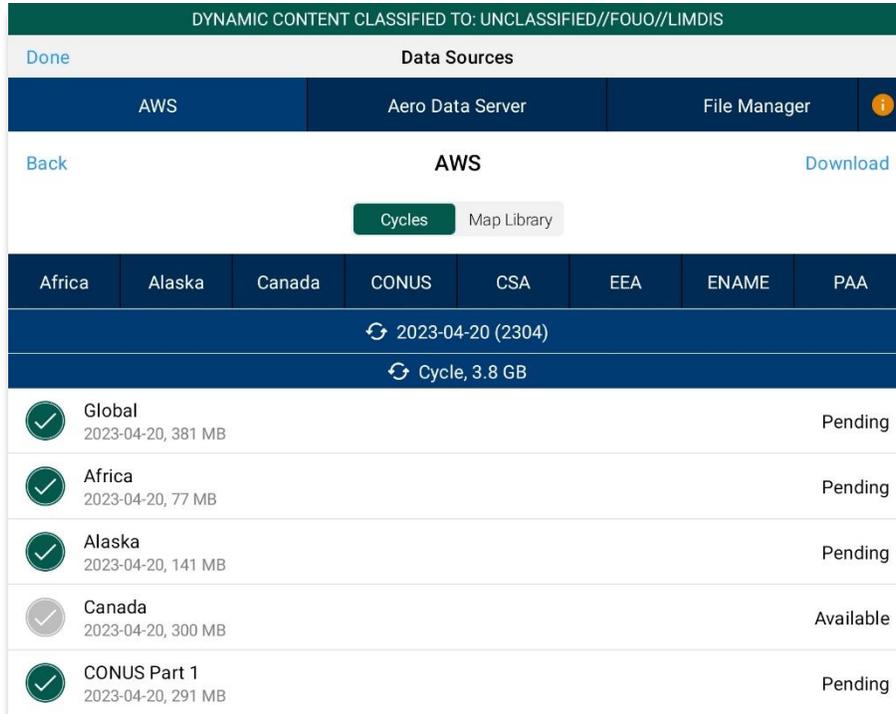
5. Tap **Connect** and users will be redirected to the GEOAxis webpage.
6. Select desired authentication method.



- Once authenticated, users will be redirected to the AWS download screen. Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.



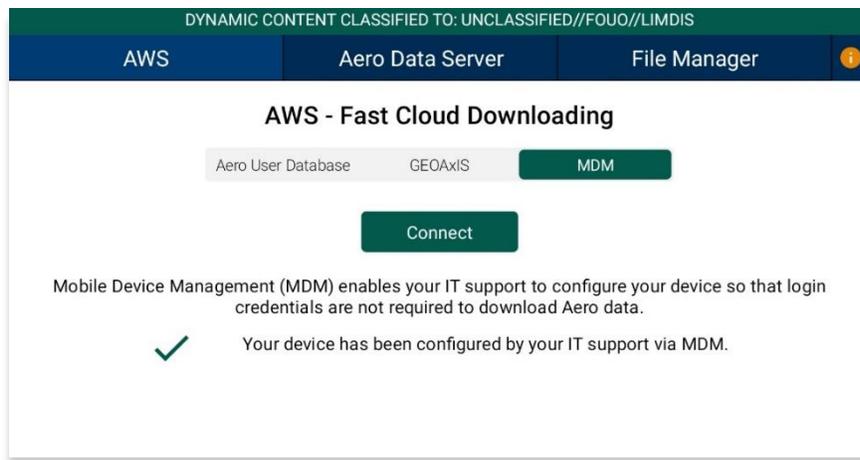
- Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files have been selected.



10.2.3 Download Data Using Mobile Device Management (MDM)

Mobile Device Management (MDM) is a software that enables the IT department to automate and monitor the user's device. The IT administrator would securely connect the user's device to the organization's network. This allows for devices to be automatically authenticated, thereby negating the need for login credentials.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **AWS** option, if necessary.
4. Tap the **MDM** option.

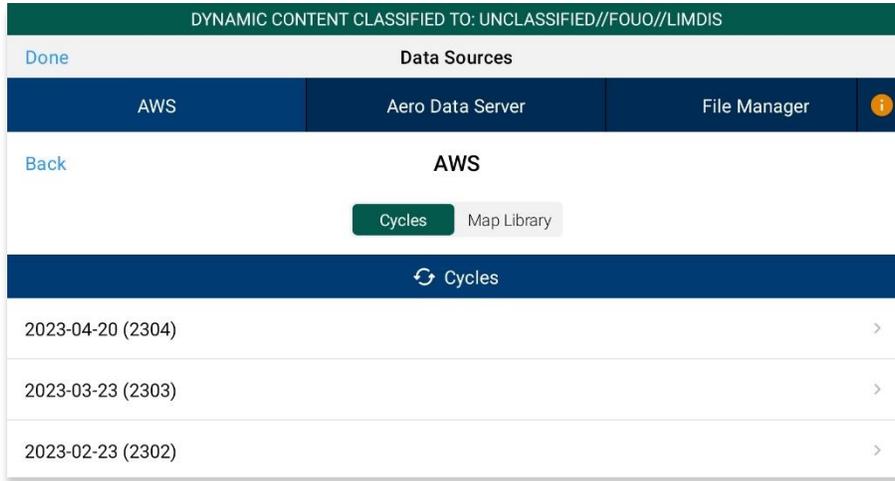


NOTE: IT administrator must be contacted to retrieve key value pairs for MDM configuration prior to downloading data; otherwise, the following message will appear as displayed below.

✗ Your device has not been configured by your IT support via MDM.

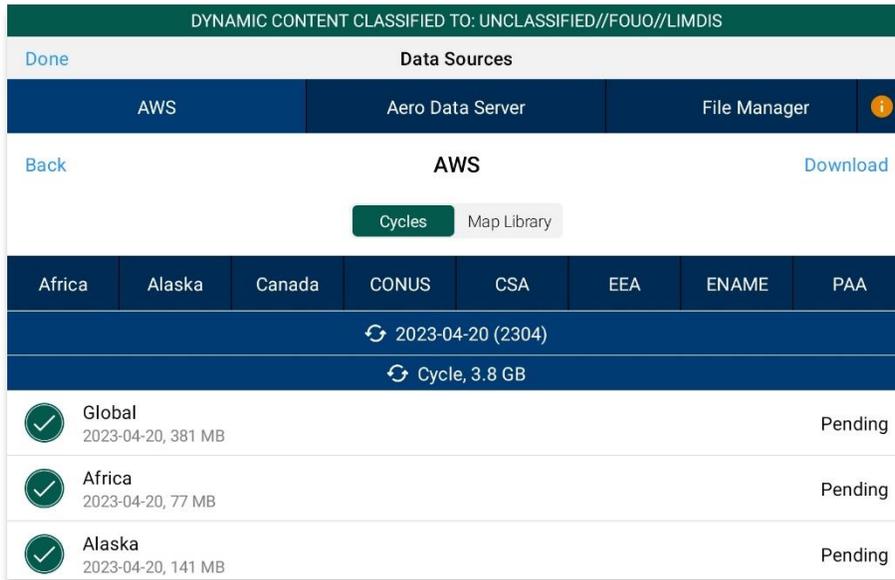
5. Tap **Connect**. Users will be redirected to the *Data Download* screen.

- Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.



NOTE: When selecting *Map Library* to load data using MDM, refer to [Section 10.2.1.1](#) for additional information.

- Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files have been selected.



NOTE: Maxar cannot be accessed through MDM. To access Maxar (online) and/or download Maxar (offline) tiles, users must log in through *GEOAxis* or *AUD* authentications with the authorized partner selected.

10.3 Download Data Using Aero Data Server (ADS)

Aero Data Server (ADS) is a server that enables users to download Aero App data and Map Library charts through a local server connected to the Wi-Fi network. Global is required to be loaded in ADS for Aero App to access cycle, Aero App Maps, E-IPL, and other data, not including User Files or Map Library.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **Aero Data Server** option.
4. Users will be presented with options to Discover, enter Host and Port numbers, and Connect. Tap **Discover** and a list of ADS servers will display.

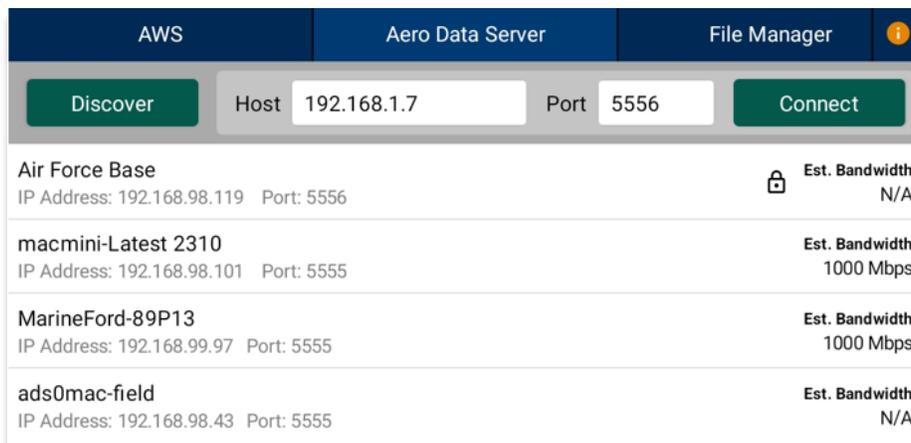


NOTE: The Background Downloading feature allows users to continue downloading data while switching screens within Aero App or while using another application. Refer to [Section 10.1](#) for additional information.

10.3.1 Aero Data Server (ADS) Discover

The Aero Data Server (ADS) Discover tool automatically locates servers that share the same Wi-Fi network as your device. In turn, the ADS Discover tool negates having to enter the IP address and port number of a server.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select the **Aero Data Server** option, then tap **Discover** and all available servers will display.

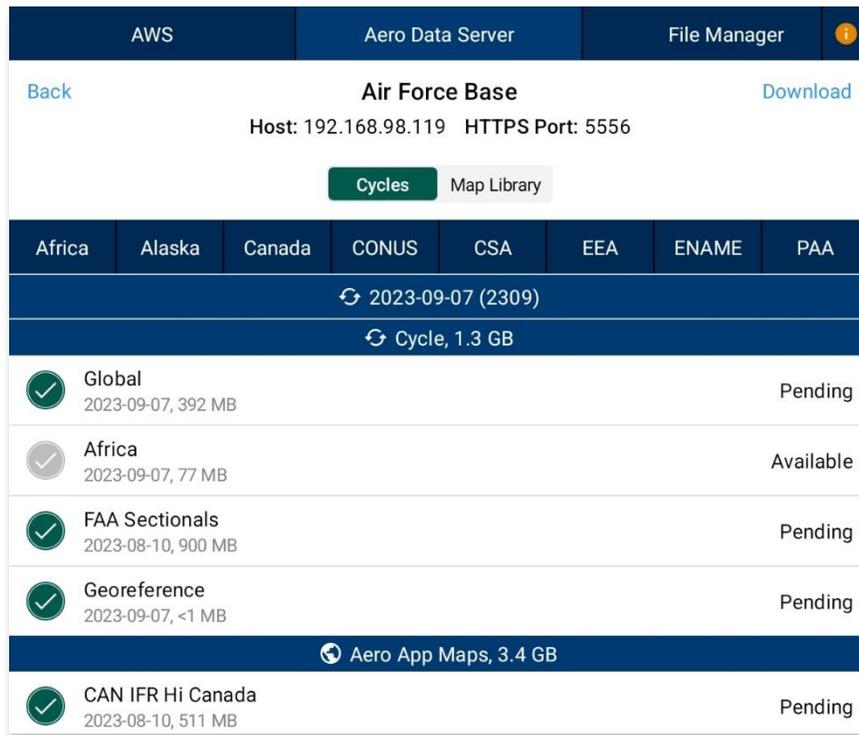


- Alternatively, users can manually connect to a server by entering the host and port numbers, respectively, in provided fields.



NOTE: To establish a connection with a secured server, certificates would need to be installed in the ADS device as needed.

- Once entered, tap **Connect** to connect to the server.
- Users will be redirected to the Data Cycle Download screen. Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.
- Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files have been selected.



NOTE: Aero App will receive data for the latest three cycles loaded on ADS but will only have access to the cycles containing global.

10.3.1.1 Download Map Library Data Using Aero Data Server (ADS)

Map Library charts will be available to users who have Map Library files downloaded on ADS. Once the respective server has been selected, users will be redirected to the Data Download screen.

1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts will be displayed. The files are grouped into categories. Tap on the desired folders to *reveal* files. Tap the folder again to *hide* files.
3. Tap on the header of the date column to display **Created**, **Effective**, or **Expiration** dates.

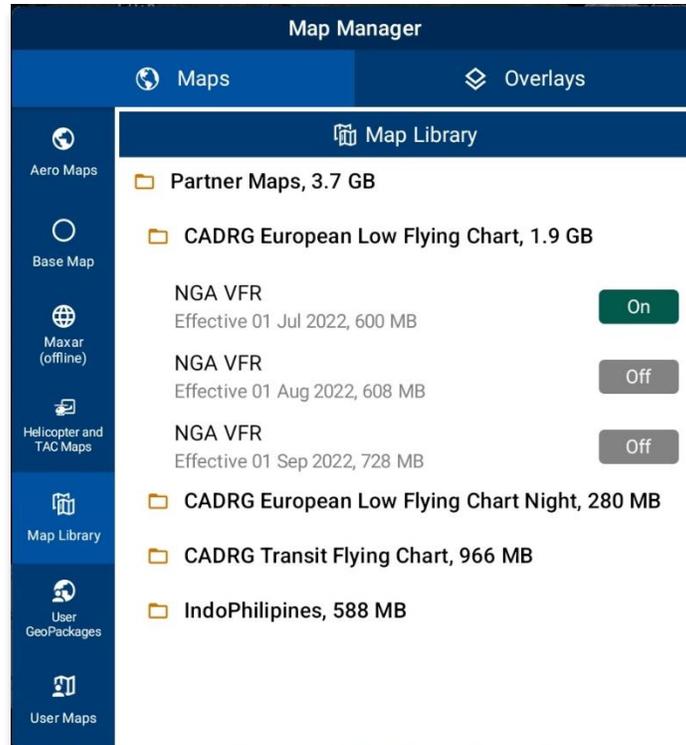


NOTE: If the files have expired, the Created time is replaced by "Expired".

4. Select desired map file(s).
5. Tap **Download** once desired Map Library files have been selected.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS				
AWS	Aero Data Server	File Manager		
Refresh	DESKTOP-654SPG2	Download All		
Host: 192.168.98.119		HTTP Port: 5555		
Cycles		Map Library		
Map Library				
Filename	Effective	Size		
Partner Maps		2.6 GB		
Daytona Orlando OSM		38 MB		
<input checked="" type="checkbox"/> OSM Daytona Orlando <small>osm_daytonaorlando-2022-09-28.mbtiles</small>	28 Sep 2022	38 MB	Available	
European Low Flying Chart		600 MB		
<input checked="" type="checkbox"/> NGA VFR <small>mm_nga_clfc-2022-07-01.mbtiles</small>	01 Jul 2022	600 MB	Loaded	
European Low Flying Chart Night		149 MB		
European Transit Flying Chart		966 MB		
<input checked="" type="checkbox"/> NGA VFR <small>mm_nga_ctfc-2022-07-01.mbtiles</small>	01 Jul 2022	426 MB	Available	
<input checked="" type="checkbox"/> NGA VFR <small>mm_nga_ctfc-2022-09-01.mbtiles</small>	01 Sep 2022	540 MB	Loaded	

6. To verify that Map Library files were successfully downloaded, navigate to **Map** on the **Main Menu**.
7. Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
8. Select **Maps** from the navigational bar.
9. Tap **Map Library** from the side menu and the Map Library charts will display.



NOTE: Map Library charts can be deleted from File Manager or the Map Manager view by swiping left then tapping **Delete**.



NOTE: Map Library charts can be displayed on the Map. Refer to [Section 14.3.5.5](#) for additional information.

10.4 Easy Buttons

Easy Button is a feature that bundles regional data files for the selected region. One or more Easy Buttons can be selected for the region(s) of interest. Easy Buttons are available on the AWS – GEOAxis, Aero User Database and MDM, and Aero Data Server (ADS).

1. Once you have selected the appropriate Data Source and the desired cycle, you will be redirected to the Data Cycle Download screen.
2. Tap desired **Easy Button(s)**:
 - Africa
 - Alaska
 - Canada
 - CONUS
 - CSA
 - EEA
 - ENAME
 - PAA
3. A dialog box displays all region files for the preferred region. Tap **No** to cancel or **Yes** to proceed. All related files will be selected once the selection of region is confirmed.

Easy Buttons

Africa	Alaska	Canada	CONUS	CSA	EEA	ENAME	PAA
🔄 2024-01-25 (2401)							
🔄 Cycle, 4.6 GB							
<input checked="" type="checkbox"/>	Global	2024-01-25, 400 MB					Pending
<input checked="" type="checkbox"/>	Africa	2024-01-25, 77 MB					Available
<input checked="" type="checkbox"/>	Alaska	2024-01-25, 138 MB					Available
<input checked="" type="checkbox"/>	Canada	2024-01-25, 301 MB					Available
<input checked="" type="checkbox"/>	CONUS Part 1	2024-01-25, 1016 MB					Loaded
<input checked="" type="checkbox"/>	CONUS Part 2	2024-01-25, 559 MB					Available

Select Region Files for CONUS

Select Global, CONUS Part 2, Georeference, FAA IFR Atlantic, FAA IFR Hi CONUS, FAA IFR Lo CONUS, FAA VFR CONUS, FAA Helicopter CONUS Gulf Coast, FAA Helicopter CONUS Routes, FAA TAC CONUS, and Terrain Coloring?

Easy Button popup confirmation

4. You can individually select or deselect desired data cycle files. Tap **Download** to begin the download.

The screenshot displays a mobile application interface for managing data sources. At the top, a green bar indicates the content is classified as UNCLASSIFIED//FOUO//LIMDIS. Below this is a 'Data Sources' section with tabs for 'AWS', 'Aero Data Server', and 'File Manager'. The 'AWS' tab is active, showing 'AWS (United States)' with a 'Download' button. A 'Cycles' button is also visible. Below the tabs, a list of data cycles is shown for the date 2023-09-07 (2309), with a total size of 4.6 GB. Each cycle has a checkbox and a status indicator.

Region	File Name	Size	Status
Global	2023-09-07	392 MB	Pending
Africa	2023-09-07	77 MB	Available
Alaska	2023-09-07	138 MB	Available
Canada	2023-09-07	301 MB	Available
CONUS Part 1	2023-09-07	1017 MB	Pending
CONUS Part 2	2023-09-07	524 MB	Pending
CSA	2023-09-07	231 MB	Pending
EEA	2023-09-07	217 MB	Available
ENAME	2023-09-07	506 MB	Pending
PAA	2023-09-07	357 MB	Available

10.5 Download Data From the Aero App Website

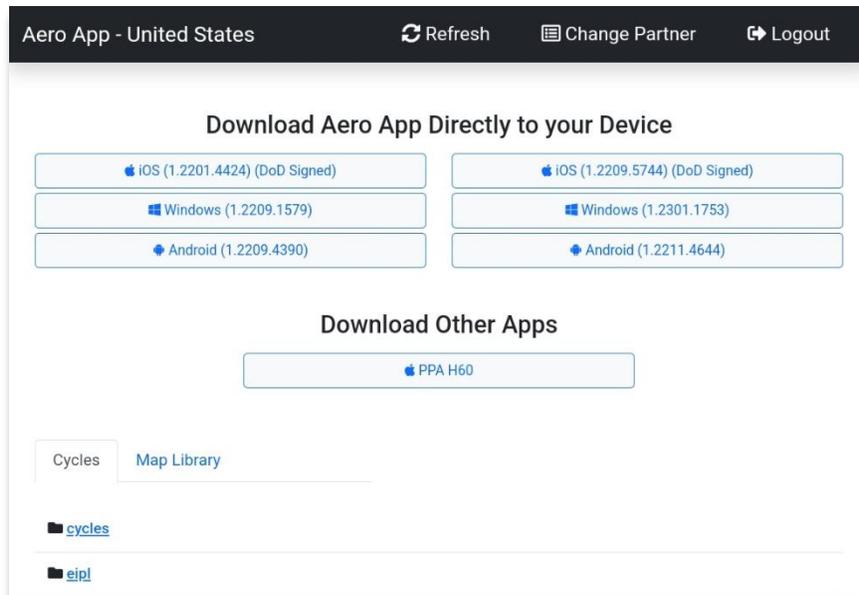
The Aero App website (aeroapp.info) is a source to download Aero App data directly on your device. An active GEOAxis and Aero User Database credentials are required.

1. From your device, open an internet browser of choice.
2. Enter download.aeroapp.info in the address bar.

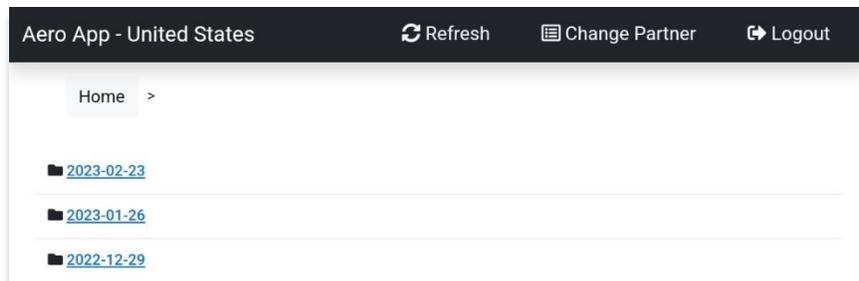


NOTE: Alternatively, users can go to aeroapp.info > Downloads > Data and users will be directed to the Data Menu Options page.

3. Log in using your *GEOAxis* or *Aero User Database* credentials. The Select Partner popup will be displayed for Aero User Database users who have access to multiple government foreign partners.
4. Navigate to the *Cycles* section of the page. Select **Cycles** from the list of folders.



5. Click the **latest cycle** or a **cycle** of choice.

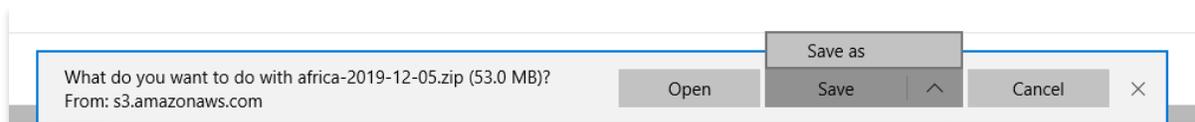


6. Users will be redirected to the download page. Located at the upper-right corner of the screen are options to choose from **Full Data Files**, or **Delta Files** data types. Select desired data type.
7. Click the respective **ZIP** and **SIG** buttons for your region(s) of choice: **Africa**, **Alaska**, **Canada**, **CONUS**, **CSA**, **EEA**, **ENAME**, and/or **PAA**, and other files.

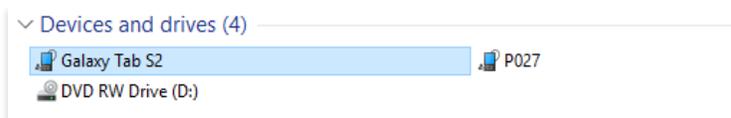


NOTE: The Global file must be included to download a complete data cycle.

8. A download confirmation window will appear above the taskbar with options to Open, Save, or Cancel download. Click **Save** or click the up-arrow (icon) and select **Save as**.



9. Once the data has completed the download, select from options to **Open**, **Open folder**, or **View downloads**.
10. Connect an Android tablet to your PC.
11. Once your device is connected, open **File Explorer** then navigate to **Devices and drives** to locate your Android tablet.



12. Double-click on the **tablet icon** to open *Internal storage*.
13. Drag and drop the downloaded data files from your Downloads folder into your tablet's internal storage.



NOTE: Refer to [Section 13](#) on how to load and view data status.

11 Sideload Data

This section describes the various ways to sideload a complete data cycle or user-generated data such as User Maps, GeoPackages, User Waypoints, CRD files, Pins, Hazards, and User Documents.

To ensure the successful sideloading of user-generated data, users are required to grant Aero App permission to access Shared Storage. Failure to do so will restrict access to certain features and functionalities within Aero App. Refer to [Section 7.2](#) for additional information.

11.1 Sideload Data Cycle via Aero App DVD

NGA distributes the Aero App DVD to appropriate personnel. For additional information, contact Jorge Diaz (Jorge.Diaz@dla.mil) from the Defense Logistics Agency.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



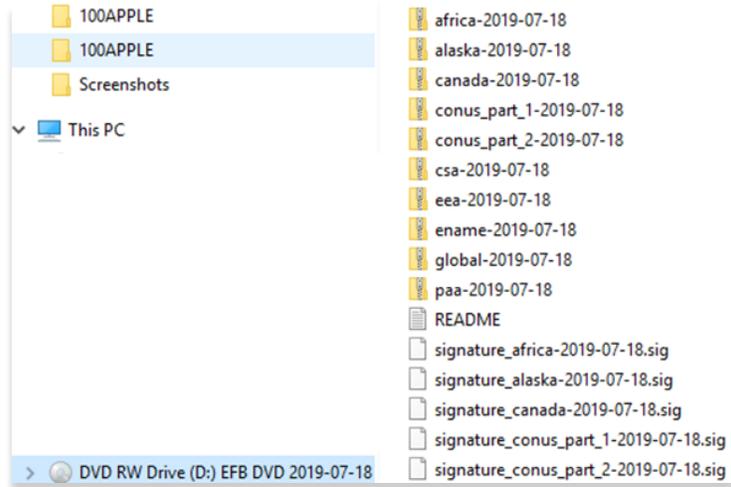
4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.
5. Insert the Aero App DVD into your PC's disk drive.



NOTE: Those who do not have a DVD disk drive on their computer may need to purchase an external DVD drive to read the Aero App DVD.

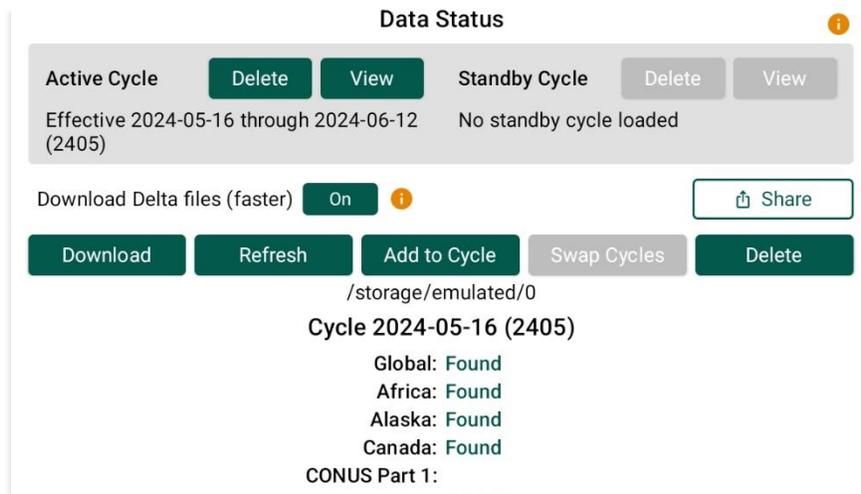
6. Open a new *File Explorer* window then locate and double-click on the **DVD drive**.
7. From the Aero App DVD drive, double-click on the **app-Android** folder to view contents.

- Both File Explorer windows should be open simultaneously. Drag and drop the respective **ZIP** and **SIG** files of the preferred region from the Aero App DVD drive into your device's Internal Storage.



NOTE: The Global file must be included to download a complete data cycle.

- To confirm if the files were properly transferred, open **Aero App** on your Android device.
- Tap **Data** on the **Main Menu**.
- A successful download will display **Found** beside the respective data file(s).



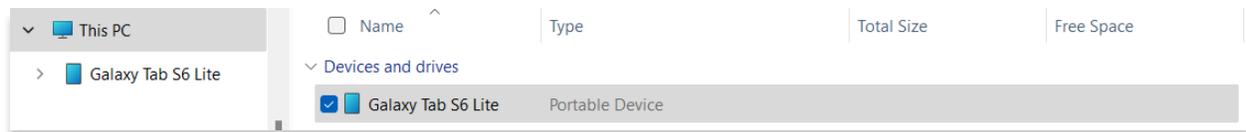
NOTE: Refer to [Section 13](#) on how to load and view data status.

11.2 Sideload User Maps

Users can sideload user-generated Maps into Aero App. User Maps are MBTiles files that can be viewed on the map. Be sure to store your user-generated data files in a secure location on your PC for easy access when preparing to transfer to your Android device.

To successfully sideload User Maps onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **Aero App**. Its respective subfolders are displayed.



6. Select **MovingMap** to view contents.



7. Drag and drop desired user map files from your PC into the MovingMap folder.

Verify that the sideload was successful. The steps in achieving this are as follows:

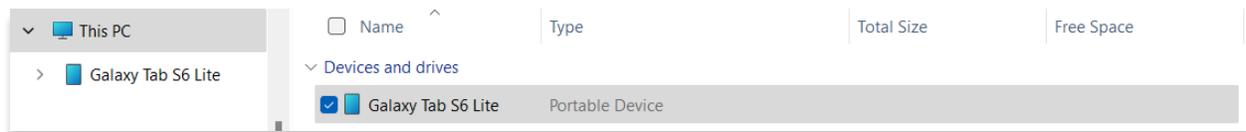
8. Open **Aero App**.
9. Tap **Map** on the **Main Menu**.
10. Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** on the navigation bar, if necessary.
12. Tap **User Maps** from the side menu. A successful sideload will display the User Map(s) in the list.

11.3 Sideload GeoPackages

Users can sideload GeoPackages into Aero App to view on the Map. Be sure to store your GeoPackages in a secure location on your PC for easy access when preparing to transfer to your Android device.

To successfully sideload GeoPackages onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **AeroApp**. Its respective subfolders are displayed.



6. Select **MovingMap** to view contents.



7. Drag and drop desired GeoPackages from your PC into the MovingMap folder.

Verify that the sideload was successful. The steps in achieving this are as follows:

8. Open **Aero App**.
9. Tap **Map** on the **Main Menu**.
10. Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** on the navigation bar, if necessary.
12. Tap **User GeoPackages** from the side menu. A successful sideload will display the name(s) of the GeoPackage(s) in the list.

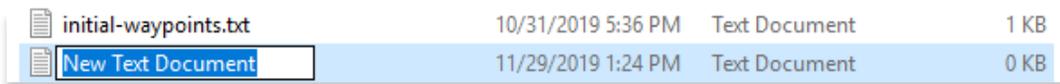
11.4 Sideload User Waypoints

Users can sideload custom waypoints to view on the map or add to a flight route. Users have the option to create individual user waypoints directly from Aero App or sideload multiple user waypoints at a time.

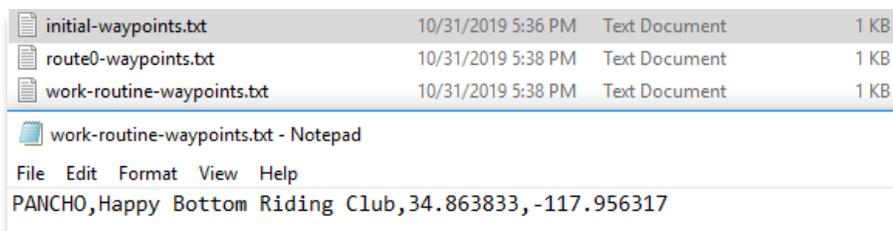
To successfully sideload User Waypoints onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

Aero App supports text files for user waypoints. The user waypoints file should follow the format `{name}-waypoints.txt` and be stored in the `AeroApp\WayPoints` directory. To create a user waypoint, the following steps should be followed:

1. Create a folder on your desktop named User Waypoints.
2. Double-click on the folder to open it.
3. Click the **+ New** drop-down then select **Text Document**.
4. Create a name for the Text Document file ending in **<-waypoints>**.



5. Right-click on the file and hover over **Open with** then select **Notepad**.
6. Create customer waypoints following the format:
<ID>,<Name>,<Latitude>,<Longitude>.

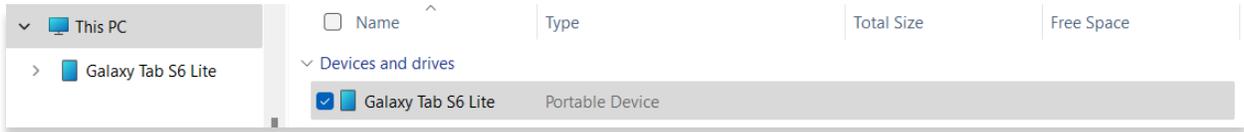


7. Save file once completed.

Be sure to store your User Waypoint(s) in a secure location on your PC for easy access when preparing to transfer to your Android device.

8. Connect an Android tablet to your PC.
9. Once your device is connected, open **File Explorer** and navigate to **This PC**.

10. Navigate to *Devices and drives* and locate your Android device.



11. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



12. Select **AeroApp**. Its respective subfolders are displayed.



13. Select **WayPoints** to view contents.



14. Drag and drop desired user waypoint file(s) from your PC into the WayPoints folder.

Verify that the sideload was successful. The steps in achieving this are as follows.

15. Open **Aero App**.

16. Tap **Search** on the **Main Menu**.

17. The Search popup will appear. Enter the name of the user waypoint in the text box. The user waypoint(s) will appear under the User Waypoints section.

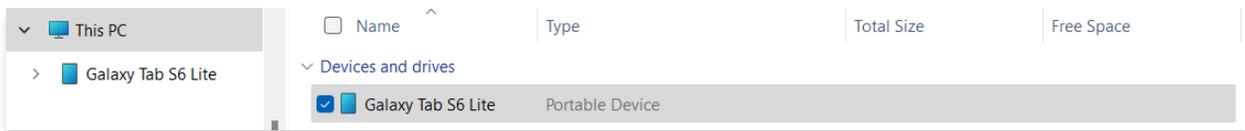


11.5 Sideload Common Route Definition (CRD) Files

Aero App enables users to sideload Common Route Definition (CRD) files to view on the map or add to a flight route. Be sure to store your CRD files in a secure location on your PC for easy access when preparing to transfer to your Android device.

To successfully sideload CRD files onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **AeroApp**. Its respective subfolders are displayed.



6. Select **Routes** to view contents.



7. Drag and drop desired CRD file(s) from your PC into the Routes folder.

Verify that the sideload was successful. The steps in achieving this are as follows:

8. Tap **Route** on the **Main Menu**. The Route Panel will expand.
9. Tap **Route Manager** located at the bottom right of the panel view.
10. Select **Actions** from the side menu, if necessary.
11. Tap **Load** and your CRD file(s) will appear under Load Route.

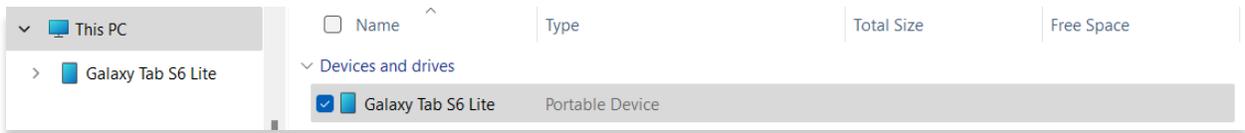
11.6 Sideload Pins

Aero App enables users to sideload Pins into Aero App. To sideload Pins, users must create a SQLite file. Refer to for additional information. The Pin SQLite file should follow the format *pins-{name}.sqlite* and be stored in the AeroApp\Pins directory.

A file with the format *pins.sqlite* contains stored pins that were created through the app. These pins are viewed in the Dropped Pins table on Aero App. Refer to [Section 14.1.3.4.2](#) for additional information.

To successfully sideload user-generated Pins onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **AeroApp**. Its respective subfolders are displayed.



6. Select **Pins** to view contents.



7. Drag and drop the pins SQLite file from your PC into the Pins folder.
8. Rename the SQLite file to the format, *pins-{name}.sqlite*.

 pins	SQLITE File	32 KB	9/13/2023 2:19 PM
 pins-myHazard1	SQLITE File	32 KB	9/13/2023 2:14 PM
 pins-myPins1	SQLITE File	48 KB	9/7/2023 11:24 AM



NOTE: If the imported file is not renamed, any pins stored in pins.sqlite will be overwritten.

Verify that the sideload was successful. The steps in achieving this are as follows:

9. Open **Aero App**.
10. Tap **Map** on the **Main Menu**.
11. Navigate to **Map Manager** located at the lower right corner of the Map screen. The Map Manager popup will appear.
12. Select **Overlays** on the navigational bar.
13. Select **User Overlays** from the side menu.
14. Locate your imported files. The files will display as *pins-{name}.sqlite*. Users must enable *Pins* from the Overlays menu to view on the Map. Refer to [Section 14.4.5.2.1.17](#) for additional information.



NOTE: If photo pins were sideloaded, users must enable *User Images* from the Overlays menu to view on the Map. Refer to [Section 14.4.5.2.1.25](#) for additional information.



NOTE: Users can bulk delete all imported files by going to File Manager on their Android tablet and deleting the pins file.

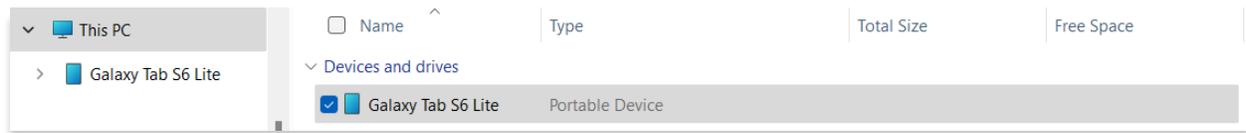
11.7 Sideload Hazards

Aero App enables users to sideload Hazards into Aero App. To sideload Hazards, users must create a SQLite file. Refer to [Appendix C | Hazards and Pins SQLite Files](#) for additional information. The Hazard SQLite file should follow the format *pins-{name}.sqlite* and be stored in the AeroApp\Pins directory.

A file with the format *pins.sqlite* contains stored hazards that were created through the app. These hazards are viewed in the Dropped Hazards table on Aero App. Refer to [Section 14.1.3.4.3](#) for additional information.

To successfully sideload user-generated Hazards onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **AeroApp**. Its respective subfolders are displayed.



6. Select **Pins** to view contents.



7. Drag the pins SQLite file(s) into the Pins folder.
8. Rename the SQLite file to the format, *pins-{name}.sqlite*.

 pins	SQLite File	32 KB	9/13/2023 2:19 PM
 pins-myHazard1	SQLite File	32 KB	9/13/2023 2:14 PM
 pins-myPins1	SQLite File	48 KB	9/7/2023 11:24 AM



NOTE: If the imported file is not renamed, any pins stored in pins.sqlite will be overwritten.

Verify that the sideload was successful. The steps in achieving this are as follows:

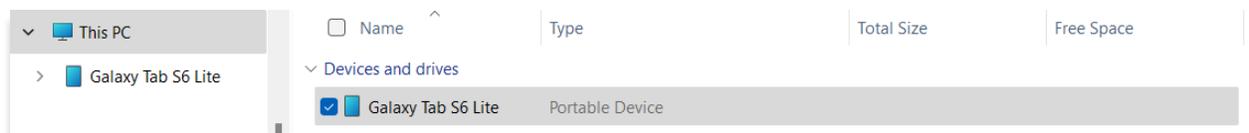
9. Open **Aero App**.
10. Tap **Map** on the **Main Menu**.
11. Navigate to **Map Manager** located at the lower right corner of the Map screen.
The Map Manager popup will appear.
12. Select **Overlays** on the navigational bar.
13. Select **User Overlays** from the side menu.
14. Locate your imported files. The files will display as *pins-{name}.sqlite*. Users must enable *Hazards* from the Overlays menu to view on the Map. Refer to [Section 14.4.5.2.1.12](#) for additional information.

11.8 Sideload Documents

Users can sideload documents into Aero App. Be sure to store your user documents in a secure location on your PC for easy access when preparing to transfer to your Android device.

To select a document to display on Aero App, users must grant Aero App permission to access Shared Storage. Refer to [Section 7.2](#) for additional information.

1. Connect an Android tablet to your PC.
2. Once your device is connected, open **File Explorer** and navigate to **This PC**.
3. Navigate to *Devices and drives* and locate your Android device.



4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



5. Select **AeroApp**. Its respective subfolders are displayed.



6. Select **Documents** to view contents.

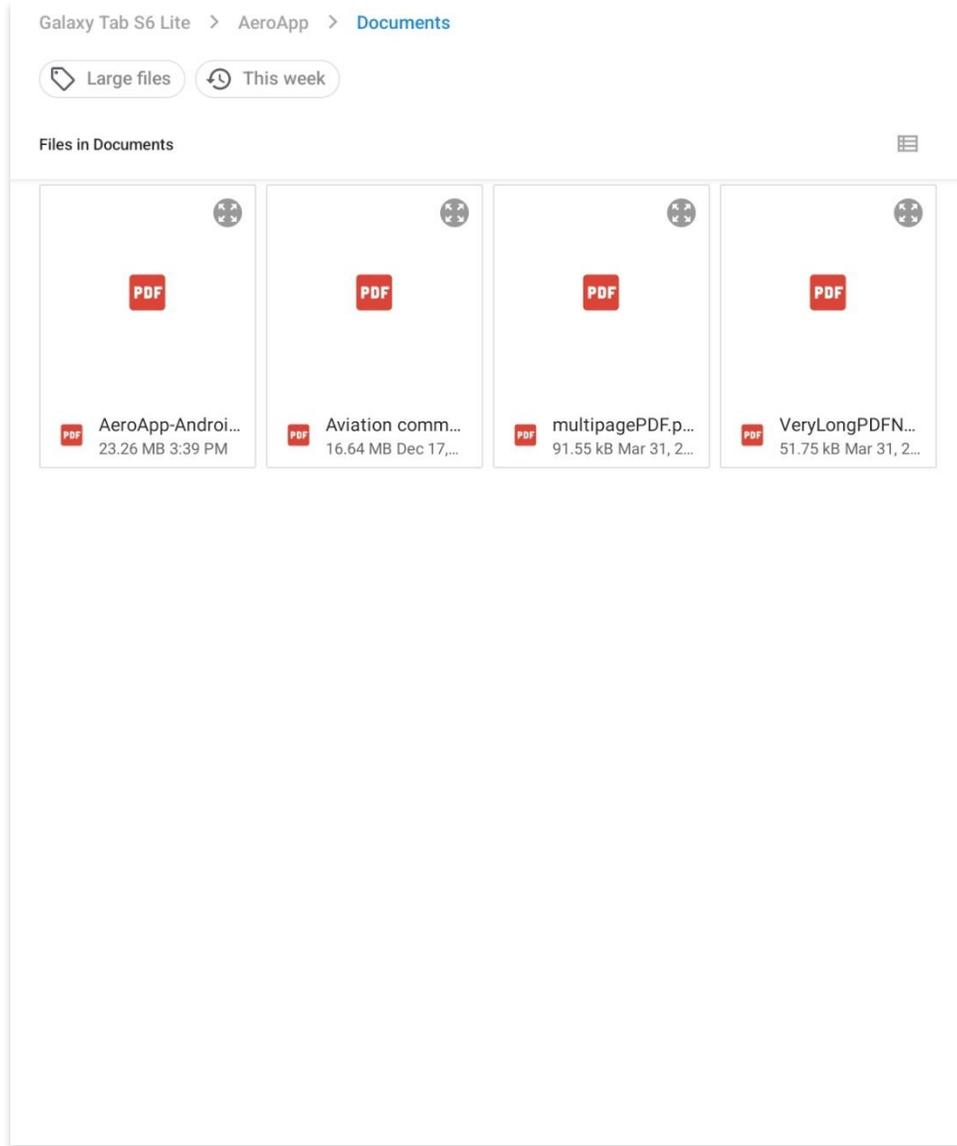


7. Drag and drop desired PDF file(s) from your PC into the Documents folder.



Verify that the sideload was successful. The steps in achieving this are as follows:

8. Open **Aero App**.
9. Tap **General** on the **Main Menu**.
10. Tap **Docs** from the *General* options.
11. Tap on the **ribbon**. The system file picker will display. A successful sideload will display the PDF file(s) under the Documents section.



12 Updating Aero App Data

Aero App Data updates are released periodically. Users can load and manage up to two data cycles at a time. Aero App data cycle releases every 28-days, thereby, users will need to download the latest data cycle, respectively.

12.1 Data Notifications

Aero App provides data notifications to identify the status of the data cycle loaded on your device. The notifications inform users that there is no active cycle loaded, or if the active data cycle is not current.

No active cycle

Aero App displays airport information, FLIP charts and other data for the Active Cycle. If no Active Cycle is selected, Aero App will display the following notification. If there is data in the Standby Cycle, then tap **Swap Cycles** on the Data Status screen to move the data to the Active Cycle. If there is no data in either cycle, then data must be downloaded or sideloaded.



Active cycle is not current

Aero App will show a data notification if the Active Cycle is not current. In this configuration, a red banner will be displayed to alert users when the data in the Active Cycle is not up to date. It is recommended to always keep the Active Cycle current.



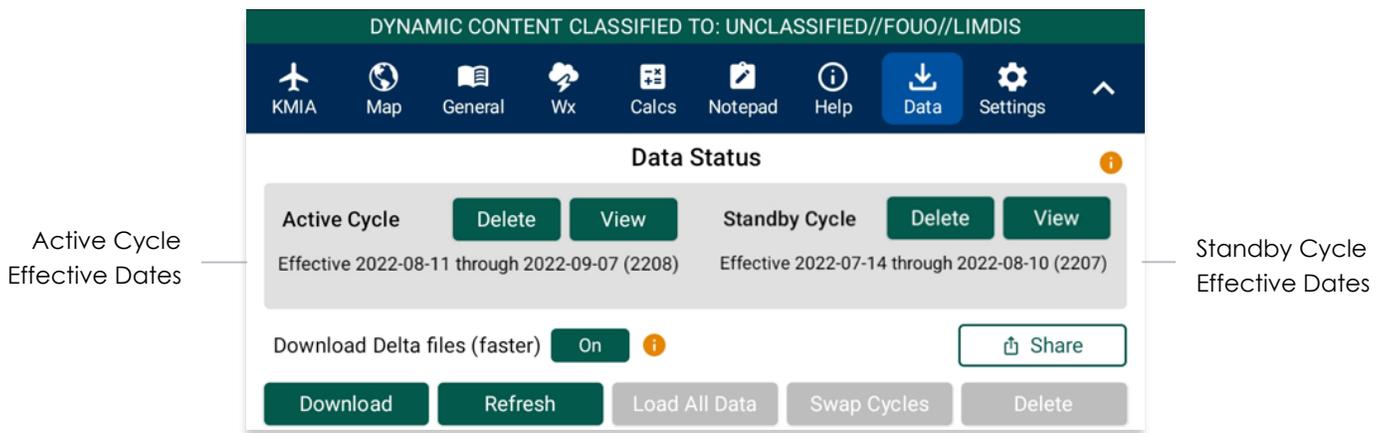
13 Manage Data

The Data Status page provides a user-friendly interface for managing and monitoring the status and file sizes of the loaded data. It allows users to easily add or remove any unwanted or dated data.

13.1 Data Status

The Data Status page enables users to access information about the loaded data cycle on Aero App. Users can download or delete cycles, view effective dates, swap cycles, and activate or move downloaded data on standby. Additionally, users have the option to share data with their team members.

1. Tap **Data** on the **Main Menu**. The *Data Status* screen will display.
2. The effective cycle dates of the Active Cycle are displayed on the left, and the Standby Cycle are displayed on the right. From this screen, you can also download new data when they become available.

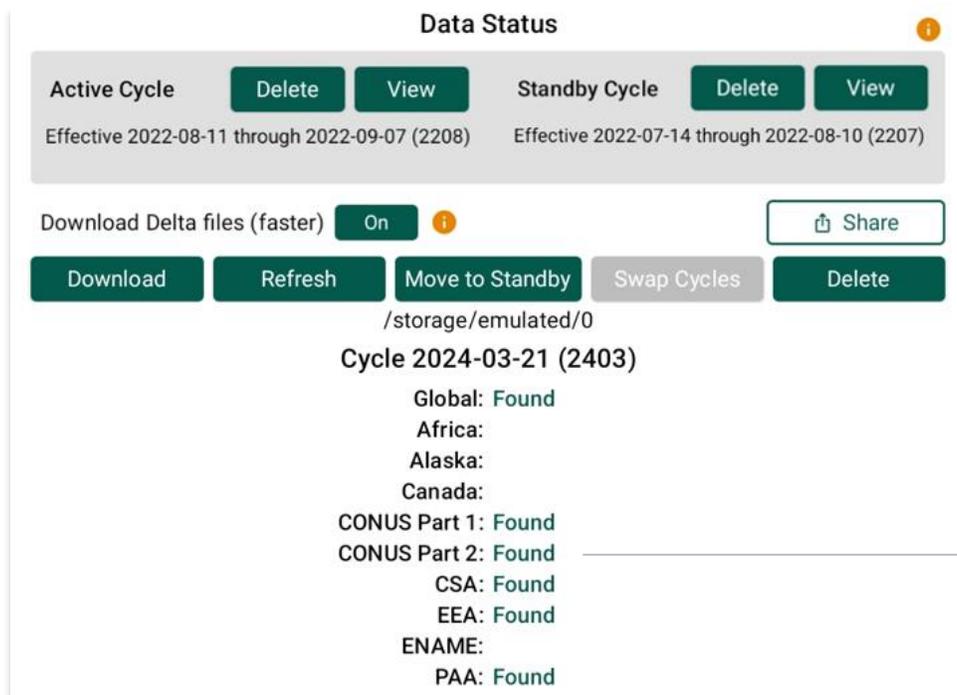


NOTE: Core data files are current for 28 days after the effective date.

13.2 Manage Data Downloads

Users can load and manage two data cycles, which are stored in Active Cycle and Standby Cycle. Any sideloaded or downloaded data will only become available once it's activated by moving the data onto Active Cycle.

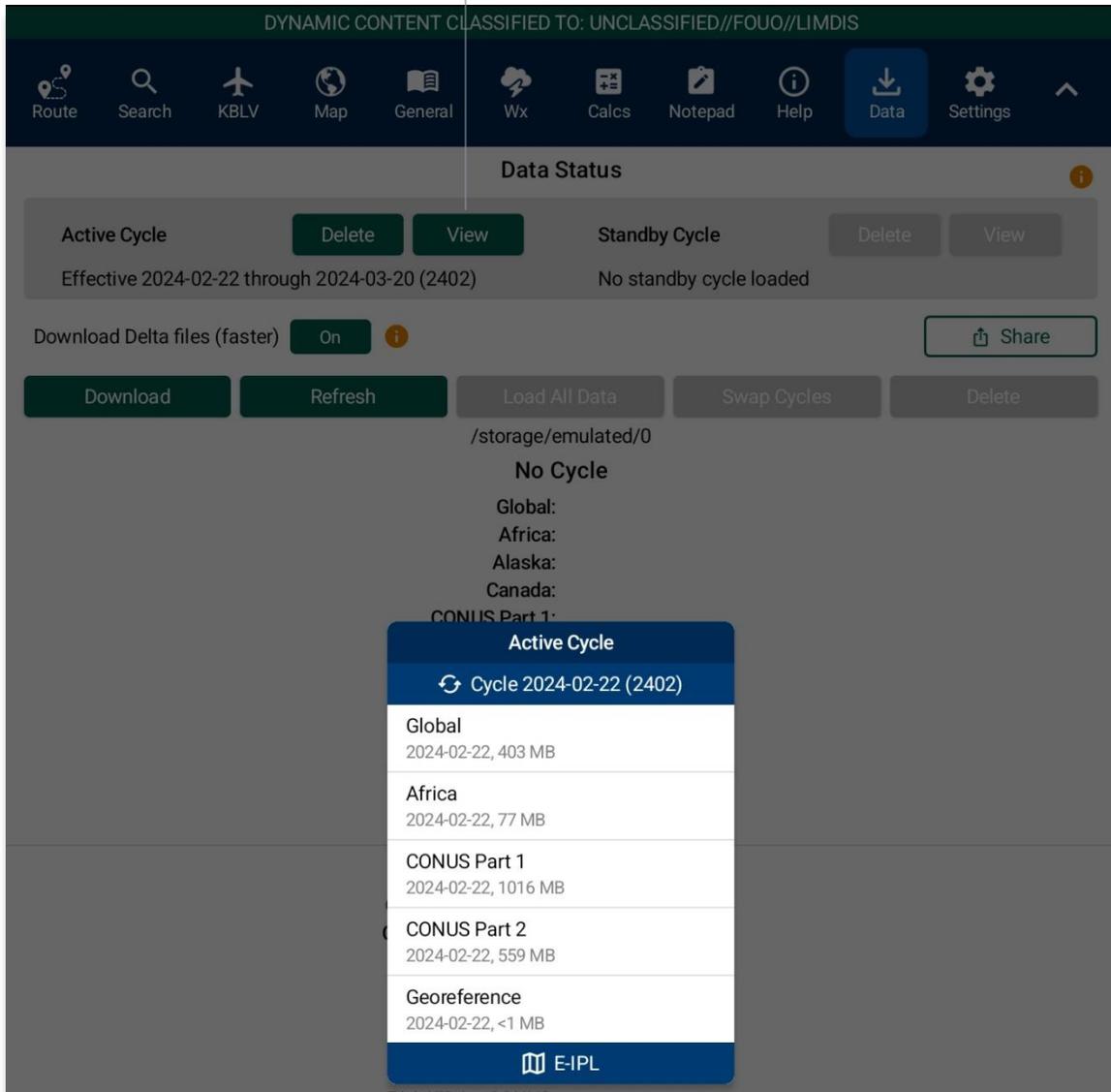
1. Tap **Data** on the **Main Menu**. The Data Status screen will display.
2. Tap **Download** to select data that you wish to have in the device. Refer to [Section 10](#) for additional information. A successful download will display **Found** beside the respective region and chart types.



3. Tap **Move to Standby** to transfer the data to Standby Cycle.
4. Tap **Swap Cycles** to switch the data loaded on Standby Cycle to Active Cycle. Your data should be activated.
5. If maps are downloaded separately, tap **Load Maps** to move data to Active Cycle.
6. Tap **Refresh** to reload the page.

7. Tap **View** to display the list of available files stored in Active Cycle or Standby Cycle.
8. Tap **Delete** to permanently delete the files stored in Active Cycle or Standby Cycle.

View Active
Cycle Data



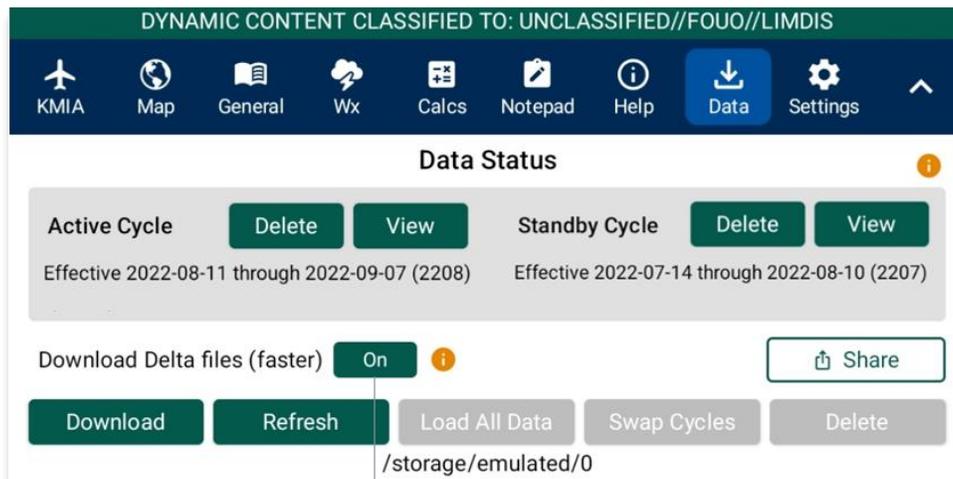
13.3 Delta Files

Aero App allows users to download delta files which are significantly smaller files that contain the core data changes between cycles. To upload files to ADS from Aero App, users must download a full data cycle and ensure that the Download Delta files (faster) option is disabled.

13.3.1 Download Delta Files (Faster)

Deltas are defined as the core data changes between cycles. Instead of downloading a full cycle, users have the option to download the changes and apply them to a previous cycle. This results in smaller file sizes reducing the download time. To download Delta files, the previous data must be in Active or Standby cycle.

1. Tap **Data** on the **Main Menu**.
2. Tap the **Download Delta files (faster)** button to enable option.
3. Tap **Download**.

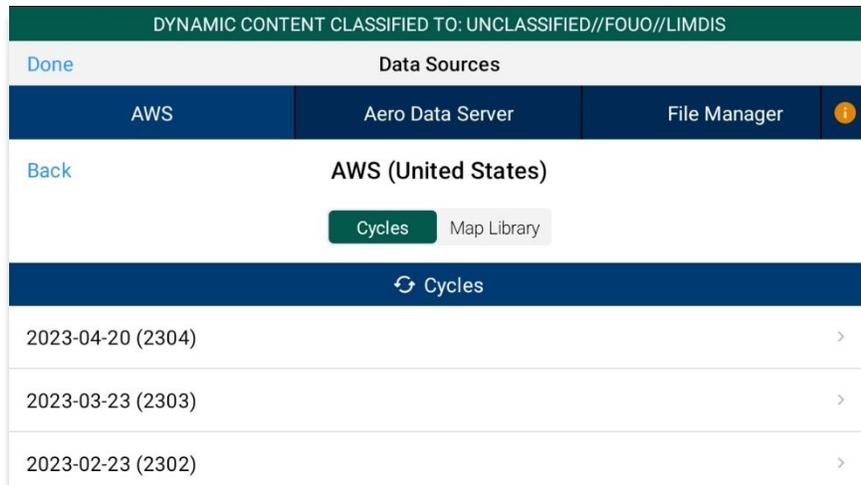


Download Delta files
(faster) enabled

- Log in to AWS using Aero User Database (AUD) or GEOAxis credentials, set up your device with Mobile Device Management (MDM), or select Aero Data Server.

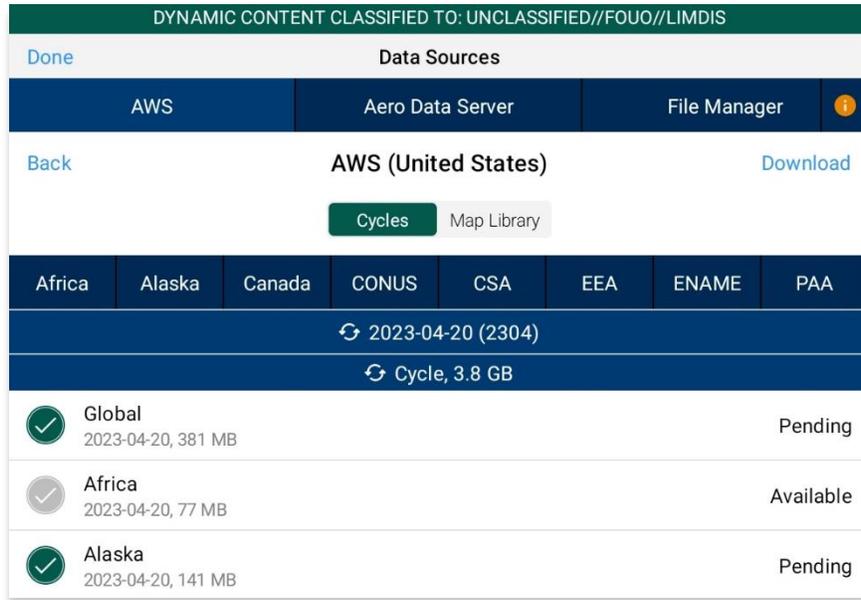


- Users will be redirected to the Data Cycle Download screen. Users are provided with options to download Cycles or Map Library. Select **Cycles**.

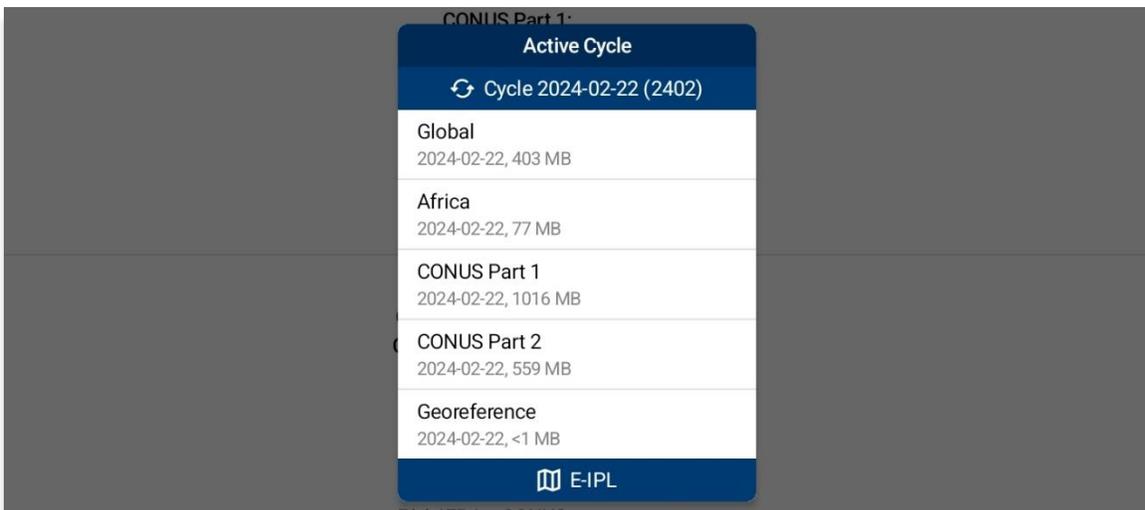


- Available data pertaining to that cycle will be displayed. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files have been selected.

8. Tap **Done** once download is complete.



9. On the Data Status screen, tap **Move to Standby** and an Applying Deltas loading popup will appear.
10. Tap **Swap Cycles** to load data onto Active Cycle, which activates the current data.
11. Tap **View** to verify the data in Active Cycle.

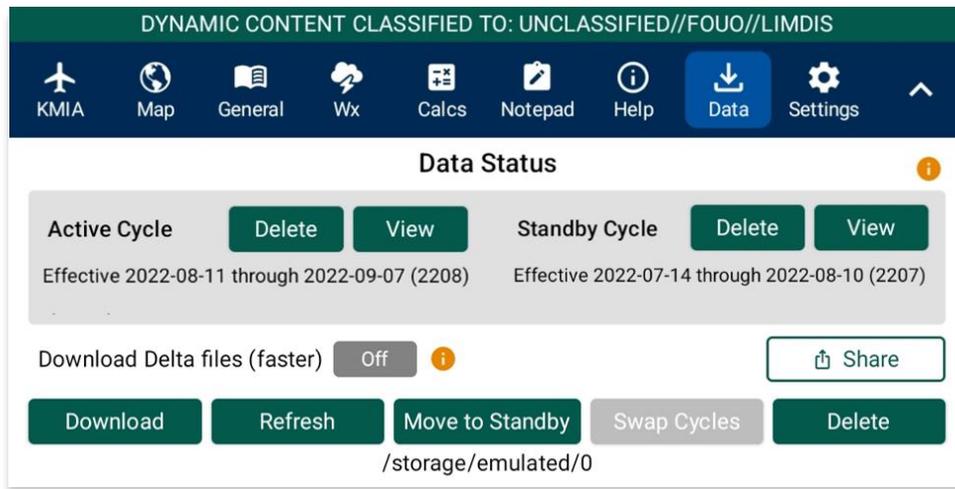


NOTE: A warning will display as users attempt to load Delta files onto Standby Cycle while **Download Delta files (faster)** is enabled. Selecting **Load Delta files** from the warning enables users to move Delta files to Standby Cycle.

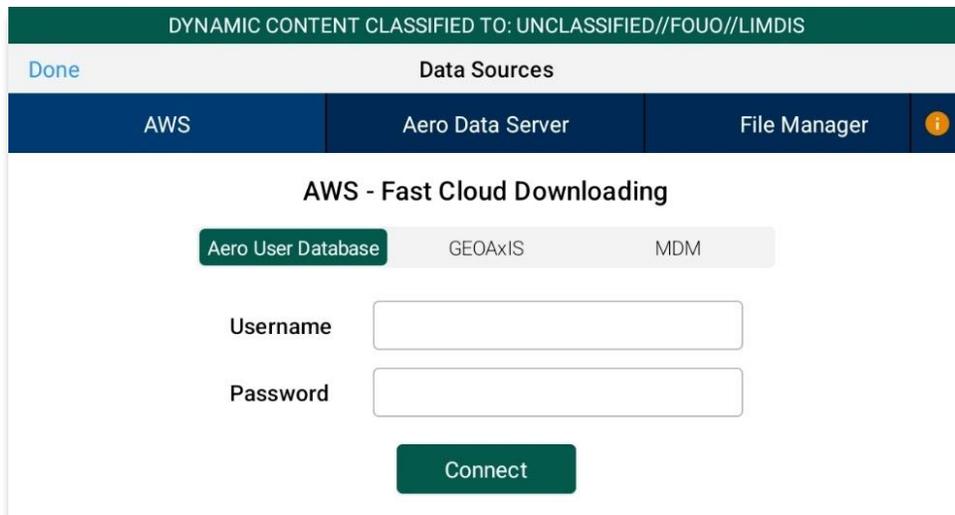
13.3.2 Download Compatible Files

To upload files to ADS, a full data cycle, without Deltas, is required. If Download Delta files (faster) option was enabled at the time of download, Delta files will be inaccessible when sharing files via Upload to ADS as Delta files are not compatible.

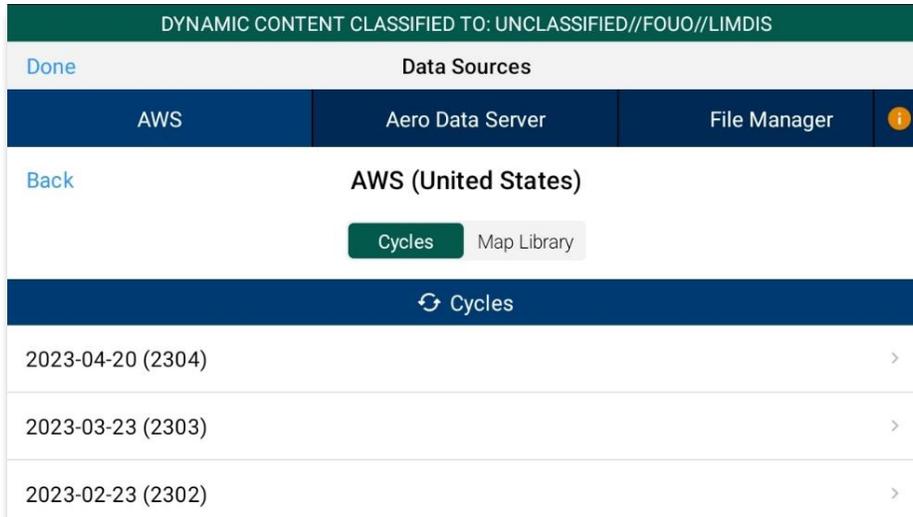
1. Tap **Data** on the **Main Menu**.
2. Ensure that the Download Delta files (faster) option is disabled. Tap **Download**.



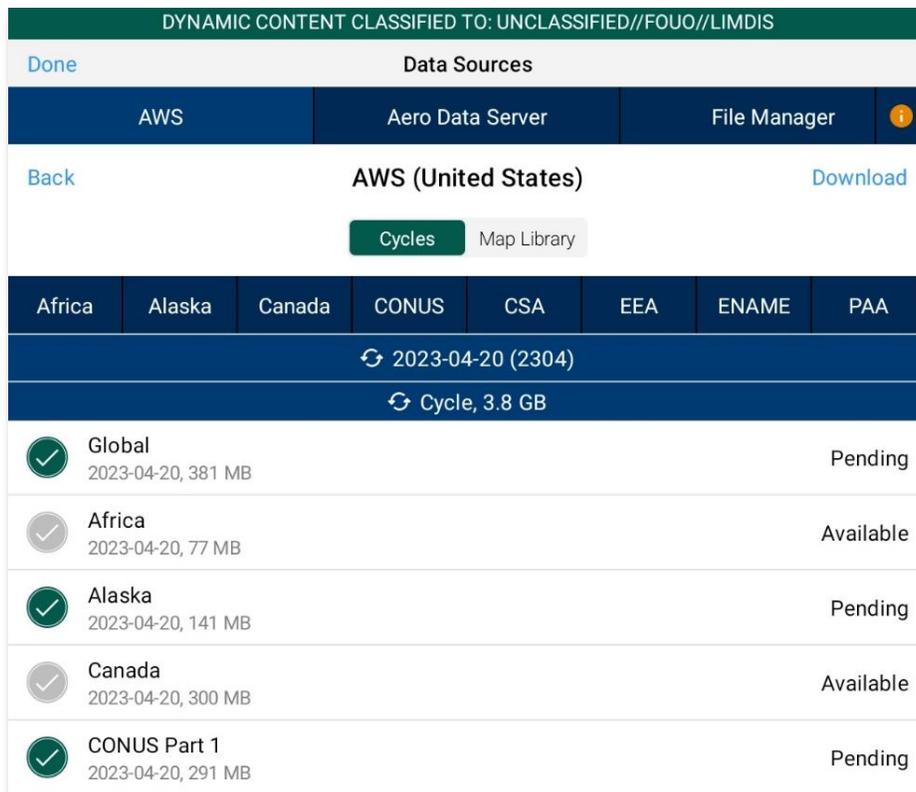
3. Log in to AWS using Aero User Database (AUD) or GEOAxis credentials, set up your device with Mobile Device Management (MDM), or select Aero Data Server.



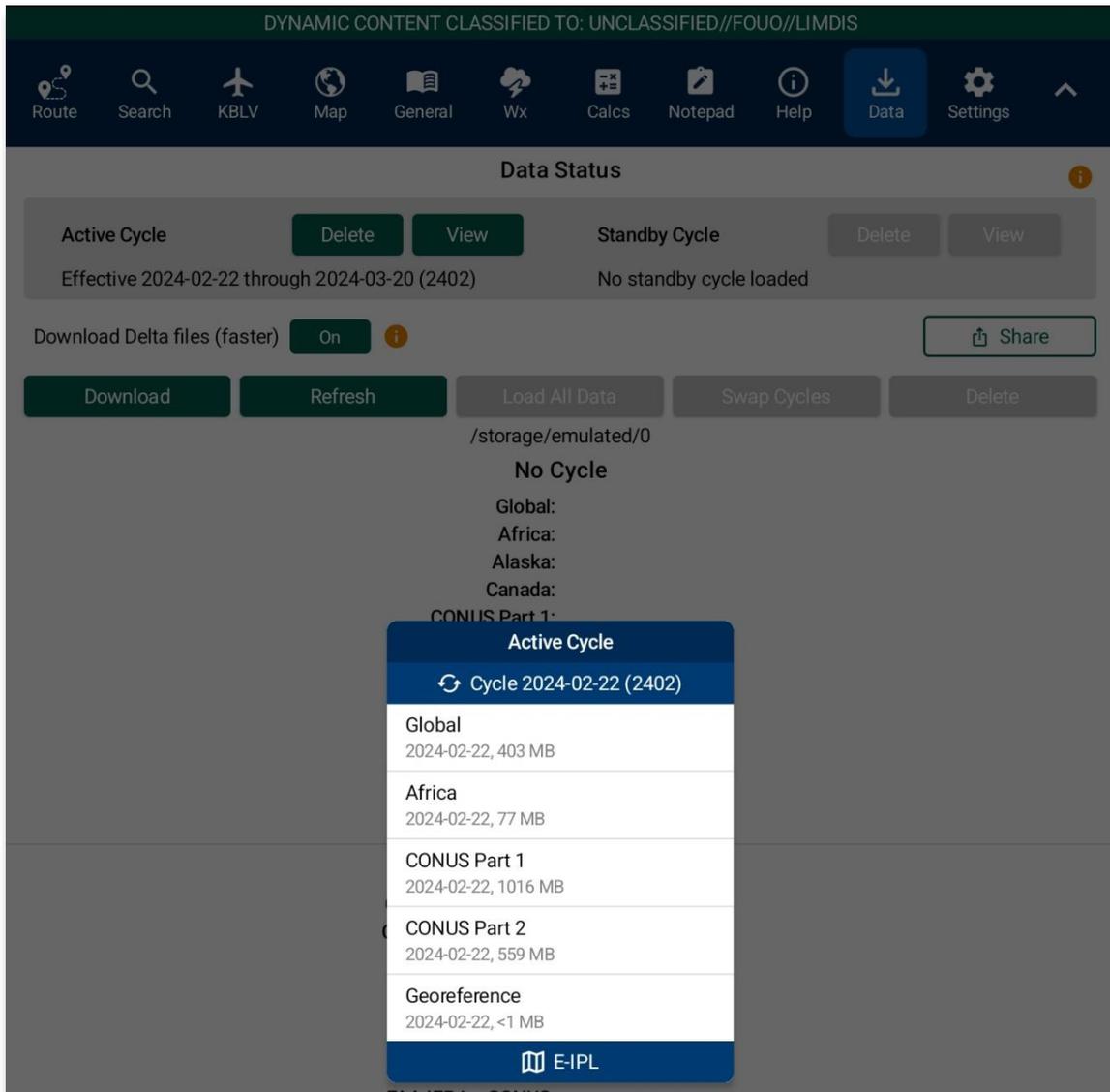
- Users will be redirected to the Data Cycle Download screen. Users are provided with options to download Cycles or Map Library. Select **Cycles**.



- Available data pertaining to that cycle will be displayed. Select individual data files or select regional Easy Buttons for faster data selection.
- Tap **Download** once desired data files have been selected.
- Tap **Done** once download is complete.



8. On the Data Status screen, tap **Move to Standby**.
9. Tap **Swap Cycles** to load data into Active Cycle, which activates the current data.
10. Tap **View** to verify the data in Active Cycle.



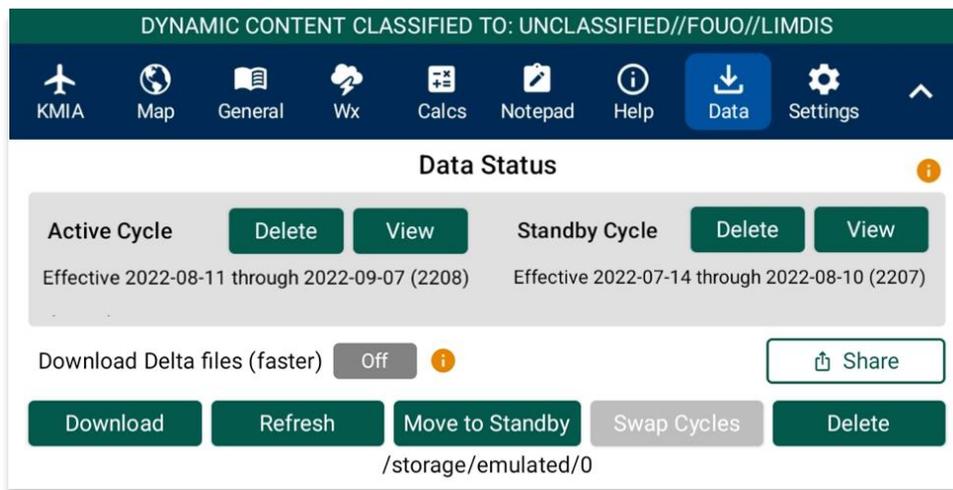
NOTE: A warning will display as users attempt to load Delta files onto Standby Cycle while **Download Delta files (faster)** is enabled. Selecting **Load Delta files** from the warning enables users to move Delta files to Standby Cycle.

13.4 Upload Data to ADS

Aero App allows users to share Data Cycles, Maps, and additional files such as Earth Base Map, Giant Reports, and Terrain to another user by uploading data to ADS. Once the desired data is uploaded to ADS, team members can download the shared data to their device. The Download Delta files (faster) option must be disabled as sharing delta files is not supported.

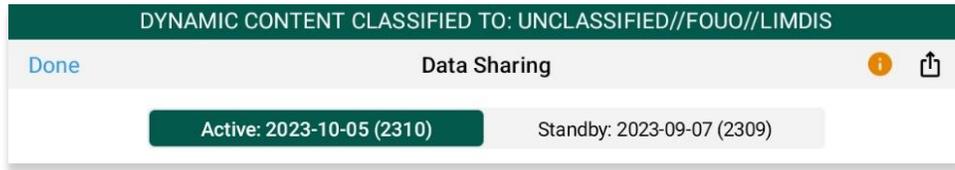
Ensure to set up ADS to allow data uploads. The steps in achieving this are as follows:

1. Log in to ADS on your PC.
2. Select **Settings** on the navigation bar.
3. Navigate to the *Aero App Upload* section. Select a window of time (15 minutes, 30 minutes, or 1 hour) to allow data uploads to ADS.
4. Open **Aero App** on your Android tablet.
5. Tap **Data** on the **Main Menu**.
6. Tap the **Share** button. The Data Sharing screen will display.

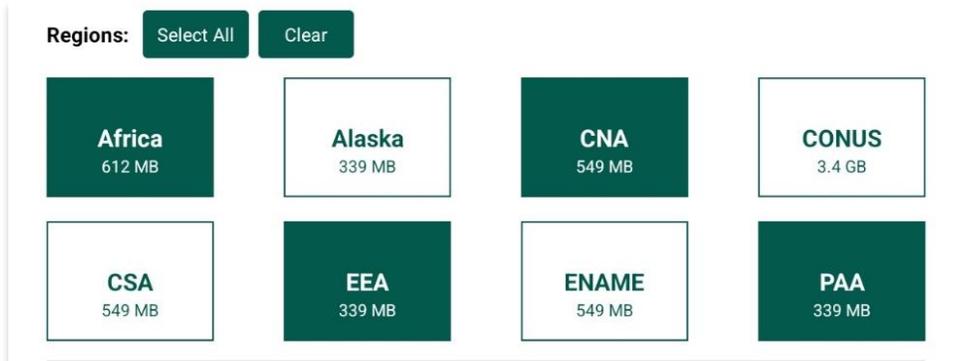


NOTE: The data displayed on the Data Sharing page corresponds to the downloaded data on your device.

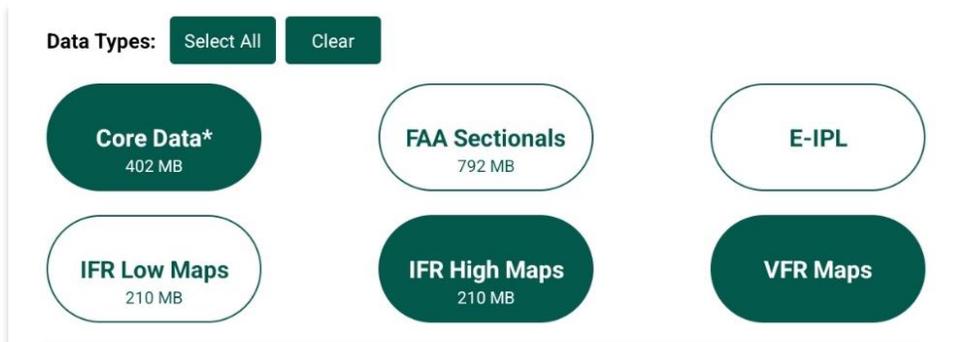
7. Select from **Active** or **Standby** cycle to share data.



8. Select desired **Regions** to share.



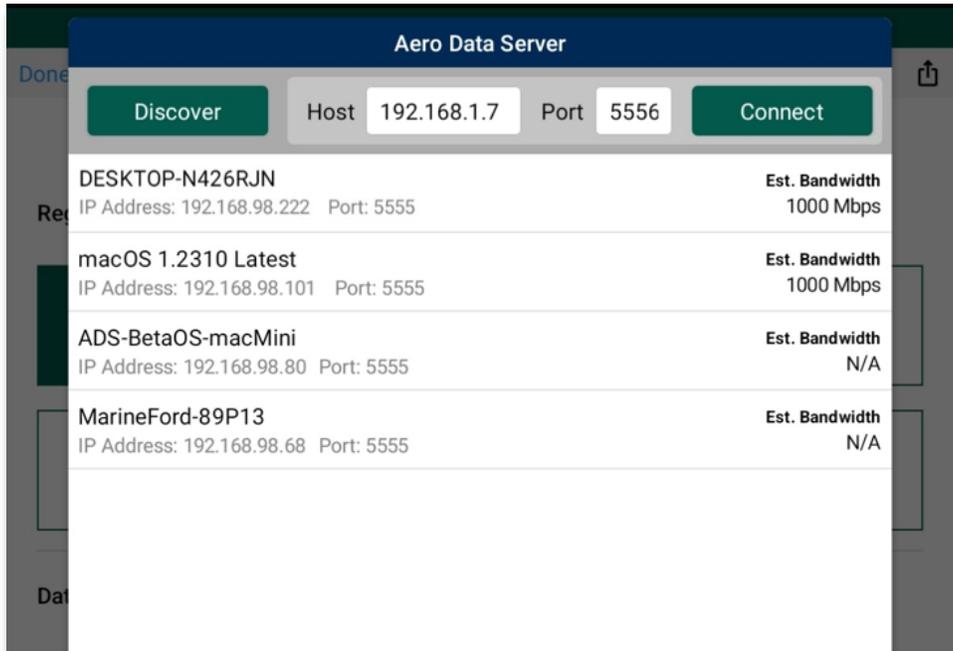
9. Select desired **data types** to share.



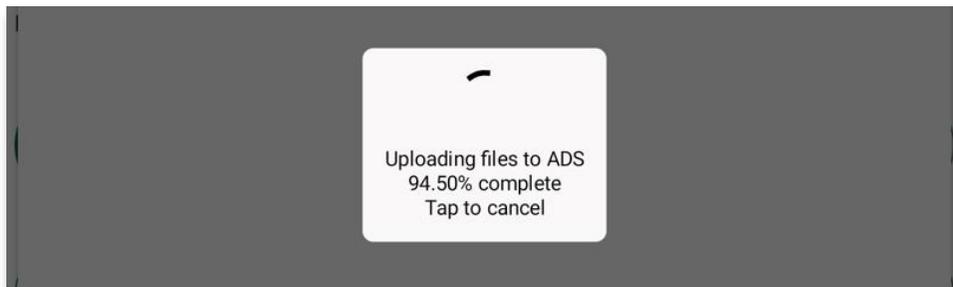
10. Select desired **additional files** to share.



11. Once all required files are selected, the Share icon will be selectable. Tap **Share**.
12. The Aero Data Server popup will display. Select desired server or manually enter the server IP address and Port number to connect.



13. The data selected will begin to upload onto ADS.



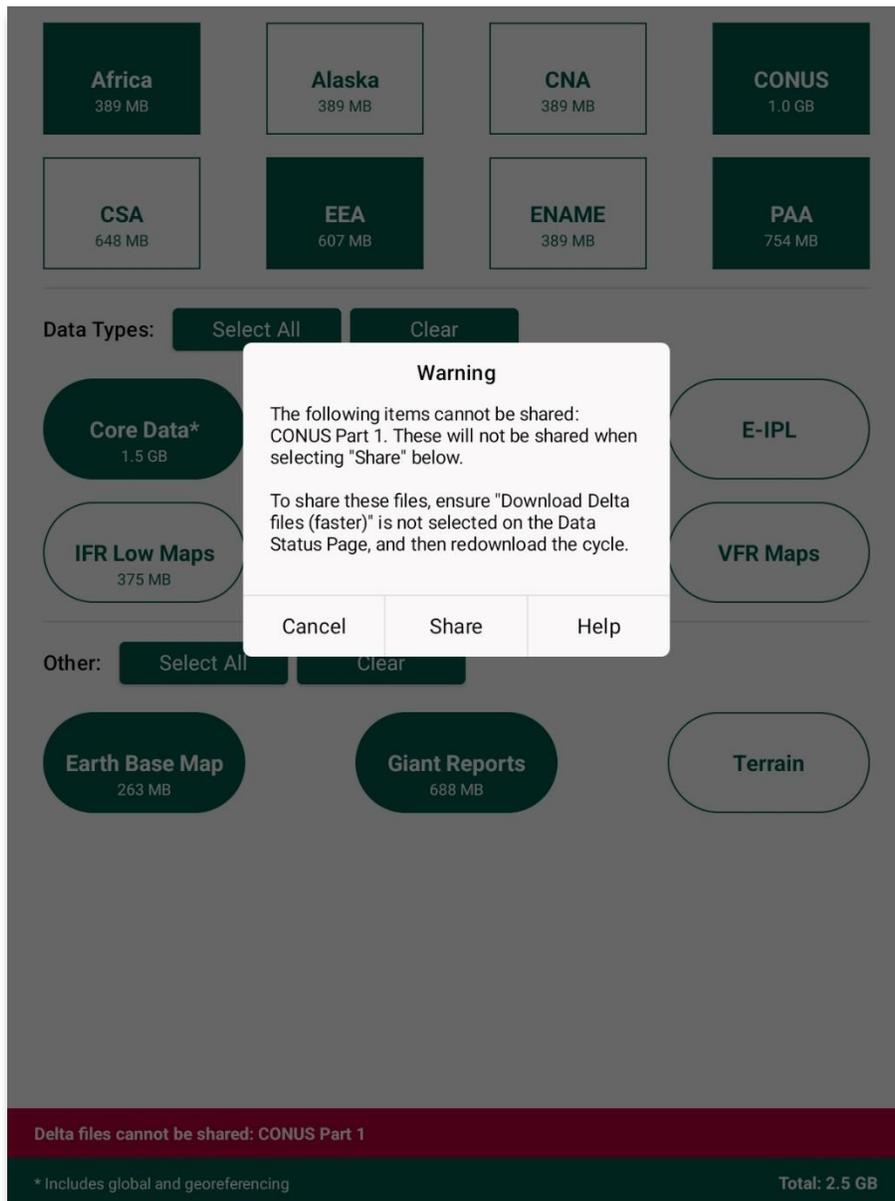
NOTE: Users can tap **Select All** to highlight all files or tap **Clear** to deselect all selected files.



NOTE: **Core Data*** includes the Global and Georeference files.

13.4.1 Sharing Incompatible Files

Attempting to share incompatible files such as Delta files will result in a warning being displayed. When users select files containing Delta files, a red banner will appear at the bottom of the Data Sharing screen listing the Delta files which cannot be shared. If users proceed to share files, a warning message will appear where they can select Help, Share, or Cancel. Selecting Help displays Contextual Help. Selecting Share will only share the compatible files and exclude delta files.



13.5 File Manager

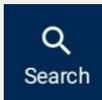
File Manager is responsible for storing, managing, and making modifications to files that have been downloaded and loaded into Aero App.

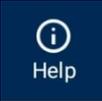
1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Tap **File Manager**. A collection of subcategories will be displayed.
4. Data within File Manager is categorized by data types, each accessible by its own tab. To explore File Manager, simply tap on the desired data type. The following data types are the available:
 - **Downloads** – contains data files that are in queue to be loaded onto Standby Cycle.
 - **Active** – stores cycle data and regional files loaded on Active Cycle.
 - **Standby** – stores cycle data and regional files loaded on Standby Cycle.
 - **Aero App Maps** – contains a collection of downloaded regional charts such as CAN, FAA and NGA IFR high and low charts, as well as FAA VFR charts of the respective region.
 - **Map Library** – includes a library of downloaded charts such as maps for emergencies, NavPlan charts, range charts, and others.
 - **Documents** – stores a collection of user-generated files such as routes, user maps, user waypoints, user documents, and GeoPackages.
 - **Other** – contains Earth Base Map, Giant Reports, and Terrain Coloring data downloads.
 - **Host Nation** – contains Host Nation chart downloads, sorted by download date with the most recent chart displayed at the top.
5. Swipe left to reveal the delete button for the files that you wish to permanently remove from Aero App. Tap **Delete**. The selected file will be removed from the list. This excludes Global files that have been added to Active or Standby Cycle.



14 Aero App Menus

The Main Menu is utilized to display the main functions of Aero App and is located either on the top or bottom of the screen (user-configurable).

 <p>Route</p>	<p>Collapsible Route Panel – The Route Panel can expand or collapse, based on the user's view preference. Users have options to add to route, edit route, and access additional route enhancement features in the Route Manager. The Route Panel contains essential route information, such as the ETA and ETE, distance and bearing, tower frequencies, and the total distance of your route.</p>
 <p>Search</p>	<p>Search – Users can perform a search of different identifiers such as Airports, NavAids, Waypoints, Airways, User Waypoints, and Pins. A search can be refined by setting a minimum runway length, which can be done through the Settings page. Additionally, features such as adding identifier to favorites and viewing Giant Reports of the searched identifier are available.</p>
 <p>KMIA</p>	<p>Active Point – Once the search is completed, the identifier will become an active point. The active point will show its General Information such as Giant Reports and Chart Supplements, AQP images (if applicable), Communications, Runways, and Remarks. Additional information such as APD, procedure charts, Host Nation charts, weather, and others can be viewed. To load a new active point, simply tap on the search icon and enter a desired point, then tap Search on your device's on-screen keyboard. The new identifier will load as the new active point.</p>
 <p>Map</p>	<p>Map – Aero App's Map makes use of Whirly Globe technology, which provides various settings and overlays to customize its display. Charts such as VFR sectionals, High and Low enroutes, and many more are available.</p>
 <p>General</p>	<p>General – Contains a library of FAA data, FLIP Charts, Supplements, Area Planning, User Documents, and Terminal Procedure Legend.</p>
 <p>Wx</p>	<p>Wx Images – Provides access to real-time weather images, including RADAR, Satellite, Icing, Weather Forecast, AIRMETs and SIGMETs, Prog Charts, Convective SIGMETs and Outlooks, Current Convective Watches, and Alaska.</p>
 <p>Calcs</p>	<p>Calcs – Contains E6B and Fuel Check features. The E6B calculator is used to perform a variety of navigation calculations for Altitude, Cold Wx, Conversions, Coordinates, Descent, Distance, IFR Climb, Rwy Winds, and Winds Aloft. Fuel Check measures the fuel burn usage of the ownship.</p>

 <p>Notepad</p>	<p>Notepad – Users can create up to three pages of notes using their fingertips or a stylus.</p>
 <p>Help</p>	<p>Help – A hub for Aero App information containing options to view the What's New, Web Links, link to User Manual, and the About page.</p>
 <p>Data</p>	<p>Data – Users can download, share, manage, and monitor the status and file sizes of the loaded data.</p>
 <p>Settings</p>	<p>Settings – Allows users to customize the appearance and behavior of Aero App. Various setting options include Bluetooth, Data, Miscellaneous, Reset, Route, and User Interface.</p>

14.1 Collapsible Route Panel

The collapsible Route Panel can be expanded to display the full view of the Route Panel or be hidden to display the full view of a specific Aero App page. Tapping the Route button from the Main Menu expands the Route Panel view providing users with the following options:

- **Add** – enables users to add identifiers (e.g., Airports, NavAids, Waypoints, Airways, User Waypoints, and Pins), search term, or an entire route.
- **Edit** – enables users to delete and/or reorder entries within the route.
- **Route Manager** – enables users to perform actions pertaining to the route or display additional features on the map.

When points are added to the route, each point in the Route Panel will contain essential route information such as the identifier name, ETA/ETE, distance and bearing, and tower frequencies. Aero App calculates the total distance of your route, which is displayed above the Route Panel options.

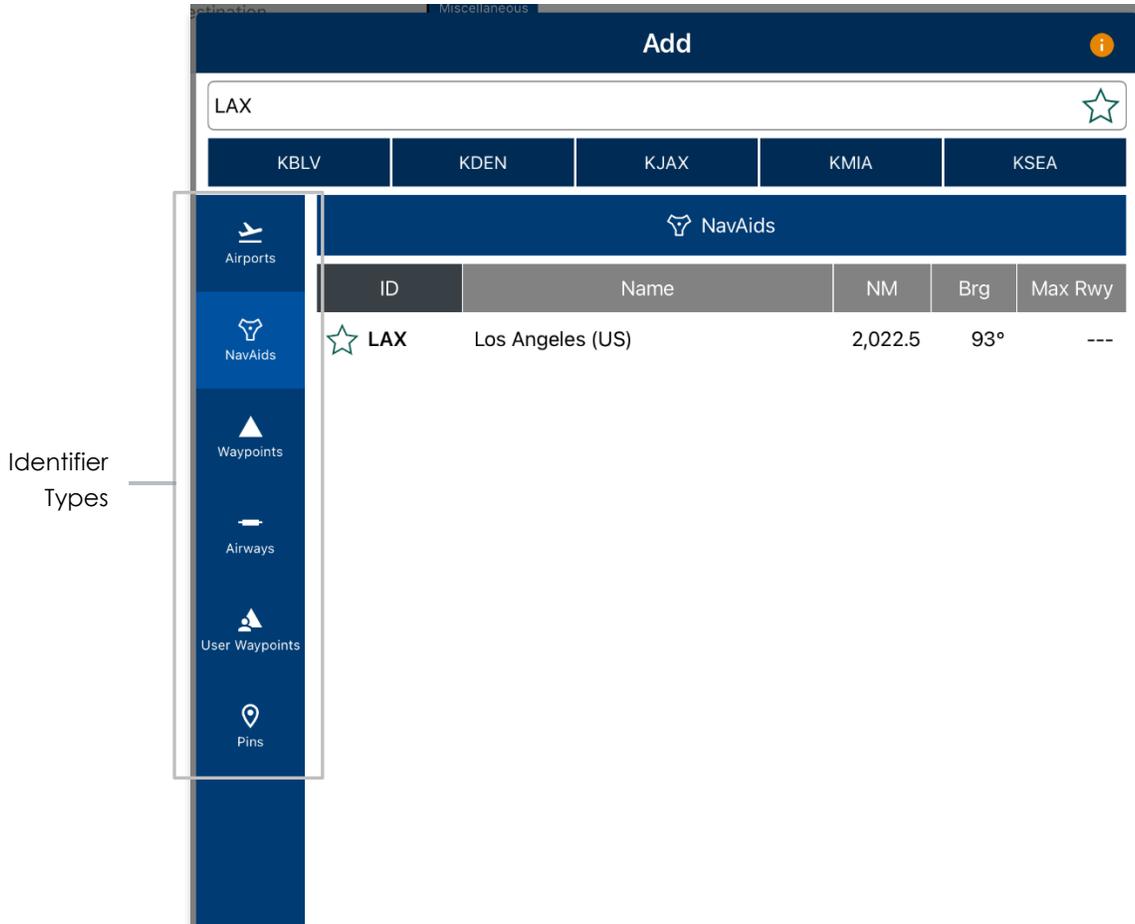
14.1.1 Add to Route

The Add to Route feature allows users to create a route by adding an identifier (e.g., Airports, NavAids, Waypoints, Airways, User Waypoints, and Pins), search term, or route including entering coordinates in GARS, lat/lon, MGRS or Radial format. Users can filter airports by setting a minimum runway length in their Settings.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap the **Add** button.
3. Search by entering an identifier, search term, or route in the search text box.
4. Tap **Search** from the device's on-screen keyboard and the entries will be added to the route.



5. The search results are divided into identifier types. Select from Airports, NavAids, Waypoints, Airways, User Waypoints, or Pins.



NOTE: Aero App displays the individual route legs of Departure Procedures (DPs), Standard Terminal Arrival Routes (STARs), Instrument Approach Procedures (IAPs), Airways, and Jetways. The point information includes ICAO, frequency information (when appropriate), as well as distance, bearing, Estimated Time Enroute (ETE) and Estimated Time of Arrival (ETA) to the next point in the route.



NOTE: To enter a route with multiple points, enter each identifier separated by a space. The entries will display in the given order.

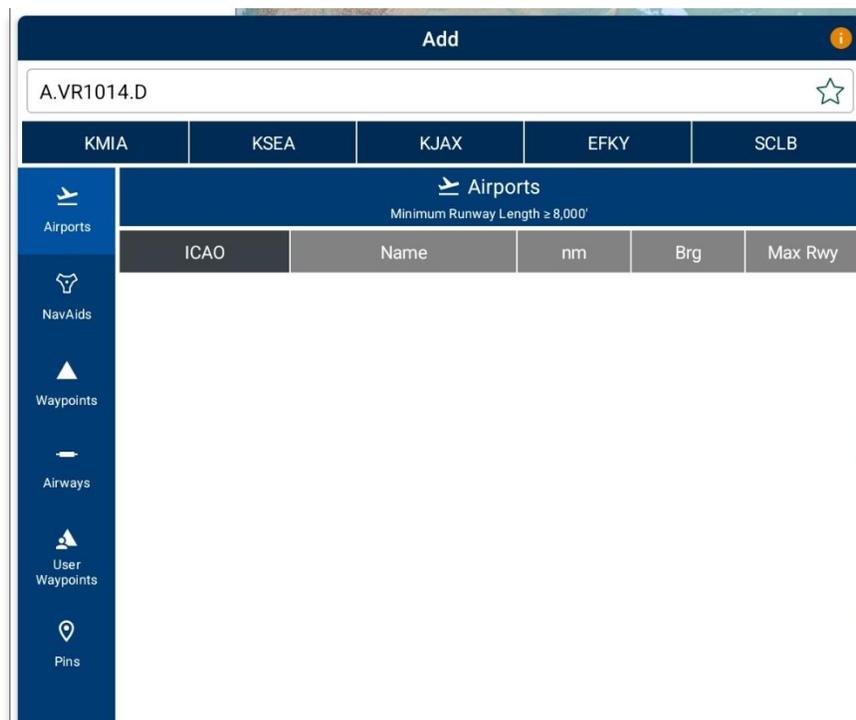


NOTE: When adding a new point (e.g., ICAO, Waypoint, etc.) to an existing route, the new point is automatically added to the route in its geographically optimal position and not simply at the end of the route.

14.1.1.1 Add Military Training Routes (MTRs) to Route

Users can add Military Training Routes (MTRs) as their current route. Ensure that the entry follows the format of <starting point>.<MTR>.<endpoint>.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap the **Add** button.
3. Use your device's on-screen keyboard to enter desired MTRs following the format: **<starting point>.<MTR>.<endpoint>** to add to route.



4. The MTR is populated in the Route Panel and on the Map.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

Route Search KMIA Map General Wx Calcs Notepad Help

KUBS
Columbus Lowndes Co
13.2 nm, 90°

140 kt
1535z

270°
0.5 nm →

12,118'

N33°52.71' 30.61 nm
W87°15.84' 312°
16SDC 75584 48721

Twr: 13.5 hfm

A.VR1014.D
A.VR1014.D (MTR)
70.4 nm, 107°

▼ A, B, C, D

A
VR1014.A
18.5 nm, 107°

B
VR1014.B
18.4 nm, 90°

C
VR1014.C
12.1 nm, 89°

D
VR1014.D
21.4 nm, 72°

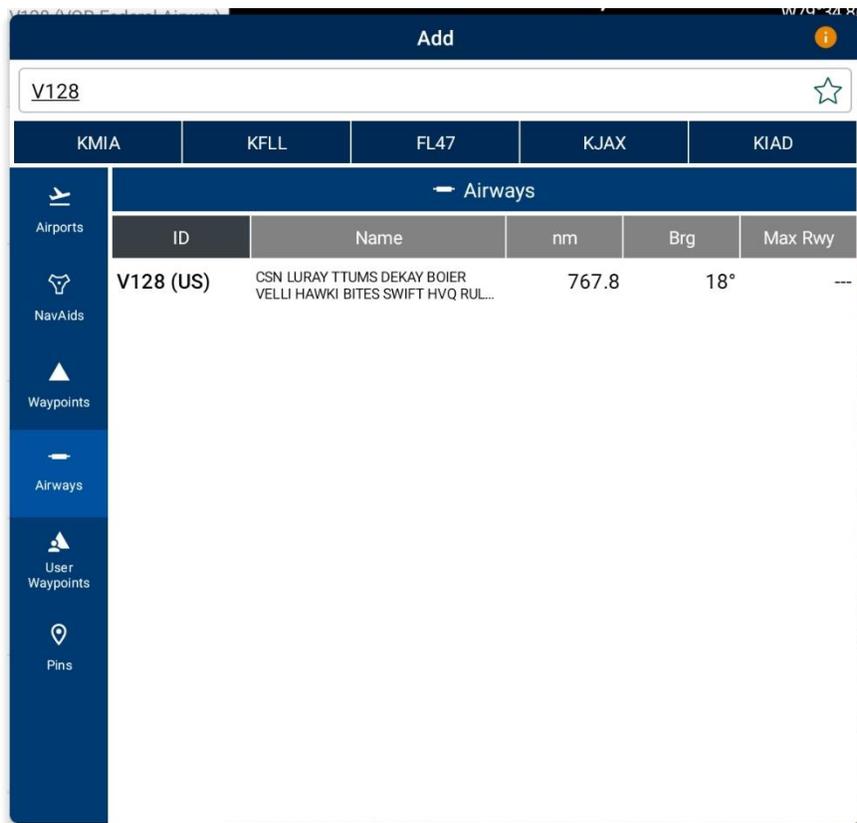
KBHM
Birmingham Shuttlesworth Intl
Destination
ETE: 00:00:39, ETA: 15:35:57Z
Twr: 119.9 MHz, 118.25 ...

Distance: 83.6 nm

14.1.1.2 Add Airways to Route

Users can add Airways to the route. There are several types of airways, each prefixed with a letter followed by one to three digits. Enter desired airway in the search text box and the airway will be added to the route.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap the **Add** button.
3. Use your device's on-screen keyboard to search and select desired Airways to add to the route.



4. The Airway is populated in the Route Panel and on the Map.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

Route Search KMIA Map General Wx Calcs Notepad Help

V128
V128 (VOR Federal Airway)
420.8 nm, 276°

140 kt 270° 10,732'
1539z 345.6 nm → N39°08.01'
W80°15.94'
17SND 63466 31845

23.5 nm

CSN
Casanova
33 nm, 276°
116.3 MHz, 110X

LURAY
LURAY
22.7 nm, 275°

TTUMS
TTUMS
11.7 nm, 275°

DEKAY
DEKAY
19.4 nm, 274°

BOIER
BOIER
18.1 nm, 274°

VELLI
VELLI
7.4 nm, 273°

HAWKI
HAWKI
24.4 nm, 273°

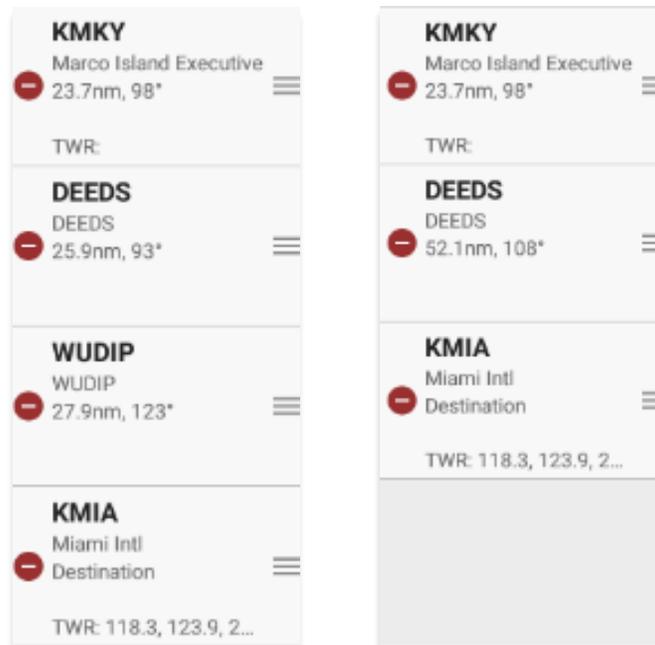
BITES
BITES
25.3 nm, 272°

Distance: 420.8 nm

14.1.2 Edit Route

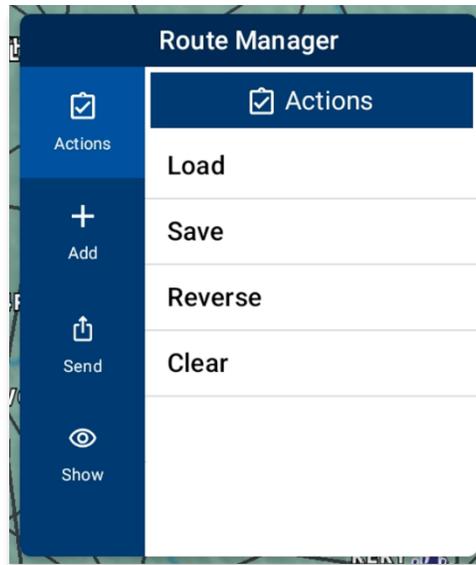
Aero App allows users to edit their flight route directly from the Route Panel. Users can reorder the points to their desired course or permanently delete a point from the route.

1. Tap **Route** on the **Main Menu**.
2. Tap **Edit**.
3. Hold the **Hamburger** button next to the identifier that you wish to move.
4. Swipe up or down to place the identifier in the desired route position.
5. Tap on the **red circle** next to the entry that you wish to delete.
6. Tapping **Delete** will remove that entry from the route panel.



14.1.3 Route Manager

Route Manager provides route enhancement capabilities and is located at the bottom right of the Route Panel view. Route Manager is divided into categories of Actions, Add, Send, and Show.



14.1.3.1 Actions

The Actions menu offers the following options and will be further elaborated in the sections below:

- Load
- Save
- Reverse
- Clear

14.1.3.1.1 Load Route

The Load feature displays a collection of imported routes including CRD, JSON, and KML/KMZ files, and routes saved directly on Aero App. Selecting a route from the list replaces the initial route with the selected route.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Select the route that you wish to load. The selected route will populate the Route Panel and display on the Map.



NOTE: Loading an invalid route in Aero App will trigger an error message.



NOTE: Loading an empty route will result in Aero App clearing your current flight route.



NOTE: Loading a route file that exceeds the 200 KB limit will trigger an error message.

14.1.3.1.1.1 Load a CRD File

Aero App supports CRD files. CRD files must be sideloaded onto Aero App. Refer to [Section 11.5](#) for additional information.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Locate and tap the CRD files that were loaded onto Aero App. The selected route will populate the Route Panel and display on the Map.

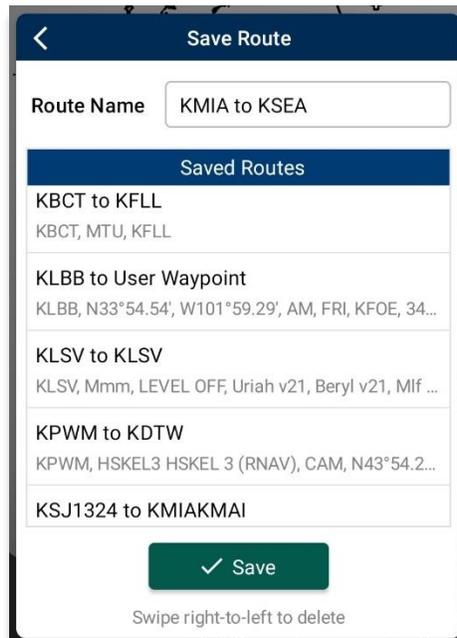


6. To delete a CRD file, swipe right-to-left to reveal the *Delete* button. Tap **Delete** and the route will be permanently removed.

14.1.3.1.2 Save Route

Aero App allows users to save routes loaded in the Route Panel for ease of access.

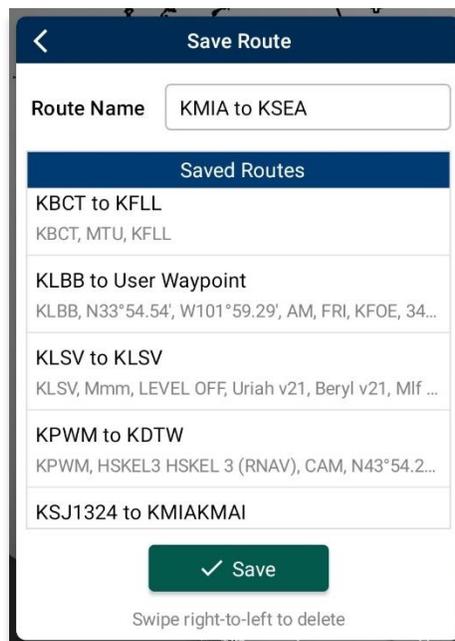
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Ensure that the route includes a complete route.
3. Tap **Route Manager**.
4. Select **Actions** from the side menu, if necessary.
5. Tap **Save**.
6. The Route Name will display a preselected name, with the format of <Departure> to <Arrival>. If necessary, rename the route name to the desired name.
7. Tap **Save**. The route will be saved and be added to the *Load Route* table.



NOTE: When entering a new route name, the name should only contain alphanumeric (lower and upper case) characters, spaces and hyphens.

14.1.3.1.2.1 Save a CRD File

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Save**.
5. Tap in the *Route Name* text box and change the route's name to desired name.
6. Once the CRD file has been renamed, tap **Save**. The changes will be added to the Saved Routes list.



14.1.3.1.3 Reverse Route

Selecting Reverse reverses the order of the route points loaded in the Route Panel.

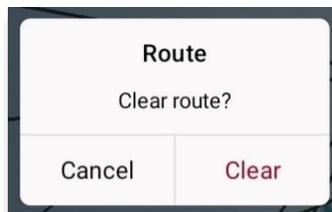
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Reverse**. The entire route is reversed.

KMIA Miami Intl 52.1nm, 289° TWR: 118.3, 123.9, 256.9	KMKY Marco Island Executive 23.7nm, 98° TWR:
DEEDS DEEDS 23.7nm, 279°	DEEDS DEEDS 52.1nm, 108°
KMKY Marco Island Executive Destination TWR:	KMIA Miami Intl Destination TWR: 118.3, 123.9, 256.9

14.1.3.1.4 Clear Route

Selecting Clear removes all the route points loaded in the Route Panel.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Clear**.
5. A confirmation popup will appear. Tap **Clear** to confirm action.

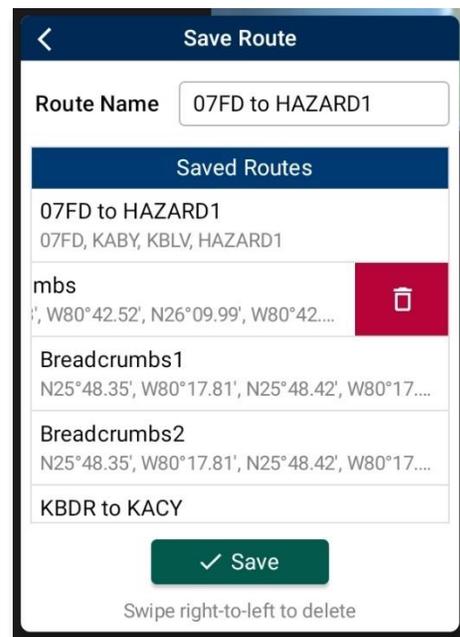
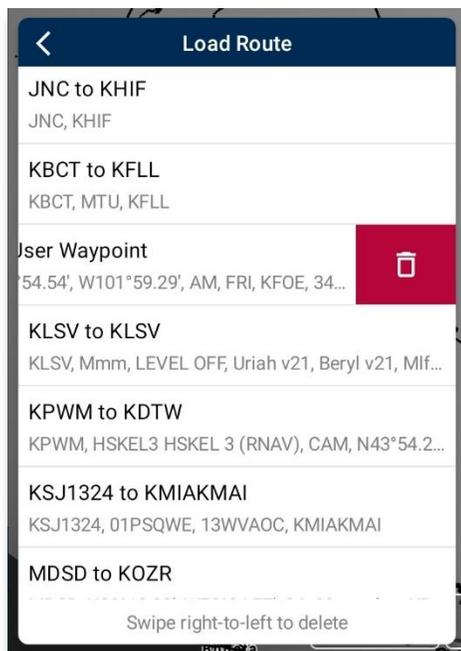


NOTE: Clearing a route clears the current route. It does not delete any saved routes.

14.1.3.1.5 Delete Imported and Saved Routes

Users can delete routes listed in the Load and Save Route views.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Actions** from the side menu, if necessary.
4. Tap the options **Load** or **Save**.
5. Swipe right-to-left to reveal the **Delete** button. Tap **Delete** and the route will be permanently removed.



14.1.3.2 Add

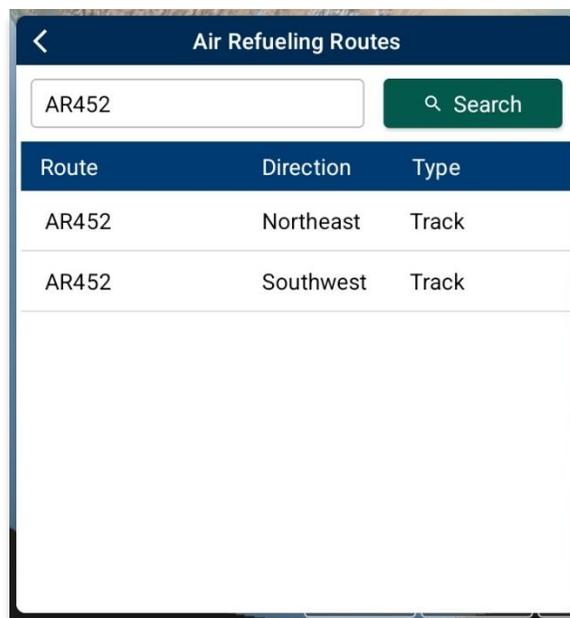
The Add menu offers the following features and will be further elaborated in the sections below:

- Air Refueling Route
- Preferred Route
- Search and Rescue (SAR)

14.1.3.2.1 Add Air Refueling Route

Air Refueling Route can be added to your flight route. If an existing route is loaded in the Route Panel, Aero App will add the air refueling route to its optimal position on the route.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Add** from the side menu.
4. Tap **Air Refueling Route**.
5. An Air Refueling Route popup will display. In the text box, enter an air refueling route. After three characters are entered, an auto search will begin.
6. Tap **Search** once desired route is entered. Alternatively, users can select a route from the routes that appear under the search box.



7. The points listed displays columns for Usage, Waypoint, NavAid/Radial and Lat/Lon.

AR452 - Northeast			
Usage	Waypoint	NavAid/Radial	Lat/Lon
IP	---	FMG 47 nm, 275.7°	N39°49.00' W120°36.00'
CP	---	REO 49.4 nm, 159...	N41°46.00' W117°50.00'
NC	---	REO 47.4 nm, 80.9°	N42°27.00' W116°49.00'
NC	---	BOI 38.3 nm, 158°	N42°55.00' W116°07.00'
EX	---	BOI 63.2 nm, 61.7°	N43°45.00' W114°46.00'

8. Tap on a row to select an *entry point*. The row will be shaded gray to indicate a point is selected.
9. Tap on a row to select an *exit point*. The points between the selected entry point and exit point will be shaded gray. The shaded points are the points to your air refueling route.



NOTE: To reselect new entry and exit points, tap on another point, and repeat the steps.

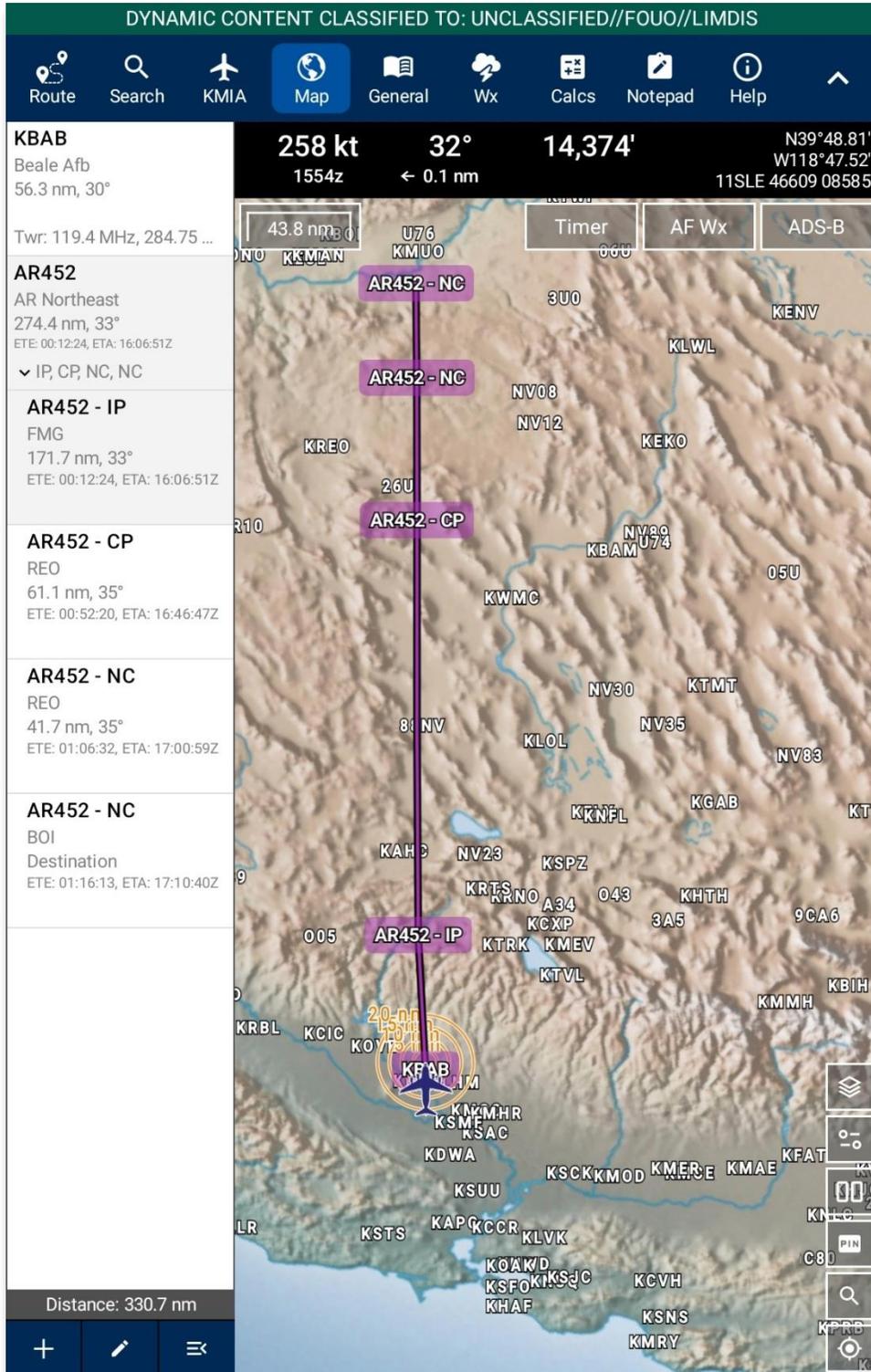
10. Once selections are completed, the Add to Route button will be selectable. Tap **Add to Route**.

AR452 - Northeast			
Usage	Waypoint	NavAid/Radial	Lat/Lon
IP	---	FMG 47 nm, 275.7°	N39°49.00' W120°36.00'
CP	---	REO 49.4 nm, 159...	N41°46.00' W117°50.00'
NC	---	REO 47.4 nm, 80.9°	N42°27.00' W116°49.00'
NC	---	BOI 38.3 nm, 158°	N42°55.00' W116°07.00'
EX	---	BOI 63.2 nm, 61.7°	N43°45.00' W114°46.00'



Tap to select entry and exit points.
 All points between will also be added to the route.

11. The points will populate the Route Panel and display on the Map.



14.1.3.2.1.1 View Air Refueling Route

Pilots can tap an Air Refueling Route on the Map to view additional information such as its Frequency, A/A Tacan, Alternatives, Scheduling Unit, ARTCC, and its Remarks.

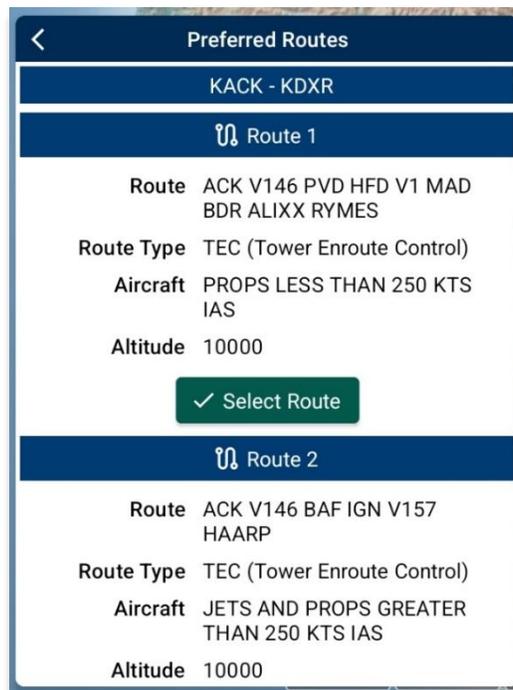
1. Navigate to the **Map** screen and tap on an air refueling route point.
2. The Map's popup menu will display. Select **Show** from the side menu.
3. Tap **Info and Wx**.
4. The Information view will display additional information such the refueling route's Frequency, A/A Tacan, Alternatives, Scheduling Unit, ARTCC, and its Remarks.



14.1.3.2.2 Preferred Route

The Aero App provides alternative preferred routes in place of the current flight route. Once an origin and destination are entered in the route panel, the Preferred Route feature will activate and display a list of preferred routes to select from. This feature is only available for select routes.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Ensure that a route is loaded in the Route Panel.
3. Tap **Route Manager**.
4. Select **Add** from the side menu.
5. Tap **Preferred Route**.
6. A list of preferred routes will be displayed. Tap **Select Route** once desired route is found, and the new route will display on the route panel.



7. When selecting an alternative preferred route, a dialog box will appear. Tap **Use Preferred Route**. The alternative preferred route will replace the previously selected preferred route.
8. Tap **Cancel** to discard all changes.

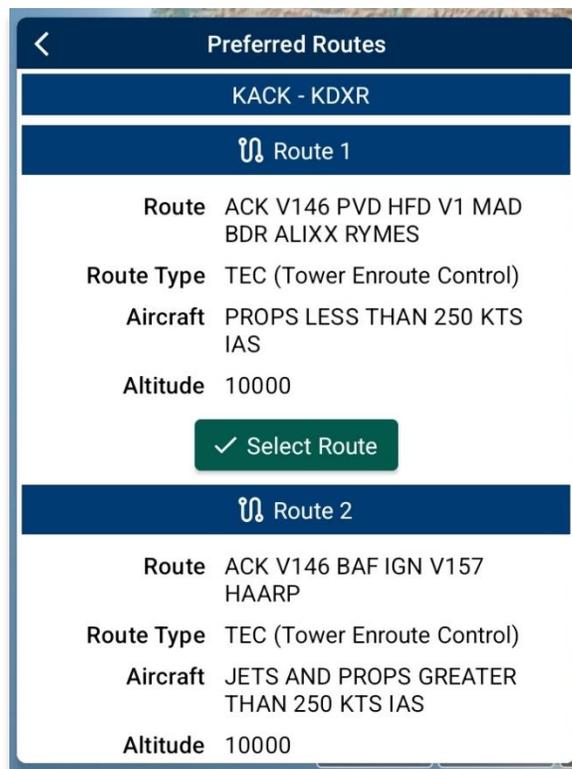


NOTE: The Preferred Route option will be disabled if there are no available preferred routes.

14.1.3.2.2.1 Preferred Route with DP and STAR

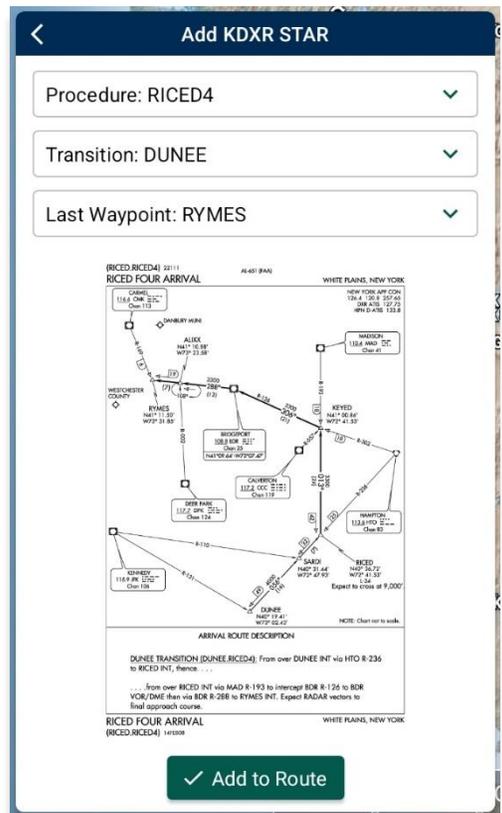
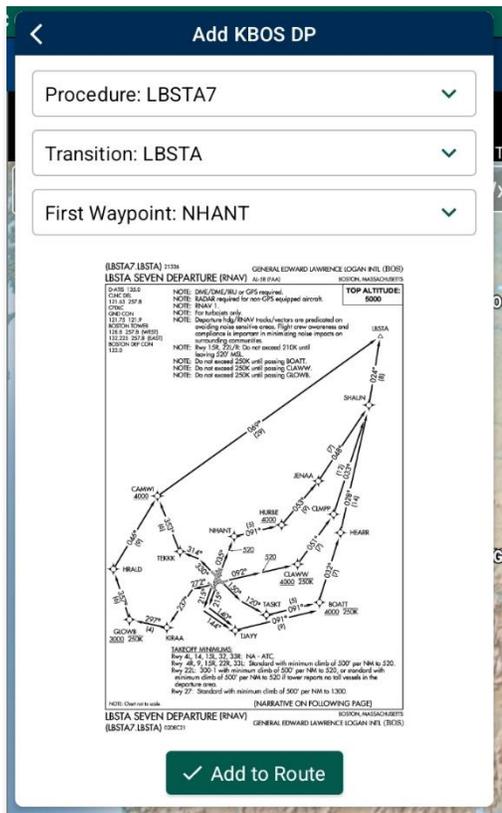
Aero App allows users to select a preferred route containing DPs or STARs, if applicable.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Ensure that a route is loaded in the Route Panel.
3. Tap **Route Manager**.
4. Select **Add** from the side menu.
5. Tap **Preferred Route**.
6. A list of preferred routes will be displayed. Select a desired route.



7. Select **DP** or **STAR**, if applicable.

8. Tap **Add to Route** when selections are completed.



9. A Preferred Route dialog box will appear. Tap **Use Preferred Route** a new route will apply to your flight route.



NOTE: The Preferred Route option will be disabled if there are no available preferred routes.

14.1.3.2.3 Add Search and Rescue (SAR) Pattern

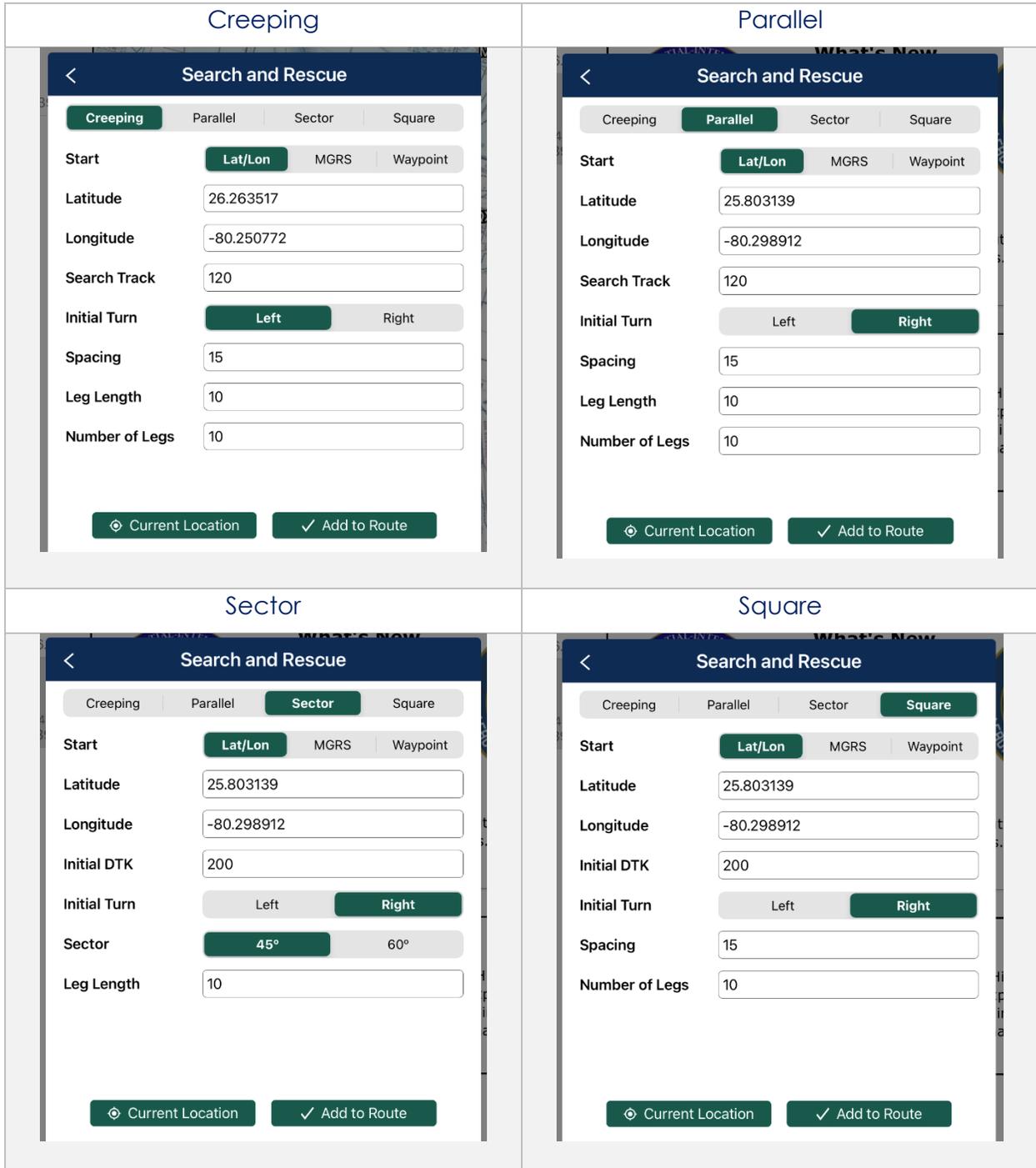
Search and Rescue (SAR) provides pilots and rescue missions with search patterns within a specified area. These search patterns, such as creeping, parallel, sector, and square are displayed on the Map and can be added to the current route.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Add** from the side menu.
4. Tap **SAR**.
5. Tap to select or slide the segmented control to **Creeping, Parallel, Sector, or Square**. Respective to the selection, different fields will be available to specific *Pattern* options.

SAR Patterns

6. Tap to select or slide the segmented control to **Lat/Lon, MGRS, or Waypoint**.
7. Users can tap **Current Location** (GPS required) to set their current position as the coordinates or manually enter them in the Latitude and Longitude fields.
8. All fields are required; therefore, all fields must be filled.

9. Add to Route will become selectable once all required fields are filled. Tap **Add to Route**.



14.1.3.3 Send

The Send menu offers the Flight Plan feature which can be filed directly from Aero App.

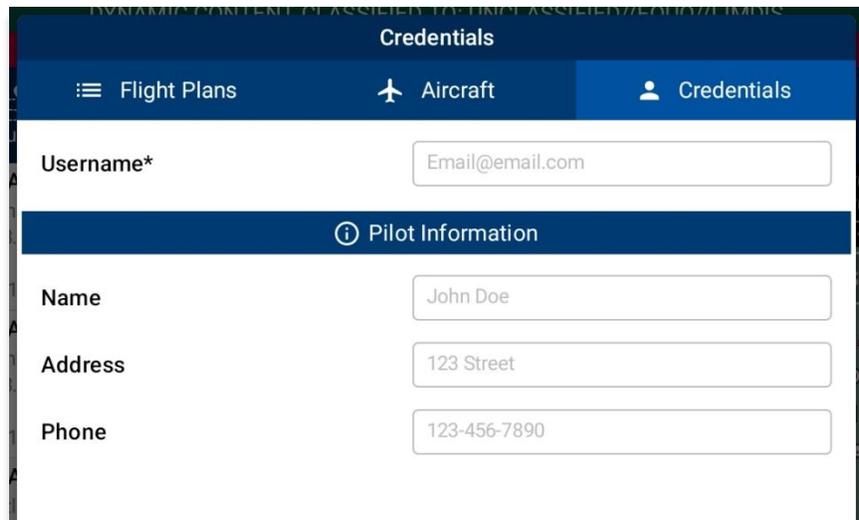
14.1.3.3.1 Flight Plans

Aero App allows users to access filed flight plans, file a new flight plan, and add or edit Aircraft information providing ease of access when filing a new flight plan. In addition, users can enter or update their Flight Service credentials. This feature is available to only FAA and DOD users.

14.1.3.3.1.1 Credentials

Users must possess Flight Service credentials to file a flight plan. Users must log in to their Flight Service account prior to filing a flight plan. Refer to [Section 6.3](#) for additional information.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Select **Credentials** from the navigational bar.
6. Tap **Edit** on the bottom of the Credentials view and the text boxes will become selectable.



The screenshot displays the 'Credentials' screen in the Aero App. At the top, there is a dark blue navigation bar with three tabs: 'Flight Plans' (with a hamburger menu icon), 'Aircraft' (with an airplane icon), and 'Credentials' (with a person icon). Below the navigation bar, the 'Credentials' section is visible. It starts with a 'Username*' label followed by a text input field containing 'Email@email.com'. Below this is a section header 'Pilot Information' with an information icon. Underneath, there are three more text input fields: 'Name' containing 'John Doe', 'Address' containing '123 Street', and 'Phone' containing '123-456-7890'.

- To associate your filings with your flight service account, enter your Flight Service username in the username text box.

Credentials

Flight Plans Aircraft Credentials

Username* testing@hiltonsoftware.com

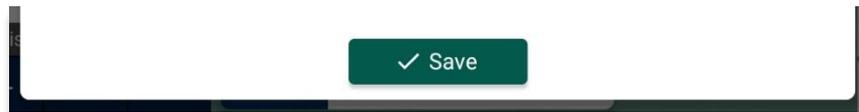
Pilot Information

Name Marisa James

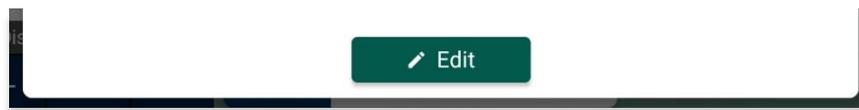
Address 1111 nw st

Phone 9543232244

- Tap **Save** once the necessary fields are filled.



- Tap **Edit** to modify the information entered.



NOTE: Pilot information is required to file a flight plan. The information entered in the Pilot Information section will pre-populate on a new flight plan form.



NOTE: Pilot information cannot be modified when filing a new flight plan. Therefore, any changes to the pilot information must be made on the Credentials page.

14.1.3.3.1.2 New Aircraft

Users can save aircraft information for ease of access when filing a flight plan.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Select **Aircraft** from the navigational bar.
6. From the Aircraft view, tap **+ New**, located at the bottom of the screen, and the **Aircraft** form will appear.
7. Fields will contain hint text in each text box, and others may include an ellipsis button that displays other available options to choose from.



NOTE: Asterisks denote required fields.

8. Once the fields are filled, tap **Save**.

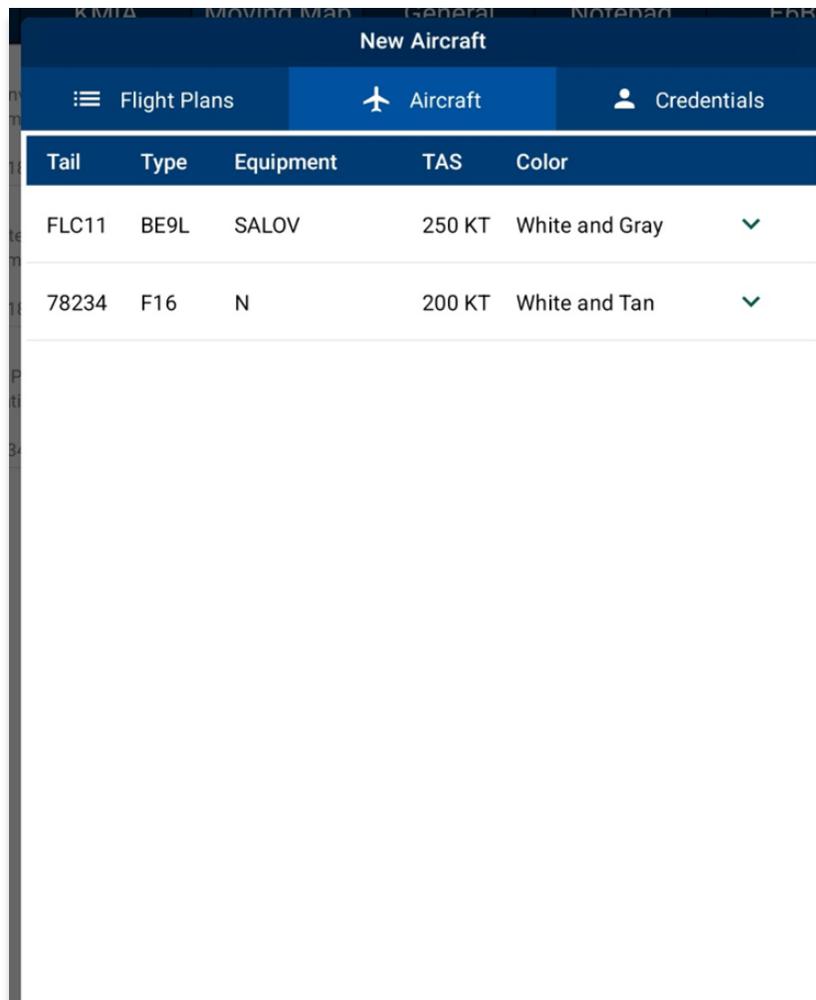
9. Your aircraft will be added to the Aircraft screen.

Tail	Type	Equipment	TAS	Color	
FLC11	BE9L	SALOV	250 KT	White and Gray	▼
78234	F16	N	200 KT	White and Tan	▼

14.1.3.3.1.3 Aircraft

Users can view previously saved aircraft information such as its tail number, type, equipment, true airspeed, and color.

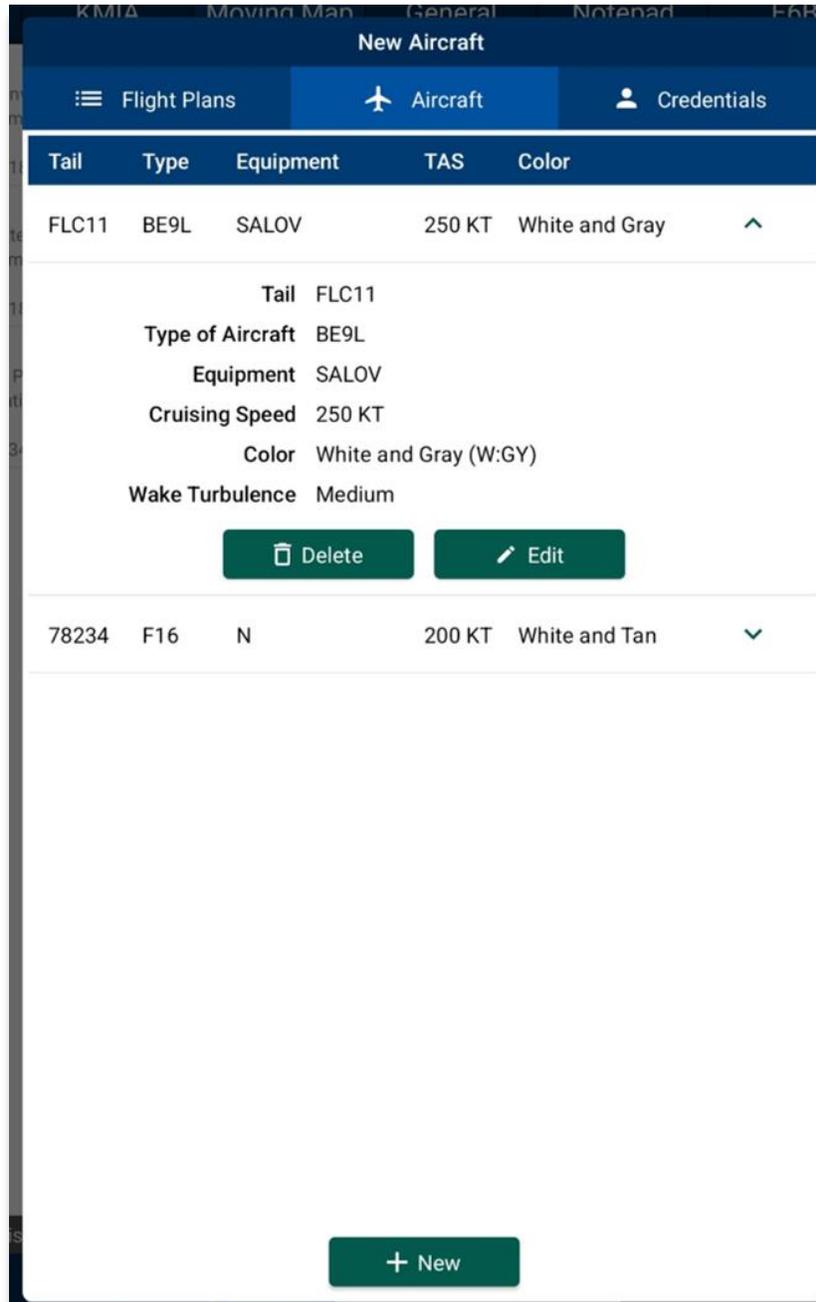
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Select **Aircraft** from the navigational bar.
6. The Aircraft table will appear listing all the saved aircraft.



The screenshot shows a mobile application interface titled "New Aircraft". At the top, there is a dark blue header with the title "New Aircraft". Below the header is a navigation bar with three items: "Flight Plans" (with a hamburger menu icon), "Aircraft" (with an airplane icon and highlighted in blue), and "Credentials" (with a person icon). Below the navigation bar is a table with the following columns: "Tail", "Type", "Equipment", "TAS", "Color", and a dropdown arrow. The table contains two rows of data:

Tail	Type	Equipment	TAS	Color	
FLC11	BE9L	SALOV	250 KT	White and Gray	▼
78234	F16	N	200 KT	White and Tan	▼

7. Tap the drop-down arrow to expand your aircraft information.
8. Tap **Edit** to modify an aircraft.
9. Tap **Delete** to remove an aircraft.



NOTE: Predefined aircraft, such as those obtained directly from the FAA, cannot be modified. Therefore, the **Delete** and **Edit** buttons will be disabled.

14.1.3.3.1.4 New Flight Plan

Users can file flight plans directly from Aero App.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Tap **+ New** and the **New Flight Plan** form will appear.
6. The form is broken up into sections for *Aircraft*, *Route*, *Supplementary Information*, *Dinghies*, and *Additional Information*.
7. Fields will contain hint text in each text box, and others may include an ellipsis button that displays other available options to choose from.



NOTE: Users can auto-fill aircraft information by tapping the ellipsis icon in the Aircraft field and selecting a saved aircraft.



NOTE: Asterisks denote required field.

- Once the fields are filled, tap **Send**, located at the bottom of the view, to file your flight plan.

New Flight Plan ✓ Save Form

Flight Plans Aircraft Credentials

Aircraft

Tail* 78234

Flight Rules* IFR **VFR**

Type of Flight* G

Number of Aircraft 1

Type of Aircraft* F16

Wake Turbulence* **Light** Medium Heavy Auto

Equipment* N

Surveillance Equipment* A

Route

Departure* KMIA

Departure Time (Zulu)* 10 Jun 2024 1924z

Cruising Speed* 250 **Knots** Mach

Level/Altitude* 14500 **VFR**

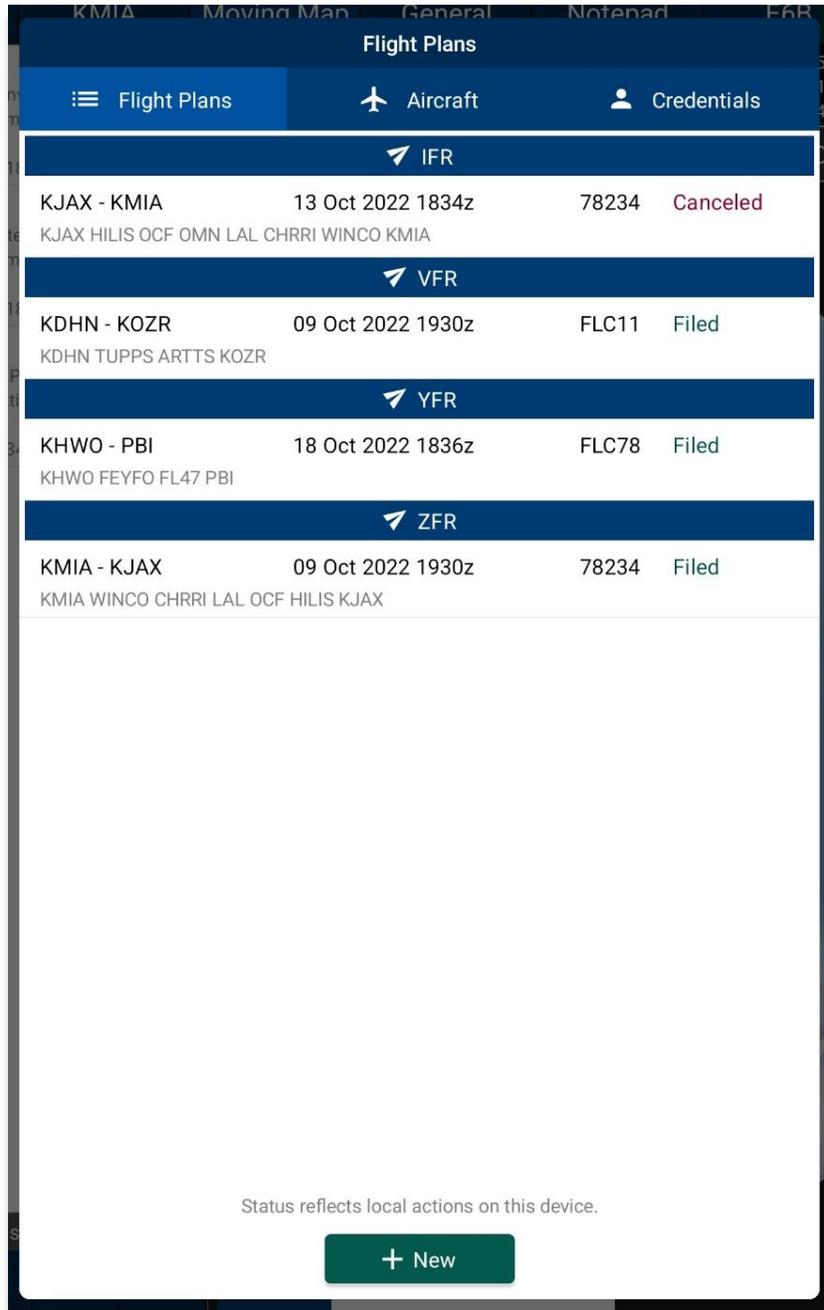
Route WINCO CHRRI LAL OCF HILIS

Destination* KJAX



NOTE: The Save Form button placed on the header of the Flight Plan form saves any entered data for ease of access upon returning to the screen. Aero App will automatically save entered data whenever the view has accidentally been closed.

- 9. Your filed flight plan will appear on the Flight Plans view previewing your flight information such as the entire route, the entered departure time in which the flight plan was filed, the aircraft's tail number, and the status of the plan.



NOTE: Users must enter credentials prior to filing a flight plan.

14.1.3.3.1.5 Flight Plans

By default, the Flight Plans page will be the initial view to users. Filed flight plans are organized and displayed based on IFR and VFR categories. Aero App no longer supports YFR and ZFR flight rule options. If users had previously filed a YFR or ZFR flight plan and choose to file a new Flight Plan, a message will appear. The message notifies users that the YFR and ZFR flight rules are no longer available, and the IFR flight rule will be automatically selected. Each filed flight plan includes a preview of the route, the entered departure time when the flight plan was filed, the aircraft's tail number, and the plan's status.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear and display a table containing the list of all filed flight plans. Select your desired filed flight plan.

Flight Plans			
Flight Plans	Aircraft	Credentials	
IFR			
KJAX - KMIA	13 Oct 2022 1834z	78234	Canceled
KJAX HILIS OCF OMN LAL CHRRR WINCO KMIA			
VFR			
KDHN - KOZR	09 Oct 2022 1930z	FLC11	Filed
KDHN TUPPS ARTTS KOZR			
YFR			
KHWO - PBI	18 Oct 2022 1836z	FLC78	Filed
KHWO FEYFO FL47 PBI			
ZFR			
KMIA - KJAX	09 Oct 2022 1930z	78234	Filed
KMIA WINCO CHRRR LAL OCF HILIS KJAX			

6. The Filed Flight Plan view will display with your flight plan information. Tap the hamburger button and the Actions menu will display with the following options:
- **Activate** – initiates the filed flight plan
 - **Close** – closes previously activated flight plan
 - **Cancel** – dismisses the flight plan
 - **New** – redirects view to the New Flight Plan screen
 - **Delete** – permanently removes the filed flight plan from the table

The screenshot displays the 'Filed Flight Plan' view for a flight from KMIA to KJAX (VFR) on 17 Jun 2024 2018z. The interface is divided into sections: Aircraft, Route, and Supplementary Information. The 'Actions' menu is open, showing options: Flight Service, Activate, Close, Cancel, Aero App, New, and Delete. A label 'Hamburger button' points to the menu icon in the top right corner.

Aircraft	
Tail	78234
Flight Rules	VFR
Type of Flight	G
Number of Aircraft	1
Type of Aircraft	F16
Wake Turbulence	MEDIUM
Equipment	N
Surveillance Equipment	A

Route	
Departure	KMIA
Departure Time (Zulu)	17 Jun 2024 2018z
Cruising Speed	250 kt
Level/Altitude	VFR14500
Route	WINCO CHRRI LAL OCF HILIS
Destination	KJAX
Total EET	0100
Alternates	N/A
Other Info	N/A

Supplementary Information	
Endurance	0130
Persons On Board	2
Emergency Radio	N/A
Survival Equipment	N/A
Jackets	N/A



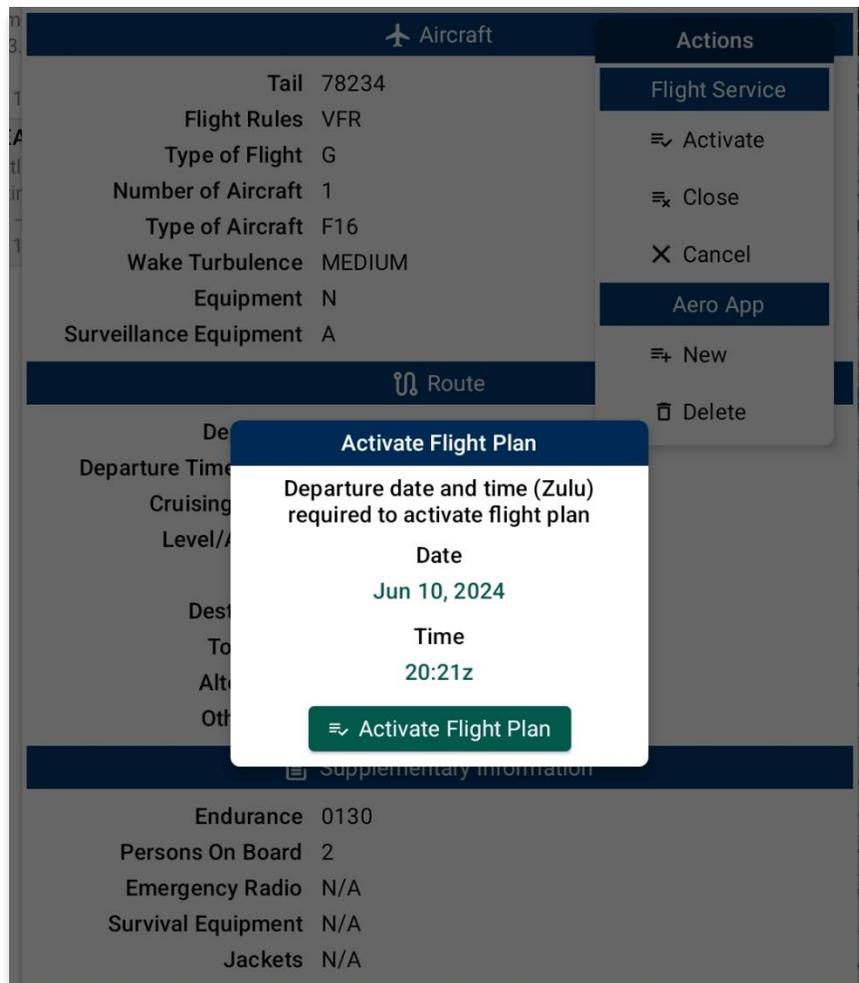
NOTE: Flight Plans such as IFR and YFR cannot be activated. However, IFR and YFR can be canceled.

14.1.3.3.1.5.1 Actions for Filed Flight Plan

Actions for Filed Flight Plan provides operations such as the ability to Activate, Close, and Cancel the pilot's filed Flight Plan directly from Aero App. The request to Activate, Close, and Cancel will reflect the Flight Service provider, but actions made through the provider will NOT reflect on Aero App.

Additional options such as New and Delete are used to file a new Flight Plan or delete the selected plan. When selecting New, the selected plan's information will populate onto the new Flight Plan form.

1. Tap the **hamburger** button to display the Actions Menu.
2. To initiate the flight plan, tap **Activate**.
3. The Activate Flight Plan popup will display. Select the **departure date and time** (Zulu) in which you would like to activate the flight plan.
4. Tap **Activate Flight Plan** once completed.

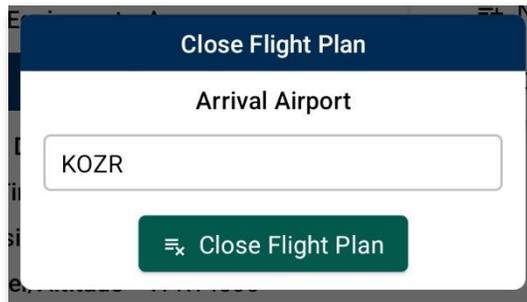


5. To close the flight plan, tap **Close**.



NOTE: The flight plan must be activated in order to close the plan.

6. The Close Flight Plan popup will display. Enter the **arrival airport** of your flight plan. The nearest airport will be suggested as the arrival airport. To remove the suggested airport, tap the text box and enter desired arrival airport.
7. Tap **Close Flight Plan** to confirm the action.



8. To dismiss the flight plan, tap **Cancel**.



NOTE: A flight plan can only be cancelled if it has not yet activated.

9. The Cancel Flight Plan popup confirmation will be displayed. Tap **Cancel Flight Plan** to confirm action.
10. Tap outside of the popup to cancel the action.



11. To create a new Flight Plan, tap **New**.
12. Users will be redirected to the New Flight Plan's form. The selected Flight Plan's information will populate onto the form.

New Flight Plan ✓ Save Form

Flight Plans Aircraft Credentials

Aircraft

Tail* 78234 ...

Flight Rules* IFR VFR

Type of Flight* G ...

Number of Aircraft 1

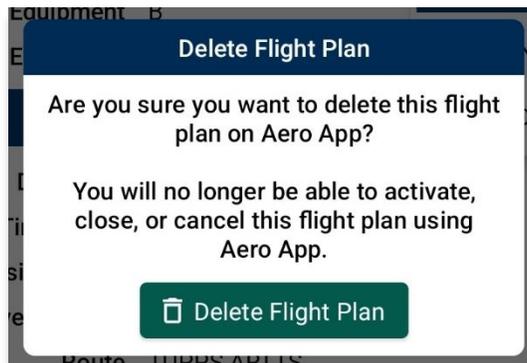
Type of Aircraft* F16

Wake Turbulence* Light Medium Heavy Auto

Equipment* N ...

Surveillance Equipment* A ...

13. To permanently remove the flight plan from Aero App, tap **Delete**.
14. The Delete Flight Plan popup confirmation will be displayed. Tap **Delete Flight Plan** to confirm action.
15. Tap outside of the popup to cancel the action.



14.1.3.4 Show

The Show menu offers the following options and will be further elaborated in the sections below:

- Doghouses
- Dropped Pins
- Dropped Hazards
- Point Shapes
- Routes
- User Waypoints
- Route Line Transparency

14.1.3.4.1 Doghouses

Doghouses display route information such as the next point, heading, distance, time (MM+SS), and time ahead/behind/on schedule in order from top to bottom. Doghouses can display when entering Airports, Coordinates, MGRS, GARS, and Radial Off NavAids.

Once the Doghouses feature is enabled, doghouses will populate on the Map for each point of the active route. The doghouses will disappear once your ownship passes a point on the active route.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Tap **Show** from the side menu.
4. Tap **Doghouses**.
5. From the *Doghouses* popup, enable **Show Doghouses**.
6. Tap on the **Time on Target** time selection and scroll through the time format until desired time is met using the format of hh:mm:ss.

7. Tap on the **Groundspeed** text box and enter your groundspeed in knots.

Enable Doghouses

ETD in Zulu time

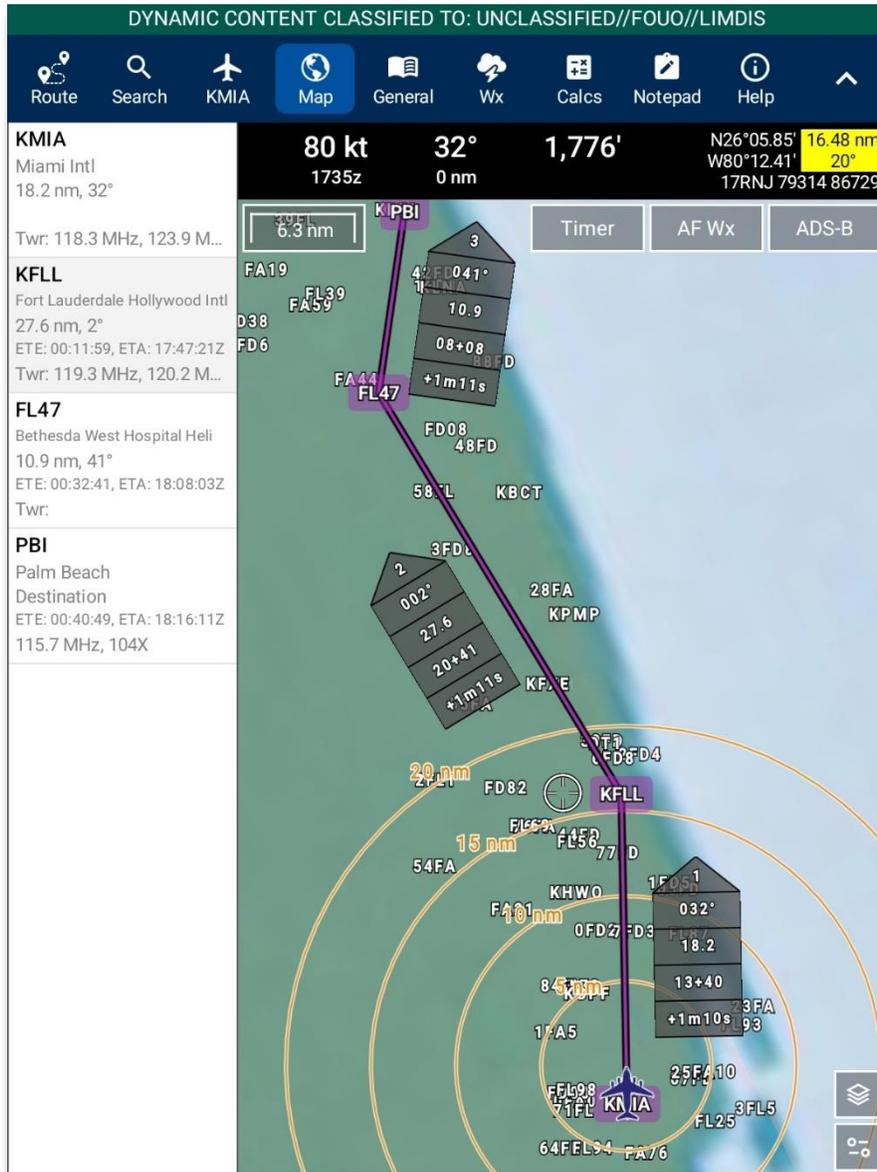
Waypoint	ETE	ETA
KFL	00:13:40	17:01:11z
FL47	00:20:41	17:21:52z
PBI	00:08:08	17:30:00z



NOTE: Entering a decimal number in the Groundspeed field will trigger an error message.

8. The Estimated Time of Departure (ETD) will adjust based on the entered values in Time on Target and Groundspeed fields. Your ETD will be calculated in Zulu time.

- Tap outside of the Doghouses popup and Doghouses will populate on the Map.



NOTE: Users may need to zoom in at least 40 miles to view Doghouses.

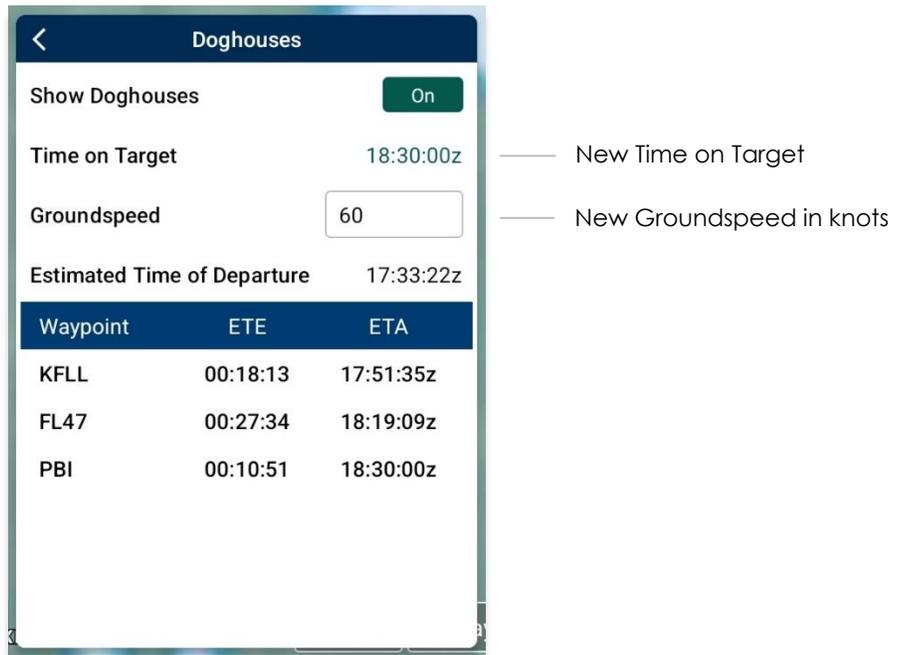


NOTE: If users are behind, ahead, or on schedule, the field below your fixed time will display the calculated difference of the time that was entered for your set time following the format **+/- {Minutes}m{Seconds}s**. If the calculated differences are an hour behind or ahead, the format will be **> + {Hours}h** or **> - {Hours}h**. If the user is on schedule, it will display **"0"**.

14.1.3.4.1.1 Edit Doghouses

Users can adjust their time on target and groundspeed. The fields such as your fixed time, ETA/ETE, and the calculated differences will automatically update to the new values.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **Doghouses**.
5. From the Doghouses popup, tap the **Time on Target** time selection and scroll through the time format until the new desired time is met using the format of hh:mm:ss.
6. Tap on the **Groundspeed** text box and enter your new groundspeed in knots.



7. The Estimated Time of Departure will adjust based on the entered values in the Time on Target and Groundspeed fields.
8. Tap outside of the Doghouses popup and the Doghouses will recalculate based on the adjusted time and groundspeed.



NOTE: Alternatively, users can tap on the Doghouses displayed on the Map to view the Doghouses popup.

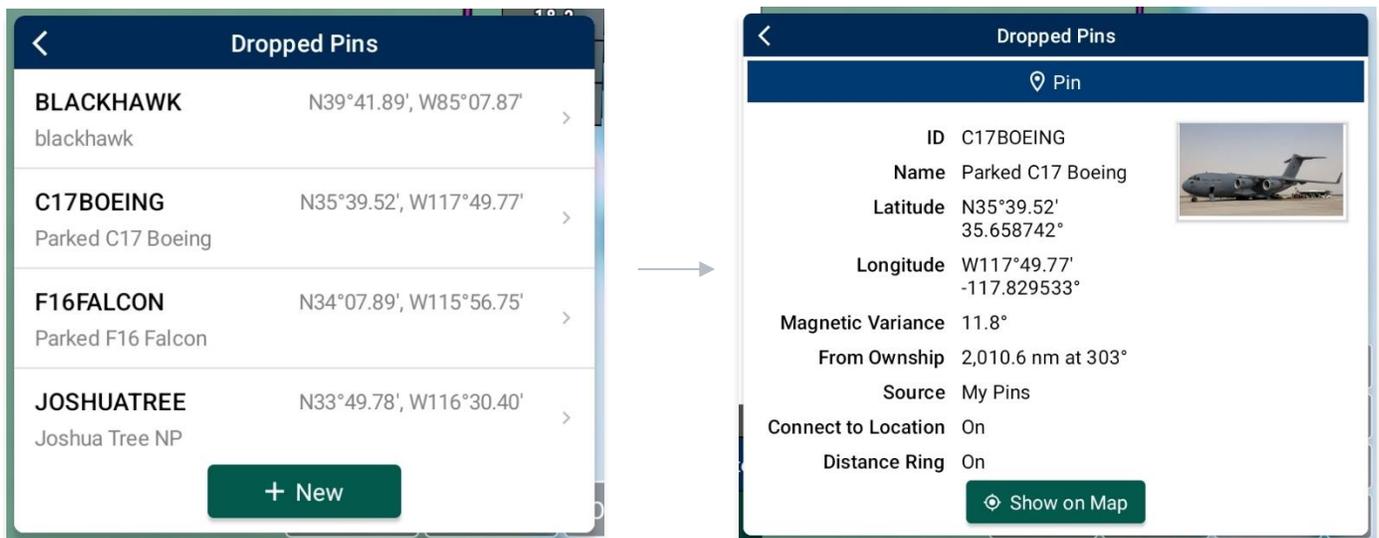
14.1.3.4.2 Dropped Pins

Dropped Pins is a collection of pins that were dropped by users. Each pin contains information regarding the pin such as its ID, Name, Latitude, Longitude, Magnetic Variance, From Ownship, Source, Notes, and any associated attachments.

Certain pins such as Avoidance Point and Pin, may contain additional information such as Connect to Location, Distance Rings, Radius, and Alert on Intersection.

Aero App enables users to drop new pins directly from the Dropped Pins screen. Tap **+** **New** and follow the prompts. Refer to [Section 14.4.12.1.3](#) for additional information.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **Dropped Pins**.
5. A collection of dropped pins will appear. Tap on desired pin.
6. Dropped Pins popup will display information pertaining to the selected pin.



7. Tap **Show on Map** and the map view will pan to the location of the dropped pin.



NOTE: To view the dropped pins on the Map, users must enable Pins from the Overlays menu. Refer to [Section 14.4.5.2.1.17](#) for additional information. This is exclusive to Avoidance Point, Emergency Marker, Landmark, and Pin. Refer to [Section 14.4.5.2.1.25](#) for Photo Pins.



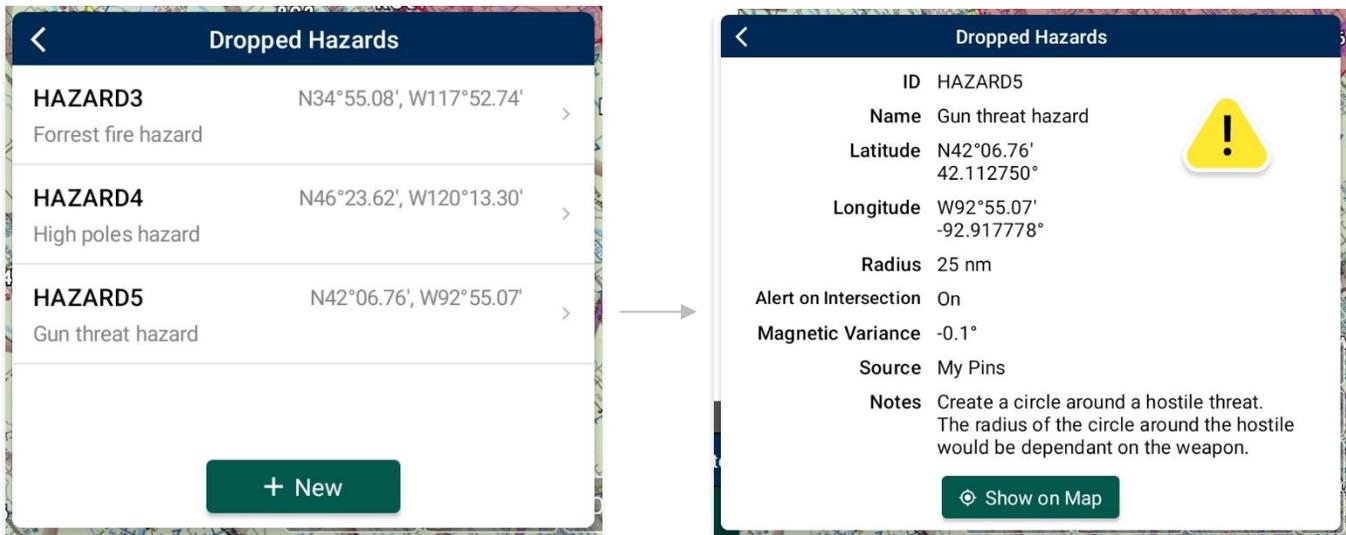
NOTE: Users can add pins to their route. Refer to [Section 14.4.12.1.3.5.1](#) for additional information.

14.1.3.4.3 Dropped Hazards

Dropped Hazards is a collection of hazards that were dropped by users. Tapping a hazard on the Dropped Hazards list will display information such as its ID (auto-generated by Aero App), Name, Latitude, Longitude, Radius, Alert on Intersection, Magnetic Variance, Source, and Notes.

Aero App enables users to drop a new hazard directly from the Dropped Hazards screen. Tap **+ New** and follow the prompts. Refer to [Section 14.4.12.1.4](#) for additional information.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **Dropped Hazards**.
5. A collection of dropped hazards will appear. Tap on desired hazard.



6. Tap **Show on Map** and the map view will pan to the location of the dropped hazard.



NOTE: To view the dropped hazards on the Map, users must enable Hazards from the Overlays menu. Refer to [Section 14.4.5.2.1.12](#) for additional information.

14.1.3.4.4 Point Shapes

Aero App offers Point Shapes which are used to track individual points of the pilot's flight path. Point shapes include triangles, squares, and circles, respective to the number of points that pilots have in their current route.

The following scenarios are displayed below:

- **6 or more points:** The first and last points display triangles, second and second to last points display squares, and points between the second and second to last points display circles.
- **3-4 points:** The first and last points display triangles, second and second to last points display squares, and no circles will display.
- **1-2 points:** The first and last points display triangles, and no squares or circles will display.

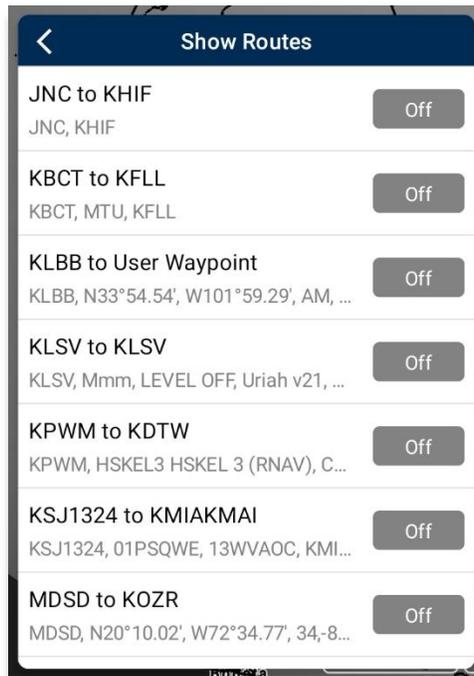
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **Point Shapes** to enable the option.
5. The respective point shapes will appear on the Map.



14.1.3.4.5 Routes

The Routes feature displays a collection of imported routes including CRD, JSON, and KML/KMZ files, and routes saved directly on Aero App to display on the Map. Multiple routes can simultaneously be displayed on the Map.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **Routes**.
5. A list of saved routes will be shown below. Tap to enable the desired route to display on the Map. The enabled route will move to the top of the Show Routes list.



NOTE: Selecting a route file that exceeds the 200 KB limit will trigger an error message.

- Multiple routes can be simultaneously shown on the Map, displayed in different colors. If you have a current route in the route panel, the route will show in a magenta line.

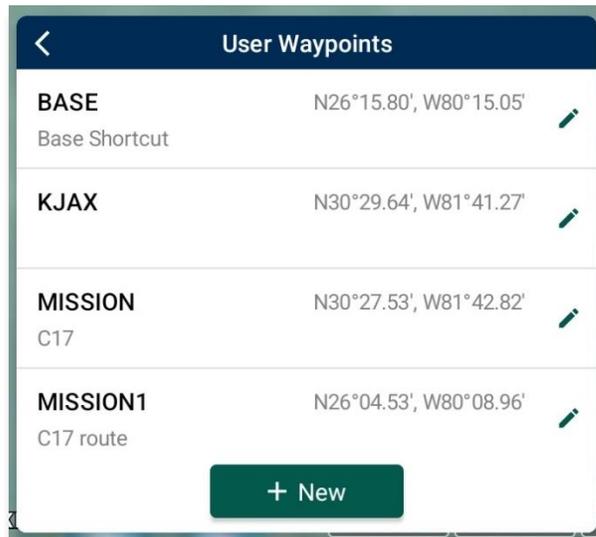


14.1.3.4.6 User Waypoints

User Waypoints are a collection of waypoints that were created by users through Aero App. Each waypoint contains information such as its ID, Name, Latitude, and Longitude.

Aero App enables users to create User Waypoints directly from the User Waypoints screen. Tap **+ New** and follow the prompts. Refer to [Section 14.4.12.1.1](#) for additional information. Alternatively, users can sideload User Waypoints. Refer to [Section 11.4](#) for additional information.

1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Tap **User Waypoints**. A list of User Waypoints will be shown.



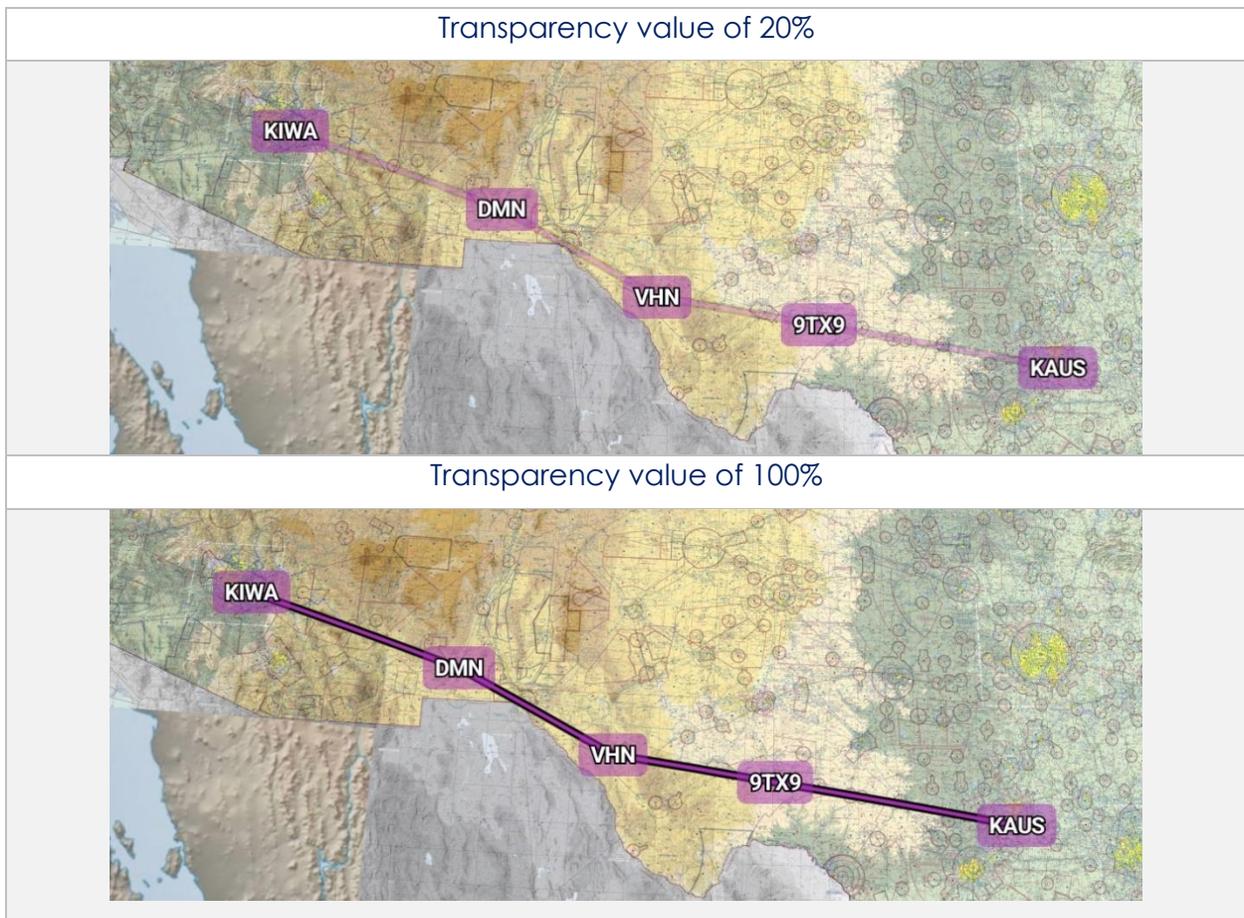
Aero App allows users to modify their user waypoints directly on the User Waypoints view.

5. Tap on the **pencil icon** of the user waypoint that you wish to modify.
6. Tap on the field that you wish to change and enter new values.
7. Tap **Save** and your changes will be saved.

14.1.3.4.7 Route Line Transparency

Route Line Transparency allows users to adjust the translucency of their flight path displayed on the Map view.

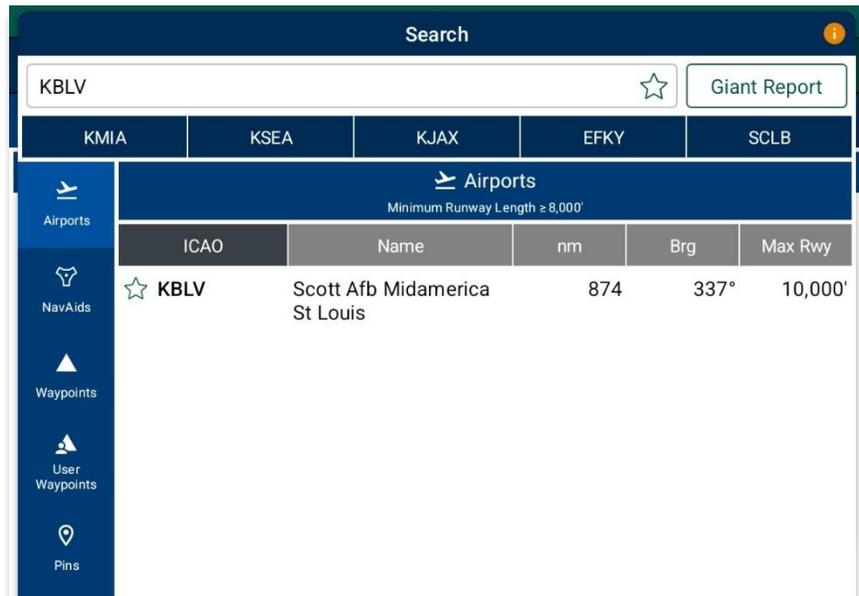
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Tap **Route Manager**.
3. Select **Show** from the side menu.
4. Navigate to the Route Line Transparency slider.
5. By default, the Route Line Transparency value is set to 50%. Drag the slider to adjust the route transparency to any value between 20% to 100%.



14.2 Search

The Search menu is located on the Main Menu. Users can search by identifier (i.e., Airport, Waypoint, User Waypoint, or Pins) or its search term. Users can filter airports by setting a minimum runway length in their Settings. Once an identifier or search term has been selected, it will become the Active Point. Options such as the identifier overview, diagrams, charts, weather, and other supporting sources are available to view.

1. Tap **Search** on the **Main Menu**.
2. The Search popup will appear. Tap the **text box** to open your device's keyboard.
3. Enter an identifier (i.e., Airport, Waypoint, User Waypoint, or Pins) or search term.
4. The search results are divided into identifier types. Select from Airports, NavAids, Waypoints, User Waypoints, or Pins.

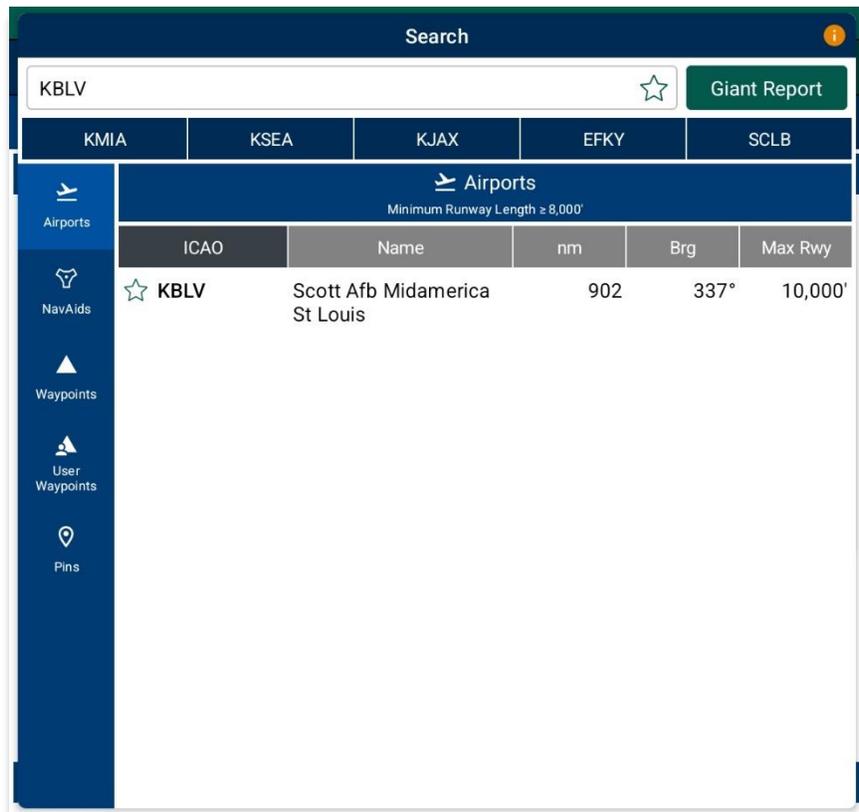


NOTE: The Search view will display the most recent five searches, excluding NavAids and Waypoints.

14.2.1 Giant Report

Aero App allows users to search an airport's Giant Report, Giant Report data must be downloaded and active to view the PDF.

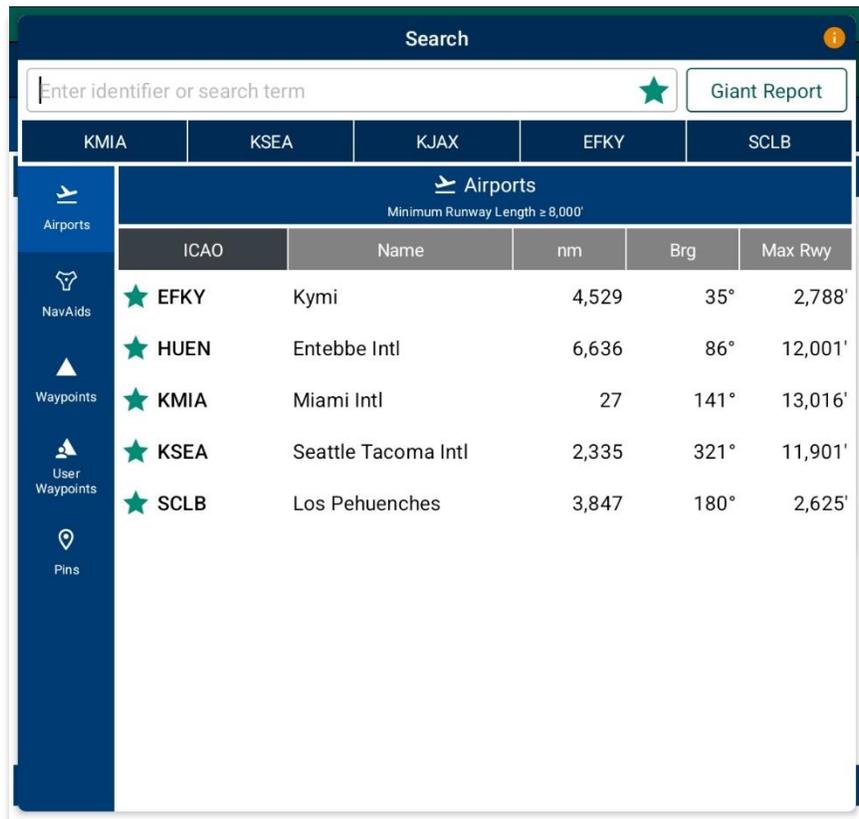
1. Tap the **Giant Report** button to enable the option.
2. Enter a desired identifier or search term in the search text box.
3. Select desired airport. The Giant Report document will open.



14.2.2 Add an Identifier to Favorites

Aero App allows users to add identifiers such as Airports, NavAids, and Waypoints to their *Favorites* list.

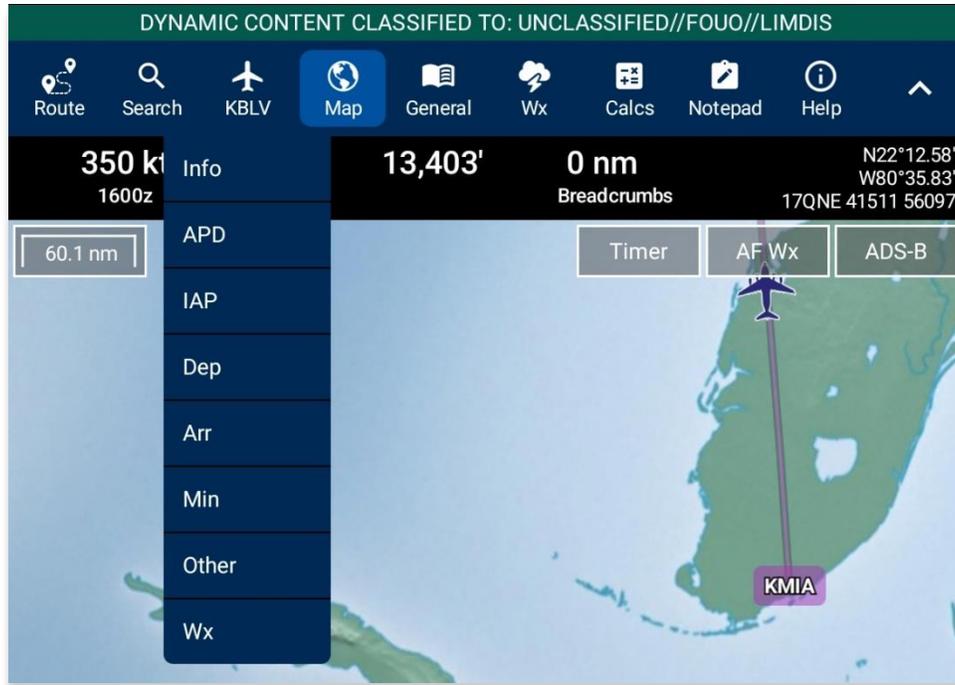
1. Enter a desired identifier in the search text box.
2. After three characters are entered, an auto search will begin. Locate desired identifier that you wish to add to *Favorites*.
3. Tap the **Star** located next to the identifier; the Star will convert to green.
4. To remove an identifier from *Favorites*, tap the **Star** for the second time and the identifier will be removed from *Favorites*.
5. To view all identifiers marked as favorite, remove all characters from the search box then tap the **Star**. The Favorites list will display respective to the identifier type that was selected (e.g., Airports, NavAids, and Waypoints).



NOTE: Users can add their desired identifiers to *Favorites* directly from Add to Route, Active Point search, or Move Map to Location features.

14.3 Active Point

The Active Point is located on the Main Menu and is activated once an identifier or search term is searched. When conducting an ICAO search, a drop-down menu will display, offering options to view airport Info, APD, IAP, Dep, Arr, Min, Wx, and other relevant charts and documents corresponding to the ICAO being searched.



14.3.1 Identifier Information

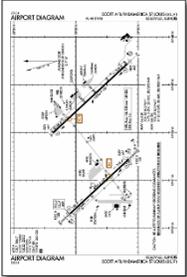
The Info submenu displays detailed airport information of the searched airport. Airport information includes General Information, AQPs, Communications, Runways, and Remarks. The Airport Diagram, Chart Supplement, Giant Report, and Host Nation options are in the General Information section.

General and other relevant information for identifiers such as NavAids, Waypoints, and User Waypoints are available to users. Global is required to access identifier information.

The Info page can be viewed in various locations within Aero App. Users can tap the Active Point on the Main Menu or the Route Panel, or by simply pressing a point on the Map view.

General Information contains the identifier summary searched ICAO, name, location, region, elevation, latitude, longitude, magnetic variance, and more. The General Information section may include accessibility to Airport Diagram, Chart Supplement, Giant Report, and Host Nation, respective to the selected identifier. To view charts and Giant Report data, users must download the respective region files, Global, and Giant Report data.

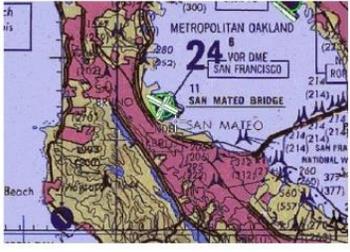
General Information

ICAO KBLV	
Name Scott AFB Midamerica St Louis	
Location Belleville, Illinois United States	
Region CONUS	
Elevation 459'	
Latitude N38°32.71' 38.545178°	
Longitude W89°50.11' -89.835211°	
Magnetic Variance -2.2°	
Rot Beacon Yes	
Arresting Gear No	
Chart Supplement Yes	Chart Supplement Giant Report Host Nation
In DAFIF Yes	
Giant Report Yes (2024-03-10)	

Airport Qualification Program (AQP) is available for select airports.

AQP

Mountainous terrain

Communications includes tower frequencies, remarks, and call signs for the selected airport.

Communications

126 ARW COMD POST	138.55, 277.7
375 AMW COMD POST	139.9, 349.4
ATIS	128.7, 256.7
	Opr 1200-0600Z++.
CLNC DEL	119.875, 263.025
GND	119.2, 275.8

Runways contain airport runway information such as the runway dimensions, surface, condition, PNC, LCN, and more.

/\ Runways			
Runway 14L/32R			
Dimensions	10,000' x 150'		
Surface	Concrete		
Condition	Good		
PCN	82		
LCN	108		
Runway 14L		Runway 32R	
Heading	138.0° magnetic 136.6° true	Heading	318.0° magnetic 316.6° true
TDZE	442'	TDZE	442'
Latitude	N38°33.37' 38.556197°	Latitude	N38°32.18' 38.536261°
Longitude	W89°50.01' -89.833494°	Longitude	W89°48.57' -89.809456°

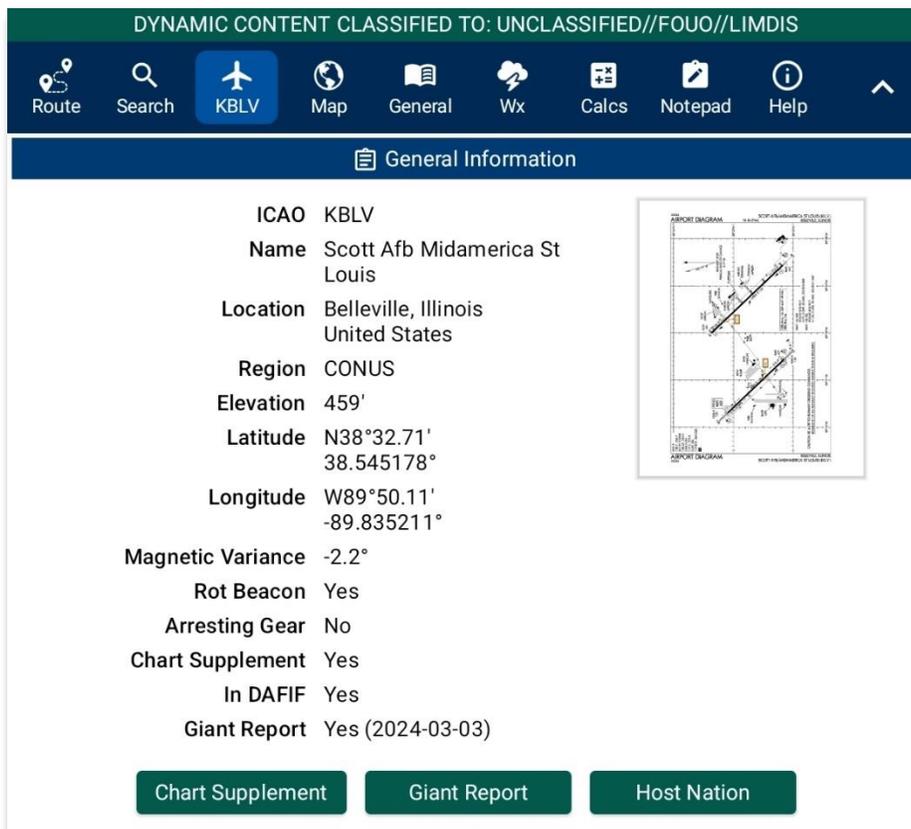
Remarks provides airport conditions, fuel type, and other cautionary advice.

Remarks
<p>CAUTION Dense civ air tfc all quad, all alt. Unexpected bumps occur on Twy G btn rwys when crossing bridges and tunnels. Use min speed when opr in area. Use caution when utilizing Twy G, 0.25 NM E of Rwy 14R-32L int, grad chg of 3° and a 70° turn present. On coming tfc may not be vis due to terrain. Bird and wildlife haz.</p>
<p>CSTM/AG/IMG NAV CSTMS avbl. Ctc base OPS 72 hrs prior to exp arr to coord. Civ acft must be cleared by US CSTMS if given a min 72 hr ntc prior to acft arr.</p>
<p>FLUID SP(Mil) PRESAIR(Mil) LHOX(Mil) LOX(Mil)</p>
<p>FUEL A++(Mil) 100LL A+; Scott AFB fuel svc avbl 1100-0500Z++, OT rqr 1 hr PN.</p>
<p>JASU 6(A/M32A-86) 3(AM32-95)</p>
<p>LGT Train track lctd approx 1650' fr displ thld of Rwy 32L; Rwy 32L APP lgt interrupted by passing train.</p>

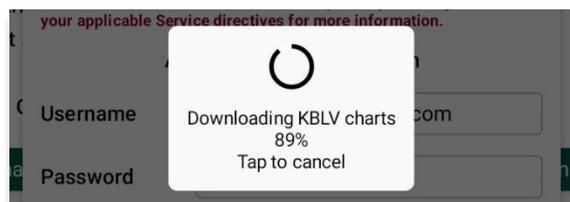
14.3.1.1 Download Host Nation Charts

Users are required to possess an ASPS account to utilize the Host Nation feature. Users must log in to their ASPS account to download charts. Refer to [Section 6.4](#) for additional information.

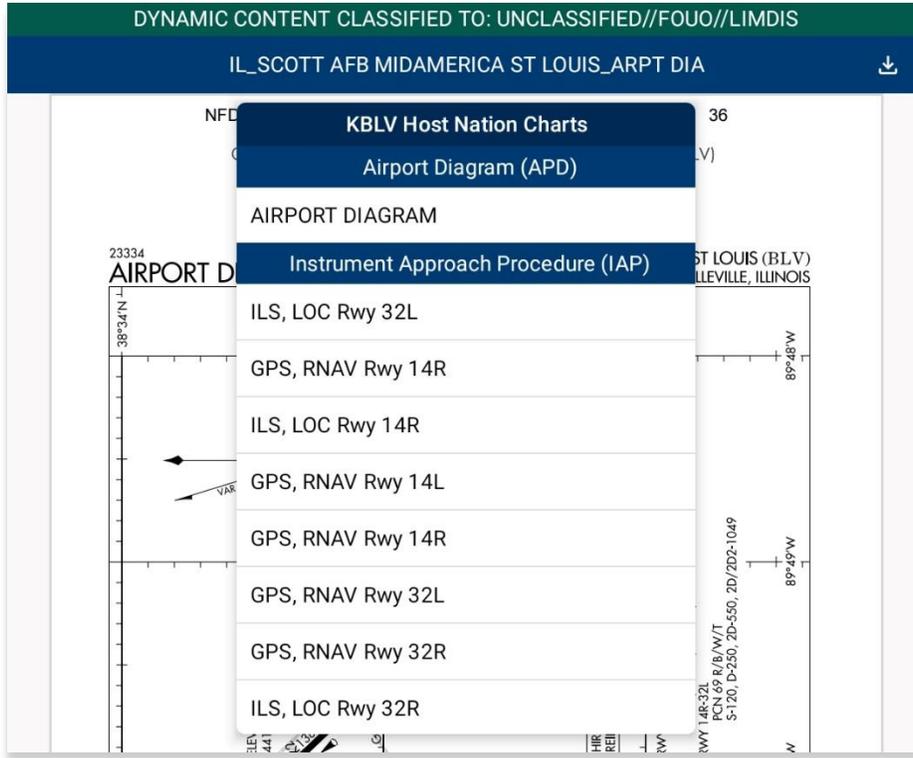
1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Info**.
4. Tap **Host Nation** in the *General Information* section.



5. Log in with your ASPS credentials.
6. Once credentials are entered, the Host Nation chart for your airport of choice will begin to download.



- Once the download is complete, the screen will switch to the chart view. Tap on the ribbon located at the top of the screen.
- The chart selection popup will appear. Select desired chart to display.



- Users have the option to redownload the charts to view the latest version by tapping the download button.



NOTE: Host Nation chart downloads can be managed through Aero App's File Manager.



NOTE: The downloaded Host Nation charts can be viewed on the Host Nation page.

14.3.2 Airport Chart Options

Users can view Airport charts including Airport Diagram (APD), Instrument Approach Procedure (IAP), Departure Procedure (Dep), Arrival Procedure (Arr), Alternate Minimums/ RADAR Minimums/ Takeoff Minimums (Min), Other – which includes special procedures and RNAVs among others, and Host Nation charts. Tap the Active Point Menu to display additional airport options.

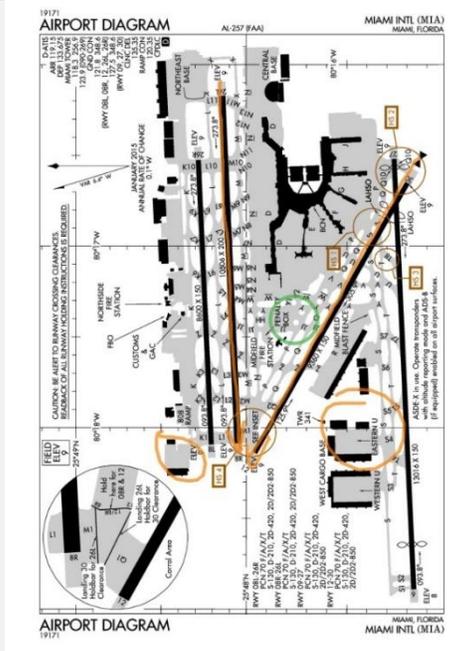


NOTE: The additional airport options are exclusive to airports only.

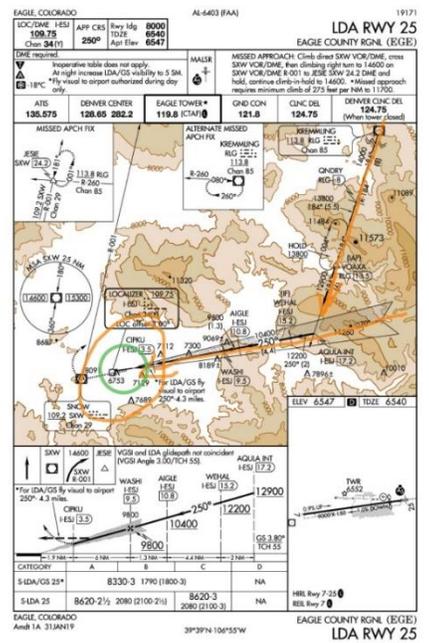
1. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
2. Select desired chart type. The selected chart will display.
3. Tap on the **ribbon** to display the full list of available chart options.



Airport Diagram (APD)



Instrument Approach Procedure (IAP)



14.3.2.1 Draw on Airport Diagram (APD) and Instrument Approach Procedure (IAP) Charts

The Draw on APD and IAP feature allows you to freely make markings on your desired chart(s) to highlight a specific location or element.

1. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
2. Select **APD** or **IAP** and selected airport chart will display.
3. Tap the **pencil icon** on the top left of the view to activate the drawing tool. The pencil icon will be replaced with the following options to make edits to your annotations:
 - **CLEAR** – erases all markings on the selected chart
 - **UNDO** – reverses the previous markings on the selected chart
 - **EXIT** – exits out of the drawing tool
4. To rotate the chart clockwise, tap the **Rotate** button on the top right of the view.



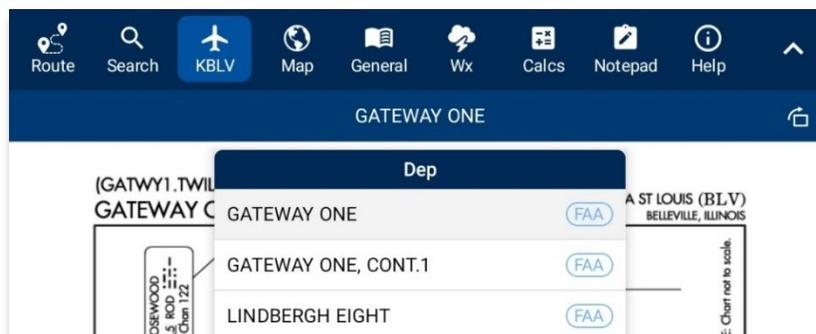
NOTE: Drawings on Charts persist across cycles for 6 months.



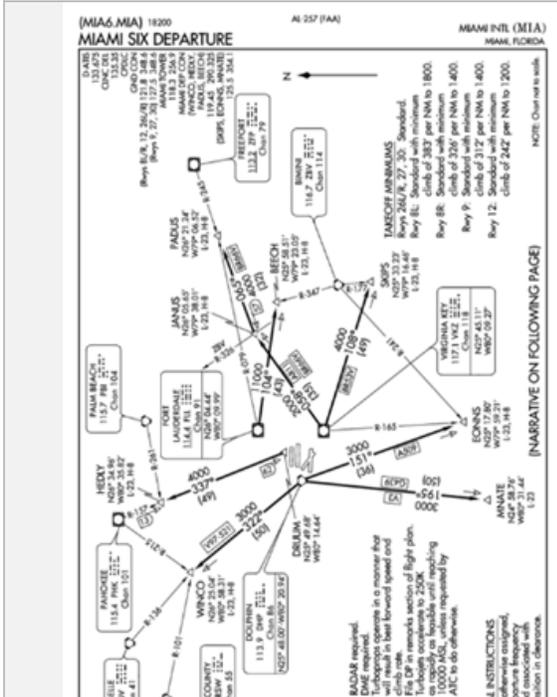
NOTE: The Draw on Chart feature is only available for Airport Diagrams and Instrument Approach Procedures.

14.3.3 Continuation of Airport Charts

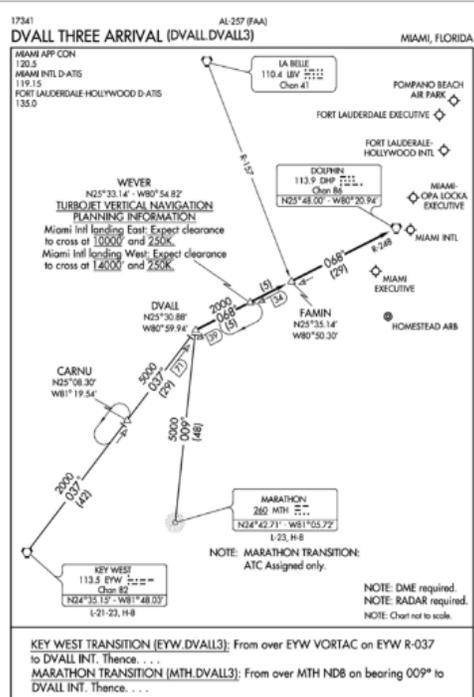
1. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
2. Select desired chart type. The selected chart will display.
3. Tap on the **ribbon** to display the full list of available chart options.



Departure Procedures



Arrival Procedures



Alternate/ RADAR/ Takeoff Minimums

ALTERNATE MINS	NAME	ALTERNATE MINIMUMS		
<p>SAN JUAN, PR LISI MUNIZ MARIN INTL (TJSJ)..... ILS or LOC Rwy 6^{1,2} ILS or LOC Rwy 10^{1,2} MIS Rwy 6^{1,2} RNAV (GPS) Rwy 8^{1,2} RNAV (GPS) Rwy 10^{1,2} RNAV (GPS) Rwy 26^{1,2} RNAV (GPS) Rwy 28^{1,2} VOR or TACAN Rwy 6^{1,2} VOR or TACAN Rwy 10^{1,2} VOR or TACAN Rwy 26^{1,2}</p> <p>¹ILS, LOC, Category D, 1000-3. ²NA when local weather not available. ³ILS, LOC, Category D, E, 1000-3. ⁴Category D, E, 1000-3.</p>	<p>TAMPA, FL PETER O KNIGHT (TPF)..... RNAV (GPS) Rwy 22 RNAV (GPS) Rwy 36 NA when local weather not available.</p> <p>TAMPA EXEC (VDF)..... ILS or LOC Rwy 23¹ RNAV (GPS) Rwy 5² RNAV (GPS) Rwy 18 RNAV (GPS) Rwy 23^{1,2} NA when local weather not available. ¹LOC, Category C, 800-2^{1/2}. ²Category C, 800-2^{1/2}.</p> <p>TAMPA INTL (TPA)..... ILS or LOC Rwy 11¹ ILS or LOC Rwy 19R¹ RNAV (GPS) Rwy 11¹ RNAV (GPS) Rwy 19R¹ RNAV (GPS) Rwy 19L¹ RNAV (GPS) Rwy 19R¹ RNAV (GPS) Rwy 28¹ RNAV (GPS) Rwy 28¹ RNAV (GPS) Rwy 28¹ RNAV (GPS) Rwy 28¹</p> <p>¹ILS, Category C, 700-2; Categories D, E, 1000-3; LOC Categories D, E, 1000-3. ²ILS, Category C, 700-2; Category D, 1000-3; LOC Category D, 1000-3. ³Categories A, B, 1300-2; Categories C, D, 1300-3. ⁴Category D, E, 1000-3. ⁵Category D, 1000-3.</p>			
		<p>SARASOTA/BRADENTON, FL SARASOTABRADENTON INTL (SRQ)..... ILS or LOC Rwy 14 ILS or LOC Rwy 32 NA when control tower closed.</p> <p>SEBRING, FL SEBRING RGNL (SEF)..... RNAV (GPS) RWY 14¹ RNAV (GPS) RWY 32 Category D, 800-2^{1/2}. NA when local weather not available.</p> <p>STUART, FL WITHAM FLD (SUA)..... RNAV (GPS) Rwy 30 NA when local weather not available.</p> <p>TALLAHASSEE, FL INTL (TLH)..... ILS or LOC Rwy 27^{1,2} ILS or LOC Rwy 26^{1,2} R40AR-1¹ RNAV (GPS) Rwy 9^{1,2} RNAV (GPS) Rwy 16^{1,2} RNAV (GPS) Rwy 27^{1,2} RNAV (GPS) Rwy 36^{1,2} VOR or TACAN Rwy 9^{1,2} VOR Rwy 16^{1,2}</p> <p>¹NA when control tower closed. ²ILS, Categories A, B, C 800-2; Category D, 800-2^{1/2}; Category E, 1000-3; LOC, Category D, 800-2^{1/2}; Category E, 1000-3. ³ILS, Category D, 700-2^{1/2}; LOC, Category D, 800-2^{1/2}. ⁴Category D, 800-2^{1/2}. ⁵Category D, 800-2^{1/2}; Category E, 1000-3. ⁶NA when local weather not available.</p>	<p>TITUSVILLE, FL SPACE FLORIDA LAUNCH AND LANDING FACILITY (TTS)..... RNAV (GPS) Rwy 15¹ RNAV (GPS) Rwy 33¹ NA when local weather not available. ¹Categories D, E, 1000-3. ²Category C, 1000-2^{1/2}; Category D, E, 1000-3.</p> <p>SPACE COAST RENE (TK)..... ILS or LOC Rwy 36¹ RNAV (GPS) Rwy 39¹ RNAV (GPS) Rwy 18¹ RNAV (GPS) Rwy 18¹ RNAV (GPS) Rwy 36¹</p> <p>¹NA when local weather not available. ²NA when control tower closed.</p>	
				<p>VENICE, FL VENICE MUNI (VNC)..... RNAV (GPS) Rwy 5 RNAV (GPS) Rwy 13 RNAV (GPS) Rwy 23 RNAV (GPS) Rwy 31 NA when local weather not available. Category D, 1000-3.</p>

Other

RNAV DEPARTURE AUP AL-257 (FAA) MIAMI INTL (MTA) MIAMI, FLORIDA

ATTENTION ALL USERS PAGE (AUP)

- PREFLIGHT:** All aircraft capable of conducting Terminal RNAV procedures should expect an RNAV SID clearance. If unable to accept the RNAV SID clearance, advise Clearance Delivery. Upon assignment of an RNAV SID, crosscheck the charted RNAV SID with the aircraft navigation system against the ATC clearance. Consider the following cross checks:
 - Preplan Runway, ensure expected departure runway is selected/displayed
 - Ensure all transitions are selected/displayed correctly
 - Ensure sequence of waypoints match the appropriate charts
 - Use the LEGS page to verify routing (for navigation systems with ROUTE and LEGS pages)
 - Ensure altitude set in the altitude window matches the TOP ALTITUDE of the SID or altitude assigned by ATC
 - Advise ATC prior to takeoff if unable to verify correct loading or if unable to comply with the SID
 - Do not modify or manually construct RNAV procedures
- BEFORE TAKEOFF:** Ensure that the Departure Runway assigned is displayed on the navigation system.
 - Verify all modification, including runway changes, in the navigation system with the RNAV SID
 - Verify aircraft symbol relative to the runway symbol, lateral track, and displayed route agree with the ATC clearance (electronic navigation map displays)
 - Confirm proper navigation/FMS selection are displayed when runway or route changes are issued by ATC
- LINE UP/TAKEOFF:** Pilots can expect a takeoff clearance from ATC that will include "RNAV to" the first waypoint on the SID, or a heading, if lower issues an initial departure heading in take-off clearance, DO NOT DELETE the ATC issued RNAV SID from active FMS, and expect ATC DIRECT/JOIN clearance to resume RNAV SID during departure.
 - SAMPLE PHRASEOLOGY**
 - Clearance: "RNAV to CSALT, Runway 8R, Cleared for Takeoff"
 - Response: "RNAV to CSALT, Runway 8R, Cleared for Takeoff"
 - Verify the correct runway and SID are selected/displayed and the correct lateral navigation mode is available and ready for use after takeoff
 - If the takeoff clearance does not match the selected/displayed procedure, request an initial heading from tower or refuse the takeoff clearance until the discrepancy is resolved
- AFTER TAKEOFF:** Unless instructed to fly a heading by ATC, engage lateral navigation Right guidance as soon as practical but no later than 400 feet AGL, and fly the departure. Strict compliance with the lateral and vertical tracks and charted speed restrictions is imperative.
 - Once established on the procedure, maintain route centerline, as depicted by onboard lateral navigation indicators
 - Manually intervene if necessary, to stay on track to avoid transgressing in the direction of a parallel runway, track, or aircraft
 - If unable to comply with the SID profile, either laterally or vertically, immediately notify ATC
- SPECIFIC INFORMATION:** 0700 - 2300 local runway 8L/R, 9, 26L/R, 27 simultaneous departures, all RNAV equipped aircraft departing MIA should expect to fly a MIA RNAV DEPARTURE SID. In the event of weather or other non-standard events, headings may be issued



NOTE: The Min tab includes Alternate, RADAR, and Takeoff Minimums options.

Host Nation

AIRPORT

EFFECTIVE UPON PUBLICATION UNLESS OTHERWISE NOTED BY AN EFFECTIVE DATE

NFDD #: 210 - 12
NFDD Date: 30 OCT 2018
City, State: BELLEVILLE, ILLINOIS
AirField Info: SCOTT AFB/MIDAMERICA - (04413.A)
Ident: BLV

Data

LATITUDE -	38-32-42.6 N	LONGITUDE -	89-50-06.7 W
USER FEE APPT	YES	ACDED	

Page 1 out of 1



NOTE: Use two fingers to zoom in on desired document display and use the opposite gesture to zoom out.



NOTE: Host Nation includes a slider that allows users to select individual pages. Alternatively, users can tap the left or right arrows to turn the page.



NOTE: A blank state message will appear indicating that there is no data downloaded.

14.3.4 Weather and Information About Potential Hazards

An internet connection is required to view weather and potential flight hazard information for the selected airport. The Wx menu offers the following options and will be further elaborated in the sections below:

- Internet
- METARs
- TAFs
- Winds
- Temps
- PIREPs
- NOTAMs

14.3.4.1 Internet

The Internet section describes how to retrieve METARs and Terminal Aerodrome Forecasts (TAFs) information. A NOTAMs button is available, which redirects users to the NOTAMs website.

14.3.4.1.1 METARs and Terminal Aerodrome Forecasts (TAFs)

Aero App displays METARs and Terminal Aerodrome Forecasts (TAFs) information from Aviation Digital Data Service.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **Internet** from the side menu, if necessary.
5. Select **METARs & TAFs** to view information for the selected airport.



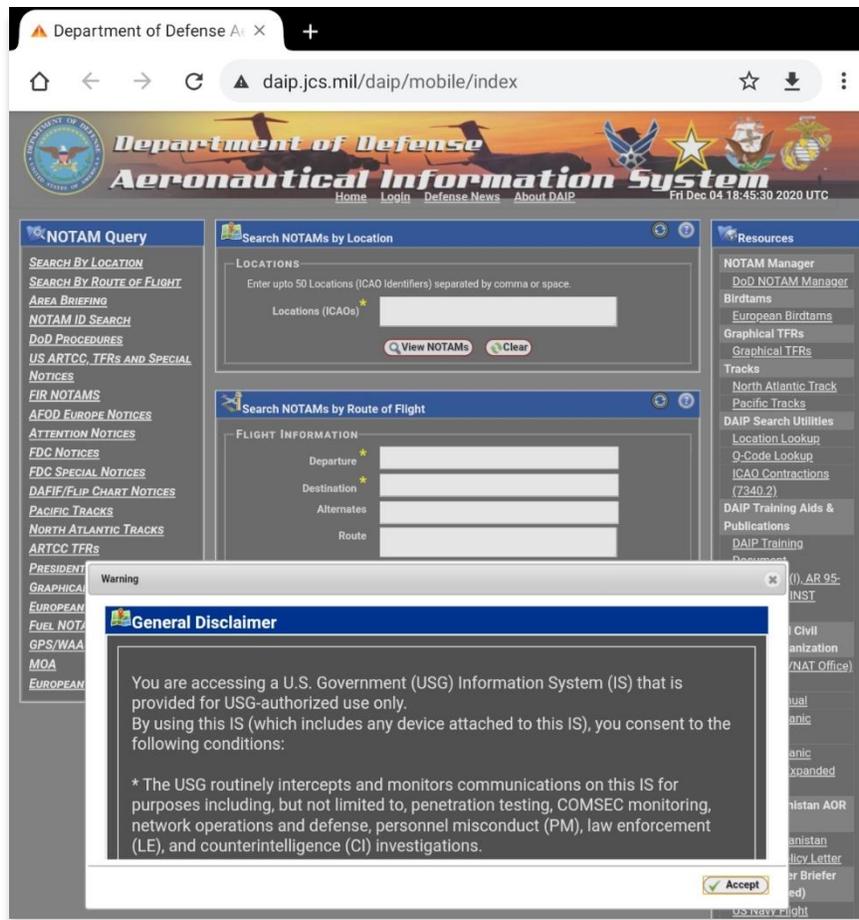
6. Tap the **Decode** button to enable the option. Users can view raw or decoded weather information for the selected airport.

The screenshot shows a mobile application interface for weather information. At the top, there is a status bar with 'Internet' and a signal strength icon. Below that, a navigation bar contains 'METARs & TAFs' (selected), 'NOTAMs', and a 'Decode' button set to 'On'. A yellow information icon is next to the 'Decode' button, with a line pointing to the text 'Decode Enabled'. On the left side, there is a dark blue sidebar with icons for 'Internet', 'METARs', 'TAFs', 'Winds', 'Temps', 'PIREPs', and 'NOTAMs'. A line points from the text 'Decoded Weather Information' to the 'METARs' icon. The main content area displays weather data for KBLV (Belleville/Scott AFB, IL, US) observed at 2035 UTC 23 Jan 2024. The data includes: Text: KBLV 232035Z 0000KT 4SM BR BKN004 OVC009 08/07 A3015 RMK AO2A CIG 002 RWY32R SLP216 \$; Temperature: 8C (46.4 F); Dewpoint: 7C (44.6 F); Altimeter: 30.15 inches Hg (1021.1 mb); Sea level pressure: 1021.6 mb; Winds: calm; Visibility: 4 sm; Ceiling: 400 feet AGL; Clouds: broken clouds at 400 feet AGL, overcast cloud deck at 900 feet AGL; Weather: BR (mist). Below this, there is a TAF for KBLV issued at 1600 UTC 23 Jan 2024, with a forecast period from 1600 UTC 23 Jan 2024 to 0400 UTC 24 Jan 2024. The forecast type is FM, with winds from VRB degrees at 6 knots, visibility of 6 sm (9 km), ceiling of 500 feet AGL, and broken clouds at 500 feet AGL. Weather is BR (mist). There are also TEMPO and BECMG forecasts for the period 1600 UTC 23 Jan 2024 to 1900 UTC 23 Jan 2024 and 0400 UTC 24 Jan 2024 to 1800 UTC 24 Jan 2024, with various weather conditions like light rain and overcast clouds.

14.3.4.1.2 Notice to Airmen (NOTAMs) Website

Notice to Airmen (NOTAMs) are notices to alert pilots of potential hazards along a flight route or at a location that can affect the safety of the flight.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **Internet** from the side menu, if necessary.
5. Tap **NOTAMs** and users will be redirected to the DOD Aeronautical Information System browser.



14.3.4.2 METARs

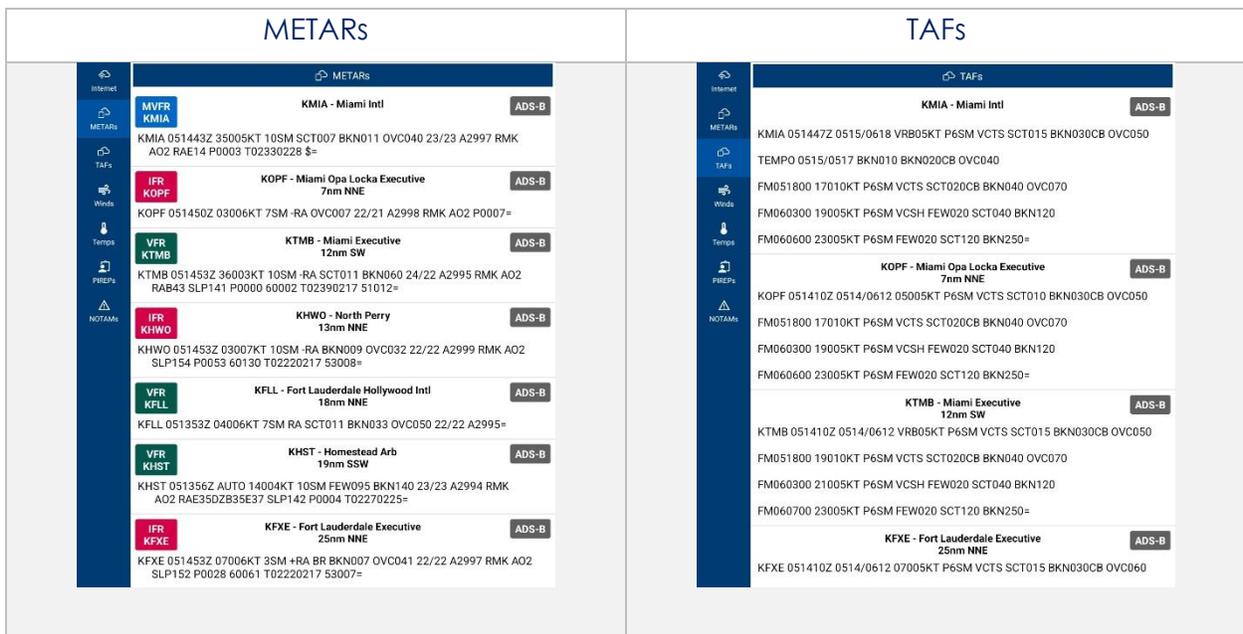
The METARs tab displays raw weather information for ADS-B and Air Force Weather (AF Wx) data that may include temperature, precipitation, visibility, barometric pressure, and other information of interest to pilots.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **METARs** from the side menu. Aero App will display ADS-B data information.

14.3.4.3 Terminal Aerodrome Forecasts (TAFs)

Terminal Aerodrome Forecasts (TAFs) highlight the expected meteorological conditions at an airport during a specific period, typically 24 hours.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **TAFs** from the side menu. Aero App will display the TAFs data.



NOTE: Refer to [Section 14.3.3](#) for additional information for Air Force Weather (AF Wx).

14.3.4.4 Winds and Temps

Winds and Temps are forecasts of specific atmospheric conditions in terms of wind and temperature at certain altitudes; typically measured in feet above mean sea level. Wind direction is always in reference to true north. The wind speed is measured in knots and the temperature is measured in Celsius.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **Winds** from the side menu. Aero App will display winds data.
5. Select **Temps** from the side menu. Aero App will display temperature data.

Winds

Valid: 051800Z							
ID	3K	6K	9K	12K	18K	24K	30K
KEYW	200@14	210@21	210@31	210@38	250@34	230@38	230@58
KMLB	140@24	170@23	220@22	250@28	250@38	230@57	220@91

Valid: 061200Z							
ID	3K	6K	9K	12K	18K	24K	30K
KPIE	310@47	280@51	270@49	260@39	220@55	230@60	220@77

Temps

Valid: 051800Z								
ID	FZL	6K	9K	12K	18K	24K	30K	34
KEYW	13800	14	9	3	-7	-17	-33	
KMLB	13000	12	7	2	-10	-19	-35	

Valid: 061200Z								
ID	FZL	6K	9K	12K	18K	24K	30K	34
KPIE	12800	7	6	2	-12	-23	-32	3

14.3.4.5 Pilot Reports (PIREPs)

Pilot Reports (PIREPs) are reports of actual weather conditions encountered by an ownship in flight.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **PIREPs** from the side menu. Aero App will display PIREPs data.

14.3.4.6 Notice to Airmen (NOTAMs)

Notice to Airmen (NOTAMs) alerts pilots of potential hazards along a flight route that could affect safety.

1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
3. Select **Wx**.
4. Select **NOTAMs** from the side menu. Aero App will display NOTAMs data.

PIREPs	NOTAMs

14.4 Map

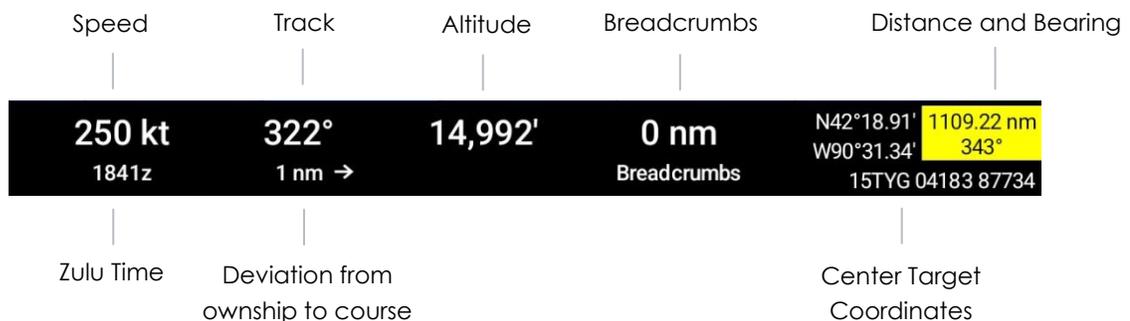
The Map menu is an essential and powerful tool that provides a highly customizable and comprehensive worldwide map.

The following are map-related overlays, features, tools, and other offerings available to users on the Map view:

- Flight Information Panel
- Timer
- Air Force Weather (AF Wx)
- Automatic Dependent Surveillance – Broadcast (ADS-B)
- Map Manager
- Map Options
- Split Screen
- PIN
- Move Map to Location
- Crosshair Icon (Snap to Location)

14.4.1 Flight Information Panel

The Flight Information Panel, located directly above the Map view, displays details of the user's current flight. The Flight Information Panel contains details such as the current flight's Speed, Zulu Time, Track, Altitude, Breadcrumbs, Center Target Coordinates, and the Distance and Bearing.



14.4.1.1 Speed

The Flight Information Panel displays the speed of the ownship located at the left side of the panel. The indicated airspeed is measured in knots (kt) and will adjust accordingly to the rate of the ownship.

14.4.1.2 Zulu Time

Aero App uses Zulu time, which is based on the 24-hour clock and is represented by a four-digit number, with the first two digits indicating the hour and the last two digits indicating the minutes. Zulu time is located directly below the ownship's speed of the panel view.

14.4.1.3 Track

Aero App measures the Track, which is the *actual* direction of the ownship's course above the ground. The Track value is based on the GPS. The value below the track is the deviation from your ownship to the course, which is measured in nm or km, respective to which distance unit format users have set in their Settings. The orientation of the arrow is direction to get back to course.



NOTE: The arrow points toward the route and not in the direction of the deviation.

14.4.1.4 Altitude

The pilot's ownship GPS altitude does not synchronize with the altitude it displays on your altimeter. To correct this, users can manually adjust the altitude to allow uniformity of the two.

1. Tap **Altitude** on the Flight Information Panel.
2. Tap the **+/-** buttons to adjust your calibrated altitude by increments or decrements of 100' or 500', respectively.
3. Tap **Set** to complete the calibration.
4. The ownship altitude is displayed below the *GPS* section. Tap **Use GPS** to use your current GPS altitude.

14.4.1.5 Center Target Coordinates

The Flight Information Panel displays the latitude, longitude, and MGRS of the Center Target. The Center Target is activated once the Map view is moved. As the Map view is moved, the Latitude, Longitude, and MGRS values update respective to the placement of the center target. Refer to [Section 14.4.10](#) for additional information.

14.4.1.6 Distance and Bearing

Distance is the range between your ownship's location and where the center target is placed. Bearing is the angle between your ownship and the center target. As the Map is moved, the distance and bearing updates respective to the placement of the Center Target, provided the GPS is on.

When the center target is activated, a yellow tag is shown on the Information Panel and displays the *distance* in nm or km, respective to which distance unit format users have set in their Settings and *bearing* (in degrees) relative to current location. Refer to [Section 14.4.10.1](#) for additional information.

14.4.1.7 Breadcrumbs

Breadcrumbs enables users to record coordinates throughout their course. A GPS connection is required. To view the recorded Breadcrumbs on the Map view, users must enable the option as described in [Section 14.4.6.1.1](#).

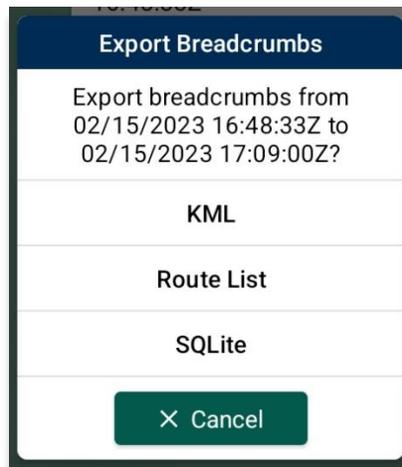
1. Tap the **coordinates** located at the upper-right corner of the Flight Information Panel.
2. A dialog window will appear displaying the recorded breadcrumbs.

The screenshot shows a 'Breadcrumbs' dialog window with the following data:

2023-02-22	
17:37:05Z 500 kt, 47°, 49,782'	N20°07.87' W90°08.88'
17:37:10Z 500 kt, 47°, 49,778'	N20°08.28' W90°08.41'
17:37:20Z 500 kt, 47°, 49,767'	N20°09.24' W90°07.34'
2023-02-23	
01:58:00Z 500 kt, 98°, 16,707'	N50°58.97' W08°20.53'
01:58:10Z 500 kt, 98°, 16,696'	N50°58.82' W08°18.34'
01:58:20Z	N50°58.67'

Additional UI elements include: '+ Add', 'X Clear', and 'Export' buttons at the top; 'Zulu Time' label pointing to the time field; 'Speed, Track, Altitude' label pointing to the speed/track/altitude field; 'Coordinates' label pointing to the coordinate field; and a 'Timer' section at the bottom with options: Off, 10 sec (selected), 1 min, 1 hour, and Distance.

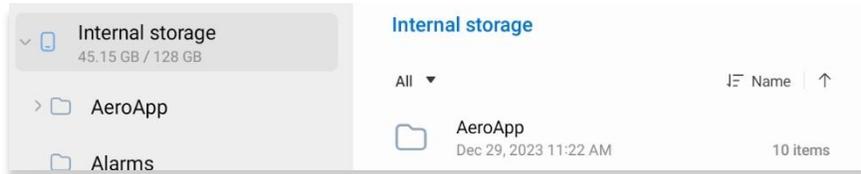
3. Tap **Add** to manually store coordinates. Users have the option to select a timer to automatically add coordinates for every 10 seconds, 1 minute, 1 hour, or Distance.
4. To enable breadcrumbs to be recorded by distance, select **Distance** from the timer options and enter desired distance increments in nautical miles (nm), statute miles (sm), feet (ft), kilometers (km), or meters (m).
5. To delete individual breadcrumbs, swipe left on the selected breadcrumb to reveal the delete button then tap **Delete**.
6. Tap **Clear** to delete all breadcrumbs.
7. To export and save breadcrumbs, tap **Export**. Users can export breadcrumbs in KML, Route List, or SQLite file.



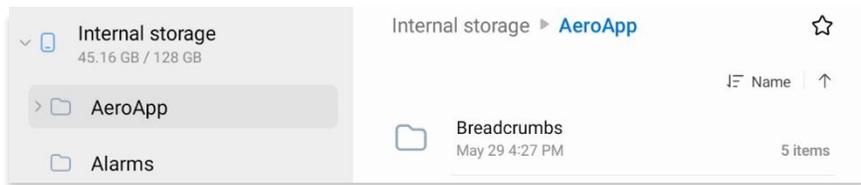
NOTE: Breadcrumbs are logged by individual days.

14.4.1.7.1 View Breadcrumbs in KML

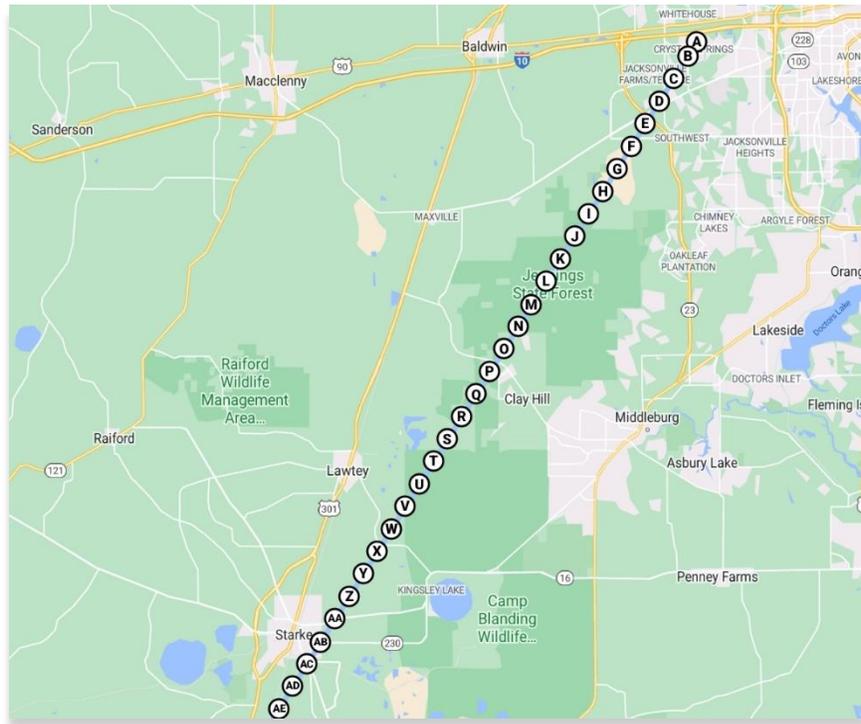
1. Export Breadcrumbs to KML.
2. Open **My Files** app on your Android tablet.
3. Navigate to your tablet's **Internal storage** to view contents.
4. Select the **AeroApp** folder.



5. Select **Breadcrumbs**.

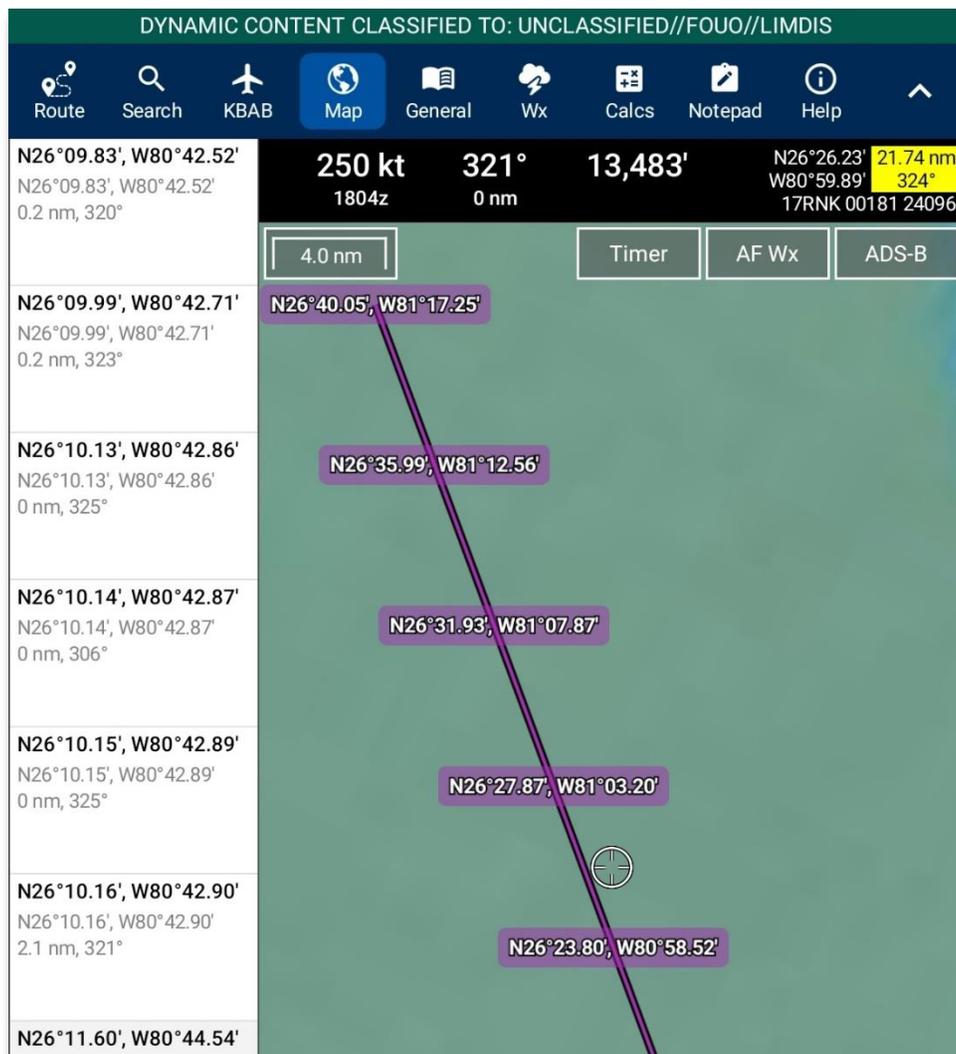


6. Your exported breadcrumbs will be listed. Tap a **KML file**. Your tablet will open the default map and display the points of the breadcrumbs.



14.4.1.7.2 View Breadcrumbs in Route List

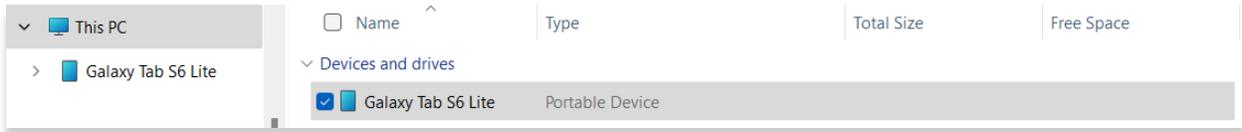
1. Export Breadcrumbs to Route List.
2. The **Export to Route List** popup will display.
3. Users will be prompted to name their route name. Enter the desired name then tap **Save**.
4. To view your saved route, tap **Route** on the **Main Menu**. The Route Panel will expand.
5. Tap **Route Manager**.
6. Select **Actions** from the side menu.
7. Select **Load**. Locate the route name of your breadcrumbs. The route will populate the Route Panel and on the Map.



14.4.1.7.3 View Breadcrumbs in SQLite File

Aero App enables users to view Breadcrumbs in SQLite File. A database viewer is required to view Breadcrumbs in SQLite file.

1. Export Breadcrumbs to SQLite Database.
2. Connect an Android tablet to your PC.
3. Once your device is connected, open **File Explorer** and navigate to **This PC**.
4. Navigate to Devices and drives and locate your Android device.



5. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



6. Select **AeroApp**. Its respective subfolders are displayed.



7. Select **Breadcrumbs** to view contents.



8. Your exported breadcrumbs will be listed. Drag your desired breadcrumbs to your database viewer and your route will display.

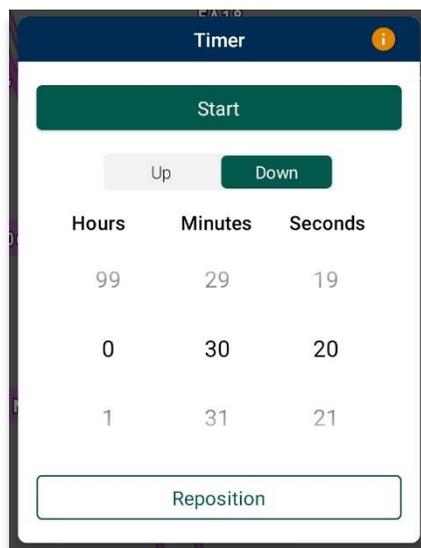
14.4.2 Timer

The Timer feature is a general use chronometer that can be used to time flights or any other activity.

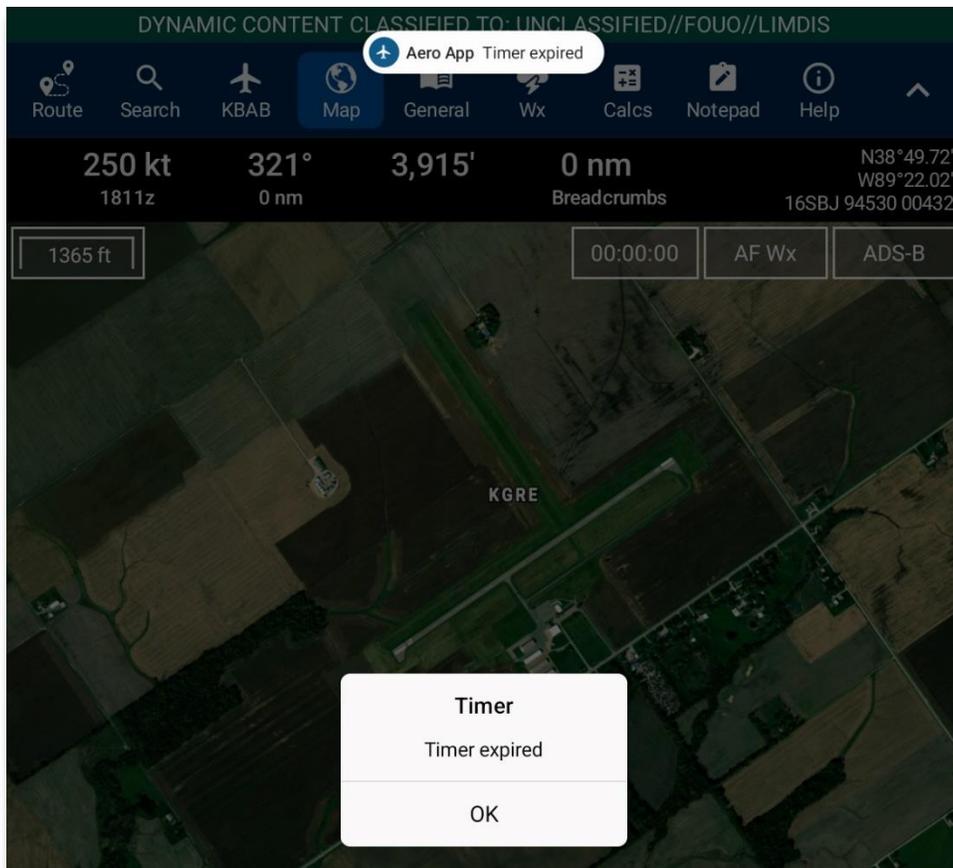
1. Tap **Map** on the **Main Menu**.
2. Tap **Timer** located at the upper right of the screen. The timer menu will display.
3. The Timer has two modes:
 - **Count Up** – starts the timer at zero then begins counting.
 - **Count Down** – timer counts down based on the selected hours, minutes, and seconds the timer was set to.
4. By default, *Count Down* is selected. Tap to select or slide the segmented control to the left to select **Count Up** mode.
5. Tap **Start** to begin the timer.



6. To count down, tap to select or slide the segmented control to **Count Down** mode.
7. Adjust the timer's **Hours**, **Minutes**, and **Seconds** to desired duration.
8. Tap **Start** to begin the timer.



9. The Timer box switches between the following colors to indicate the time remaining on the timer:
 - **Green** – if input is greater than 1 minute
 - **Yellow** – timer box will start flashing yellow with 1 minute remaining on the timer.
 - **Orange** – timer box will start flashing orange with 30 seconds remaining on the timer.
 - **Red** – timer box will start flashing red with 10 seconds remaining on the timer.
10. An alert will appear on the screen once the timer is completed. If the device is locked, a notification will display in the device notification bar.



11. To force the timer to end, tap **Stop**.
12. Tap **Reset** to restart timer.

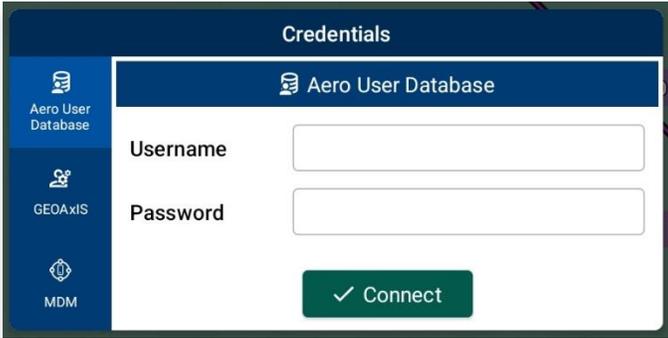


NOTE: Tap **Reposition** to move the Timer button from the current position to below the ADS-B button.

14.4.3 Air Force Weather (AF Wx)

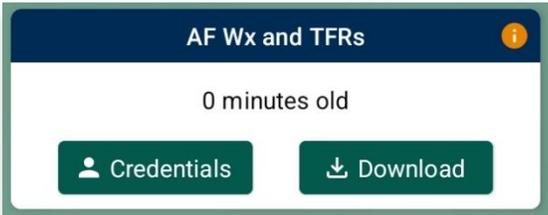
Air Force Weather (AF Wx) displays METARs and TAFs in Aero App. This information can be viewed from an ICAO on the Map view, Route panel, and Wx tab. Air Force Weather data is only available to DOD crews and select partners.

1. Tap **Map** on the **Main Menu**.
2. Tap **AF Wx** located at the upper right of the Map view.
3. The AF Wx and TFRs popup will display. Tap **Credentials**.
4. Select desired method of authentication using any of the following options:
 - Aero User Database
 - GEOAxis
 - MDM



The screenshot shows a 'Credentials' dialog box. On the left is a vertical menu with three options: 'Aero User Database' (selected), 'GEOAxis', and 'MDM'. The main area is titled 'Aero User Database' and contains two input fields: 'Username' and 'Password'. Below these fields is a green button with a checkmark and the text 'Connect'.

5. Tap **Connect** when done.
6. The AF Wx and TFRs popup will display the currency of the weather.
7. Tap **Download** to retrieve the latest Air Force Weather data.



The screenshot shows a popup window titled 'AF Wx and TFRs'. Below the title, it says '0 minutes old'. At the bottom of the popup are two buttons: 'Credentials' (with a person icon) and 'Download' (with a download icon).



NOTE: The password field is cleared when Aero App is closed and then reopened.



NOTE: Air Force Weather (AF Wx) is only available via internet. However, if ADS-B weather information becomes available, whichever source has the latest data will show as the current weather.

14.4.3.2 Air Force Weather (AF Wx) on Route Panel

Air Force weather can be viewed on the Route Panel. Additional Air Force weather information can be viewed on the Wx menu. Refer to [Section 14.4.3.3](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Weather** from the side menu.
5. Tap **METARs** to enable the option. Different colored dots will populate on the Route Panel for each point on the route. The different color dots within route panel depict the airport's flight rule.
6. Tap the **Route Tab** to expand the Route Panel.
7. METAR information will be displayed for each ICAO on your route.
8. Flight rules are color-coded to depict the latest reported weather conditions:
 - **Green:** VFR
 - **Blue:** MVFR
 - **Red:** IFR
 - **Magenta:** LIFR

VFR		MVFR	
KCLS Chehalis Centralia 34.6 nm, 22° ETE: 13:24:07, ETA: 07:49:14Z Twr:		KSEA Seattle Tacoma Intl Destination ETE: 13:40:27, ETA: 08:05:34Z Twr: 119.9 MHz, 120.95 ...	
IFR		LIFR	
KSUU Travis Afb 506.9 nm, 342° ETE: 10:52:02, ETA: 05:17:09Z Twr: 120.75 MHz, 254.4 ...		KTCM Mcchord Fld 19.9 nm, 4° ETE: 13:34:29, ETA: 07:59:36Z Twr: 124.8 MHz, 259.3 M...	



NOTE: METAR information on the Route Panel expires 75 minutes after becoming available.

14.4.3.3 Air Force Weather (AF Wx) Information on the Wx Menu

Air Force weather information can be viewed by accessing the Wx menu for the Active Point, or by selecting Info and Wx for an ICAO on the Map view or the Route Panel.

1. Tap **Active Point** on the **Main Menu**. The Active Point options will display.
2. Select **Wx**.
3. The following options to view AF Wx information will be available to users:
 - METARs
 - TAFs

METARs	TAFs
<div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">METARs</p> <p>VFR EDDN AF Wx</p> <p>EDDN - Nuernberg</p> <p>EDDN 081620Z AUTO 26011KT CAVOK 21/10 Q1012 BECMG 24005KT=</p> <hr/> <p>VFR ETEB AF Wx</p> <p>ETEB - Ansbach Ahp 21nm SW</p> <p>ETEB 081555Z AUTO 28007KT 9999 BKN046 19/12 A2989 RMK AO2 SLP124 T01940122 \$=</p> <hr/> <p>VFR ETIK AF Wx</p> <p>ETIK - Illesheim Ahp 27nm W</p> <p>ETIK 081555Z 26011KT 9999 SCT050 21/10 A2988 RMK AO2A SLP110 T02080100 \$=</p> <hr/> <p>VFR ETIH AF Wx</p> <p>ETIH - Hohenfels Aaf 34nm ESE</p> </div>	<div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">TAFs</p> <p>EDDN - Nuernberg AF Wx</p> <p>EDDN 081100Z 0812/0912 24010KT 9999 SCT030 PROB30 TEMPO 0813/0816 25015G25KT SHRA BKN025TCU BECMG 0816/0818 24005KT BECMG 0820/0822 14004KT BECMG 0908/0910 24009KT PROB30 TEMPO 0911/0912 24015G25KT SHRA BKN040CB=</p> <hr/> <p>ETEB - Ansbach Ahp 21nm SW AF Wx</p> <p>ETEB 081500Z 0815/0921 25010G15KT 9999 SCT040 BKN050 QNH2989INS BECMG 0818/0819 21009KT 9999 SCT050 QNH2992INS BECMG 0903/0904 21009KT 9999 SCT030 BKN070 QNH2991INS TEMPO 0910/0914 23012G18KT 8000 -SHRA BKN030 TX20/0815Z</p> </div>



NOTE: Air Force Weather is only available via the internet. However, if ADS-B weather information becomes available, whichever source has the latest data will show the current weather.



NOTE: METAR information on the Wx tab expires 3 hours after becoming available. TAF information on the Wx tab expires 12 hours after becoming available.

14.4.4 Automatic Dependent Surveillance – Broadcast (ADS-B)

The user's ownship has an Automatic Dependent Surveillance—Broadcast receiver. The ADS-B tool receives NEXRAD, METARs, TAFs, and other textual data as well as ownship location. For non-proprietary ADS-B and GPS receiver compatibility with Aero App, refer to this link: [ADS-B/GPS Compatibility List](#).

14.4.4.1 Connecting to ADS-B Receiver via Wi-Fi

To establish a connection with an ADS-B receiver via Wi-Fi, you must ensure to connect your Wi-Fi network to the receiver.

1. Open the Android *device settings app* and select **Connections**.
2. Tap on **Wi-Fi**.
3. Search and tap the ADS-B receiver in the *Available networks* section.
4. Ensure the ADS-B receiver's connection is established. For additional information, refer to [Section 14.3.4.2.1](#).

14.4.4.2 Connecting to ADS-B Receiver via Bluetooth

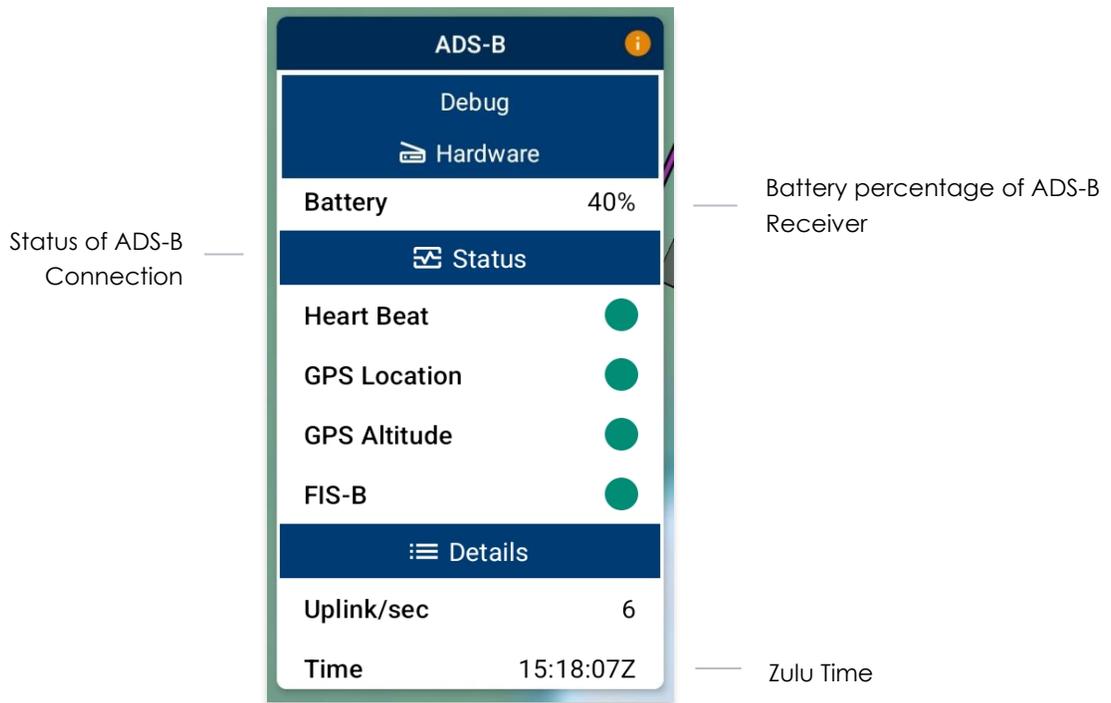
To establish a connection with an ADS-B receiver via Bluetooth, you must ensure to connect your Bluetooth to the receiver.

1. Open the Android *device settings app* and select **Connections**.
2. Tap on **Bluetooth**.
3. Search and tap the ADS-B receiver in the *Available devices* section.
4. Ensure the ADS-B receiver's connection is established. For additional information, refer to [Section 14.11.1](#).
5. Pair device.

14.4.4.2.1 ADS-B Information

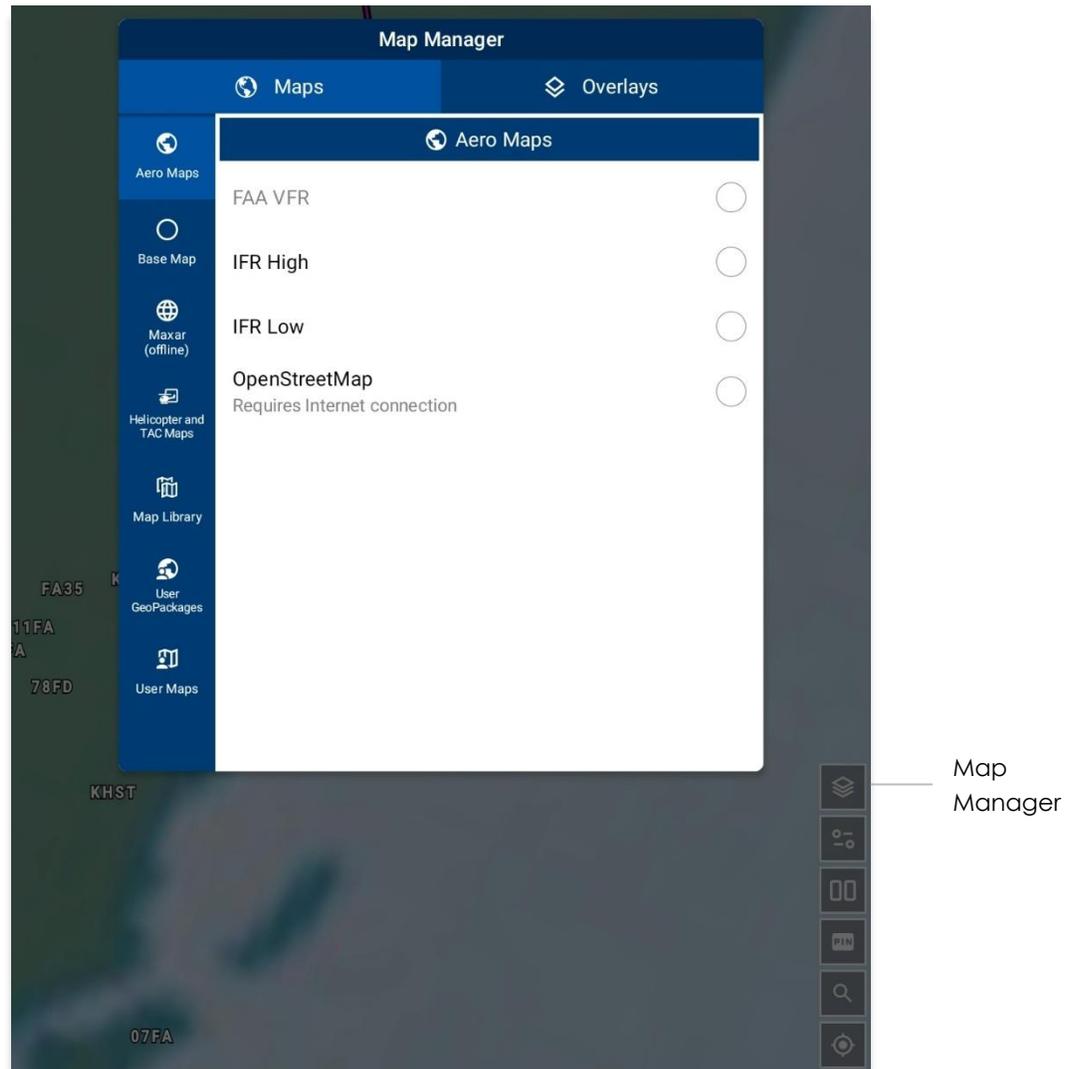
Aero App provides an ADS-B tool that outputs ADS-B details such as its battery percentage, connection statuses, and additional ADS-B information.

1. Tap **Map** on the **Main Menu**.
2. Tap the **ADS-B** button located at the upper-right corner of your screen.
3. The green status indicates that the ADS-B connection is established to receive the data for Heart Beat, GPS Location, GPS Altitude, and FIS-B Data. If the status displays red, then there is no connection.
 - **Battery** – displays ADS-B battery percentage.
 - **Heart Beat** – indicates the connection status of the ADS-B device.
 - **GPS Location** – indicates the connection status of the ownship's GPS location.
 - **GPS Altitude** – indicates the connection status of the ownship's GPS altitude.
 - **FIS-B** – indicates the connection status in receiving weather from FIS-B towers.
 - **Uplink/sec** – indicates the occurrence of the ADS-B data messages Aero App receives from ADS-B towers during the previous second.
 - **Time** – displays the Zulu time.



14.4.5 Map Manager

The Map Manager includes map configuration options and is located at the lower right of the Map view.



14.4.5.1 Maps

Maps contain a library of mutable charts stored within Aero Maps, Base Map, Maxar (offline), Helicopter and TAC Maps, Map Library, User GeoPackages, and User Maps menus.

14.4.5.1.1.2 Instrument Flight Rule (IFR) High Enroute

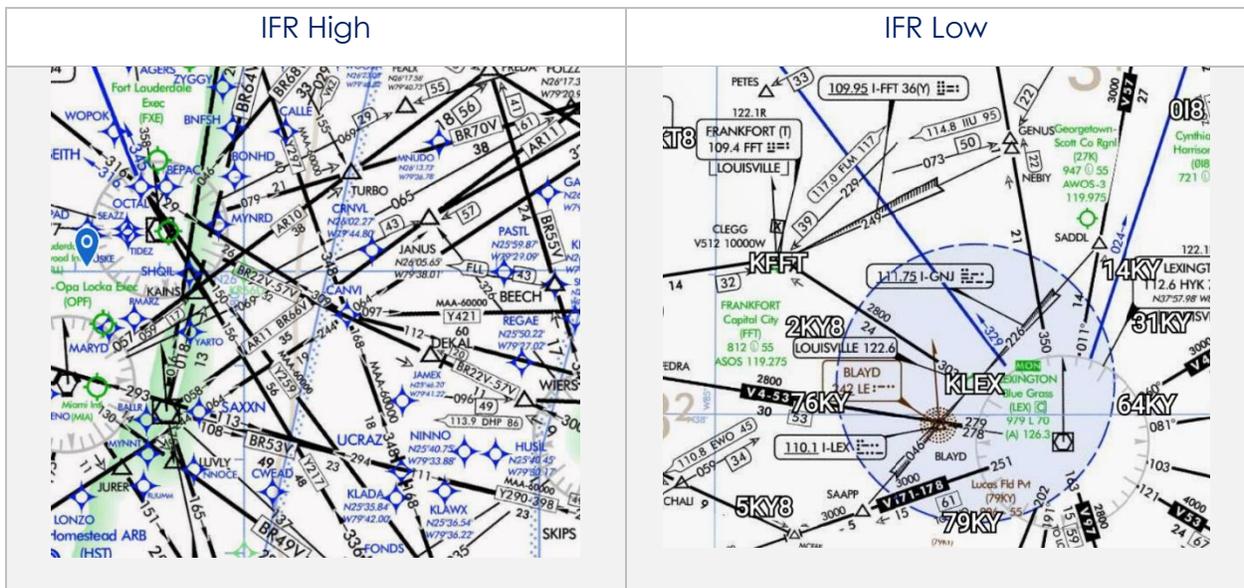
The IFR High charts for the desired region must be downloaded. Until the data has been successfully downloaded, the IFR High option will remain disabled.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **IFR High** to enable the option. The high-altitude IFR Enroute chart is displayed on the Map.

14.4.5.1.1.3 Instrument Flight Rule (IFR) Low Enroute

The IFR Low charts for the desired region must be downloaded. Until the data has been successfully downloaded, the IFR Low option will remain disabled.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **IFR Low** to enable the option. The low-altitude IFR Enroute chart is displayed on the Map.



14.4.5.1.1.4 Maxar (Online)

Maxar (online) requires an internet connection to view real-time satellite imagery. GEOAxis and AUD (select partners) can access Maxar (online).

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **Maxar (online)** to enable the option. A satellite imagery is displayed on the Map.

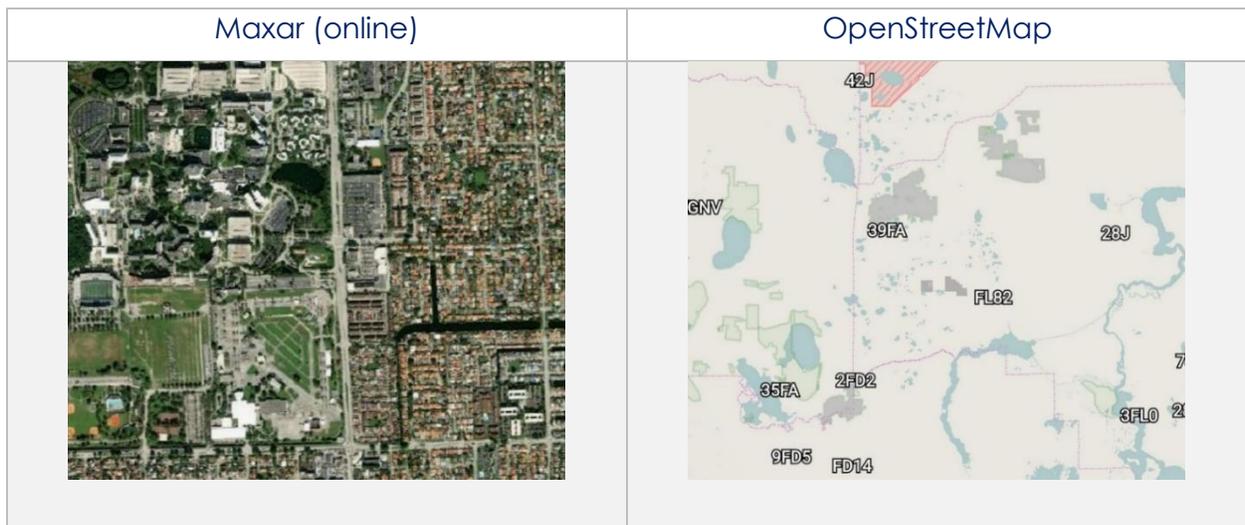


NOTE: Credentials will be cleared when users close Aero App. Thereby, users must log in again to view the Maxar (online).

14.4.5.1.1.5 OpenStreetMaps

OpenStreetMaps requires an internet connection to view on the Map.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **OpenStreetMap** to enable the option. OpenStreetMap is displayed on the Map.



14.4.5.1.2 Base Map

The Base Map menu offers worldwide Earth and Gray base maps and will be further elaborated in the sections to follow.

14.4.5.1.2.1 Earth Base Map

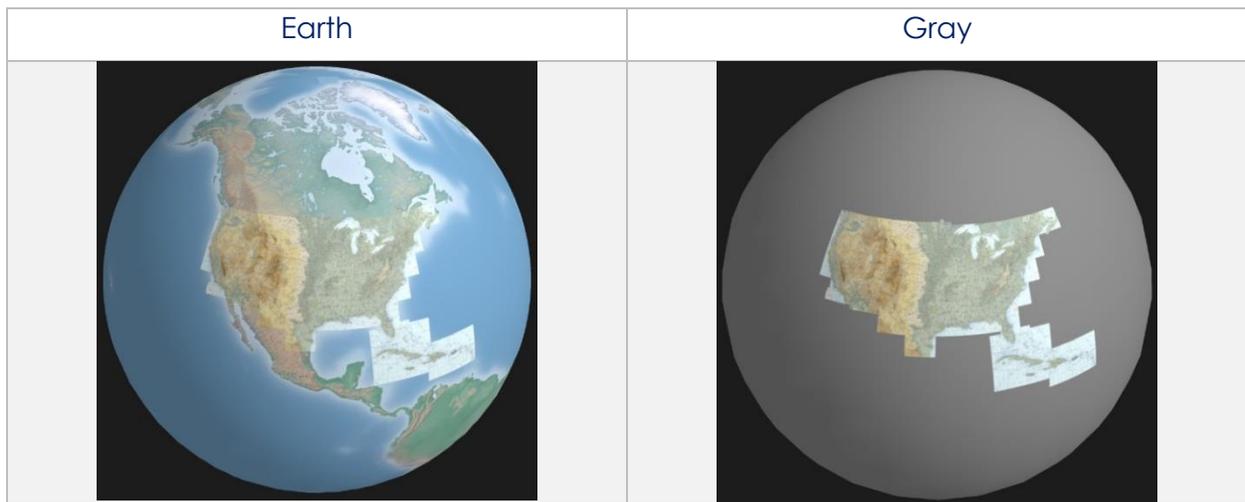
Earth Base Map data must be downloaded. Until the data has been successfully downloaded, the Earth option will remain disabled.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Base Map** from the side menu.
5. Tap **Earth** to enable the option. The earth base map is displayed.

14.4.5.1.2.2 Gray Base Map

The Gray Base Map is the default map when no map has been chosen or downloaded.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Base Map** from the side menu.
5. Tap **Gray** to enable the option. The gray base map is displayed.



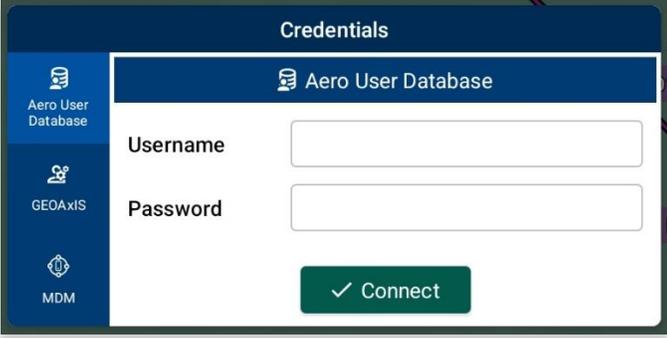
14.4.5.1.3 Maxar (Offline)

Maxar (offline) allows users to download cache images to be displayed on the Map. The initial download of Maxar (offline) cache images requires internet connection. Once the images are downloaded, internet connection is no longer required and can be displayed on the Map at any time.

14.4.5.1.3.1 Maxar (Offline)

The Maxar (offline) feature is available to users logged in using their GEOAxis credentials or AUD with select government foreign partners, or users whose devices are set with Mobile Device Management (MDM).

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Maxar (offline)** from the side menu.
5. Tap **Download**.
6. The credentials popup will display. Log in using Aero User Database or GEOAxis credentials or set up your device with Mobile Device Management (MDM).



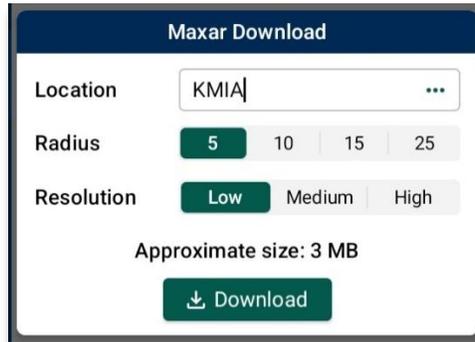
The screenshot shows a 'Credentials' popup window. On the left is a dark blue sidebar with three options: 'Aero User Database' (selected), 'GEOAxis', and 'MDM'. The main area is white and titled 'Aero User Database'. It contains two input fields: 'Username' and 'Password'. Below the fields is a green button with a white checkmark and the text 'Connect'.

7. The Maxar Download popup will display the following fields:

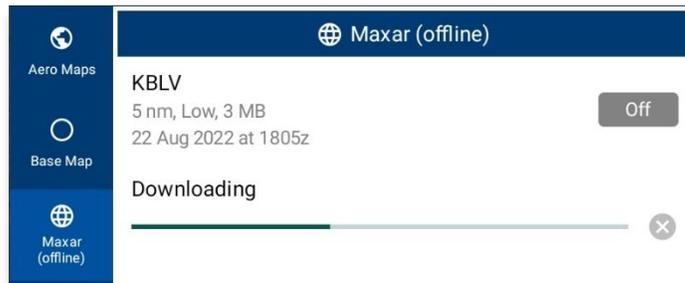
- **Location** – tap the ellipsis button to display the Search popup. Enter Airport, NavAid, Waypoint, User Waypoint, or Pin inside the text box. Radial Off NavAid and all other identifiers will be converted to coordinates.



- **Radius** – select from options 5, 10, 15, 25.
- **Resolution** – select from options Low, Medium, or High.



8. Once all fields have been filled, tap **Download** and the cached image will begin to download.



9. Downloaded files will be listed below the Maxar (offline) section.



10. Select desired file to display on the Map.



14.4.5.1.4.3 Terminal Area Charts (TACs)

The FAA TAC data for the desired region (e.g., Alaska and/or CONUS) must be downloaded. Until the data has been successfully downloaded, the TACs option will remain disabled.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Helicopter and TAC Maps** from the side menu.
5. Tap **TACs** to enable the option. The terminal area chart is overlaid on the Map.



14.4.5.1.5 Map Library

The Map Library section provides users the option to download Map Library charts to display on the Map view. Map Library includes maps for emergencies, NavPlan charts, range charts, and others. The Aero App team is the distributor of these charts.

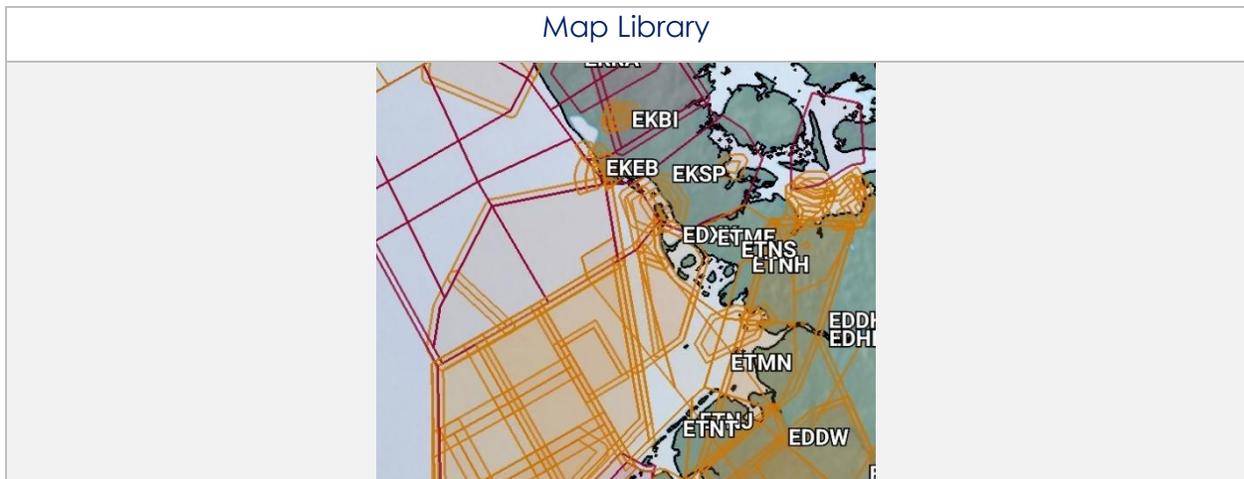
14.4.5.1.5.1 Map Library

Users must download Map Library charts to view them on the Map. Refer to [Section 10.2.1.1](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **Map Library** from the side menu.
5. The files are grouped by categories, tap on a folder to show or hide its respective files.
6. Tap desired **Map**. The chart is overlaid on the map.



NOTE: Map Library charts can be deleted from File Manager or directly from the Map Manager view by swiping left then tapping **Delete**.

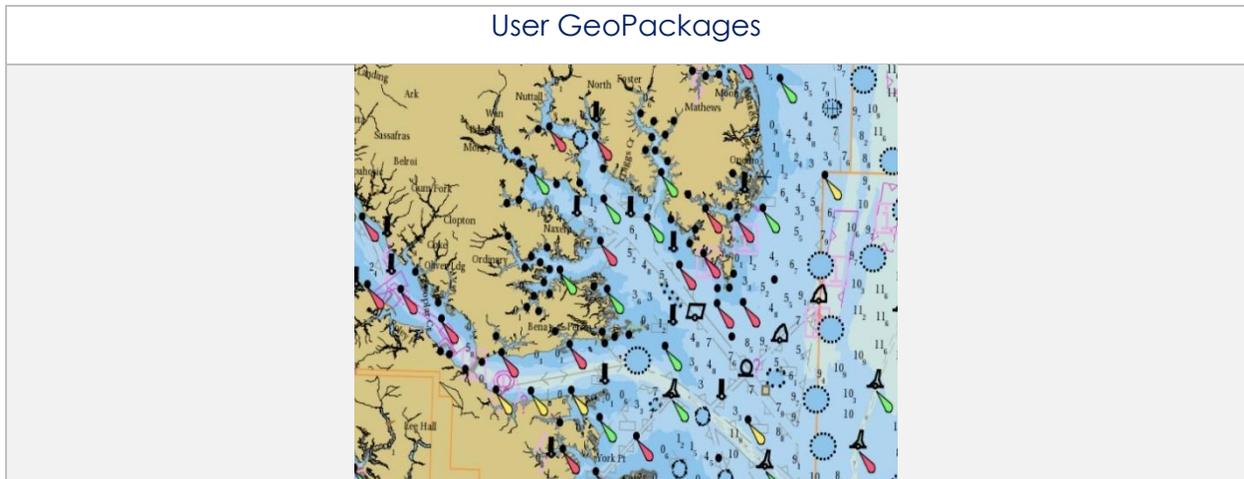


14.4.5.1.6 User GeoPackages

Aero App supports GeoPackages to be viewed and accessed on the Map view. GeoPackages must be sideloaded onto Aero App. Refer to [Section 11.3](#) for additional information.

14.4.5.1.6.1 User GeoPackages

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **User GeoPackages** from the side menu.
5. The files are grouped by categories, tap on a folder header to show, or hide its respective files.
6. Select desired file(s) and the overlay will display on the Map.
7. To delete a user GeoPackage, swipe left to reveal the delete button of the file that you choose to permanently remove. Tap **Delete**.

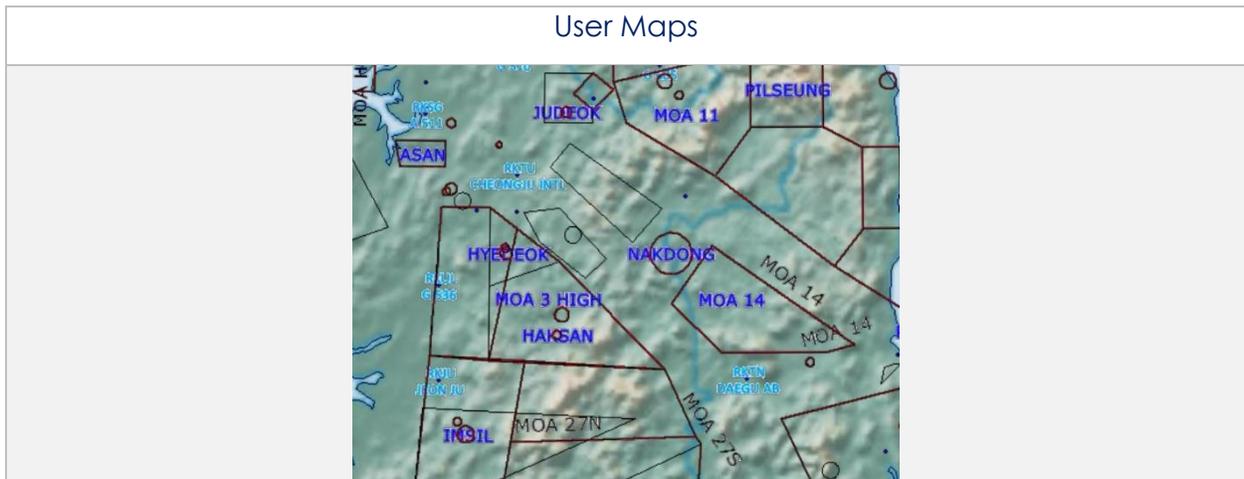


14.4.5.1.7 User Maps

Aero App supports User Maps to be viewed and accessed on the Map view. User Maps must be sideloaded onto Aero App. Refer to [Section 11.2](#) for additional information.

14.4.5.1.7.1 User Maps

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
3. Select **Maps** on the navigation bar, if necessary.
4. Select **User Maps** from the side menu.
5. The loaded files will display under User Maps.
6. Enable desired file(s) and the overlay will display on the Map.
7. To delete a user map, swipe left to reveal the delete button of the file that you choose to permanently remove. Tap **Delete**.



14.4.5.2 Overlays

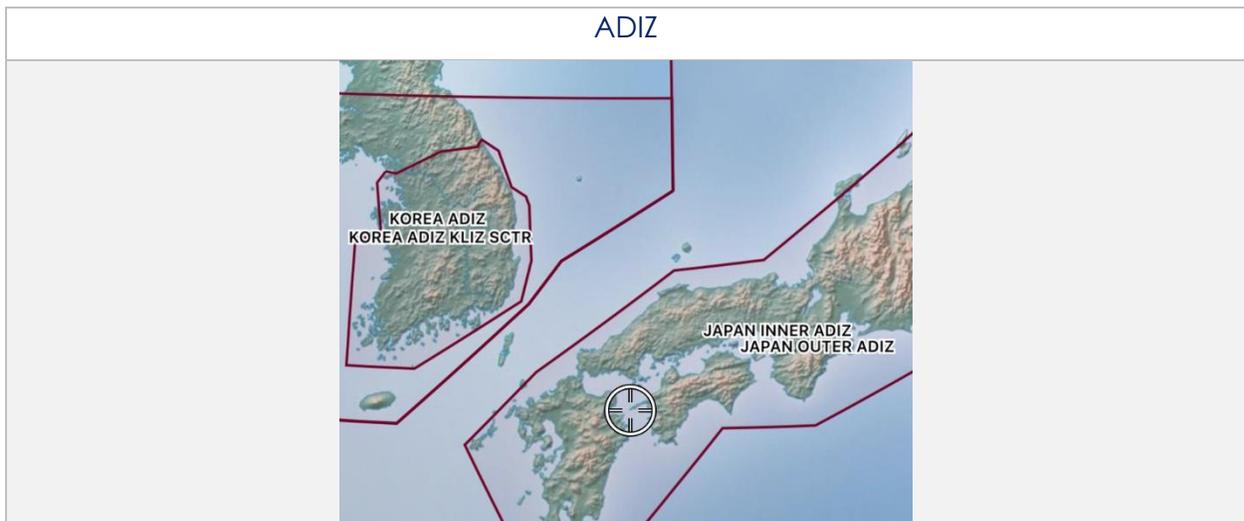
The Overlays section contains map overlay options to display on the Map. The sections ahead will expand on the different Map overlay options to choose from.

14.4.5.2.1 Aero Overlays

Aero Overlays contains various map overlay options.

14.4.5.2.1.1 Air Defense Identification Zone (ADIZ)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **ADIZ** to enable the option. ADIZ sectors will populate the Map.
6. Tap an ADIZ sector of choice on the Map. A popup containing an overview of the specified area will be displayed.

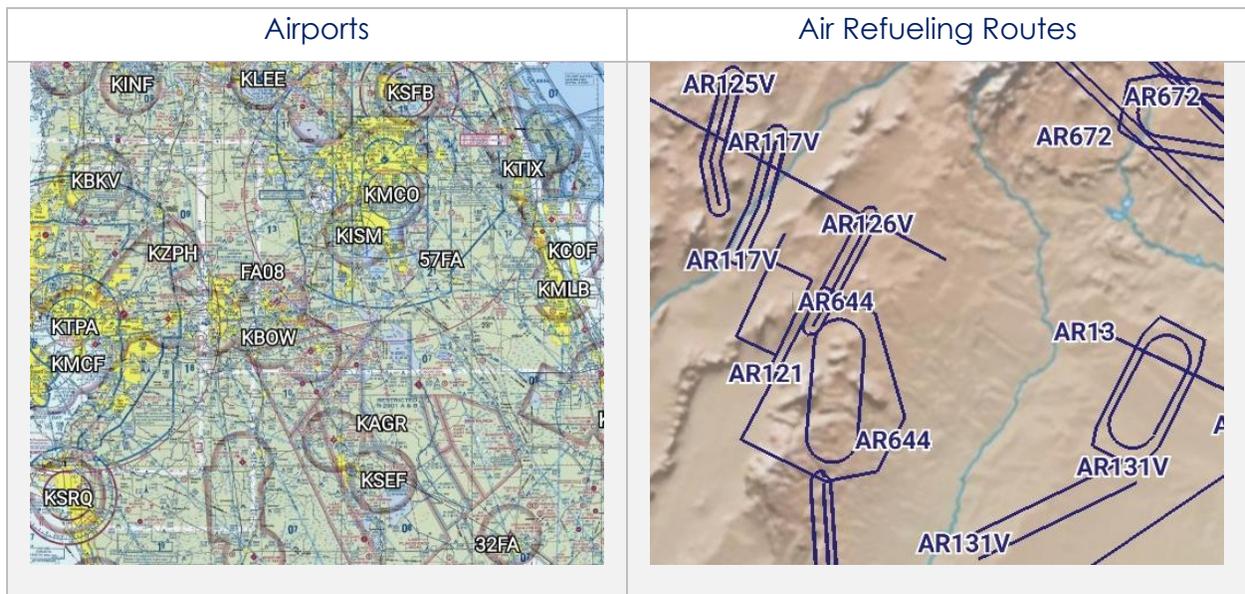


14.4.5.2.1.2 Airports

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Airports** to enable the option. Airport identifiers will populate the Map; respective to the minimum runway length users have set in their Settings.

14.4.5.2.1.3 Air Refueling Routes

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Air Refueling Routes** to enable the option. Air refueling routes will populate on the Map.
6. Tap an AR label on the Map. A popup with air refueling route information will be displayed.

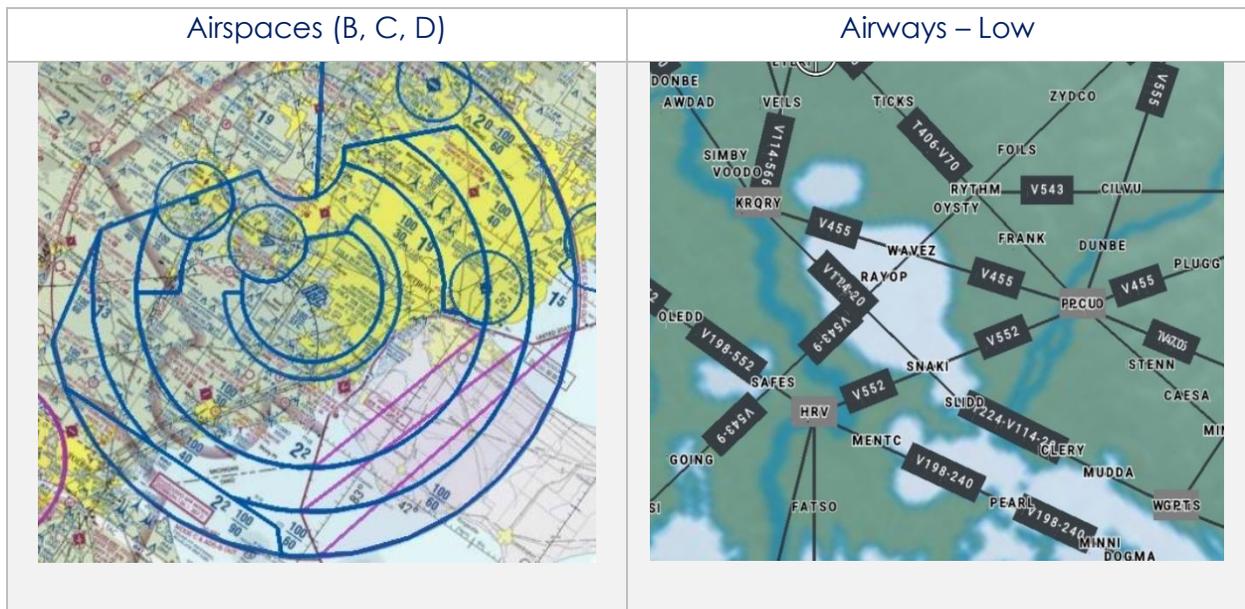


14.4.5.2.1.4 Airspaces (B, C, D)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Airspaces (B, C, D)** to enable the option. The airspace classes will populate on the Map.
6. Tap an Airspace of choice on the Map view. A popup with airspace class information will be displayed.

14.4.5.2.1.5 Airways – Low

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **Airways** to **Low**. The low-altitude airways that are below 18,000 ft will populate the Map.



14.4.5.2.1.6 Airways – High

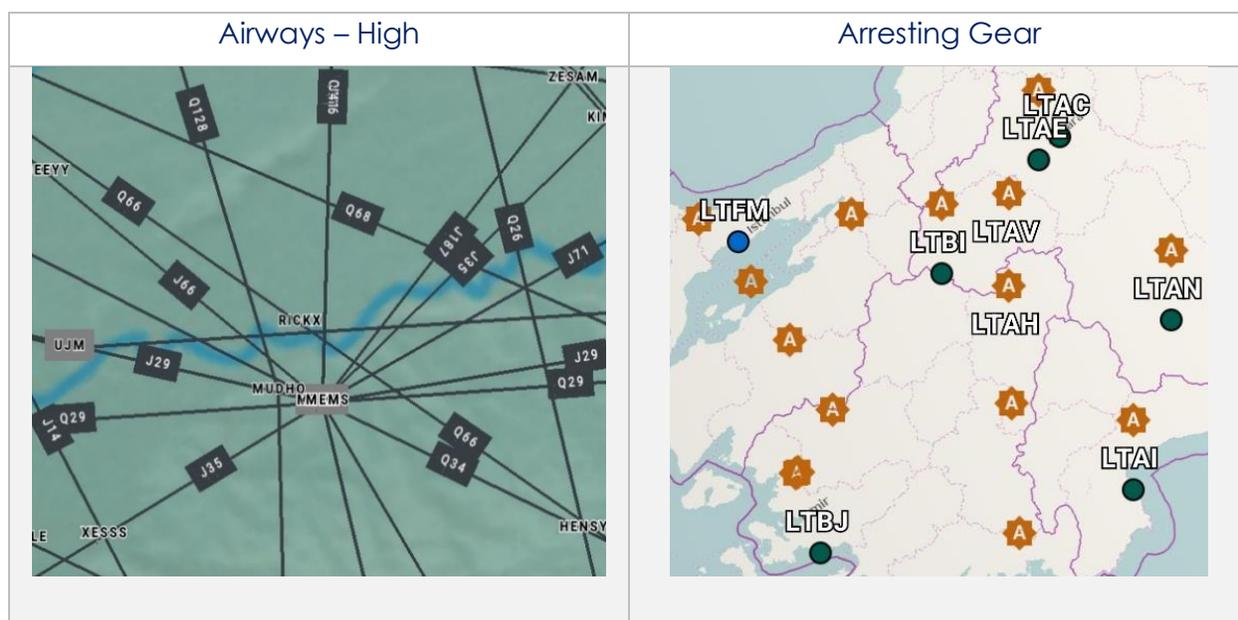
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **Airways to High**. The high-altitude airways that are between 18,000 ft and 45,000 ft will populate on the Map.



NOTE: Users can add Airways to their route. Refer to [Section 14.1.1.2](#) for additional information.

14.4.5.2.1.7 Arresting Gear

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Arresting Gear** to enable the option. Arresting gear will populate on the Map.
6. Tap an arresting gear of choice on the Map. A popup with arresting gear information such as its identifier name, absorbing system, engagement type, and command will be displayed.



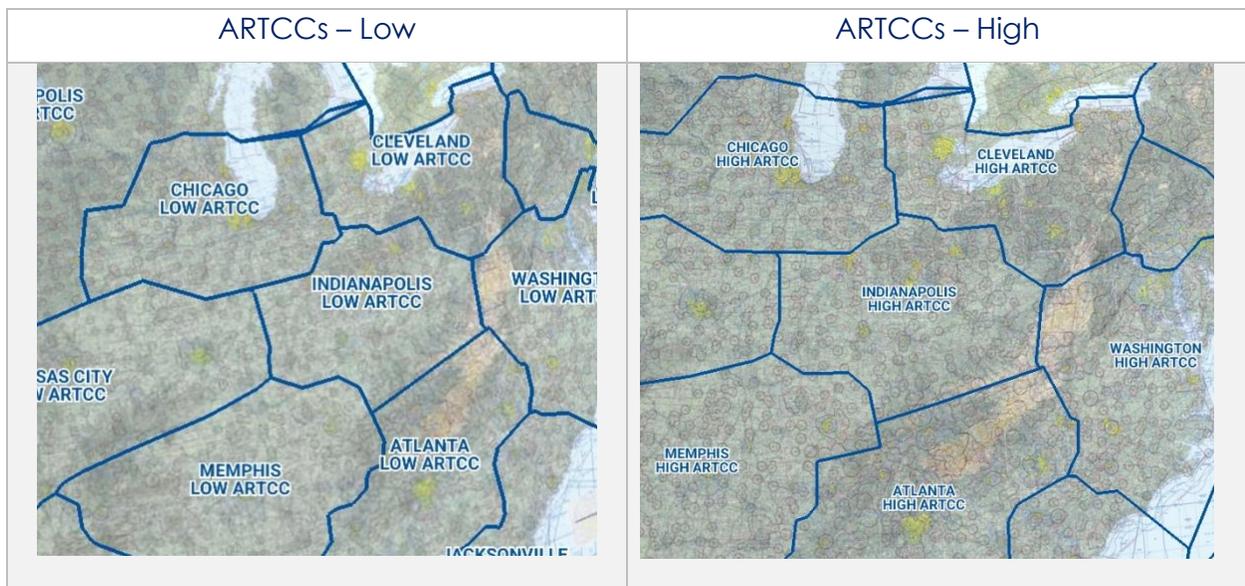
14.4.5.2.1.8 Air Route Traffic Control Centers (ARTCCs) – Low

Air Route Traffic Control Centers (ARTCCs) low and high, is primarily to provide air traffic service for pilots that are operating on an IFR flight plan.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for ARTCCs to **Low**. The map will overlay regions of low ARTCCs.

14.4.5.2.1.9 Air Route Traffic Control Centers (ARTCCs) – High

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for ARTCCs to **High**. The map will overlay regions of high ARTCCs.

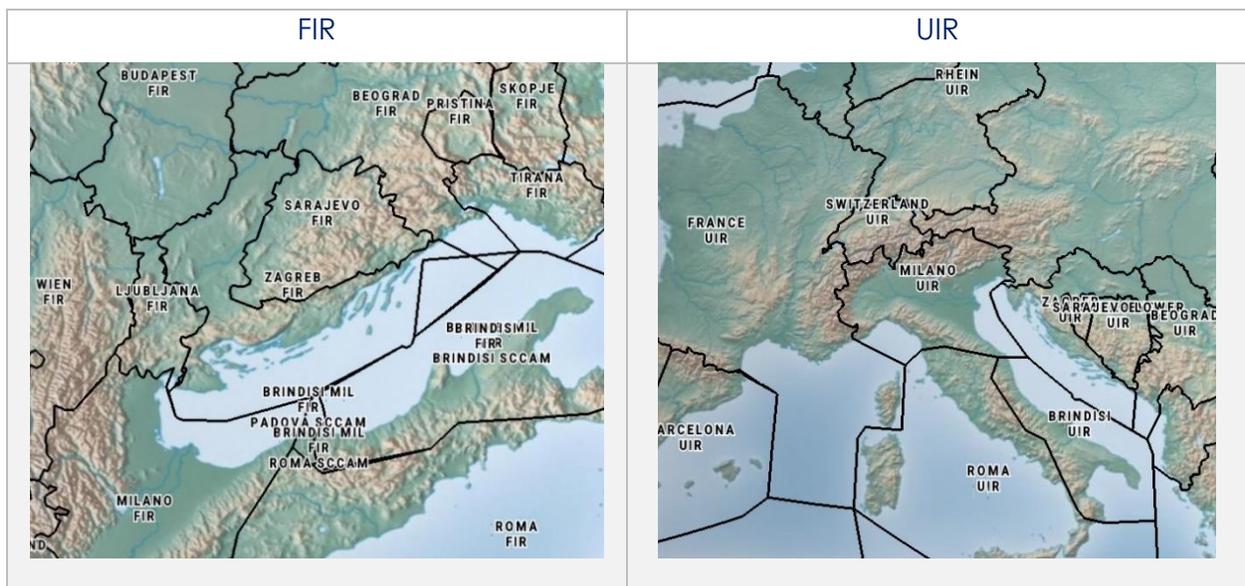


14.4.5.2.1.10 Flight Information Region (FIR)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control to **FIR**. The map will be divided into specified regions of airspace.
6. Tap a region of choice on the Map. A popup containing an overview of the flight information region will be displayed.

14.4.5.2.1.11 Upper Flight Information Region (UIR)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control to **UIR**. The map will be divided into specified regions of airspace.
6. Tap a region of choice on the Map. A popup containing an overview of the upper flight information region will be displayed.



14.4.5.2.1.12 Hazards

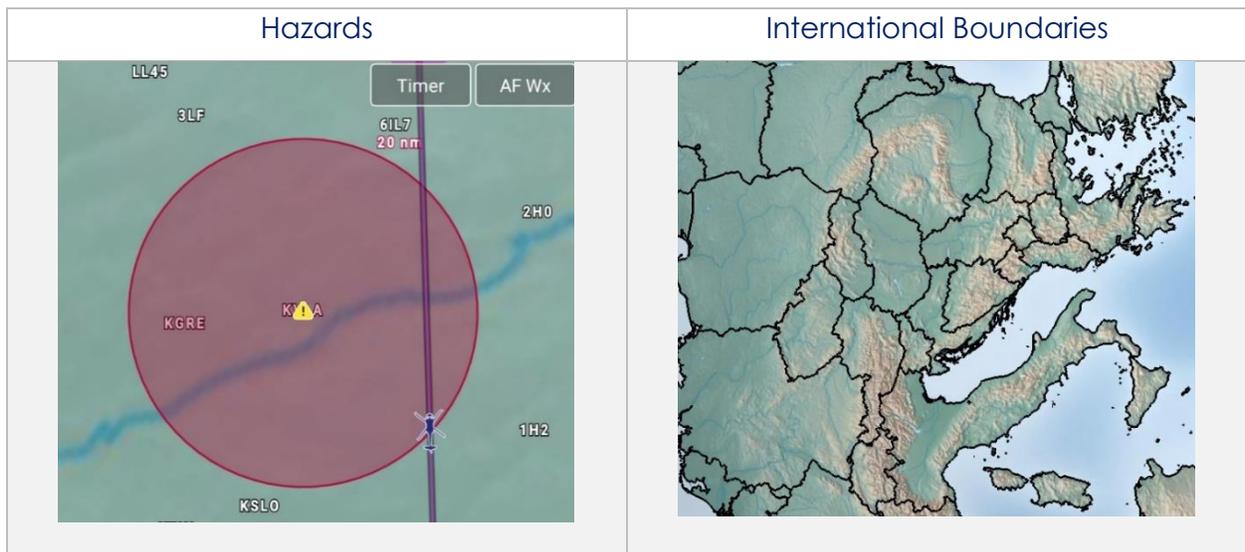
Hazards are marked locations on the Map that were dropped by users. This option must be enabled to view dropped hazards. If no hazards were dropped, refer to [Section 14.4.12.1.4](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Hazards** to enable the option. Dropped Hazards will populate on the Map.
6. Tap a hazard of choice on the Map. The Identifier Menu will appear.
7. To view hazard information, tap **Show** from the side menu.
8. Tap **Info and Wx** and hazard information will be displayed.

14.4.5.2.1.13 International Boundaries

International Boundaries delineate the space between sovereign states.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **International Boundaries** to enable the option. Divisions of the sovereign states will overlay on the map.



14.4.5.2.1.14 Military Training Routes (MTRs) Instrument Route (IR)

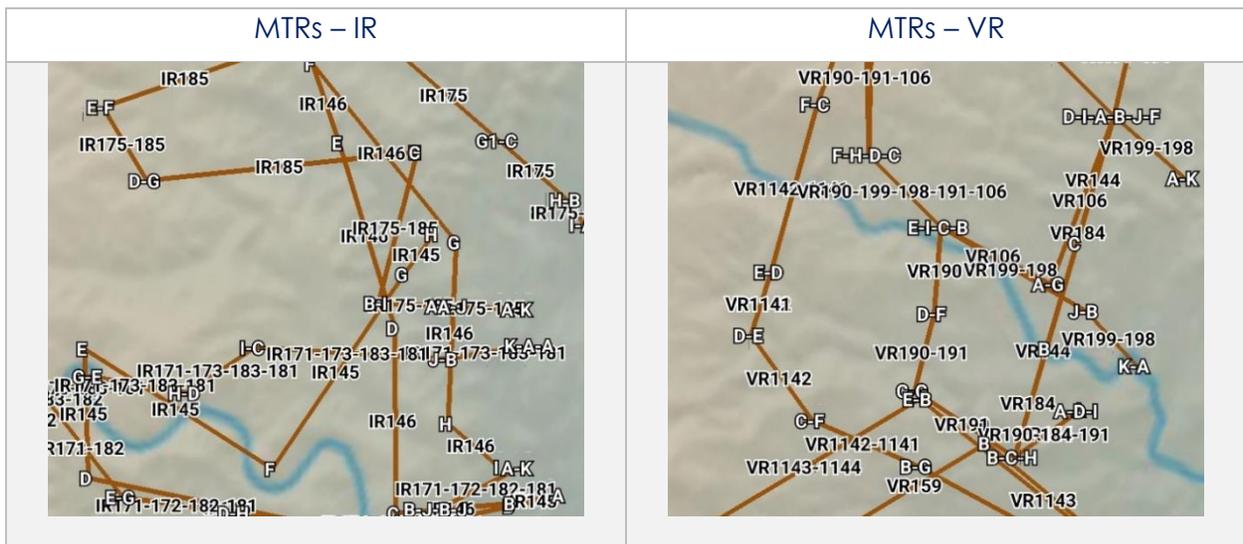
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **MTRs** to **IR**. Instrument military training routes will populate on Map.
6. Tap an MTR of choice on the Map view. A popup containing information on the MTR will be displayed.



NOTE: Users can add MTRs to route. Refer to [Section 14.1.1.1](#) for additional information.

14.4.5.2.1.15 Military Training Routes (MTRs) Visual Route (VR)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **MTRs** to **VR**. Visual military training routes will populate the Map.
6. Tap an MTR of choice on the Map view. A popup containing information on the MTR will be displayed.



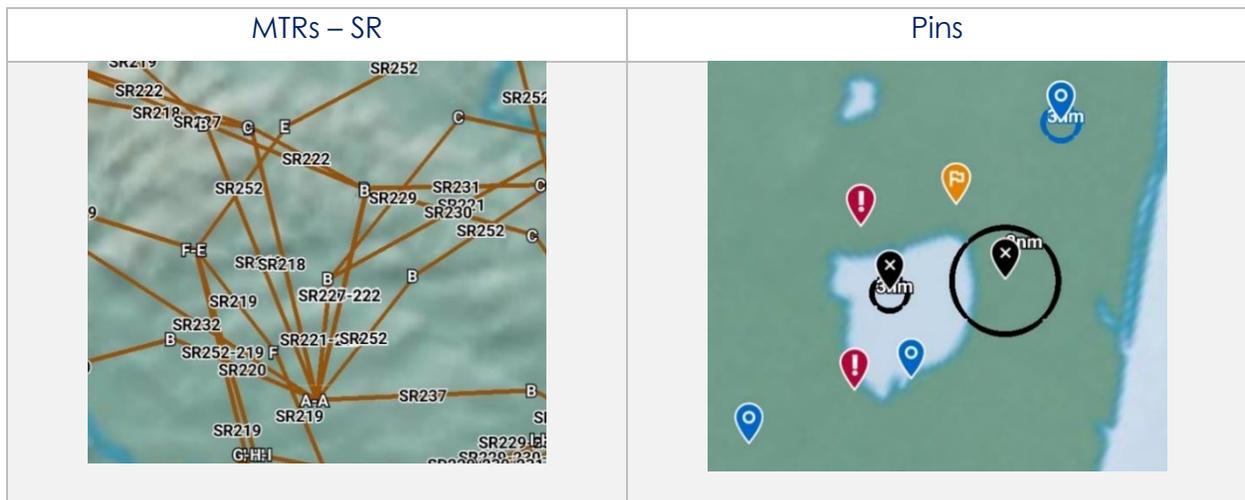
14.4.5.2.1.16 Military Training Routes (MTRs) Slow Speed Route (SR)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **MTRs to SR**. Slow speed military training routes will populate on the Map.
6. Tap an MTR of choice on the Map view. A popup containing information on the MTR will be displayed.

14.4.5.2.1.17 Pins

Pins are marked locations on the Map that were dropped by users. The Pins overlay is exclusive to Avoidance Point, Emergency Marker, Landmark, and Pin. This option must be enabled to view dropped pins. If no pins were dropped, refer to [Section 14.4.12.1.3](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Pins** to enable the option. Dropped pins will populate on the Map.
6. Tap a pin of choice on the Map view. The Identifier Menu will appear.
7. To view pin information, tap **Show** from the side menu.
8. Tap **Info and Wx** and pin information will be displayed.

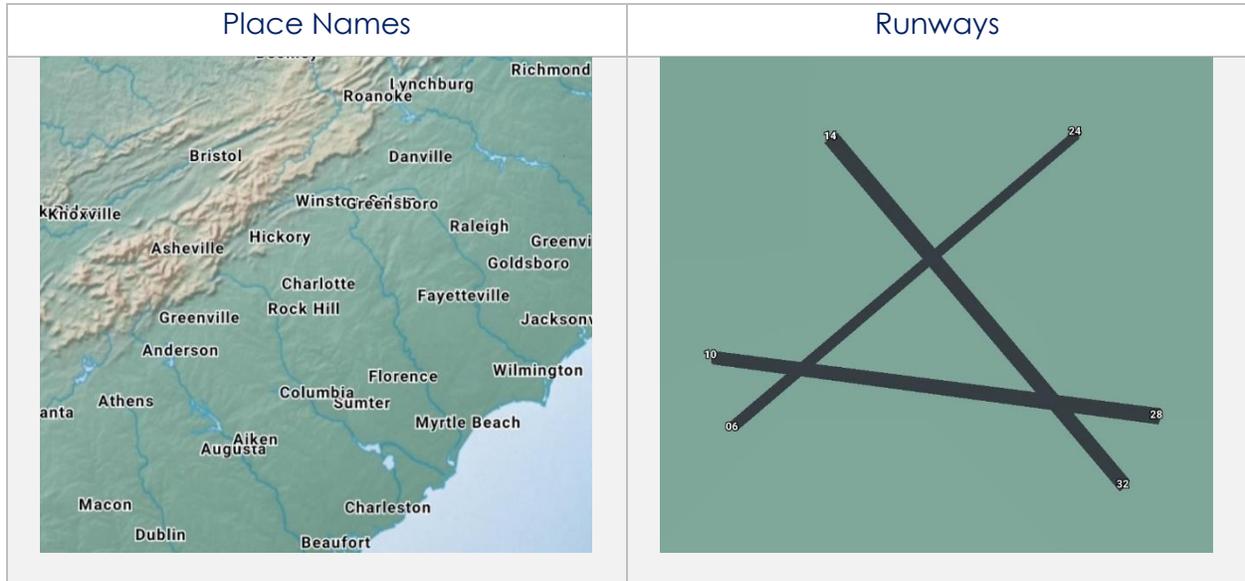


14.4.5.2.1.18 Place Names

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Place Names** to enable the option. Town and country names will populate on the Map.

14.4.5.2.1.19 Runways

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Runways** to enable the option. Runways will populate on the Map.



14.4.5.2.1.20 Search and Rescue (SAR) Grids

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **SAR Grids** to enable the option. World-wide SAR grids will overlay on the Map.



NOTE: If SAR grids have been enabled but are not displaying, try zooming in on the Map screen to view the grids.

14.4.5.2.1.21 Special Use Airspaces (SUAs)

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for **SUAs** to **On**. Special airspaces will be displayed on the Map.
6. Tap to select or slide the segmented control to **+Labels** to display labels on special use airspaces.
7. Tap an SUA of choice on the Map. A popup containing SUA information will be displayed.



14.4.5.2.1.22 Terrain

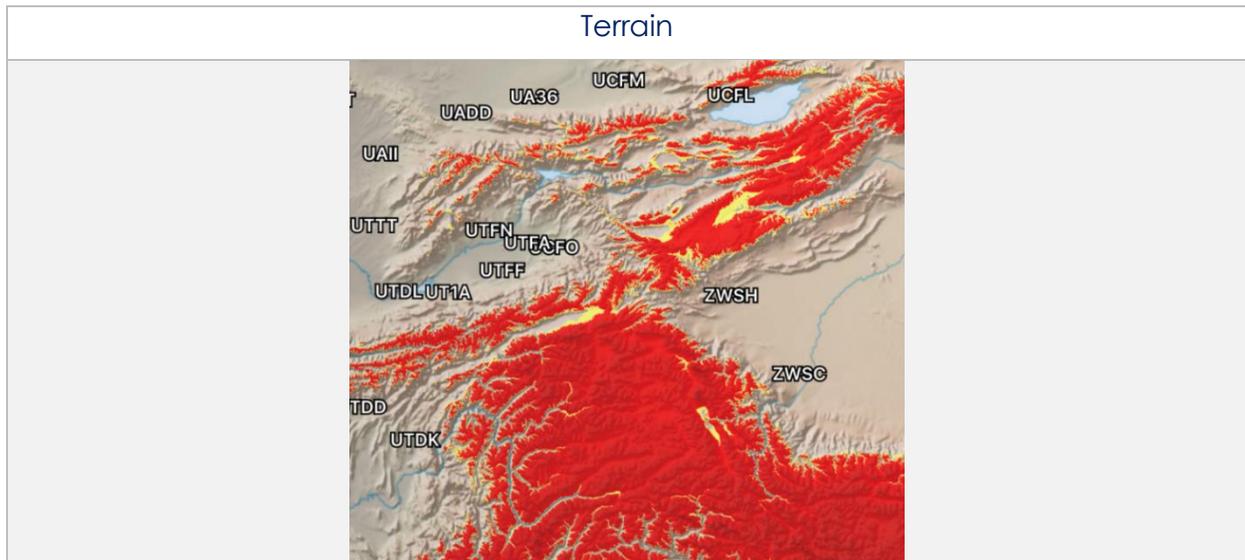
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Terrain** to enable the option. Terrain coloring will overlay on the Map.
6. The overlay will display red and yellow coloring which depicts the proximity of the pilot's ownship relative to terrain. The different colors indicate the following:
 - a. **Red** – ownship is less than or equal to 100 feet above terrain
 - b. **Yellow** – ownship is 100 to 1,000 feet above terrain
7. By default, the transparency is set to 100%. Drag the slider to adjust the route line transparency to any value between 20% to 100%.



NOTE: Terrain Coloring data must be loaded to view the Terrain overlay. Refer to [Section 9.13](#) for additional information.



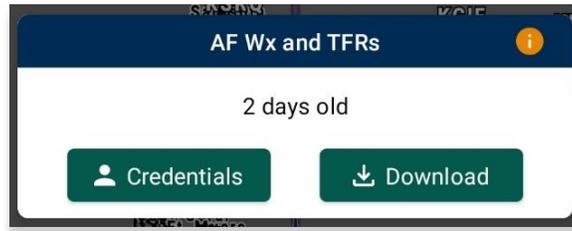
NOTE: The elevation of the water is the water's true elevation, therefore, the terrain coloring for water will range from red to yellow depending on the ownship's altitude.



14.4.5.2.1.23 Temporary Flight Restrictions (TFRs)

Temporary Flight Restrictions (TFRs) can be overlaid on the Map view. By tapping on a TFR overlay, the TFR textual data will display for that specific TFR selection.

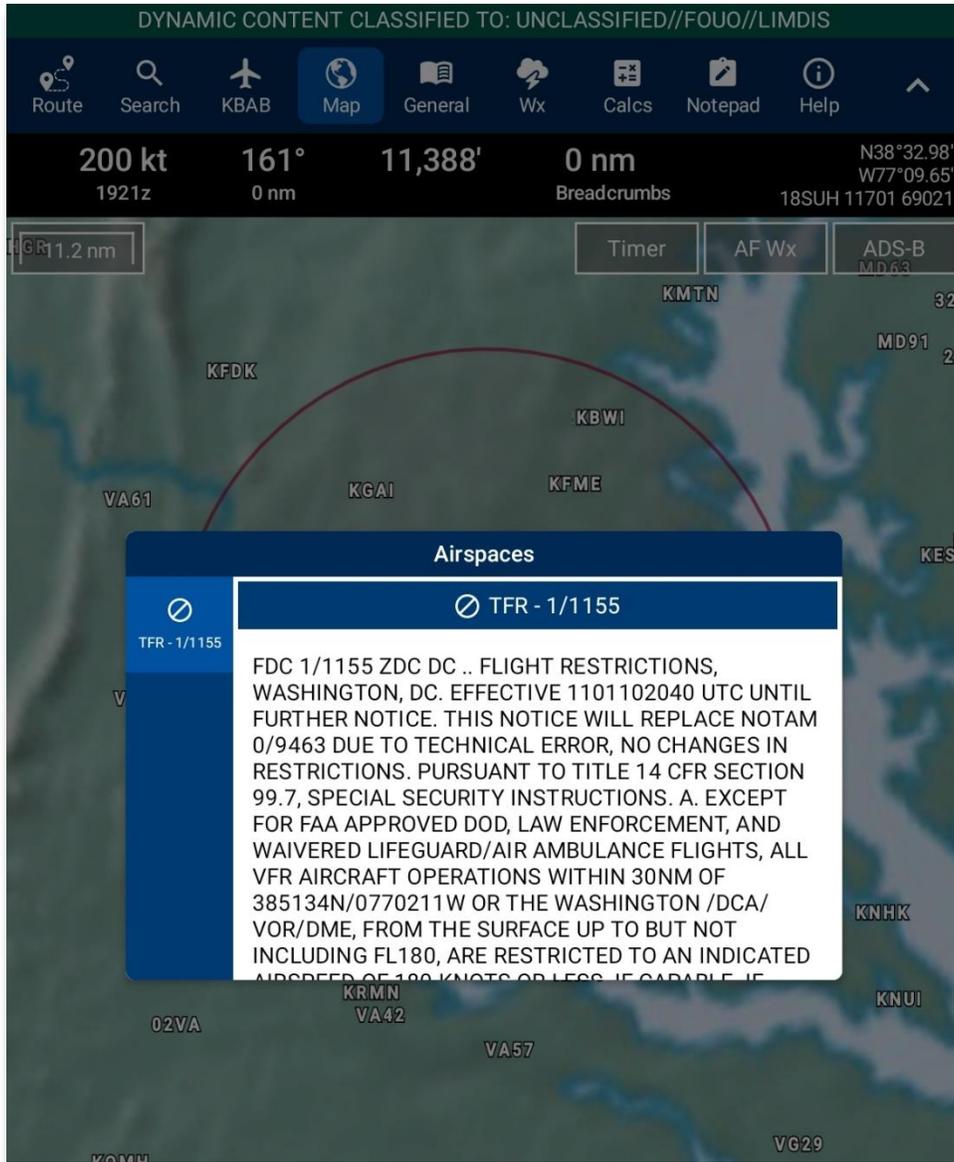
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **TFRs** to enable the option.
6. Exit from the Overlays popup and navigate to the AF Wx button on the Map view.
7. The AF Wx and TFRs popup will display. Select **Credentials**.



8. Select desired method of authentication using any of the following options:
 - Aero User Database
 - GEOAxis
 - MDM

Credentials	
Aero User Database	
Username	<input type="text"/>
Password	<input type="password"/>
<input type="button" value="✓ Connect"/>	

9. Tap **Connect** when done.
10. The TFRs will populate on the Map.
11. Tap on a TFR to display TFR information.

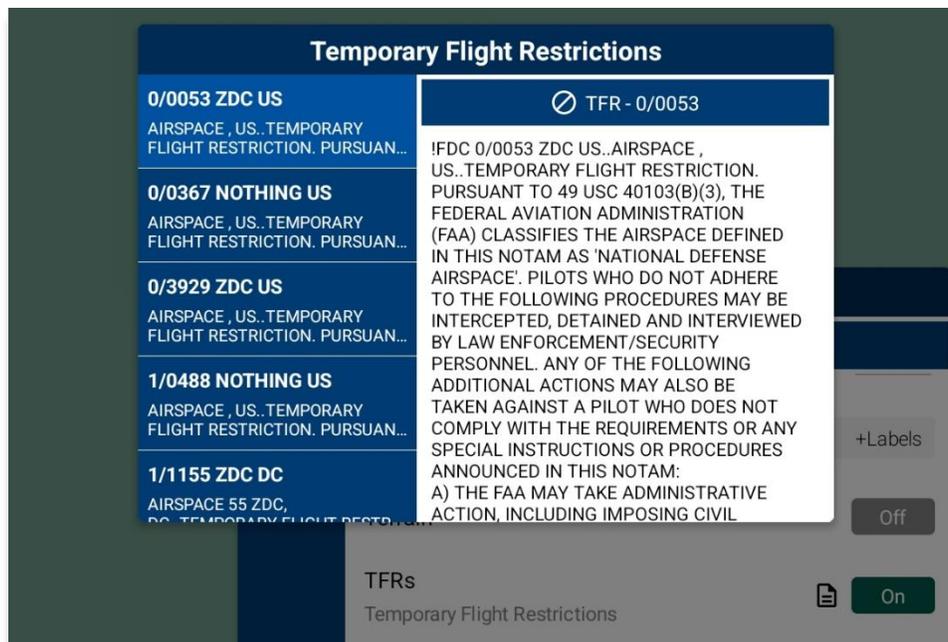


NOTE: In the case where a TFR overlaps another TFR, a Which One popup will appear to confirm selection.

14.4.5.2.1.23.1 View Textual Temporary Flight Restrictions (TFRs)

Textual Temporary Flight Restrictions (TFRs) can be viewed from the Overlays menu. TFRs, including presidential TFRs, will be listed on the popup.

1. Prior to viewing textual TFRs, users must ensure that they are logged in using their Aero User Database or GEOAxis credentials.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Scroll to the bottom of the Overlays menu to view additional overlays. Locate *TFRs* and tap the **document** icon beside the option.
6. The Temporary Flight Restrictions popup will display with all TFR data including presidential TFRs. Scroll down to view additional TFRs.



14.4.5.2.1.24 Time Zones

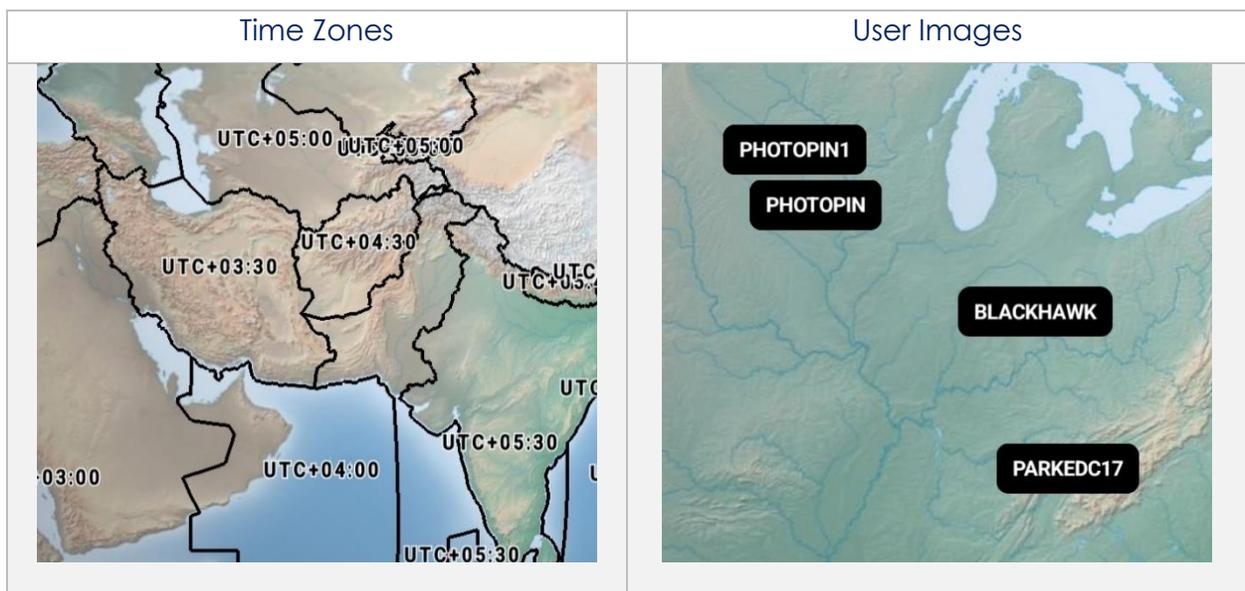
Time Zones are shown on the Map view with lines separating the longitudinal divisions. Labels display the time offset for each time zone.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Time Zones** to enable the option. The map will display lines separating longitudinal divisions.

14.4.5.2.1.25 User Images

User Images are Photo Pins that were dropped by users. The User Images overlay is exclusive to Photo Pins. This option must be enabled to view dropped photo pins. If no pins were dropped, refer to [Section 14.4.12.1.3.4](#) for additional information.

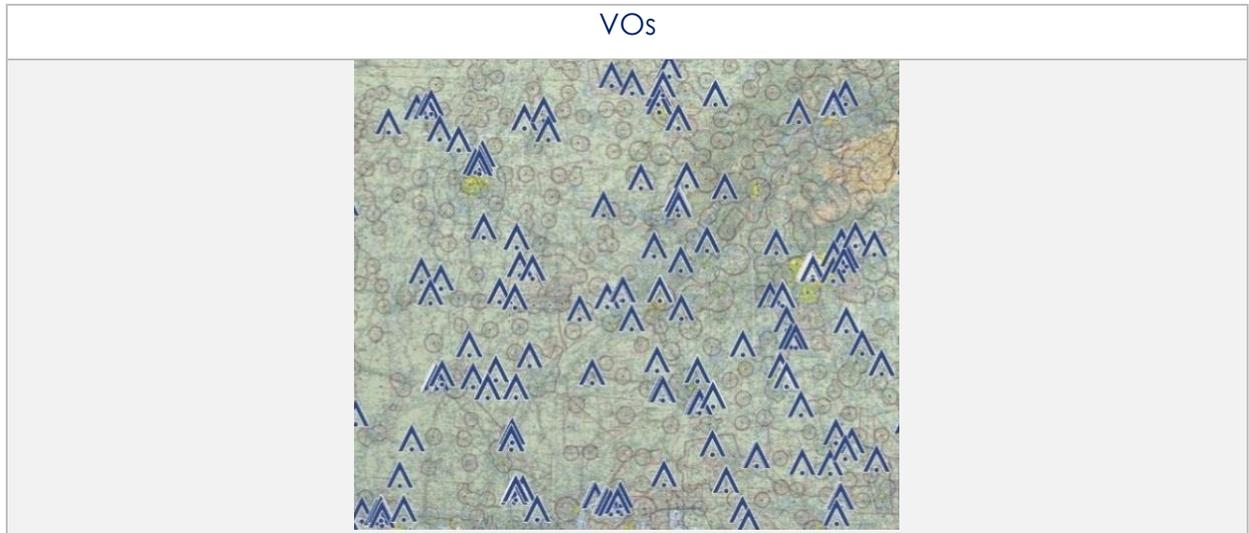
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **User Images** to enable the option. Dropped photo pins will populate on the Map.



14.4.5.2.1.26 Vertical Obstructions (VOs)

Vertical Obstructions (VOs) will provide information including towers, buildings, and bridges at or over 150' with additional information including coordinates, AGL, and MSL.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **VOs** to enable the option. Vertical obstructions will populate the Map.

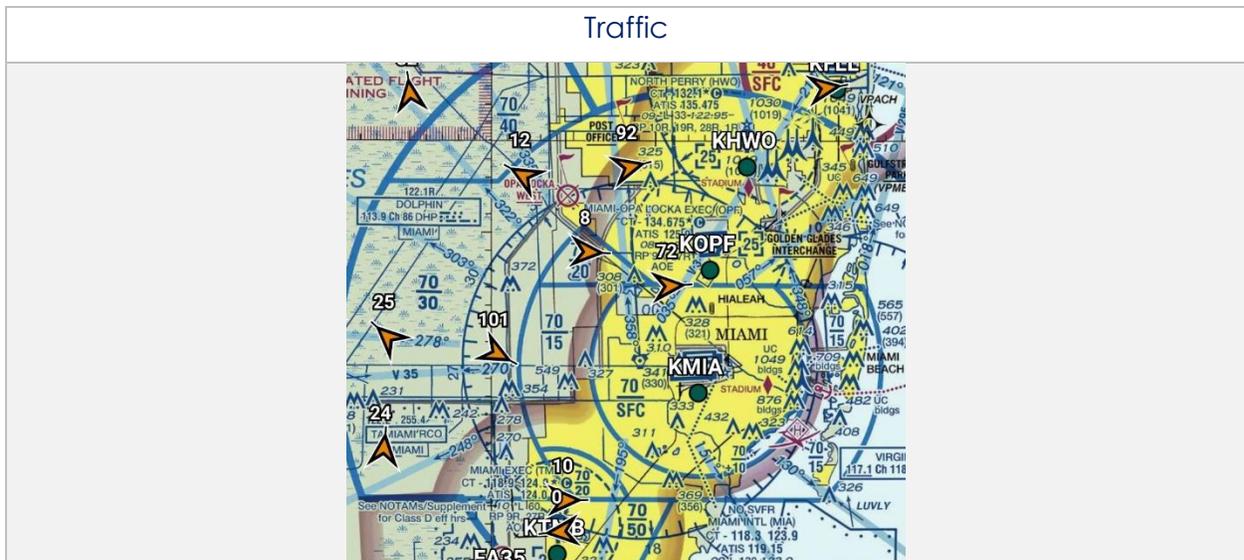


14.4.5.2.2 Traffic

Air traffic can be displayed on Aero App based on the given information provided from your ADS-B receiver. A successful connection to an ADS-B receiver is required to view traffic on the Map. Refer to [Section 14.4.4](#) for additional information.

14.4.5.2.2.1 Traffic

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **Traffic** from the side menu.
5. Tap **Traffic** to enable the option. ADS-B traffic will populate on the Map.



14.4.5.2.3 User Overlays

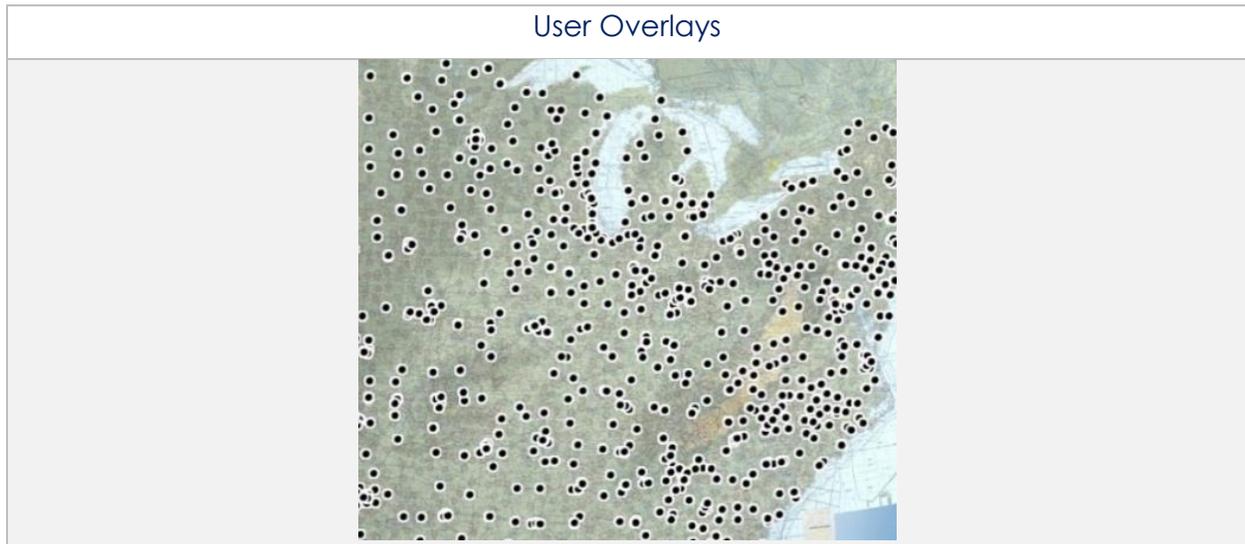
Aero App enables users to sideload User Overlays such as Shapefiles, GeoJSON, and KML/KMZ files to their Aero App directory. Refer to [Section 11](#) for additional information.

14.4.5.2.3.1 User Overlays

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **User Overlays** from the side menu.
5. Tap one or multiple **User Overlays**. The user overlay is displayed on the map.



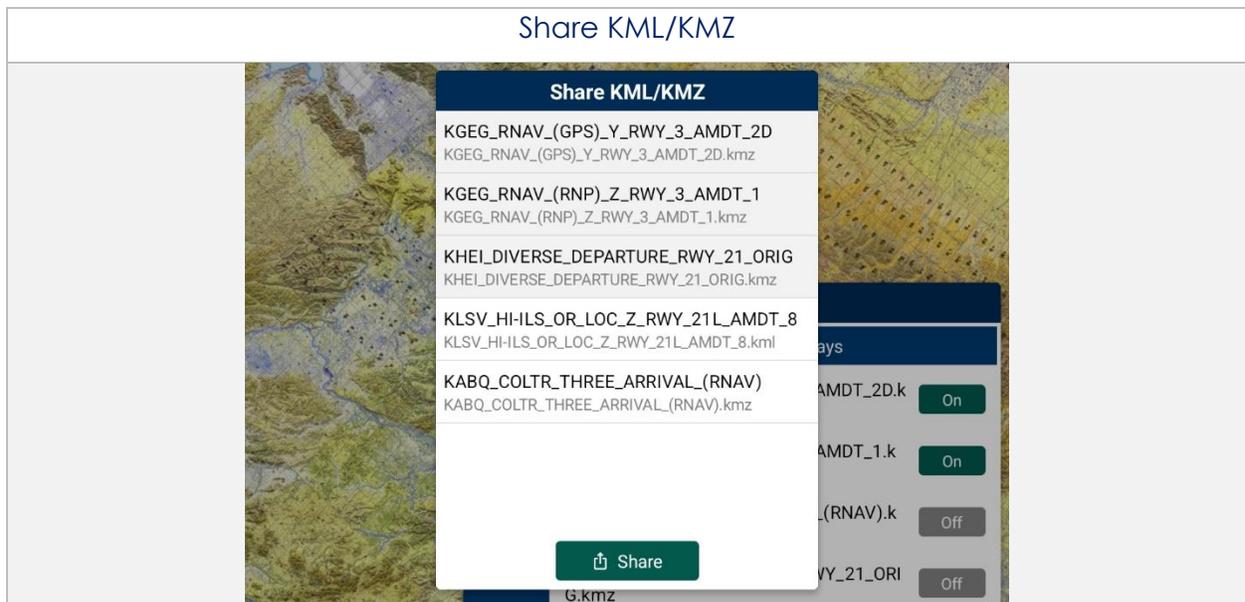
NOTE: Users can sideload User Overlays by storing Shapefiles, GeoJSON, KML/KMZ, and other files in the [mounted root]/AeroApp/MovingMaps directory.



14.4.5.2.3.2 Share KML/KMZ

KML/KMZ files can be shared between Aero App users via Quick Share or Email.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** on the navigational bar.
4. Select **User Overlays** from the side menu.
5. Tap **Share** and the Share KML/KMZ popup will display.
6. Select desired **file(s)** to share then tap **Share** to display the different sharing methods.
7. Select desired **method of sharing**.
8. By selecting **Quick Share**, the Quick Share view will display. Refer to [Section 14.4.5.2.3.2.1](#) for additional information.
9. By selecting **Email**, the email provider in which you have set your device to share files to, will appear with the KML/KMZ files loaded as an attachment. Refer to [Section 14.4.5.2.3.2.3](#) for additional information.

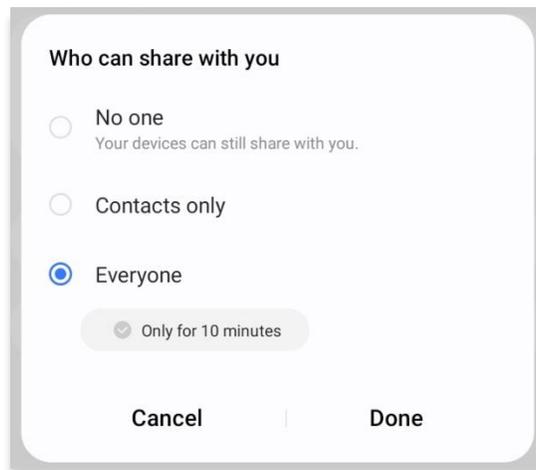


NOTE: The Share button will be disabled if no files have been selected.

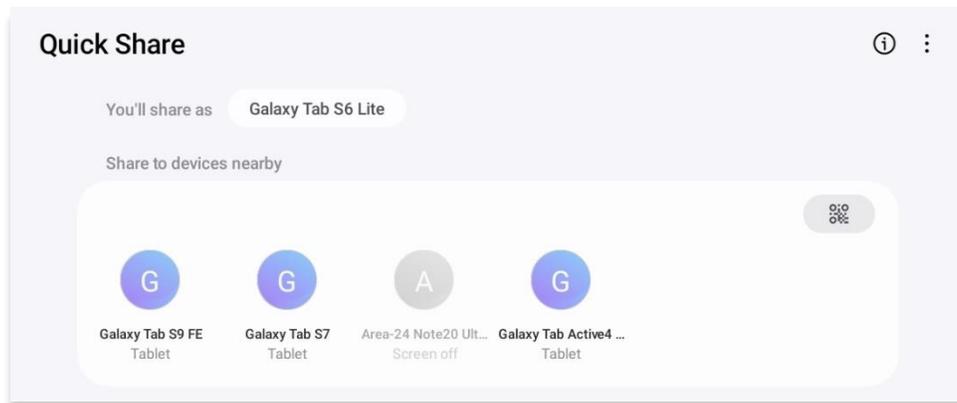
14.4.5.2.3.2.1 Sharing KML/KMZ Files Through Quick Share

Pilots can share KML/KMZ files to another Android device via Quick Share. Users must adjust their *Who can share with you* setting to the appropriate device visibility setting to avoid sharing interruption. Refer to support.google.com/android for additional information on Quick Share.

1. On the sharing device, the Quick Share view will display. Ensure the receiving device has their screens turned on, and the *Who can share with you* setting to set to 'Contacts only' or 'Everyone'.



2. Your device will begin to scan for nearby devices. Select a device listed below the *Share to devices nearby* section.

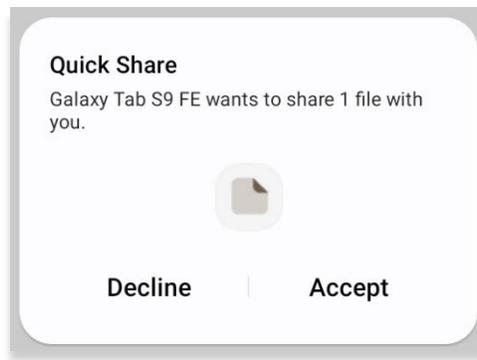


3. The sharing process will begin, and the receiving device will follow prompts to accept the files that are being shared.

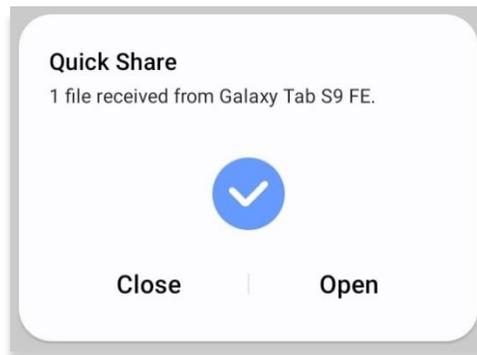
14.4.5.2.3.2 Receiving KML/KMZ Files Through Quick Share

Users receiving the files via Quick Share must follow the prompts to accept the files being sent. Users must adjust their *Who can share with you* setting to the appropriate device visibility setting to avoid receiving interruption. Refer to support.google.com/android for additional information on Quick Share.

1. Ensure your device is turned on, and the *Who can share with you* setting set to 'Contacts only' or 'Everyone'.
2. A Quick Share popup will appear with options to *Decline* or *Accept*. Tap **Accept**.



3. The transfer process will begin. The received file will be stored in your device's Internal Storage.
4. Once the transfer is complete, options to *Close* or *Open* will appear. Tap **Open** and you will be redirected to the folder where the KML/KMZ file is stored. Alternatively, you can navigate to Internal Storage > Download > Quick Share.



The received KML/KMZ file will be stored in the device's Internal Storage. To view the files on Aero App, users must move the received files to the appropriate Aero App folder. Refer to support.google.com for additional information.

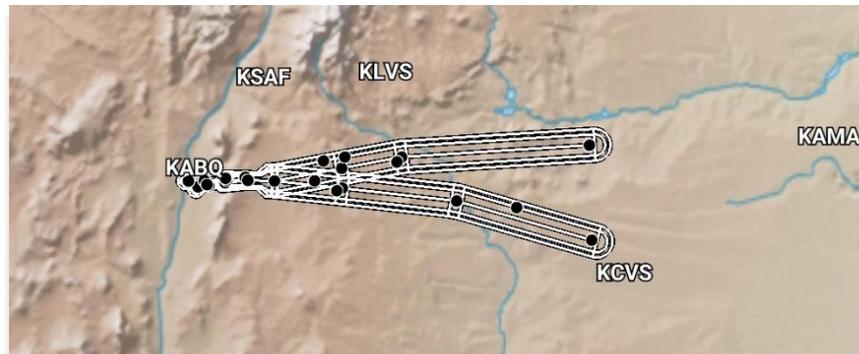
5. Locate the received KML/KMZ file. Press and hold the file to view additional actions. Select **Move**.



6. Navigate to the Aero App folder and select **MovingMap** subfolder. Alternatively, users can copy the files to the Aero App's MovingMap subfolder.
7. Tap **Move here**. The KML/KMZ file will now be stored in Aero App's Internal Storage.



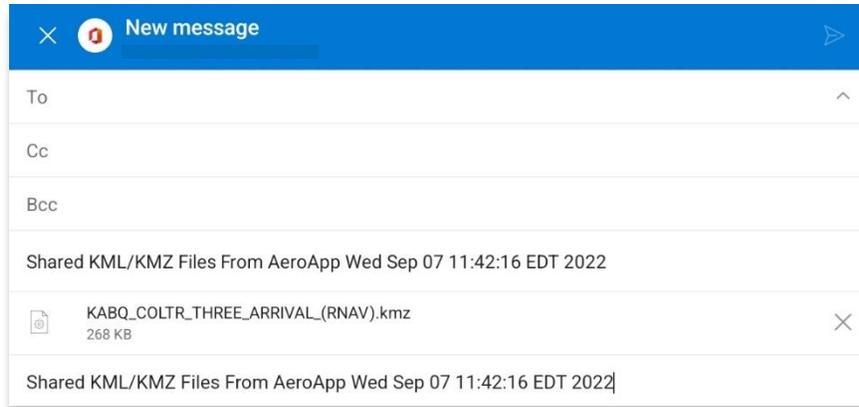
8. The KML/KMZ file can be viewed on Aero App. Open **Aero App**.
9. Tap **Map** on the **Main Menu**.
10. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
11. Tap **Overlays** on the navigational bar.
12. Tap **User Overlays** from the side menu.
13. Locate and tap to enable the KML/KMZ file from the *User Overlays* collection. The KML/LMZ file will overlay on the Map.



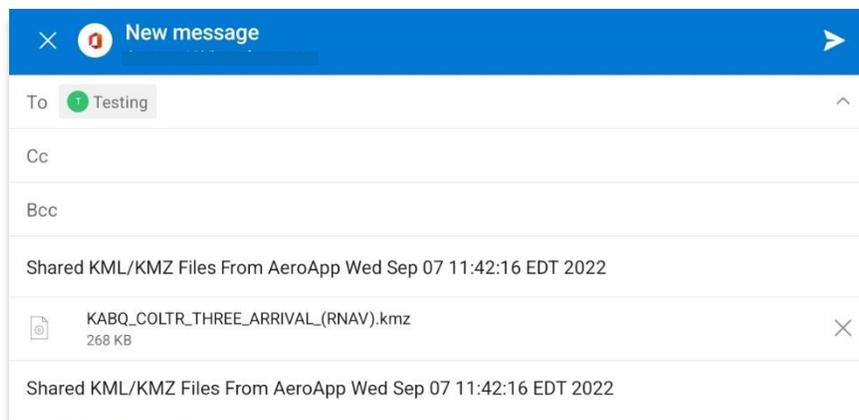
14.4.5.2.3.2.3 Sharing KML/KMZ Files Through Email

Pilots can share KML/KMZ files via email. Users must set their *device setting* to their desired email provider for *both* devices prior to sharing and receiving files.

1. On the sharing device, the email provider in which you have set your device to share files to, will display with the KML/KMZ files attached.

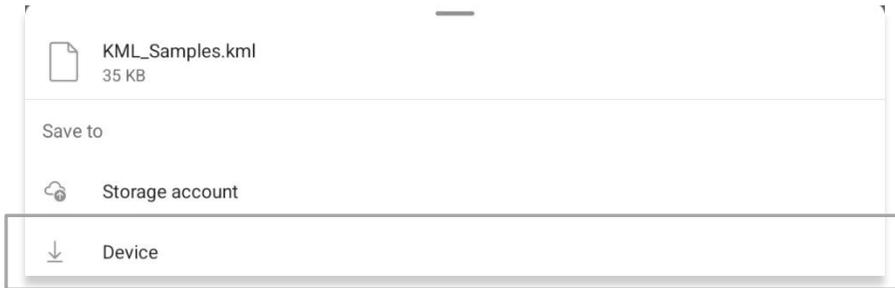


2. Enter the recipient's email address to which you would like to share the KML/KMZ files.
3. Once a valid email address has been entered, the *send button* will become selectable. Tap the **Send** button and the receiving device will follow prompts in downloading the files into their device.

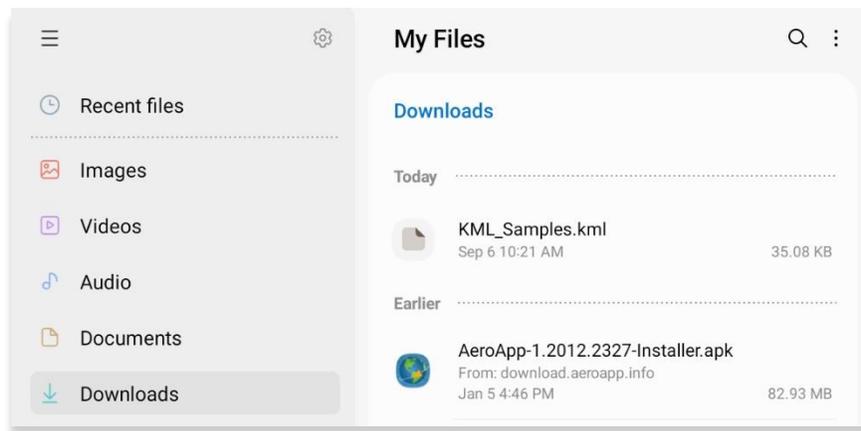


14.4.5.2.3.2.4 Receiving KML/KMZ Files Through Email

1. On the receiving device, navigate to the email provider to which the KML/KMZ files were sent to.
2. From the email provider, tap to save the files into your device's storage.

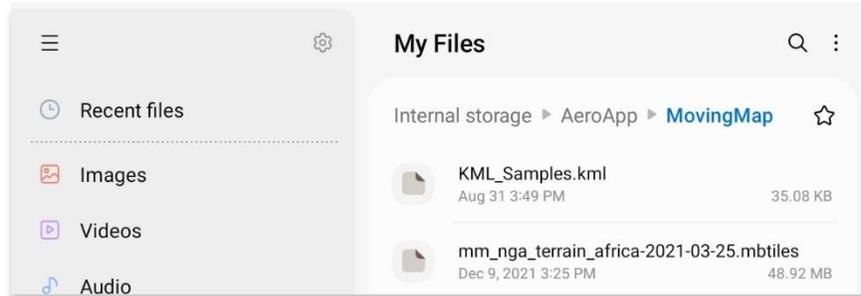


3. Once saved, navigate to the device's File Folder.
4. Navigate to the *Downloads* folder and locate KML/KMZ file.

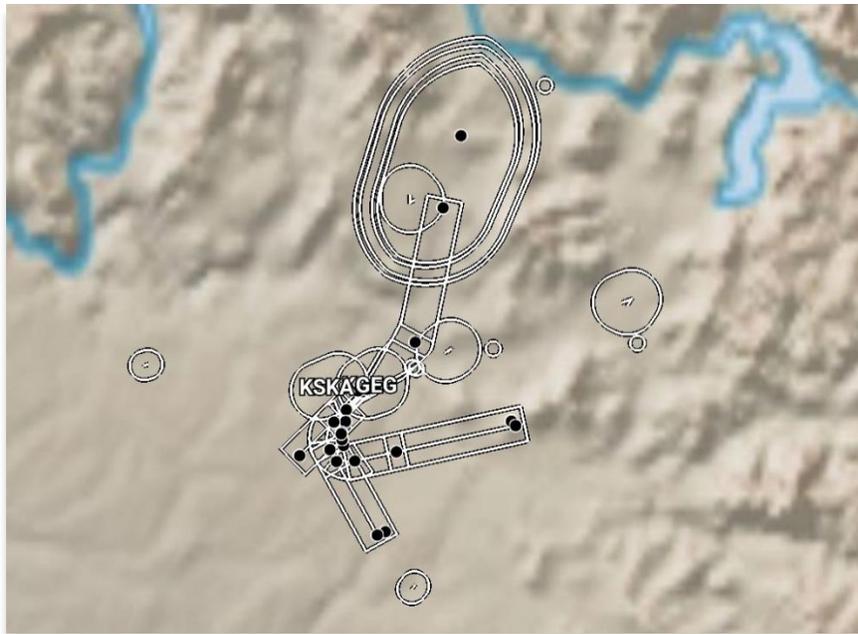


5. Copy desired KML/KMZ file.

6. Navigate to the device's **Internal Storage** and locate the **Aero App** folder.
7. Navigate to the **MovingMap** folder and paste the KML/KMZ file.



8. Open **Aero App**.
9. Tap **Map** on the **Main Menu**.
10. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
11. Tap **Overlays** on the navigational bar.
12. Tap **User Overlays** from the side menu.
13. Locate and tap to enable the KML/KMZ file from the *User Overlays* collection. The KML/KMZ file will overlay on the Map.



14. To delete the overlay, from the **User Overlays** popup, swipe left to reveal the delete button of the file that you choose to permanently remove. Tap **Delete**.

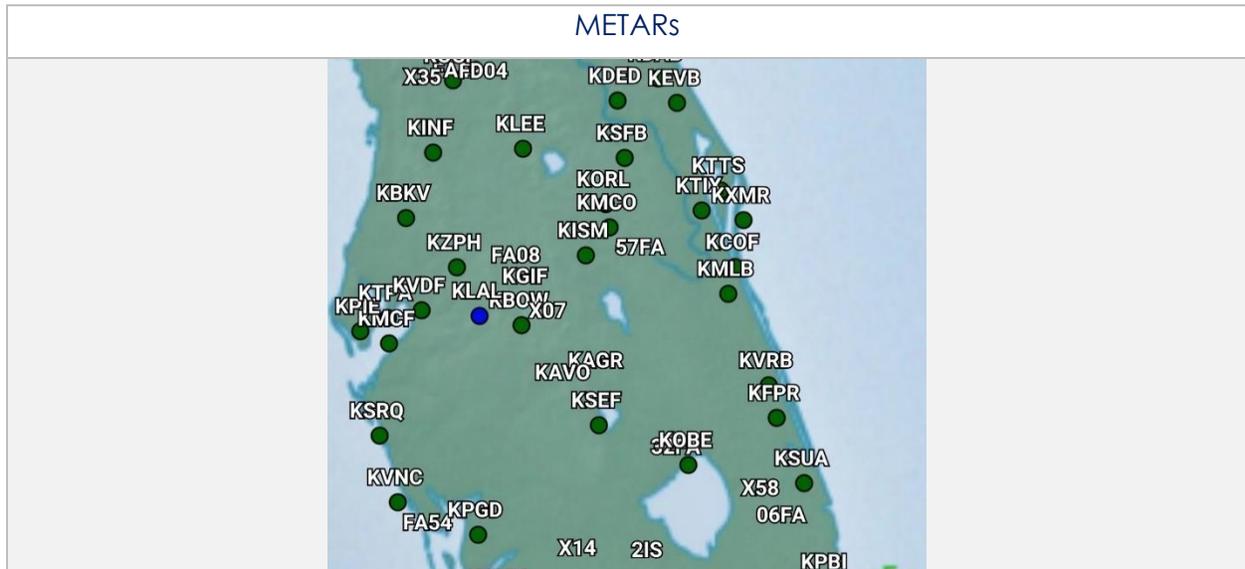
14.4.5.2.4 Weather

Aero App Weather has various options that enable pilots to display METARs and ADS-B weather on the Map. Users can modify their ADS-B flight altitude and ADS-B overlay transparency.

14.4.5.2.4.1 METARs

The METARs option must be enabled to view the latest ADS-B and/or AF Weather on the Map.

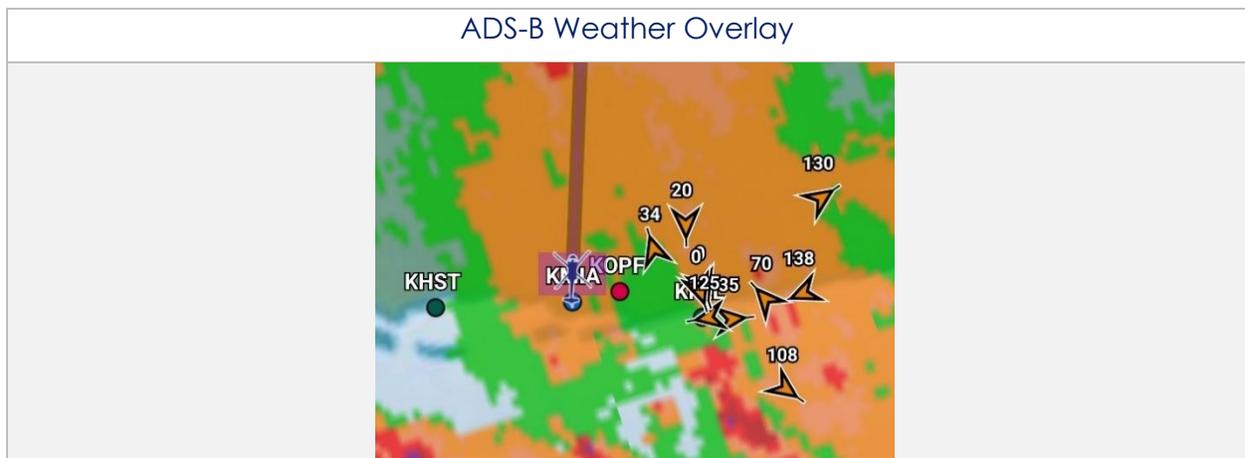
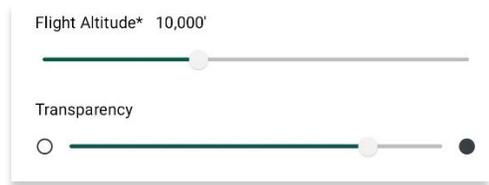
1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Tap **Overlays** on the navigational bar.
4. Tap **Weather** from the side menu.
5. Tap **METARs** to enable the option. The flight rules will overlay on the Map.



14.4.5.2.4.2 ADS-B Weather

Aero App provides animated ADS-B weather such as Lightning, Cloud Tops, Icing Probability, Icing Severity, Icing SLD Potential, NEXRAD, and Turbulence. User must establish an ADS-B connection. For additional information, refer to [Section 14.4.4](#).

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Tap **Overlays** on the navigational bar.
4. Tap **Weather** from the side menu.
5. Tap **ADS-B** to enable the option. Additional ADS-B weather overlay options will display.
6. Tap **Lightning** to enable the option.
7. Tap the radio buttons of the desired ADS-B weather overlay.
8. A Flight Altitude slider displays below all the ADS-B weather overlay options. The Flight Altitude slider is enabled when a required weather overlay option is selected. These weather overlays have an asterisk as listed below:
 - Icing Probability*
 - Icing Severity*
 - Icing SLD Potential*
 - Turbulence*
9. By default, the flight altitude value is set to 10,000'. Adjust the flight altitude slider to any value between 2,000' and 24,000'.
10. By default, the ADS-B overlay transparency value is set to 50%. Adjust the ADS-B overlay transparency slider to any value between 0% and 100%.



14.4.6 Map Options

The Map Options menu offers Location and Ownship settings and is located at the lower right of the Map view, directly below Map Manager.



14.4.6.1 Location

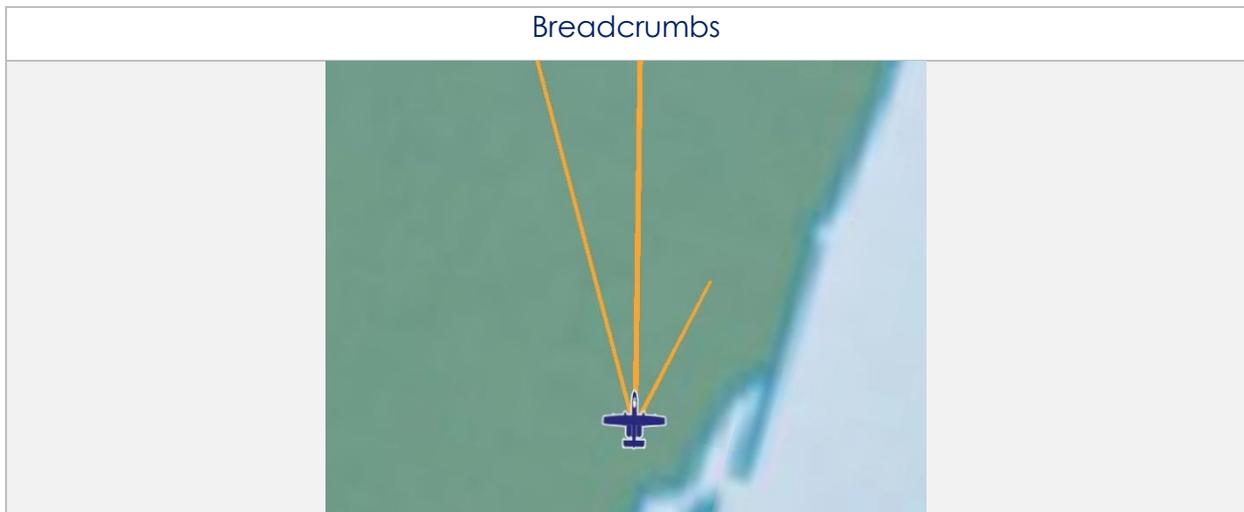
The Location menu offers options to show recorded paths and the ability to add distance rings around your ownship.

14.4.6.1.1 Breadcrumbs

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Location** from the side menu.
4. Tap **Breadcrumbs** to enable the option. The breadcrumb trail tracks will be displayed in orange on the Map.



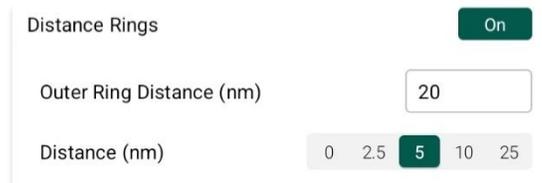
NOTE: Refer to [Section 14.4.1.7](#) for additional information regarding Breadcrumbs.



14.4.6.1.2 Distance Rings

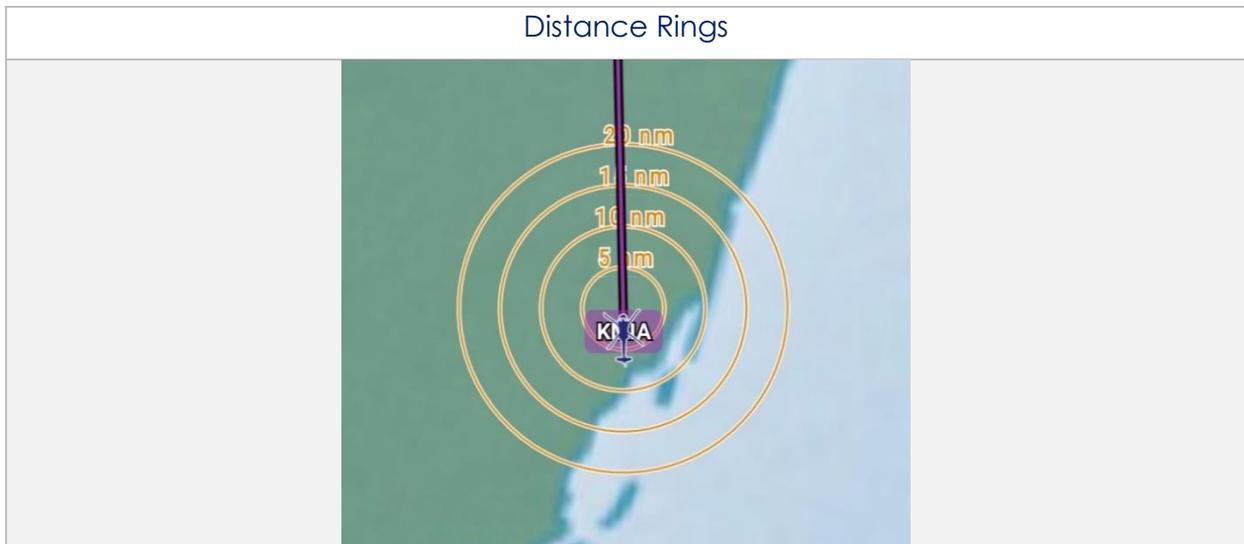
Distance Rings are a series of rings surrounding the pilot's ownship. It is a tool that determines how far away something is from the location of your ownship. The distance rings' default values can be modified in Settings. The Outer Ring Distance setting represents the farthest distance from the ownship, and Distance setting is the length between each ring.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Location** from the side menu.
4. Tap **Distance Rings** to reveal additional options for distance rings.
5. Tap the **Outer Ring Distance** text box and enter desired outer ring distance in km or nm, respective to the distance unit format you have set in Settings.



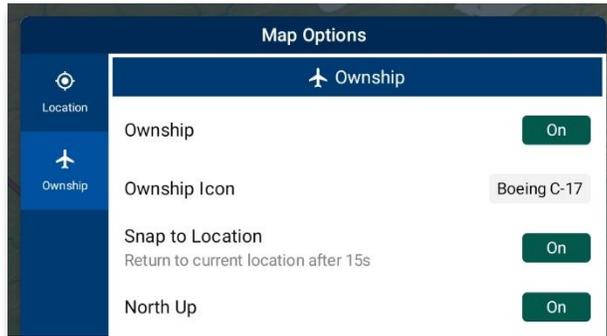
NOTE: The maximum outer ring distance is 999. Any values entered that are greater than 999 or invalid characters (e.g., emojis, special characters, or letters) will display an error.

6. Use the segmented control to select desired distance between rings from the options of 0, 2.5, 5, 10, and 25 km or nm; respective to the distance unit format you have set in Settings.



14.4.6.2 Ownship

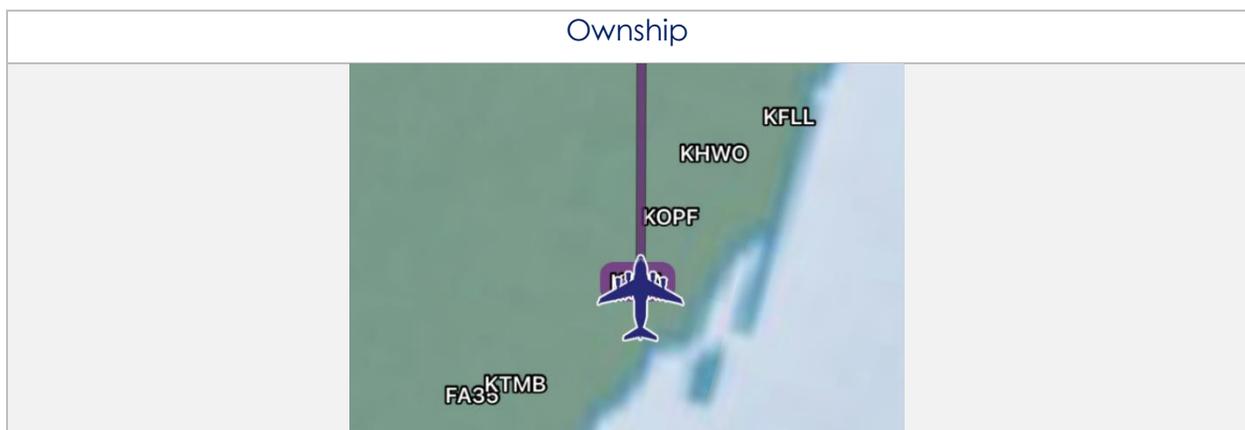
The Ownship menu allows users to customize their ownship. Users can show or hide their Ownship from the map view, Snap to Location in 15 second intervals, and choose North Up as the orientation on the Map.



14.4.6.2.1 Show Ownship and Ownship Icon

The location of your device is relative to the position of the ownship being displayed on the Map view. If your device is connected to an ADS-B or GPS receiver, Aero App will display the GPS location of your receiver. Refer to [Section 14.4.4](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Ownship** from the side menu.
4. Tap **Ownship** to enable the option. An ownship will display on the Map respective to the location of your device, ADS-B, or GPS receiver.
5. Tap the **Ownship Icon** options to display the selection of ownship icons.
6. Select the desired ownship to display the user's current location on the Map.



14.4.6.2.2 Snap to Location

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Ownship** from the side menu.
4. Tap **Snap to Location** to enable the option. The map will automatically snap to your current location after 15 seconds.



NOTE: Alternatively, users can access their Snap to Location feature by tapping the *crosshair icon* on their Map view as explained in [Section 14.4.9](#).

14.4.6.2.3 North Up

1. Tap **Map** on the **Main Menu**.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Ownship** from the side menu.
4. Tap **North Up** to enable the option. The map will be repositioned to a north-up orientation which keeps a fixed point of reference.



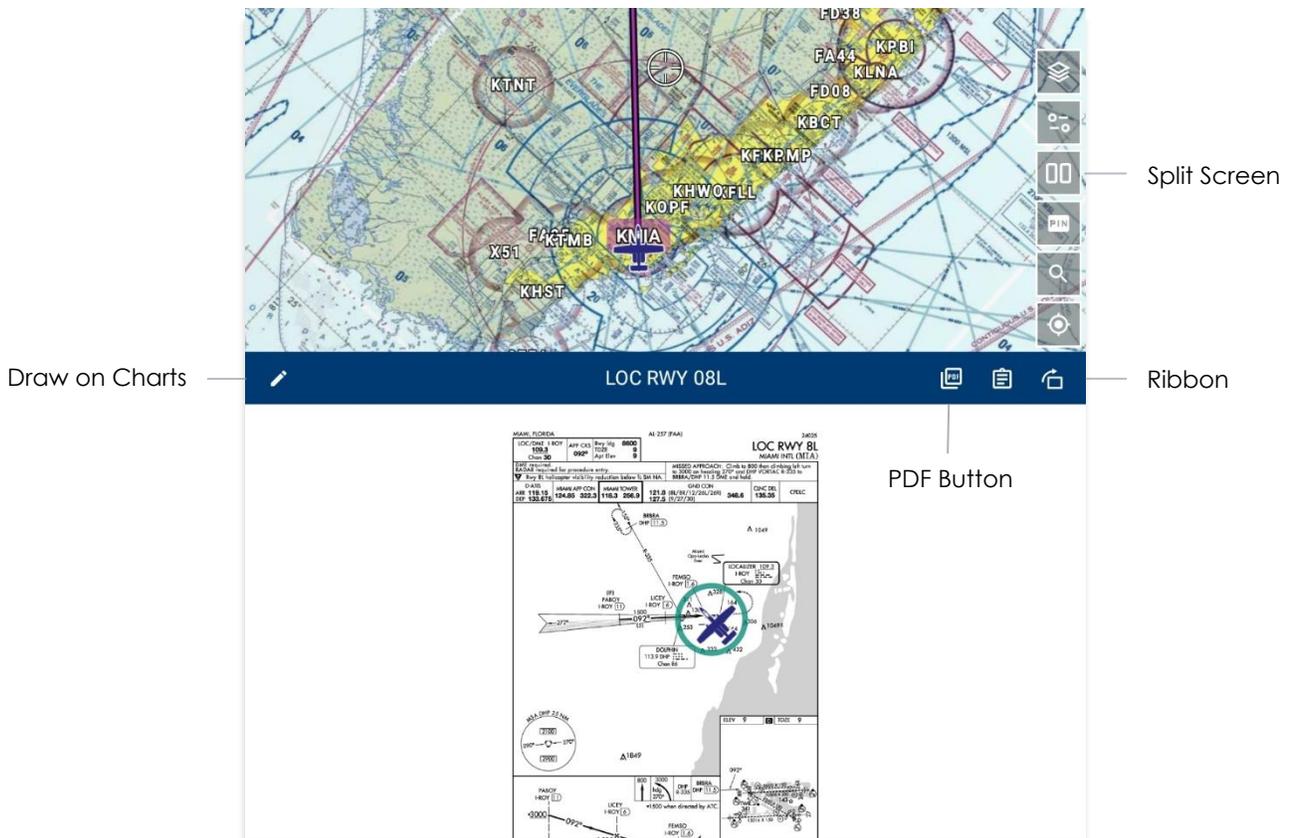
14.4.7 Split Screen

Split Screen allows users to view IAP and APD charts, and user PDF documents simultaneously with the Map on the same screen.

14.4.7.1 APD and IAP for Destination Airport

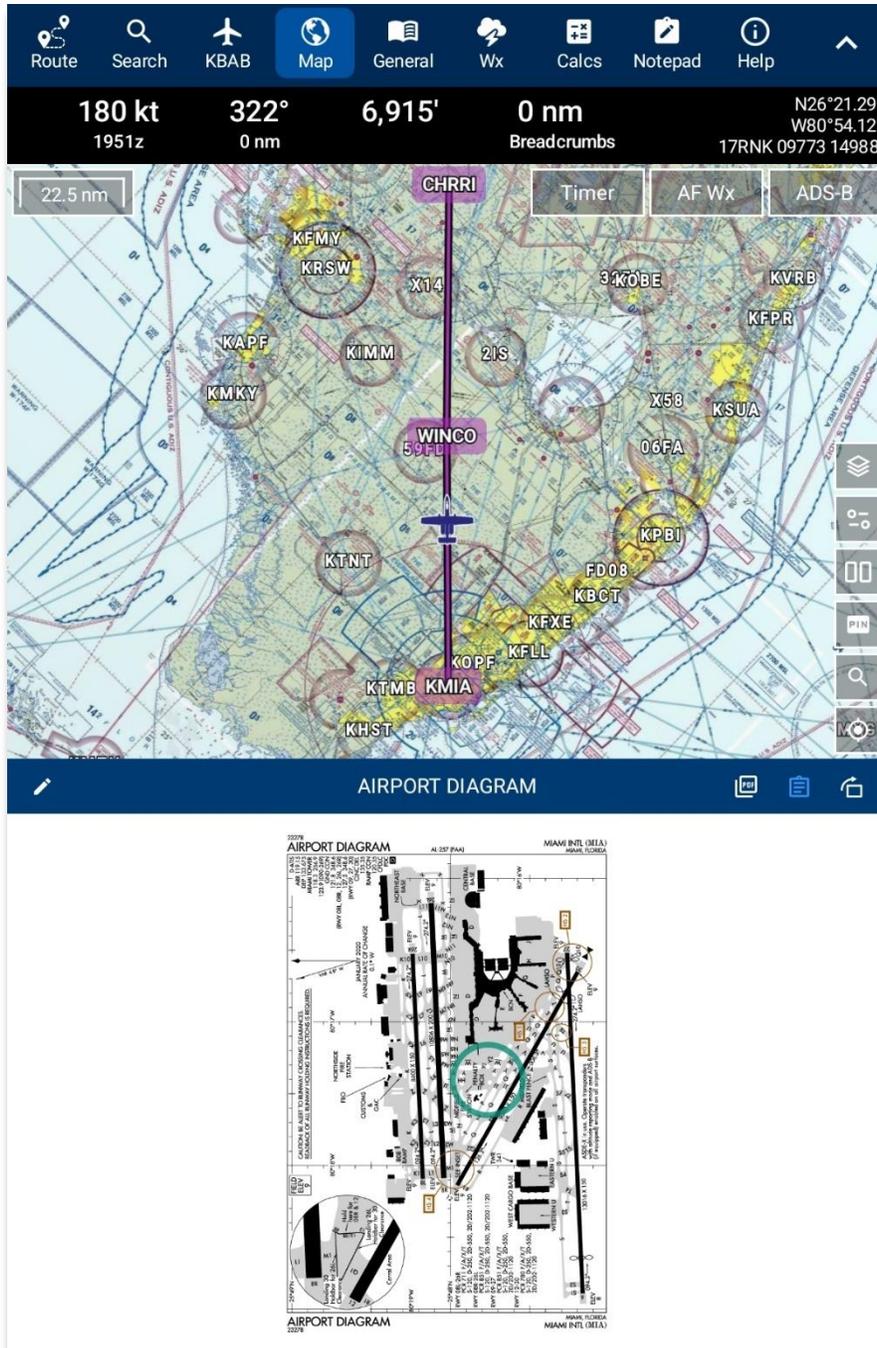
The APD or IAP charts for the route's destination airport can be displayed simultaneously with the Map on a split screen.

1. Tap **Map** on the **Main Menu**.
2. Tap on the **split screen** icon located at the bottom right of the Map view. By default, the destination IAP chart is shown.
3. Tap on the **ribbon**.
4. Select a chart from the popup menu.



NOTE: If no route is loaded, no chart will display.

- To switch to your destination APD, tap the document icon located directly above the PDF icon and the IAP will switch to APD.



NOTE: The switch screen button will turn blue if the user is viewing the IAP, when switching to view the APD charts, the button will revert to white.

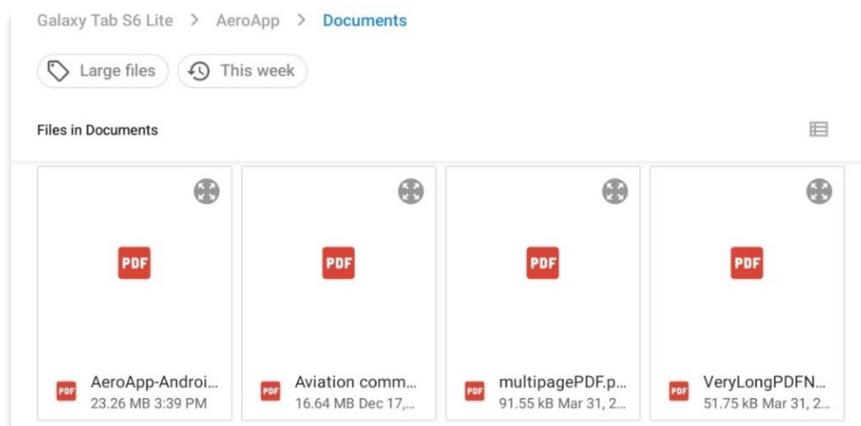


NOTE: Refer to [Section 14.3.2.1](#) on how to draw on APD and IAP charts.

14.4.7.2 PDF Support

The Map's split screen view supports the display of PDF documents. To view your preferred user documents, ensure they are saved to your device and that the necessary permissions are granted to appear in the system file picker. Refer to [Section 7.2](#) for additional information.

1. Tap the **PDF** icon on the ribbon of the split screen.
2. Tap on the **ribbon** and the *system file picker* will appear.



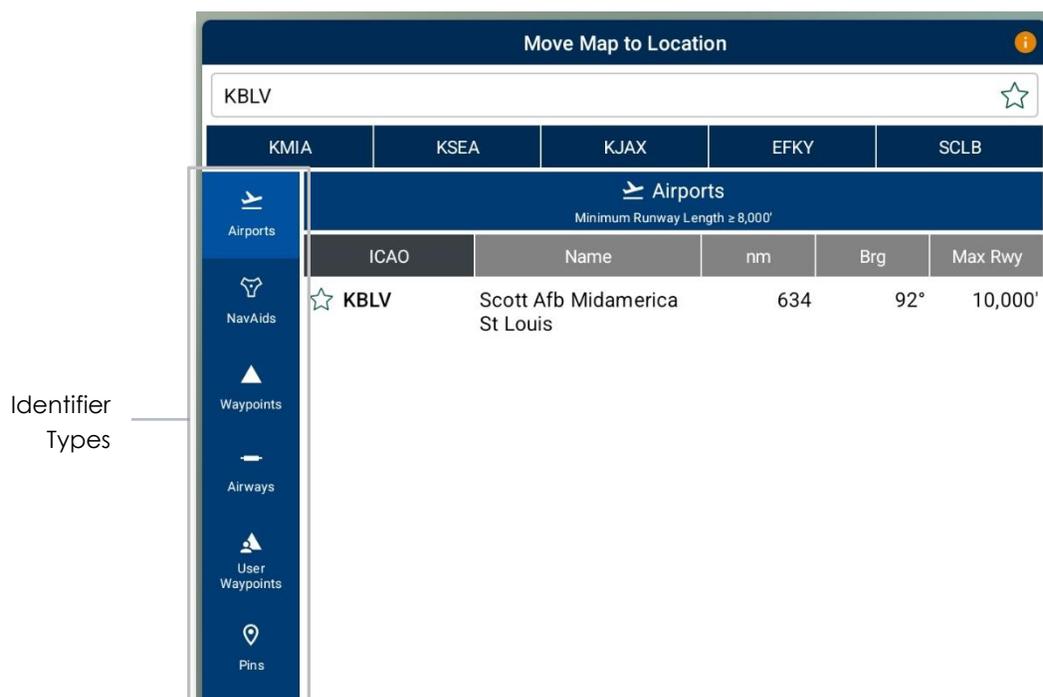
3. Select desired **document**. Your document will display on the split screen view.
4. Swipe the document to the right to move forward or swipe to the left to move backward from a page. Alternatively, you can move the slider to skip multiple pages.
5. To return to the IAP chart view, tap the **clipboard** icon.



14.4.8 Move Map to Location

The Move Map to Location feature allows users to search for an identifier (i.e., Airport, NavAid, Waypoint, Airways, User Waypoint, or Pins) or its search term and the screen will move to the location of the identifier. Users can filter airports by setting a minimum runway length in their Settings.

1. Tap the **search icon** located at lower right of the Map view.
2. Enter an identifier, search term, MGRS, or latitude, longitude.
3. Tap **Search** on the device's on-screen keyboard and the screen will pan to its location.
4. The search results are divided into identifier types. Select from Airports, NavAids, Waypoints, Airways, User Waypoints, or Pins.



14.4.9 Snap to Location

The Crosshair icon located at the bottom-right corner of the Map view, is a shorthand way to manually snap to your current GPS location.



NOTE: Users can enable the Snap to Location feature, which returns to the user's current location after 15 seconds as explained in [Section 14.4.6.2.2](#).

14.4.10 Center Target

The Center Target retrieves the latitude, longitude, and MGRS values of the area in which the target is placed. As the Map moves, a yellow tag would briefly display information on Distance and Bearing, respective to the placement of the target.



Center Target

14.4.10.1 Measure Distance and Bearing Between Points

Aero App provides a tool that calculates the distance and bearing between two points on the Map.

1. Move the Map to activate the center target.
2. Choose a *starting point* and tap the **target icon** to set the starting point.
3. Move the Map to a desired end point. The measurement is displayed above the end point. The values displayed are the distance and bearing of the starting point and end point.



14.4.11 Drag and Drop

The Drag and Drop feature is a tool for users who would like to make quick modifications to their current route. Users can drag any point or segment of the current route and drop it to their desired location.

1. Load desired route in your Route Panel.
2. On the Map, hold a point or segment in your route and drag it to a point that you wish to add to the route.



3. The Nearest popup will appear displaying the latitude and longitude of the selected point with 10 nearest Airports, NavAids, Waypoints, and User Waypoints.
4. Select desired point.

5. A new point will be added to the current route.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

Route Search KBAB Map General Wx Calcs Notepad Help

KMIA
Miami Intl
52.4 nm, 323°
Twr: 118.3 MHz, 123.9 M...

WINCO
WINCO
52.7 nm, 323°
ETE: 00:19:04, ETA: 20:45:10Z

CHRR1
CHRR1
39.5 nm, 31°
ETE: 00:40:26, ETA: 21:06:32Z

KAGR
Macdill Afb Aux Fld
40.6 nm, 307°
ETE: 00:56:27, ETA: 21:22:33Z
Twr:

LAL
Lakeland
72.3 nm, 357°
ETE: 01:12:55, ETA: 21:39:01Z
116.0 MHz, 107X

OCF
Ocala
30.1 nm, 1°
ETE: 01:42:15, ETA: 22:08:21Z
113.7 MHz, 084X

HILIS
HILIS
Destination
ETE: 01:54:26, ETA: 22:20:32Z

148 kt 323° 8,526'
2026z 0 nm

N27°00.84' 70.54 nm
W80°36.12' 356°
17RNK 39488 88055

32.1 nm Timer HILIS AF Wx ADS-B



NOTE: Warning popups will appear when users try to drag and drop points that belong to a route with a DP, STAR, SAR pattern, Airway, or MTR.

14.4.12 Identifier Menu

The Identifier Menu includes identifier information such as the identifier name, and its latitude and longitude. In the case where NavAid is selected, additional information will be available to users such as its identifier name, bearing, distance, and frequency. Users can display the Identifier Menu in three simple ways:

- Long pressing any point on the Map
 - Tapping an existing point on the Map
 - Tapping any point on the Route Panel
1. Tap **Map** on the **Main Menu**.
 2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
 3. The Nearest popup will display. Select desired identifier. The Identifier Menu will display with each option grouped by Actions, Add, and Show.



14.4.12.1 Actions

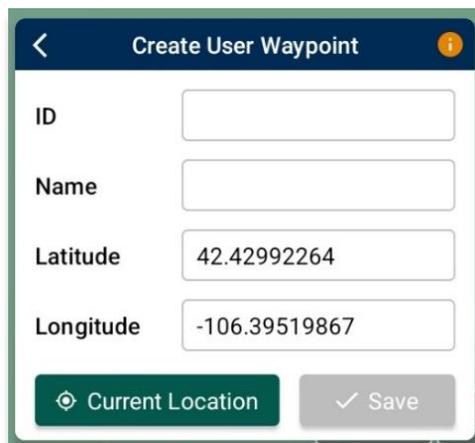
The Actions menu offers the following options and will be further elaborated in the sections below:

- Create User Waypoint
- Direct-To
- Drop Pin
- Drop Hazard
- Add to Route or Remove from Route

14.4.12.1.1 Create User Waypoint

Users can create user waypoints directly from Aero App. Alternatively, users can sideload their user-generated waypoints onto Aero App. Refer to [Section 11.4](#) for additional information. To view the full list of User Waypoints, refer to [Section 14.1.3.4.6](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Create User Waypoint**.
6. The Create User Waypoint popup will appear with fields to enter an Identifier, Name, Latitude, and Longitude. The latitude and longitude fields are auto filled with the point's current coordinates. Fill in the necessary information.



The screenshot shows a mobile application dialog titled "Create User Waypoint". The dialog contains the following fields and buttons:

Field	Value
ID	
Name	
Latitude	42.42992264
Longitude	-106.39519867

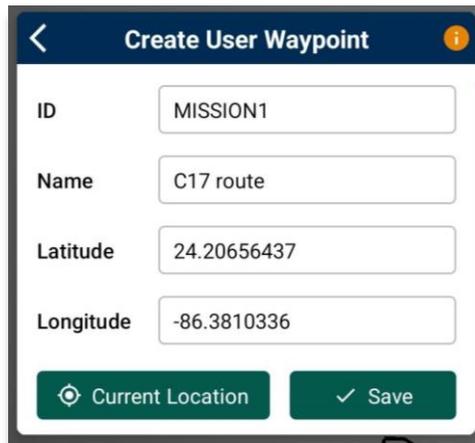
Buttons at the bottom: "Current Location" (with a location pin icon) and "Save" (with a checkmark icon).

7. Tap **Current Location** to use your present location's coordinates.



The Name field is optional. When creating a name for User Waypoints, the name should only contain alphanumeric characters (upper and lower cases) and spaces.

8. Once fields are filled, the Save button will be selectable. Tap **Save** and the waypoint is added to the User Waypoint list.

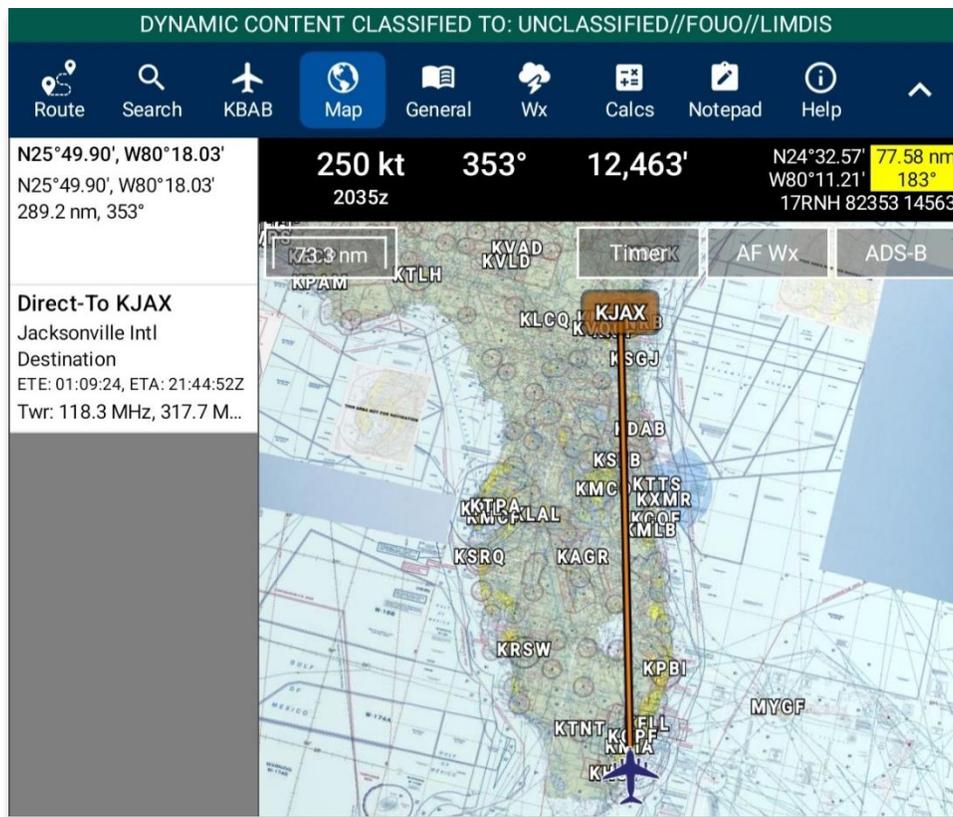


The screenshot shows a mobile application interface for creating a user waypoint. The title bar is dark blue with a back arrow on the left, the text 'Create User Waypoint' in the center, and an information icon on the right. Below the title bar, there are four input fields: 'ID' with the value 'MISSION1', 'Name' with the value 'C17 route', 'Latitude' with the value '24.20656437', and 'Longitude' with the value '-86.3810336'. At the bottom of the form, there are two green buttons: 'Current Location' with a location pin icon and 'Save' with a checkmark icon.

14.4.12.1.2 Direct-To on Empty Route

The Direct-To feature creates a new route from your ownship's current location direct to your desired destination.

1. Ensure that the route is empty.
2. Tap **Map** on the **Main Menu**.
3. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map to directly display the Identifier Menu.
4. The Nearest popup will appear, select your desired point.
5. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
6. Tap **Direct-To**.
7. A new route will contain two points, your present location, and the destination. The present location will be added to the flight route as the first point and the selected Direct-To point will be added as the destination.



8. To cancel the Direct-To, tap the Direct-To point on the Map or the Route Panel. The Actions popup will appear, select **Cancel Direct-To**.

14.4.12.1.2.1 Direct-To on Existing Route

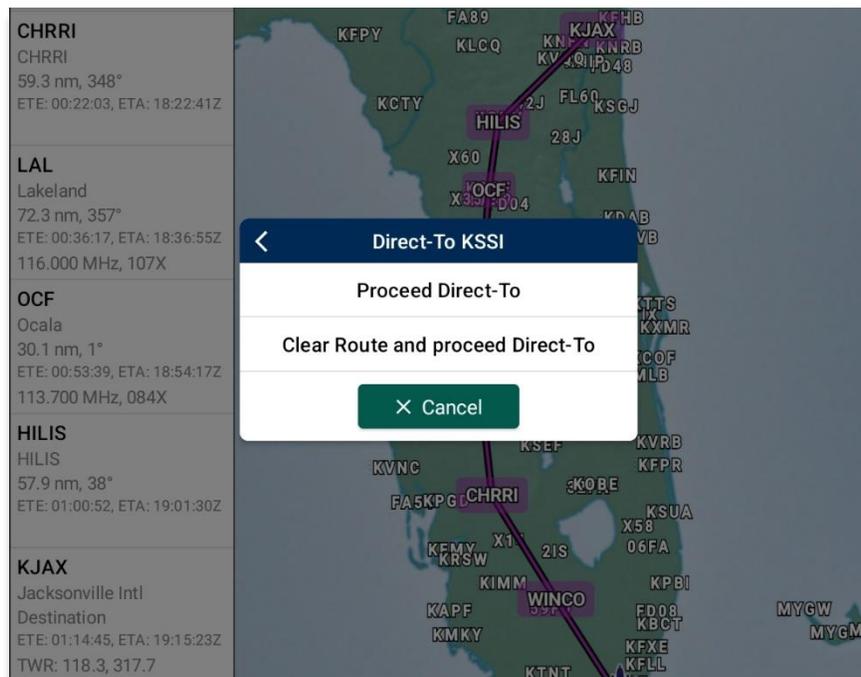
Users can create a Direct-To route on an existing route.

1. Ensure that the route includes one or more points.
2. Tap **Map** on the **Main Menu**.



NOTE: During the Direct-To course, users will be able to continue adding additional points to the route. The Direct-To enroute will not be interrupted.

3. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map to directly display the Identifier Menu.
4. The Nearest popup will appear, select your desired point.
5. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
6. Select **Direct-To**. The Direct-To options popup will display the following options:

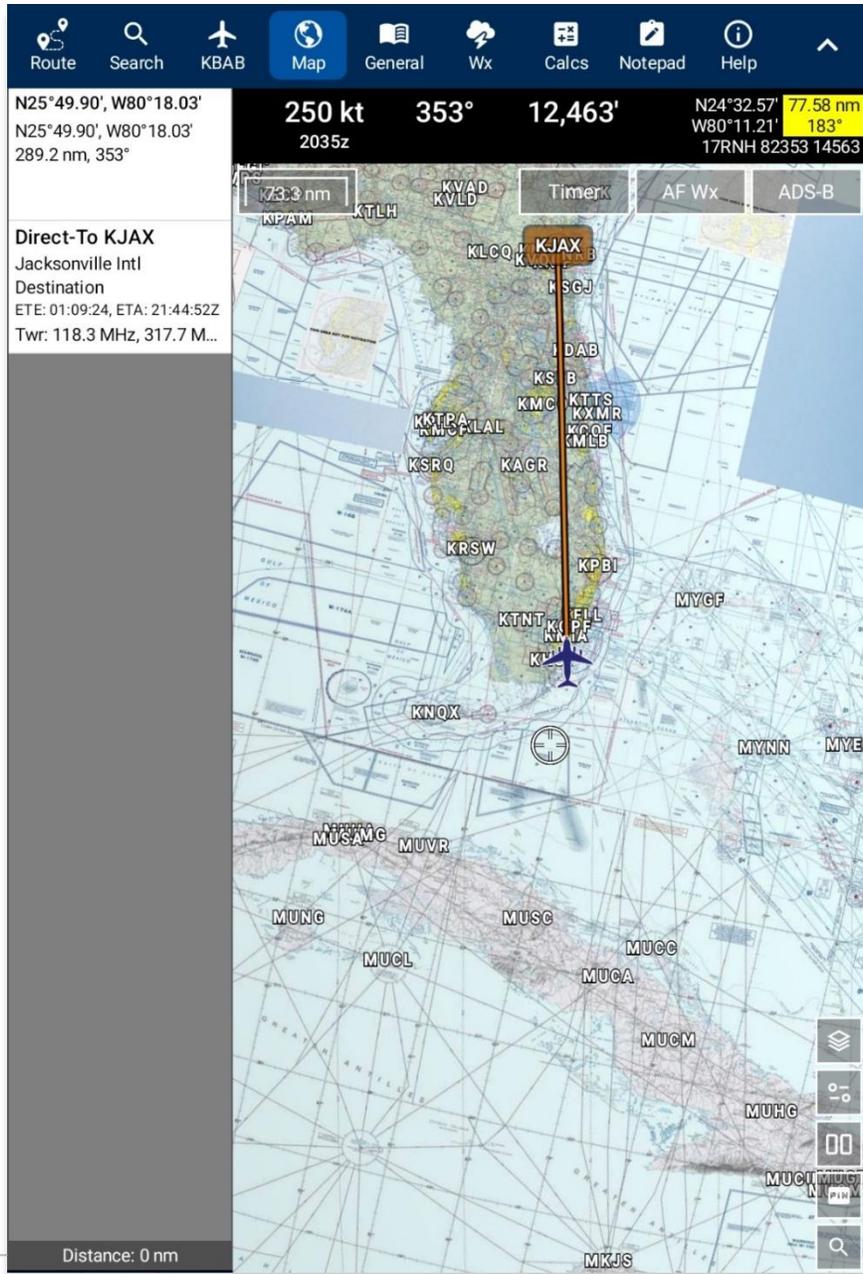


- Proceed Direct-To** – A new route is created starting from your present location to the Direct-To point. The existing route will be grayed out and remain untouched. The values for ETA/ETE, distance and bearing, and tower frequencies are the calculated values for the Direct-To route. The total distance value is calculated for your existing route and not the Direct-To route.



Distance of existing route

- Clear Route and proceed Direct-To** – Aero App clears the existing route and creates a new route starting from your present location to the Direct-To point. The values for ETA/ETE, distance and bearing, and tower frequencies are the calculated values for the Direct-To route. The total distance for the Direct-To route is not calculated, therefore, the values are set to 0 nm/km.



Distance set to 0 nm/km

- Cancel** – dismisses the action.

- To cancel the Direct-To, tap the Direct-To point on the Map or the Route Panel. The Actions popup will appear, select **Cancel Direct-To**. Your route will revert to the original route.



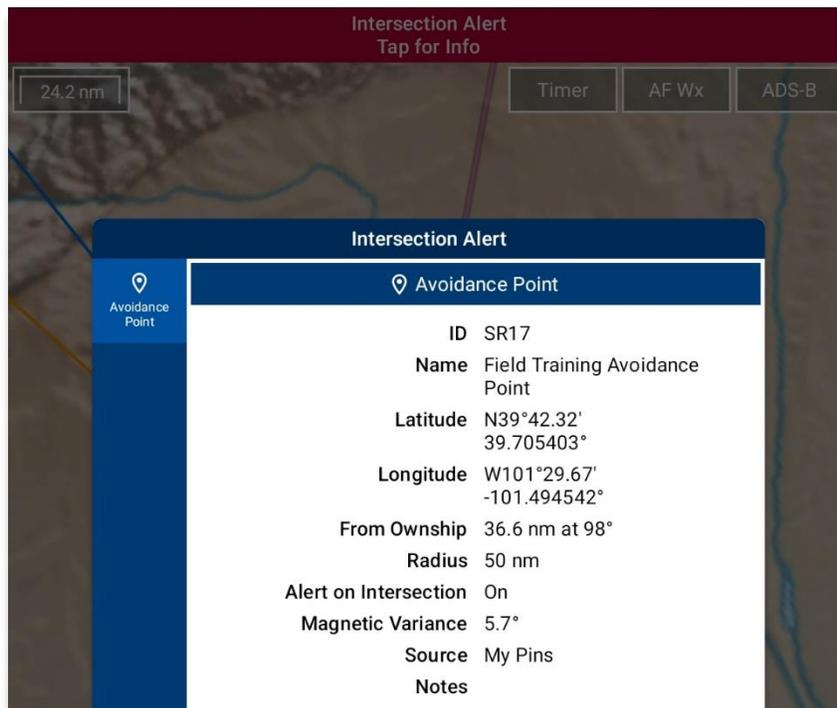
NOTE: Once the existing route has been cleared, users cannot revert to the original route when canceling Direct-To.

14.4.12.1.3 Drop Pin

The Drop Pin feature enables pilots to drop geographic pins in any specified area on the Map, view relevant information about pins, and add dropped pins to their route. Aero App offers various pin types including Avoidance Point, Emergency Marker, Landmark, Photo Pin, and Pin. In addition, Aero App supports user-generated pins which can be sideloaded into Aero App. Refer to [Section 11.6](#) for additional information.

Aero App offers an Alert on Intersection feature for specific pin types that notifies users when their ownship intersects with a designated radius. When the intersection occurs, a red banner is displayed at the top of the Map view, and it will disappear when the ownship is no longer within the specified radius.

Users can tap the banner to view Pin information. This functionality is exclusively available for Avoidance Point and Pins.

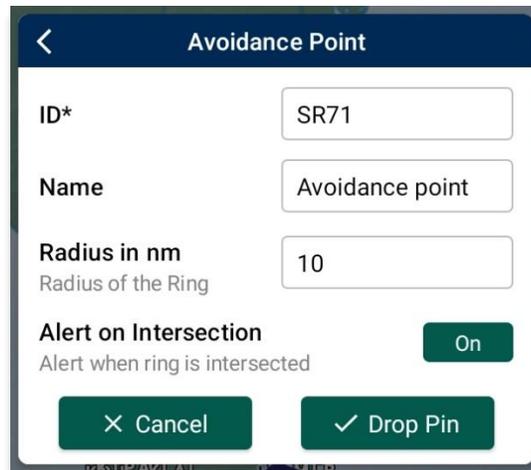


Alert on Intersection banner

14.4.12.1.3.1 Avoidance Point

An Avoidance Point pin is a location on the Map that should be avoided during a flight. Avoidance Point pin includes an Alert on Intersection feature, which notifies users when their ownship intersects with the marked location. Refer to [Section 14.4.12.1.3](#) for additional information. Fields containing an asterisk are required.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. Tap **Avoidance Point**.
7. The Avoidance Point popup will appear with fields for ID*, Name, Radius in nm, and Alert on Intersection. Fill in the required fields.



The screenshot shows a mobile application interface for configuring an Avoidance Point. The popup is titled "Avoidance Point" and contains the following fields and controls:

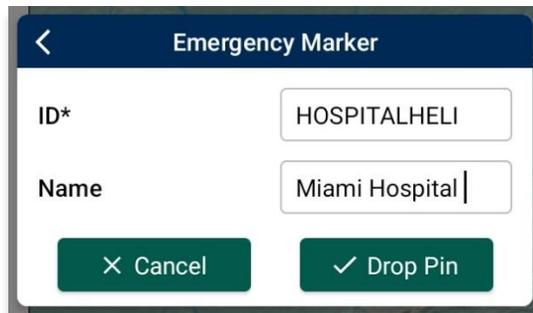
- ID***: A text input field containing "SR71".
- Name**: A text input field containing "Avoidance point".
- Radius in nm**: A text input field containing "10", with the subtitle "Radius of the Ring".
- Alert on Intersection**: A toggle switch labeled "Alert when ring is intersected" is currently turned "On".
- Buttons**: Two buttons at the bottom: "Cancel" (with a close icon) and "Drop Pin" (with a checkmark icon).

8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

14.4.12.1.3.2 Emergency Marker

An Emergency Marker pin is used to identify emergency locations on the Map, aiding in the safety and efficiency of emergency response teams. Fields containing an asterisk are required.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. Tap **Emergency Marker**.
7. The Emergency Marker popup will appear with fields for ID* and Name. Fill in the required fields.

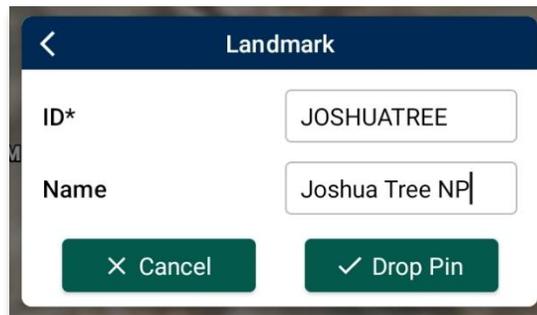
A screenshot of a mobile application popup titled "Emergency Marker". The popup has a dark blue header with a back arrow on the left and the title "Emergency Marker" in white. Below the header, there are two text input fields. The first field is labeled "ID*" and contains the text "HOSPITALHELI". The second field is labeled "Name" and contains the text "Miami Hospital". At the bottom of the popup, there are two green buttons: "Cancel" with a white 'X' icon and "Drop Pin" with a white checkmark icon.

8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

14.4.12.1.3.3 Landmark

A Landmark pin is used to mark noteworthy locations on the Map. Fields containing an asterisk are required.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. Tap **Landmark** from the following drop pin options.
7. The Landmark popup will appear with fields such as ID* and Name. Fill in the required fields.

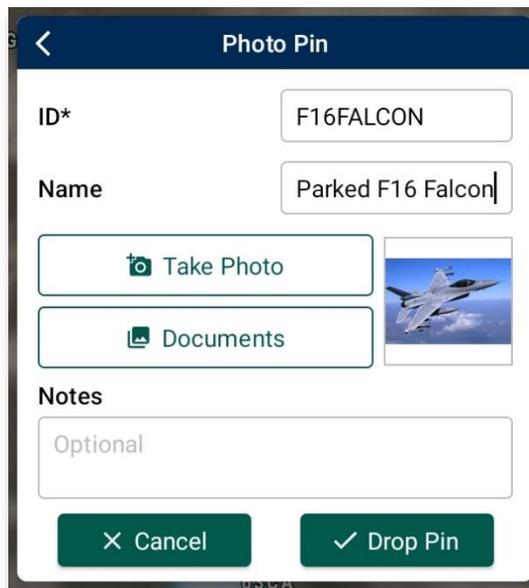
A screenshot of a mobile application's 'Landmark' popup form. The form has a dark blue header with a back arrow on the left and the title 'Landmark' in the center. Below the header, there are two input fields: 'ID*' with the text 'JOSHUATREE' and 'Name' with the text 'Joshua Tree NP'. At the bottom of the form, there are two buttons: a green button with a white 'X' icon and the text 'Cancel', and a green button with a white checkmark icon and the text 'Drop Pin'.

8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

14.4.12.1.3.4 Photo Pin

A Photo Pin is a designated location on the Map that incorporates user-generated images. Fields containing an asterisk are required.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. Tap **Photo Pin**.
7. The Photo Pin popup will appear with fields for ID*, Name, Image upload, and Notes. Fill in the required fields.



NOTE: Uploading an image is required for Photo Pins.

8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

14.4.12.1.3.5 Pin

A Pin is used to mark a location on the Map. Pin includes additional options such as Connect to Location, Distance Rings, Radius in nm, and Alert on Intersection. Fields containing an asterisk are required. The Alert on Intersection feature notifies users when their ownship intersects with the specified radius of the pin. Refer to [Section 14.4.12.1.3](#) for additional information.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. Tap **Pin** from the following drop pin options.
7. The Pin popup will appear with fields such as ID*, Name, Image upload, and Notes. Fill in the necessary information.

The screenshot shows the 'Pin' configuration screen. The top bar is dark blue with a back arrow and the title 'Pin'. Below the title, there are several input fields and toggle switches. The 'ID*' field is filled with 'C17BOEING'. The 'Name' field is filled with 'Parked C17 Boeing'. There are two buttons for image selection: 'Take Photo' and 'Documents'. A small image of a C17 aircraft is visible. The 'Notes' field is empty and labeled 'Optional'. Below these fields is an 'Advanced ^' button. Under the 'Advanced' section, there are four settings: 'Connect to Location' (On), 'Distance Ring' (On), 'Radius in nm' (5), and 'Alert on Intersection' (Off). At the bottom, there are two buttons: 'Cancel' and 'Drop Pin'.

8. Tap **Advanced** for additional options: Connect to Location, Distance Ring, Radius in nm or km (respective to which distance unit format users have set in their Settings), and Alert on Intersection.
9. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
10. Tap **Cancel** to dismiss the action.



NOTE: Creating Pins will require a unique identifier. Existing Pins will be assigned auto-generated identifiers (e.g., PIN1, PIN2, PIN3, etc.).

14.4.12.1.3.5.1 Add Pin to Route

The Add to Route option allows users to add dropped pins to their flight route.

1. Ensure that the Pins overlay is enabled.
2. Navigate to the Map and tap on your desired **Pin**.
3. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Add to Route**.



5. The selected dropped pin will be added to your flight route.
6. To delete from your current route, tap **Edit** then tap the minus icon or swipe left then tap the delete button.
7. To delete from the Map view, tap the dropped pin and select **Remove from Route**.

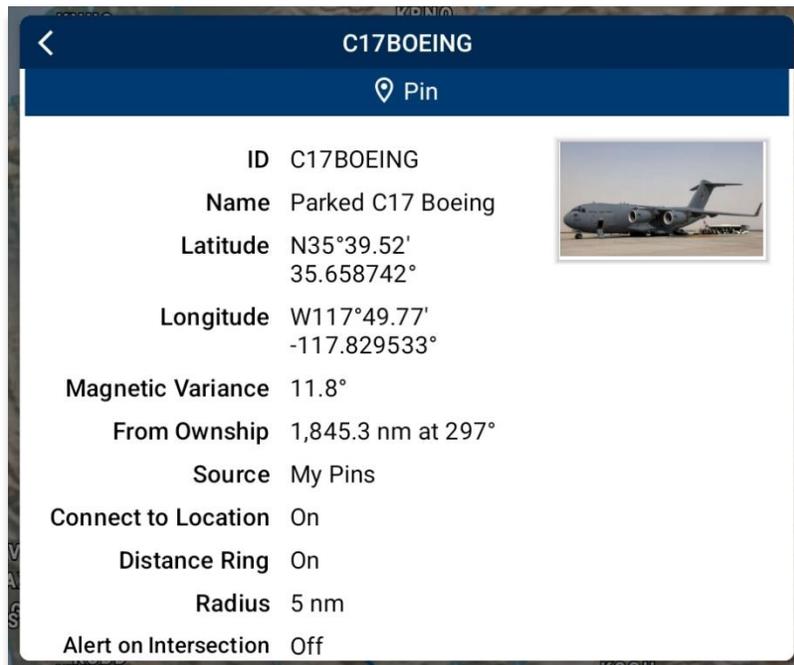
14.4.12.1.3.5.2 View Pin Information

Aero App provides users a display to view Pin information. The pin information is relevant to the pins that were dropped or pins that were sideloaded by users.

Pin Information is available under Information and Wx. Each pin contains relevant information such as its ID, Name, Latitude, Longitude, Magnetic Variance, From Ownship, Source, Notes, and any associated attachments.

Certain pins such as Avoidance Point and Pin, may contain additional information such as Connect to Location, Distance Rings, Radius, and Alert on Intersection.

1. Navigate to Map and tap on your desired **Pin**.
2. The Identifier Menu will appear. Select **Show** from the side menu.
3. Tap **Info and Wx** to view any information associated with the pin.

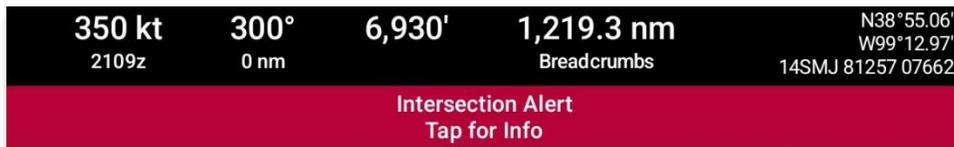


NOTE: Creating Pins will require a unique identifier. Existing Pins will be assigned auto-generated identifiers (e.g., PIN1, PIN2, PIN3, etc.).

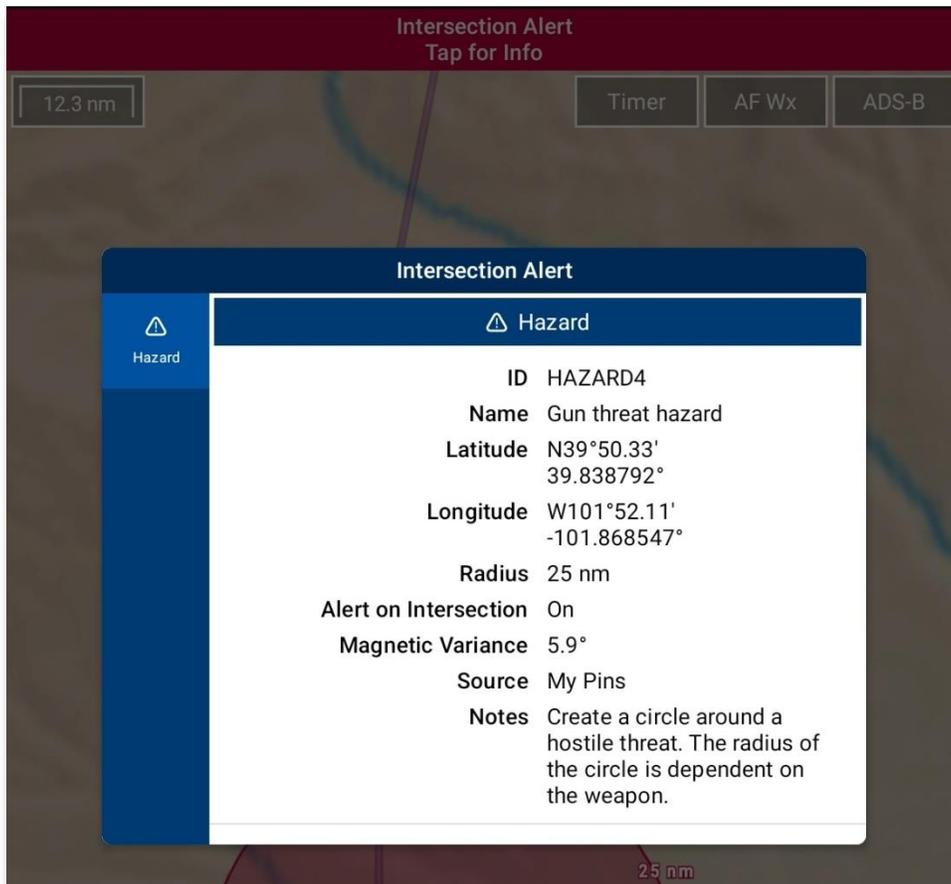
14.4.12.1.4 Drop Hazard

The Drop Hazards feature enables pilots to drop hazards at a specified location on the Map to identify potential hazards to avoid during flight. Fields containing an asterisk are required. Alternatively, users can sideload user-generated Hazards into Aero App. Refer to [Section 11.7](#) for additional information.

Enabling the Alert on Intersection feature will cause a red banner to appear at the top of the view when your ownship intersects with the hazard's radius.



The duration of the banner display is determined by the value of the given radius and will disappear once your ownship is no longer intersecting the specified radius. The banner can be tapped to display Hazard information.



To drop a hazard at your current location or any location of your choice, follow these steps below:

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Hazard**.
6. The Hazard popup will appear with fields for Name*, Radius in nm or km (based on which distance unit is set in Settings), Alert on Intersection, Latitude*, Longitude*, and Notes. Fill in the required fields.

Hazard

Name* Gun threat hazard

Radius in nm 25
Radius of the Ring

Alert on Intersection On
Alert when ring is intersected

Latitude* 33.636700

Longitude* -84.427864

Notes

Create a circle around a hostile threat.
The radius of the circle is dependent on
the weapon.

Current Location Drop Hazard



NOTE: If users set their Coordinates Unit to MGRS, the Latitude and Longitude fields will remain disabled, and a MGRS field will appear.

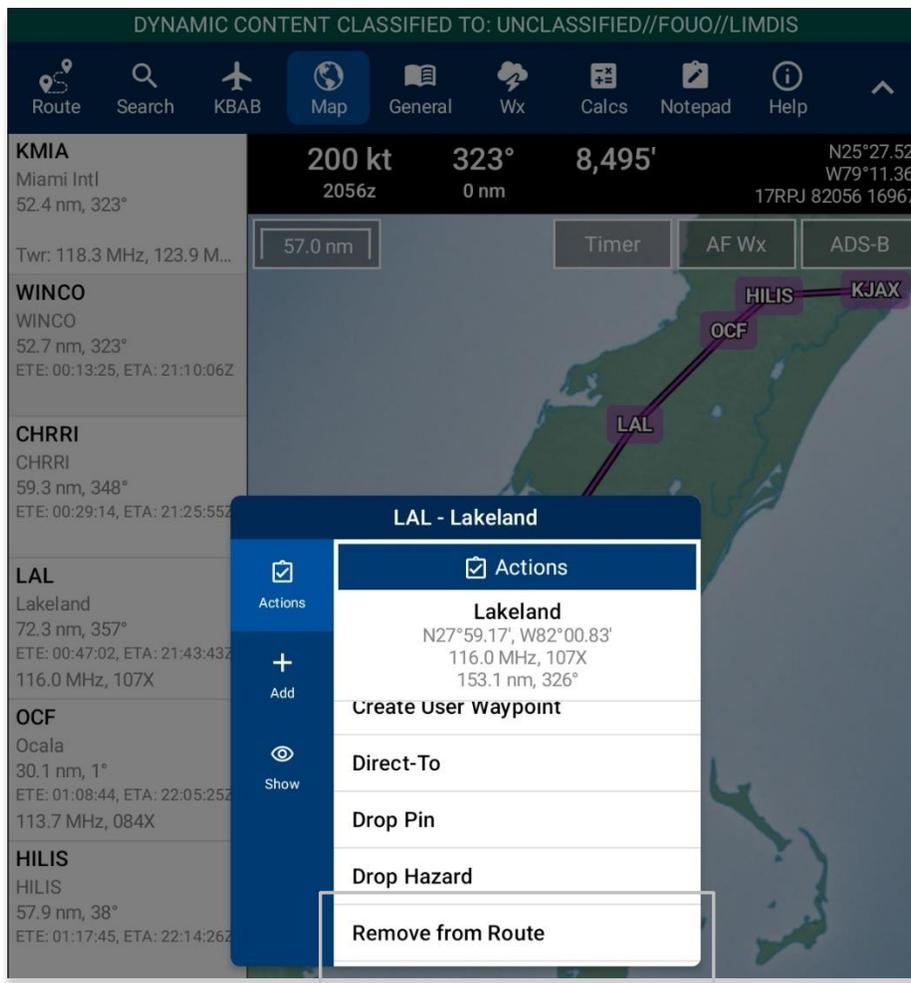


NOTE: If an invalid MGRS is entered, the Latitude and Longitude fields will be left blank.

7. Tap **Current Location** to set your current position as the coordinates.
8. Once the required fields have been filled, the Drop Hazard button will be selectable. Tap **Drop Hazard** and your hazard will display on the Map.

14.4.12.1.5 Add to Route

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Add to Route**.
6. A new point will be added to the current route.
7. Once the point has been added, the popup changes to *Remove from Route*. By tapping **Remove from Route**, the point will be deleted from the route.



14.4.12.2 Add

The Add submenu provides users the option to add the following procedures to their route:

- Departure Procedure (DP)
- Standard Terminal Arrival Procedure (STAR)

14.4.12.2.1 Add Departure Procedure (DP) or Standard Terminal Arrival Route (STAR) to Route

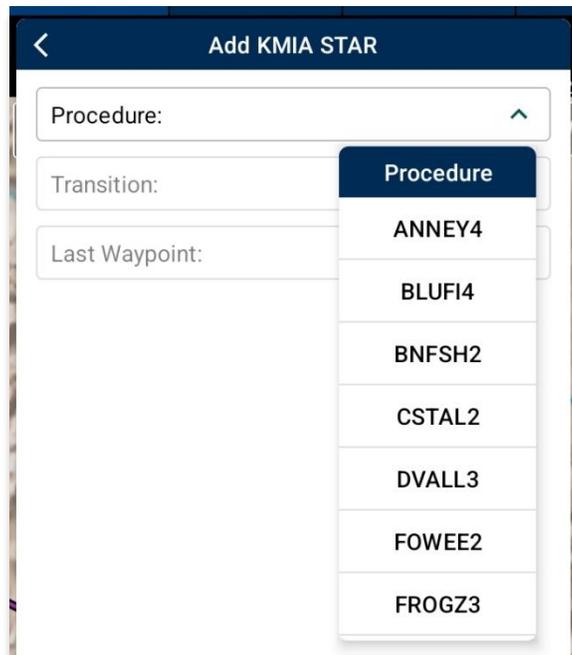
Aero App enables users to add Departure Procedure (DP) and Standard Terminal Arrival Route (STAR) to their flight route.

1. Select an airport from the Route Panel or on the map view.
2. The Identifier Menu will appear. Select **Add** from the side menu.
3. Select **DP** or **STAR**.

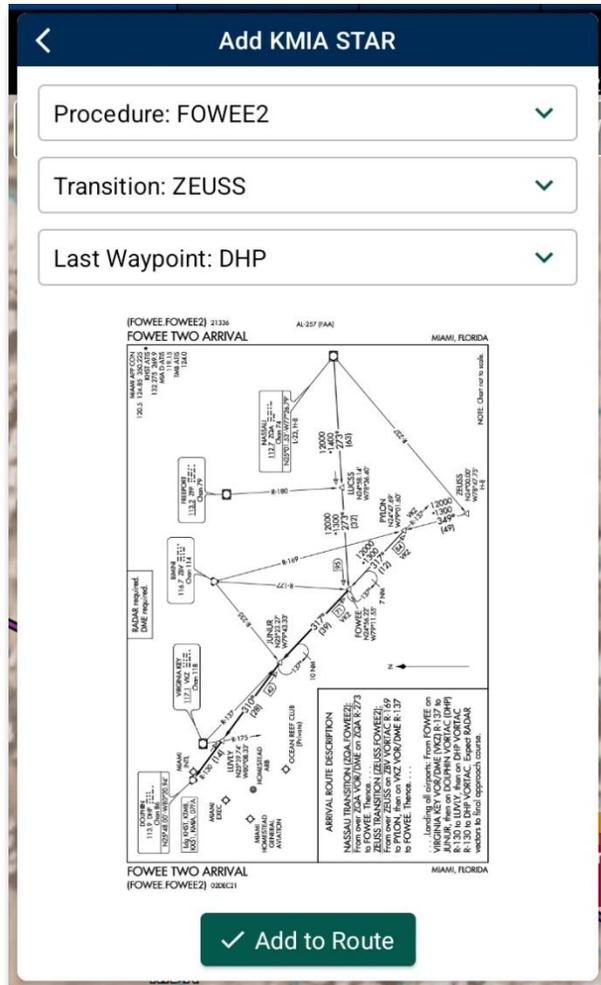


NOTE: If both options, DP and STAR are disabled, it is due to the position of the selected airport. Select the appropriate departure and/or arrival airports to display procedure options.

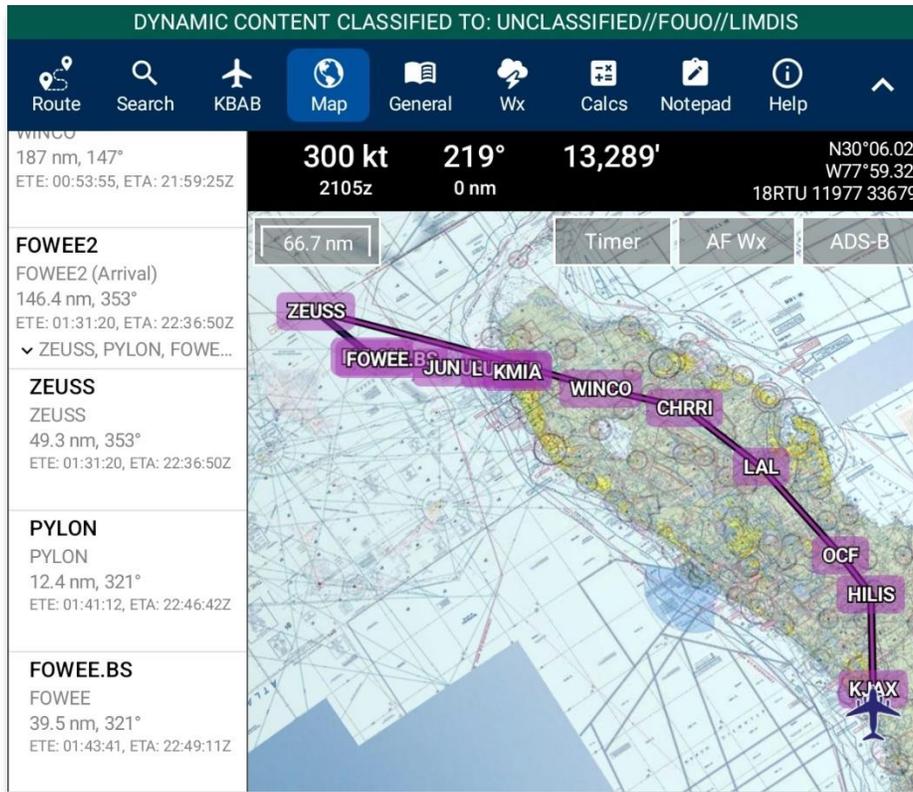
4. The procedure selection popup will display. Tap the Procedure drop-down and select desired **Procedure**.



5. Transition will become selectable. Tap the Transition drop-down and select desired **Transition** point.
6. First Waypoint will become selectable. Tap the First Waypoint drop-down and select desired **First Waypoint**.
7. The Procedure preview will appear and Add to Route will become selectable. Tap **Add to Route**.



8. The procedure will be added to your flight route.



14.4.12.3 Show

The Show menu offers the following options and will be further elaborated in the sections below:

- Show on Map
- IAP on Map
- Info and Wx
- Nearest

14.4.12.3.1 Show on Map

Show on Map pans the map view to the selected point or identifier.

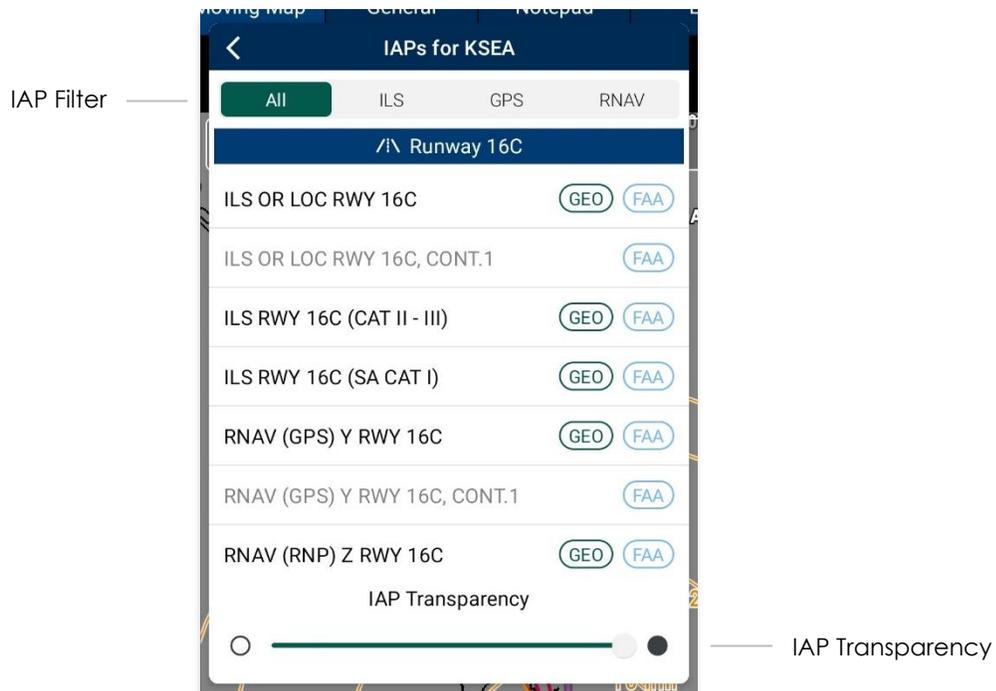
1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **Show on Map**.
6. The screen will pan to the selected location.



14.4.12.3.2 Instrument Approach Procedure (IAP) on Map

Aero App enables users to display Instrument Approach Procedures (IAPs) on the Map, perfectly georeferenced. IAP on the Map provides an additional level of situational awareness.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an ICAO on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **IAP on Map**.
6. A list of IAPs for the identifier will be displayed. Select an **IAP filter** from the segmented button group.
7. IAPs are grouped by runways. Select desired **IAP** then the IAP will overlay on the Map.
8. To adjust the transparency of the IAP, tap on the chart and drag the slider from left to right. By default, IAP transparency is set to 100%.



9. To remove the IAP from the Map, tap the red popup **X**.



Remove IAP



NOTE: A small number of Instrument Approach Procedures (IAPs) are not georeferenced and therefore cannot be shown on the Map view.

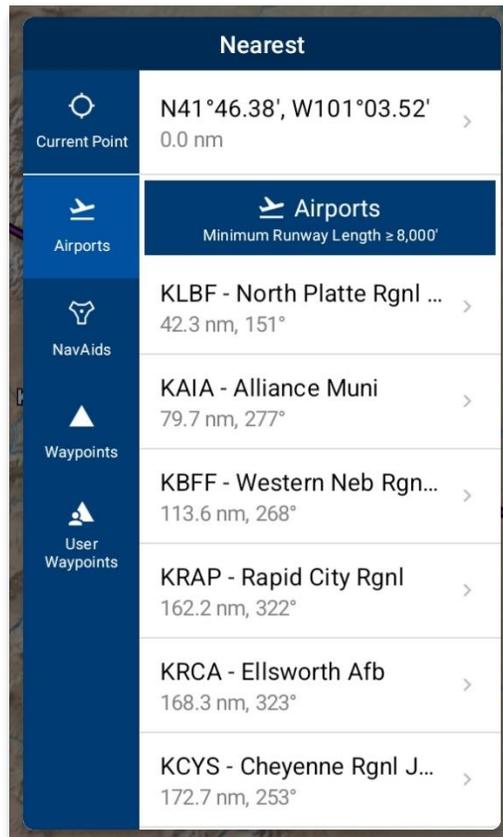
14.4.12.3.3 Info and Wx (Information and Weather)

The Info and Wx (Information and Weather) option can be accessed when tapping an identifier on the Map or the Route Panel. When tapping an ICAO on the Map or the Route Panel, additional airport information such as Info, APD, IAP, Dep, Arr, Min, Other, Host Nation, and Wx can be viewed. Refer to [Section 14.3.1](#) for additional information. Identifiers that are not an airport such as NavAids, Waypoints, User Waypoints, Pins, and others, will display only that identifier's information.

14.4.12.3.4 Nearest

The Nearest feature enables users to view nearby Airports, NavAids, Waypoints, and User Waypoints. Once a desired point is selected, the Identifier Menu will display.

1. Tap **Map** on the **Main Menu**.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **Nearest**.
6. Your current point and a list of the nearest Airports, NavAids, Waypoints, and User Waypoints will display. Select a desired point and the Identifier Menu will display.

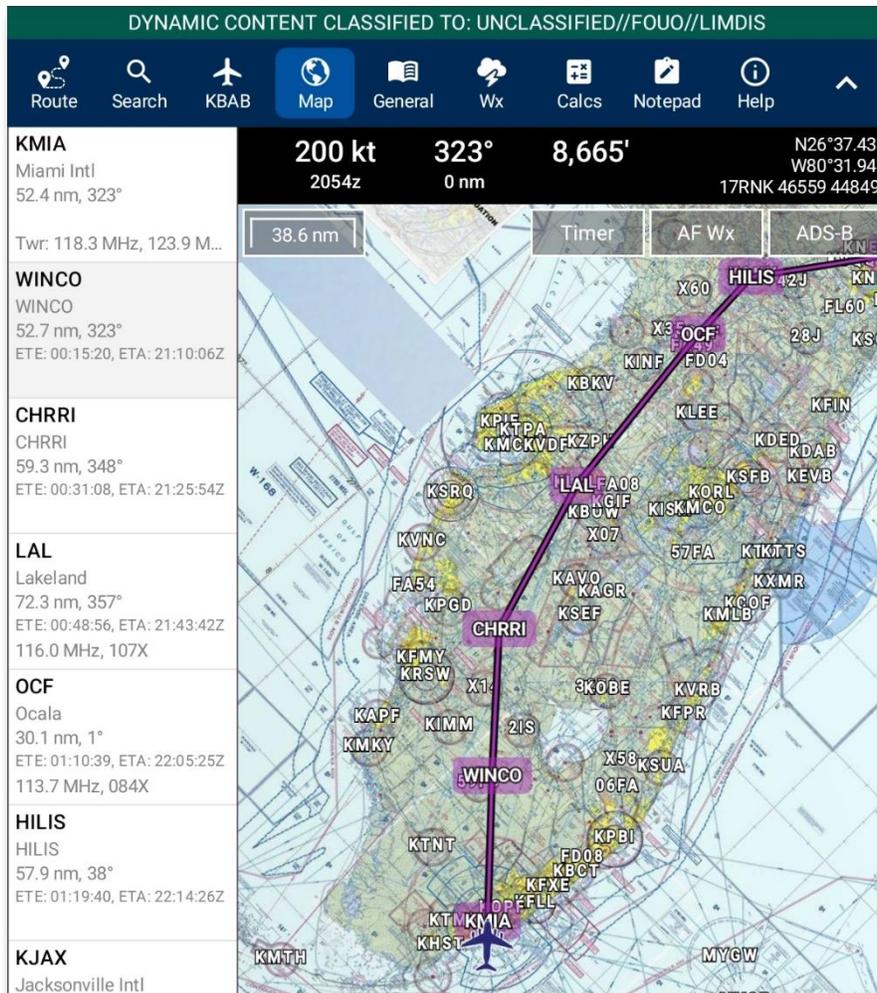


14.4.13 Estimated Time Enroute (ETE) and Estimated Time of Arrival (ETA)

Estimated Time Enroute (ETE) and Estimated Time of Arrival (ETA) are calculated for each segment of a flight route. ETE is the estimated time it takes to reach a point from your current location. The time gets updated as the ownship moves closer to the point. ETA is the estimated time at which you will arrive at the designated location.

In addition, Departure and/or Arrival waypoints will include ETE and ETA values.

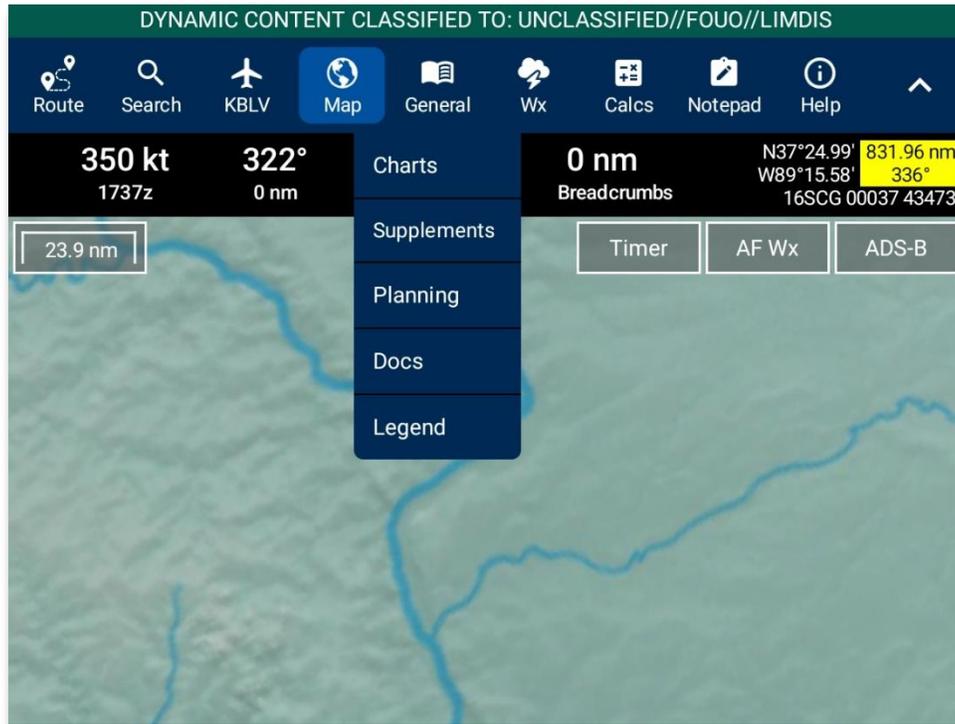
1. Tap **Route** on the **Main Menu**. The Route Panel will expand.
2. Enter desired route.
3. Each segment of the flight's route will display its respective ETE and ETA.



NOTE: Estimated Time of Arrival (ETA) will display in Zulu time.

14.5 General

The General section includes significant charts and documents such as regional Charts, Supplements, Planning, User Documents, and Legend.

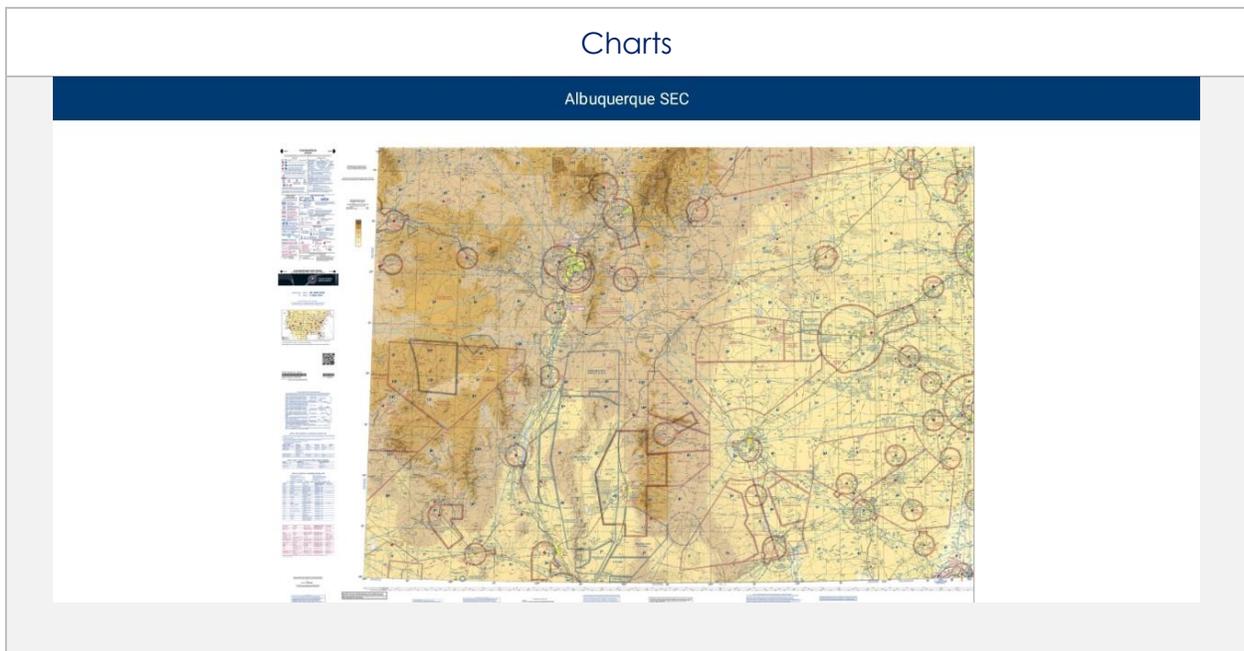


14.5.1 Charts

The selection of charts is accessible from the General Main Menu drop-down. Users have the option to display regional charts, Supplements, Planning, Documents and Legend on their view. It is necessary to download the respective region of the chart to display on Aero App.

1. Tap **General** on the **Main Menu**. The General options will be displayed.
2. Select from Charts, Supplements, Planning, Documents, and Legend.

3. Tap on the **ribbon** to display available charts or documents for the selected chart or document type.



NOTE: The slider below all documents will allow users to select individual screens for Supplements, Planning, Docs, and Legend charts. Alternatively, users can tap the left or right arrows to turn the page.

Supplements

Chart Supplement - East Central US

Federal Aviation Administration

UNITED STATES GOVERNMENT FLIGHT INFORMATION PUBLICATION

**CHART SUPPLEMENT
EAST CENTRAL U.S.**

Effective 0901Z **25 JAN 2024**
to 0901Z **21 MAR 2024**

Consult NOTAMs for latest information.
Consult/Subscribe to FAA Safety Alerts and Charting Notices at:
https://www.faa.gov/air_traffic/flight_info/aeronav/safety_alerts/
Warning: Refer to current foreign charts and flight information publications for information within foreign airspace.
Published from digital files compiled in accordance with Interagency Air Committee specifications and agreements approved by: Department of Defense • Federal Aviation Administration

Area Planning Documents

AP1

AP/1

DoD
FLIGHT INFORMATION PUBLICATION

AREA PLANNING

**NORTH AND SOUTH
AMERICA**

EFFECTIVE 0001L **5 OCT 2023**
TO 0001L **21 MAR 2024**

PCN NR 1 EFFECTIVE 0001L **30 NOV 2023 INCLUDED**
PCN NR 2 EFFECTIVE 0001L **25 JAN 2024 INCLUDED**

Consult NOTAMS for latest information.

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NSN 7641014109523
NSA REF. NO. PLANXAP1

EFF. DATE 23278

User Documents

Aviation commercial Guide.pdf

An Overview of Commercial Aircraft
2018 - 2019



DVB Bank SE
Aviation Research (AR)



Terminal Procedure Legend

Terminal Procedure Legend

LEGEND
INSTRUMENT APPROACH PROCEDURES (CHARTS)

PLANVIEW SYMBOLS

ROUTES
 Procedure Track: 165°
 Procedure Turn: 315°
 Missed Approach: (Type, degree, and point of turn optional)
 Visual Flight Rules:
 Penetration Track:

TERMINAL ROUTES
 Telex Route: 3000 → Minimum to IAF: 2400 → Telex Altitude (15.1) → Mileage
 Route from IAF: 3100 NoPT 5.4 NM to GS Intpt (14.2 to IOM)

HOLDING PATTERNS
 Missed Approach: Procedure Turn: Arrival: 090°
 HOLD: 3000 → 270° → HOLD: 4000
 > 270°
 Testing on distance limits will be specified when they deviate from the standard. DME fixes may be shown.

HOLDING PROCEDURE ENTRY DIAGRAM
 (a) Parallel entry
 (b) Front entry
 (c) Direct entry

FIXES / ATC REPORTING REQUIREMENTS
 Reporting Point:
 ▲ Name (Compulsory) ✕ Intersection
 ▲ Name (Non-Compulsory) ✕ WAYPOINT (Non-Compulsory)
 ◆ WAYPOINT (Compulsory) ◆ WAYPOINT (Compulsory)
 △ TROVOR POINT (Flow)
 △ TROVOR POINT (Flow)
 Compute Navigational Fix (CHF) - No ATC Function
 s (NAM) 15° interval when in conflict with runway pattern

ALTITUDES
 (When different from minimum route altitude)
 3000 Mandatory Altitude
 2500 Minimum Altitude
 2000 Maximum Altitude
 1500 Mandatory Altitude
 1000 Minimum Altitude
 500 Maximum Altitude

INDICATED AIRSPEED
 175K Mandatory Airspeed
 120K Minimum Airspeed
 250K Maximum Recommended Airspeed
 180K Recommended Airspeed

RADIO AIDS TO NAVIGATION
 110.1 Underline indicates no voice transmitted on this frequency
 112.2 Parentheses indicate DME paired VHF frequency

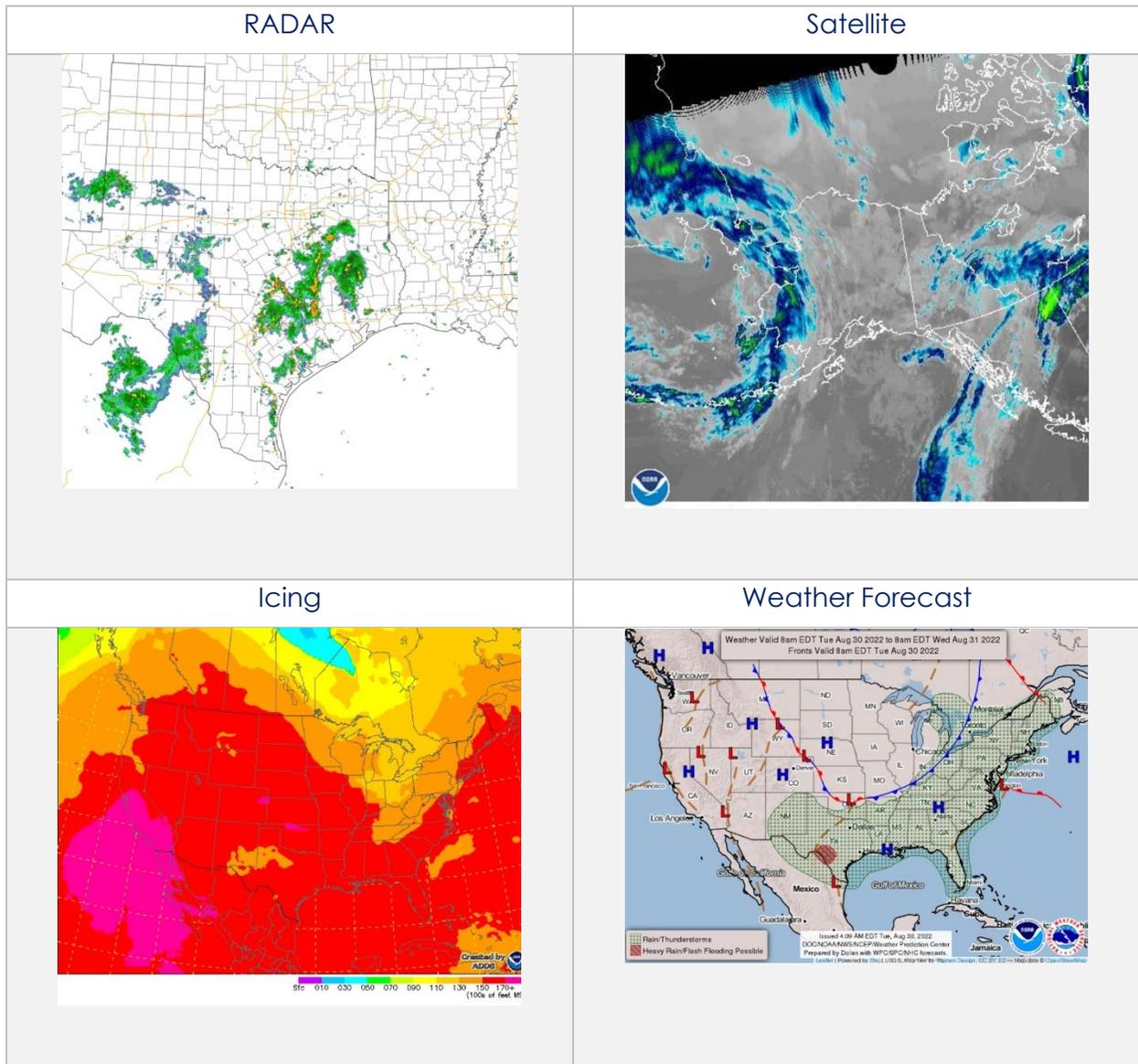
Compulsory:
 ● VOR ● VORTAC ● DME ● NDB/DME
 ● VOR/DME ● TACAN ● NDB

Non-Compulsory:
 ○ VOR ○ VORTAC ○ DME ○ NDB/DME
 ○ VOR/DME ○ TACAN ○ NDB

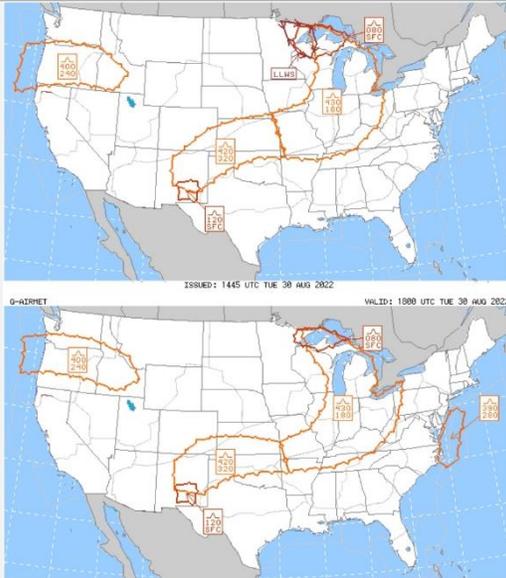
MISCELLANEOUS
 LOC/DME
 LOC/DME/SDP Transmitter (shown when installation is offset from its normal position off the end of the runway)
 Primary NAVIAD with Coordinate Values
 Secondary NAVIAD
 VOR Changeover Point
 Key End Coordinates
 RWY 15 51°40'02" N 077°05'00" W
 Distance Not to Scale
 International Boundary
 Air Defense Identification Zone

14.6 Weather (Wx) Images

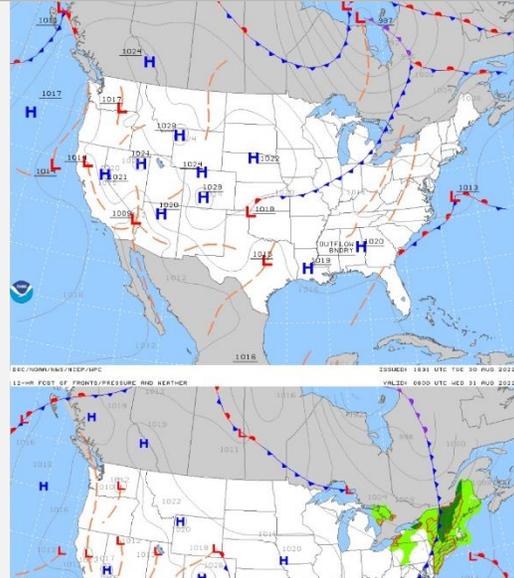
The Weather (Wx) Images are from the National Oceanic and Atmospheric Administration (NOAA) providing access to weather, hydrologic, and climatic forecasts and warnings for the U.S. and adjoining areas. The images can be panned and zoomed. An internet connection is required to view real-time weather images. Wx images are provided below:



AIRMETS and SIGMETs



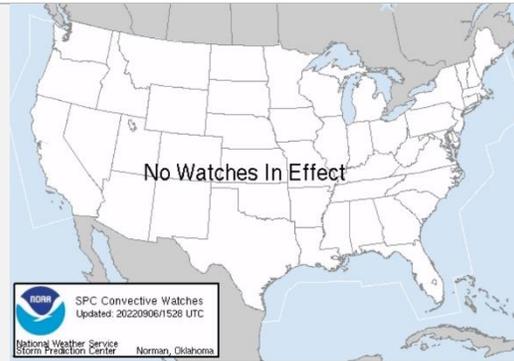
Prog Charts



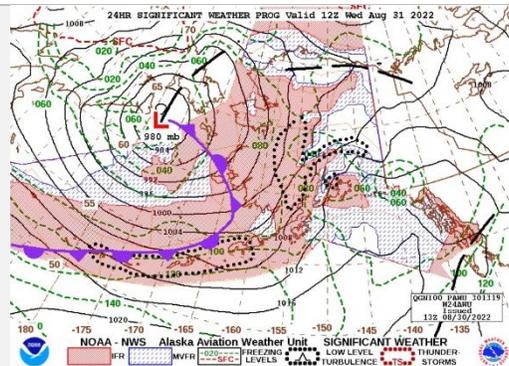
Convective SIGMETs and Outlooks



Current Convective Watches

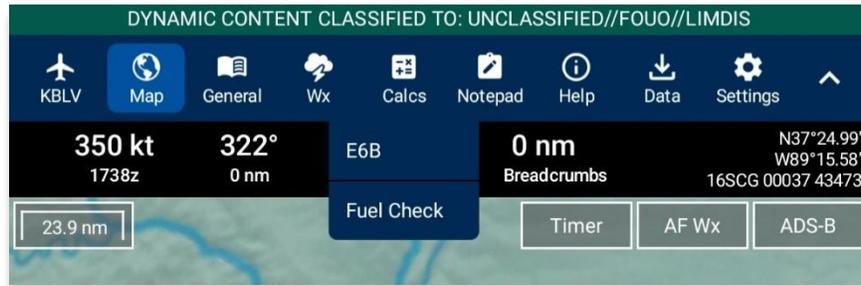


Alaska



14.7 Calcs (Calculations)

The Calcs menu, also referred to as Calculations, contains features for E6B and Fuel Check. To access these features, tap the Calcs button.



14.7.1 E6B Calculator

The electronic calculator enables pilots to perform a variety of calculations for preflight or inflight planning.

Altitude

Altitude calculates the Pressure Altitude and Density Altitude by entering the Elevation or the Airport ICAO, Altimeter, and Temperature.



Cold Weather (Wx)

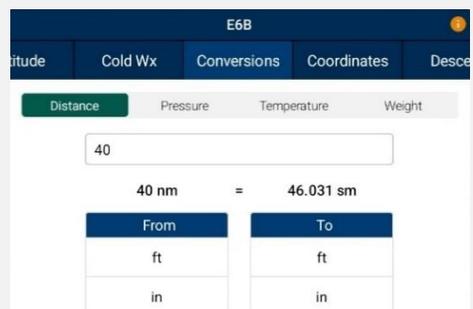
Cold Wx corrects Altitude for cold temperature operations. Users can switch between Celsius and Fahrenheit.



Conversions

Conversions are divided into Distance, Pressure, Temperature, and Weight. Tap to select or slide the segmented control to desired conversion category.

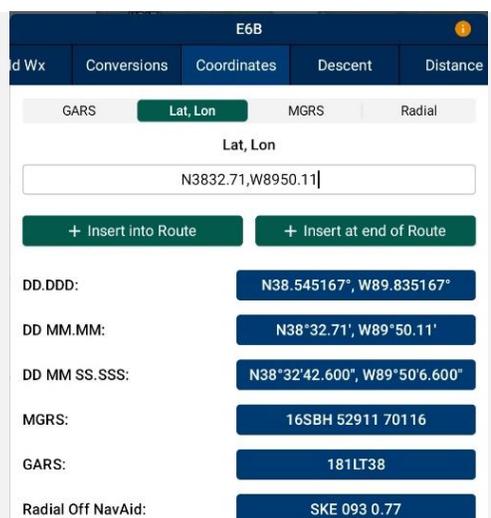
1. Tap to select the current unit in the left column and select the desired unit in the right column.
2. Enter a value in the text box.



Coordinates

Coordinates allows users to get a reading on Lat, Lon, MGRS (Military Grid Reference System), GARS (Global Area Reference System), and Radial Off NavAid when you enter coordinates.

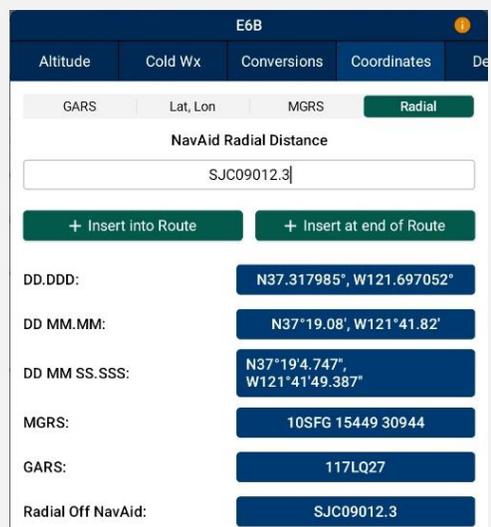
1. Select an option from **Lat, Lon, MGRS, GARS**, or **Radial** by tapping your desired option on the segmented button group.
2. Enter coordinates in the text box.
3. Results will populate below.
4. **+ Insert into Route** and **+ Insert at end of Route** will be selectable. Select **+ Insert into Route** and the entered coordinates will be added to your current route.
5. Select **+ Insert at end of Route** and the entered coordinates will be added at the end of your current route.



Once the coordinates have been entered in for one of the tabs, you can tap an output field to automatically switch to the mode with those field values automatically populated.

For example, from the Lat, Lon view, you can tap on the MGRS output field and the MGRS tab is displayed with the field values from Lat, Lon.

NavAid Radial Distance calculates the coordinates using three inputs; namely a NavAid, Radial and Distance.



Descent

Descent Rate is calculated in feet per minute, enter the Descent Angle in degrees and Groundspeed in knots.

Distance

Distance calculates the Total Fuel by Distance measured in kilometers or nautical miles, respective to which Distance Unit users have set in their Settings. Speed which is measured in knots and Time following the format (hh:mm:ss). Tap or slide the segmented control to the desired distance calculation type.

Distance is calculated by the Speed, Time, and Fuel Burn Per Hour. The expected output is Distance measured in kilometers or nautical miles; respective to which distance unit format user have set in their Settings and the Total Fuel in gallons.

Speed is calculated by Distance, Time, and Fuel Burn Per Hour. The expected output is Speed measured in knots and the Total Fuel in gallons.

Time is calculated by Distance, Speed, and Fuel Burn Per Hour. The expected output is Time following the format (hh:mm:ss) and the Total Fuel in gallons.

Instrument Flight Rule (IFR) Climb

IFR Climb calculates the Climb Angle measured in Degrees and Climb Rate measured in Feet per Minute by providing the Climb in ft/km and ft/nm; respective to which Distance Unit users have set in their Settings. As well as providing the Groundspeed measured in knots.

E6B				
cent	Distance	IFR Climb	Rwy Winds	Winds Aloft
Climb Angle		Climb Rate		
1.9°		1,333		
Degrees		Feet Per Minute		
ft/nm Climb:		<input type="text" value="200"/>		
Groundspeed:		<input type="text" value="400"/>		

Runway (Rwy) Winds

Runway Winds calculates Headwind and Crosswind by typing in Runway Direction in degrees, and Wind Direction/Speed.

E6B				
cent	Distance	IFR Climb	Rwy Winds	Winds Aloft
Headwind		Crosswind		
↓ 9		← 12		
Knots		Knots		
Runway Direction:		<input type="text" value="29"/>		
Wind Dir/Spd:		<input type="text" value="80"/> @ <input type="text" value="15"/>		

Winds Aloft

Winds Aloft calculates Heading (Hdg), Ground Speed (GS), and Wind Correction Angle (WCA) by typing in Nearby Airport (ICAO), Course (degrees), True Airspeed (knots), and Wind Direction/Speed.

E6B				
Distance	IFR Climb	Rwy Winds	Winds Aloft	
HDG		GS		WCA
40°		441		41°
Degrees		Knots		Degrees
Nearby Airport:		<input type="text" value="KBLV"/>		
Course:		<input type="text" value="5"/>		
True Airspeed:		<input type="text" value="250"/>		
Wind Dir/Spd:		<input type="text" value="150"/> @ <input type="text" value="300"/>		

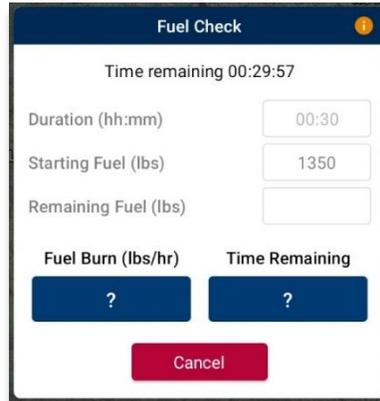


NOTE: Reference notes are located at the bottom of the E6B popup.

14.7.2 Fuel Check

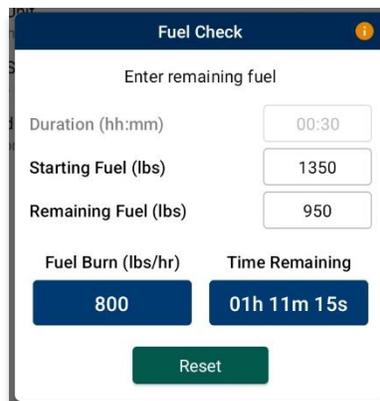
The Fuel Check feature calculates fuel burn and estimates the time remaining until the fuel is consumed fully. Fuel Check includes fields for Duration (hh:mm), Starting Fuel (lbs), and Remaining Fuel (lbs).

1. Tap **Calcs** on the **Main Menu**. The Calcs options will be displayed.
2. Select **Fuel Check**. The Fuel Check popup will appear.
3. Tap on the **Duration** field. Enter desired duration for the fuel check in hours and minutes.
4. Enter the exact fuel amount in the **Starting Fuel** field.
5. Tap **Start** to begin the timer.
6. Tap **Cancel** to stop the timer.



The screenshot shows the 'Fuel Check' popup with a dark blue header and a white background. At the top, it says 'Time remaining 00:29:57'. Below this are three input fields: 'Duration (hh:mm)' with '00:30', 'Starting Fuel (lbs)' with '1350', and 'Remaining Fuel (lbs)' which is empty. At the bottom, there are two buttons labeled 'Fuel Burn (lbs/hr)' and 'Time Remaining', both containing a question mark. A red 'Cancel' button is at the very bottom.

7. Once the timer has ended, users will be promoted to enter the remaining fuel. In the *Remaining Fuel* field, enter the **remaining fuel** in pounds.
8. The calculations will populate the Fuel Burn and Time Remaining results field based on the entered values. Tap **Reset** to clear the calculations.

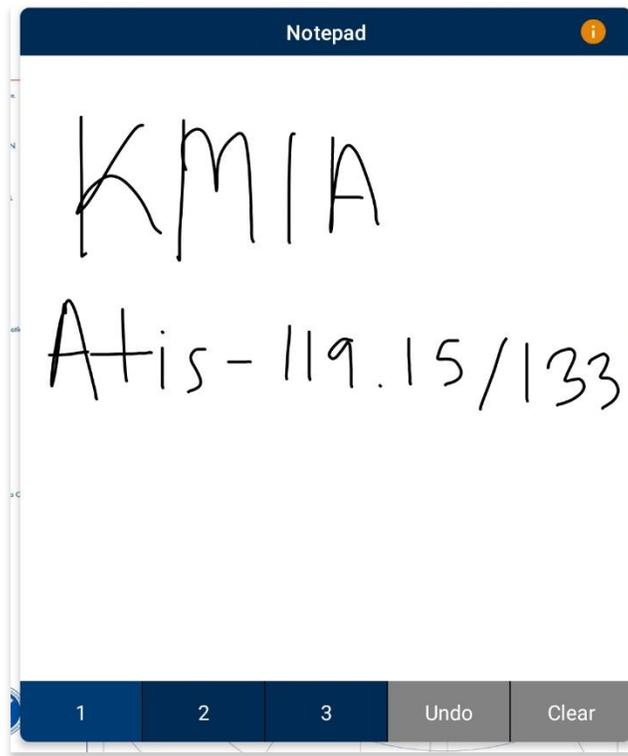


The screenshot shows the 'Fuel Check' popup with a dark blue header and a white background. At the top, it says 'Enter remaining fuel'. Below this are three input fields: 'Duration (hh:mm)' with '00:30', 'Starting Fuel (lbs)' with '1350', and 'Remaining Fuel (lbs)' with '950'. At the bottom, there are two buttons labeled 'Fuel Burn (lbs/hr)' and 'Time Remaining', containing '800' and '01h 11m 15s' respectively. A green 'Reset' button is at the very bottom.

14.8 Notepad

The Notepad feature enables users to freely enter notes using their fingertips or with a stylus. The notepad contains three reusable pages. The notepad view includes Undo and Clear options.

- **Undo** – Undoes the most recent markings on the notepad
- **Clear** – Erases all markings on the selected notepad page



NOTE: Any notepad markings are automatically saved upon exiting the view.

14.9 Help

The Help menu contains the following options:

- What's New (Must have global file loaded in Active Cycle)
- Web Links (Must have global file loaded in Active Cycle)
- User Manual
- About

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

KBAB
Map
General
Wx
Calcs
Notepad
Help
Data
Settings
^

Aero App

Version 1.2406.6339
MAGTAB version v1.1.3

Send Feedback




The Aeronautical Application, Aero App, is a collaborative effort reaching across NGA, and other government agencies, focused on supporting the WarFighter and NGA Vision.

Aero App for Android Version 1.2406 requires Android 12 or later

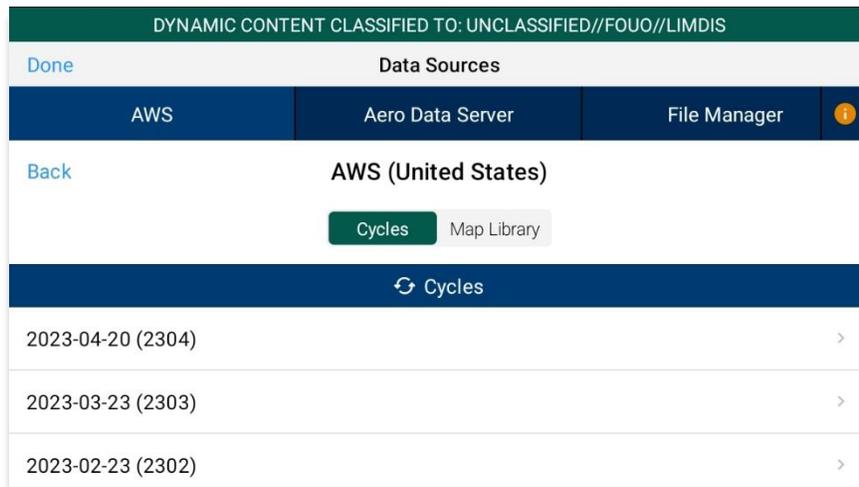
Third Party Libraries

- WhirlyGlobe-Maply
(Mousebird Consulting)
Code License: Apache 2.0
(License included later in Document)
- Zoomable
(<https://github.com/usuiat/Zoomable>)
Code License: Apache 2.0
(License included later in Document)
- TouchImageView
(<https://github.com/MikeOrtiz/TouchImageView>)
Copyright © 2012 Michael Ortiz
Code License: The MIT License (MIT)
(License included later in Document)

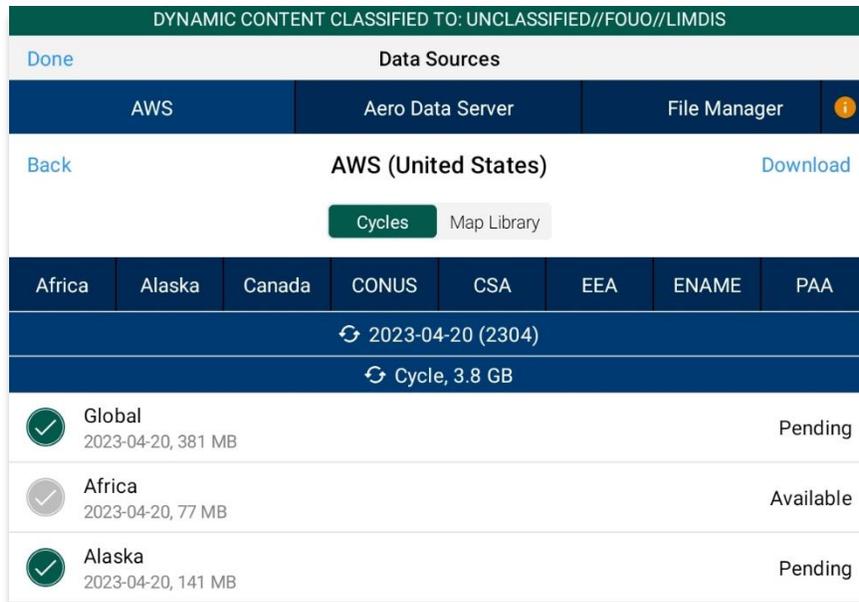
14.9.1 What's New Popup

The What's New page will pop up when a new cycle has been successfully loaded into Active Cycle.

1. Tap **Data** on the **Main Menu**.
2. Tap **Download**.
3. Select preferred authentication from **AWS** or **ADS**.
4. Select desired **data cycle**.



5. Select desired **data** to download.
6. Tap **Download** to begin download.



7. Navigate back to the **Data Status** page.
8. Tap **Move to Standby**.
9. Tap **Swap Cycles**.
10. The What's New popup will display.
11. Tap **OK** to dismiss the popup.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

The active cycle 2024-03-21 is not current

KBAB Map General Wx Calcs Notepad Help Data Settings

What's New

What's New Aero App for Android

This page contains information about new features, improvements to Aero App, other useful and important updates and is updated with each data cycle.

Tap the link below for all the latest information about Aero App and for fast and secure database downloads.

aeroapp.info

Currently in Aero App for Android Version 1.2402

Aero App for Android Version 1.2402 requires Android 12 or later

ADIZ Overlay



Aero App provides access to Air Defense Identification Zone (ADIZ) sectors on the Moving Map. Pilots can easily access detailed information about specific areas of airspace, including any necessary precautions or restrictions. This feature is particularly useful for pilots who need to navigate through complex and potentially dangerous airspaces with caution and awareness.

ATAK API Development



Aero App has implemented an API for ATAK, which offers pilots enhanced access to critical data using a library provided by Aero App for Android. The API enables pilots to request data on various important aspects of their flight plan, such as Airport information, NavAid data, and Waypoint information, as well as charts and cycle information.

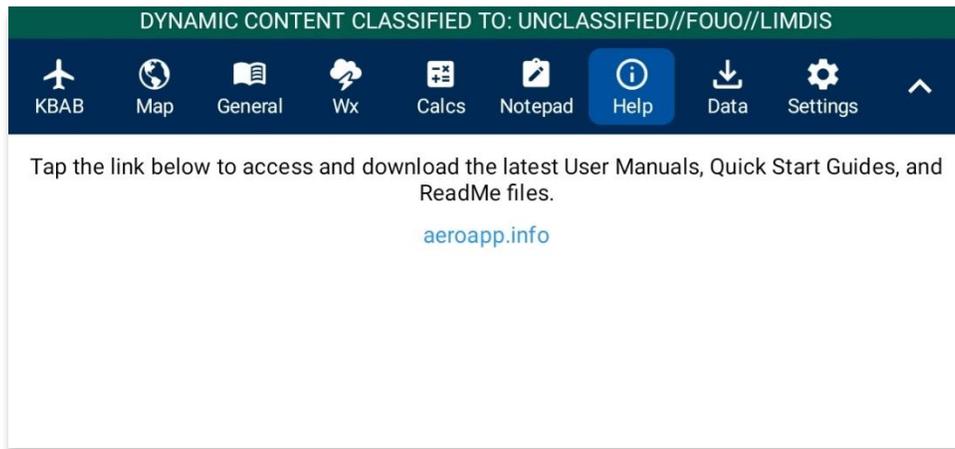
OK

NGA IFR Lo ENAME:

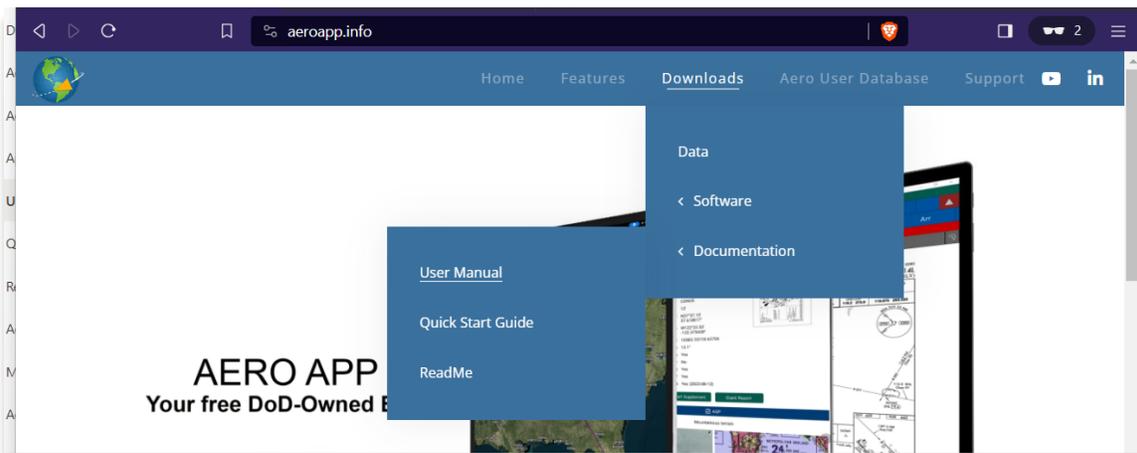
14.9.2 User Manual Access

The User Manual tab includes a link that redirects users to the Aero App website (aeroapp.info).

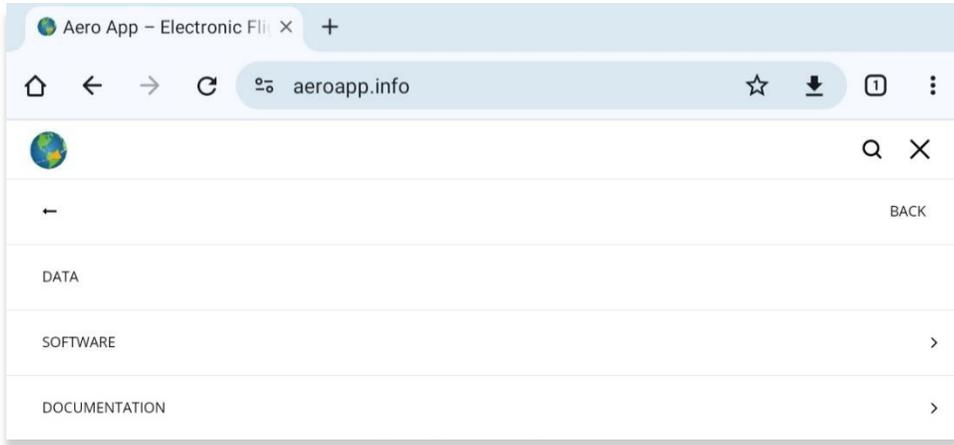
1. Tap **Help** on the **Main Menu**. The Help options will display.
2. Select **User Manual**.
3. Tap the **aeroapp.info** link and users will be redirected to the Aero App homepage.



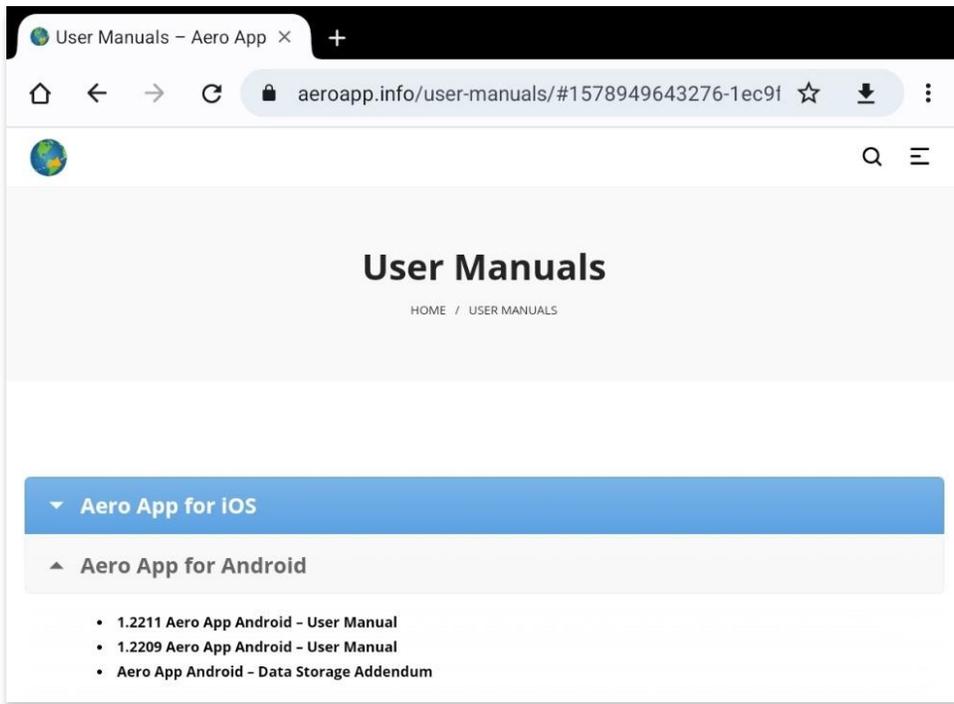
4. Navigate to the *Downloads* menu. Option placement will vary depending on display size.
 - On large screens, hover over **Downloads** on the menu ribbon to reveal additional download options.



- On smaller screens, tap the hamburger button and select **DOWNLOADS** to display additional download options.



5. Select **Documentation** then **User Manual**.
6. Users are provided with several platforms to choose from. Tap **Aero App for Android** to reveal related user manuals.
7. Select desired user manual version and you will be redirected to the PDF.



NOTE: The Aero App User Manual can be uploaded into Aero App. Refer to [Section 11.8](#) for additional information.

14.10 Data

The Data Status screen enables users to manage cycles. Refer to [Section 13](#) for additional information.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS

KMIA Map General Wx Calcs Notepad Help Data Settings

Data Status

Active Cycle **Delete** **View** Standby Cycle **Delete** **View**
Effective 2022-08-11 through 2022-09-07 (2208) Effective 2022-07-14 through 2022-08-10 (2207)

Download Delta files (faster) **On** **Share**

Download **Refresh** **Move to Standby** **Swap Cycles** **Delete**

/storage/emulated/0

Cycle 2024-03-21 (2403)

- Global: Found
- Africa:
- Alaska:
- Canada:
- CONUS Part 1: Found
- CONUS Part 2: Found
- CSA: Found
- EEA: Found
- ENAME:
- PAA: Found
- FAA Sectionals:
- Georeference:

Aero App Maps

- CAN IFR Hi Canada:
- CAN IFR Lo Canada:
- FAA IFR Atlantic:
- FAA IFR Hi Alaska:
- FAA IFR Lo Alaska:
- FAA VFR Alaska:
- FAA IFR Hi CONUS:
- FAA IFR Lo CONUS: Found
- FAA VFR CONUS:
- FAA VFR PAA:
- NGA IFR Africa:
- NGA IFR Hi CSA:
- NGA IFR Lo CSA:

14.11 Settings

Settings is a tool that enables users to customize the behavior of Aero App. Various setting options are divided into Bluetooth, Data, Miscellaneous, Reset, Route, and User Interface.

14.11.1 Bluetooth

Bluetooth contains various options on connecting devices such as ADS-B and GPS receivers to Aero App. [Section 14.4.4](#) elaborates on the connection of ADS-B receivers via Wi-Fi and Bluetooth.

The Bluetooth connection status is displayed at the top of the screen.

1. Tap **Settings** on the **Main Menu**.
2. Select **Bluetooth** from the side menu.
3. The following options are available:
 - **Allow Background Location Collection** – allows Aero App to collect location information even when Aero App is in the background.
 - **Android Bluetooth Settings** – opens the system settings to manage Bluetooth status and pair device.
 - **Currently Connected Device** – breaks the connection of the currently connected device.
 - **Device Type** – selects from GPS or ADS-B device type.
 - **Select Paired Device** – selects the paired Bluetooth device to connect.

14.11.2 Data

Data contains the setting options for external storage devices to store Aero App data. Refer to [Appendix D | Android Data Storage](#) for additional information.

1. Tap **Settings** on the **Main Menu**.
2. Select **Data** from the side menu.
3. The following options are available:
 - **Path for Data on SD Card and Computer** – selects the directory that you wish to copy files to before data loading.
 - **Search for Data on SD Card and Computer** – automatically searches device for Aero App files.
 - **Use SD Card to store Data** – uses the connected SD card to store Core, Map, and Other Data.

14.11.3 Miscellaneous

Miscellaneous contains the setting options to customize select Aero App features and views.

1. Tap **Settings** on the **Main Menu**.
2. Select **Miscellaneous** from the side menu.
3. The following options are available:
 - **Airport Ring on APD and IAP** – verifies the georeferencing by showing a small ring around the Airport center.
 - **Home Field** – sets an ICAO as the default location on the Map upon opening the Map page and GPS is not available. This feature will take effect when the app is either rebooted or reopened and Map is selected for use.
 - **Minimum Runway Length (ft)** – filters Airports based on the specified runway length. The value must be in ft.
 - **Next Waypoint Buffer (nm)** – automatically changes to the next waypoint when the ownship is within a buffer radius around waypoint. The value must be in nm or km; respective to which distance unit format users have set in their Settings.
 - **Ownship on APD and IAP** – displays ownship on FAA Airport Diagrams and Instrument Approach Procedures.

- **Secret** – classifies your device as containing SECRET material.



NOTE: Once Aero App has been updated to SECRET, the action cannot be undone.



NOTE: Aero App must be uninstalled and reinstalled to revert to UNCLASSIFIED.

- **Switch to APD on Landing** – switches the screen to display an APD upon landing. When this feature is enabled, Speed (ft) will display. Enter desired value in kt. Once your ownship has reached the specified speed, the screen will switch to APD.

14.11.4 Reset

Reset clears all chart markups.

1. Tap **Settings** on the **Main Menu**.
2. Select **Reset** from the side menu.
3. The following option is available:
 - **Clear All Chart Markups** – clears all markups on APDs and IAPs.

14.11.5 Route

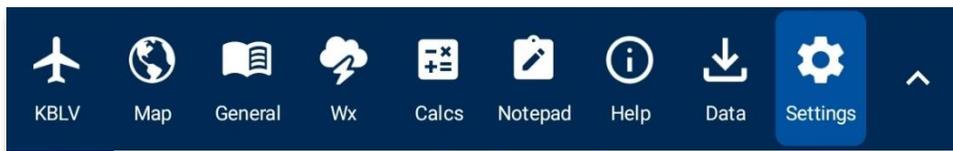
The Route setting contains route configuration options.

1. Tap **Settings** on the **Main Menu**.
2. Select **Route** from the side menu.
3. The following option is available:
 - **Snap Route to Current Leg** – automatically scrolls to the current leg in route and highlights the current flight leg on the Route Panel.

14.11.6 User Interface

The User Interface setting allows users to customize the general appearance of the app and the format in which information is presented to the user.

1. Tap **Settings** on the **Main Menu**.
2. Select **User Interface** from the side menu.
3. The following options are available:
 - **Big Buttons on Main Menu** – enlarges the Menu button size; useful when wearing gloves.



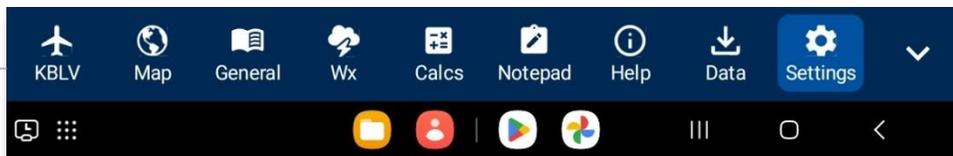
- **Confirm on Delete** – confirms deletion of an item in the route.
- **Coordinates Unit** – displays coordinates in Military Grid Reference System or Lat/Lon format.
- **Display Text for Main Menu** – displays text below each Main Menu option.

No text on Main Menu option



- **Distance Unit** – displays distance in km or nm.
- **Info Text Size** – sets Airport Information screen text size from small, medium, or large.
- **Main Menu at Top** – relocates the Main Menu to the top or bottom of your screen.

Main Menu on bottom of page

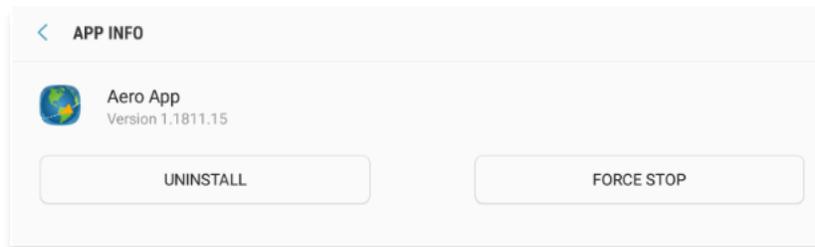


- **Night Mode** – uses white-on-black or a black-on-white screen while using Aero App.

15 Appendix A | Uninstall Aero App

This section will describe how to uninstall Aero App from your tablet.

1. Go to **Settings** on your tablet.
2. Tap **Apps**.
3. Navigate Aero App on the list provided.
4. Tap **Aero App**.
5. Tap **Uninstall** from the options provided.
6. A confirmation will pop up, tap **OK**.



NOTE: Alternatively, users can uninstall Aero App by going to their home page and long-pressing on the Aero App icon, then tapping **Uninstall**.



NOTE: Uninstalling Aero App will delete Aero App data.

16 Appendix B | User Waypoints and Coordinates

Enter Waypoints using Latitude and Longitude coordinates.

Coordinate formats include:

DD.DDD,DDD.DDD		DDMM.MM,DDMM.MM	
Enter Example	Means	Enter Example	Means
37.12345, -121.12345	37.12345°N, 121.12345°W	3723.45, -11834.45	37°23.45N, 118°34.45W
NDD.DDD,WDDD.DDD		NDDMM.MM,WDDMM.MM	
Enter Example	Means	Enter Example	Means
N37.12345, W121.12345	37.12345°N, 121.12345°W	N3713.4536, W12145.901	37°13.4536°N, 121°45.901W
DD.DDDN,DDD.DDDW		DDMM.MMN,DDDMM.MMW	
Enter Example	Means	Enter Example	Means
37.12345N, 121.12345W	37.12345°N, 121.12345°W	3713.4536N, 12145.90W	37°13.4536°N, 121°45.901W



NOTE: If you enter the values in degrees and decimal minutes, you need to ensure that there are at least four digits before the decimal point, i.e., for 1 degree and 12.5 minutes use 0112.5 because 112.5 will be interpreted as 112.5 degrees.



NOTE: When using E6B, you can leave spaces between degrees and decimal minutes. This is not possible when utilizing search boxes for the creation of routes.



NOTE: When adding MGRS to route, a minimum of six characters is required for a valid MGRS entry.

17 Appendix C | Hazards and Pins SQLite Files

This appendix includes key specifications, schemas, and examples of SQLite databases for Hazards and Pins. Aero App uses a structured database, or SQLite file, comprised of two tables: *mapPins* and *hazards*, to read and display pins and hazards on the Map view.

In addition to dropping their own pins and hazards on the Map, users can create or modify SQLite files to share their pins and/or hazards with others to display on Aero App. This SQLite file must be saved as *pins-{name}.sqlite*, where *{name}* is replaced by the user. If the file does not follow that naming convention, Aero may not read the file, or it may cause existing Pins and Hazards to overwrite on Aero App. The sections ahead provide further details on creating a SQLite file.

17.1 Specifications for Hazards

The following specifications apply to Hazards.

- **NOT NULL** – denotes the field is required
- **UNIQUE** – denotes the value must be distinct
- **INTEGER** – whole numbers only
- **REAL** – allows decimal numbers
- **TEXT** – allows alphanumeric character data

Key	Key Type	Definition
id	INTEGER PRIMARY KEY AUTOINCREMENT	The id column serves as the primary key, and the "AUTOINCREMENT" attribute ensures that a unique value is automatically assigned to this column for each new row inserted into the table.
identifier	TEXT NOT NULL UNIQUE	The identifier field is required and must differ from other identifiers in this column. It is recommended to follow a naming convention such as <i>HAZARD#</i> (starting from 1), where "#" represents a unique number. Users should avoid using white spaces or leaving the field blank.
name	TEXT NOT NULL	The name column can contain any character from the ASCII table. However, it is recommended to limit it to alphanumeric characters and spaces.

radius	REAL	The radius column represents the distance from the center of the ring to its outer edge that pilots should avoid when flying. If the radius column is left empty or a negative value is entered, the radius of the ring will be automatically adjusted to 0.
alert	INTEGER NOT NULL	The alert column indicates whether Intersection Alert is active or not. 1 is used to represent true while 0 is used to represent false.
notes	TEXT	The notes column is intended for additional information or context regarding hazards.
lat	REAL NOT NULL	The lat column represents the latitude of the hazard. Latitude cannot be greater than 90 or less than -90 but can be equal to either value.
lon	REAL NOT NULL	The lon column represents the longitude of the hazard. Longitude cannot be greater than 180 or less than -180 but can be equal to either value.
mgrs	TEXT	The mgrs column can contain any alphanumeric characters, symbols, or spaces. It is used solely for display purposes and is not used to derive a location, since the location is determined solely by the lat/lon values.

Here's the schema for the Hazards table. This schema includes the keys for each column mentioned earlier, with the necessary data types and constraints.

```
CREATE TABLE IF NOT EXISTS hazards (
    id INTEGER PRIMARY KEY AUTOINCREMENT,
    identifier TEXT NOT NULL UNIQUE,
    name TEXT NOT NULL,
    radius REAL,
    alert INTEGER NOT NULL,
    notes TEXT,
    lat REAL NOT NULL,
    lon REAL NOT NULL,
    mgrs TEXT);
```

17.1.1 Hazards SQLite Table

Here's an example of a SQLite table for Hazards:

id	identifier	name	radius	alert	notes	lat	lon	mgrs
1	0 HAZARD1	Gun threat hazard	10.0	1	Create a circle around a hostile threat...	33.434278	-112.011583	null

17.2 Specifications for Pins

Users must refer to the provided schema to create a table and input the desired values for each column. For Pins, the following specifications apply.

- **NOT NULL** – denotes the field is required
- **UNIQUE** – denotes the value must be unique
- **INTEGER** – whole numbers only
- **REAL** – allows decimal numbers
- **TEXT** – allows alphanumeric character data
- **BLOB** – stores large objects such as images

Key	Key Type	Definition
id	INTEGER PRIMARY KEY AUTOINCREMENT	The id column serves as the primary key, and the "AUTOINCREMENT" attribute ensures that a unique value is automatically assigned to this column for each new row inserted into the table.
pinType	INTEGER NOT NULL	The pinType field serves to indicate the type of geographic pin. Specifically, 0 is used to represent pin, 1 represents landmark, 2 represents emergency marker, and 3 represents photo pin. Landmark and avoidance point share the same pinType value, which is 1. If connectToOwnship is enabled, then it's landmark, otherwise it is avoidance point.
identifier	TEXT NOT NULL	The identifier field is required and must differ from other identifiers in this column. Users

	UNIQUE	should avoid using white spaces or leaving the field blank.
name	TEXT NOT NULL	The name column can contain any character from the ASCII table. However, it is recommended to limit it to alphanumeric characters and spaces.
notes	TEXT	The notes column is intended for additional information or context regarding pins.
lat	REAL NOT NULL	The lat column represents the latitude of the pin. Latitude cannot be greater than 90 or less than -90 but can be equal to either value.
lon	REAL NOT NULL	The lon column represents the longitude of the pin. Longitude cannot be greater than 180 or less than -180 but can be equal to either value.
timestamp	INTEGER NOT NULL	The timestamp column indicates the number of seconds since epoch time of when the pin was created.
radius	REAL	The radius column represents the distance from the center of the ring to its outer edge that pilots should avoid when flying. If the radius column is left empty or a negative value is entered, the radius of the ring will be automatically adjusted to 0.
radiusCircle	INTEGER NOT NULL	The radiusCircle column indicates whether Radius Ring is active or not. 1 is used to represent true while 0 is used to represent false.
radiusWarning	INTEGER NOT NULL	The alert column indicates whether an intersection alert is active or not. 1 is used to represent true while 0 is used to represent false.
connectToOwnship	INTEGER NOT NULL	The connectToOwnship column indicates whether Connect to Location is active or not. 1 is used to represent true while 0 is used to represent false.

imageBlob	BLOB	The imageBlob column is intended to associate pins to relevant photos and can be viewed through Aero App. This field is required for Photo Pins.
-----------	------	--

Here's the schema for the Pins table. This schema includes the keys for each column mentioned earlier, with the necessary data types and constraints.

```
CREATE TABLE IF NOT EXISTS mapPins (
  id INTEGER PRIMARY KEY AUTOINCREMENT,
  pinType INTEGER NOT NULL,
  identifier TEXT NOT NULL UNIQUE,
  name TEXT,
  notes TEXT,
  lat REAL NOT NULL,
  lon REAL NOT NULL,
  timestamp INTEGER NOT NULL,
  radius REAL,
  radiusCircle INTEGER NOT NULL,
  radiusWarning INTEGER NOT NULL,
  connectToOwnship INTEGER NOT NULL,
  imageBlob BLOB);
```

17.2.1 Pins SQLite Table

Here's an example of a SQLite table for Pins.

The screenshot shows a SQLite browser window with the following tabs: Browse Data, Database Structure, Edit Pragmas, and Execute SQL. The 'Table:' dropdown is set to 'mapPins'. Below the table name is a search bar labeled 'Filter in any column'. The table data is displayed in a grid with 13 columns: id, pinType, identifier, name, notes, lat, lon, timestamp, radius, radiusCircle, radiusWarning, connectToOwnship, and imageBlob. Each column has a 'Filter' button above it. The first row of data is as follows:

id	pinType	identifier	name	notes	lat	lon	timestamp	radius	radiusCircle	radiusWarning	connectToOwnship	imageBlob
1	1	0 PIN1	C17	Parked C17	38.545178	-89.835211	1694455715	10.0	1	1	1	null

18 Appendix D | Android Data Storage

Android data storage refers to the different methods used to save and manage Aero data. The sections ahead will provide detailed information on data storage.

18.1 Use SD Card to Store Data

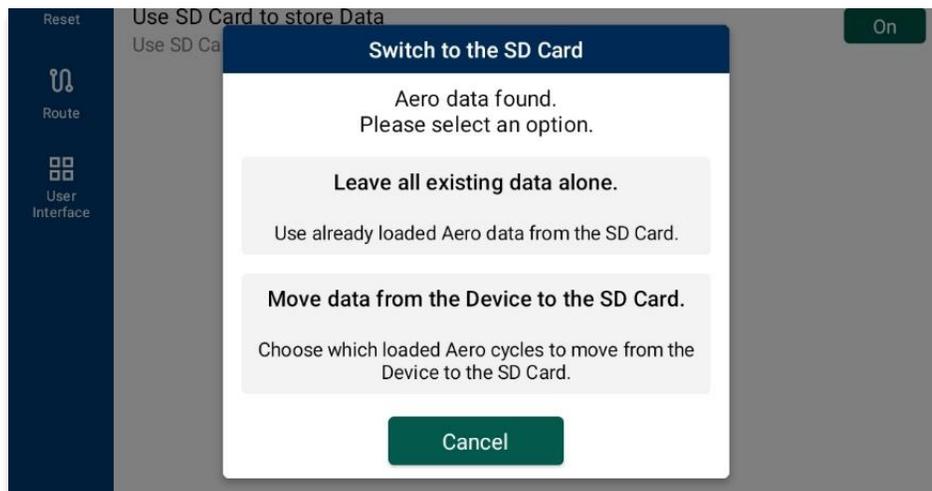
The Use SD Card to store data function allows users to store data in their preferred SD card. This feature provides the advantage of saving internal storage space and setting a primary location to store Aero data.

1. Insert an SD card into your Android device.
2. Open **Aero App** on your device.
3. Tap **Settings** on the **Main Menu**.
4. Select **Data** from the side menu.
5. Tap to enable the **Use SD Card to store Data** option. The primary storage is now set to read and write from the SD card.

18.1.1 Switch to the SD Card

By enabling the *Use SD Card to store data* option, users are presented with the following options:

- **Leave all existing data alone** – Uses preloaded data from the SD card.
- **Move data from the Device to the SD Card** – Transfers desired Aero data from the Android tablet's internal storage to SD card.



18.1.1.1 Leave all Existing Data Alone

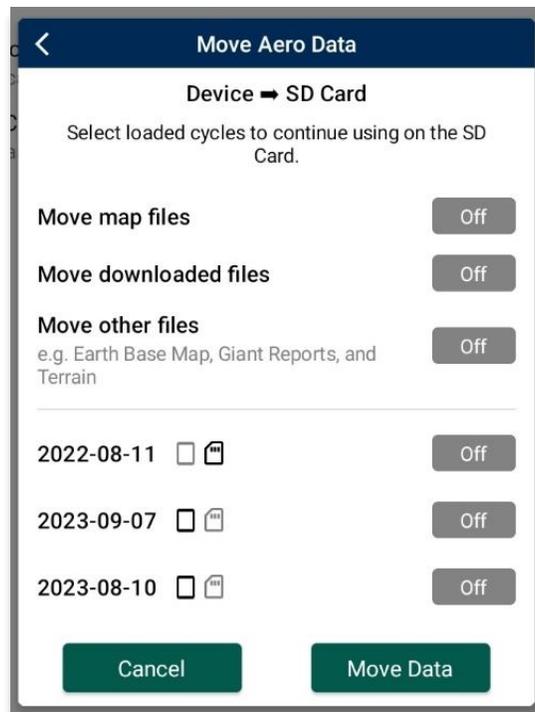
When selecting the *Leave all existing data alone* option, you are allowing Aero App to access preloaded data from your SD card. This allows Aero App to read data directly from the SD card.

1. Select the **Leave all existing data alone** option. A confirmation popup will appear.
2. Tap **Continue**. Aero App will read and store new data from the SD card. This does not move any existing data from the Android tablet.

18.1.1.2 Move Data From the Device to the SD Card

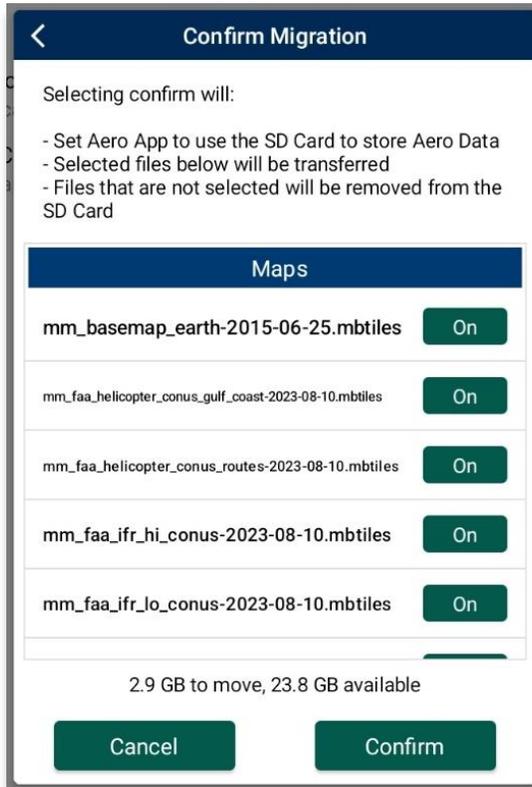
When selecting the *Move data from the Device to SD card* option, you are allowing Aero App transfer Aero data from their Android tablet's internal storage to the SD card.

1. Select the **Move data from the Device to the SD Card** option. A *Move Aero Data* popup will appear.
2. Select data that you wish to transfer into the SD card.
3. Tap **Move Data** once desired data is selected.

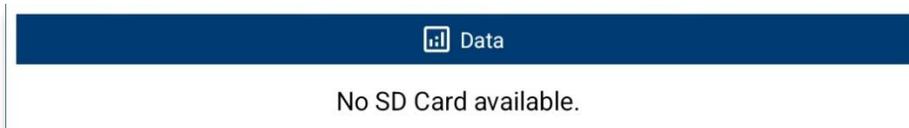


4. A **Confirm Migration** popup will appear containing the selected data.

5. Tap **Confirm**. The transfer will begin. This process may take a while.



NOTE: If a user does not have an SD card inserted into their device, the following message will display under the Data subheading.

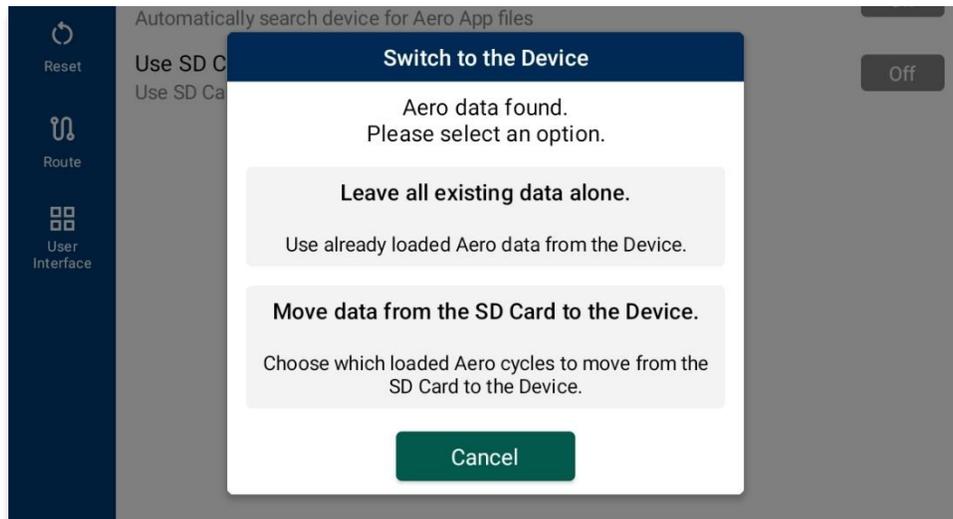


NOTE: If user does have an SD card inserted into their device, the following message will display under the Data subheading.



18.2 Switch to the Device

If you disable the *Use SD Card to store Data* option, you can use your Android tablet as the main resource for Aero App data. This means that you can use the pre-loaded Aero App data or transfer data from the SD card to the tablet.



18.3 Search for Data on SD Card and Computer

The Search for Data on SD Card and Computer option has an auto-discover function that scans your SD card and the Android tablet's internal storage for Aero App data. If your Android tablet has an SD card inserted, Aero App will check it for data; otherwise, an SD card is not required. Aero App will use any data found as the primary resource for Aero data.

1. Open **Aero App**.
2. Tap **Settings** on the **Main Menu**.
3. Select **Data** from the side menu.
4. Tap to enable the **Search for Data on SD Card and Computer** option.

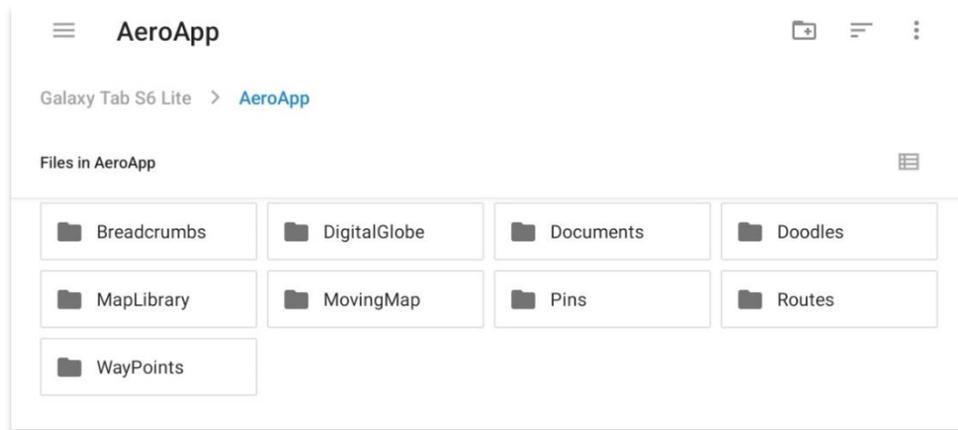


NOTE: When the *Search for Data on SD Card and Computer* option is enabled, Aero App disregards what is set as the directory to store data.

18.4 Path for Data on SD Card and Computer

The Path for Data on SD Card and Computer feature gives users the ability to specify a preferred directory for loading Aero App data. Users with Android tablets that operate on Android 12 or newer versions, can opt to sideload data from the primary folder by enabling the *Search for Data on SD Card and Computer* option. If your Android tablet has an SD card inserted, Aero App will check it for data; otherwise, an SD card is not required.

1. Open **Aero App**.
2. Tap **Settings** on the **Main Menu**.
3. Select **Data** from the side menu.
4. Tap **Choose** for the **Path for Data on SD Card and Computer** option.
5. Select desired folder or subfolder to set the directory in which will store Aero App data.



6. Once the directory is selected, tap **USE THIS FOLDER** to set the path.



7. A confirmation popup will appear. Tapping **Allow** will let Aero App access current and future content in the selected folder.
8. Tap **Cancel** to void action.

19 Appendix E | Aero App for Android on Windows 11

Aero App for Android supports cross-platform compatibility between Android and Windows operating systems. Aero App for Android can run on a Windows computer through the Windows Subsystem for Android (WSA) application. This feature will be further elaborated in the sections to follow.



NOTE: Currently, Surface tablets are not supported.

19.1 Requirements

Running Aero App for Android on Windows requires the following:

- Windows Subsystem for Android (WSA)
- Windows 11, minimum version 22H2 build 22621

19.2 Install Windows Subsystem (WSA)

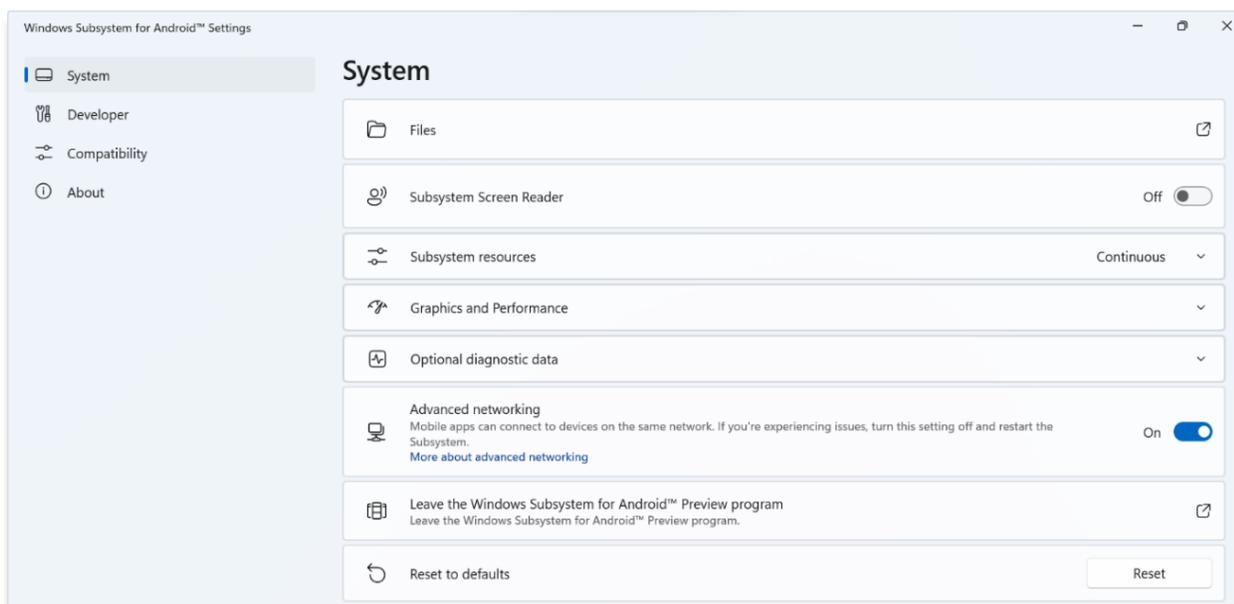
To install WSA on your Windows, users must install the Amazon Appstore from the Microsoft Store using their Microsoft account. Installing the Amazon Appstore will silently install WSA in the background.

Once the Amazon Appstore has been installed, a popup will appear that includes an installation guide of the Windows Subsystem for Android.

19.3 Windows Subsystem for Android (WSA) Settings

WSA is a Microsoft feature that enables Windows 11 devices to run Android applications such as Aero App. Windows Subsystem for Android (WSA) includes a Settings App. To access WSA search for "Windows Subsystem for Android" in the Start menu.

The WSA Settings App allows access to the WSA Virtual Machine's filesystem. Clicking the pop-out arrow for the **Files** option will open a window similar to the Android tablet My Files app.



NOTE: Users are not able to move files into Android from the Files window. Files can only be copied to Windows.

The **Subsystem resources** option enables users to set the duration in which the WSA virtual machine will be active. It is recommended for users to switch their settings from **As Needed** to **Continuous** for improved performance experience.

The **Advanced networking** option allows users to connect to other devices in the same network. This option must be switched **On** to access certain Aero App features, such as ADS Discover.

The **Developer Mode** should be enabled from the WSA Settings app. Enabling developer mode will be covered in the sections below.



NOTE: To establish a connection with a secured server on ADS, certificates would need to be installed on WSA as needed.

19.4 Android Debugging Bridge (ADB)

Android Debugging Bridge (ADB) is used to facilitate the interaction between Windows and WSA. It is a command-line tool that requires users to enter adb commands.

19.4.1 Download and Extract Platform Tools

To begin using adb commands, users will need to:

1. Navigate to the Android Developer site - developer.android.com/studio/release/platform-tools.
2. Download and extract the Platform Tools.
3. Open the **platform-tools** folder.
4. Open a terminal window from this directory.
5. Execute the command, '.\adb devices'.

If located in the appropriate destination, the adb-server should start up and list any connected Android devices. Executing the command here will start the adb server. This confirms that your current setup operates effectively.

For additional information, visit developer.android.com.



NOTE: No device would be listed since you need the connection of the WSA address. This will be further explained in the sections to follow.

19.4.2 Add to PATH

ADB can only be used from the folder in which it is stored in. To run adb commands without specifying 'adb devices' or navigating to the folder:

1. Open the Environment Variables from the Control Panel.
2. Directly below *User Variables*, click **Path** to highlight, then **Edit....**
3. Click **New**.
4. Enter the path to the platform tools. The path is the complete directory of the platform tools folder location, i.e., C:\Users\username\Downloads\platform-tools_r33.0.3-windows\platform-tools.
5. Click **Ok**.

Once added, ensure to never move, or delete the platform tools folder.

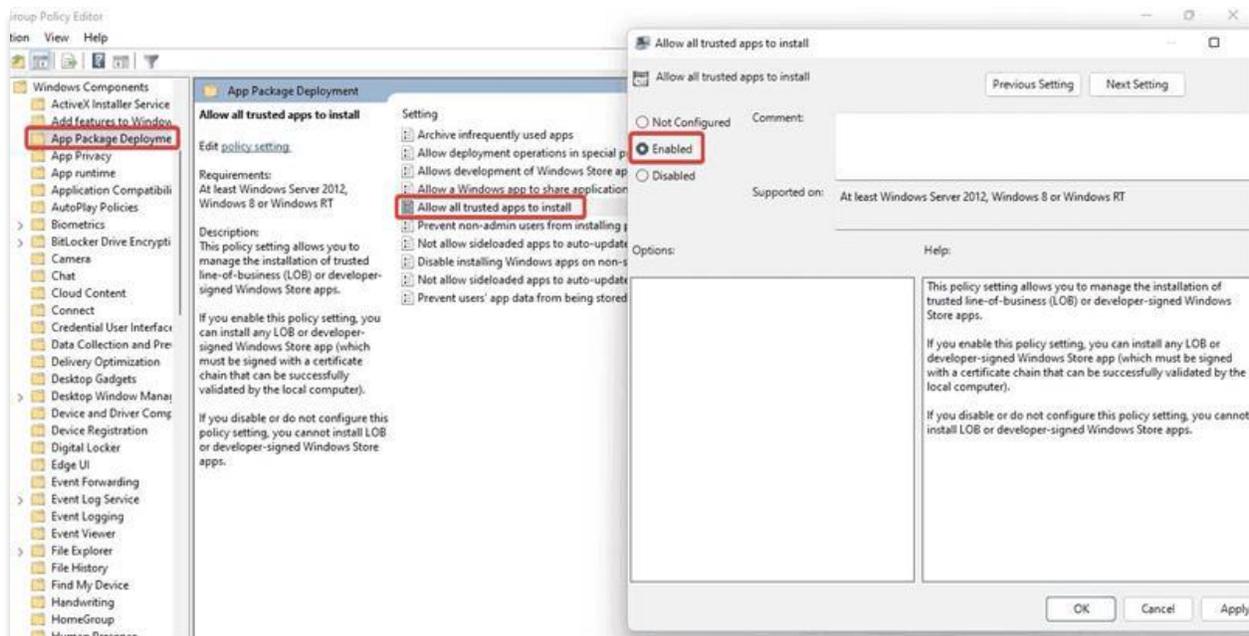
19.5 Enable Developer Mode

To enable Developer Mode, or access other settings:

1. Open the WSA Settings app.
2. Select Developer. Notate the IP address and Port number, i.e., 127.0.01:58584 to use further in this section.
3. Ensure Developer Mode is enabled.
4. Select **Manage developer settings** to ensure the WSA VM is running.
5. Search **Developer Settings** from the Windows search.
6. Navigate to **Settings**.
7. Click **Privacy and Security**.
8. Click **For developers**.
9. Enable **Developer Mode**.

If the options in the Settings application are not working or are disabled, users can use the methods below as an alternative. However, Group Policy Editor is only available for Windows 11 Professional, Enterprise or Education editions, not for Home Editions.

1. On your keyboard, press **Win + R** to open the Run dialog box. Enter "gpedit.msc" and click **Ok** to open the Local Policy Editor.
2. Navigate to the following path: 'Computer Configuration > Administrative Templates > Windows Components > App Package Deployment'.
3. On the right side, find the policy "Allows development of Windows Store apps and installing them from an integrated development environment (IDE)".



4. Double-click and check the **Enabled** option in the Settings window.
5. Click **Apply** then click **OK**.

19.6 Install Aero App for Android into WSA

To install Aero App for Android into WSA:

1. Copy the **Android apk file** to any location on the Windows machine.
2. Open a Terminal.
3. Run 'adb connect <wsa-address>', with '<wsa-address>' being the virtual machine's address, i.e., 127.0.0.1:58584. This address is the same IP address used to enable developer mode.



NOTE: A message that reads "Failed to authenticate <virtual machine's address> may display."

- a. In the case where the device displays 'unauthorized' next to it:
 - i. Go back to the WSA Settings App.
 - ii. Click **Developer**.
 - iii. Select **Manage developer settings**.
 - iv. Scroll to **Use Debugging** and switch between on and off toggles.
 - v. A dialog will display requesting authorization. Click to **Allow**.
 - vi. Verify that WSA is connected; *adb devices* should now show authorized along with the list of devices attached i.e., <virtual machine's address> device.
4. Install the APK - adb install <path-to-apk>, where the <path-to-apk> is the full path, i.e., **C:\Users\username\ AeroApp_Android-1.2301.0-release.apk**.
5. Once installation is completed, the screen will display "Success".

19.7 Sideloaded Data

Sideloaded data uses the **adb push <local> <remote>** command, where **<local>** is the path to the file to send to the WSA virtual machine, and **<remote>** is the location in the WSA virtual machine to put the file in. The paths in the WSA virtual machine that you'll need will begin with `"/sdcard/"`. Refer to the examples provided below:

- Adding a global zip:
 - ``adb push "C:\Users\username\Documents\global-2022-08-11.zip"/sdcard/``
- Adding a user MBTiles file:
 - ``adb push C:\Users\username\files\map.mbtiles /sdcard/AeroApp/MovingMap/``
- Adding all files in a directory:
 - ``adb push C:\Users\username\data\. /sdcard/Documents/``



NOTE: Depending on the number of files being sideloaded, it may take a while to complete the transfer. In the case where folder names include spaces, be sure to add quotation marks as seen on the first example above.

19.8 Unsupported Features

To run Aero App for Android on Windows, a Windows computer with the minimum operating system of Windows 11 is required. The list below displays Aero App for Android's unsupported features when running on a Windows machine:

- SD card storage
- Bluetooth connectivity
- ADS-B connectivity
- MAGTAB
- Share KML/KMZ user overlays
- MDM
- GPS connectivity



NOTE: The Windows Subsystem for Android (WSA) is under continuous development by Microsoft. There may be updates to the WSA that can affect the performance of Aero App for Android. A temporary change in functionality may occur as a result. A feature may become blocked, or a previously unsupported feature may begin working. These changes are outside the control of the Aero App development team.

20 Appendix F | Acronyms and Glossary

.apk	Android package file format for distribution and installation of mobile apps and middleware
A/FD	Airport Facility Directory
ADDS	Aviation Digital Data Service
ADIZ	Air Defense Identification Zones
Adobe	Software suite of graphic design, video editing, and web development applications
ADS	Aero Data Server
ADS-B	Automatic Dependent Surveillance-Broadcast
AF Wx	Air Force Weather
AFR	Africa (Central and Southern regions)
AIRMET	Airmen's Meteorological Information
Alt Min	Alternate Minimums
AP	Area Planning
APD	Airport Diagram
App Mgmt	Application Management
AQP	Advanced Qualification Program
Arr	Airport Arrival Procedures
ARTCC	Air Route Traffic Control Center
ASPS	Aeronautical Source Packaging Service
AUD	Aero User Database
AvGas	Aviation Gasoline
AWS	Amazon Web Services
Breadcrumbs	GPS points along a flight path
CAC Card	Common Access Card
CONUS	Contiguous United States
CRD	Common Route Definition
CSA	Caribbean and South America
Delta	Upgrades from previous data cycles that only include changes
Dep	Airport Departure Procedures
DINS	Defense Internet NOTAM Service
DLA	Defense Logistics Agency
Docs	User-defined content loaded into document library
DOD	Department of Defense
DP	Departure Procedures
DSN	Defense Switched Network
DVD	Digital Versatile Disc
E6B	Aviator's calculator
EEA	Eastern Europe and Asia
EFB	Electronic Flight Bag
E-IPL	Electronic - Instrument Procedure Library

ENAME	Europe, North Africa, Middle East
ETA	Estimated Time of Arrival
ETE	Estimated Time Enroute
FAA	Federal Aviation Administration
FIR	Flight Information Region
FIS-B	Flight Information Services-Broadcast
FLIP	Flight Information Publications and Flight Information Products
Ft	Foot
GARS	Global Area Reference System
GB	Gigabyte
GEOAxis	Credentials authentication provider for the government
GEOINT	Geospatial Intelligence
GPS	Global Positioning System
GS	Ground Speed
Hdg	Heading
IAP	Instrument Approach Procedures
ICAO	International Civil Aviation Organization that assigns airport code or location indicator as an alphanumeric code designating aerodromes around the world
IFR	Instrument Flight Rules
IP	Internet Protocol
IPA	iOS application archive file which stores an iOS app
IR	Instrument Routes
KG	Kilogram
KM	Kilometer
KML	Keyhole Markup Language
KMZ	Keyhole Markup Language Zipped
Kt	Knot
LAHSO	Land and Hold Short Operations
Lat, Lon	Latitude and Longitude
Lbs	Pounds
LIFR	Low Instrument Flight Rules
M	Meter
macOS	Current series of Unix-based graphical operating systems by Apple
MDM	Mobile Device Management
METAR	Aviation Routine Weather Report, a format for reporting weather information
Mgmt	Management
MGRS	Military Grid Reference System
Map	Navigation system displaying the receiver's current location at the center of a map
MTRs	Military Training Routes
NavAid	A device or system that provides a navigator with navigational data
NEXRAD	Next-Generation Radar
NGA	National Geospatial-Intelligence Agency

NGA GEOINT	NGA web-based capabilities for online, on-demand discovery, and access to geospatial intelligence
NIPRnet	Non-Secure Internet Protocol Router Network
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NSN	National Stock Number
OCONUS	Outside Contiguous US
PAA	Pacific, Australasia, and Antarctica
PDF	Adobe Portable Document
PIREP	Pilot Report
PKI	Public Key Infrastructure
POC	Point of Contact
Prog Chart	A map displaying the likely weather forecast for a future time
RNAV	Area navigation, a method of IFR navigation
SAR	Search and Rescue
SD Card	Secure Digital High-Capacity card
Shapefiles	Geospatial vector data format for geographic information system (GIS) software
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SM	Statute Mile
SQLite	Relational database management system
SR	Slow Speed Low Altitude Routes
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TACs	Terminal Area Charts
TAFs	Terminal Aerodrome Forecasts
TFRs	Temporary Flight Restrictions
TFRs	Temporary Flight Restrictions
TO Min	Takeoff Minimums
UIR	Upper Information Region
USB	Universal Serial Bus
VFR	Visual Flight Rules
VO	Vertical Obstruction
VR	Visual Routes
Waypoint	A set of coordinates that identify a point in physical space
WCA	Wind Correction Angle
Wx	Weather
XTK	Crosstrack