

Aeronautical Application (Aero App)

iOS User Manual Version 1.2602

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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 within the Map's Route Panel.
- View navigation 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 onto Aero App.
- Load and view PDF format.

2 About the User Manual

This User Manual is a detailed guide that explains how to use and understand Aero App. It includes comprehensive information on global map coverage, including aeronautical overlays, user maps, as well as displaying Air Force Weather data, airport details, and other navigation information. This manual assists pilots in viewing georeferenced Flight Information Publications (FLIP) and FAA charts, as well as the Electronic-Instrument Procedure Library (E-IPL), Host Nation charts, among other aeronautical resources.

3 Getting Started

The Aero App User Manual offers comprehensive instructions for using Aero App. This manual includes procedures for app installation, downloading and loading data, sideloading user-generated maps, and descriptions of various features, among other offerings. Additionally, this manual contains images to help guide you through the steps. Before you begin, please ensure that your system meets the specified requirements, which are detailed in the following section.

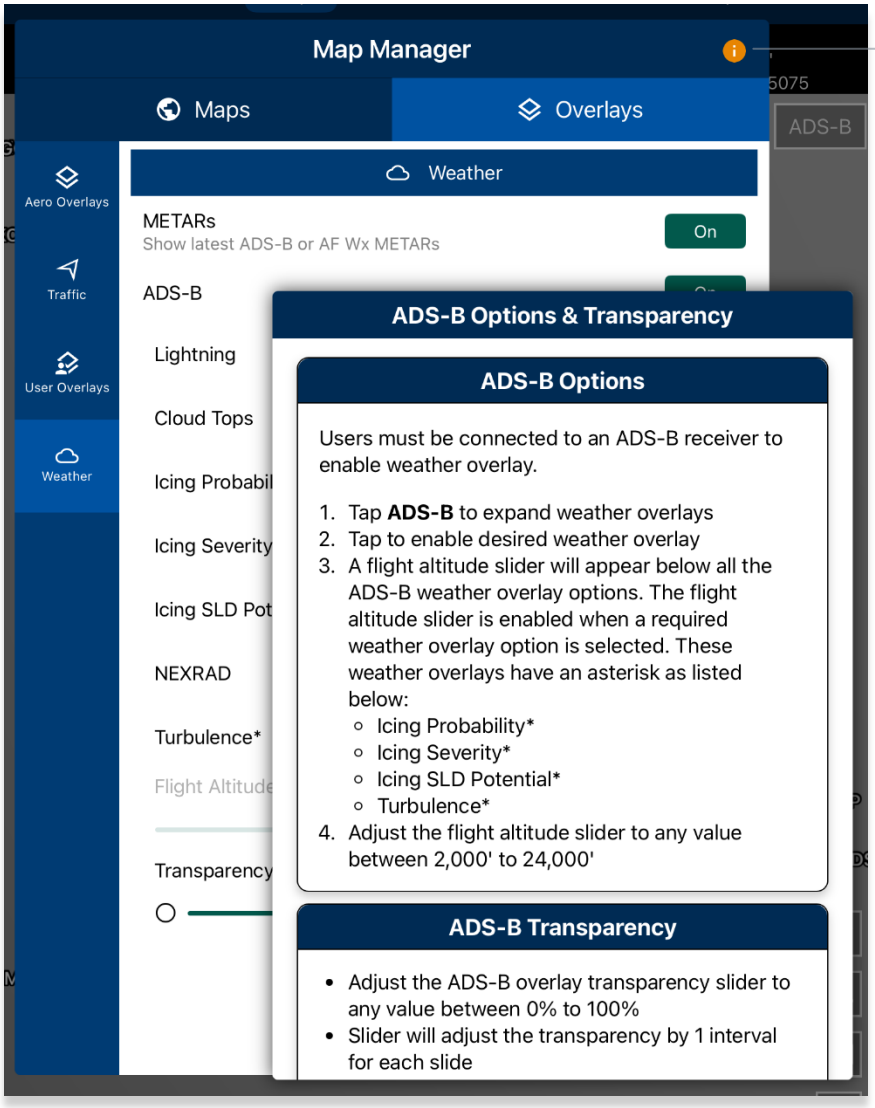
3.1 System Requirements

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

- Required
    - iPad running iOS 18 or later
    - iPad with Apple A12X processor or later
    - 16 GB of available storage (for the installation of Aero App and one complete data cycle)
- Optional
    - USB cable to connect the iPad to a stand-alone computer
    - The latest version of iTunes, available at https://www.apple.com/itunes.
- Internet connection if downloading data or Aero App via the internet

3.2 Contextual Help

Contextual help in Aero App offers 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 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

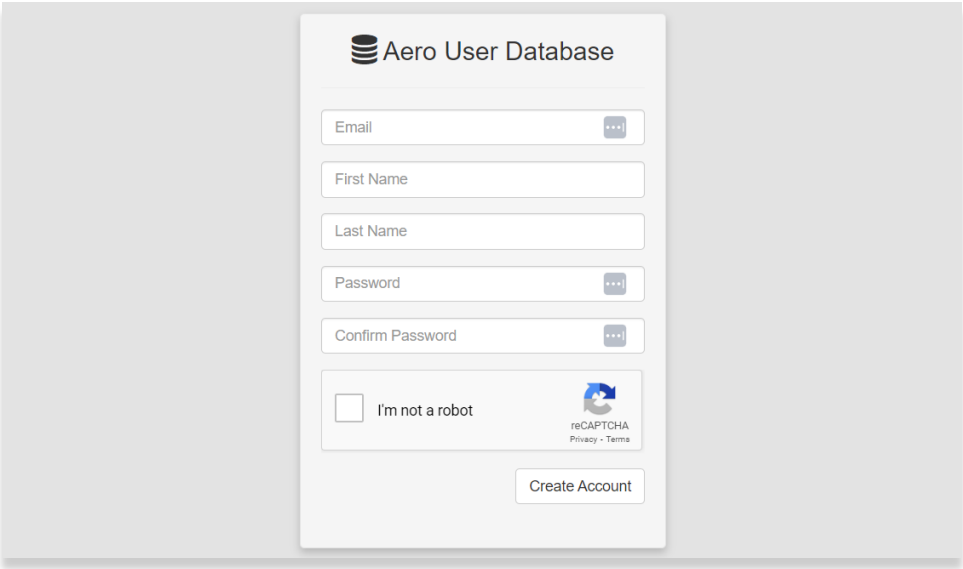
5 Accounts

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.

5.1 Aero User Database (AUD) Account Registration

Aero User Database (AUD) provides authentication for DOW and foreign government partners seeking access to Aero App software and data. Users who choose 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.



NOTE: 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.

5.2 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://portal.geoaxis.gs.mil/ in the address bar.
3. Select one of the listed credentials to authenticate.
4. Follow the prompts.



NOTE: Valid .mil email is required to create an account.

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

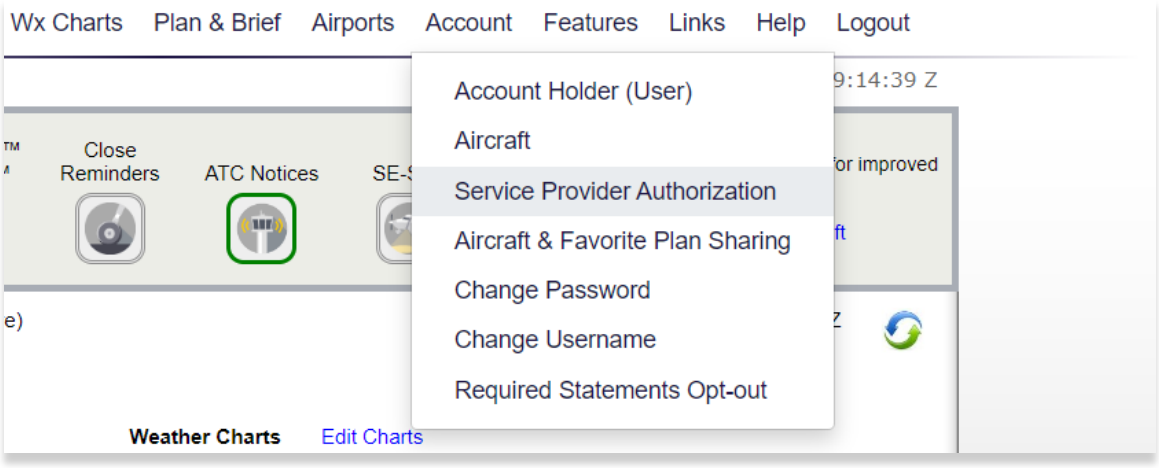
5.3 Flight Service Account Registration

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 and 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.

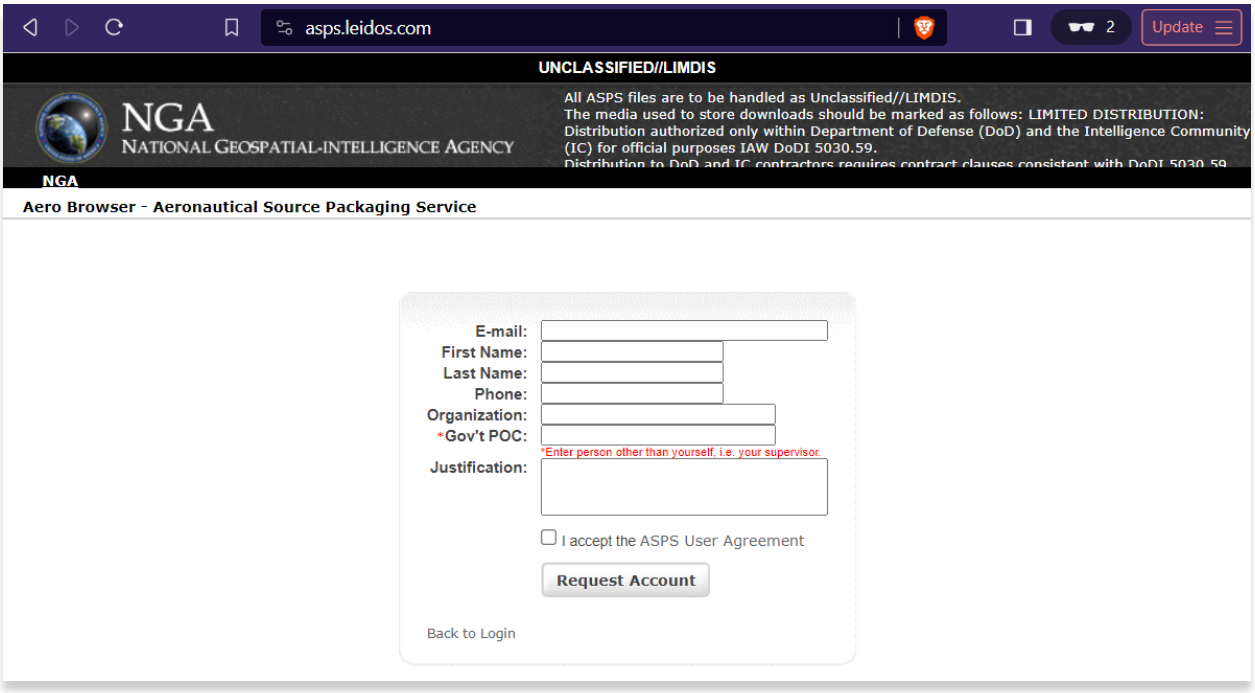


10. A button to *Edit* and *Save* is available. Select **Edit**.
11. From the provided table, locate *NGA Aeronautical Application (Aero App)* and select **Yes** on the radio buttons.
12. Click **Save**.

5.4 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.



6 Aero App Installation

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

6.1 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 the Defense Logistics Agency (acctmgr@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.

6.1.1 Install Aero App from Aero App DVD

NGA distributes the Aero App DVD to the appropriate persons. For additional information, contact the Defense Logistics Agency (acctmgr@dla.mil).

1. Connect an iPad to your PC.
2. 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.

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

Depending on the operating system of your computer, users will require different steps in installing Aero App. The following sections ahead will provide the necessary steps for each operating system.

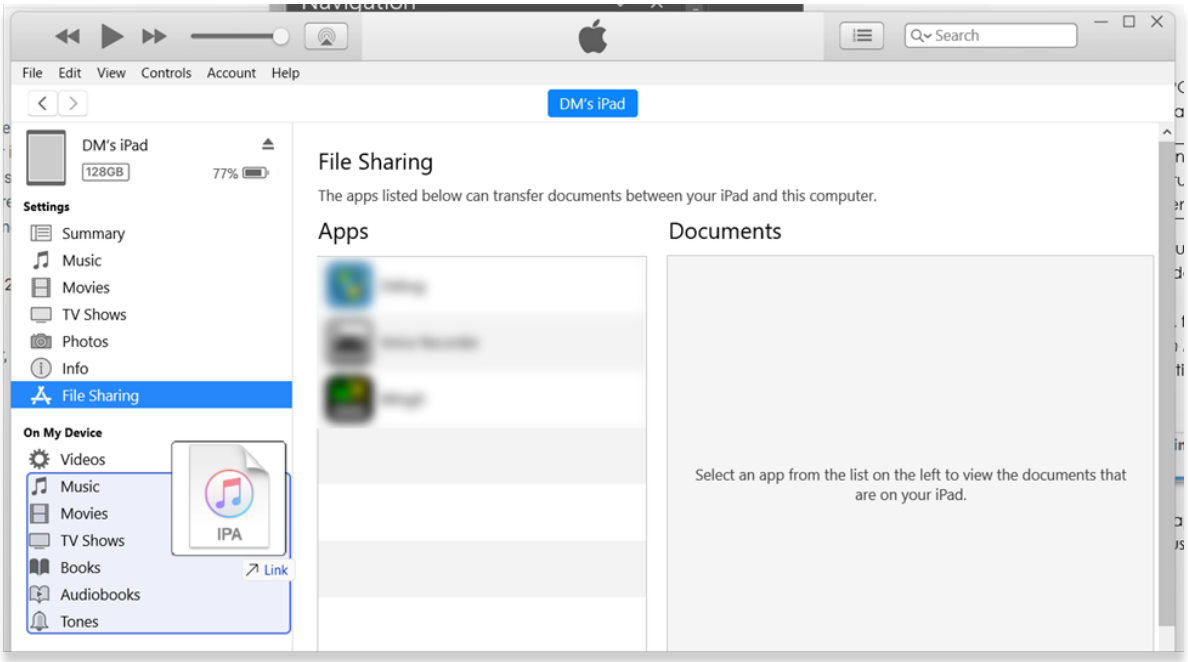
6.1.1.1 Sideload Files with iTunes

Install iTunes on Windows to transfer files via iTunes. An internet connection and account registration are not required when performing a sideload. Users with Mac running macOS Catalina must refer to Section 6.1.1.2.

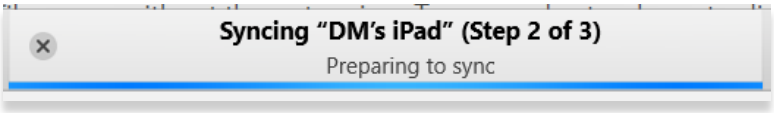
1. Connect an iPad to your PC.
2. Open **iTunes** or automatically connect.

NOTE: To automatically connect to iTunes, enable the **Automatically sync when this iPad is connected** feature. iTunes will automatically open once you connect your iPad to your computer.

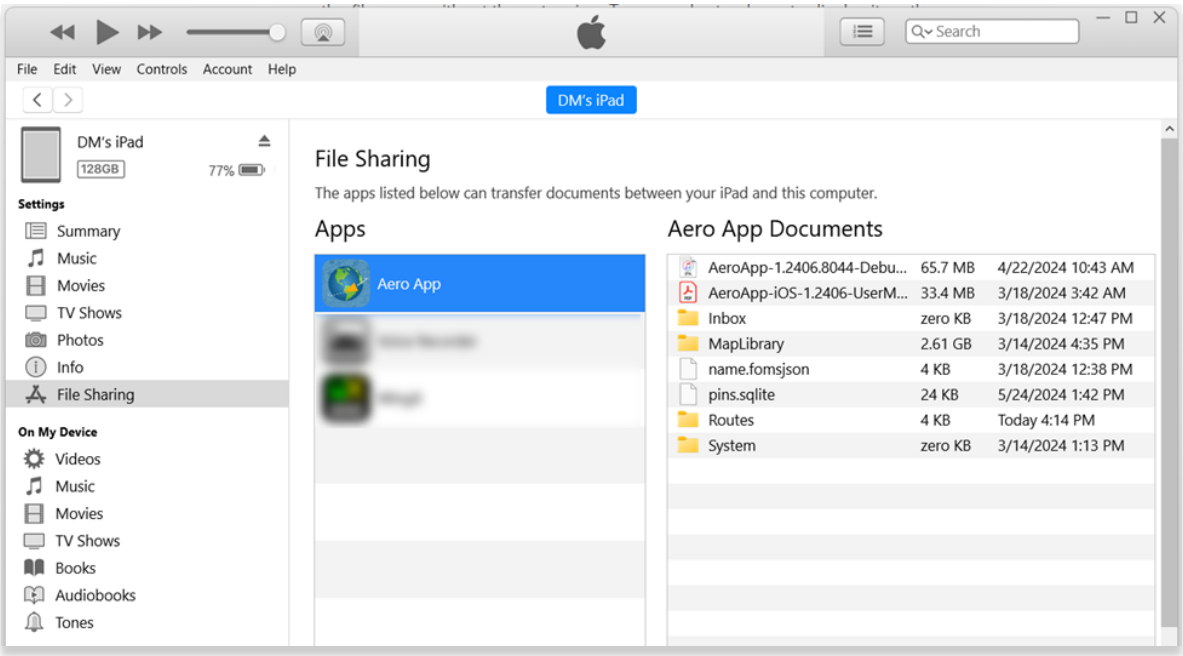
3. Click the **iPad** icon and your iPad information will display.
4. Open the File Explorer window that displays the app-iOS contents described in Section 6.1.1.
5. Drag and drop the iOS IPA file (**AeroApp-<version-number>.ipa**) from the Aero App DVD drive into the *On My Device* section of iTunes.



6. Click the **Sync** button on the bottom right of the iTunes window. The status bar displays the status of the transfer.



7. Click **File Sharing**. The apps currently installed on your device will be listed. A successful sideload will display Aero App on the list.



8. Return to your iPad's home screen and the Aero App icon should display as shown below.

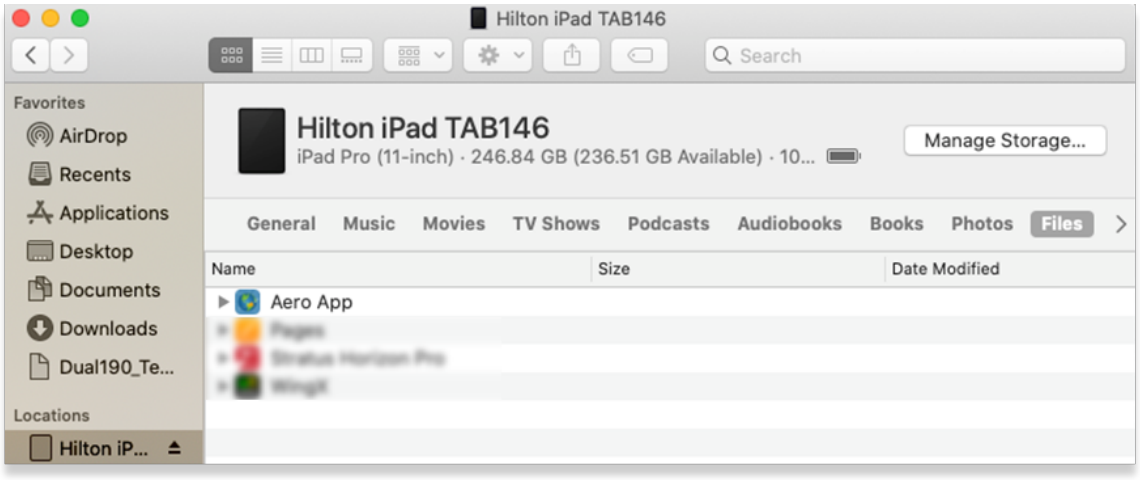


NOTE: Users may be prompted with an Untrusted Enterprise Developer message when they attempt to open Aero App for the first time. To resolve this, go to the iPad's General settings. Navigate to VPN & Device Management, select U.S. Department of War, then select the Trust "U.S. Department of War" button.

6.1.1.2 Sideload Files with Finder

Users with a Mac running macOS Catalina or later must use Finder to sideload files.

1. Connect an iPad to a Mac.
2. Open a **Finder** window.
3. Select your **iPad** from the sidebar of the Finder window below the *Locations* section.
4. Drag and drop the iOS IPA file (**AeroApp-<version-number>.ipa**) from the Aero App DVD drive into the Finder app. Aero App will begin to install onto your iPad.



5. Return to your iPad's home screen and the Aero App icon should display as shown below.



NOTE: Users may be prompted with an Untrusted Enterprise Developer message when they attempt to open Aero App for the first time. To resolve this, go to the iPad's General settings. Navigate to VPN & Device Management, select U.S. Department of War, then select the Trust "U.S. Department of War" button.

6.1.2 Install Aero App from Apple App Store

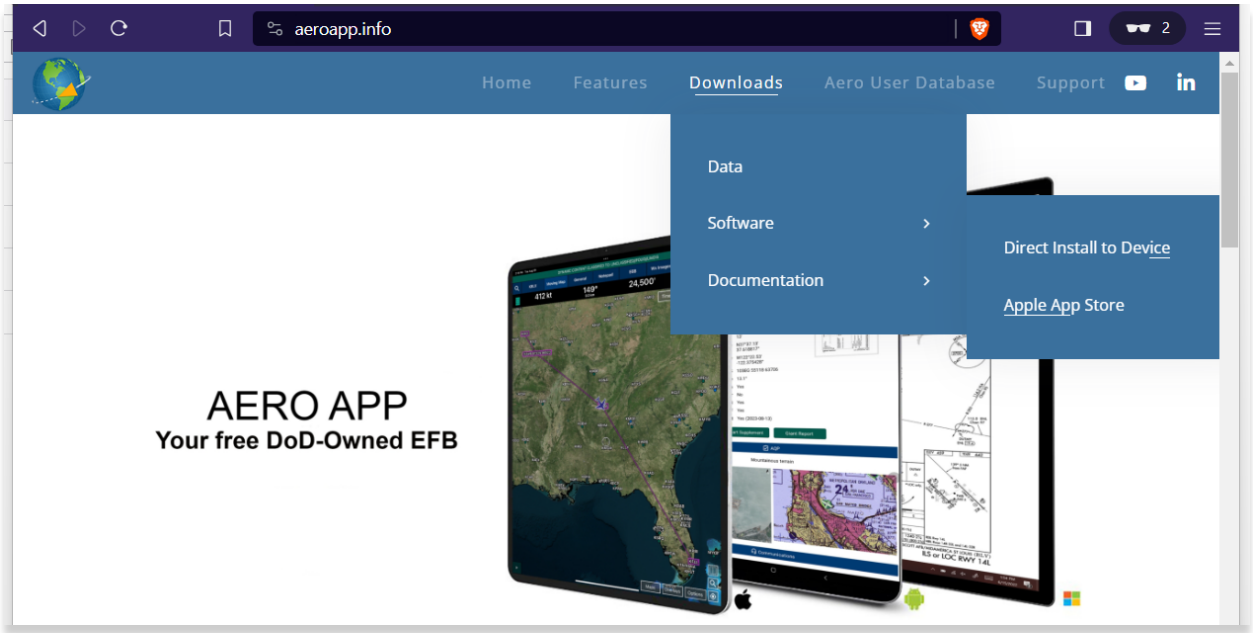
Aero App is available on the Apple App Store. Users must possess an Apple ID and an active internet (Wi-Fi or cellular) connection to use the Apple App Store. To create a new Apple ID, visit the Apple Support website.

1. Go to the Apple App store on your iPad.
2. Navigate to the search bar and enter **Aero App** in the text field.
3. A collection of related apps will be listed. Select Aero App to view additional app information or tap **Get** to directly install Aero App on your device.

6.1.3 Install Aero App from Aero App Website

Users must possess GEOAxIS or Aero User Database credentials prior to downloading Aero App software from the Aero App website. Refer to Section 5 for additional information.

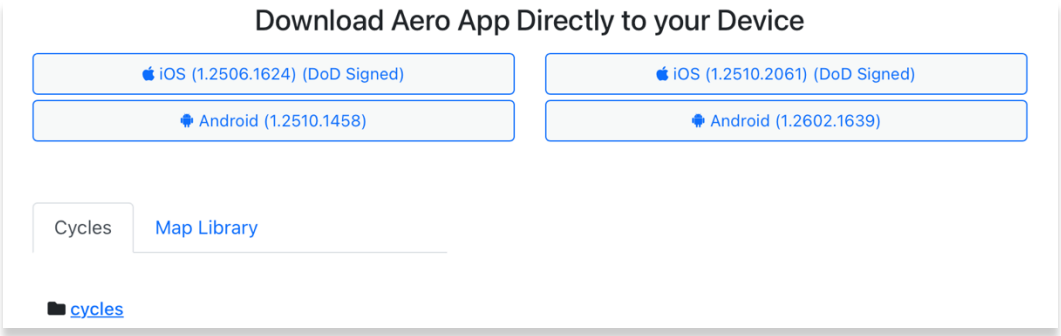
1. Open an internet browser of choice.
2. Enter aeroapp.info in the address bar.
3. Navigate to the *Downloads* menu. The option placement will vary depending on display size.
    - On larger screens, hover over **Downloads** from the navigation bar to reveal additional download options.



- On smaller screens, click 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 foreign government partners.
8. Navigate to the *Download Aero App Directly to your Device* section then select **iOS (<version number>) (DoD Signed)**. Aero App will begin to install onto your device.



NOTE: Users may be prompted with an Untrusted Enterprise Developer message when they attempt to open Aero App for the first time. To resolve this, go to the iPad's General settings. Navigate to VPN & Device Management, select U.S. Department of War, then select the Trust "U.S. Department of War" button.

7 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).

8 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 is 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.

8.1 Aero App Maps

Aero App includes an advanced Map that provides pilots with access to Visual Flight Rules (VFRs) and worldwide Instrument Flight Rules (IFRs) charts. After selecting a Cycle, pilots can navigate to the Aero App Maps section on the download page to select and download charts for their preferred regions. A list of available regional maps will be displayed for easy selection. For more information, refer to Section 18.1 of this guide.

8.2 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 17.3 for additional information on Air Force Weather (AF Wx).

8.3 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 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 9 for additional information in downloading data on Aero App.



NOTE: Users have the option to sideload data onto Aero App. Refer to Section 10 for additional information.

8.4 Core Data Delta Files

Core Data Delta Files are smaller files that only include the data changes from the previous cycle, making them a more efficient way to update your data. Downloading these delta files significantly reduces download times.

It's important to always include the Global file during the download process. Before downloading Core Data Delta Files, users must enable the Use Deltas option (refer to Section 12.4). Once enabled, Aero App will automatically retrieve the relevant delta files based on the previous cycle. Since delta files only contain updates, they are typically much smaller in size. Ensure the Global file is present for the delta files to be applied correctly.

8.5 Electronic – Instrument Procedure Library (E-IPL)

Electronic – Instrument Procedure Library (E-IPL) charts are translations of Host Nation procedures presented in the familiar DOW approach format. Designed to supplement existing DOW FLIP charts, E-IPL charts help fill gaps in instrument procedure coverage.

After selecting a Cycle, users can navigate to the E-IPL Data section on the download page to access and download available E-IPL charts from ADS and AWS sources. Once downloaded, E-IPL charts can be accessed in multiple ways. One method is from the Active Point menu by selecting **IAP**, **Dep**, or **Arr** chart types, each identified by an E-IPL pill on the chart selector popup; from the Map view by selecting an **ICAO**, then tapping **Show**, followed by **Info and Wx**; or through the Route Panel using the same process to access the Info and Wx menu.



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

8.6 FAA Sectionals

FAA Sectionals are specialized aeronautical charts designed for visual navigation under Visual Flight Rules (VFR). FAA Sectionals are available to DOW users and select partners.

These charts are available for download under the Cycle Data section on the download page after selecting a Cycle. Once downloaded, users can access FAA Sectionals by going to **General** on the Main Menu and selecting **Charts**. FAA Sectionals are available for specific regions, including Alaska, CONUS, and the Pacific, with each chart labeled as Sectional on chart type name.



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

8.7 Georeference

Georeferencing aligns accurate location data with the map coordinate system in Aero App, allowing users to display their ownship position precisely on Airport Diagrams (APDs), Instrument Approach Procedures (IAPs), and on the Map.

Georeference data is available under the Cycle Data section on the download page after selecting a Cycle. Once downloaded, users can access georeferenced charts in several ways. One option is through the Active Point menu by selecting between APDs and IAPs, where georeferenced charts are identified by a GEO label on the chart selector popup. Alternatively, from the Map view, users can select an ICAO, tap **Show**, and then choose **Info and Wx** to view the georeferenced charts. The same steps can be followed from the Route Panel by selecting **Info and Wx** to access the charts.

8.8 Giant Reports

Giant Reports are PDF documents produced by the U.S. Air Force that provide safety assessments for operational use. These reports can be downloaded and viewed directly within Aero App.

Giant Reports data is located under the Other Data section on the download page after selecting a Cycle. Once the data is downloaded, users can access the reports from the Active Point menu by selecting **Info**, then **Giant Report**. Alternatively, users can display the identifier menu of a desired point, choose **Info and Wx**, then **Giant Report** to view its report. For more information, refer to Giant Report of this guide.

8.9 Helicopter and Terminal Area Chart (TAC) Maps

Aero App supports the display of Helicopter (Gulf Coast) charts, Helicopter (Routes) charts, and Terminal Area Charts (TACs) directly on the Map. When displayed, these charts align perfectly with the underlying sectional or other base maps for accurate positioning.

The Helicopter and TAC Maps data can be found under the Helicopter and TAC Maps section on the download page after selecting a Cycle. Once downloaded, these charts can be viewed from the Map View within the Map Manager menu. For more information, refer to Section 18.1.4 of this guide.



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

8.10 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 mission, 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 DOW and specific government foreign partners. For information on downloading Map Library charts, refer to Section 9.2.1.1 and Section 9.3.1.1. For information on overlaying Map Library charts on the Map, refer to Section 18.1.5.

8.11 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. For Maxar online (Wi-Fi or cellular required) refer to Section 18.1.1.4 and for Maxar offline (no internet connected required after initial download) refer to Section 18.1.3.

"*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

8.12 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 18.2.1.25 for additional information on displaying TFRs on the Map.

8.13 Terrain

Aero App includes Terrain Coloring and Terrain Analysis data 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. For additional information on Terrain overlay, refer to Section 18.2.1.24.

Terrain Analysis data is exclusive to Coverage, Line of Sight, and VOR MON orbit coverage. Users are required to download Terrain Analysis data to access orbit coverage features. Refer to Section 25.3.6.1 for additional information on orbit coverage usage.

Terrain Coloring and Terrain Analysis data can be downloaded from AWS using GEOAxIS or Aero User Database credentials, or directly from ADS. Terrain data will be listed under Other in the Data Download view and is available to select government foreign partners.

8.14 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.

9 Download Data

Aero App allows users to download data directly to their devices. To access data from Amazon Web Services (AWS) or Aero Data Server (ADS) on Aero App, users must select Manual as their active profile. Refer to Section 12.2 for additional information on Profiles. Alternatively, users can download data directly to their device by visiting the Aero App website (aeroapp.info).

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

9.1 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. To switch user profiles, tap the dropdown to view the different profiles available for data download (refer to Section 32.2 to create a new profile). By default, the Manual option is selected. Select the desired profile.
2. Tap **Download**. If the Manual profile is selected, the sections ahead will contain information on downloading data manually. If a user profile is selected, refer to Section 12.2 for information on downloading preselected datasets.
3. Navigate to a desired screen within Aero App or an application in which you would like to proceed in normal operations.
4. Once the downloading is complete, a popup will notify users that the download was successful.



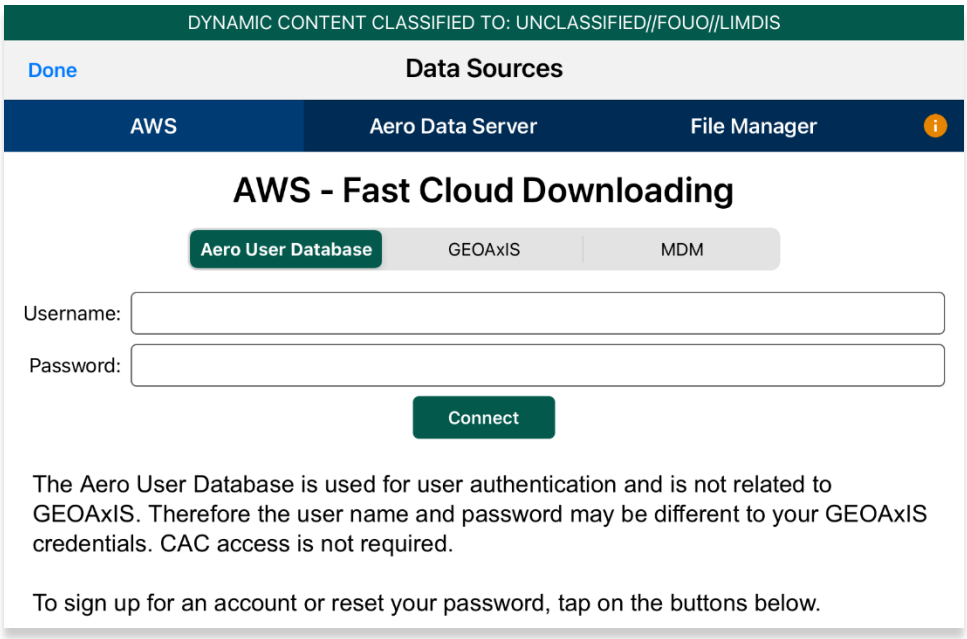
5. Navigate back to the **Data Status** screen. Notice the files you have selected to download display **Found.** This indicates that the files have successfully downloaded with any interruptions.

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.

9.2 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).

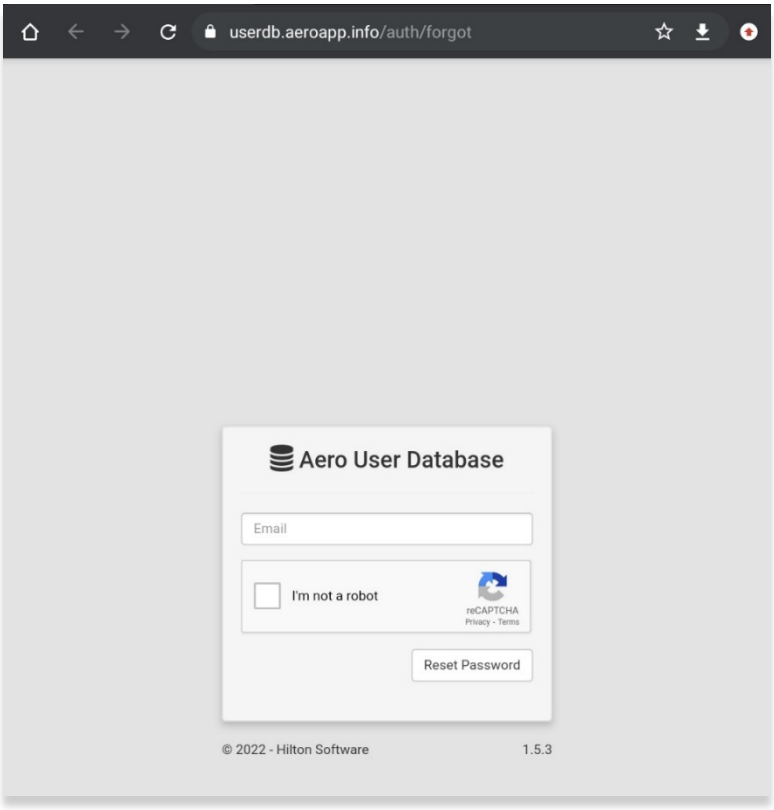


5. Below each user authentication option, you are presented with the options to *Sign Up For An Account* and *Reset Password*.

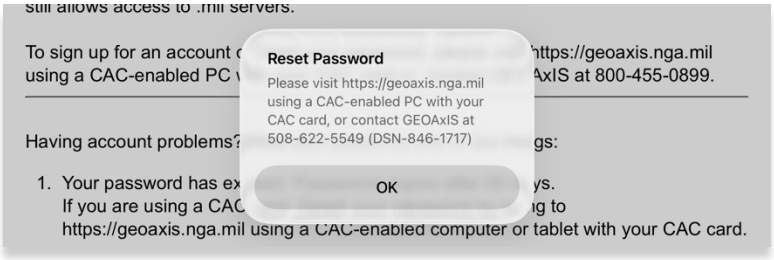


6. Tap **Sign Up for An Account** to create an Aero User Database (AUD) or GEOAxIS account.

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.

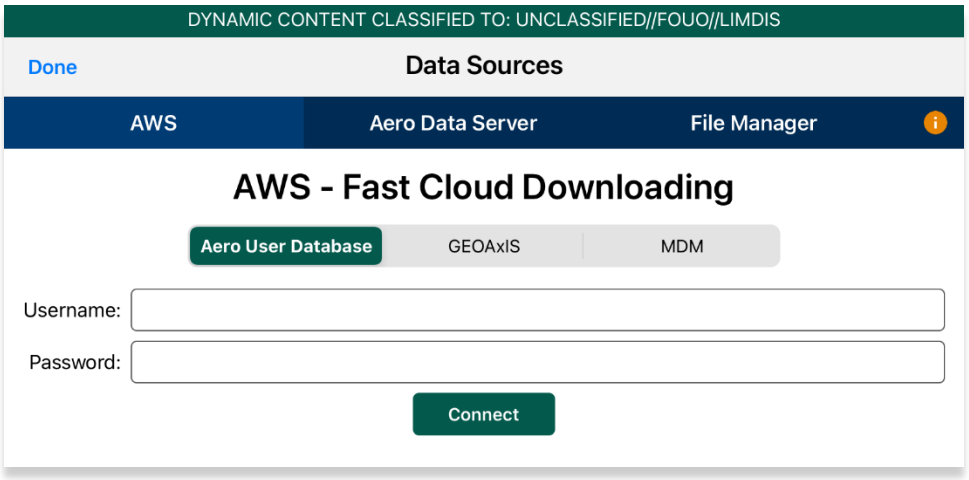


NOTE: The Background Downloading feature allows users to continue downloading data while switching screens within Aero App or while using another application. Refer to Section 9.1 for additional information.

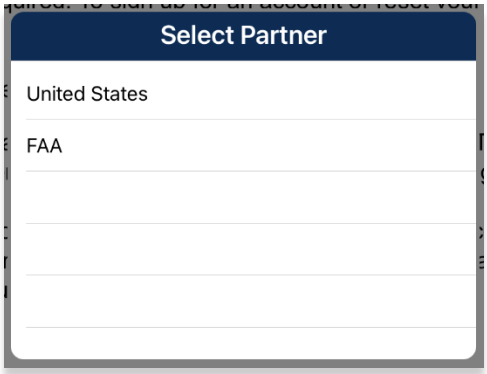
9.2.1 Download Data Using Aero User Database (AUD)

Aero User Database (AUD) allows for authentication of both DOW users and foreign government 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.**

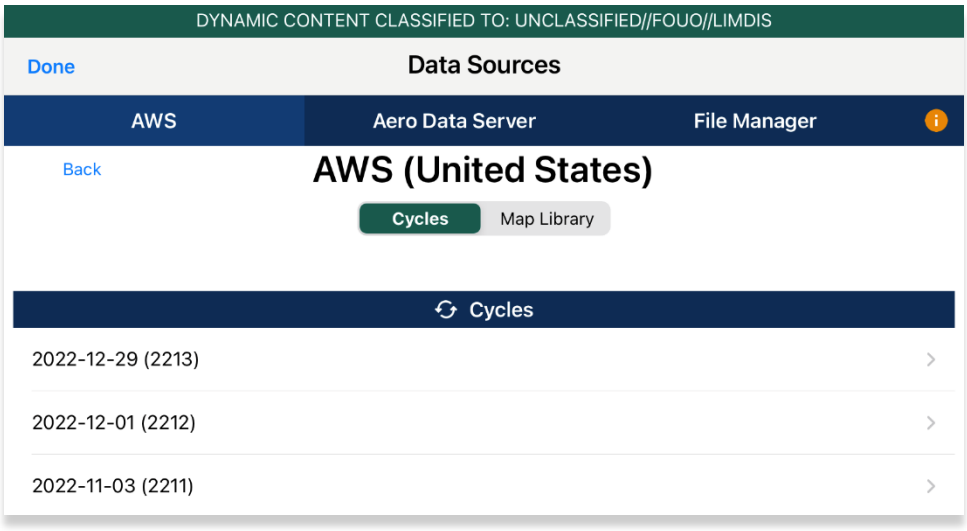


6. The Select Partner popup will display. Select from partners list.

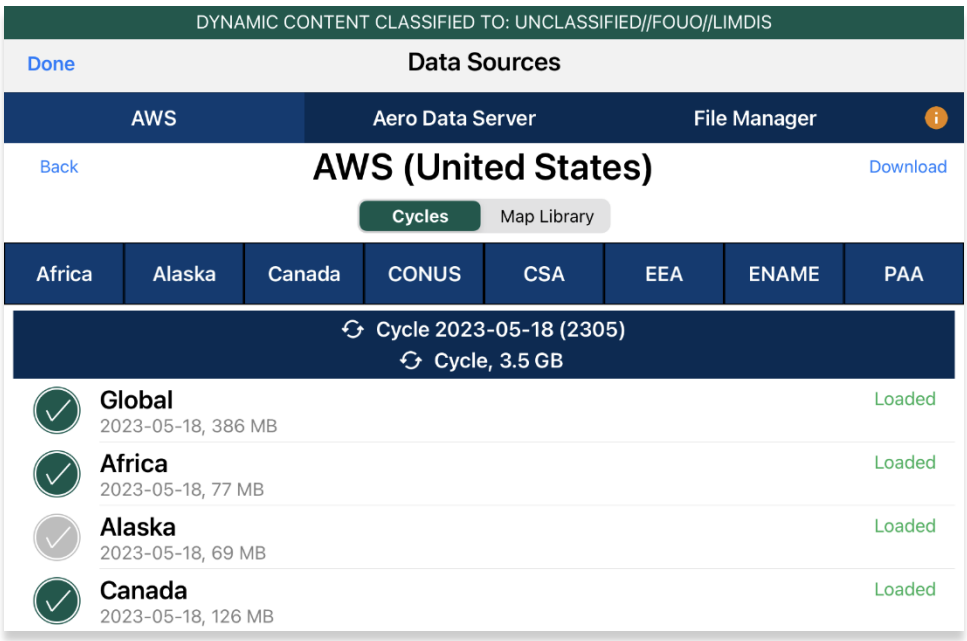


NOTE: The *Select Partner* popup will appear to those who have access to multiple foreign government partners.

7. The Data Cycle Download screen will open. Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.



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



NOTE: Refer to Section 5 for additional information regarding registering for an AUD account.

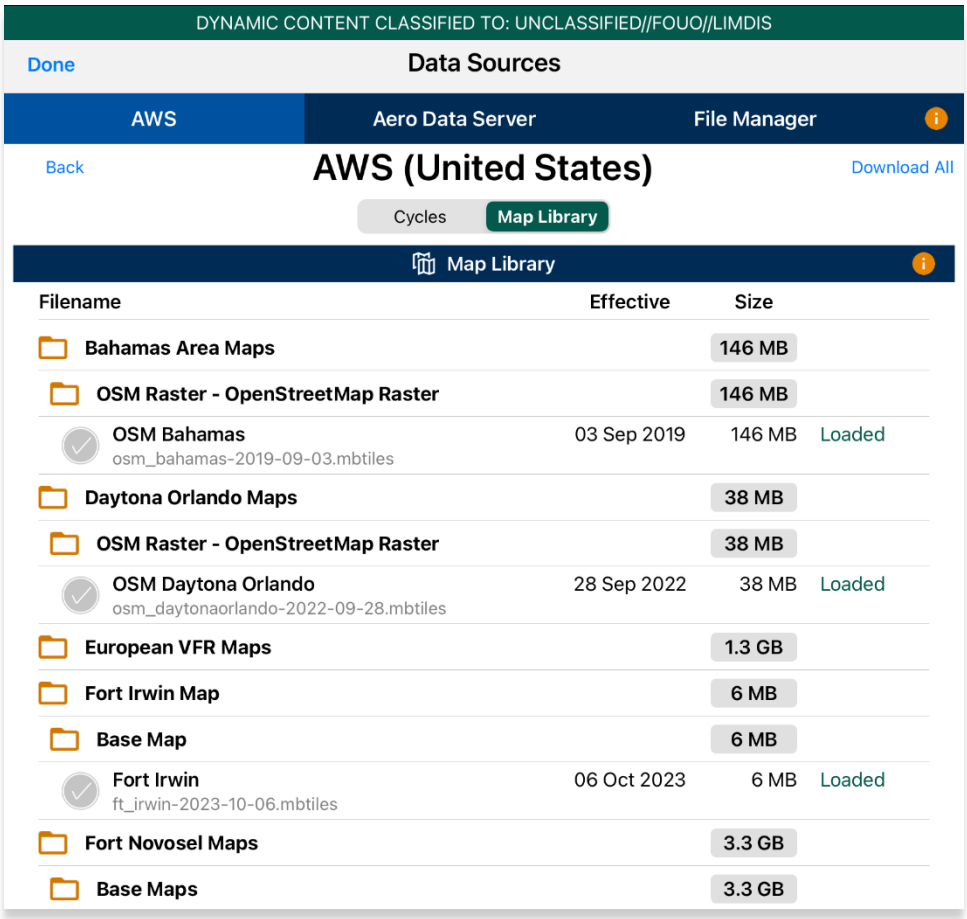
9.2.1.1 Download Map Library Data Using Aero User Database (AUD)

Access to Map Library data is provided to select foreign government partners. If a partner does not support Map Library data, the option to select Map Library from the segmented control will not be available. Follow the steps below to download Map Library data.

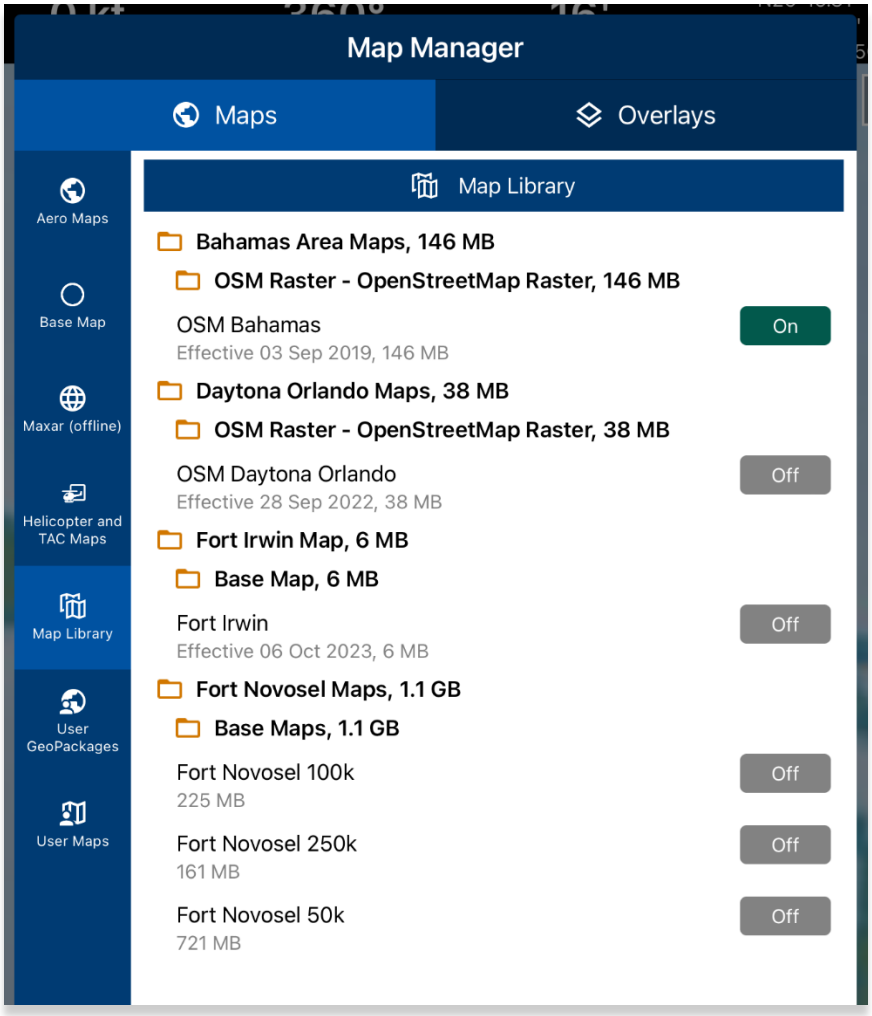
1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts are stored within a folder. Tap the folder to reveal subfolder(s). Tap on the subfolder to reveal its respective file(s).
3. Tap on the date column header to browse and view ***Created***, ***Effective***, or ***Expiration*** dates of a file.

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.



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 navigation bar.
9. Select **Map Library** from the side menu.
10. Tap on the desired folder to reveal the subfolder. Then tap on the subfolder to reveal the downloaded Map Library file.

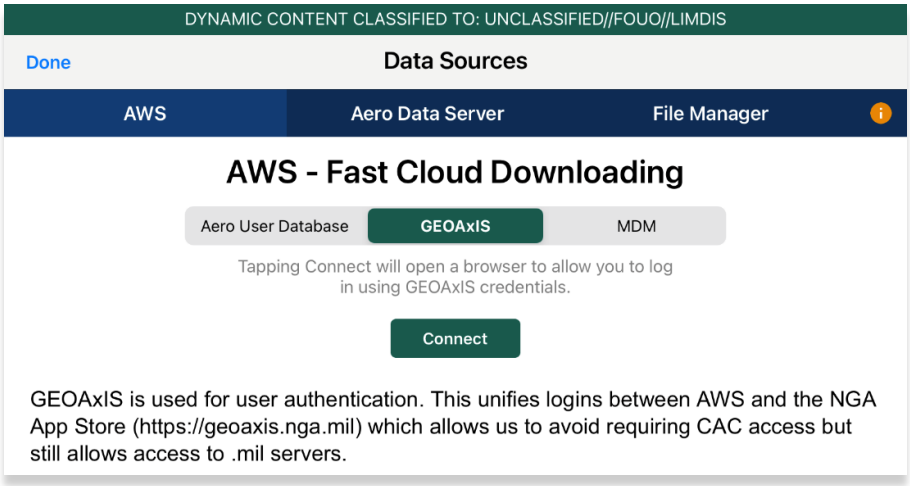


NOTE: Map Library charts can be displayed on the Map. Refer to Section 18.1.5 for additional information.

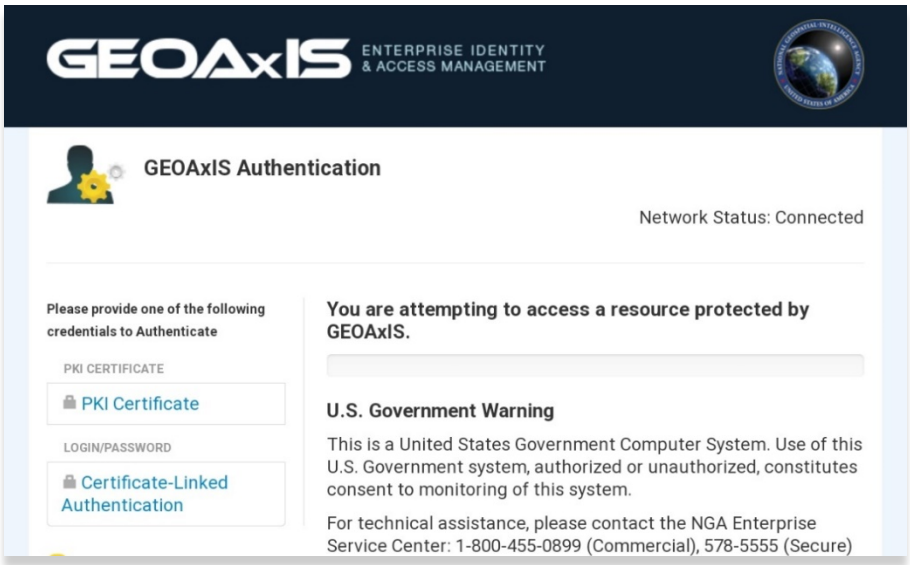
9.2.2 Download Data Using GEOAxIS

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 5.2 for additional information.

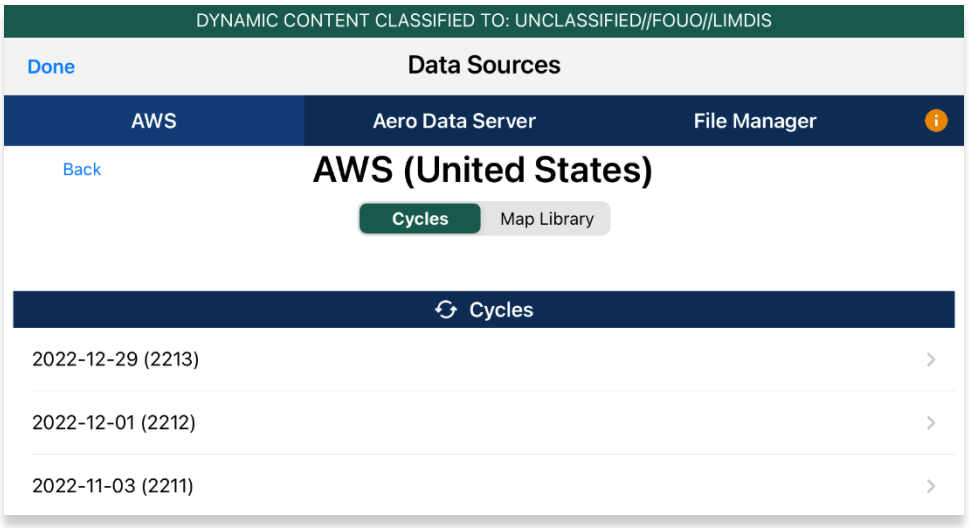
1. Tap **Data** on the ***Main Menu***.
2. Tap **Download**.
3. Select the **AWS** option, if necessary.
4. Tap the **GEOAxIS** option.



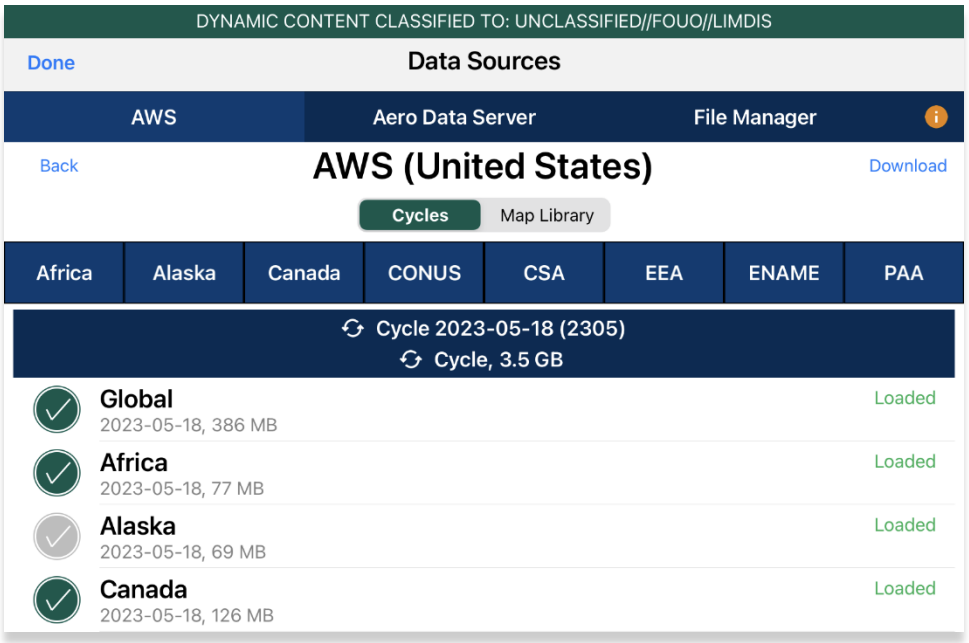
5. Tap **Connect** and users will be redirected to the GEOAxIS webpage.
6. Select desired authentication method.



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



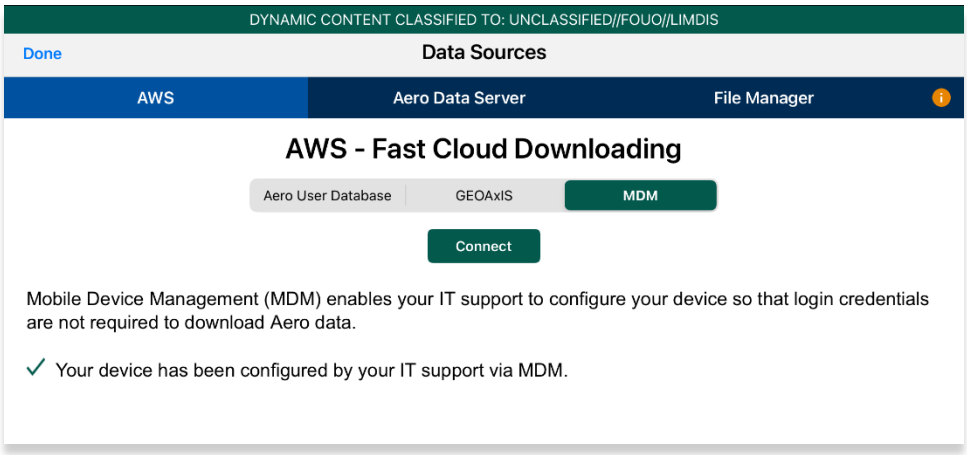
8. Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
9. Tap **Download** once desired data files have been selected.



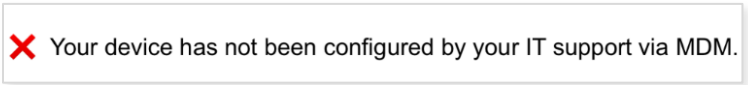
9.2.3 Download Data Using Mobile Device Management (MDM)

Mobile Device Management (MDM) is 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 on the **MDM** option.

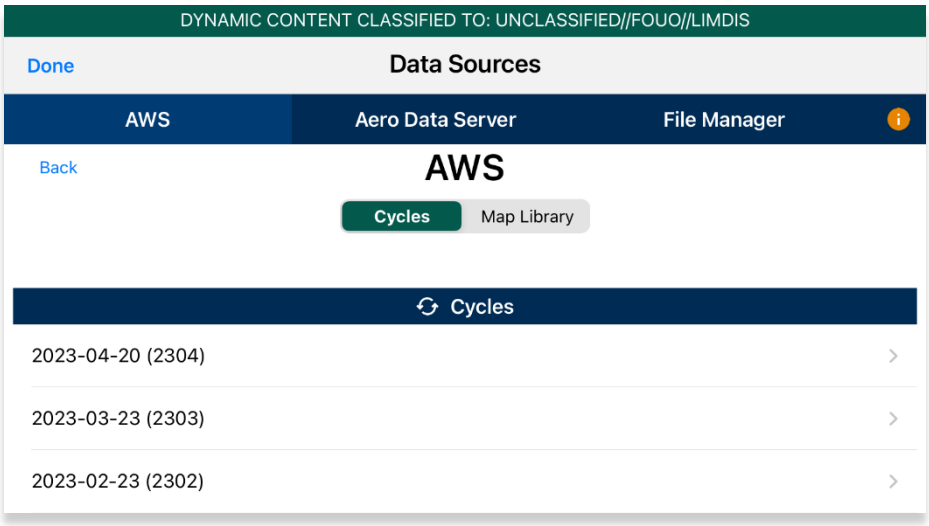


NOTE: IT administrator must be contacted to retrieve key value pairs for MDM configuration prior to downloading data; otherwise, the following message will appear as displayed below.



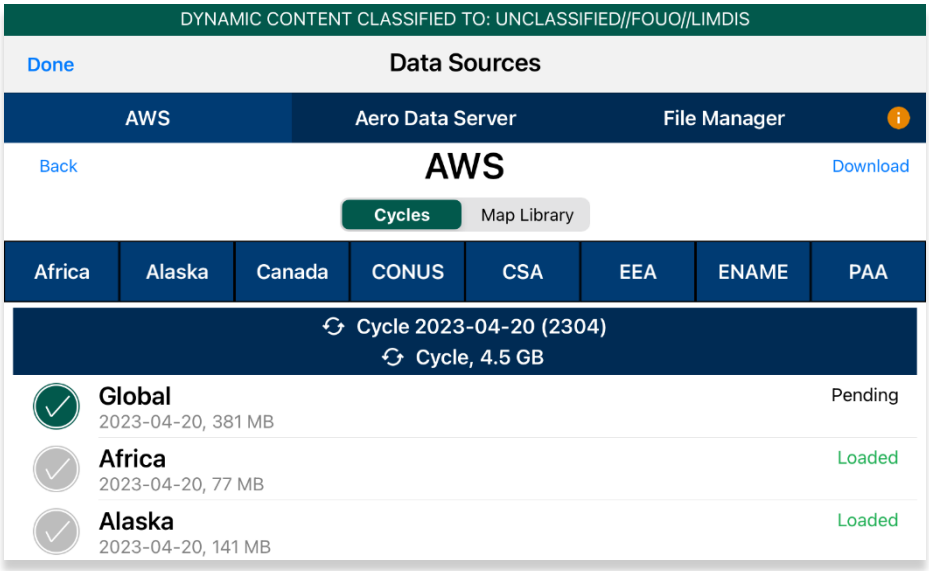
5. Tap **Connect**. Users will be redirected to the *Data Download* page.

6. 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 9.2.1.1 for additional information.

7. Available cycle data will be displayed on the screen. Select individual data files or select region Easy Buttons for faster data selection.
8. 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.

9.3 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 load in ADS for Aero App to access cycle, Aero App Maps, E-IPL, and other data, not including User Files or Map Library.

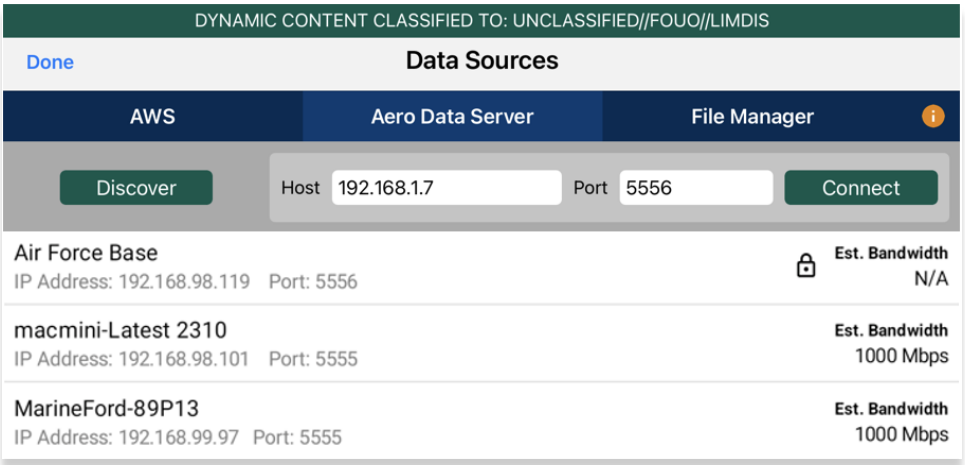
1. Tap **Data** on the ***Main Menu***.
2. Tap **Download**.
3. Select the **Aero Data Server** option.
4. Users will be presented with options to Discover, enter Host and Port numbers, and Connect. Tap **Discover** and a list of ADS servers will display.

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 9.1 for additional information.

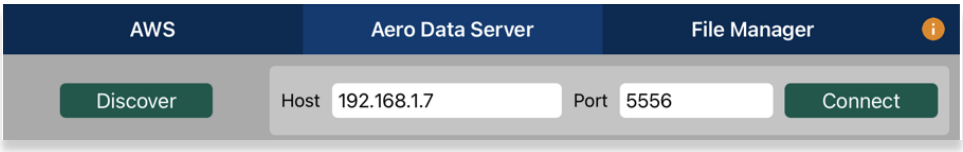
9.3.1 Aero Data Server (ADS) Discover

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.



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

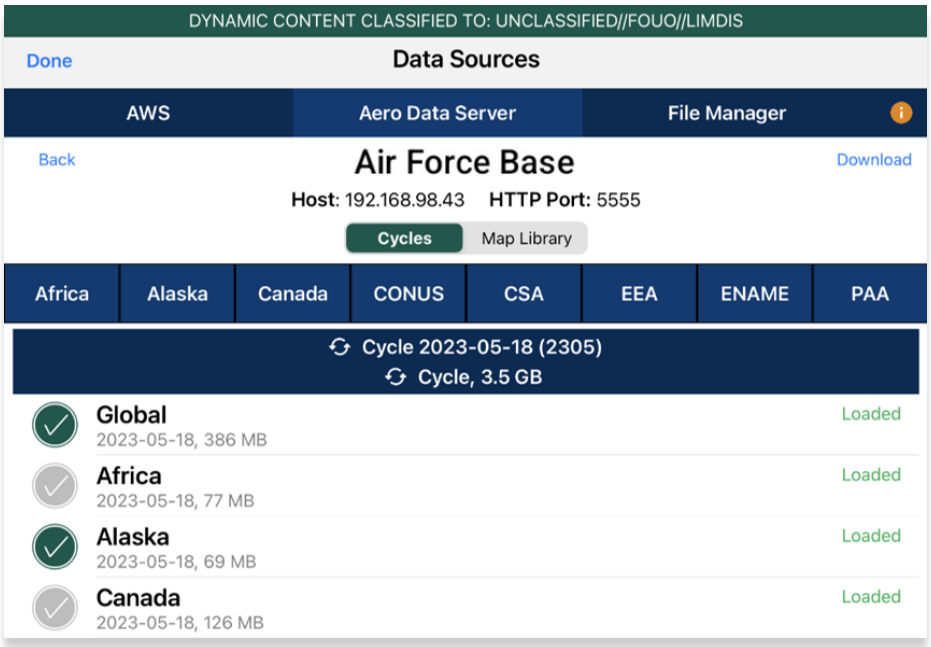


NOTE: To establish a connection with a secure server, certificates would need to be installed in the ADS device as needed.

5. Once entered, tap **Connect** to connect to the server.
6. Users will be prompted to use the Data Cycle Download screen. Users are provided with options to download *Cycles* or *Map Library*. Select **Cycles**.
7. Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.

NOTE: Easy Buttons will not be accessible for users connecting to ADS with user files.

8. 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.

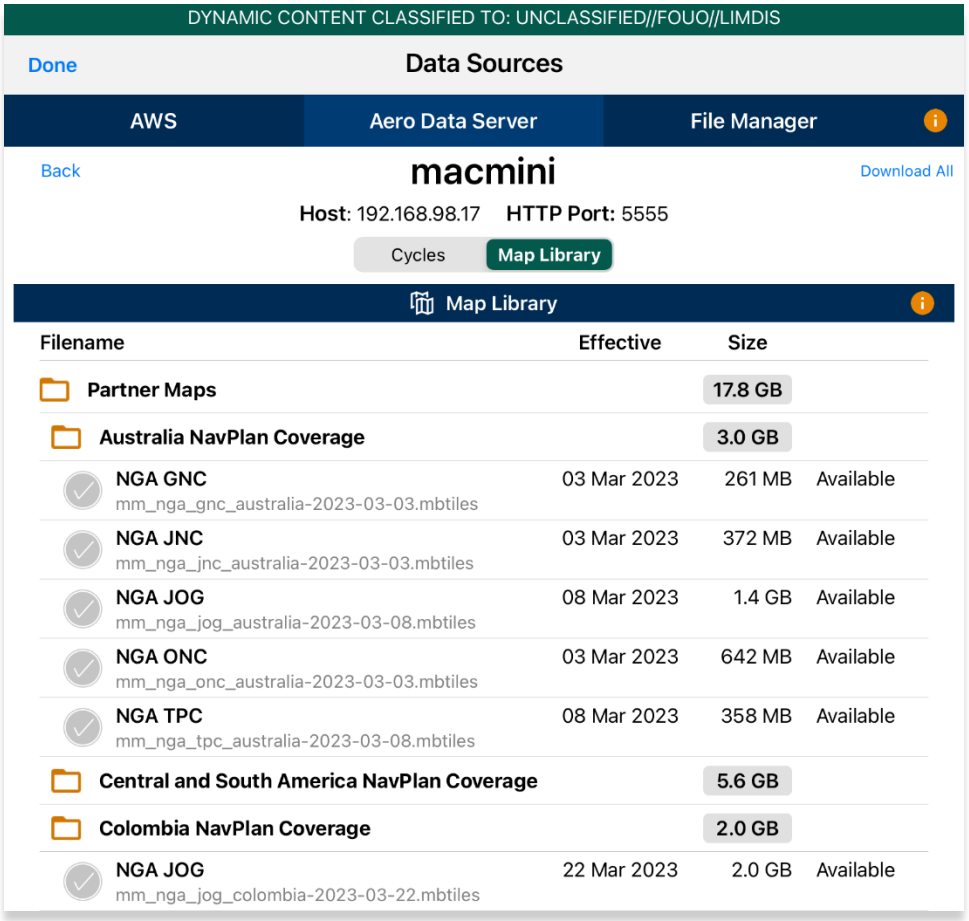
9.3.1.1 Download Map Library Data Using Aero Data Server (ADS)

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.

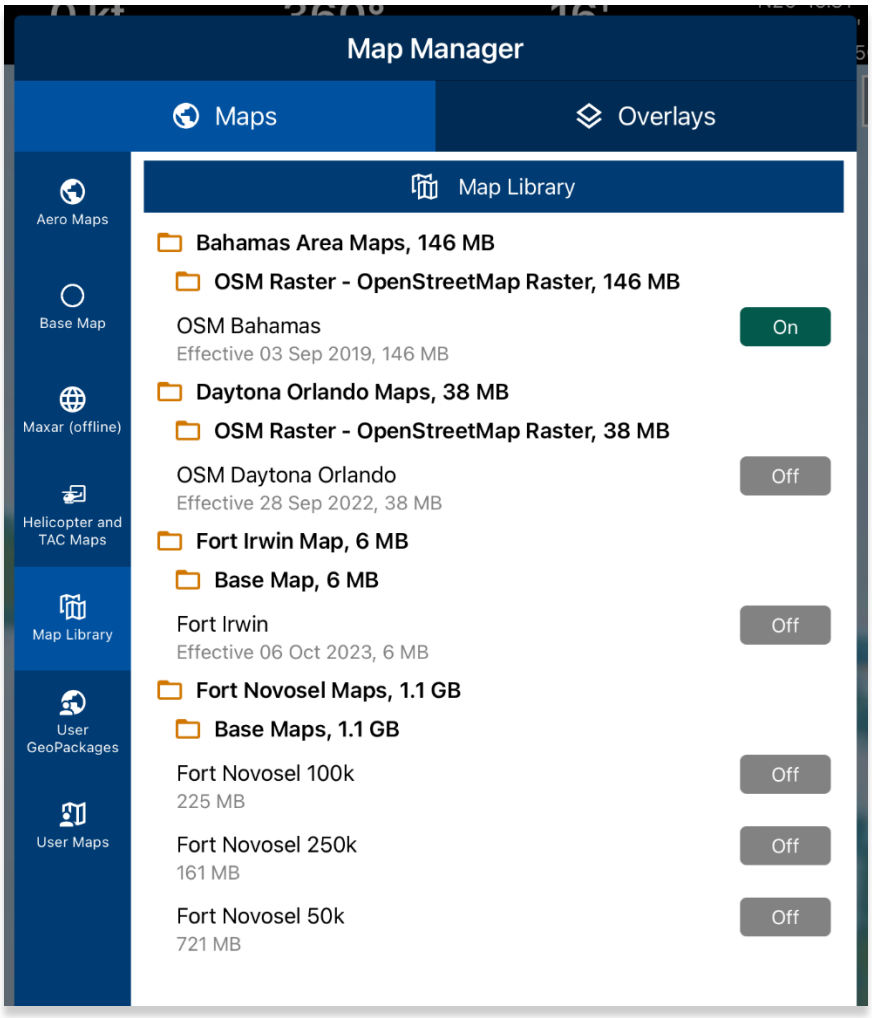
1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts are stored within a folder. Tap the folder to reveal subfolder(s). Tap on the subfolder to reveal its respective file(s).
3. Tap on the date column header to browse and view ***Created***, ***Effective***, or ***Expiration*** dates of a file.

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.



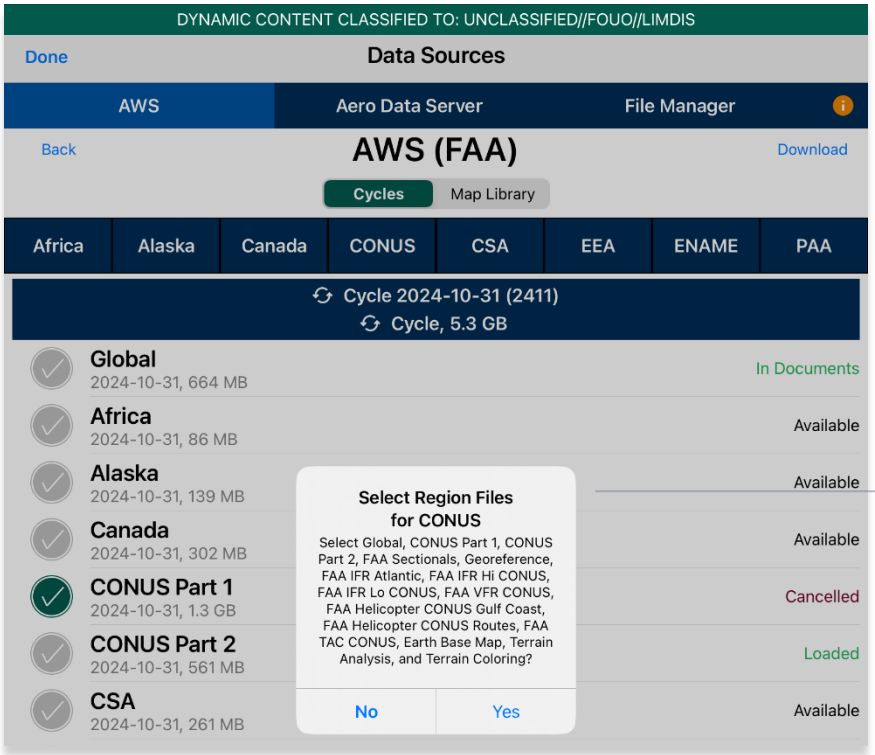
6. To verify that Map Library files were successfully downloaded, navigate to **Map** on the ***Main Menu***.
7. Navigate to **Map Manager** located at the lower-right of the Map screen. The Map Manager popup will appear.
8. Select **Maps** from the navigation bar.
9. Select **Map Library** from the side menu.
10. Tap on the desired folder to reveal the subfolder. Then tap on the subfolder to reveal the downloaded Map Library file. Refer to Section 18.1.5 for additional information.



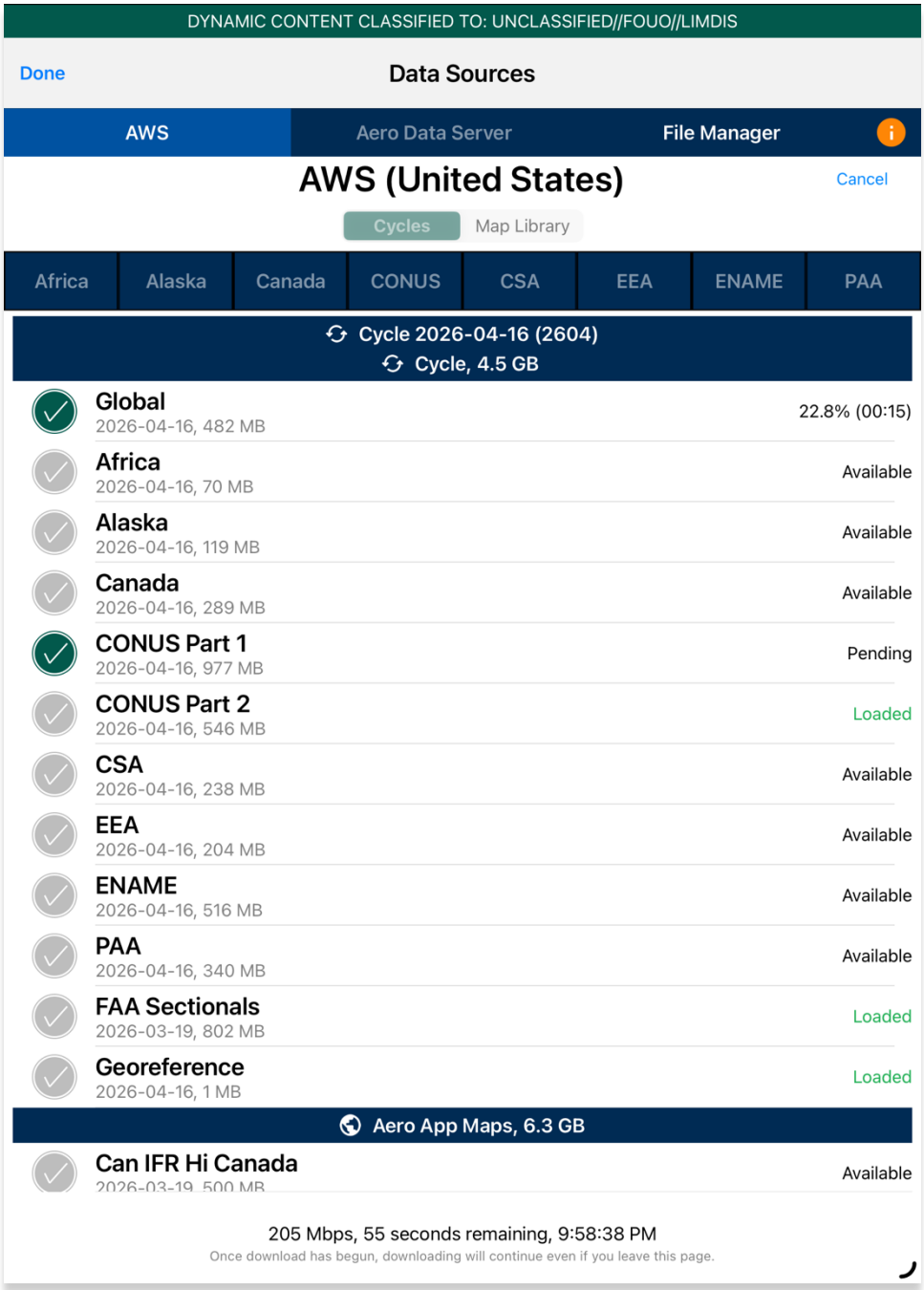
9.4 Easy Buttons

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 (if available for download).

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.



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



Download (Cancel when download is in progress)

NOTE: While a download is in progress, the download speed and estimated time remaining are displayed at the bottom of the download page.

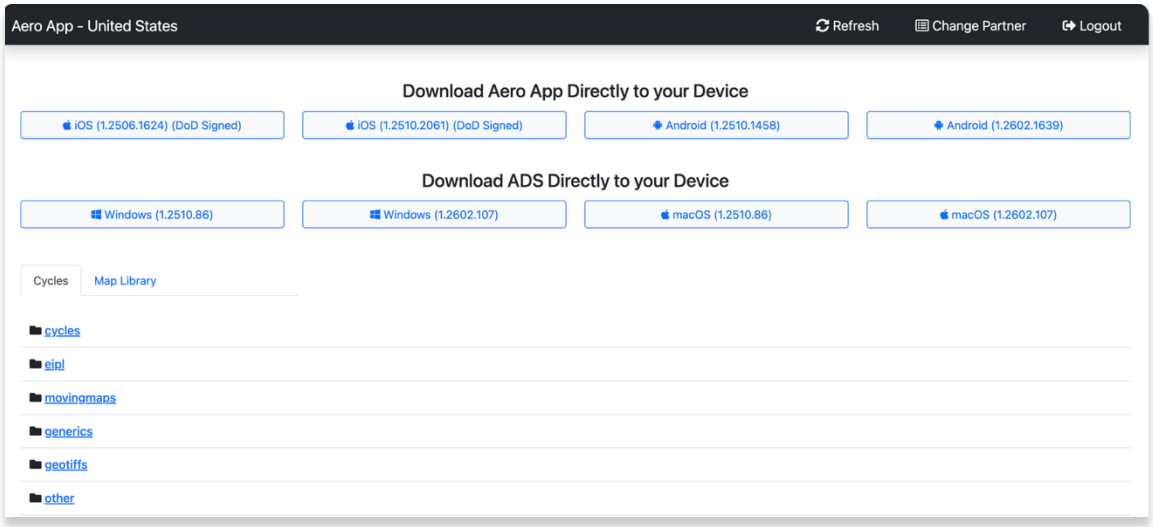
9.5 Download Data from the Aero App Website

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

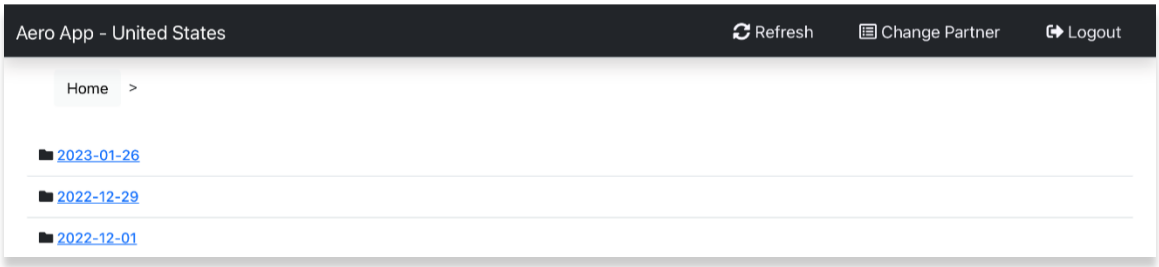
1. From your device, open an internet browser of choice.
2. Enter https://download.aeroapp.info in the address bar.

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 foreign government partners.
4. Navigate to the *Cycles* section of the page. Select **Cycles** from the list of folders.



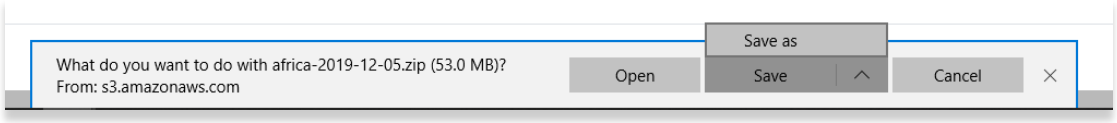
5. Click the **latest cycle** or a **cycle** of choice.



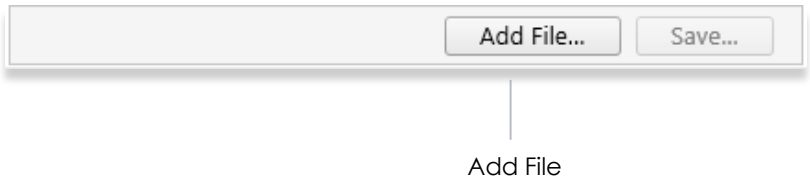
6. Users will be redirected to the download page. Located on the upper-right of the screen are options to choose from **Full Data Files**, or **Delta Files** data types. Select desired data type.
7. Click the respective **ZIP** and **SIG** buttons for your region(s) of choice: **Africa**, **Alaska**, **Canada**, **CONUS**, **CSA**, **EEA**, **ENAME**, and/or **PAA**, among 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 download, select from options to **Open**, **Open folder**, or **View downloads**.
10. Connect an iPad to your PC.
11. Locate device storage on the computer:
    - On Windows, open iTunes
    - On macOS, open Finder and select the device under Locations.
12. Click the **iPad** icon and your device information will display.
13. Locate **Aero App** under File Sharing.
14. Go to the bottom of the iTunes screen and click **Add File**. File Explorer will display.



15. Drag the downloaded data files from your Downloads folder onto your iPad.



NOTE: Refer to Section 12 on how to load and view data status.

10 Sideload Data

This section describes various ways to sideload a complete data cycle or user-generated data such as User Maps, GeoPackages, User Waypoints, CRD files, Pins, Documents, and KML/KMZ files can be sideloaded and loaded onto Aero App.

10.1 Sideload Data from Aero App DVD

NGA distributes the Aero App DVD to users. For additional information, contact the Defense Logistics Agency (acctmgr@dla.mil).

Ways to sync device:

- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

1. Insert the Aero App DVD into your computer.
2. Locate and double click on the DVD drive from File Explorer.

10.1.1 Sideload Data with iTunes

This section explains how to sideload data to Aero App using iTunes. Ensure that both the **Global zip** and **SIG files** are included, as they are required for proper functionality. Follow the steps below to transfer data files from your computer to your apple device.

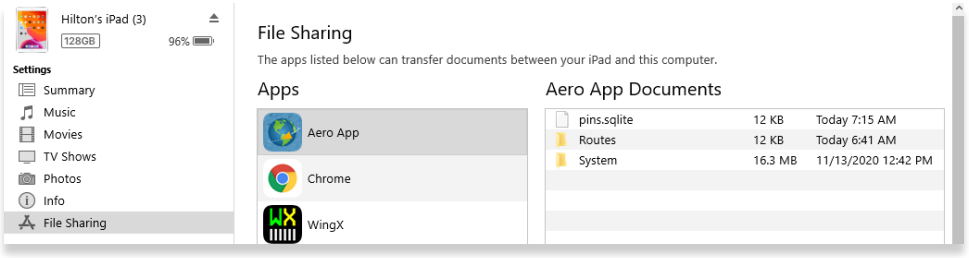
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.



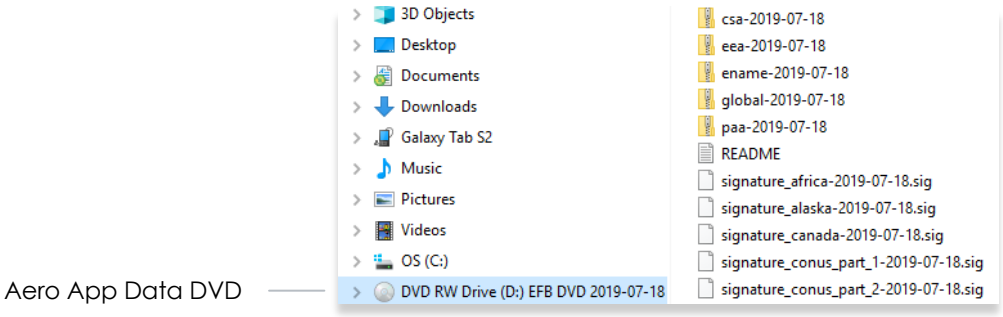
NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.

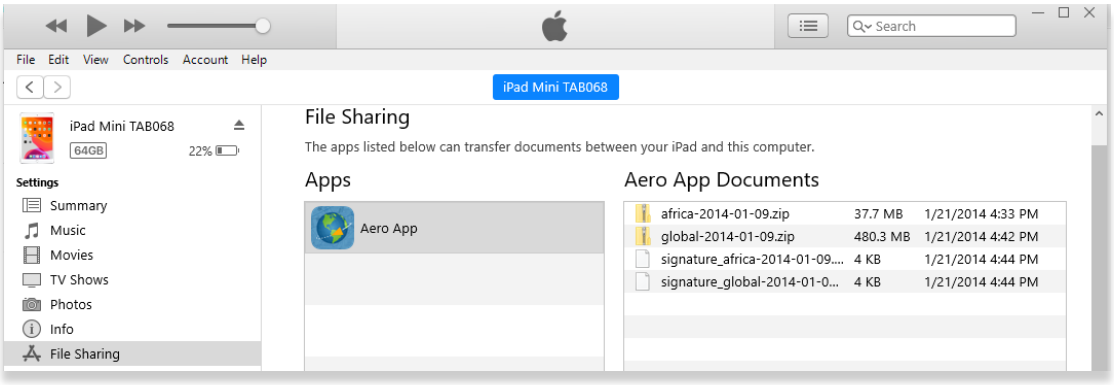
5. Select **Aero App** from the File Sharing section.



6. Navigate to the Aero App DVD on File Explorer.



7. Drag and drop desired data files from the Aero App DVD onto Aero App files. Ensure to *include* Global zip and sig file.



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

8. Open **Aero App**.
9. Tap **Data** on the ***Main Menu***.
10. Tap **Download**.
11. Select the **File Manager** option from Data Sources.
12. A successful download will display the downloaded files below the Documents tab of the File Manager page.

NOTE: Refer to Section 12 on how to load and view data status.

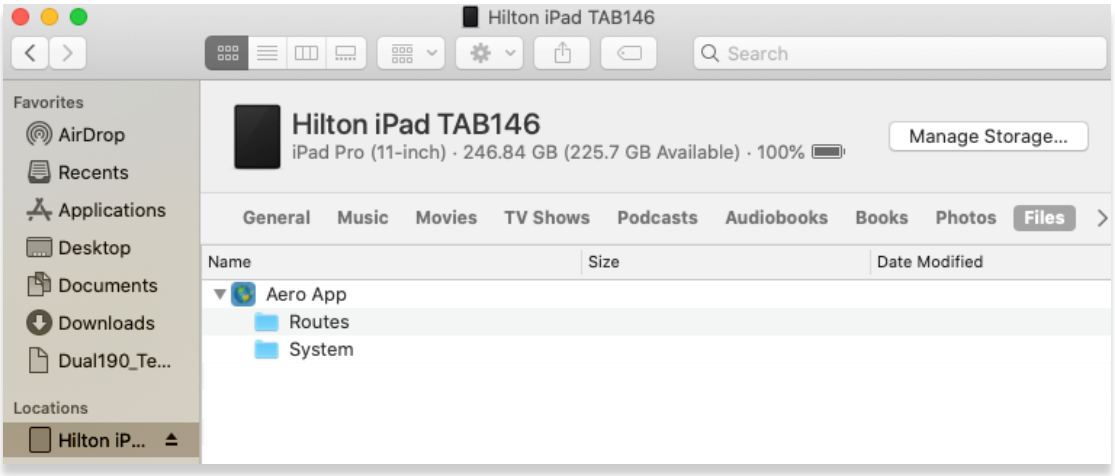
10.1.2 Sideload Data with Finder

This section explains how to sideload data to Aero App using Finder on macOS Catalina or later. In macOS Catalina and newer versions, iTunes has been replaced by *Finder*. Ensure both the **Global zip** and **SIG files** are included, as they are required for proper functionality. To sideload, connect your iPad to a USB or USB-C port on a Mac running macOS Catalina or later, then follow the steps below to transfer data files.

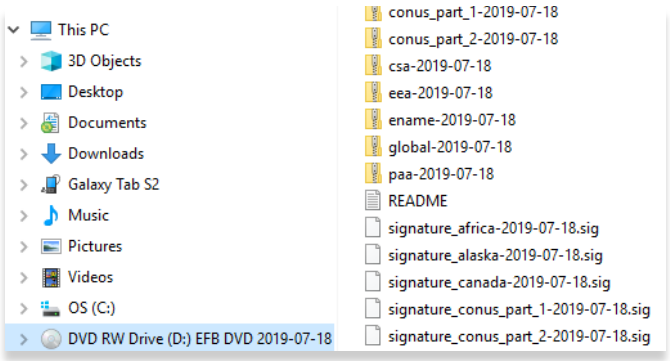
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. Locate your iPad on the left side of the Finder screen under Locations.
4. The top of the screen will display menu options. Click **Files**.



5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to expand all available folders.

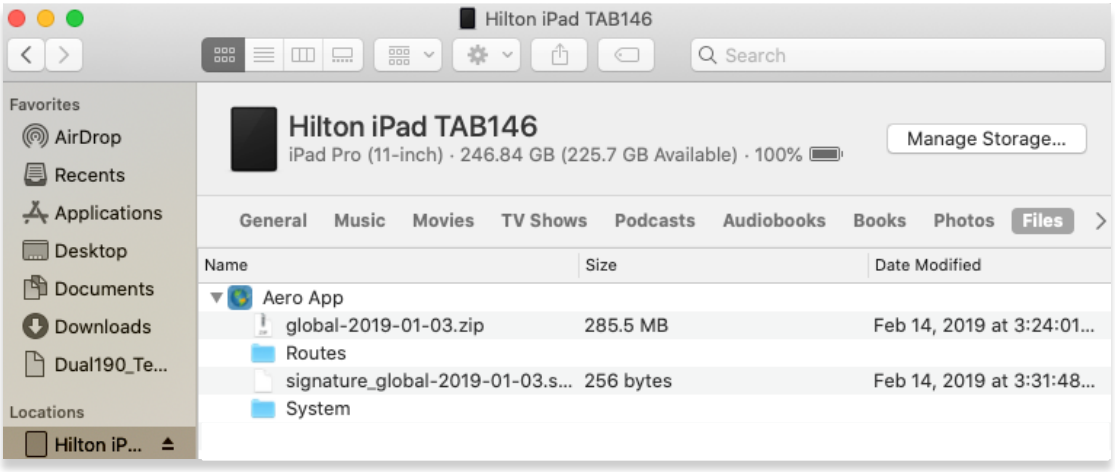


6. Navigate to the Aero App DVD on File Explorer.



Aero App Data DVD

7. Drag and drop desired data files from the Aero App DVD onto Aero App files. Ensure to *include* Global zip and sig file.



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

8. Open **Aero App**.
9. Tap **Data** on the ***Main Menu***.
10. Tap **Download**.
11. Select the **File Manager** option from Data Sources.
12. A successful download will display the downloaded files below the Documents tab of the File Manager page.

NOTE: Refer to Section 12 on how to load and view data status.

10.2 Sideload User Maps

Users can sideload user-generated Maps into Aero App. User Maps are MBTiles files that can be viewed on the map.

Ways to sync device:

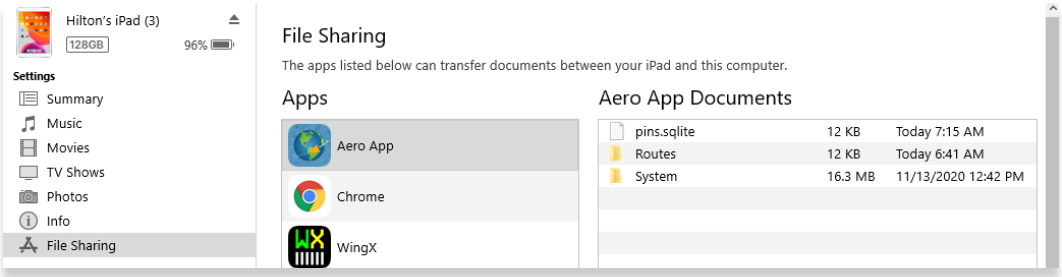
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.2.1 Sideload User Maps with iTunes

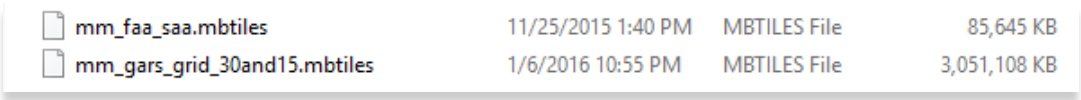
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

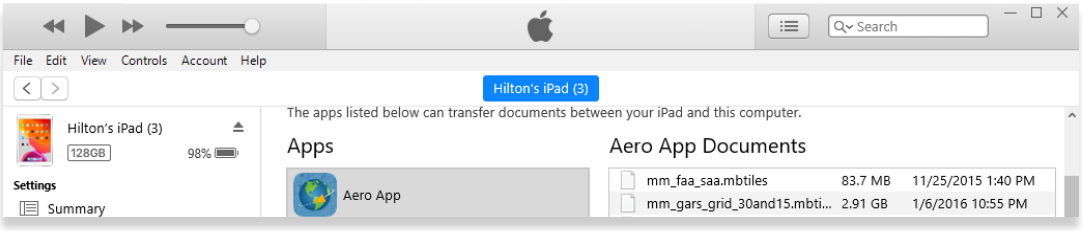
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the file containing User Maps.



7. Drag and drop desired User Map file(s) from the Aero App DVD onto Aero App files.

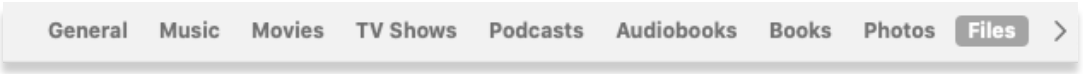


Verify that the sideload was successful. The steps in achieving this are as follows:

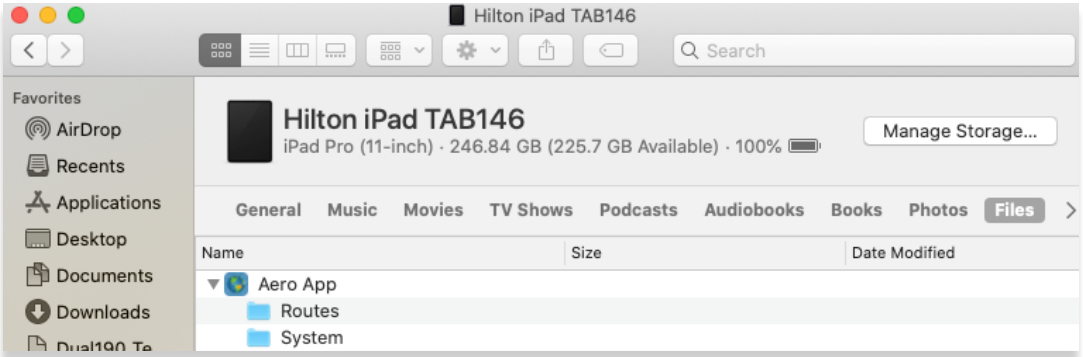
8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** from the navigation bar, if necessary.
12. Select **User Maps** from the side menu. A successful sideload will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

10.2.2 Sideload User Maps with Finder

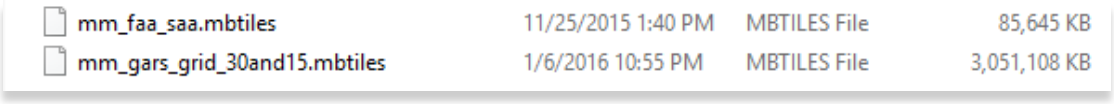
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display on the sidebar. Click your device.
4. The top of the page will display menu options. Click **Files.**



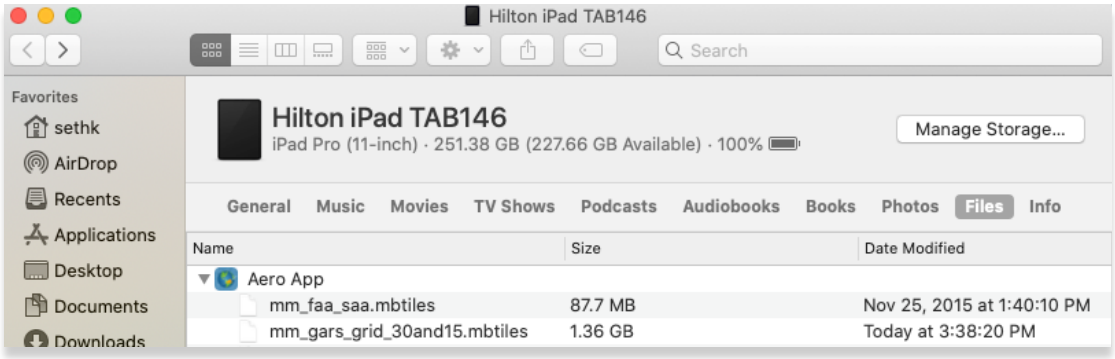
5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.



6. Navigate to the file containing User Maps.

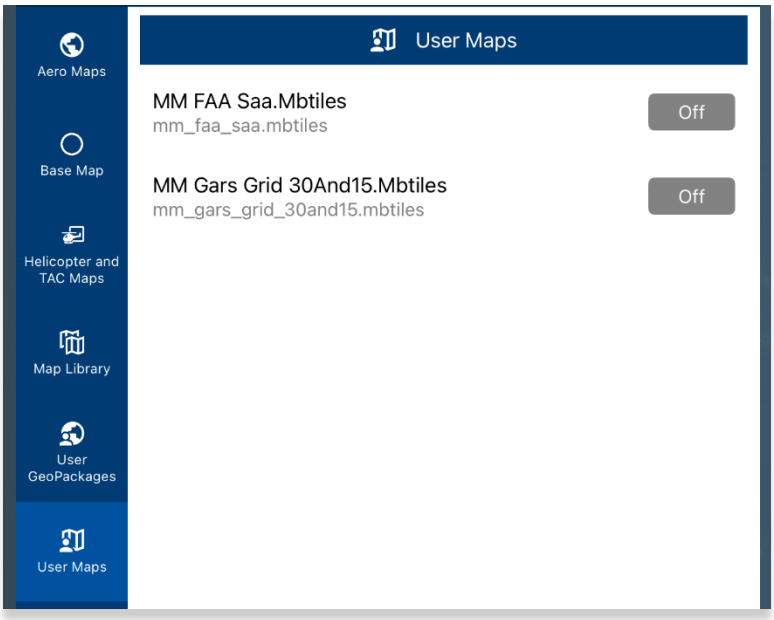


7. Drag and drop desired User Map(s) onto Aero App files.



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** from the navigation bar.
12. Select **User Maps** from the side menu. A successful sideload will display the User Map(s) in the list.



10.3 Sideload User GeoPackages

Users can sideload GeoPackages into Aero App to view on the Map.

Ways to sync device:

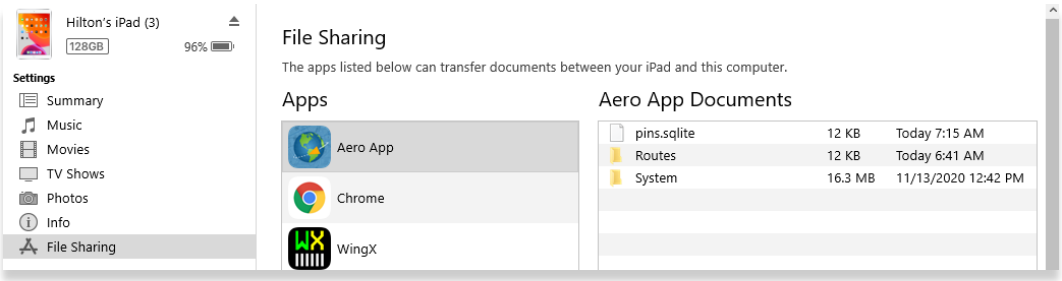
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.3.1 Sideload User GeoPackages with iTunes

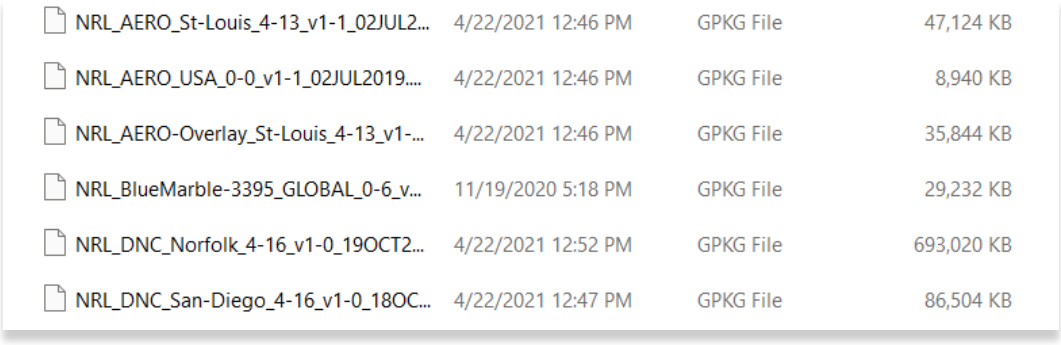
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

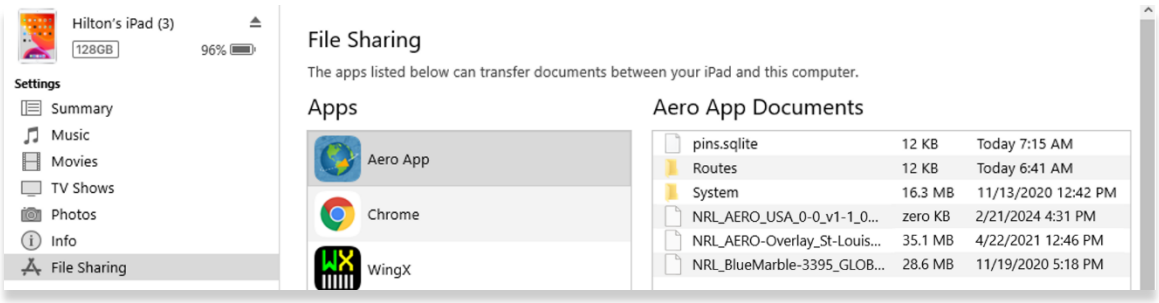
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the file containing GeoPackages.



7. Drag and drop desired GeoPackage file(s) onto Aero App files.

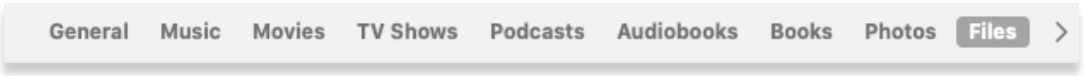


Verify that the sideload was successful. The steps in achieving this are as follows:

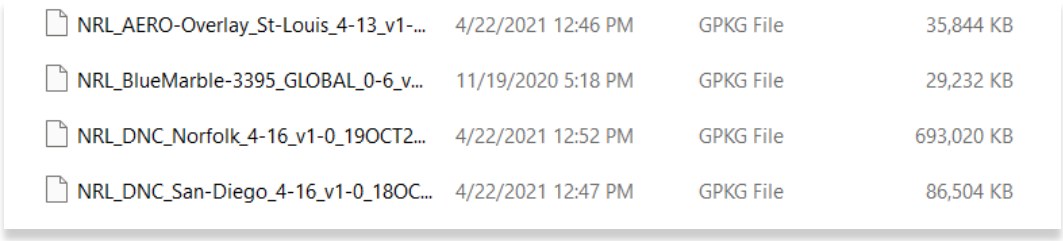
8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** from the navigation bar, if necessary.
12. Select **User GeoPackages** from the side menu. A successful sideload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

10.3.2 Sideload User GeoPackages with Finder

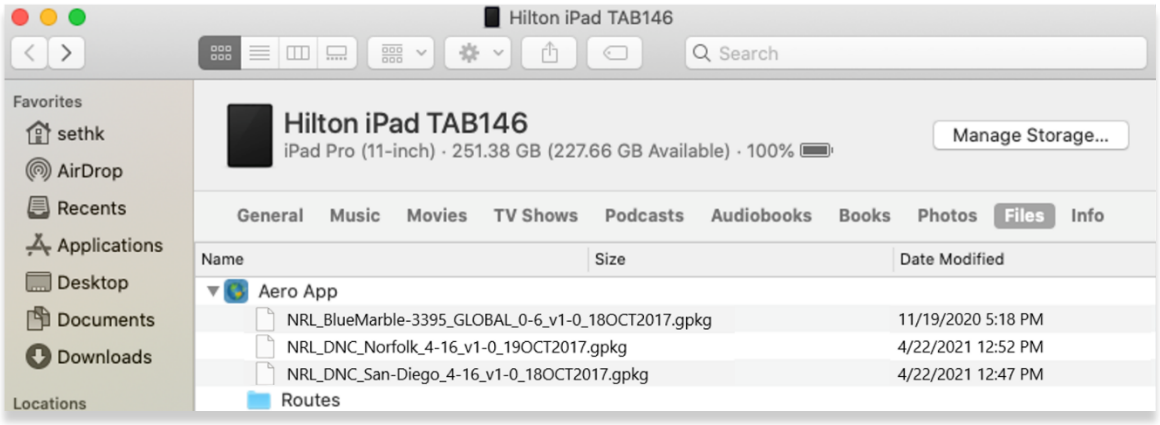
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display on the sidebar. Click your device.
4. The top of the page will display menu options. Click **Files.**



5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.
6. Navigate to the file containing GeoPackages.



7. Drag and drop desired user GeoPackages(s) onto Aero App files.



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

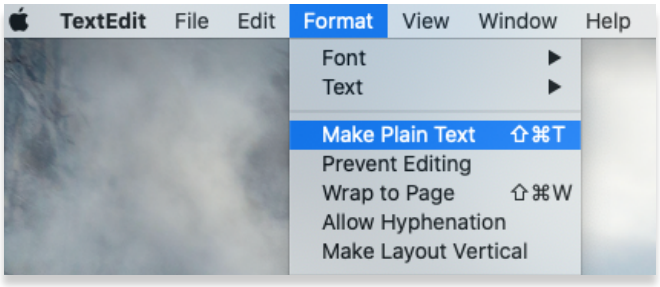
8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** from the navigation bar**.**
12. Select **User GeoPackages** from the side menu. A successful sideload will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

10.4 Sideload User Waypoints

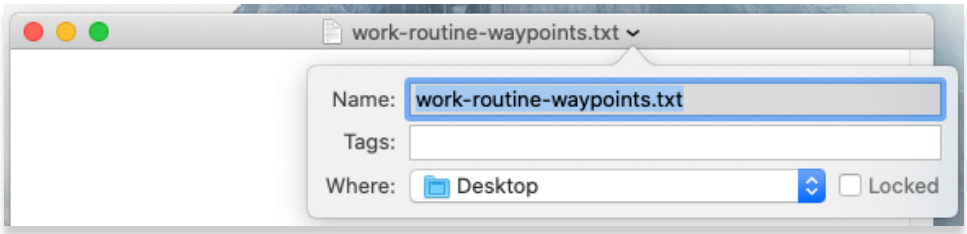
Users can sideload custom waypoints to view on the map or add to a flight route. Users have the option to create individual user waypoints directly from Aero App or sideload multiple user waypoints at a time.

Aero App supports text files for user waypoints. The user waypoints file should follow the format *{name}-waypoints.txt*. To create a user waypoint, the following steps should be followed:

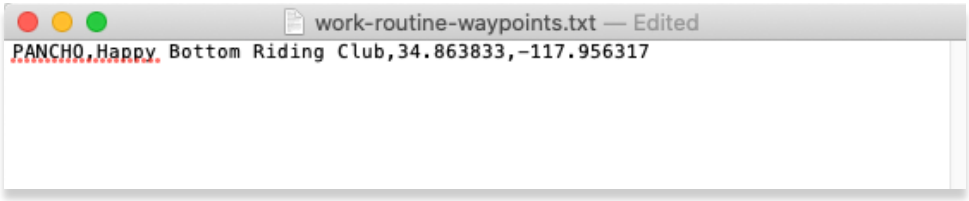
1. Connect your Apple device to a USB or USB-C port of a Mac or Windows computer.
2. Locate device storage on the computer:
    - On Windows, open iTunes
    - On macOS, open Finder and select the device under Locations.
3. Create a folder in your desktop named User Waypoints.
4. Right-click on the folder and open **TextEdit** on your Mac desktop.
5. On the upper-left corner of the screen, hover over Format and click **Make Plain Text**.



6. The TextEdit will be renamed to Untitled – Edited.
7. Click the **dropdown arrow** and create a name for the Text Document following the format: **<waypoint name>-waypoints.txt**.



8. Click on the text file to open TextEdit. Create the Waypoint following the format: **<ID>,<Name>,<Latitude>,<Longitude>**.



9. Once the User Waypoint has been created, click the **exit** button to quit the app. Your data will automatically be saved.

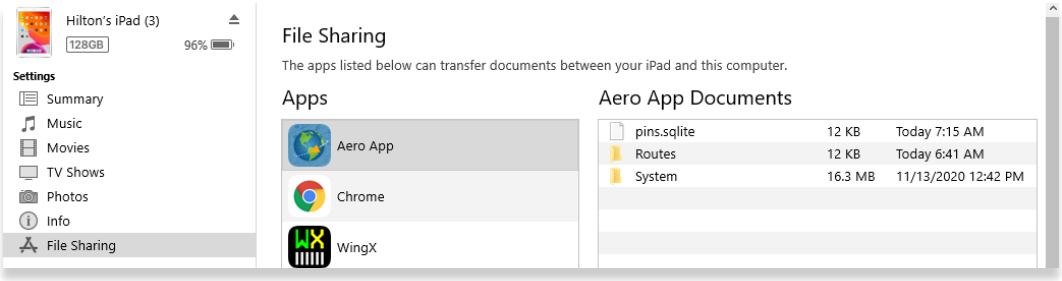
NOTE: To create User Waypoints, pilots can use TextEdit on a Mac and Notepad on Windows.

10.4.1 Sideload User Waypoints with iTunes

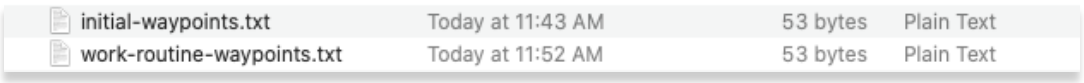
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

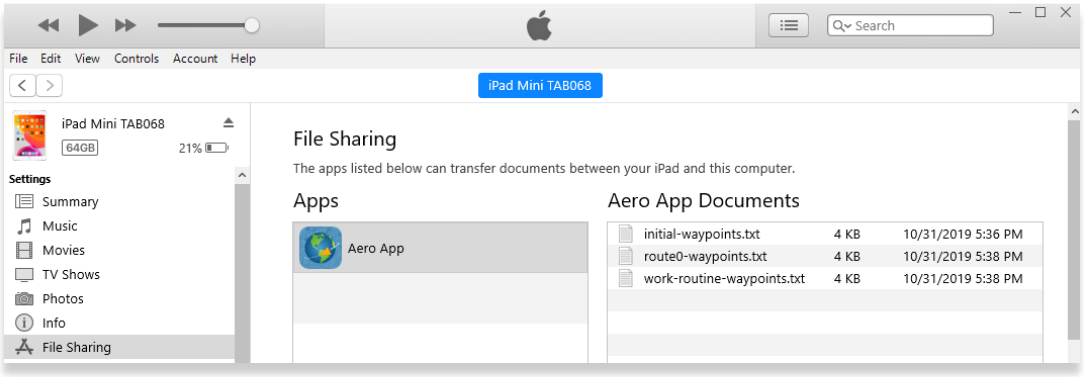
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the file containing User Waypoints.



7. Drag and drop desired User Waypoint(s) onto Aero App files.

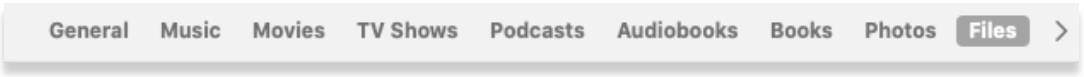


Verify that the sideload was successful. The steps in achieving this are as follows:

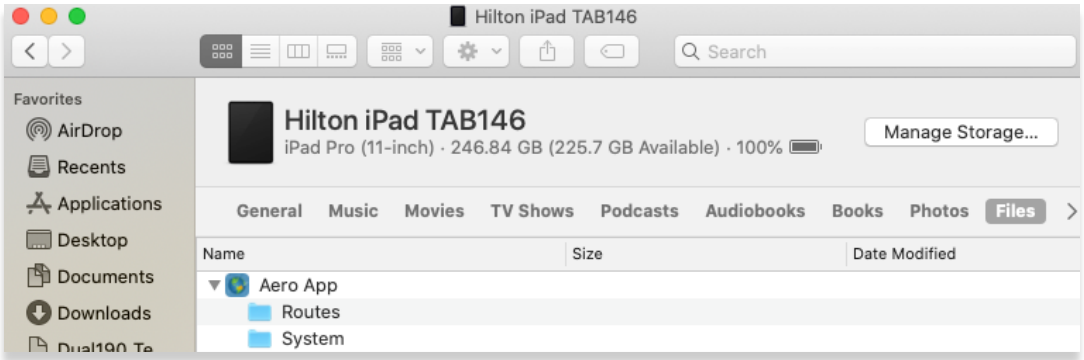
8. Open **Aero App**.
9. Tap **Search** on the ***Main Menu***.
10. The Search popup will appear. Enter the name of the user waypoint in the text field. The user waypoint(s) will appear under the User Waypoints section.

10.4.2 Sideload User Waypoints with Finder

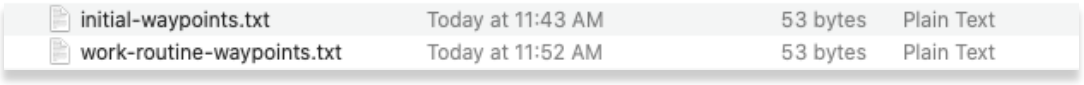
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.



6. Navigate to the file containing User Waypoints.

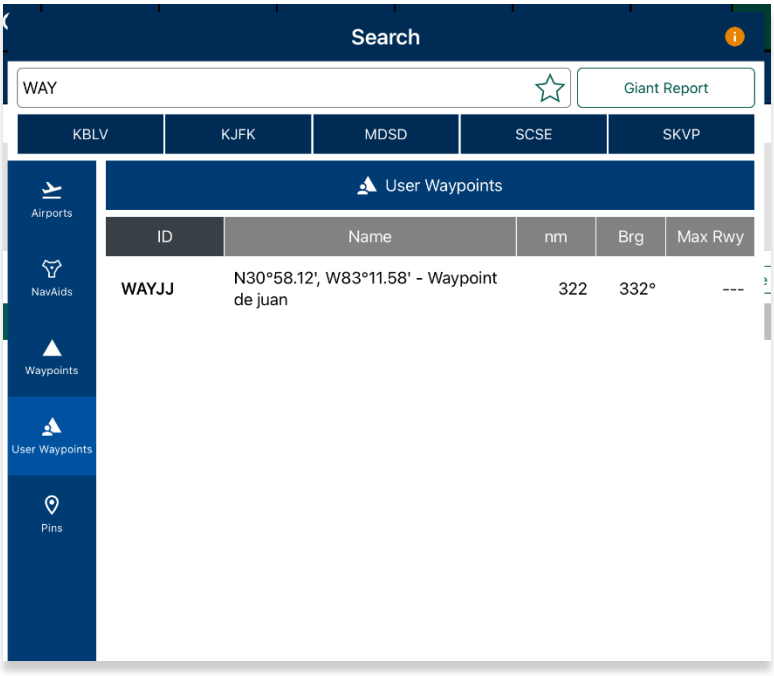


7. Drag and drop desired User Waypoint(s) onto Aero App files.



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

8. Open **Aero App**.
9. Tap **Search** on the ***Main Menu***.
10. The Search popup will appear. Enter the name of the user waypoint in the text field. The user waypoint(s) will appear under the User Waypoints section.



10.5 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.

Ways to sync device:

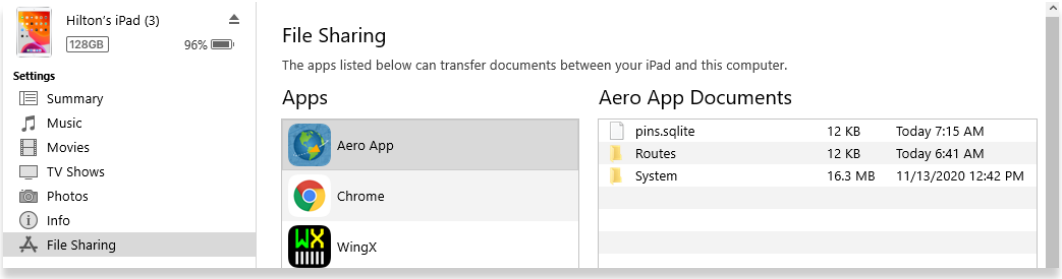
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.5.1 Sideload CRD Files with iTunes

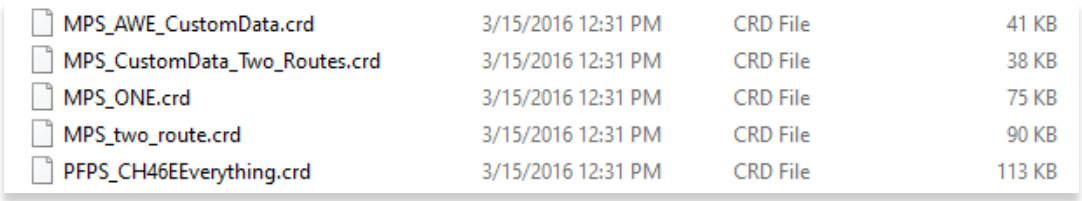
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

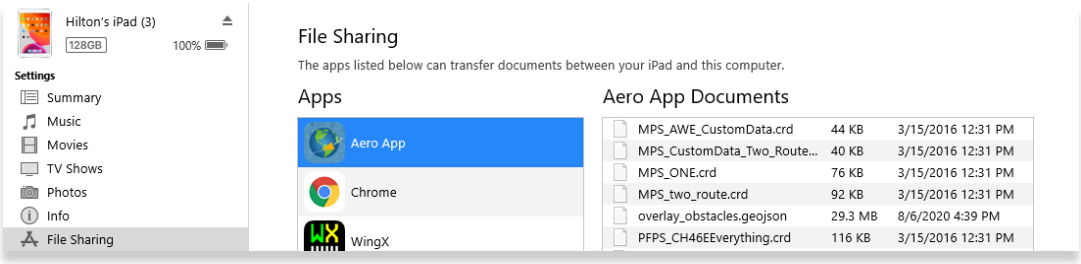
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the folder containing CRD files.



7. Drag and drop desired CRD file(s) onto Aero App files.

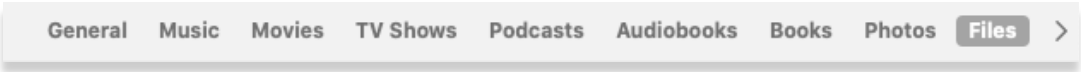


Verify that the sideload was successful. The steps in achieving this are as follows:

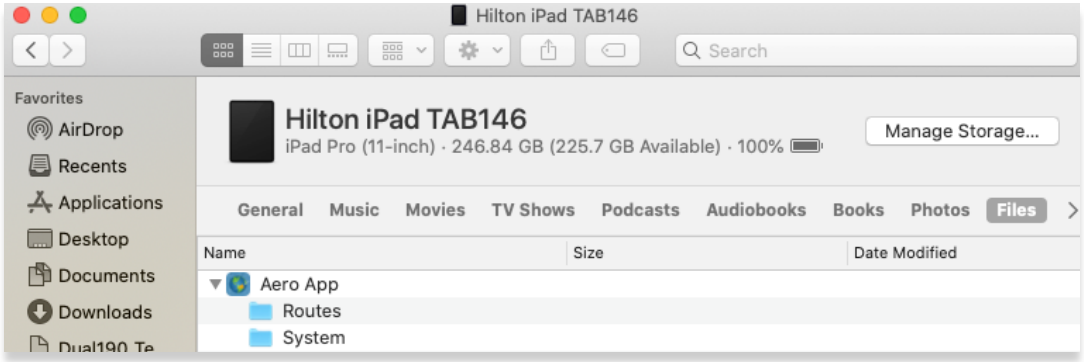
8. Open **Aero App**.
9. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
10. Tap **Route Manager** located at the bottom of the panel view.
11. Select **Actions** from the side menu, if necessary.
12. Tap **Load** and your CRD file(s) will appear under Load Route.

10.5.2 Sideload CRD Files with Finder

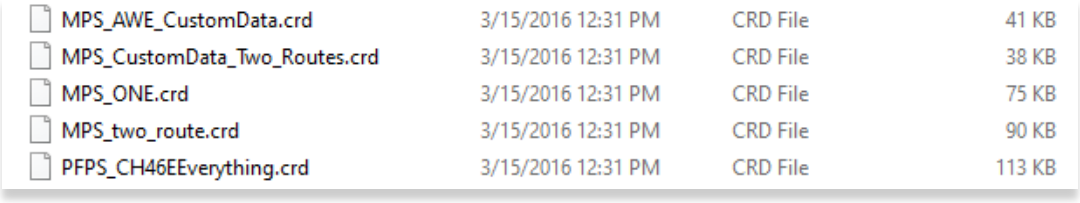
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.



6. Navigate to the folder containing CRD files.

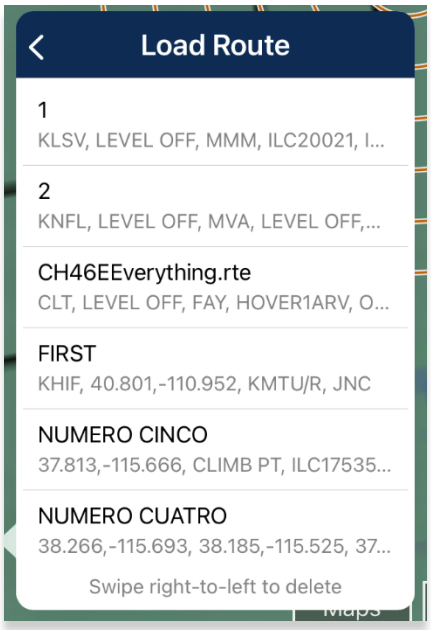


7. Drag and drop desired CRD file(s) onto Aero App files.



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

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



10.6 Sideload Pins

Aero App enables users to sideload Pins into Aero App. To sideload Pins, users must create a SQLite file. Refer to Appendix C | Hazards and Pins SQLite Files for additional information. The Pin SQLite file should follow the format *pins-{name}.sqlite and* be stored in the AeroApp\Pins directory. To view sideloaded pins, refer to Section 18.2.3 for additional information.

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 14.3.4.2 for additional information.

Ways to sync device:

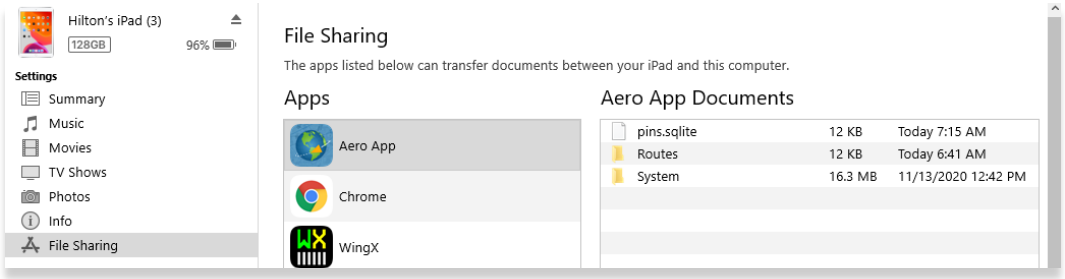
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.6.1 Sideload Pins with iTunes

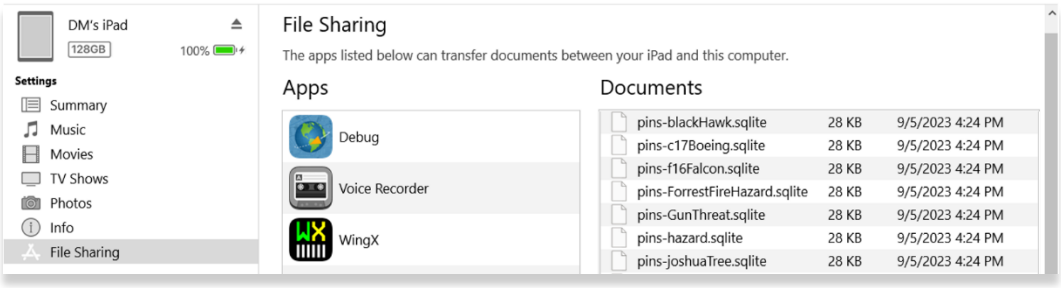
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



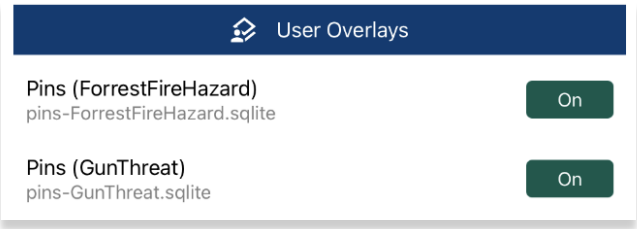
6. Locate the pins.sqlite files you wish to sideload onto Aero App. Rename the SQLite file to the format, *pins-{name}.sqlite*.
7. Drag and drop desired pin SQLite file(s) onto Aero App files.



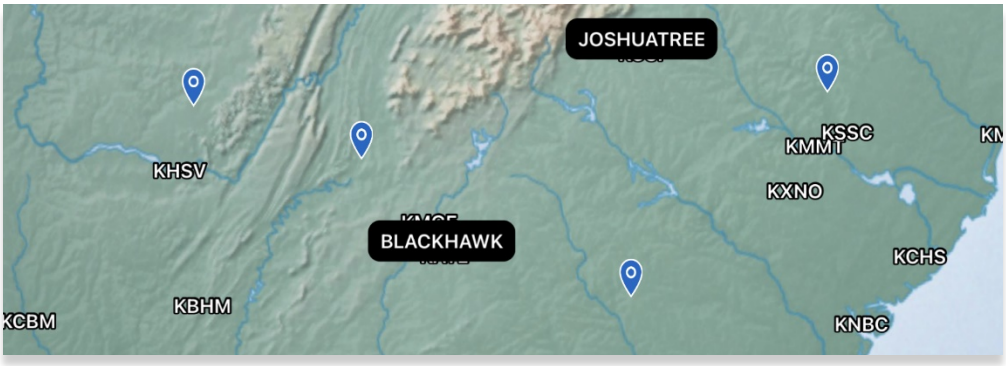
NOTE: If the imported file is not renamed, any pins stored in pins.sqlite will be overwritten.

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

8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from the navigation bar.
12. Select **User Overlays** from the side menu.
13. Locate your imported files. The files should display as *pins-{name}.sqlite*.

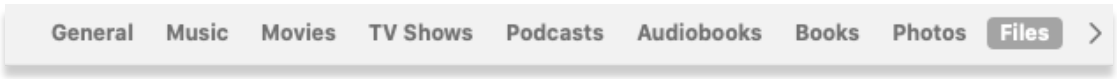


14. Tap to enable your desired imported pins file and the pin will display on the Map.

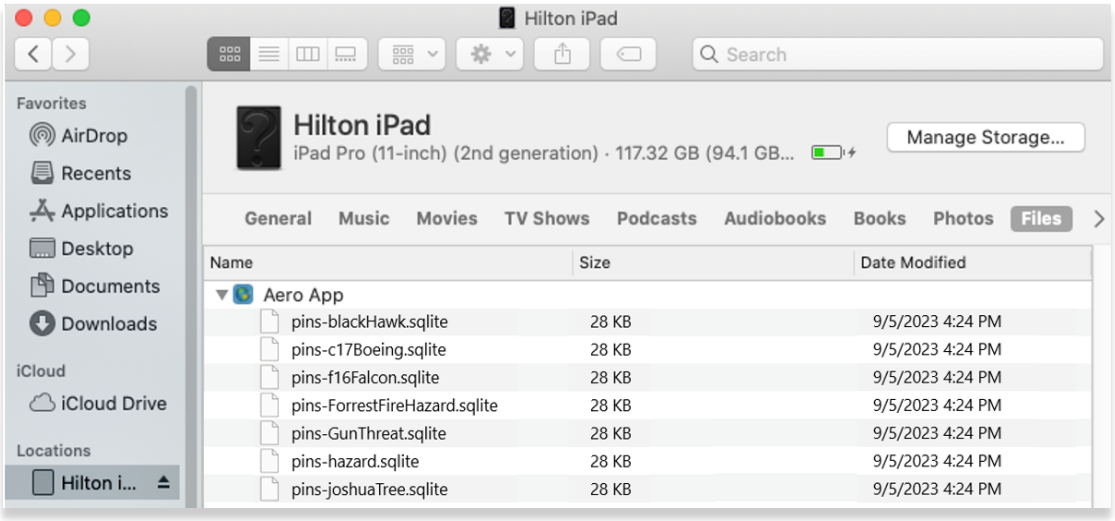


10.6.2 Sideload Pins with Finder

1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



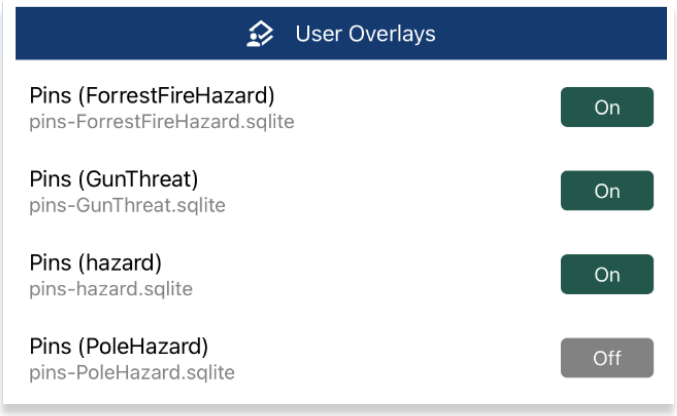
5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.
6. Locate the pins.sqlite files that you wish to sideload onto Aero App. Rename the SQLite file to the format, *pins-{name}.sqlite*.
7. Drag and drop desired pins SQLite file(s) onto Aero App files.



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 corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from the navigation bar.
12. Select **User Overlays** from the side menu.

13. Locate your imported files. The files should display as *pins-{name}.sqlite*.



14. Tap to enable your desired imported pins file and the pin will display on the Map.



10.7 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. To view sideloaded hazards, refer to Section 18.2.3 for additional information.

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 14.3.4.3 for additional information.

Ways to sync device:

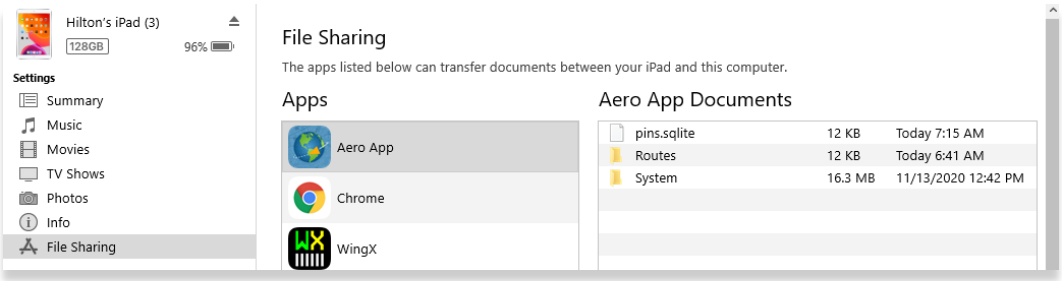
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.7.1 Sideload Hazards with iTunes

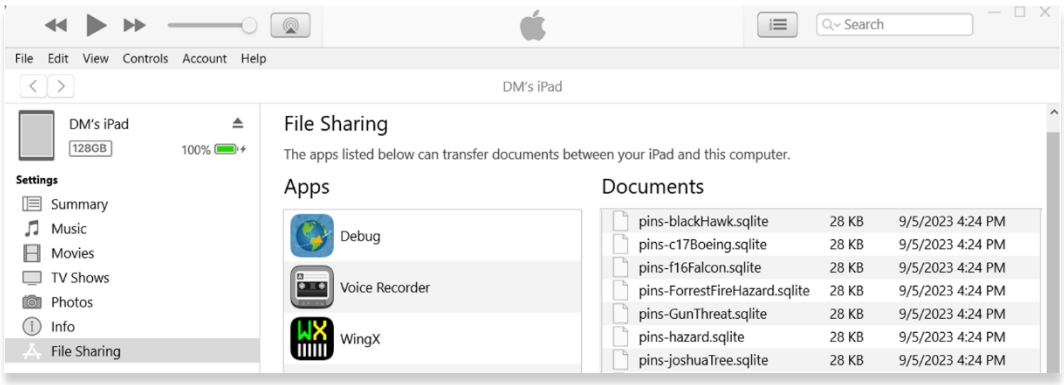
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



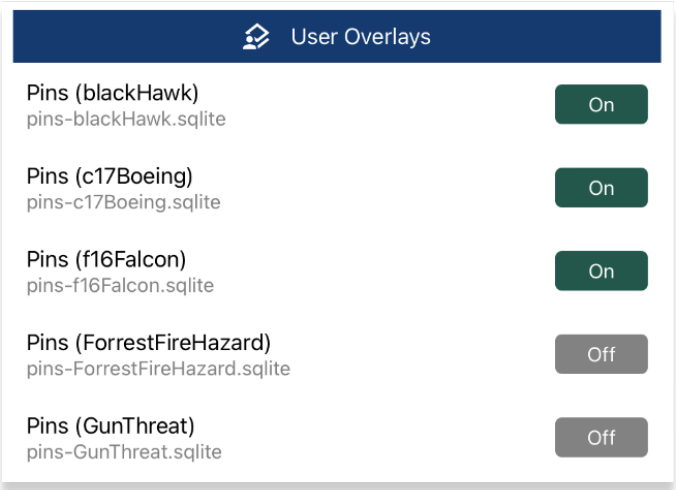
6. Locate the pins.sqlite files you wish to sideload onto Aero App. Rename the SQLite file to the format, *pins-{name}.sqlite*.
7. Drag and drop desired pins SQLite file(s) onto Aero App files.



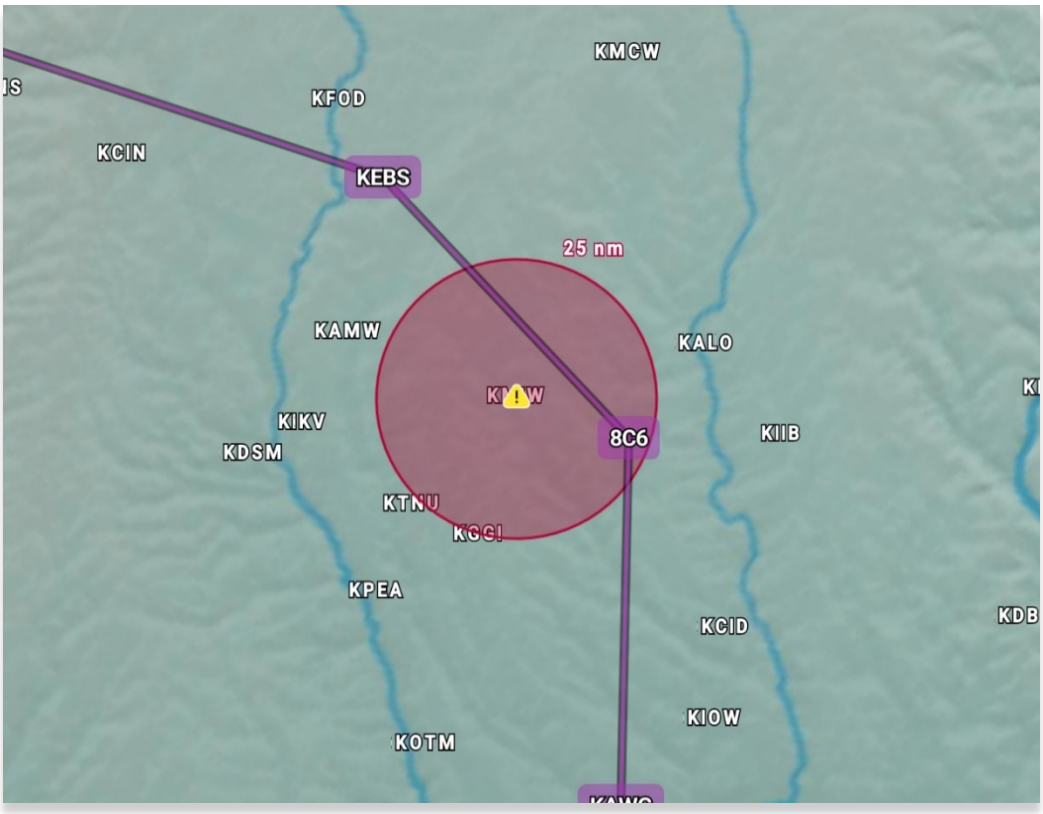
NOTE: If the imported file is not renamed, any pins stored in pins.sqlite will be overwritten.

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

8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from the navigation bar.
12. Select **User Overlays** from the side menu.
13. Locate your imported files. The files should display as *pins-{name}.sqlite*.

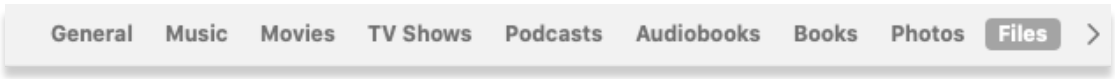


14. Tap your desired imported pins file and your hazard will overlay on the Map.

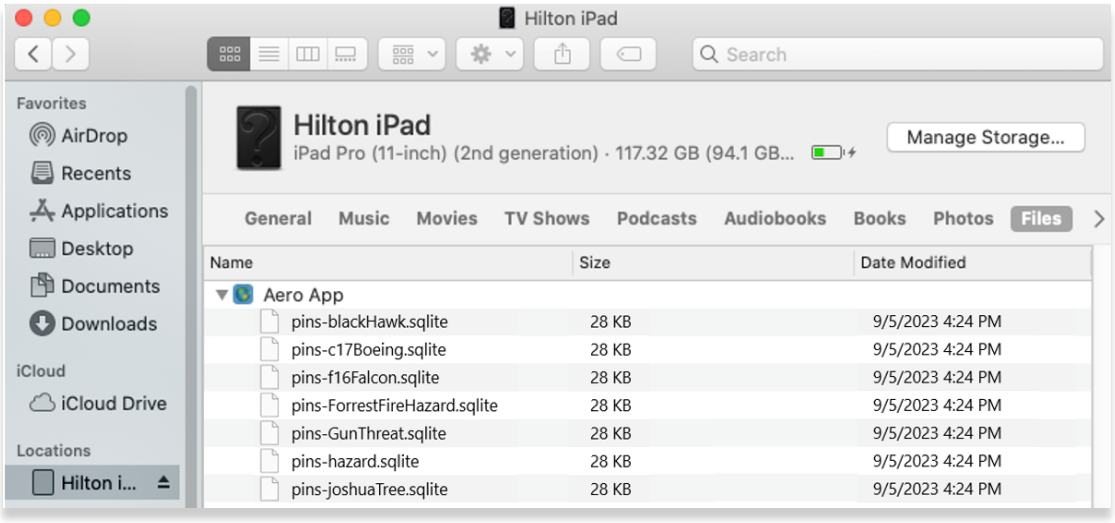


10.7.2 Sideload Hazards with Finder

1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



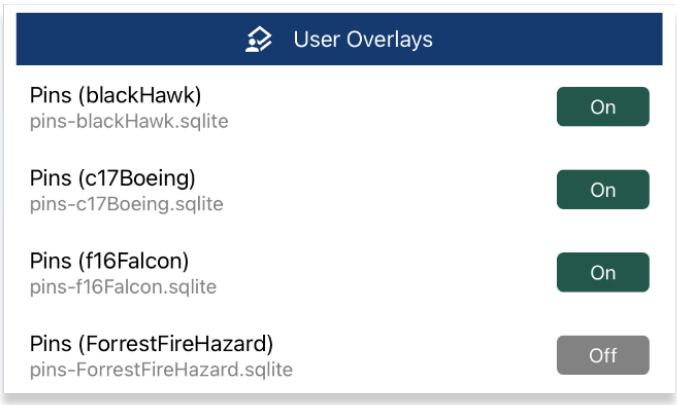
5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.
6. Locate the pins.sqlite files that you wish to sideload onto Aero App. Rename the SQLite file to the format, *pins-{name}.sqlite*.
7. Drag and drop desired pins SQLite file(s) onto Aero App files.



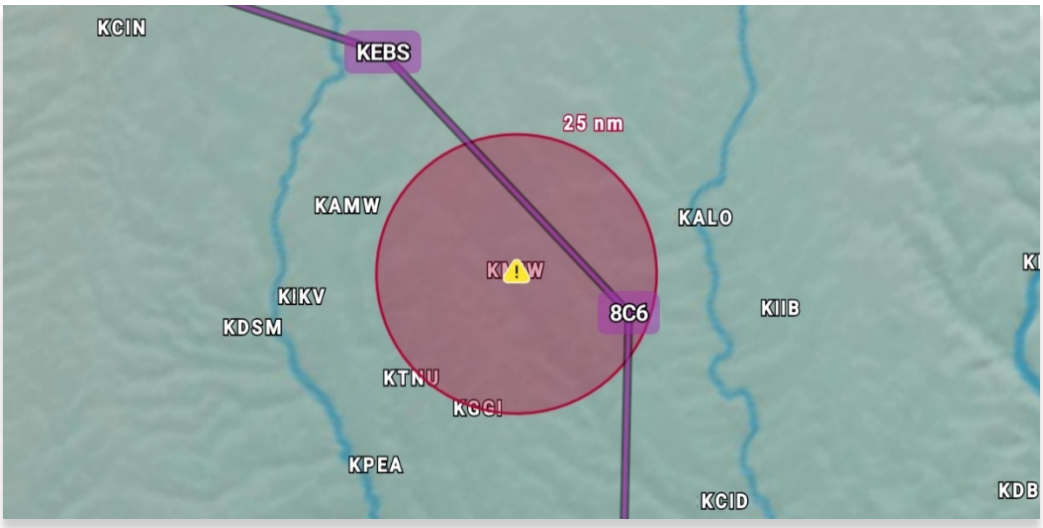
Verify that the sideload was successful. The steps in achieving this are as follows:

8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower-right corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from the navigation bar.
12. Select **User Overlays** from the side menu.

13. Locate your imported files. The files should display as *pins-{name}.sqlite*.



14. Tap your desired imported pins file and your hazard will overlay on the Map.



10.8 Sideload Documents

Users can sideload and view their document of choice documents on Aero App.

Ways to sync device:

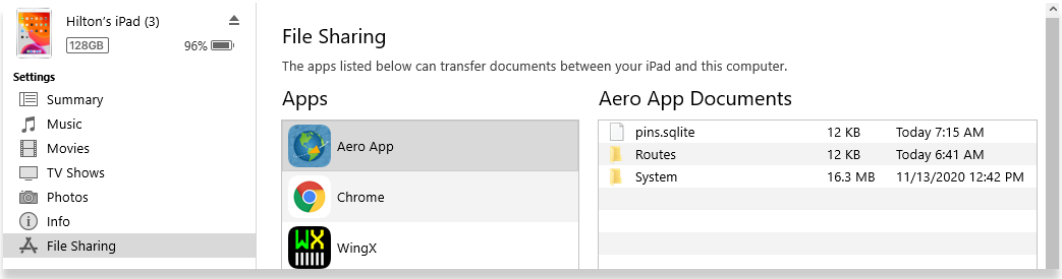
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.8.1 Sideload Documents with iTunes

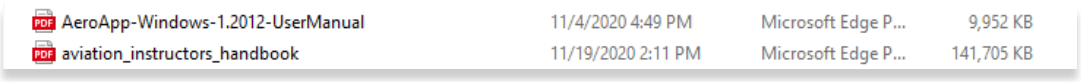
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

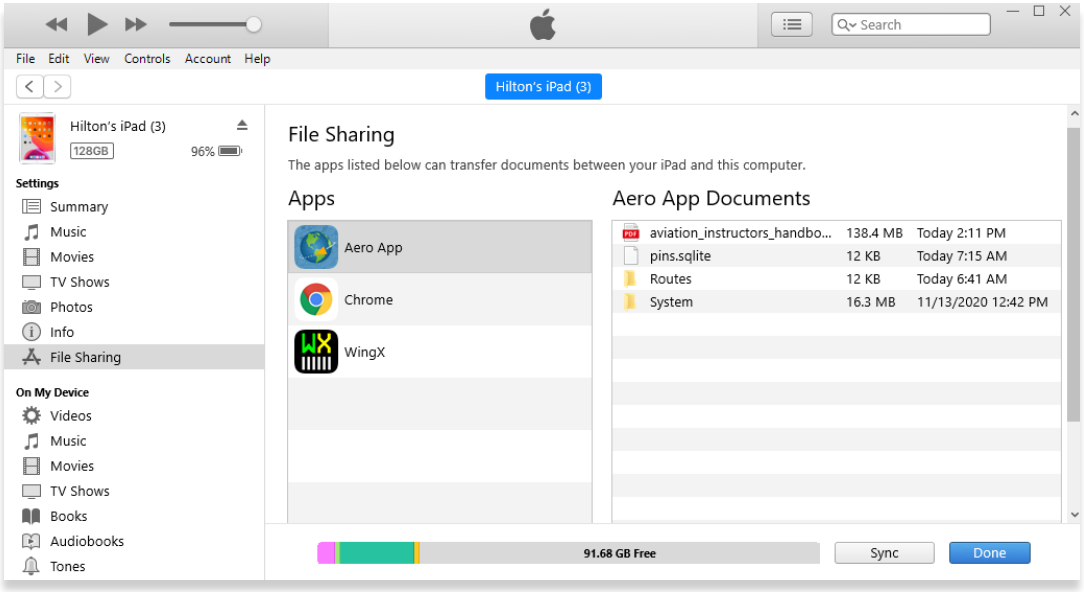
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the file containing documents.



7. Drag and drop desired document(s) onto Aero App files.

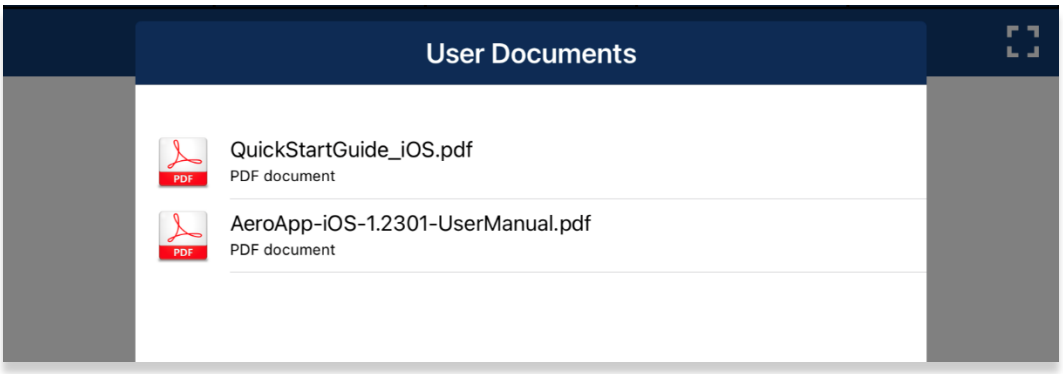


Verify that the sideload was successful. The steps in achieving this are as follows:

8. Open **Aero App**.
9. Tap **General** on the ***Main Menu***. The General options will appear.
10. Select **Docs**.
11. Tap on the **ribbon** to select a document.



12. A successful sideload will display the PDF file(s) under the Documents section.

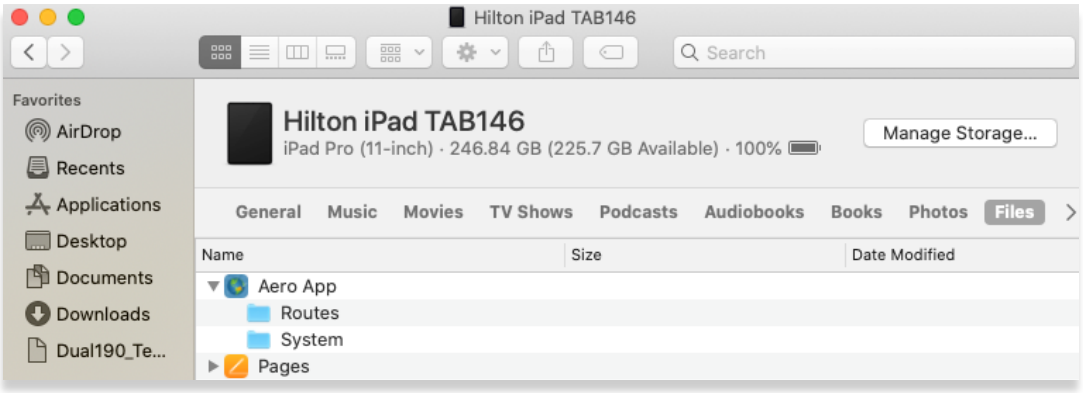


10.8.2 Sideload Documents with Finder

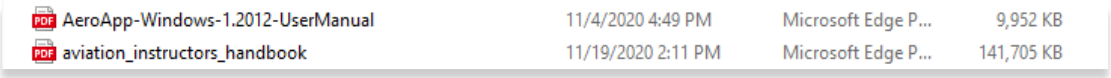
1. Connect your device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



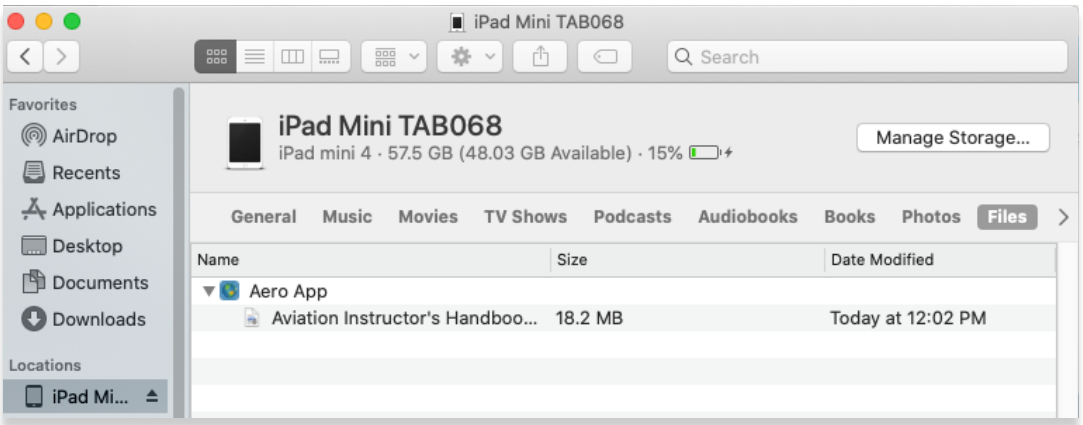
5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.



6. Navigate to the file containing documents.



7. Drag and drop desired document(s) onto Aero App files.

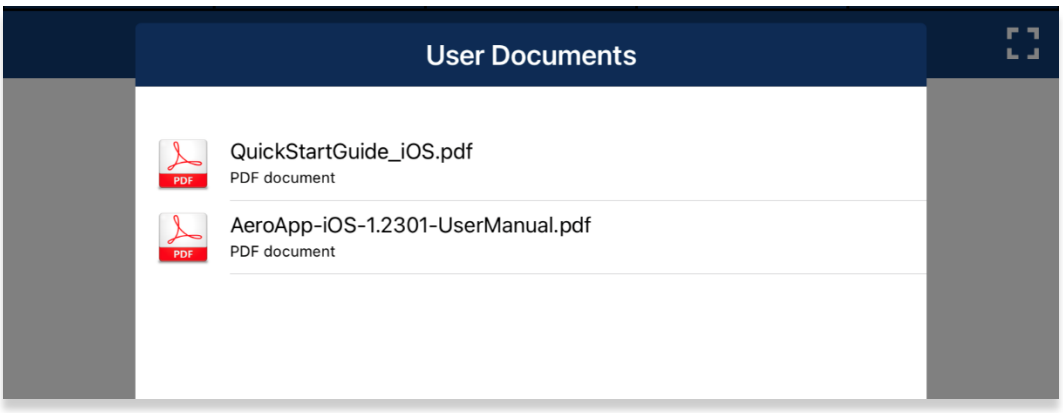


Verify that the sideload was successful. The steps in achieving this are as follows:

8. Open **Aero App**.
9. Tap **General** on the ***Main Menu***. The General options will appear.
10. Tap **Docs**.
11. Tap on the **ribbon** to select a document.



12. A successful sideload will display the PDF file(s) under the Documents section.



10.9 Sideload KML/KMZ

Aero App enables users to sideload KML/KMZ files. Imported KML/KMZ routes can be added to the flight route. Refer to Section 14.3.1.1 for more information.

Ways to sync device:

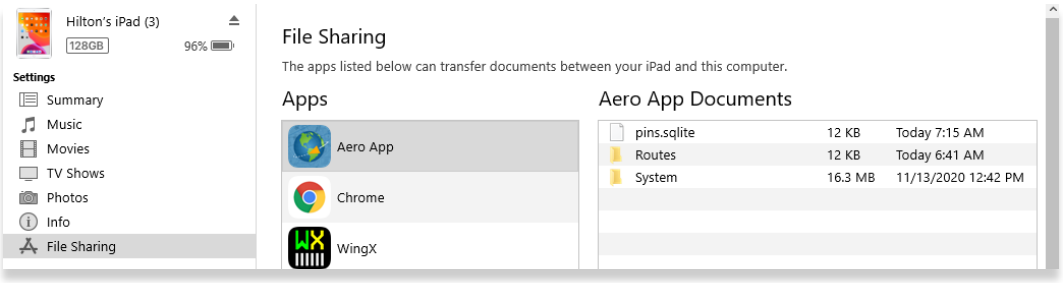
- On Windows, open iTunes
- On macOS, open Finder and select device under Locations

10.9.1 Sideload KML/KMZ Files with iTunes

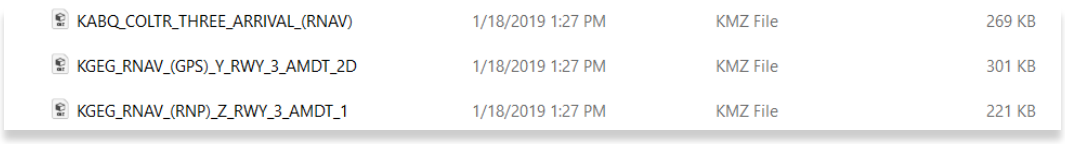
1. Connect your Apple device to a USB or USB-C port of a Windows computer.
2. Open **iTunes**.

NOTE: Alternatively, users can enable the **Automatically sync when this iPad is connected** option on iTunes. Go to *Summary* > scroll down to *Options* > enable *Automatically sync when iPad is connected*. iTunes will automatically open once you connect your device to your computer.

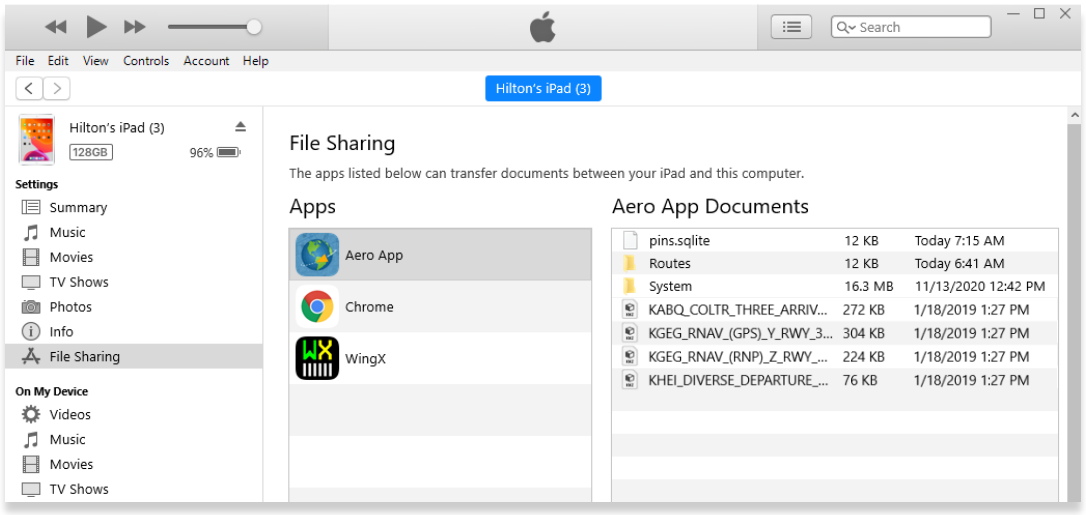
3. Allow your computer to recognize your device. Once recognized, an iPad icon will appear. Click the iPad icon and your device information will display.
4. In the left sidebar, click **File Sharing**.
5. Select **Aero App** from the File Sharing section.



6. Navigate to the file containing KML/KMZ files.

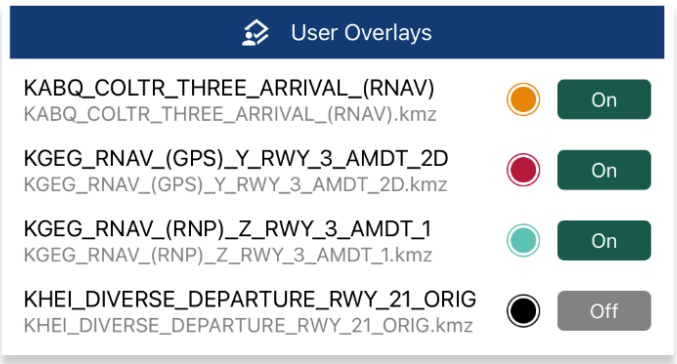


7. Drag and drop desired KML/KMZ file(s) into Aero App files.



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 corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from navigation bar.
12. Select **User Overlays** from the side menu. Your sideloaded KML/KMZ files will be shown below.
13. Tap desired KML/KMZ file and it will overlay on the Map.

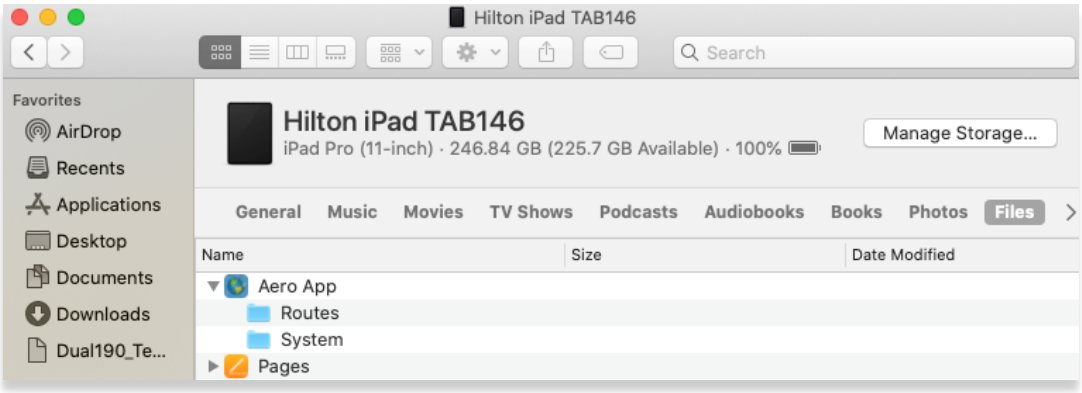


10.9.2 Sideload KML/KMZ Files with Finder

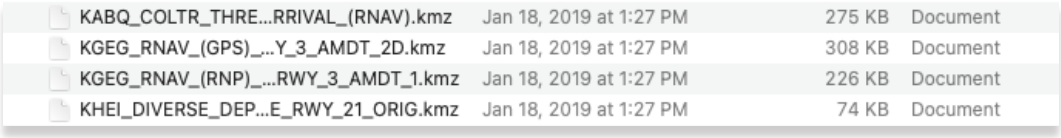
1. Connect your Apple device to a USB or USB-C port of a Mac computer.
2. Click the **Finder** icon in the Dock.
3. On the Finder window, your device will display in the sidebar. Click your device.
4. The top of the screen will display menu options. Click **Files.**



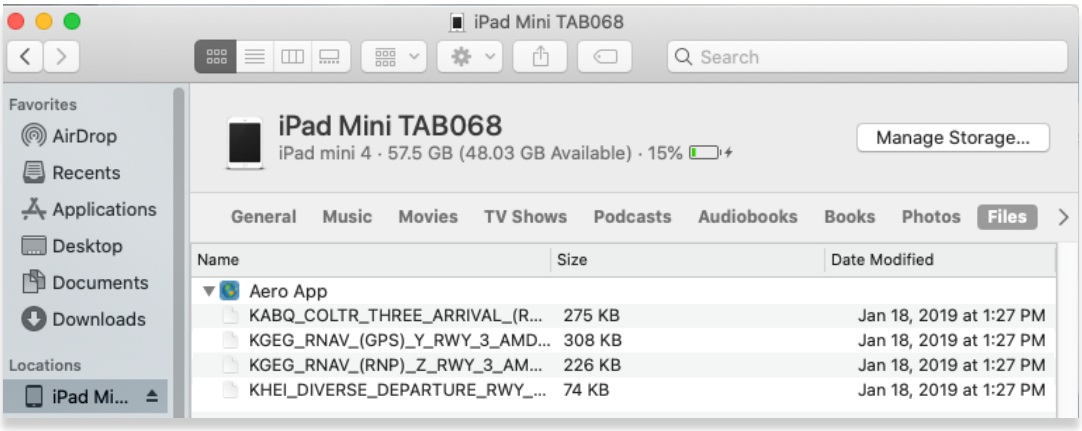
5. Aero App will display under Files. Click the **dropdown arrow** on the left side of Aero App to display all available folders.



6. Navigate to the file containing KML/KMZ files.

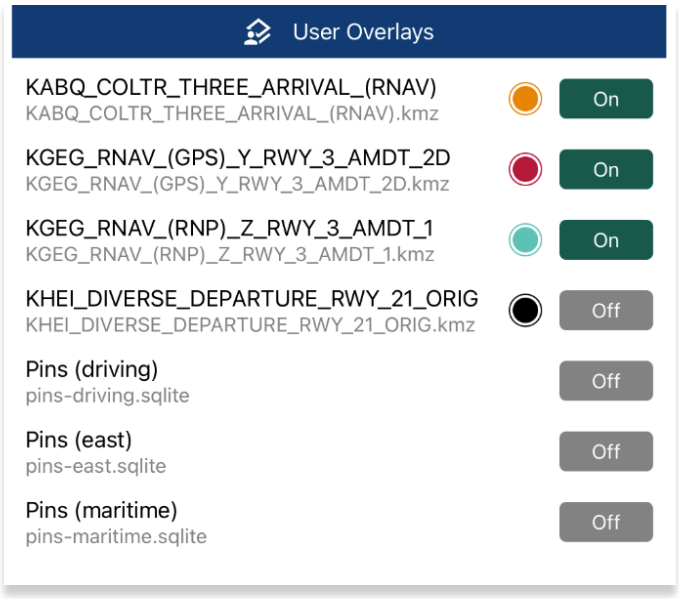


7. Drag and drop desired KML/KMZ file(s) into Aero App files.



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 corner of the Map screen. The Map Manager popup will appear.
11. Select **Overlays** from navigation bar.
12. Select **User Overlays** from the side menu. Your sideloaded KML/KMZ files will be shown below.
13. Tap desired KML/KMZ file and it will overlay on the Map.



11 Updating Aero App Data

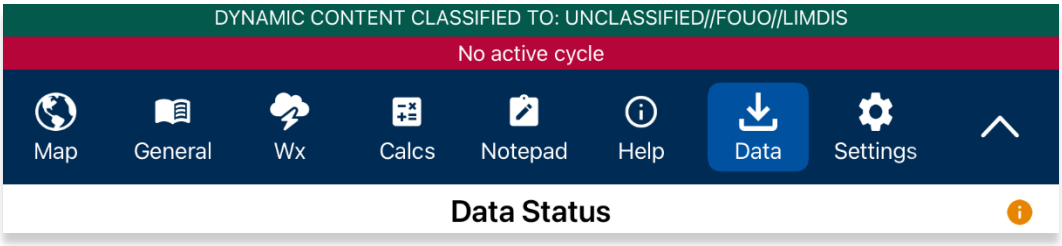
Aero App Data updates are released periodically. Users can load and manage up to two data cycles at a time. Aero App data cycle releases every 28 days, thereby users will need to download the latest data cycle, respectively.

11.1 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.

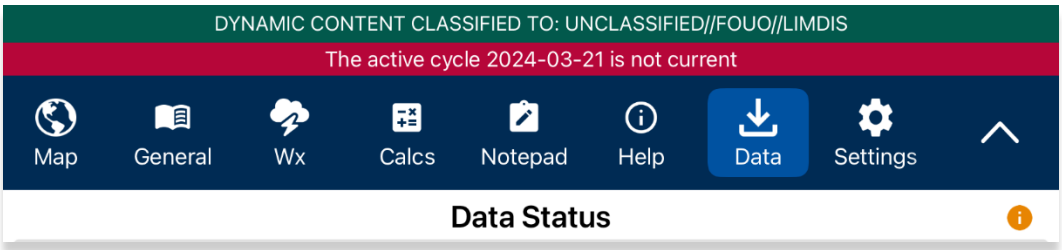
No active cycle

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 button** 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 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.



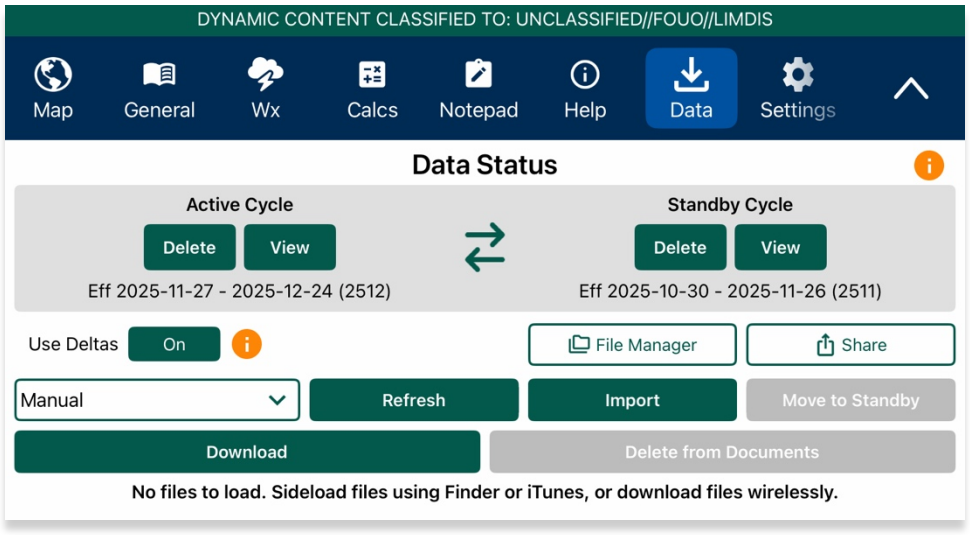
12 Manage Data

The Data Status page allows users to monitor the status of cycle data, download new data, or share data among their crew members. Users can easily add or remove any unwanted or outdated data.

12.1 Data Status

The Data Status page enables users to access information about the loaded data cycle on Aero App. There are options to download, view, and delete data cycles, view effective dates, swap button, import data, and load downloaded data to make them active or to keep them on standby. This page also includes the option to share data with your 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.



Active Cycle Effective Dates

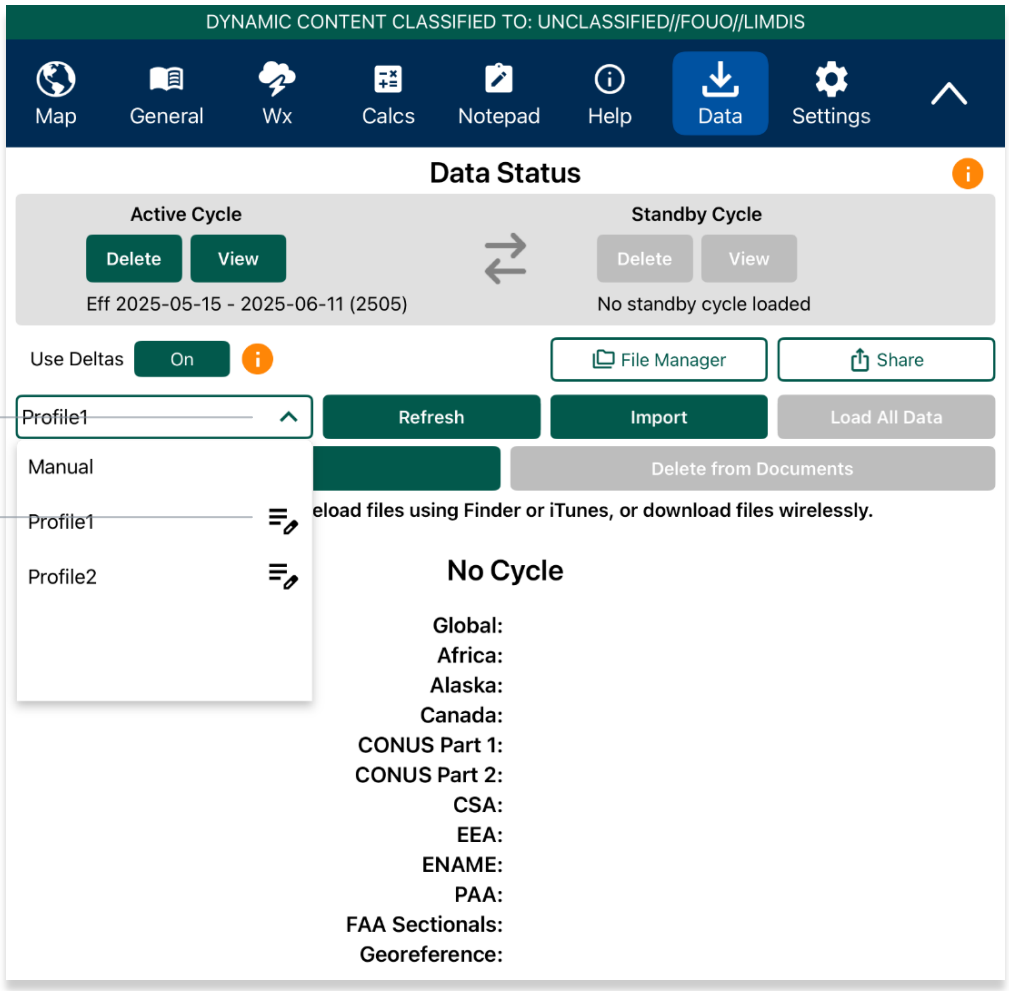
Standby Cycle Effective Dates

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

12.2 User Profiles

User Profiles allow users to download the latest data based on preselected datasets within each Profile (refer to Section 32.2 to create a new profile) as an alternative to manually selecting files to download each time. The profile selected in Settings is selected by default in the dropdown, however, users can select another profile from the drop down to designate as the new default/active profile. This new selection is reflected in Settings. The data associated with the selected profile is what will be downloaded. Additionally, users have the option to manually download data by switching the profile to Manual.

1. The active user profile is the profile selected in your settings. To switch profiles, tap the **profile dropdown** and select desired profile.
2. To modify the data selection of a specific profile, tap the **Edit icon** of the user profile you wish to make changes to. Tap **Save** once satisfied with your data selection and return to the Data Status page.

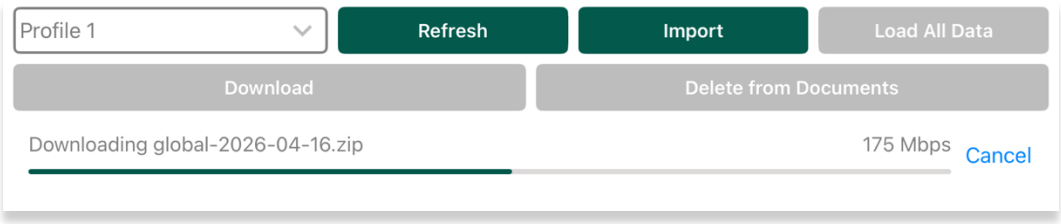


3. Tap **Download**.
4. The Credentials popup will appear. Select desired method of authentication.

The download will begin. A progress bar will display with real-time status of the download. The following possible status labels will appear:

- **Loaded** – file already exists in Active or Standby Cycle
- **Found** – download succeeded
- **Not Available** – a file was not found, or an error occurred during a download
- **Cancelled** – the current file being downloaded was stopped
- **Pending** – preselected datasets that are in queue to be downloaded
- **Validating** – file has finished downloading

5. To cancel the download, tap **Cancel**.



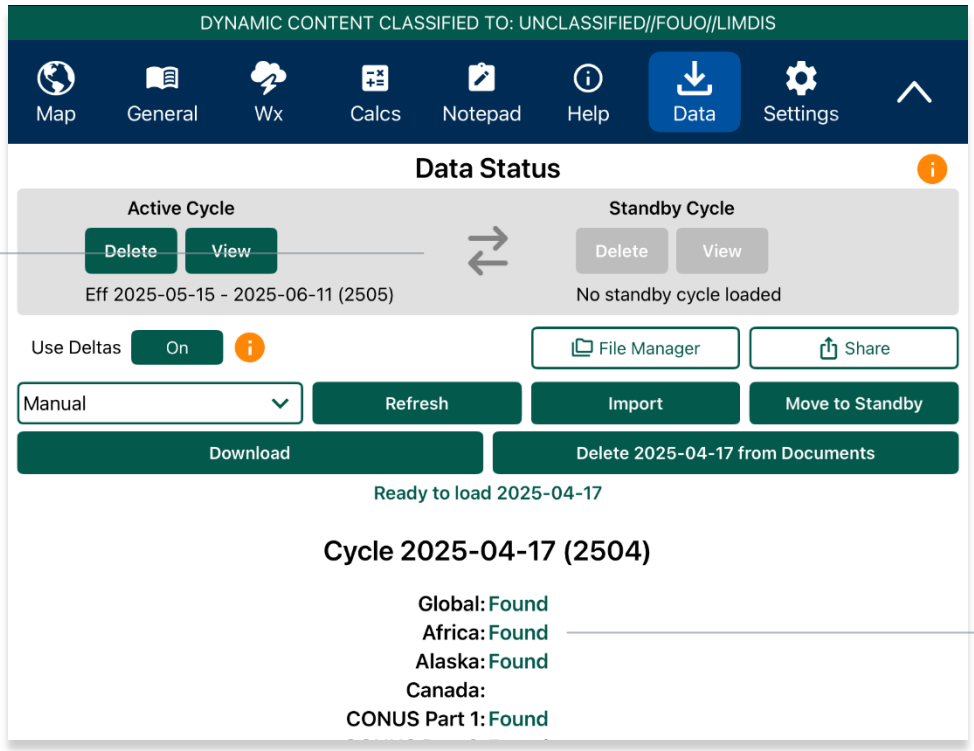
6. To download data manually, select **Manual** from the profiles dropdown. Refer to Section 9 for additional information on downloading data.

NOTE: Profiles cannot be switched once the downloading process has begun.

12.3 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 into Active Cycle.

1. Tap **Data** on the ***Main Menu***. The Data Status screen will display.
2. To switch user profiles, tap the dropdown to view the different profiles available for data download (refer to Section 32.2 to create a new profile). By default, the Manual option is selected. Select the desired profile.
3. Tap **Download**. If the Manual profile is selected, refer to Section 9 for information on downloading data manually. If a user profile is selected, refer to Section 12.2 for information on downloading preselected datasets.



Swap button

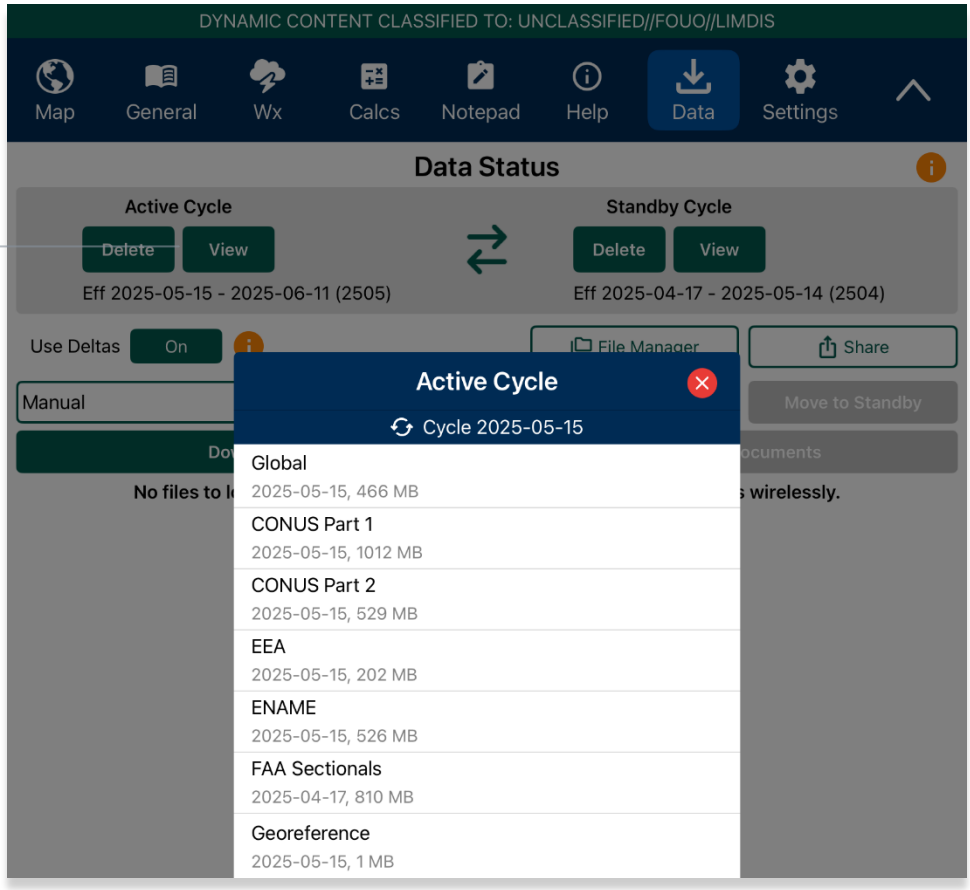
Example of **Found** status label

4. Tap **Move to Standby** to transfer the data to Standby Cycle.
5. Tap the **Swap button** to switch the data loaded on Standby Cycle to Active Cycle. Your data should be activated.

NOTE: When a new cycle is loaded in Active Cycle, the What's New page will pop up and display relevant information about new features, app enhancements, and important updates, respective to the loaded active cycle.

6. If maps are downloaded separately, tap **Load Maps** to move data to Active Cycle.
7. Tap **Refresh** to reload the page.
8. Tap **View** to display the list of available files stored in Active Cycle or Standby Cycle.
9. Tap **Delete** to permanently delete the files stored in Active Cycle or Standby Cycle.
10. The delete confirmation popup will be displayed. Tap **Delete** to confirm action.

View Active Cycle Data



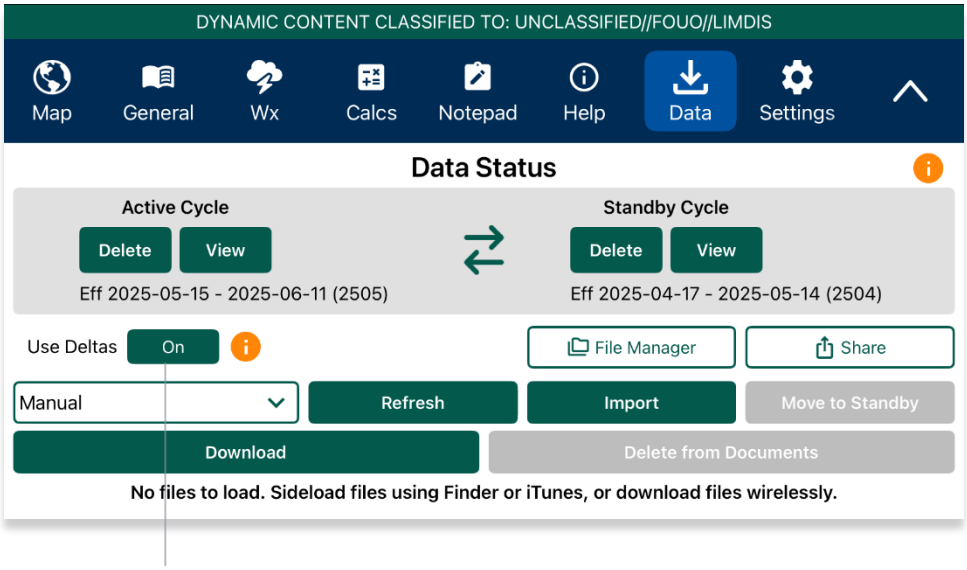
12.4 Delta Files

Delta files in Aero App are smaller, incremental updates that include only the changes made to core data between cycles. This allows for more efficient downloads, as only the updates are downloaded instead of the entire data set.

Use Deltas

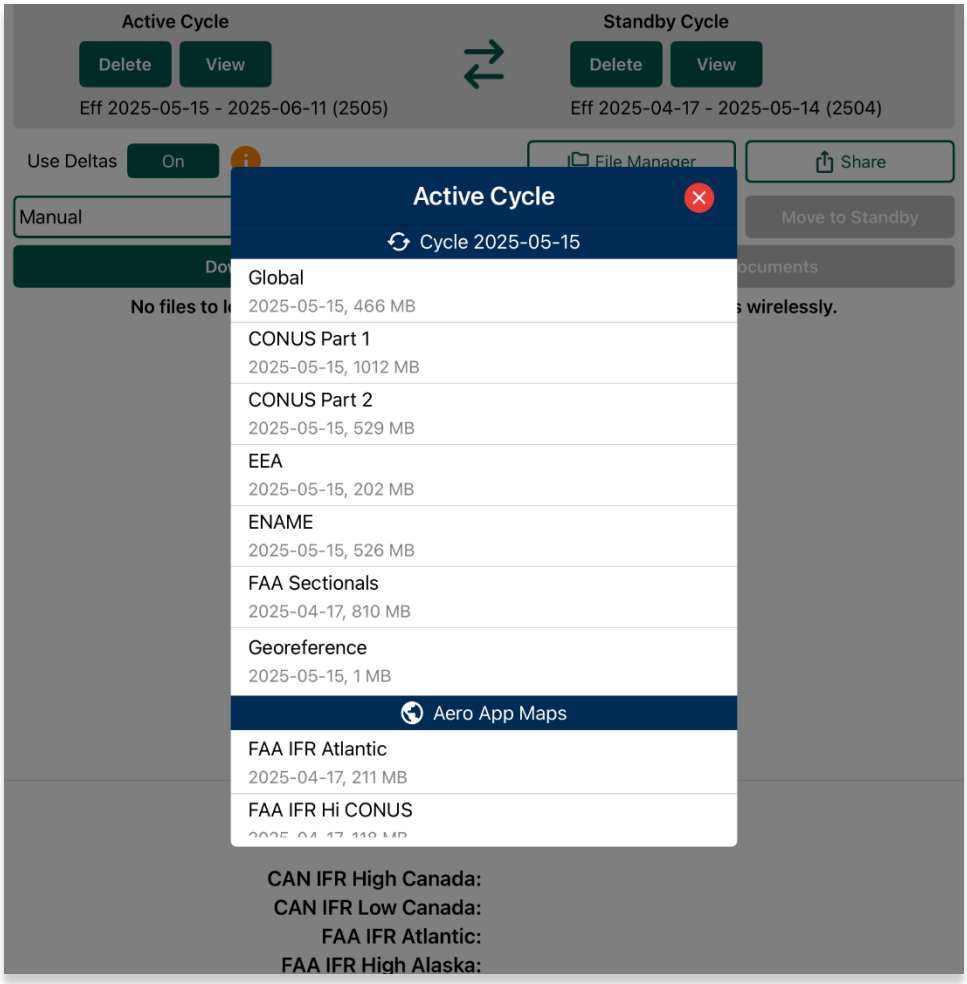
To access data updates between cycles, ensure the Use Deltas option is *enabled* when downloading core data files. Once enabled, Aero App will automatically retrieve the relevant delta files based on the previous cycle. Note that the previous cycle must be loaded in Active or Standby Cycle before downloading delta files. Additionally, ensure the **Global** file is present, as it is required for applying the delta files correctly.

1. Tap **Data** on the ***Main Menu***.
2. Tap **Use Deltas** to enable the option.
3. To switch user profiles, tap the dropdown to view the different profiles available for data download (refer to Section 32.2 to create a new profile). By default, the Manual option is selected. Select the desired profile.
4. Tap **Download**. If the Manual profile is selected, refer to Section 9 for information on downloading data manually. If a user profile is selected, refer to Section 12.2 for information on downloading preselected datasets. Follow the prompts until the download is complete.



Use Deltas enabled

5. On the Data Status screen, tap **Move to Standby** and an Applying Deltas popup will display.
6. Tap **Swap button** to load data onto Active Cycle, which activates the current data.
7. Tap **View** to verify the data in Active Cycle.

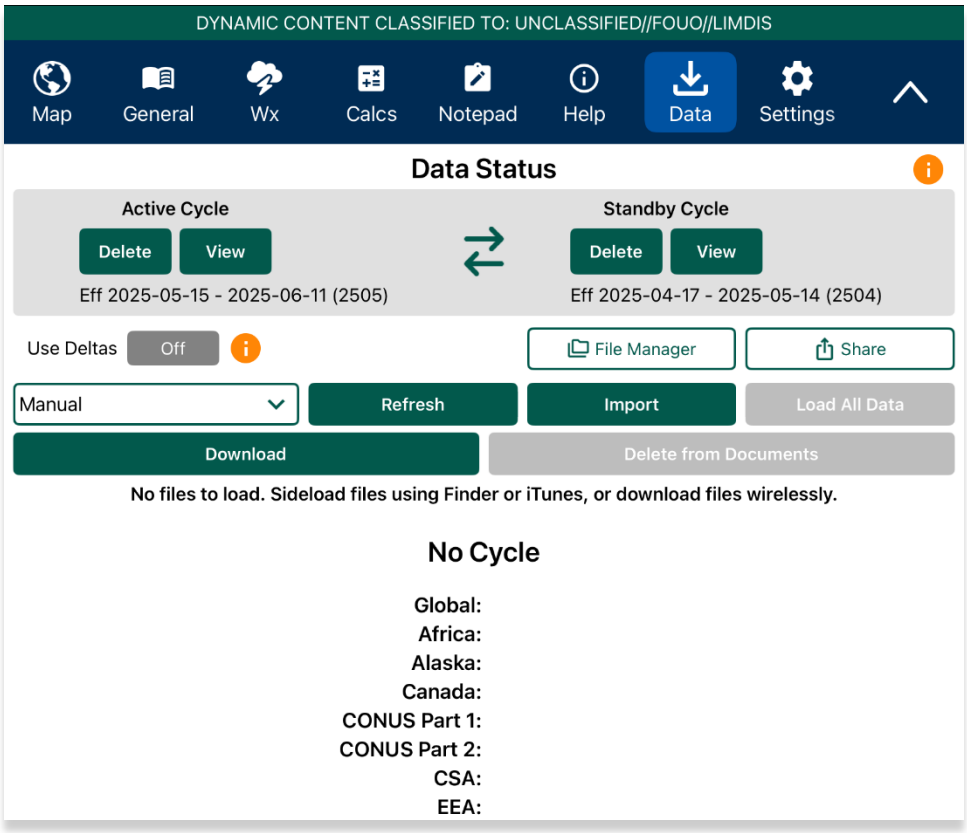


NOTE: A warning will appear if users try to tap Move to Standby while delta files are downloaded on the Data Status page and Use Deltas is disabled.

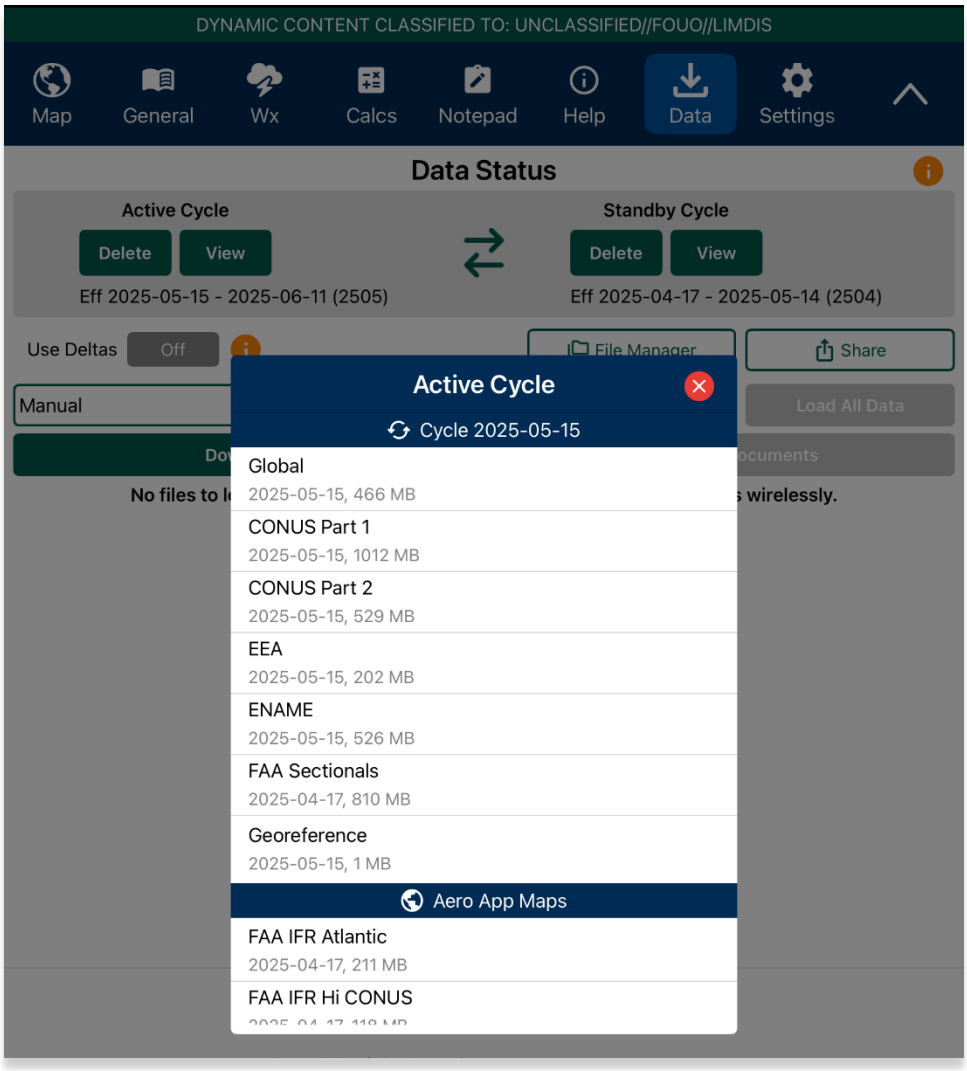
Download Compatible Files

To AirDrop or upload files to ADS, a complete data cycle (without Deltas) is required. If the Use Deltas option was enabled during download, then the user will be prompted with a warning to download a complete cycle, as these methods do not support core data deltas. Therefore, ensure the Use Deltas option is *disabled* before sharing files.

1. Tap **Data** on the ***Main Menu***.
2. Ensure that the *Use Deltas* option is disabled. Disable Use Deltas, if necessary.
3. To switch user profiles, tap the dropdown to view the different profiles available for data download (refer to Section 32.2 to create a new profile). By default, the Manual option is selected. Select the desired profile.
4. Tap **Download**. If the Manual profile is selected, refer to Section 9 for information on downloading data manually. If a user profile is selected, refer to Section 12.2 for information on downloading preselected datasets. Follow the prompts until the download is complete.



5. On the Data Status screen, tap **Move to Standby.**
6. Tap **Swap button** to load data into Active Cycle, which activates the current data.
7. Tap **View** to verify the data in Active Cycle.

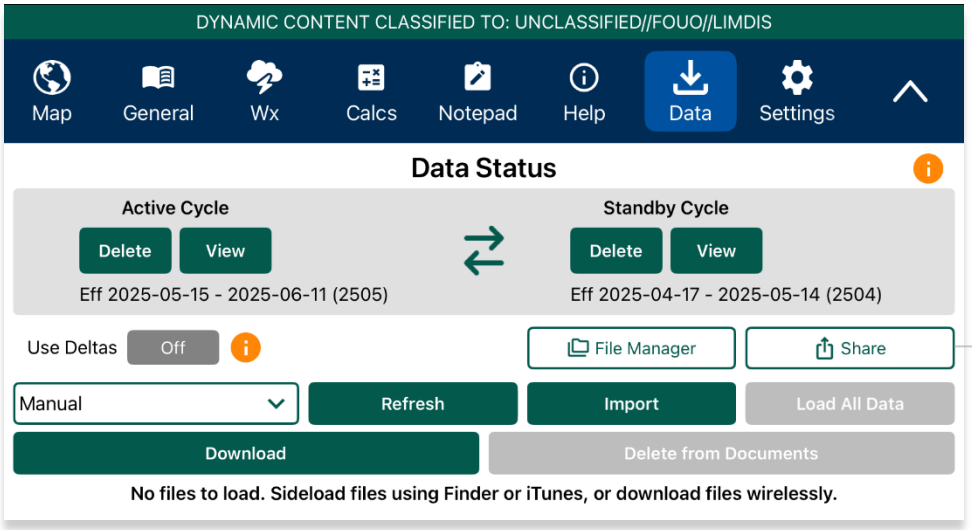


NOTE: A warning will appear if users attempt to tap on Move to Standby when there is delta files downloaded on the Data Status page and Use Deltas is disabled.

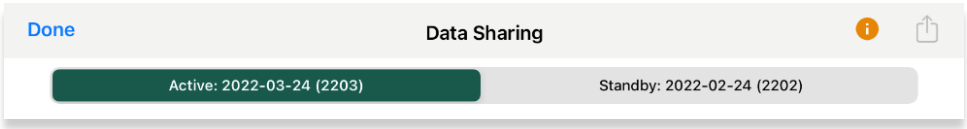
12.5 Share Data via AirDrop

Aero App allows users to share Data Cycles, Maps, and additional files (such as Earth Base Map, Giant Reports, and Terrain) with another user via AirDrop. Users can select one or multiple files to share at a time. To ensure compatibility, the Use Deltas option must be *disabled*, as delta files cannot be shared. Additionally, ensure that *Core Data* is selected for the sharing options to become selectable.

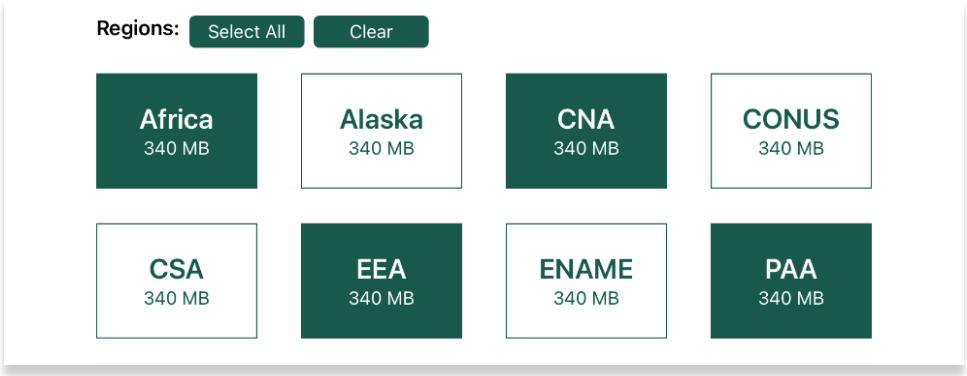
1. Tap **Data** on the ***Main Menu***.
2. Tap the **Share** button and the Data Sharing screen will display.



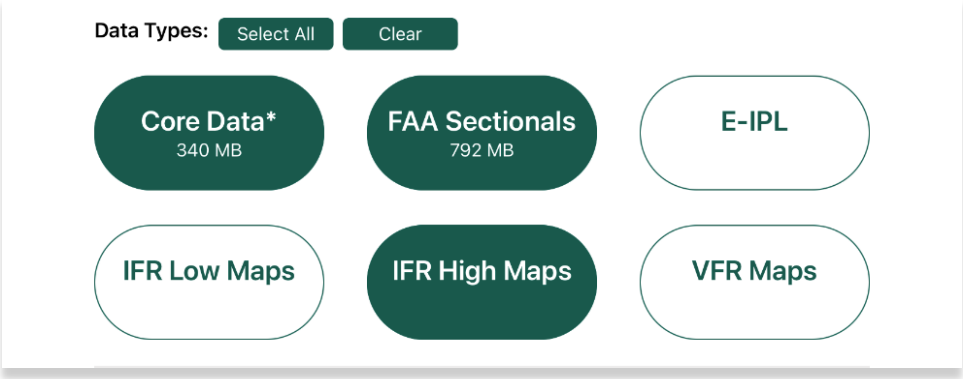
3. Select from **Active** or **Standby** cycle to share data.



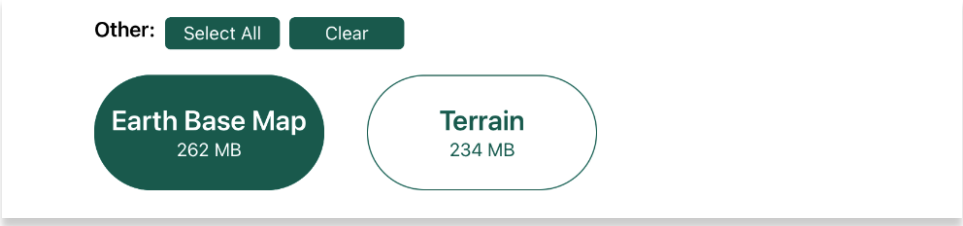
4. Select desired **Regions** to share.



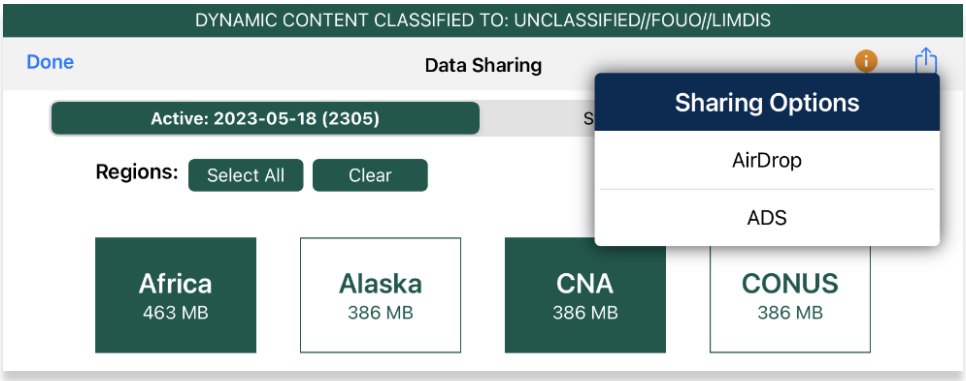
5. Select desired **data types**.



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



7. Once all the required files are selected, the Share icon will be selectable. Tap **Share**.
8. The *Sharing Options* popup will appear. Select from **AirDrop** or **ADS**.



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

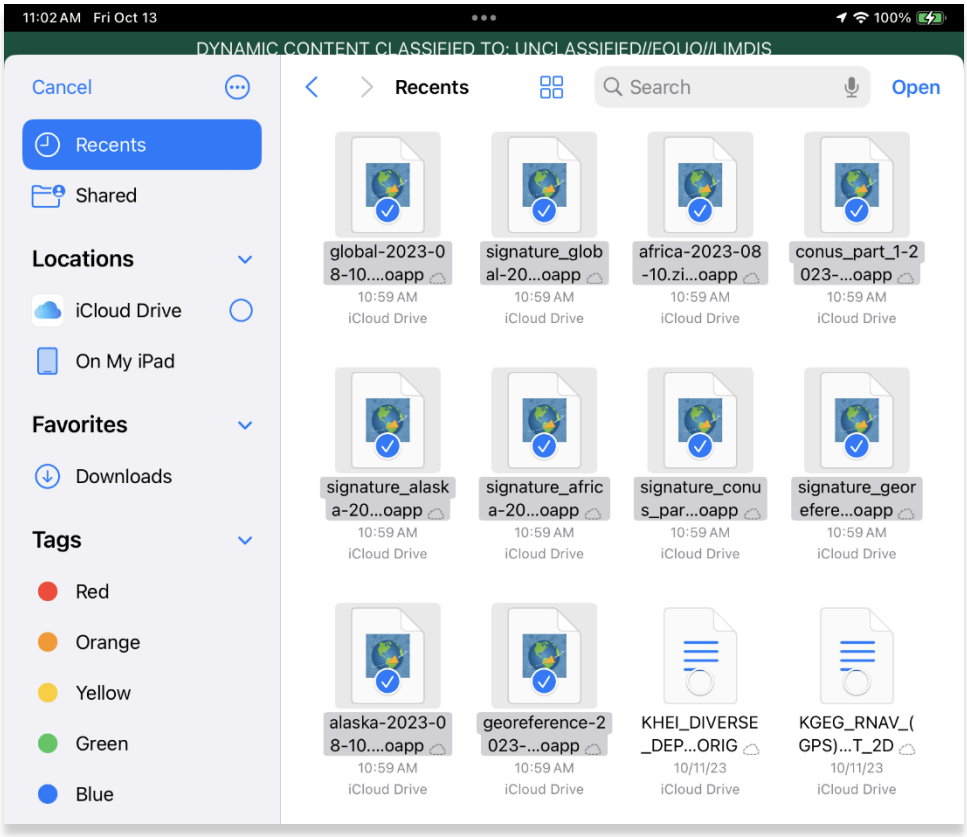
NOTE: If AirDrop fails, close the Data Sharing screen, reopen, and try again. This is a known Apple AirDrop issue.

NOTE: The **Core Data*** data type includes Global and Georeference files.

12.5.1 Receiving Map/Cycle Files Through AirDrop

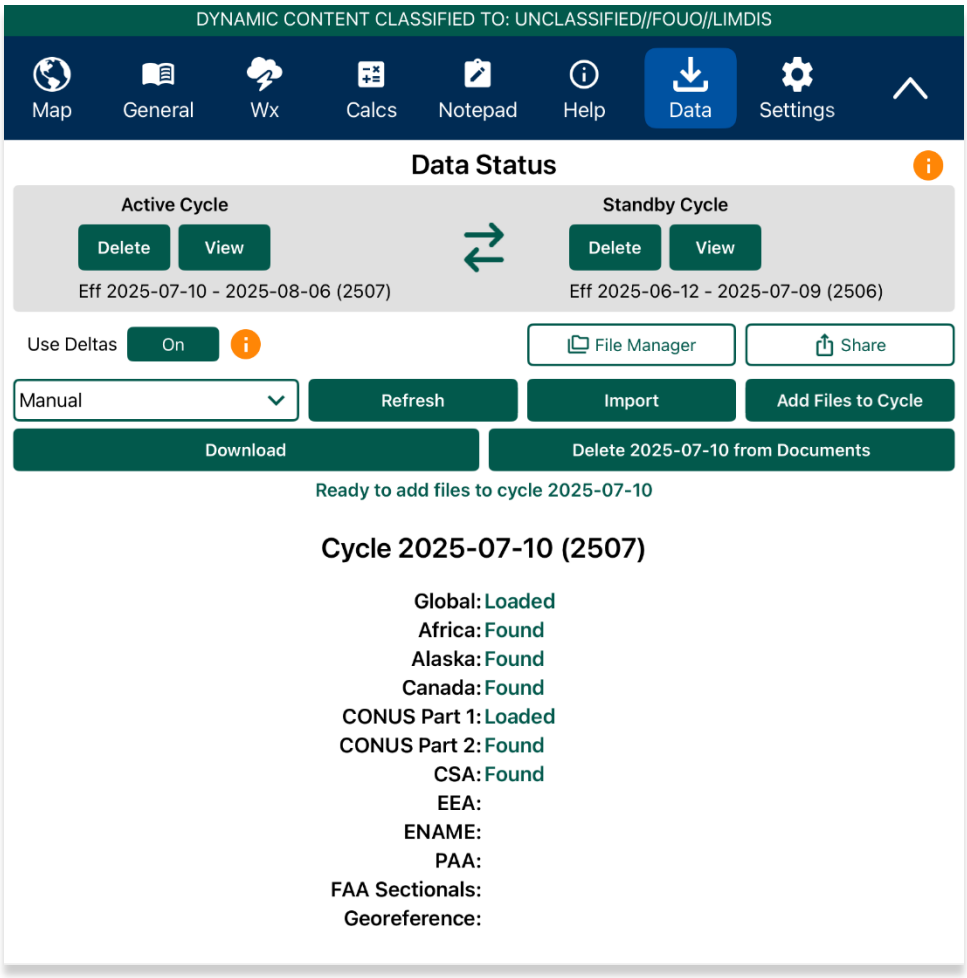
Users can view the Airdropped Map/Cycle files on Aero App. The person receiving the files must have their AirDrop *enabled* prior to receiving any files. Different behaviors will occur depending on the device's operating system. Refer to support.apple.com for additional information on AirDrop.

1. Once the AirDrop is complete, open the files using Aero App. iOS 17 users can open files through the Import button on the Data Status page.
2. A popup to select an application to import the Airdropped files will display. Select **Aero App**.
3. The *document picker* will display. Select desired files to import.
4. Tap **Open** once the desired files have been selected.



NOTE: The document picker only applies to device's running iOS 17 or later.

5. Navigate to the *Data Status* page.
6. The Airdropped files will be loaded on the Data Status page. Tap **Move to Standby** or **Add Files to Cycle** if a cycle is already loaded in Standby Cycle.

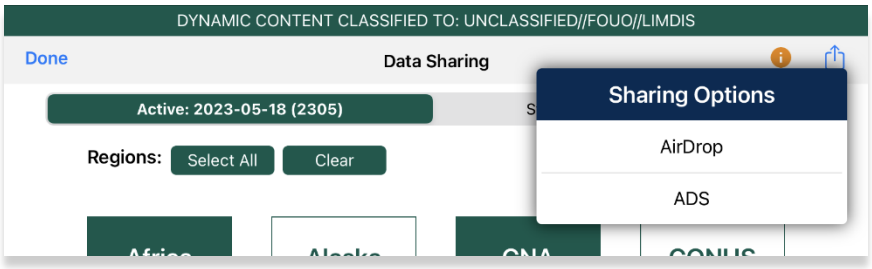


7. An *Import* button is available for users who missed a file to import. Tap **Import** to display the document picker.
8. Select desired file to import into Aero App.

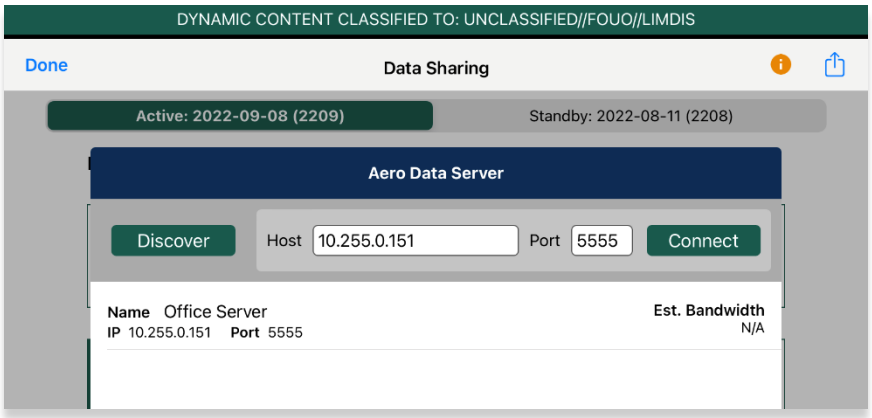
12.6 Upload Data to ADS

Aero App allows users to share Data Cycles, Maps, and other files such as Earth Base Map, Giant Reports, and Terrain data by uploading them to ADS. Once the data is uploaded, team members can download and apply data directly to their own devices. Ensure that the Use Deltas option is *disabled* before uploading, as delta files are not supported for sharing. Before uploading data, make sure ADS is properly set up. The following steps will guide you through the setup process.

1. Log in to ADS on a Mac or Windows computer.
2. On the ***Settings Menu***, select a window of time from the options of 15 Minutes, 30 Minutes, or 1 Hour. Then, click **Save** to apply the selected upload time interval.
3. Once a window of time is selected, return to the ***Data Sharing*** screen on Aero App.
4. Select **ADS** from Sharing Options list. The Aero Data Server screen will display.



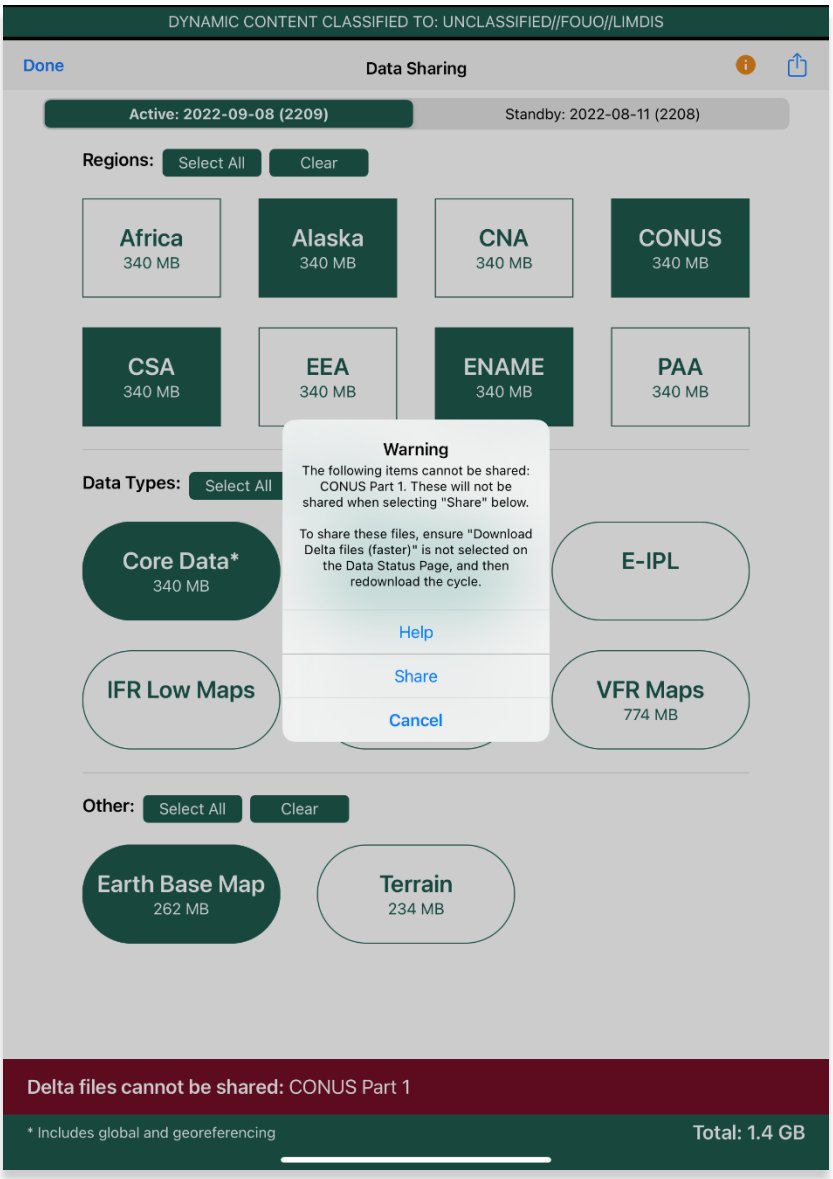
5. Select the appropriate server or enter the IP Address and Port of the server to connect.
6. Once connected, the files will be uploaded to ADS.



NOTE: Refer to Section 12.5 for guidance on how to load desired Data Cycles, Maps, and Additional files to share.

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.

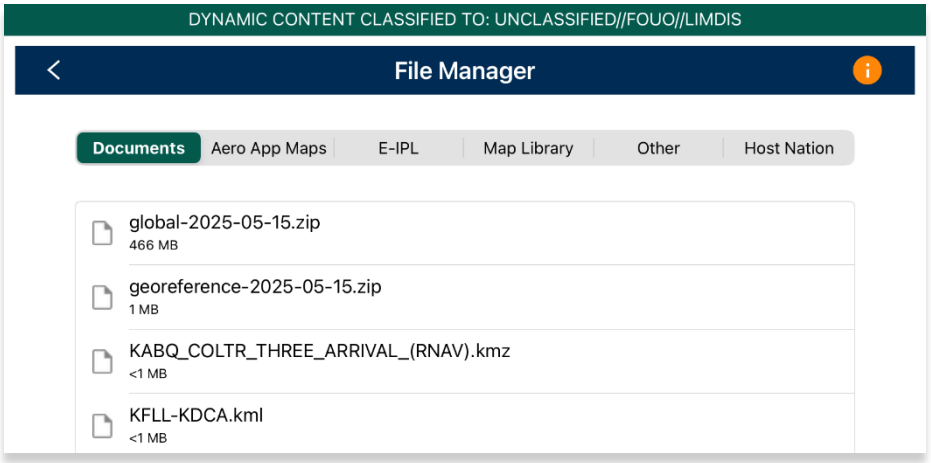


NOTE: Refer to Section 12.5 redownload AirDrop-compatible files.

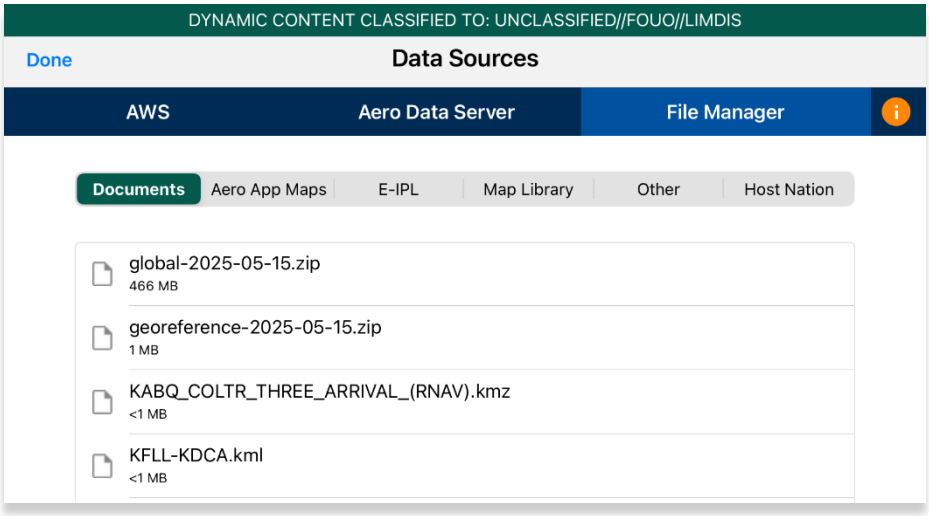
12.7 File Manager

The File Manager is responsible for storing, managing, and modifying files that have been downloaded and loaded onto Aero App. There are different ways users can access File Manager. Users can select File Manager directly on the Data Status page or through Data Sources. To access File Manager through Data Sources, users will need to switch to *Manual mode* in the user profile dropdown or in Settings. Refer to Section 32.2 for additional information.

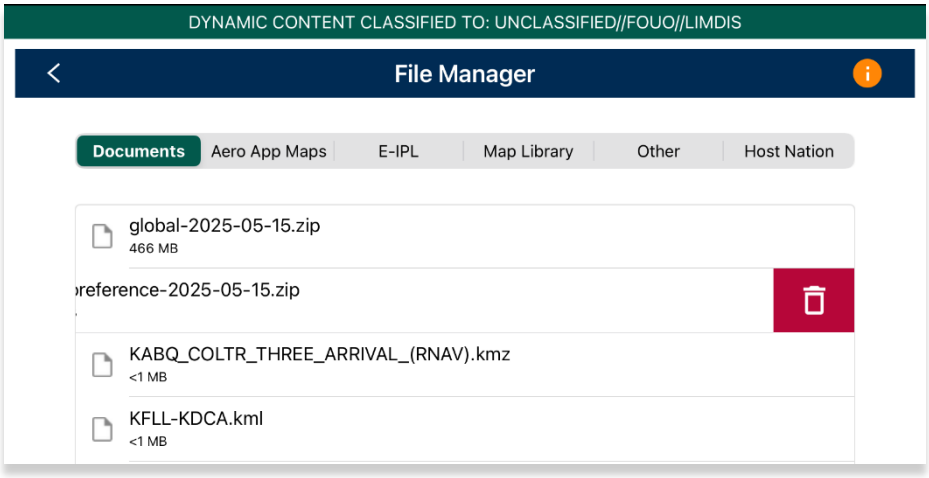
1. Tap **Data** on the ***Main Menu***.
2. Ways to access File Manager:
    - Tap **File Manager** on the Data Status page.



    - Switch to *Manual mode* in the user profile dropdown on the Data Status page or in your settings. Tap **Download** on the Data Status page to be directed to Data Sources. Choose **File Manager**.



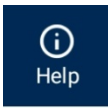
3. File Manager contains tabs for different data types. To view data and files stored within Aero App, select a data type. The following data types are available:
    - **Documents** – stores a collection of user-generated files such pins, waypoints, KML/KMZ, GeoPackages, GeoJSON, Shapefile, PDF documents, as well as data files that are in queue to be loaded onto Active or Standby Cycle.
    - **Aero App Maps** – contains a collection of downloaded regional charts such as Canada, FAA and NGA IFR high and low charts, as well as FAA VFR charts of the respective region.
    - **Electronic – Instrument Procedure Library (E-IPL)** – contains a library of E-IPL charts of the respective region.
    - **Map Library** – Includes a library of downloaded charts such as maps for emergencies, NavPlan charts, range charts, and others.
    - **Other** – contains Earth Base Map, Giant Reports, Terrain Analysis, 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.
4. Swipe left to reveal the delete button for the files that you wish to permanently remove from Aero App. Tap **Delete**.
5. The delete confirmation popup for File Manager will be displayed. Tap **Delete** to confirm action. The file will be removed from the list.



13 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).

	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.
	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.
	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.
	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.
	General – Contains a library of FAA data, FLIP Charts, Supplements, Area Planning, User Documents, and Terminal Procedure Legend.
	Wx provides menus for Wx Images and DD 175-1 Briefings. Wx images allow users to access real-time weather images, including RADAR, Satellite, Icing, Weather Forecast, AIRMETs and SIGMETs, Prog Charts, Convective SIGMETs and Outlooks, Current Convective Watches, and Alaska. DD 175-1 Briefings allow users to download and view weather briefings directly to Aero App.
	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.

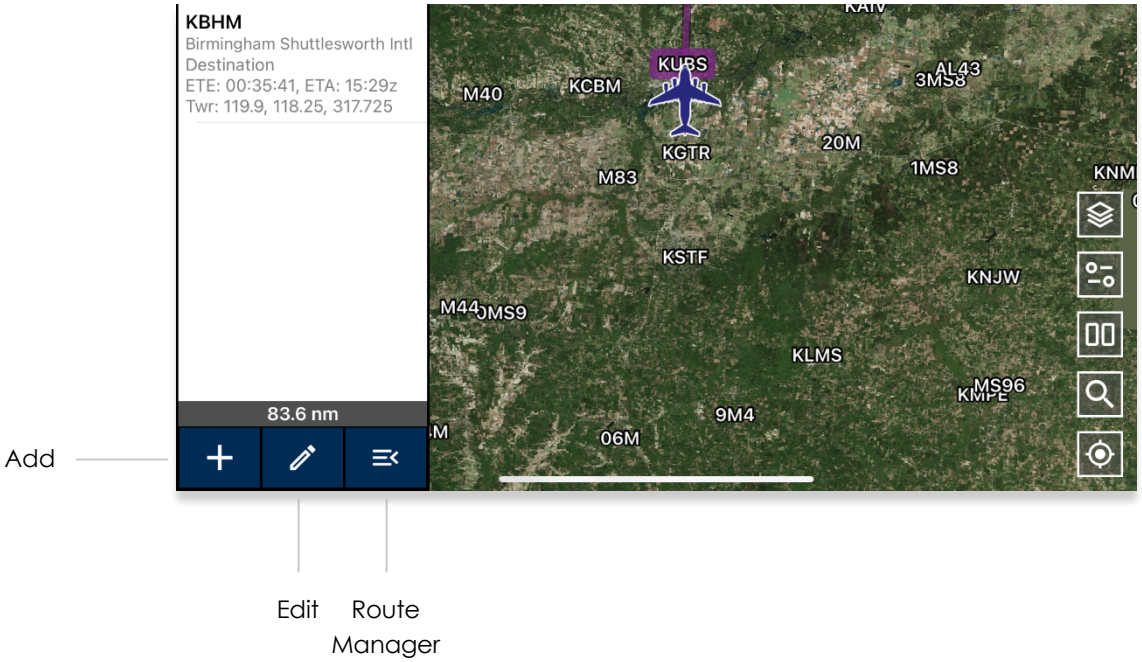
	Notepad – Users can create up to three pages of notes using their fingertips or a stylus.
	Help – A hub for Aero App information containing options to view the What's New, Web Links, link to User Manual, and the About page.
	Data – Users can download, share, manage, and monitor the status and file sizes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

14 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. The bottom of the Route Panel view displays the following options:

- **Add** – enables users to add identifiers such as Airports, NavAids, Waypoints, User Waypoints, Airways, MTRs, Pins, enter a full route, or add coordinates in latitude and longitude, MGRS, GARS, or Radial format.
- **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.

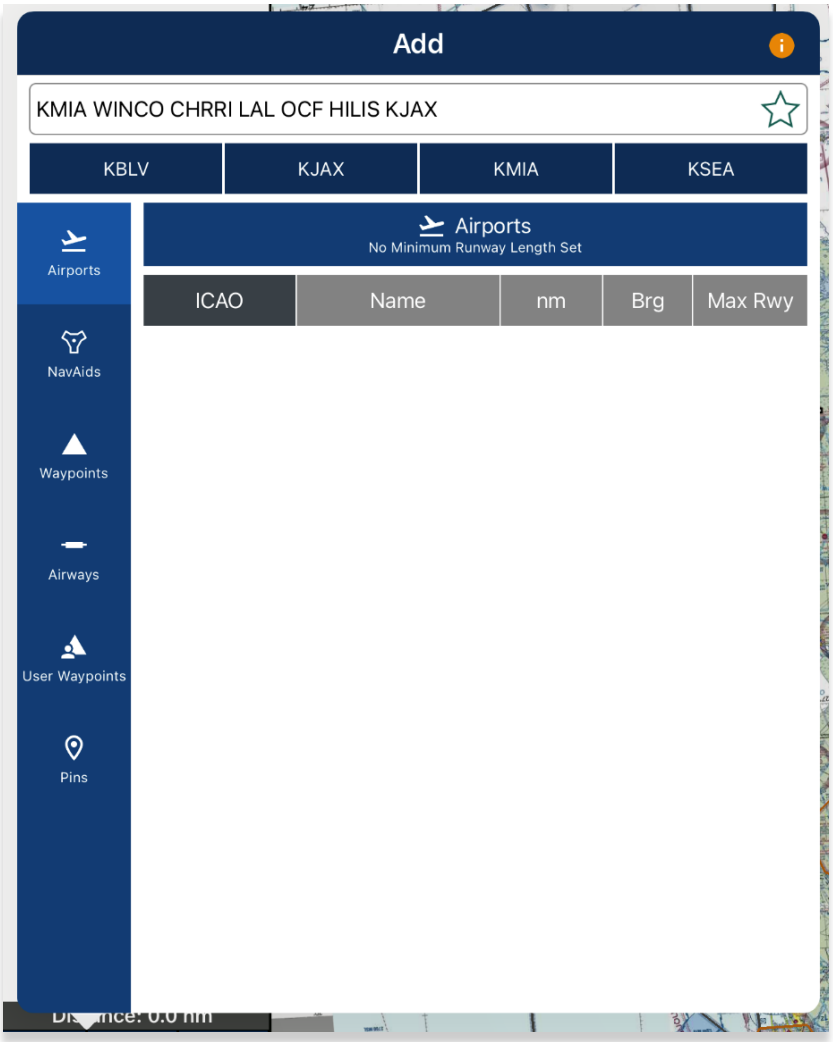
When points are added to the route, each point in the Route Panel will contain essential route information such as the identifier name, ETA/ETE, and distance and bearing. Aero App calculates the total distance of your route, which is displayed above the Route Panel options.



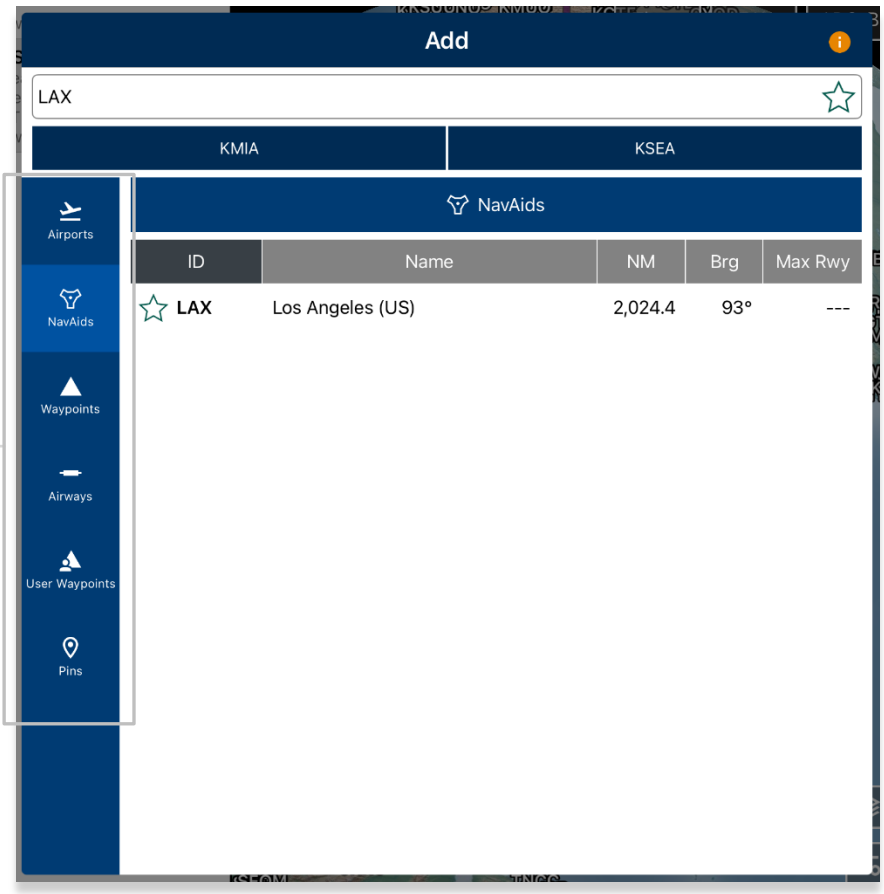
14.1 Add

The Add to Route feature allows users to create a route by adding Airports, NavAids, Waypoints, Airways, User Waypoints, Pins, MTRs, a full route, or enter coordinates in latitude and longitude, MGRS, GARS, 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 located at the bottom left of the Route Panel. The Add popup will display.
3. Search by entering an identifier, search term, or a full route. You can also enter coordinates in lat/lon, MGRS, GARS, or Radial format in the text box.
4. Tap **Go** from the device's on-screen keyboard and the entries will be added to the route. All entries are displayed in the Route Panel in the order they were entered.



5. If individual entries are entered, 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), MTRs, Airways, and Jetways. Each point includes the identifier name, frequency information (if available), distance, bearing, Estimated Time of Arrival (ETA), and Estimated Time En Route (ETE) to the next point in the route.

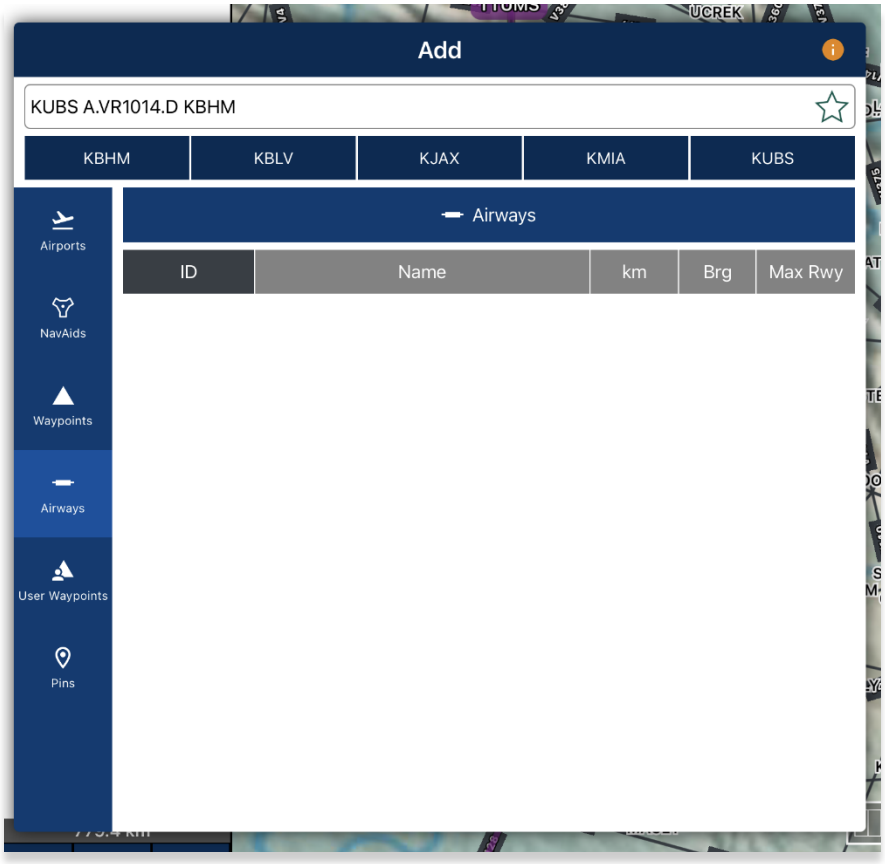
NOTE: To enter a route with multiple points, separate each identifier with a space. The points will be displayed in the order given. When adding multiple points to an existing route, they will be added at the end. This only applies when adding multiple points at once.

NOTE: When adding a new point (e.g., Airport, 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.

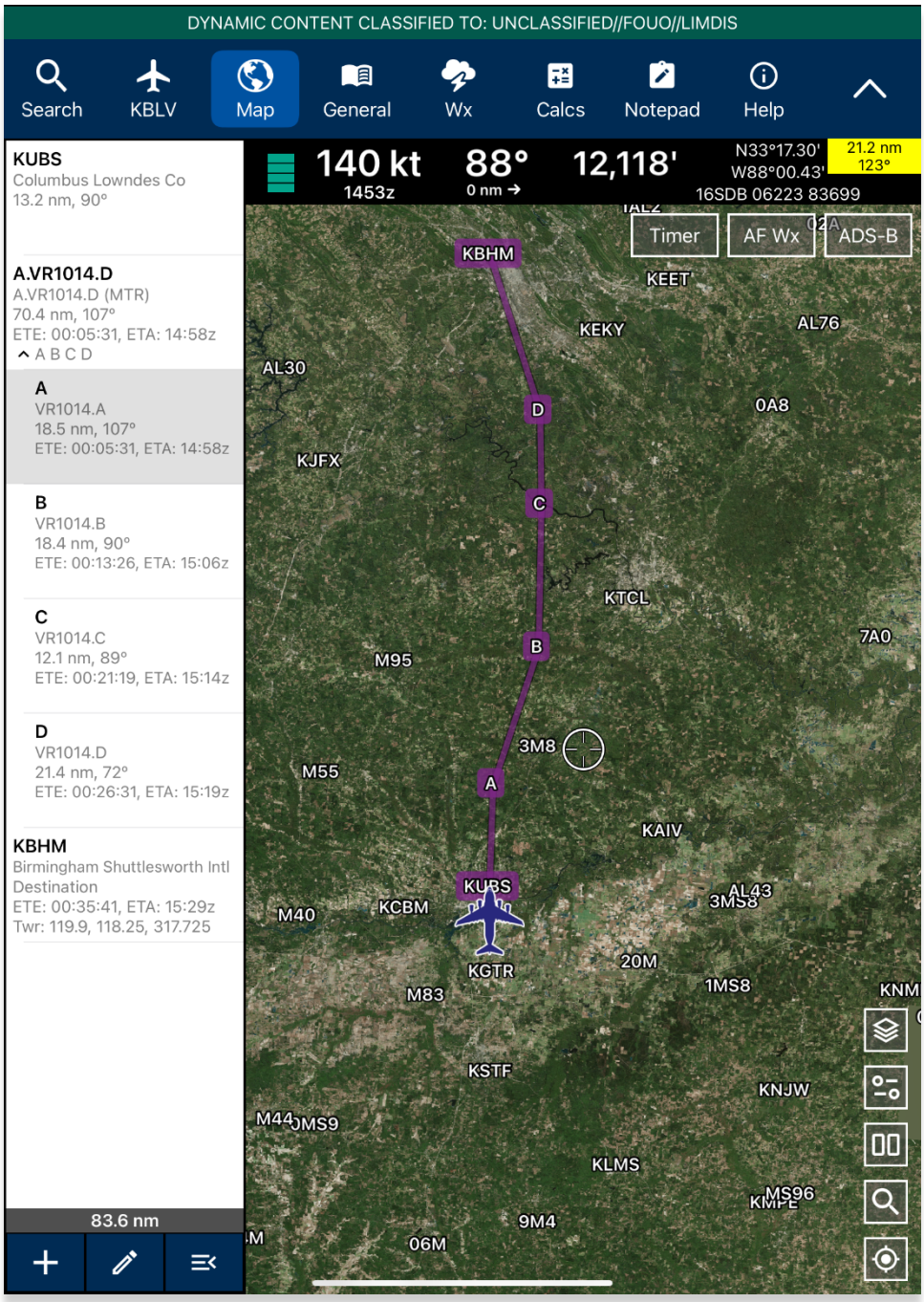
Add Military Training Routes (MTRs) to Route

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.



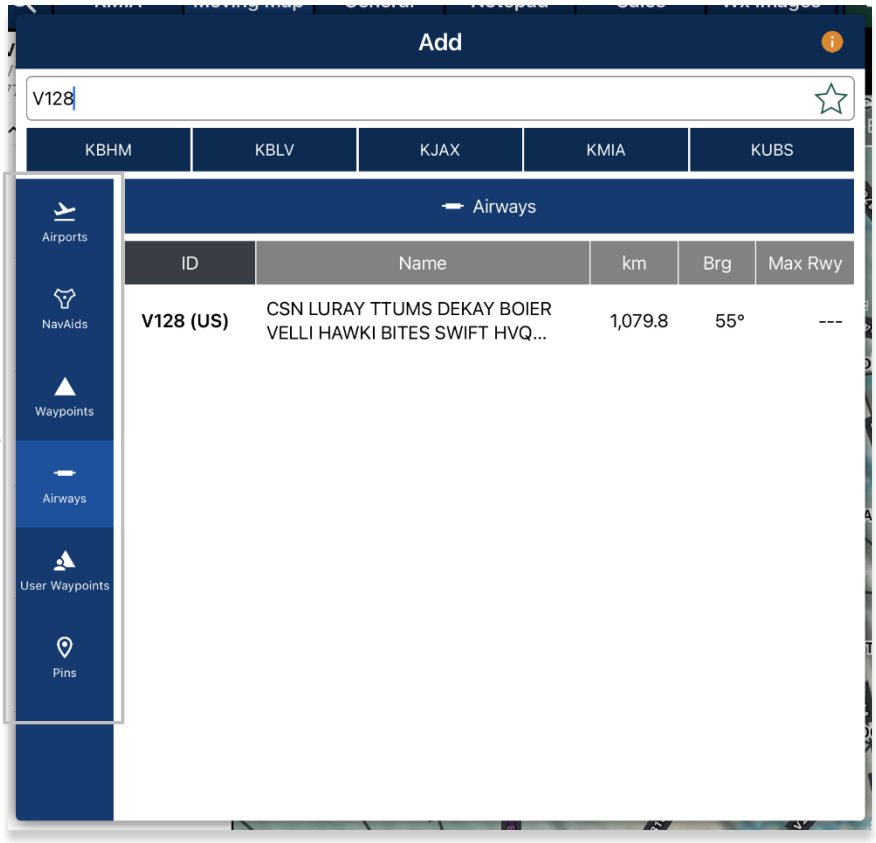
4. The MTR is added to the Route Panel and on the Map.



Add Airways to Route

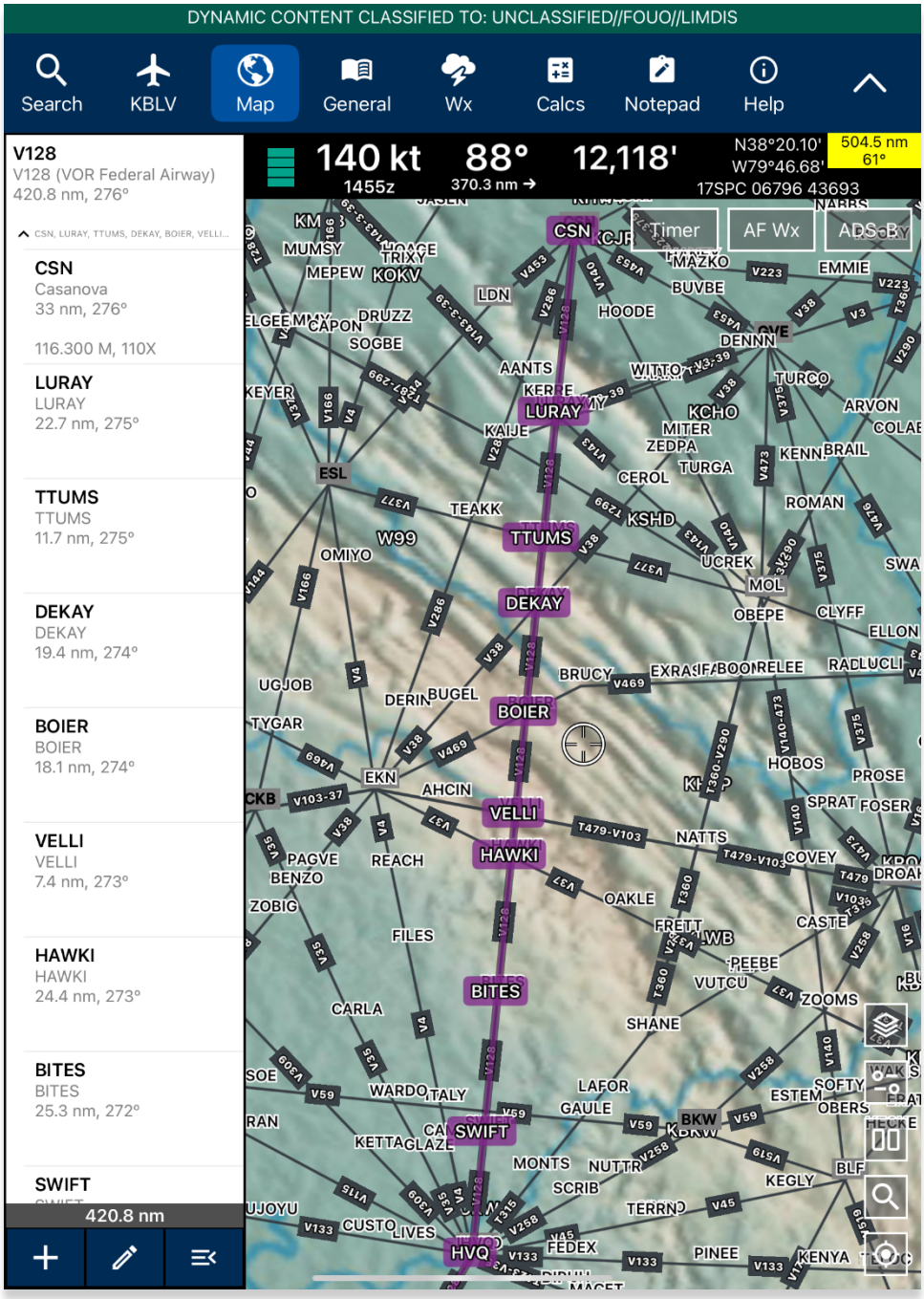
Users can add Airways to the route. There are several types of airways, each prefixed with a letter followed by one to three digits. Enter the desired airway in the search text box and the airway will be added to the route.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap the **Add** button.
3. Choose **Airways** from the identifier types to see results related to airways.
4. Use your device's on-screen keyboard to search and select desired Airways to add to the route.



Identifier Types

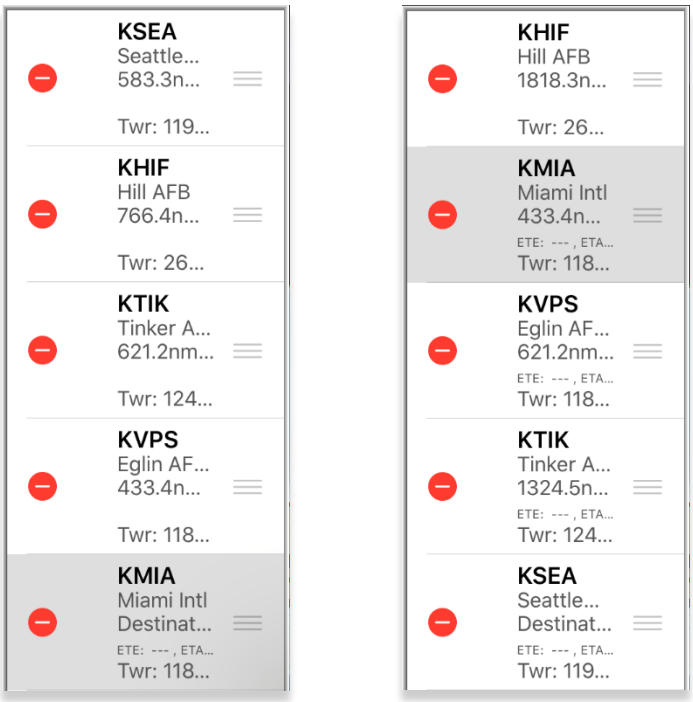
5. The Airway is added to the Route Panel and on the Map.



14.2 Edit

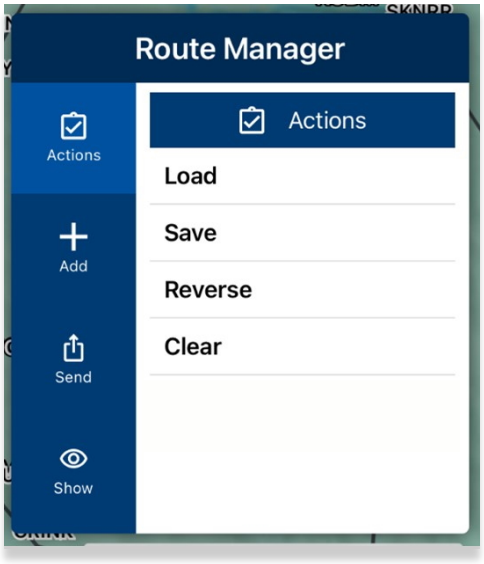
Aero App allows users to edit their flight route directly from the Route Panel. Users can reorder the points to their desired course or permanently delete a point from the route.

1. Tap **Route** on the ***Main Menu***.
2. Tap **Edit** located at the bottom center of the Route Panel, to the right of the Add button.
3. Hold the **Hamburger** button next to the identifier that you wish to move.
4. Drag the identifier to the desired route position.
5. Repeat steps until satisfied with the new flight route.
6. Tap on the **red circle** next to the entry that you wish to delete.
7. To delete a point from your flight route, tap the **red delete button** next to the entry you wish to permanently delete.



14.3 Route Manager

The 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.



14.3.1 Actions

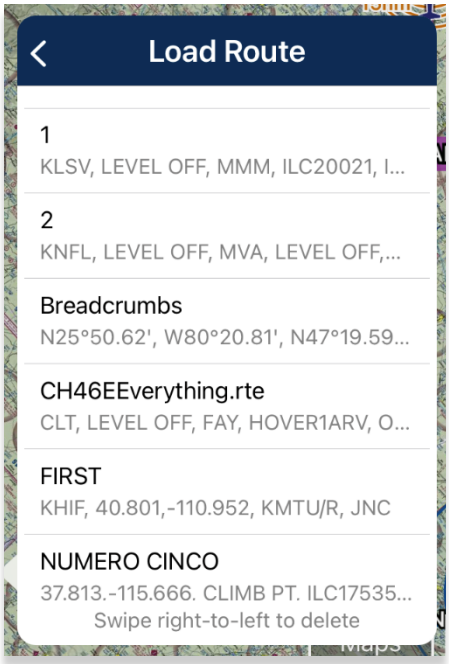
The Actions menu offers the following options and will be further discussed in the sections below:

- Load
- Save
- Reverse
- Clear

14.3.1.1 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** located at the bottom right of the Route Panel.
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.

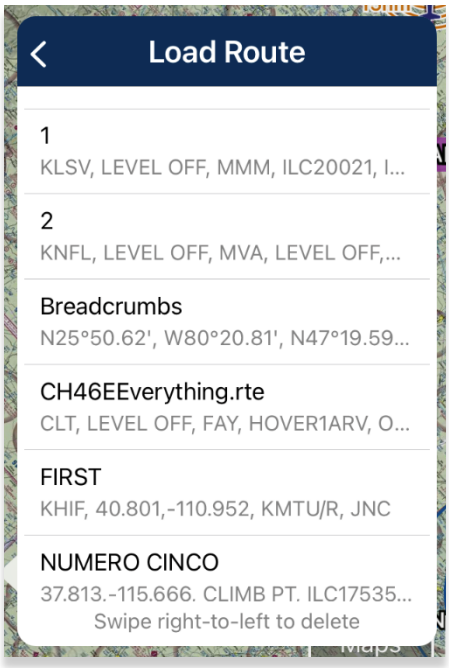
NOTE: Loading an empty route will result in Aero App clearing your current flight route.

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

Load a Common Route Definition (CRD) File

Aero App supports CRD files. CRD files must be sideloaded onto Aero App. Refer to Section 10.5 for additional information.

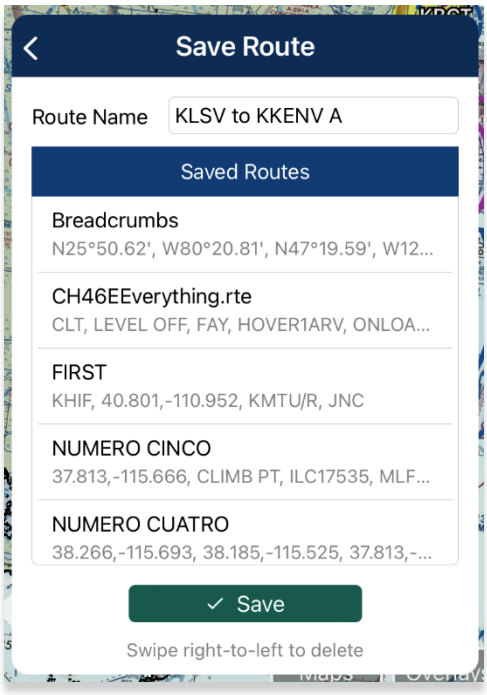
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Locate and tap the CRD files that were loaded onto Aero App. The selected route will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



14.3.1.2 Save Route

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

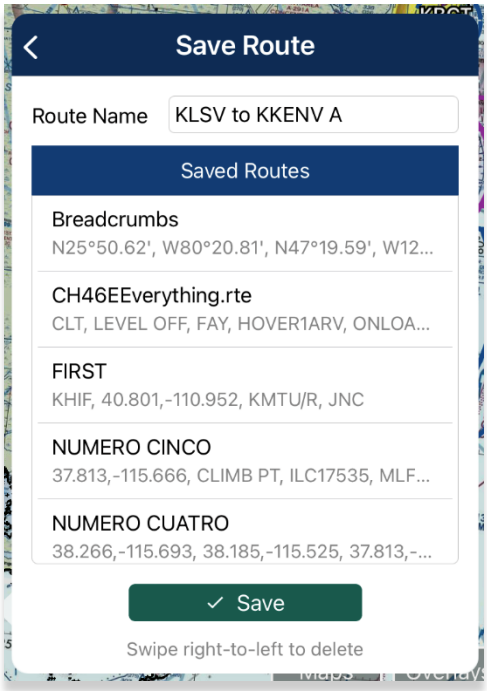
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Ensure that the route includes one or more points.
3. Tap **Route Manager** located at the bottom right of the Route Panel.
4. Select **Actions** from the side menu, if necessary.
5. Tap **Save**.
6. The Route Name will display 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 can only contain alphanumeric (lower and upper case) characters, spaces, and hyphens.

Save a CRD File

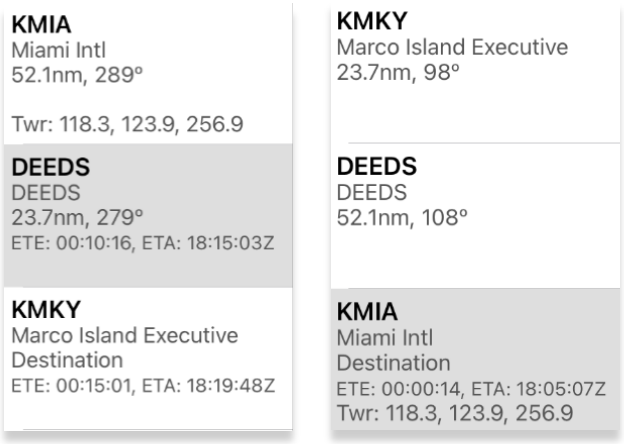
1. Tap **Route** on the ***Main Menu*.** The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Save.**
5. Tap in the *Route Name* text field and change the route's name to desired name.
6.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



14.3.1.3 Reverse Route

The Reverse option changes the order of the points in a route to the opposite sequence.

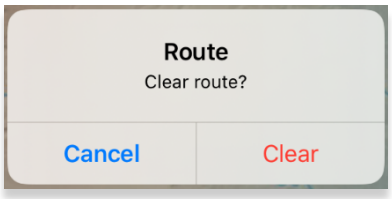
1. Tap **Route** on the ***Main Menu.*** The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Reverse**. The entire route is reversed.



14.3.1.4 Clear Route

The Clear option deletes the entire flight route from the Route Panel.

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

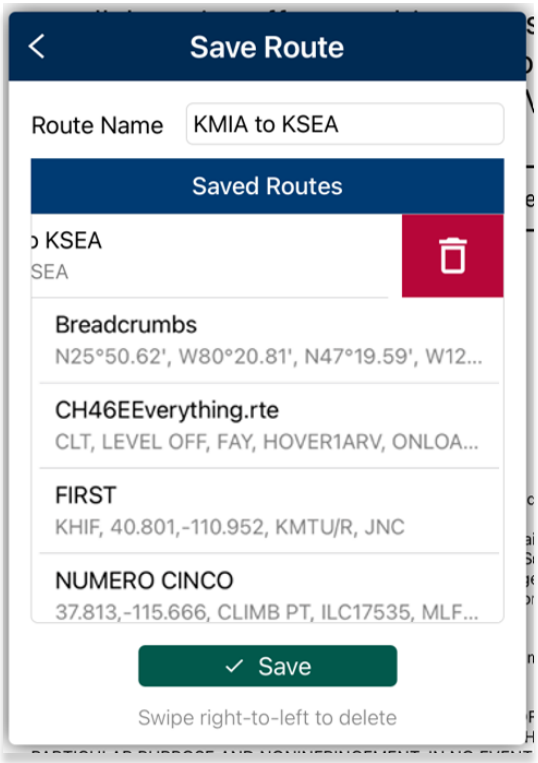


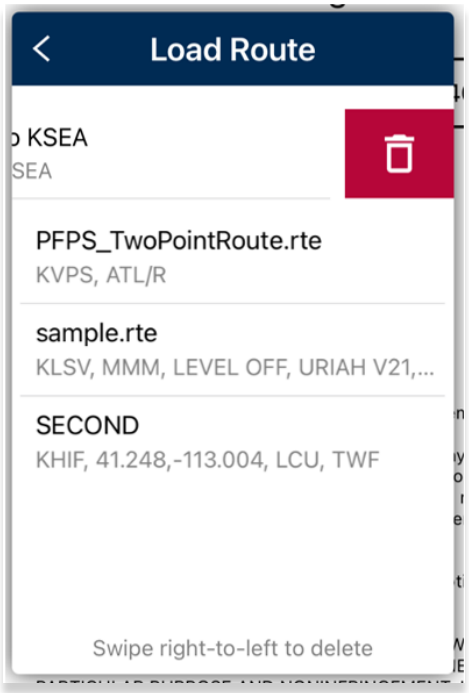
NOTE: Clearing a route clears the current route. It does not delete any saved routes.

14.3.1.5 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** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap the options ***Load*** or ***Save***.
5. To delete a file, from the *Load Route* or Save Route view, swipe left to reveal the *delete* button of the file that you choose to permanently remove. Tap **Delete**.
6. The delete confirmation popup will be displayed. Tap **Delete** to confirm action.





14.3.2 Add

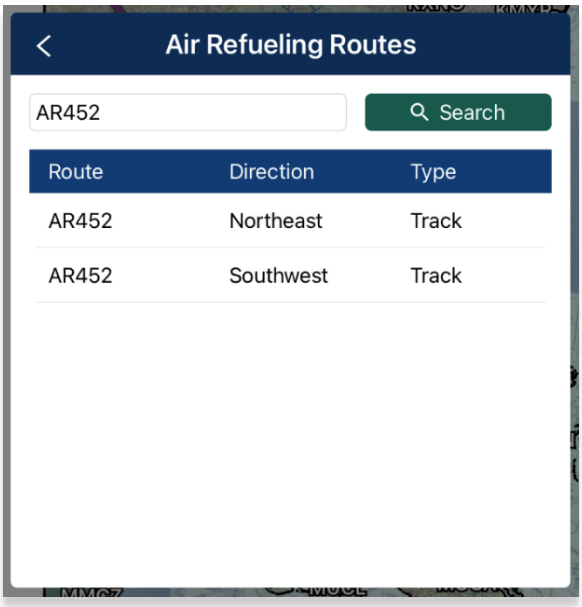
The Add menu offers the following features and will be further elaborated in the sections below:

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

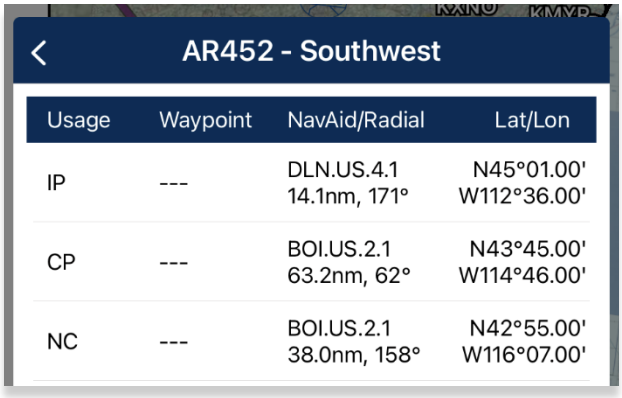
14.3.2.1 Add Air Refueling Route

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** located at the bottom right of the Route Panel.
3. Select **Add** from the side menu.
4. Tap **Air Refueling Route**.
5. An Air Refueling Route popup will be displayed. In the text field, enter an air refueling route. After three characters are entered, possible matches will be listed.
6. Tap **Search** once desired route it entered. Alternatively, users can select a route from the routes that appear under the search box.



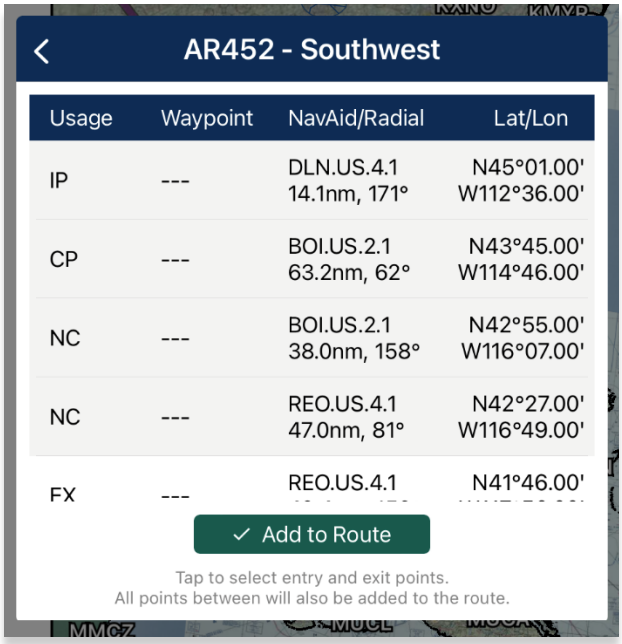
7. The points listed displays columns for Usage, Waypoint, NavAid/Radial and Lat/Lon.



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 another 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 entries, tap on another point, and repeat the steps.

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



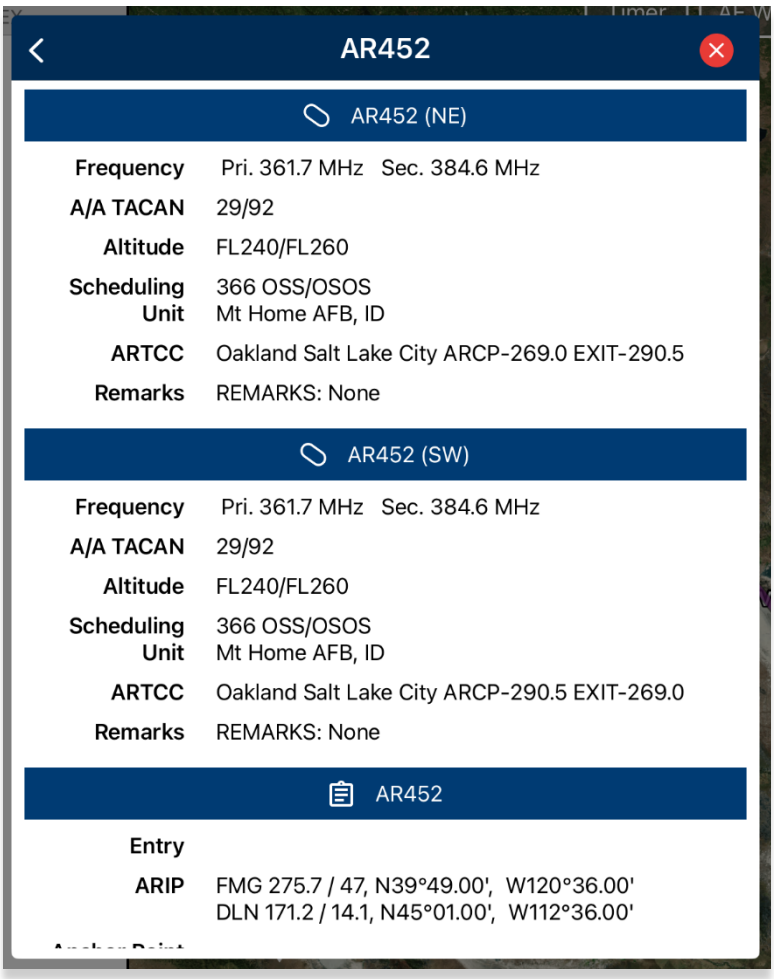
11. The points will populate the Route Panel and display on the Map.



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, Altitude, Scheduling Unit, ARTCC, and Remarks.

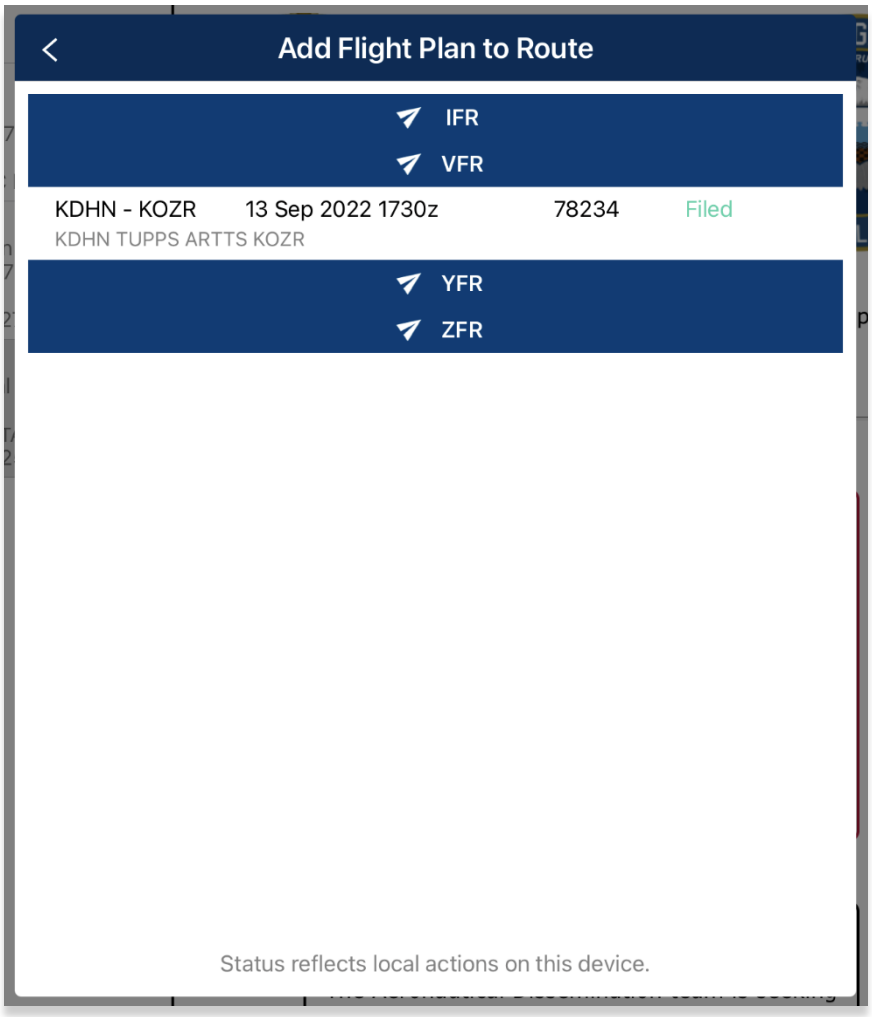
1. Navigate to the **Map** screen and tap on an air refueling route point.
2. The Identifier Menu will be displayed. Select **Show** from the side menu.
3. Tap **Info and Wx**.
4. The information view will display additional information such the air refueling route's Frequency, A/A TACAN, Altitude, Scheduling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



14.3.2.2 Flight Plan

Flight Plan is a collection of filed flight plans. Pilots can choose to add the flight plan to their current route.

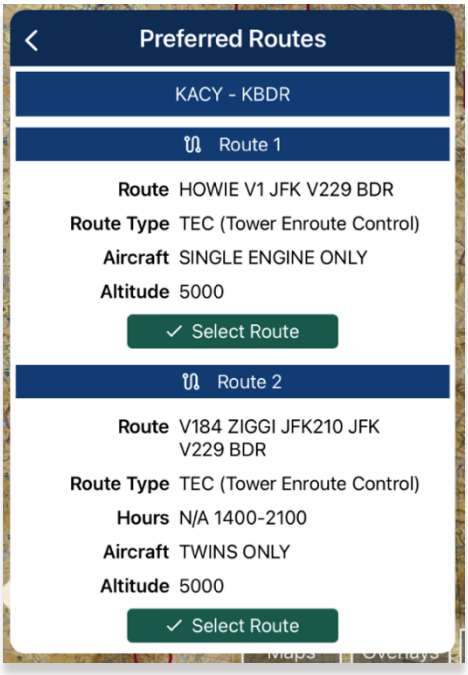
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Add** from the side menu.
4. Tap **Flight Plan**.
5. The *Add Flight Plan to Route* popup will be displayed. Tap desired flight plan and the filed route will populate to the current route.



14.3.2.3 Preferred Route

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. Enter a route in the Route Panel.
3. Tap **Route Manager** at the bottom right of the Route Panel view.
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.

NOTE: Some Preferred Routes contain intersecting radials. If the intersection point is reordered in the Route Panel, it will become a user waypoint.

Preferred Route with DP and STAR

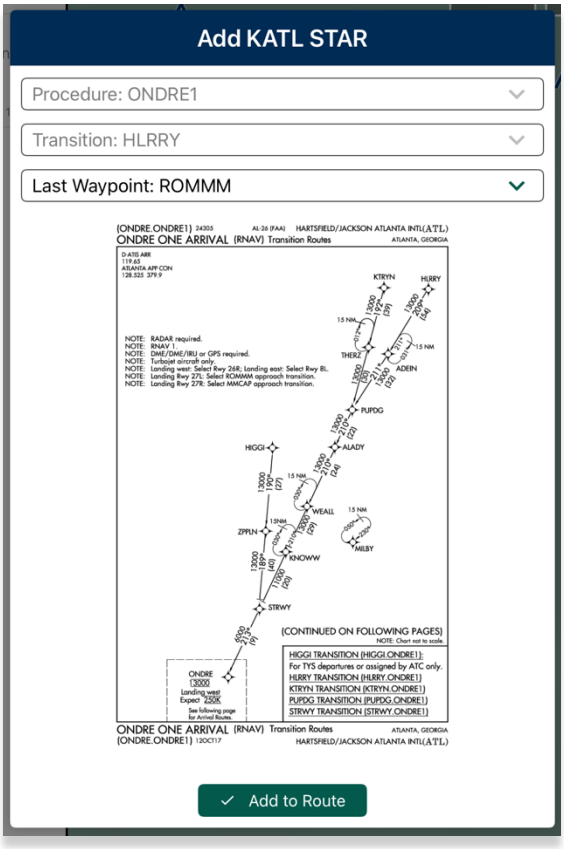
Aero App allows users to select a preferred route containing DPs or STARs, if applicable.

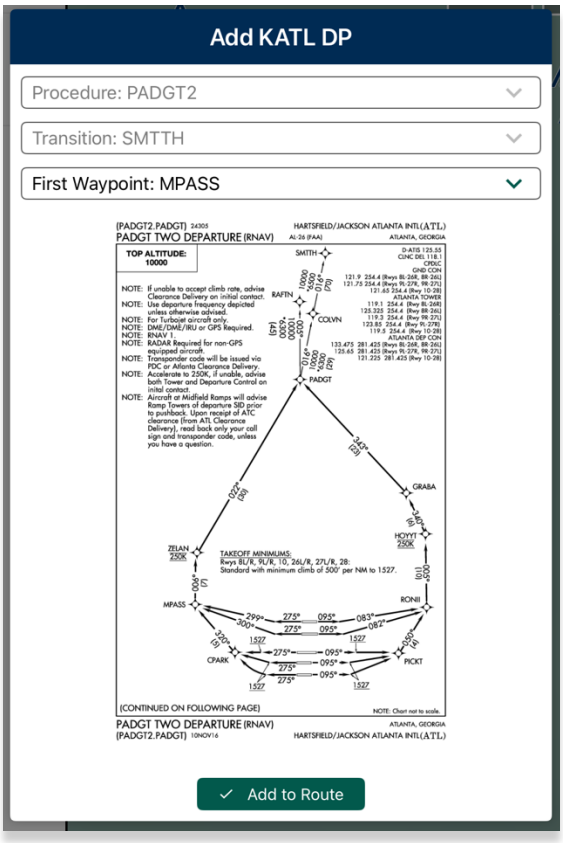
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Enter a route in the Route Panel**.**
3. Tap **Route Manager** at the bottom right of the Route Panel view.
4. Select **Add** from the side menu.
5. Tap **Preferred Route**.
6. A list of preferred routes will be displayed. Select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



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

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





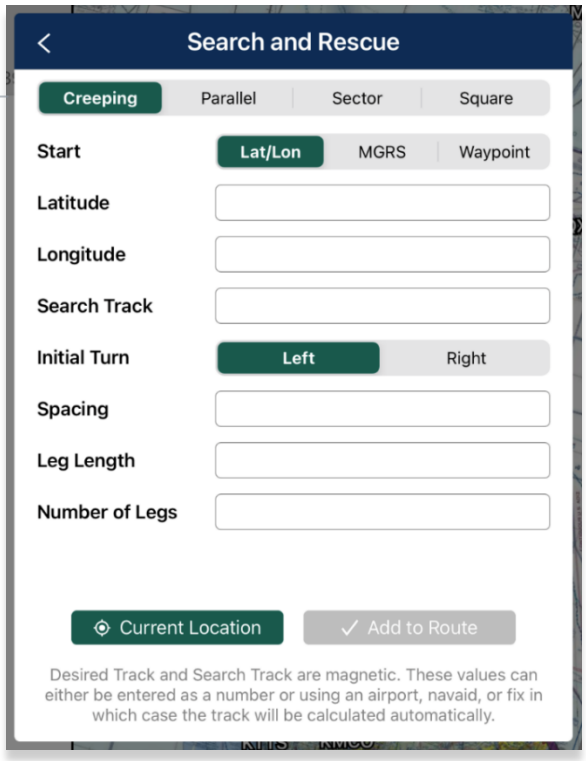
9. A Preferred Route dialog box will appear. Tap **Use Preferred Route** a new route will apply to your flight route.

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

14.3.2.4 Add Search and Rescue (SAR) Pattern

The Search and Rescue (SAR) feature allows pilots to create SAR patterns in a specific area to assist and support pilots during rescue missions. These search patterns, such as creeping, parallel, sector, and square are displayed on the Map and can be added to the current route.

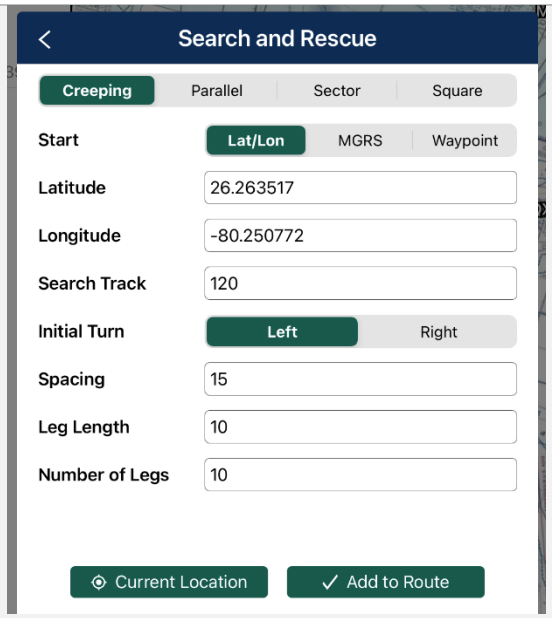
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
3. Select **Add** from the side menu.
4. Tap **SAR**.
5. Tap to select or slide the segmented control to **Creeping, Parallel, Sector,** or **Square**. Respective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



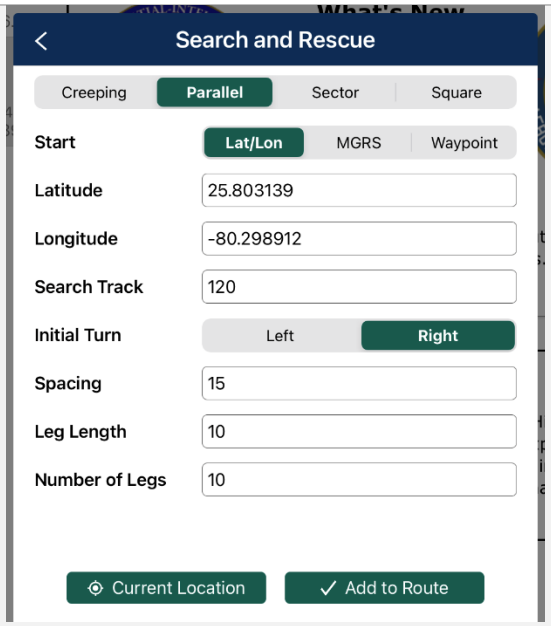
6. Tap to select or slide the segmented control to **Lat/Lon**, **MGRS**, or **Waypoint**.
7. Users can tap **Current Location** (GPS required) to set their current position as the coordinates or manually enter them in the Latitude and Longitude fields.
8. All fields are required; therefore, all fields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

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

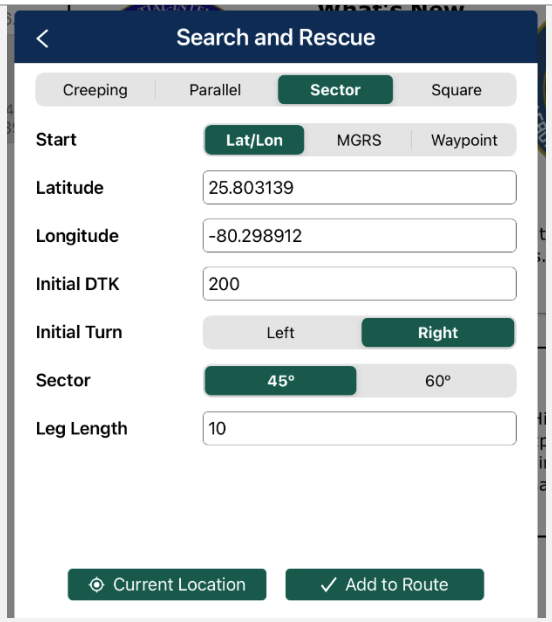
Creeping



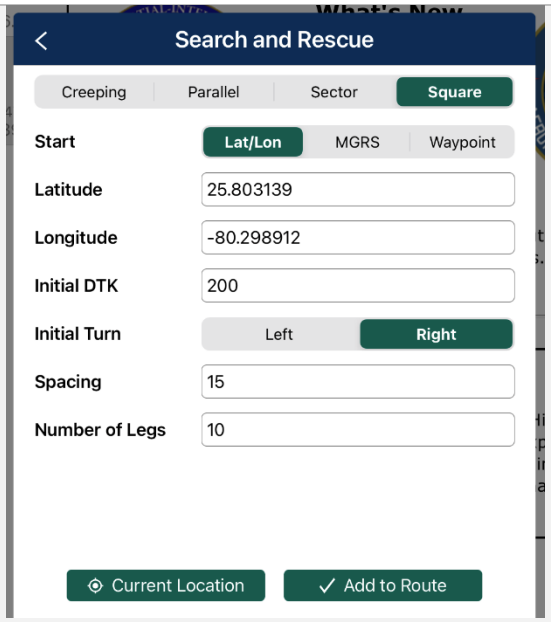
Parallel



Sector



Square



14.3.3 Send

The Send option enables users to share preloaded routes with their fellow pilots for enhanced collaboration and mission planning. The following options are available to users and will be further elaborated in the sections below:

- AirDrop
- File Flight Plan

14.3.3.1 AirDrop Route

Pilots can share routes with nearby teammates. The device receiving the files must have their AirDrop enabled. Different behaviors will occur depending on the device's operating system.

Send Route Using AirDrop

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
3. Select **Send** from the side menu.
4. Tap **AirDrop**.
5. Select the iPad to receive the route.

Receive Route Through AirDrop

1. The receiving iPad will receive a notification that a route is being sent via AirDrop.
2. Select **Set Route** to replace the current route with the route being received.
3. Select **Cancel** to dismiss the action.

14.3.3.2 Flight Plans

The Flight Plans feature on Aero App allows pilots to easily file and view their flight plans. Accessible through the Route Panel, flight plans are organized by IFR and VFR flight rules for quick reference. A navigation menu at the top lets users switch between Flight Plans, Aircraft, and Credentials views. To file or access plans, pilots need to connect to their Flight Service account. This feature is available exclusively for FAA and DOW users.

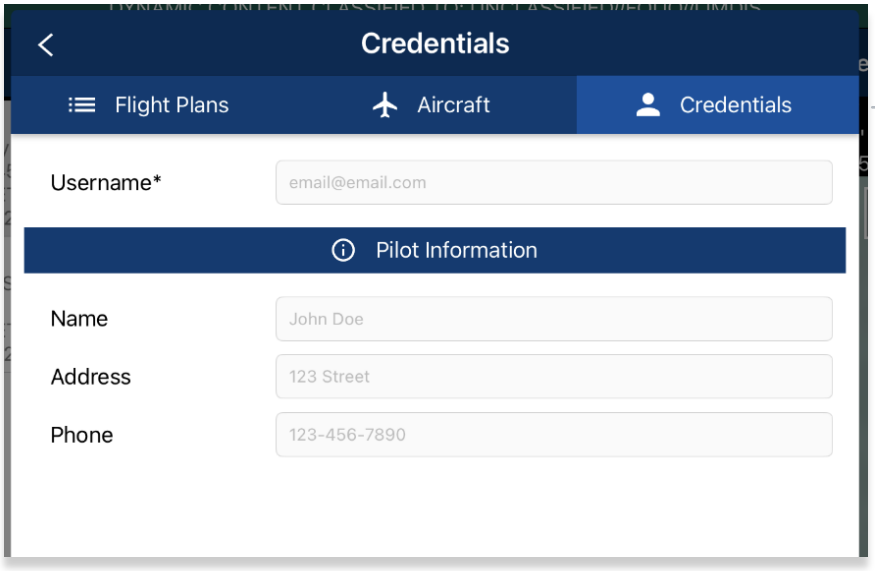
To access the Flight Plans feature:

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
3. Tap **Send** from the side menu, then select **File Flight Plan**.

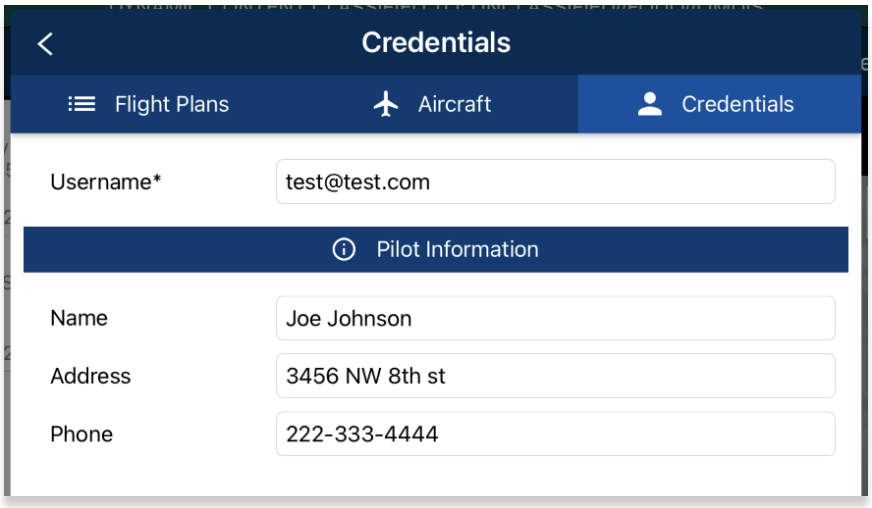
Credentials

To file flight plans or access flight plans that have been filed, user must have a Flight Service account. Refer to Section 5.3 for additional information. Ensure you are logged in to your account by entering the username and pilot information in the provided fields.

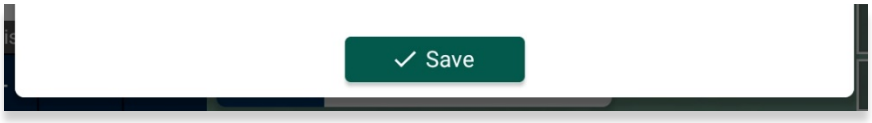
4. The top of the Flight Plans view contains a navigation menu. Select **Credentials**.
5. The fields are disabled. Tap **Edit** on the bottom of the Credentials view to enter edit mode.



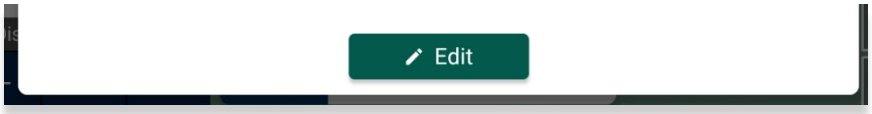
6. Enter the **username** of your Flight Service account.
7. Enter the **name**, **address**, and **phone number** associated with your account.



8. Tap **Save** once all fields are filled.



9. Tap **Edit** to make modifications.



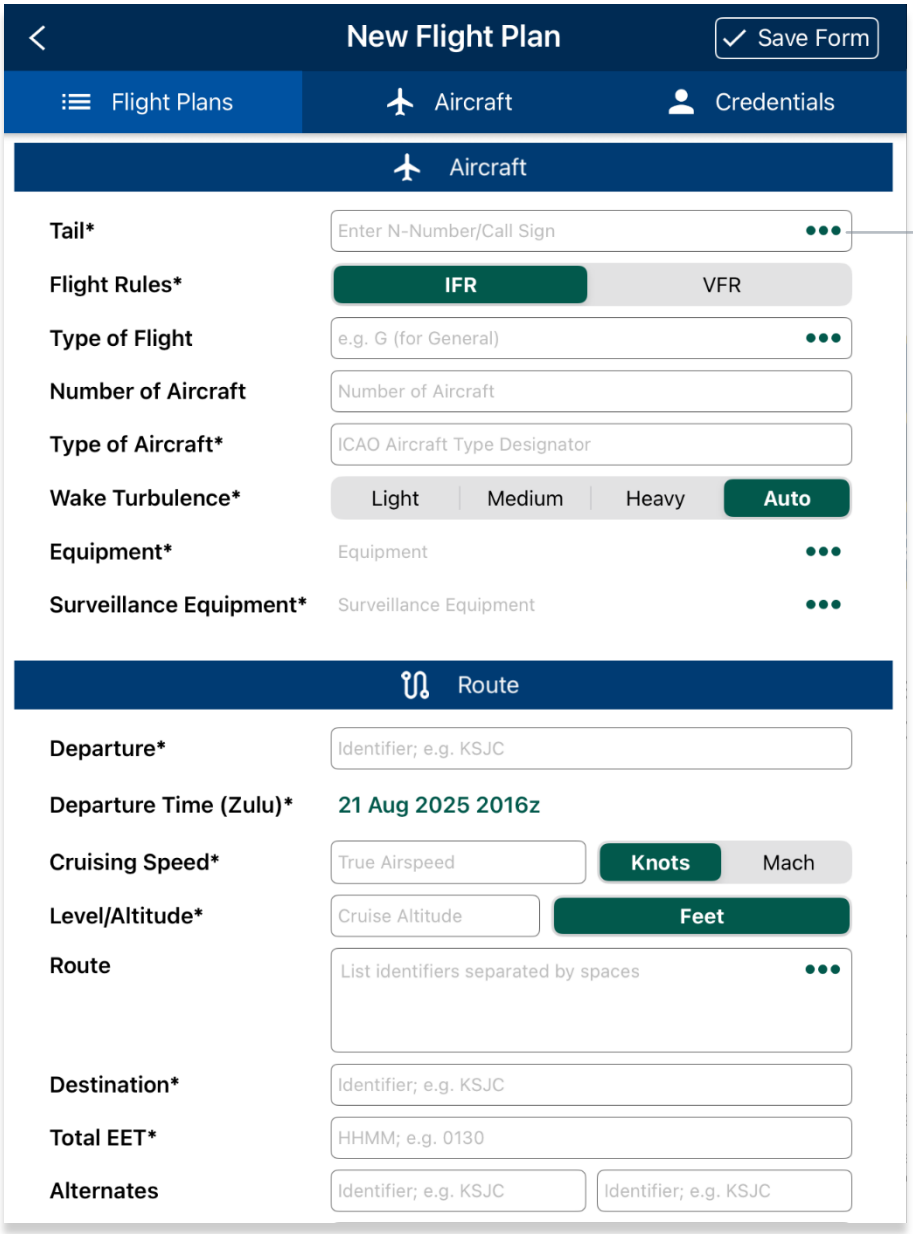
NOTE: Pilot information is required to file a flight plan and will automatically fill in the new flight plan form.

NOTE: Pilot information cannot be edited when filing a flight plan. To make changes, users must make updates on the Credentials page.

New Flight Plan

File flight plans directly through Aero App by filling the New Flight Plan form. Users can file new plans by tapping the "New" button at the bottom of the Flight Plans view.

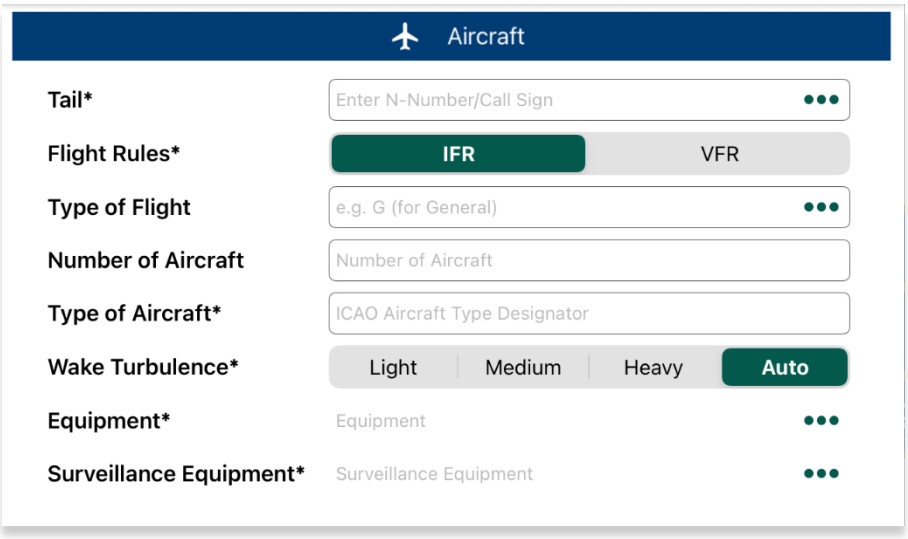
The form is divided into sections for *Aircraft*, *Route*, *Supplementary Information*, *Dinghies*, and *Additional Information*. Each field includes hint text, and some have an ellipsis button to display additional options. Fields with asterisks are required.



- **Aircraft** – The Aircraft portion of the form includes fields specific to your aircraft's details. To simplify the flight planning process, it is advised to create an aircraft in advance. To create a new aircraft, see the instructions in the Aircraft section. Once created, return to the New Flight Plan form. In the Tail field, tap the ellipsis, then choose your desired aircraft from the list. The aircraft details will automatically fill in the corresponding fields on the form. You can edit its details directly within the form if needed.

  Next, choose the ***Flight Rule*** to indicate the flight's operational requirements by selecting from IFR or VFR flight rules. ***Type of Flight*** specifies the nature of the flight. Tap the ellipsis to select the correct flight type code. Specify the ***Number of Aircraft*** and ***Type of Aircraft***, then select the ***Wake Turbulence*** intensity with options for Light, Medium, Heavy, or Auto.

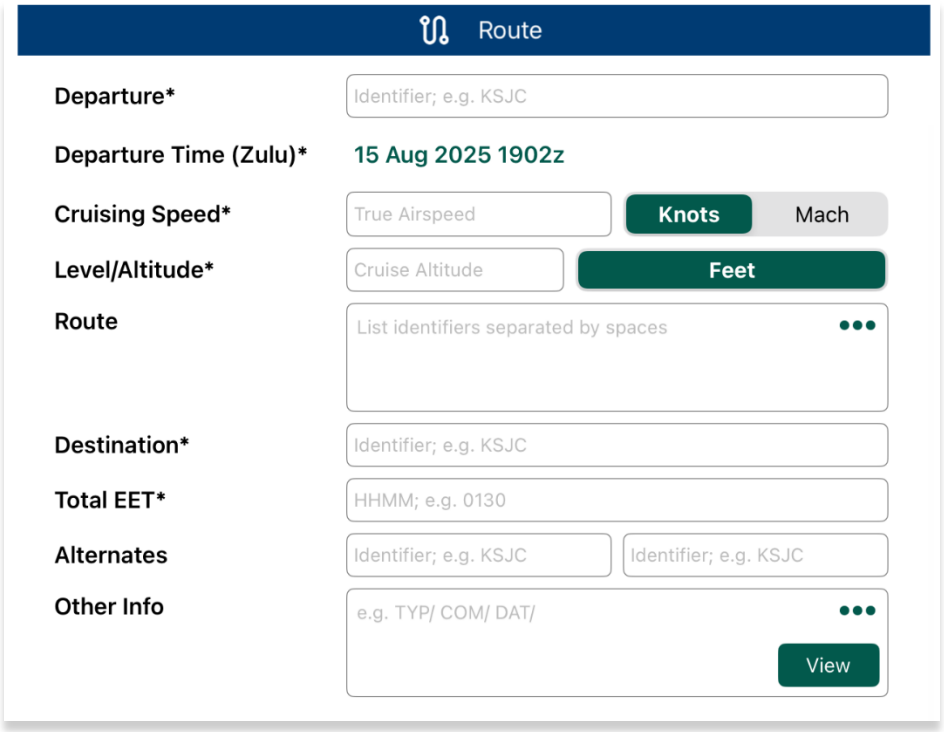
  If an aircraft has been selected, the ***Equipment*** and ***Surveillance Equipment*** fields should already be filled. If not, tap the ellipsis in each field to select the appropriate equipment codes manually.



- **Route** – In the Route portion of the form, enter the ***Departure*** Identifier, which is the code for the departure airport, and the ***Departure Time*** in Zulu (UTC) time. If an aircraft has been selected, the ***Cruising Speed*** field should already be filled. If not, specify the true airspeed, with options to select either Knots or Mach. You'll also indicate the ***Level/Altitude***, which refers to the cruise altitude for the majority of the flight. If needed, tap the Level/Altitude button to display additional cruise altitude units.

  The ***Route*** field allows for manual entry of identifiers, separated by spaces, or you can tap the ellipsis to display the Saved Route list (See Section 14.3.1.2). If a route is selected, the departure and destination points will automatically populate in their respective fields. Otherwise, manually enter the **destination** airport of your choice.

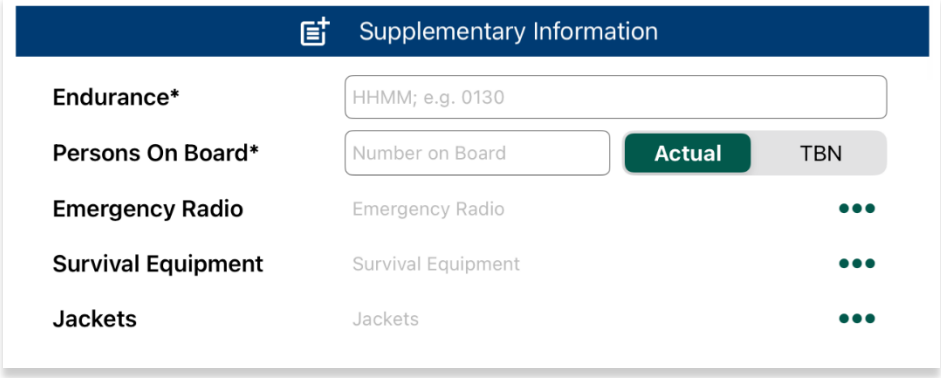
  In the ***Total EET*** (Estimated Elapsed Time) field, you'll enter the flight duration in HHMM format. The ***Alternates*** field provides space for two backup airports in case the planned destination airport becomes unsuitable for landing. The ***Other Info*** field should be filled if an aircraft has been selected. If needed, you can manually enter this information or tap the ellipsis to access additional details that may relate to your flight plan.



- **Supplementary Information** – The Supplementary Information portion of the form specifies details about the aircraft in case of emergency. In the ***Endurance*** field, enter the maximum time the aircraft can fly based on its current fuel load.

  Enter the ***Number of Persons*** onboard, including both passengers and crew members on the aircraft. The default selection is Actual, but if the exact number is not known at the time of filing, you can select TBN (To Be Notified).

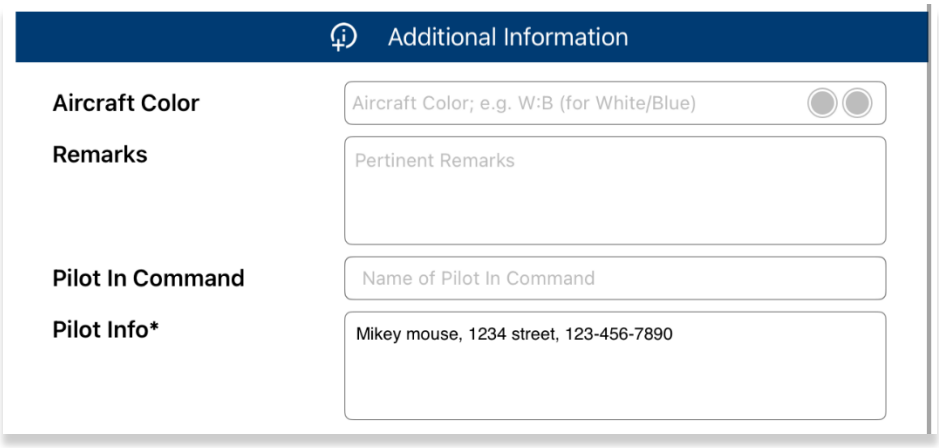
  The fields for ***Emergency Radio***, ***Survival Equipment***, and ***Jackets*** should be filled if an aircraft has been selected. If needed, tap the ellipsis to manually select the appropriate emergency equipment for each field.



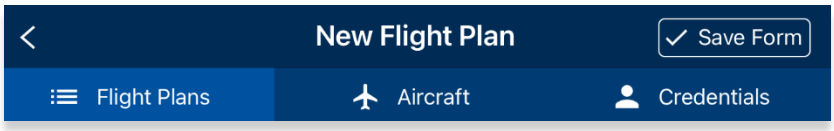
- **Dinghies** – The Dinghies portion of the form will be filled automatically if an aircraft has been selected. If not, enter the appropriate values for ***Number***, ***Capacity***, ***Cover***, and ***Color*** manually to specify the dinghies onboard.



- **Additional Information** – The Additional Information portion of the form specifies the ***Aircraft Color*** and any pertinent ***Remarks*** that apply to the aircraft or the flight itself. Enter the name of the ***Pilot In Command*** of the flight. If pilot details were previously entered on the Credentials page, the Pilot Information field will be automatically populated with that data.



Once all the required fields are filled, the *Send* button will become selectable. Tap **Send**, located at the bottom of the New Flight Plan form to file your flight plan. 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 new flight plan form before sending. Aero App will automatically save entered data whenever the view has accidentally been closed.

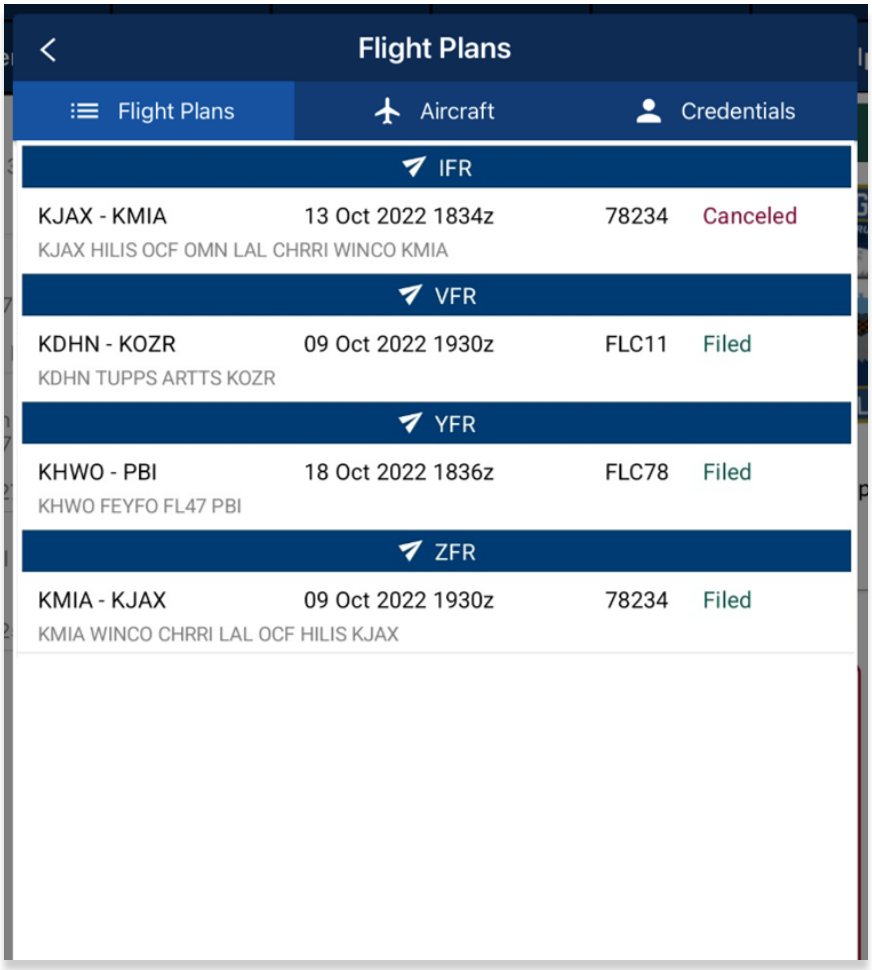


Filed Flight Plans

The Flight Plans page is the first view users see, showcasing filed flight plans organized into IFR and VFR categories. While Aero App no longer supports YFR and ZFR flight rules, any previously filed YFR and ZFR plans will remain in your Flight Plans list.

The Flight Plans view shows a table of filed plans, including departure and destination, filing date, tail number, status, and route. To the right of the Flight Plans view, you'll see the state of each filed plan, with possible statuses including:

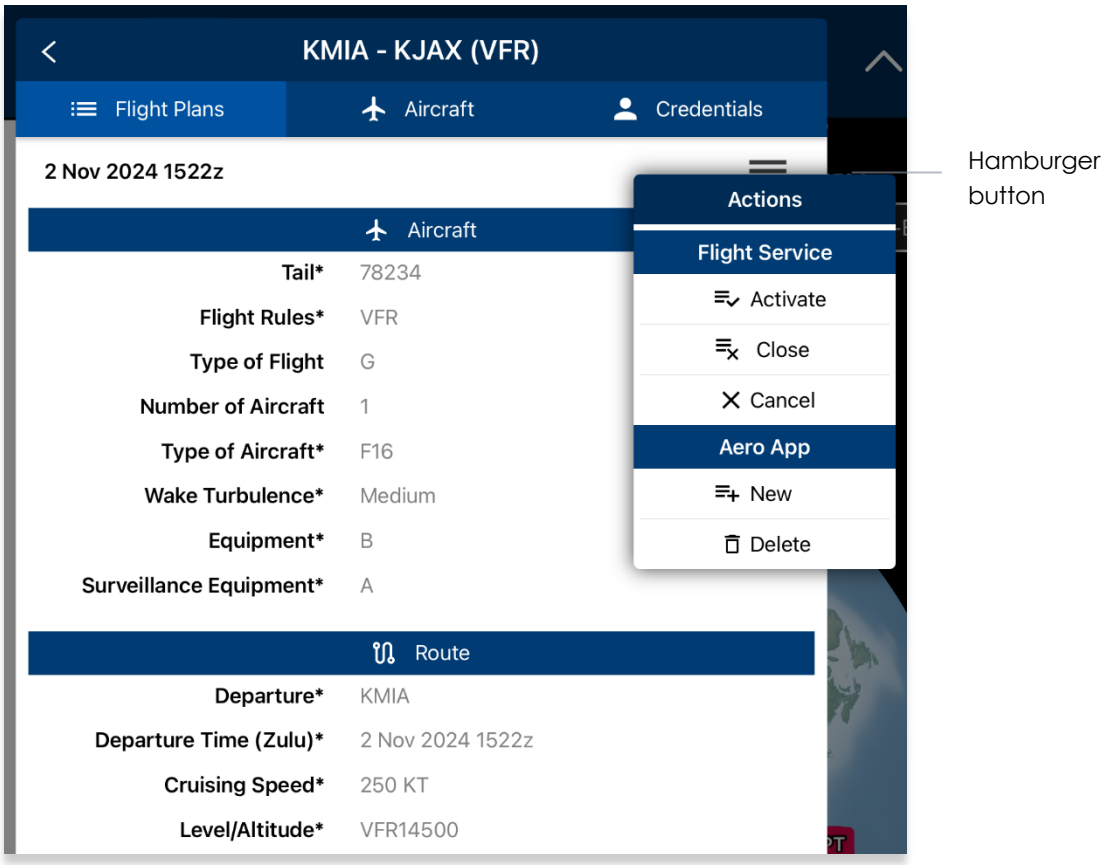
- **Activated** – flight has departed, and the flight plan is now active
- **Filed** – submitted to ATC, but flight has not yet departed
- **Closed** – plan is no longer active
- **Canceled** – plan was withdrawn by the pilot before departure



To view a filed flight plan, select desired plan. The Filed Flight Plan view will display with your flight plan information.

Tap the **hamburger button** to display the Actions menu, which includes the options listed below. For more details, refer to the section Actions for Filed Flight Plans:

- **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 view
- **Delete** – permanently removes the filed flight plan from the table



NOTE: IFR flight plans cannot be activated, but they can be canceled.

Aircraft

To simplify the flight planning process, users can create an aircraft directly within Aero App. When an aircraft is created, users can select the aircraft in the flight plans form. The aircraft information will automatically populate the corresponding fields, reducing the need for manual entry. All created aircraft are stored in the Aircraft table, where users can view and manage aircraft details as needed.

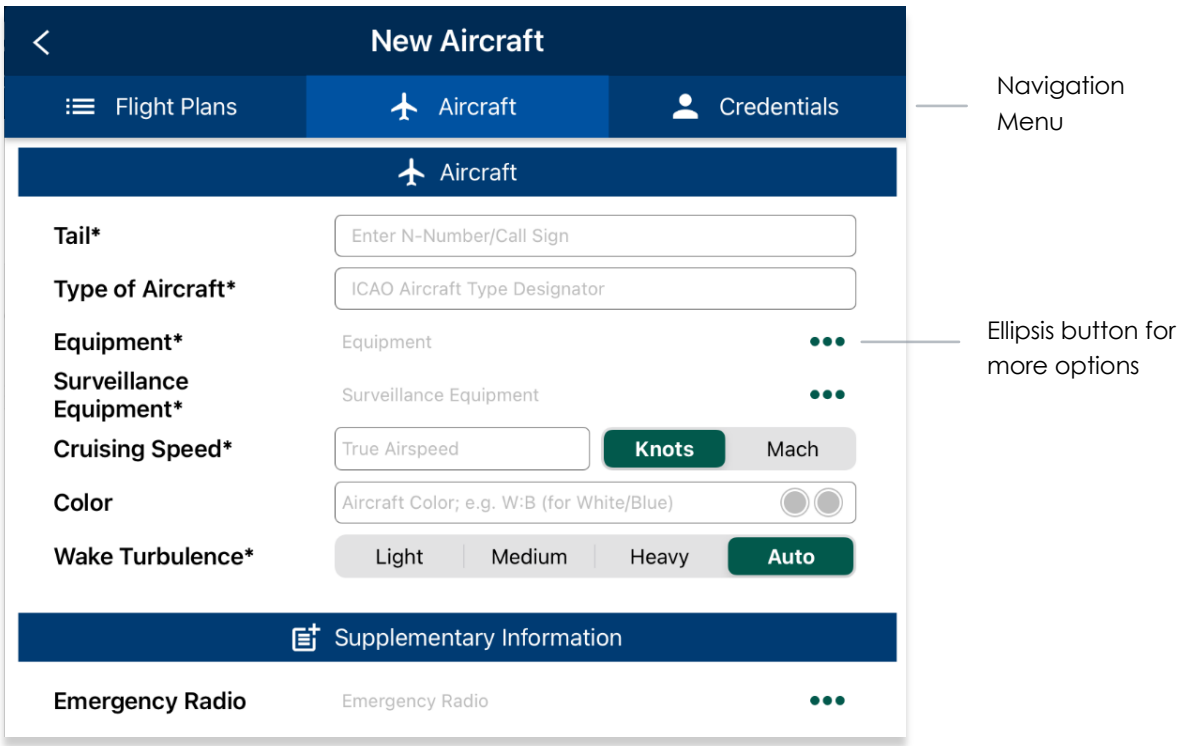
New Aircraft

The beginning section of the flight plan form requires aircraft information. Once the aircraft has been created, users can edit its details either directly on the New Flight Plan form or in the Aircraft view by selecting the Edit button.

To create a new aircraft through Aero App, follow the steps below:

1. The top of the Flight Plans view contains a navigation menu. Select **Aircraft**.
2. Tap **+ New** at the bottom of the Aircraft view.

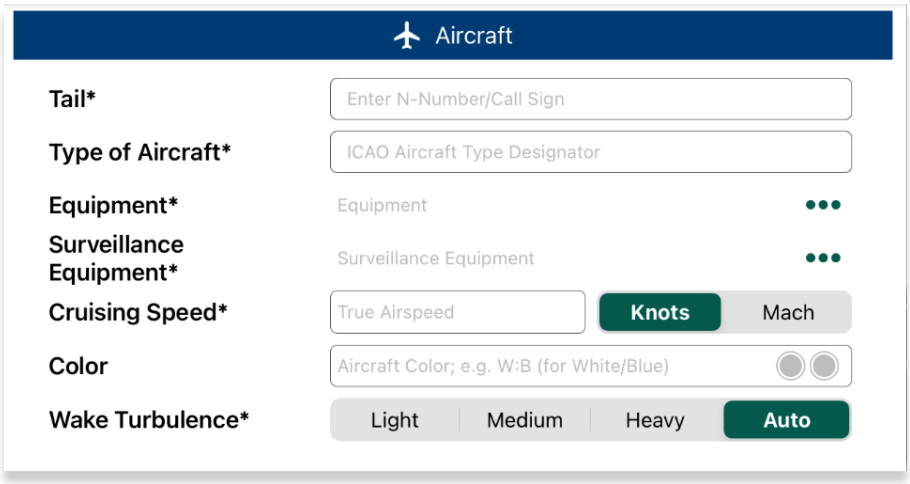
The New Aircraft form is divided into sections for Aircraft, Supplementary Information, and Dinghies. Each field includes hint text, and some have an ellipsis button to display additional options. Fields with asterisks are required.



- **Aircraft** – In the Aircraft portion of the form, enter the aircraft's ***Tail*** number (N-number/call sign). The tail length must be between two to seven characters. If the input is outside this range, an error message will be displayed.

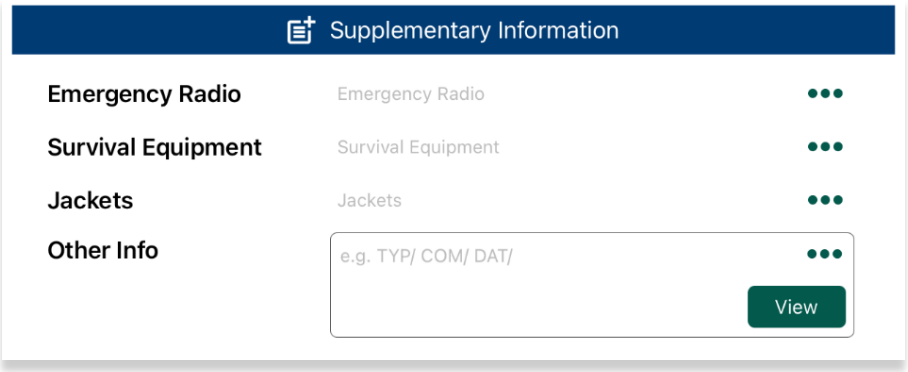
  Next, specify the ***Type of Aircraft*** by providing the model of the aircraft. In the ***Equipment*** and ***Surveillance Equipment*** fields, list any specialized equipment the aircraft carries. Tap the ellipsis to choose the relevant codes. Enter the ***Cruising Speed*** in true airspeed, with the option to select either Knots or Mach.

  To define the aircraft ***Color***, tap the color selector to open the Aircraft Colors menu and choose primary and secondary colors. Select the ***Wake Turbulence*** intensity, with options for Light, Medium, Heavy, or Auto.

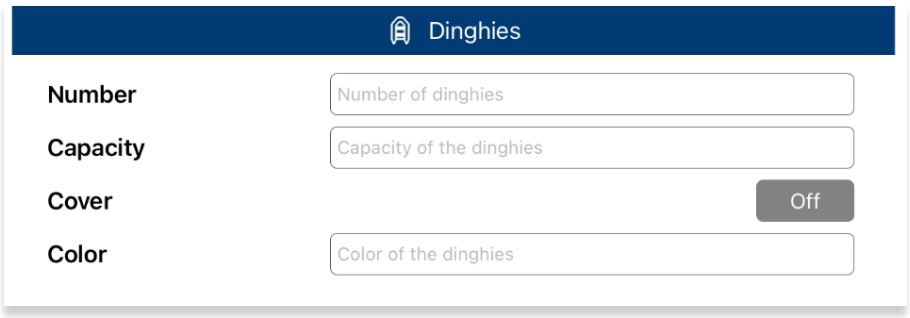


- **Supplementary Information** – The Supplementary Information portion of the form specifies details about the aircraft in case of emergency. To add aircraft equipment, tap the ellipsis icon and select the appropriate options from the menu. You can indicate whether the aircraft is equipped with an **Emergency Radio**, **Survival Equipment**, and/or **Life Jackets**, based on the suitable climate conditions.

  The ***Other Info*** field is used for any relevant details not covered in the other fields. You can manually enter this information or tap on the ellipsis to access additional options. Some entries may also include an arrow to view further specifications.



- **Dinghies** – The Dinghies portion of the form specifies the ***Number*** of dinghies carried onboard. Enter the total number of dinghies and their combined ***Capacity***, which is the total number of people the dinghies can accommodate. If there is more than one dingy onboard, add the capacity of all dinghies combined. Additionally, there is a switch button to indicate whether the dinghies are ***Covered*** or not. You will also need to specify the ***Color*** of the dinghies.



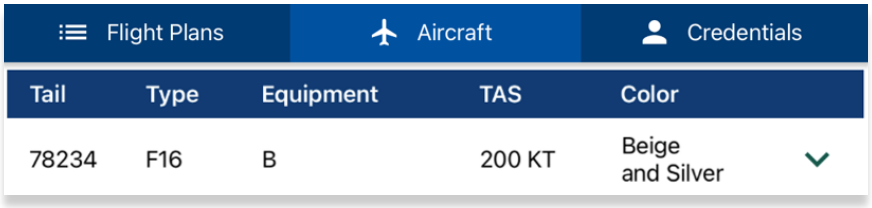
Once all the required fields are filled, the *Save* button will become selectable. Tap **Save**, located at the bottom of the New Aircraft form to save your aircraft information.



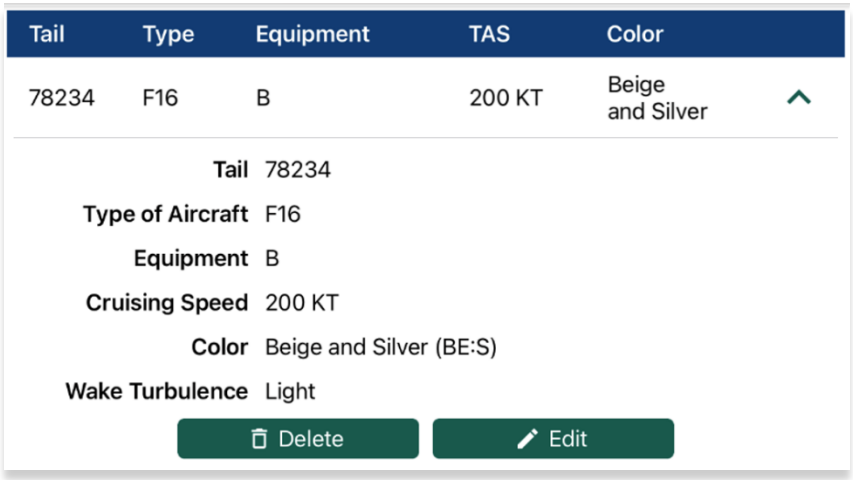
View/Modify Aircraft

Users can view and edit aircraft details directly in Aero App. The table displays a list of previously saved aircraft, showing key information such as tail number, aircraft type, aircraft equipment, TAS, and aircraft color. Expand each aircraft to reveal Wake Turbulence information and options to Edit or Delete the aircraft.

1. The top of the Flight Plans view contains a navigation menu. Select **Aircraft**.



2. Tap on the **aircraft row** to view aircraft information.
3. Tap **Edit** to modify an aircraft.
4. Tap **Delete** of the aircraft that you wish to permanently remove.
5. The delete confirmation popup for the aircraft will be displayed. Tap **Delete** to confirm action.



NOTE: Predefined aircraft, such as those imported from the FAA, cannot be edited or deleted. As a result, the Edit and Delete buttons will be disabled for the aircraft.

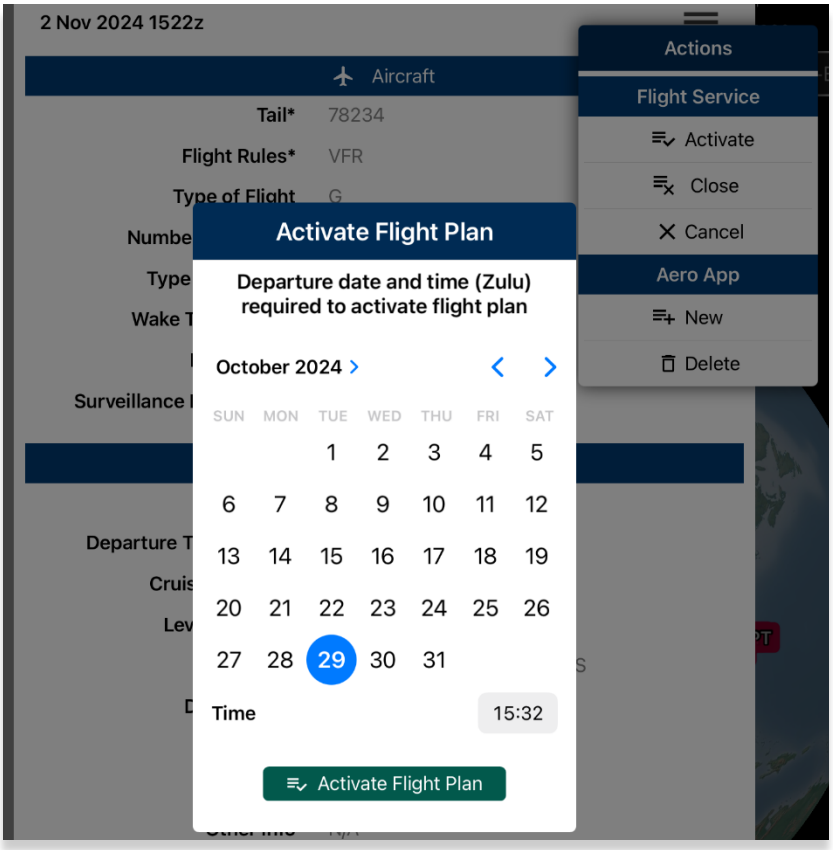
Actions for Filed Flight Plans

Actions for Filed Flight Plans in Aero App allow pilots to Activate, Close, or Cancel a filed flight plan directly within the app.

Requests to Activate, Close, or Cancel a flight plan are sent to the Flight Service provider. However, any changes made by the provider will *not* be reflected in Aero App. Additional actions such as *New* and *Delete* are also available. Selecting New will create a new flight plan using the details from the currently selected plan. Choosing Delete will remove the selected flight plan.

Note that Aero App no longer supports YFR and ZFR flight rules. If a user attempts to file a new flight plan based on one that previously used YFR or ZFR, a notification will appear. This message informs the user that YFR and ZFR are no longer supported, and IFR flight rules will be automatically selected instead.

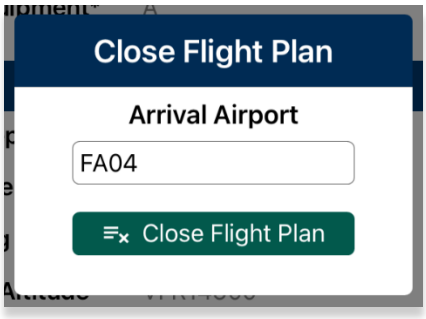
1. Tap the **hamburger** button to display the Actions menu.
2. Tap **Activate** to initiate the flight plan.
3. The Activate Flight Plan popup will appear. Select the desired **departure date** and **time** (Zulu).
4. Tap **Activate Flight Plan** to activate the flight plan.



5. To close the flight plan, return to the Actions menu and select **Close**.

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

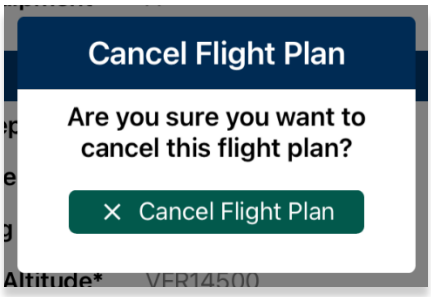
6. The Close Flight Plan popup will display. Enter the **arrival airport** of your flight plan. The nearest airport will be suggested as the arrival airport. To remove the suggested airport, enter the desired arrival airport in the text field.
7. Tap **Close Flight Plan** to confirm the action.



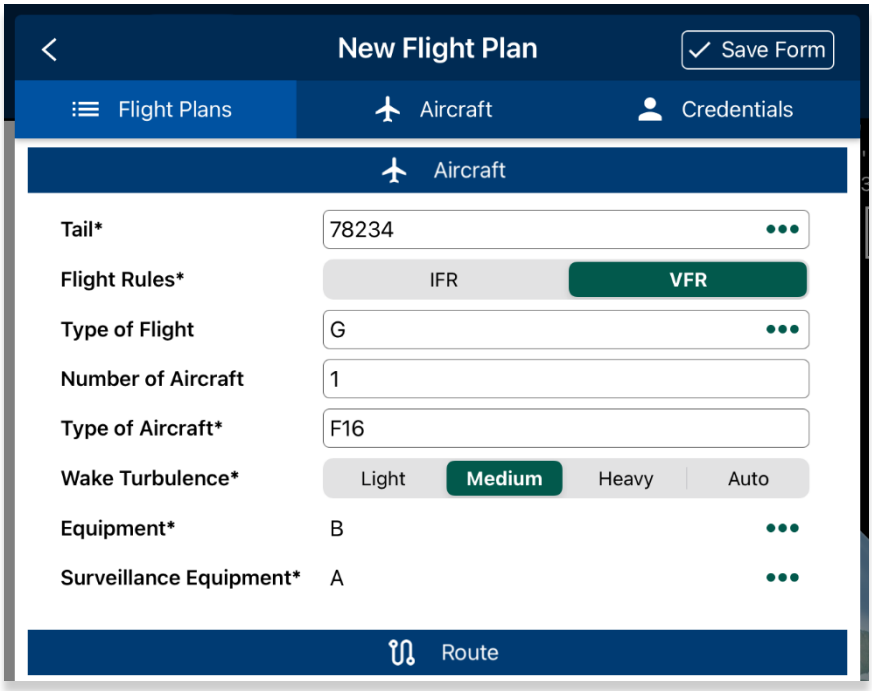
8. To cancel the flight plan, return to the Actions menu and select **Cancel**.

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

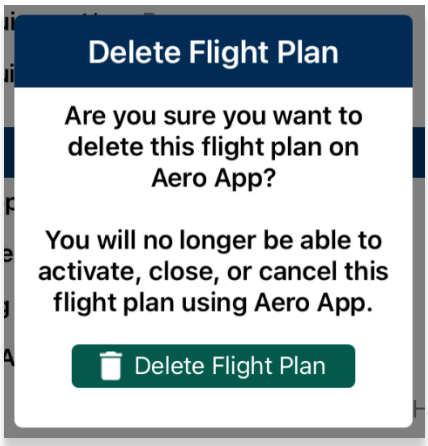
9. The Cancel Flight Plan popup confirmation will be displayed. Tap **Cancel Flight Plan** to confirm action.



10. To create a new flight plan, return to the Actions menu and select **New**.
11. Users will be redirected to the New Flight Plan form. The selected Flight Plan's information will populate onto the form.



12. To permanently remove the flight plan from Aero App, return to the Actions menu and select **Delete**.
13. The Delete Flight Plan popup confirmation will be displayed. Tap **Delete Flight Plan** to confirm action.
14. Tap outside of the popup to cancel the action.



14.3.4 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

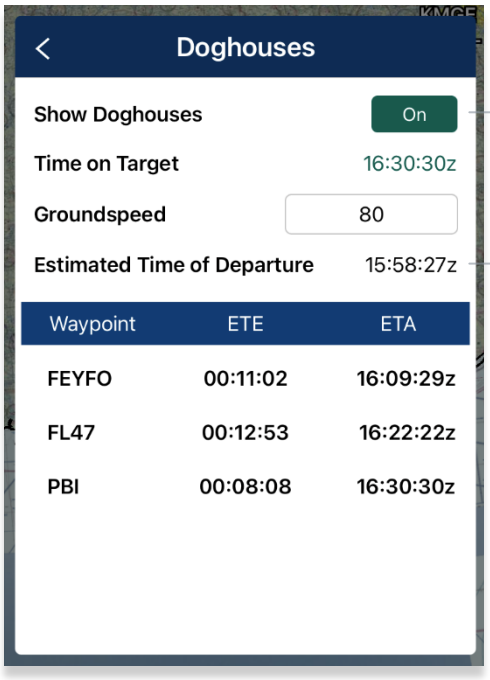
14.3.4.1 Doghouses

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 will be displayed for every point loaded in the route.

Once the Doghouses feature is enabled, doghouses will appear on the Map for each segment between points. The doghouses disappear when the ownship reaches the most advanced point of each segment.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
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.



NOTE: Entering a decimal number in the Groundspeed field will trigger an error message. Ensure that only whole numbers are entered.

NOTE: For points outside the U.S., Doghouses include a country code extension. For example, the waypoint DRAKE in Chile is displayed as DRAKE.CL.

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.

9. Tap outside of the Doghouses popup, and a doghouse will be assigned to each point on the active route on the Map.



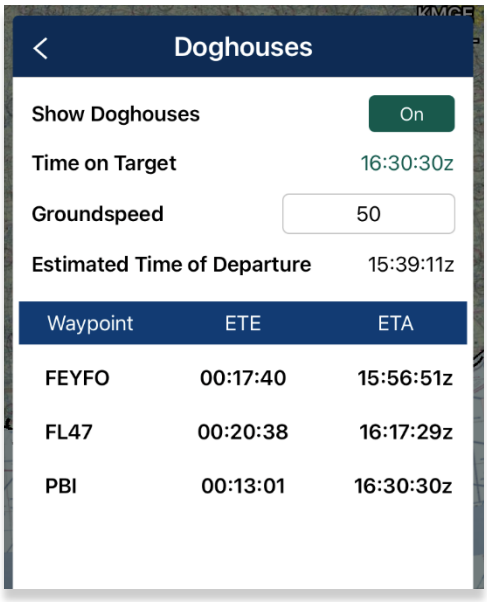
NOTE: Users may need to zoom in at least 40 miles to view Doghouses.

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**".

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 with the new values.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
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 field and enter your new groundspeed in knots.



NOTE: Entering a decimal number in the Groundspeed field will trigger an error message. Ensure that only whole numbers are entered.

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 ETE and ETA will recalculate based on the adjusted time and groundspeed.

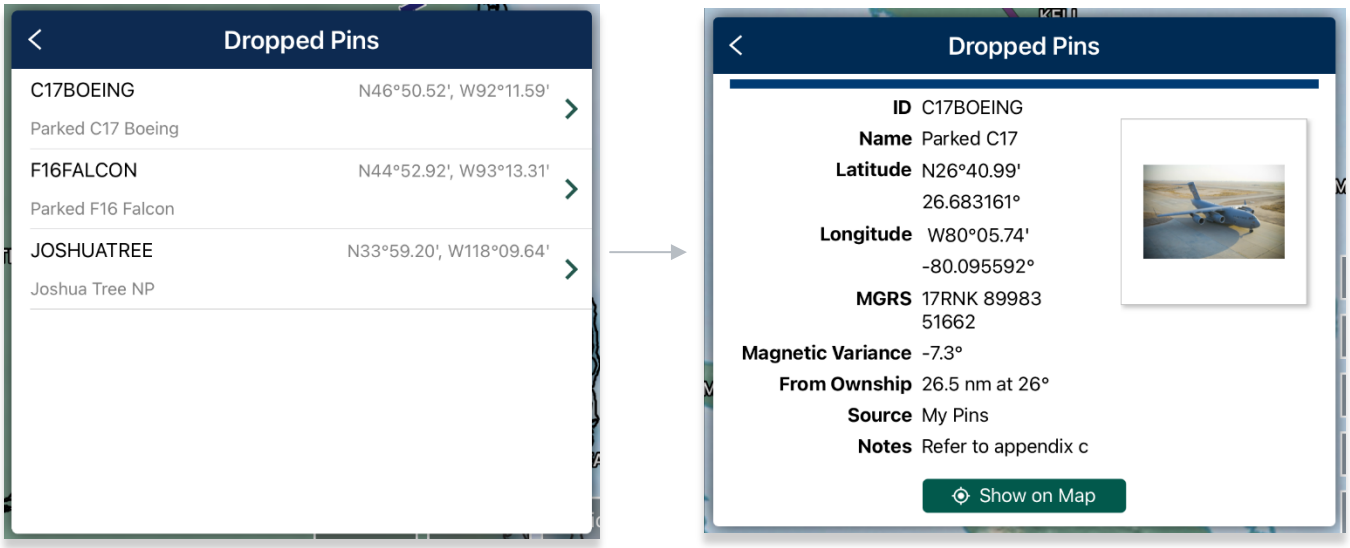
NOTE: Alternatively, users can tap on the Doghouses displayed on the Map to view the Doghouses popup.

14.3.4.2 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.

Refer to Section 25.1.3 to drop a new pin on a location.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
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.
8. To delete a dropped pin, return to the list of pins. Swipe left to reveal the delete button of the pin that you choose to permanently remove. Tap **Delete**.
9. The delete confirmation popup for the selected pin will be displayed. Tap **Delete** to confirm action. The pin will be removed from the list.

NOTE: To view the dropped pins on the Map, users must enable Pins from the Overlays menu. Refer to Section 18.2.1.19 for additional information. This is exclusive to Pin. Refer to Section 18.2.1.27 for Photo Pins.

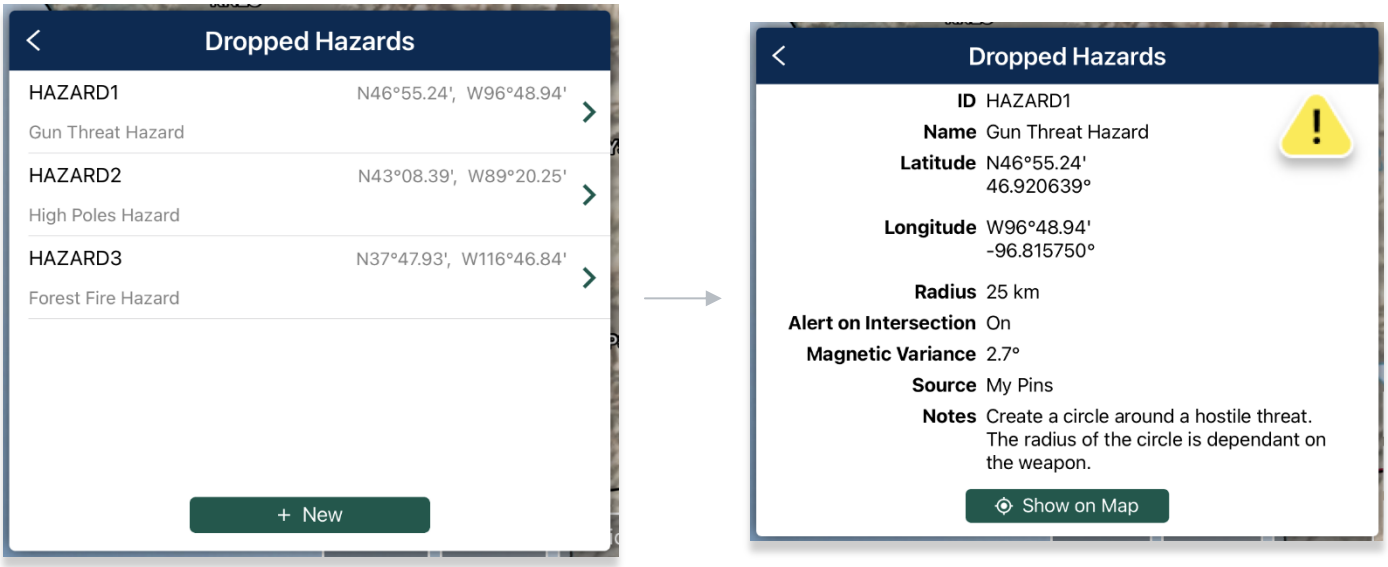
NOTE: Users can add pins to their route. Refer to Add Pin to Route for additional information.

14.3.4.3 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 25.1.4 for additional information.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
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.
7. To delete a dropped hazard, return to the list of hazards. Swipe left to reveal the delete button of the hazard that you choose to permanently remove. Tap **Delete**.
8. The delete confirmation popup for the selected hazard will be displayed. Tap **Delete** to confirm action. The hazard will be removed from the list.

NOTE: To view dropped hazards on the Map, users must enable Hazards from the Overlays menu. Refer to Section 18.2.1.13 for additional information.

14.3.4.4 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 position of each point in the 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.

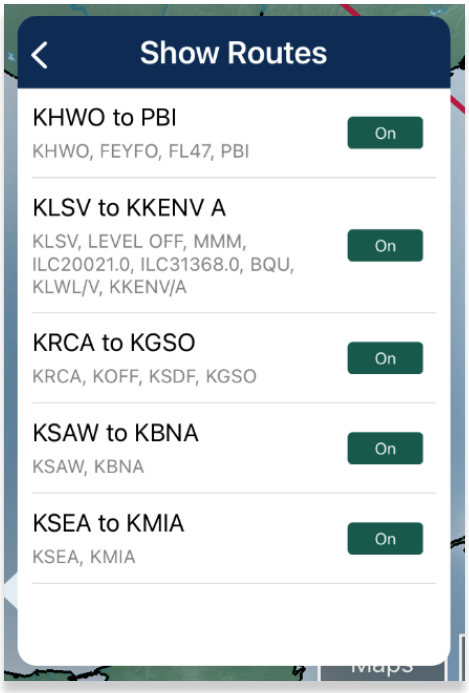
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
3. Select **Show** from the side menu.
4. Tap **Point Shapes** to enable the option.
5. The respective point shapes will appear on the Map.



14.3.4.5 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** at the bottom right of the Route Panel view.
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.

6. Multiple routes can be 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.

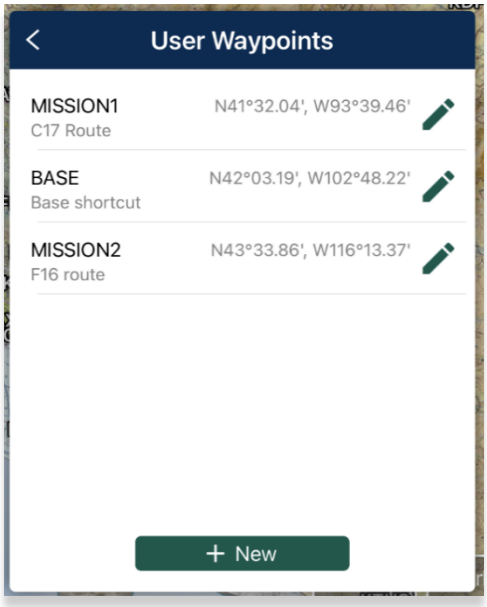


14.3.4.6 User Waypoints

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 25.1.1 for additional information. Alternatively, users can sideload User Waypoints. Refer to Section 10.4 for additional information.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
3. Select **Show** from the side menu.
4. Tap **User Waypoints**. A list of User Waypoints will be shown.
5. To delete a user waypoint, swipe left to reveal the delete button of the waypoint that you choose to permanently remove. Tap **Delete.**
6. The delete confirmation popup for the User Waypoint will be displayed. Tap **Delete** to confirm action.



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

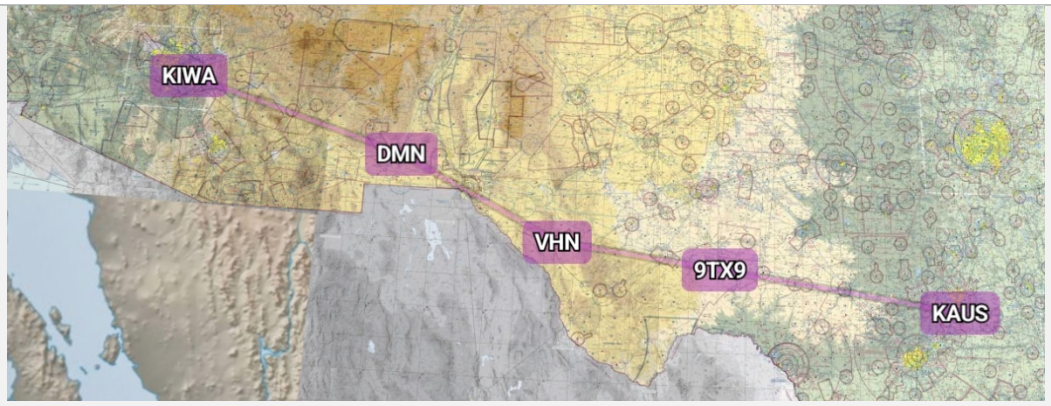
7. Tap on the **pencil icon** of the user waypoint that you wish to modify.
8. Tap on the field that you wish to change and enter new values.
9. Tap **Save** and your changes will be saved.

14.3.4.7 Route Line Transparency

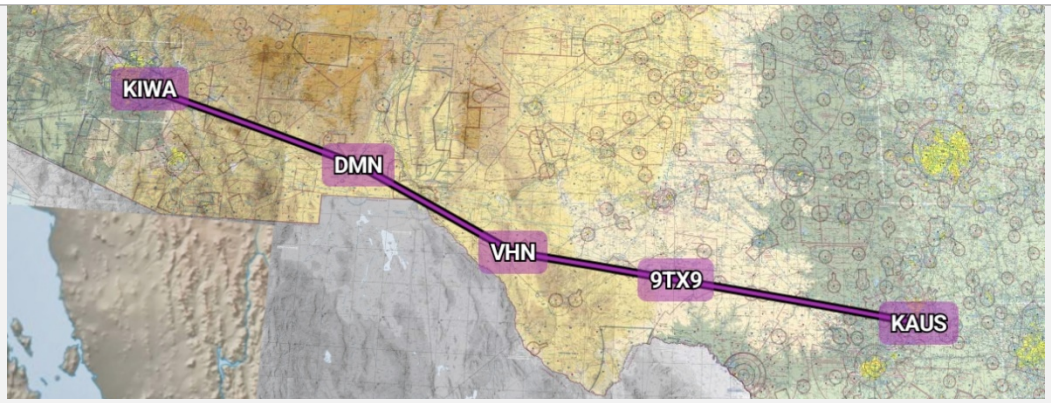
Route Line Transparency allows users to adjust the translucency of their flight path displayed on the Map view.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** at the bottom right of the Route Panel view.
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%.

Transparency value of 20%



Transparency value of 100%



14.4 Estimated Time En Route (ETE) and Estimated Time of Arrival (ETA)

Estimated Time En Route (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.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Enter a route in the Route Panel.
3. Each segment of the flight's route will display its respective ETE and ETA.

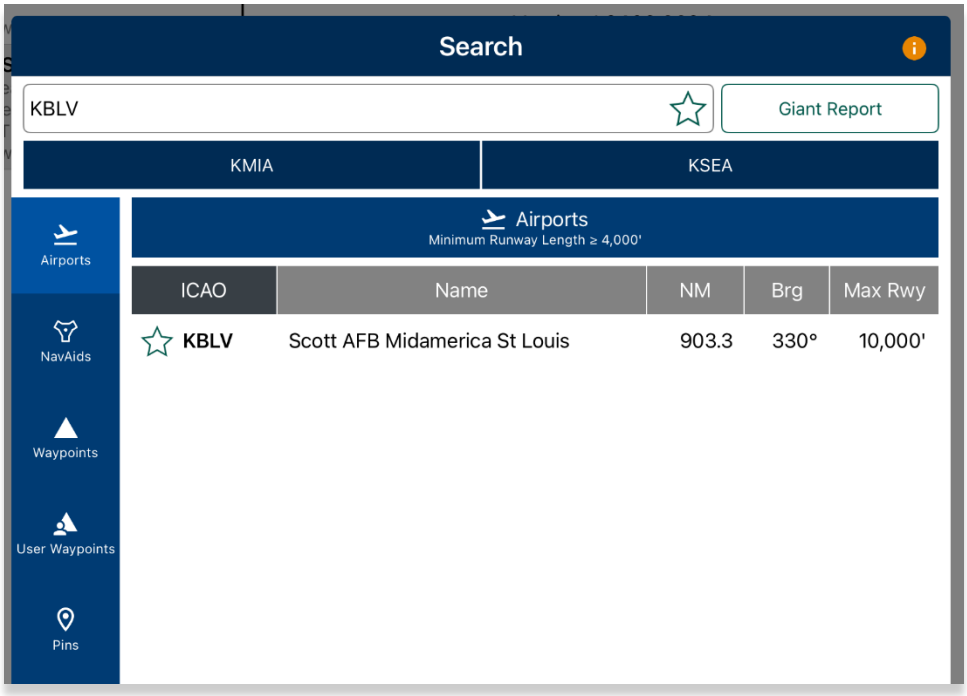


NOTE: Estimated Time of Arrival (ETA) will display in Zulu time.

15 Search

Search (search icon) is located on the Main Menu. Users can search by a point's ID (identifier) or by entering a 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 or the search term of a desired point.
4. The search results are divided into different identifier types. Select from Airports, NavAids, Waypoints, User Waypoints, or Pins. Alternatively, users can tap **Go** on the device's keyboard and the searched identifier will become an active point.

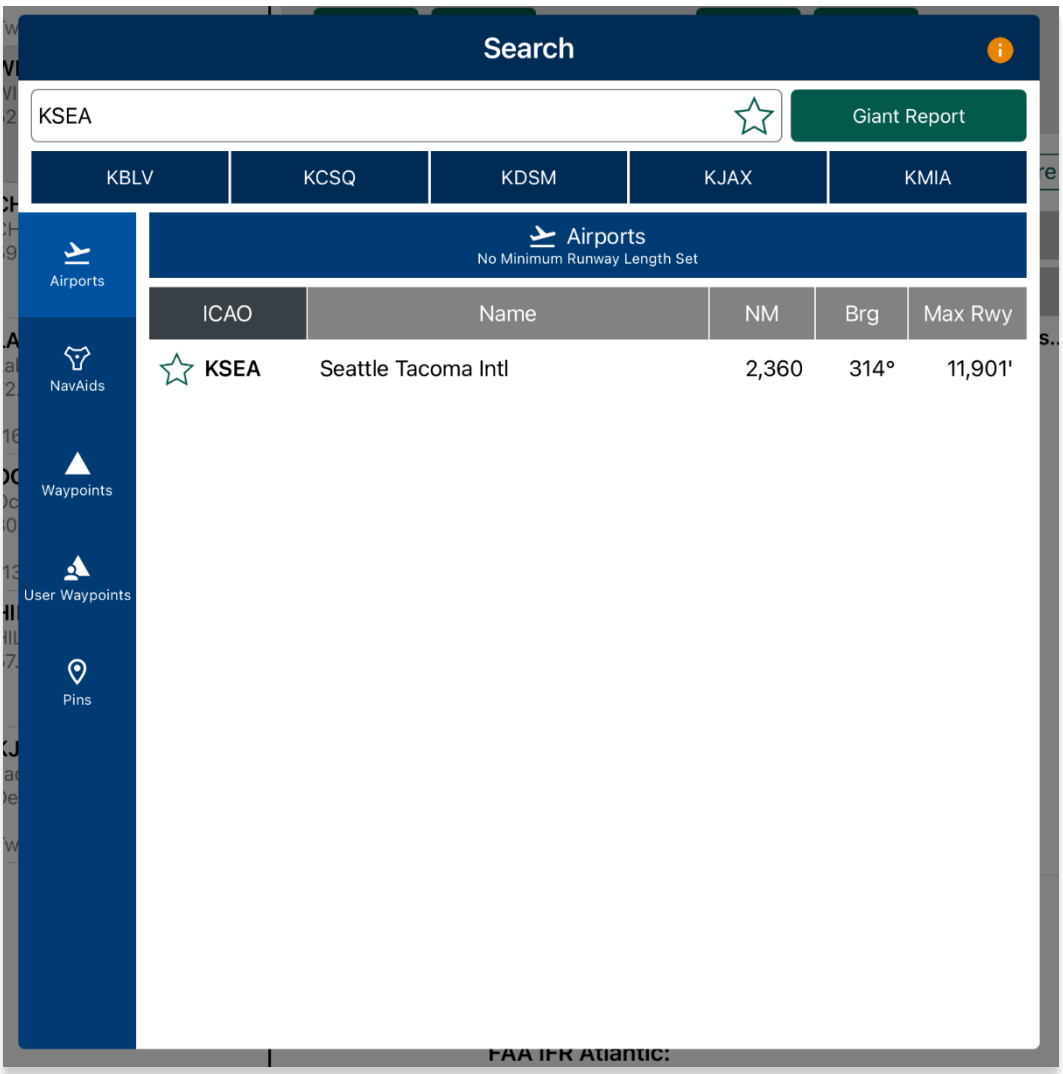


NOTE: The Search view will display the five most recently searched airports.

Giant Report

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

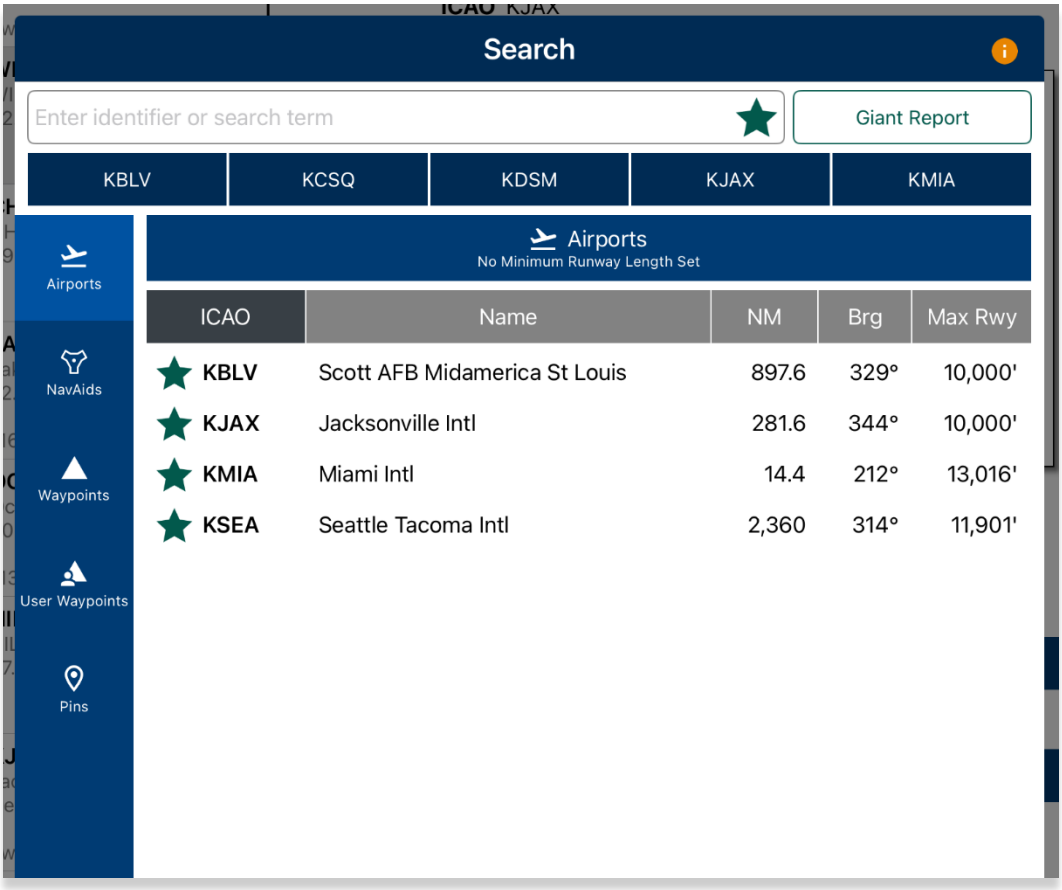
1. Tap the **Giant Report** button to enable the option.
2. Enter desired identifier or search term in the search text field.
3. Select desired airport. The Giant Report document will open.



Add an Identifier to Favorites

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

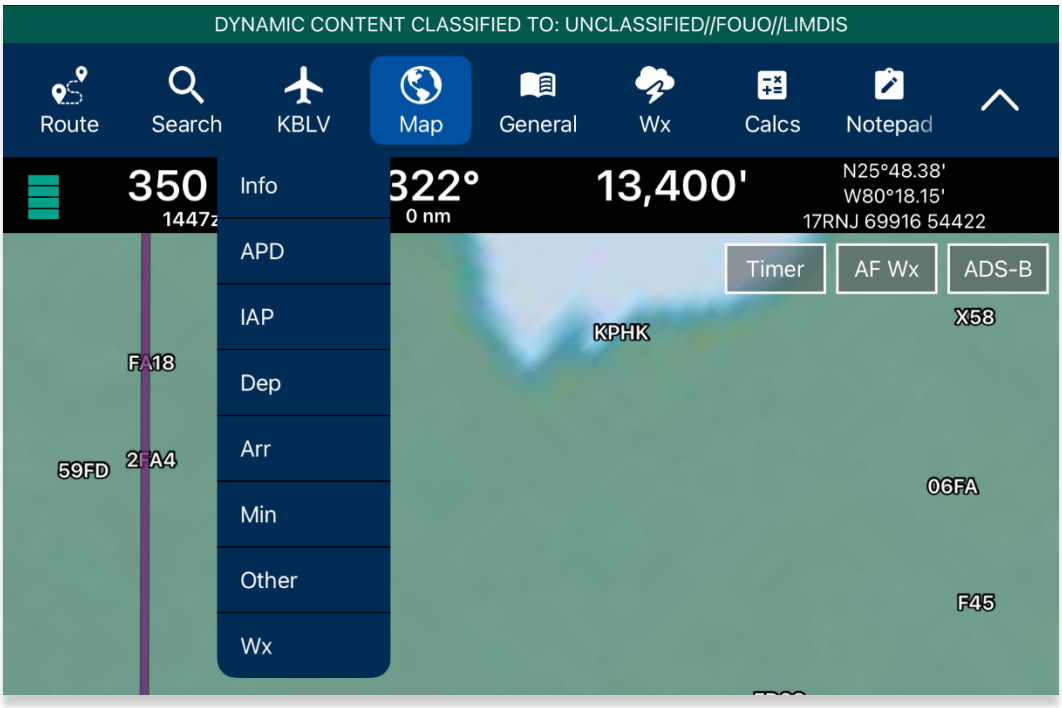
1. Enter a desired identifier in the search text field.
2. After three characters are entered, an auto search will begin. Locate desired identifier that you wish to add to *Favorites*.
3. Tap the **Star** located next to the identifier; the Star will convert to green.
4. To remove an identifier from *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 the Add to Route feature, Active Point search, or Move Map to Location features.

16 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 dropdown menu will display options to view airport Info, APD, IAP, Dep, Arr, Min, Wx, and other relevant charts and documents corresponding to the ICAO being searched.



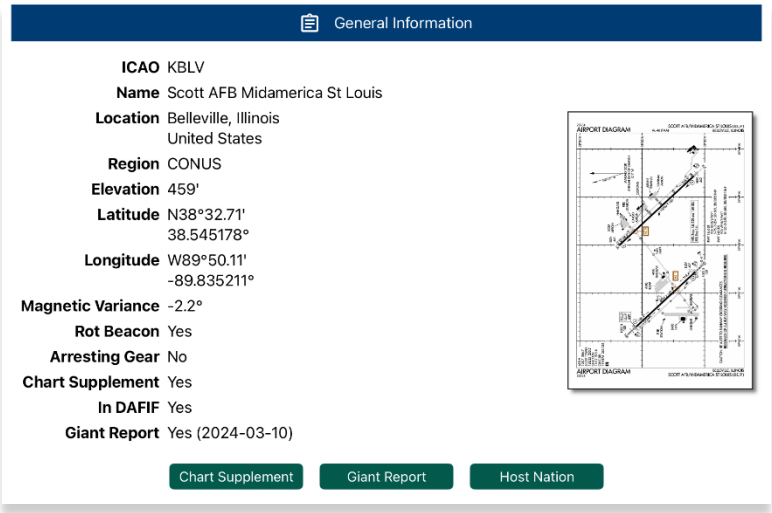
16.1 Identifier Information

The Info menu 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.

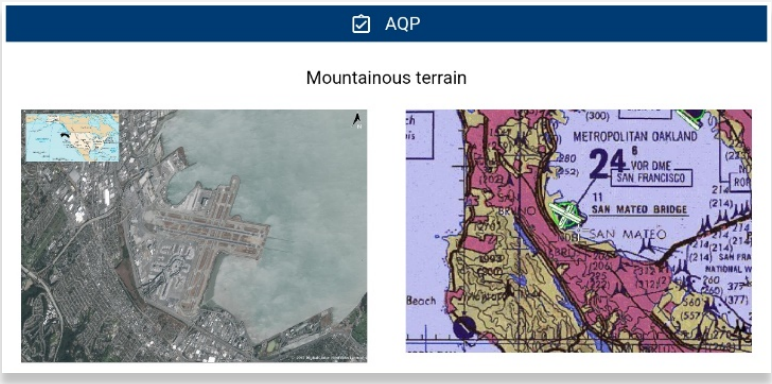
When searching for NavAids, users can access general information about NavAids. Similarly, other identifiers such as Waypoints, User Waypoints, and Pins contain relevant identifier information. Global is required to access identifier information.

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.

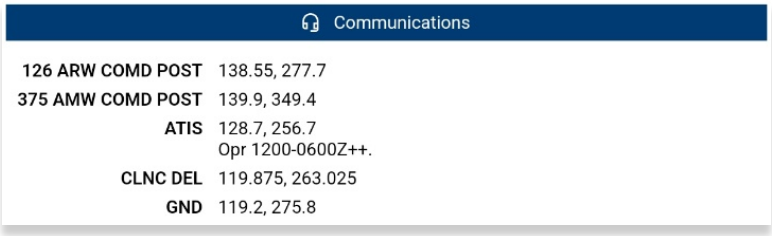
General Information contains identifier summary such as the ICAO, name, location, region, elevation, latitude, longitude, magnetic variance, and more. The General Information section may include accessibility to Airport Diagram, Chart Supplement, Giant Report, and Host Nation, respective to the entered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



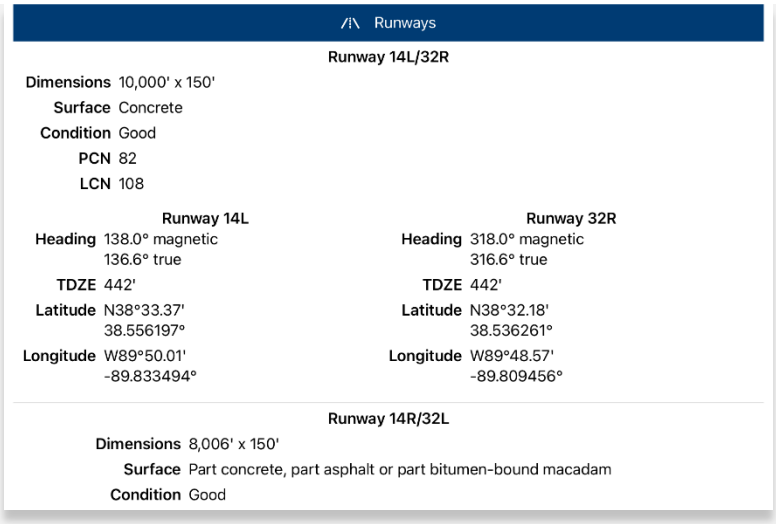
Airport Qualification Program (AQP) is available for select airports.



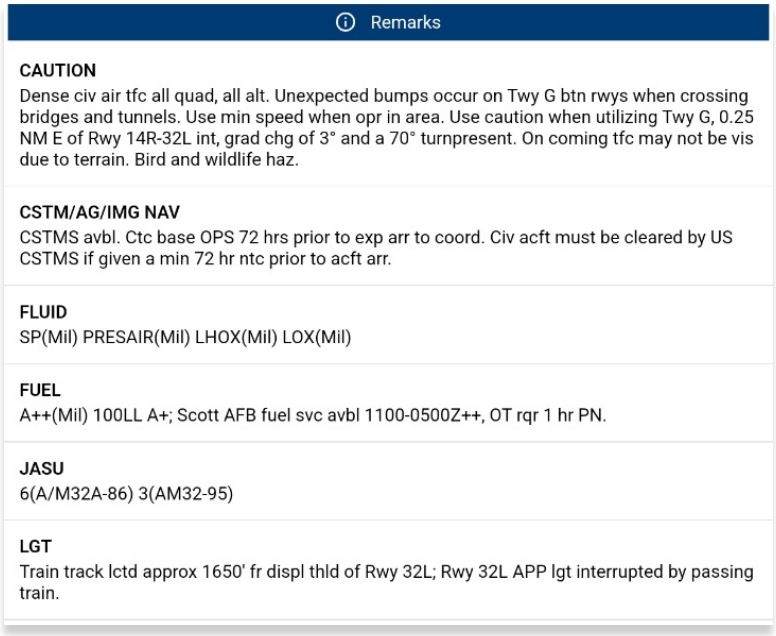
Communications include tower frequencies, remarks, and call signs for the selected airport.



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



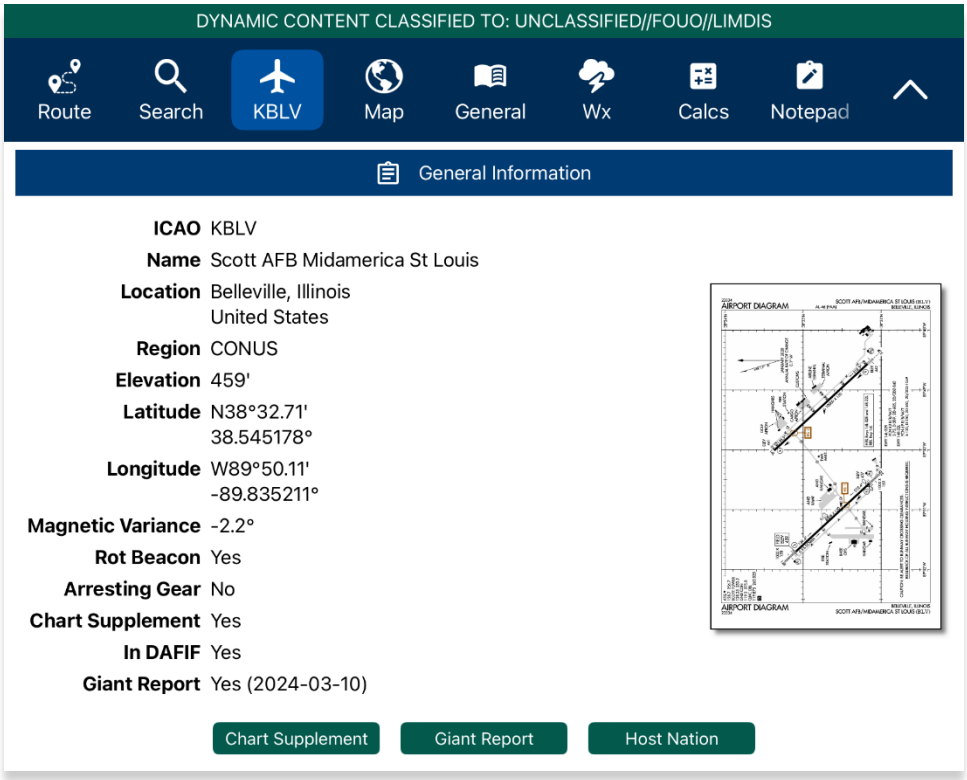
Remarks provide airport conditions, fuel type, and other cautionary advice.



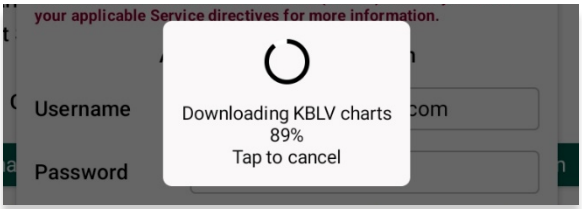
16.1.1 Download Host Nation Charts

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 5.4 for additional information.

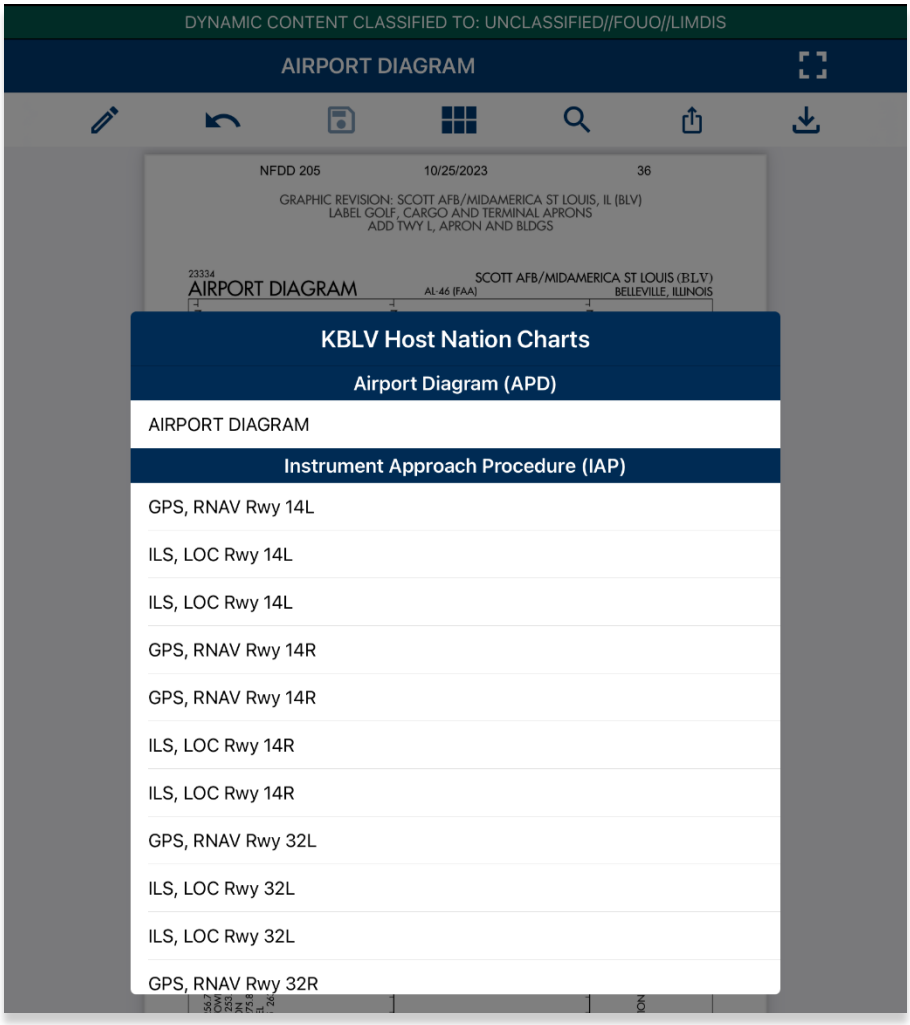
1. Search for an airport of choice.
2. Tap **Active Point** on the ***Main Menu***. The Active Point options will be displayed.
3. Select **Info**.
4. Tap **Host Nation** in the *General Information* section.



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.



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



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



NOTE: Host Nation downloaded charts can be managed through Aero App's File Manager.

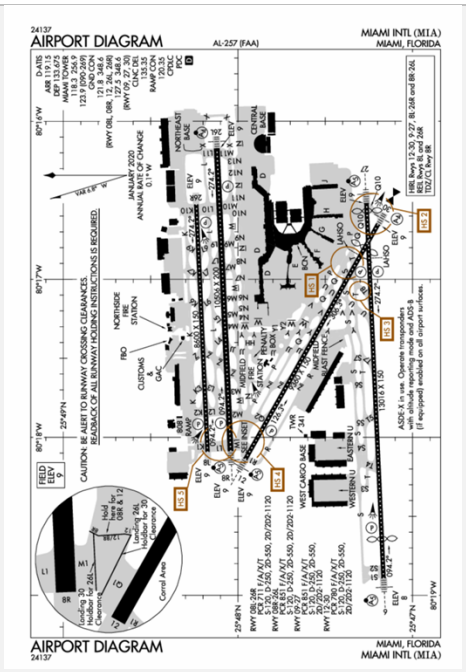
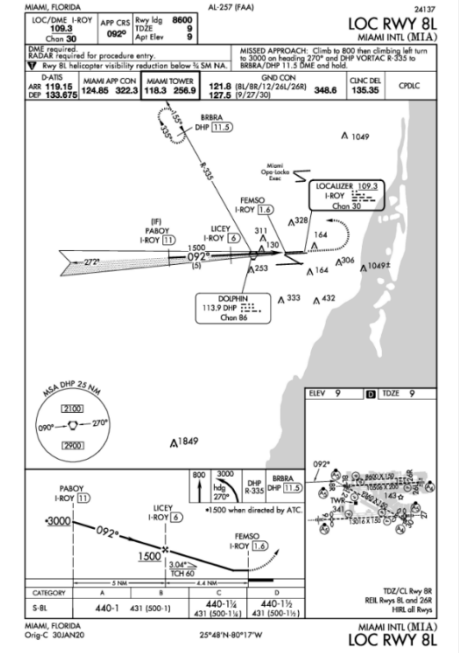
NOTE: The downloaded Host Nation charts can be viewed on the Host Nation page.

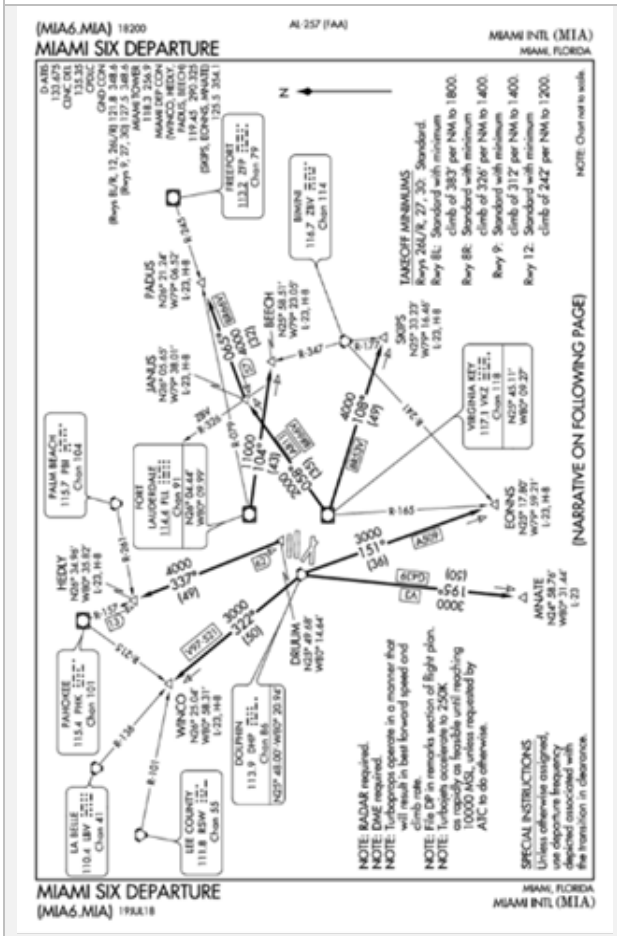
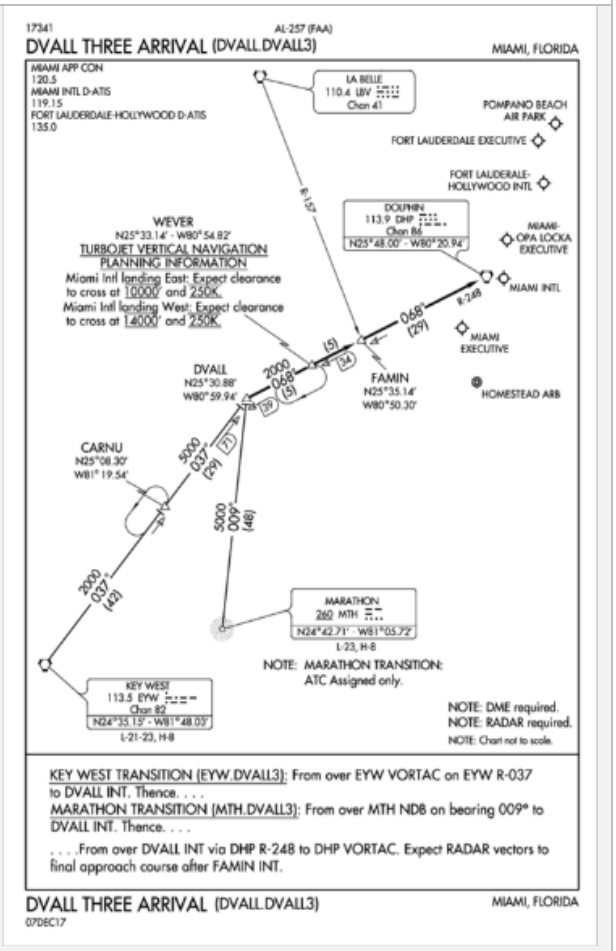
16.2 Terminal Chart Options

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

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

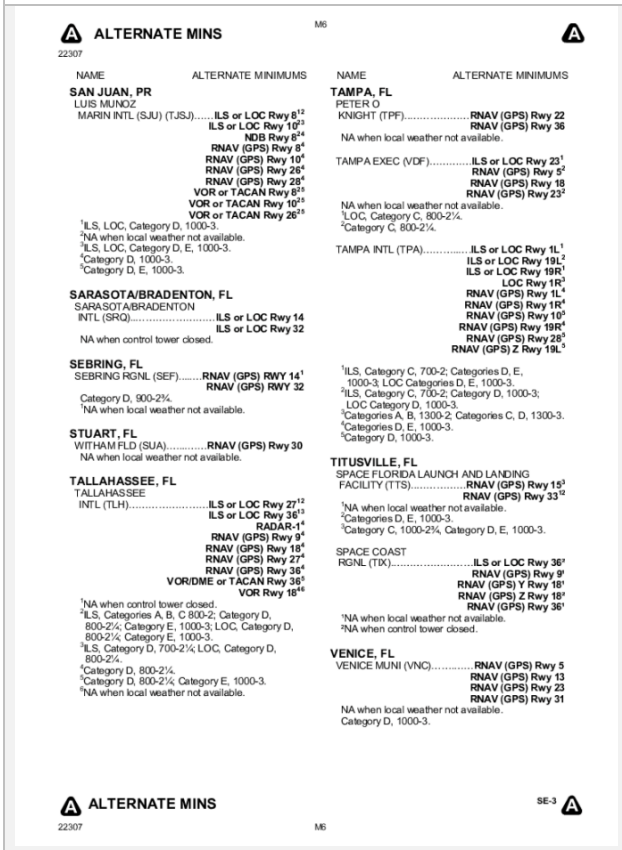


Airport Diagram (APD)	Instrument Approach Procedure (IAP)
	

Departure Procedures	Arrival Procedures
	

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

Alternate/ RADAR/ Takeoff Minimums	Other



ALTERNATE MINS

22307

M6

NAME	ALTERNATE MINIMUMS
SAN JUAN, PR	
LUIS MUNOZ MARIN INTL (SJU) (TJSJ)	**ILS or LOC Rwy 8**[12] **ILS or LOC Rwy 10**[23] **NDB Rwy 8**[24] **RNAV (GPS) Rwy 8**[4] **RNAV (GPS) Rwy 10**[4] **RNAV (GPS) Rwy 26**[4] **RNAV (GPS) Rwy 28**[4] **VOR or TACAN Rwy 8**[25] **VOR or TACAN Rwy 10**[25] **VOR or TACAN Rwy 26**[25]
SARASOTA/BRADENTON, FL	
SARASOTA/BRADENTON INTL (SRQ)	**ILS or LOC Rwy 14** **ILS or LOC Rwy 32**
SEBRING, FL	
SEBRING RGNL (SEF)	**RNAV (GPS) RWY 14**[1] **RNAV (GPS) RWY 32**
STUART, FL	
WITHAM FLD (SUA)	**RNAV (GPS) Rwy 30**
TALLAHASSEE, FL	
TALLAHASSEE INTL (TLH)	**ILS or LOC Rwy 27**[12] **ILS or LOC Rwy 36**[13] **RADAR-1**[4] **RNAV (GPS) Rwy 9**[4] **RNAV (GPS) Rwy 18**[4] **RNAV (GPS) Rwy 27**[4] **RNAV (GPS) Rwy 36**[4] **VOR/DME or TACAN Rwy 36**[5] **VOR Rwy 18**[46]
TAMPA, FL	
PETER O KNIGHT (TPF)	**RNAV (GPS) Rwy 22** **RNAV (GPS) Rwy 36**
TAMPA EXEC (VDF)	**ILS or LOC Rwy 23**[1] **RNAV (GPS) Rwy 5**[2] **RNAV (GPS) Rwy 18** **RNAV (GPS) Rwy 23**[2]
TAMPA INTL (TPA)	**ILS or LOC Rwy 1L**[1] **ILS or LOC Rwy 19L**[2] **ILS or LOC Rwy 19R**[1] **LOC Rwy 1R**[3] **RNAV (GPS) Rwy 1L**[4] **RNAV (GPS) Rwy 1R**[4] **RNAV (GPS) Rwy 10**[5] **RNAV (GPS) Rwy 19R**[4] **RNAV (GPS) Rwy 28**[5] **RNAV (GPS) Z Rwy 19L**[5]
TITUSVILLE, FL	
SPACE FLORIDA LAUNCH AND LANDING FACILITY (TTS)	**RNAV (GPS) Rwy 15**[3] **RNAV (GPS) Rwy 33**[12]
SPACE COAST RGNL (TIX)	**ILS or LOC Rwy 36**[2] **RNAV (GPS) Rwy 9**[1] **RNAV (GPS) Y Rwy 18**[1] **RNAV (GPS) Z Rwy 18**[2] **RNAV (GPS) Rwy 36**[1]
VENICE, FL	
VENICE MUNI (VNC)	**RNAV (GPS) Rwy 5** **RNAV (GPS) Rwy 13** **RNAV (GPS) Rwy 23** **RNAV (GPS) Rwy 31**

[1]ILS, LOC, Category D, 1000-3.
[2]NA when local weather not available.
[3]ILS, LOC, Category D, E, 1000-3.
[4]Category D, 1000-3.
[5]Category D, E, 1000-3.

[1]NA when control tower closed.
[2]ILS, Categories A, B, C 800-2; Category D, 800-2¼; Category E, 1000-3; LOC, Category D, 800-2¼; Category E, 1000-3.
[3]ILS, Category D, 700-2¼; LOC, Category D, 800-2¼.
[4]Category D, 800-2¼.
[5]Category D, 800-2¼; Category E, 1000-3.
[6]NA when local weather not available.

[1]ILS, Category C, 700-2; Categories D, E, 1000-3; LOC Categories D, E, 1000-3.
[2]ILS, Category C, 700-2; Category D, 1000-3; LOC Category D, 1000-3.
[3]Categories A, B, 1300-2; Categories C, D, 1300-3.
[4]Categories D, E, 1000-3.
[5]Category D, 1000-3.

[1]NA when local weather not available.
[2]Categories D, E, 1000-3.
[3]Category C, 1000-2¼, Category D, E, 1000-3.

[1]NA when local weather not available.
[2]NA when control tower closed.

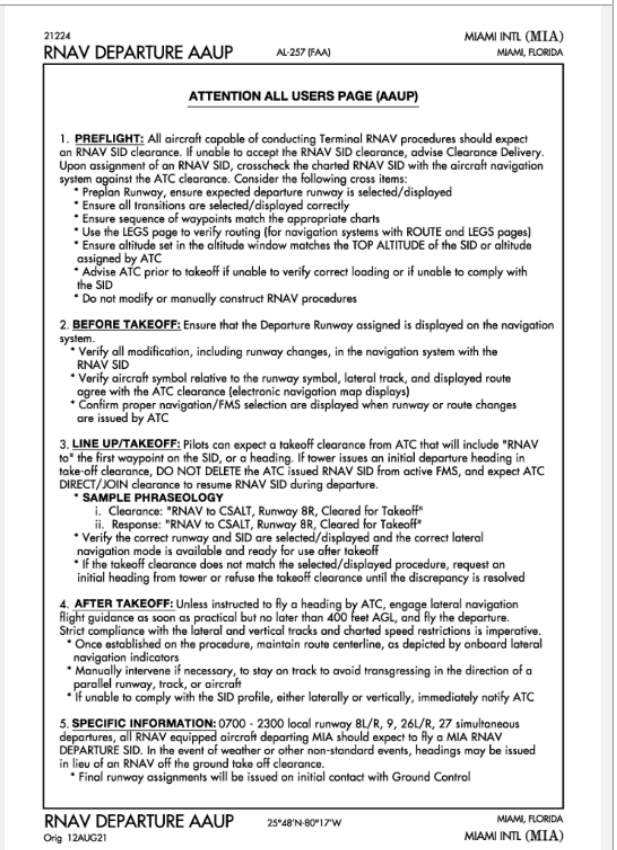
NA when local weather not available.
Category D, 1000-3.

ALTERNATE MINS

22307

M6

SE-3



21224

RNAV DEPARTURE AAUP

AL-257 (FAA)

MIAMI INTL (MIA)
MIAMI, FLORIDA

ATTENTION ALL USERS PAGE (AAUP)

1. **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 items:
   * 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

2. **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

3. **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 tower 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**
     i. Clearance: "RNAV to CSALT, Runway 8R, Cleared for Takeoff"
     ii. 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

4. **AFTER TAKEOFF:** Unless instructed to fly a heading by ATC, engage lateral navigation flight 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

5. **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 in lieu of an RNAV off the ground take off clearance.
   * Final runway assignments will be issued on initial contact with Ground Control

RNAV DEPARTURE AAUP

Orig 12AUG21

25°48'N-80°17'W

MIAMI, FLORIDA
MIAMI INTL (MIA)

NOTE: There are options to maximize or minimize a desired chart/document located at the top right of the view. Alternatively, users can use two fingers to zoom in on the desired document display and use the opposite gesture to zoom out.

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

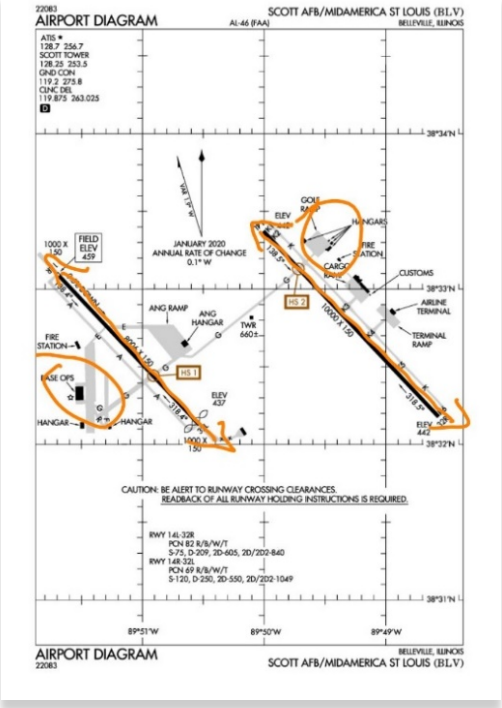
16.2.1 Draw on Airport Diagram (APD) and Instrument Approach Procedure (IAP) Charts

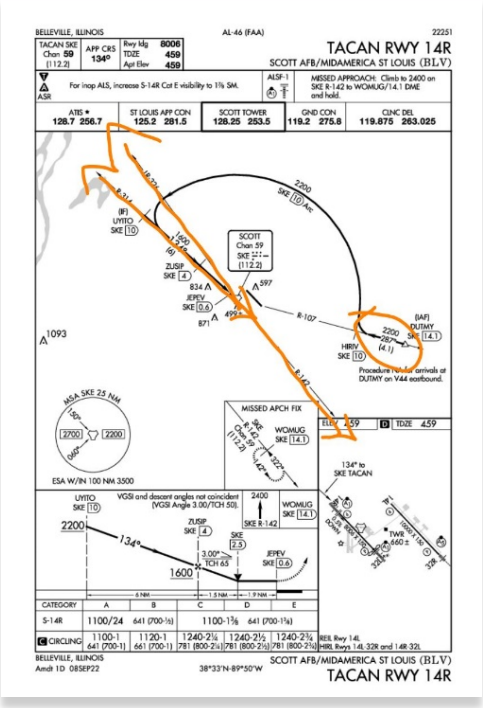
The Draw on Chart feature allows you to freely make markings on any APD and/or IAP chart to highlight a specific location or element.

1. To view an APD or IAP, navigate to the **Active Point** or ***Split Screen*** view.
2. 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
3. To rotate the chart clockwise, tap the **rotate** button on the top right of the view.
4. To view the chart in full screen, tap the **expand view** button to the right of the rotate button.



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



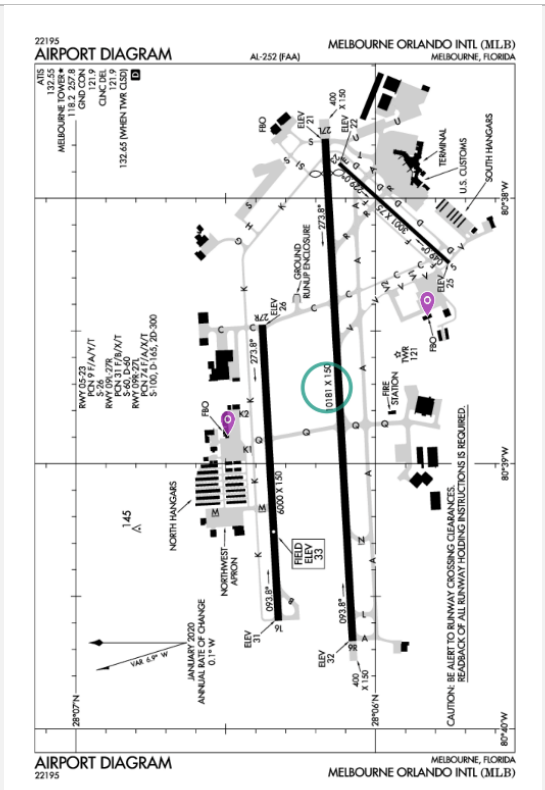


16.2.2 Contract Fuel Locations on APDs

Users can display Contract Fuel Locations on an APD. This feature is accessible to users from the Active Point or split screen feature on the Map. Georeference data is required to view contract fuel locations.

1. To view an APD, navigate to the **Active Point** or ***Split Screen*** view.
2. A gas pump icon is located on the top left of the ribbon. Tap the **gas pump** icon. Markings for contract and non-contract fuel locations will be depicted on the chart. The purple markings represent non-contract fuel locations, while gold markings represent contract fuel locations, respectively.
3. To remove the markings from a chart, navigate to the ribbon, then tap the **gas pump** icon for the second time and the markings will be removed.

Contract Fuel Locations on APDs



NOTE: Only fuel locations whose coordinates are specified in Aero App will be shown on the charts.

16.3 Weather and Potential Hazard Information

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

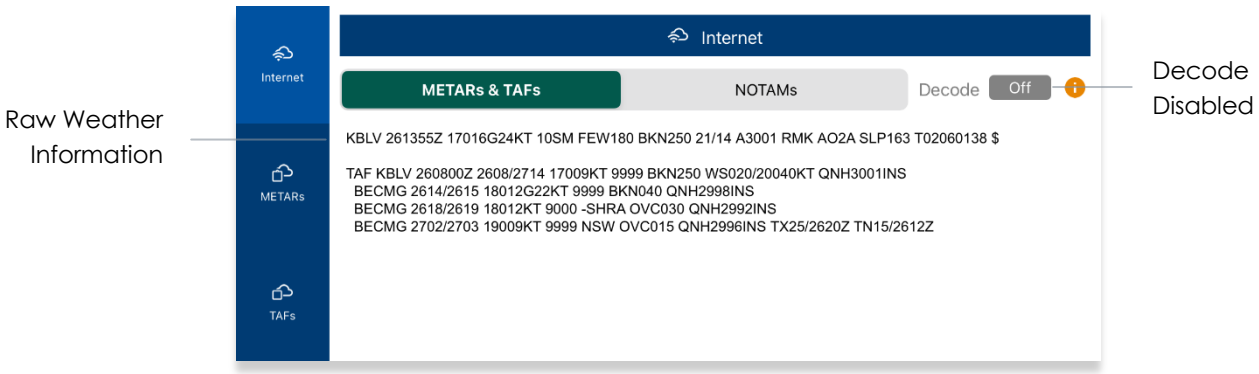
16.3.1 Internet

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.

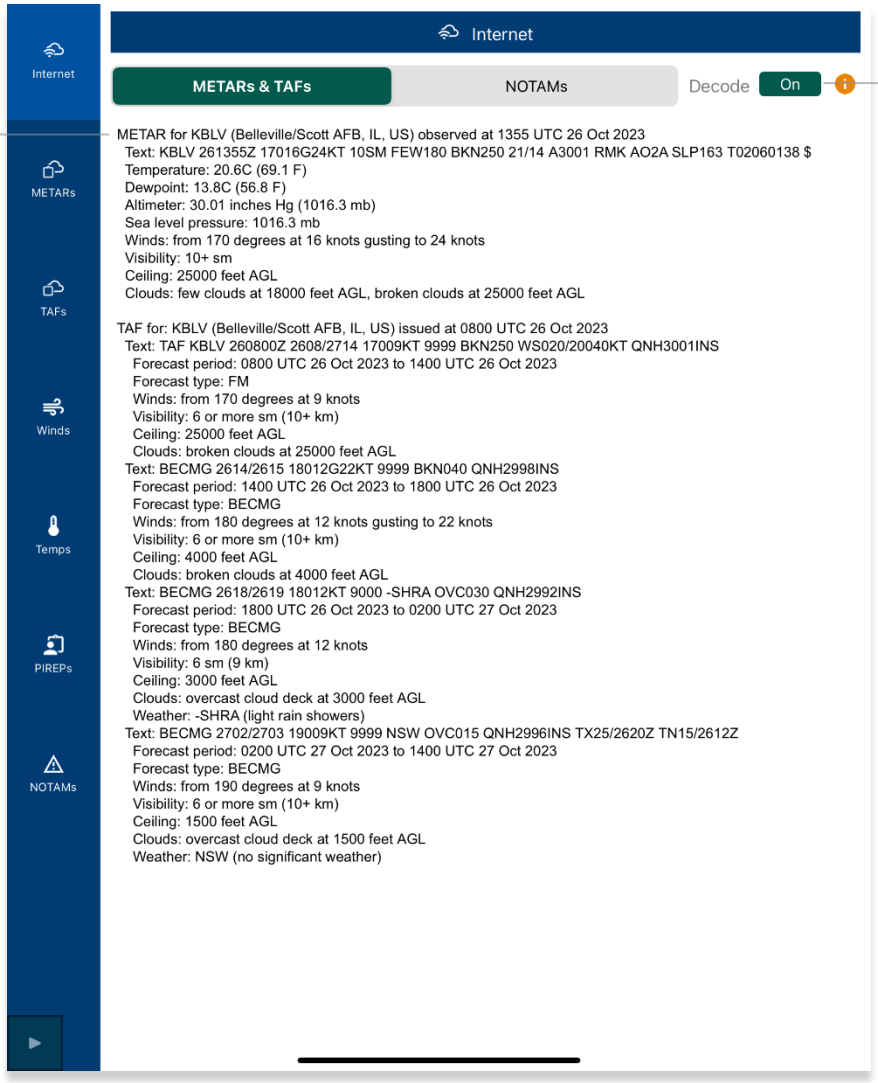
METARs and Terminal Aerodrome Forecasts (TAFs)

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

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



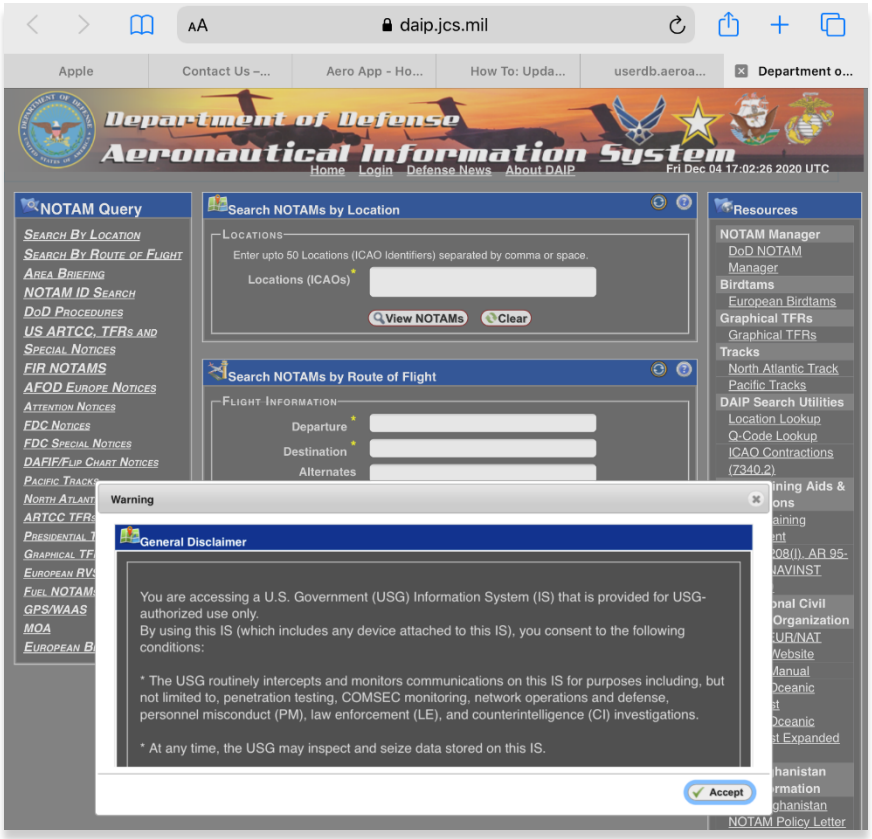
6. Tap the **Decode** button to enable the option. Users can view raw or decoded weather information for the selected airport.



Notice of Airmen (NOTAMs) Website

Notice of 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. Search for an airport of choice.
2. Tap **Active Point** on the ***Main Menu***. The Active Point options will be displayed.
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.



16.3.2 METARs

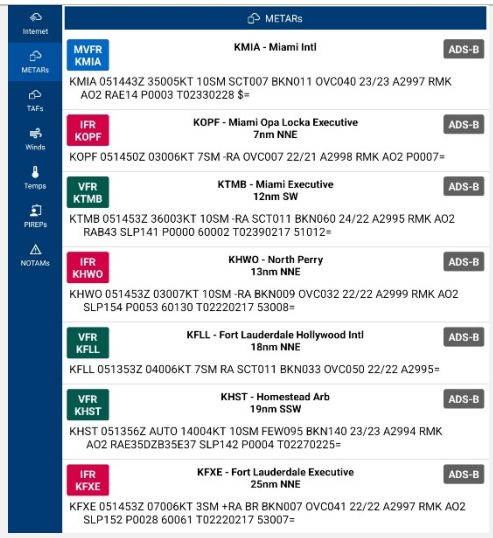
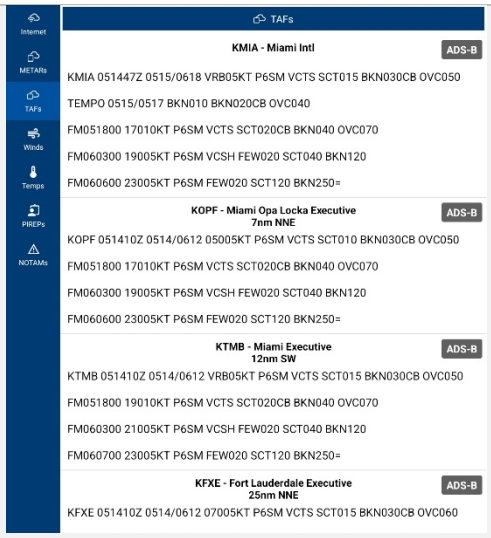
The METARs tab displays raw weather information for ADS-B and Air Force Weather (AF Wx) data that may include temperature, precipitation, visibility, barometric pressure, and other information of interest to pilots.

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

16.3.3 Terminal Aerodrome Forecasts (TAFs)

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

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

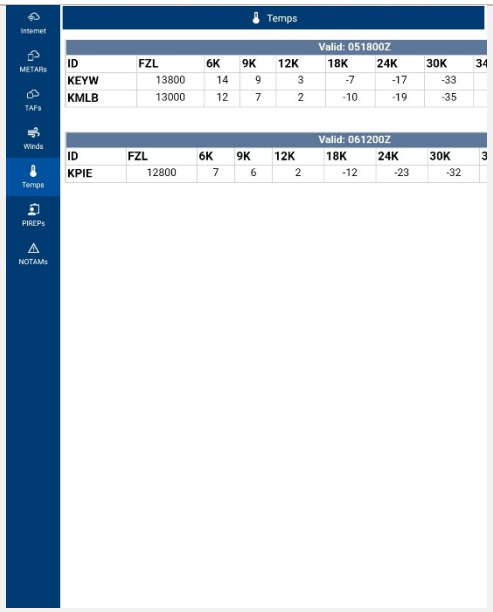
METARs	TAFs
	

NOTE: Refer to Section 17.3 for additional information for Air Force Weather (AF Wx).

16.3.4 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. Search for an airport of choice.
2. Tap **Active Point** on the ***Main Menu***. The Active Point options will be displayed.
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	Temps
	

16.3.5 Pilot Reports (PIREPs)

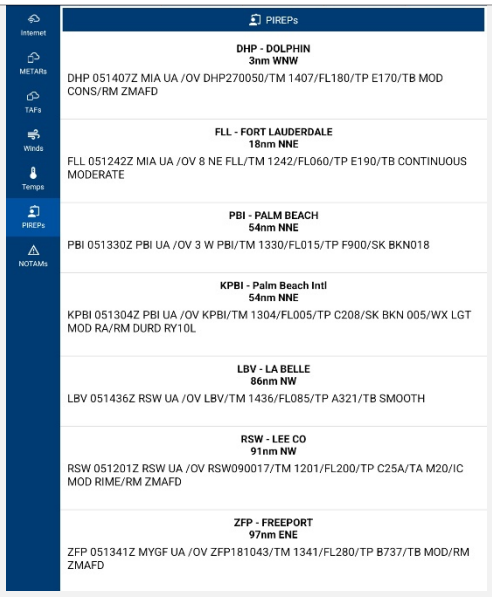
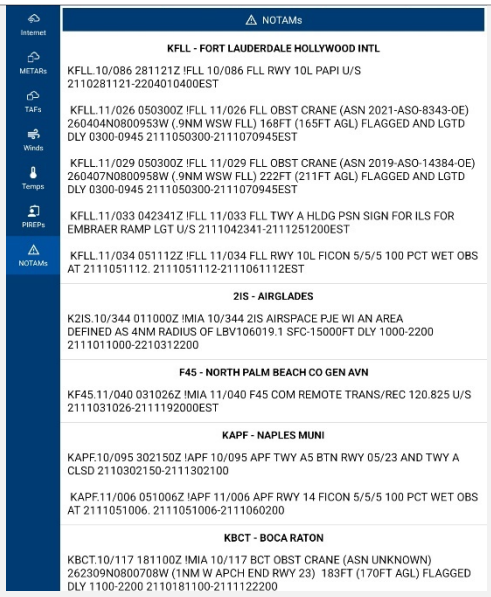
Pilot Reports (PIREPs) are reports of actual weather conditions encountered by an ownship in flight.

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

16.3.6 Notice to Airmen (NOTAMs)

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

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

PIREPs	NOTAMs
	

17 Map

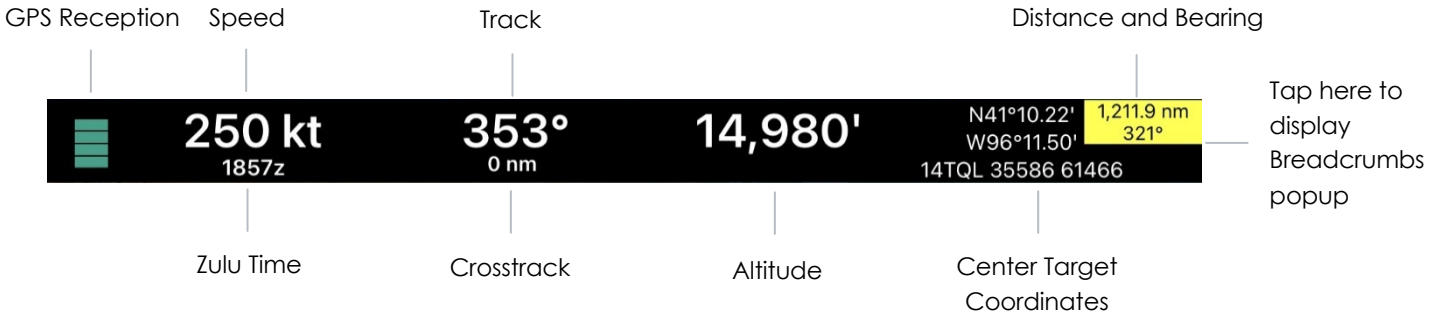
The Map menu is an essential and powerful tool that provides a highly customizable and comprehensive worldwide map.

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
- Move Map to Location
- Crosshair Icon (Snap to Location)

17.1 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 ownship's GPS reception connection status, Speed, Zulu Time, Track, Crosstrack, Altitude, Breadcrumbs, Center Target Coordinates, and the Distance and Bearing.



17.1.1 GPS Reception Connection Status

Aero App enables users to view their current GPS reception connection status. The GPS reception connection status is located at the upper-left of the Flight Information Panel. There are different ranges that indicate GPS reception. The ranges are as follows:

- **4 bars** = WASS
- **3 bars (green)** = +/- 10 meters
- **2 bars (orange)** = +/- 20 meters
- **1 bar (red)** = +/- 50 meters



NOTE: If there is no GPS connection, **No GPS Data** will be displayed on the Flight Information Panel.

17.1.2 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.

17.1.3 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.

17.1.4 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. Crosstrack is the value below track. It 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 in the direction to get back to course.



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

17.1.5 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.

17.1.6 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 is moved. As the globe on the Map view is moved, the Latitude, Longitude, and MGRS values update respective to the placement of the center target. Refer to Section 23 for additional information.

17.1.7 Distance and Bearing

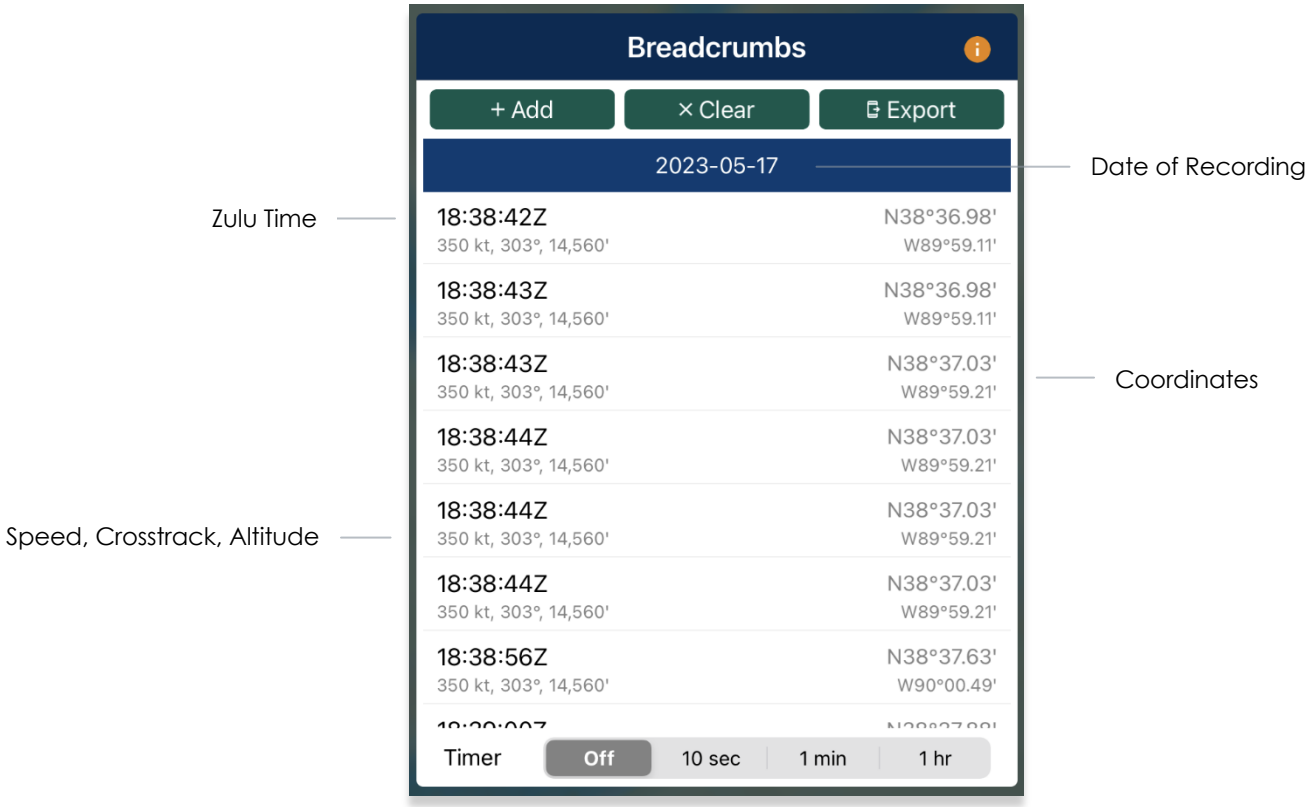
Distance is the range between your ownship's location and where the center target is placed. Bearing is the angle between your ownship and the center target. As the globe on the Map view is moved, the distance and bearing updates respective to the placement of the Center Target, provided the GPS is on.

When the center target is activated, a yellow tag is shown on the Flight 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 23.1 for additional information.

17.1.8 Breadcrumbs

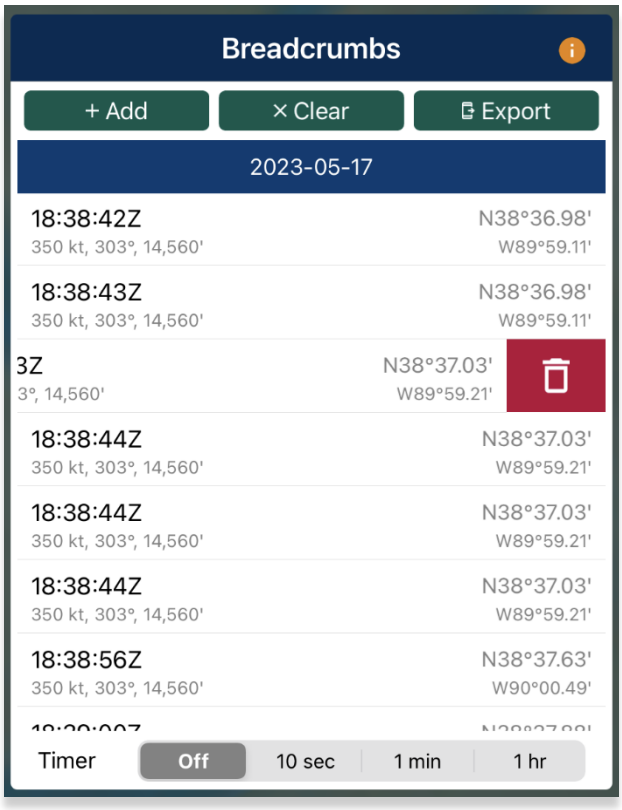
Breadcrumbs enable users to record coordinates throughout their course. A GPS connection (Wi-Fi or cellular) is required. To view the recorded Breadcrumbs on the Map view, users must enable the option as described in Section 19.1.1.

1. Tap the **coordinates** located at the upper-right of the Flight Information Panel. The Breadcrumbs popup will appear displaying recordings of breadcrumbs.

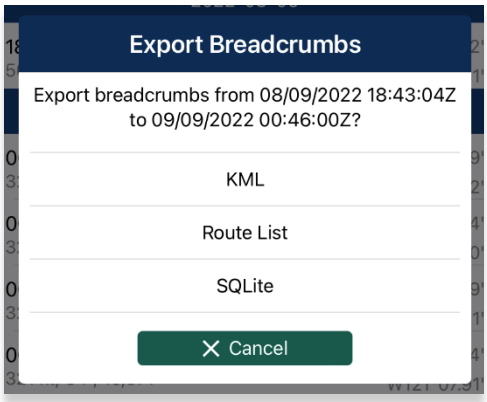


2. Tap **Add** to manually store coordinates. Users have the option to set a timer to automatically add coordinates for every 10 seconds, 1 minute, or every hour.
3. To delete an individual breadcrumb, swipe left to reveal the delete button of the breadcrumb that you choose to permanently delete. Tap **Delete**.

4. The delete confirmation popup for Breadcrumbs will be displayed. Tap **Delete** to confirm action.



5. Tap **Clear** to delete all breadcrumbs.
6. The clear all confirmation popup for Breadcrumbs will be displayed. Tap **Clear** to confirm the action.
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.

Export Breadcrumbs in KML

1. Select **KML** from the Export Breadcrumbs popup.
2. Connect your iPad to a USB or USB-C port of a Mac or Windows computer. Ways to sync device:
    - On Windows, open iTunes
    - On macOS, open Finder and select **device** under *Locations*
3. Locate *Aero App* to display contents.
4. Your exported breadcrumbs will be listed.

Export Breadcrumbs to Route List

1. Select **Route List** from the Export Breadcrumbs popup.
2. The **Export to Route List** popup will display.
3. Users will be prompted to name their route. Enter the desired name then tap **Save**. Your exported breadcrumbs will be saved in the *Load Route* (refer to Section 14.3.1.1) and *Show Routes* (refer to Section 14.3.4.5) views.

Export Breadcrumbs in SQLite

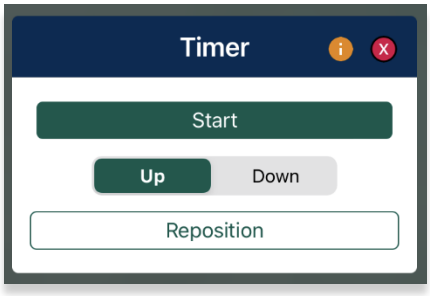
Aero App allows users to view Breadcrumbs in SQLite File. A database viewer is required to view Breadcrumbs in SQLite file.

1. Select **SQLite** from the Export Breadcrumbs popup.
2. Connect your iPad to a USB or USB-C port of a Mac or Windows computer. Ways to sync device:
    - On Windows, open iTunes
    - On macOS, open Finder and select device under Locations
3. Locate *Aero App* to display contents.
4. Your exported breadcrumbs will be listed.

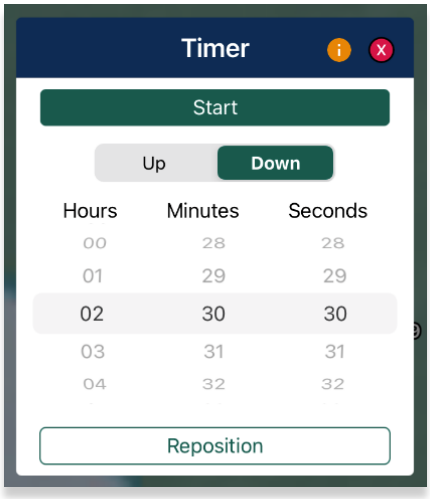
17.2 Timer

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

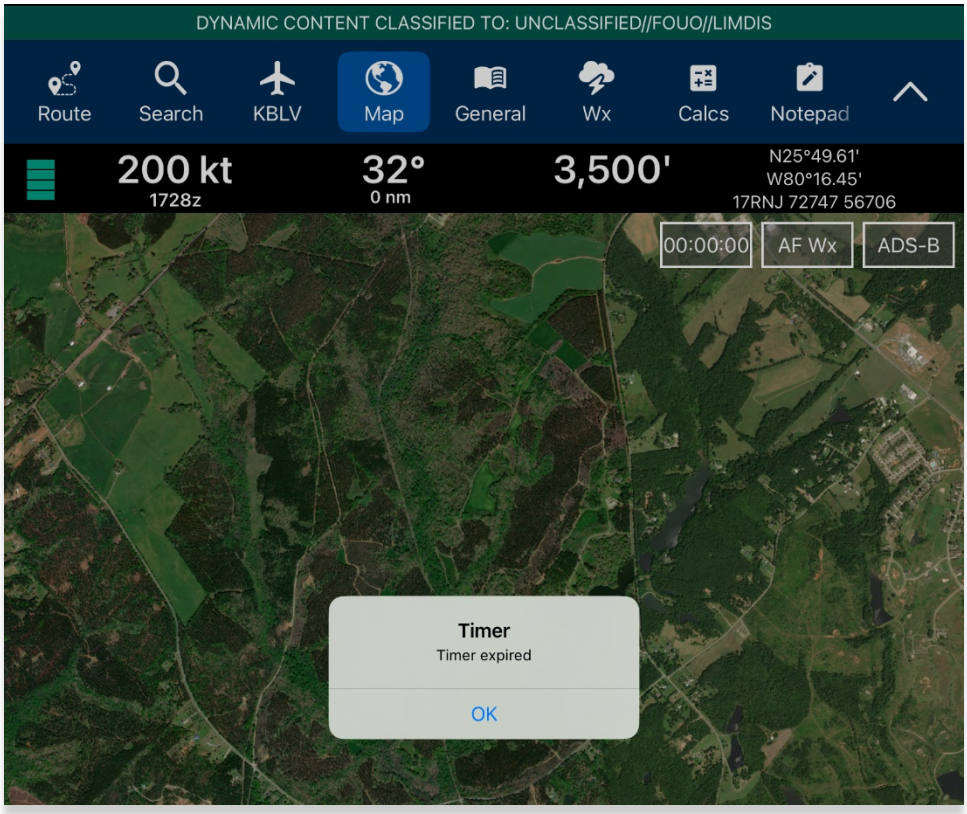
1. Tap **Map** on the ***Main Menu***.
2. Tap **Timer** located at the upper-right of the screen. The timer menu will display.
3. The Timer has two modes:
    - **Count Up** – starts the timer at zero then begins counting.
    - **Count Down** – timer counts down based on the selected hours, minutes, 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 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 be displayed in the device notification bar.



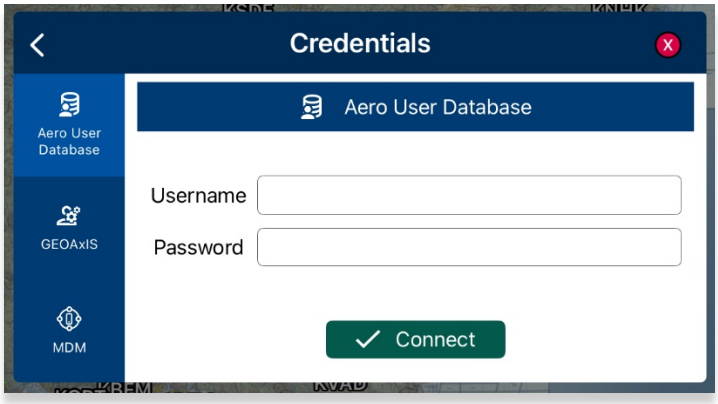
11. To force the timer to end, tap **Stop**.
12. Tap **Reset** to restart timer.

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

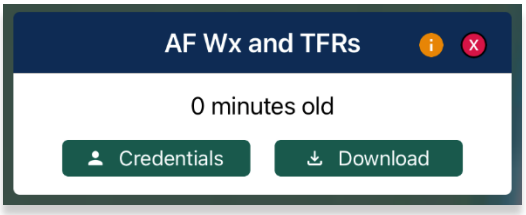
17.3 Air Force Weather (AF Wx)

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 DOW 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



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.



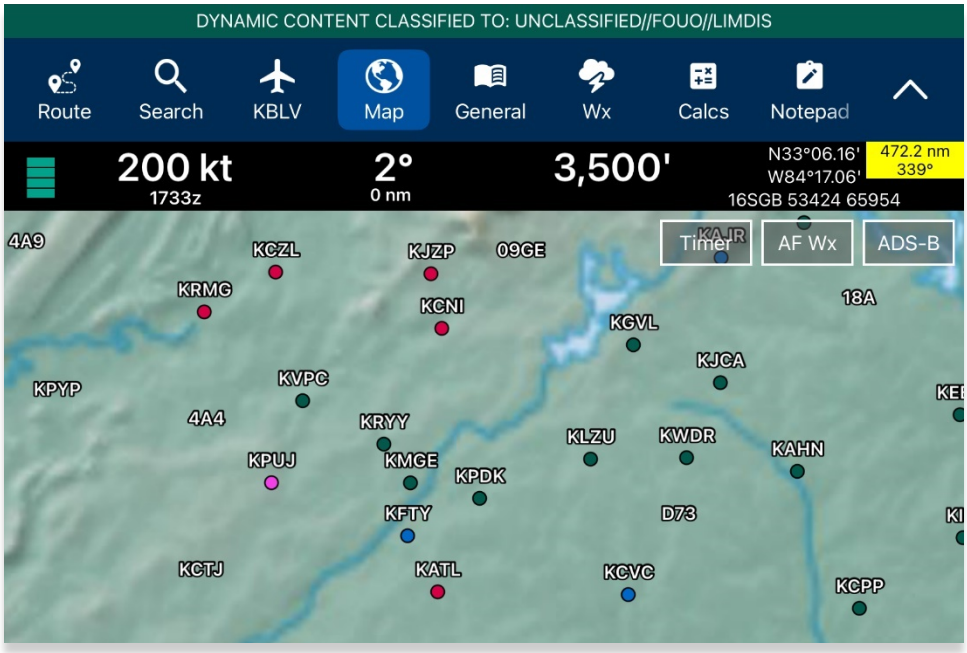
NOTE: The password field is cleared when Aero App is closed and then reopened.

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 the current weather.

Air Force Weather (AF Wx) on Map View

Air Force Weather can be viewed on the Map view. Once the METARs option is enabled, different color dots that indicate airport flight rules will populate the Map. Additional Air Force weather information can be viewed from the Wx menu. Refer to Air Force Weather Information on Wx Menu 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** from the navigation bar.
4. Select **Weather** from the side menu.
5. Tap **METARs** to enable the option. Different colored dots will populate on the Map. The different color dots below the airport labels depict the airport's flight rule.
6. The flight rules displayed below airport labels are color-coded to depict the latest reported weather conditions:
    - **Green**: VFR
    - **Blue**: MVFR
    - **Red**: IFR
    - **Magenta**: LIFR

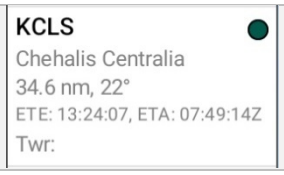
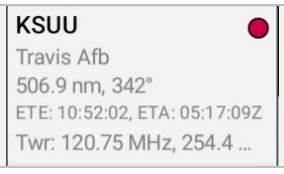
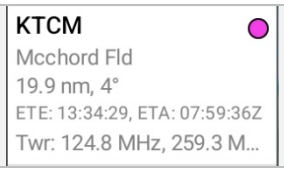


NOTE: METAR information on the Map expires 75 minutes after becoming available.

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 from the Wx menu. Refer to Air Force Weather Information on Wx Menu 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** from the navigation 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 the 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
	
IFR	**LIFR**
	

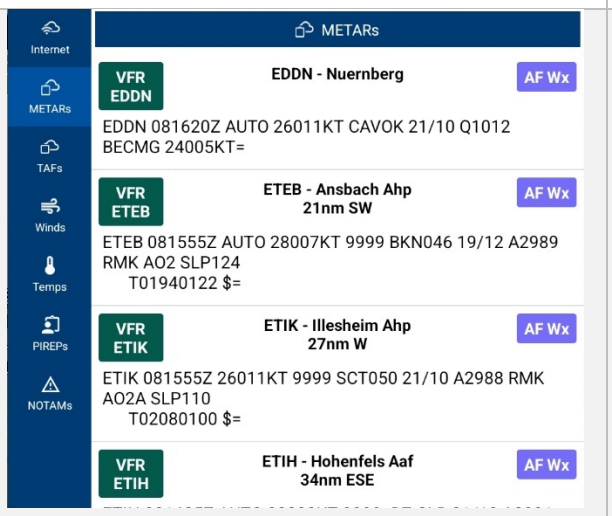
NOTE: The colored dots below airport labels on the Map expire 75 minutes after becoming available.

Air Force Weather (AF Wx) Information on Wx Menu

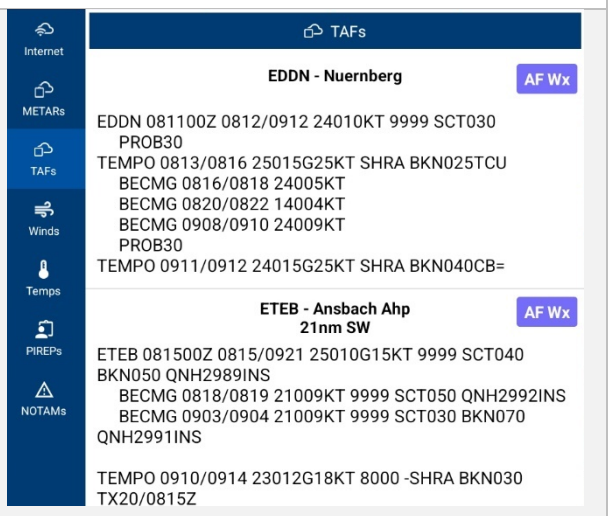
Air Force weather information can be viewed by accessing the Wx menu for the Active Point, or by selecting Info and Wx for an ICAO on the Map view or the Route Panel.

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

METARs



TAFs



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.

17.4 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

17.4.1 Connecting to ADS-B Receiver via Wi-Fi

To establish a connection with an ADS-B receiver via Wi-Fi, you must ensure that your ADS-B receiver is connected to an iPad with internet access.

1. Open the iPad's *settings app* and select **Wi-Fi**.
2. Enable the **Wi-Fi** option to display all available networks.
3. Search and tap the ADS-B receiver in the *OTHER NETWORKS* section.
4. Ensure the ADS-B receiver's connection is established. For additional information, refer to Section 17.4.3.

17.4.2 Connecting to ADS-B Receiver via Bluetooth

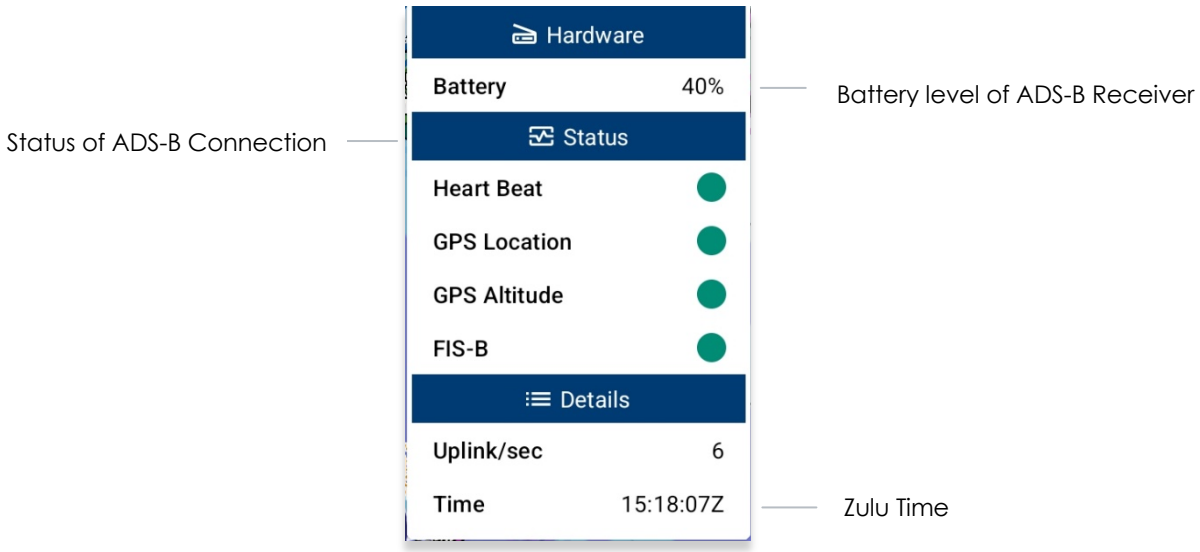
To establish a connection with an ADS-B receiver via Bluetooth, you must ensure to connect your Bluetooth to the receiver.

1. Open the iPad's *settings app* and select **Bluetooth**.
2. Enable the **Bluetooth** option to display all available devices.
3. Search and tap the ADS-B receiver in the *OTHER DEVICES* section.
4. Ensure the ADS-B receiver's connection is established.
5. Pair device.

17.4.3 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 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.



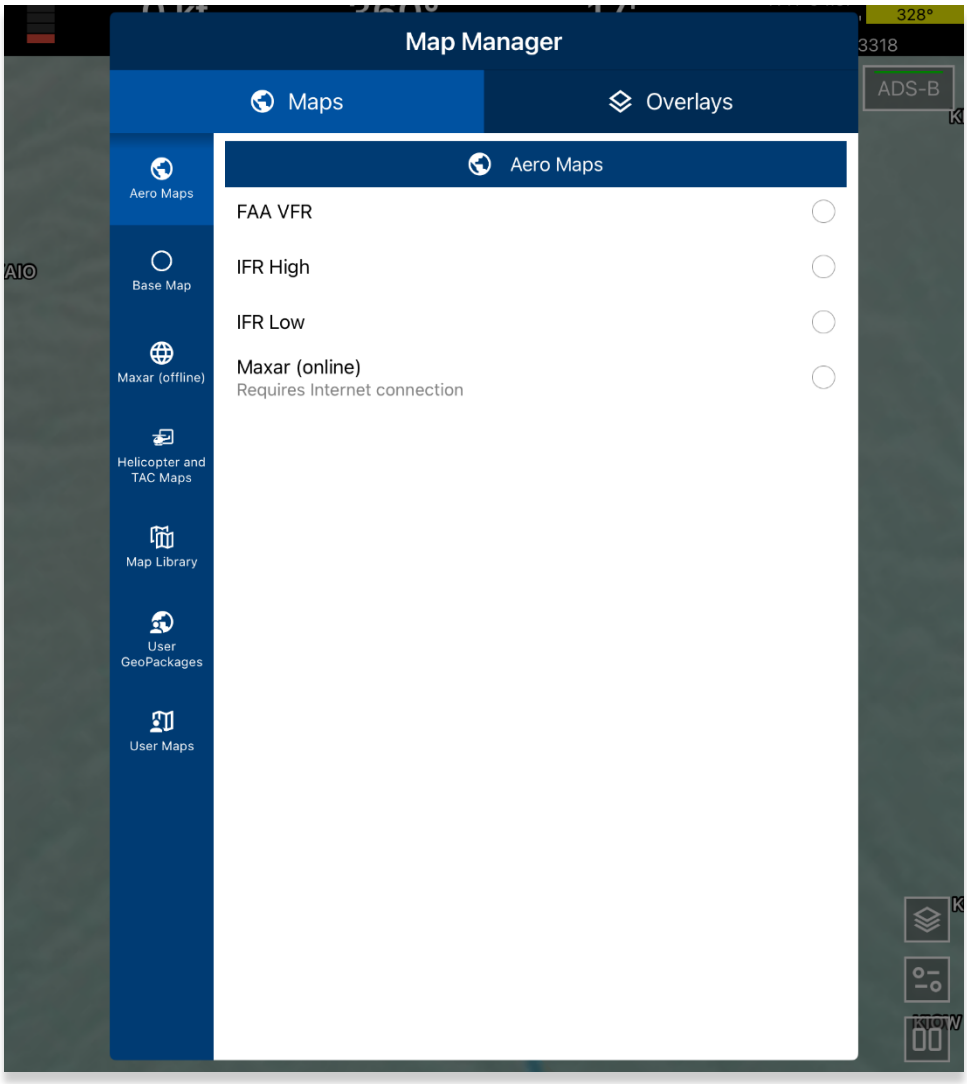
4. The ADS-B button on the Map will display a green line above the text when an ADS-B receiver is connected successfully.



NOTE: If the ADS-B is disconnected, the ADS-B button on the Map will not display a green status connection.

18 Map Manager

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



18.1 Maps

Maps allow users to enable different types of charts that can be displayed on the Map. Map types are separated into categories of Aero Maps, Base Map, Maxar (offline), Helicopter and TAC Maps, Map Library, User GeoPackages, and User Maps menus.

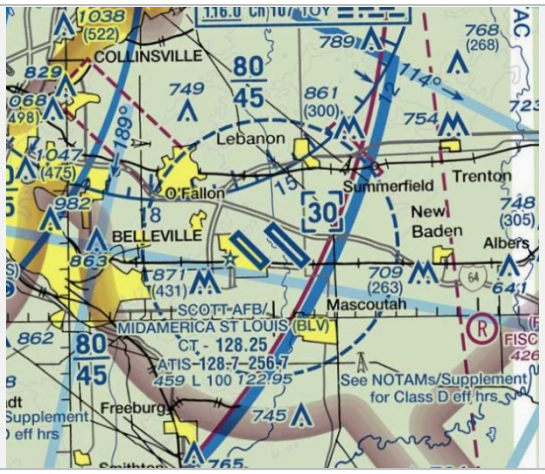
18.1.1 Aero Maps

The Aero Maps section provides access to current FAA VFR, worldwide IFR High and Low Enroutes, and Maxar (online).

18.1.1.1 FAA Visual Flight Rule (VFR)

The FAA VFR for the desired region must be downloaded. Until the data has been successfully downloaded, the FAA VFR 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** from the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **FAA VFR** to enable the option. The VFR sectional is displayed on the Map.

FAA VFR


18.1.1.2 Instrument Flight Rule (IFR) High

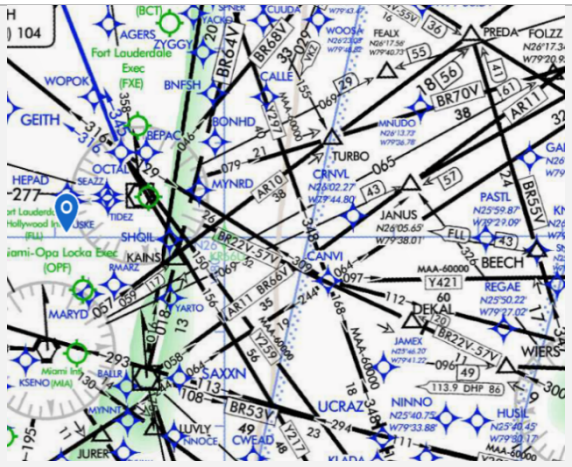
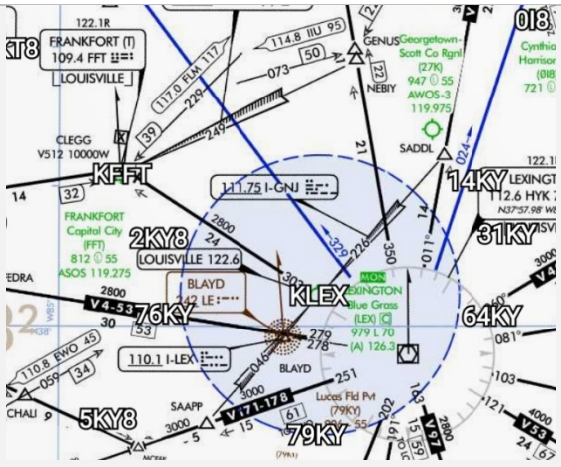
The IFR High charts for the desired region must be downloaded. Until the data has been successfully downloaded, the IFR High option will remain disabled.

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** from 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.

18.1.1.3 Instrument Flight Rule (IFR) Low

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** from 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.

IFR High	IFR Low
	

18.1.1.4 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** from 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 Maxar (online).

Maxar (online)


18.1.2 Base Map

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

18.1.2.1 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** from 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.

NOTE: When Earth Base Map is disabled, the Gray Base Map will serve as the default base map.

18.1.2.2 Gray Base Map

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

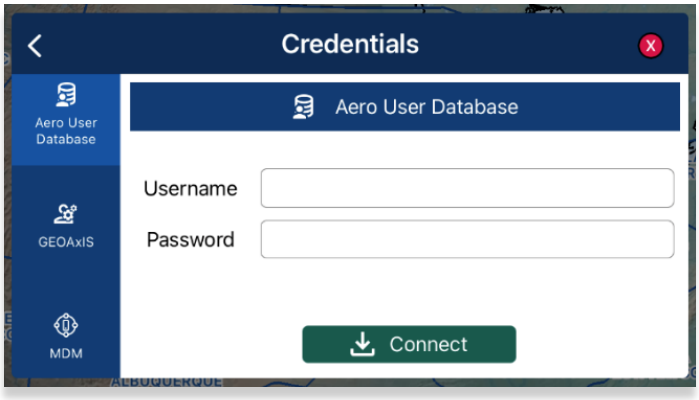
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Base Map** from the side menu.
5. Tap **Gray** to enable the option. The gray base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

Earth	Gray
	

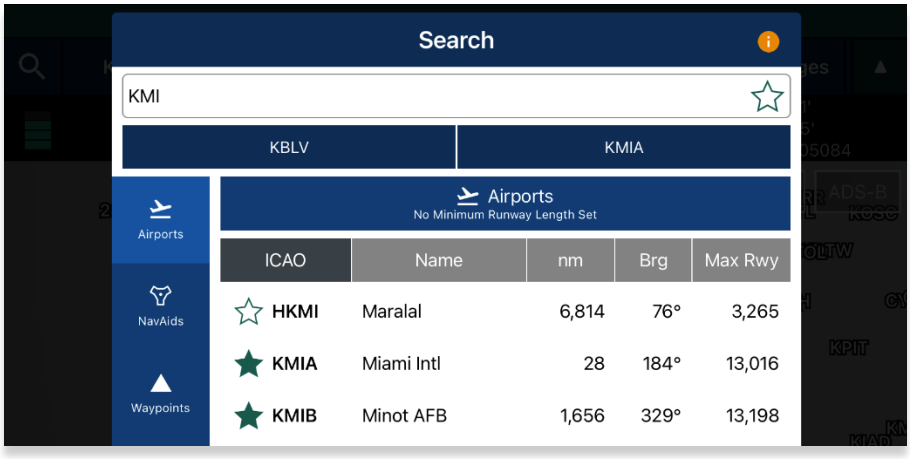
18.1.3 Maxar (Offline)

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, an internet connection is no longer required and can be displayed on the Map at any time. This 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).

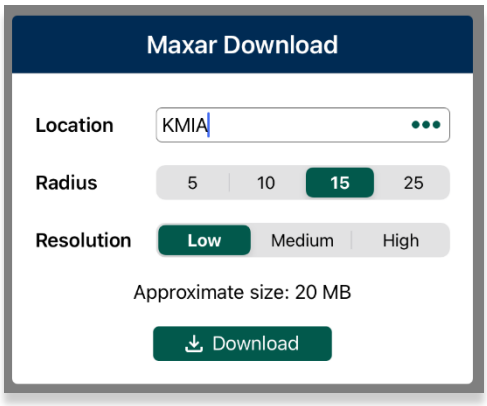
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Maxar (offline)** from the side menu.
5. Tap **Download.**
6. The credentials popup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



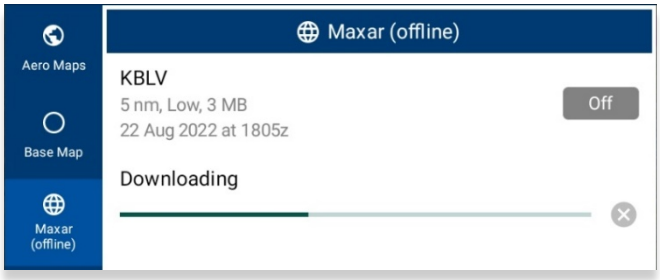
7. The Maxar Download popup will display the following fields:
    - **Location** – tap the ellipsis button to display the Search popup. Enter Airport, NavAid, Waypoint, User Waypoint, or Pin inside the text box. Radial Off NavAid and all other identifiers will be converted to coordinates.



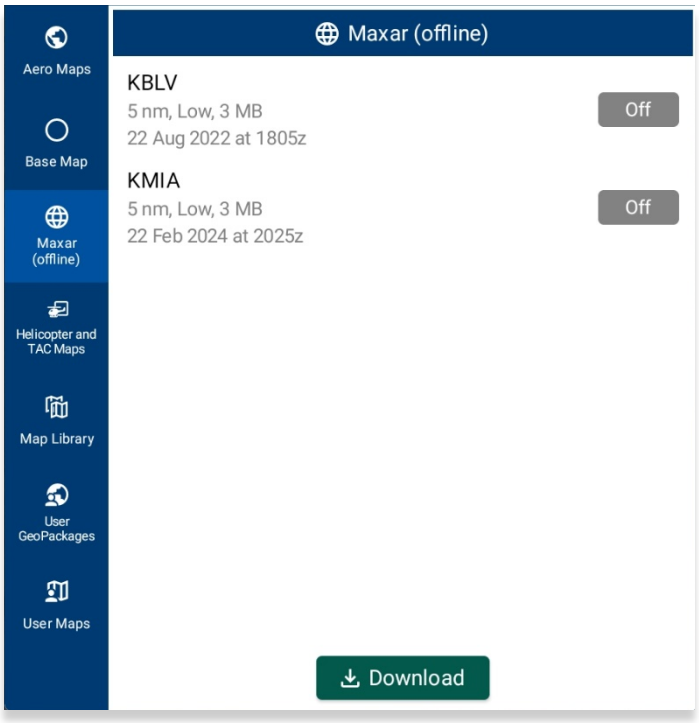
- **Radius** – select from options of 5, 10, 15, 25.
- **Resolution** – select from options of Low, Medium, or High.



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.
11. To delete a cache image, swipe left to reveal the delete button of the file that you wish to permanently remove. Tap **Delete**.
12. The delete confirmation popup for Maxar will be displayed. Tap **Delete** to confirm action.

Maxar


18.1.4 Helicopter and Terminal Area Chart (TAC) Maps

Helicopter and Terminal Area Chart (TAC) Maps provide access to Helicopter (Gulf Coast), Helicopter (Routes), and Terminal Area Charts (TACs) to overlay on the Map.

18.1.4.1 Helicopter (Gulf Coast)

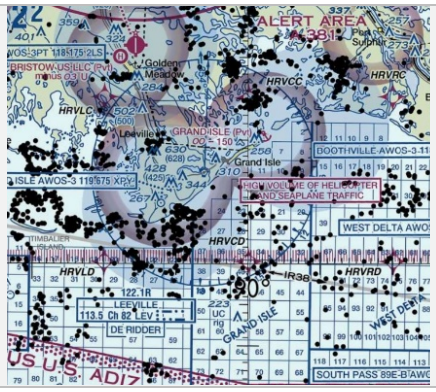
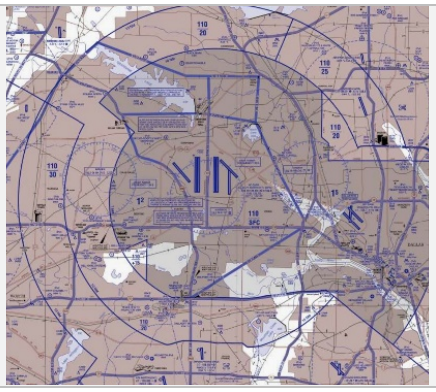
The FAA Helicopter CONUS Gulf Coast data must be downloaded. Until the data has been successfully downloaded, the Helicopter (Gulf Coast) option will remain disabled.

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** from the navigation bar, if necessary.
4. Select **Helicopter and TAC Maps** from the side menu.
5. Tap **Helicopter (Gulf Coast)** to enable the option. The gulf coast chart is overlayed on the Map.

18.1.4.2 Helicopter (Routes)

The FAA Helicopter CONUS Routes data must be downloaded. Until the data has been successfully downloaded, the Helicopter (Routes) 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 **Helicopter (Routes)** to enable the option. The helicopter chart is overlayed on the Map.

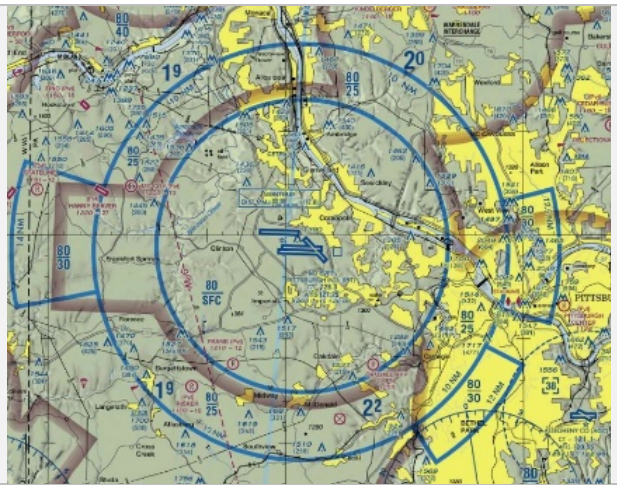
Helicopter (Gulf Coast)	Helicopter (Routes)
	

18.1.4.3 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** from 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 overlayed on the Map.

TACs

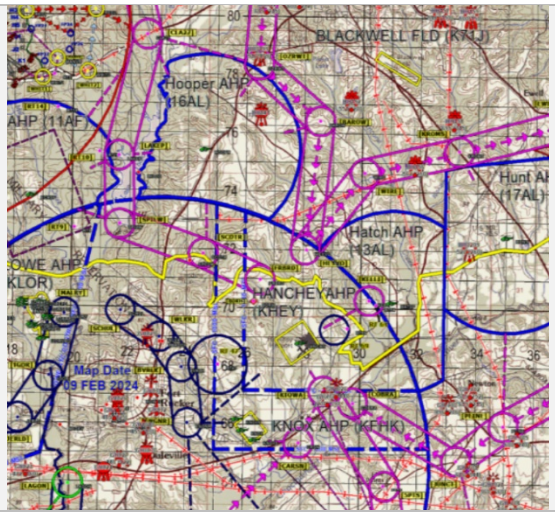


18.1.5 Map Library

Map Library provides users with 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 are the distributors of these charts. Users must download Map Library charts to view them on the Map. Refer to Section 9.2.1.1 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** from the navigation bar, if necessary.
4. Select **Map Library** from the side menu.
5. The files are grouped by categories of map types. Tap on the desired folder to reveal the subfolder. Then tap on the subfolder to reveal the downloaded Map Library chart file.
6. Enable desired Map Library chart. The chart will be displayed on the map. Depending on the size of the chart, Aero App will zoom in to optimize the chart display. If the chart is small, the users may need to zoom in to view the chart.
7. To delete Map Library, swipe left to reveal the *delete* button of the folder or file that you choose to permanently remove. Tap **Delete**.
8. The delete confirmation popup for Map Library will be displayed. Tap **Delete** to confirm action.

Map Library

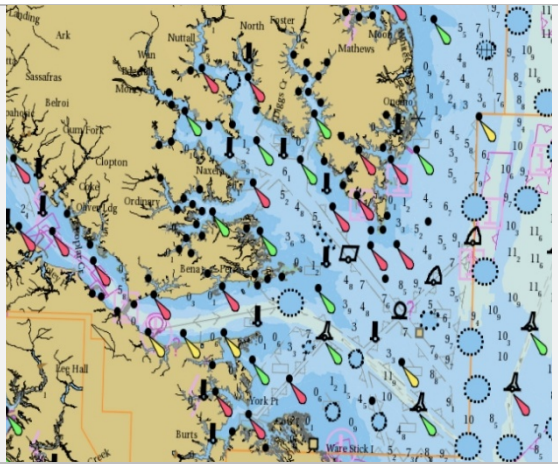


18.1.6 User GeoPackages

Aero App supports GeoPackages to be viewed and accessed on the Map view. GeoPackages must be sideloaded onto Aero App. Refer to Section 10.3 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 **Maps** from the navigation bar, if necessary.
4. Select **User GeoPackages** from the side menu.
5. The files are grouped by categories, tap on the 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**.
8. The delete confirmation popup for User GeoPackages will be displayed. Tap **Delete** to confirm action.

User GeoPackages

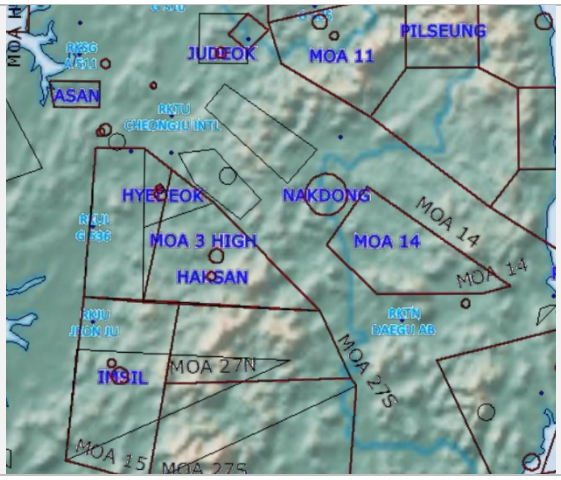


18.1.7 User Maps

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 10.2 for additional information.

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** from the navigation bar, if necessary.
4. Select **User Maps** from the side menu.
5. The loaded files will display under User Maps.
6. Select 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**.
8. The delete confirmation popup for User Maps will be displayed. Tap **Delete** to confirm action.

User Maps



18.2 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.

18.2.1 Aero Overlays

Aero Overlays contain various map overlay options.

18.2.1.1 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** from the navigation 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 on the ADIZ sector of choice on the Map. A popup containing an overview of the specified area will be displayed.

ADIZ

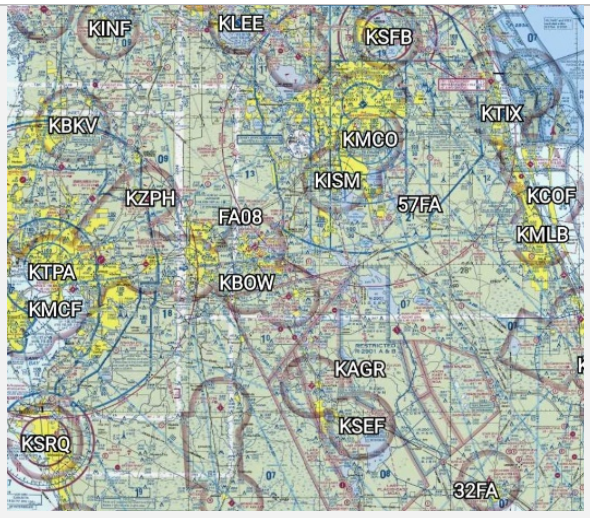
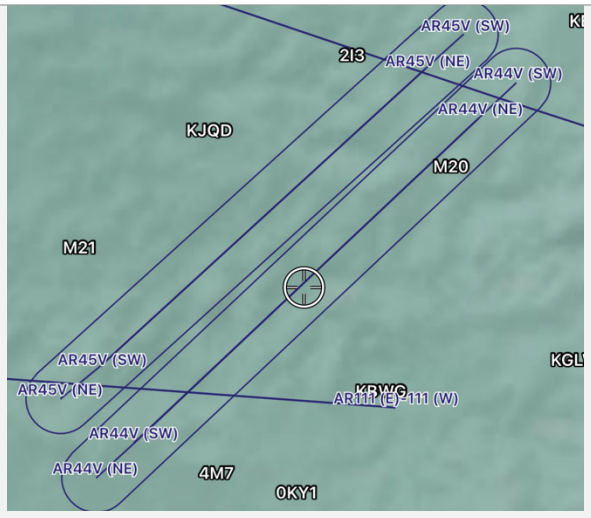


18.2.1.2 Airports

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** from the navigation 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.

18.2.1.3 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** from the navigation 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 the Map. If an ARR has multiple directions, the first and last points of each direction will be labeled with the direction name in parentheses.
6. Tap an **ARR label** on the Map to display a popup with air refueling route information.

Airports	Air Refueling Routes
	

18.2.1.4 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Airspaces (B, C, D)** to enable the option. Airspaces will populate the Map.
6. Tap an Airspace of choice on the Map view. A popup with airspace class information will be displayed.

18.2.1.5 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **Low** from the Airways segmented control**.** The low-altitude airways that are below 18,000 ft will populate the Map.

Airspaces (B, C, D)	Airways – Low
	

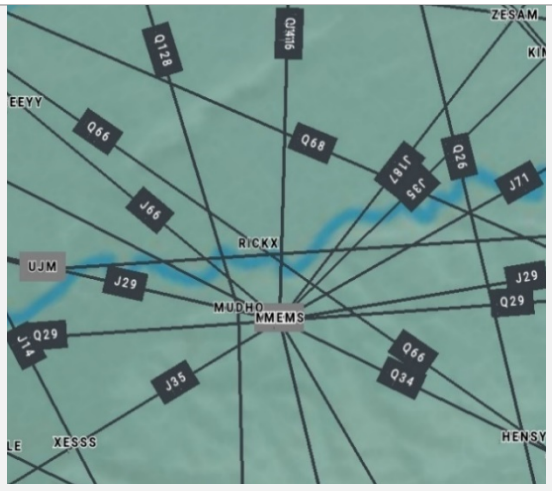
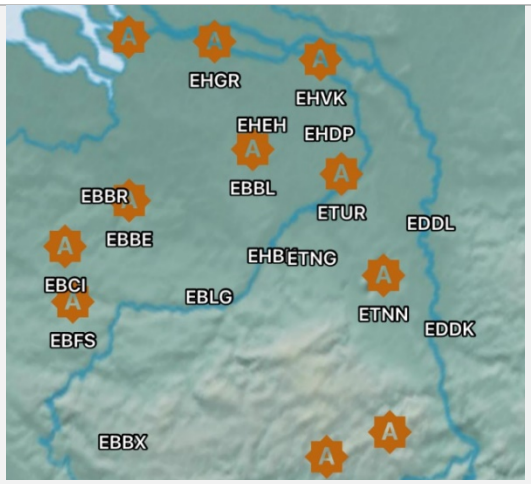
18.2.1.6 Airways – High

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **High** from the Airways segmented control**.** The high-altitude airways that are between 18,000 ft and 45,000 ft will populate the Map.

NOTE: Users can add Airways to their route. Refer to Add Airways to Route for additional information.

18.2.1.7 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Arresting Gear** to enable the option. Arresting gear icons for select areas will populate 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.

Airways – High	Arresting Gear
	

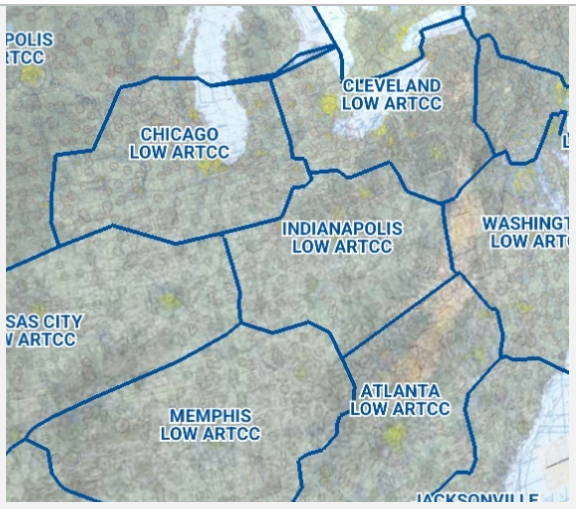
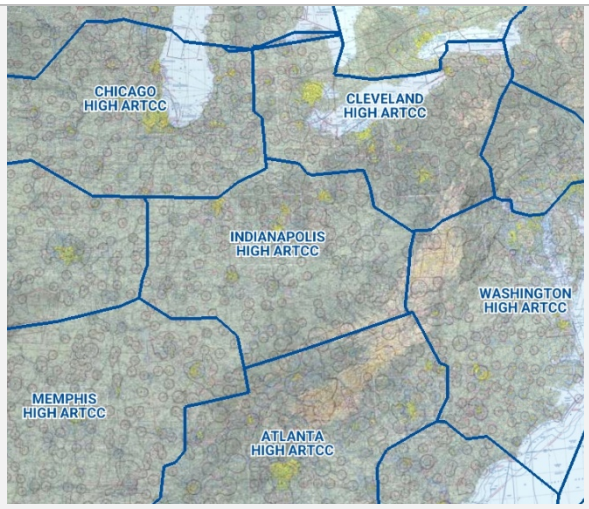
18.2.1.8 Air Route Traffic Control Centers (ARTCCs) – Low

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **Low** from the *ARTCCs* segmented control**.** The Map will overlay regions of low ARTCCs.

18.2.1.9 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **High** from the *ARTCCs* segmented control. The Map will overlay regions of high ARTCCs.

ARTCCs – Low	ARTCCs – High
	

18.2.1.10 Flight Information Regions (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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **FIR** from the *FIRs* segmented control. 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.

18.2.1.11 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **UIR** from the *FIRs* segmented control. 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.

FIR	UIR
	

18.2.1.12 Fuel Locations

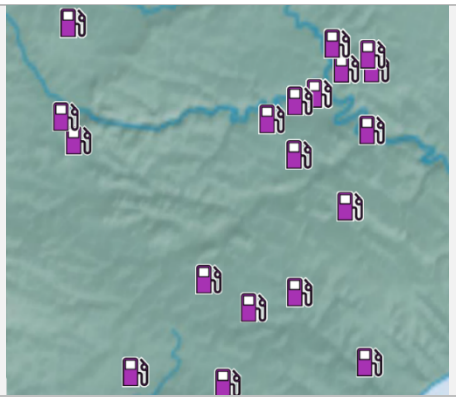
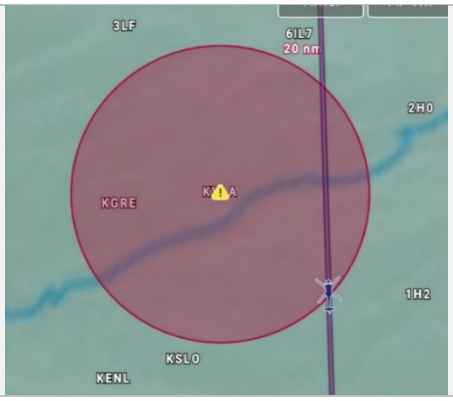
Contract fuel locations are available to users to populate the Map. The contract fuel icons are selectable and contain FBO information for the respective location.

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Fuel Locations** to enable the option. Contract fuel locations will populate the Map.
6. Tap a fuel pump of choice on the Map. A popup containing information on the respective fuel location will be displayed.

18.2.1.13 Hazards

Hazards are marked locations on the Map that were created by users. This option must be enabled to view dropped hazards. If no hazards were dropped, refer to Section 25.1.4 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Hazards** to enable the option. Dropped Hazards will populate the Map.
6. Tap a hazard of choice on the Map. The Map 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.

Fuel Locations	Hazards
	

18.2.1.14 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** from the navigation 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.

18.2.1.15 Mountainous Areas

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Mountainous Areas** to enable the option. Mountainous terrain will overlay on the Map.

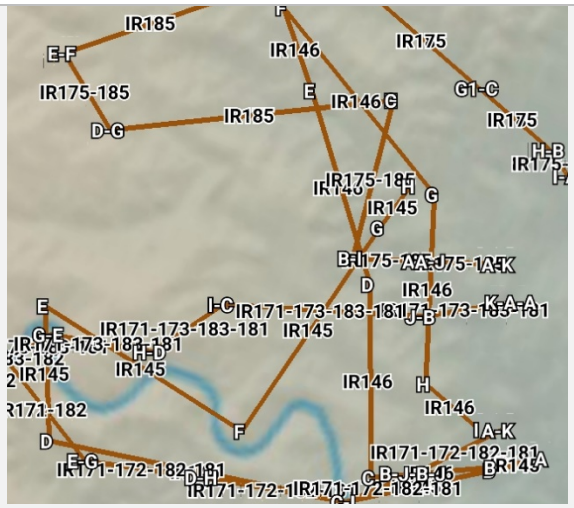
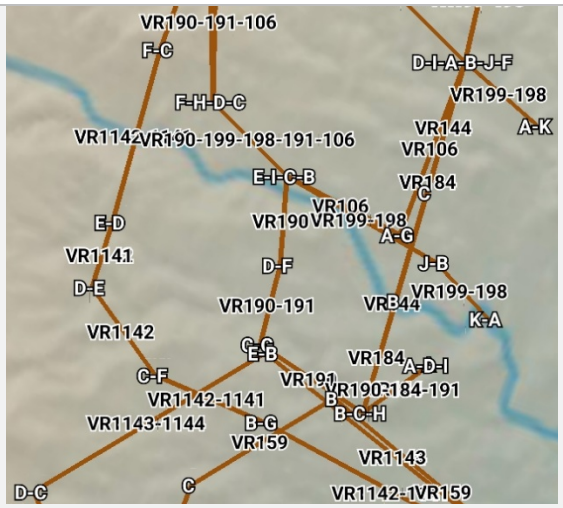
International Boundaries	Mountainous Areas
	

18.2.1.16 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **IR** from the MTRs segmented control. Instrument military training routes will populate the Map.
6. Tap an MTR of choice on the Map. A popup containing information on the MTR will be displayed.

18.2.1.17 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **VR** from the MTRs segmented control. Visual military training routes will populate the Map.
6. Tap an MTR of choice on the Map. A popup containing information on the MTR will be displayed.

MTRs – IR	MTRs – VR
	

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

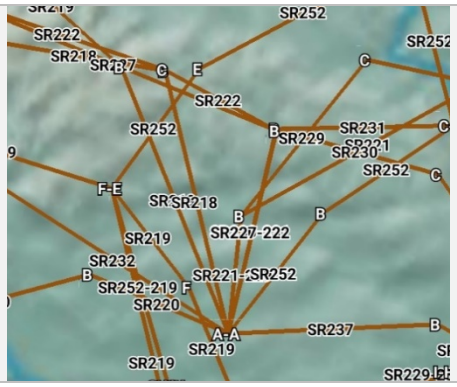
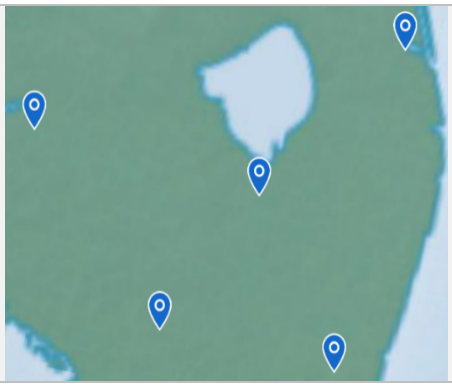
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **SR** from the MTRs segmented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

NOTE: Users can add MTRs to the route. Refer to Add MTRs to Route for additional information.

18.2.1.19 Pins

Pins are marked locations on the Map that were dropped by users. This option must be enabled to view dropped pins. If no pins were dropped, refer to Section 25.1.3 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Pins** to enable the option. Dropped pins will populate the Map.
6. Tap a pin of choice on the Map. 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.

MTRs – SR	Pins
	

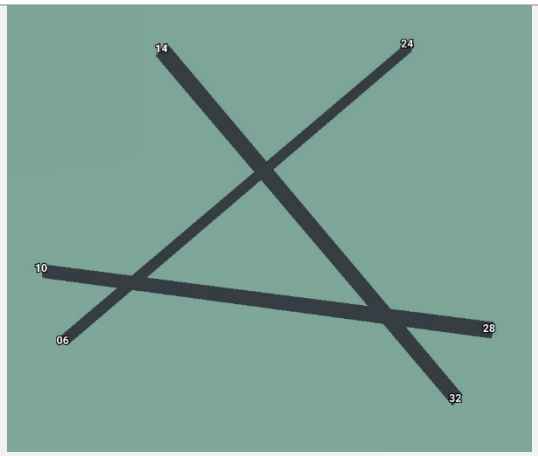
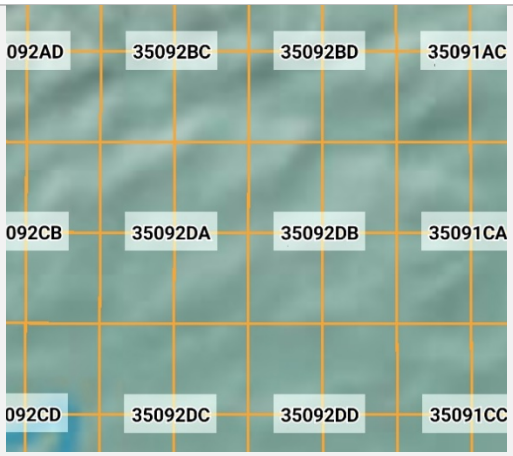
18.2.1.20 Runways

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Runways** to enable the option. Airport runways will populate the Map.

18.2.1.21 Search and Rescue (SAR) Grids

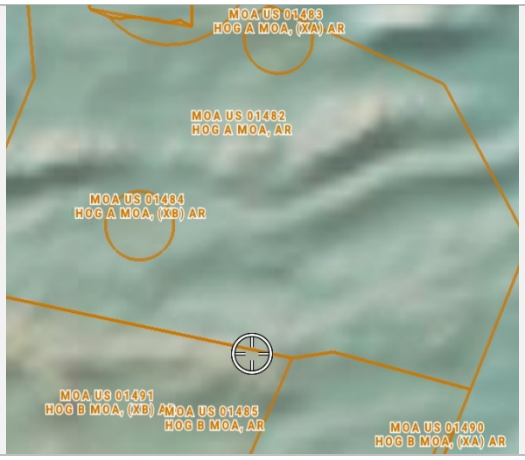
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **SAR Grids** to enable the option.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

Runways	SAR Grids
	

18.2.1.22 Special Use Airspaces (SUAs)

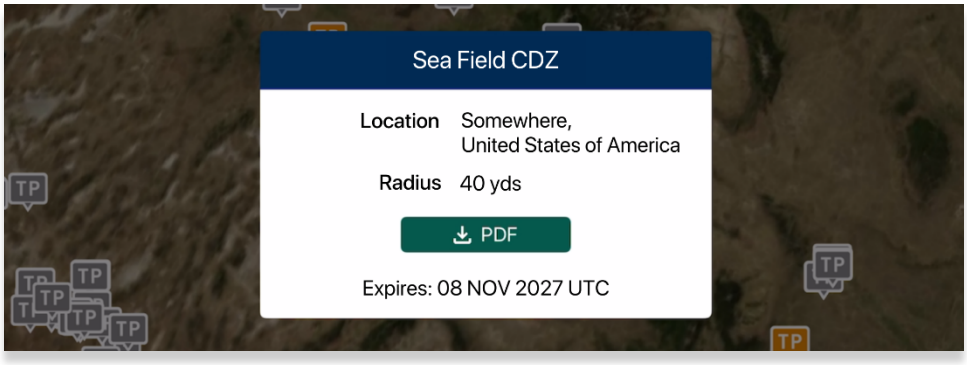
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select **On** from the SUAs segmented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

SUAs


18.2.1.23 Talon Point

Talon Point provides worldwide information on Drop Zone and Load Zone surveys. Surveys can be downloaded directly to Aero App and viewed as PDF. Talon Point is limited to DOW Partners and GEOAxIS users.

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap the Talon Point **download button**. The Credentials popup will appear. Enter your AUD credentials or choose GEOAxIS to authenticate.
6. Once authenticated, enable **Talon Point**. Talon Point locations will populate the map.
7. Tap a Talon Point of choice on the Map. Information on the talon point location will be displayed.

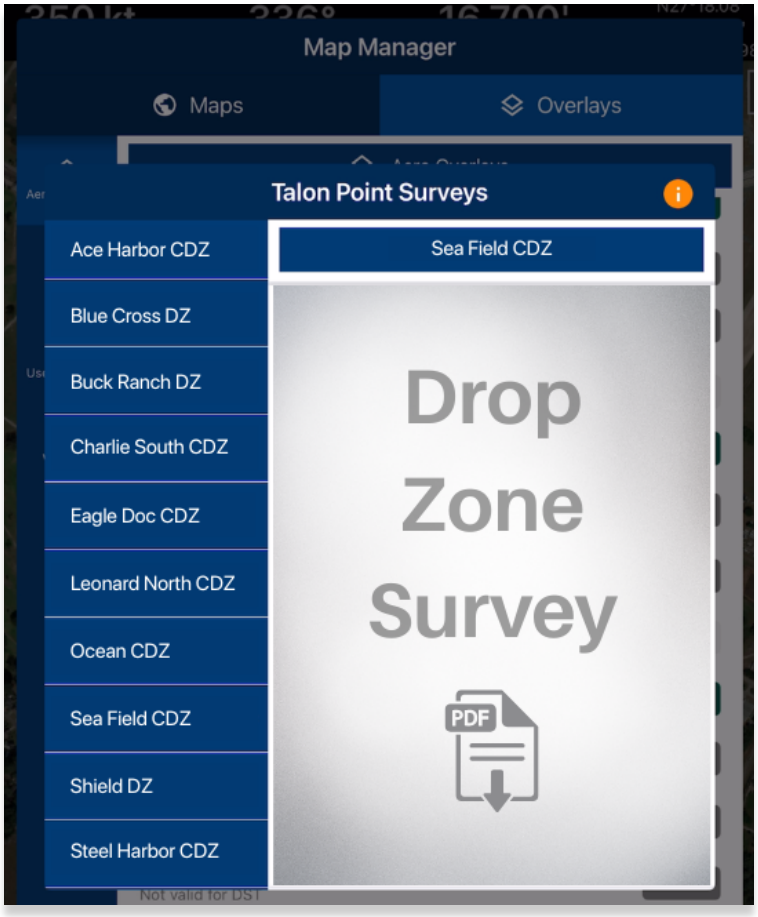


8. Tap **download PDF**. The download will begin. Once the download is complete, the TP icon will change to orange indicating the PDF is available to be viewed.
9. To view a survey, tap the **orange TP** icon on the Map. Tap **View PDF**.



Downloaded Talon Point Surveys are compiled into a single list in Map Manager. The list includes every downloaded survey including those that have expired. It is advised to download or redownload Talon Point surveys prior to every mission to ensure accurate and up-to-date documents as they are subject to change.

10. Open **Map Manager**, tap **Overlays**.
11. Tap the Talon Point **document button** to view the list of Talon Point Surveys.
12. Choose a survey of choice to display the PDF.



NOTE: An expired label will be displayed beneath the survey name when the PDF has expired.

13. To remove a survey from the Talon Point Surveys list, swipe left to reveal the delete button. Tap **Delete**.
14. The delete confirmation popup for Talon Point will be displayed. Tap **Delete** to confirm action.

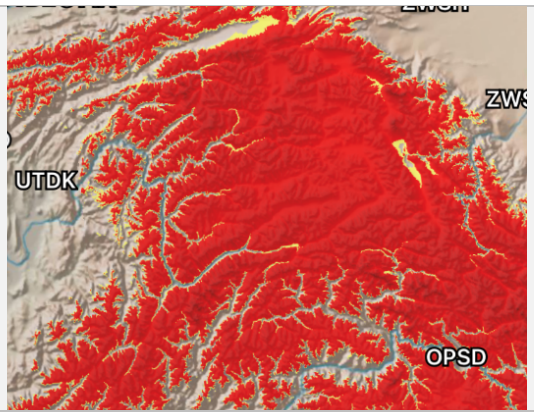
18.2.1.24 Terrain

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** from the navigation 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:
    - **Red** – ownship is less than or equal to 100 feet above terrain
    - **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 8.13 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.

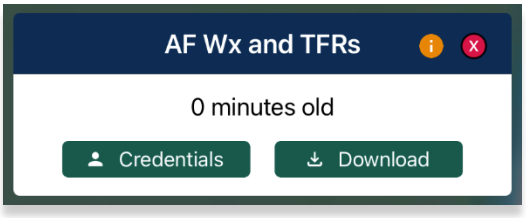
Terrain



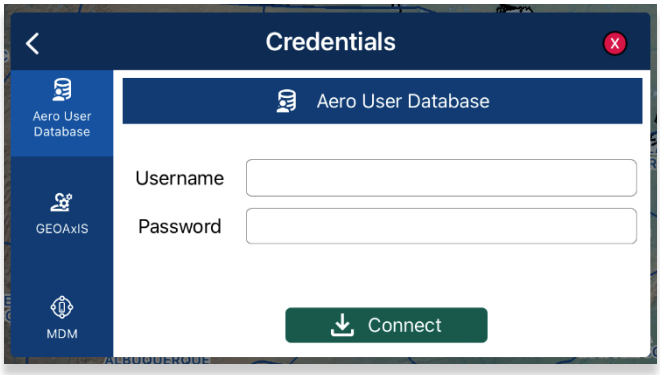
18.2.1.25 Temporary Flight Restrictions (TFRs)

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

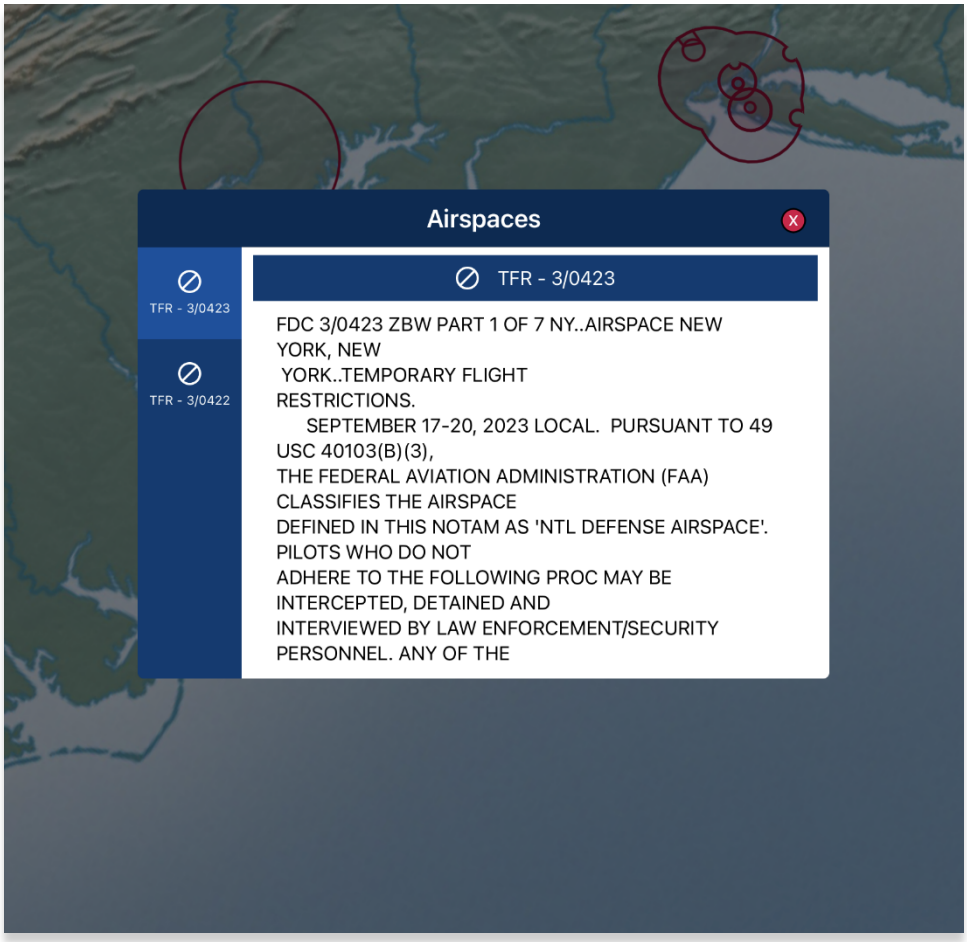
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower-right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **TFRs** to enable the option.
6. Exit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



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

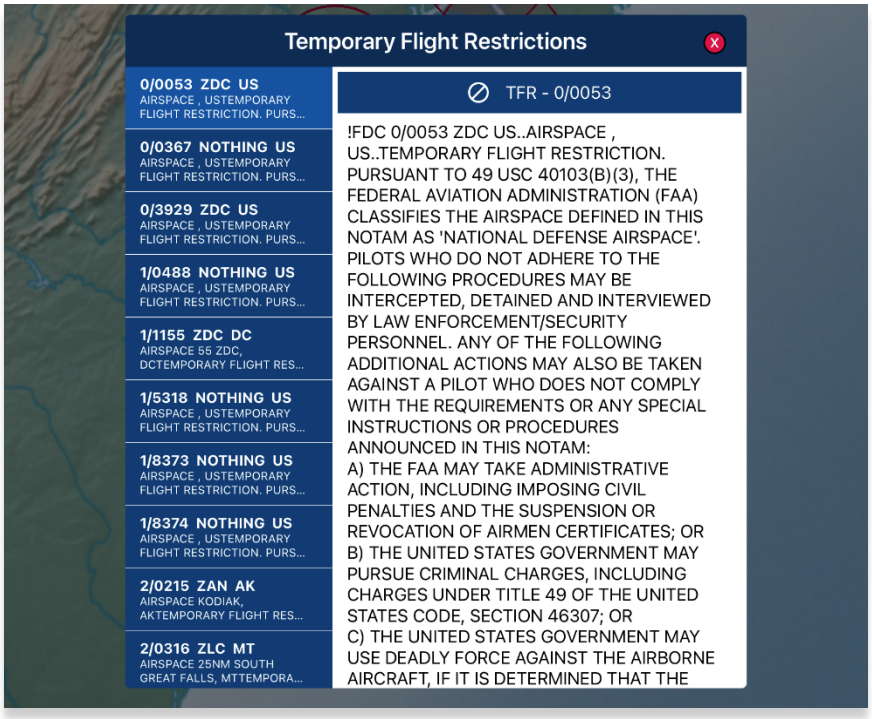


NOTE: In the case where a TFR overlaps another TFR, a Which One popup will appear to confirm selection.

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** from the navigation 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.



18.2.1.26 Time Zones

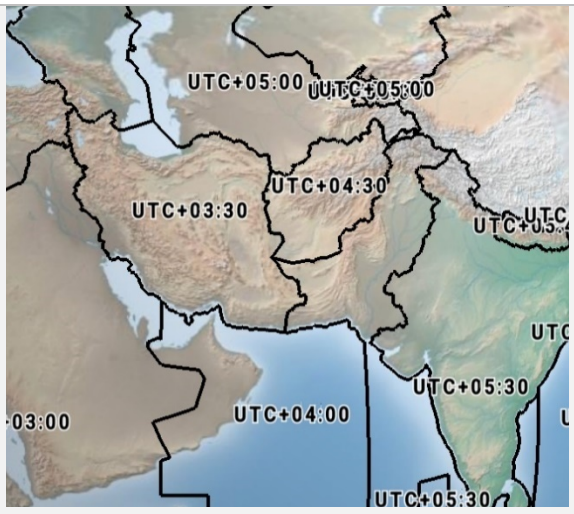
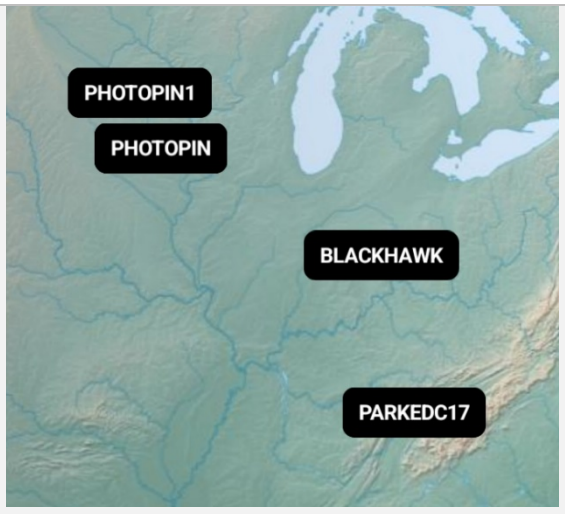
Time Zones are shown on the Map view with lines separating the longitudinal divisions. Labels display the time offset for each time zone.

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** from the navigation 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.

18.2.1.27 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 Photo Pin 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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **User Images** to enable the option. Dropped photo pins will populate the Map.

Time Zones	User Images
	

18.2.1.28 Vertical Obstructions (VOs)

Vertical Obstructions (VOs) will mark locations of towers, buildings, and bridges that are over 150'. In addition, users can view detailed information for each VO, including its ID, coordinates, altitudes, and accuracy values (horizontal, AGL, and MSL); access to accuracy values is limited to select partners.

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** from the navigation bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **VOs** to enable the option. Vertical obstructions will populate the Map.
6. Tap a vertical obstruction of choice on the Map. A popup containing VO information will be displayed.

VOs

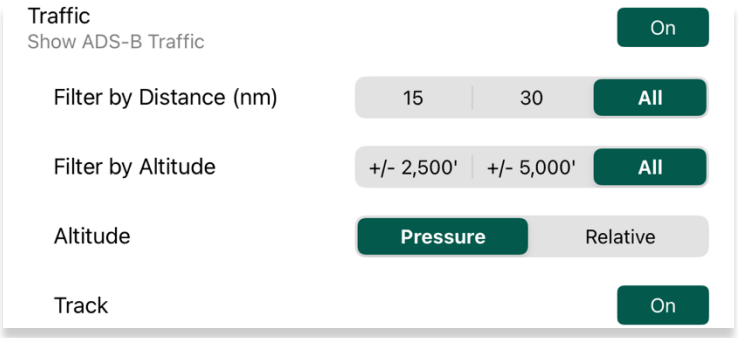

18.2.2 Traffic

Air traffic can be displayed on Aero App based on the given information provided by your ADS-B receiver. A successful connection to an ADS-B receiver is required to view traffic on the Map. Refer to Section 17.4 for additional information.

18.2.2.1 Traffic

Users can customize how traffic is displayed on the Map with various filter options, including filters for distance, altitude, and track.

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** from the navigation bar.
4. Select **Traffic** from the side menu.
5. Enable **Traffic** to activate the option. Additional settings will be displayed, with preconfigured traffic selected by default. Adjust as needed.
    - **Filter by Distance** – Filter ownship traffic based on the distance from your ownship, with a radius of either ***15 or 30 km or nm***, depending on your unit format in Settings. Alternatively, you can choose to display ***all traffic*** surrounding your ownship.
    - **Filter by Altitude** – Filter traffic based on altitude relative to your ownship, with the choice to display traffic up to ***2,500'*** above and below, or up to ***5,000'*** above and below. Alternatively, you can choose to display ***all traffic*** surrounding your ownship.
    - **Altitude** – Set altitude to Pressure or Relative:
        a. **Pressure** – Displays traffic targets in pressure altitude (actual altitude of ownship), shown in hundreds of feet. Pressure altitude is prefixed with a "+" (e.g., +50'). Any value below 100 feet is displayed as "+0".
        b. **Relative** – Displays traffic altitude relative to your ownship. If the target is above, it's shown with a "+" (e.g., +50'), and if below, with a "-" (e.g., -50'). Altitudes are displayed in hundreds of feet, with values below 100 feet shown as "+0" or "-0".
    - **Track** – Displays a fixed line extending in the direction of the ownship's current flight path.

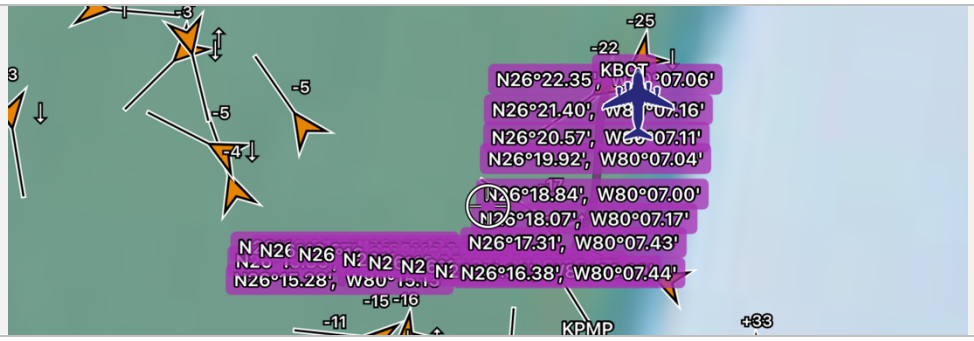


ADS-B traffic will populate the Map.

Traffic with Pressure Altitude



Traffic with Relative Altitude



Users can tap on a traffic target to display traffic information.

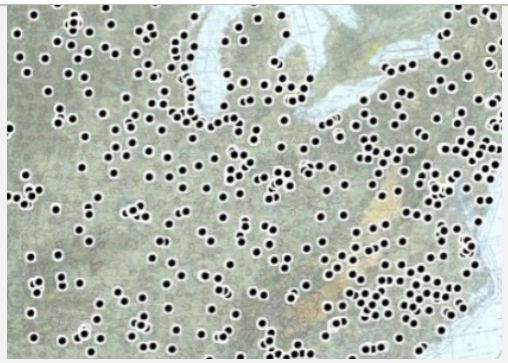
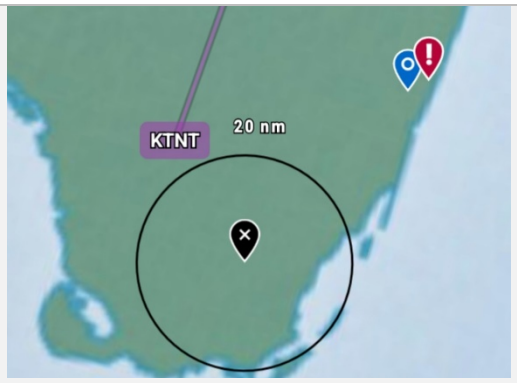
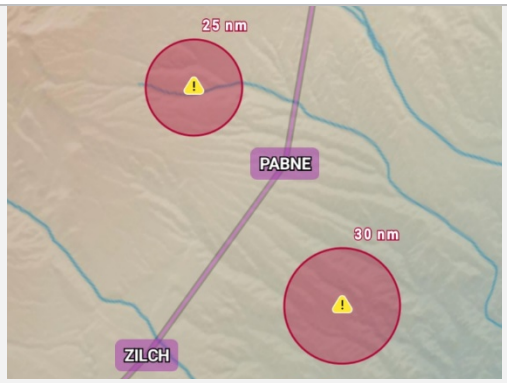


18.2.3 User Overlays

Aero App enables users to sideload User Overlays such as Shapefiles, GeoJSON, KML/KMZ, user-generated Pins and Hazards in SQLite format, and other files in the Aero App directory. Refer to Section 10 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** from the navigation bar.
4. Select **User Overlays** from the side menu.
5. Select desired user overlay(s) and the overlay will display on the Map.

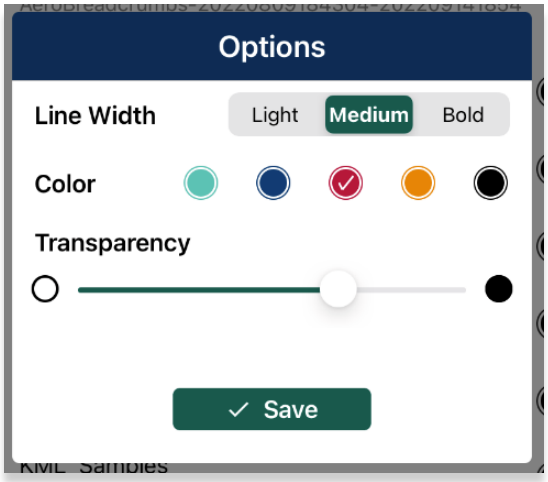
NOTE: Loading a GeoJSON file that exceeds the 35 MB limit will trigger an error message.

Shapefiles	GeoJSON
	
Pins	**Hazards**
	

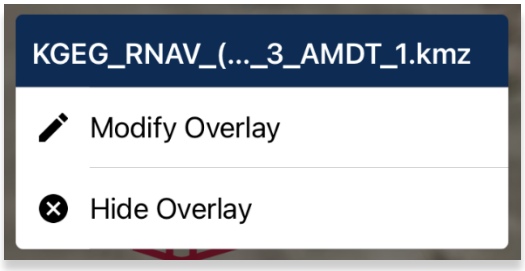
6. Users will have the option to configure their User Overlays by tapping the radio button located to the right of the selected user overlay.

NOTE: The User Overlays configuration feature supports only KML, KMZ, Shapefiles, and GeoJSON file formats.

7. An *Options* popup will display, select desired *Line Width*, *Color*, and adjust *Transparency* to desired preference.
8. Tap **Save** once desired settings have been selected.



9. Locate and tap user overlay from the Map. Users are presented with the following options:
   - **Modify Overlay** – returns to the overlay configuration popup to make changes to the user overlay.
   - **Hide Overlay** – hides the user overlay.



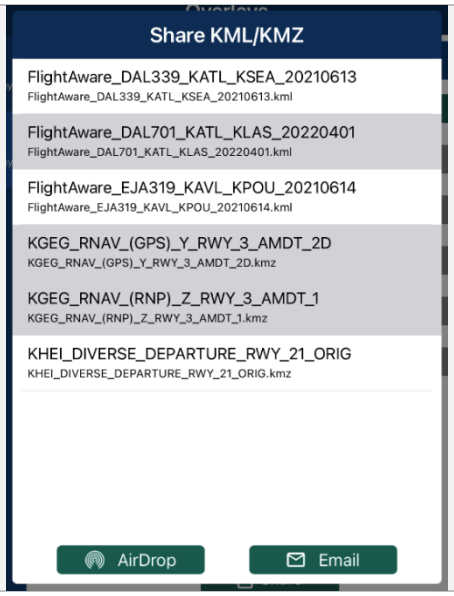
10. To delete a user overlay, from the User Overlays menu, swipe left to reveal the delete button of the file that you wish to permanently remove. Tap **Delete**.
11. The delete confirmation popup for User Overlays will be displayed. Tap **Delete** to confirm action.

18.2.3.1 Share KML/KMZ

KML/KMZ files can be shared between Aero App users via AirDrop 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** from the navigation 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.
7. Select desired **method of sharing**.
8. By selecting **AirDrop,** the AirDrop popup will appear with the KML/KMZ files attached. Refer to Sharing KML/KMZ Files Through AirDrop 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 Sharing KML/KMZ Files Through Email for additional information.

Share KML/KMZ

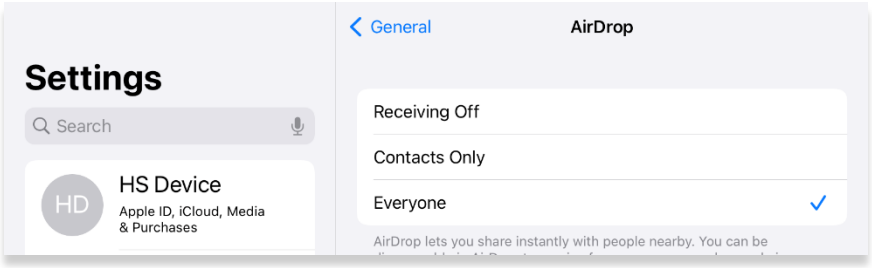


NOTE: The share options will be disabled if no files have been selected.

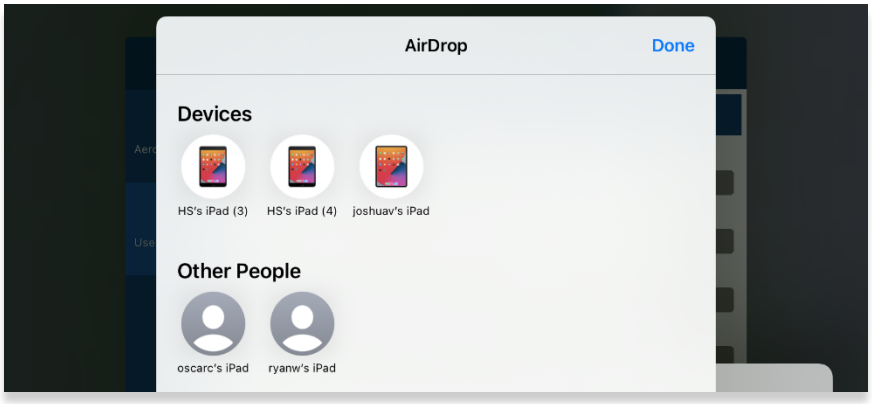
Sharing KML/KMZ Files Through AirDrop

KML/KMZ files can be shared with another Apple device through AirDrop. The person receiving the files must have their AirDrop *enabled* on *the* devices prior to receiving any files. Refer to support.apple.com for additional information on AirDrop.

1. On the sharing device, the AirDrop popup will display. Ensure the receiving device has their AirDrop enabled to allow the sharing device to select the device in which the KML/KMZ files will be sent to.



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



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

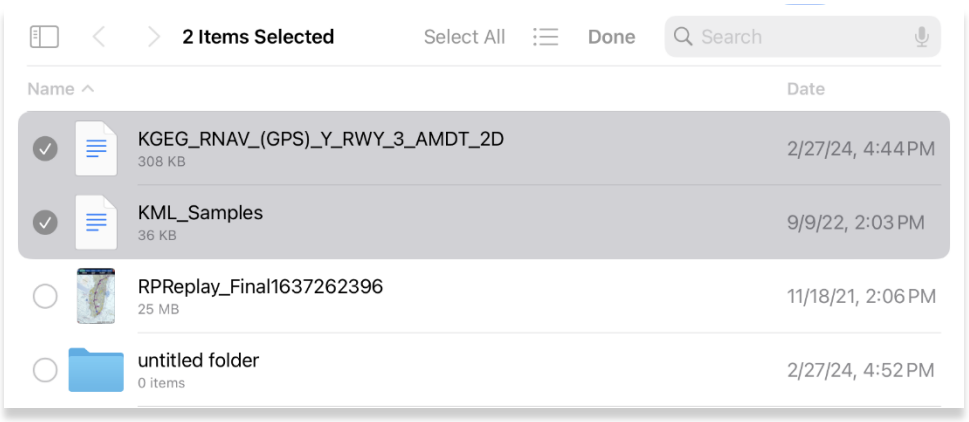
Receiving KML/KMZ Files Through AirDrop

Users receiving the files via AirDrop must follow the prompts to accept the files being sent. Users must have their AirDrop *enabled* to avoid receiving interruption. Different behaviors will occur depending on the device's operating system. Refer to support.apple.com for additional information on AirDrop.

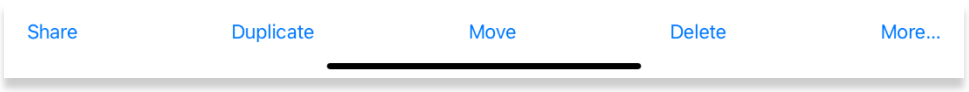
1. Ensure your device's AirDrop is enabled.
2. An AirDrop notification will appear with options to *Decline* or *Accept*. Tap **Accept**.

The KML/KMZ file is stored in your device's Files app. To view the files on Aero App, users must transfer the files to Aero App and open them through the document picker.

3. From the document picker view, locate and select the received KML/KMZ files.

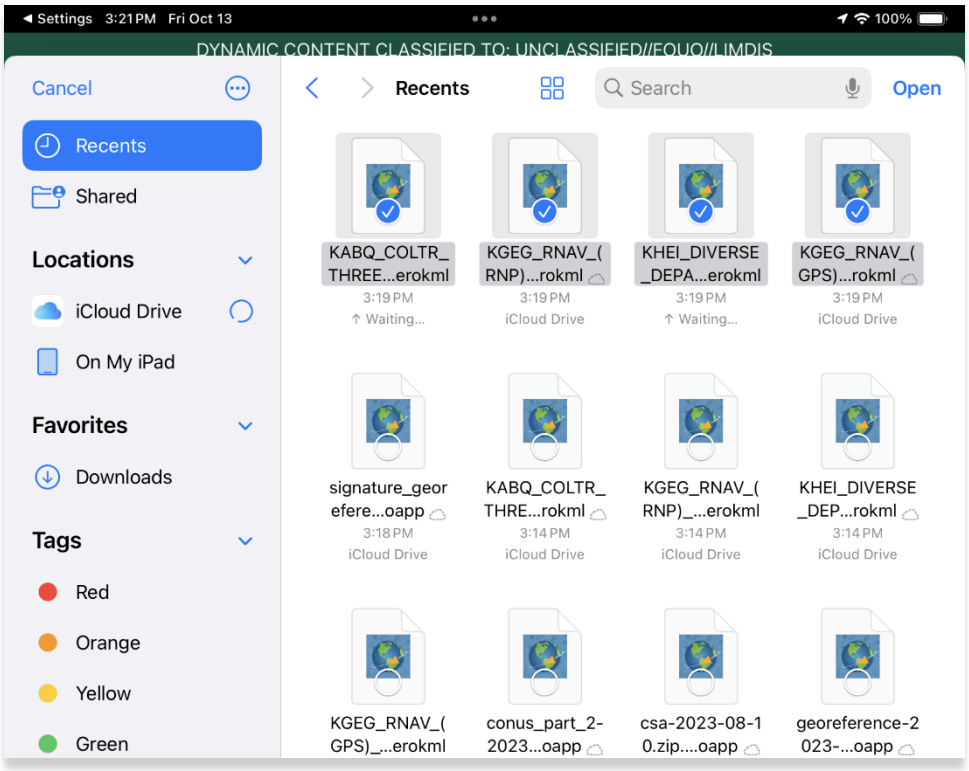


4. Selecting files will trigger the additional actions at the bottom of the page to become selectable. Select **Share**.



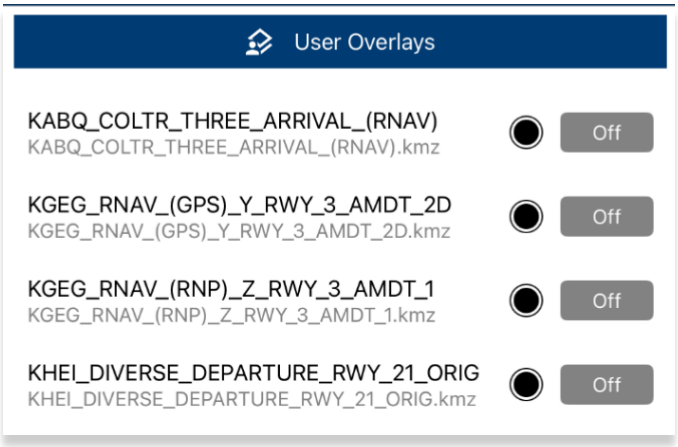
5. Select **Aero App**. Aero App's document picker will display.

6. Select desired KML/KMZ files to load onto Aero App then tap **Open**.



NOTE: The document picker only applies to device's running iOS 17 or later.

7. The Airdropped files will be loaded in the Overlays popup of the Map. Select desired files to overlay on the Map view.

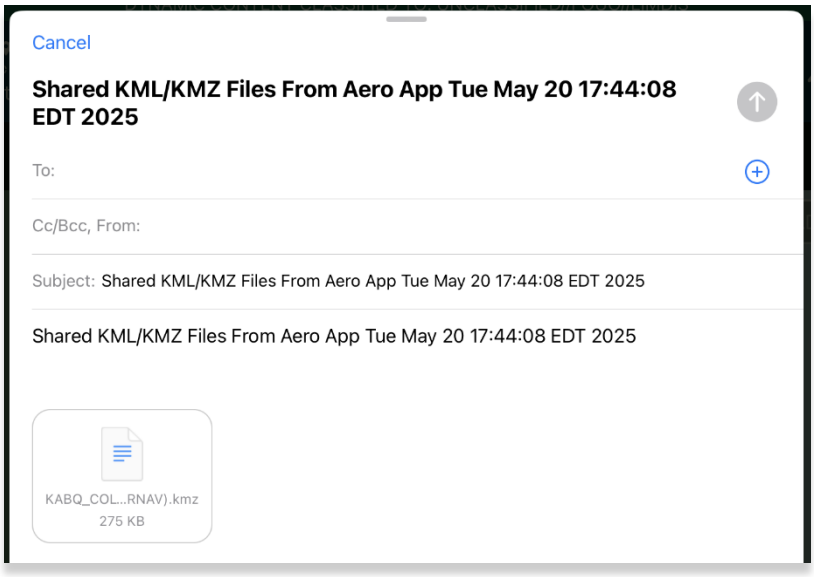


8. Aero App provides users with the option to import missed files into Aero App. Navigate to the Date Status page and select **Import** to load the files that you wish to view on Aero App.

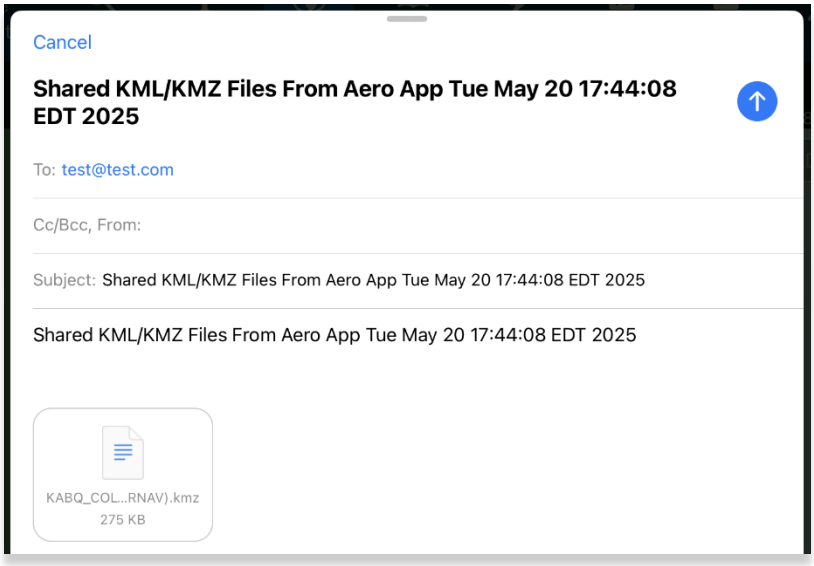
Sharing KML/KMZ Files Through Email

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 any 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.

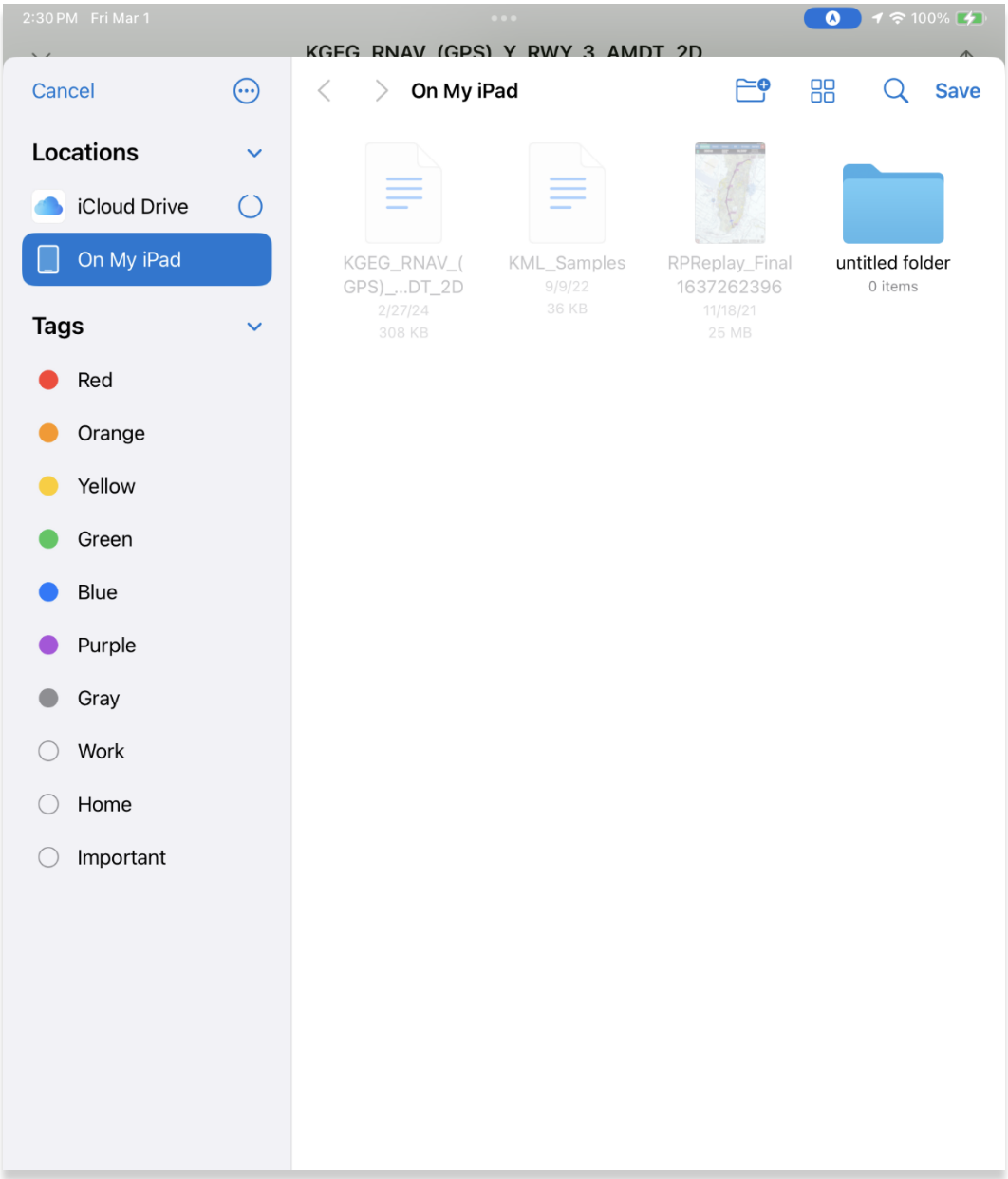


2. Enter the recipient's email address to which you would like to share the KML/KMZ files.
3. Once a valid email address has been entered, the *send button* will become selectable. Tap the **Send** button and the receiving device will follow prompts in downloading the files onto their device.



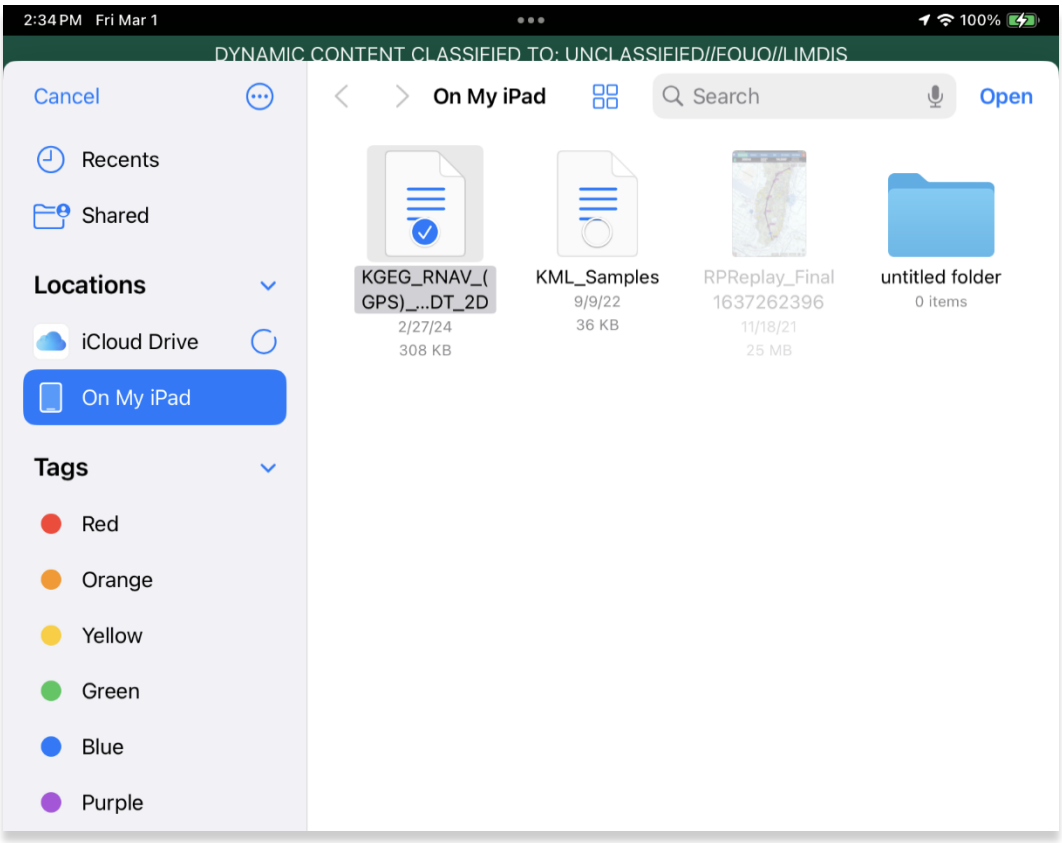
Receiving KML/KMZ Files Through Email

1. On the receiving device, navigate to the email provider in which the KML/KMZ files were sent to.
2. On the email, tap on the **shared KML/KMZ file**.
3. Tap the **Download** button.
4. Tap **Save to Files** from the list of actions.
5. Select **On My iPad** for the location to store the files, then tap **Save**.



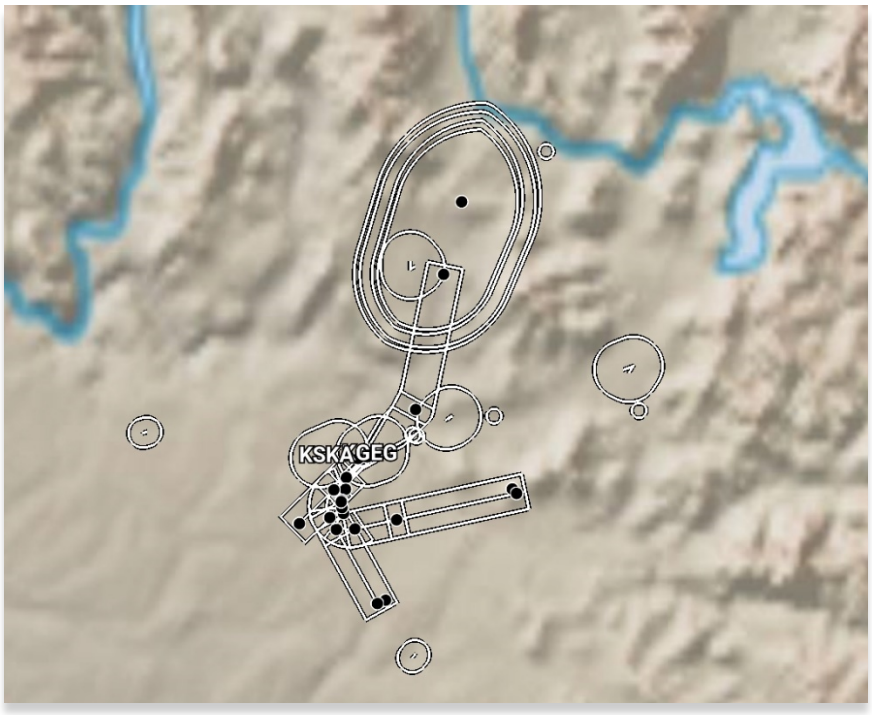
The KML/KMZ file is stored in your device's Files app. To view the files on Aero App, users must import the files into Aero App through the *Import* feature on the Data Status page. Alternatively, users can import files into Aero App directly from the device's Files app.

6. Open **Aero App**.
7. Tap **Data** on the ***Main Menu***.
8. Tap **Import** and the system file picker will appear.
9. Locate and tap the KML/KMZ file.
10. Tap **Open**. The KML/KMZ file will begin to load onto Aero App.



11. The KML/KMZ file can now be viewed on Aero App. Tap **Map** on the ***Main Menu***.
12. Navigate to **Map Manager**.
13. Select **Overlays** from the navigation bar.
14. Select **User Overlays** from the side menu.

15. Locate and tap to enable the KML/KMZ file from the *User Overlays* collection. The KML/KMZ file will overlay on the Map.



16. To delete the overlay, swipe left to reveal the delete button of the file that you wish to permanently remove. Tap **Delete.**
17. The delete confirmation popup for User Overlays will be displayed. Tap **Delete** to confirm action.

18.2.4 Weather

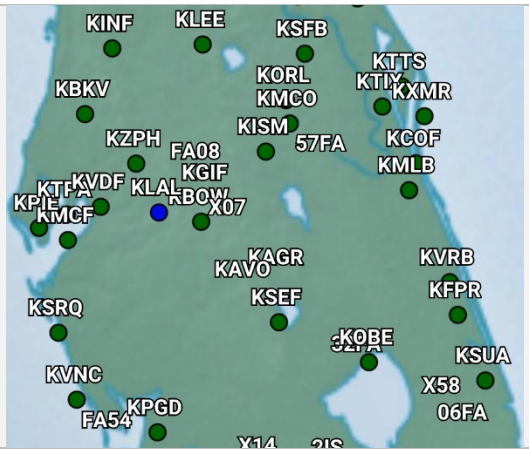
Aero App Weather has various options that enable pilots to display METARs and ADS-B weather on the Map. Users can modify their ADS-B flight altitude and ADS-B overlay transparency.

18.2.4.1 METARs

The METARs option must be enabled to view the latest ADS-B and/or Air Force Weather (AF Wx) on the Map. To view AF Wx (Wi-Fi or cellular required), user must be logged in through AUD, GEOAxIS, or with 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 **Overlays** from the navigation bar.
4. Select **Weather** from the side menu.
5. Tap **METARs** to enable the option. The flight rules will overlay on the Map.

METARs

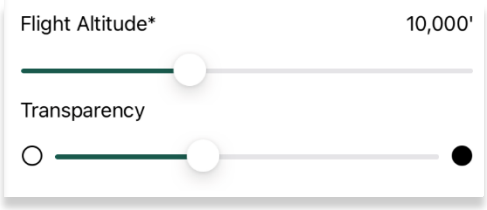


NOTE: Air Force Weather (AF Wx) is only available via internet. However, if ADS-B weather information becomes available, whichever source has the latest data will show the current weather.

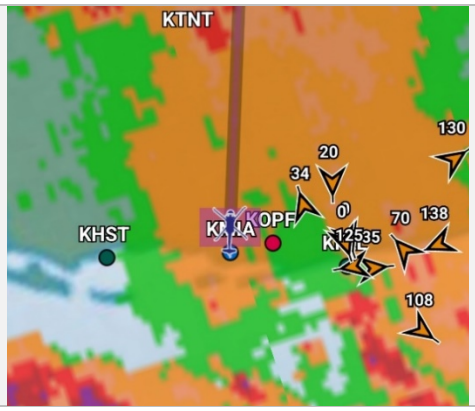
18.2.4.2 ADS-B Weather

Aero App provides animated ADS-B weather such as Lightning, Cloud Tops, Icing Probability, Icing Severity, Icing SLD Potential, NEXRAD, and Turbulence. Users must establish an ADS-B connection. For additional information, refer to Section 17.4.

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** from the navigation bar.
4. Tap **Weather** from the side menu.
5. Tap **ADS-B** to enable the option. Additional ADS-B weather overlay options will be displayed.
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' to 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% to 100%.

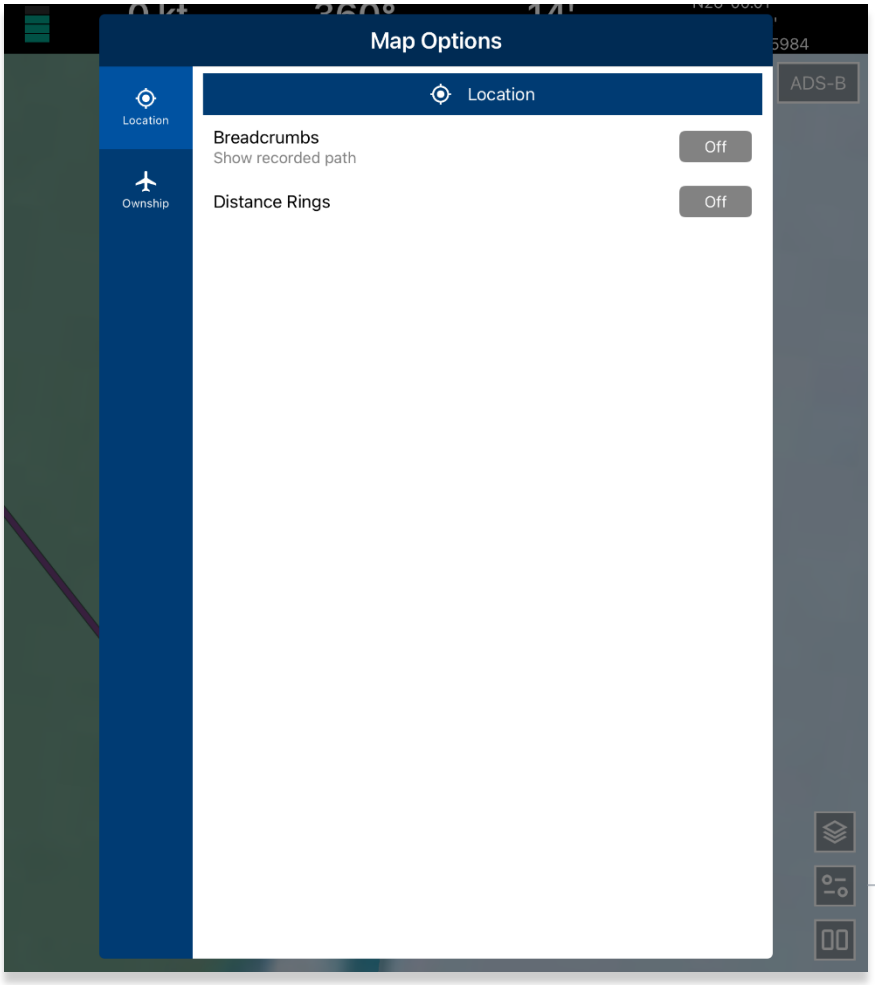


ADS-B Weather Overlay



19 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.



19.1 Location

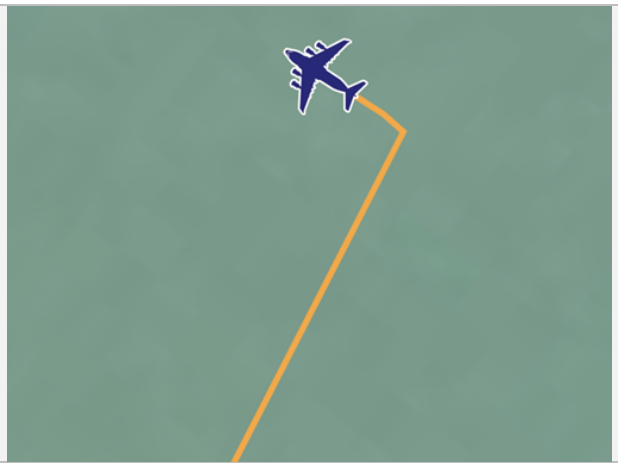
The Location menu offers options to show recorded paths and the ability to add distance rings around your ownship.

19.1.1 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 17.1.8 for additional information regarding Breadcrumbs.

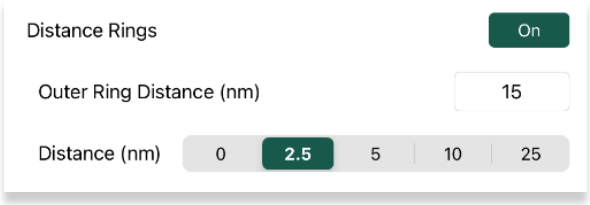
Breadcrumbs



19.1.2 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 settings can be modified to in Settings. The Outer Ring Distance setting represents the farthest distance from the ownship, and Distance setting is the length between each ring.

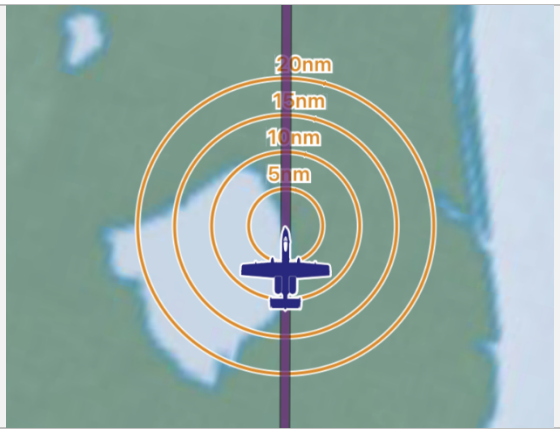
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Options** located directed below Map Manager.
3. Select **Location** from the side menu.
4. Tap **Distance Rings** to reveal additional options for distance rings.
5. Tap on the **Outer Ring Distance** text field and enter desired outer ring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

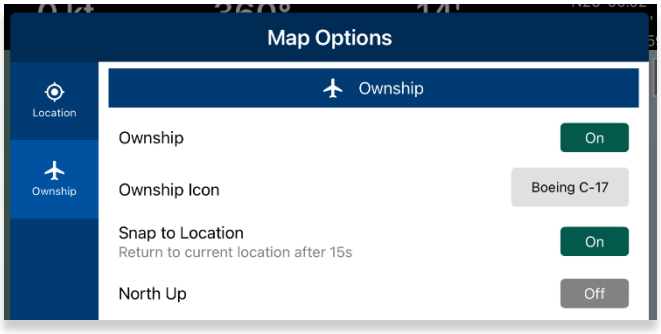
6. Use the segmented control to select desired distance between rings from the options of 0, 2.5, 5, 10, and 25 km or nm, respective to the selected distance unit format in Settings.

Distance Rings



19.2 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.

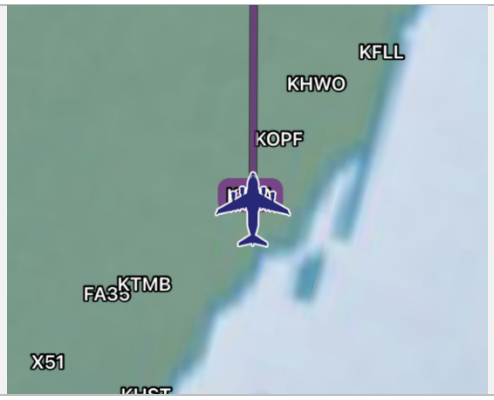


19.2.1 Show Ownship and Ownship Icon

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 17.4 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.

Ownship



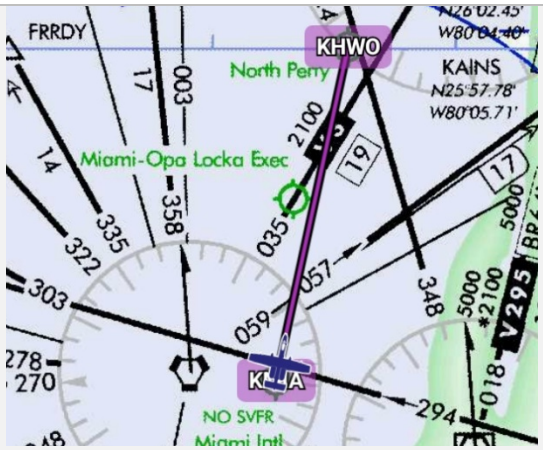
19.2.2 Snap to Location

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 pan 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 22.

19.2.3 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. The **North Up** to enable the option. The Map will be repositioned to a north-up orientation which keeps a fixed point of reference.

Snap to Location	North Up
	

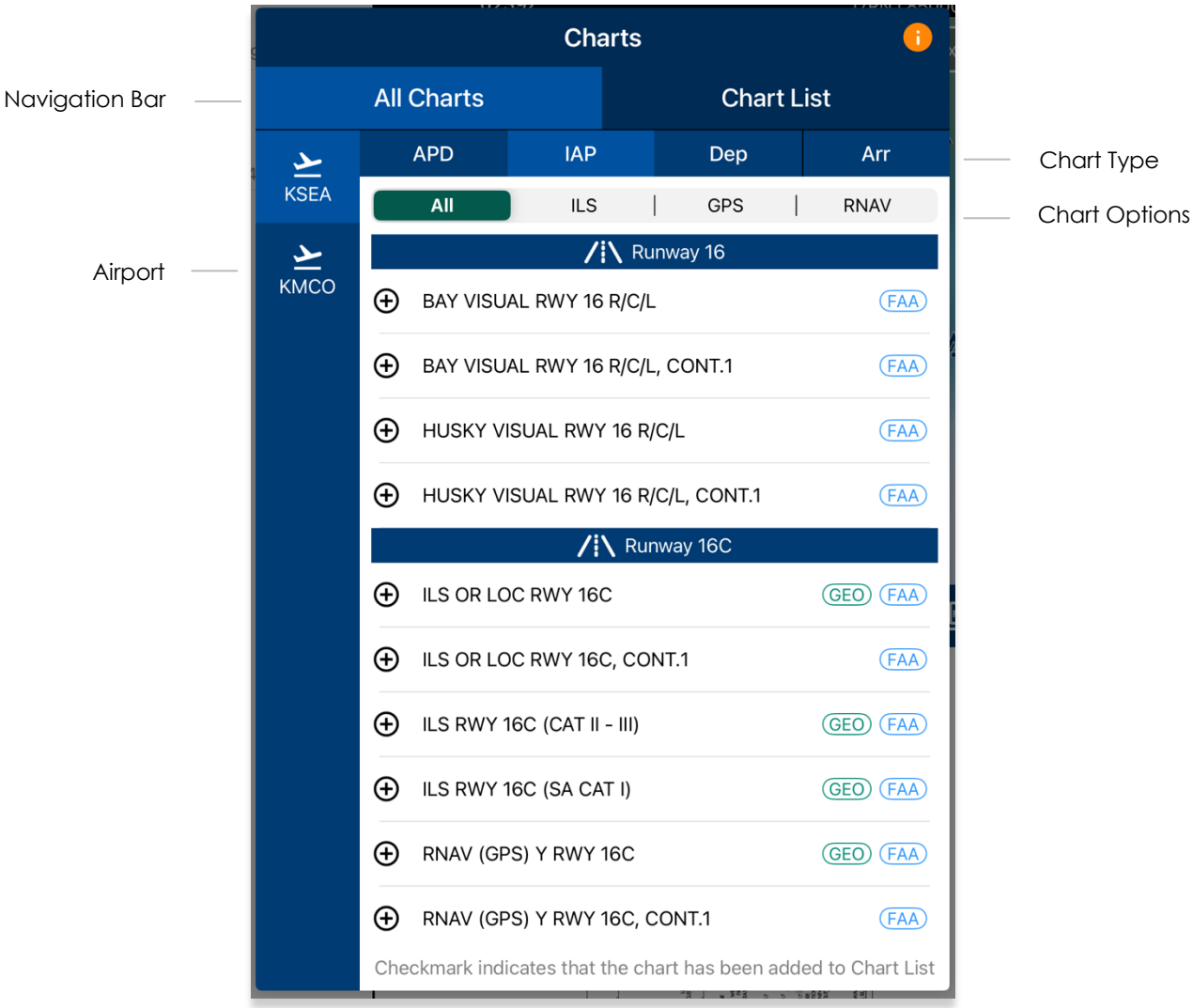
20 Split Screen

The Split Screen feature allows users to view airport charts or PDF documents alongside the Map, all within the same screen. To activate this feature, tap the Split Screen icon located at the lower-right corner of the map view, just below Map Options.



20.1 Terminal Charts

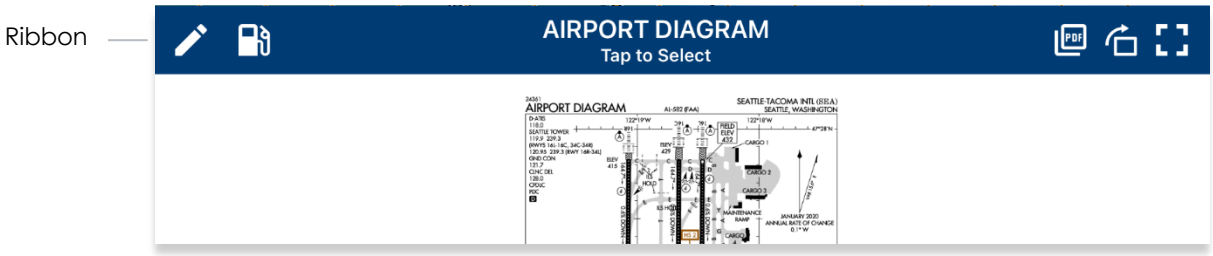
The Charts popup enables users to create a personalized collection of terminal charts to display in split screen view. The *All Charts* option lists charts for the airports that are part of the current route. The *Chart List* stores all charts that have been manually added from the All Charts selection.



All Charts

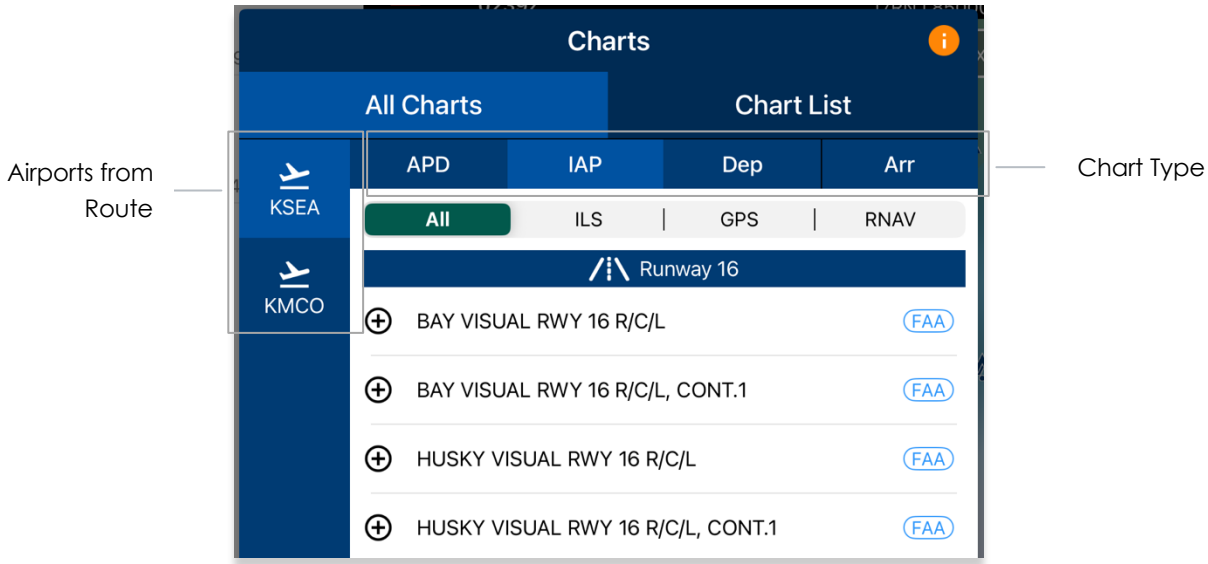
All Charts display all available terminal charts based on the airports included in the current route. These charts are categorized by airport in the side menu and by chart type in the submenu. In the side menu, airports are listed in the order they appear in the route. The submenu allows users to choose between APD, IAP, Dep, and Arr. Each chart option may include labels indicating the data source of the specific chart (e.g., FAA) and whether the chart is georeferenced (e.g., GEO).

1. Tap **Map** on the ***Main Menu***.
2. Tap on the **split screen** icon located at the bottom right of the Map view.
3. The route destination's airport diagram is displayed by default, tap on the **ribbon**.

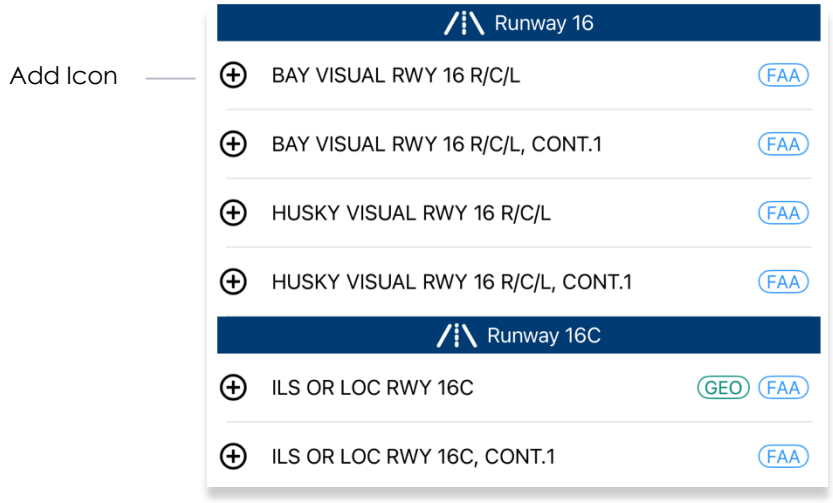


NOTE: If airports do not exist in the current route, the ribbon will display "No Chart", therefore, charts cannot be viewed in split screen.

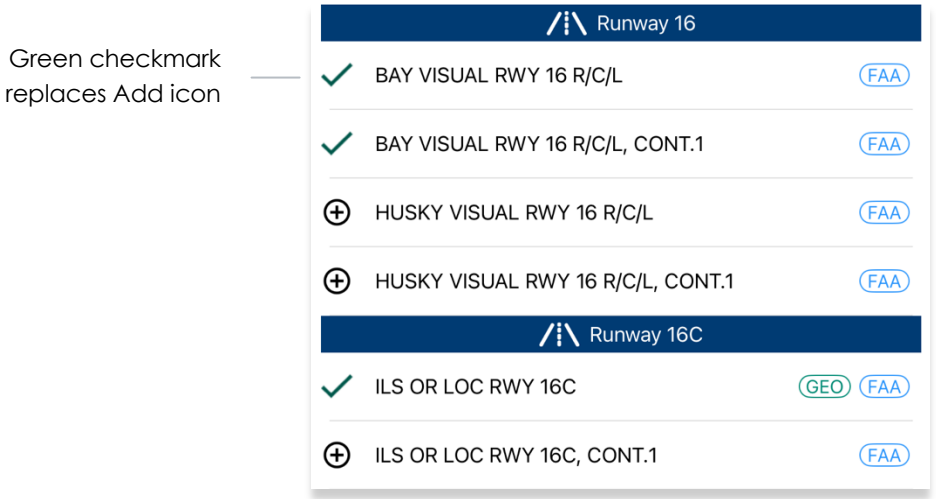
4. The first airport on the side menu is selected by default, select desired **airport**.
5. APD chart type is selected by default on the submenu, select desired **chart type**.



6. Each chart type contains chart options. To add to the Chart List, tap the **add** icon.



7. Once selected, the add icon will be replaced with a green checkmark, which denotes that the chart has been successfully added to the Chart List.

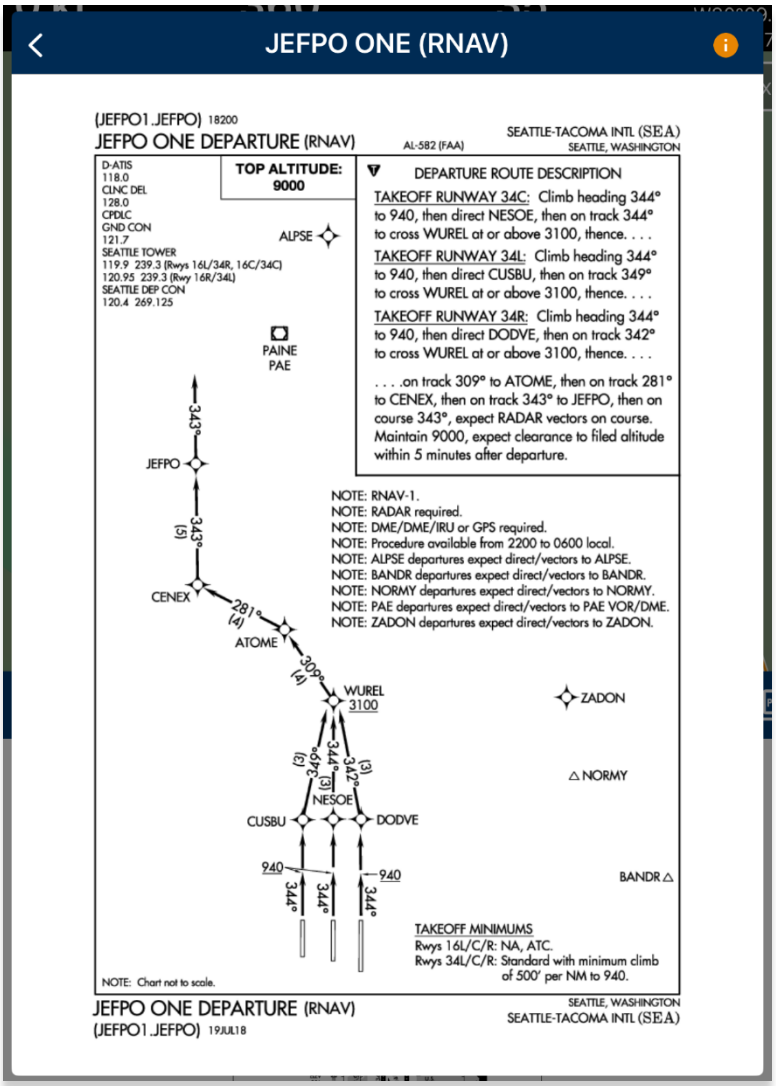


NOTE: If regional data is loaded in Active Cycle, users can view any chart by tapping on the chart name.

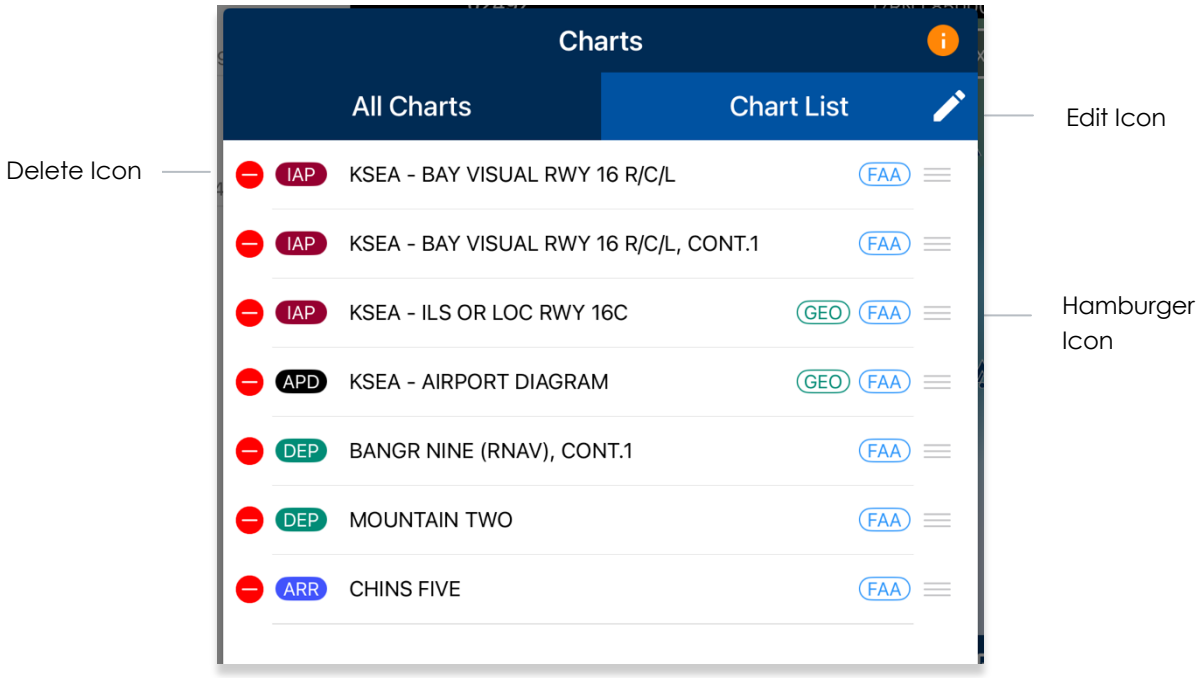
Chart List

The charts that were added from All Charts are now stored in Chart List. Charts are listed in the order they were added. The charts will remain accessible while the airport is included in the route. Once the airport is removed from the route, the corresponding chart will be deleted from the list. Users can view, sort, or remove charts they no longer need from the Chart List.

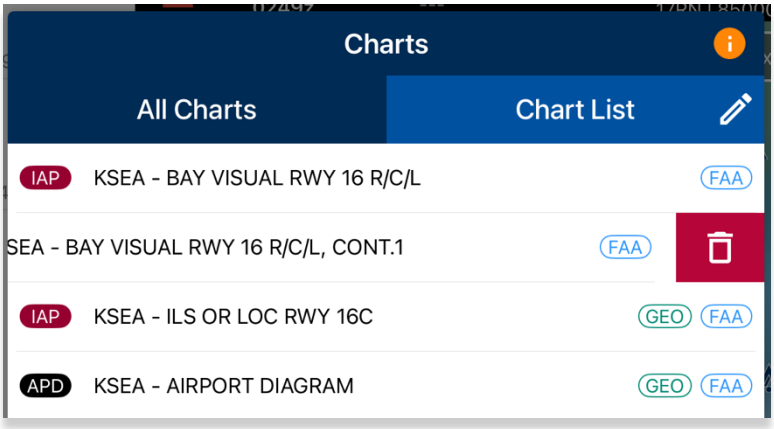
1. To view a chart, tap on the desired chart. The chart will be displayed.



2. To enter the Edit mode, tap the **edit** icon in the Chart List header.
3. To reorder charts, hold the **hamburger** icon and drag them to the desired position. Continue to rearrange chart placement until satisfied.
4. To remove a chart from the list, select the **delete** icon.



5. Alternatively, users can swipe left to reveal the delete icon. Tap **Delete**.
6. The delete confirmation popup will be displayed. Tap **Delete** to confirm action.

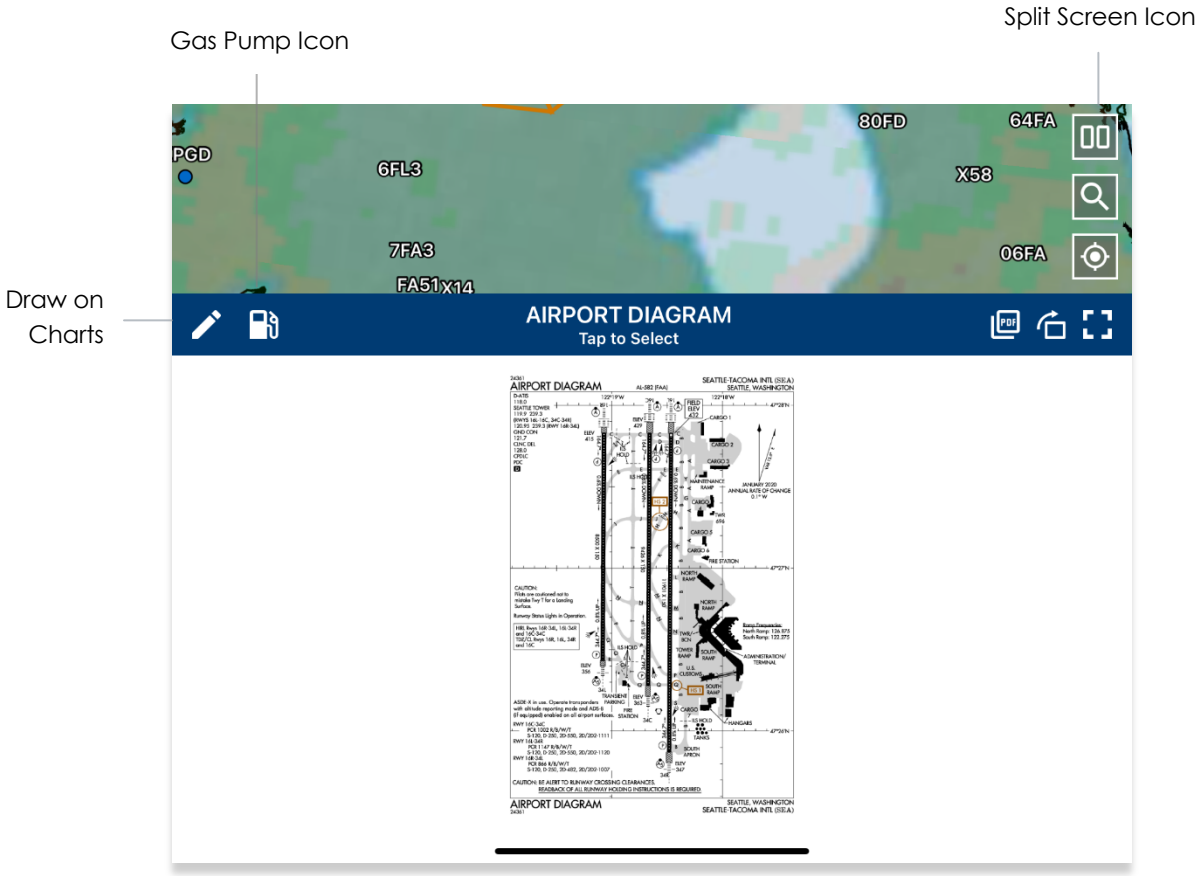


NOTE: Charts are automatically deleted from the Chart List if the chart is no longer in Active Cycle.

20.2 View Charts on Split Screen

After adding the desired charts to the Chart List, users can view airport charts in split screen view. The charts will appear in the order they are listed on the Chart List.

1. Tap **Map** on the ***Main Menu***.
2. Tap on the **split screen** icon located at the bottom right of the Map view.
3. To view charts listed on the Chart List, swipe left to move forward and right to move backwards.



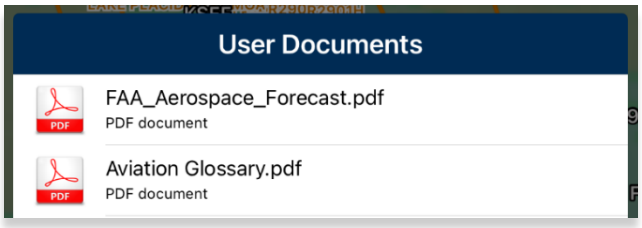
NOTE: Users can view contract fuel locations on APDs. Refer to Section 16.2.2 for additional information.

NOTE: Users can make marks on APD and IAP charts. Refer to Section 16.2.1 for additional information.

20.3 View PDF on Split Screen

Users can display PDF documents on the Map's split screen view. To view a user document, ensure the document is saved to your device. Refer to Section 10.8 to sideload user documents.

1. Tap **Map** on the ***Main Menu***.
2. Tap on the **split screen** icon located at the bottom right of the Map view.
3. To switch to PDF view, tap the **PDF icon** on the ribbon.
4. To switch the user document display, tap on the **ribbon** and the *User Documents* popup will appear.



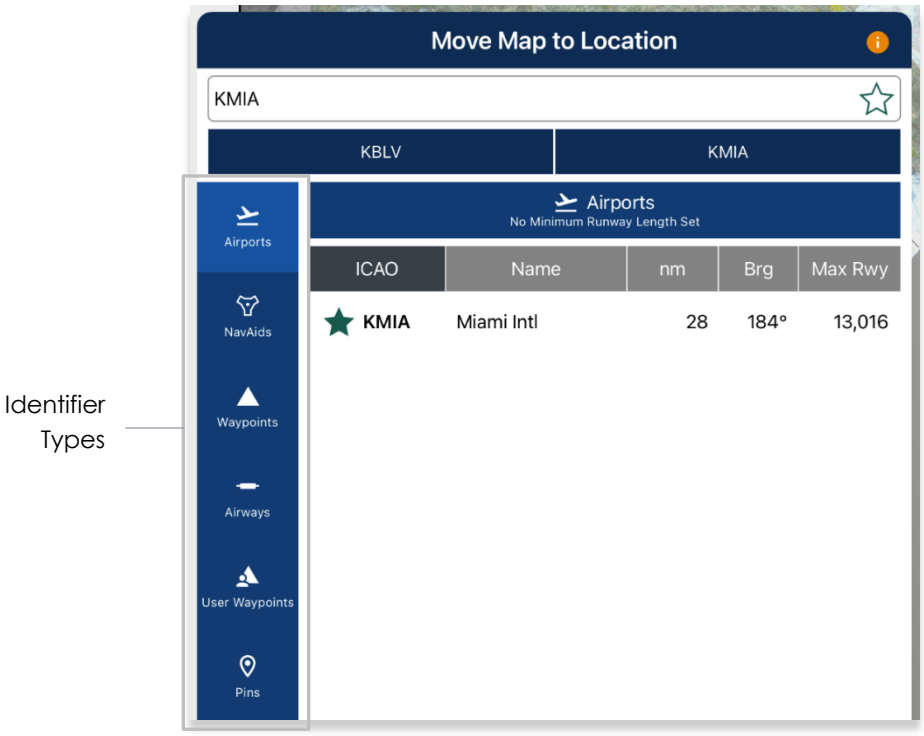
5. Select the desired **document**. Your document will be displayed on the split screen view.
6. To delete a user document, swipe left to reveal the delete button of the document that you choose to permanently remove. Tap **Delete**.
7. The delete confirmation popup for the selected document will be displayed. Tap **Delete** to confirm action. The document will be removed from the list.
8. To return to the airport chart view, tap the **clipboard icon**.



21 Move Map to Location

The Move Map to Location (search icon) feature can be found at the lower-right of the Map view, directly below the *Split Screen* button. Users can search by a point's ID (identifier) or by entering a 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.

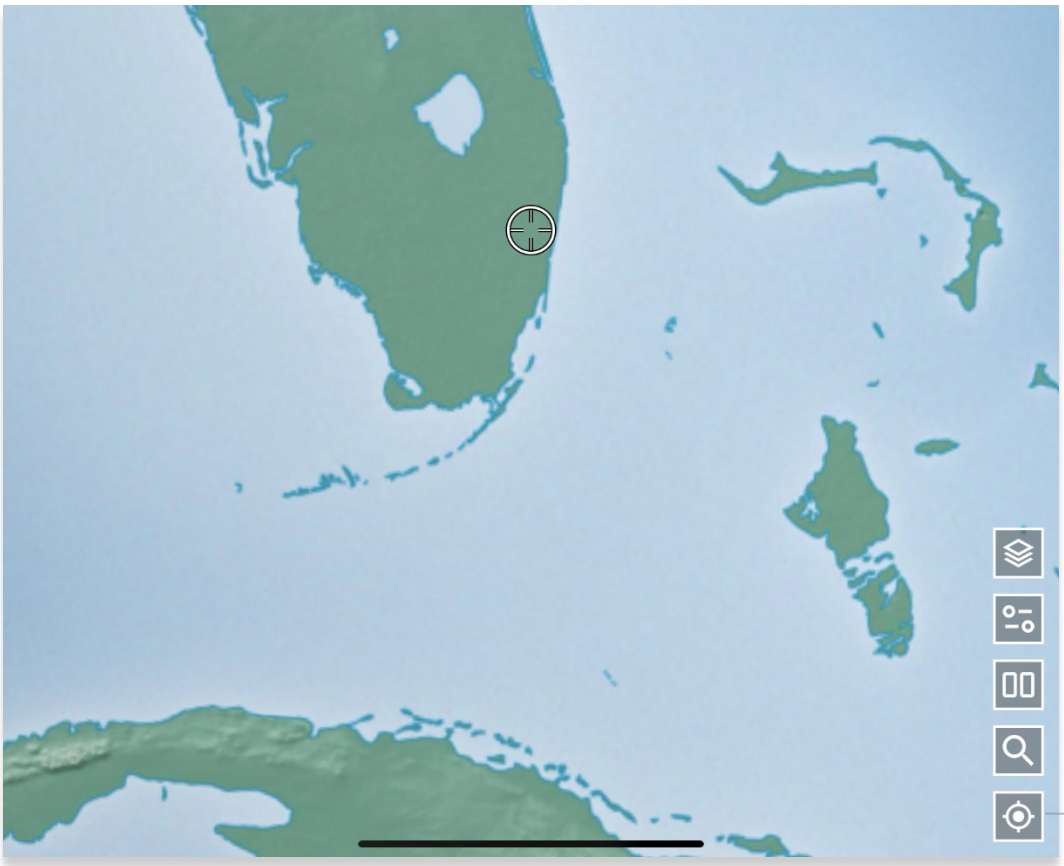
1. Tap the **Move Map to Location** (search icon) button located at the lower-right of the Map view.
2. The Move Map to Location popup will appear. Tap the **text box** to open your device's keyboard.
3. Enter an identifier, search term, MGRS, or the coordinate of the desired point.
4. The search results are divided into different identifier types. Select from Airports, NavAids, Waypoints, Airways, User Waypoints, or Pins. Alternatively, users can tap Search on the device's keyboard and the screen will pan to its location.



NOTE: When users initiate a search for an Airway, the map will display the first waypoint associated with the selected Airway.

22 Snap to Location

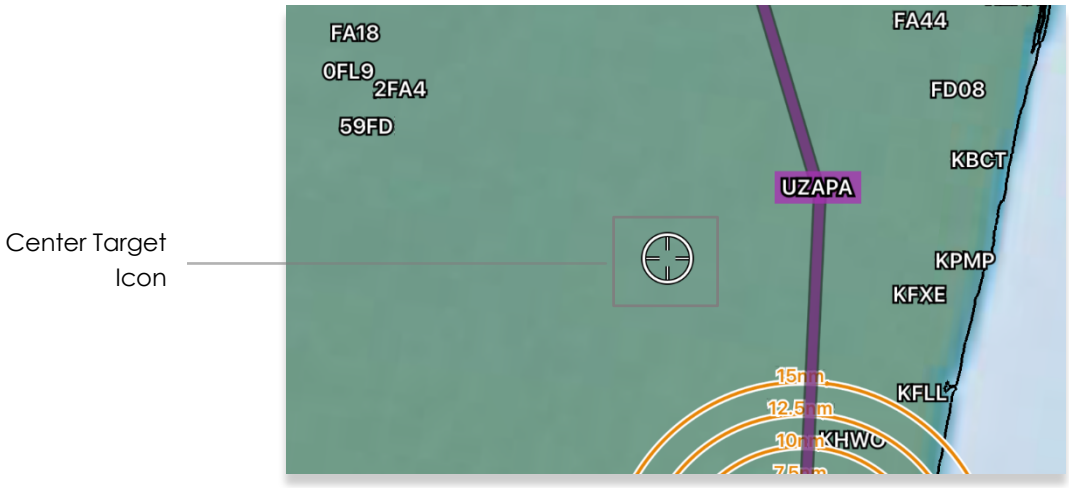
The Snap to Location (crosshair icon) is located at the bottom right of the Map view. This feature is a shorthand way to manually snap to your current GPS location.



NOTE: Users can enable the Snap to Location feature, which returns to the user's current location after 15 seconds as explained in Section 19.2.2.

23 Center Target

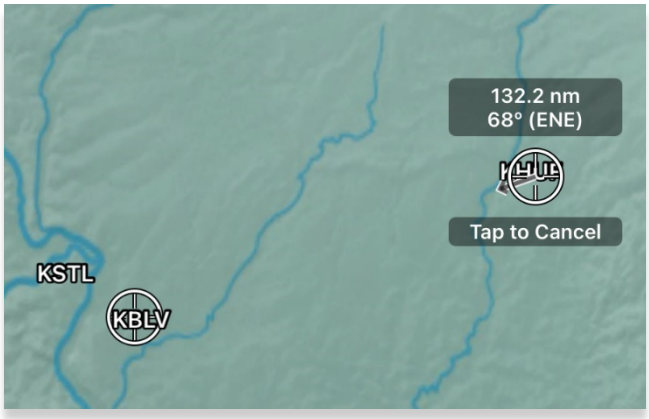
The Center Target retrieves the latitude, longitude, and MGRS values of the area in which the target is placed. As the Map moves, a yellow tag would briefly display information on the Distance and Bearing, respective to the placement of the target.



23.1 Measure Distance and Bearing Between Points

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

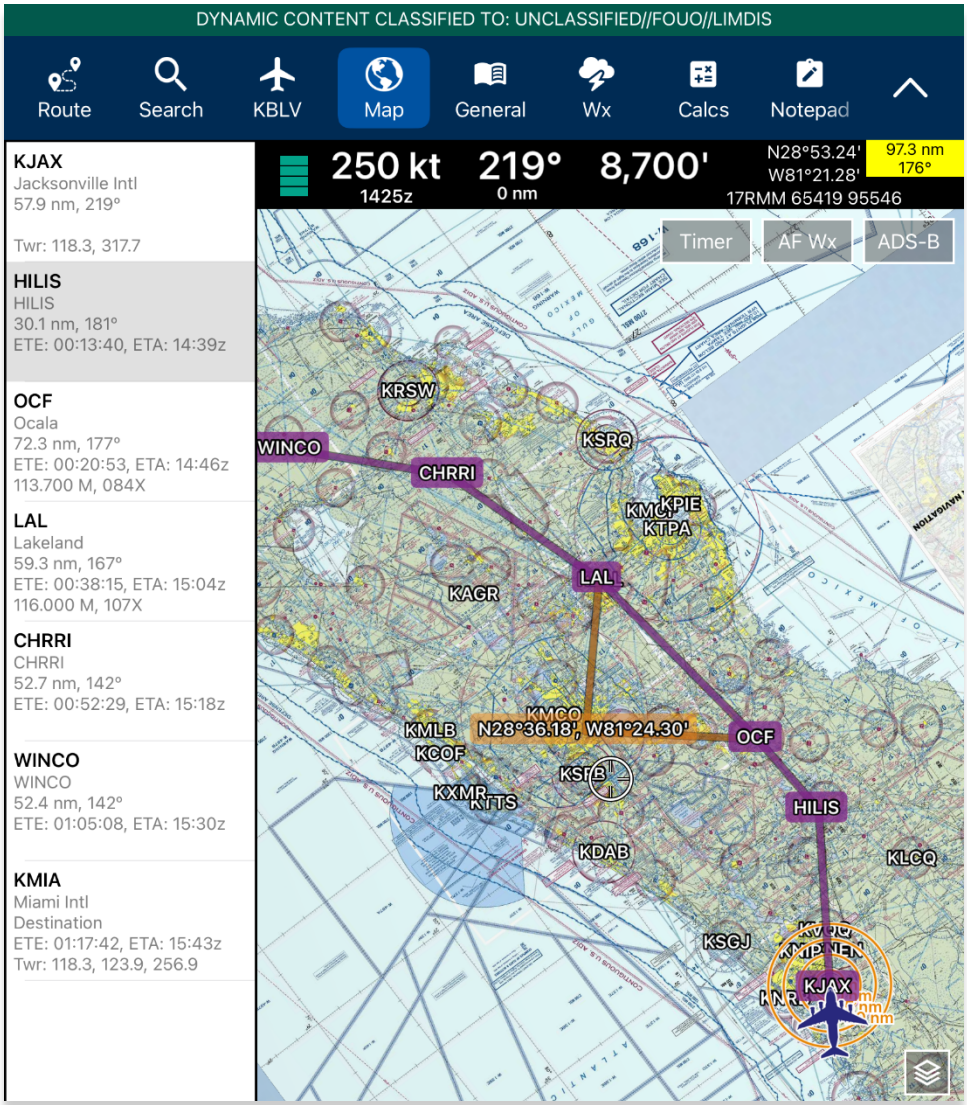
1. Move the *Map* to activate the center target.
2. Choose a *starting point* and tap the **Center Target icon** to set the starting point.
3. Move the *Map* to a desired end point. The measurement is displayed above the end point. The values displayed are the distance and bearing of the starting point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



24 Drag and Drop

The Drag and Drop feature allow users to make quick modifications to their current route. Users can drag and drop any point or segment of the current route to their desired location. The coordinates will be displayed in latitude/longitude or MGRS, based on the distance unit format users have set in Settings.

1. Load the desired route in your Route Panel.
2. On the Map, hold a point or segment in your route to activate the Drag and Drop feature (or once route line turns orange) and drag it to a point that you wish to add to the route.



3. The Nearest popup will appear displaying the coordinates (in lat/lon or MGRS format) of the selected point with 10 nearest Airports, NavAids, Waypoints, and User Waypoints.
4. Select the desired point.
5. A new point will be added to the current route.



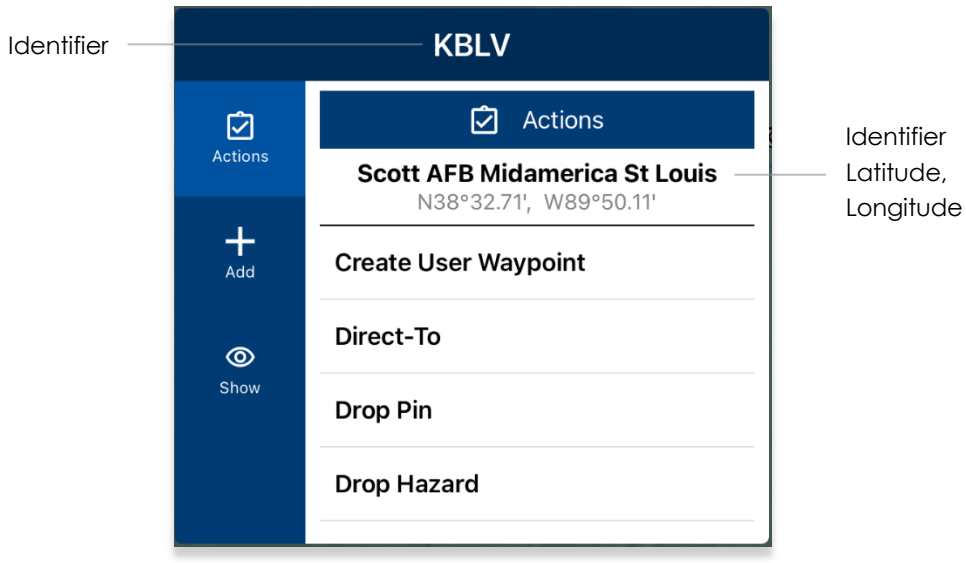
NOTE: Warning popups will appear when users try to drag and drop points that belong to a route with a DP, ARR, STAR, SAR pattern, Airway, or MTR.

25 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 be displayed. Select desired identifier. The Identifier Menu will display with each option grouped by Actions, Add, and Show.



25.1 Actions

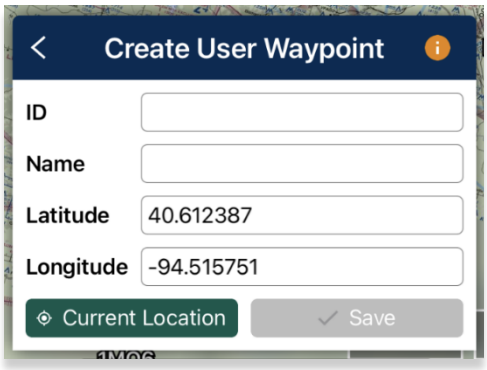
The Actions menu offers the following options and will be further discussed in the sections below:

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

25.1.1 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 10.4 for additional information. To view the full list of User Waypoints, refer to Section 14.3.4.6 for additional information.

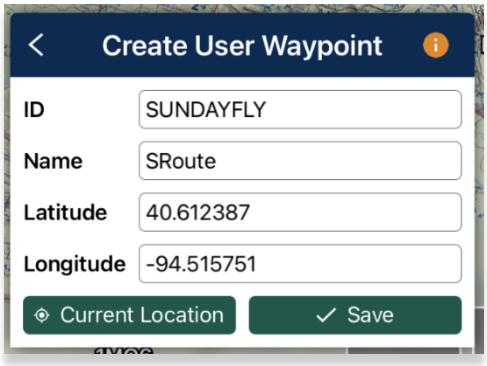
1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Actions** 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.



7. Tap **Current Location** (GPS required) 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.

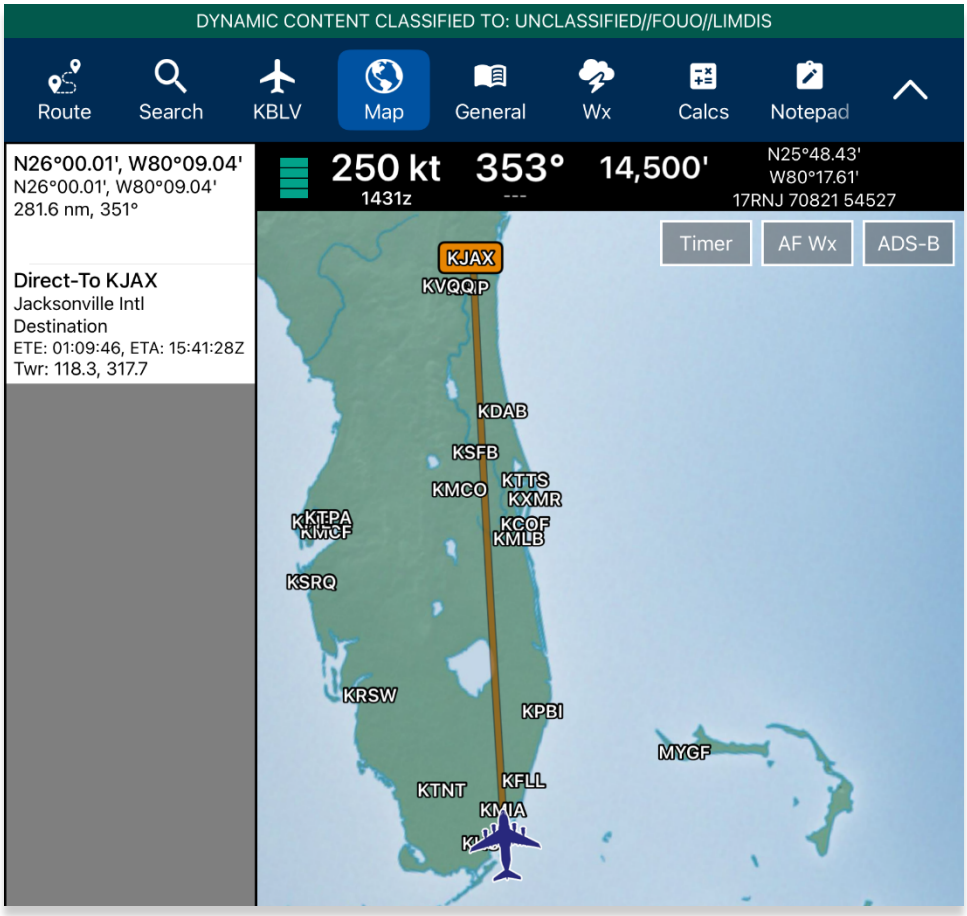
8. Once fields are filled, the Save button will be selectable. Tap **Save** and the waypoint is added to the User Waypoint list.



25.1.2 Direct-To on Empty Route

The Direct-To feature creates a new route from your ownship's current location directly 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.**

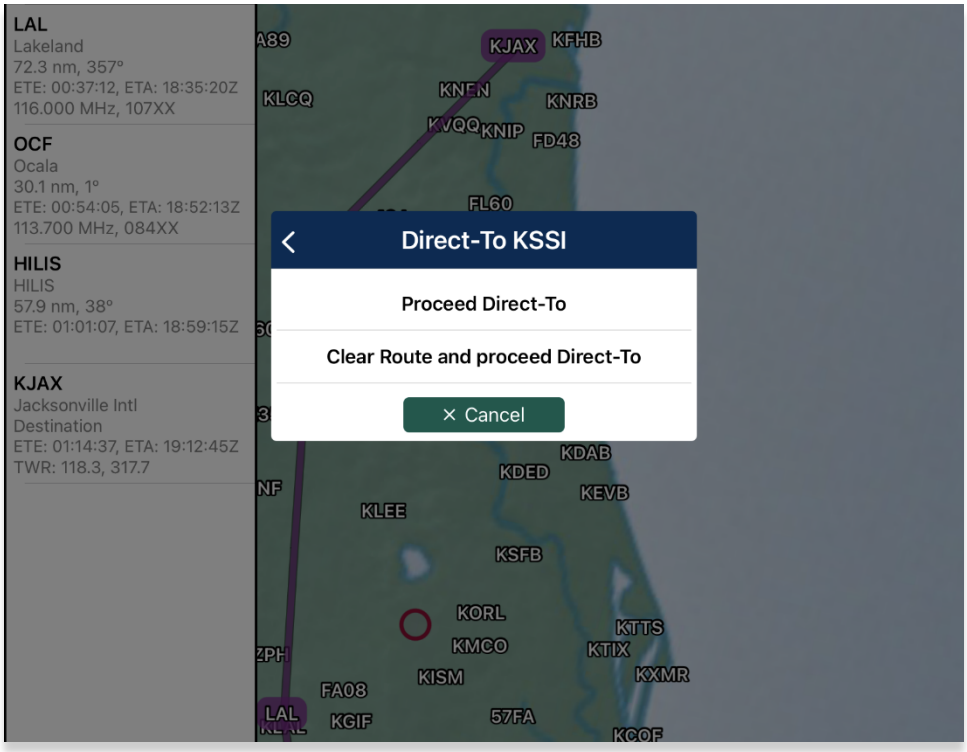
25.1.2.1 Direct-To on Existing Route

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

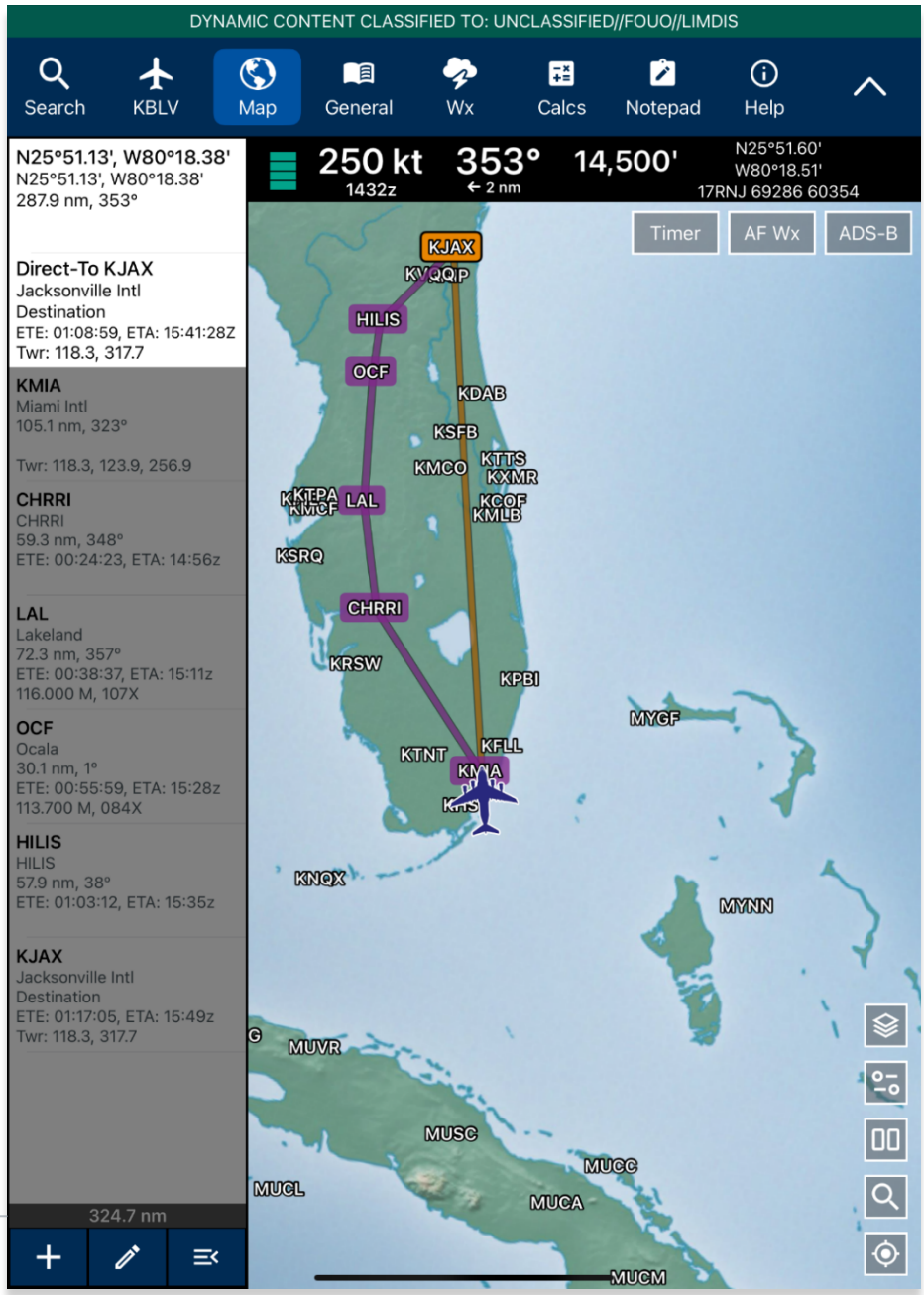
1. Ensure that the route includes one or more points.
2. Tap **Map** on the ***Main Menu***.

NOTE: During the Direct-To course, users will be able to continue adding additional points to the route. The Direct-To en route 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:

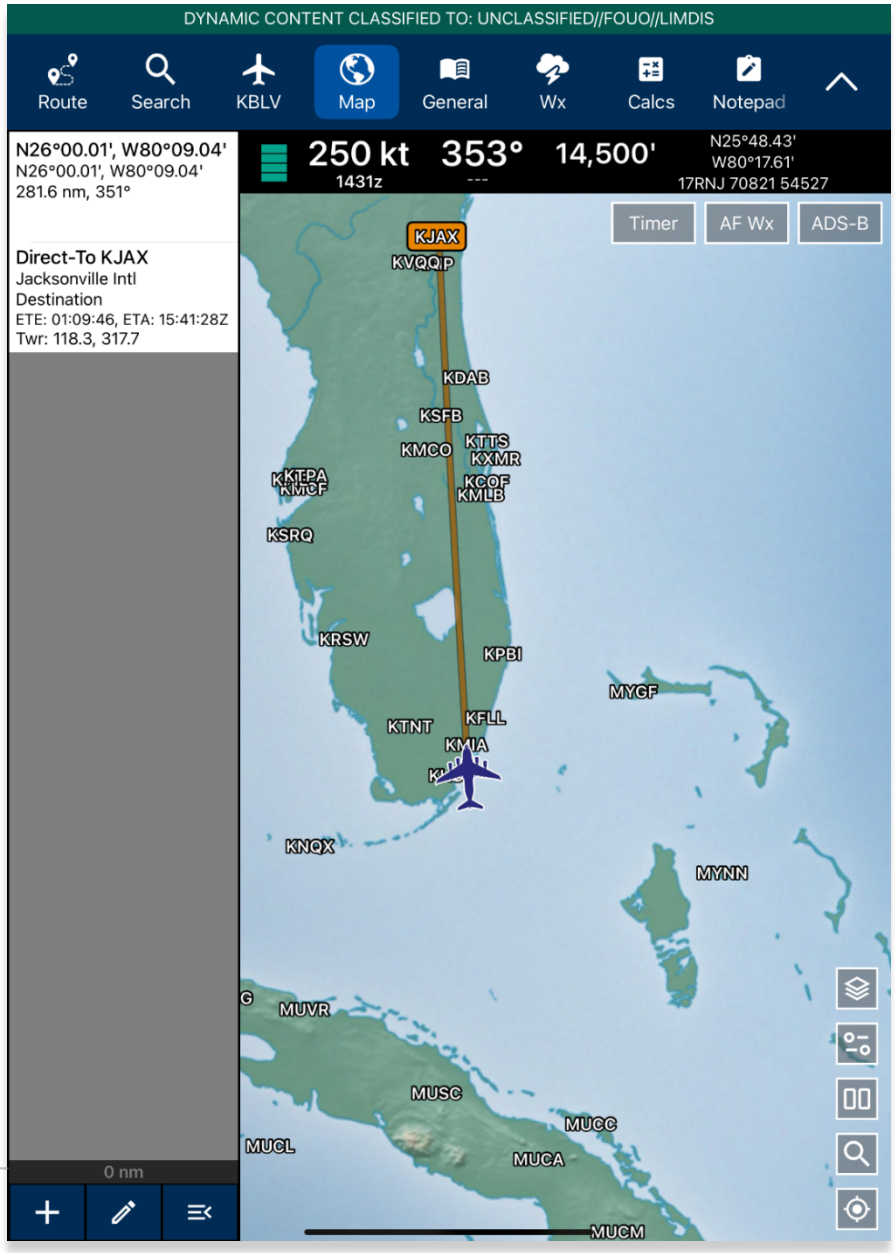


- **Proceed Direct-To** – A new route is created starting from your present location to the Direct-To point. The existing route will be grayed out and remain untouched. The values for ETA/ETE, distance and bearing, and tower frequencies are the calculated values for the Direct-To route. The total distance 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.

7. 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.

25.1.3 Drop Pin

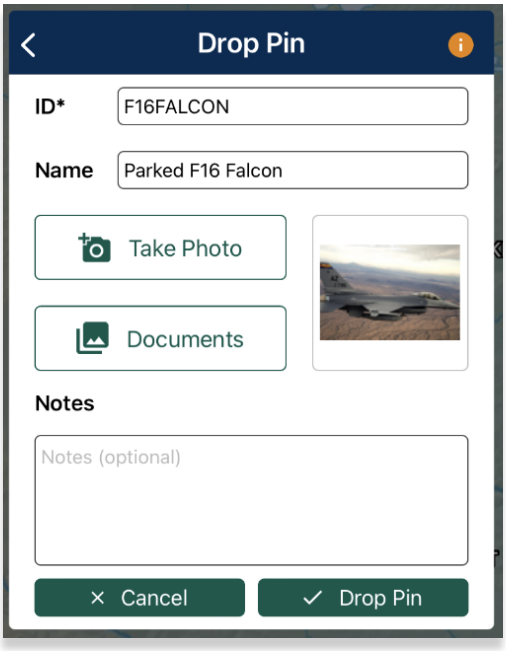
The Drop Pin feature enables pilots to drop geographic pins in any specified area on the Map, view relevant information about pins, and add dropped pins to their route. Aero App offers pin types including Photo Pin and Pin. In addition, Aero App supports user-generated pins which can be sideloaded onto Aero App. Refer to Section 10.6 for additional information.

Photo Pin

A Photo Pin is a designated location on the Map that incorporates user-generated images. Fields marked with an asterisk must be filled.

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.



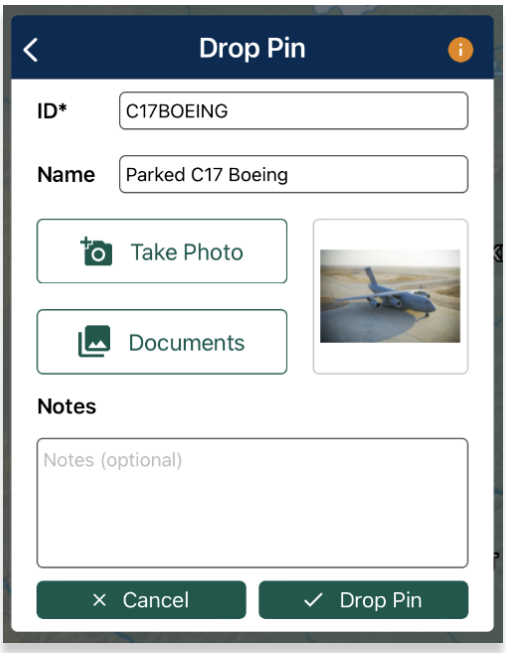
NOTE: Uploading an image is required for Photo Pins.

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.

Pin

A Pin is used to mark a location 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 **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.



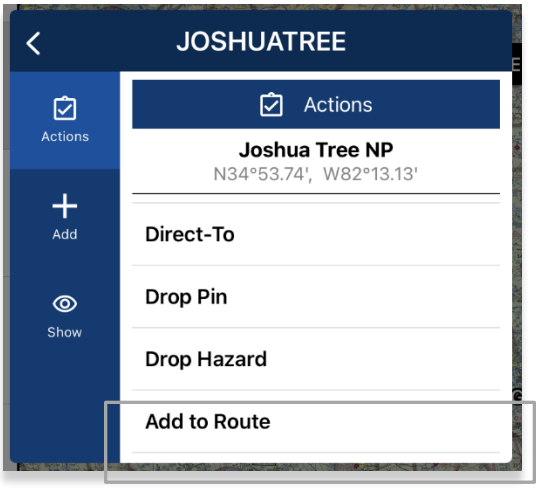
8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to discard the action.

NOTE: Creating a Pin requires choosing a unique identifier. Using an existing ID will trigger an error message.

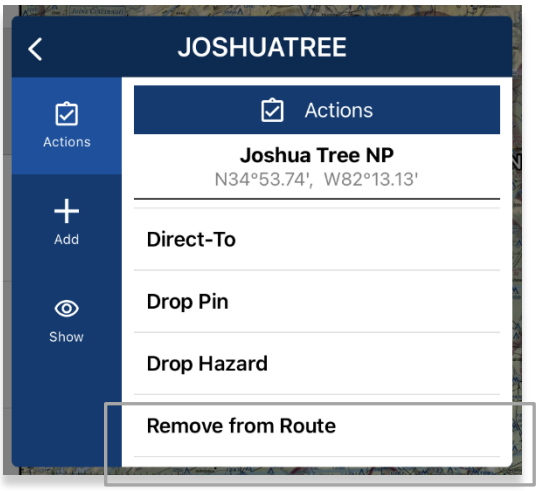
Add Pin to Route

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**.

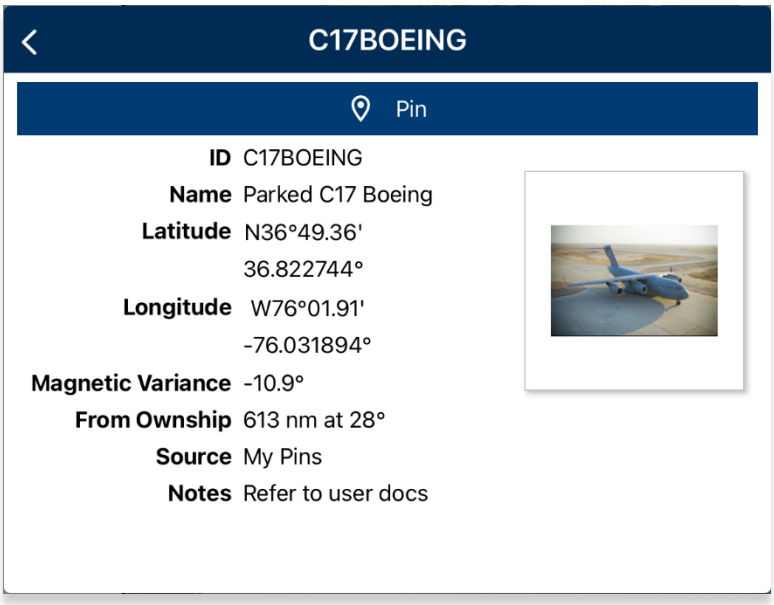


View Pin Information

Aero App provides users with 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.

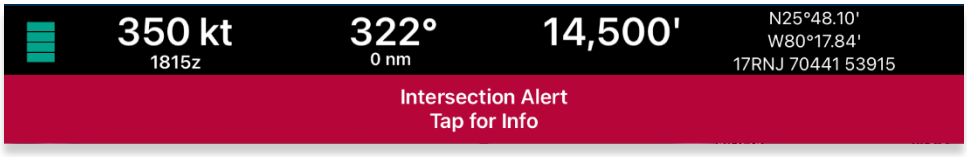
1. Navigate to the Map and tap on your desired **Pin**.
2. The Identifier Menu will appear. Select **Show** from the side menu.
3. Tap **Info and Wx** to view any information associated with the pin.



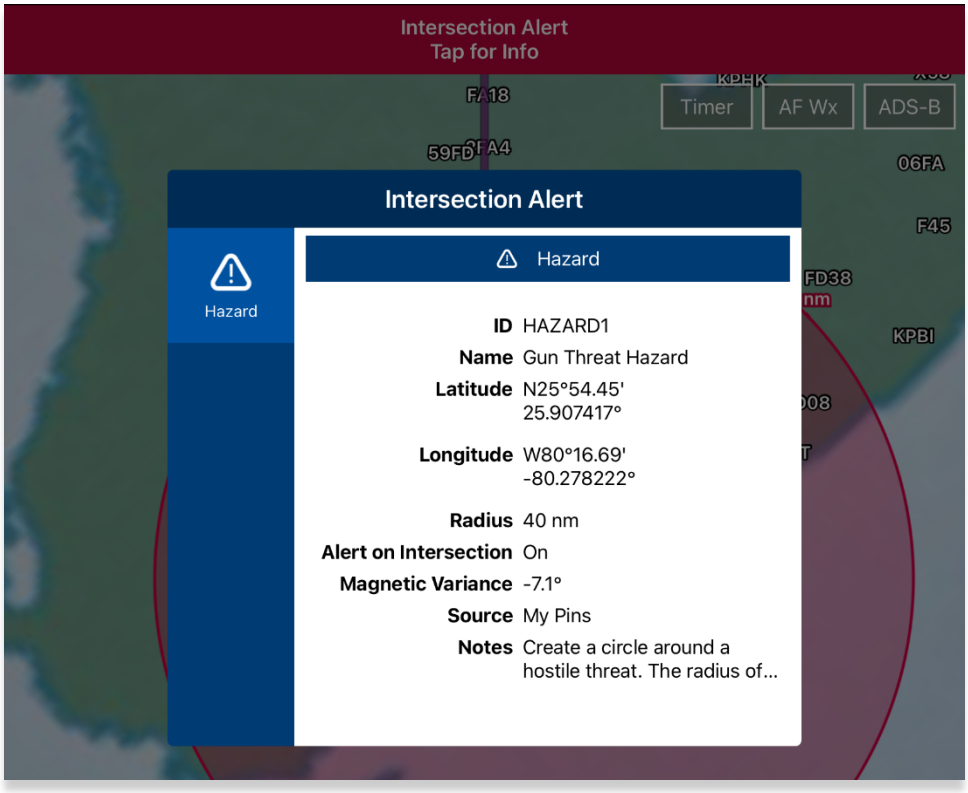
25.1.4 Drop Hazard

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 10.7 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 ring.

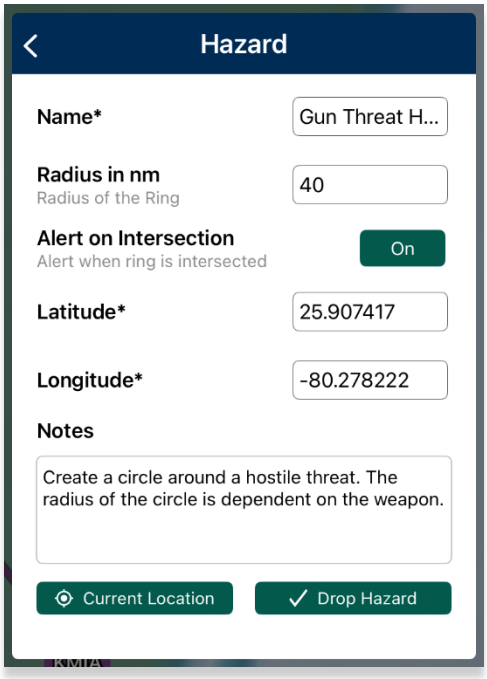


The duration of the banner display is determined by the value of the given radius and will disappear once your ownship is no longer intersecting the specified radius. The banner can be tapped to display Hazard information.



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.



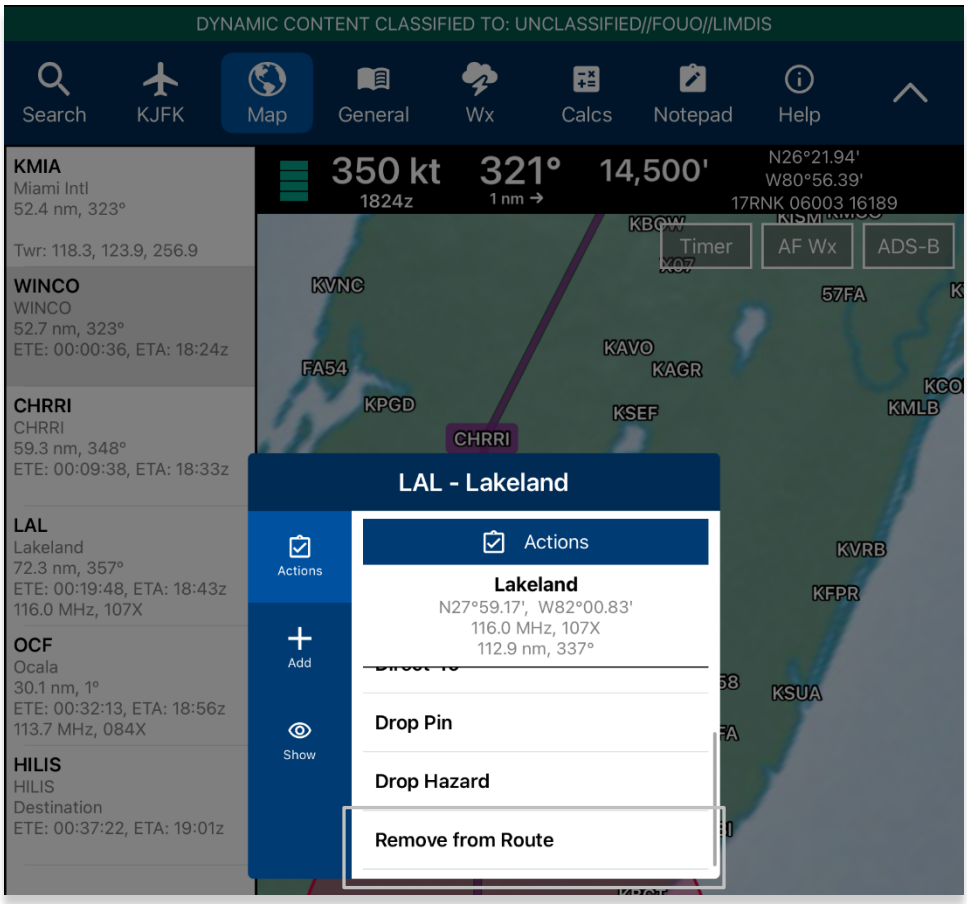
NOTE: If users set their Coordinates Unit to MGRS, the Latitude and Longitude fields will remain disabled, and a MGRS field will appear.

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 be displayed on the Map.

25.1.5 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.



25.2 Add

The Add submenu provides users with the option to add the following procedures to their route:

- Departure Procedure (DP)
- Standard Terminal Arrival Procedure (STAR)

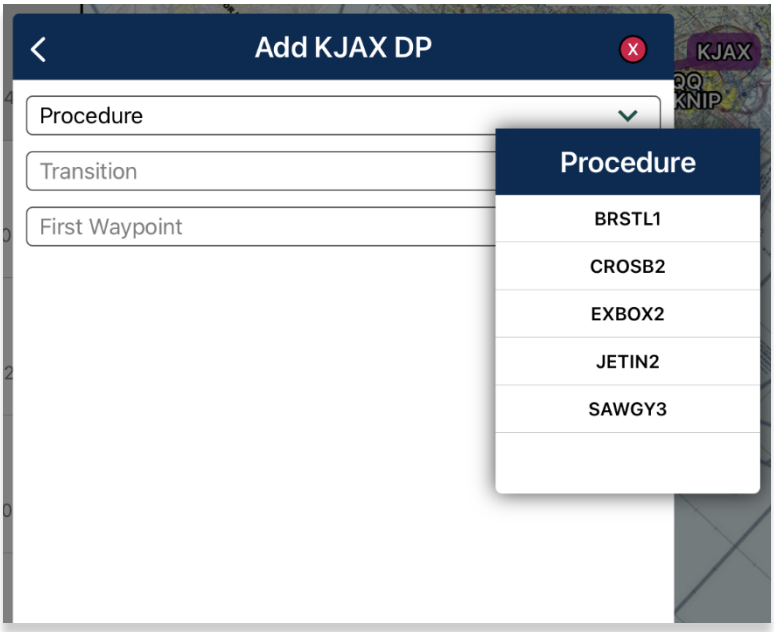
25.2.1 Add Departure Procedure (DP) or Standard Terminal Arrival Route (STAR) to Route

Aero App enables users to add Departure Procedure (DP) and Standard Terminal Arrival Route (STAR) to their flight route.

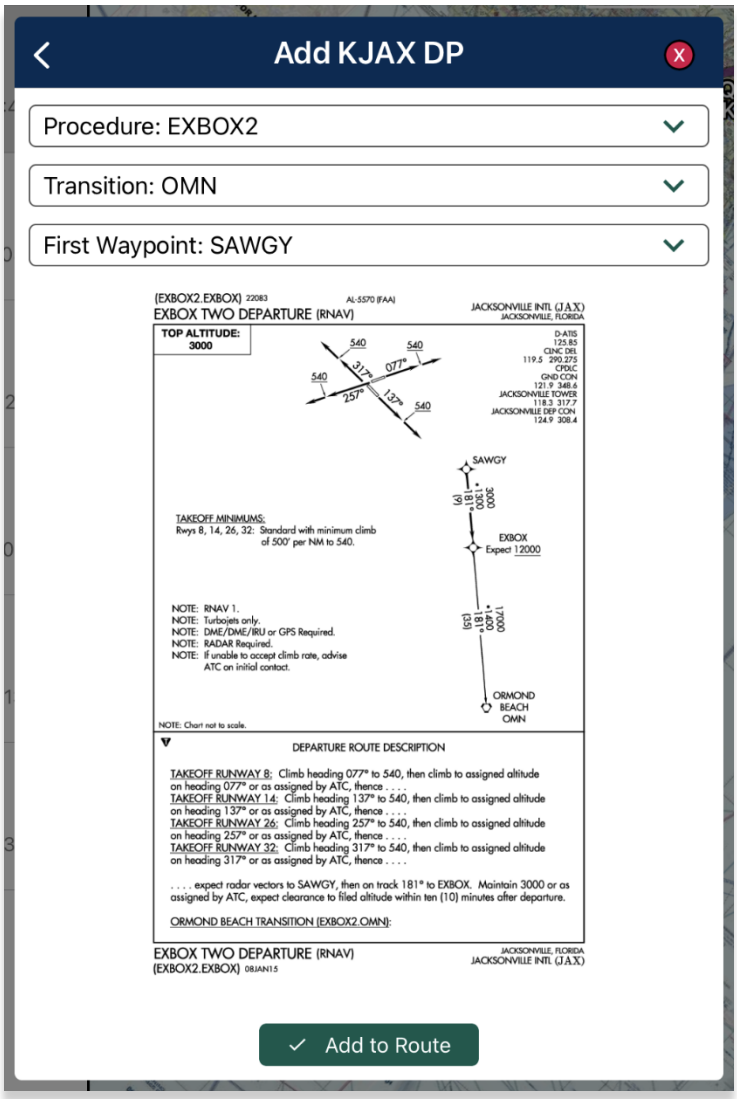
1. Select an airport from the Route Panel or the Map view.
2. The Identifier Menu will appear. Select **Add** from the side menu.
3. Select **DP** or **STAR.**

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.

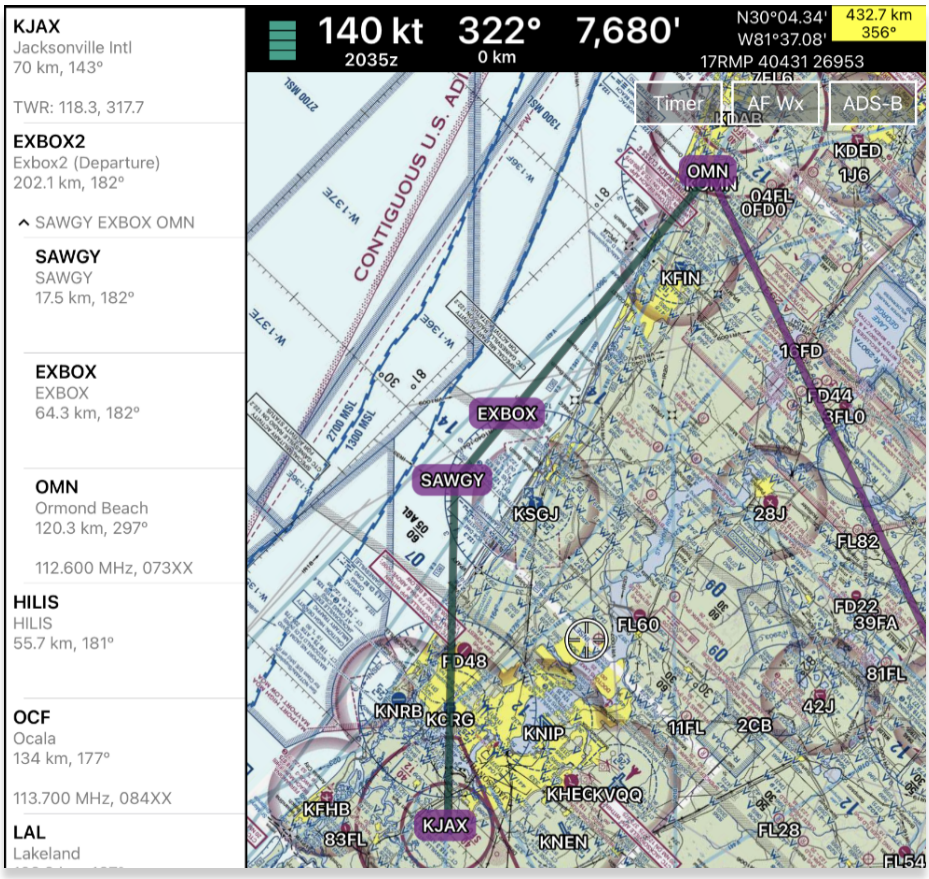
4. The procedure selection popup will display. Tap the **Procedure dropdown** and select desired **Procedure**.

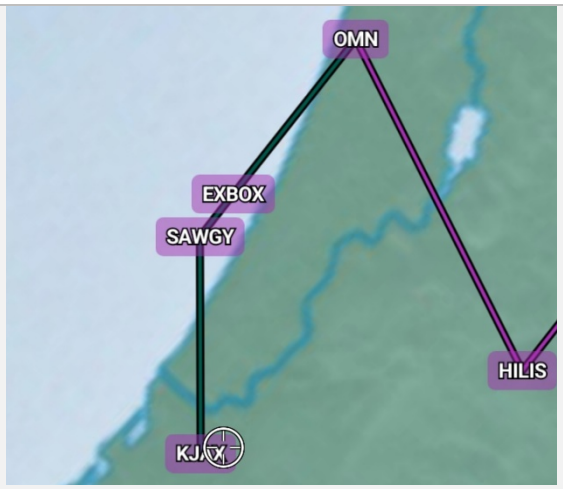


5. Transition will become selectable. Tap the **Transition dropdown** and select the desired **Transition** point**.**
6. First Waypoint will become selectable. Tap the **First Waypoint dropdown** and select the desired **First Waypoint.**
7. The Procedure preview will appear and Add to Route will become selectable. Tap **Add to Route.**



8. The procedure will be added to your flight route.



Add DP to Route	Add STAR to Route
	

25.3 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
- MVA
- Nearest
- Orbit

25.3.1 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.

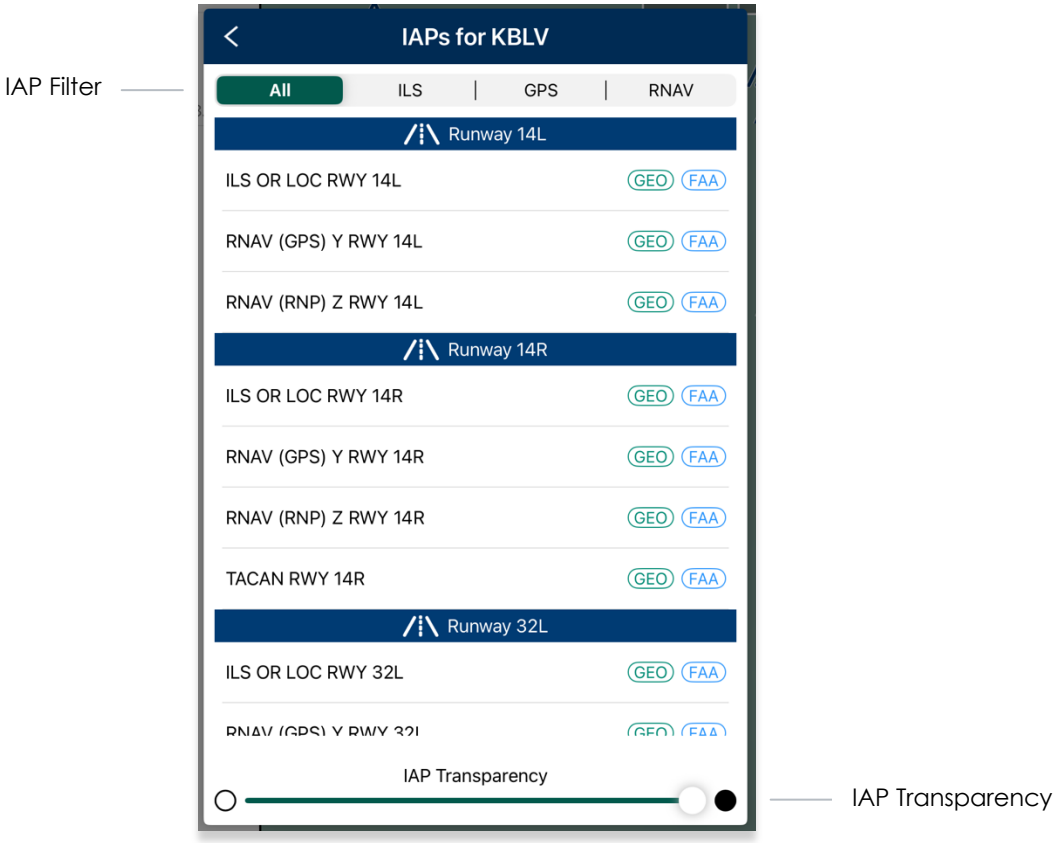




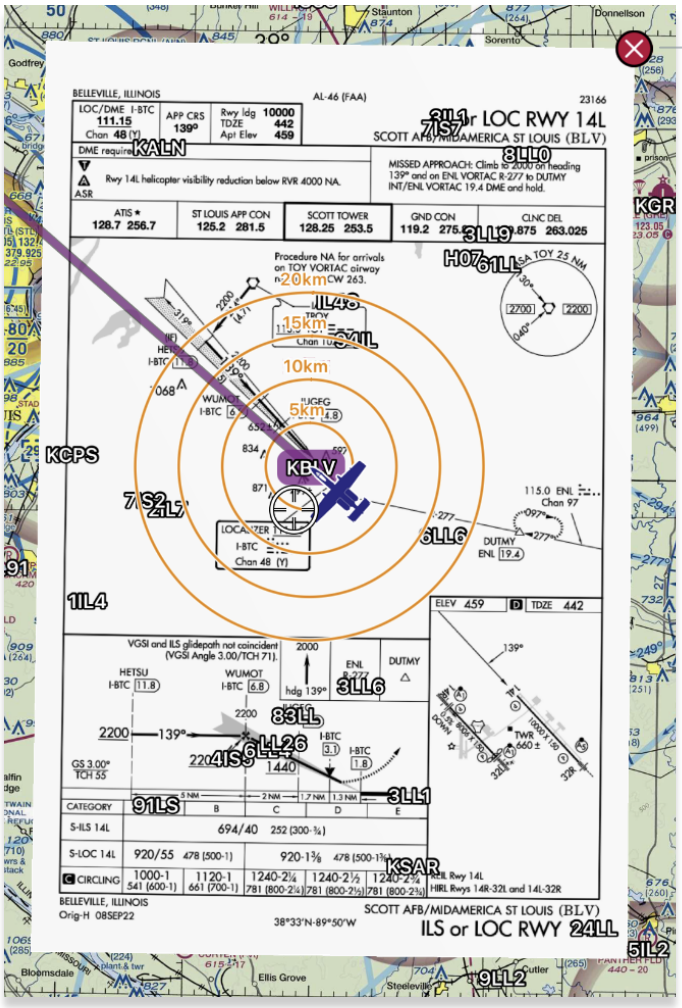
25.3.2 Instrument Approach Procedure (IAP) on Map

Aero App enables users to display Instrument Approach Procedures (IAPs) on the Map, perfectly georeferenced. Overlaying an IAP on the Map provides enhanced safety for landing and depicts topographical features and hazards. Points are georeferenced on the Map when Georeference data is loaded.

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**.



NOTE: A small number of Instrument Approach Procedures (IAPs) are not georeferenced and therefore cannot be shown on the Map.

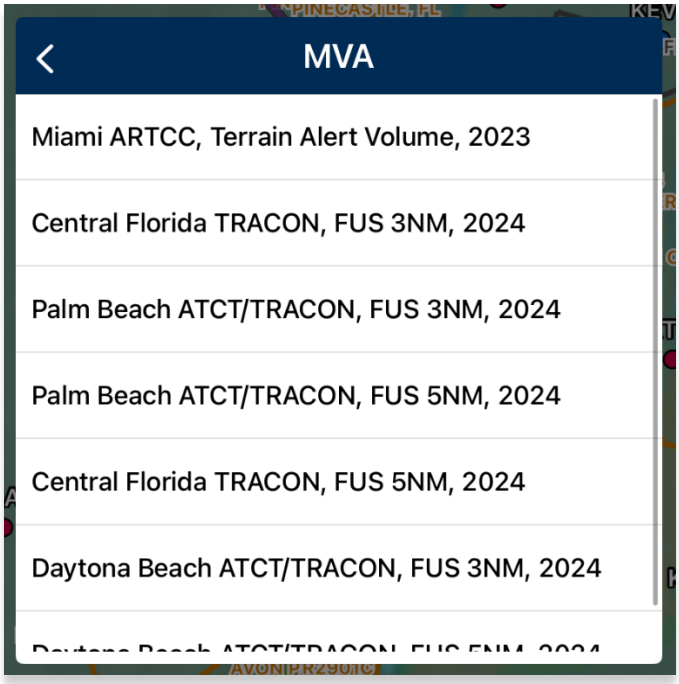
25.3.3 Info and Wx (Information and Weather)

The Information and Weather (Info and Wx) option can be accessed when tapping an identifier on the Map or the Route Panel. Users have the option to view airport information such as Info, APD, IAP, Dep, Arr, Min, Other, Host Nation, and Wx through the Info and Wx button. Refer to Section 16 for additional information about each tab. Identifiers that are not an airport such as NavAids, Waypoints, User Waypoints, Pins, and others, will display the identifier's information.

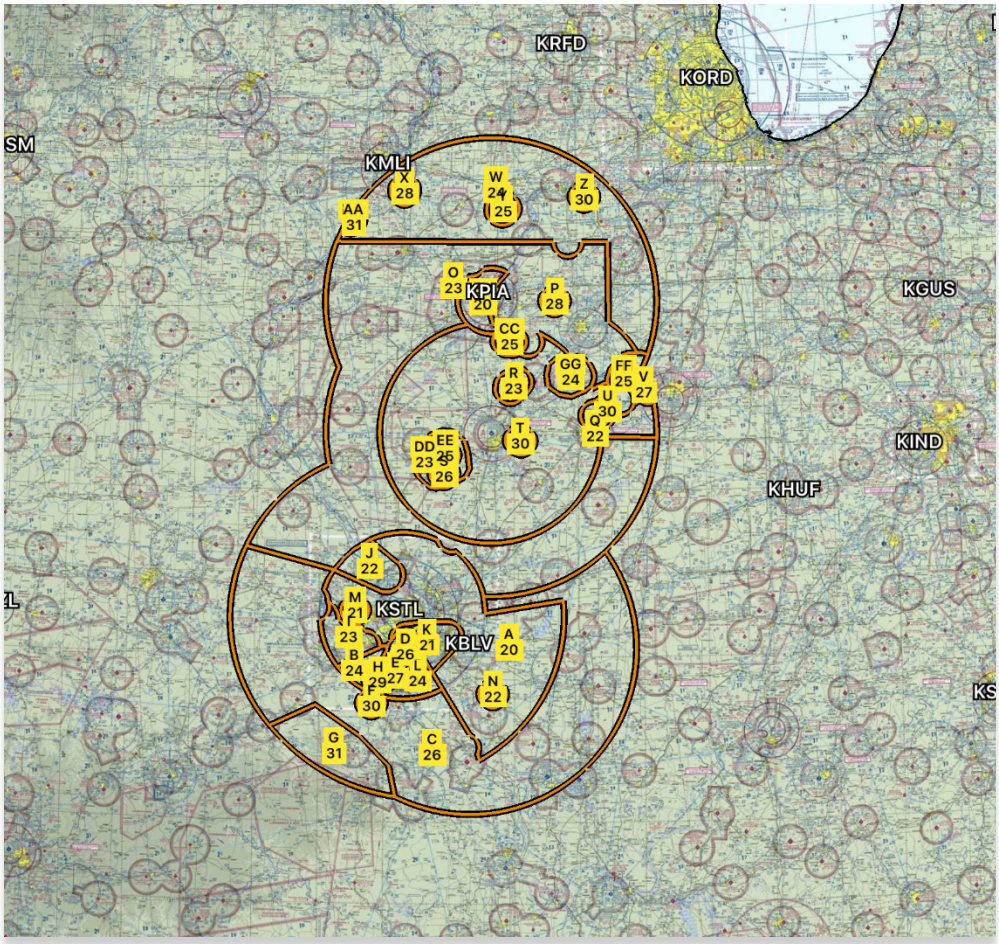
25.3.4 Minimum Vectoring Altitude (MVA)

Aero App enables users to display Minimum Vectoring Altitude (MVA) on the Map.

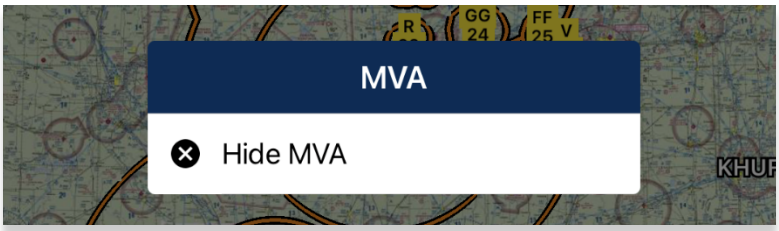
1. Tap **Map** on the ***Main Menu***.
2. Tap on an ICAO on the Map or the Route Panel to directly display the Identifier Menu.
3. The Identifier Menu will appear. Select **Show** from the side menu.
4. Tap **MVA**.
5. Select an **MVA** from the list provided**.**



6. The selected **MVA** will overlay on the Map.



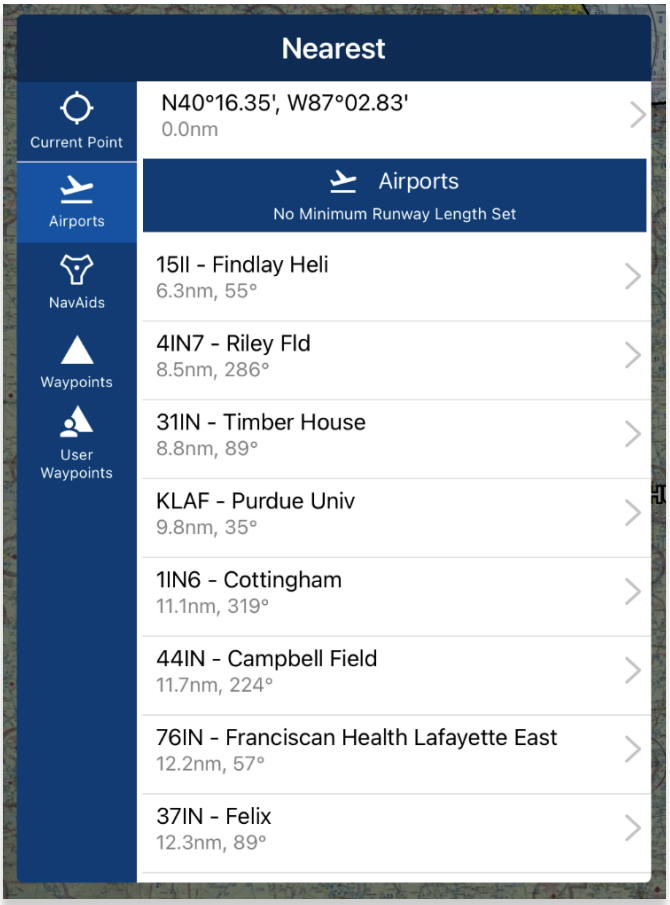
7. Tap inside area to hide MVA.
8. Tap **Hide MVA**.



25.3.5 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.

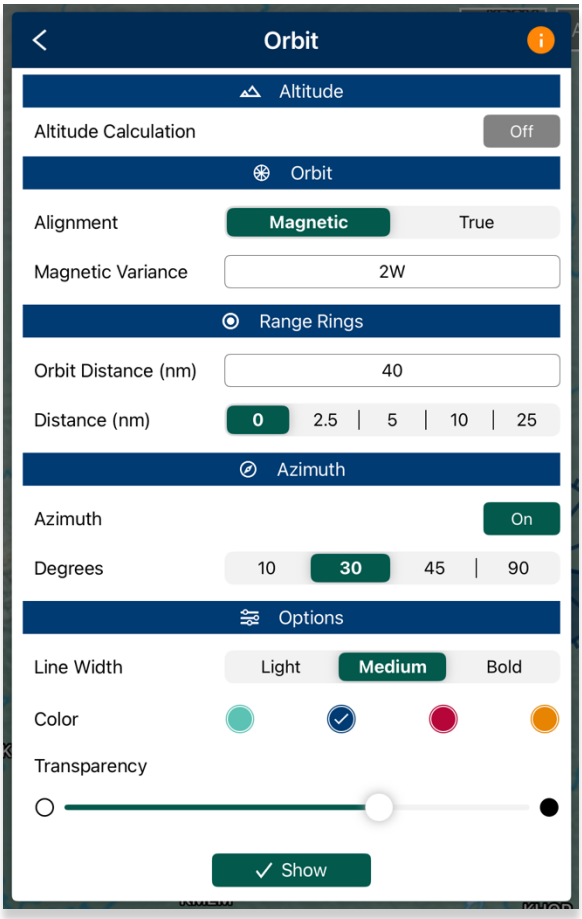
1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** 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.



25.3.6 Orbit

The Orbit feature provides awareness to pilots flying their mission. Users can select a point on the Map, set their desired configuration, then an orbit will surround the selected point. Certain fields will be pre-populated using the location's values. If necessary, modify pre-populated fields to desired preference.

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 **Orbit**.
6. The Orbit popup will appear. Each field has pre-filed values based on the selected point.



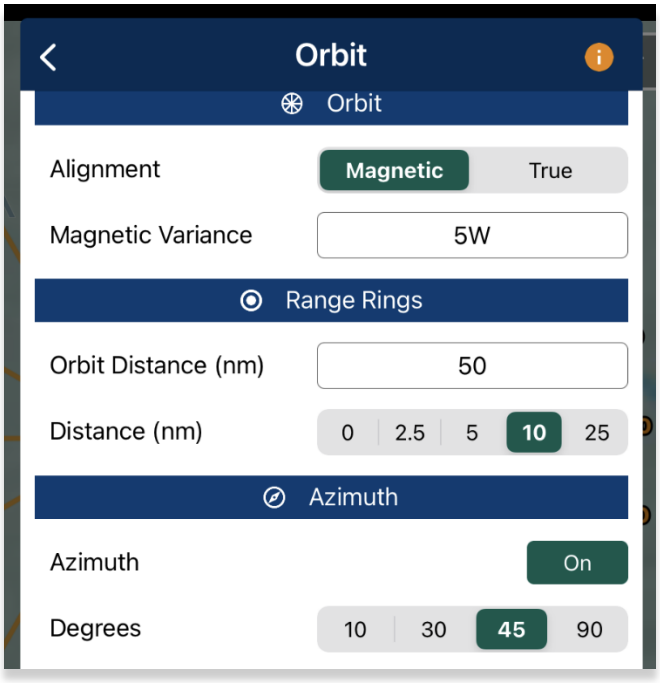
NOTE: For information on Altitude Calculation, refer to Section 25.3.6.1.

7. *Alignment* determines the direction in which the orbit is pointing. Set the desired direction to ***Magnetic*** or ***True***.
8. *Magnetic Variance* is pre-populated, and the value is based on the selected point. If necessary, enter desired value in the text field.

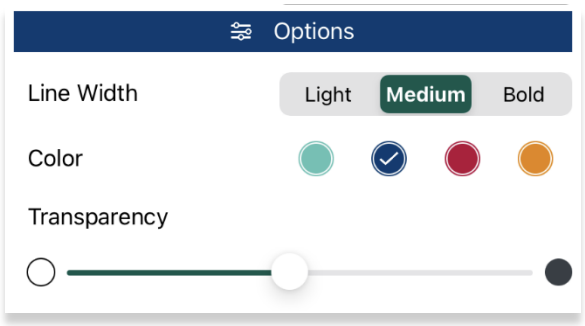
NOTE: Users can enter a positive or negative value followed by a cardinal direction of E or W.

NOTE: If the point selected is a NavAid, the Magnetic Variance field will be automatically filled with the slaved magnetic variance. However, if the NavAid does not have a slaved magnetic variance, the normal magnetic variance will be displayed instead.

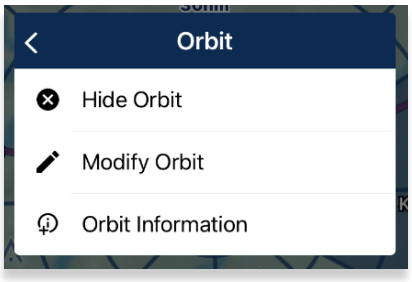
9. The *Range Rings* section determines the number of rings for the selected point and the distance between each ring. Select desired value for each field.
10. The *Azimuth* section determines the angle between the ownship and true north. The Azimuth field is enabled by default. Select the desired degrees.



11. The *Options* section includes additional options used to configure your orbit to the desired display on the Map. Modify each field to desired configuration.
12. *Transparency* modification is available to users. Adjust transparency using the slider to the desired value.



13. Tap **Show** to apply the Orbit configuration. The Orbit will overlay on the Map.
14. To modify the orbit, tap on the **Orbit** overlay on the Map.
15. Users are given the following options:



- **Hide Orbit** – hides the Orbit from the Map.
- **Modify Orbit** – displays the Obit popup to make desired modifications.
- **Orbit Information** – displays relevant Orbit information. Terrain Analysis data is required to view orbit information.

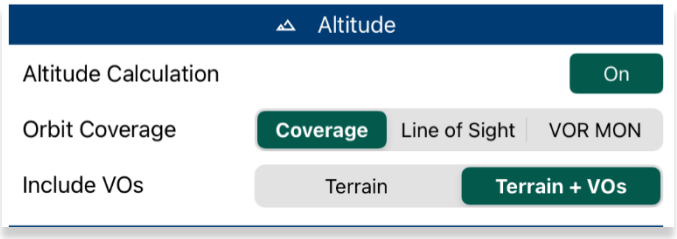
NOTE: Only one orbit can be displayed at a time on the Map.

NOTE: Distance is measured in nm or km, respective to which distance unit users have set in their Settings.

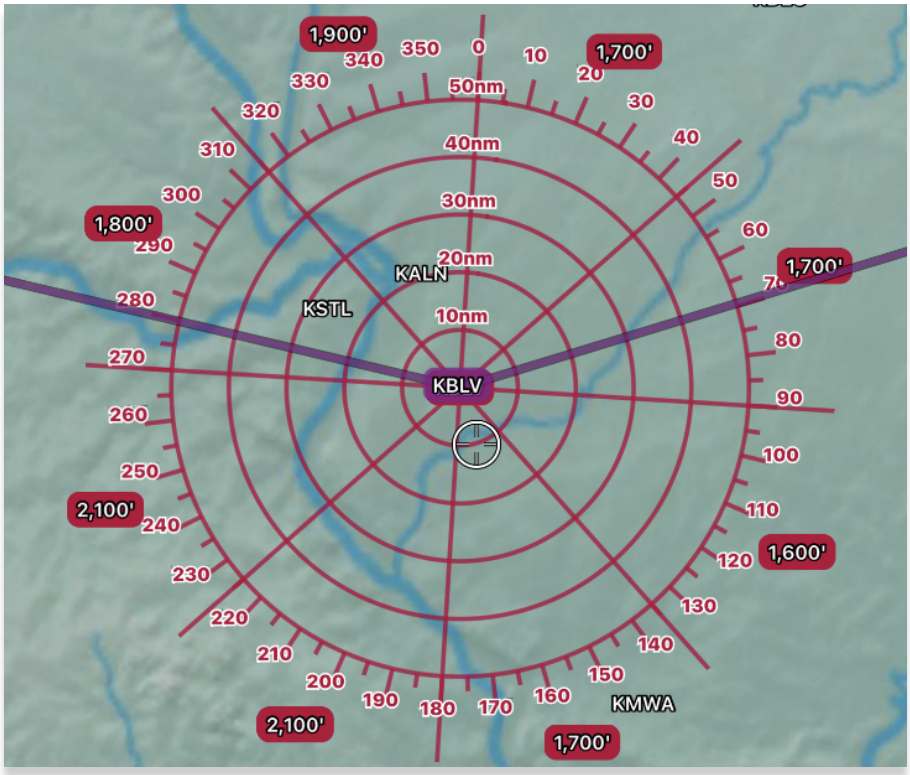
25.3.6.1 Orbit Altitude

Orbit Altitude provides users with visuals of the minimum altitude required to safely fly over mountainous terrain and vertical obstructions. Users are required to download **Global** and **Terrain Analysis** data to access Coverage, Line of Sight, and VOR MON orbit coverage features.

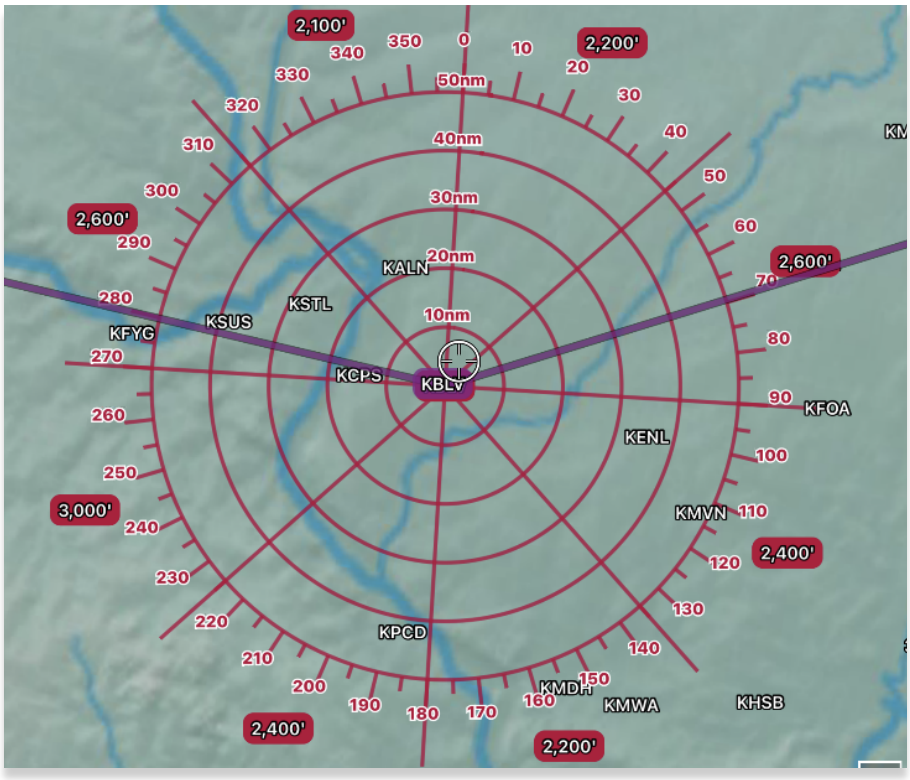
1. Enable **Altitude Calculation** to expand options.
2. Orbit Coverage provides the following coverages: Coverage, Line of Sight, and VOR MON. *Coverage* is selected by default and includes options to display the minimum altitude for vertical obstructions (VOs). Select between **Terrain** or **Terrain + VOs**.



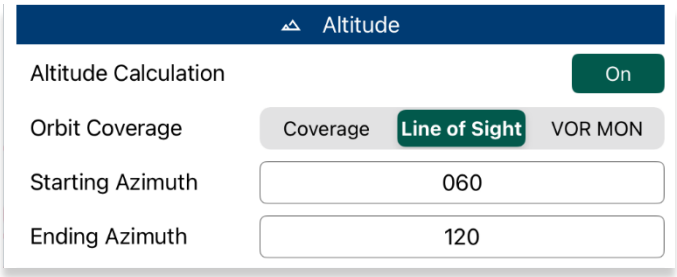
3. Tap **Show** once desired coverage option is selected.
    - **Terrain** – displays the terrain elevation for each sector.



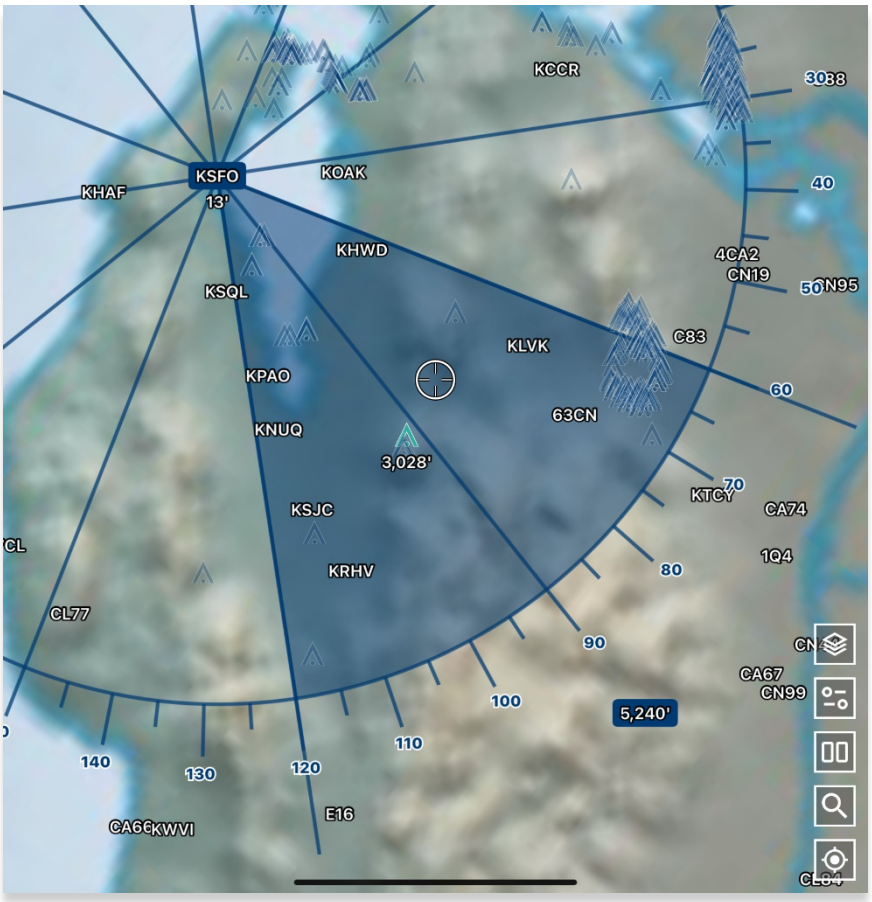
- **Terrain + VOs** – displays the terrain and VOs elevation for each sector.



4. Tap to select or toggle the segmented control to **Line of Sight** coverage. Additional fields will be displayed.
5. Fields for Starting Azimuth and Ending Azimuth will display. Values entered will be shaded on the Orbit. Enter the starting and ending azimuth for the line of sight coverage.



6. Tap **Show** once all fields are set to the desired values.



NOTE: The value placed beside the shaded area represents the line of sight for that sector.

NOTE: The value located below the selected point represents the elevation of that identifier.

NOTE: VOs are visible and will populate within the displayed orbit. The highlighted VOs are the highest elevation VOs.

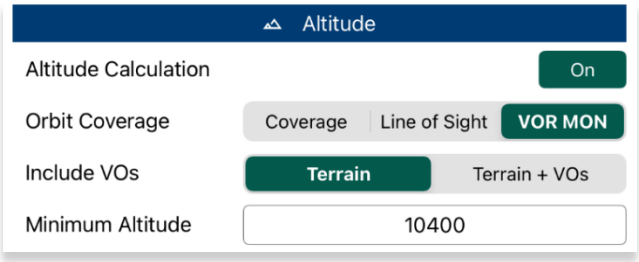
7. Tap to select or toggle the segmented control to **VOR MON** coverage.

NOTE: When the VOR MON option is selected, the default parameters are set to an Orbit Distance of 70 and a degrees value of 10.

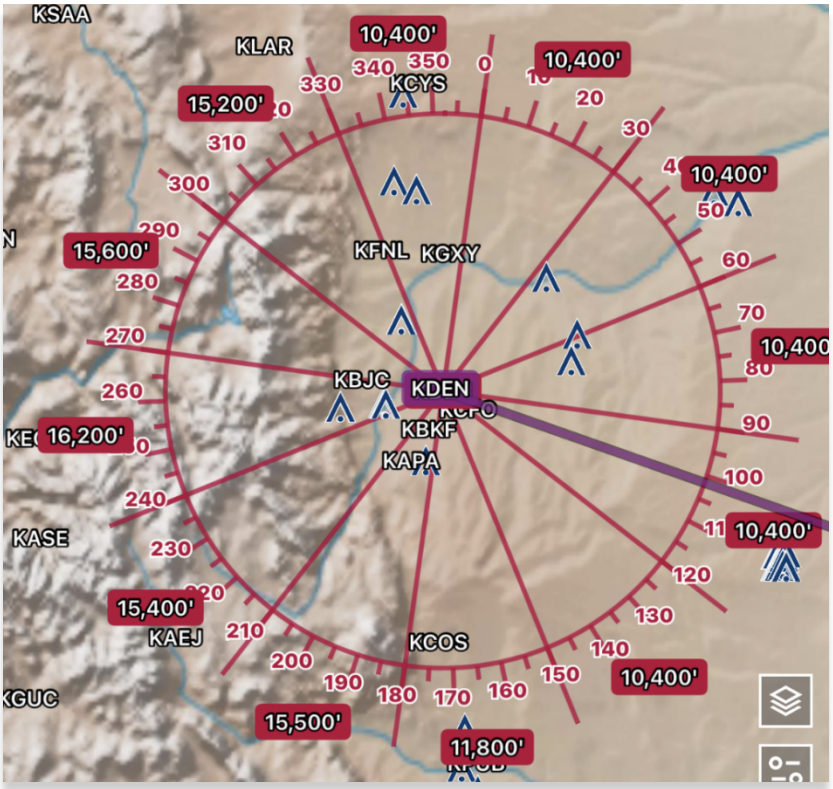
8. Fields to include VOs and entering a minimum Altitude will display. Select *Terrain* or *Terrain + VOs*.
9. Enter a **minimum altitude** in the text field.

NOTE: Default value for Minimum Altitude field is 5,000'.

NOTE: Enter any multiples of 100' from 1,000' to 17,500' above site elevation.

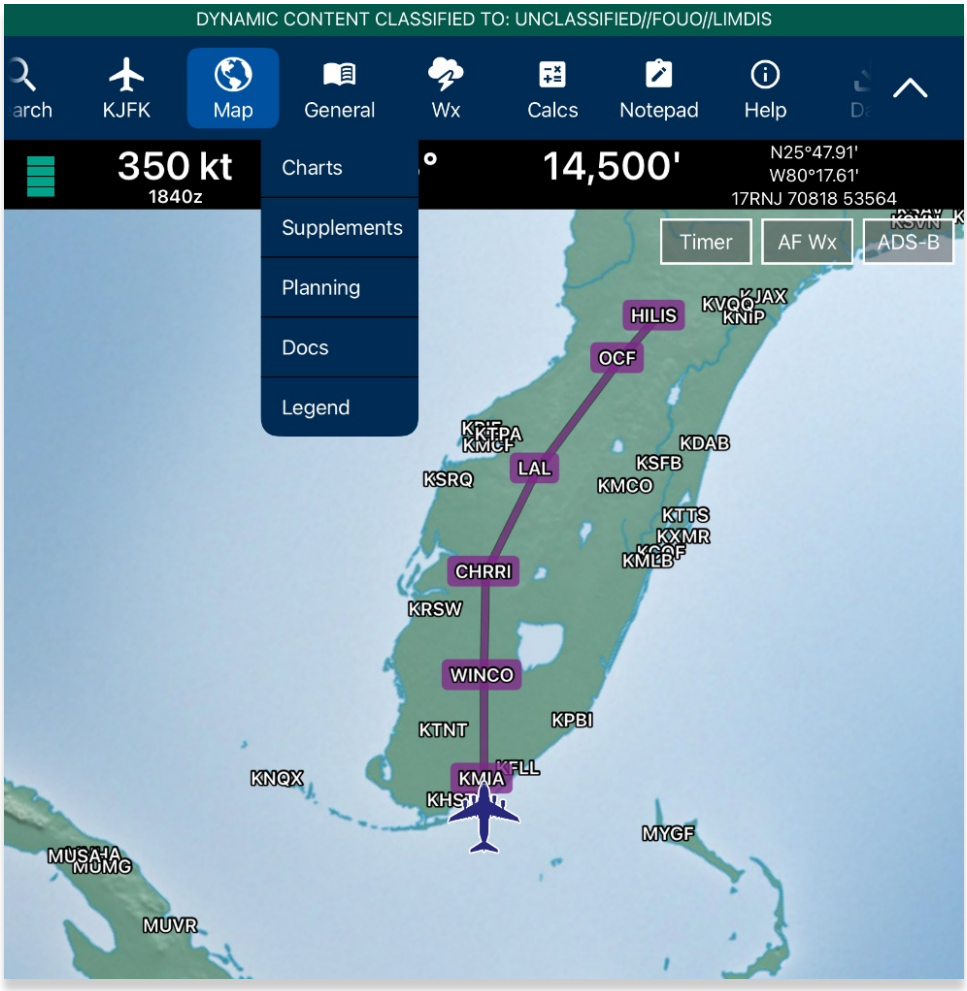


10. Tap **Show** once all fields are set to the desired values.



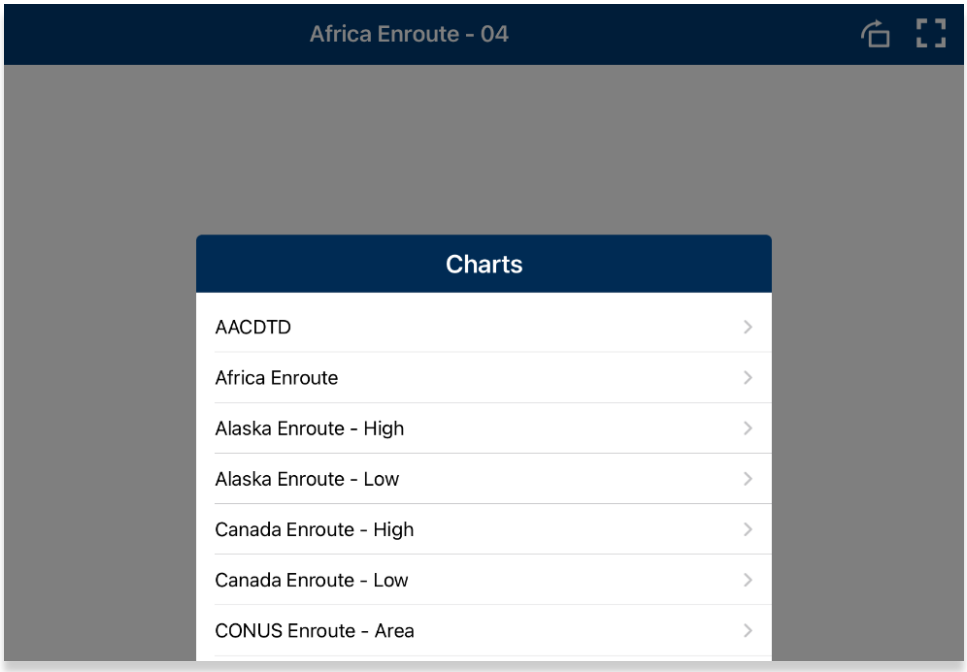
26 General

General (open book icon) is located on the Main Menu, to the right of the Map menu. The General section includes significant charts and documents such as regional Charts, Supplements, Planning, User Documents, and Legend that users can view directly on Aero App. User must download the respective region(s) to view charts.

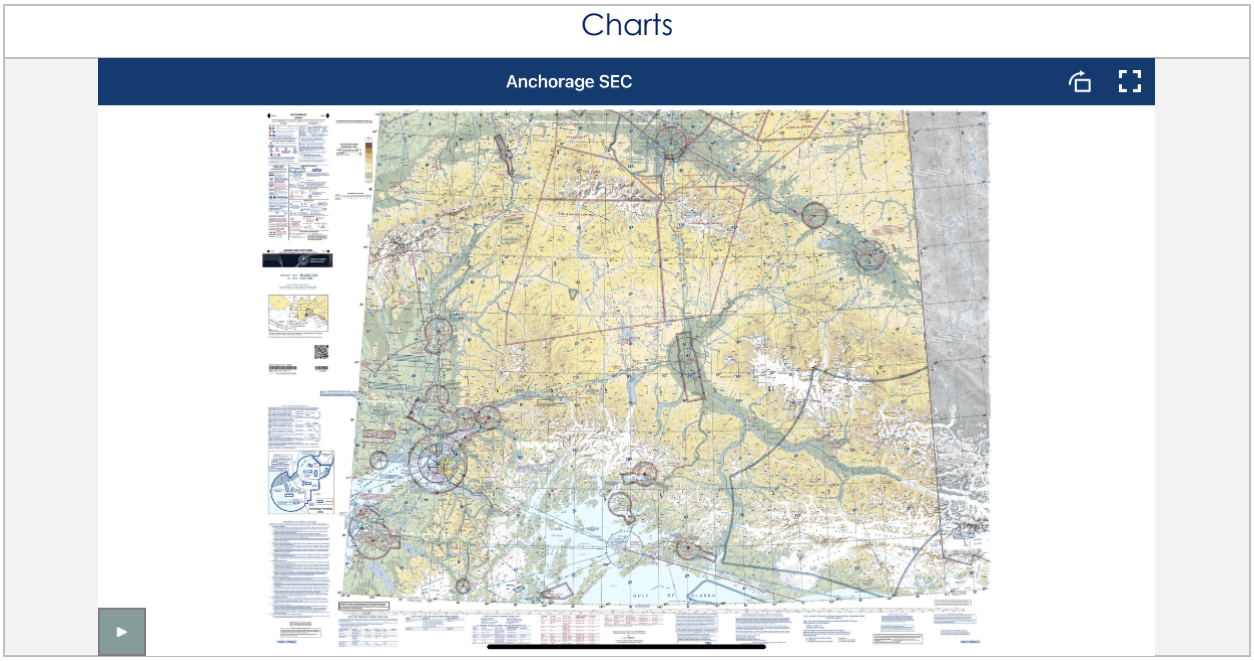


1. Tap **General** on the ***Main Menu***. The General options will be displayed.
2. Select from Charts, Supplements, Planning, Documents, and Legend.

3. Tap on the **ribbon** to display available charts or documents for the selected chart or document type.



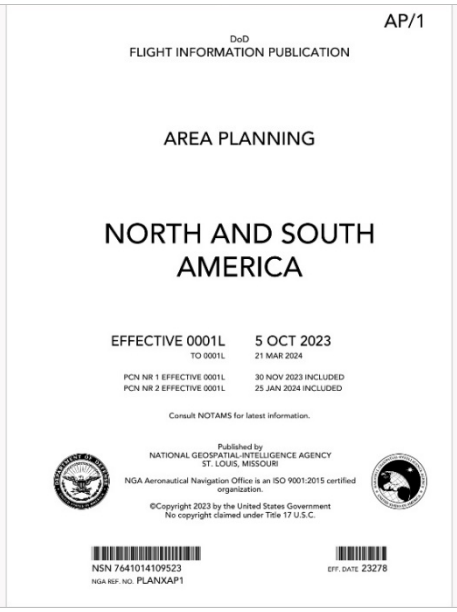
NOTE: A thumbnail slider is available for PDF documents, allowing users to swipe through individual pages of the selected document.



Supplements



Area Planning Documents





Undo Drawing

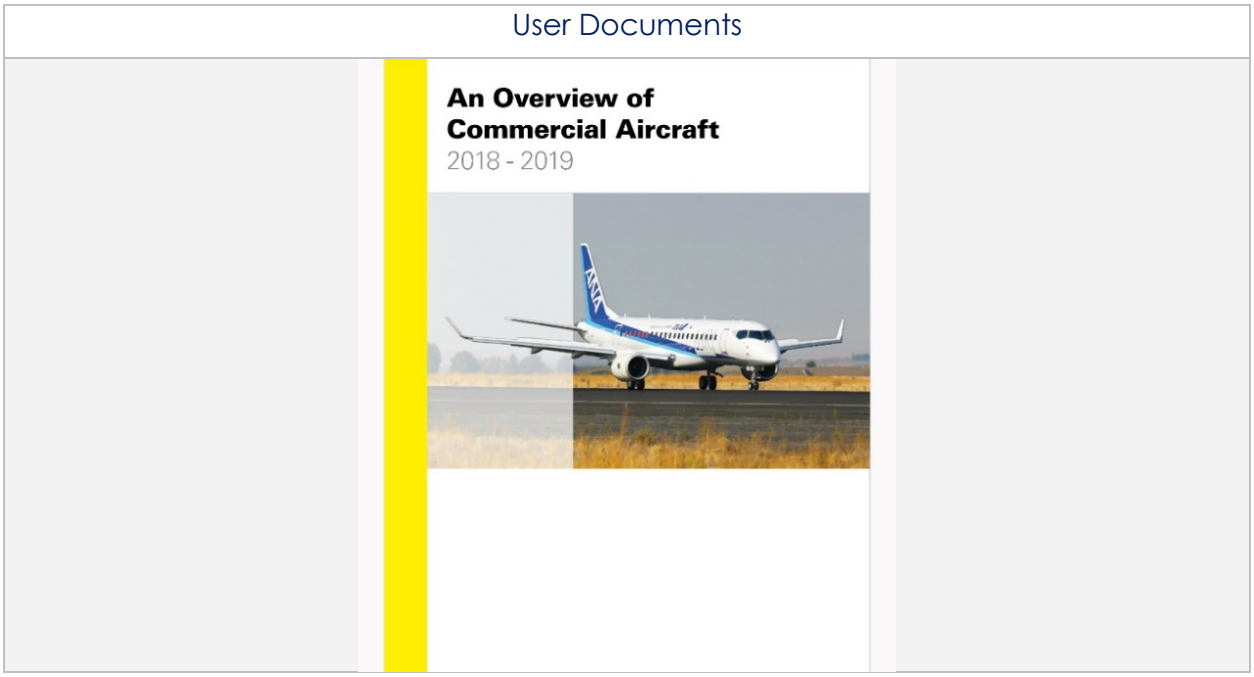
Grid View

Share

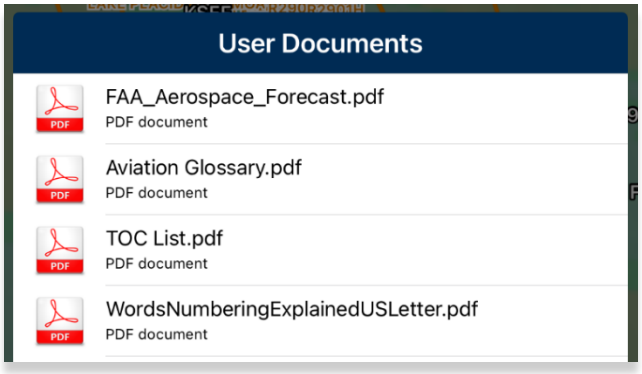
Draw on Carts

Save

Search

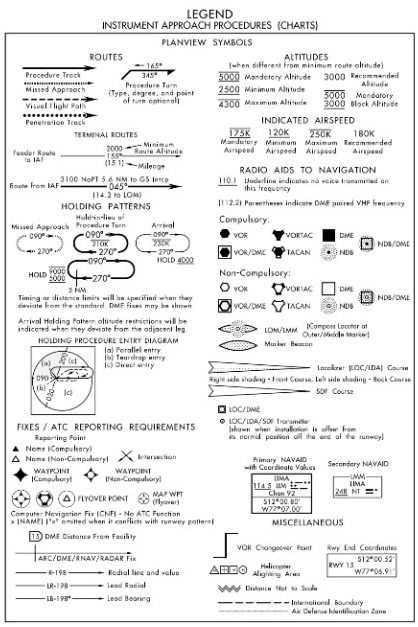


4. To delete a user document, navigate back to the user document selection popup.



5. Swipe left to reveal the delete button of the document that you wish to permanently remove.
6. The delete confirmation popup for the selected document will be displayed. Tap **Delete** to confirm action. The document will be removed from the list.

Terminal Procedure Legend



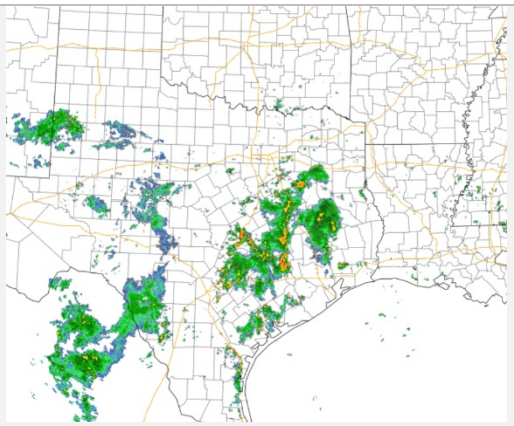
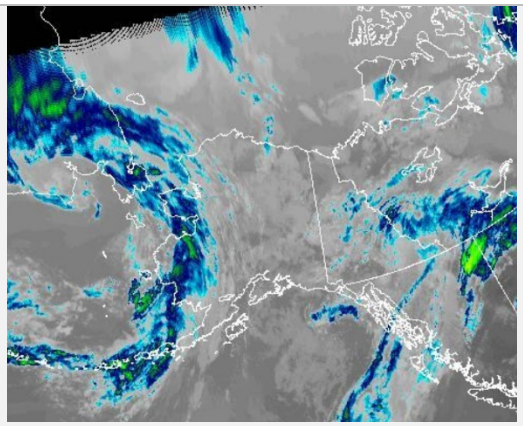
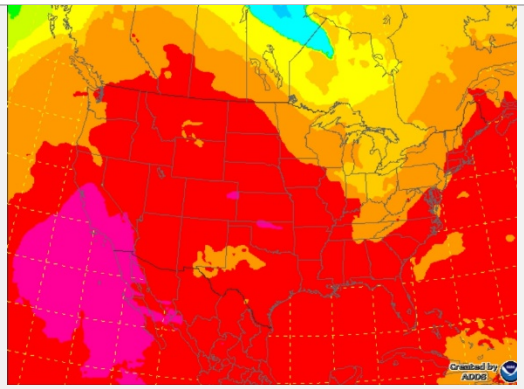
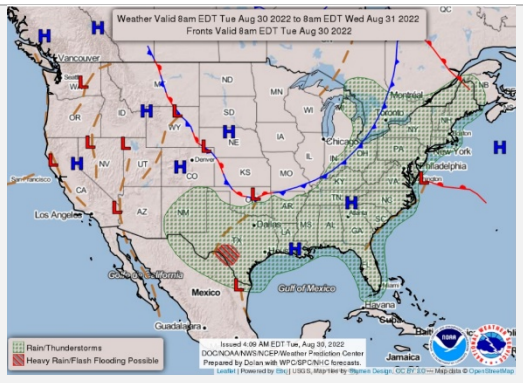


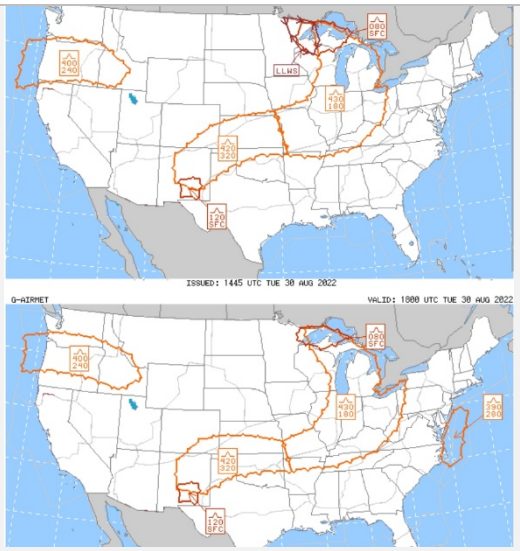
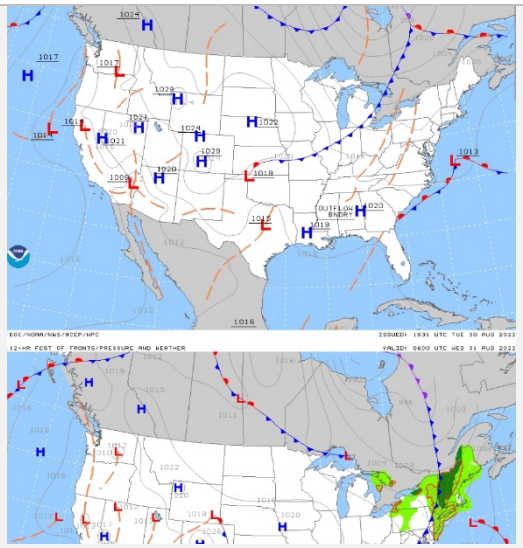
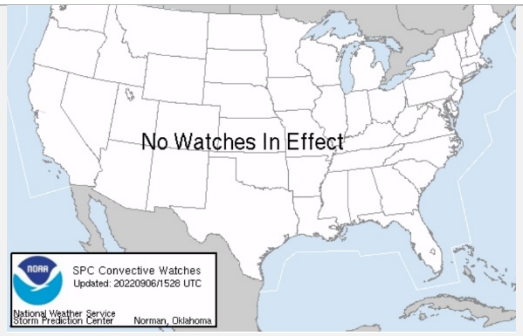
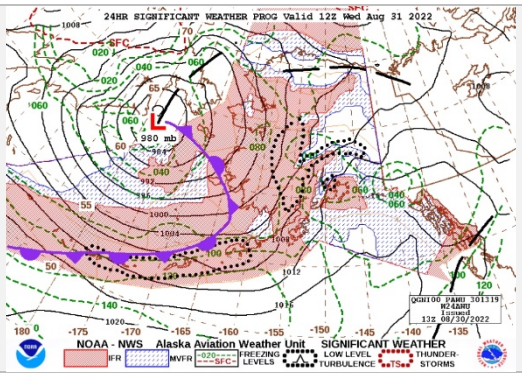
27 Weather (Wx)

The Weather (Wx) menu contains Weather Images and DD 175-1 Briefings menus. To access weather-related menus, tap Wx on the Main Menu.

27.1 Weather (Wx) Images

Weather (lightning bolt cloud icon) is located on the Main Menu, positioned between the General and Calcs menus. 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:

RADAR	Satellite
	
Icing	**Weather Forecast**
	

AIRMETs and SIGMETs	Prog Charts
	
Convective SIGMETs and Outlooks	**Current Convective Watches**
	
Alaska	
	

NOTE: Attempting to load a weather image without an internet connection will display a warning message.

27.2 DD 175-1 Briefings

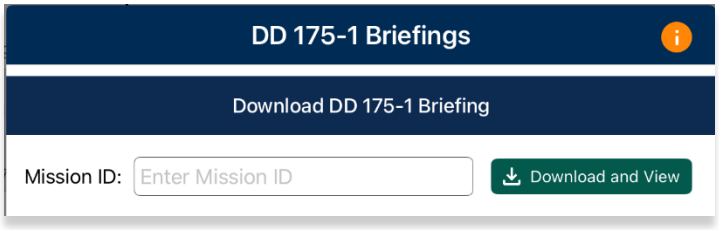
Users can download and view DD 175-1 weather briefings for their mission directly within Aero App. This feature is available exclusively to DOW partners and GEOAxIS users.

1. Tap **Wx** on the ***Main Menu***.
2. From the dropdown, select **DD 175-1 Briefings**.
3. The DD 175-1 Briefings popup will display. To download a weather briefing, enter the **mission ID** in the *Mission ID* text box.

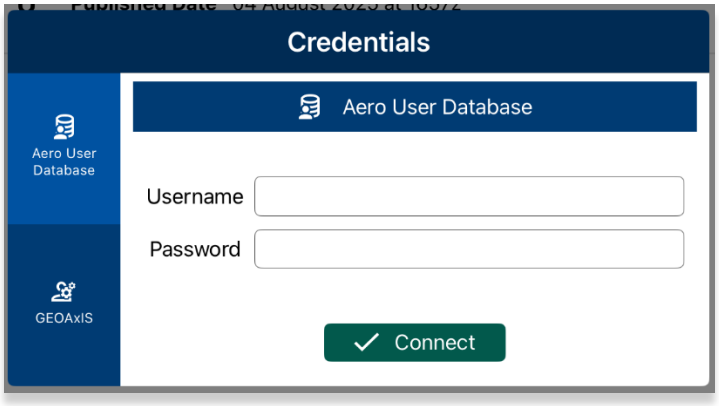
NOTE: The Mission ID must match exactly as provided, including all uppercase letters and any special characters.

NOTE: Register through BIFROST (bifrost.afweather.mil) and submit a mission briefing request to receive a Mission ID. The Mission ID is automatically generated and can be found in the Mission Management Card or briefing notification.

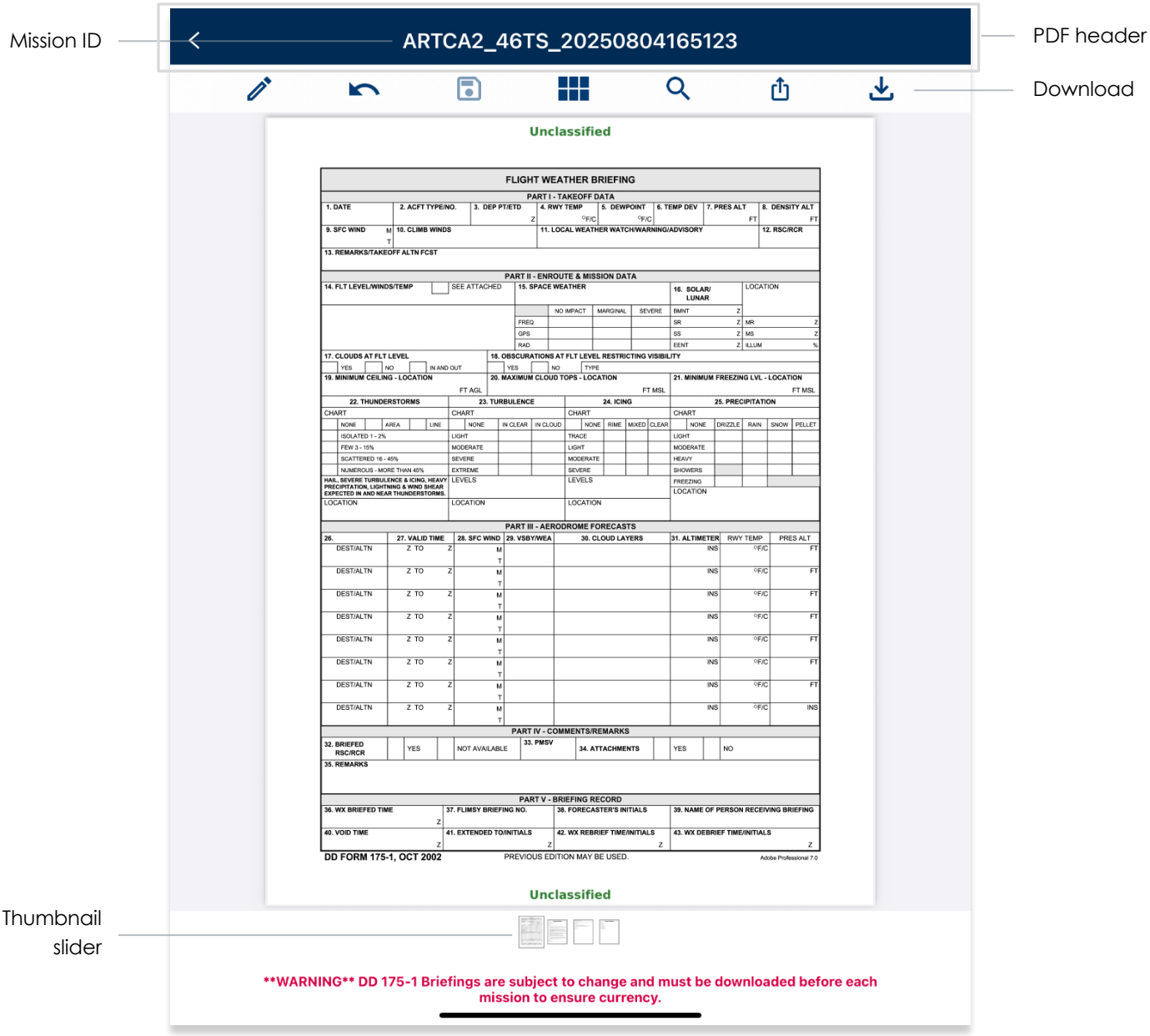
4. Tap **Download and View**.



5. The credentials popup will appear. Choose the desired method of authentication (AUD or GEOAxIS).

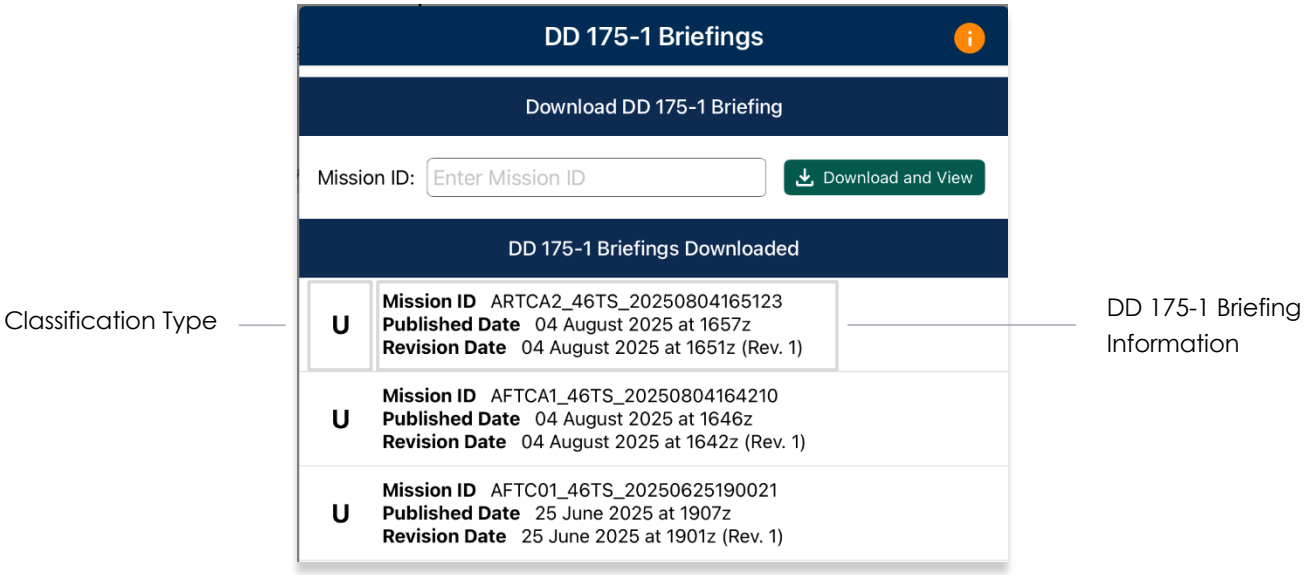


6. Tap **Connect** and the downloading process will begin.
7. The DD 175-1 briefing PDF will display. Select individual pages from the thumbnail slider or swipe left or right to view all pages of the PDF.
8. To ensure you have the latest DD 175-1 briefing for your mission, tap **Download**.
9. Return to the DD 175-1 Briefings popup by tapping the **back button** on the PDF header.

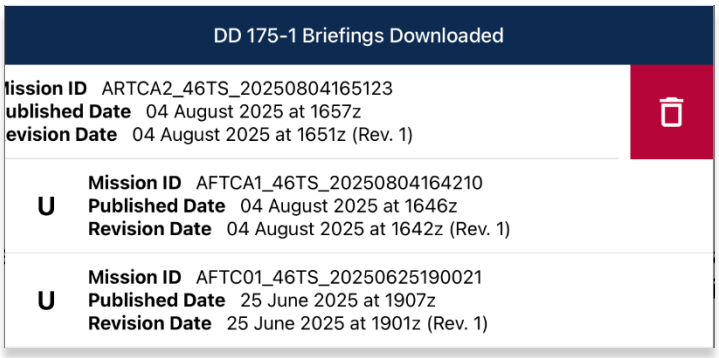


NOTE: Additional actions such as PDF markup, undo, save, multiple pages, search, share are available. Refer to Appendix D | PDF View for additional information.

The DD 175-1 Briefings Downloaded section will display a list of all downloaded weather briefings. Each briefing includes details such as the mission ID, published date, and revision date. The classification type of the briefing is shown to the left of this information.

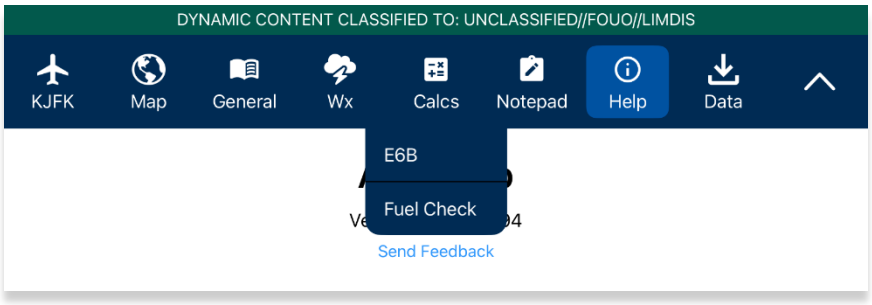


10. To delete a DD 175-1 briefing, swipe left to reveal the delete button of the PDF that you choose to permanently remove. Tap **Delete.**
11. The delete confirmation popup for DD 175-1 Briefing will be displayed. Tap **Delete** to confirm action. The DD 175-1 briefing will be removed from the list.



28 Calcs (Calculators)

The Calcs menu, also referred to as Calculators, contains E6B and Fuel Check menus. To access these menus, tap Calcs on the Main Menu.

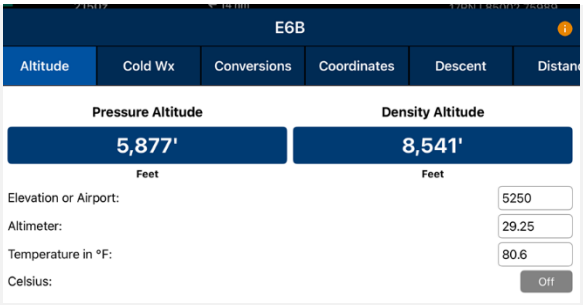


28.1 E6B Calculator

The electronic calculator enables pilots to perform a variety of calculations for preflight or in-flight planning.

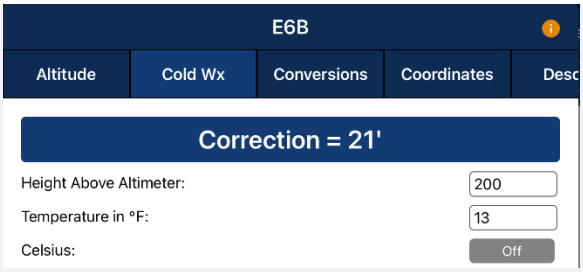
Altitude

Altitude calculates the Pressure Altitude and Density Altitude by entering the Elevation or the Airport ICAO, Altimeter, and Temperature.



Cold Weather (Wx)

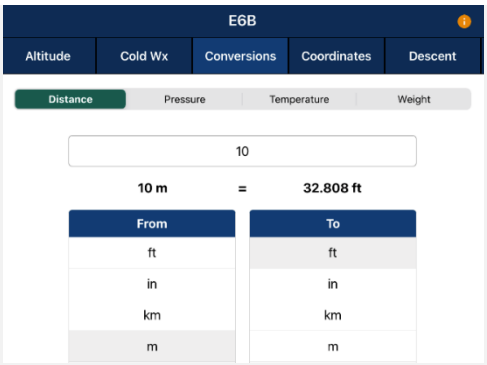
Cold Wx corrects Altitude for cold temperature operations. Users can switch between Celsius and Fahrenheit.



Conversions

Conversions are divided into Distance, Pressure, Temperature, and Weight. Tap to select or slide the segmented control to desired conversion category.

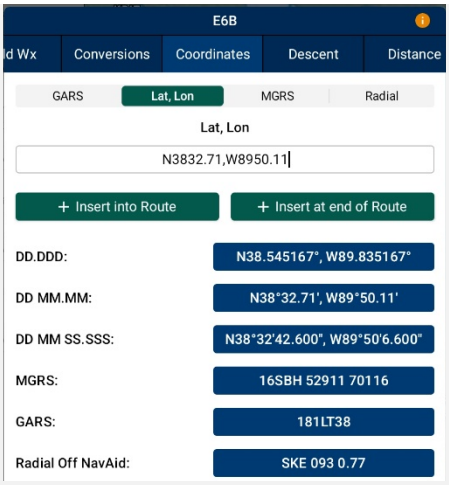
1. Tap to select the current unit in the left column and select the desired unit in the right column.
2. Enter a value in the text field.



Coordinates

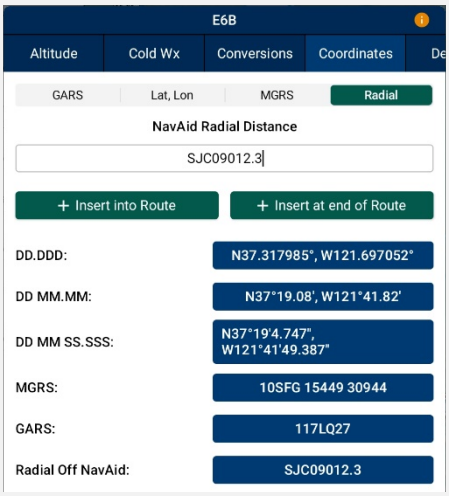
Coordinates allow users to get a reading on Lat, Lon, MGRS (Military Grid Reference System), GARS (Global Area Reference System), and Radial Off NavAid when you enter coordinates.

1. Select an option from ***Lat, Lon***, ***MGRS***, ***GARS***, or ***Radial*** by tapping or sliding the segmented control left-to-right.
2. Enter coordinates in the text field.
3. The 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.

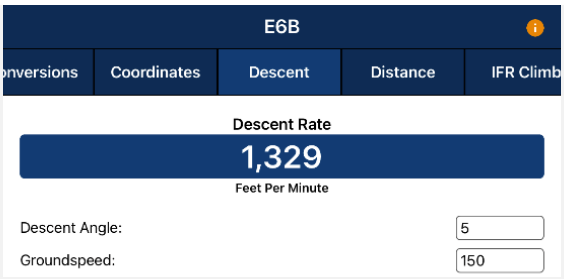
For example, from the Lat, Lon tab, you can tap on the MGRS output field and the MGRS tab is displayed with the field values from Lat, Lon.



NavAid Radial Distance calculates the coordinates using three inputs: namely NavAid, Radial and Distance.

Descent

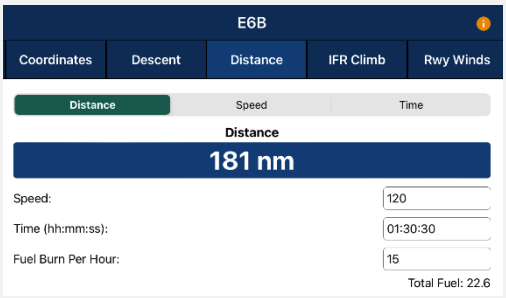
Descent Rate is calculated in feet per minute, enter the Descent Angle in degrees and Groundspeed in knots.



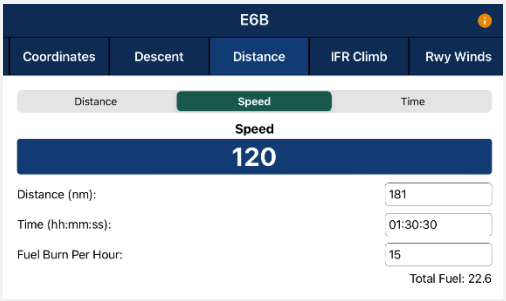
Distance

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 Speed, Time, and Fuel Burn Per Hour. The expected output is Distance measured in kilometers or nautical miles, respective to which distance unit format users 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 Rules (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.



Runway (Rwy) Winds

Runway Winds calculates Headwind and Crosswind by typing in Runway Direction in degrees, and Wind Direction/Speed.



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.

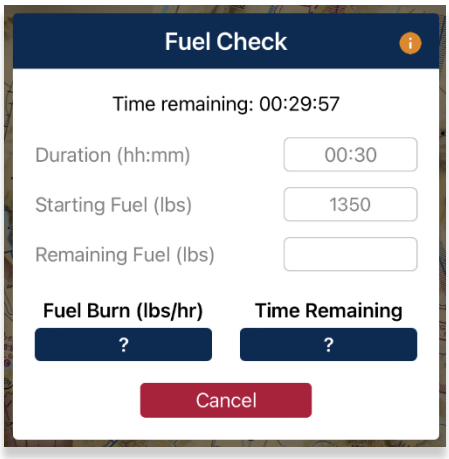


NOTE: Reference notes are located at the bottom of the E6B popup.

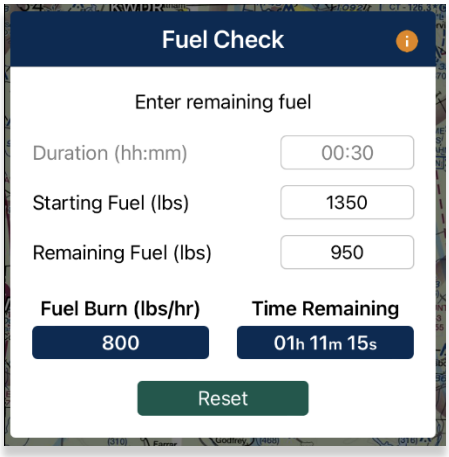
28.2 Fuel Check

The Fuel Check feature calculates fuel burning 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 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.



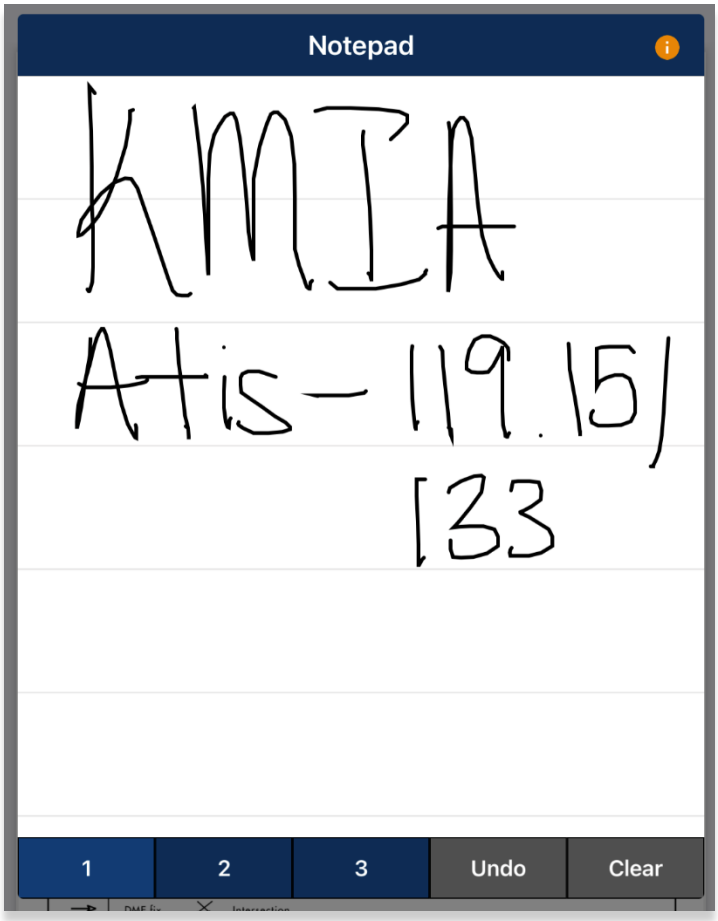
7. Once the timer has ended, users will be prompted to enter the remaining fuel. In the *Remaining Fuel* field, enter the **remaining fuel** in pounds.
8. The calculations will populate the Fuel Burn and Time Remaining results field based on the entered values. Tap **Reset** to clear the calculations.



29 Notepad

Notepad (clipboard with pencil icon) is located on the Main Menu, positioned between the Calcs and Help menus. 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

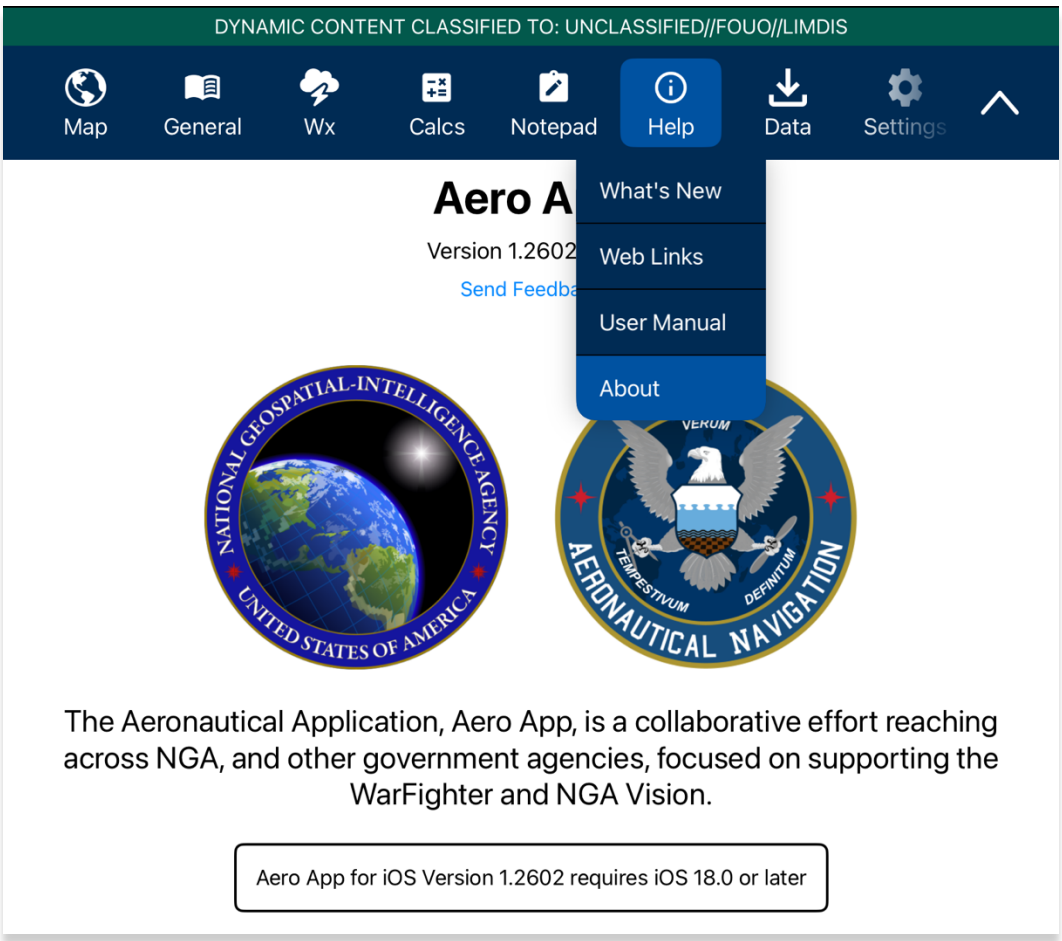


NOTE: Any notepad markings are automatically saved upon exiting the view.

30 Help

Help (information icon) is located on the Main Menu, positioned between the Notepad and Data menus. The Help menu contains the following options:

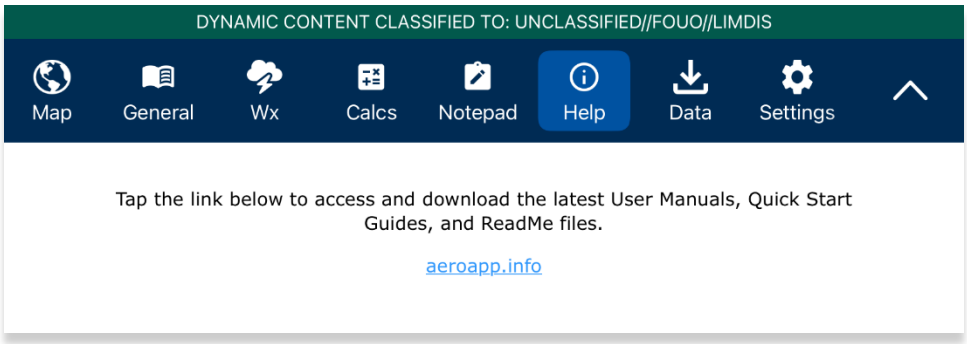
- **What's New** – contains app updates such as information on new features, app enhancements, and important updates. Global must be loaded in Active Cycle to view the What's New page. When a new cycle is loaded in Active Cycle, the What's new popup will display. Refer to Section 12.3 for additional information.
- **Web Links** – contains a collection of links to reference relevant resources. Global must be loaded in Active Cycle to view the Web Links page.
- **User Manual** – includes a link to the aeroapp.info webpage to view different sources of Aero App user guides. Refer to Section 30.1 for additional information.
- **About** – contains information on third party libraries, app version number, and the required OS to successfully use Aero App. Below the app version number is a link to send feedback to the Aero App Support Team.



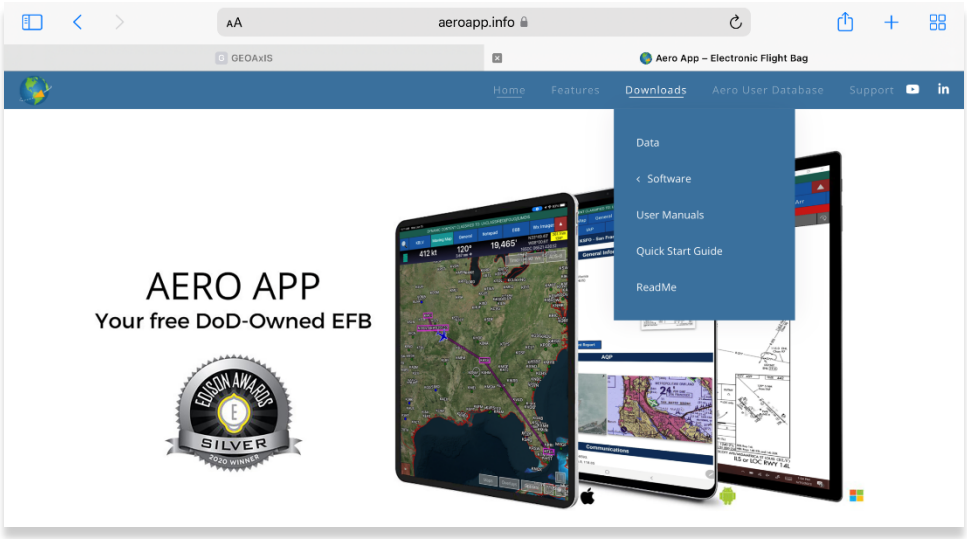
30.1 User Manual Access

The User Manual tab includes a link that redirects users to the Aero App website (aeroapp.info).

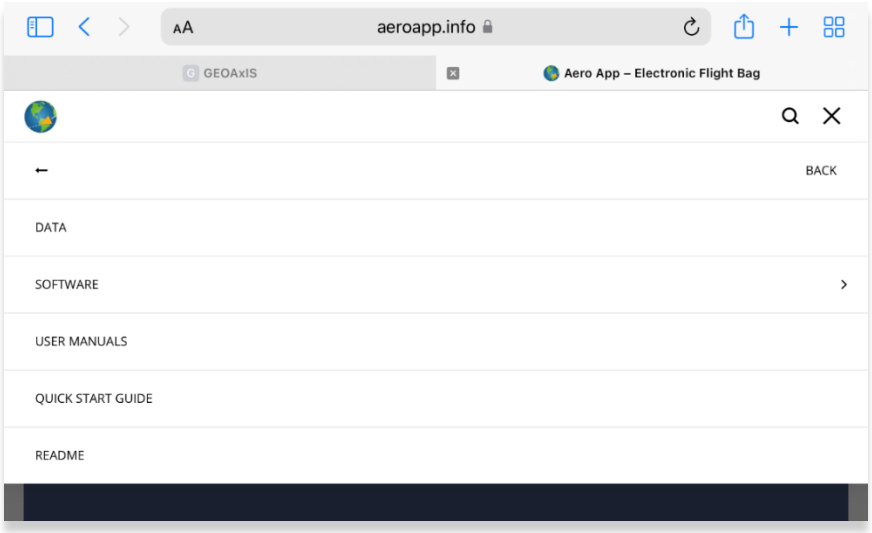
1. Tap **Help** on the ***Main Menu***. The Help options will display.
2. Select **User Manual**.
3. Tap the **aeroapp.info** link and users will be redirected to the Aero App homepage.



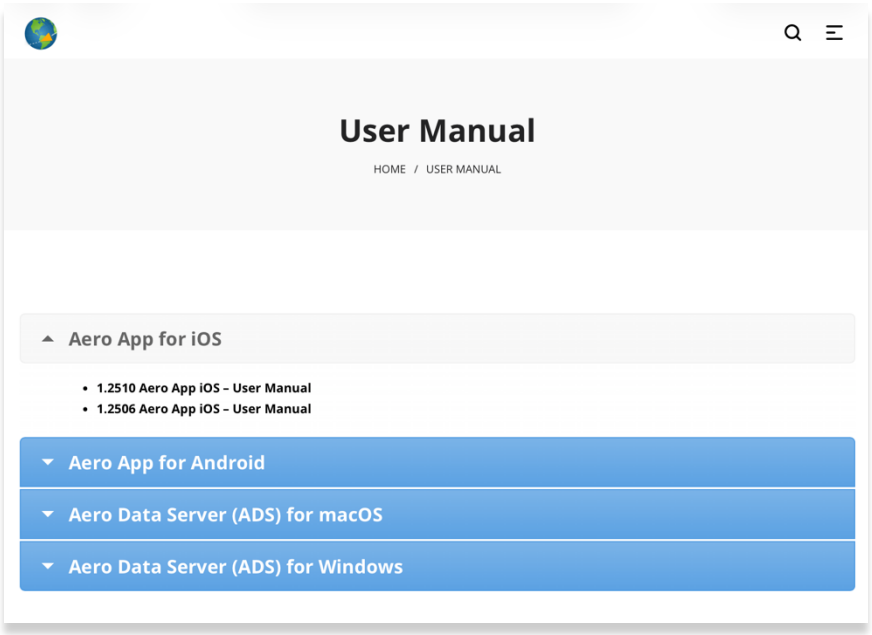
4. Navigate to the *Downloads* menu. The option placement will vary depending on display size.
    - On large screens, hover over **Downloads** on the menu ribbon to reveal additional download options.



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



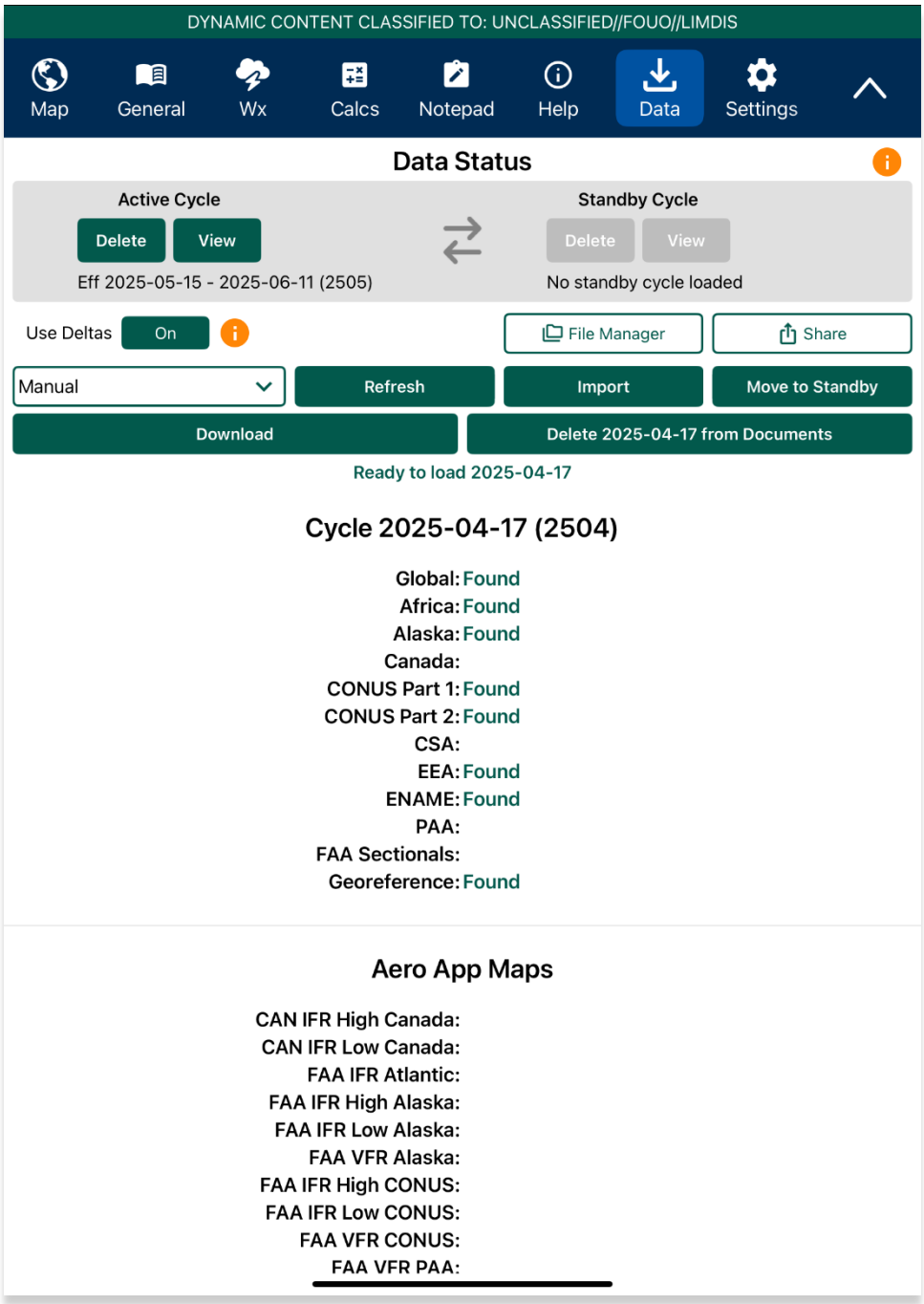
5. Select **Documentation** then **User Manual**.
6. Users are provided with several platforms to choose from. Tap **Aero App for iOS** to reveal related user manuals.
7. Select desired user manual version and you will be redirected to the PDF.



NOTE: The Aero App User Manual can be uploaded onto Aero App. Refer to Section 10.8 for additional information.

31 Data

Data (download icon) is located on the Main Menu, positioned between the Help and Settings menus. The Data Status screen enables users to manage cycles. Refer to Section 12 for additional information.



32 Settings

Settings (gear icon) is located on the Main Menu, positioned to the right of the Data menu. Settings is a tool that enables users to customize the behavior of Aero App. Various setting options are divided into Miscellaneous, Profiles, Reset, Route, and User Interface.

32.1 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.
    - **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.



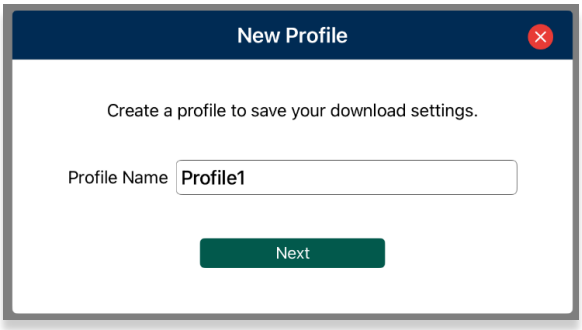
NOTE: Aero App must be uninstalled and reinstalled to revert to UNCLASSIFIED.

    - **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.

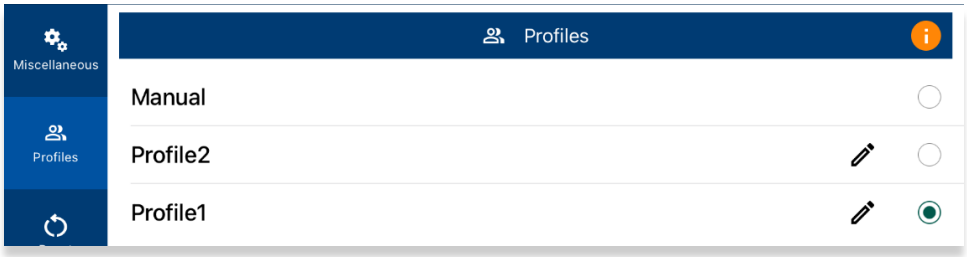
32.2 Profiles

Users can create user profiles to save their data download preferences and switch between different profiles to download the latest data for each mission. The profile selected in the Profiles setting is the active profile. Users have the option to download data manually by selecting Manual as their active profile. Refer to Section 12.2 to download data of the selected profile.

1. Tap **Settings** on the Main Menu.
2. Select **Profiles** from the side menu.
3. To create a new profile, tap **+ New**.
4. Choose a unique **profile name** to identify your download settings. Tap **Next** once you have entered a name in the text box.



5. Preselect desired **data** for your mission. Easy Buttons are available for selection. Tap **Save** once desired data has been selected.
6. Tap the **back button** to return to the Profiles settings. The newly created user profile should now be added to the list of Profiles. Manual is selected by default. To switch profiles, tap the **radio button** to activate a user profile.
7. To edit the profile name, tap the **edit icon** next to the radio button.
8. To delete a user profile, swipe left to reveal the delete button of the profile that you wish to permanently remove. Tap **Delete**.
9. The delete confirmation popup for User Profile will be displayed. Tap **Delete** to confirm action.



NOTE: Switching profiles is prohibited and will be disabled during data download.

32.3 Reset

Reset clears all chart markups.

1. Tap **Settings** on the ***Main Menu***.
2. Select **Reset** from the side menu.
3. The following options are available:
    - **Clear All Chart Markups** – clears all APD and IAP markups.
    - **Clear All PDF Markups** – clears all markups from PDFs such as Supplement, Planning Document, Legend, Giant Report, Host Nation, Talon Point, and DD 175-1 Briefings.

32.4 Route

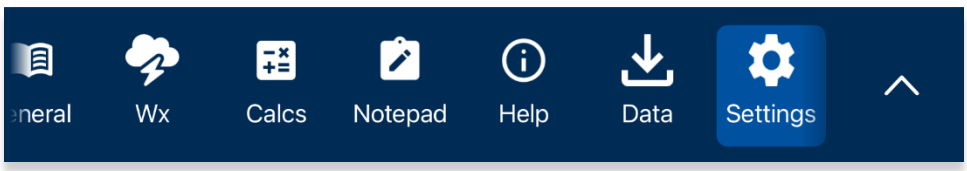
The Route setting contains route configuration options.

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.

32.5 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.



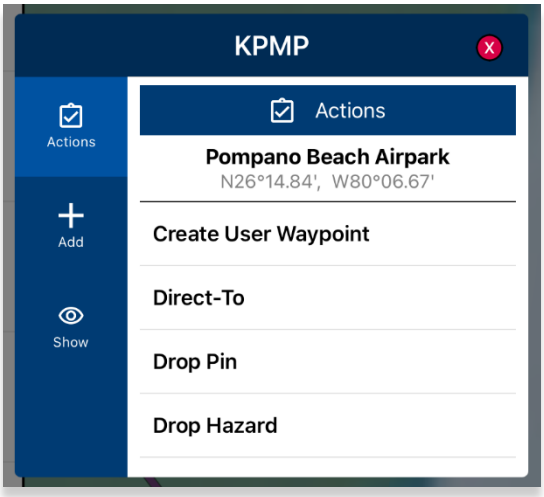
- **Confirm on Delete** – confirms deletion of an item in the route.
- **Coordinates Unit** – displays coordinates in Military Grid Reference System or Lat/Lon format.
- **Display Text for Main Menu** – displays text below each Main Menu option.



- **Distance Unit** – displays distance in km or nm.
- **Main Menu at Top** – relocates the Main Menu to the top or bottom of your screen.



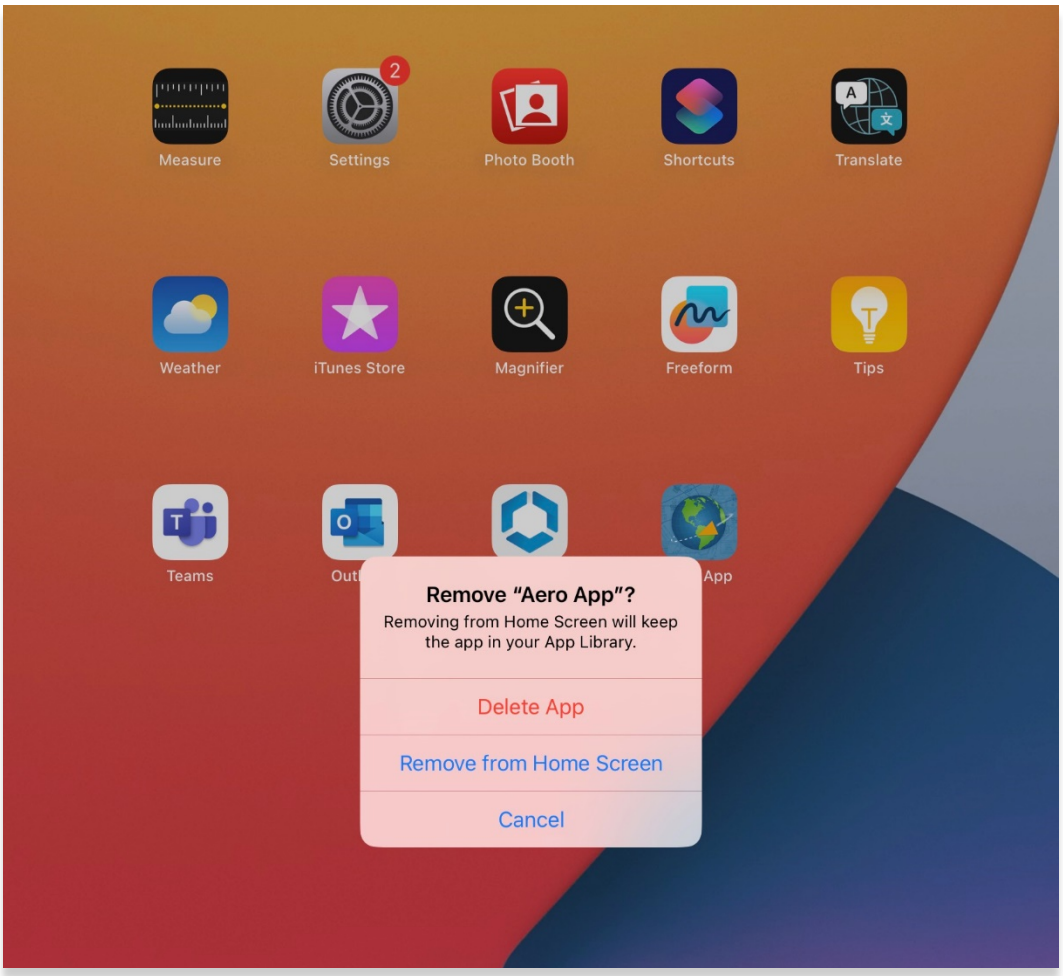
- **Popup Close on X** – displays an X to exit a view.



33 Appendix A | Uninstall Aero App

This section will describe how to uninstall Aero App from your iPad.

1. Navigate to the *Home Screen* from your iPad.
2. Located and hold Aero App until the *Remove App* button displays.
3. Tap on the **Remove App** button. A confirmation popup will display.
4. Select **Delete App** from the given options.



34 Appendix B | User Waypoints and Coordinates

Enter Waypoints using Latitude and Longitude coordinates.

Coordinate formats include:

DD.DDD,DDD.DDD		**DDMM.MM,DDMM.MM**	
Input Example	Means	Input 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,WDDDMM.MM**	
Input Example	Means	Input 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**	
Input Example	Means	Input Example	Means
37.12345N, 121.12345W	37.12345°N, 121.12345°W	3713.4536N, 12145.901W	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, e.g., 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.

35 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.

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 their 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.

35.1 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 *HAZARD#* (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

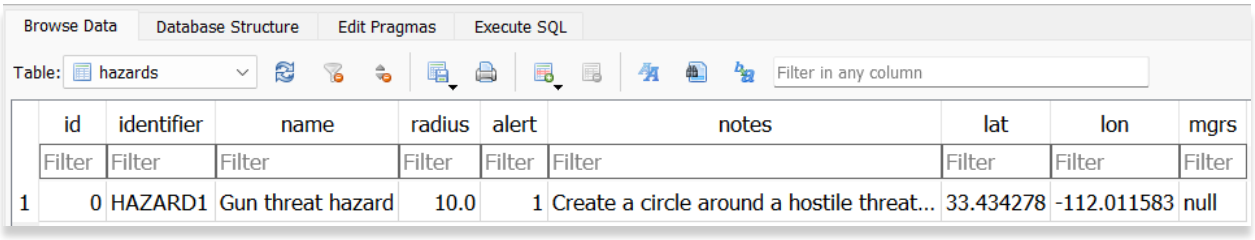
		avoid when flying. If the radius column is left empty or a negative value is entered, the radius of the ring will be automatically adjusted to 0.
alert	INTEGER NOT NULL	The alert column indicates whether Intersection Alert is active or not. 1 is used to represent true while 0 is used to represent false.
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);
```

35.1.1 Hazards SQLite Table

Here's an example of a SQLite table for Hazards:



	id	identifier	name	radius	alert	notes	lat	lon	mgrs
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	0	HAZARD1	Gun threat hazard	10.0	1	Create a circle around a hostile threat...	33.434278	-112.011583	null

35.2 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. It is recommended to follow a naming

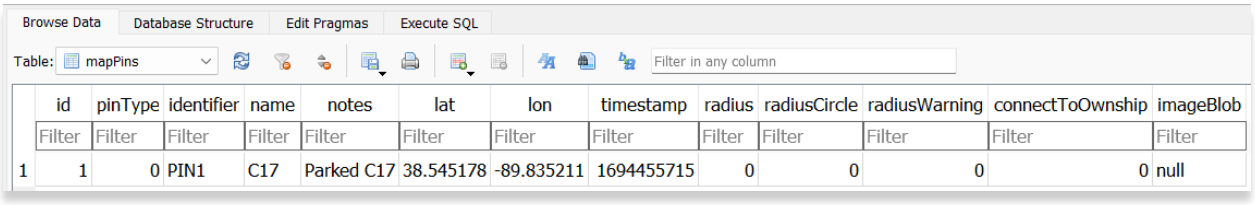
	UNIQUE	convention such as *PIN#* (starting from 1), where "#" represents a unique number. Users should avoid using white spaces or leaving the field blank.
name	TEXT NOT NULL	The name column can contain any character from the ASCII table. However, it is recommended to limit it to alphanumeric characters and spaces.
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	Option is set to 0 and are not read from.
radiusCircle	INTEGER NOT NULL	Option is set to 0 and are not read from.
radiusWarning	INTEGER NOT NULL	Option is set to 0 and are not read from.
connectToOwnship	INTEGER NOT NULL	Option is set to 0 and are not read from.
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);
```

35.2.1 Pins SQLite Table

Here's an example of a SQLite table for Pins.



	id	pinType	identifier	name	notes	lat	lon	timestamp	radius	radiusCircle	radiusWarning	connectToOwnship	imageBlob
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	1	0	PIN1	C17	Parked C17	38.545178	-89.835211	1694455715	0	0	0	0	null

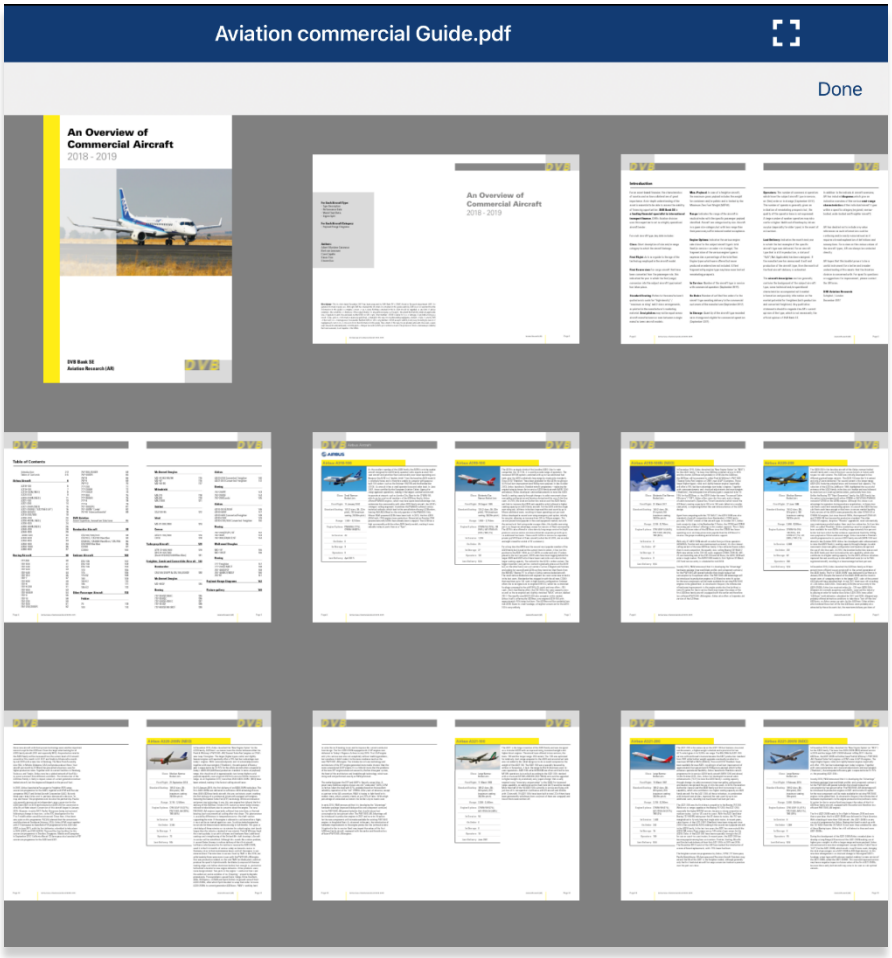
36 Appendix D | PDF Viewer

Aero App users have access to a PDF file that includes Chart Supplements, Giant Reports, Planning Books, Legends, or User Documents.

36.1 Multi-Page PDF

Users may encounter viewing PDF documents in various areas within Aero App, including Chart Supplements, Giant Reports, Planning, Legends, Host Nation, Talon Point, DD 175-1 briefings, and user documents.

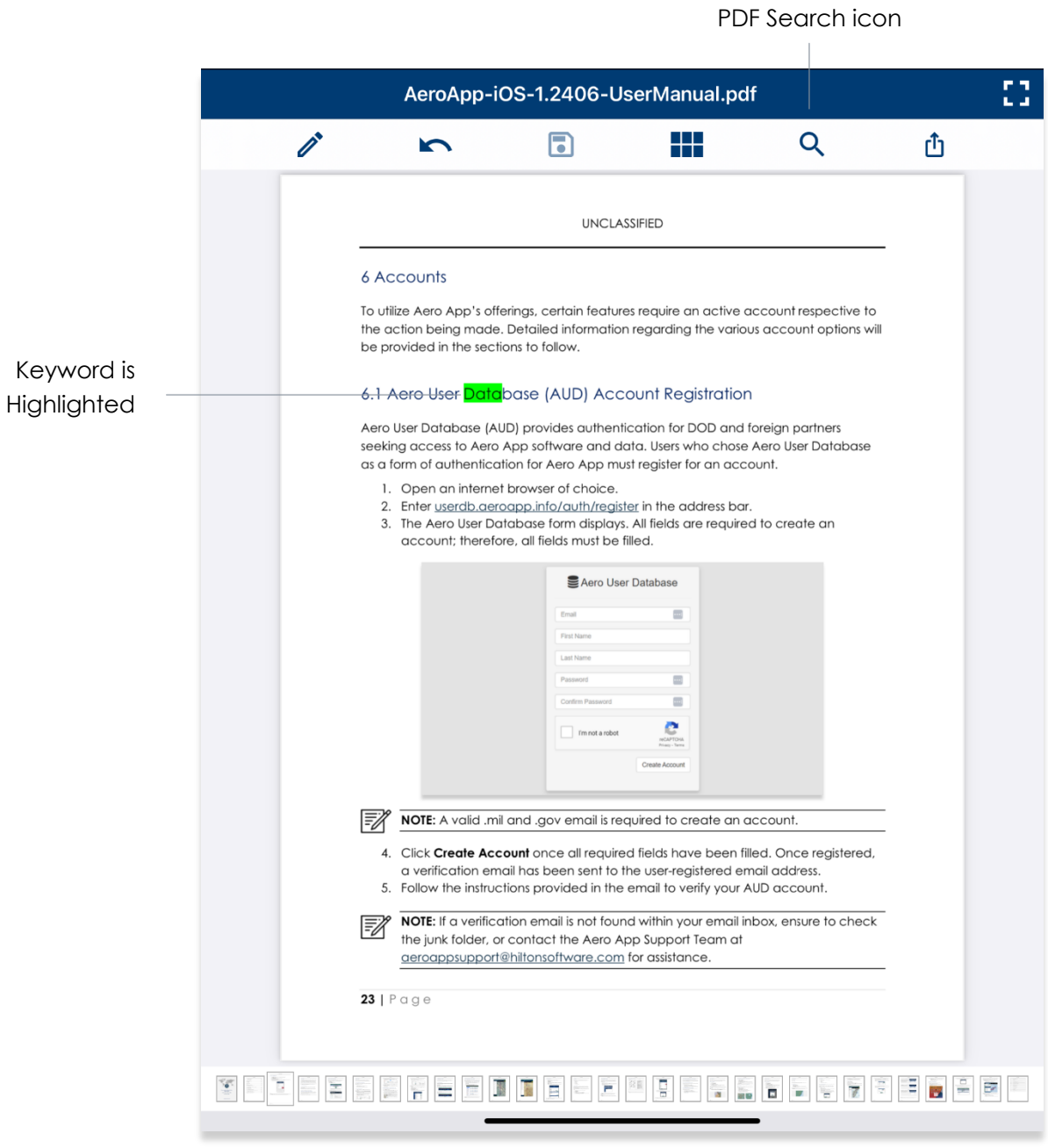
1. Open a PDF from the options mentioned above.
2. Tap on the **grid view** icon.
3. Swipe up or down to see all the pages.



36.2 PDF Search

The PDF Search feature enables users to search keywords in a PDF file.

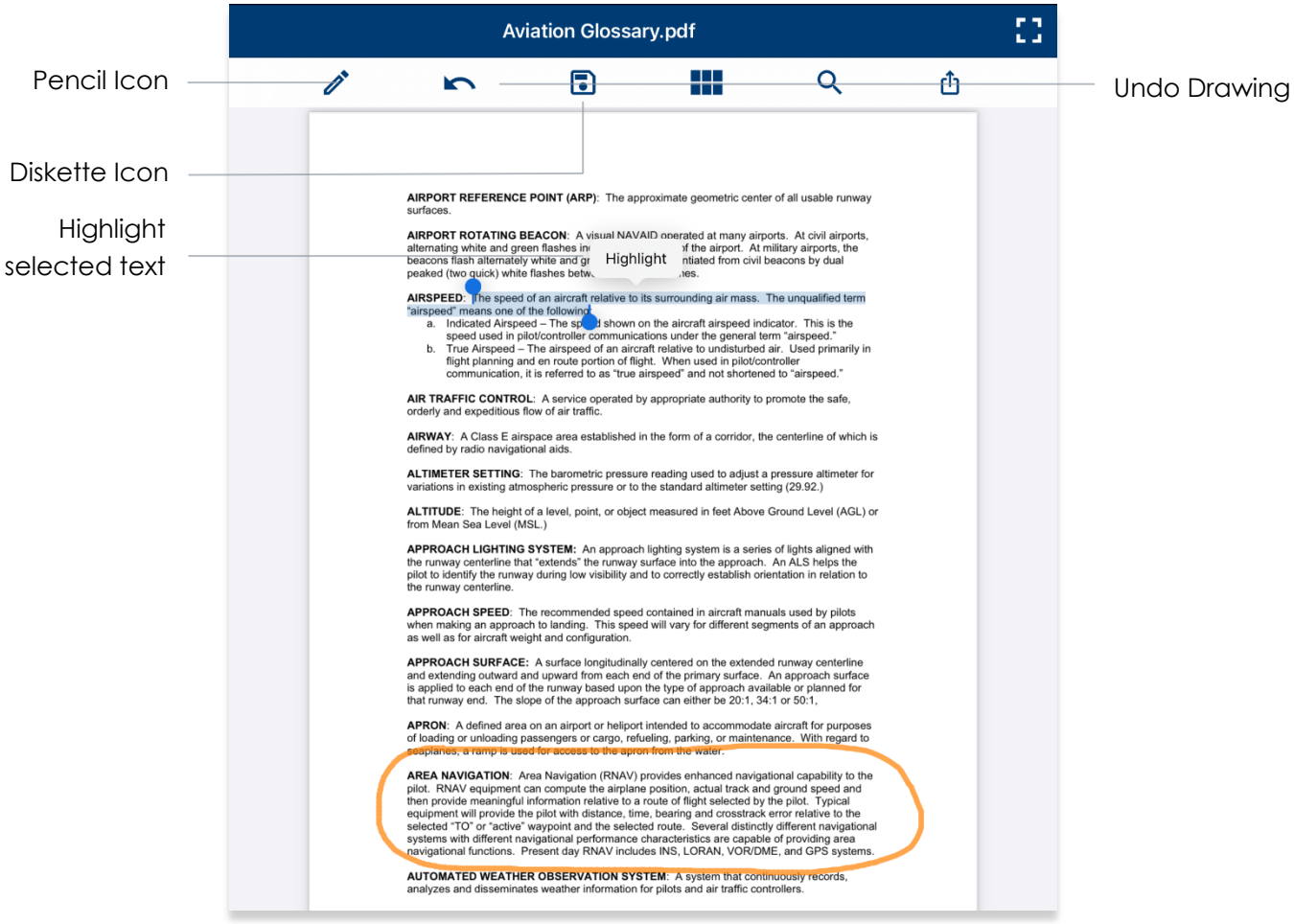
1. Navigate to desired PDF file.
2. Tap the **PDF Search** button.
3. Enter keyword(s) to search.
4. Select from the results.
5. The keyword will be highlighted on the selected page.



36.3 PDF Markup

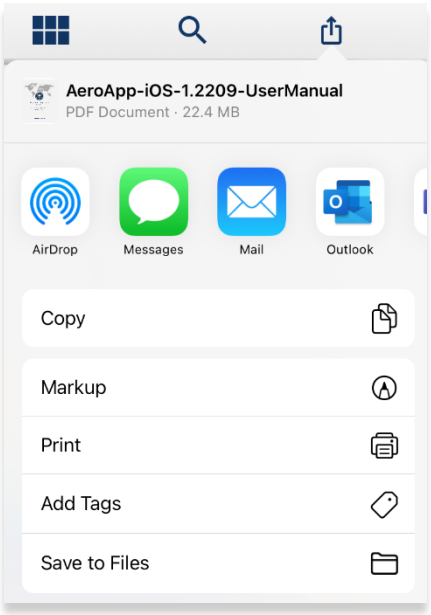
Users can draw and highlight text on a PDF. The markings will be saved on Aero App and can be later accessed.

1. Navigate to your desired PDF file.
2. Tap on the **Pencil** Icon to enable drawing mode.
3. Make the desired markings anywhere on the PDF file.
4. Tap the **Pencil** Icon again to disable drawing mode.
5. Tap the **Reverse** Icon to undo your recent markup.
6. Tap the **Diskette** Icon to save all markups on your PDF file.
7. Long-press on your desired text in the body of your document.
8. A magnified view will appear, select **Highlight** and your text will be highlighted.



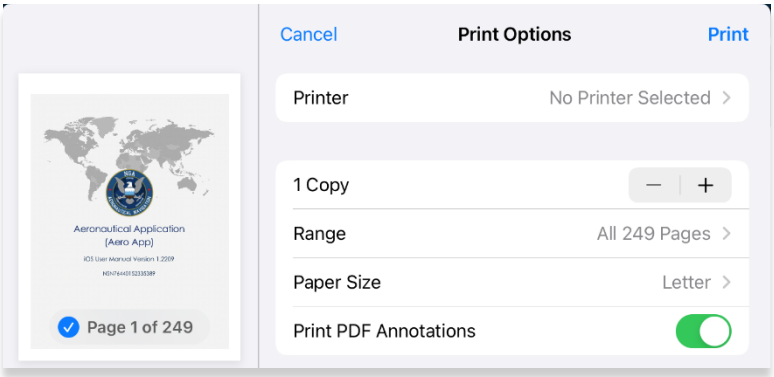
36.4 Share or Copy

1. Display desired PDF.
2. Tap on the **Share** icon.
3. Users will be presented with additional PDF options such as Copy, Markup, Print, Add Tags, and Save to Files. Select desired option.



36.5 Print

1. Display selected PDF.
2. Tap the **Share** button, then select **Print**.
3. Adjust the print configurations to desired preference.
4. Tap **Print.**



37 Appendix E | FAA Addendum

This section describes the additional features available to FAA users within Aero App. Pilots with valid Aero User Database (AUD) credentials and authorized access to FAA as their foreign government partner will be able to utilize these FAA-specific features.

37.1 FAA Special Procedure

FAA Special Procedures are available for select airports within the CONUS region. To access this feature, both **FAA Global** and **CONUS Part 1** data must be downloaded. With the required FAA data loaded, pilots can view FAA Special charts through the Active Point Search, from the Route Panel, or directly on the Map. Applicable airport charts such as Instrument Approach Procedure (IAP), Departure (DEP), and Arrival (ARR) will be marked with the FAA Special labels.

1. Tap **Search** from the ***Main Menu*** and enter the airport of your choice to open its information page. Alternatively, access special procedures on the Route Panel or on the Map by selecting the airport, then tapping **Show** > **Info and Wx** to view available IAP, DEP, and ARR special charts.
2. Tap **Active Point** on the ***Main Menu*** to display the active point menus.
3. Choose the desired chart type from IAP, Dep, or Arr. If available, the default chart for the selected type will be displayed.
4. Tap on the **blue ribbon** to navigate between available charts. Charts that are part of the FAA Special Procedures will be labeled accordingly.



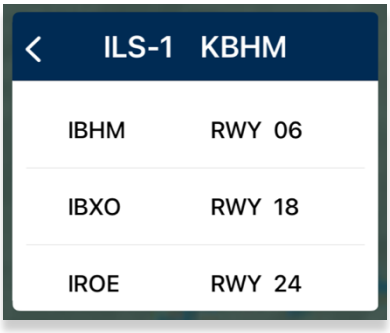
37.2 ILS-1 Maneuvers

Aero App provides ILS-1 (Instrument Landing System) for FAA users, offering approach guidance in low-visibility conditions at select airports. To access this feature, **FAA Global** data must be downloaded.

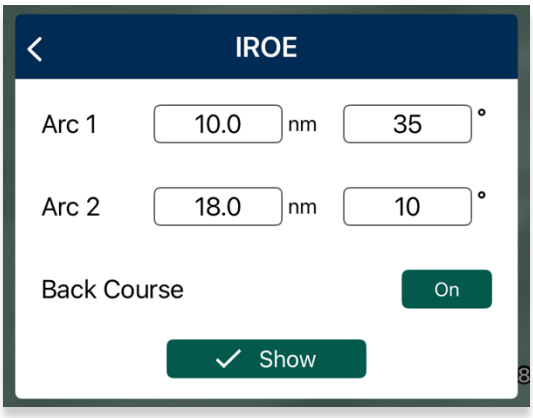
1. Tap an **ICAO** on the Map or on the Route Panel to open the Identifier menu. Alternatively, you can long-press on a location on the Map and select an **ICAO** from the Nearest popup.
2. In the Identifier menu, tap **Show** from the side menu. Then tap **ILS-1**.

NOTE: The ILS-1 feature is not available at all airports, so the ILS option will be *disabled* when unavailable.

3. The ILS-1 popup will appear with a list of runways. Select desired runway.

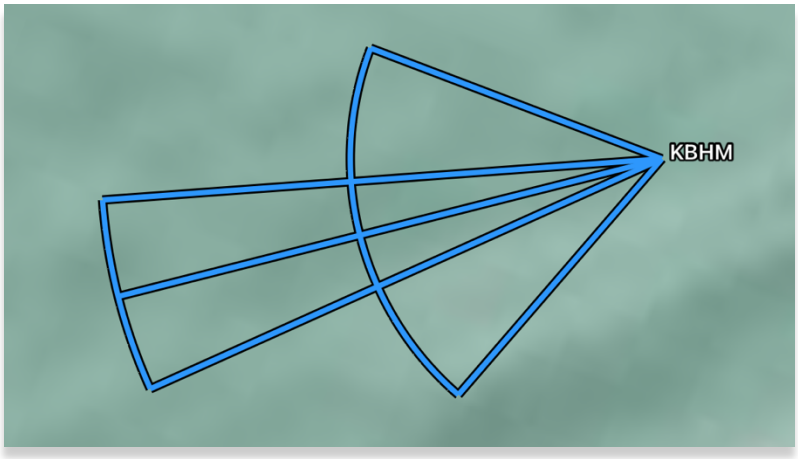


4. The ILS-1 popup will display. Enter values for **Arc 1** and **Arc 2** fields.
5. Tap to enable **Back Course** to reverse the position of the ILS-1.

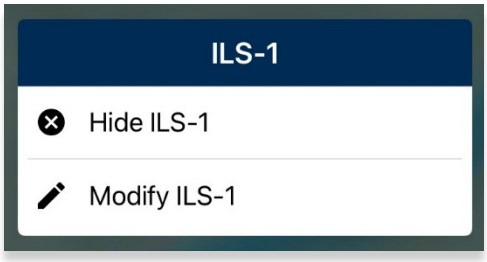


NOTE: Only whole numbers and decimals greater than 1 are accepted in the Arc fields. Entering numbers less than 1 will trigger an error message.

6. Tap **Show** once desired ILS-1 configuration is complete. The ILS-1 overlay will appear on the Map.



7. Tap the ILS-1 maneuver on Map, and the ILS-1 popup will appear.

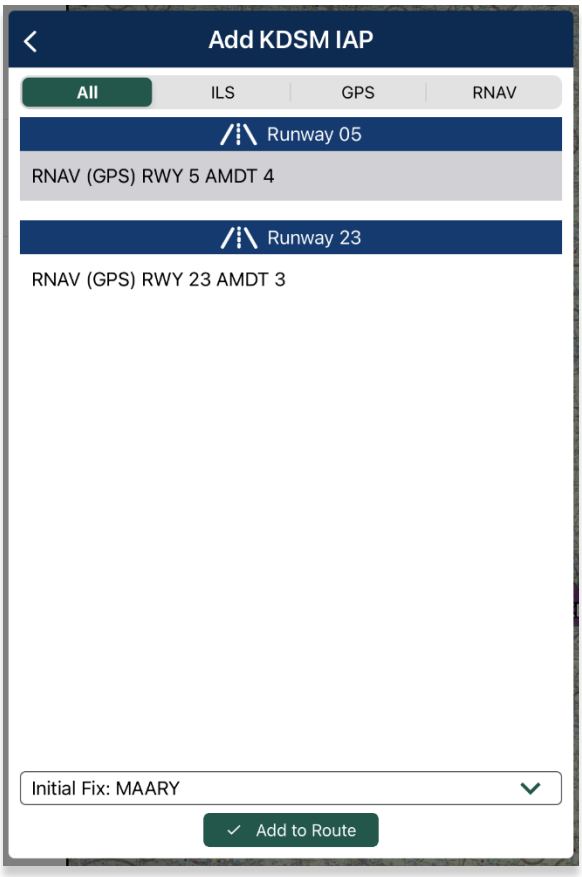


8. To make changes to the ILS-1, tap **Modify ILS-1** and make the necessary changes. Tap **Show** once complete.
9. To hide the overlay from the Map, tap **Hide ILS-1** and the overlay will be removed.

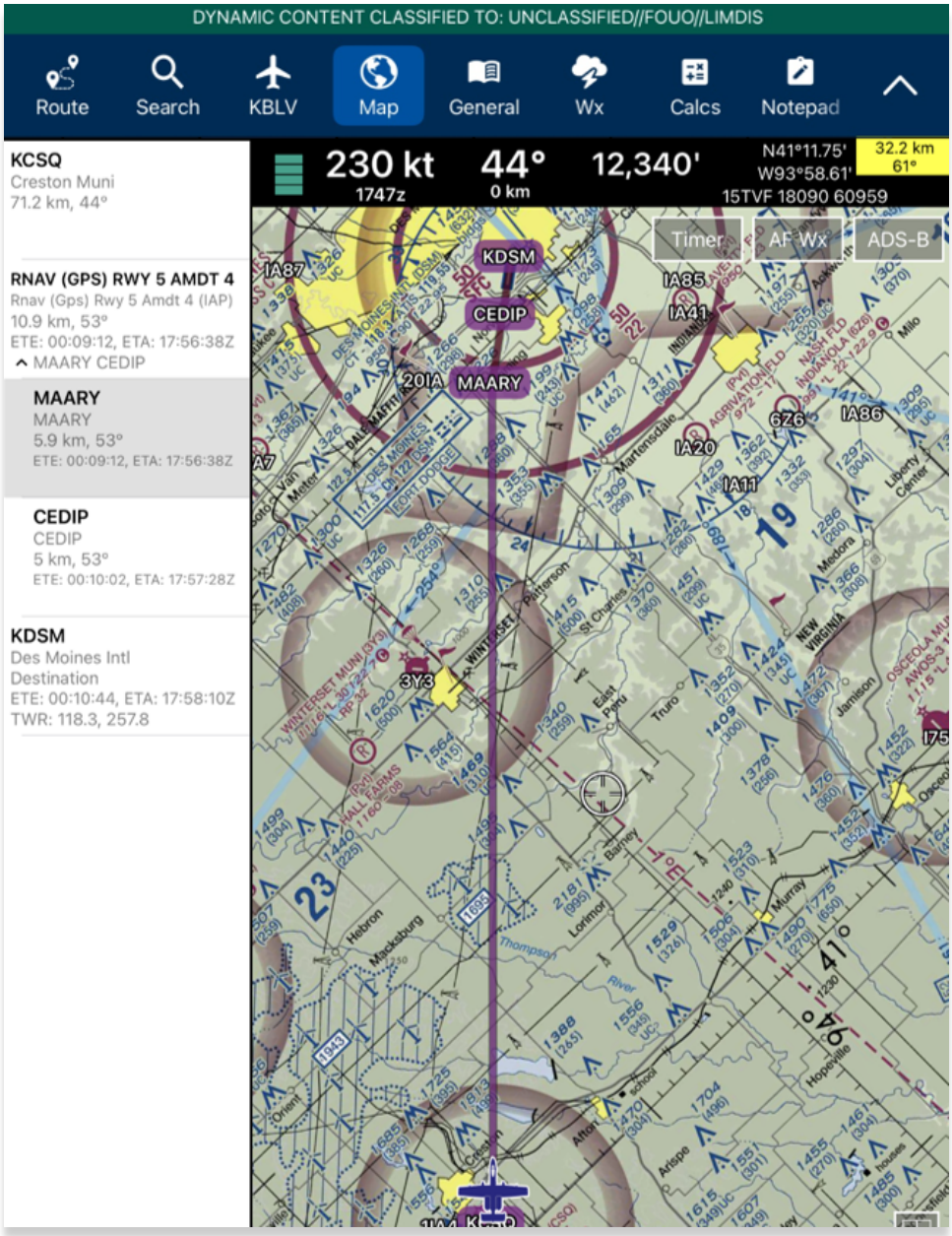
37.3 Add Instrument Approach Procedure (IAP) to Route

Aero App allows users to add Instrument Approach Procedures (IAPs) directly to their route. This feature is only supported for select airports, even if IAP charts are available for those locations. To access this feature, **FAA Global** data must be downloaded.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand. Ensure that a route is loaded in the Route.
2. Tap an **ICAO** on the Route Panel to open the Identifier menu**.**
3. In the Identifier menu, tap **Add** from the side menu. Then tap **IAP**.
4. A list of approach procedures for the airport will be displayed. Use the IAP filter (segmented control) to select the desired type of approach procedure.
5. IAPs are grouped by runways. Select desired **runway.**
6. Once selected, the Initial Fix will become selectable. Tap the **dropdown button** and select an **initial fix**.
7. Tap **Add to Route**.



8. The procedure will populate to the Route Panel and the Map.



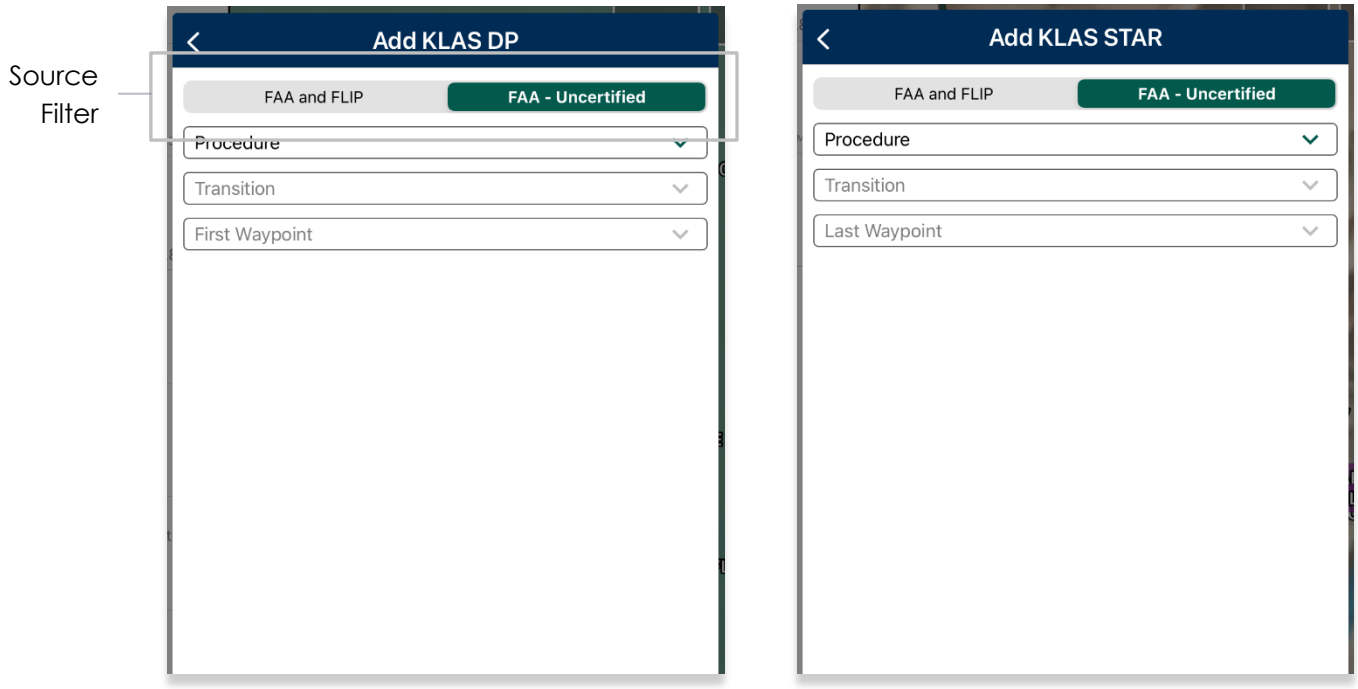
37.4 Departure Procedures (DPs) and Standard Terminal Arrival Routes (STARs)

Aero App allows FAA users to preview and add uncertified Departure Procedures (DPs) and Standard Terminal Arrival Routes (STARs) during flight route planning.

37.4.1 Add FAA Uncertified Procedure to Route

Users can add FAA uncertified Departure Procedures (DPs) and Standard Terminal Arrival Routes (STARs) to their flight route. While charts are not available for uncertified procedures, they can still be included in route planning. This feature is only supported for select airports. To access this feature, **FAA Global** data must be downloaded.

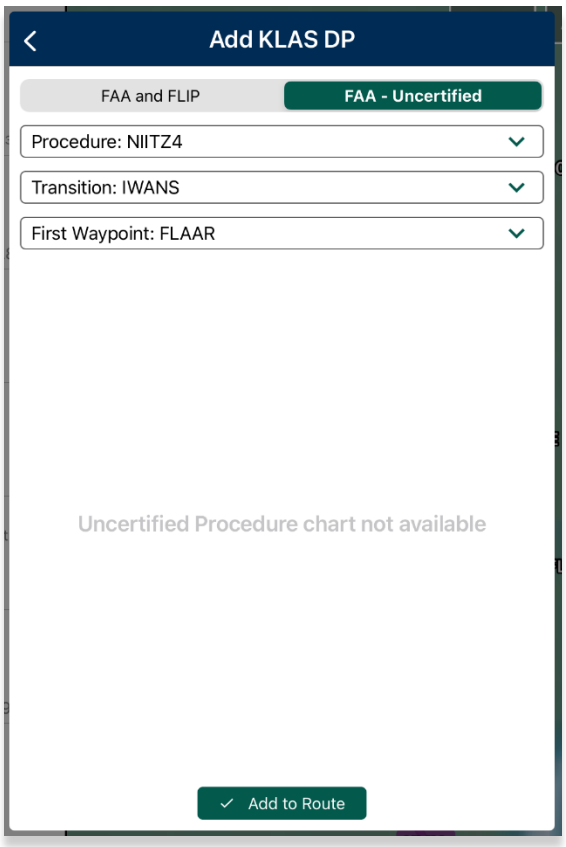
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand. Ensure that a route is loaded in the Route.
2. Tap an **ICAO** on the Route Panel to open the Identifier menu.
3. In the Identifier menu, tap **Add** from the side menu. Then select **DP** or **STAR.**
4. The procedure selection popup will display. A segmented controller located at the top of the view displays options for ***FAA and FLIP*** and ***FAA – Uncertified***.
5. Select **FAA – Uncertified**.

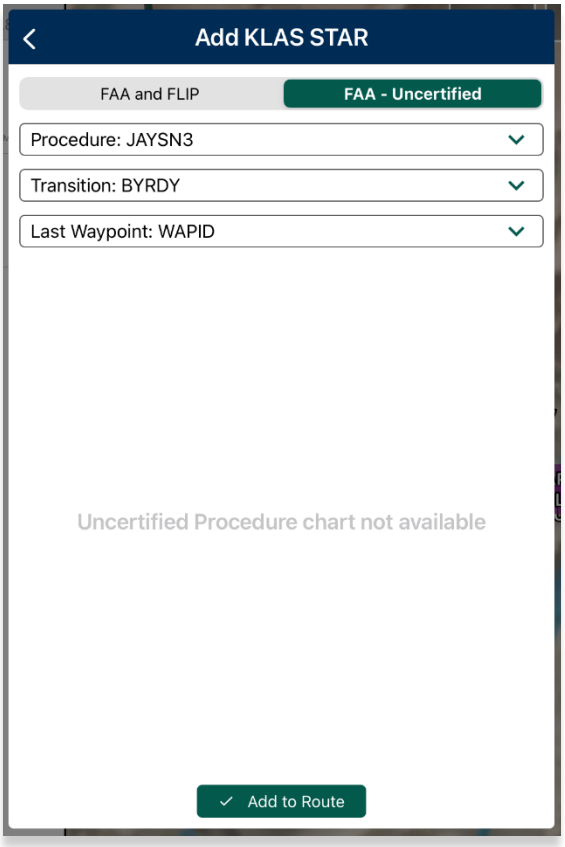


6. Tap the **Procedure dropdown** and select desired **Procedure**.
7. The Transition field will become selectable. Tap the **Transition dropdown** and select the desired **Transition.**
8. The First Waypoint (for DP) or Last Waypoint (for STAR) field will become selectable. Tap the First Waypoint or Last Waypoint dropdown and select the desired **Waypoint.**

NOTE: When there is only one option available in a field, that option is automatically selected.

9. Tap **Add to Route.**

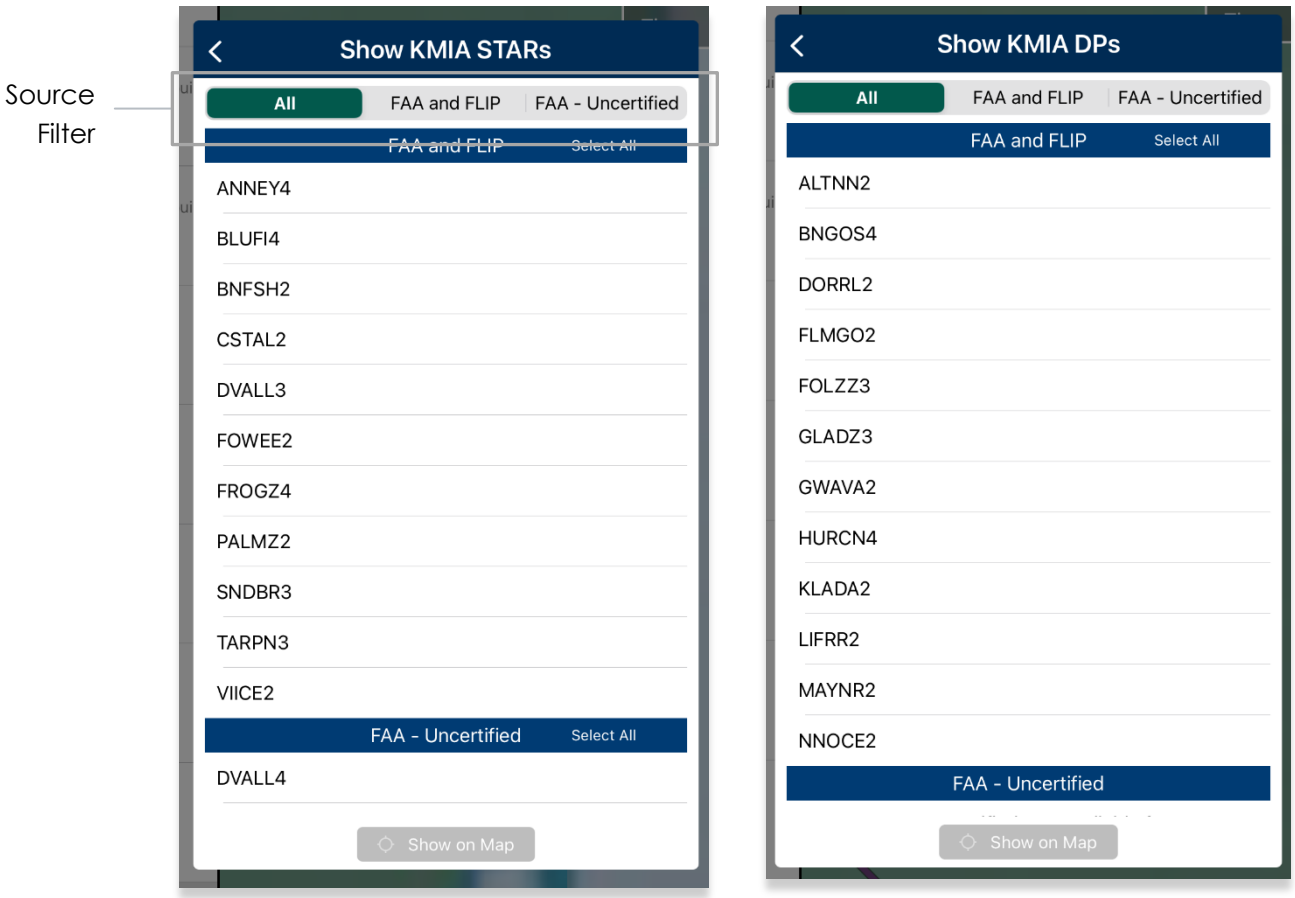




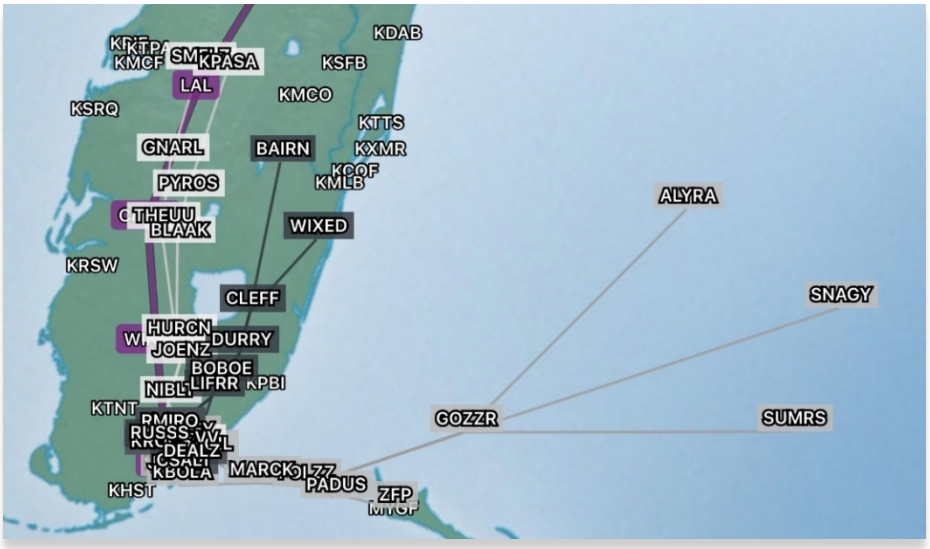
37.4.2 Show DPs and STARs

Aero App allows users to preview Departure Procedures (DPs) and Standard Terminal Arrival Routes (STARs) directly on the map. Users can also choose to add selected DPs and STARs to their current route. DPs and STARs can only be previewed for select airports. To enable this feature, the airport *must* be included in the active route. To access this feature, both **FAA Global** and **CONUS Part 1** data *must* be downloaded.

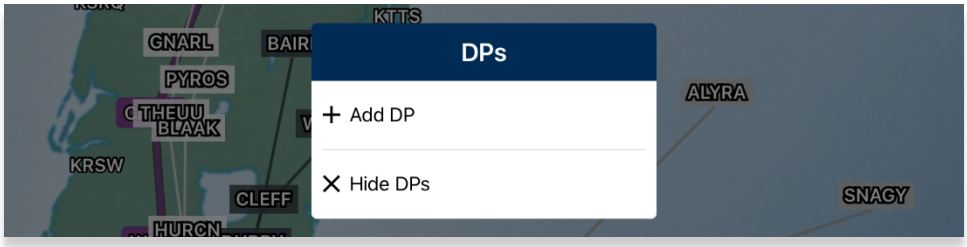
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand. Ensure that a route is loaded in the Route.
2. Tap an **ICAO** on the Route Panel to open the Identifier menu.
3. The Identifier Menu will appear. Tap **Show** from the side menu.
4. Scroll to the bottom of the popup to display additional options. Select **DPs** or **STARs**.
5. The Show <identifier> DPs or Show <identifier> STARs popup will appear. A segmented controller located at the top of the view displays options for ***All***, ***FAA and FLIP***, and ***FAA – Uncertified***. Select desired source.



6. Tap to select **individual procedures** or tap **Select All** on the section header.
7. Tap **Deselect All,** to clear selections, if necessary.
8. The Show on Map button will become selectable. Tap **Show on Map**.
9. The procedure will be previewed on the Map.

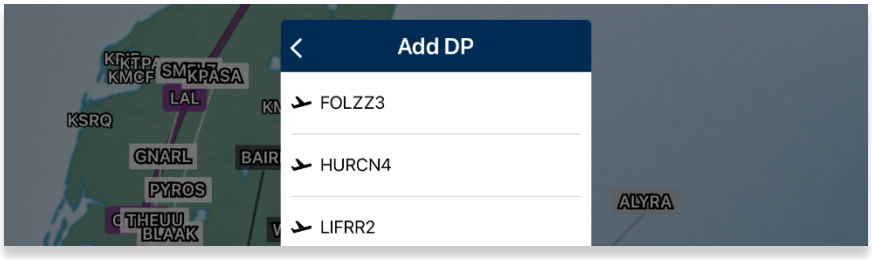


10. Tap a procedure on the Map.
11. A popup will display with options to Add <procedure> or Hide <procedure>. Select **Add <procedure>.**



NOTE: The Hide <procedure> option removes procedure previews from the Map.

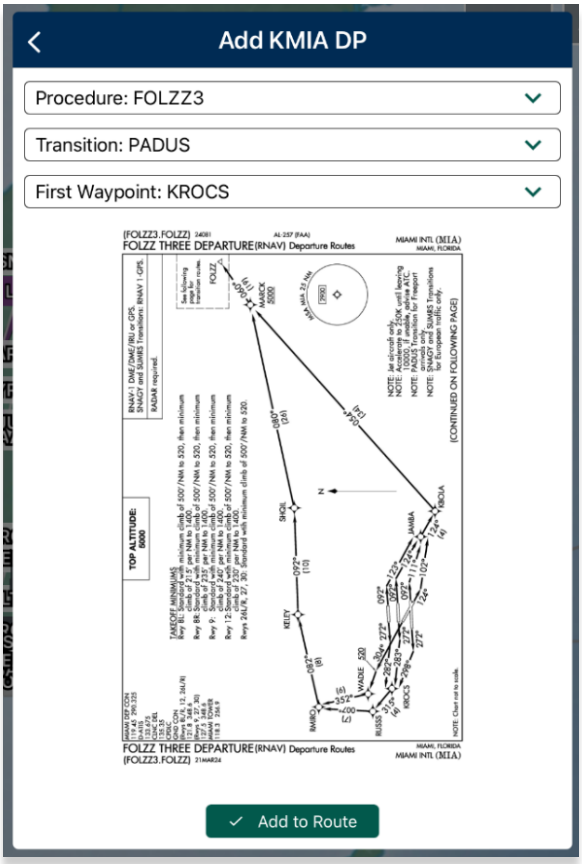
12. The Add <procedure> popup displays a list of procedures selected to preview on the Map. Select the desired procedure.



13. The Add <ICAO> procedure popup will display. The Procedure field is pre-selected. Tap the **Transition dropdown** and select the desired **Transition.**
14. The First Waypoint (for DP) or Last Waypoint (for STAR) field will become selectable. Tap the First Waypoint or Last Waypoint dropdown and select the desired **Waypoint.**

NOTE: When there is only one option available in a field, that option is automatically selected.

15. A chart preview will only display if the procedure selected belongs to FAA and FLIP (certified charts) and the Add to Route button will become selectable. Tap **Add to Route.**



37.5 Orbit – FAA Vertical Obstructions (VOs)

This section is an extension of the **Orbit Altitude** procedures found in Section 25.3.6.1. It describes the additional Vertical Obstruction (VO) options available when **FAA Global** and **Terrain Analysis** data are loaded in Aero App.

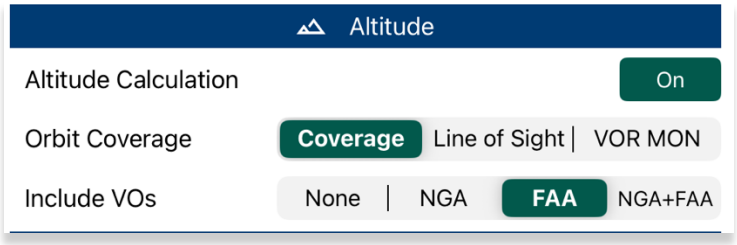
When FAA data is available, Orbit features include VO source selection to determine which obstruction datasets are used in altitude calculations.

1. Enable **Altitude Calculation** to expand options.

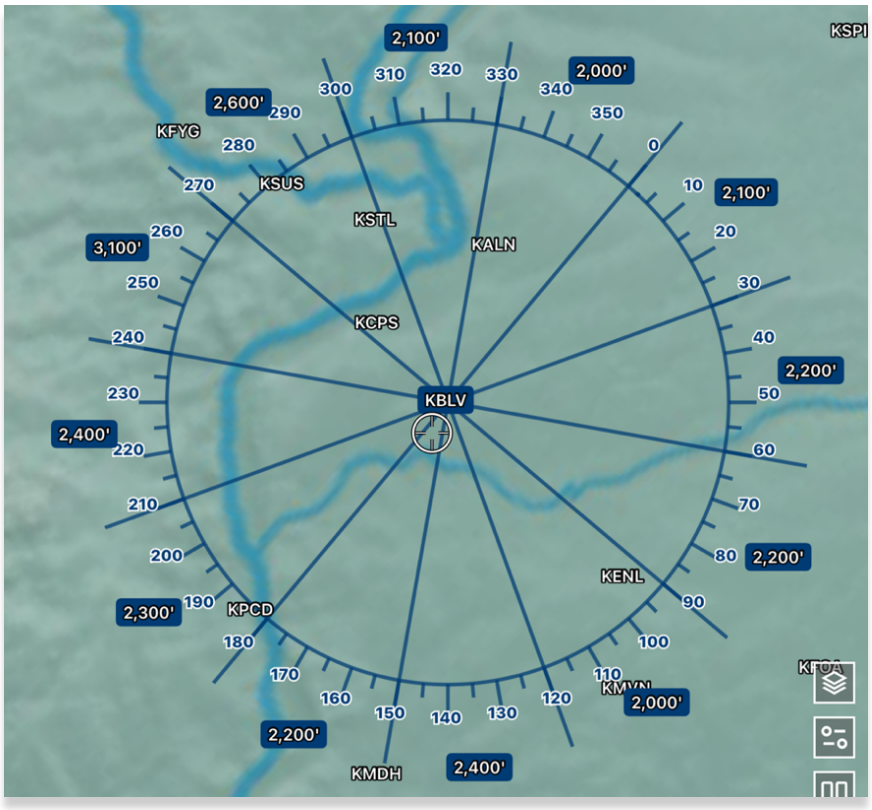
Orbit Coverage provides the following options: **Coverage, Line of Sight, and VOR MON**. Coverage is selected by default.

Orbit Coverage displays minimum altitude based on terrain and vertical obstruction data across the full orbit sector. The following VO sources are available:

- **None** – No VOs are included in the calculation.
- **NGA** – Orbit altitudes are calculated using only NGA VOs.
- **FAA** (default) – Orbit altitudes are calculated using only FAA VOs.
- **NGA + FAA** – Orbit altitudes are calculated using both NGA and FAA VOs.

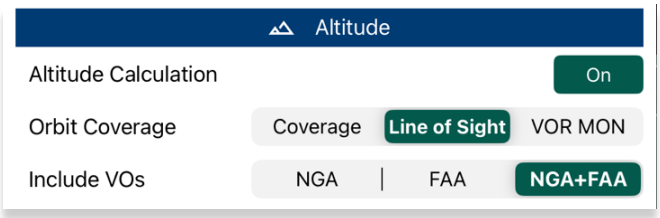


2. Tap **Show** once desired coverage option is selected.



Line of Sight displays minimum altitude for a selected azimuth range within the orbit. Tap to select or toggle the segmented control to **Line of Sight** coverage. Additional fields will be displayed. An **Include VOs** option is available to select the vertical obstruction source used in calculations. When selected, VOs will display on the Map within the orbit:

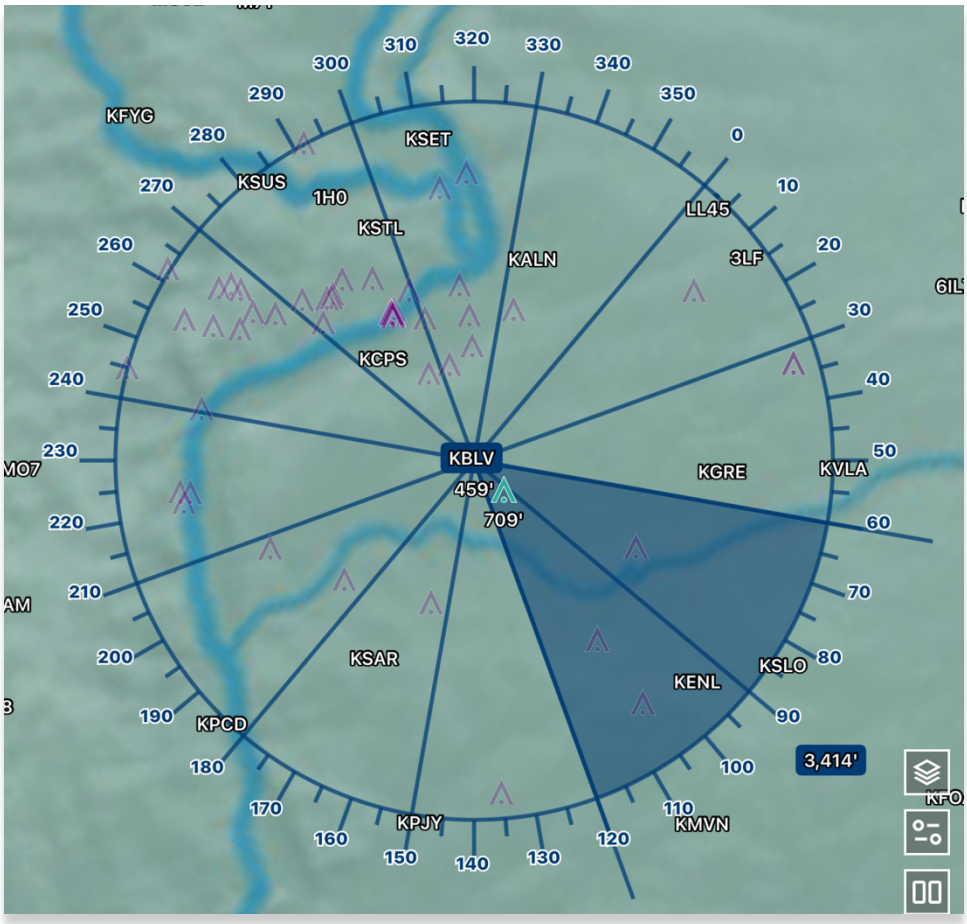
- **NGA** – Orbit altitudes are calculated using only NGA VOs, represented as dark blue icons with white outline.
- **FAA** (default) – Orbit altitudes are calculated using only FAA VOs, represented as dark purple icons with white outline.
- **NGA + FAA** – Orbit altitudes are calculated using both NGA and FAA VOs, represented as pink icons with white outlines; NGA and FAA VOs also remain visible as dark blue and dark purple icons with white outlines, respectively.



3. Fields for Starting Azimuth and Ending Azimuth will display. Values entered will be shaded on the Orbit and are calculated clockwise. Enter the starting and ending azimuth for the line of sight coverage.



4. Tap **Show** once all fields are set to the desired values.



NOTE: The value beside the shaded area represents the line of sight for that sector.

NOTE: The value located below the selected point represents the elevation of that identifier.

NOTE: Highlighted VOs represent the highest elevation obstruction based on the selected VO source.

VOR MON coverage provides minimum altitude calculations based on a defined orbit distance. Tap to select or toggle **VOR MON** coverage. VOR MON includes VO source selection used in altitude calculations. The following VO sources are available:

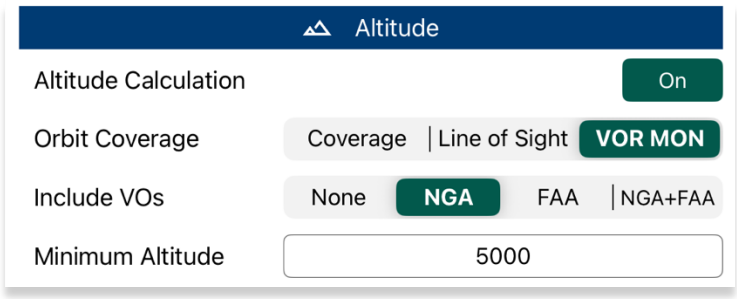
- **None** – No VOs are included in the calculation.
- **NGA** – Orbit altitudes are calculated using only NGA VOs.
- **FAA** (default) – Orbit altitudes are calculated using only FAA VOs.
- **NGA + FAA** – Orbit altitudes are calculated using both NGA and FAA VOs.

NOTE: When the VOR MON option is selected, the default parameters are set to an Orbit Distance of 70 and a degrees value of 10.

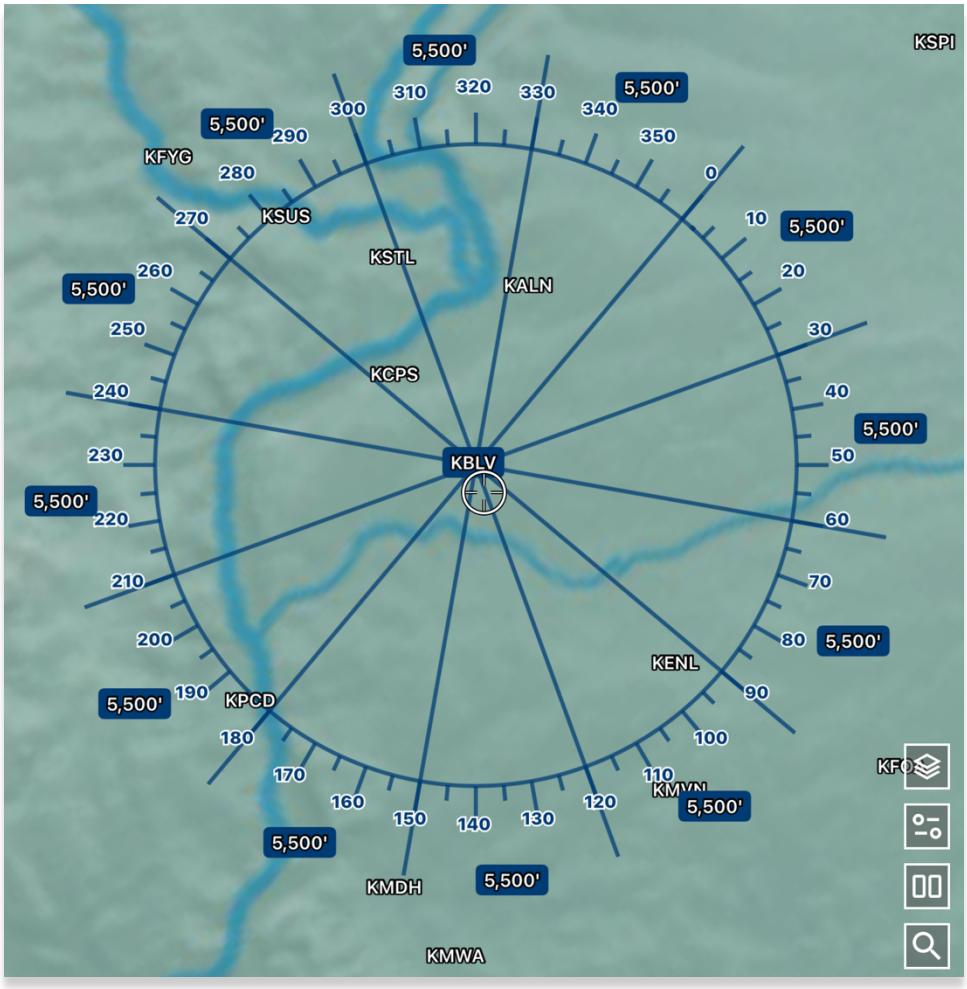
5. Enter a **Minimum Altitude** value in the text field.

NOTE: Default value for Minimum Altitude field is 5,000'.

NOTE: Values must be entered in increments of 100', between 1,000' and 17,500' above site elevation.



6. Tap **Show** once all fields are set to the desired values.

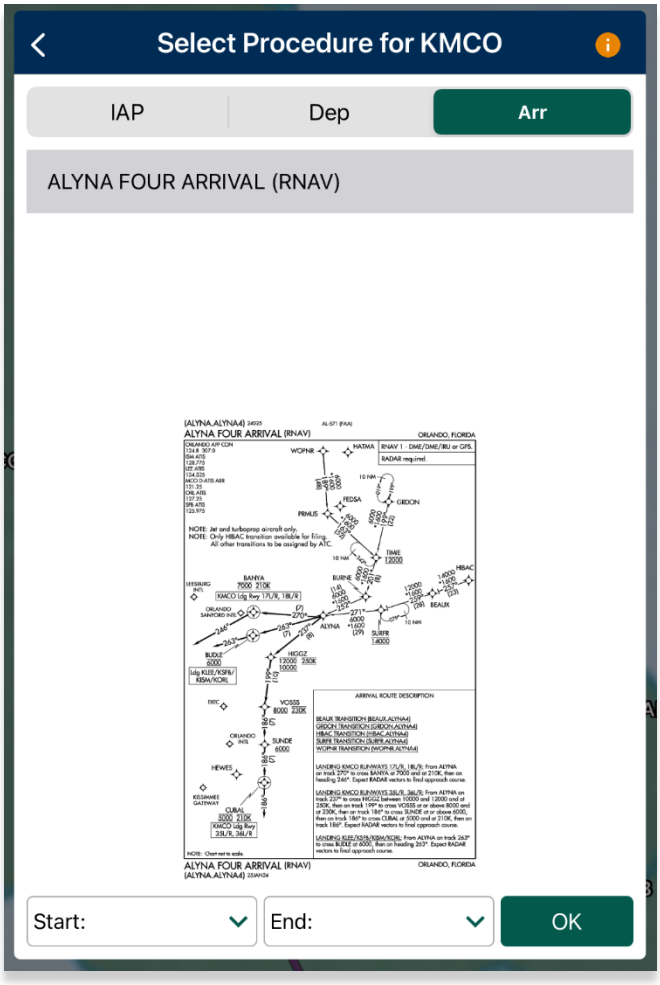


NOTE: For additional information about FAA VOs, refer to Section 37.7 of this addendum.

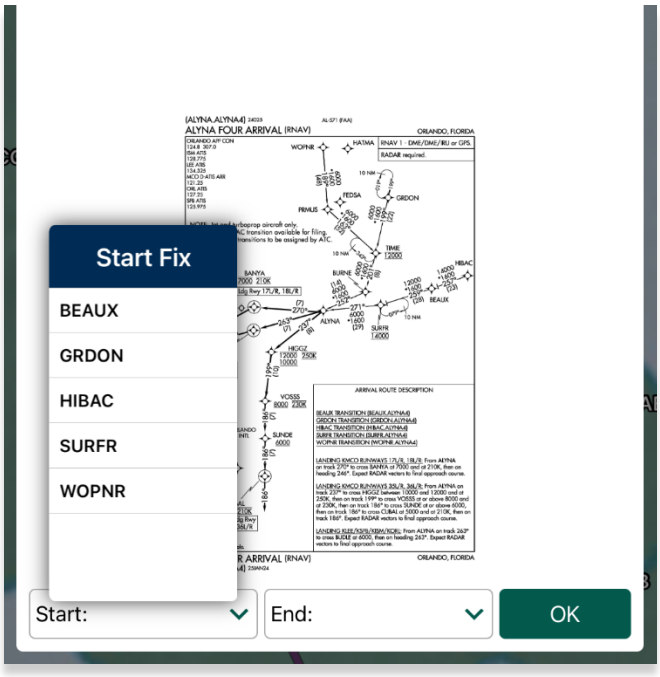
37.6 Controlling Obstacle

The Controlling Obstacles feature provides information related to potential obstructions that may pose a hazard to your aircraft. This includes data on FAA procedures, circling approaches, runways, obstacles, and navigation fixes. To enable this feature, ensure that both **FAA Global** and **CONUS Part 1** data are downloaded.

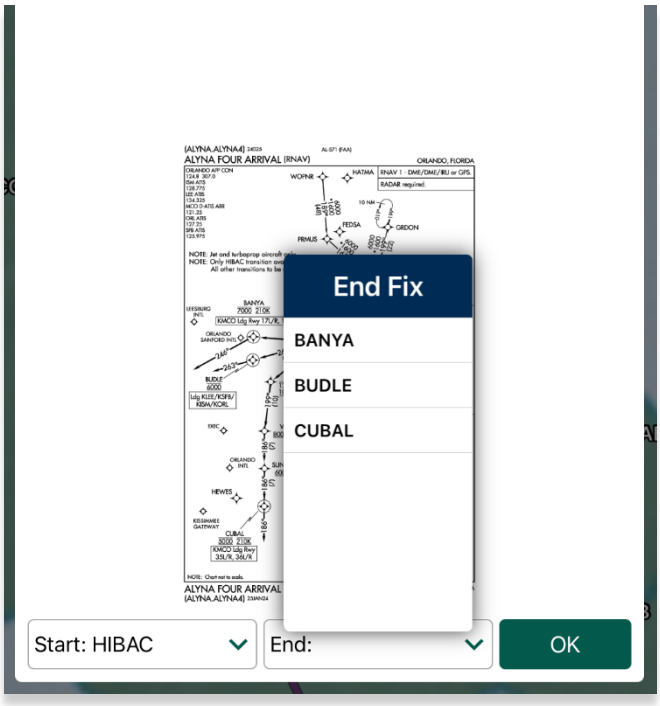
1. Long press any point on the Map to open the Identifier menu.
2. In the Identifier menu, tap **Show** from the side menu. Then tap **Controlling Obstacle**.
3. The Select Procedure for airport popup will appear. Use the filter (segmented control) to select the desired **type of procedure**.
4. Select a **procedure**.



5. Notice the *Start* and *End* dropdown buttons become selectable. Tap **Start** to display *Start Fix* options. Select desired **Start Fix**.



6. Tap **End** to display *End Fix* options. Select desired **End Fix**.



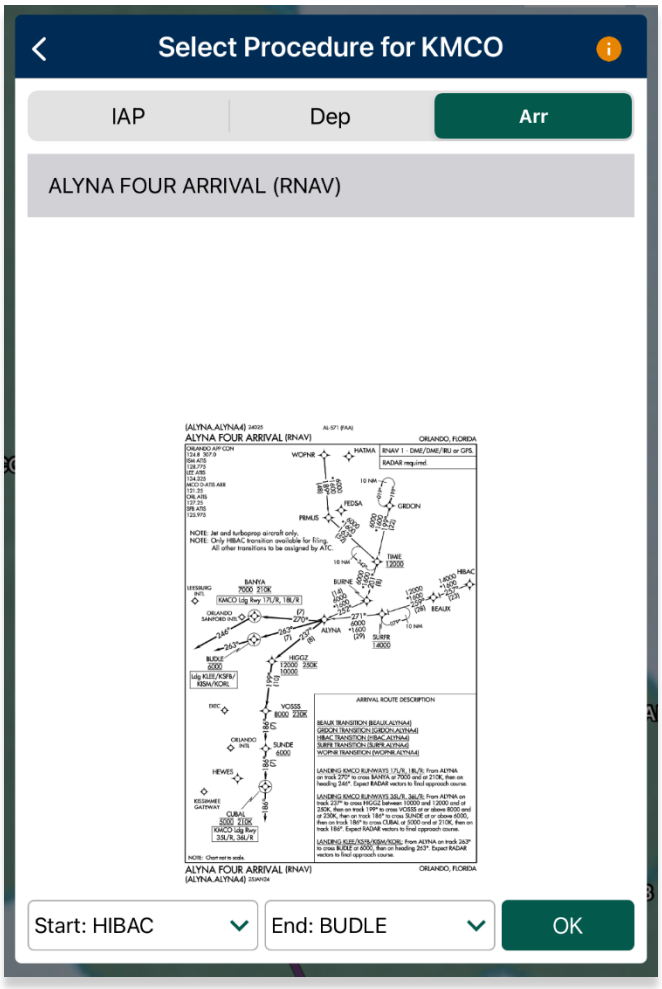
NOTE: The selected fix will filter the options for the opposite fix (e.g. selecting a Start Fix will filter options for End Fixes).

NOTE: In the case a fix was not selected, the default display for IAP includes all intermediate segments, final segments, missed approach segments with aircraft category D or no aircraft category specified, fixes, runways, and obstacles for visible segments.

NOTE: In the case a fix was not selected, the default display for Dep/Arr includes all primary segments, fixes, runways, and obstacles for visible segments.

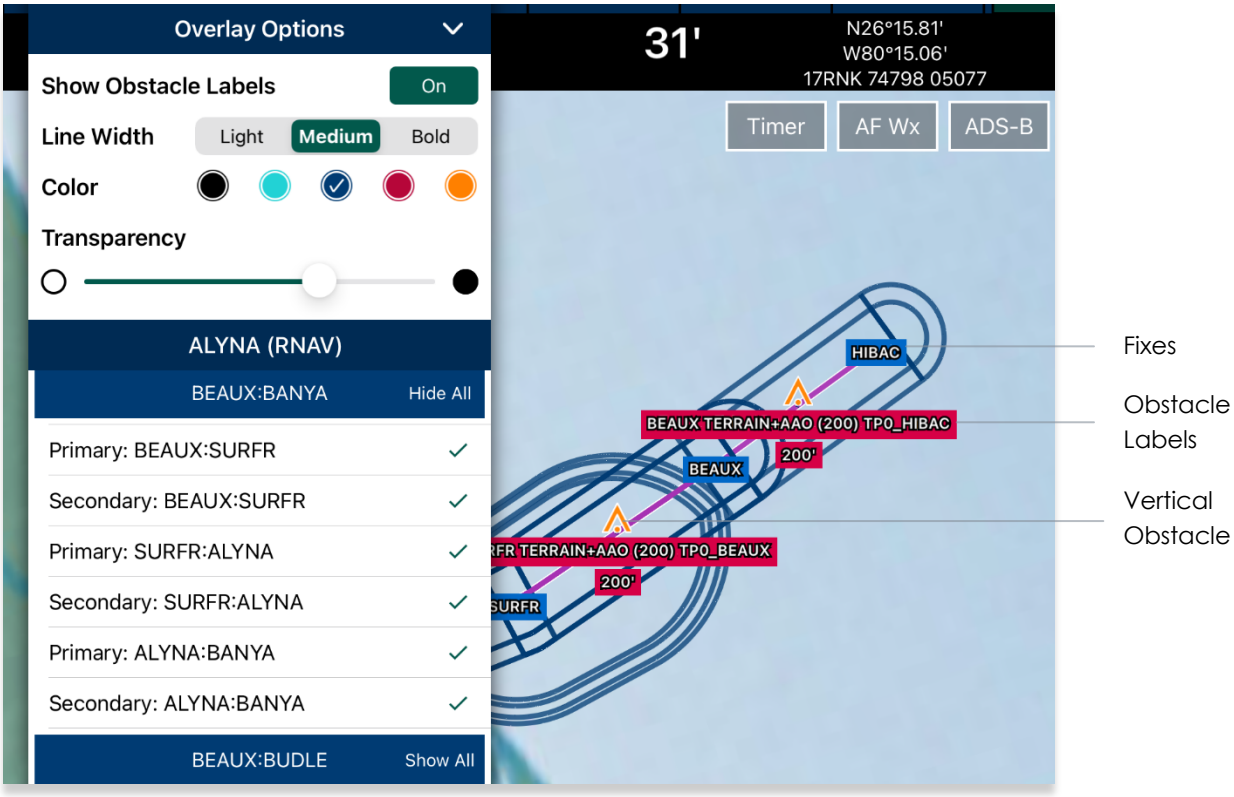
NOTE: If a procedure does not have start/end fixes, the Start/End dropdown buttons will remain disabled and all segments, runways, fixes, and obstacles for visible segments will be shown.

7. Tap **OK** once selections are complete. Your controlling obstacle will overlay on the Map.



The controlling obstacle will display all its respective points. Users have the option to select and deselect desired points to show on the Map. Tap the Controlling Obstacle overlay, and the following options will display:

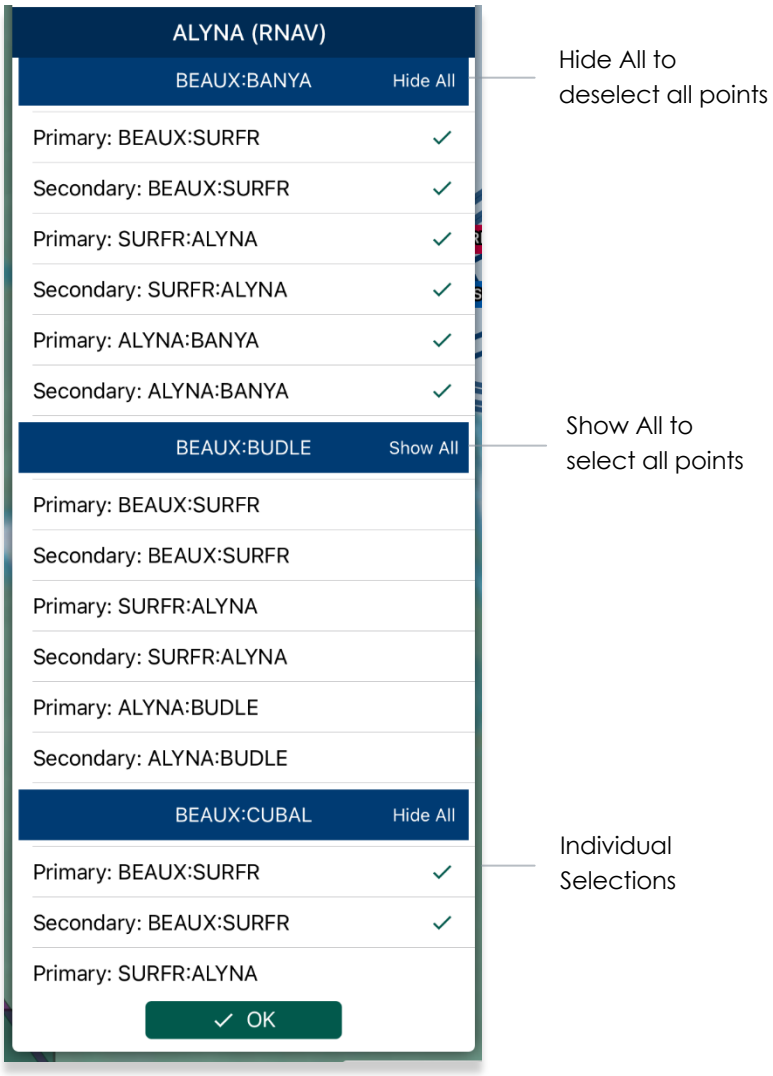
- **Modify Overlay** – provides overlay configuration options such as:
    - **Show Obstacle Labels** – when enabled, each VO will display a red label containing its respective name and height in feet.



NOTE: Selecting a vertical obstacle (orange obstacle icon) will display its respective obstacle information.

- **Line Width** – options to adjust the line weight
- **Color** – options to switch the overlay's line color
- **Transparency** – options to adjust the translucency of the overlay display

- **Hide All/ Show All/ or individual selections** – hide All deselects all points and Show All selects all points for the respective category. Users have the option to individually select desired points. Every action will update the display on the Map in real-time.



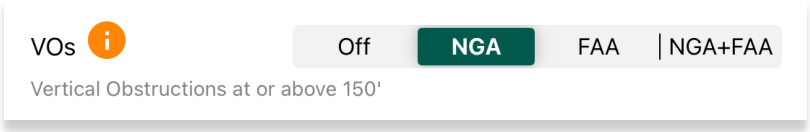
- **Hide Overlay** – removes overlay from the Map
- **Overlay Info** – provides a collection of obstacles that includes its respective segment, entry and exit fix, AGL, MSL, and type.

NOTE: The blue labels on the overlay are the names of the fixes.

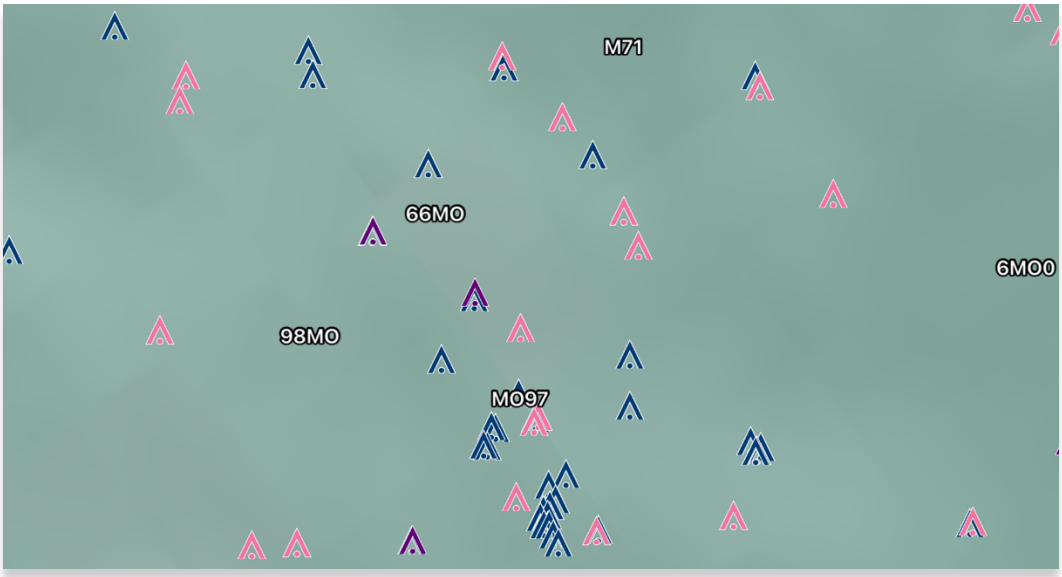
37.7 FAA Vertical Obstructions (VOs)

Aero App allows users to display Vertical Obstructions (VOs) on the Map, providing critical data for FAA and NGA sources. This overlay shows obstructions for towers, buildings, smokestacks, bridges, and any structures that may interfere with the pilot's flight path. Users can view detailed information about each VO including its ID, coordinates, altitudes, and accuracy. To access this feature, **FAA Global** data *must* be 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. The top of the Map Manager view contains a navigation menu. Select **Overlays**.
4. Tap **Aero Overlays** from the side menu, if necessary.
5. Locate **VOs** from Aero Overlays. Tap to select or slide the segmented control to ***NGA***, ***FAA***, or ***NGA+FAA***.

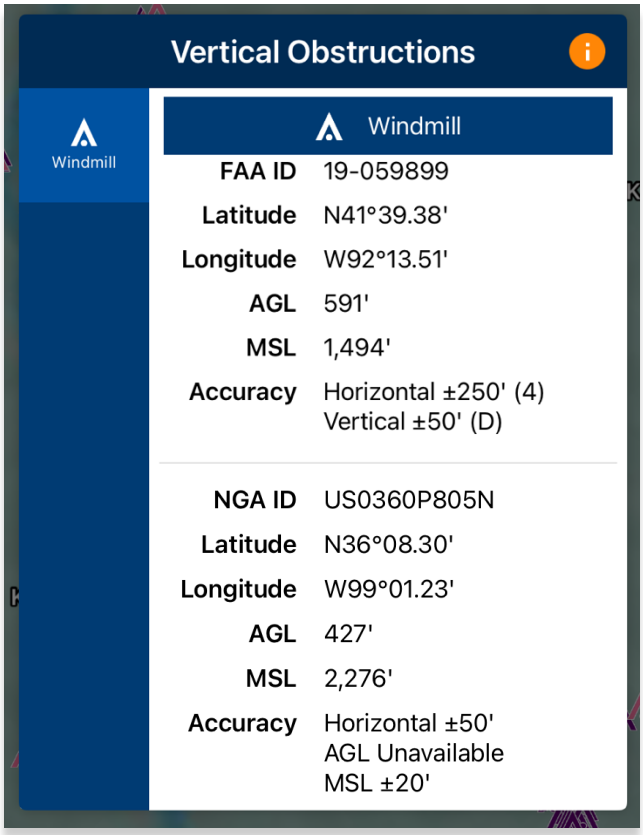


- **NGA** – NGA VOs represented as dark blue icons with white outline.
- **FAA** – FAA VOs represented as dark purple icons with white outline.
- **NGA+FAA** – NGA and FAA VOs represented as pink icons with white outlines; NGA and FAA VOs also remain visible as dark blue and dark purple icons with white outlines, respectively.



Once the VOs are displayed on the map, you can tap on any VO to view additional information about the specific obstruction. You will see the follow details:

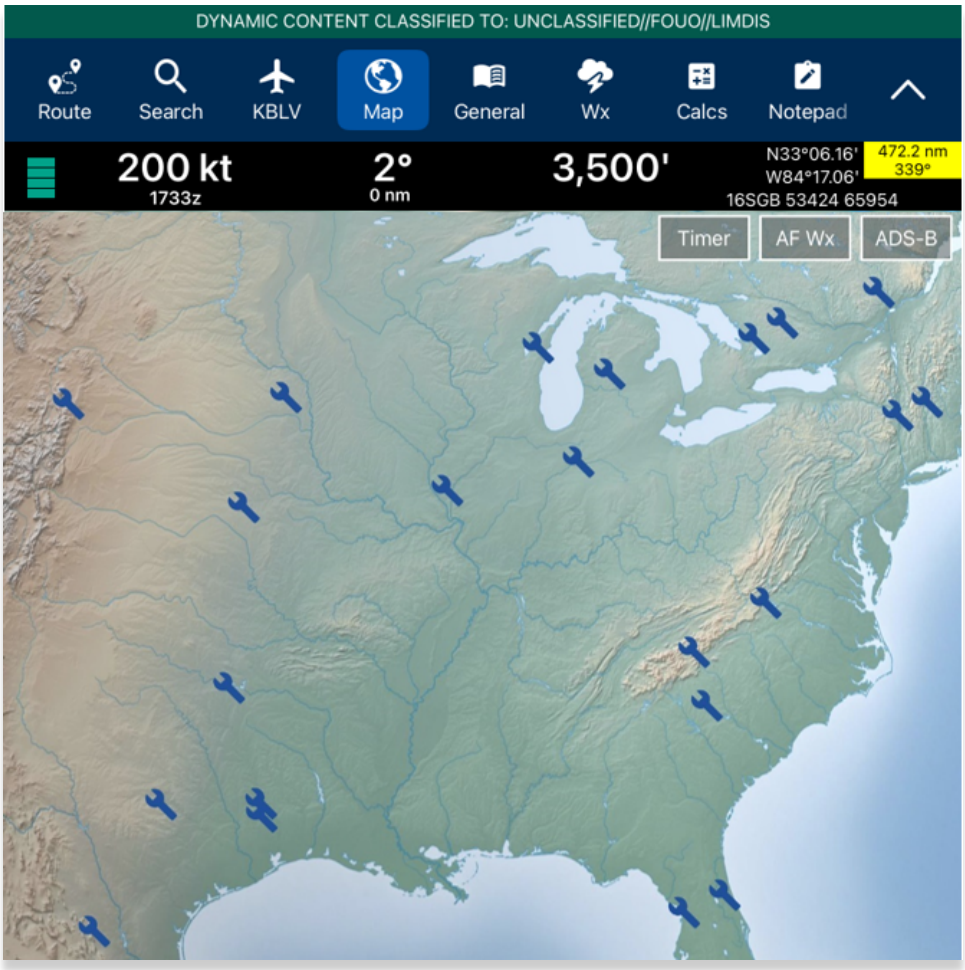
- **VO Type** (e.g., tower, building, bridge)
- **FAA ID / NGA ID** for source reference
- **Latitude / Longitude** coordinates
- **MGRS** (if enabled in Settings)
- **AGL** (Above Ground Level) altitude values
- **MSL** (Mean Sea Level) altitude values
- **Accuracy** displays horizontal and vertical tolerance values for FAA VOs (in feet); NGA VOs display horizontal, AGL, and MSL accuracy values. To view definitions for FAA accuracy codes, tap the **contextual help** button in the Vertical Obstructions information view.



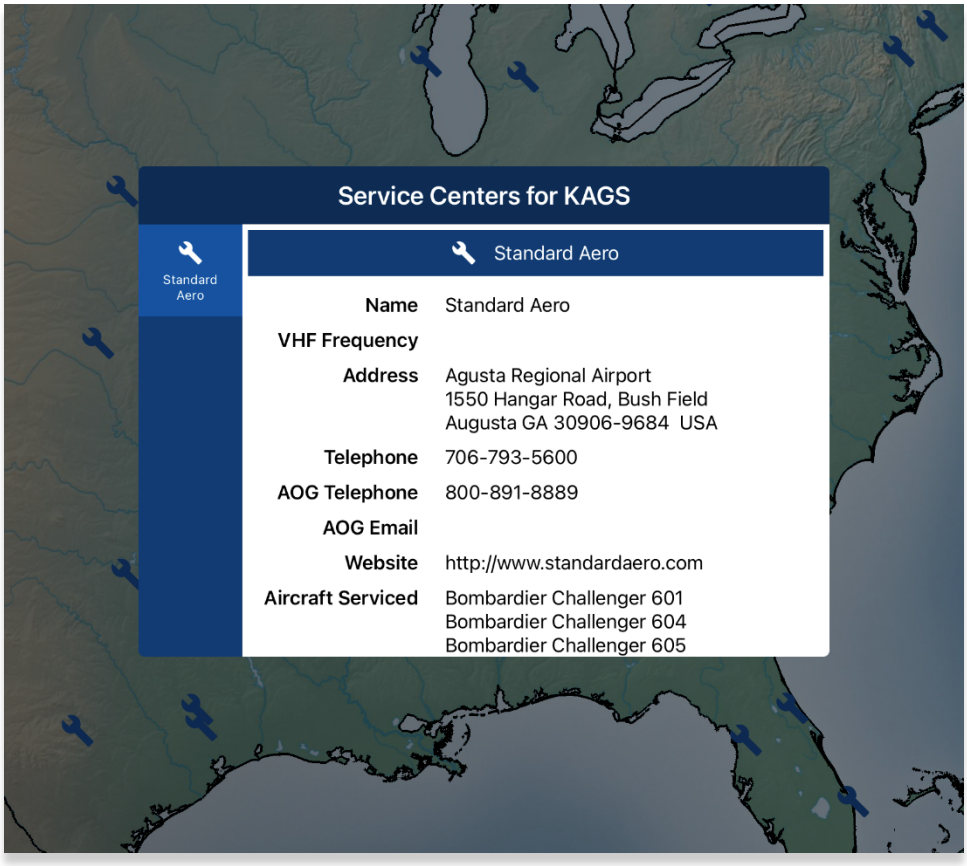
37.8 Authorized Aircraft Service Centers

Aero App displays Authorized Aircraft Service Centers on the Map, marked by blue wrench icons. Tapping an icon reveals service center details for the corresponding airport. To enable this feature, ensure that **FAA Global** data is 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. The Map Manager view will appear. The top of the Map Manager view contains a navigation menu. Select **Overlays**.
4. Tap **Aero Overlays** from the side menu, if necessary.
5. Tap to enable **Service Centers** and blue wrench icons will populate the available locations on the Map.



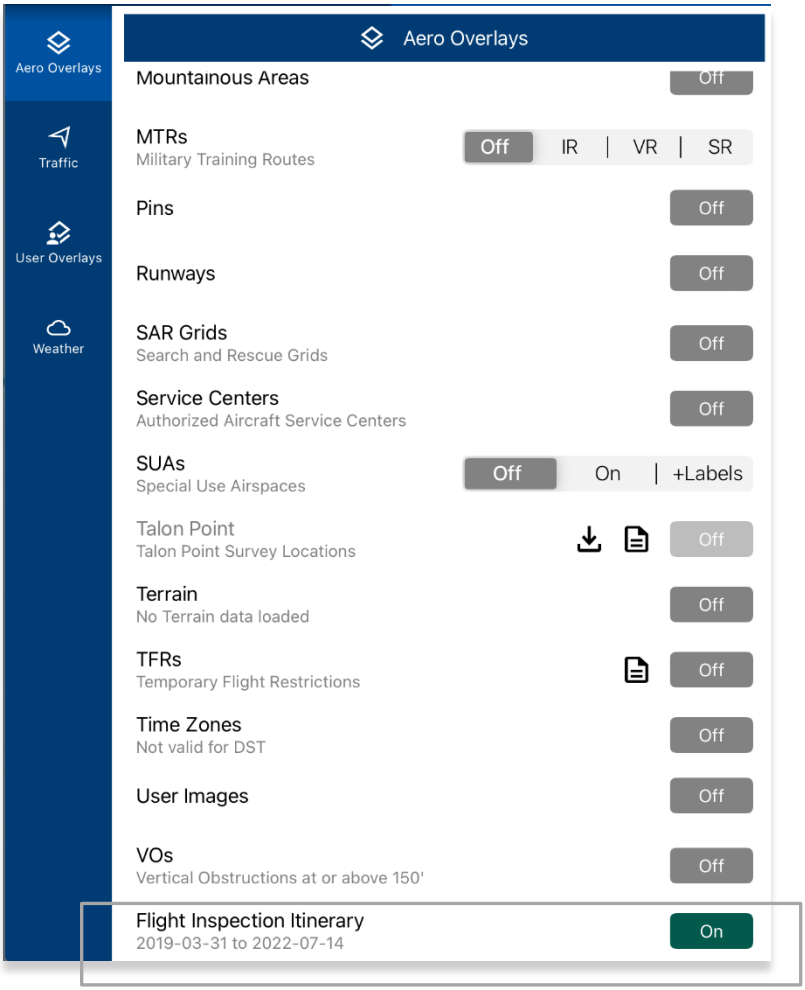
6. Tap the **Service Centers icon** to open a popup displaying the service center information for the selected airport.



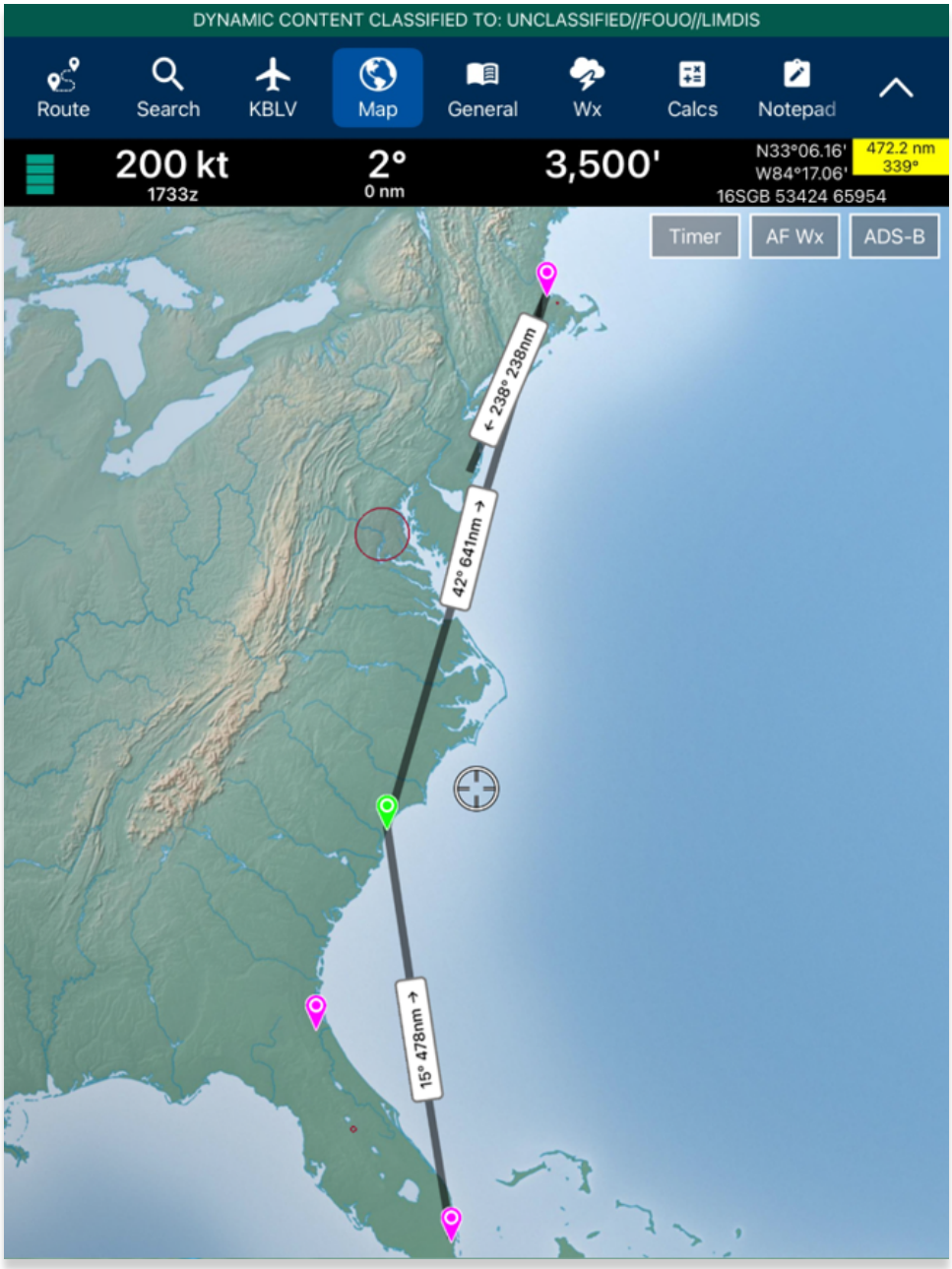
37.9 Import and Display Scheduled Flight Inspection Itineraries

Aero App allows users to import Flight Operations Management System (FOMS) itineraries, enabling the scheduled flight inspection route to be overlaid on the Map.

1. To share an itinerary with Aero App, open the FOMS app and navigate to the desired itinerary item.
2. Tap on the **Share** button and select desired method of sharing.
3. From your device, navigate to the appropriate platform which the itinerary item was shared to.
4. Tap **Save** and select **Aero App**.
5. To verify if the files have been properly imported, navigate to the **Map Manager** on the Map.
6. Select **Overlays** from the navigation bar.
7. Select **Aero Overlays** from the side menu.



8. Locate the Flight Inspection Itinerary then tap to enable the option. The route will be displayed on the Map.

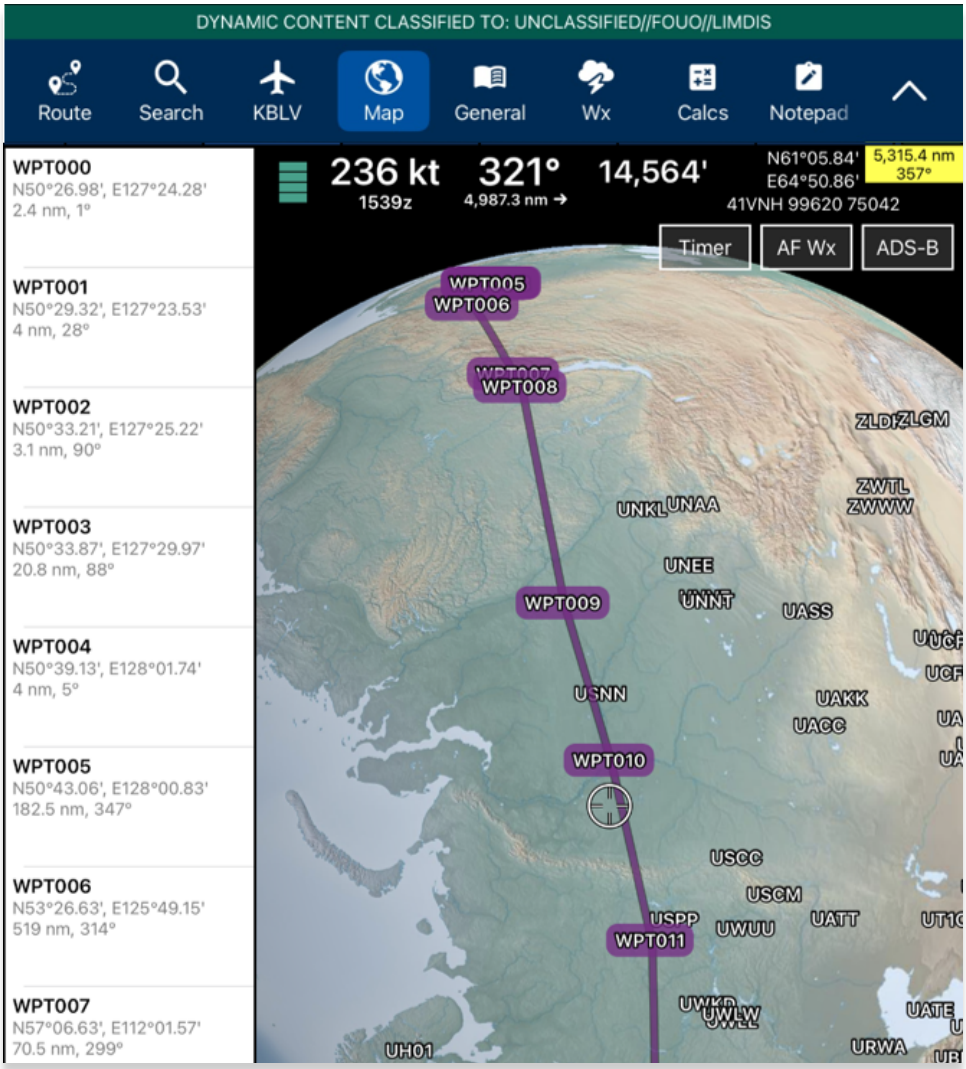


NOTE: One Flight Inspection Itinerary can be loaded at a time. Loading a new Flight Inspection Itinerary will result in deleting the previous itinerary.

37.10 Add KML Coordinates to Route

Aero App allows users to add KML coordinates to a route. KML files can be obtained from flightaware.com and must be sideloaded into the app for use.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Navigate to the **Route Manager** located at the bottom of the view.
3. Tap **Actions** from the side menu, if necessary. Then tap **Load**.
4. Locate and tap the desired KML route. The route will populate to the *Route Panel* and the *Map*.



37.10.1 Show KML Coordinates in Show Routes

KML coordinates can be displayed in the Show Routes feature. Ensure the KML file is sideloaded into Aero App before use.

1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Navigate to the **Route Manager** located at the bottom of the view**.**
3. Tap **Show** from the side menu. Then tap **Routes**. The *Show Routes* will be displayed.
4. Select desired KML route. The route will populate to the *Route Panel* and the *Map*.



38 Appendix F | Use Dark Mode on Aero App

Apple's iOS 13 introduced Dark Mode, a color scheme that uses light-colored text, icons, and graphical user interface elements on a dark background.

38.1 Enable Dark Mode with Siri

The simplest way to enable Dark Mode is by telling Siri to turn it on.

1. Say "Hey, Siri" until the listening indicator appears.
2. Tell Siri "Turn on Dark Mode." Your iPad will switch over to Dark Mode.
3. To disable Dark Mode, tell Siri "Turn off Dark Mode." Your iPad will switch to light mode.

38.2 Enable Dark Mode Through Control Center

Dark Mode can also be enabled through your iPad's Control Center.

1. Swipe down from the upper-right corner of your iPad to display the Control Center.
2. Hold down the Brightness control to display Dark Mode, Night Shift, and True Tone modes.



NOTE: Alternatively, if Dark Mode control is included in the Control Center, users can enable dark mode directly from the control or tap again to switch to light mode.

3. Enable the **Dark Mode** button and your iPad will switch to dark mode.
4. To disable Dark Mode, tap on the **Dark Mode** button again and your iPad will switch to light mode.

38.3 Enable Dark Mode Through Device Settings

The third method to enable Dark Mode is through your iPad's settings.

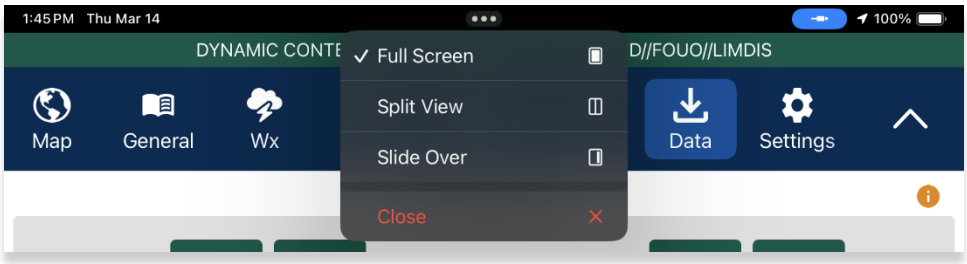
1. Open the **Settings** app on your iPad.
2. Tap **Display & Brightness.**
3. Navigate to the *APPEARANCE* section. Options for Light and Dark are available.
4. Tap **Dark** and your iPad will switch over to dark mode.
5. To disable Dark Mode, tap **Light** and your iPad will switch to light mode.
6. Enable the **Automatic** option to allow your device to automatically switch from light to dark mode based on the selected appearance schedule.

39 Appendix G | Multitasking on iOS

Aero App for iOS offers multitasking capabilities, enabling users to seamlessly switch between different apps in split-screen view. Users with earlier operating systems (iOS 15 or earlier) may display different multitasking configuration options from devices running iOS 16 or later.

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.

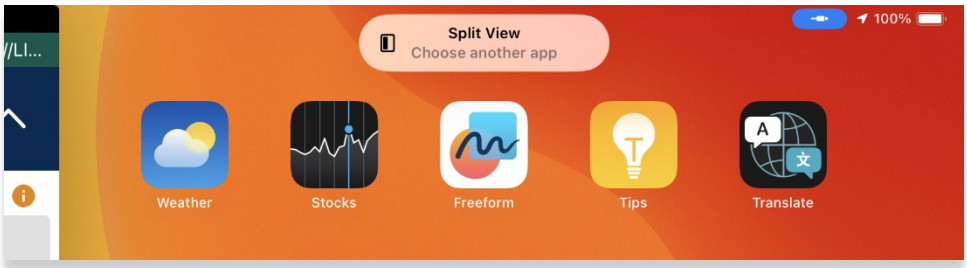
1. With Aero App open, tap on the **three dots** located at the top of the screen.
2. A popup will display with the following options:
    - Full Screen
    - Split View
    - Slide Over (not supported)
    - Close button



3. Select **Split View**.

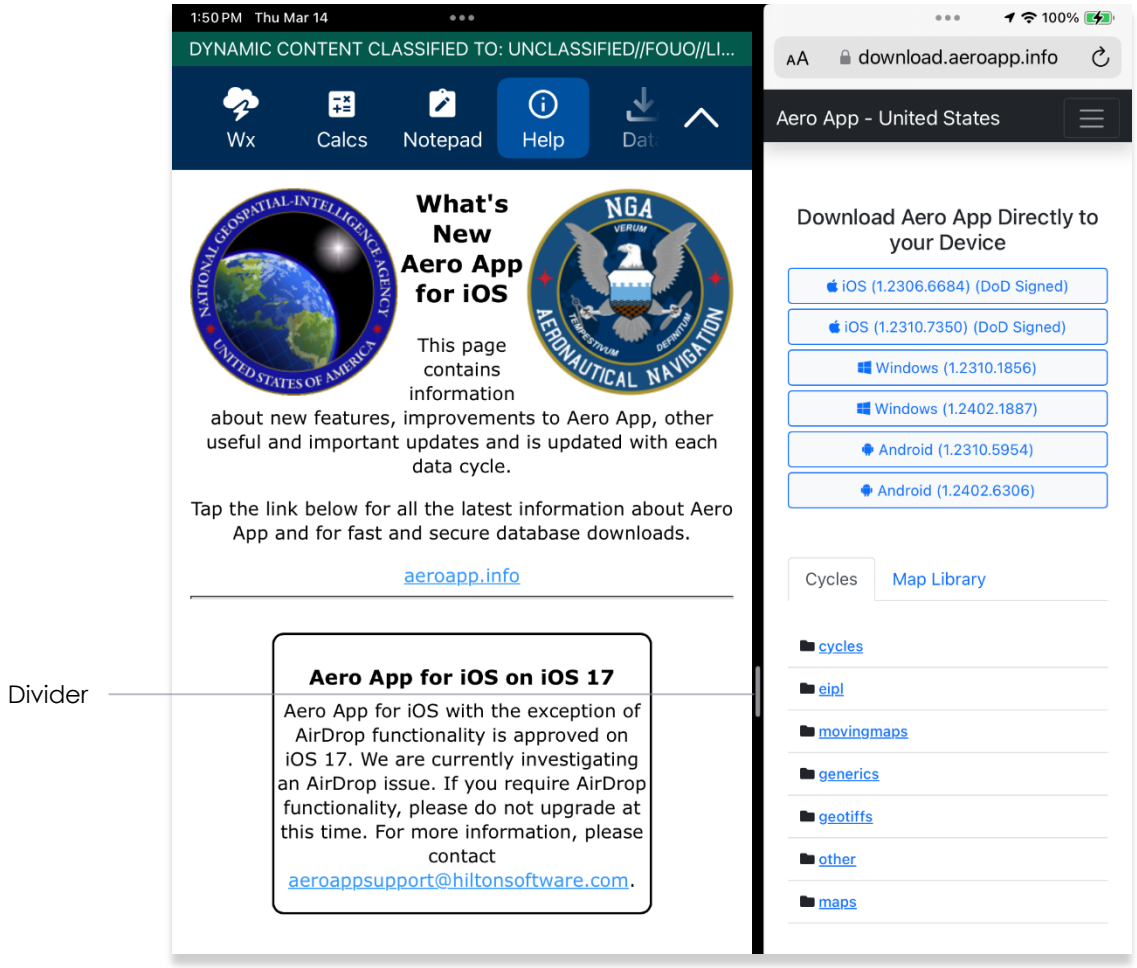
NOTE: Slide Over is not supported by Aero App.

4. Aero App will be pushed to the left side of the screen. Users will be prompted to choose another app. Select the desired app for side-by-side app experience.



NOTE: Not all apps support Multitasking.

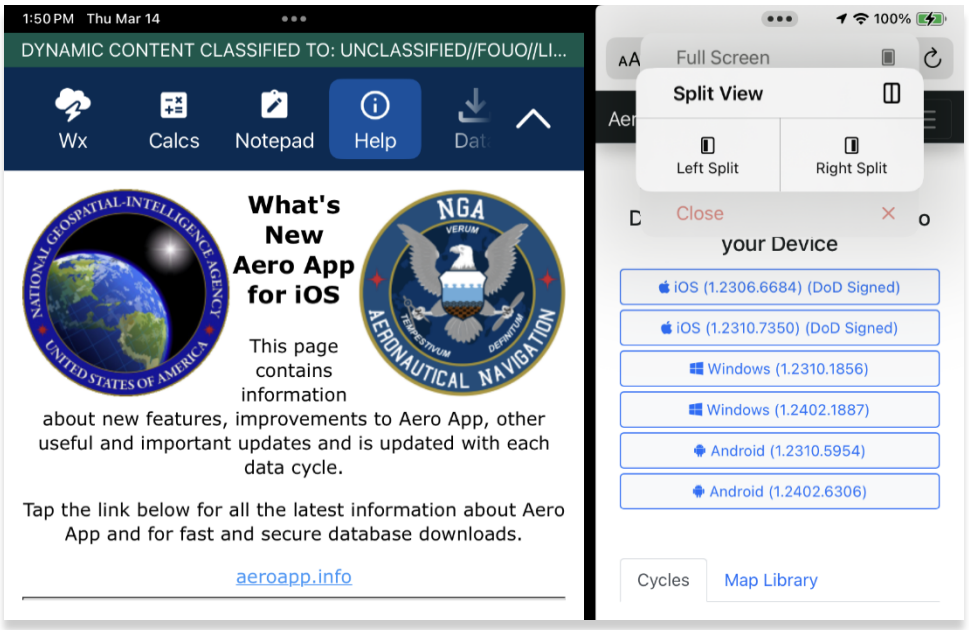
5. A divider is located between both apps to allow resizing of views when adjusted. Adjust your views to desired size preference.



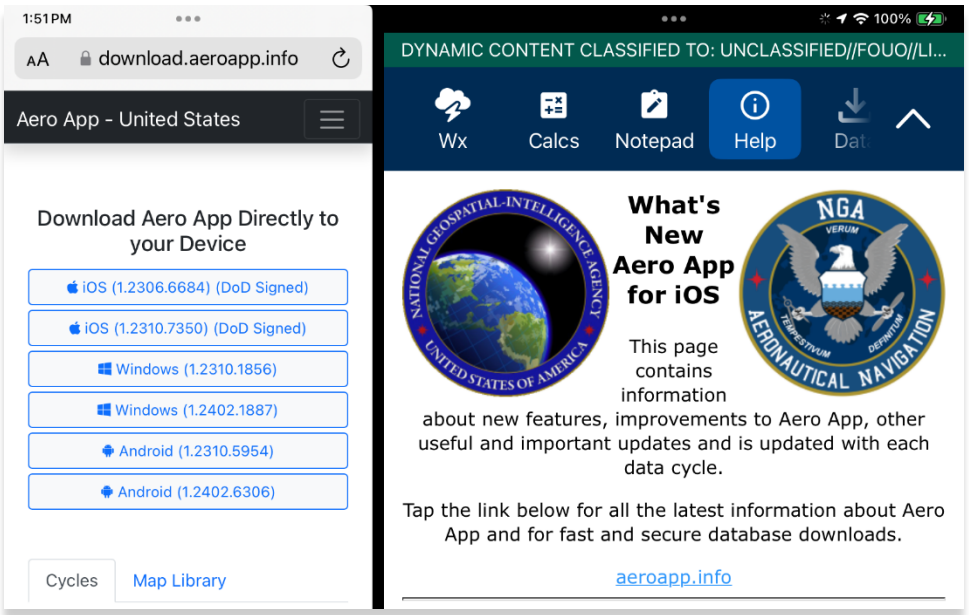
NOTE: For best practice, Aero App should be at 60/40 size to allow seamless user experience.

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

6. To move the split view app to the opposite side of the screen, tap on the **three dots** and select **Split View** again.
7. Options for the *Left Split* and *Right Split* are available. Select desired side preference.



8. Alternatively, users can hold and drag the **three dots** to the desired side of the screen.



39.1 Switch Between Apps in Split View

Users can switch between different apps of their choice.

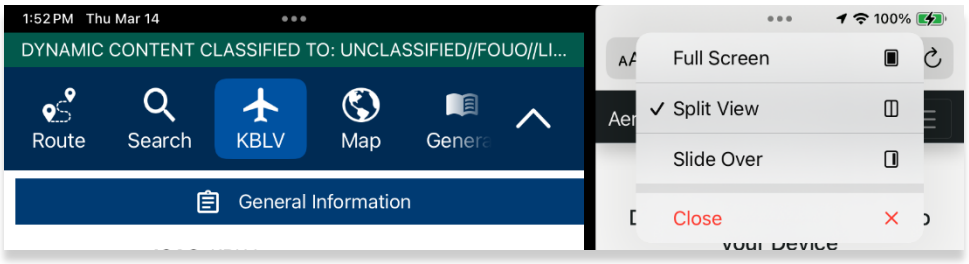
1. To switch to another app in Split View, hold and drag the **three dots** to the bottom edge of the screen.
2. Users will be prompted to choose another app. Select the desired app for side-by-side app experience.



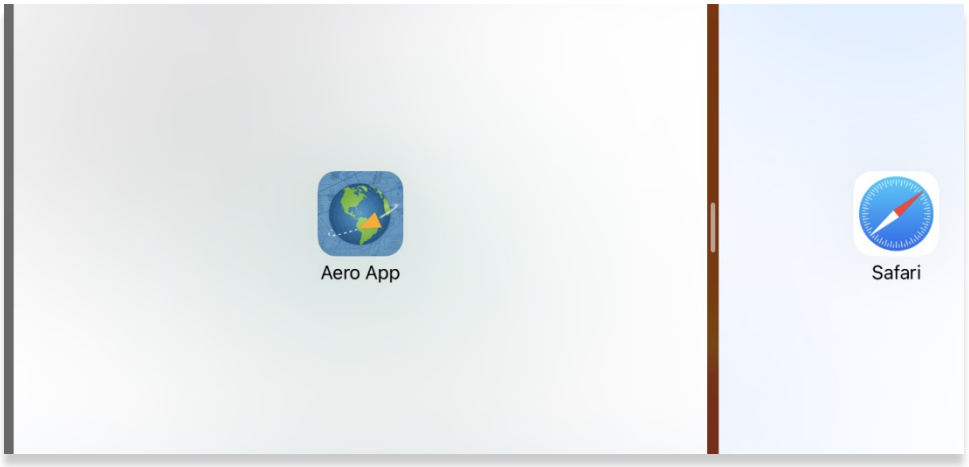
39.2 Close Apps in Split View

There are several methods to close apps in Split View. The following options are available to users:

- **Close button** – tap the **three dots** on the app that you want to close. Multitasking configuration options will be displayed. Tap the **Close** button and your app will be viewed in Full Screen mode.



- **Drag to bottom** – hold and drag the **three dots** to the bottom edge of the screen and users will be directed to the Home Screen.
- **Drag divider to the edge** – drag the **divider** in the direction of the app that you want to close. The second app will disappear, and the first app be viewed in Full Screen mode.



40 Appendix H | Acronyms and Glossary

A/FD	Airport Facility Directory
ADDS	Aviation Digital Data Service
ADS	Aero Data Server
ADS-B	Automatic Dependent Surveillance-Broadcast
AF Wx	Air Force Weather
AirDrop	Ad-hoc service in Apple's macOS and iOS operating systems which enables the transfer of files among supported Apple computers
AIRMET	Airmen's Meteorological Information
Alt Min	Alternate Minimums
AP	Area Planning
APD	Airport Diagram
App Mgmt	Application Management
AQP	Advanced Qualification Program
AR	Air Refueling Route
ARR	Airport Arrival Procedure
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
CAN	Canada
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
DOW	Department of War
DP	Departure Procedures
DSN	Defense Switched Network
DVD	Digital Versatile Disc
E-IPL	Electronic – Instrument Procedure Library
E6B	Aviator's calculator
EEA	Eastern Europe and Asia
EFB	Electronic Flight Bag
ENAME	Europe, North Africa, and 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
iBook	E-book application by Apple
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
iOS	Mobile operating system created by Apple
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
Map	Navigation system displaying the receiver's current location at the center of a map
MDM	Mobile Device Management
METAR	Meteorological Aerodrome Report. Aviation Routine Weather Report, a format for reporting weather information
Mgmt	Management
MGRS	Military Grid Reference System
MTR	Military Training Routes
NavAid	A device or system that provides a navigator with navigation 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
Shapefile	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
TAC	Terminal Area Chart
TAF	Terminal Aerodrome Forecast
TFRs	Temporary Flight Restrictions
TO Min	Takeoff Minimums
TP	Talon Point
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