Aeronautical Application

(Aero App)

Android User Manual Version 1.2410

NSN76440152335389

Publication Date: November 5, 2024

Acknowledgements

The Aeronautical Application (Aero App) User Manual was produced by Hilton Software. Hilton Software expresses great appreciation to everyone who contributed to the content quality. Hilton Software and NGA sincerely appreciate your feedback and commitment to continually improve Aero App.

Table of Contents

1 Introduction

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

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

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

2 About the Manual

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

3 Getting Started

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

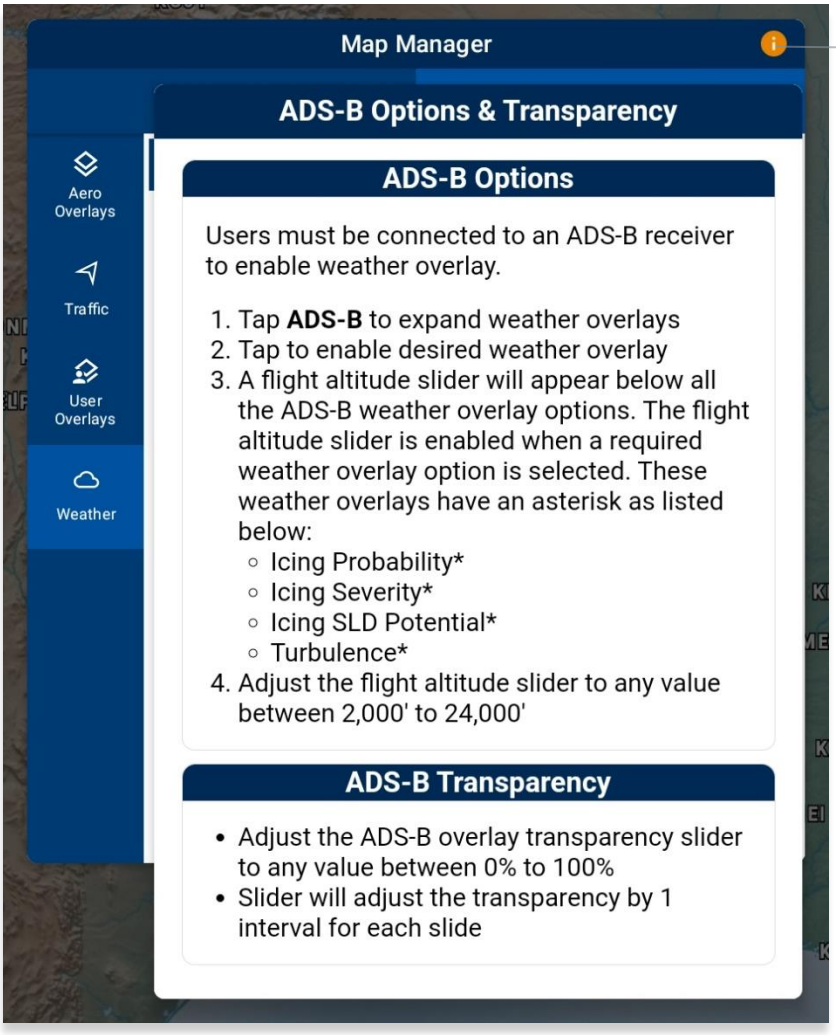
3.1 System Requirements

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

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

3.2 Contextual Help

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



4 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

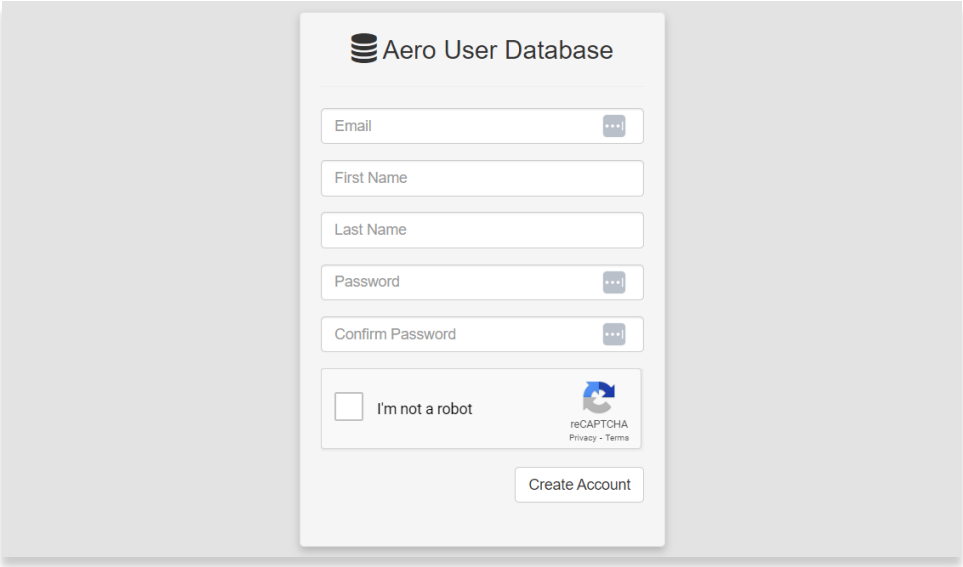
5 Accounts

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

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



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://access.geoaxis.gs.mil/oam/west/servlet/login.jsp in the address bar.
3. Select one of the listed credentials to authenticate.
4. Follow the prompts.

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

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

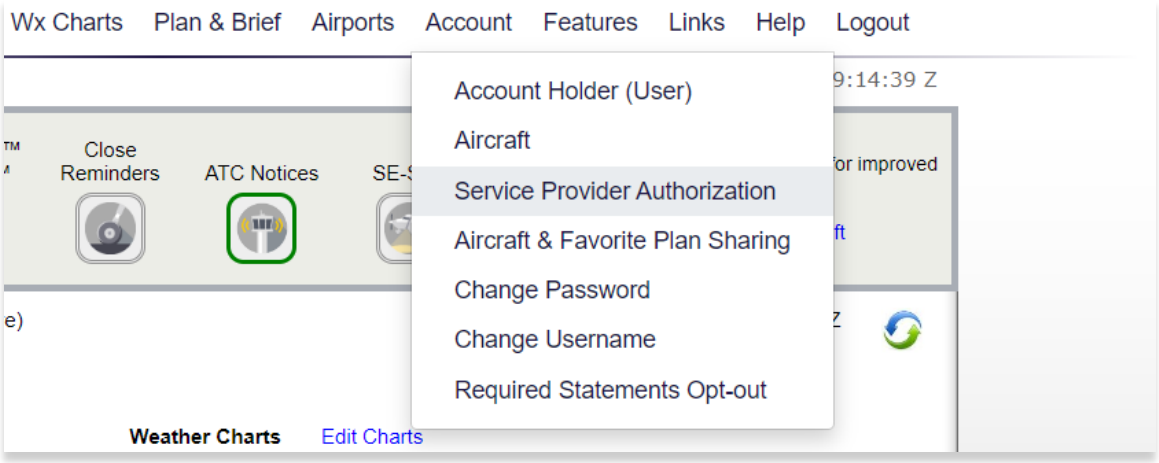
5.3 Flight Service Account Registration

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 then select **Create Account** once completed.

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

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

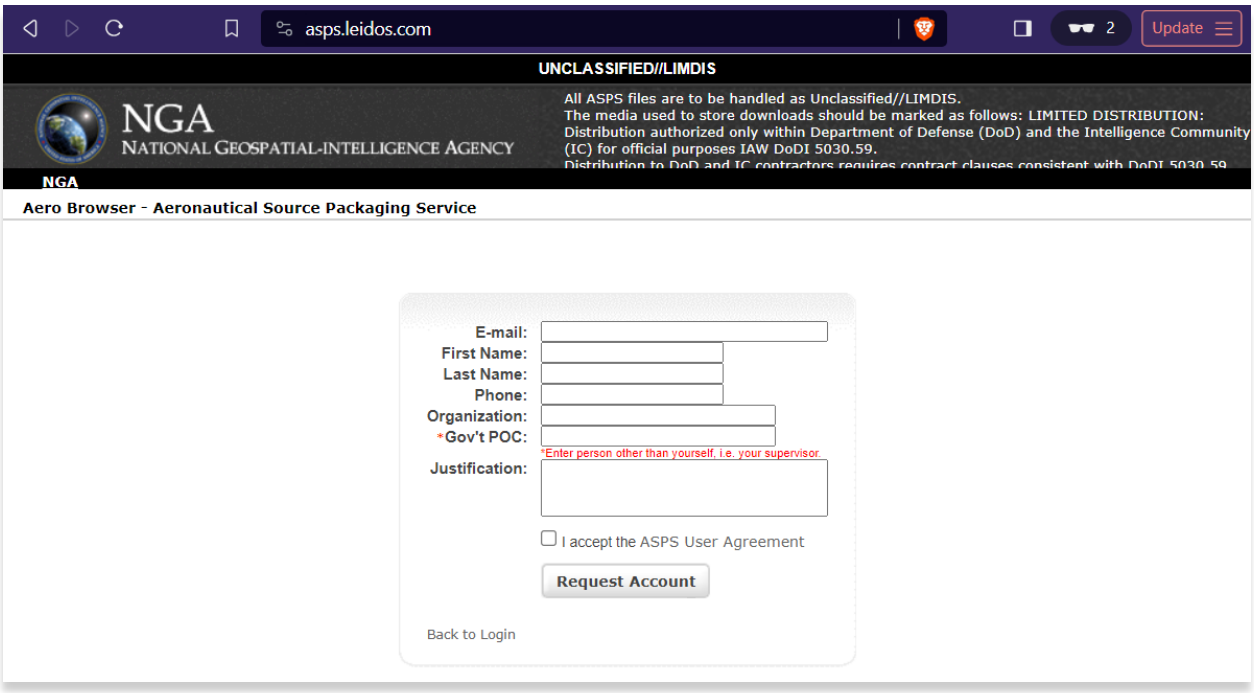


10. A button to *Edit* and *Save* is available. Select **Edit**.
11. From the provided table, locate *NGA Aeronautical Application (Aero App)* and select **Yes** on the radio buttons.
12. Click **Save**.

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

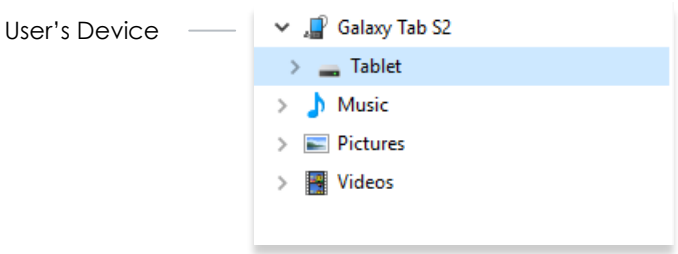
Aero App (National Stock Number [NSN] 7644016004225) can be installed from the following sources:

- **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 Jorge Diaz (Jorge.Diaz@dla.mil).
  - **National Geospatial-Intelligence Agency (NGA).** Aero App data can be downloaded via NIPRnet at (https://dbgia.geointel.nga.mil/efb/index.cfm). This link requires a PKI-enabled CAC card for access. See your security team for a PKI certificate if you receive the following message: "Certificate-based authentication failed."
- **Aero App Website** – Aero App's website (aeroapp.info) that requires GEOAxIS or Aero User Database credentials.

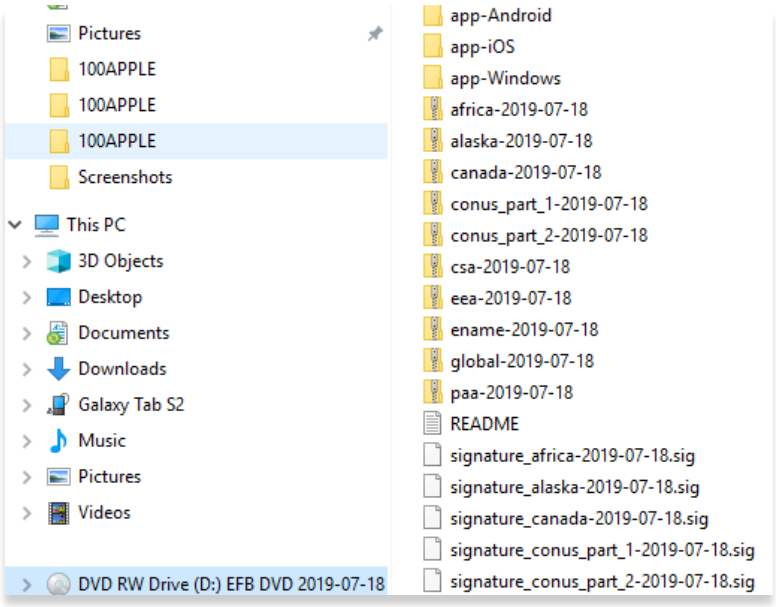
6.1.1 Install Aero App from Aero App DVD

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

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



4. Insert the data DVD into the user's computer.
5. With a new File Explorer window opened, locate and double-click on the **DVD drive**.

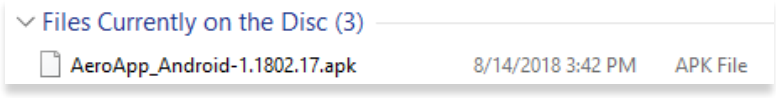


Data DVD

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

App-Android File folder

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



Aero App for Android APK file

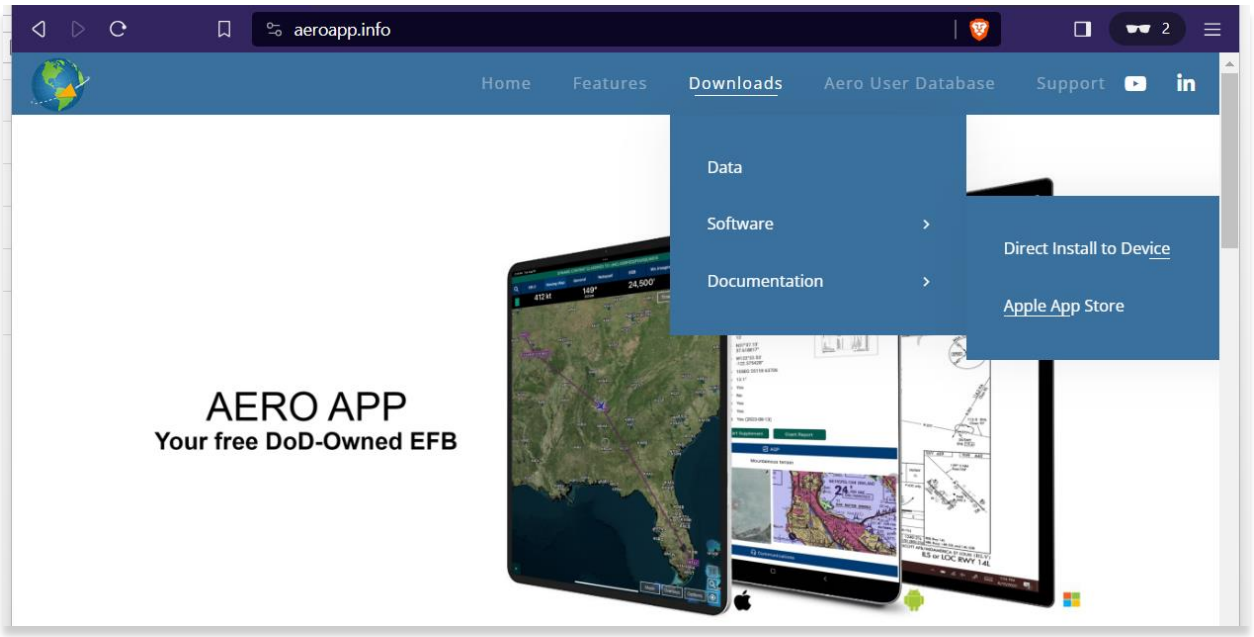
8. The Aero App for Android APK file must be installed. On your Android tablet, navigate **My Files** app.
9. Select **Internal Storage** from the app drawer to view files and folders.

10. Locate and tap the Aero App APK file (**AeroApp_Android-<version number>.apk**).
11. You will be prompted to install the app. Confirm the prompt and the app will begin to install onto your device. Aero App will be successfully installed and ready for use. Refer to Section 6.2 to grant Aero App the necessary permissions to fully utilize all features of the app.

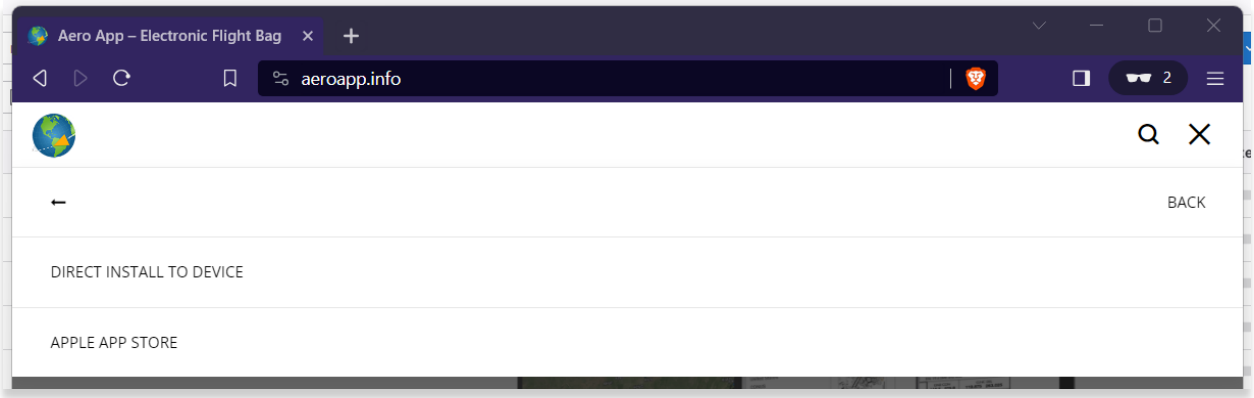
Aero App Version Number

6.1.2 Install Aero App from Aero App Website

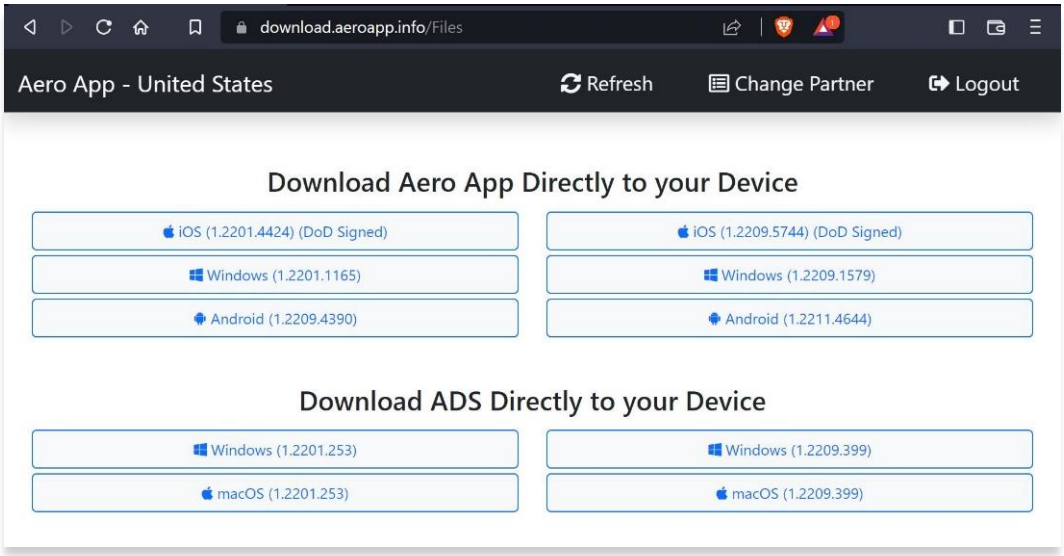
1. Open an internet browser of choice.
2. Enter aeroapp.info in the address bar.
3. Navigate to the *Downloads* menu. Option placement will vary depending on display size.
    - On larger screens, hover over **Downloads** from the navigation bar to reveal additional download options.



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



4. Select **Software**.
5. Users are presented with two methods to download Aero App:
    - Direct Install to Device
    - Apple App Store
6. Select **Direct Install to Device**.
7. Log in using *GEOAxIS* or *Aero User Database* credentials. The Select Partner popup will appear for Aero User Database users who have access to multiple government foreign partners.
8. Navigate to the *Download Aero App Directly to your Device* section then select **Android (version number)**. Aero App will begin to install onto your device. Refer to Section 6.2 to grant Aero App the necessary permissions to fully utilize all features of the app.

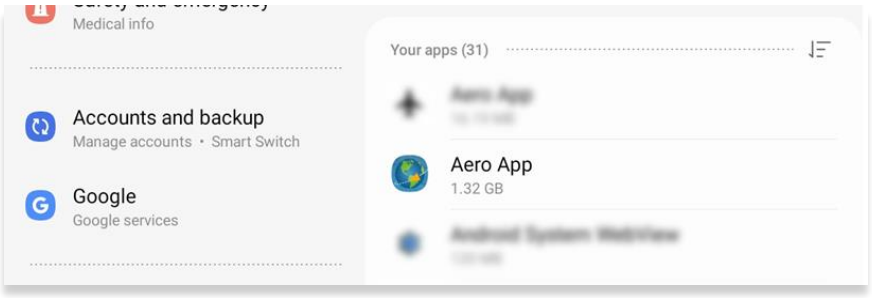


NOTE: Users must possess GEOAxIS or Aero User Database credentials to download the Aero App software from the Aero App website. Refer to Section 6 for additional information.

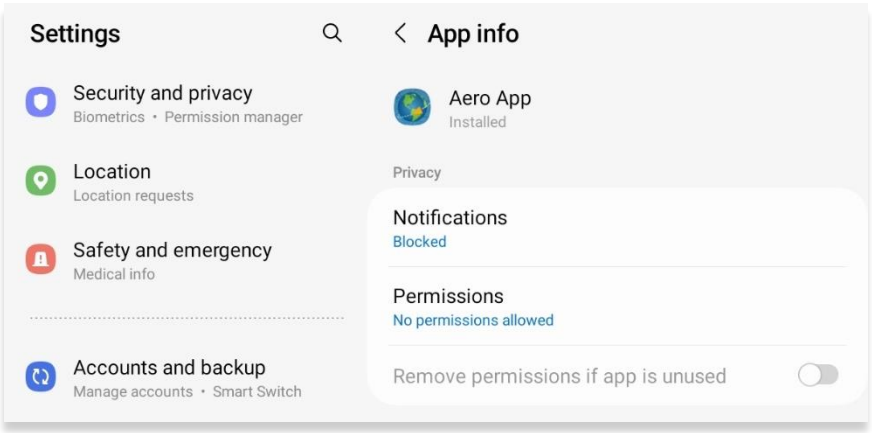
6.2 Aero App Permissions

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

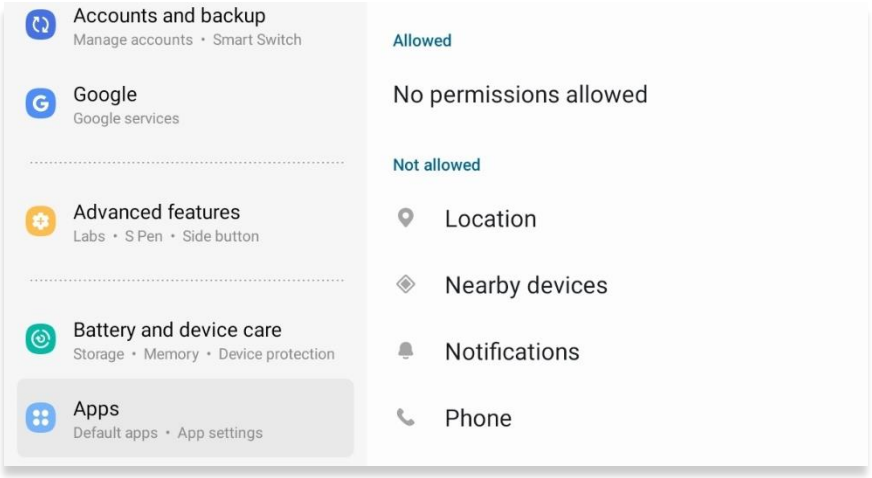
1. Open the **Settings** app on your tablet.
2. Tap **Apps**. The list of apps currently installed on your device will display.
3. Select **Aero App** from the list.



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

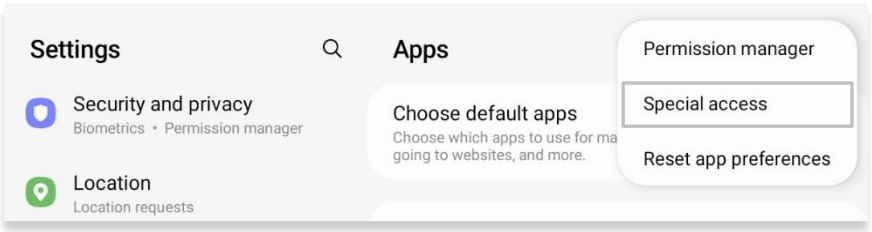


5. Navigate to the *Not allowed* section. Individually select from Location, Nearby devices, and Notifications then choose **Allow** to grant permission to each setting.

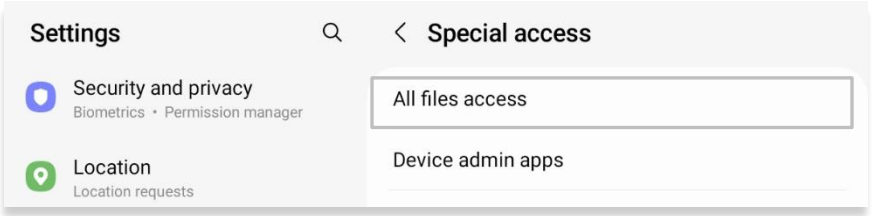


Shared Storage allows you to access any files stored on your device and fully utilize all features in Aero App. To grant access to Shared Storage, follow the steps below:

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

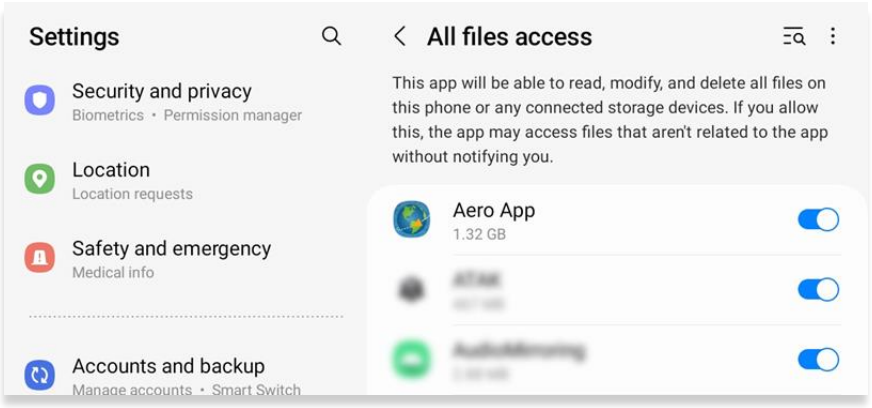


9. Select **All files access**.

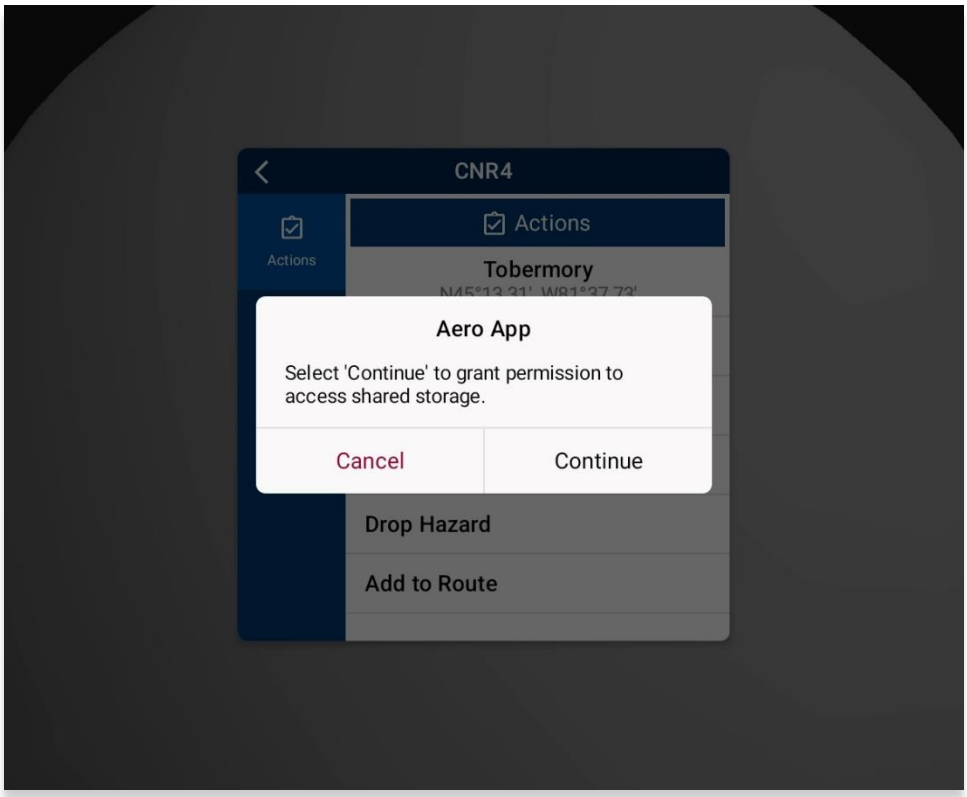


NOTE: Alternatively, you can search "All files access" from Settings to directly go to the *All files access* page.

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



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



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 displays VFR and worldwide IFR charts. Aero App enables pilots to easily download maps for their region of interest. Refer to Section 18.1 for additional information on Maps.

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

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

8.5 Electronic – Instrument Procedure Library (E-IPL)

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

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

8.6 FAA Sectionals

FAA Sectionals are Sectional Aeronautical Charts designed for visual navigation used for a flight under Visual Flight Rules and can be displayed as base maps on Aero App's Map. Users with GEOAxIS and Aero User Database (AUD) credentials will have access to FAA Sectionals. Refer to Section 26 to reference how to load FAA Sectional Charts. Refer to Section 18.1.1.1 to reference how to display FAA Sectionals on the Map.

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

8.7 Georeference

Georeference is an alignment of accurate location data to a map coordinate system for Aero App. Aero App enables users to show their ownship on Airport Diagrams, Instrument Approach Procedures, and on the Map, perfectly georeferenced. Refer to Section 32.3 on how to show Ownship on APD and IAP and show Airport Ring on APD and IAP.

8.8 Giant Reports

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

8.9 Helicopter and Terminal Area Chart (TAC) Maps

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

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

Georeferencing and spatial accuracy ensure that these charts can be used for an accurate, non-primary means of navigation. Refer to Section 18.1.4 for additional information on Helicopter and Terminal Area Chart (TAC) Maps.

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

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 missions, and many others. Map Library can be downloaded from AWS using Aero User Database credentials or directly from ADS. Map Library data is available to DOD and specific government foreign partners. For information on downloading Map Library charts, refer to Section 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. Refer to Section 18.1.1.4 and Section 18.1.3 for additional information.

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

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 18.2.1.23 for additional information on displaying TFRs on the Map.

8.13 Terrain

Aero App includes Terrain Coloring that provides situational awareness to flight crews. Users can overlay Terrain on the Map that includes an altitude-based color system that depicts the proximity of the pilot's ownship relative to terrain. Terrain can be downloaded from AWS using GEOAxIS or Aero User Database credentials or directly from ADS. Terrain Coloring data will be listed under Other in the Data Download screen and is available to specific government foreign partners. Refer to Section 18.2.1.22 for additional information.

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

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

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

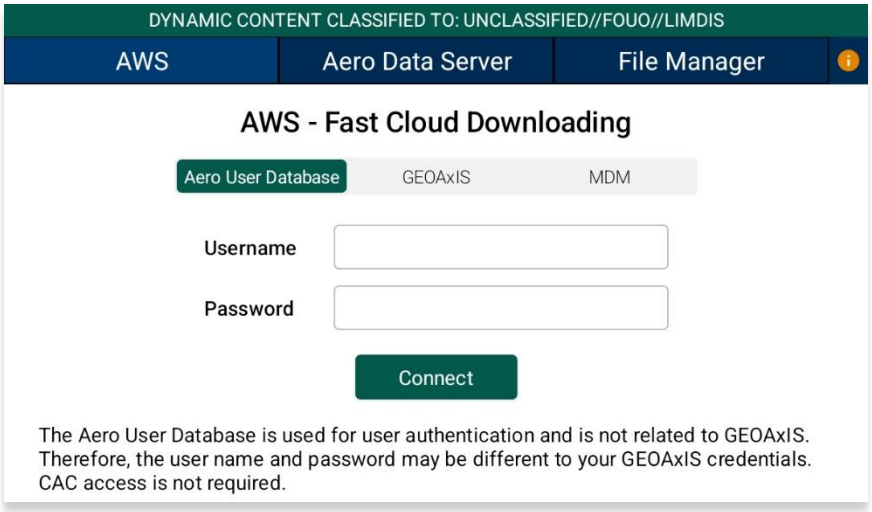
6. Navigate back to the *Data Status* screen. Notice the files you have selected to download display **Found.** This indicates that the files have successfully downloaded without any interruptions.

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

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).

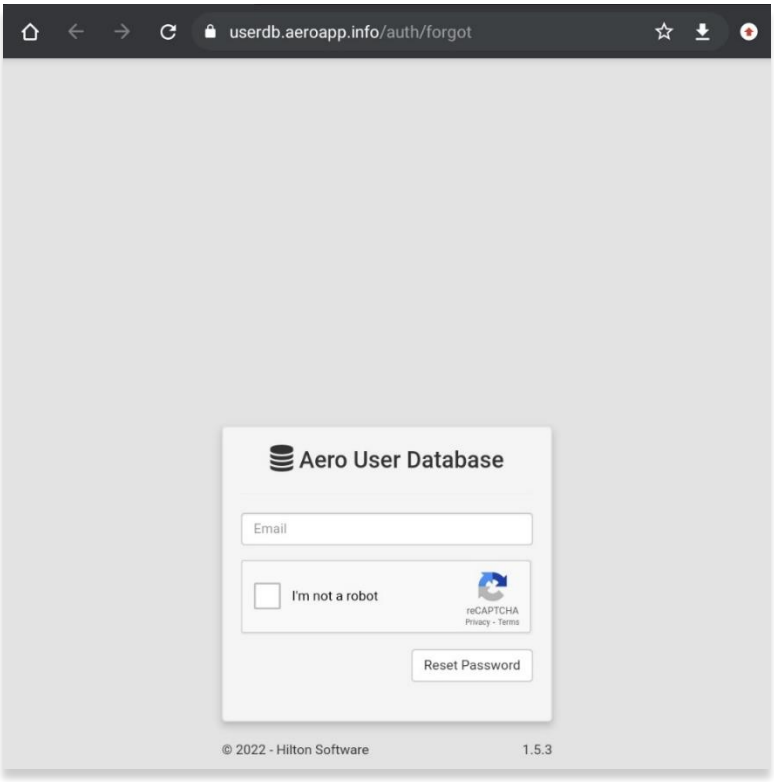


5. Below each user authentication option, you are presented with the options to *Sign Up For An Account* and *Reset Password*.

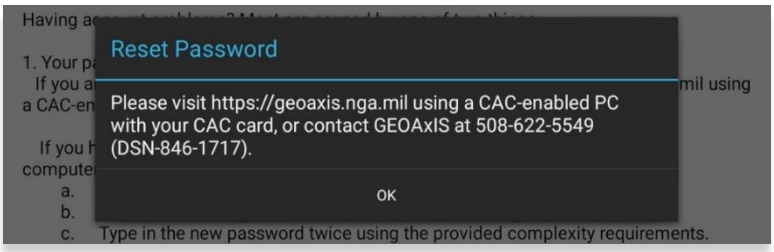
6. Tap **Sign Up for An Account** to create an Aero User Database (AUD) or GEOAxIS account.

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 on how to reset password.



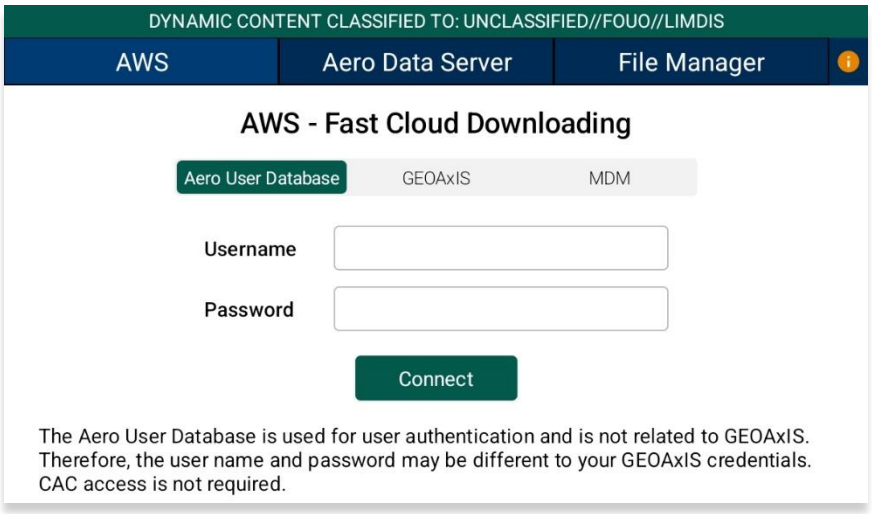
NOTE: The Background Downloading feature allows users to continue downloading data while switching screens within Aero App or while using another application. Refer to Section 9.1 for additional information.

9.2.1 Download Data Using Aero User Database (AUD)

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

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

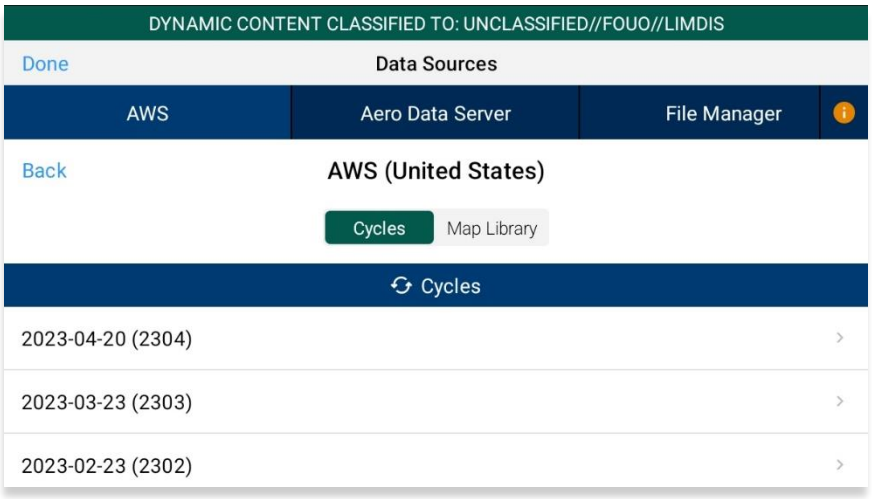
User's Credentials



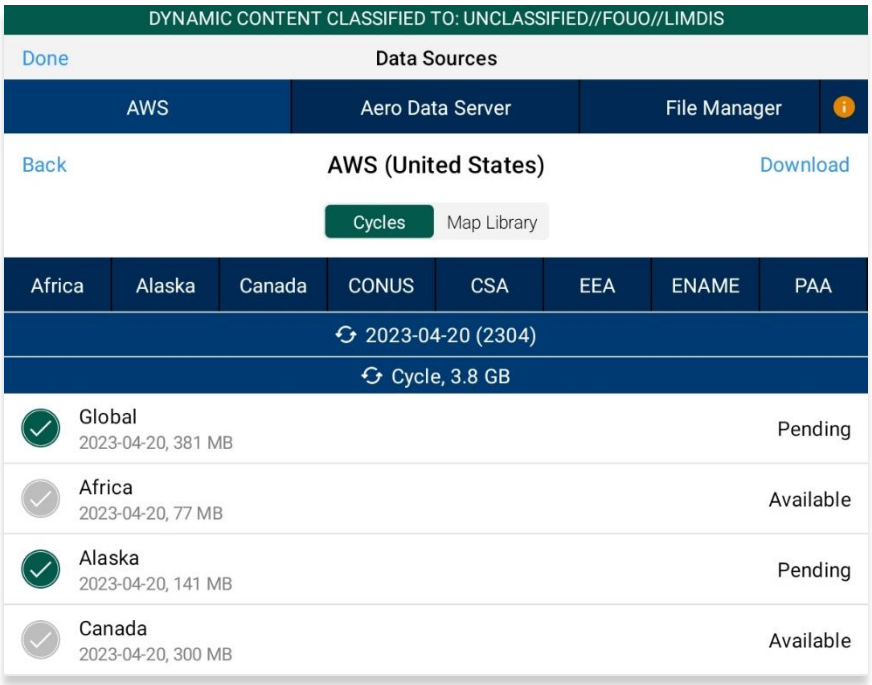
6. The Select Partner popup will display. Select from partners list.

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

7. Users will be redirected to the Data Cycle Download screen. 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 select regional Easy Buttons for faster data selection.
9. Tap **Download** once desired data files are selected.



NOTE: Refer to Section 5.1 for additional information regarding registering for an AUD account.

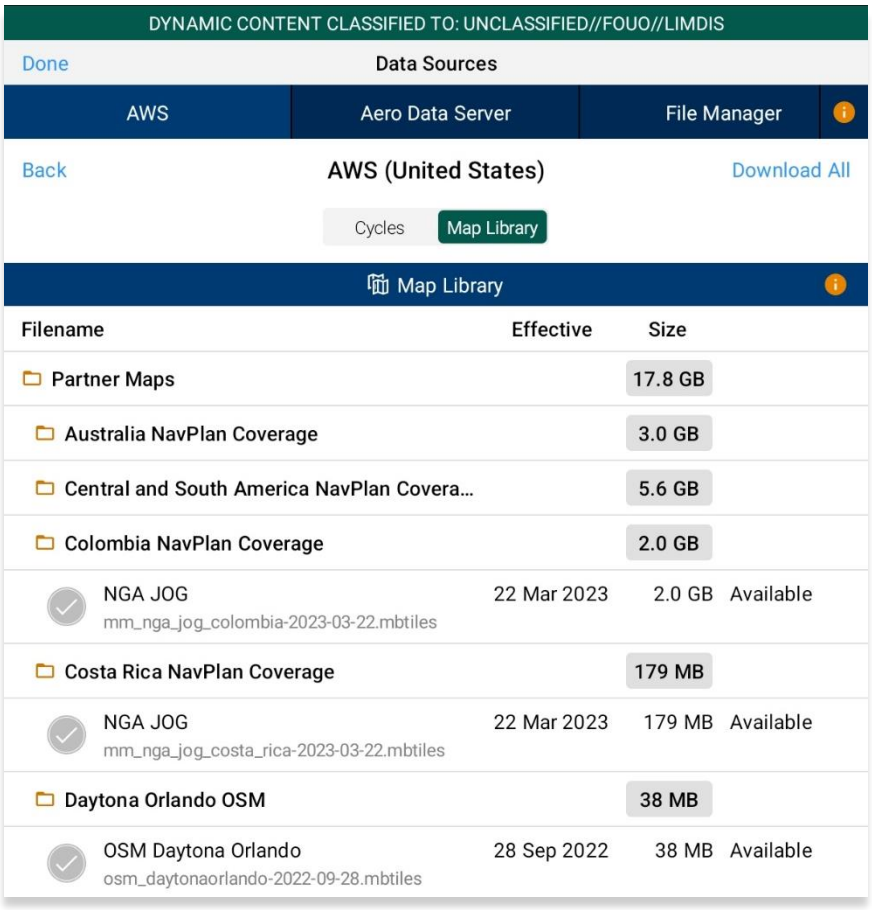
9.2.1.1 Download Map Library Data Using Aero User Database (AUD)

Access to Map Library data is provided to select government foreign 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.

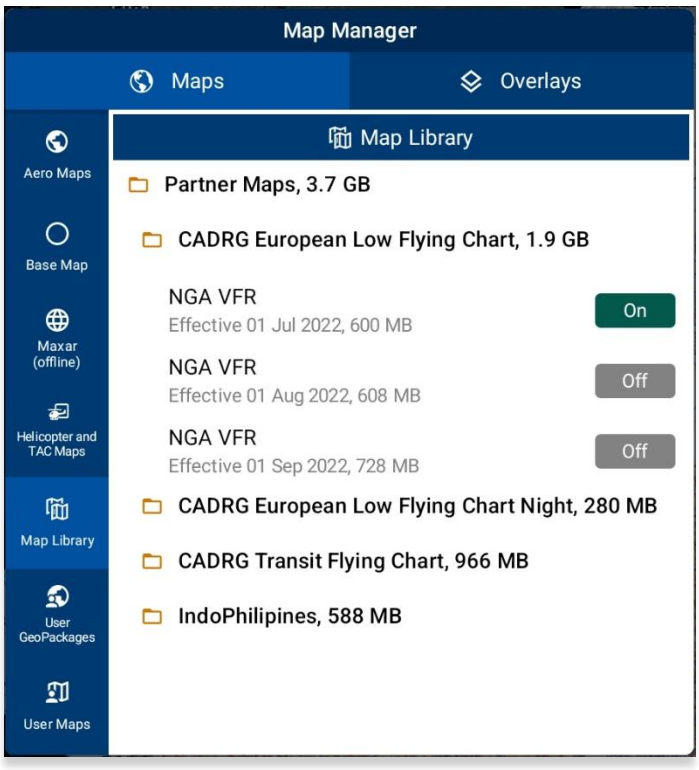
1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts will be displayed. The files are grouped into categories. Tap on the desired folders to *reveal* files. Tap again to *hide* files.
3. Tap on the header of the date column to display ***Created***, ***Effective***,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

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

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



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



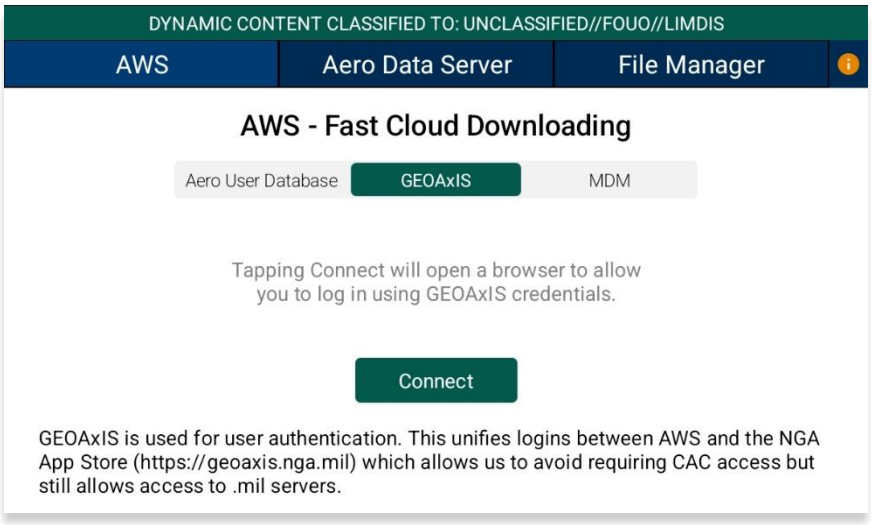
NOTE: Map Library charts can be deleted from File Manager or the Map Manager view by swiping left then tapping **Delete**.

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

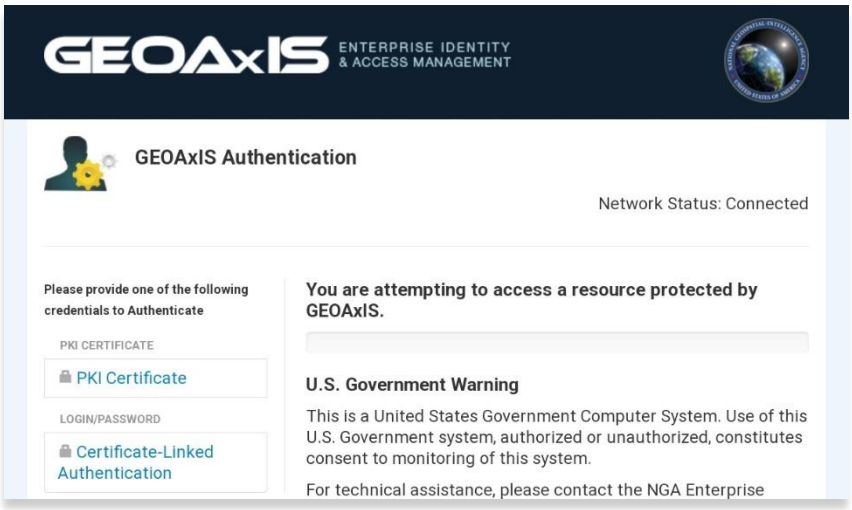
9.2.2 Download Data Using GEOAxIS

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.

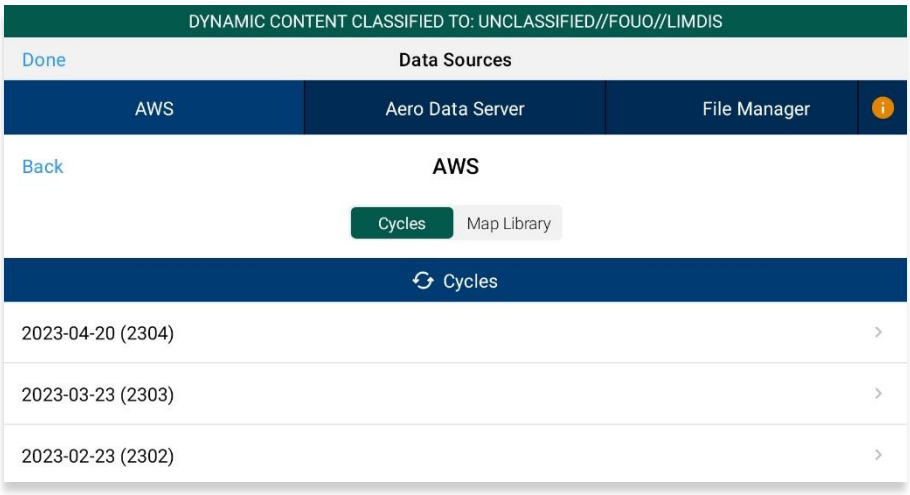
1. Tap **Data** on the ***Main Menu***.
2. Tap **Download.**
3. Select the **AWS** option, if necessary.
4. Tap the **GEOAxIS** option.



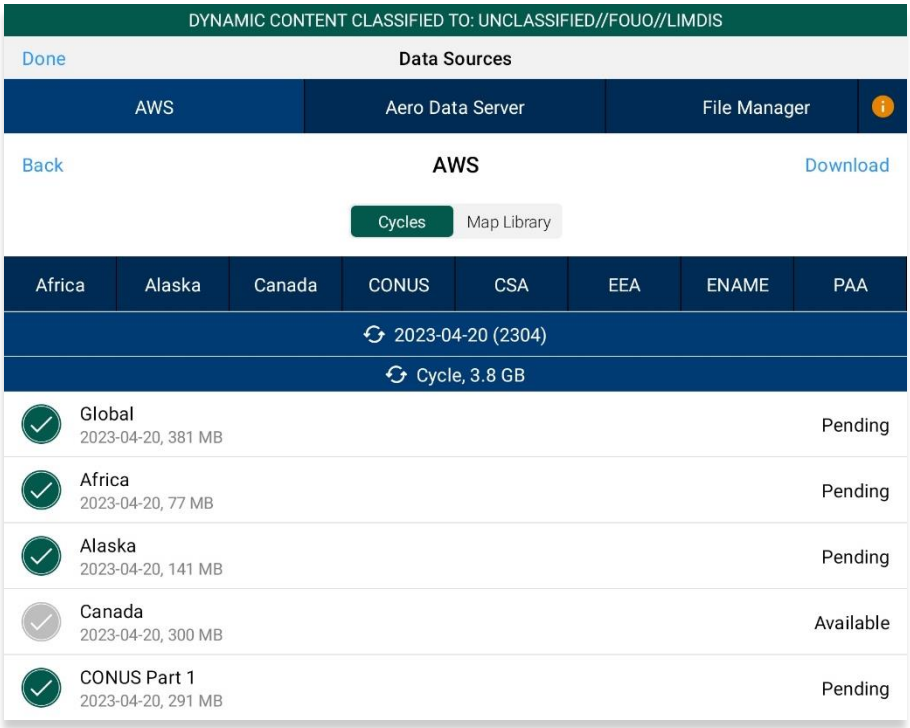
5. Tap **Connect** and users will be redirected to the GEOAxIS webpage.
6. Select desired authentication method.



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**.



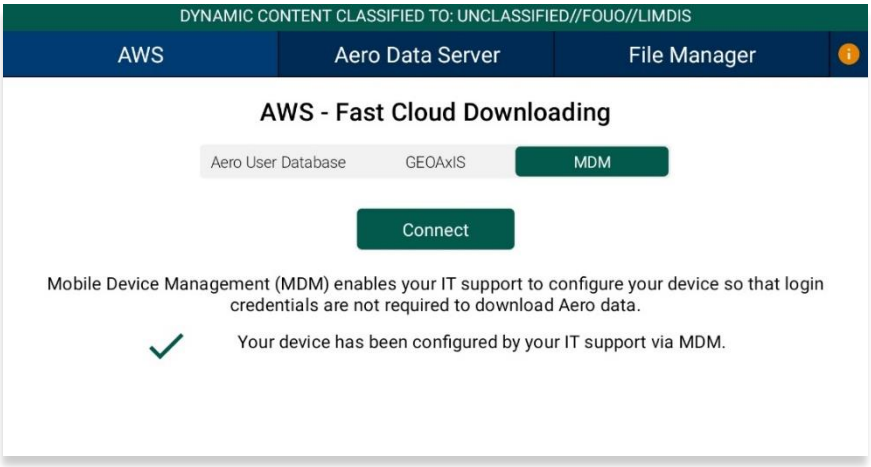
8. Available cycle data will be displayed on the screen. Select individual data files or select regional Easy Buttons for faster data selection.
9. Tap **Download** once desired data files have been selected.



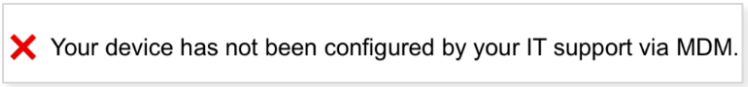
9.2.3 Download Data Using Mobile Device Management (MDM)

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 the **MDM** option.

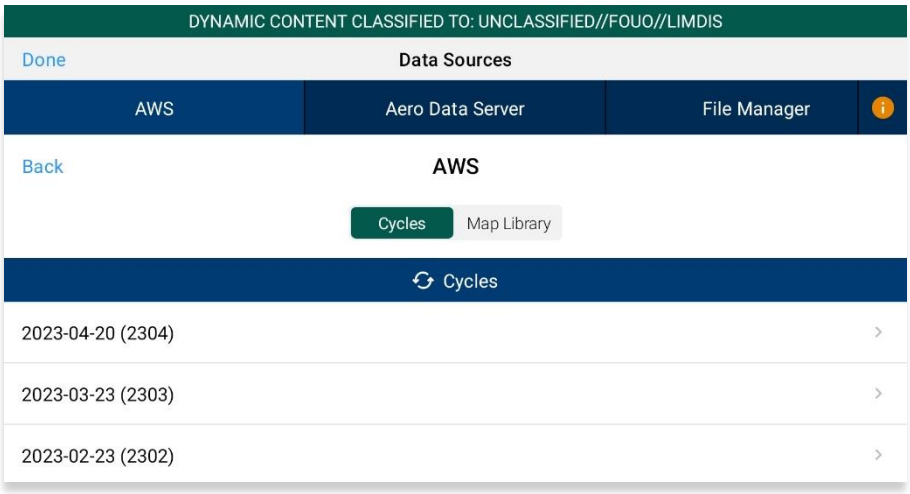


NOTE: IT administrator must be contacted to retrieve key value pairs for MDM configuration prior to downloading data; otherwise, the following message will appear as displayed below.



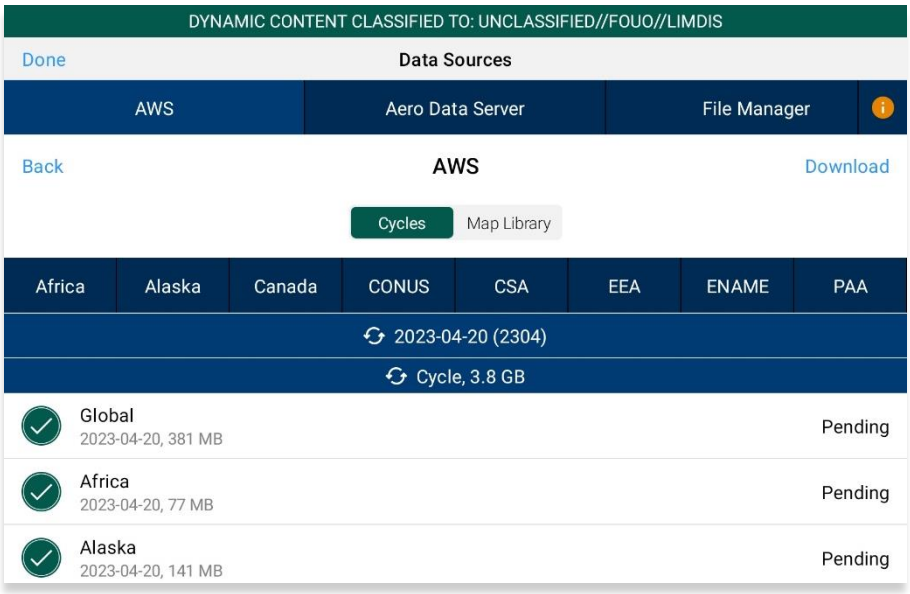
5. Tap **Connect**. Users will be redirected to the *Data Download* screen.

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

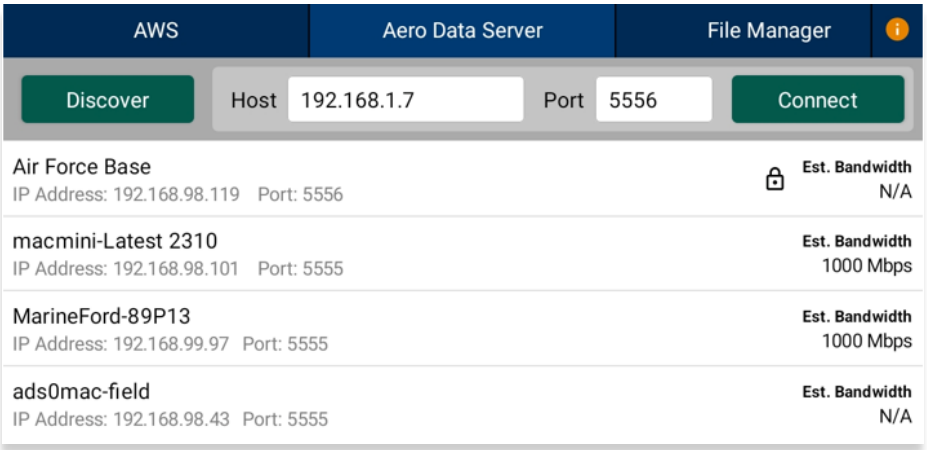
1. Tap **Data** on the ***Main Menu***.
2. Tap **Download**.
3. Select the **Aero Data Server** option.
4. Users will be presented with options to Discover, enter Host and Port numbers, and Connect. Tap **Discover** and a list of ADS servers will display.

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

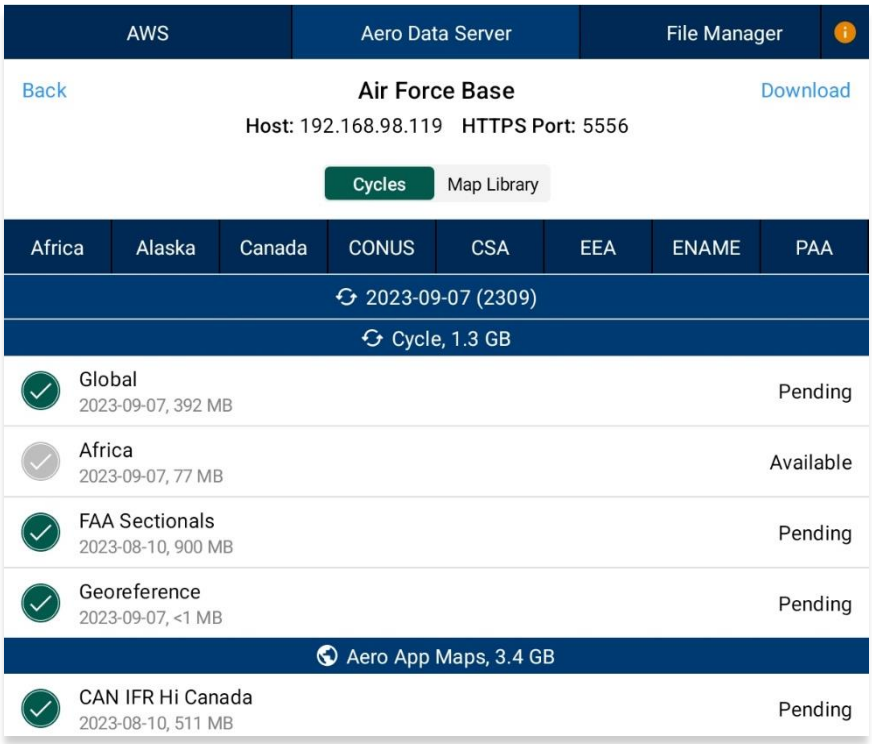
1. Tap **Data** on the ***Main Menu***.
2. Tap **Download**.
3. Select the **Aero Data Server** option, then tap ***Discover*** and all available servers will display.



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 secured 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 redirected to 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.
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.

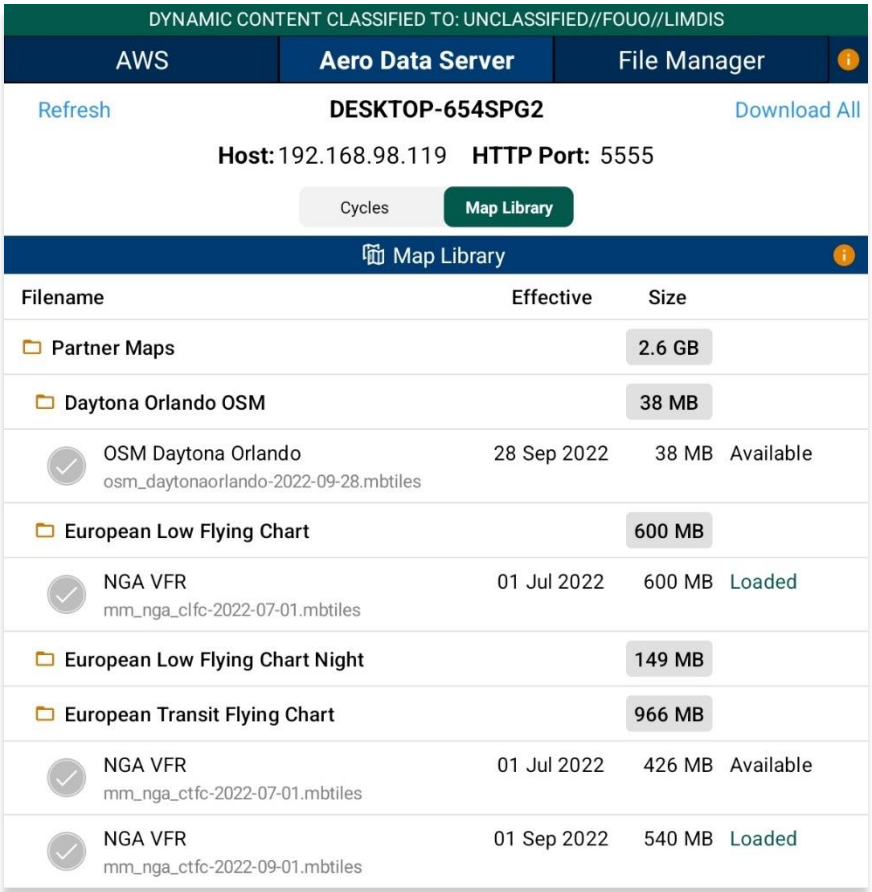
9.3.1.1 Download Map Library Data Using Aero Data Server (ADS)

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.

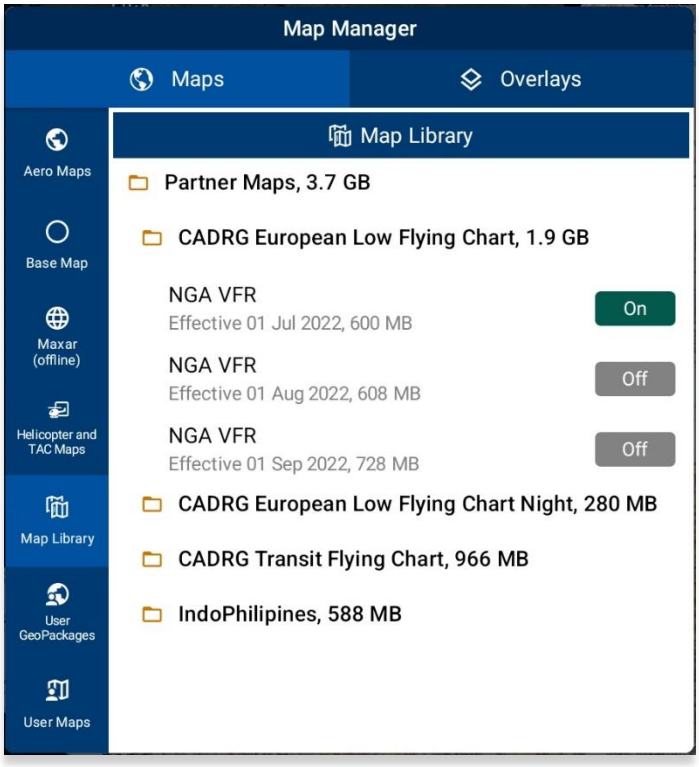
1. From the Data Download screen, select **Map Library** from segmented control.
2. Available charts will be displayed. The files are grouped into categories. Tap on the desired folders to *reveal* files. Tap the folder again to *hide* the files.
3. Tap on the header of the date column to display ***Created***,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

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

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



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



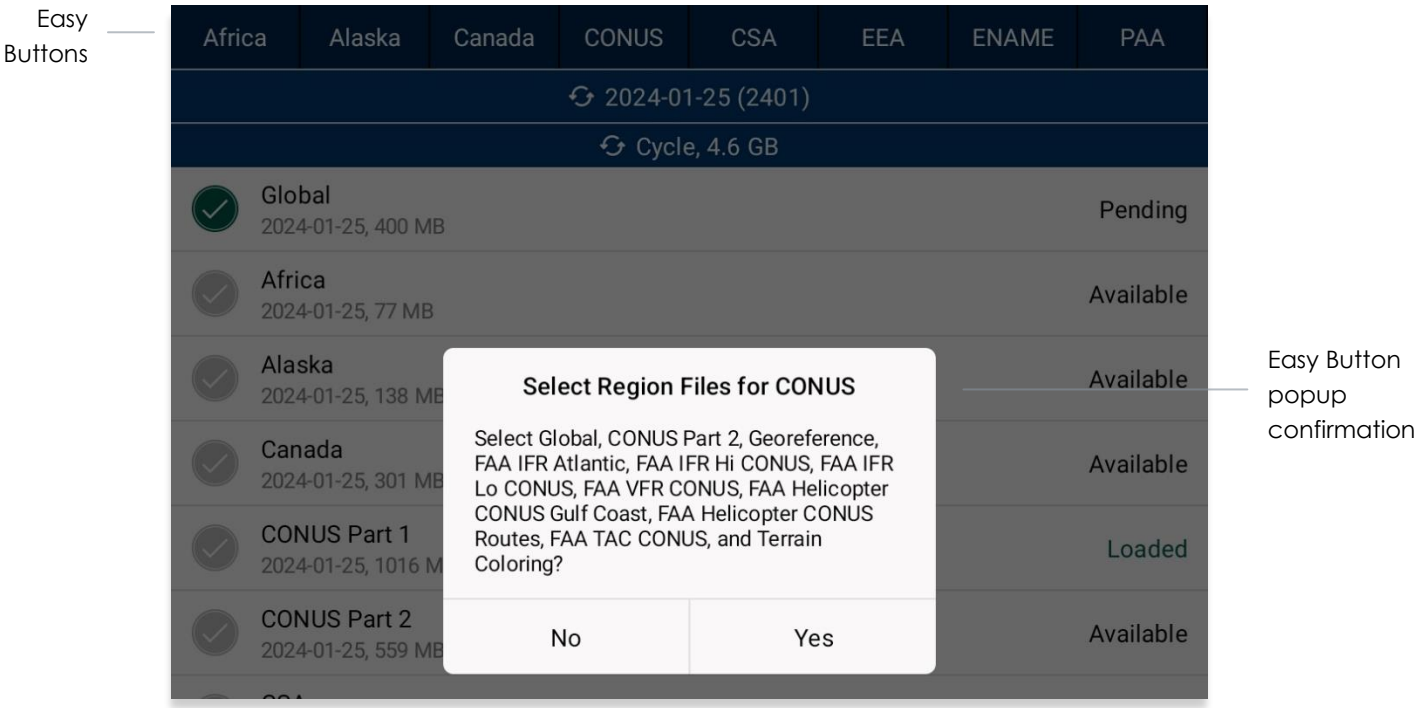
NOTE: Map Library charts can be deleted from File Manager or the Map Manager view by swiping left then tapping **Delete**.

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

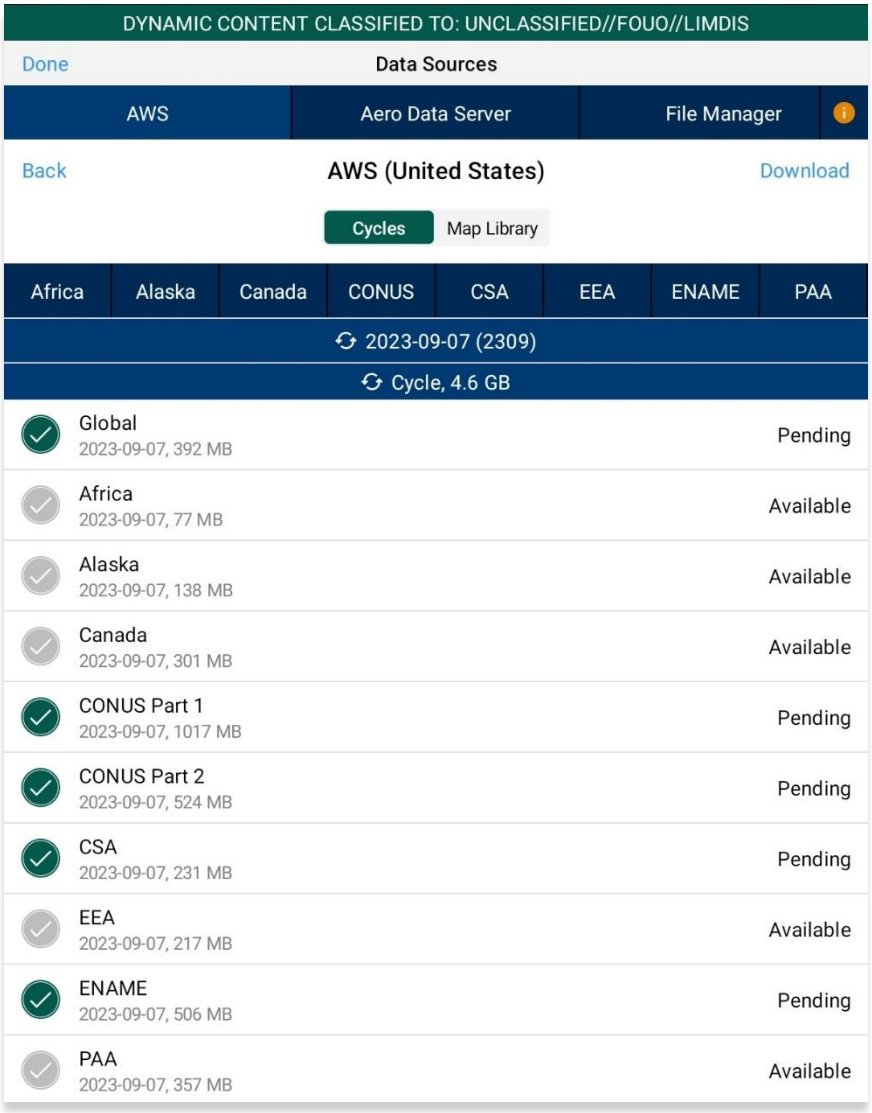
9.4 Easy Buttons

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 (ADS).

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



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



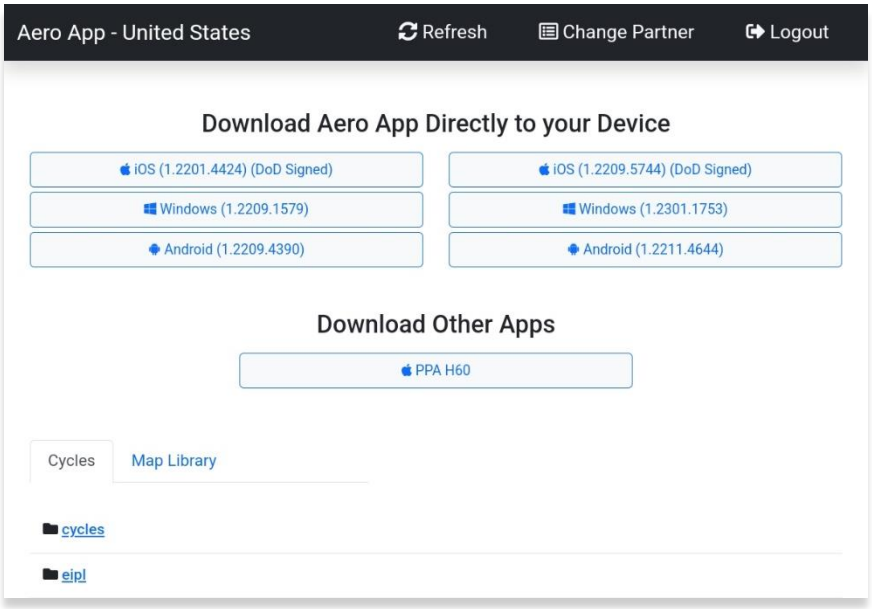
9.5 Download Data from the Aero App Website

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

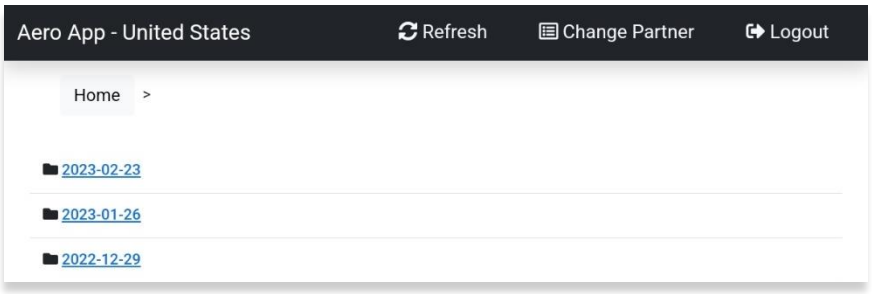
1. From your device, open an internet browser of choice.
2. Enter download.aeroapp.info in the address bar.

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

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



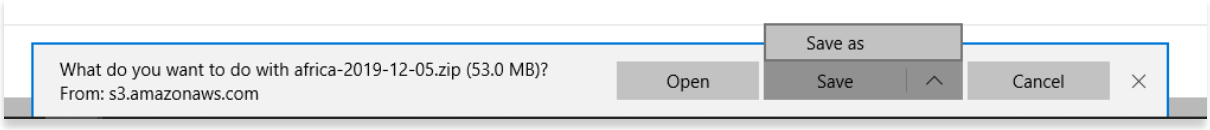
5. Click the **latest cycle** or a **cycle** of choice.



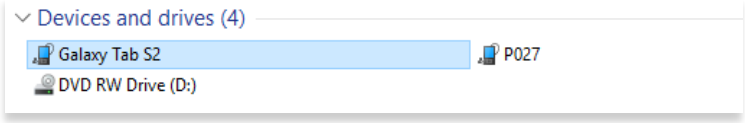
6. Users will be redirected to the download page. Located at the upper right of the screen are options to choose from **Full Data Files**, or **Delta Files** data types. Select desired data type.
7. Click the respective **ZIP** and **SIG** buttons for your region(s) of choice: **Africa**, **Alaska**,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

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

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



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



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

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

10 Sideload Data

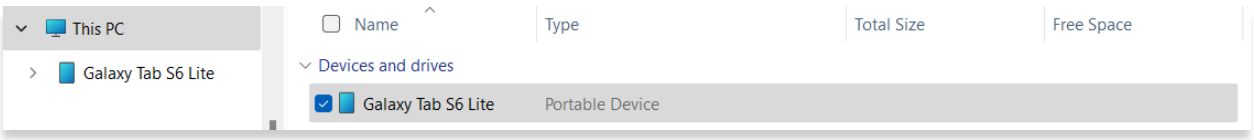
This section describes the various ways to sideload a complete data cycle or user-generated data such as User Maps, GeoPackages, User Waypoints, CRD files, Pins, Hazards, and User Documents.

To ensure the successful sideloading of user-generated data, users are required to grant Aero App permission to access Shared Storage. Failure to do so will restrict access to certain features and functionalities within Aero App. Refer to Section 6.2 for additional information.

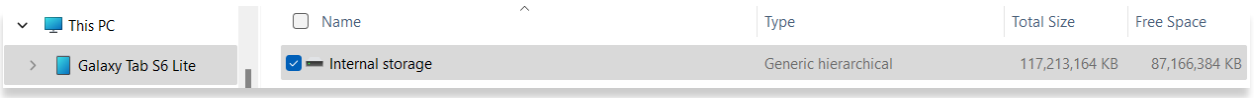
10.1 Sideload Data Cycle via Aero App DVD

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

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



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

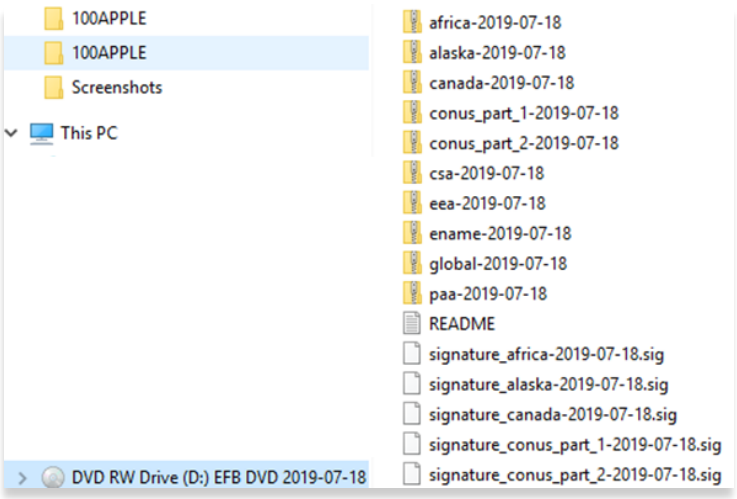


5. Insert the Aero App DVD into your PC's disk drive.

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

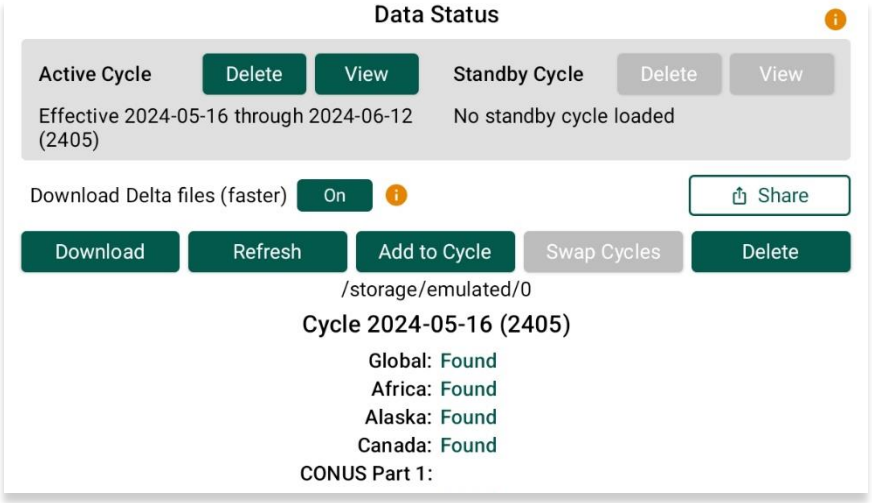
6. Open a new *File Explorer* window then locate and double-click on the **DVD drive**.
7. From the Aero App DVD drive, double-click on the **app-Android** folder to view contents.

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



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

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



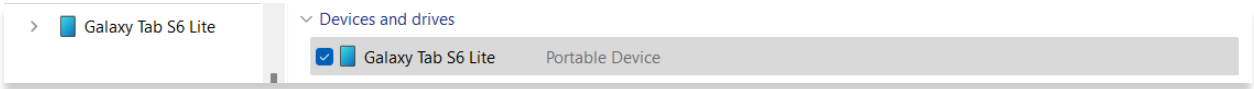
NOTE: Refer to Section 12 on how to load and view data status.

10.2 Sideload User Maps

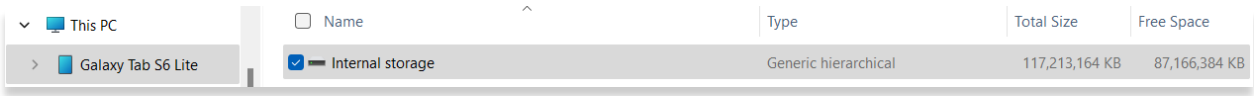
Users can sideload user-generated Maps into Aero App. User Maps are MBTiles files that can be viewed on the map. Refer to Section 18.1.7 for additional information. Be sure to store your user-generated data files in a secure location on your PC for easy access when preparing to transfer to your Android device.

To successfully sideload User Maps onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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



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



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

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

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

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

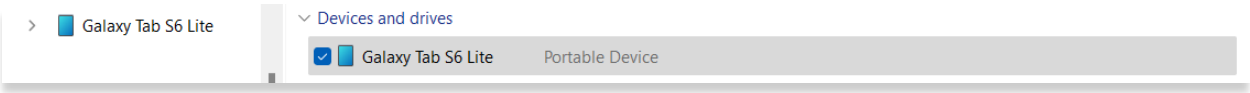
8. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower right of the Map screen. The Map Manager popup will appear.
11. Select **Maps** on the navigation bar, if necessary.
12. Tap **User Maps** from the side menu. A successful sideload will display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

10.3 Sideload GeoPackages

Users can sideload GeoPackages into Aero App to view on the Map. Be sure to store your GeoPackages in a secure location on your PC for easy access when preparing to transfer to your Android device. To view sideloaded GeoPackages, refer to Section 18.1.6 for additional information.

To successfully sideload GeoPackages onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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



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

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

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

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

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

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

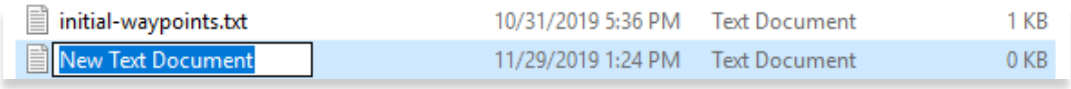
10.4 Sideload User Waypoints

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.

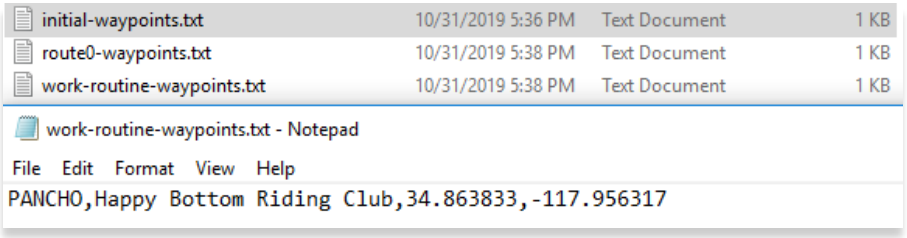
To successfully sideload User Waypoints onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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

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



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

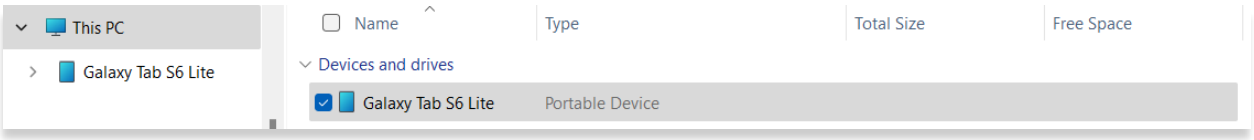


7. Save file once completed.

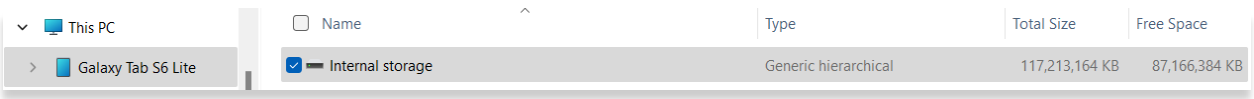
Be sure to store your User Waypoint(s) in a secure location on your PC for easy access when preparing to transfer to your Android device.

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

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



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



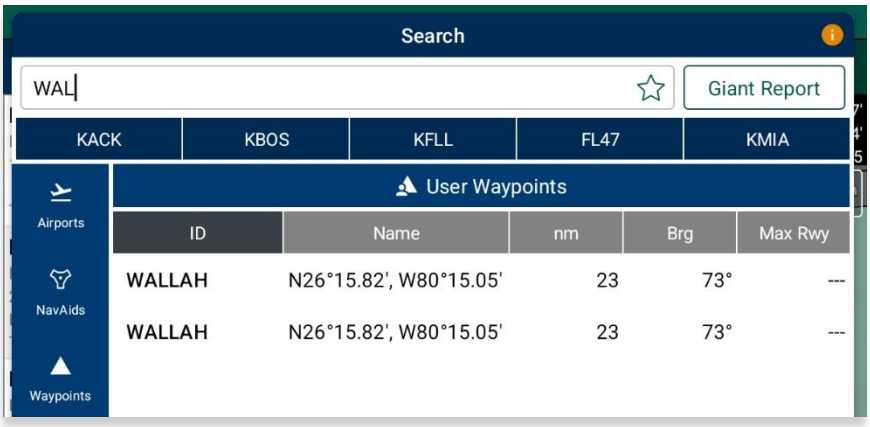
12. Select **AeroApp**. Its respective subfolders are displayed.

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

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

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

15. Open **Aero App**.
16. Tap **Search** on the ***Main Menu***.
17. The Search popup will appear. Enter the name of the user waypoint in the text box. The user waypoint(s) will appear under the User Waypoints section.

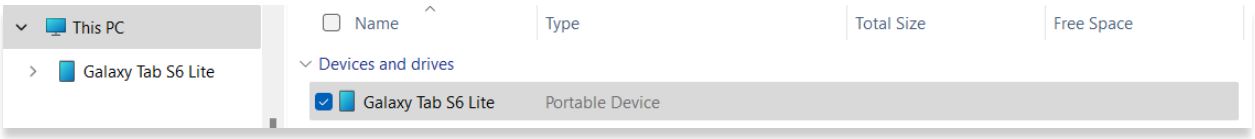


10.5 Sideload Common Route Definition (CRD) Files

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

To successfully sideload CRD files onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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



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

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

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

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

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

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

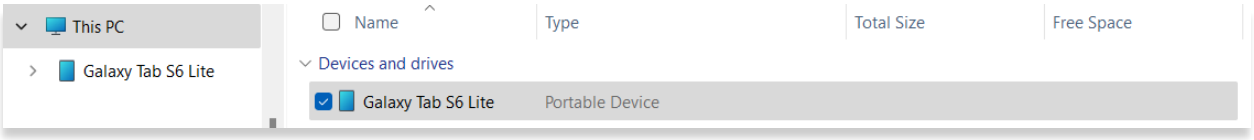
10.6 Sideload Pins

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.

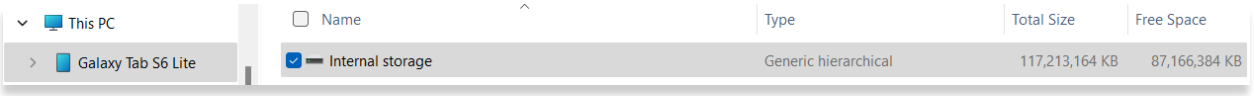
A file with the format *pins.sqlite* contains stored pins that were created through the app. These pins are viewed in the Dropped Pins table on Aero App. Refer to Section 14.3.4.2 for additional information.

To successfully sideload user-generated Pins onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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

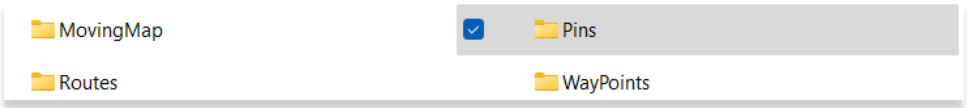


4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.

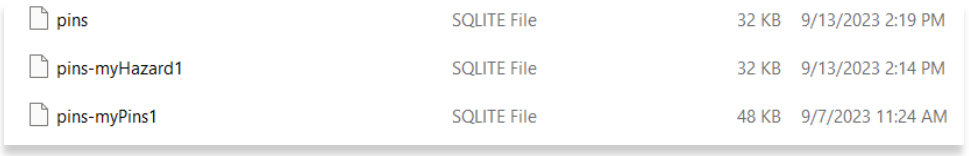


5. Select **AeroApp**. Its respective subfolders are displayed.

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



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



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

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

9. Open **Aero App**.
10. Tap **Map** on the ***Main Menu***.
11. Navigate to **Map Manager** located at the lower right corner of the Map screen. The Map Manager popup will appear.
12. Select **Overlays** from the navigational bar.
13. Select **User Overlays** from the side menu.
14. Locate your imported files. The files will display as *pins-{name}.sqlite*. Users must enable *Pins* from the Overlays menu to view on the Map. Refer to Section 18.2.1.17 for additional information.

NOTE: If photo pins were sideloaded, users must enable *User Images* from the Overlays menu to view on the Map. Refer to Section 18.2.1.25 for additional information.

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

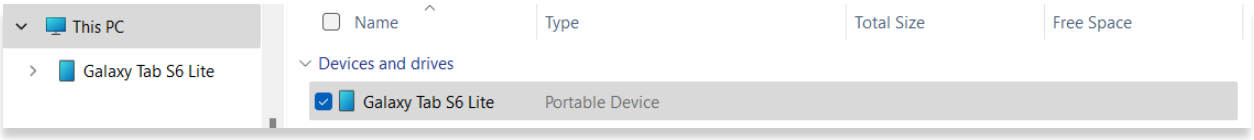
10.7 Sideload Hazards

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.

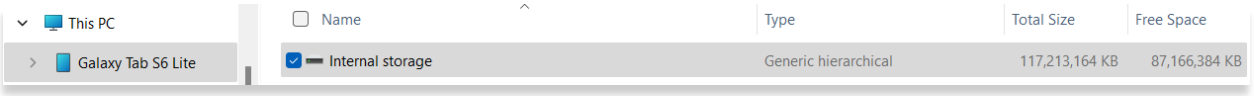
A file with the format *pins.sqlite* contains stored hazards that were created through the app. These hazards are viewed in the Dropped Hazards table on Aero App. Refer to Section 14.3.4.3 for additional information.

To successfully sideload user-generated Hazards onto Aero App, users are required to grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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



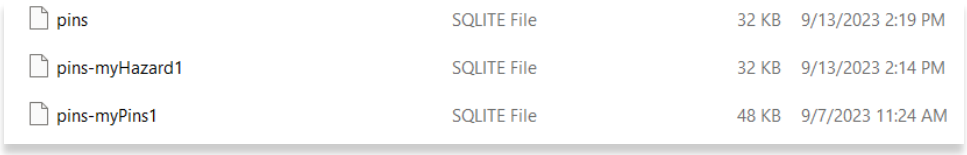
4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



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

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

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



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

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

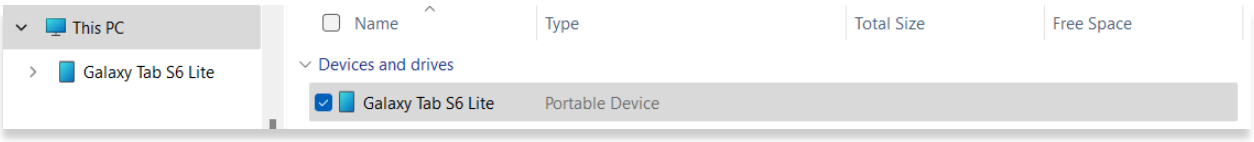
9. Open **Aero App**.
10. Tap **Map** on the ***Main Menu***.
11. Navigate to **Map Manager** located at the lower right corner of the Map screen. The Map Manager popup will appear.
12. Select **Overlays** on the navigational bar.
13. Select **User Overlays** from the side menu.
14. Locate your imported files. The files will display as *pins-{name}.sqlite*. Users must enable *Hazards* from the Overlays menu to view on the Map. Refer to Section 18.2.1.12 for additional information.

10.8 Sideload Documents

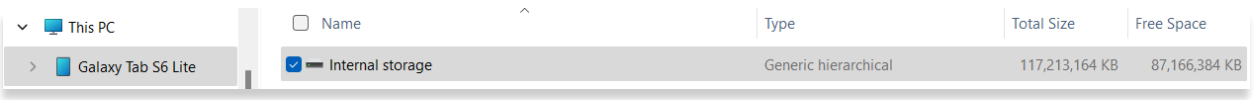
Users can sideload documents into Aero App. Be sure to store your user documents in a secure location on your PC for easy access when preparing to transfer to your Android device.

To select a document to display on Aero App, users must grant Aero App permission to access Shared Storage. Refer to Section 6.2 for additional information.

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



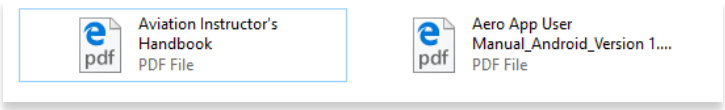
4. Double-click on your **device's name** then double-click on **Internal storage** to view contents.



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

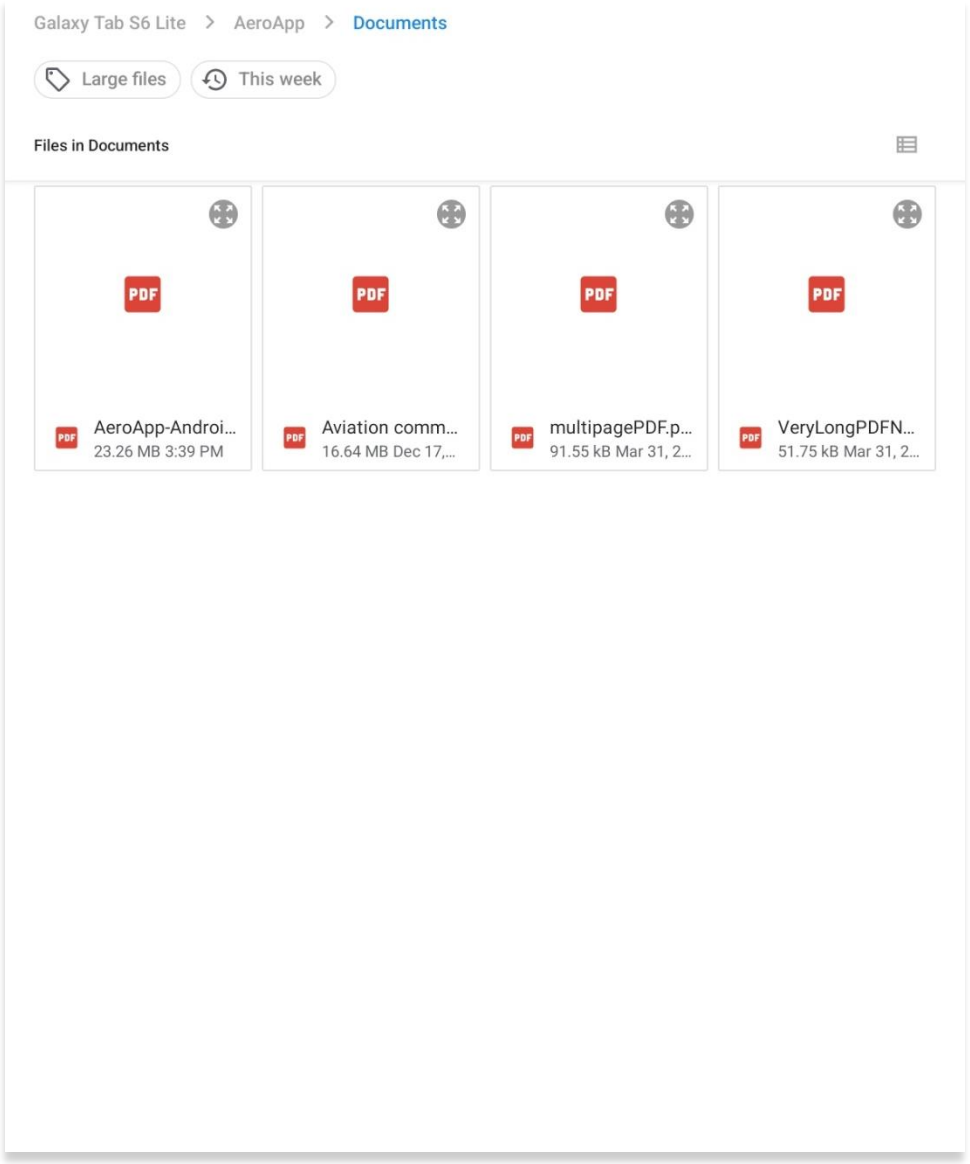
6. Select **Documents** to view contents.

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



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

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



11 Updating Aero App Data

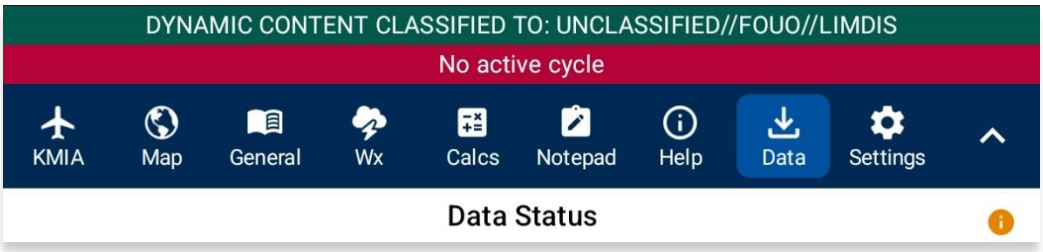
Aero App Data updates are released periodically. Users can load and manage up to two data cycles at a time. Aero App data cycle releases every 28-days, thereby, users will need to download the latest data cycle, respectively.

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.

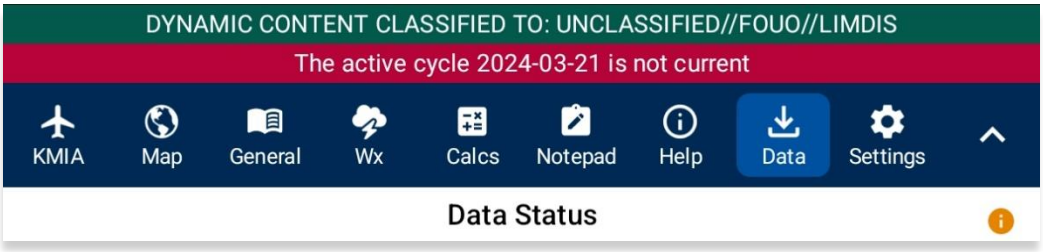
No active cycle

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 Cycles** on the Data Status screen to move the data to the Active Cycle. If there is no data in either cycle, then data must be downloaded or sideloaded.



Active cycle is not current

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



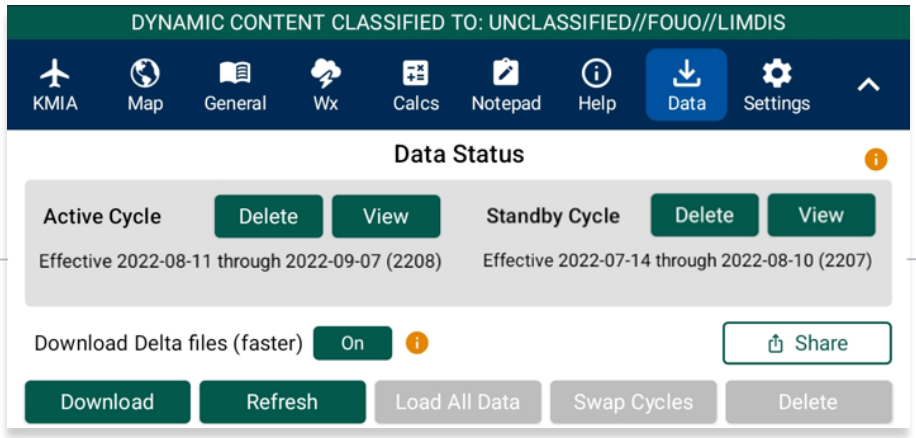
12 Manage Data

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

12.1 Data Status

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

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



Active Cycle Effective Dates

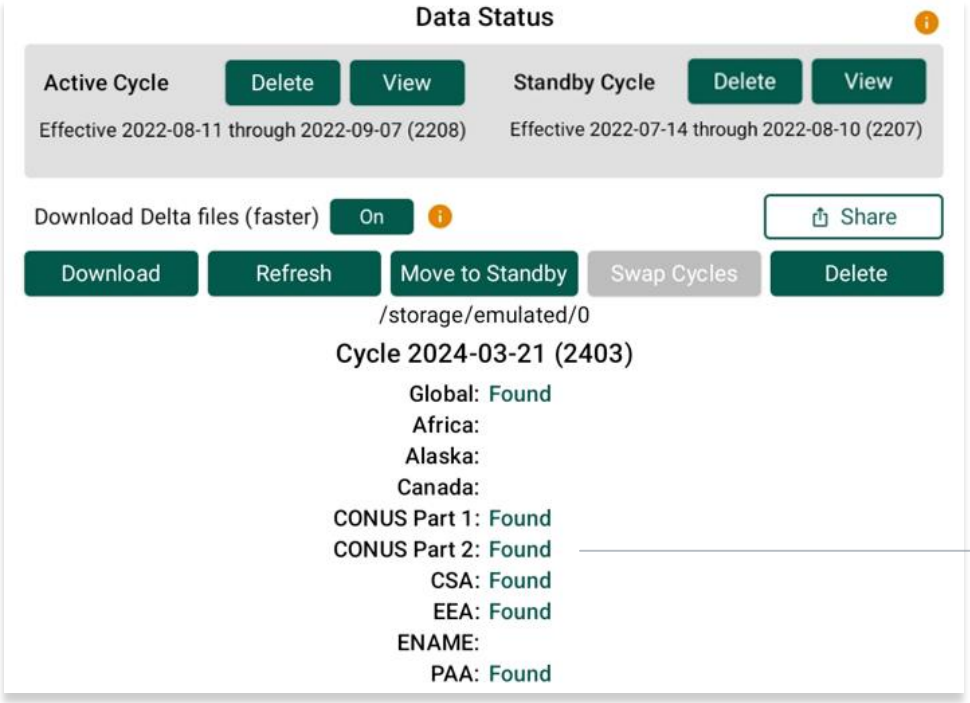
Standby Cycle Effective Dates

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

12.2 Manage Data Downloads

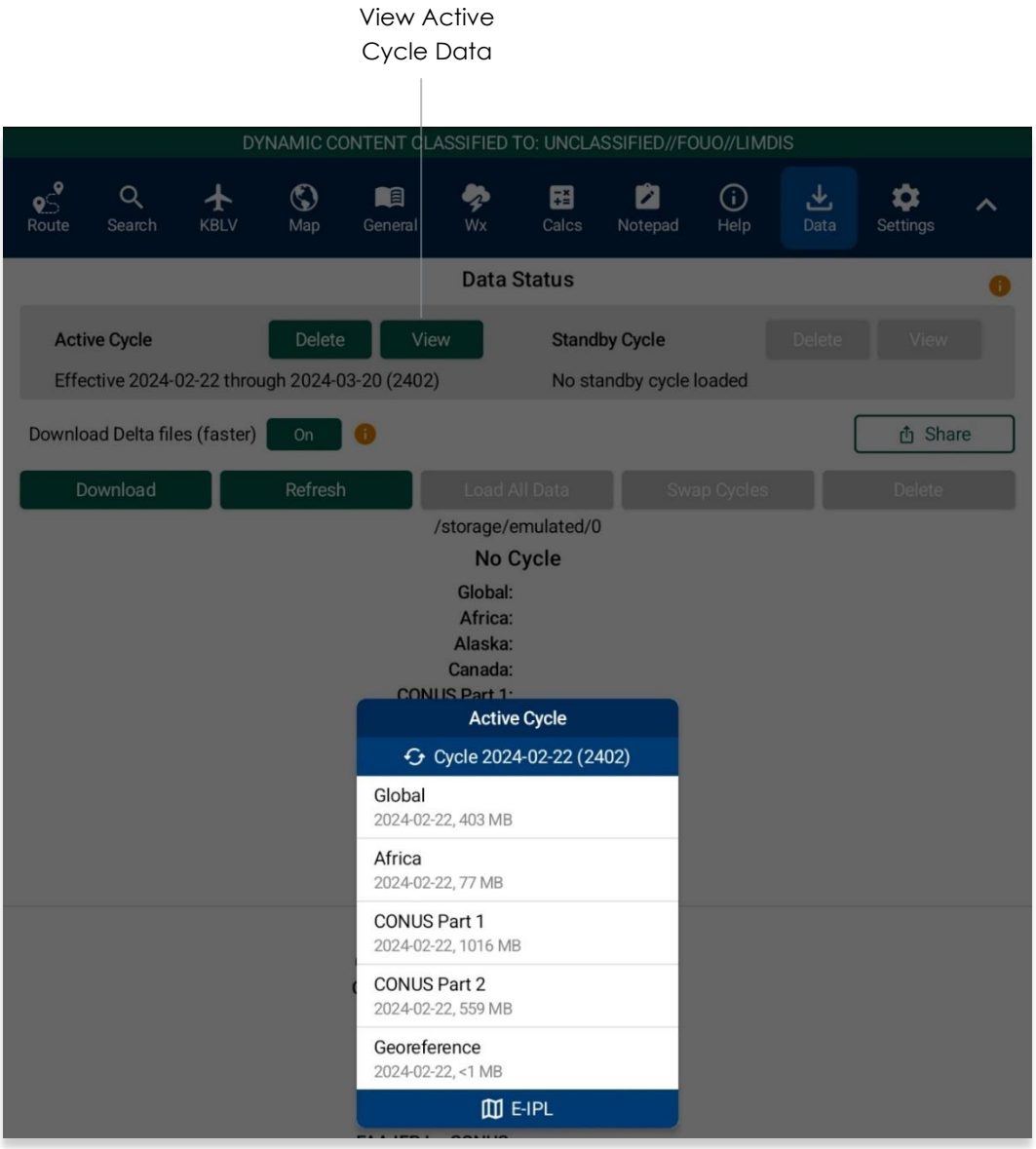
Users can load and manage two data cycles, which are stored in Active Cycle and Standby Cycle. Any sideloaded or downloaded data will only become available once it's activated by moving the data onto Active Cycle.

1. Tap **Data** on the ***Main Menu***. The Data Status screen will display.
2. Tap **Download** to select data that you wish to have in the device. Refer to Section 9 for additional information. A successful download will display **Found** beside the respective region and chart types.



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

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



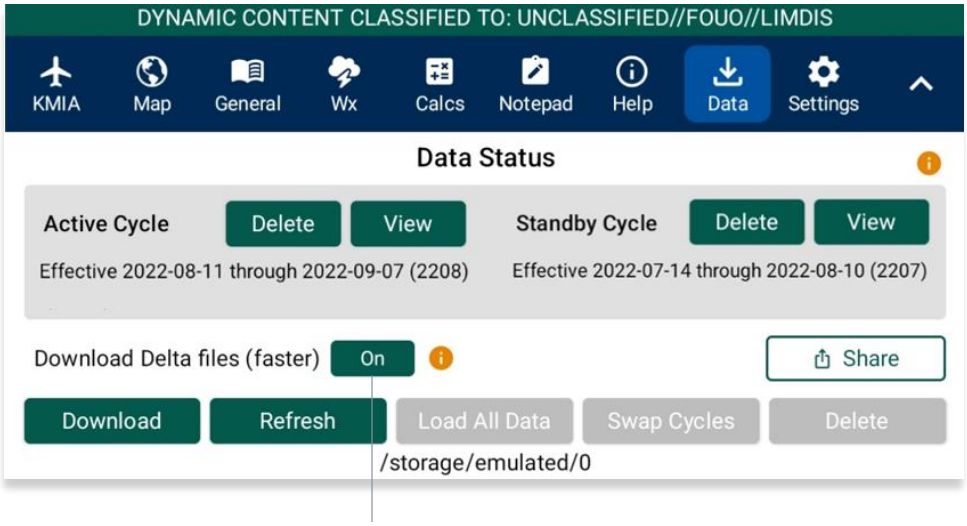
12.3 Delta Files

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

Download Delta Files (Faster)

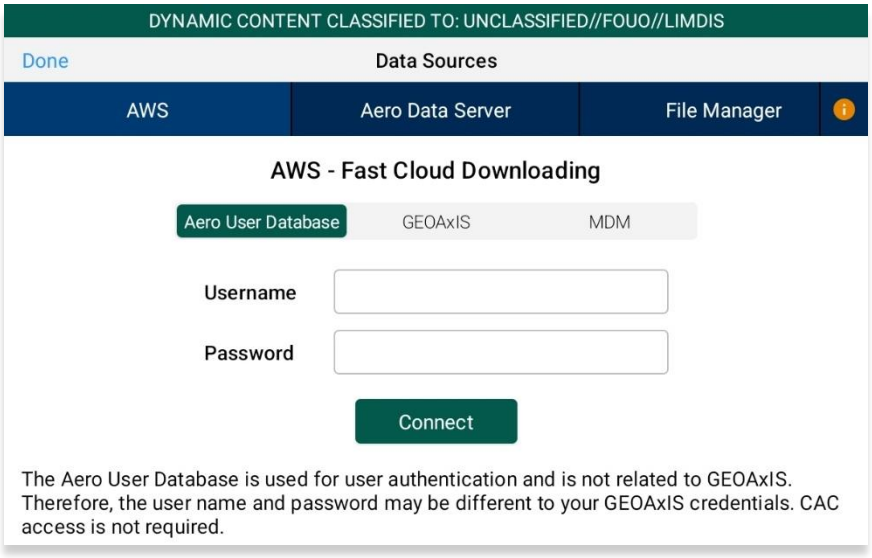
Deltas are defined as the core data changes between cycles. Instead of downloading a full cycle, users have the option to download the changes and apply them to a previous cycle. This results in smaller file sizes reducing the download time. To download Delta files, the previous data must be in Active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

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

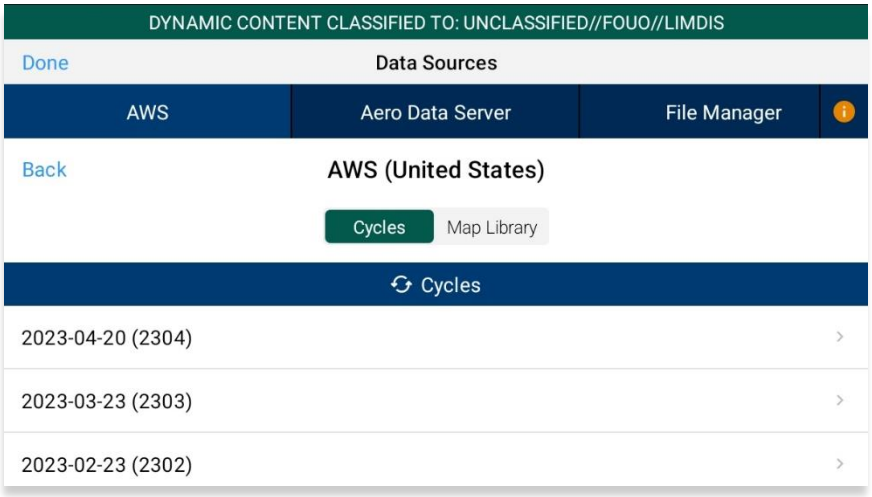


Download Delta files (faster) enabled

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

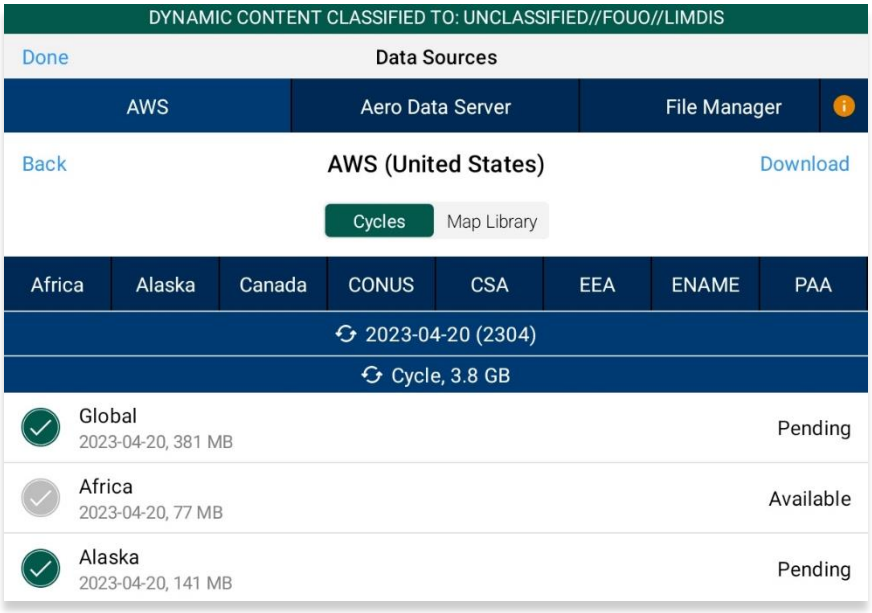


5. Users will be redirected to the Data Cycle Download screen. Users are provided with options to download Cycles or Map Library. Select **Cycles**.

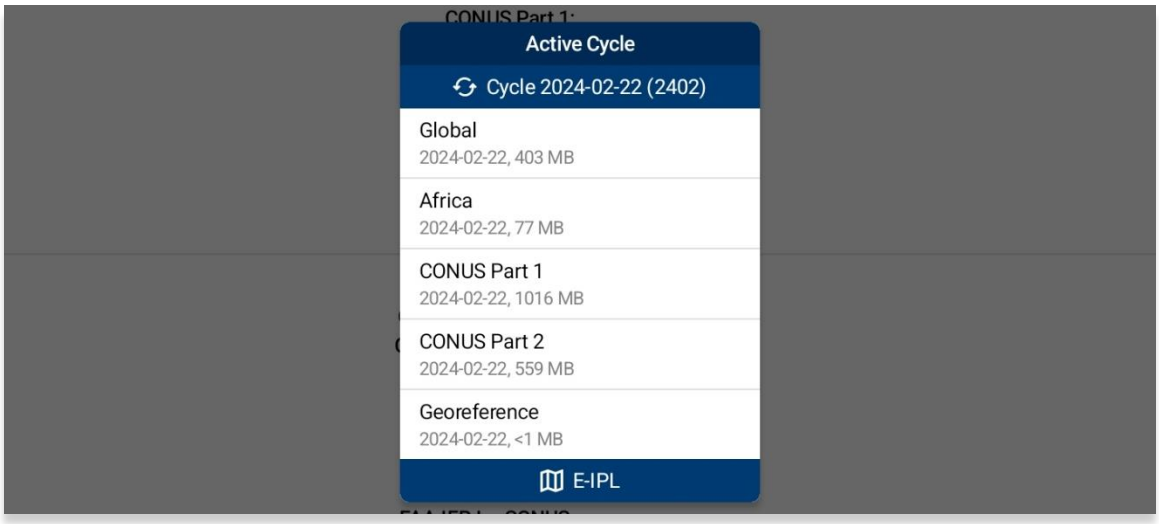


6. Available data pertaining to that cycle will be displayed. Select individual data files or select regional Easy Buttons for faster data selection.
7. Tap **Download** once desired data files have been selected.

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



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

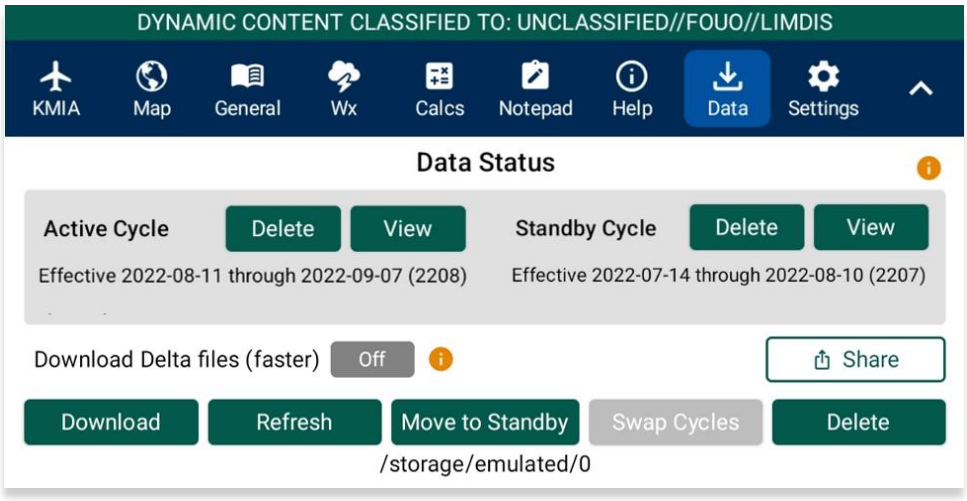


NOTE: A warning will display as users attempt to load Delta files onto Standby Cycle while **Download Delta files (faster)** is enabled. Selecting **Load Delta files** from the warning enables users to move Delta files to Standby Cycle.

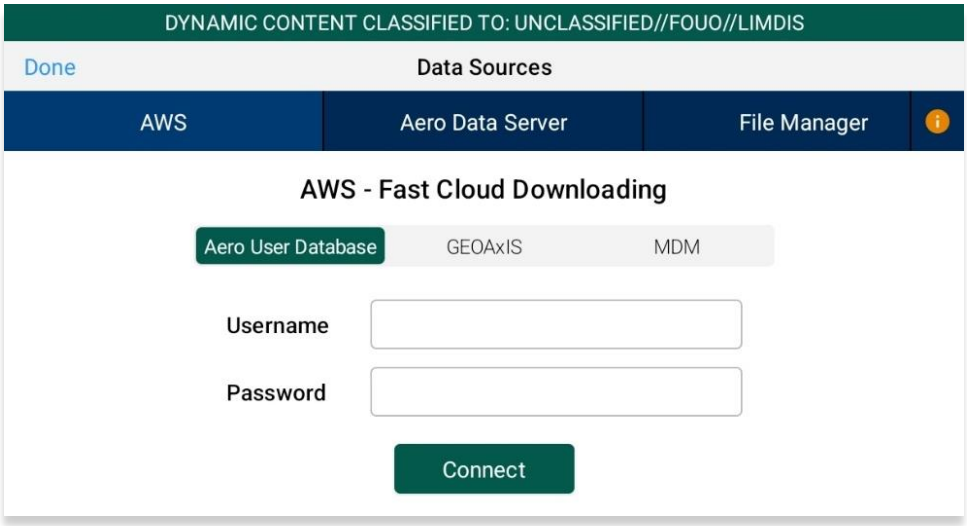
Download Compatible Files

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

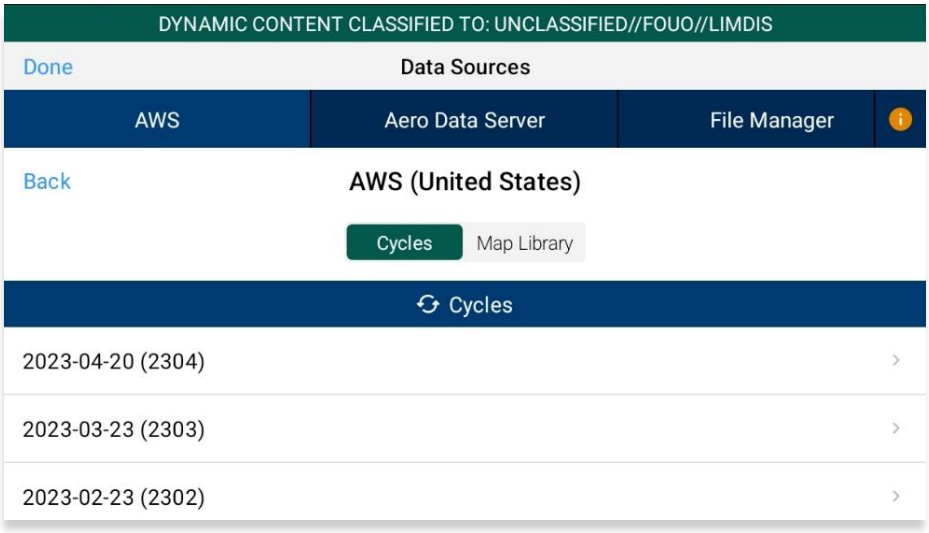
1. Tap **Data** on the ***Main Menu***.
2. Ensure that the Download Delta files (faster) option is disabled. Tap **Download**.



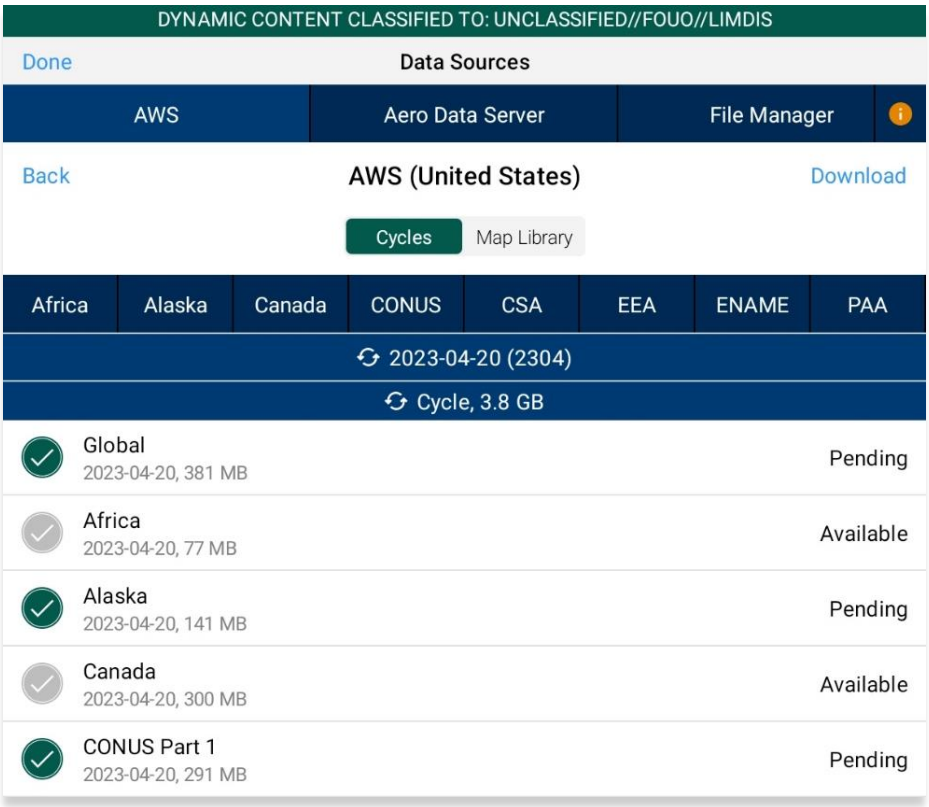
3. Log in to AWS using Aero User Database (AUD) or GEOAxIS credentials, set up your device with Mobile Device Management (MDM), or select Aero Data Server.



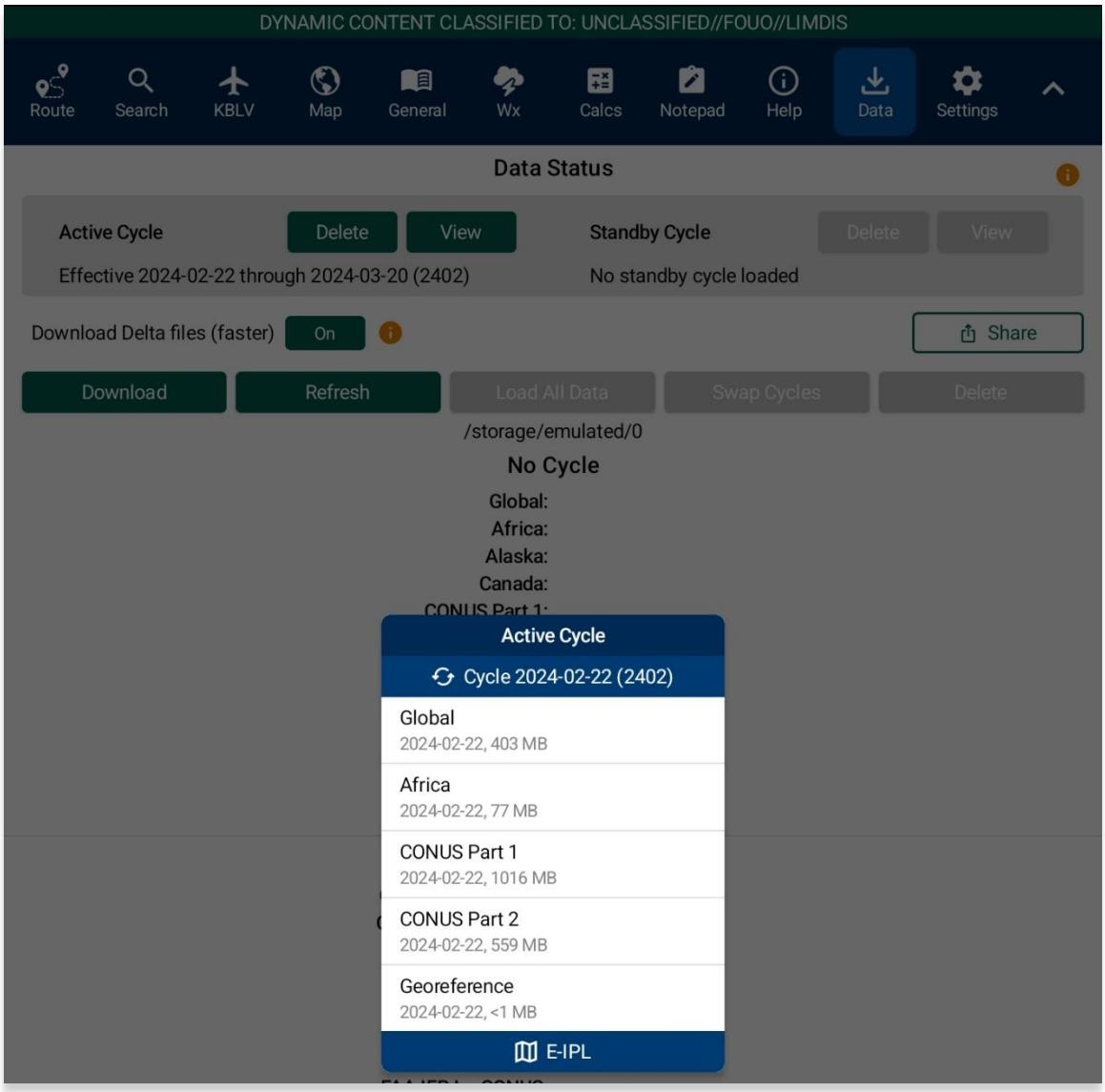
4. Users will be redirected to the Data Cycle Download screen. Users are provided with options to download Cycles or Map Library. Select **Cycles**.



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



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



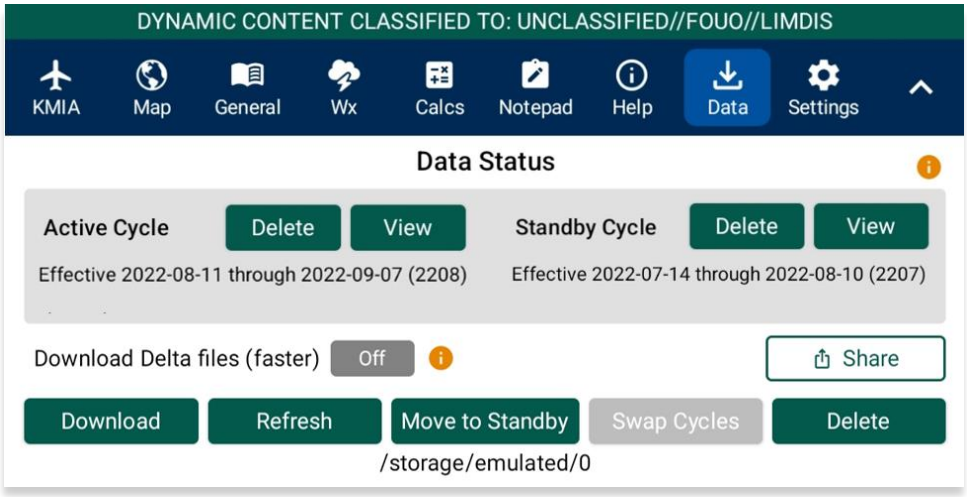
NOTE: A warning will display as users attempt to load Delta files onto Standby Cycle while **Download Delta files (faster)** is enabled. Selecting **Load Delta files** from the warning enables users to move Delta files to Standby Cycle.

12.4 Upload Data to ADS

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

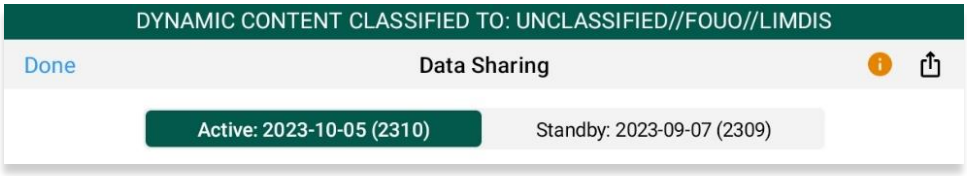
Ensure to set up ADS to allow data uploads. The steps in achieving this are as follows:

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

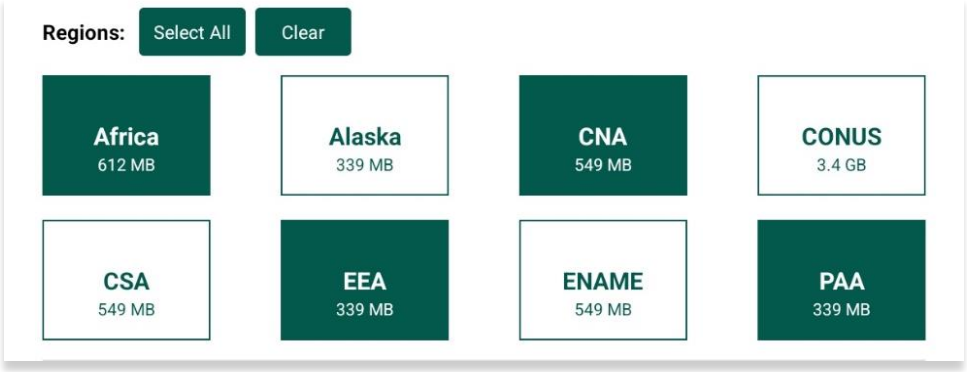


NOTE: The data displayed on the Data Sharing page corresponds to the downloaded data on your device.

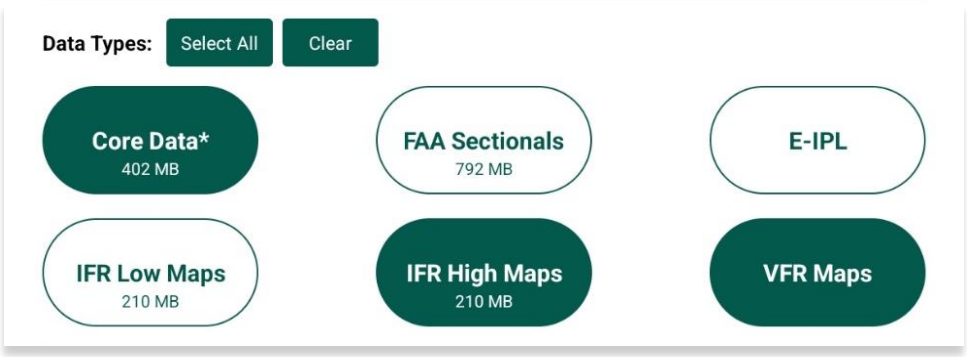
7. Select from **Active** or **Standby** cycle to share data.



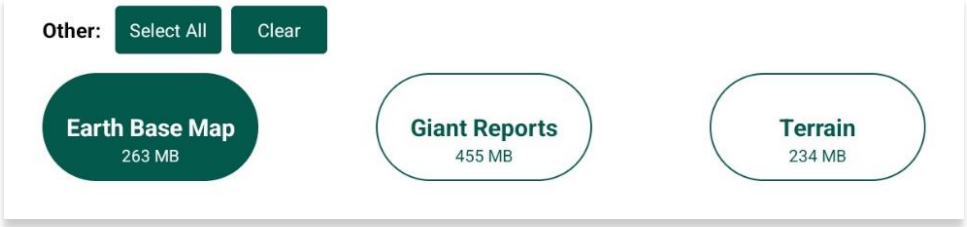
8. Select desired **Regions** to share.



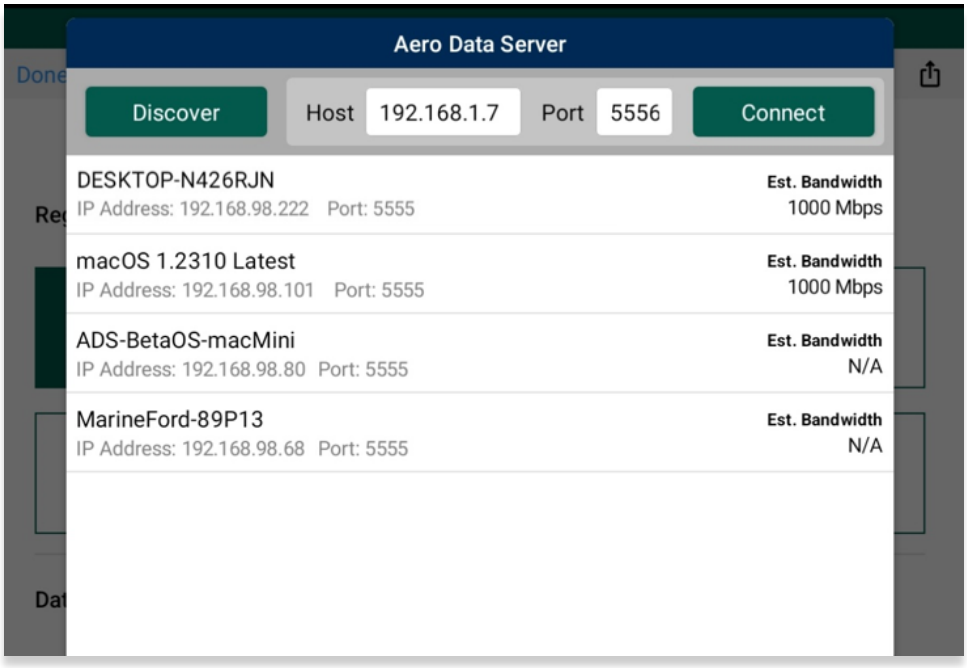
9. Select desired **data types** to share.



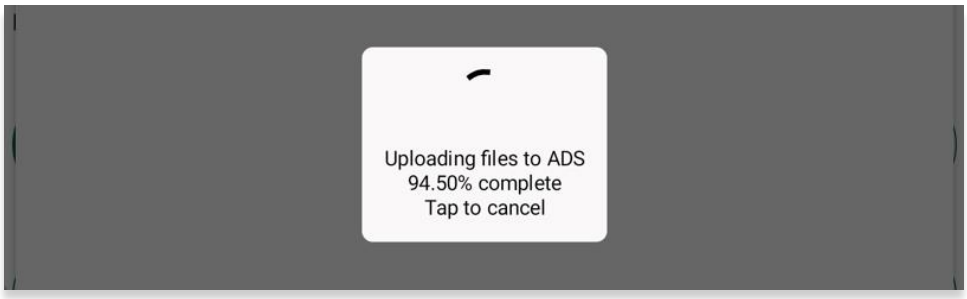
10. Select desired **additional files** to share.



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



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

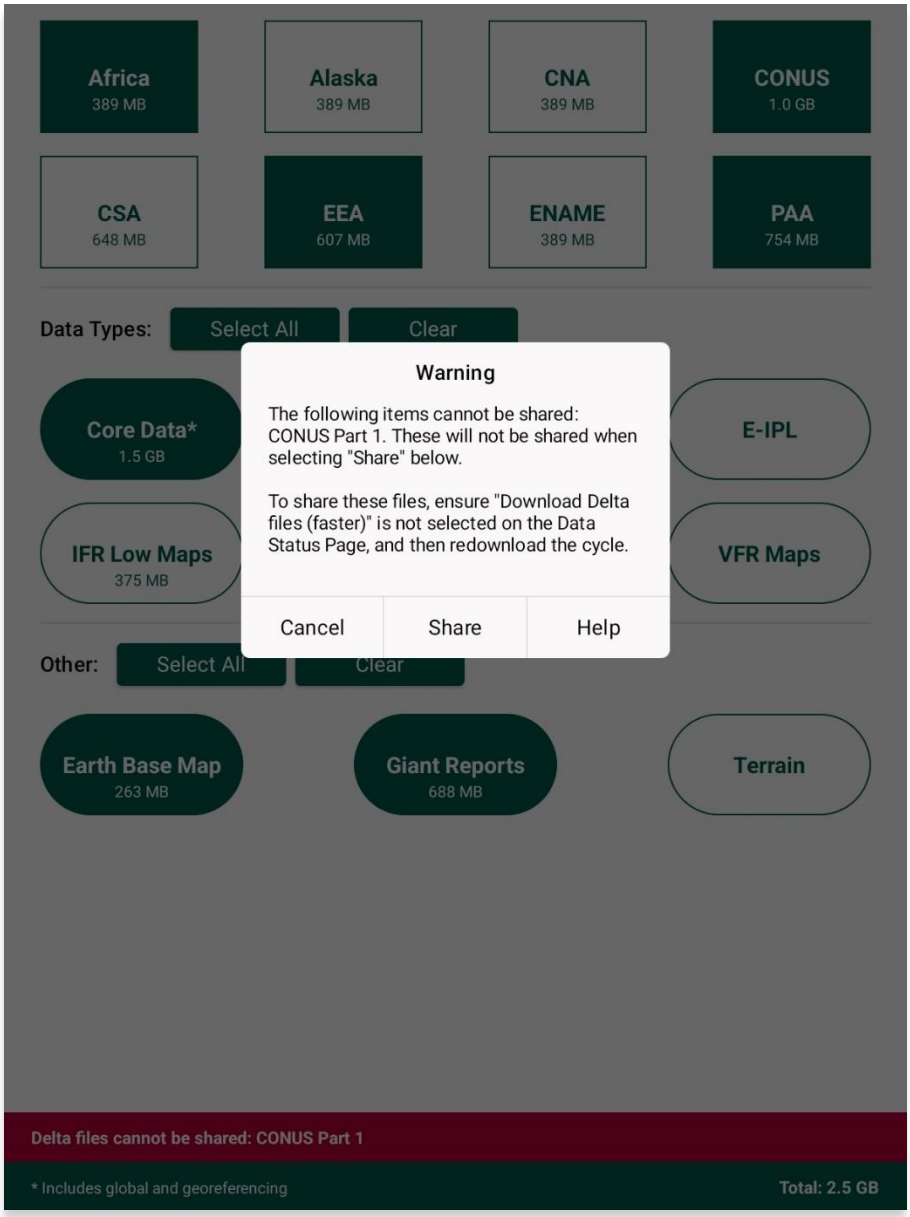


NOTE: Users can tap **Select All** to highlight all files or tap **Clear** to deselect all selected files.

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

Sharing Incompatible Files

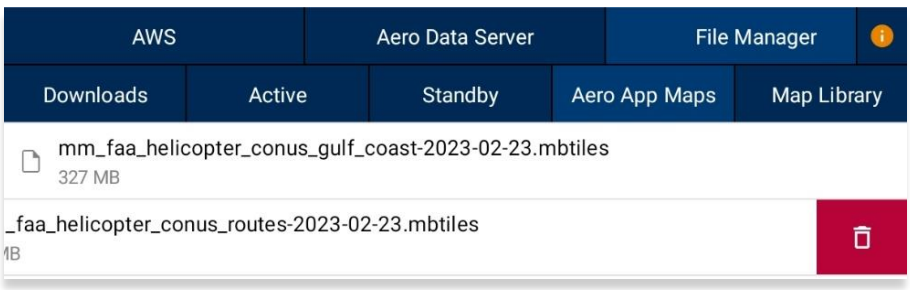
Attempting to share incompatible files such as Delta files will result in a warning being displayed. When users select files containing Delta files, a red banner will appear at the bottom of the Data Sharing screen listing the Delta files which cannot be shared. If users proceed to share files, a warning 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.



12.5 File Manager

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

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



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 Images – Provides access to real-time weather images, including RADAR, Satellite, Icing, Weather Forecast, AIRMETs and SIGMETs, Prog Charts, Convective SIGMETs and Outlooks, Current Convective Watches, and Alaska.
	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 Bluetooth, Data, 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.

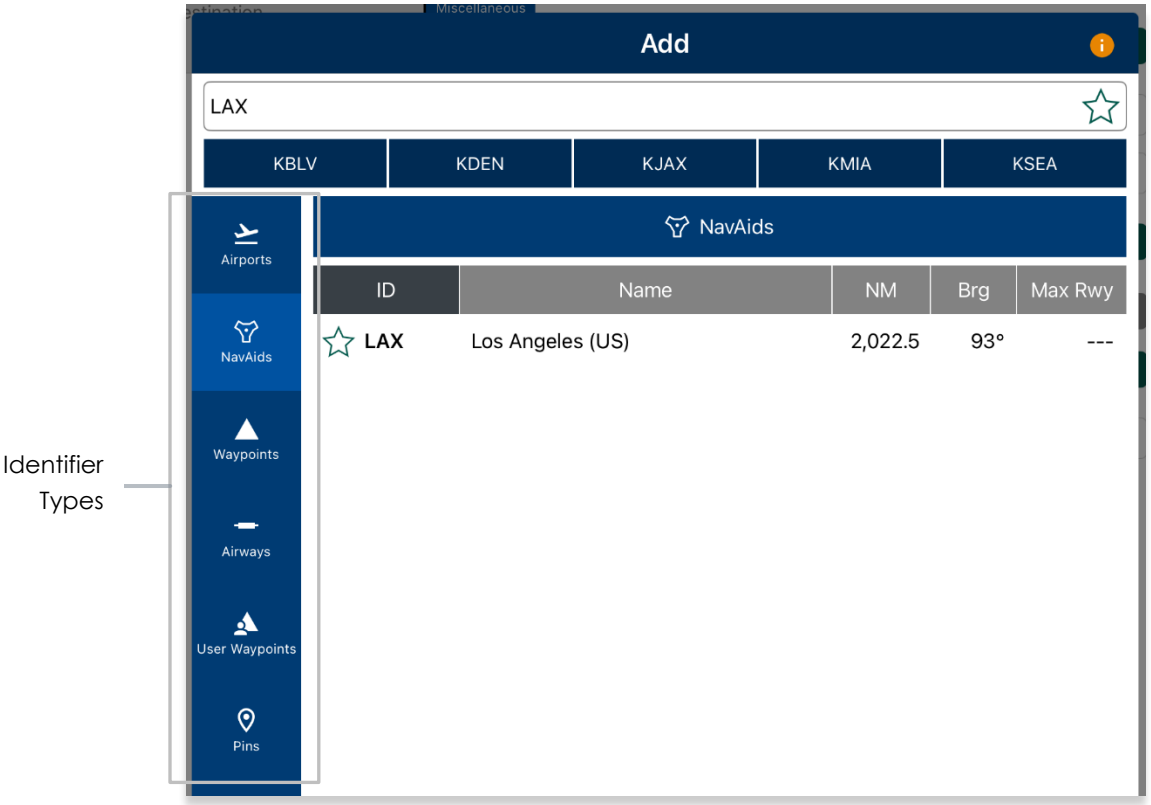
When points are added to the route, each point in the Route Panel will contain essential route information such as the identifier name, ETA/ETE, and distance and bearing. Aero App calculates the total distance of your route, which is displayed above the Route Panel options.

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 **Search** 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 that 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.

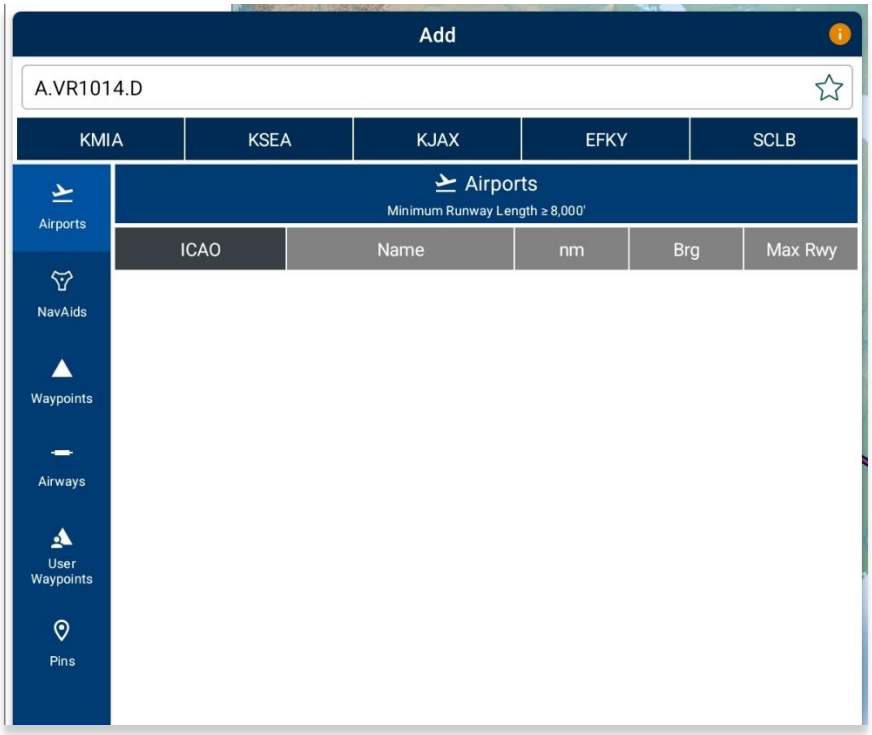
NOTE: To enter a route with multiple points, separate each identifier with a space. The points will be displayed in the order given. When adding multiple points to an existing route, they will be added at the end. This only applies when adding multiple points at once.

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.

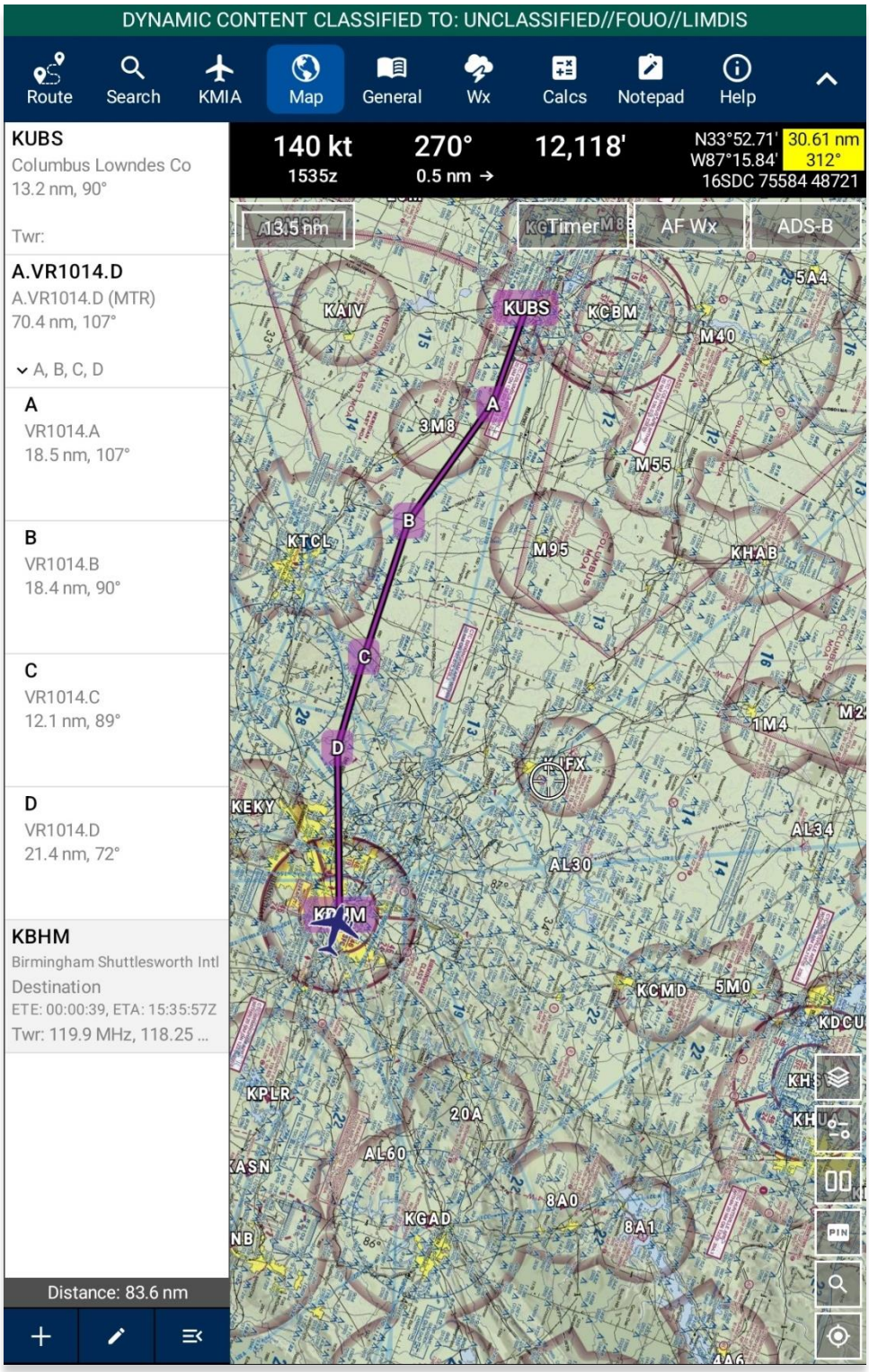
Add Military Training Routes (MTRs) to Route

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.



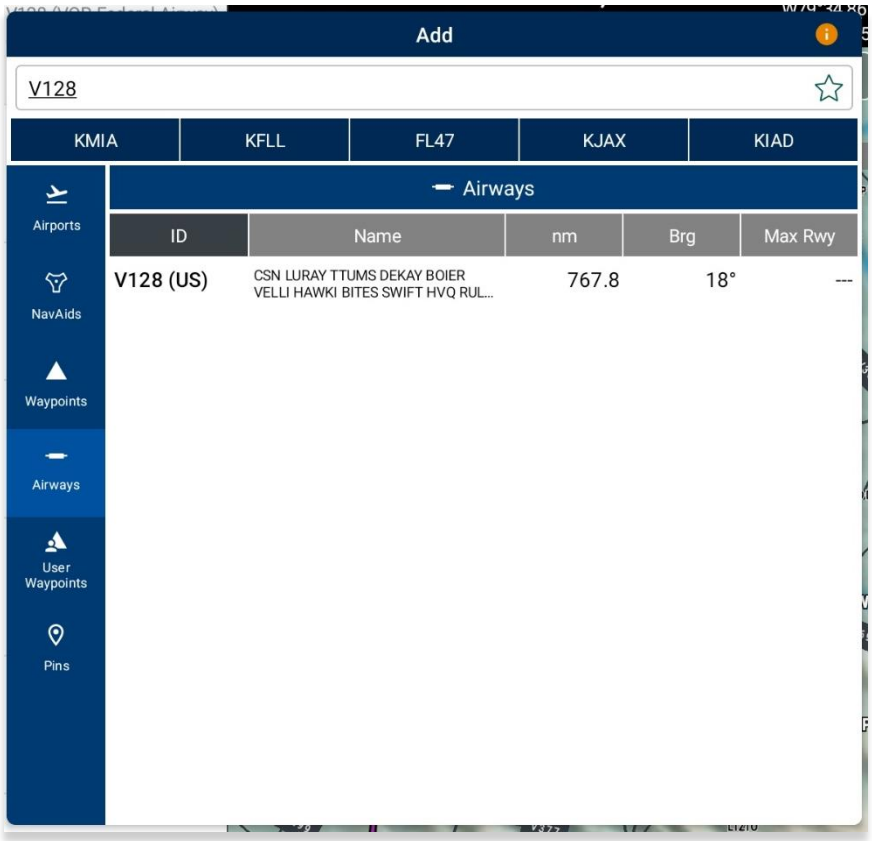
4. The MTR is added to the Route Panel and on the Map.



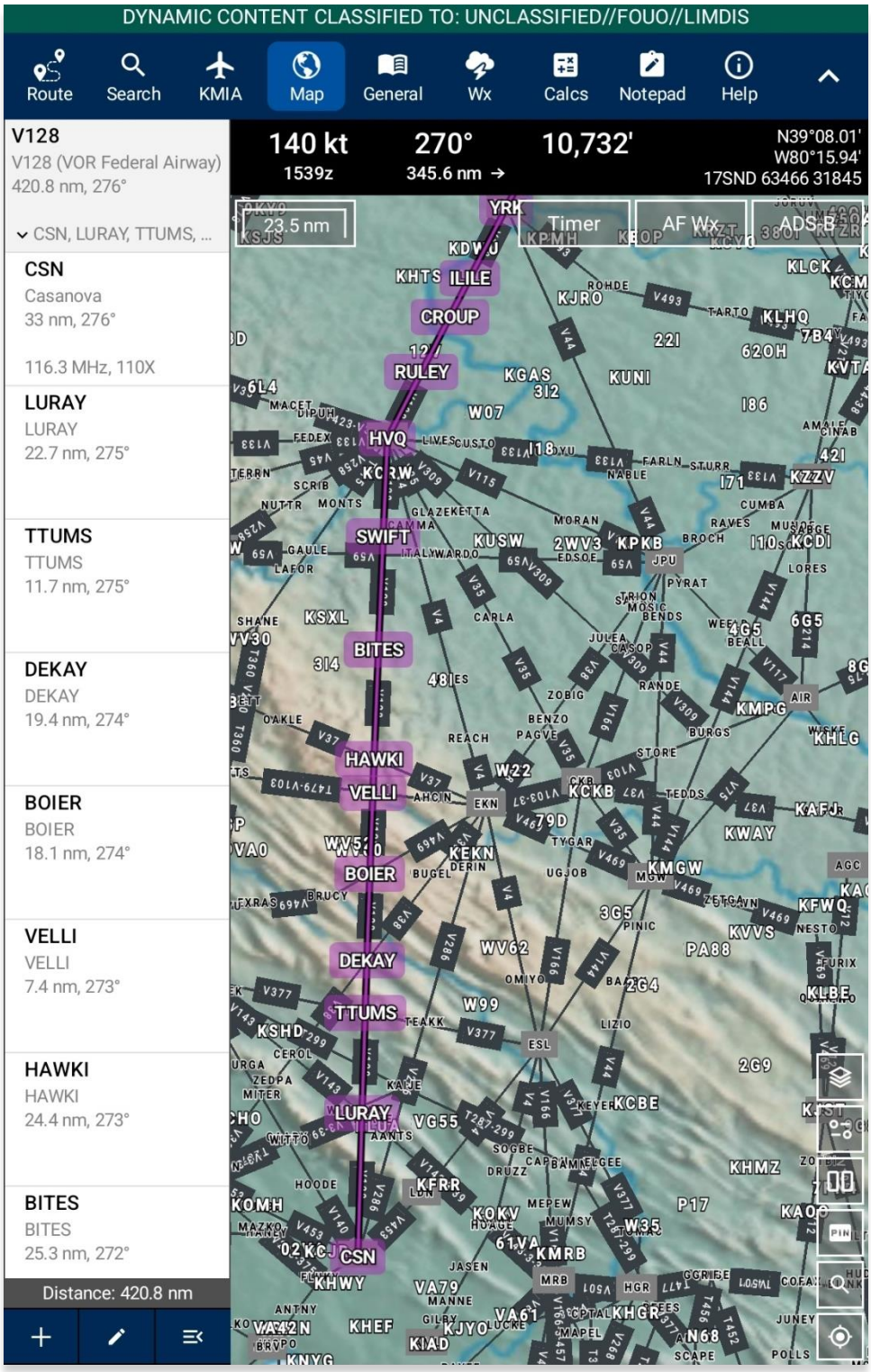
Add Airways to Route

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 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.



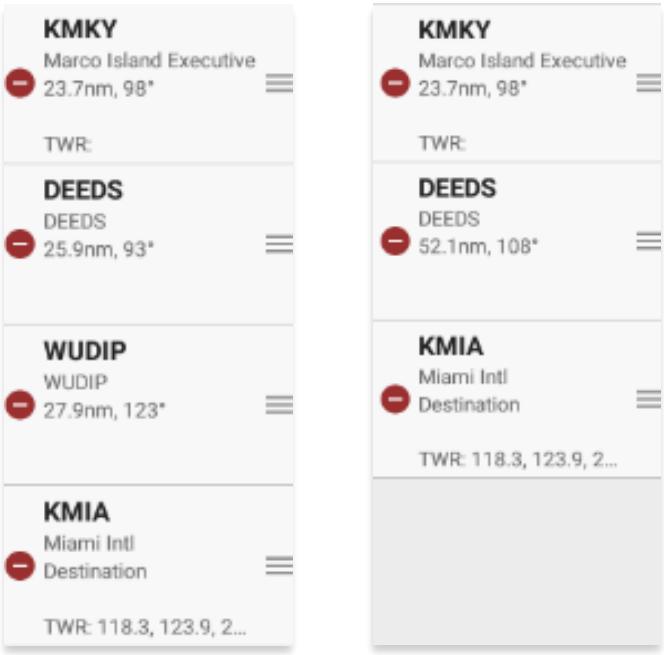
5. The Airway is added to the Route Panel and on the Map.



14.2 Edit

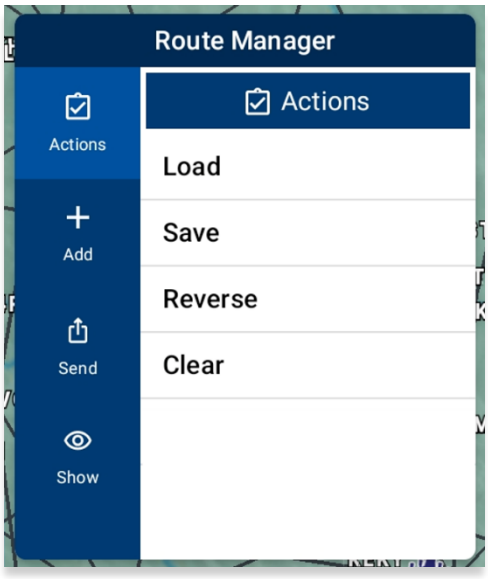
Aero App allows users to edit their flight route directly from the Route Panel. Users can reorder the points to their desired course or permanently delete a point from the route.

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

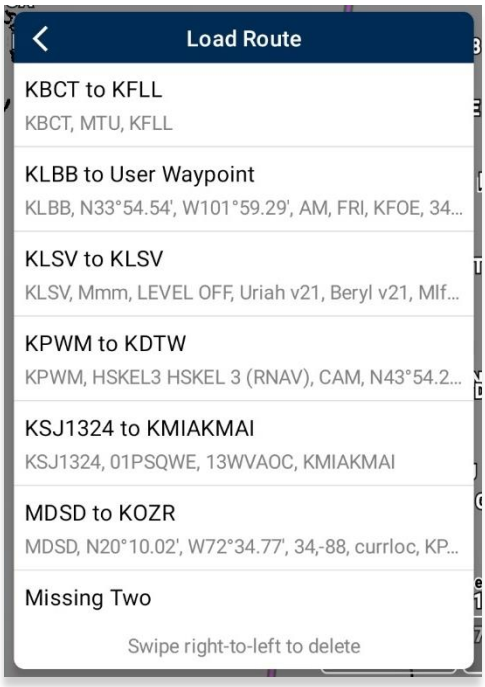
The Actions menu offers the following options and will be further elaborated in the sections below:

- 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.

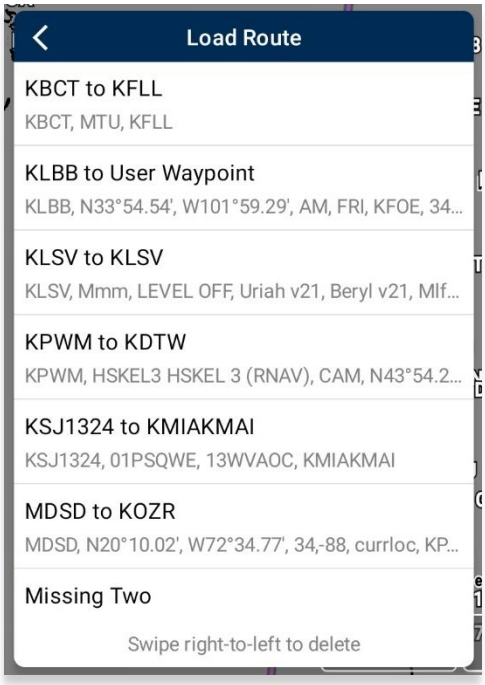
NOTE: Loading an empty route will result in Aero App clearing your current flight route.

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.

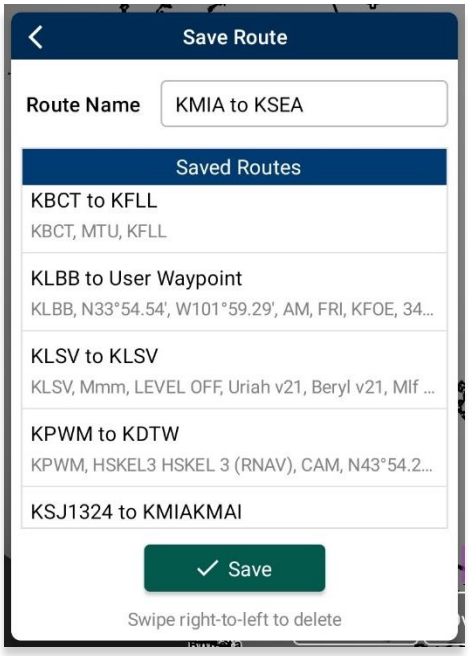


6. To delete a CRD file, swipe right-to-left to reveal the *Delete* button. Tap **Delete** and the route will be permanently removed.

14.3.1.2 Save Route

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

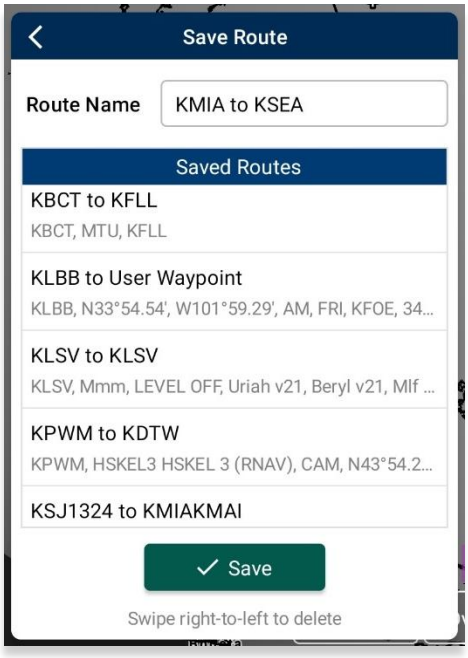
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Ensure that the route includes a complete route.
3. Tap **Route Manager** located at the bottom right of the Route Panel.
4. Select **Actions** from the side menu, if necessary.
5. Tap **Save**.
6. The Route Name will display a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

Save a CRD File

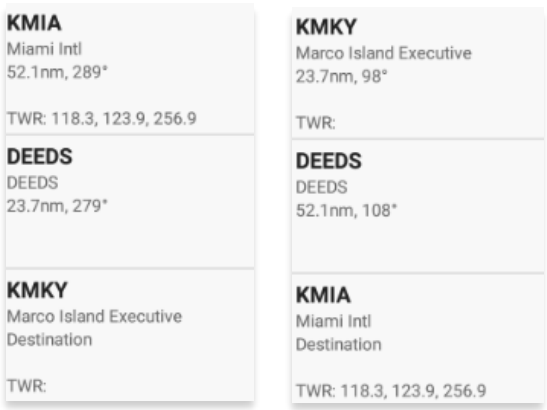
1. Tap **Route** on the ***Main Menu*.** The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Save**.
5. Tap in the *Route Name* text box and change the route's name to desired name.
6. Once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



14.3.1.3 Reverse Route

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

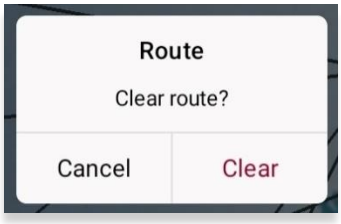
1. Tap **Route** on the ***Main Menu.*** The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Actions** from the side menu, if necessary.
4. Tap **Reverse**. The entire route is reversed.



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.

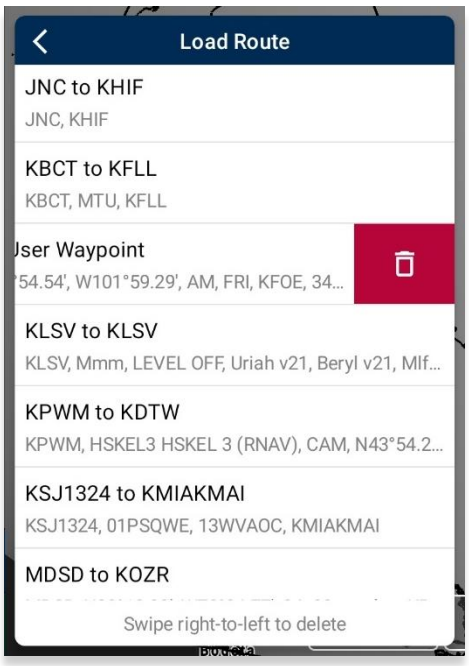


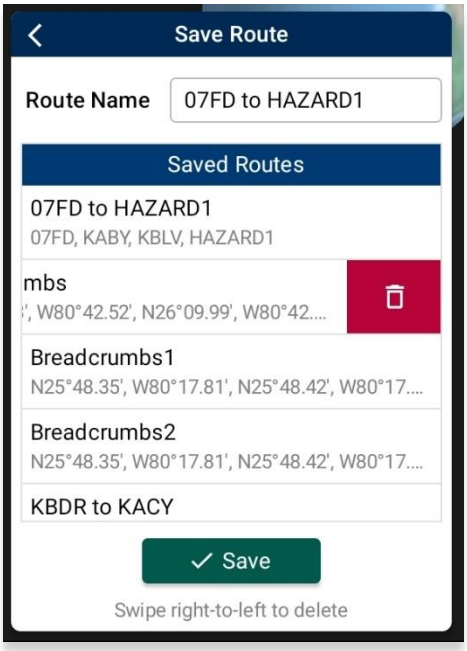
NOTE: Clearing a route clears the current route. It does not delete any saved routes.

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. Swipe right-to-left to reveal the *Delete* button. Tap **Delete** and the route will be permanently removed.





14.3.2 Add

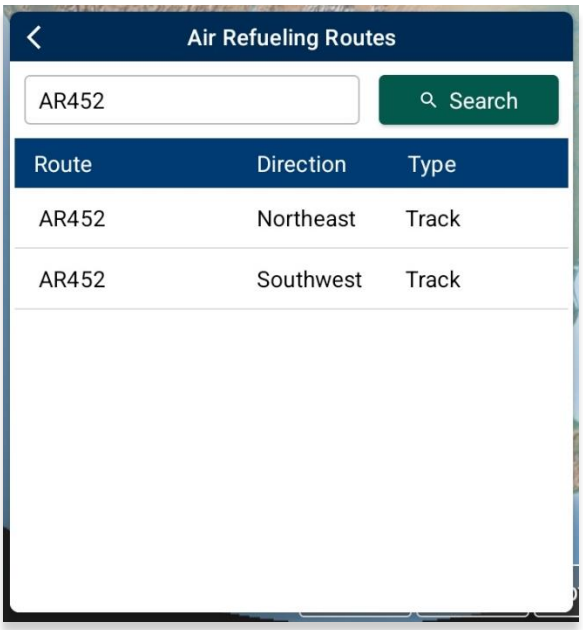
The Add menu offers the following features and will be further elaborated in the sections below:

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

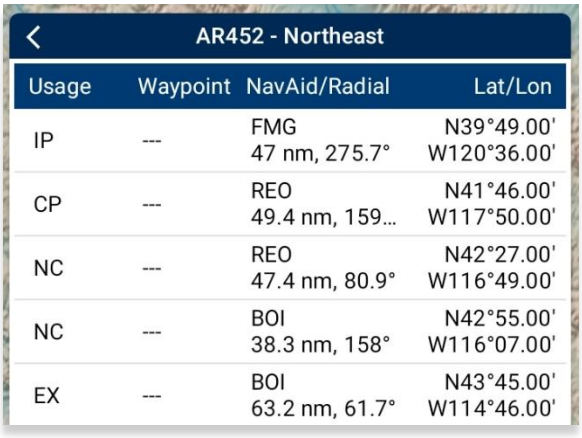
14.3.2.1 Add Air Refueling Route

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 display. 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 is entered. Alternatively, users can select a route from the routes that appear under the search box.



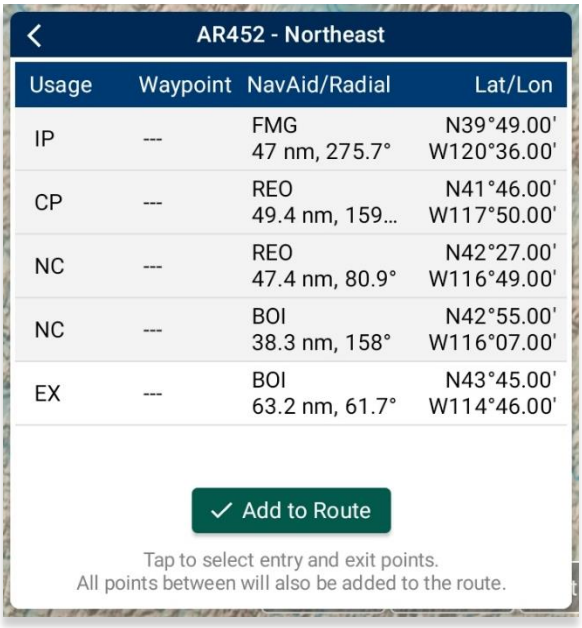
7. The points listed displays columns for Usage, Waypoint, NavAid/Radial and Lat/Lon.



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

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

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

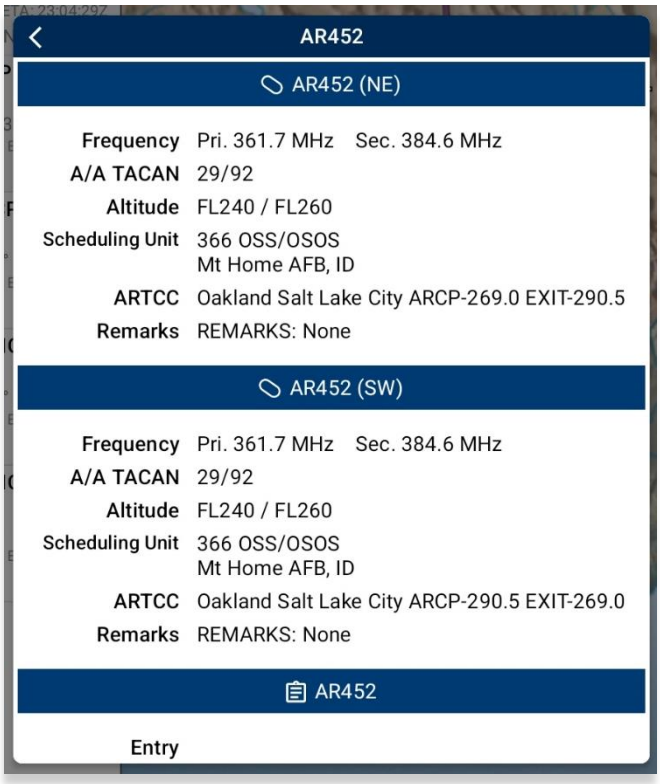


11. The points will populate the Route Panel and display on the Map.

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, Alternatives, Scheduling Unit, ARTCC, and its Remarks.

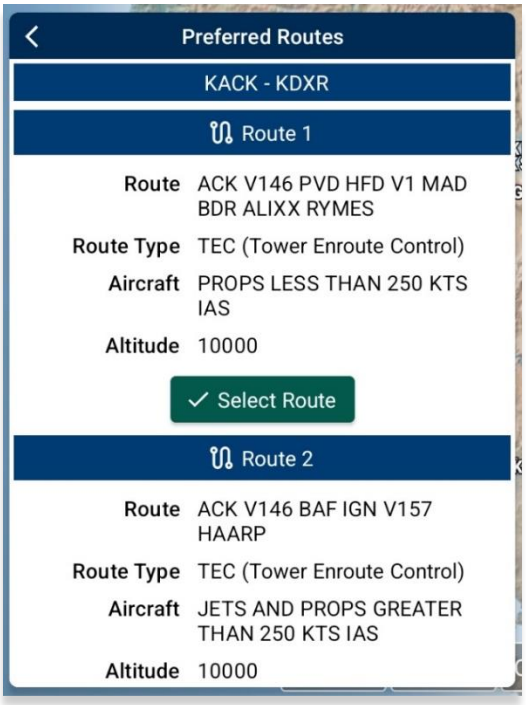
1. Navigate to the **Map** screen and tap on an air refueling route point.
2. The Map's popup menu will display. Select **Show** from the side menu.
3. Tap **Info and Wx**.
4. The Information view will display additional information such the refueling route's Frequency, A/A Tacan, Alternatives, Scheduling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



14.3.2.2 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. Ensure that a route is loaded in the Route Panel.
3. Tap **Route Manager** located at the bottom right of the Route Panel.
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.



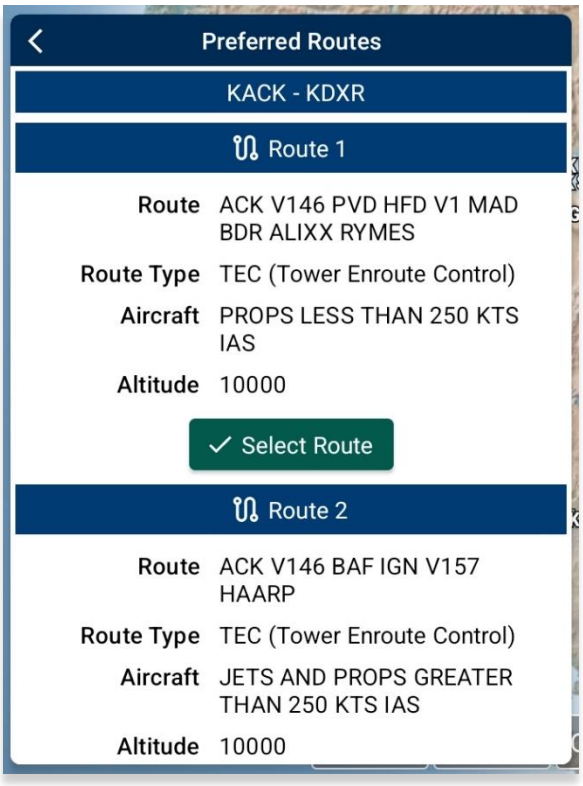
7. When selecting an alternative preferred route, a dialog box will appear. Tap **Use Preferred Route**. The alternative preferred route will replace the previously selected preferred route.
8. Tap **Cancel** to discard all changes.

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

Preferred Route with DP and STAR

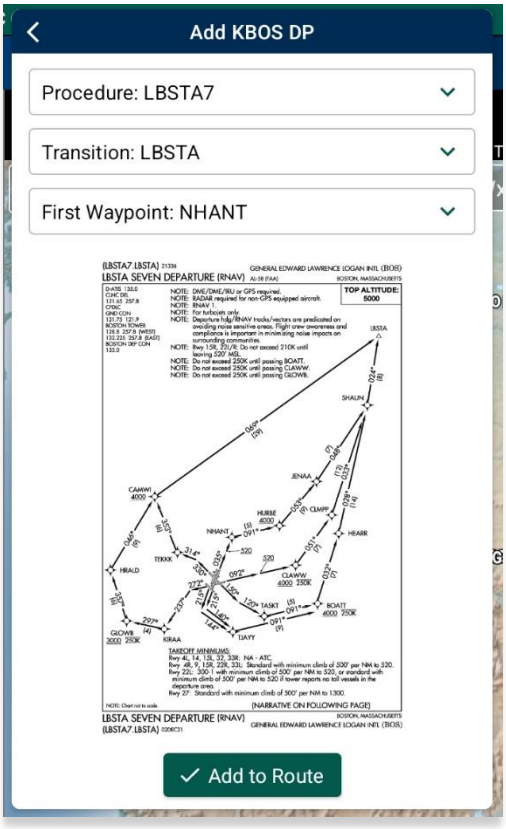
Aero App allows users to select a preferred route containing DPs or STARs, if applicable.

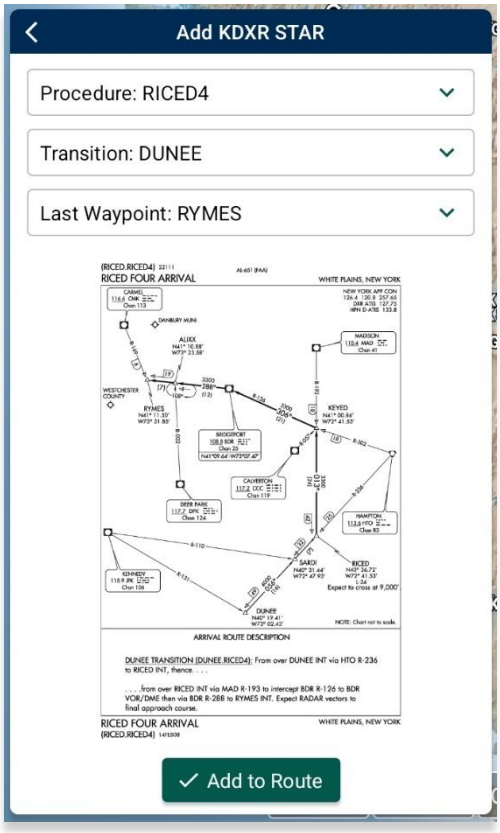
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Ensure that a route is loaded in the Route Panel**.**
3. Tap **Route Manager** located at the bottom right of the Route Panel.
4. Select **Add** from the side menu.
5. Tap **Preferred Route**.
6. A list of preferred routes will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



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

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





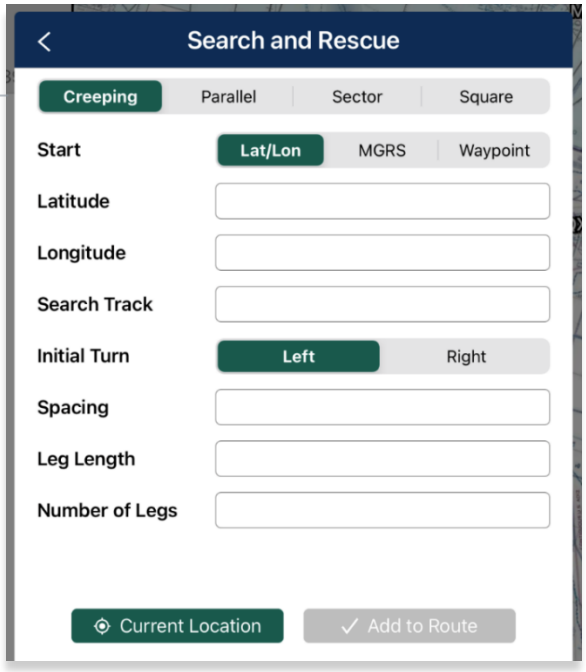
9. A Preferred Route dialog box will appear. Tap **Use Preferred Route** a new route will apply to your flight route.

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

14.3.2.3 Add Search and Rescue (SAR) Pattern

The Add Search and Rescue (SAR) Patterns 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.

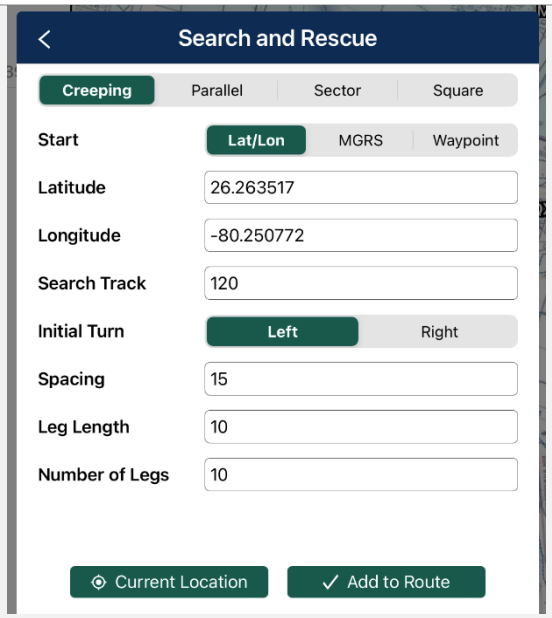
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Add** from the side menu.
4. Tap **SAR**.
5. Tap to select or slide the segmented control to **Creeping, Parallel, Sector,** or **Square**. Respective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



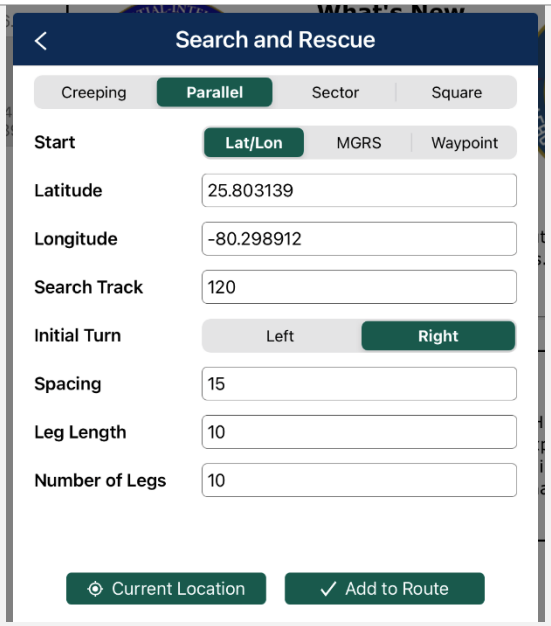
6. Tap to select or slide the segmented control to **Lat/Lon**, **MGRS**, or **Waypoint**.
7. Users can tap **Current Location** (GPS required) to set their current position as the coordinates or manually enter them in the Latitude and Longitude fields.
8. All fields are required; therefore, all fields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

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

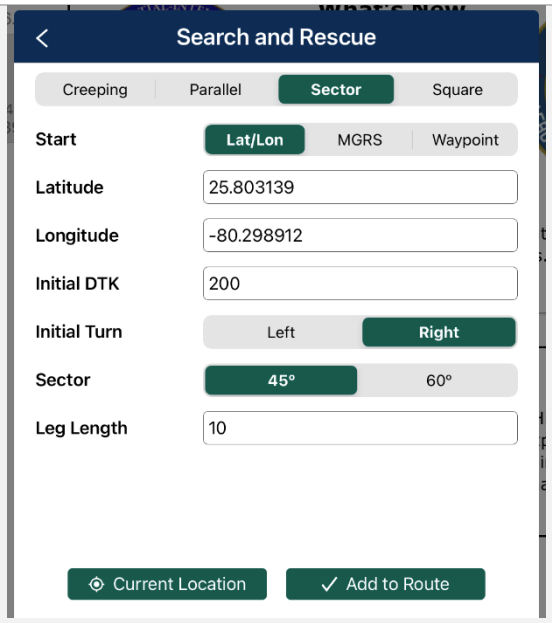
Creeping



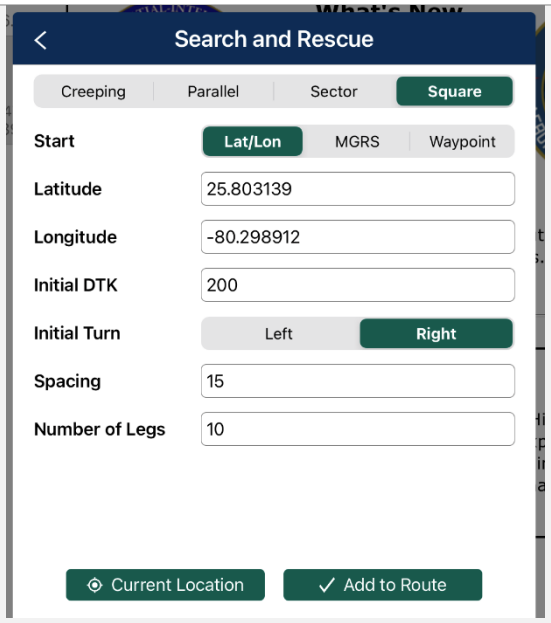
Parallel



Sector



Square



14.3.3 Send

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

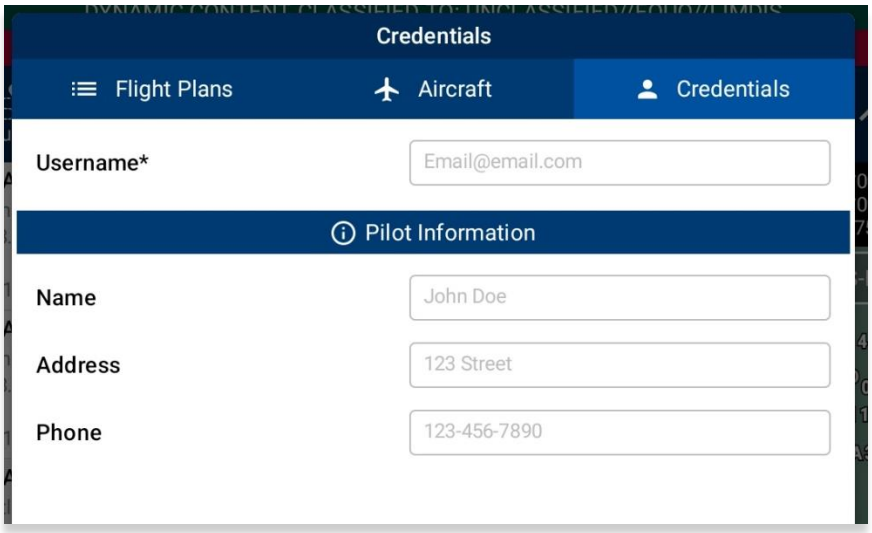
14.3.3.1 Flight Plans

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

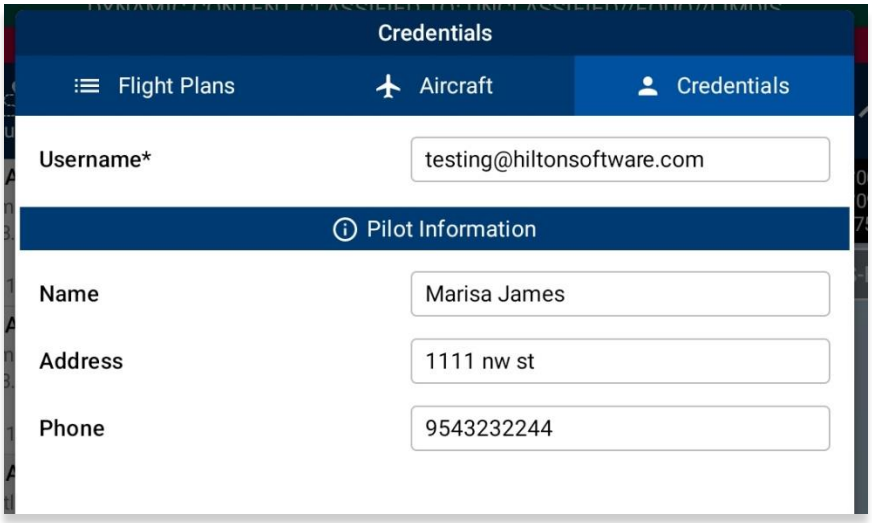
Credentials

Users must possess Flight Service credentials to file a flight plan. Users must log in to their Flight Service account prior to filing a flight plan. Refer to Section 5.3 for additional information.

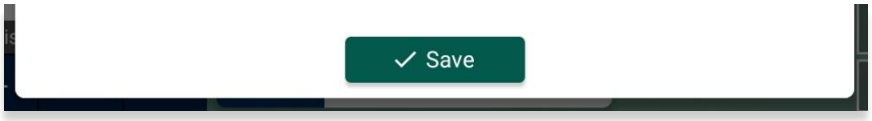
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Select **Credentials** from the navigational bar.
6.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



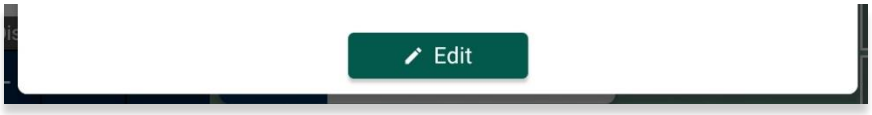
7. To associate your filings with your flight service account, enter your Flight Service username in the username text box.



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



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



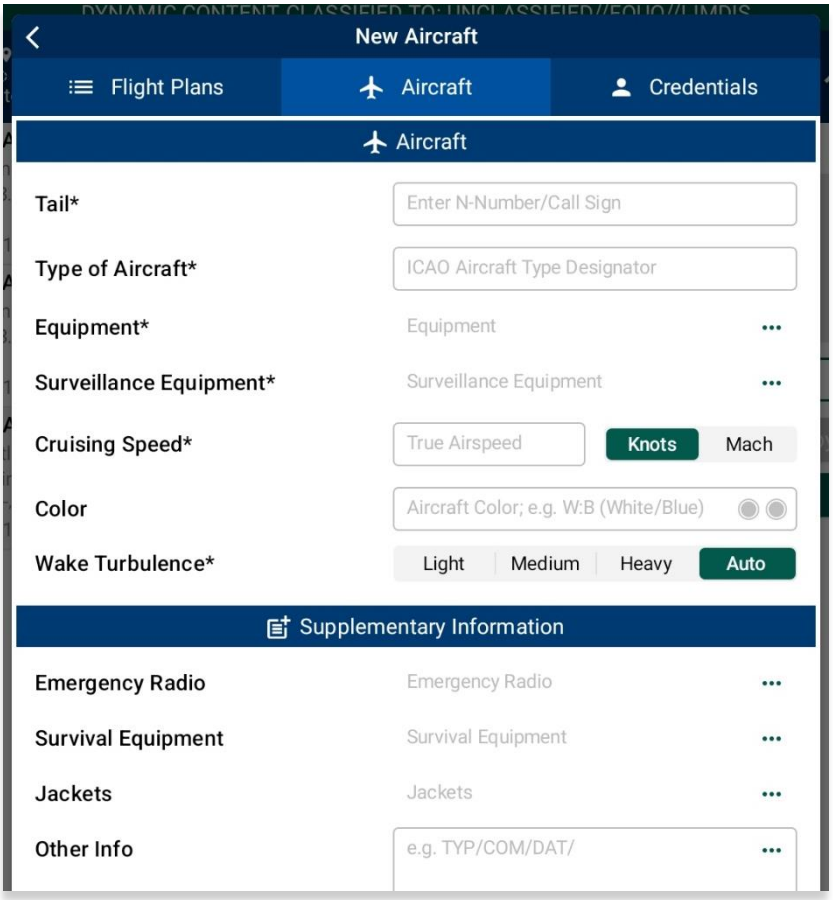
NOTE: Pilot information is required to file a flight plan. The information entered in the Pilot Information section will pre-populate on a new flight plan form.

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

New Aircraft

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

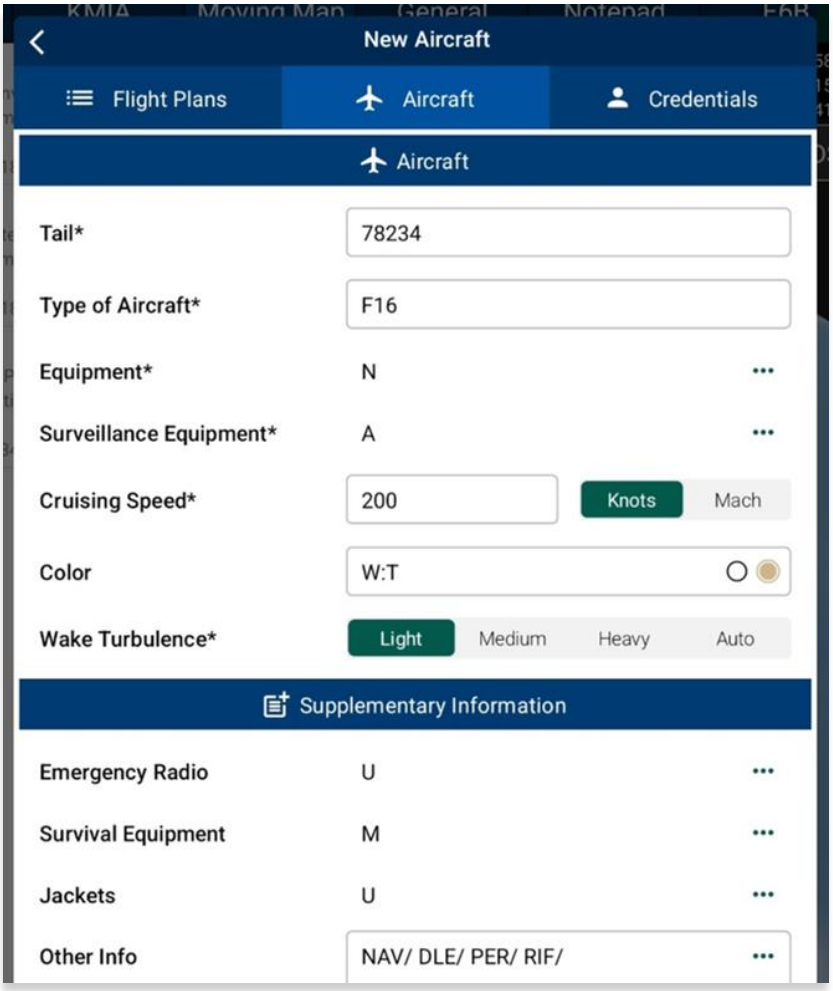
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Select **Aircraft** from the navigational bar.
6. From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



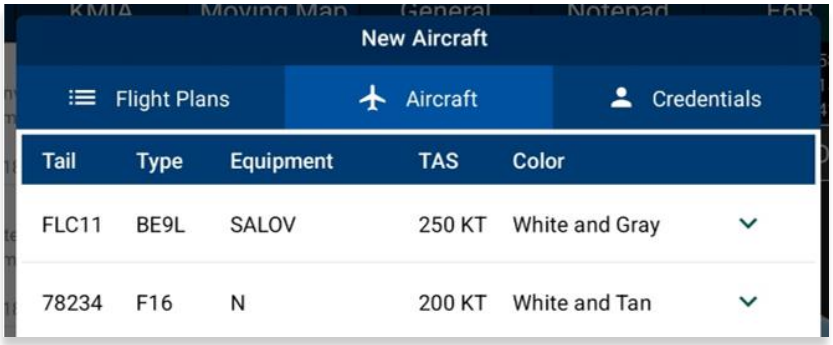
NOTE: Asterisks denote required fields.

NOTE: The tail length must be between two to seven characters. If the input is outside this range, an error message will be displayed.

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



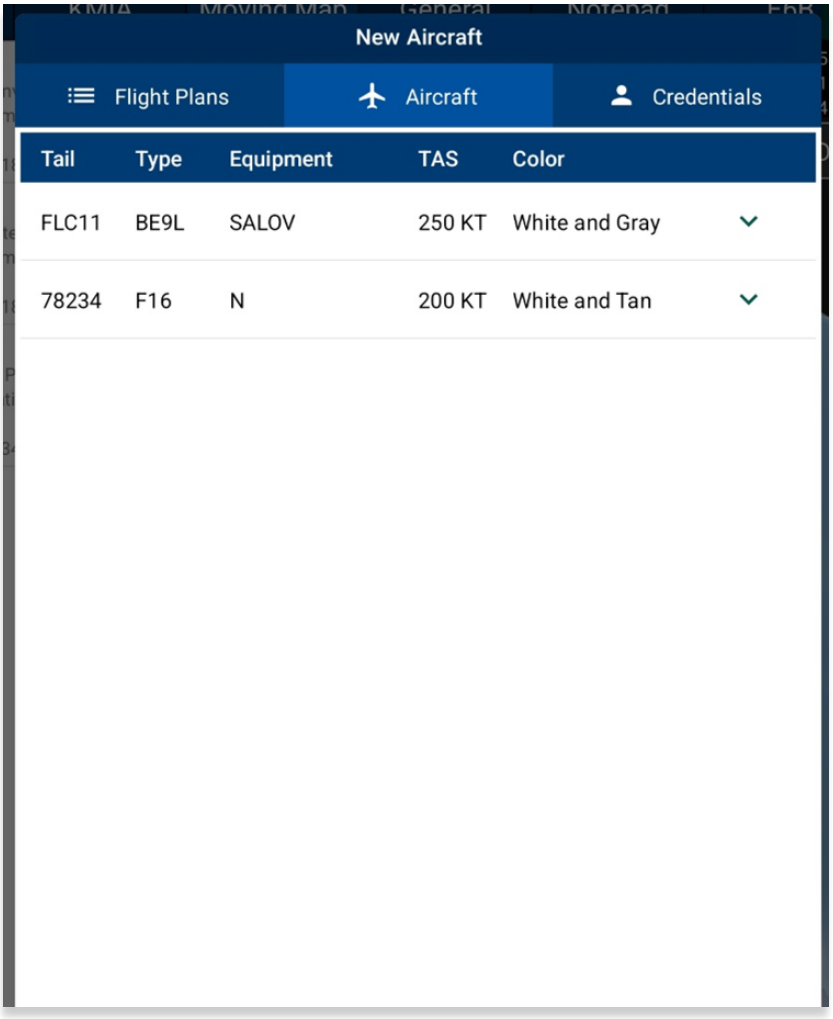
9. Your aircraft will be added to the Aircraft screen.



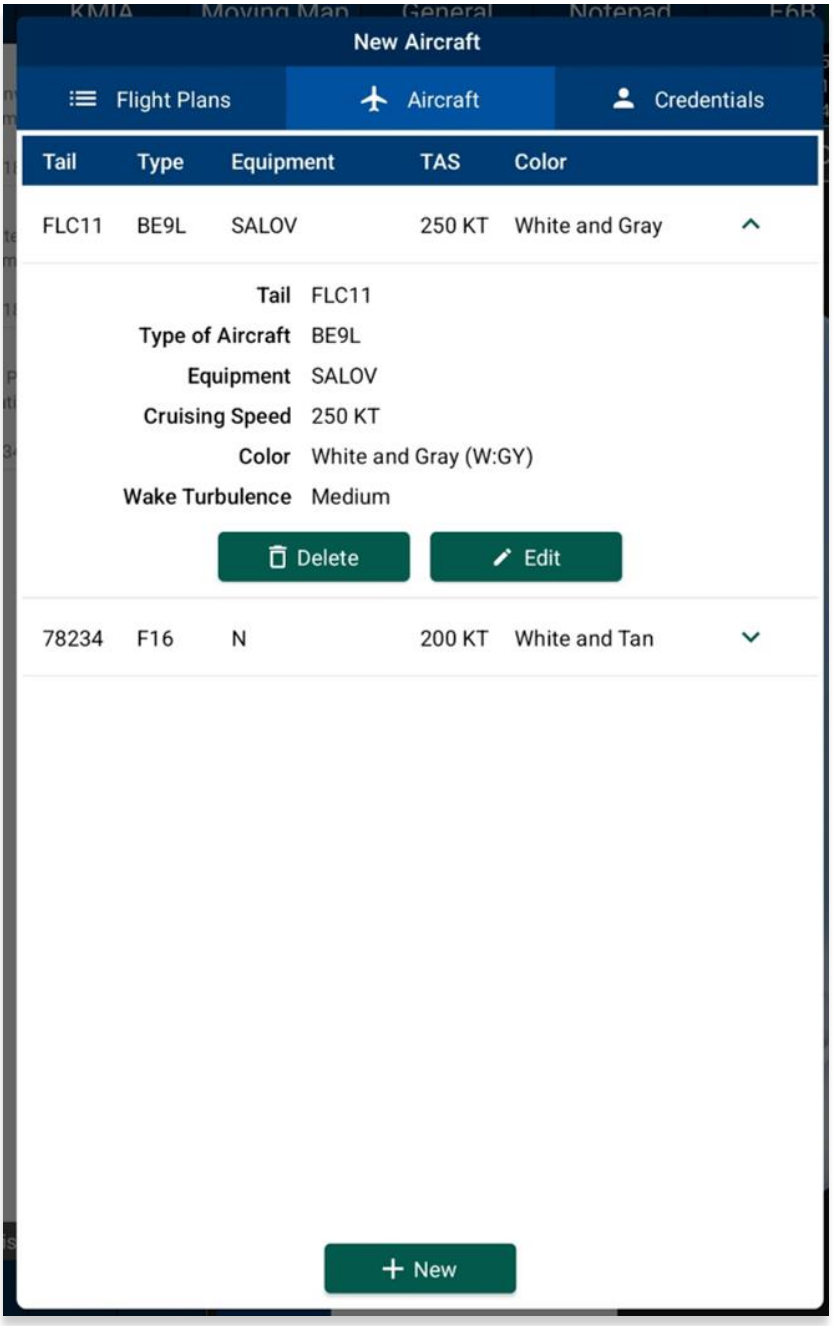
Aircraft

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

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



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

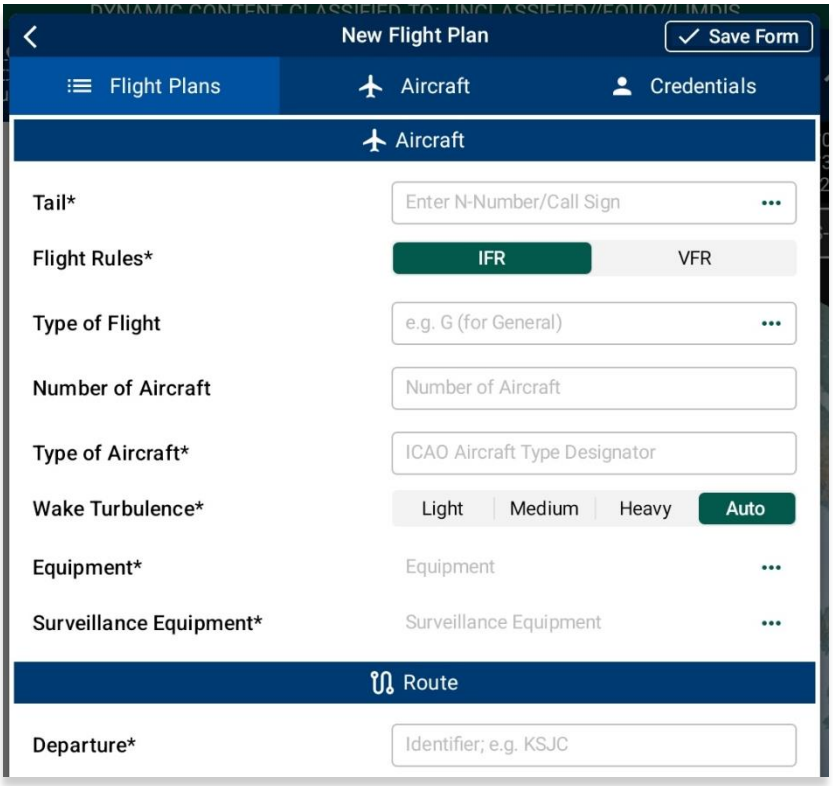


NOTE: Predefined aircraft, such as those obtained directly from the FAA, cannot be modified. Therefore, the **Delete** and **Edit** buttons will be disabled.

New Flight Plan

Users can file flight plans directly from Aero App.

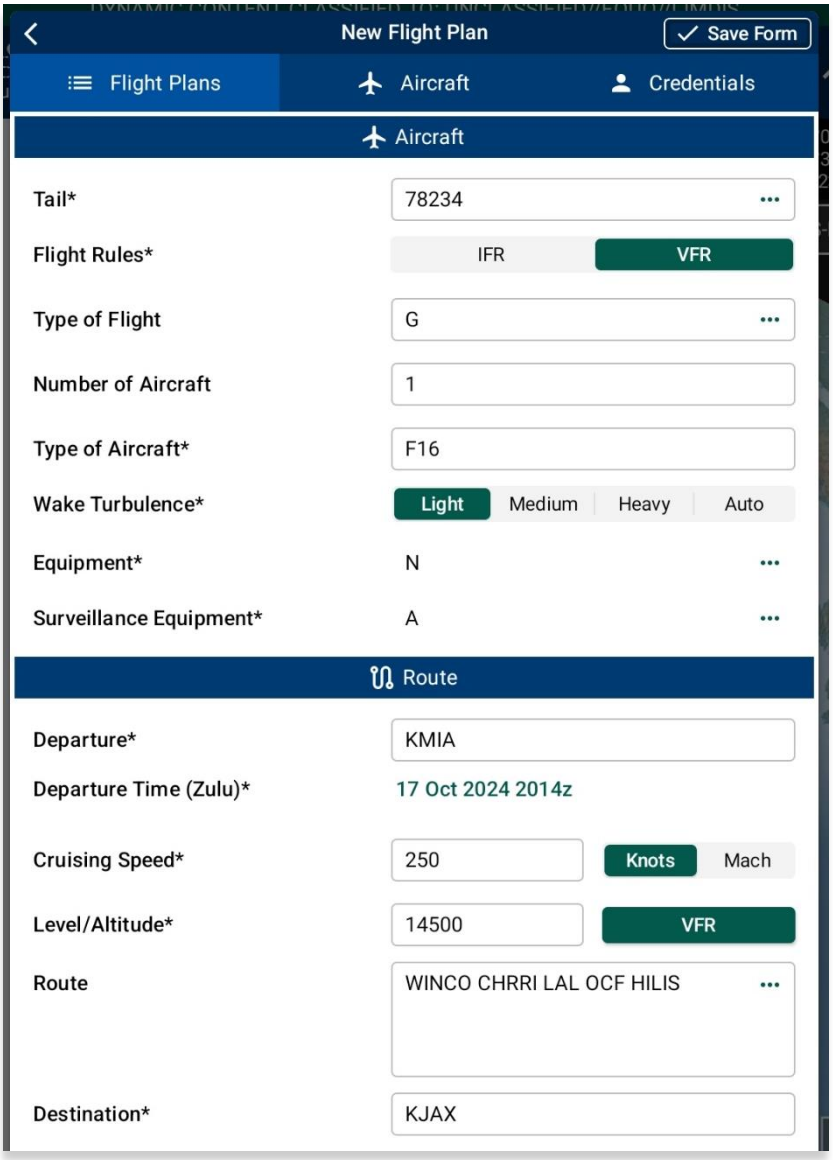
1. Tap **Route** on the ***Main Menu***. The Route Panel will expand.
2. Tap **Route Manager** located at the bottom right of the Route Panel.
3. Select **Send** from the side menu.
4. Tap **File Flight Plan**.
5. The Flight Plans view will appear. Tap **+ New** and the ***New Flight Plan*** form will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



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

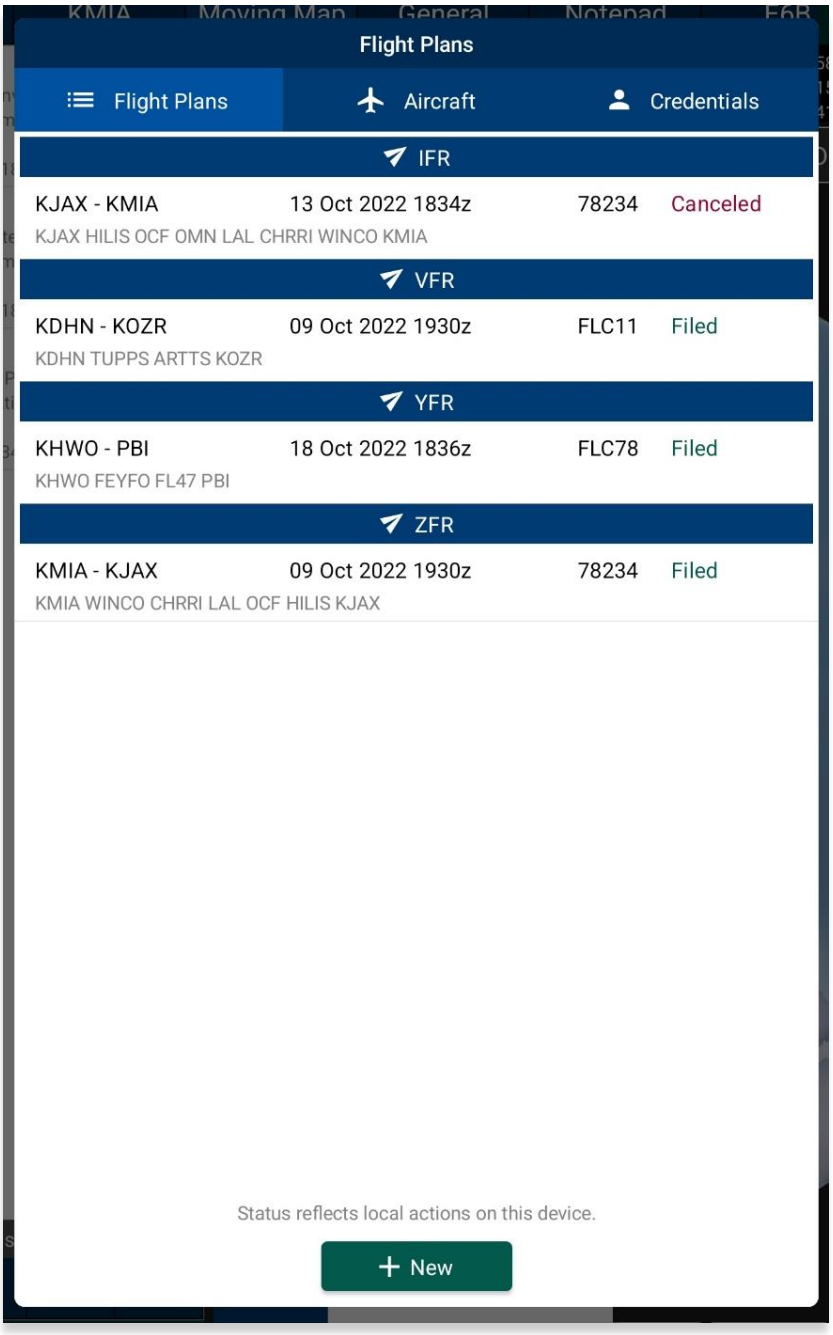
NOTE: Asterisks denote required field.

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



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

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

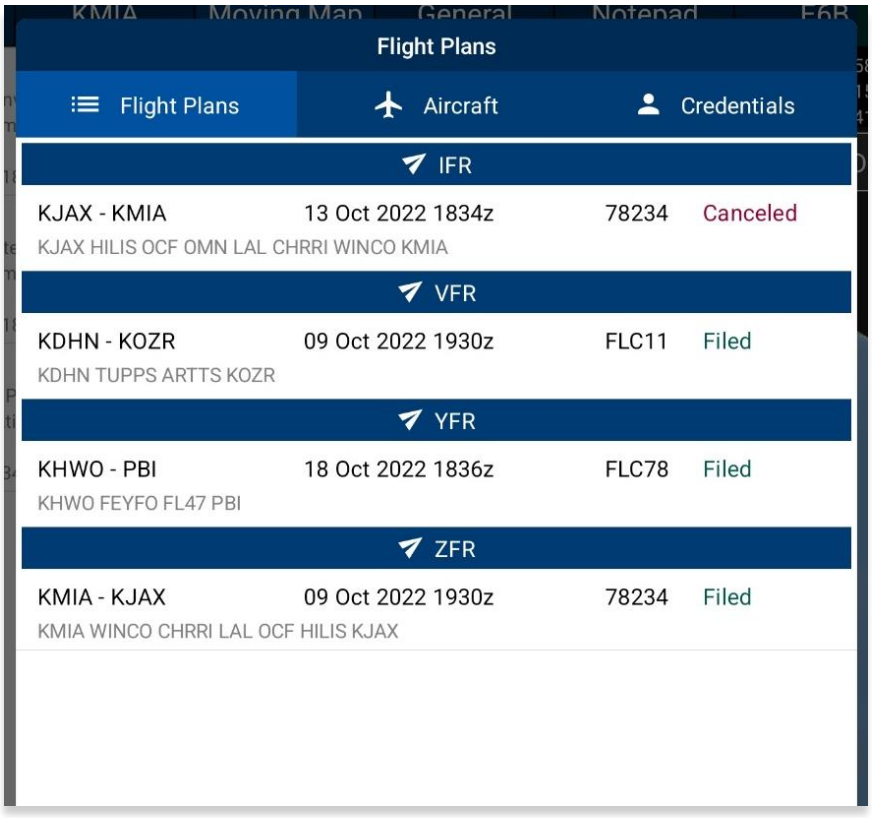


NOTE: Users must enter credentials prior to filing a flight plan.

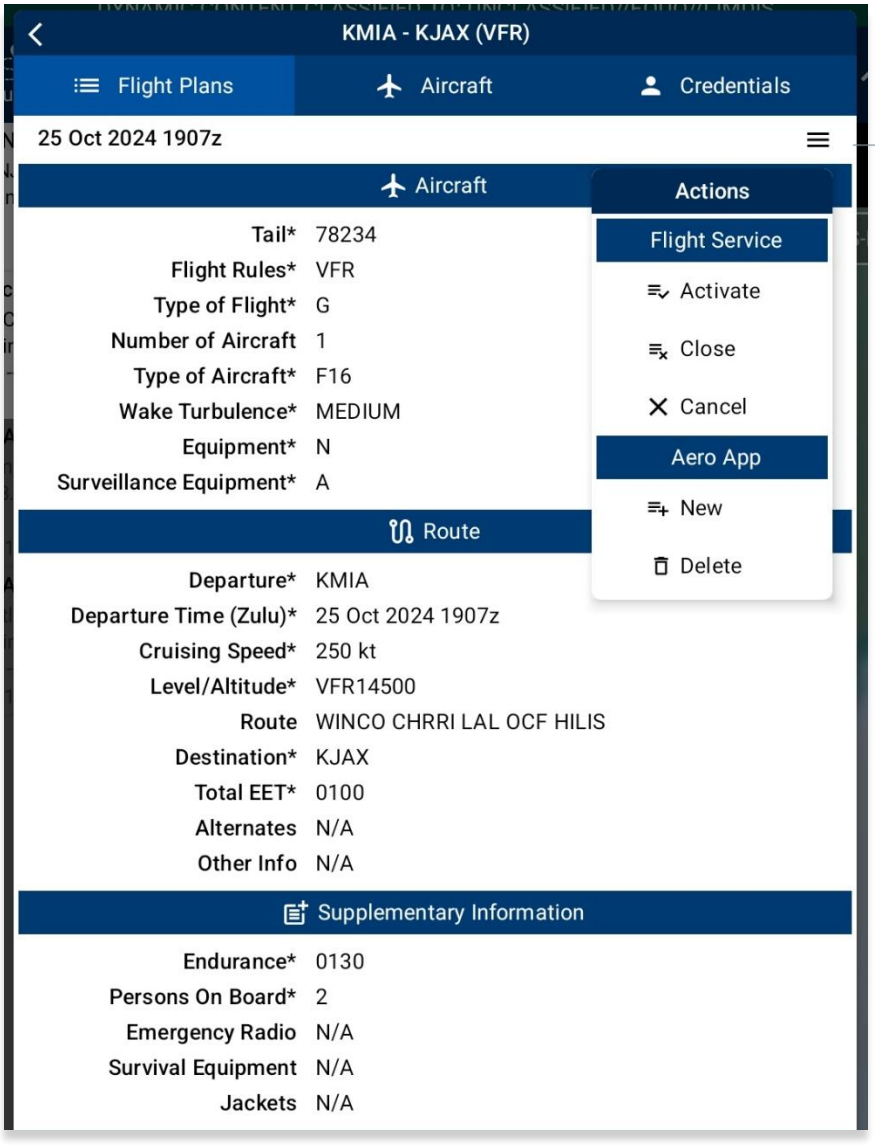
Flight Plans

The Flight Plans page is the first view users encounter. Filed flight plans are organized and displayed in IFR and VFR categories. Aero App no longer supports YFR and ZFR flight rule options; however, previously filed YFR and ZFR flight plans will not be deleted from the Flight Plans list. Each filed flight plan includes a preview of the route, the entered departure time when the flight plan was filed, the aircraft's tail number, and the plan's status.

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



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



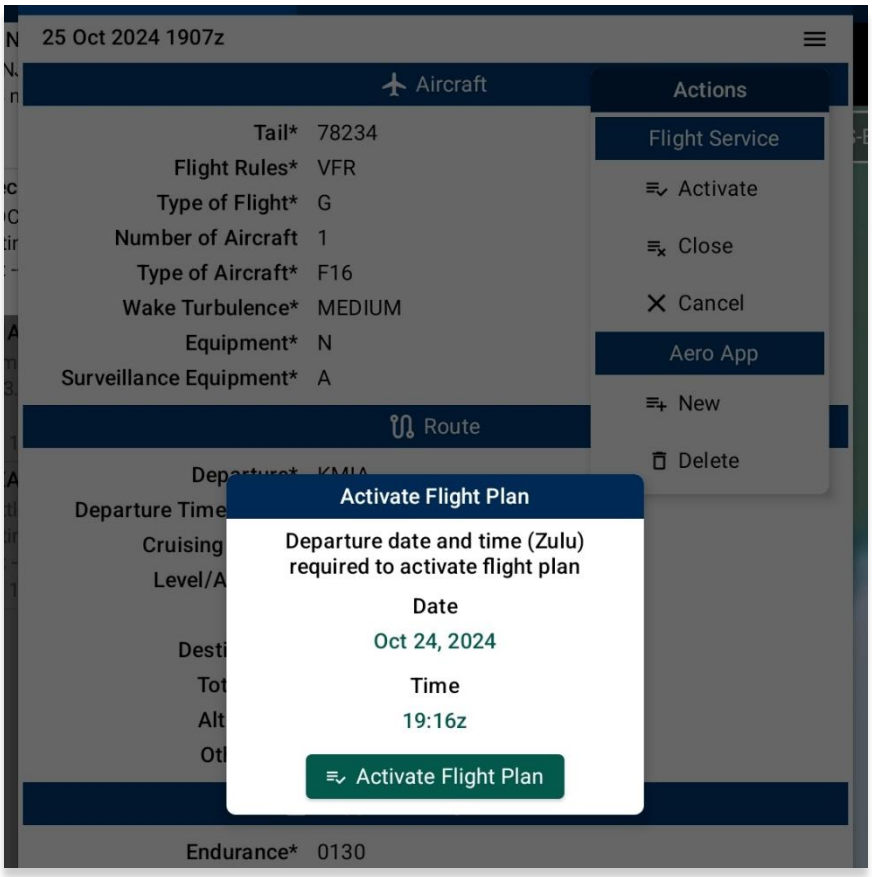
NOTE: IFR flight plans cannot be activated; however, IFR fight plans can be canceled.

Actions for Filed Flight Plan

Actions for Filed Flight Plan provides options to Activate, Close, and Cancel the pilot's filed Flight Plan directly from Aero App. Aero App no longer supports YFR and ZFR flight rule options. If users had previously filed YFR or ZFR flight plans and choose to file a new Flight Plan, a message will appear. The message notifies users that the YFR and ZFR flight rules are no longer available, and the IFR flight rule will be automatically selected.

The request to Activate, Close, and Cancel will reflect the Flight Service provider, but actions made through the provider will NOT reflect on Aero App. Additional options such as New and Delete are used to file a new Flight Plan or delete the selected plan. When selecting New, the selected plan's information will populate onto the new Flight Plan form.

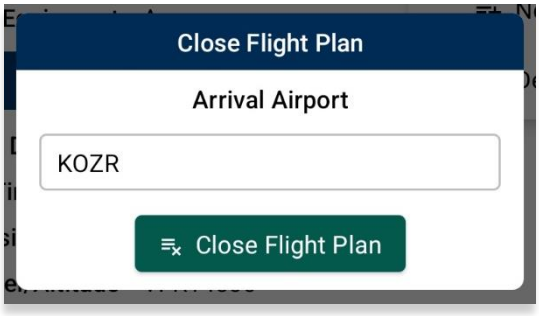
1. Tap the **hamburger** button to display the Actions Menu.
2. To initiate the flight plan, tap **Activate**.
3. The Activate Flight Plan popup will display. Select the **departure date** and **time** (Zulu) in which you would like to activate the flight plan.
4. Tap **Activate Flight Plan** once completed.



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

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

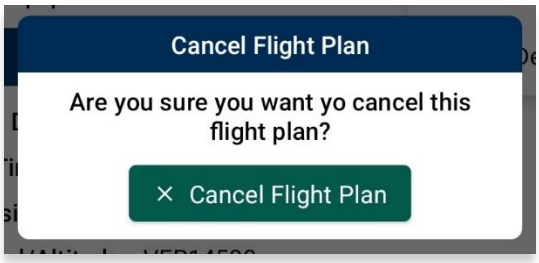
6. The Close Flight Plan popup will display. Enter the **arrival airport** of your flight plan. The nearest airport will be suggested as the arrival airport. To remove the suggested airport, tap the text box and enter desired arrival airport.
7. Tap **Close Flight Plan** to confirm the action.



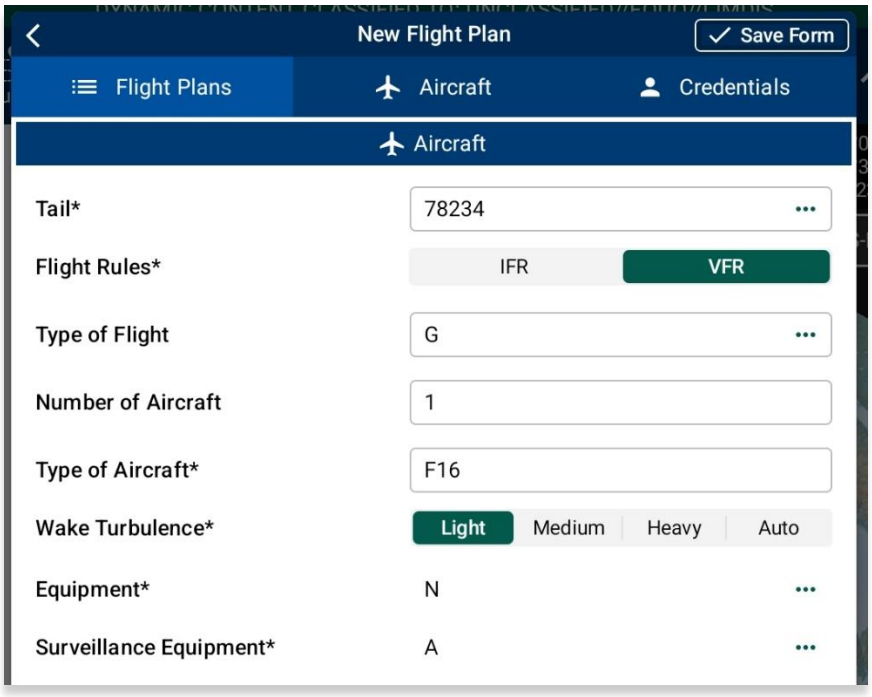
8. To dismiss the flight plan, tap **Cancel**.

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

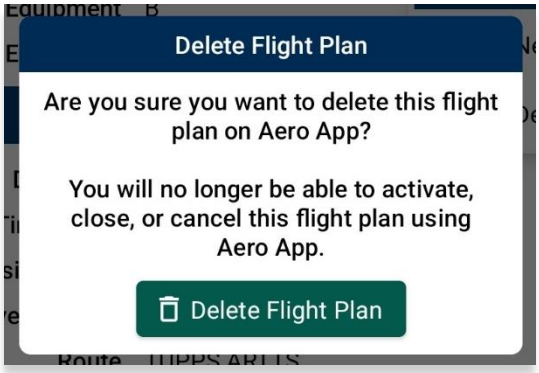
9. The Cancel Flight Plan popup confirmation will be displayed. Tap **Cancel Flight Plan** to confirm action.
10. Tap outside of the popup to cancel the action.



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



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



14.3.4 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

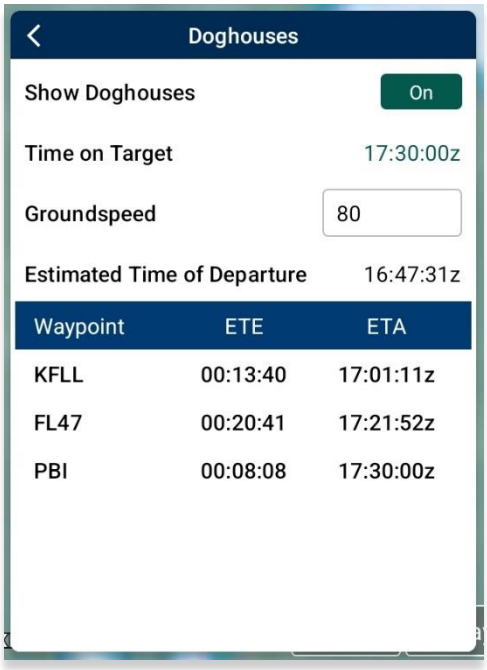
14.3.4.1 Doghouses

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

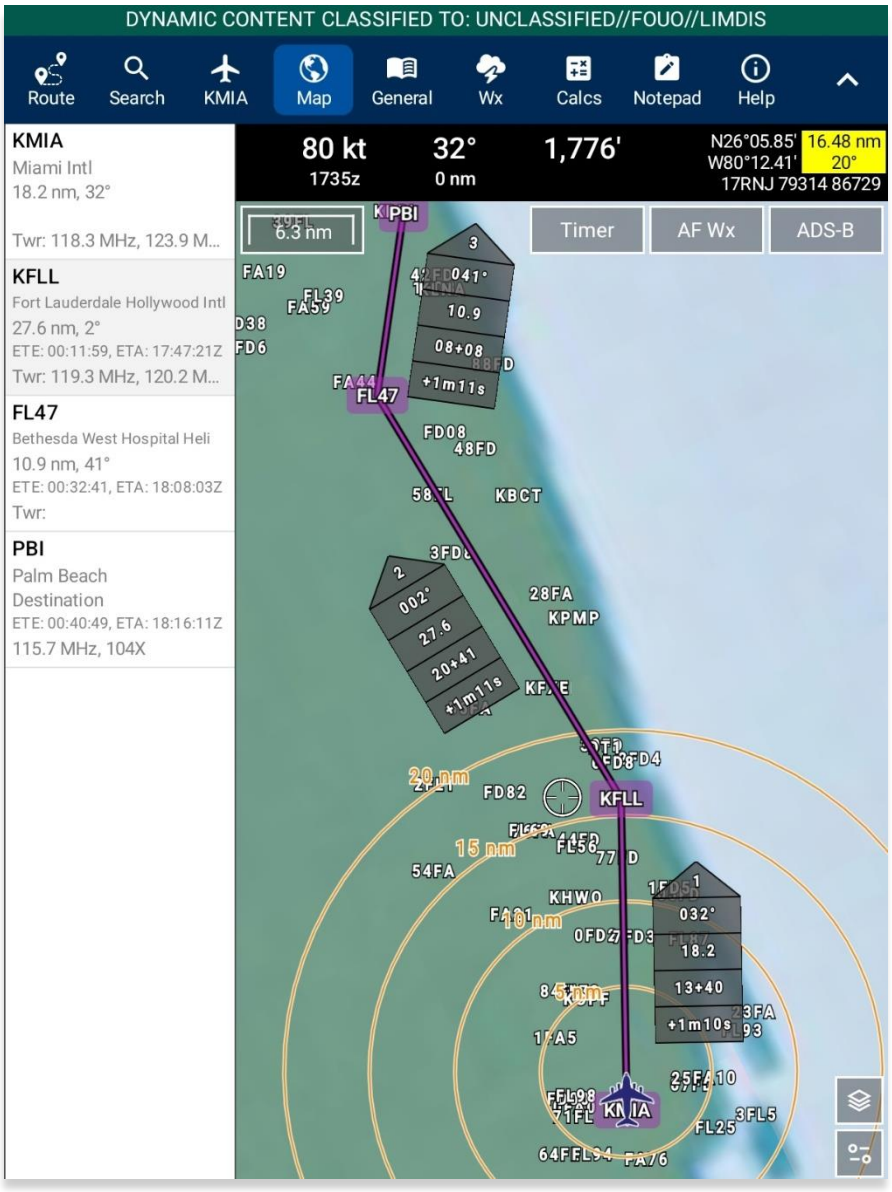
7. Tap on the **Groundspeed** text box and enter your groundspeed in knots.



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

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.



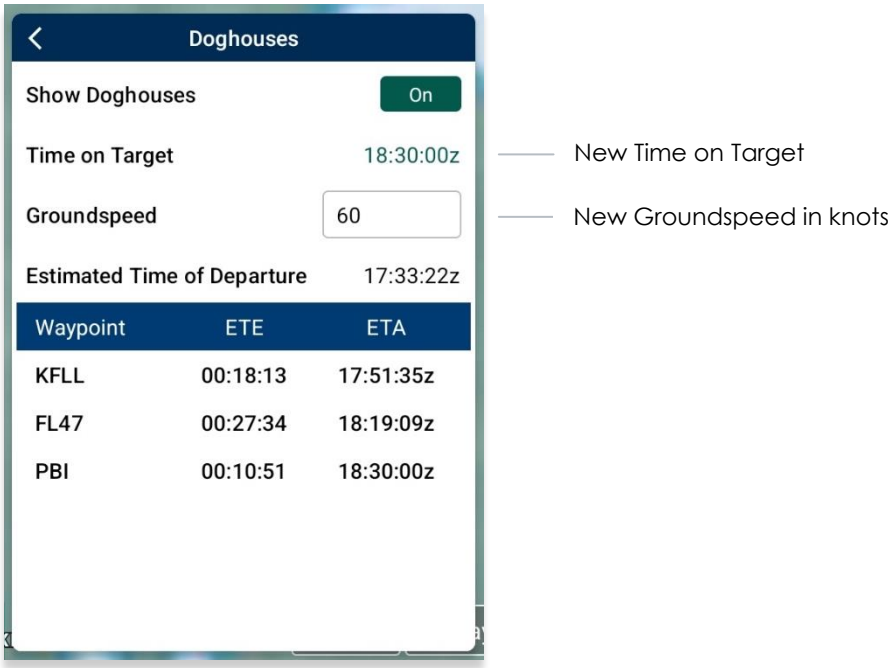
NOTE: Users may need to zoom in at least 40 miles to view Doghouses.

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 for fixed time, ETA/ETE, and the calculated differences will automatically update to the new values.

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



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 Doghouses will recalculate based on the adjusted time and groundspeed.

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

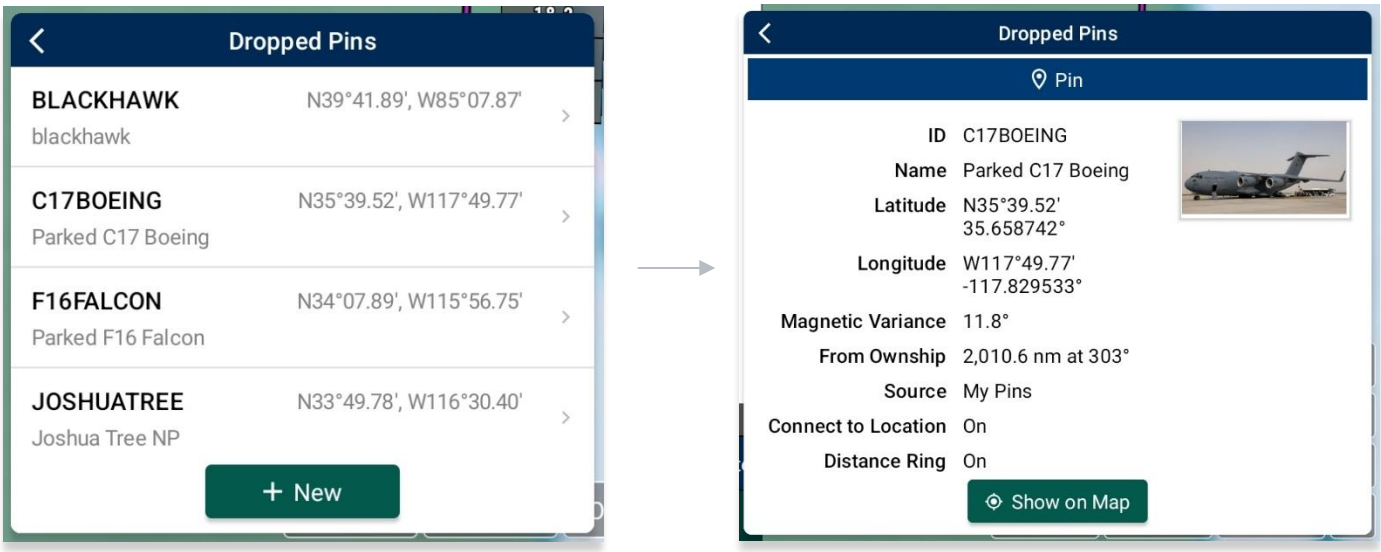
14.3.4.2 Dropped Pins

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

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

Aero App enables users to drop new pins directly from the Dropped Pins screen. Tap **+ New** and follow the prompts. Refer to Section 25.1.3 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 **Show** from the side menu.
4. Tap **Dropped Pins**.
5. A collection of dropped pins will appear. Tap on desired pin.
6. Dropped Pins popup will display information pertaining to the selected pin.



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

NOTE: To view the dropped pins on the Map, users must enable Pins from the Overlays menu. Refer to Section 18.2.1.17 for additional information. This is required for Avoidance Point, Emergency Marker, Landmark, and Pin. Refer to Section 18.2.1.25 for Photo Pins.

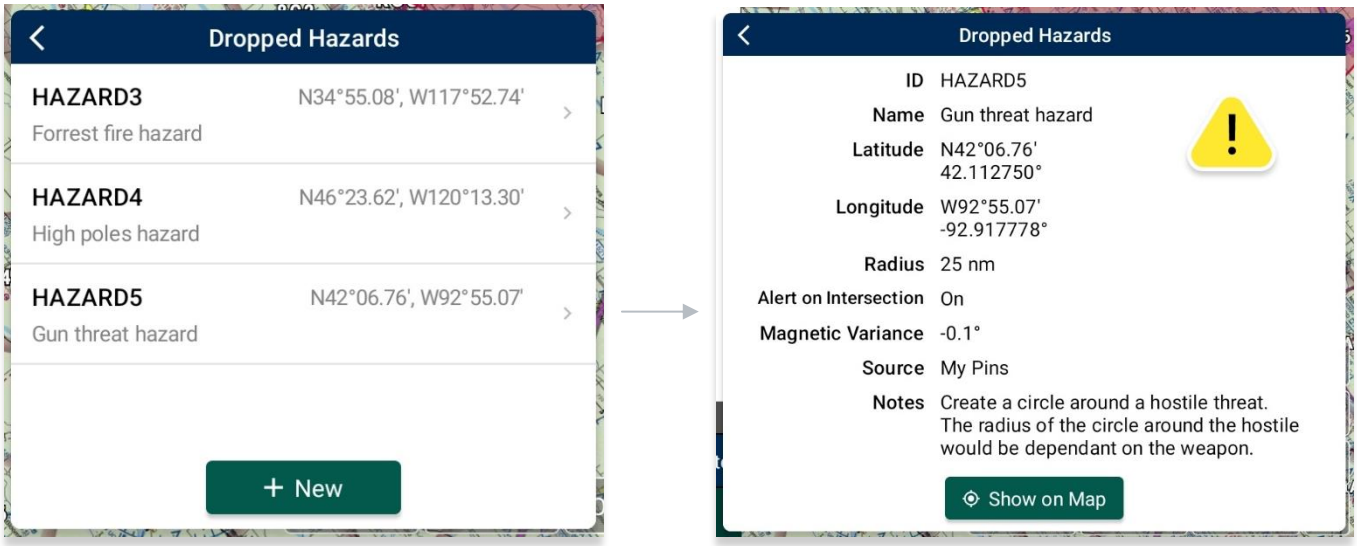
NOTE: Users can add pins to their route. Refer to the Add Pin to Route Section for additional information.

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** located at the bottom right of the Route Panel.
3. Select **Show** from the side menu.
4. Tap **Dropped Hazards**.
5. A collection of dropped hazards will appear. Tap on desired hazard.



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

NOTE: To view dropped hazards on the Map, users must enable Hazards from the Overlays menu. Refer to Section 18.2.1.12 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:

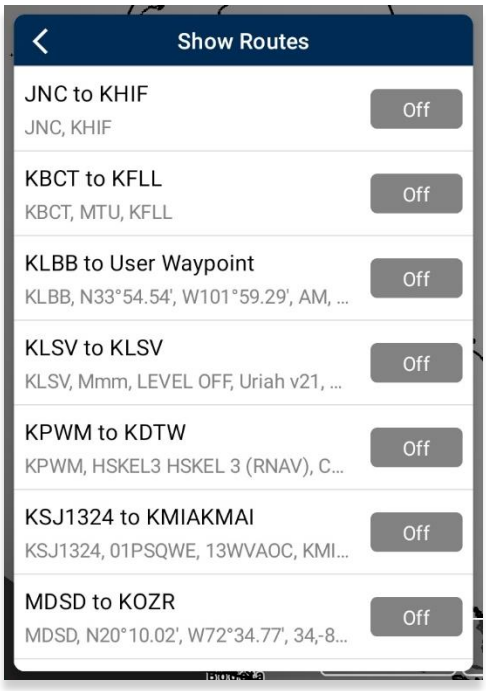
- **6 or more points:** The first and last points display triangles, second and second to last points display squares, and points between the second and second to last points display circles.
- **3-4 points:** The first and last points display triangles, second and second to last points display squares, 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** located at the bottom right of the Route Panel.
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

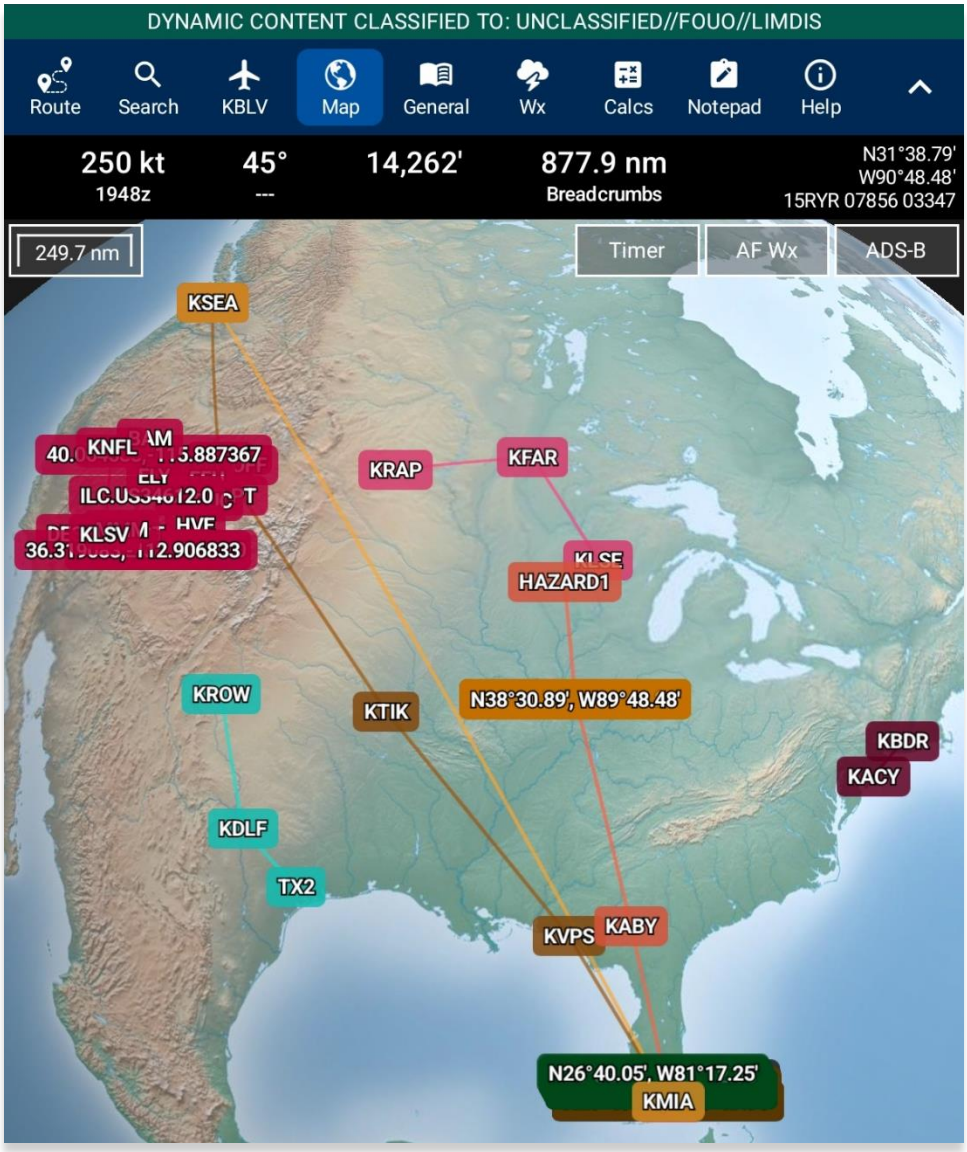
The Routes feature displays a collection of imported routes including CRD, JSON, and KML/KMZ files, and routes saved directly on Aero App to display on the Map. Multiple routes can simultaneously be displayed on the Map.

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

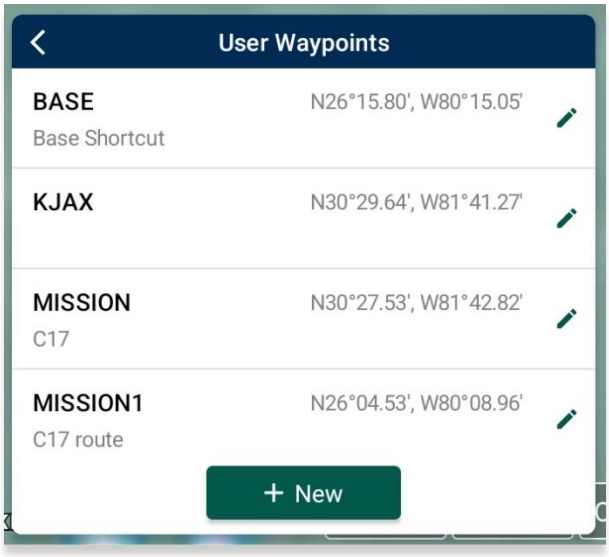


14.3.4.6 User Waypoints

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** located at the bottom right of the Route Panel.
3. Select **Show** from the side menu.
4. Tap **User Waypoints**. A list of User Waypoints will be shown.



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

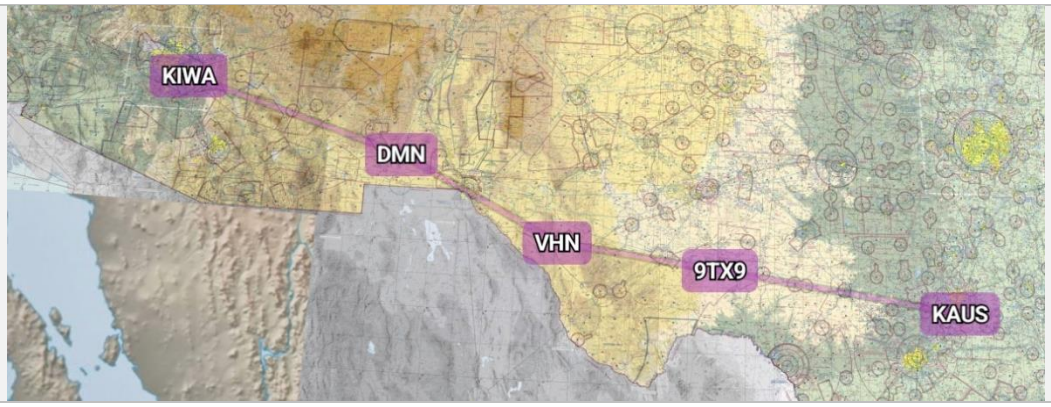
5. Tap on the **pencil icon** of the user waypoint that you wish to modify.
6. Tap on the field that you wish to change and enter new values.
7. Tap **Save** and your changes will be saved.

14.3.4.7 Route Line Transparency

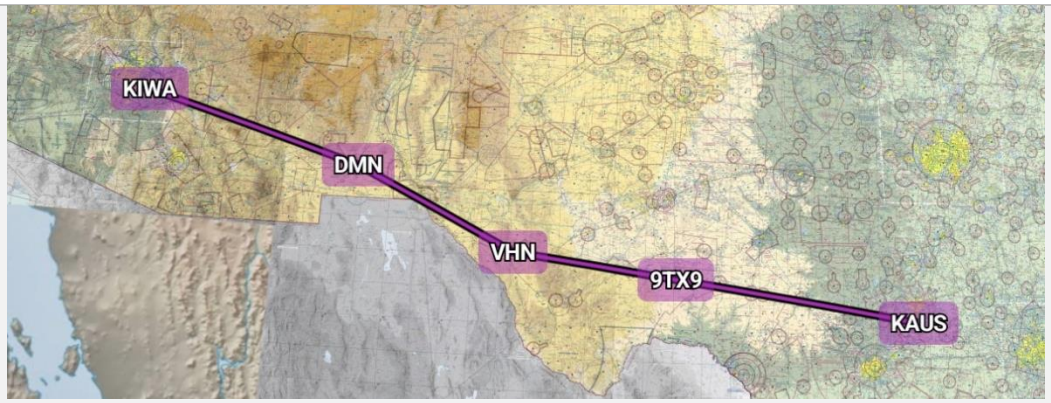
Route Line Transparency allows users to adjust the translucency of their flight path displayed on the Map view.

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



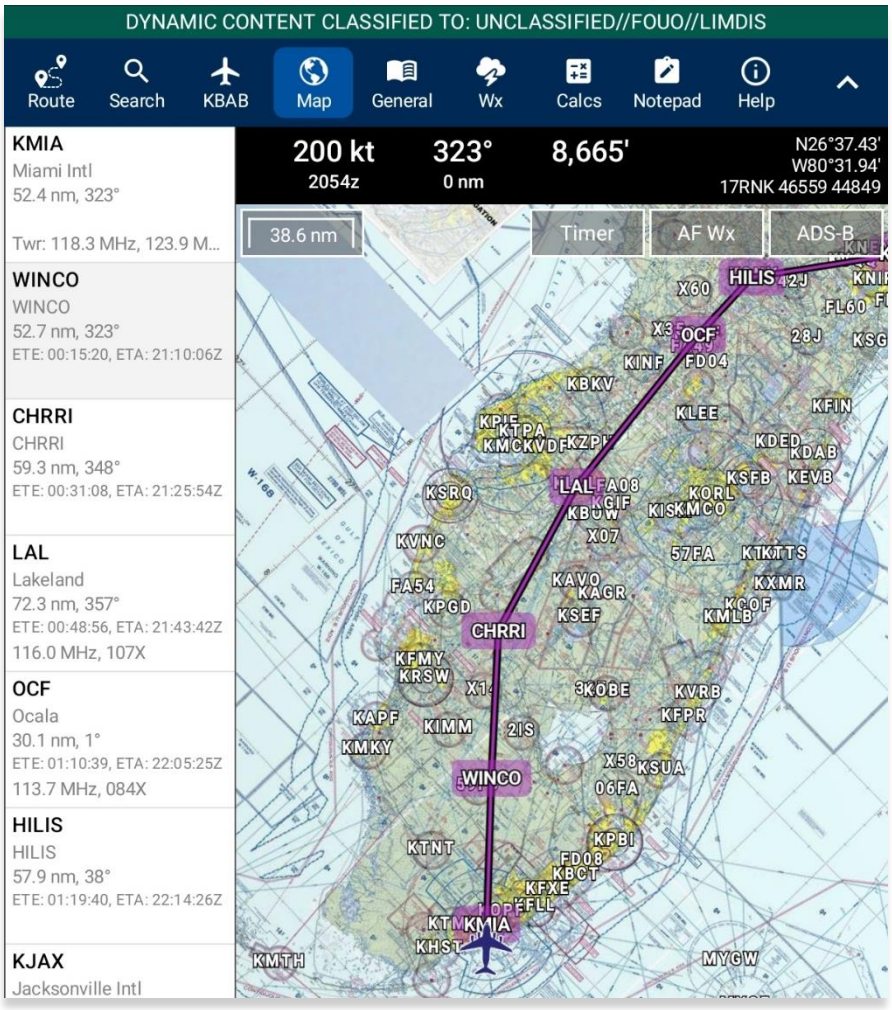
Transparency value of 100%



14.3.5 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 desired route.
3. Each segment of the flight's route will display its respective ETE and ETA.

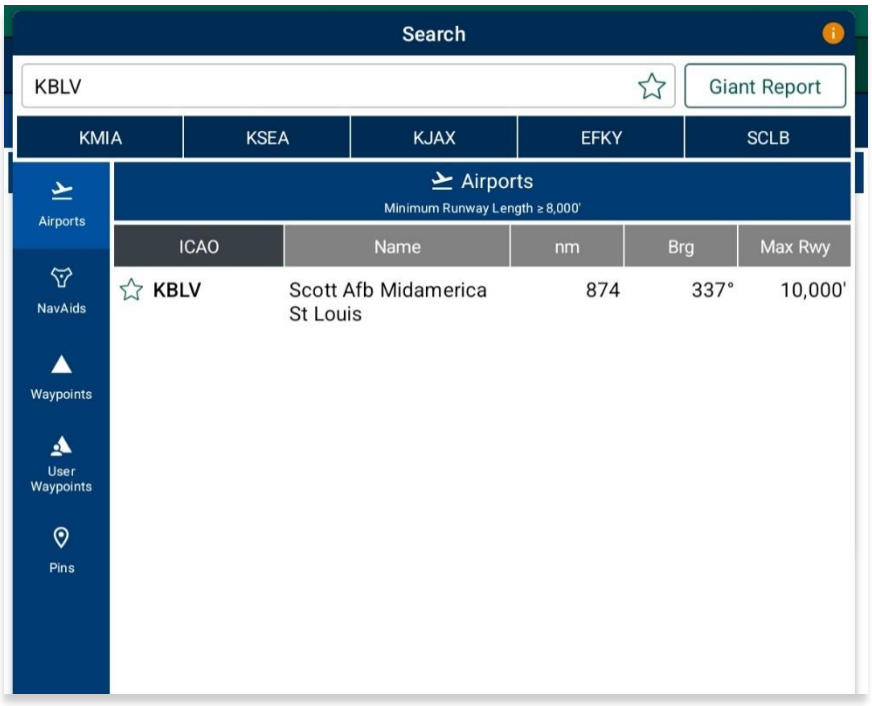


NOTE: Estimated Time of Arrival (ETA) will display in Zulu time.

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 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 **Search** on the device's keyboard and the searched identifier will become an active point.

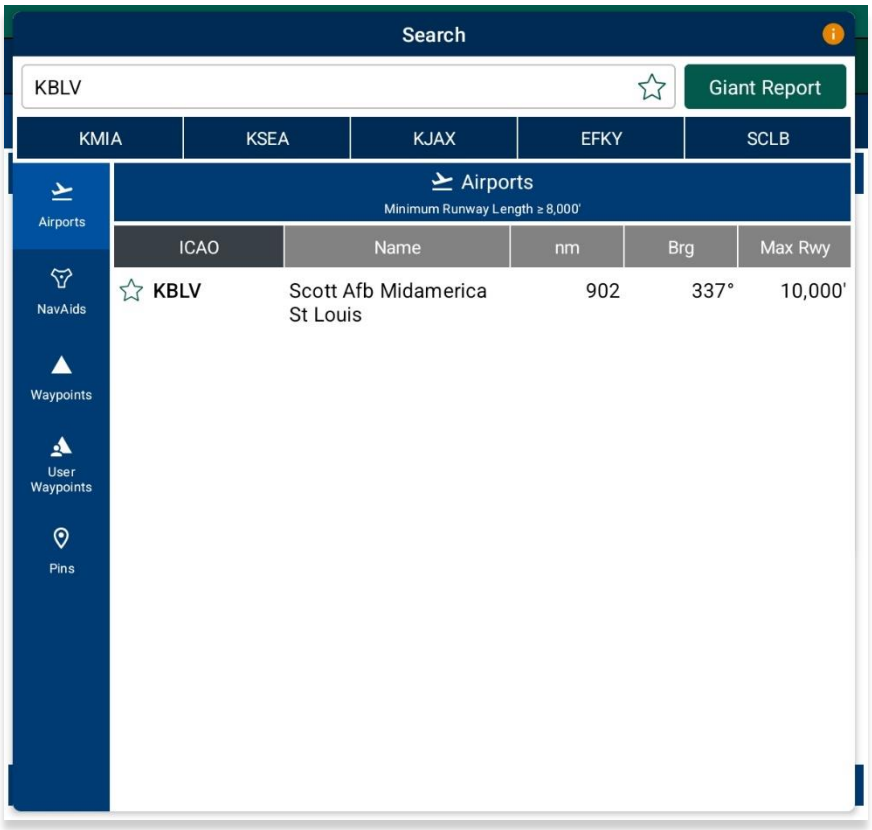


NOTE: The Search view will display the five most recently searched airports.

Giant Report

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

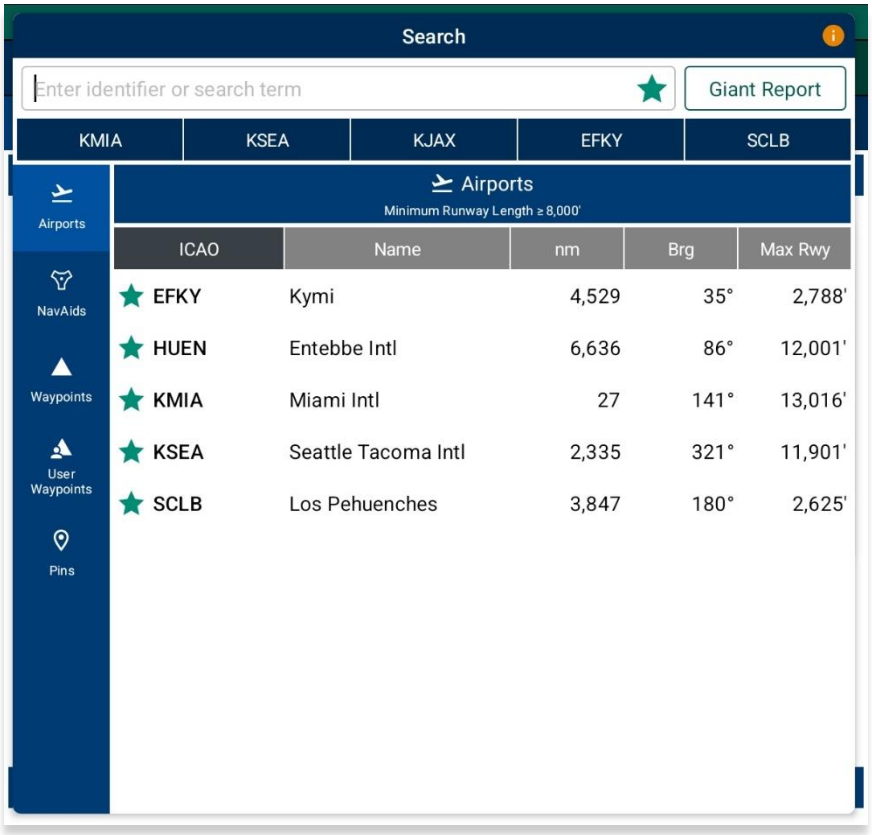
1. Tap the **Giant Report** button to enable the option.
2. Enter a desired identifier or search term in the search text box.
3. Select desired airport. The Giant Report document will open.



Add an Identifier to Favorites

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

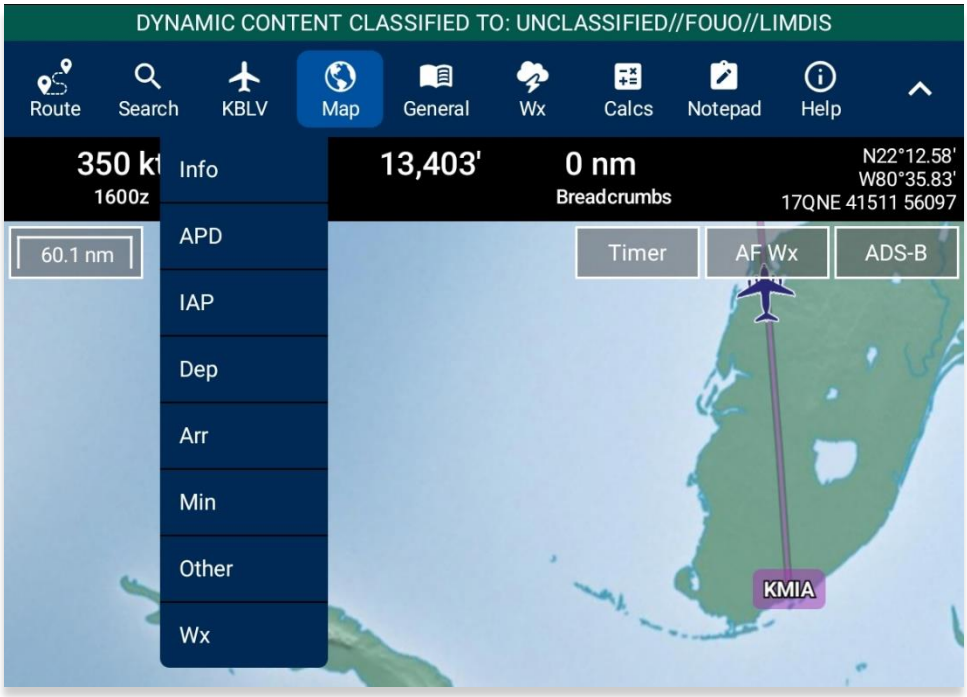
1. Enter a desired identifier in the search text box.
2. After three characters are entered, an auto search will begin. Locate desired identifier that you wish to add to *Favorites*.
3. Tap the **Star** located next to the identifier; the Star will convert to green.
4. To remove an identifier from *Favorites*,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



NOTE: Users can add their desired identifiers to *Favorites* directly from Add to Route, Active Point search, Maxar, 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 drop-down menu will display, offering options to view airport Info, APD, IAP, Dep, Arr, Min, Wx, and other relevant charts and documents corresponding to the ICAO being searched.



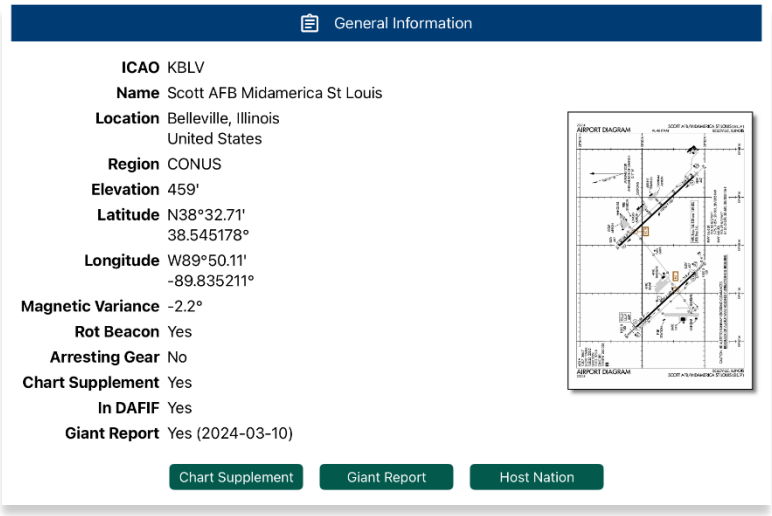
16.1 Identifier Information

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

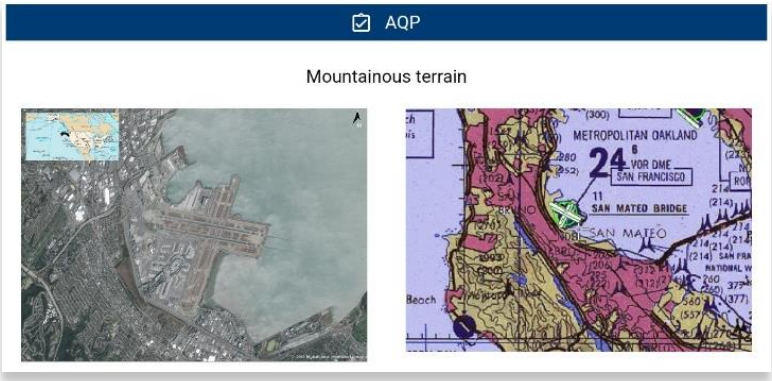
General and other relevant information for identifiers such as NavAids, Waypoints, and User Waypoints are available to users. Global is required to access identifier information.

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

General Information contains the identifier summary 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 selected identifier. To view charts and Giant Report data, users must download the respective region files, Global, and Giant Report data.

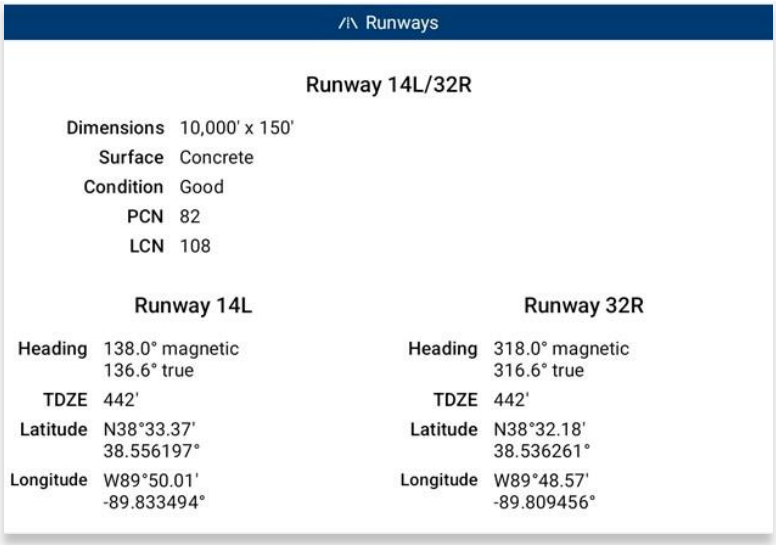


Airport Qualification Program (AQP) is available for select airports.

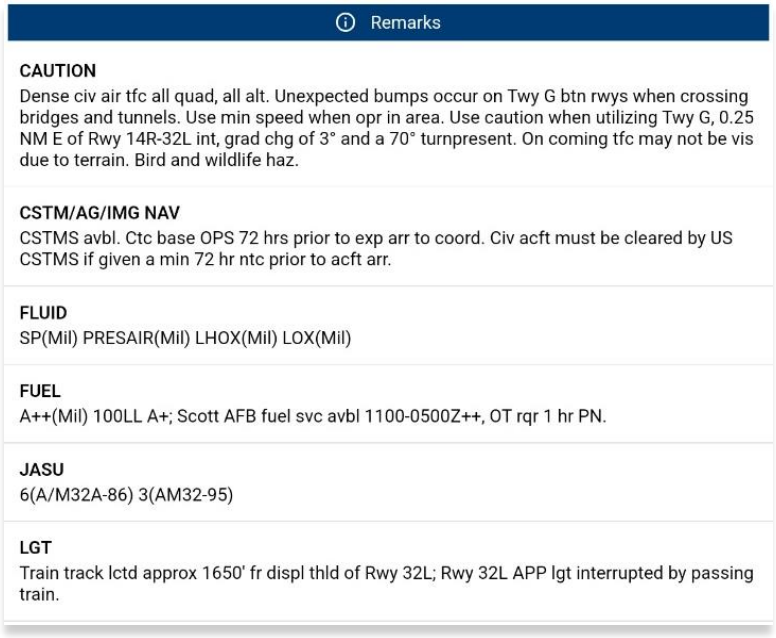


Communications includes tower frequencies, remarks, and call signs for the selected airport.

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



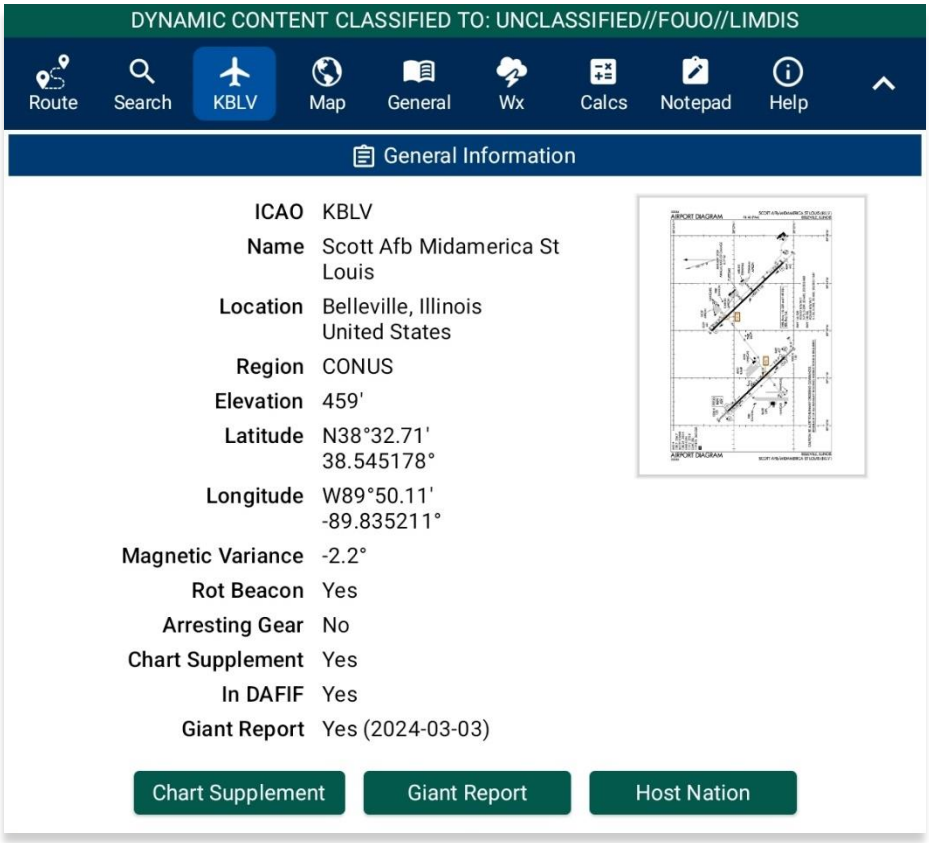
Remarks provides airport conditions, fuel type, and other cautionary advice.



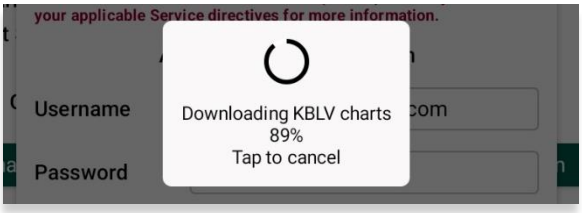
16.1.1 Download Host Nation Charts

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.

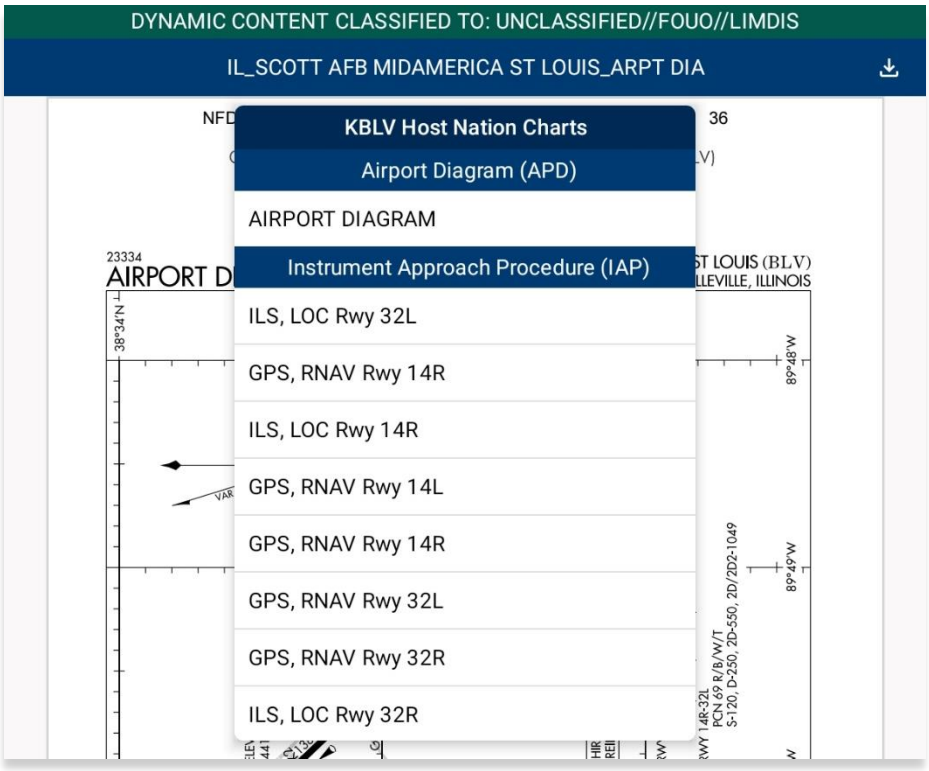
1. Ensure you search for an airport of choice.
2. Tap **Active Point** on the ***Main Menu***. The Active Point options will display.
3. Select **Info**.
4. Tap **Host Nation** in the *General Information* section.



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



7. Once the download is complete, the screen will switch to the chart view. Tap on the 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.

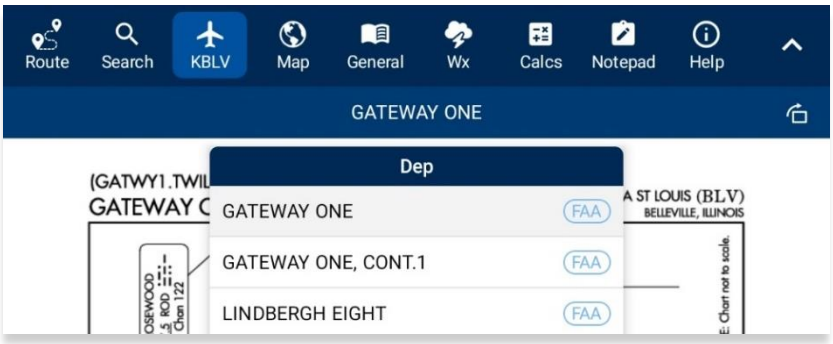
NOTE: Host Nation chart downloads can be managed through Aero App's File Manager.

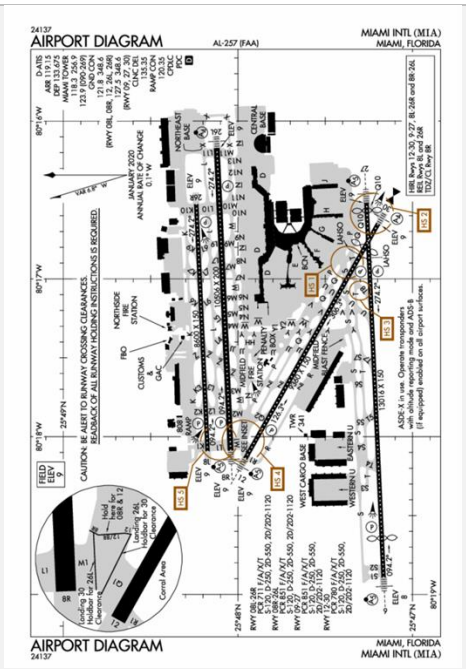
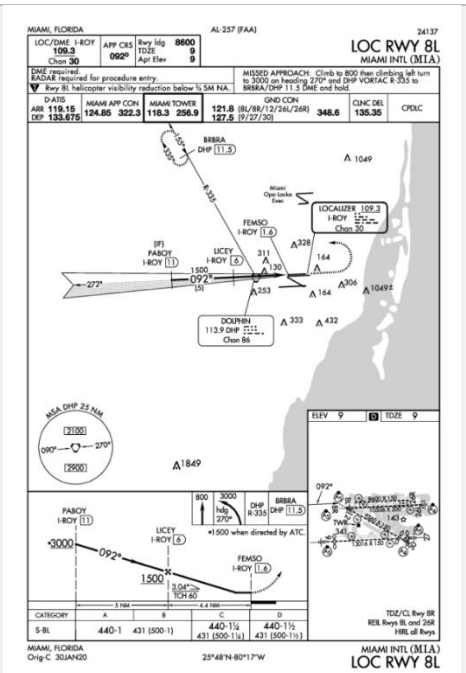
NOTE: The downloaded Host Nation charts can be viewed on the Host Nation page.

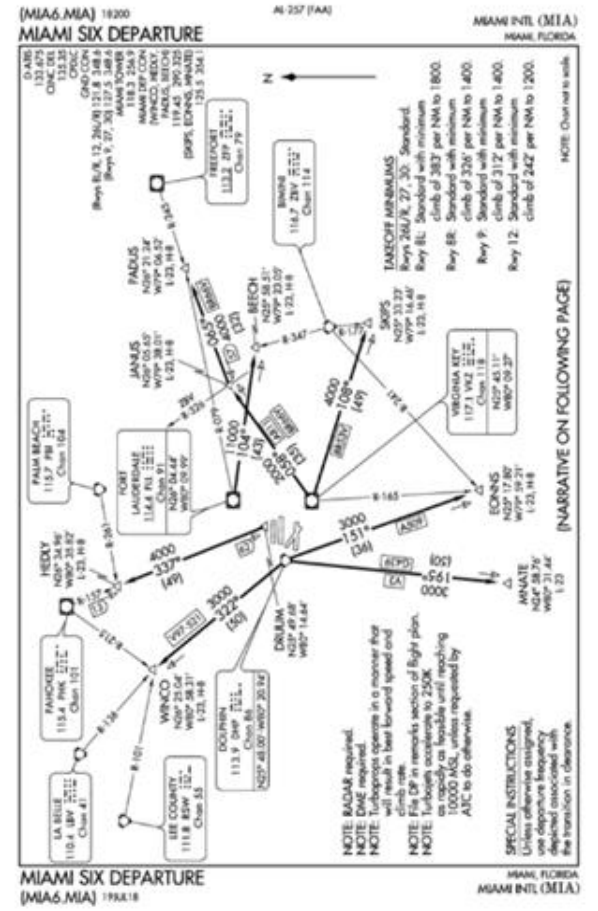
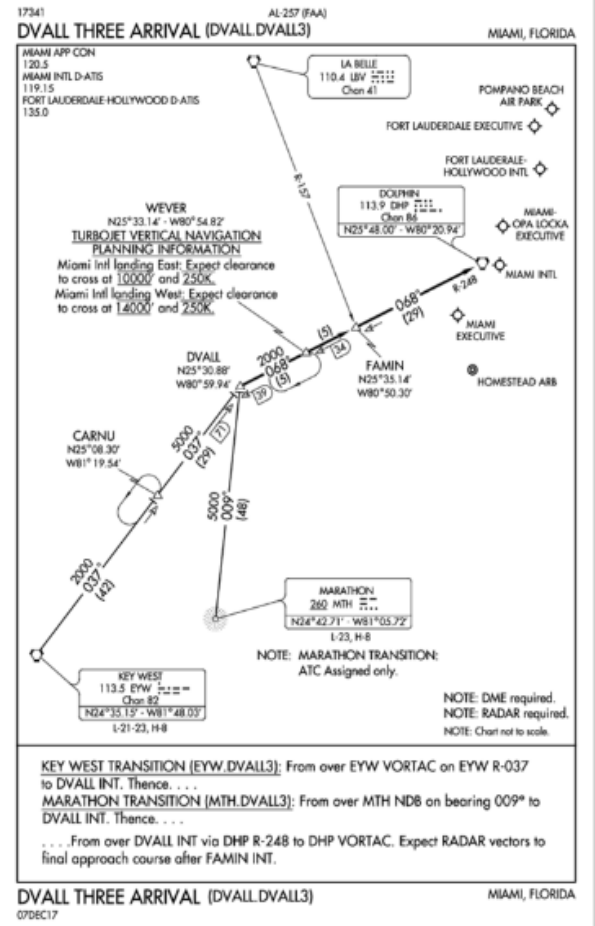
16.2 Airport Chart Options

Users can view Airport charts including Airport Diagram (APD), Instrument Approach Procedure (IAP), Departure Procedure (Dep), Arrival Procedure (Arr), Alternate Minimums/ RADAR Minimums/ Takeoff Minimums (Min), Other – 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 display.
2. Select desired chart type. The selected chart will display.
3. Tap on the **ribbon** to display the full list of available chart options.

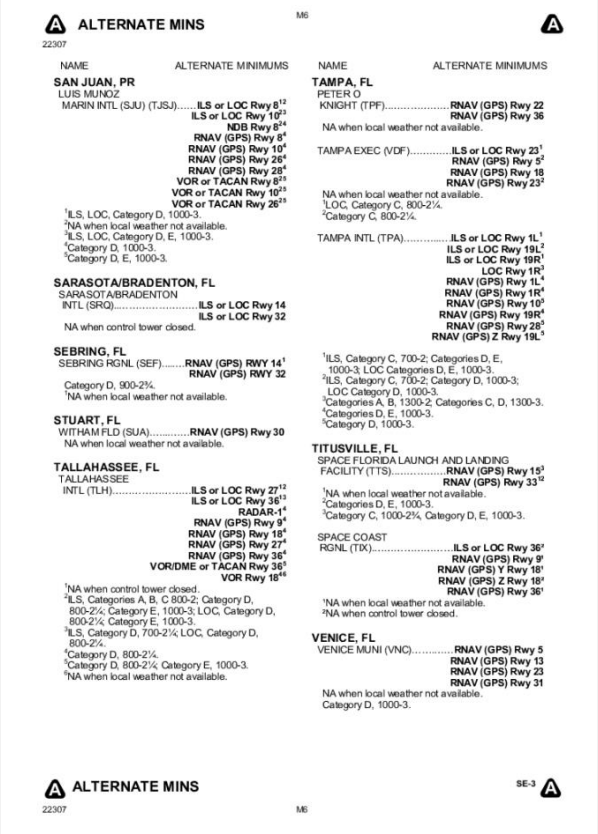


Airport Diagram (APD)	Instrument Approach Procedure (IAP)
	

Departure Procedures	Arrival Procedures
	

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

Alternate/ RADAR/ Takeoff Minimums	Other



M6

ALTERNATE MINS

22307

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**[14] **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**[45]

NAME	ALTERNATE MINIMUMS
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**[1] **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.

NA when control tower closed.

[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.

NA when local weather not available.
[1]LOC, Category C, 800-2¼.
[2]Category C, 800-2¼.

[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.

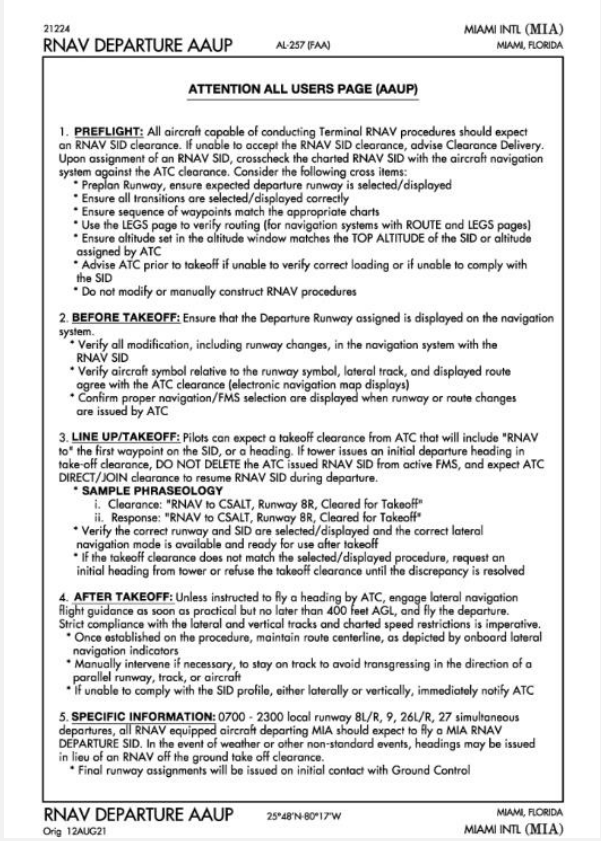
[1]NA when local weather not available.
[2]Categories D, E, 1000-3.
[3]Category C, 1000-2¼, Category D, E, 1000-3.

[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 SE-3

22307 M6



21224 MIAMI INTL (MIA)

RNAV DEPARTURE AAUP AL-257 (FAA) 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 25°48'N-80°17'W MIAMI, FLORIDA

Orig 12AUG21 MIAMI INTL (MIA)

NOTE: Use two fingers to zoom in on 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

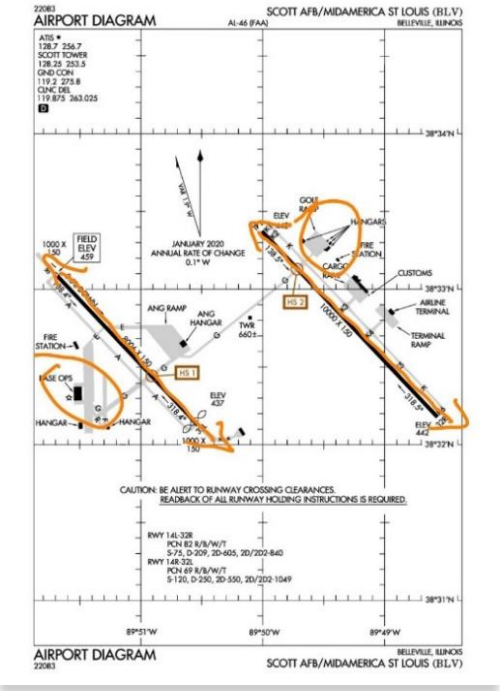
The Draw on APD and IAP feature allows you to freely make markings on your desired chart(s) to highlight a specific location or element.

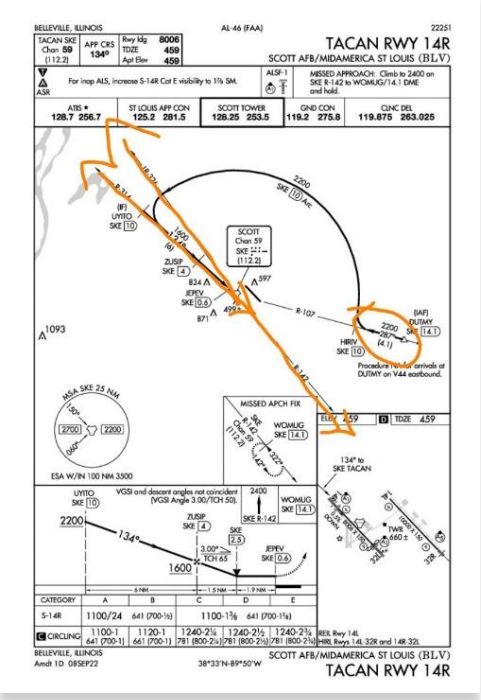
1. Tap **Active Point** on the ***Main Menu***. The Active Point options will display.
2. Select **APD** or **IAP** and selected airport chart will display.
3. Tap the **pencil icon** on the top left of the view to activate the drawing tool. The pencil icon will be replaced with the following options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

Rotate chart clockwise

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

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





16.3 Weather and Information About Potential Hazards

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

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

16.3.1 Internet

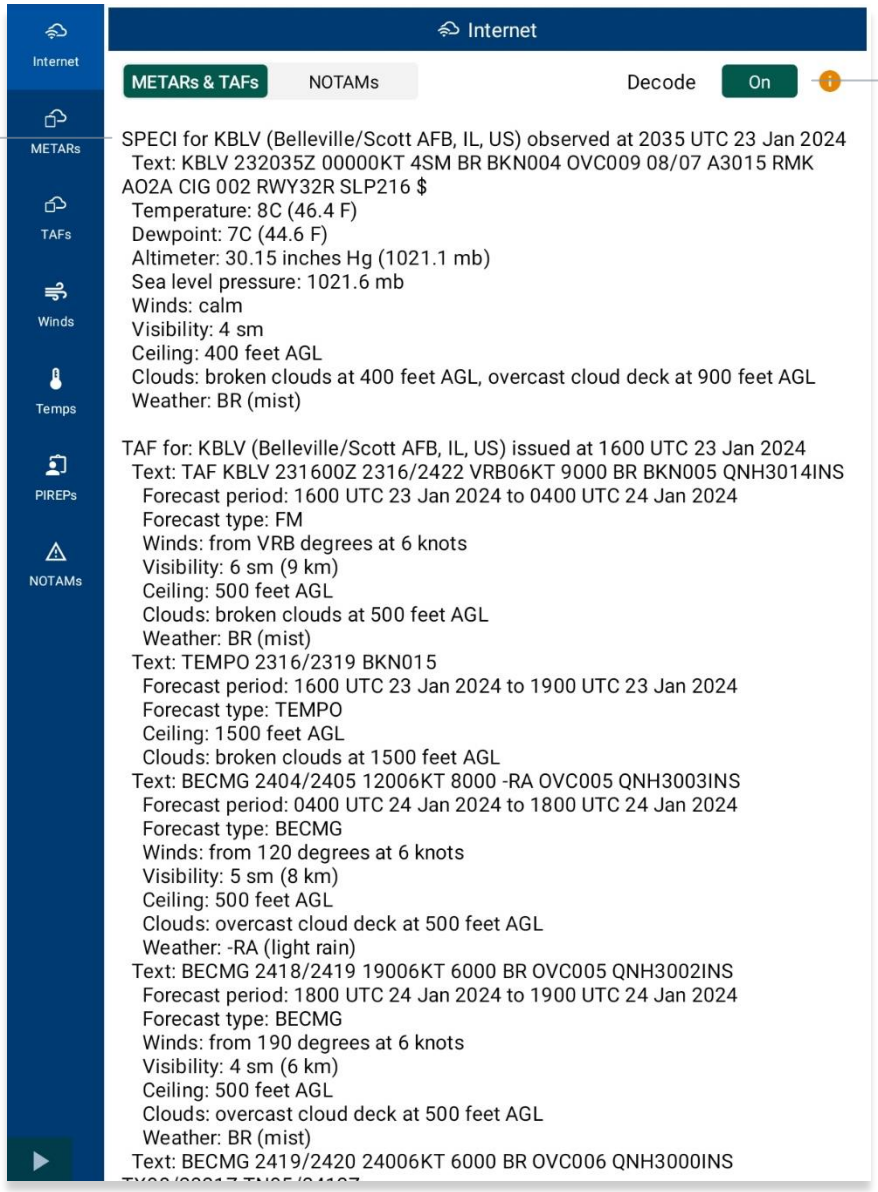
The Internet section describes how to retrieve METARs and Terminal Aerodrome Forecasts (TAFs) information. A NOTAMs button is available, which redirects users to the NOTAMs website.

METARs and Terminal Aerodrome Forecasts (TAFs)

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

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

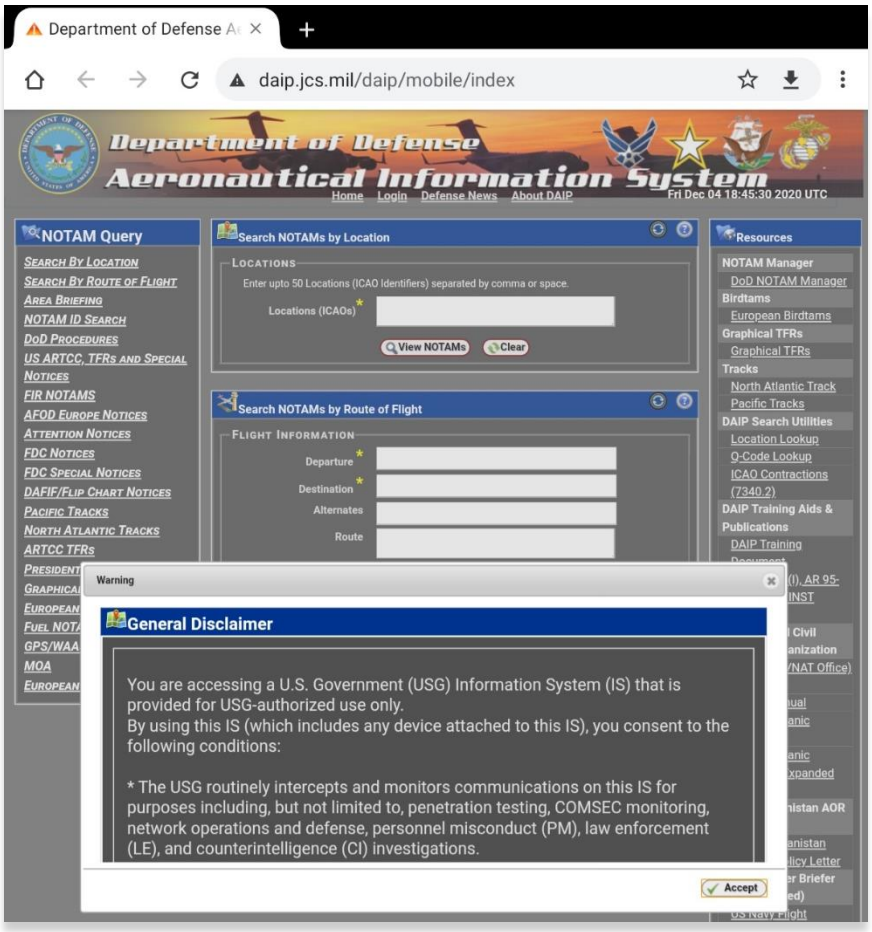
6. Tap the **Decode** button to enable the option. Users can view raw or decoded weather information for the selected airport.



Notice to Airmen (NOTAMs) Website

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

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



16.3.2 METARs

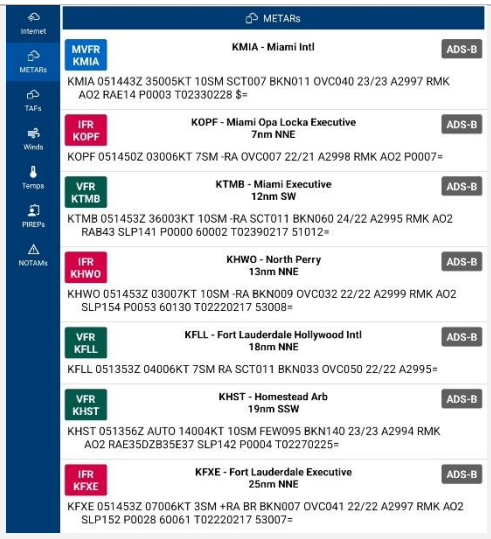
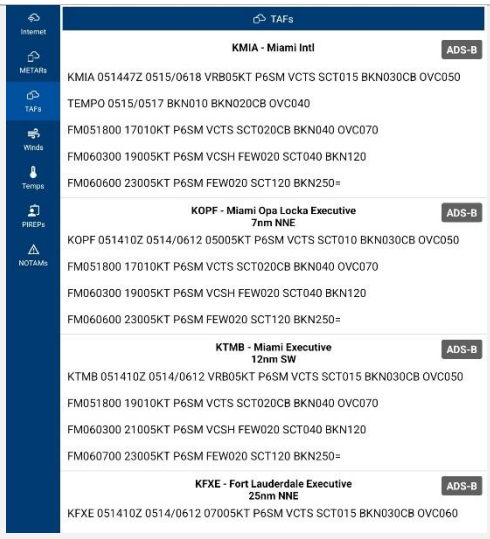
The METARs tab displays raw weather information for ADS-B and Air Force Weather (AF Wx) data that may include temperature, precipitation, visibility, barometric pressure, and other information of interest to pilots.

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

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

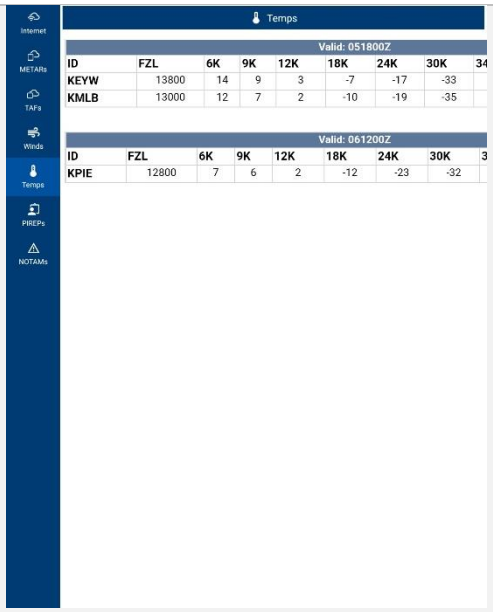
METARs	TAFs
	

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

Winds	Temps
	

16.3.5 Pilot Reports (PIREPs)

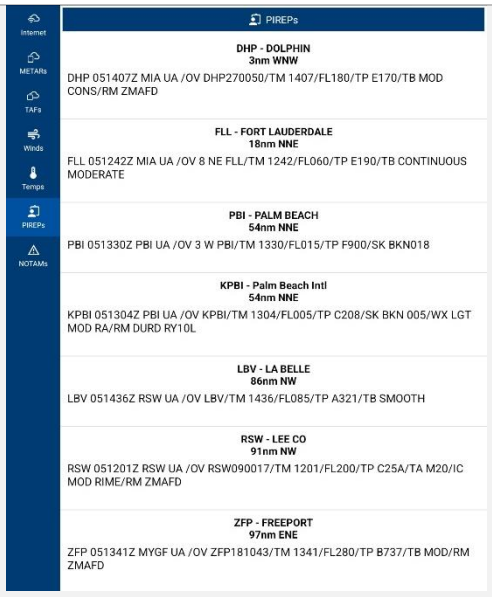
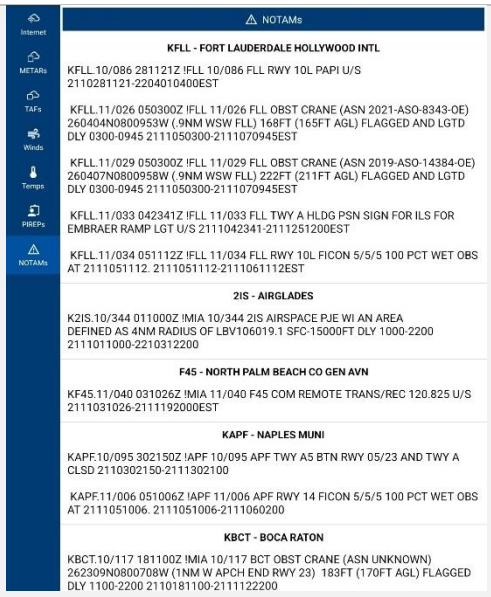
Pilot Reports (PIREPs) are reports of actual weather conditions encountered by an ownship in flight.

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

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

PIREPs	NOTAMs
	

17 Map

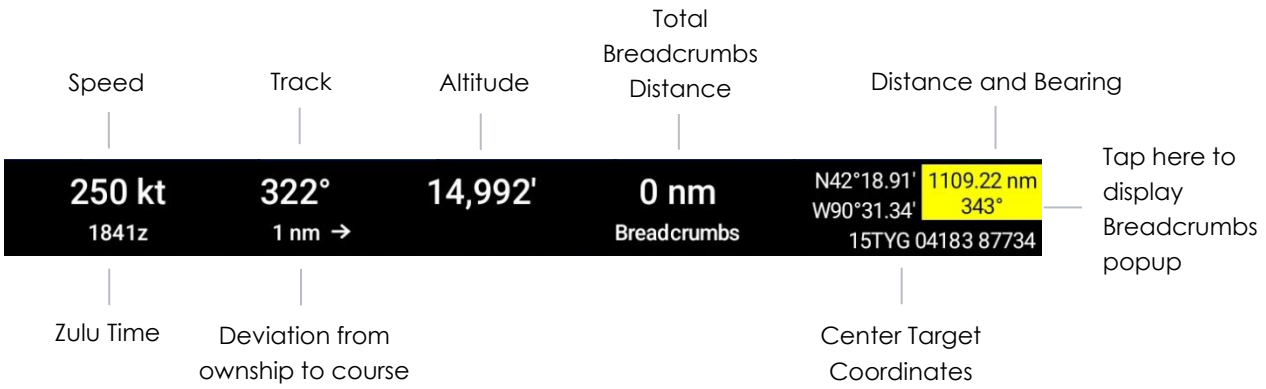
The Map menu is an essential and powerful tool that provides a highly customizable and comprehensive worldwide map.

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
- PIN
- 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 current flight's Speed, Zulu Time, Track, Altitude, Breadcrumbs, Total Breadcrumbs Distance, Center Target Coordinates, and the Distance and Bearing.



17.1.1 Speed

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

17.1.2 Zulu Time

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

17.1.3 Track

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

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

17.1.4 Altitude

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

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

17.1.5 Center Target Coordinates

The Flight Information Panel displays the latitude, longitude, and MGRS of the Center Target. The Center Target is activated once the Map view is moved. As the globe of 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.

17.1.6 Distance and Bearing

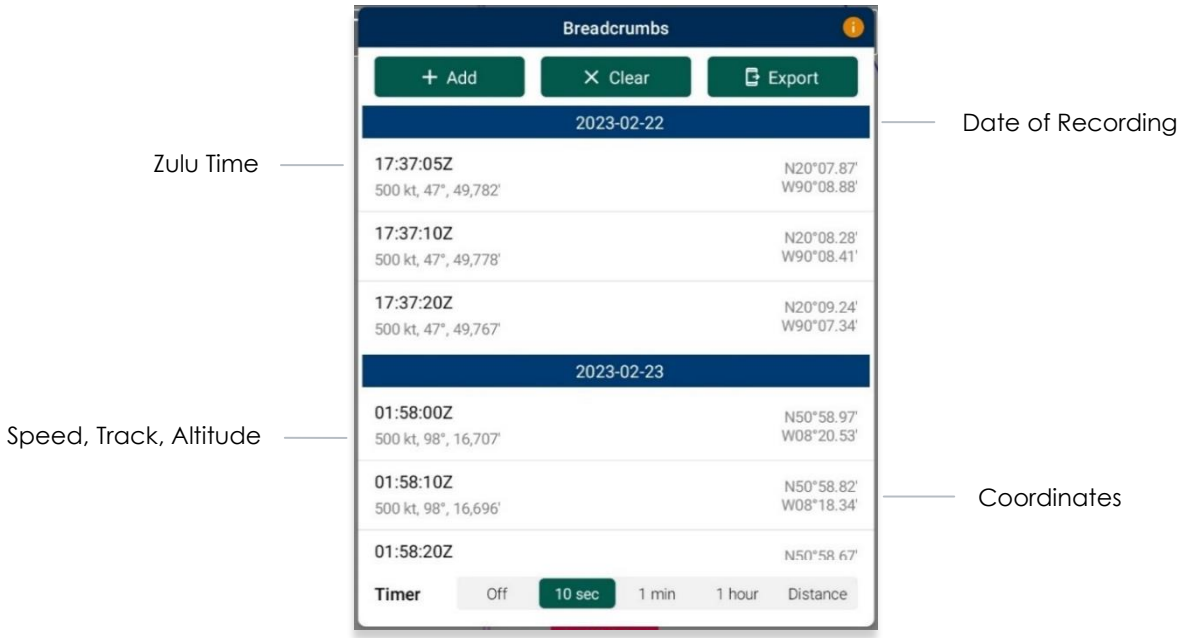
Distance is the range between your ownship's location and where the center target is placed. Bearing is the angle between your ownship and the center target. As the globe on the Map view is moved, the distance and bearing updates respective to the placement of the Center Target, provided the GPS is on.

When the center target is activated, a yellow tag is shown on the 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.

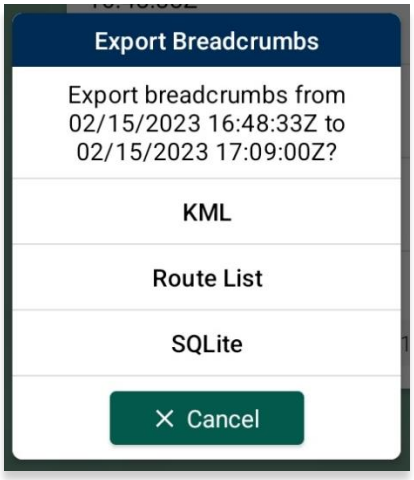
17.1.7 Breadcrumbs

Breadcrumbs allows users to record their coordinates along their route. A GPS connection (Wi-Fi or cellular) is required. The total distance of breadcrumbs is measured in nm or km, based on the user's chosen distance unit. Individual breadcrumbs are added based on a timer that can be set to every 10 seconds, per minute, per hour, or according to a user-defined distance measurement. The distance calculation continues even after the user reaches their destination and only stops when the user sets the timer to *Off*. 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.



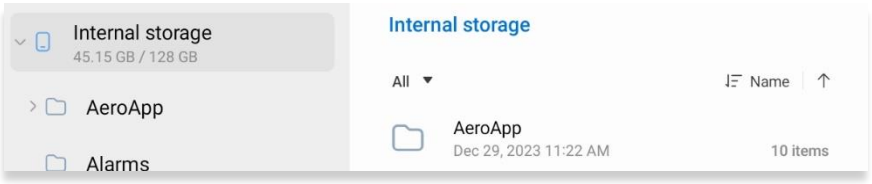
2. Tap **Add** to manually store coordinates. Users have the option to select a timer to automatically add coordinates for every 10 seconds, 1 minute, 1 hour, or Distance.
3. To enable breadcrumbs to be recorded by distance, select **Distance** from the timer options and enter desired distance increments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



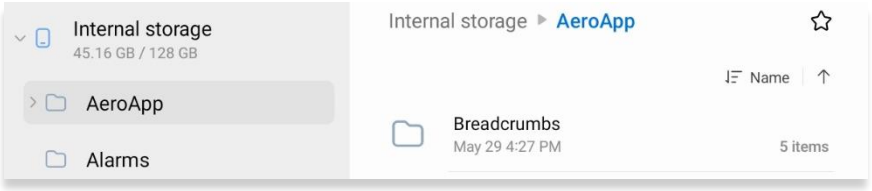
NOTE: Breadcrumbs are logged by individual days.

View Breadcrumbs in KML

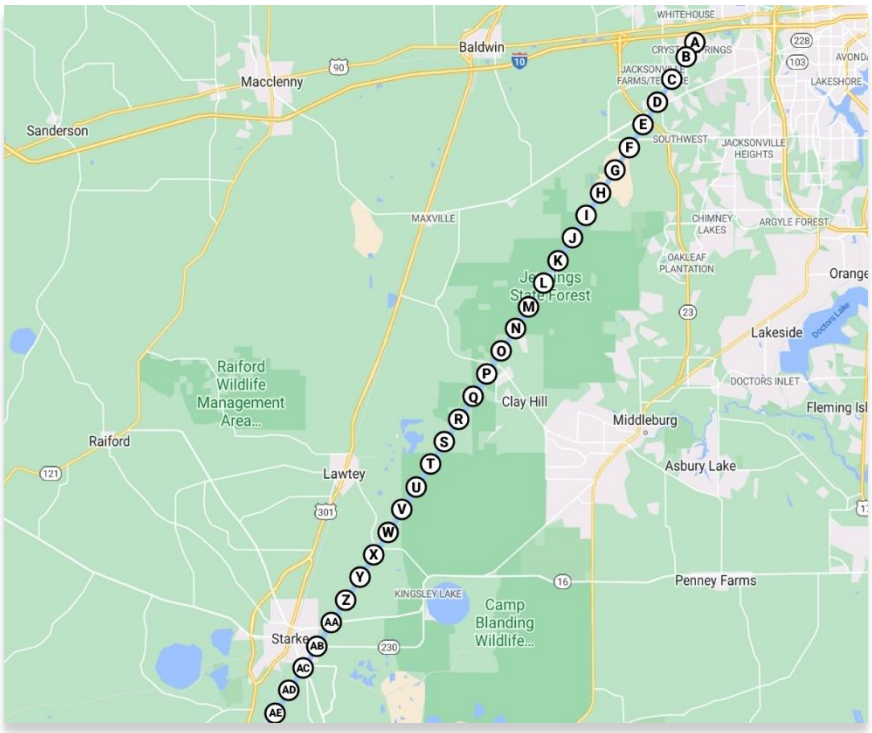
1. Select **KML** from the Export Breadcrumbs popup.
2. Open **My Files** app on your Android tablet.
3. Navigate to your tablet's **Internal storage** to view contents.
4. Select the **AeroApp** folder.



5. Select **Breadcrumbs**.

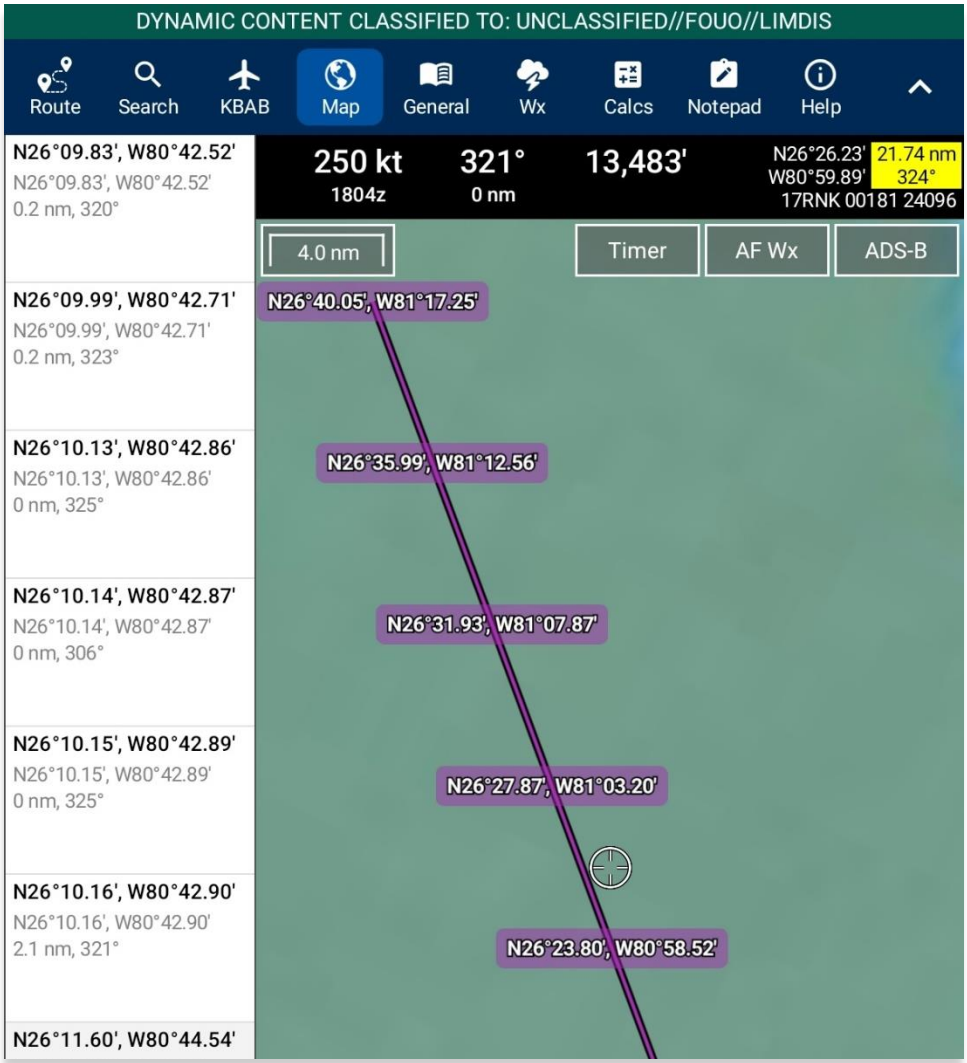


6. Your exported breadcrumbs will be listed. Tap a **KML file**. Your tablet will open the default map and display the points of the breadcrumbs.



View Breadcrumbs in Route List

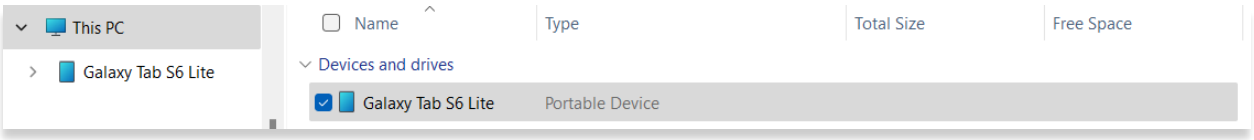
1. Select **Route List** from the Export Breadcrumbs popup.
2. The **Export to Route List** popup will display.
3. Users will be prompted to name their route name. Enter the desired name then tap **Save**.
4. To view your saved route, tap **Route** on the ***Main Menu***. The Route Panel will expand.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



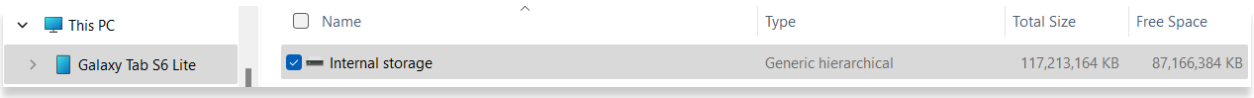
View Breadcrumbs in SQLite File

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



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



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

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

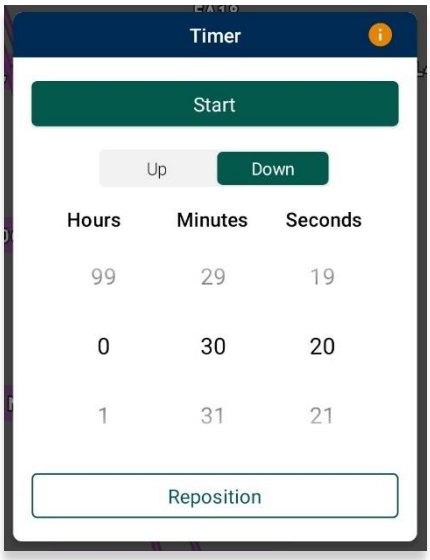
8. Your exported breadcrumbs will be listed. Drag your desired breadcrumbs to your database viewer and your route will display.

17.2 Timer

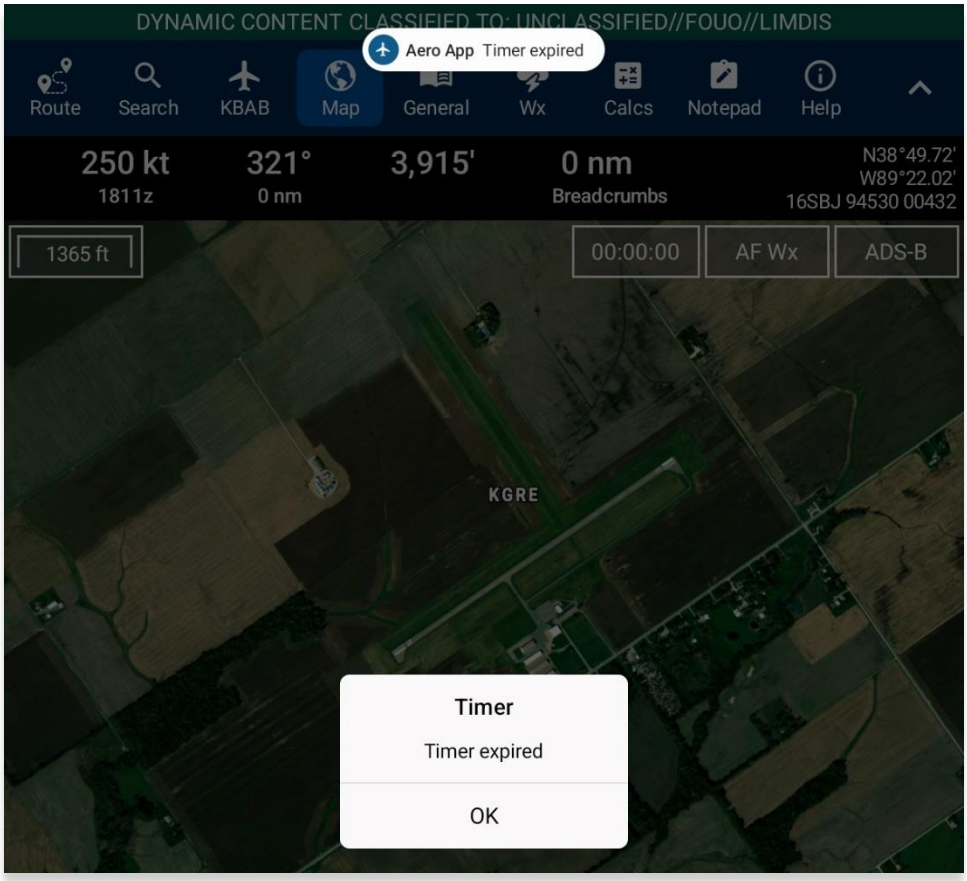
The Timer feature is a general use chronometer that can be used to time flights or any other activity.

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 the timer.



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



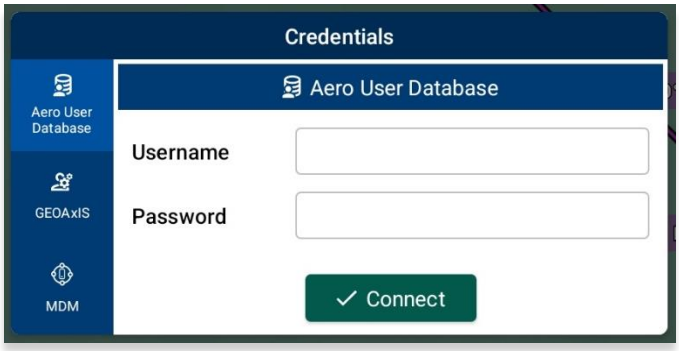
11. To force the timer to end, tap **Stop**.
12. Tap **Reset** to restart timer.

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

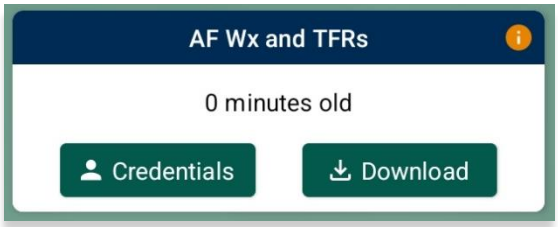
17.3 Air Force Weather (AF Wx)

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 DOD crews and select partners.

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



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 on the Map. Additional Air Force weather information can be viewed from the Wx menu. Refer to AF Wx Information on Wx Menu Section for additional information.

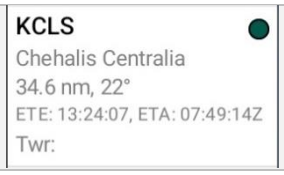
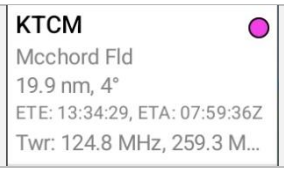
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigational bar.
4. Select **Weather** from the side menu.
5. Tap **METARs** to enable the option. Different colored dots will populate on the Map. The different color dots below the airport labels depict the airport's flight rule.
6. 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 on the Wx menu. Refer to AF Wx Information on Wx Menu Section 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 navigational bar.
4. Select **Weather** from the side menu.
5. Tap **METARs** to enable the option. Different colored dots will populate on the Route Panel for each point on the route. The different color dots within 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

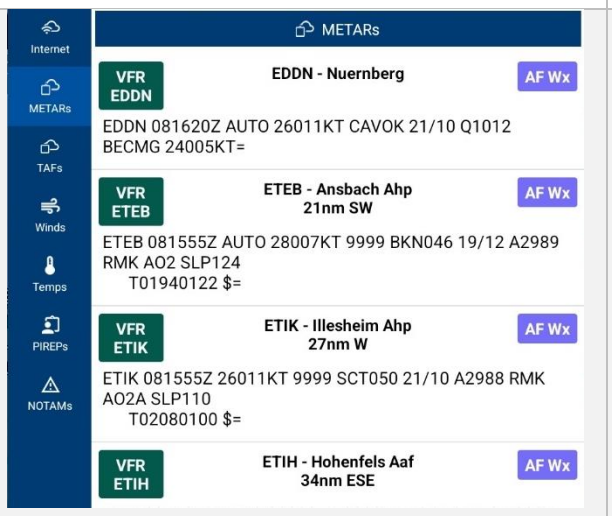
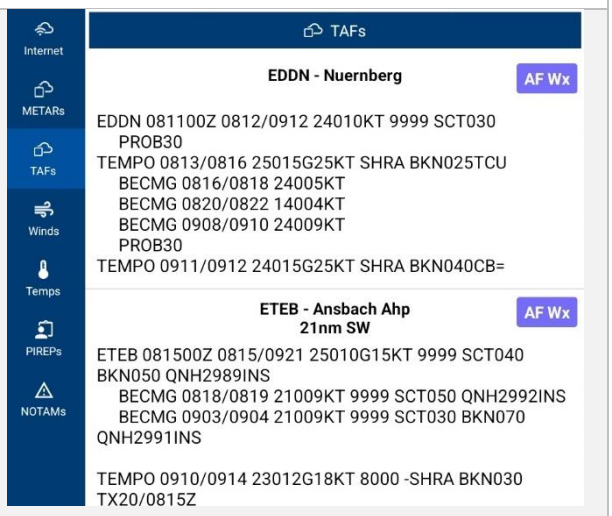
VFR	MVFR
	
IFR	**LIFR**
	

NOTE: METAR information on the Route Panel expires 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 display.
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 to connect your Wi-Fi network to the receiver.

1. Open the Android *device settings app* and select **Connections**.
2. Tap on **Wi-Fi**.
3. Search and tap the ADS-B receiver in the *Available networks* section.
4. Ensure the ADS-B receiver's connection is established. For additional information, refer to Section 17.4.3.

17.4.2 Connecting to ADS-B Receiver via Bluetooth

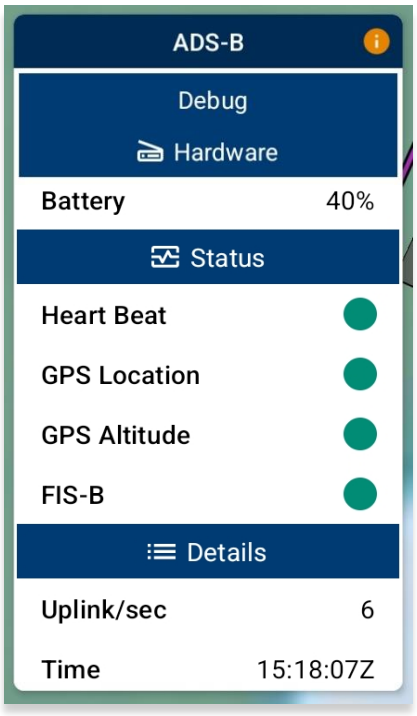
To establish a connection with an ADS-B receiver via Bluetooth, you must ensure to connect your Bluetooth to the receiver.

1. Open the Android device settings app and select **Connections**.
2. Tap on **Bluetooth**.
3. Search and tap the ADS-B receiver in the Available devices section.
4. Ensure the ADS-B receiver's connection is established. For additional information, refer to Section 32.1.
5. Pair device.

17.4.3 ADS-B Information

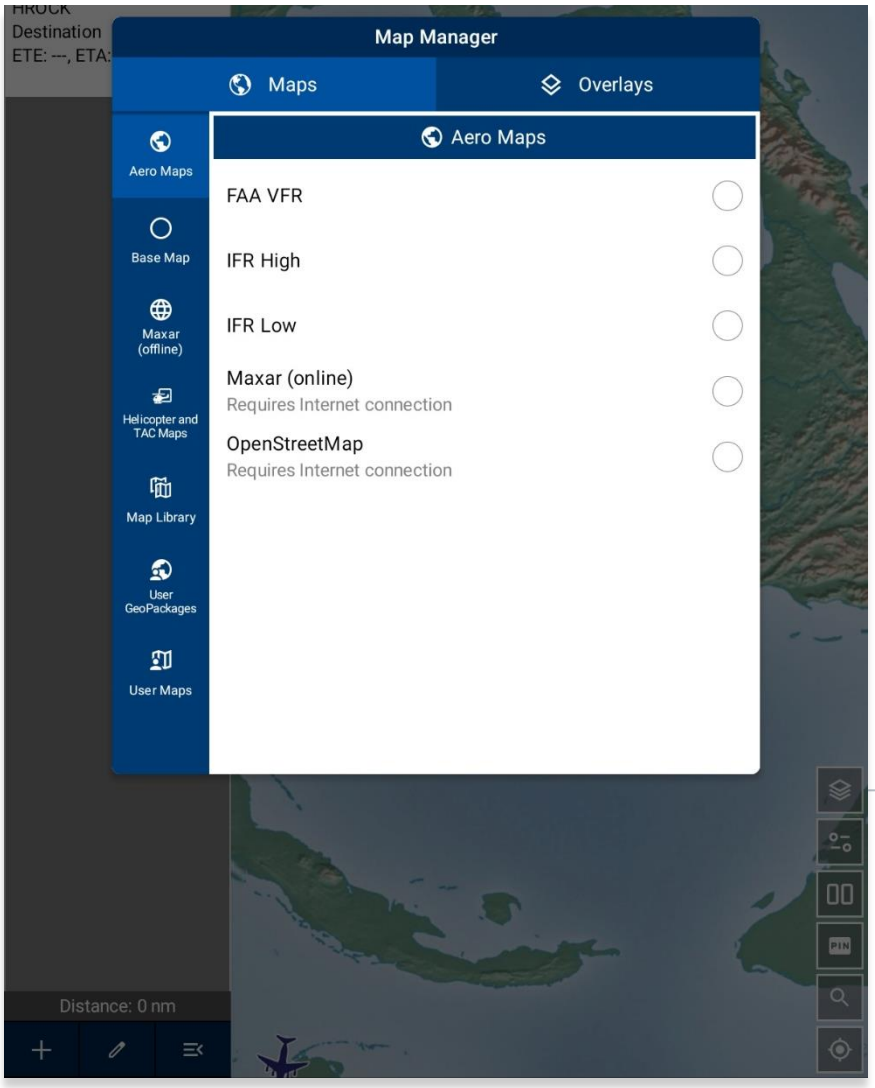
Aero App provides an ADS-B tool that outputs ADS-B details such as its battery percentage, connection statuses, and additional ADS-B information.

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



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

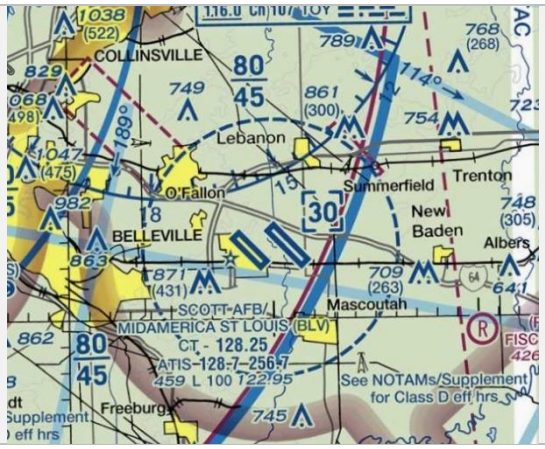
18.1.1 Aero Maps

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

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

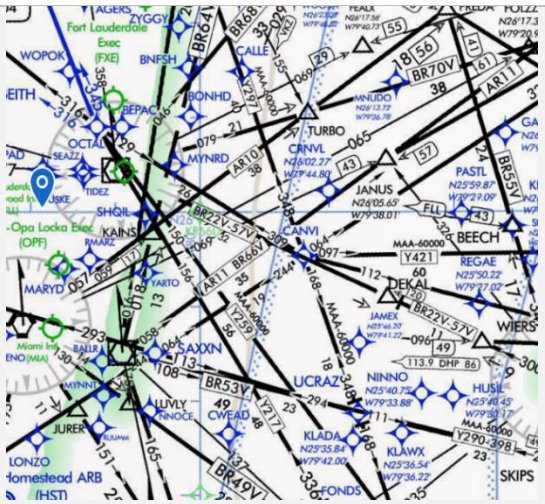
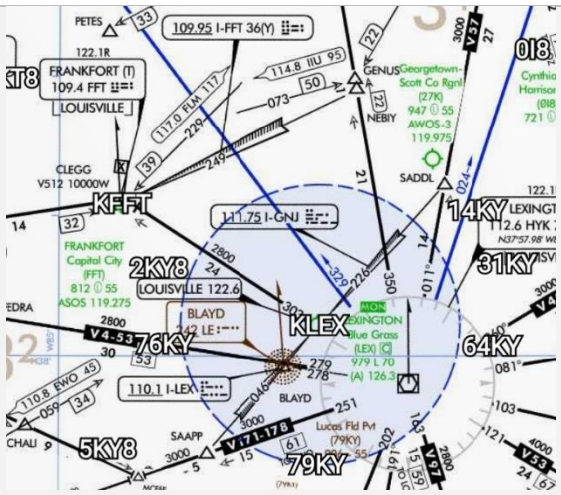
The IFR High charts for the desired region must be downloaded. Until the data has been successfully downloaded, the IFR High option will remain disabled.

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** on the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **IFR High** to enable the option. The high-altitude IFR Enroute chart is displayed on the Map.

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).

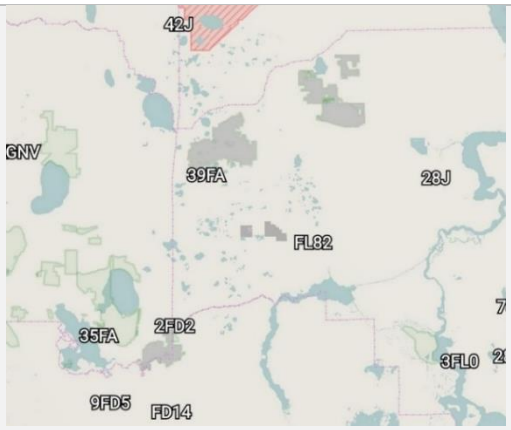
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear**.**
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Aero Maps** from the side menu, if necessary.
5. Tap **Maxar (online)** to enable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

18.1.1.5 OpenStreetMaps

OpenStreetMaps requires an internet connection to view on the Map.

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

Maxar (online)	OpenStreetMap
	

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

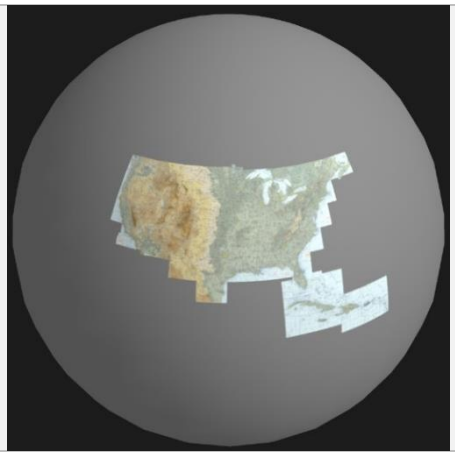
Earth Base Map data must be downloaded. Until the data has been successfully downloaded, the Earth option will remain disabled.

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.

18.1.2.2 Gray Base Map

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

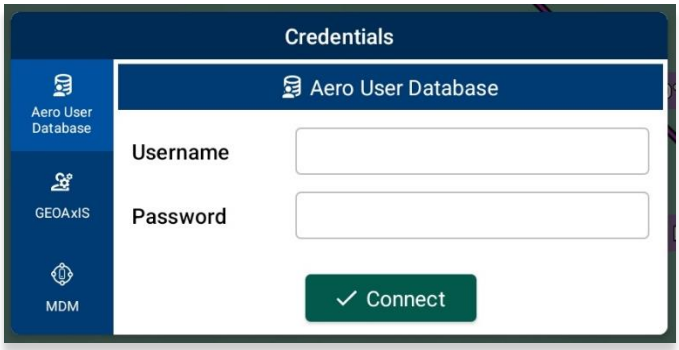
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear**.**
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Base Map** from the side menu.
5. Tap **Gray** to enable the option. The gray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

Earth	Gray
	

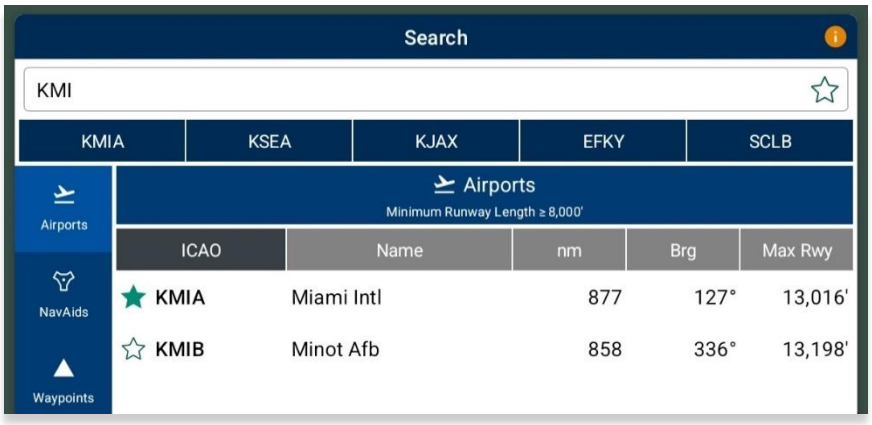
18.1.3 Maxar (Offline)

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, 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).

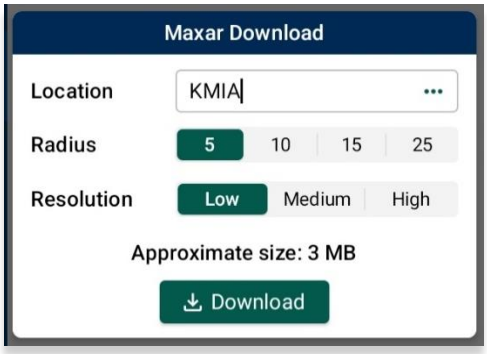
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear**.**
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Maxar (offline)** from the side menu.
5. Tap **Download.**
6. The credentials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



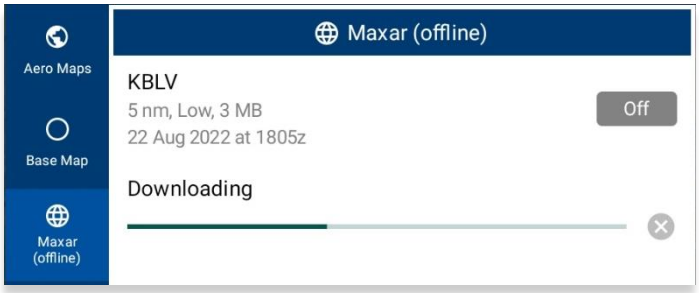
7. The Maxar Download popup will display the following fields:
    - **Location** – tap the ellipsis button to display the Search popup. Enter Airport, NavAid, Waypoint, User Waypoint, or Pin inside the text box. Radial Off NavAid and all other identifiers will be converted to coordinates.



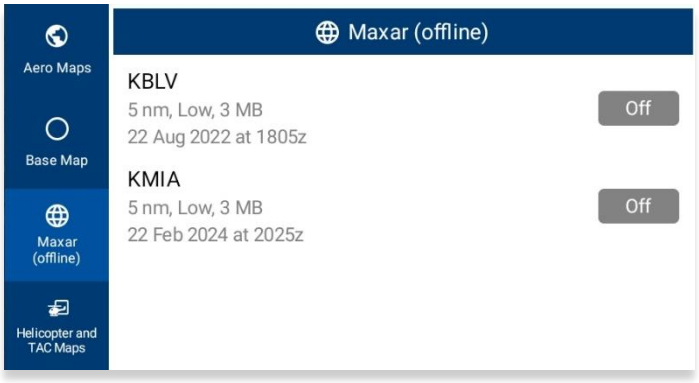
    - **Radius** – select from options of 5, 10, 15, 25.
    - **Resolution** – select from options of Low, Medium, or High.



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 choose to permanently remove. Tap **Delete.**

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)

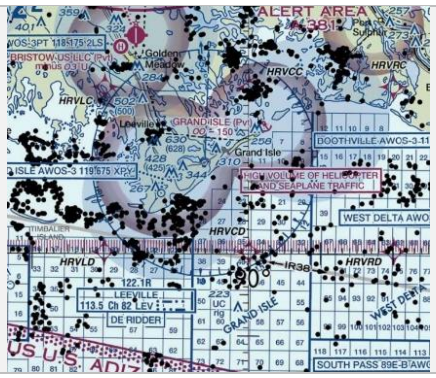
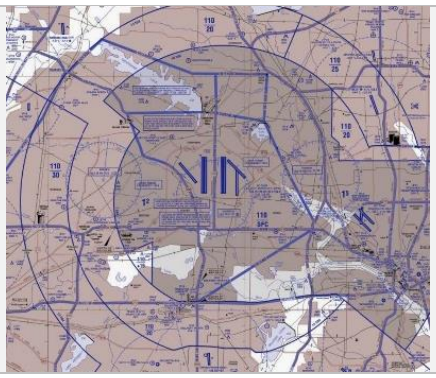
The FAA Helicopter CONUS Gulf Coast data must be downloaded. Until the data has been successfully downloaded, the Helicopter (Gulf Coast) option will remain disabled.

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.

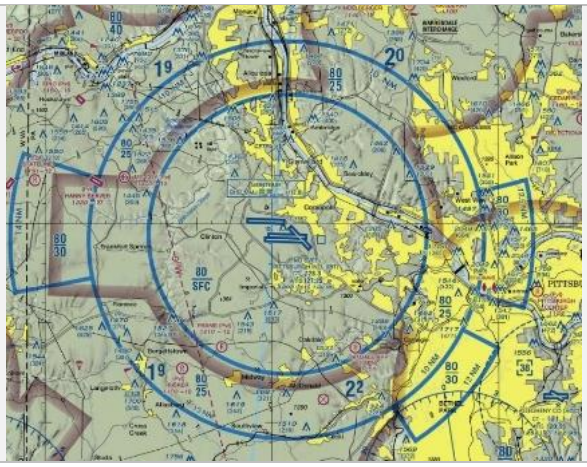
1. Tap **Map** on the ***Main Menu.***
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear**.**
3. Select **Maps** from the navigation bar, if necessary.
4. Select **Helicopter and TAC Maps** from the side menu.
5. Tap **Helicopter (Routes)** to 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

The Map Library section provides users the option to download Map Library charts to display on the Map view. Map Library includes maps for emergencies, NavPlan charts, range charts, and others. The Aero App team 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, tap on the folder header to show or hide its respective files.
6. Tap desired **Map**. The chart is overlayed on the Map.

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

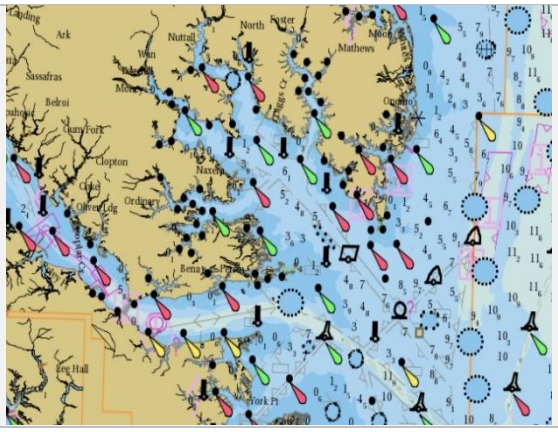
Map Library

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**.

User GeoPackages

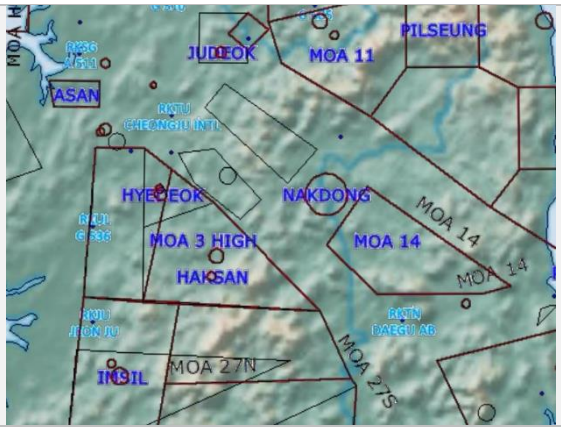


18.1.7 User Maps

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. Enable desired file(s) and the overlay will display on the Map.
7. To delete a user map, swipe left to reveal the delete button of the file that you choose to permanently remove. Tap **Delete**.

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.

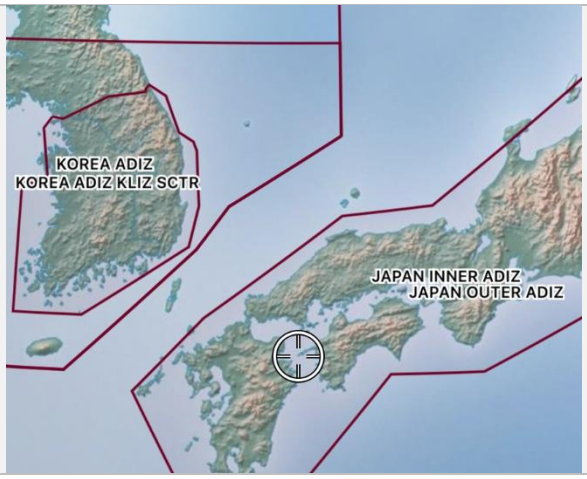
18.2.1 Aero Overlays

Aero Overlays contains 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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **ADIZ** to enable the option. ADIZ sectors will populate the Map.
6. Tap an ADIZ sector of choice on the Map. A popup containing an overview of the specified area will be displayed.

ADIZ

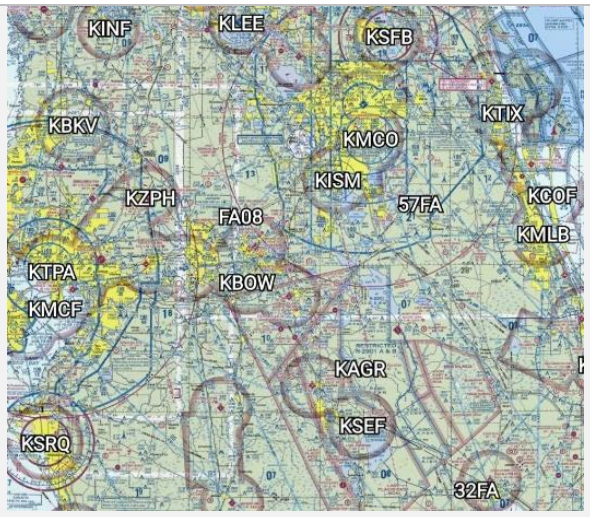
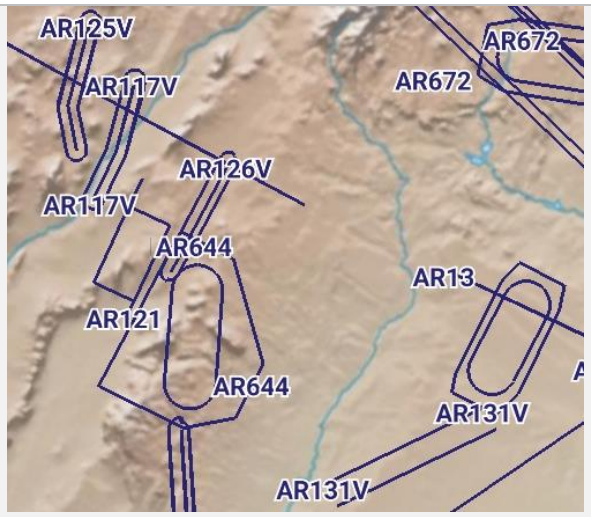


18.2.1.2 Airports

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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Airports** to enable the option. Airport identifiers will populate the Map, respective to the minimum runway length users have set in their Settings.

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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Air Refueling Routes** to enable the option. Air refueling routes will populate on the Map.
6. Tap an AR label on the Map. A popup with air refueling route information will be displayed.

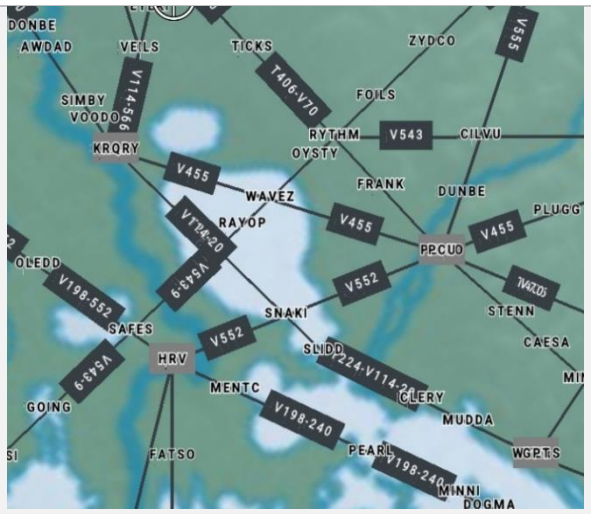
Airports	Air Refueling Routes
	

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

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

Airspaces (B, C, D)	Airways – Low
	

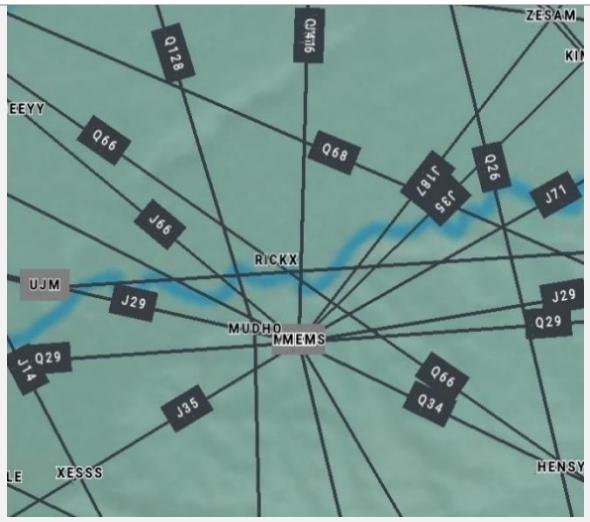
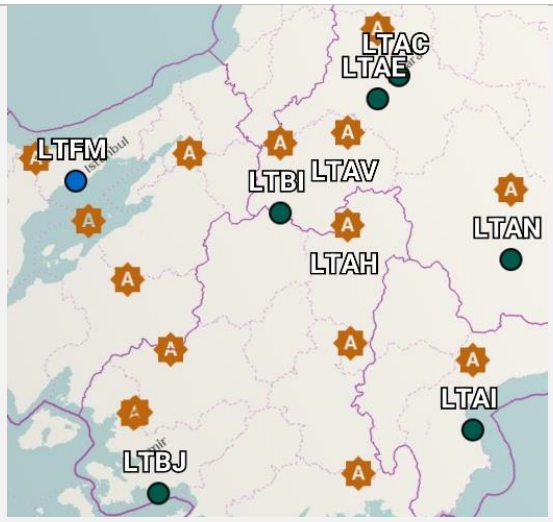
18.2.1.6 Airways – High

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

NOTE: Users can add Airways to their route. Refer to Add Airways to Route Section 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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Arresting Gear** to enable the option. Arresting gear will populate on the Map.
6. Tap an arresting gear of choice on the Map. A popup with arresting gear information such as its identifier name, absorbing system, engagement type, and command will be displayed.

Airways – High	Arresting Gear
	

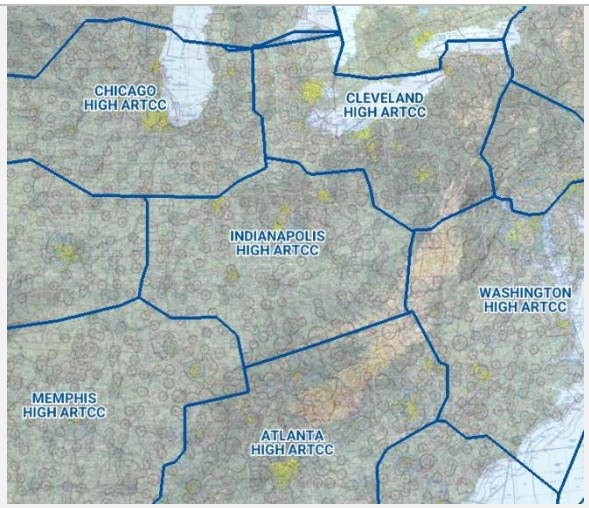
18.2.1.8 Air Route Traffic Control Centers (ARTCCs) – Low

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

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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control for ***ARTCCs*** to **High**. The map will overlay regions of high ARTCCs.

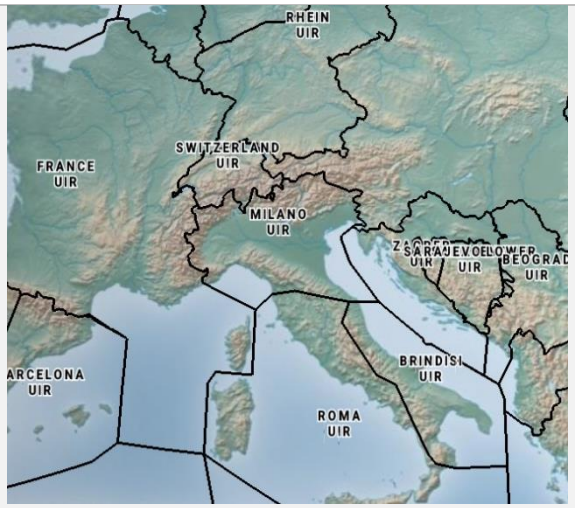
ARTCCs – Low	ARTCCs – High
	

18.2.1.10 Flight Information Region (FIR)

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

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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap to select or slide the segmented control to **UIR.** The map will be divided into specified regions of airspace.
6. Tap a region of choice on the Map. A popup containing an overview of the upper flight information region will be displayed.

FIR	UIR
	

18.2.1.12 Hazards

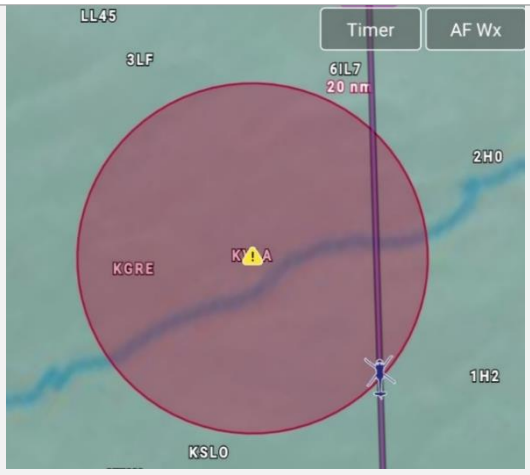
Hazards are marked locations on the Map that were dropped by users. This option must be enabled to view dropped hazards. If no hazards were dropped, refer to Section 25.1.4 for additional information.

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

18.2.1.13 International Boundaries

International Boundaries delineate the space between sovereign states.

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

Hazards	International Boundaries
	

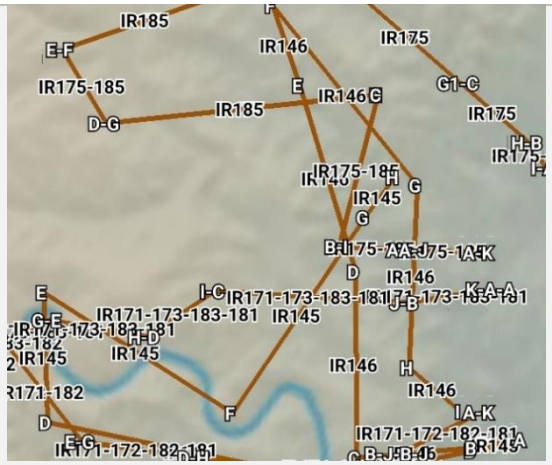
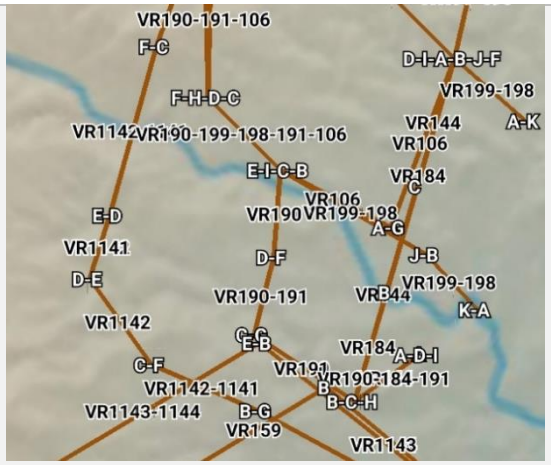
18.2.1.14 Military Training Routes (MTRs) Instrument Route (IR)

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

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

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

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

MTRs – IR	MTRs – VR
	

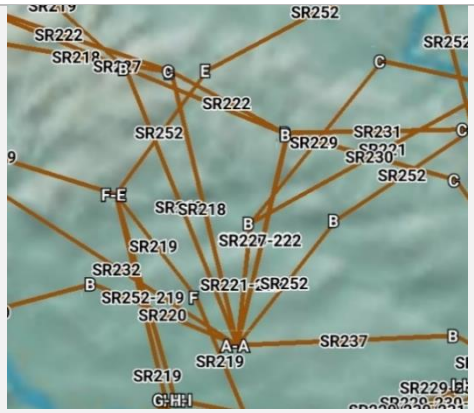
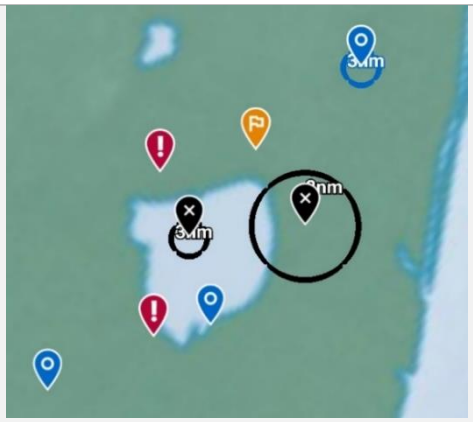
18.2.1.16 Military Training Routes (MTRs) Slow Speed Route (SR)

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

18.2.1.17 Pins

Pins are marked locations on the Map that were dropped by users. The Pins overlay is exclusive to Avoidance Point, Emergency Marker, Landmark, and Pin. This option must be enabled to view dropped pins. If no pins were dropped, refer to Section 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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **Pins** to enable the option. Dropped pins will populate on the Map.
6. Tap a pin of choice on the Map view. The Identifier Menu will appear.
7. To view pin information, tap **Show** from the side menu.
8. Tap **Info and Wx** and pin information will be displayed.

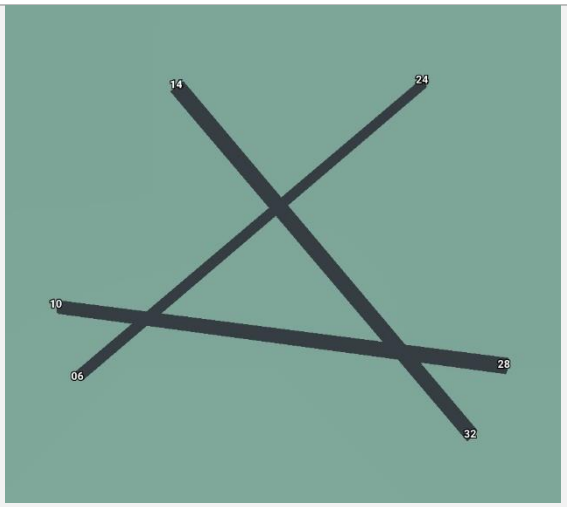
MTRs – SR	Pins
	

18.2.1.18 Place Names

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

18.2.1.19 Runways

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

Place Names	Runways
	

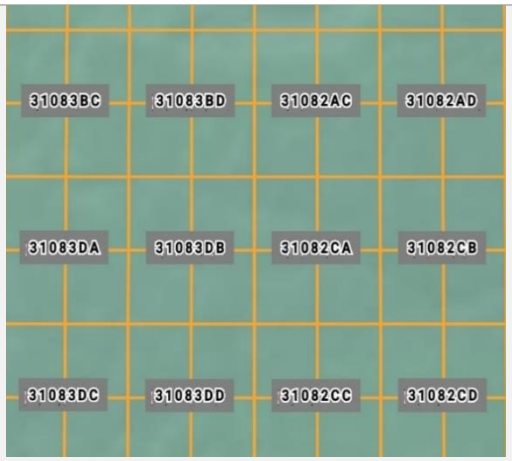
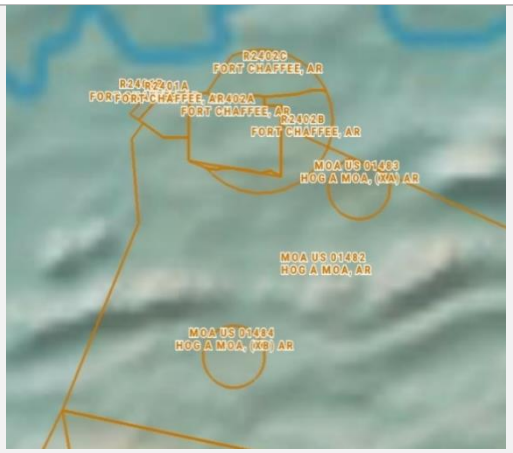
18.2.1.20 Search and Rescue (SAR) Grids

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

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

18.2.1.21 Special Use Airspaces (SUAs)

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

SAR Grids	SUAs
	

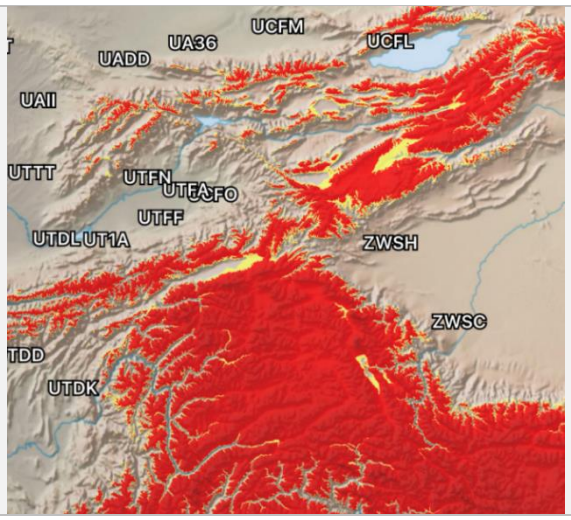
18.2.1.22 Terrain

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

NOTE: Terrain Coloring data must be loaded to view the Terrain overlay. Refer to Section 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.

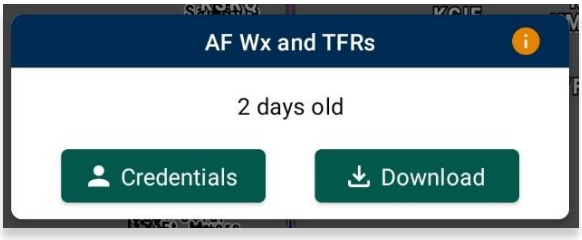
Terrain



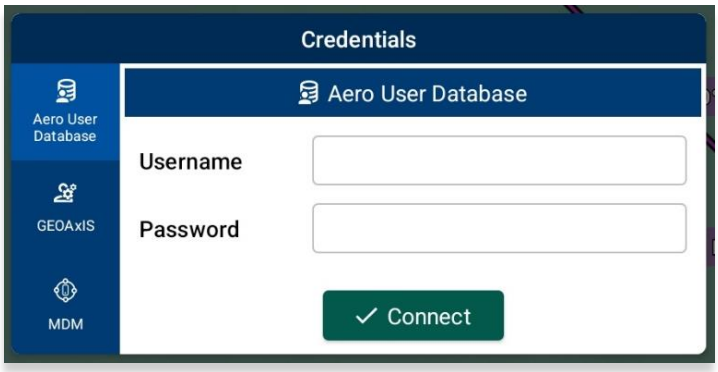
18.2.1.23 Temporary Flight Restrictions (TFRs)

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

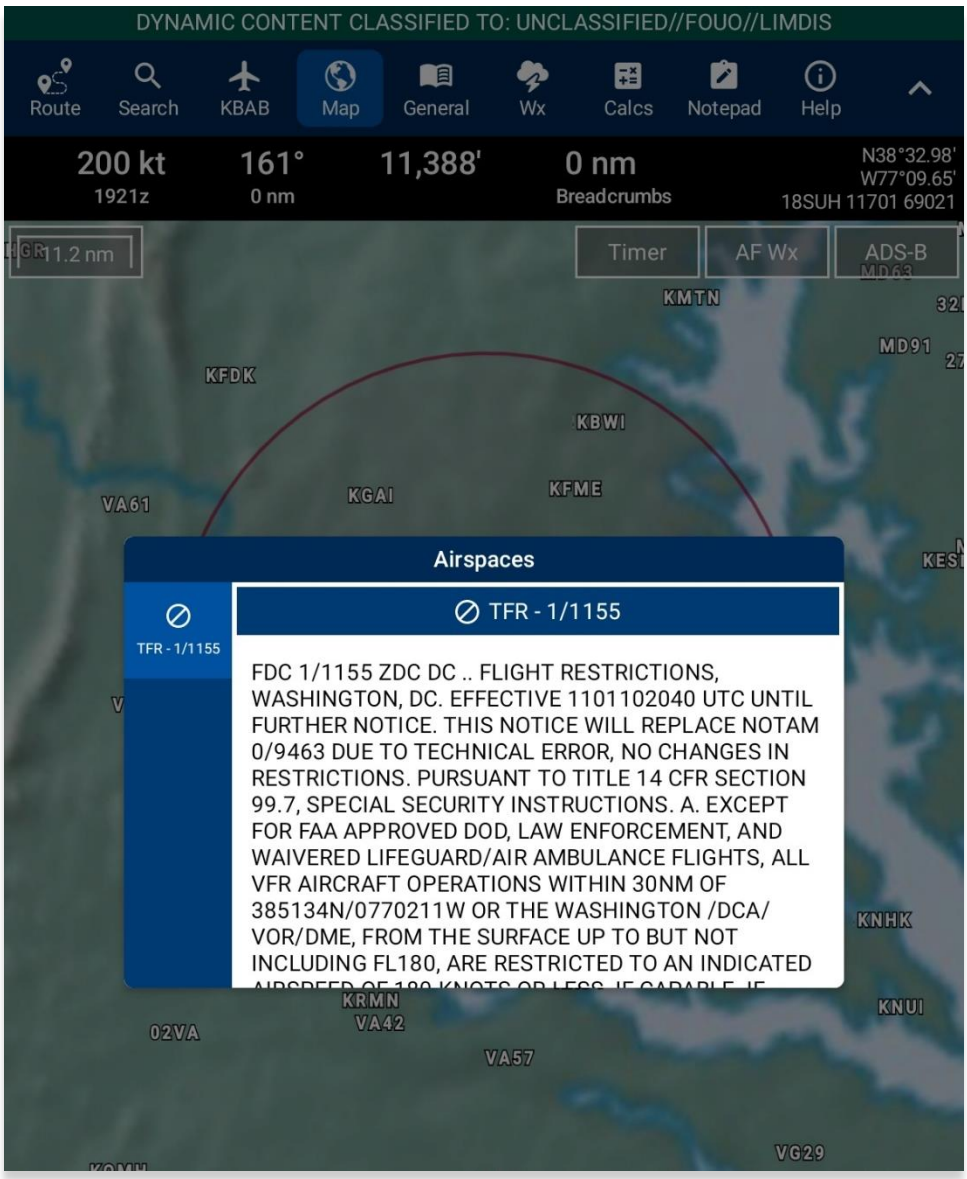
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **TFRs** to enable the option.
6.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

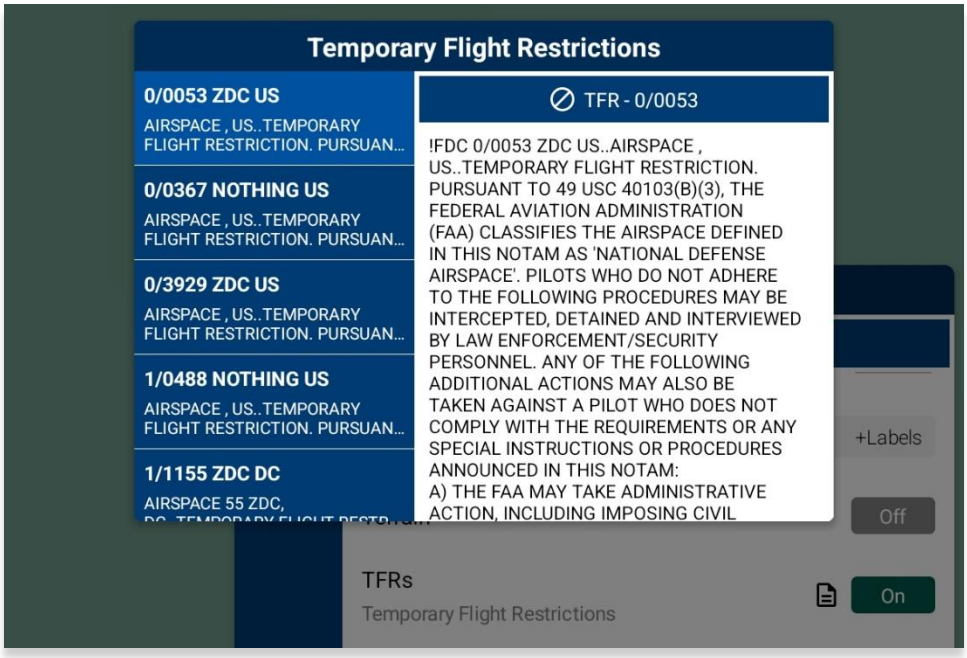


NOTE: In the case where a TFR overlaps another TFR, a Which One popup will appear to confirm selection.

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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Scroll to the bottom of the Overlays menu to view additional overlays. Locate *TFRs* and tap the **document** icon beside the option.
6. The Temporary Flight Restrictions popup will display with all TFR data including presidential TFRs. Scroll down to view additional TFRs.



18.2.1.24 Time Zones

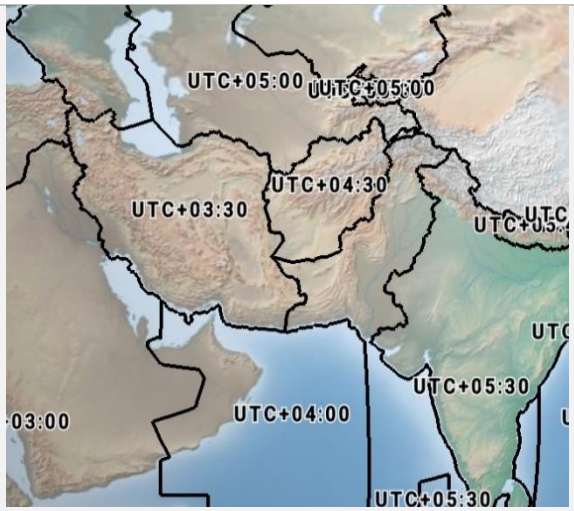
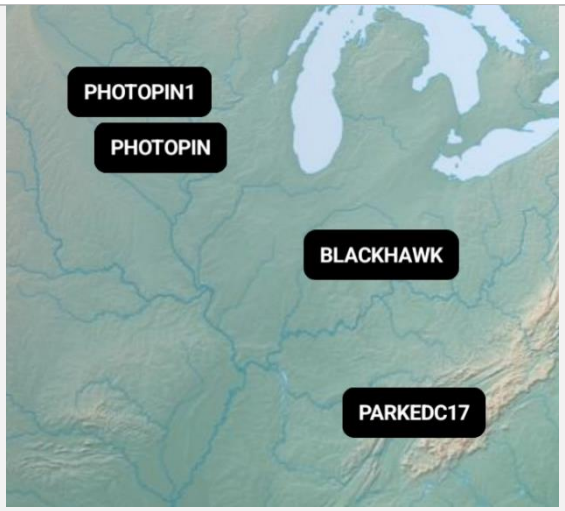
Time Zones are shown on the Map view with lines separating the longitudinal divisions. Labels display the time offset for each time zone.

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

18.2.1.25 User Images

User Images are Photo Pins that were dropped by users. The User Images overlay is exclusive to Photo Pins. This option must be enabled to view dropped photo pins. If no pins were dropped, refer to Photo Pin Section 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 navigational bar.
4. Select **Aero Overlays** from the side menu, if necessary.
5. Tap **User Images** to enable the option. Dropped photo pins will populate on the Map.

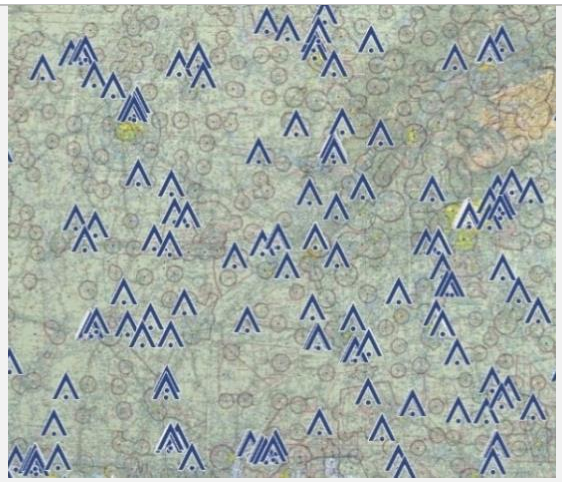
Time Zones	User Images
	

18.2.1.26 Vertical Obstructions (VOs)

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

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

VOs



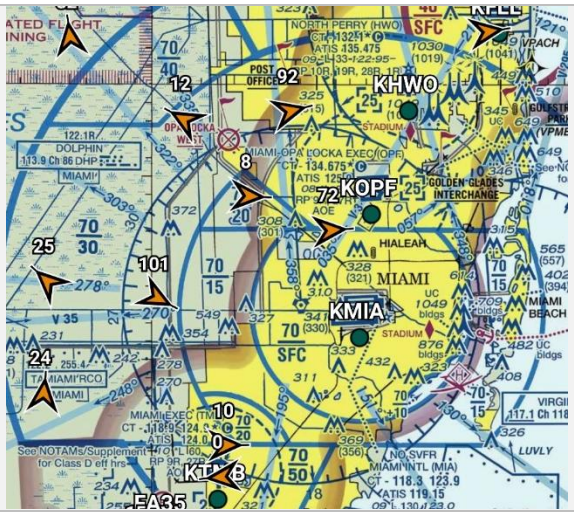
18.2.2 Traffic

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

18.2.2.1 Traffic

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

Traffic

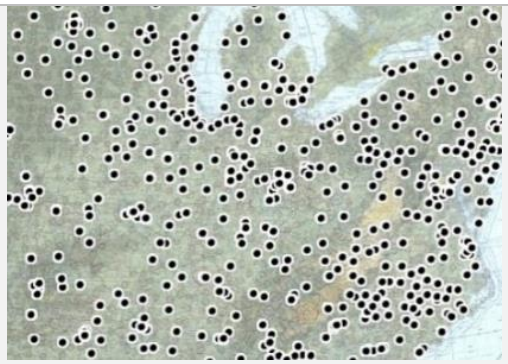
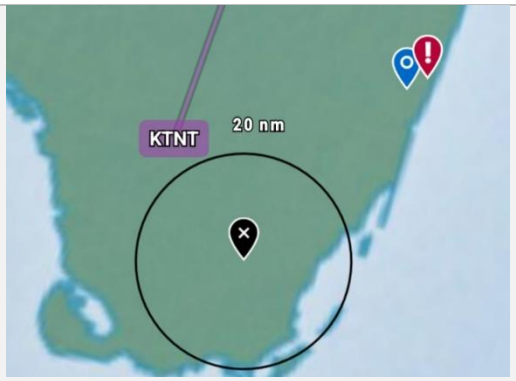
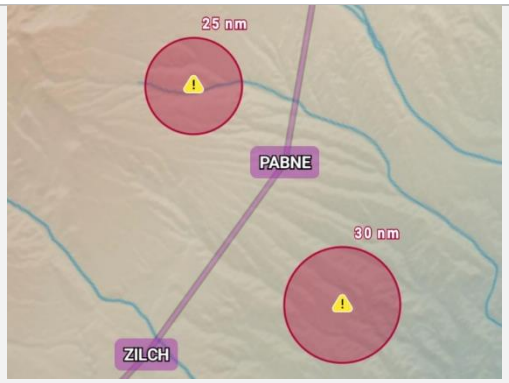


18.2.3 User Overlays

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 [mounted root]/AeroApp/MovingMaps 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 navigational bar.
4. Select **User Overlays** from the side menu.
5. Select desired user overlay(s) and the overlay will display on the Map.
6. To delete a user overlay, swipe left to reveal the delete button of the file that you choose to permanently remove. Tap **Delete**.

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

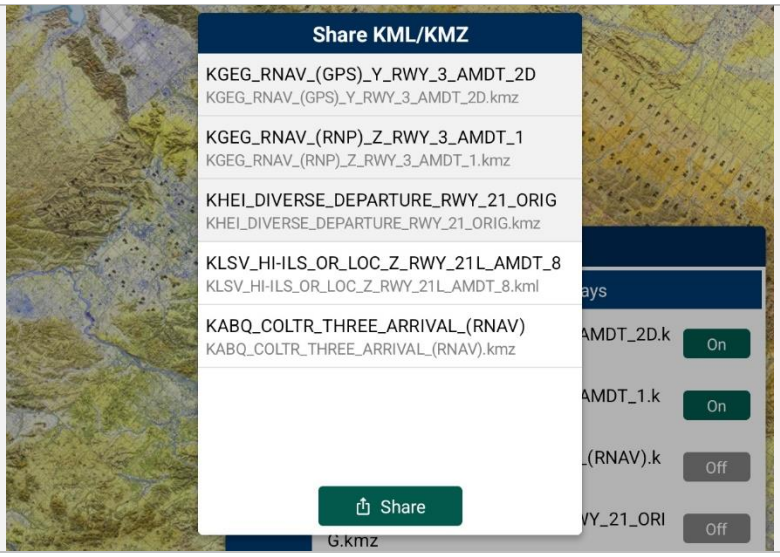
Shapefiles	GeoJSON
	
Pins	**Hazards**
	

18.2.3.1 Share KML/KMZ

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

1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
3. Select **Overlays** from the navigational bar.
4. Select **User Overlays** from the side menu.
5. Tap **Share** and the Share KML/KMZ popup will display.
6. Select desired **file(s)** to share then tap **Share** to display the different sharing methods.
7. Select desired **method of sharing**.
8. By selecting **Quick Share**, the Quick Share view will display. Refer to Sharing KML/KMZ Files Through Quick Share 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 File Through Email for additional information.

Share KML/KMZ

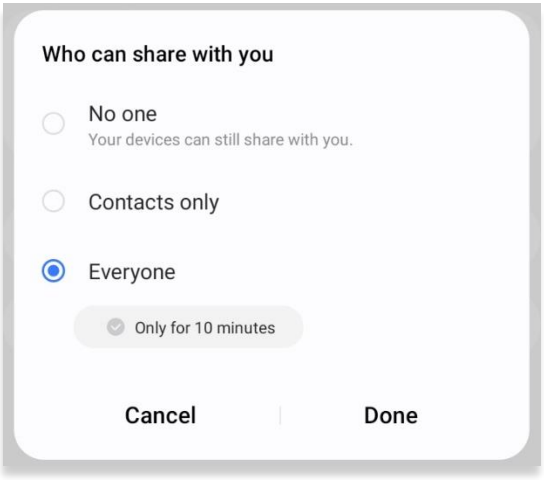


NOTE: The Share button will be disabled if no files have been selected.

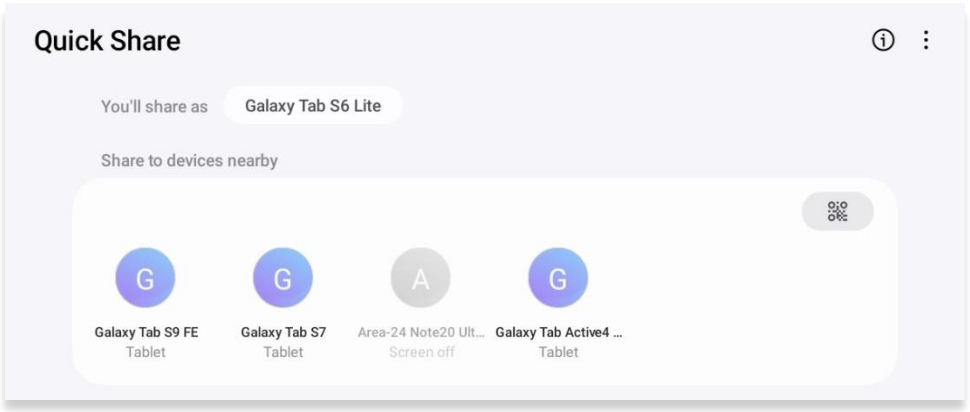
Sharing KML/KMZ Files Through Quick Share

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

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



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

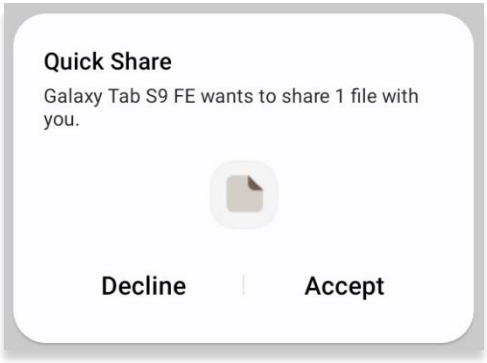


3. The sharing process will begin, and the receiving device will follow prompts to accept the files that are being shared.

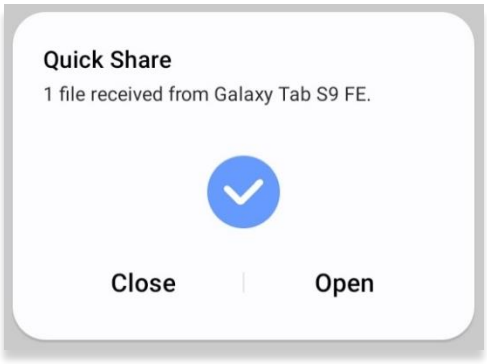
Receiving KML/KMZ Files Through Quick Share

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

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



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

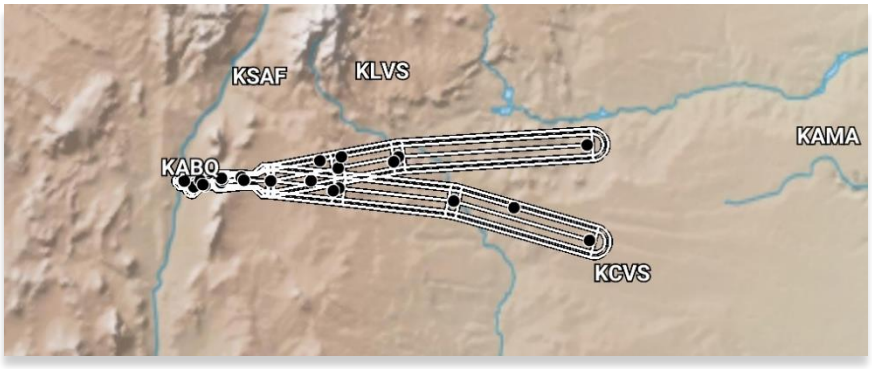


The received KML/KMZ file will be stored in the device's Internal Storage. To view the files on Aero App, users must move the received files to the appropriate Aero App folder. Refer to support.google.com for additional information.

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

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

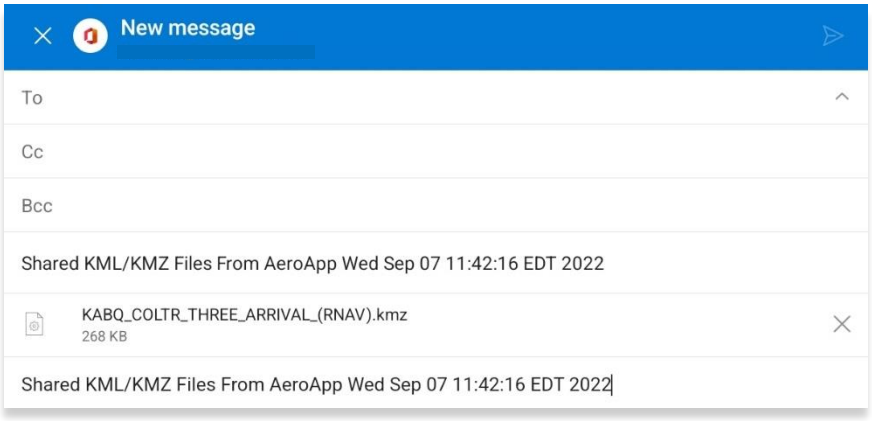
8. The KML/KMZ file can be viewed on Aero App. Open **Aero App**.
9. Tap **Map** on the ***Main Menu***.
10. Navigate to **Map Manager** located at the lower right of the Map view. The Map Manager popup will appear.
11. Tap **Overlays** on the navigational bar.
12. Tap **User Overlays** from the side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



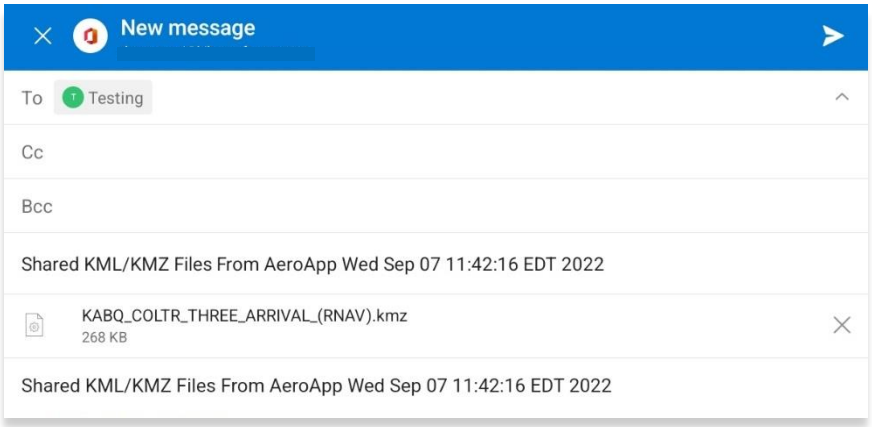
Sharing KML/KMZ Files Through Email

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

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

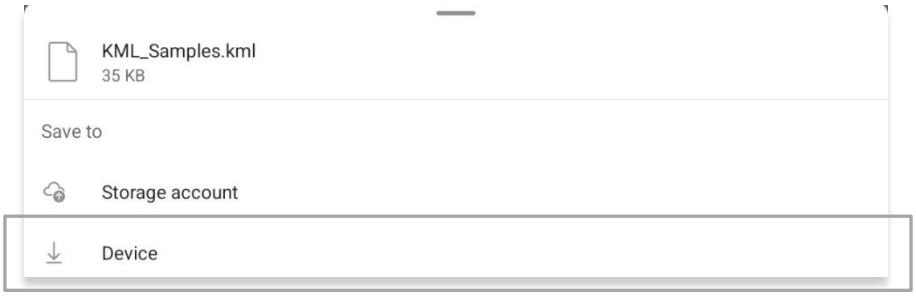


2. Enter the recipient's email address to which you would like to share the KML/KMZ files.
3. Once a valid email address has been entered, the *send button* will become selectable. Tap the **Send** button and the receiving device will follow prompts in downloading the files into their device.

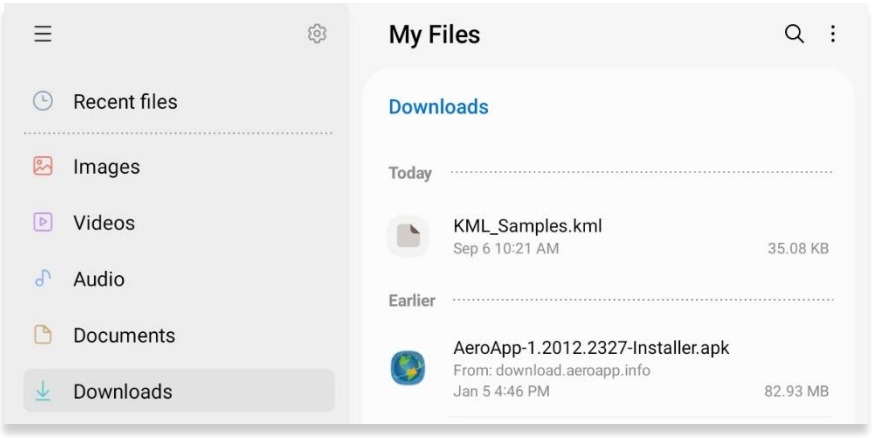


Receiving KML/KMZ Files Through Email

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

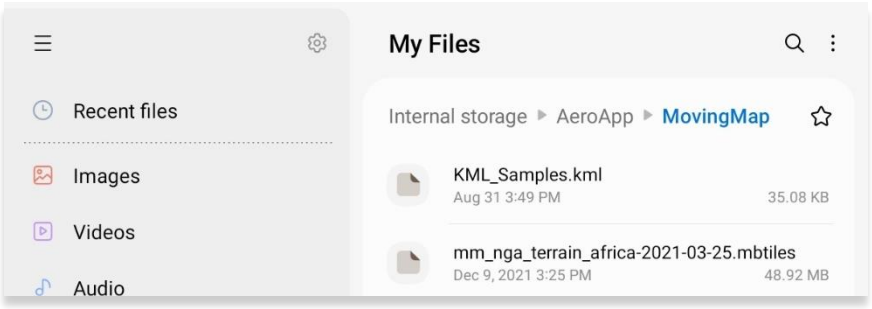


3. Once saved, navigate to the device's File Folder.
4. Navigate to the *Downloads* folder and locate KML/KMZ file.

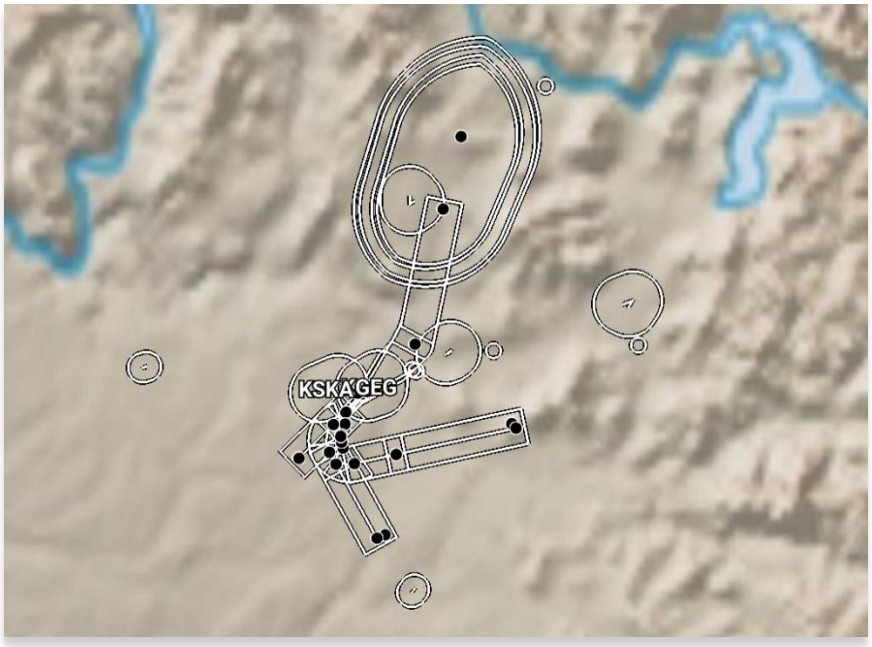


5. Copy desired KML/KMZ file.

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



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



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

18.2.4 Weather

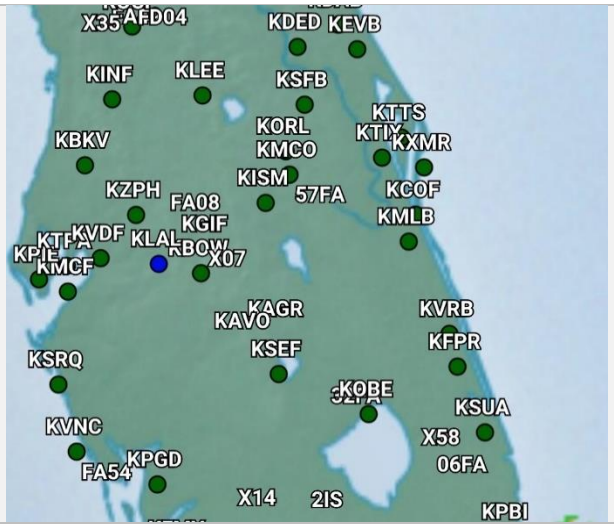
Aero App Weather has various options that enable pilots to display METARs and ADS-B weather on the Map. Users can modify their ADS-B flight altitude and ADS-B overlay transparency.

18.2.4.1 METARs

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

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

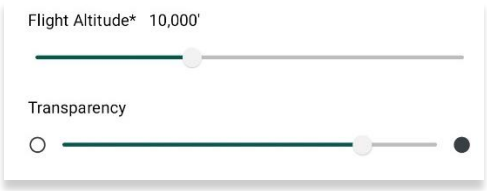
METARs



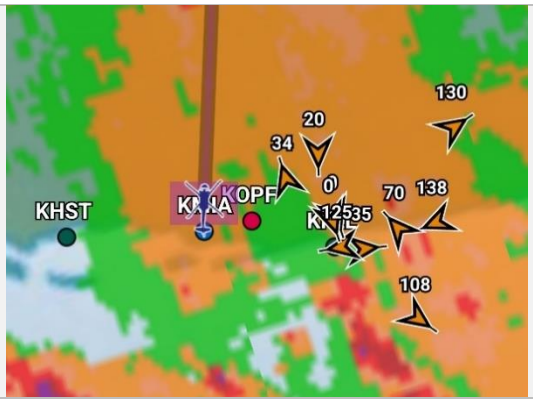
18.2.4.2 ADS-B Weather

Aero App provides animated ADS-B weather such as Lightning, Cloud Tops, Icing Probability, Icing Severity, Icing SLD Potential, NEXRAD, and Turbulence. User 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** on the navigational bar.
4. Tap **Weather** from the side menu.
5. Tap **ADS-B** to enable the option. Additional ADS-B weather overlay options will 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' and 24,000'.
10. By default, the ADS-B overlay transparency value is set to 50%. Adjust the ADS-B overlay transparency slider to any value between 0% and 100%.

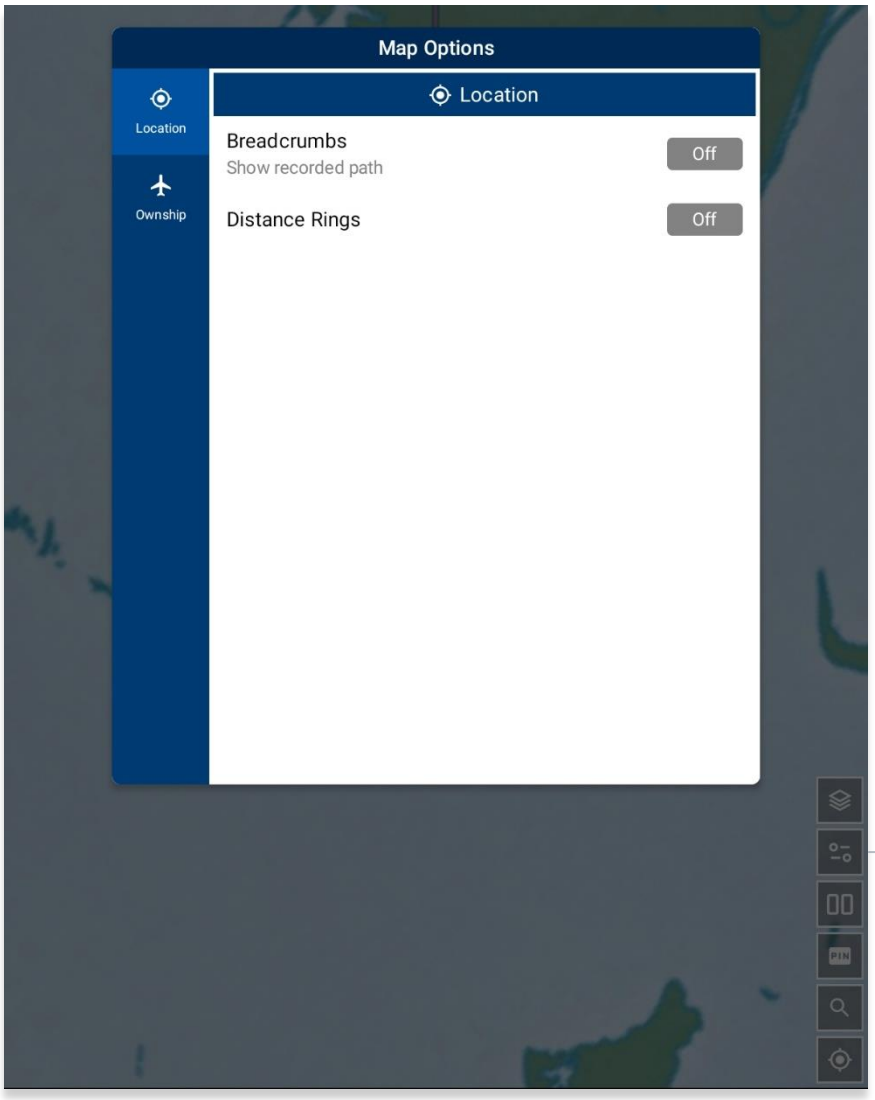


ADS-B Weather Overlay



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

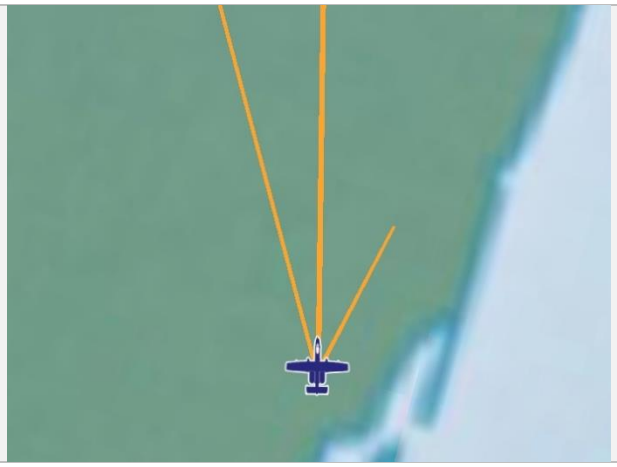
The Location menu offers options to show recorded paths and the ability to add distance rings around your ownship.

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 17.1.7 for additional information regarding Breadcrumbs.

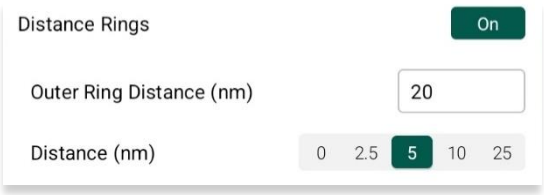
Breadcrumbs



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

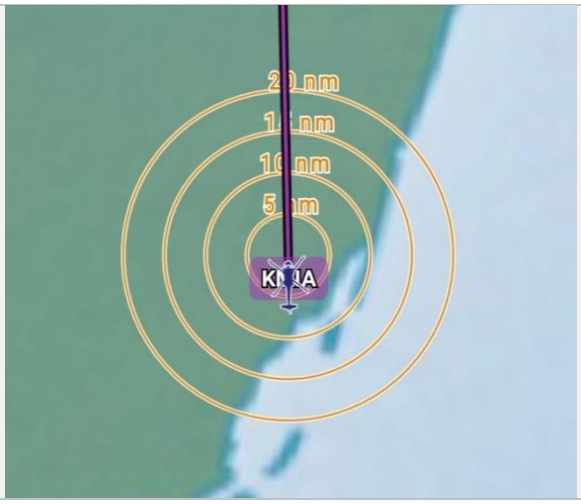
1. Tap **Map** on the ***Main Menu***.
2. Navigate to **Map Options** located directly below Map Manager.
3. Select **Location** from the side menu.
4. Tap **Distance Rings** to reveal additional options for distance rings.
5. Tap the **Outer Ring Distance** text box and enter desired outer ring distance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



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

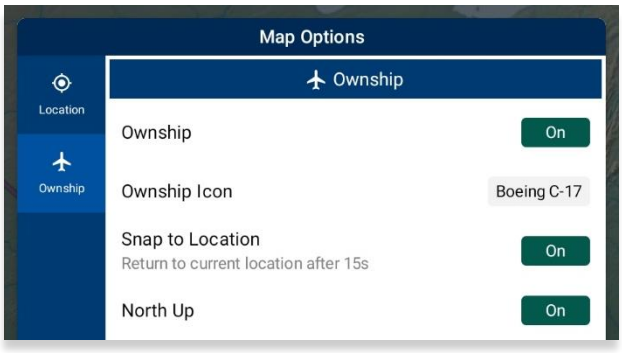
6. Use the segmented control to select desired distance between rings from the options of 0, 2.5, 5, 10, and 25 km or nm; respective to the distance unit format you have set in Settings.

Distance Rings



19.2 Ownship

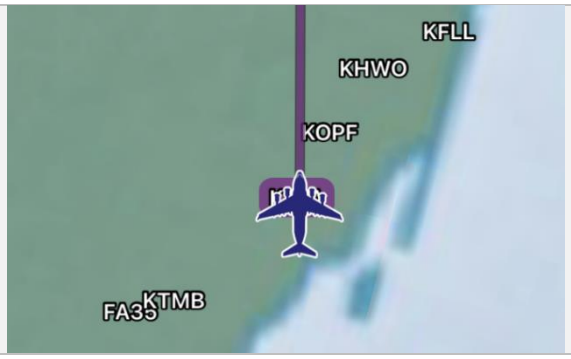
The Ownship menu allows users to customize their ownship. Users can show or hide their Ownship from the map view, Snap to Location in 15 second intervals, and choose North Up as the orientation on the Map.



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 snap to your current location after 15 seconds.

NOTE: Alternatively, users can access their Snap to Location feature by tapping the *crosshair icon* on their Map view as explained in Section 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. Tap **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
	

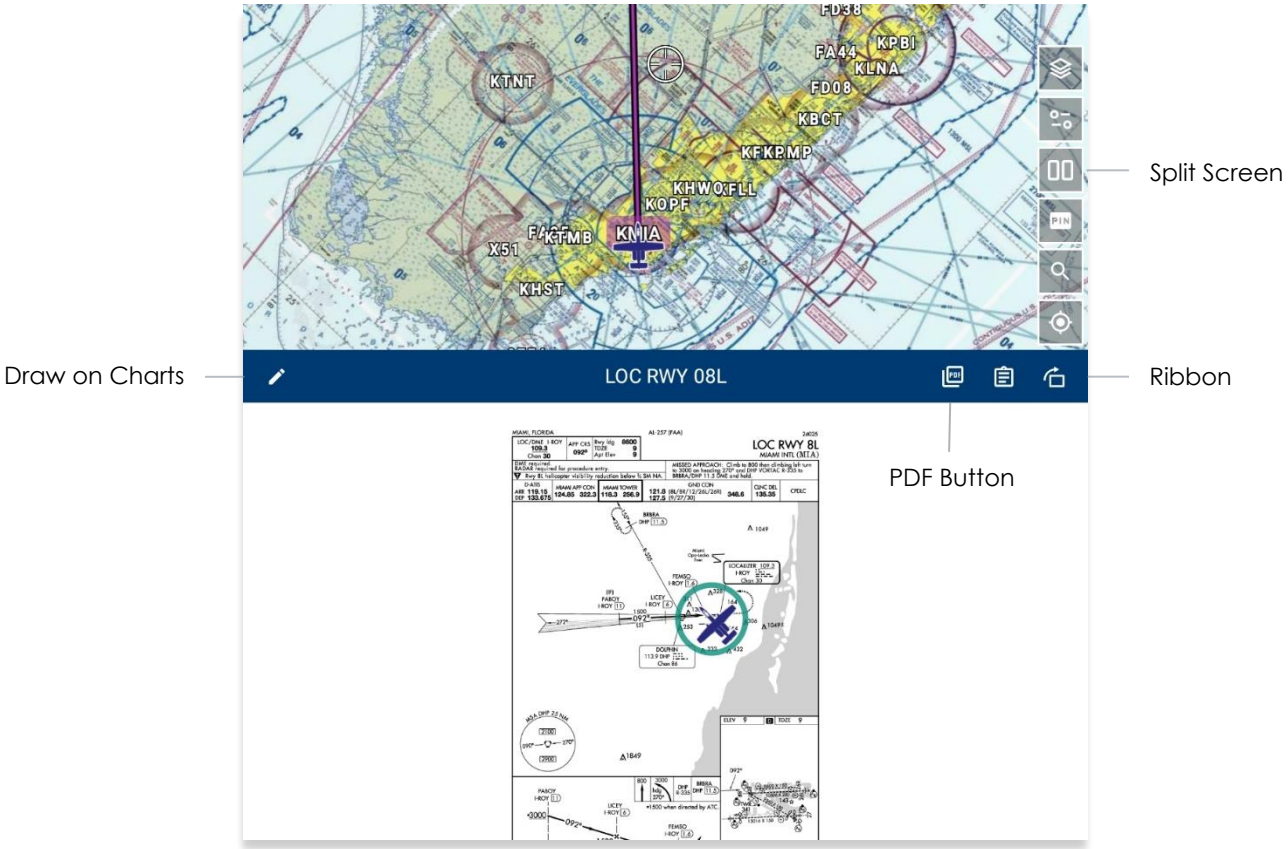
20 Split Screen

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

20.1 APD and IAP for Destination Airport

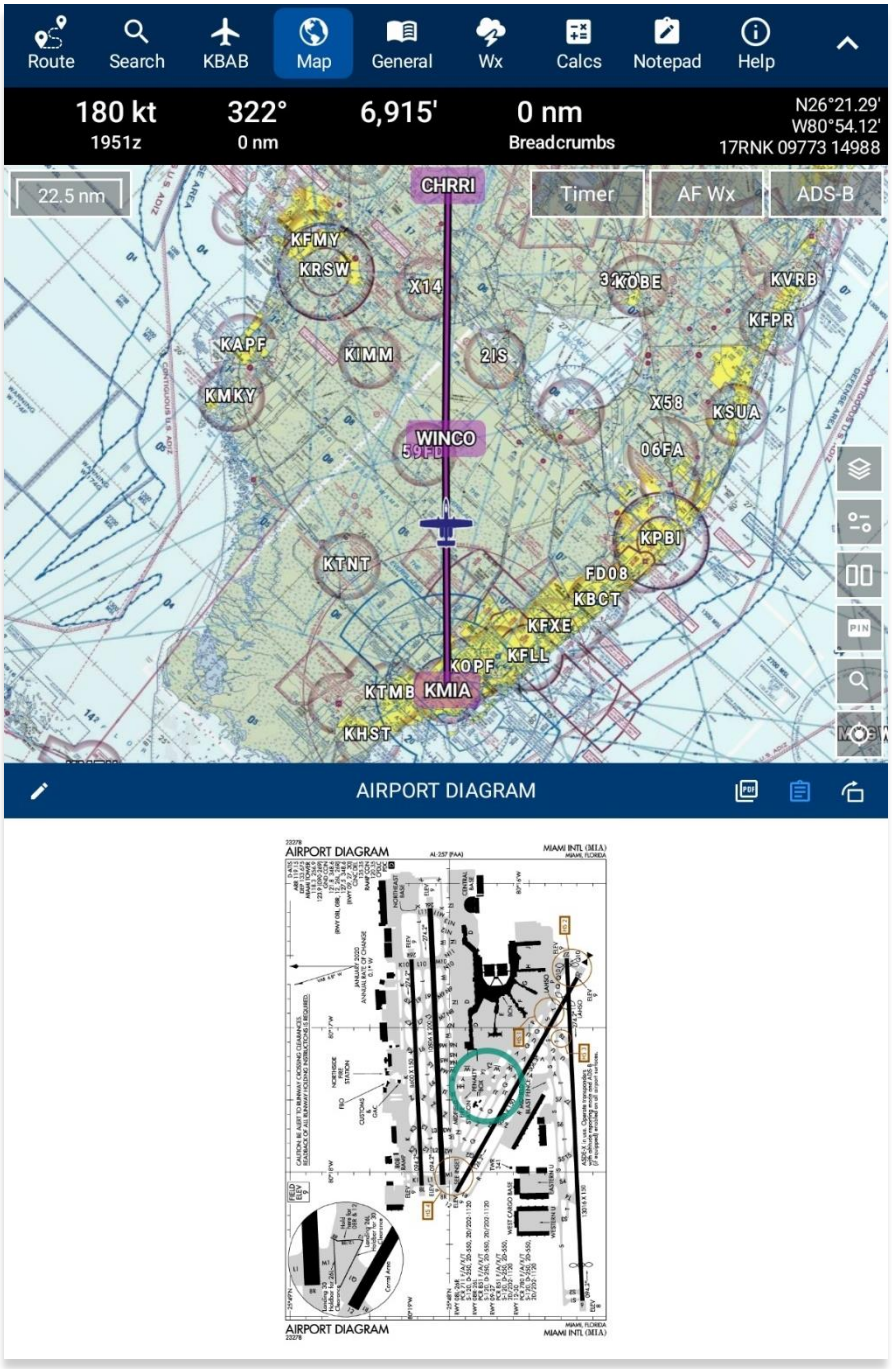
The APD or IAP charts for the route's destination airport can be displayed simultaneously with the Map on a split screen.

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



NOTE: An airport must be included in the route; otherwise, a chart will not be displayed.

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



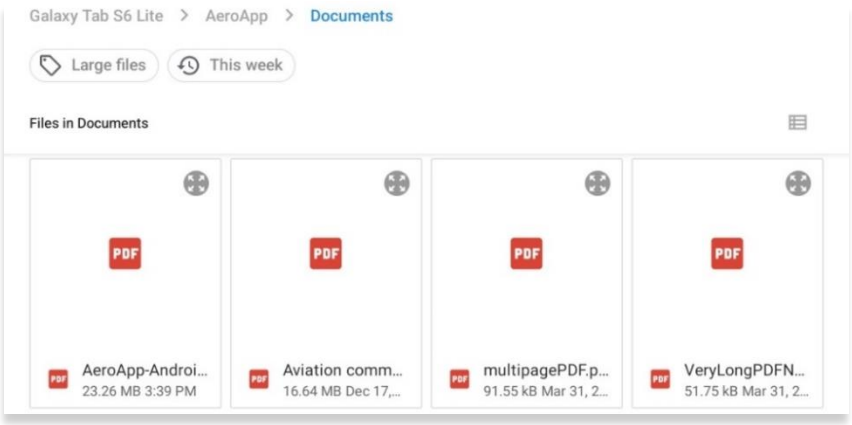
NOTE: The switch screen button will turn blue if the user is viewing the IAP, when switching to view the APD charts, the button will revert to white.

NOTE: Refer to Section 16.2.1 on how to draw on APD and IAP charts.

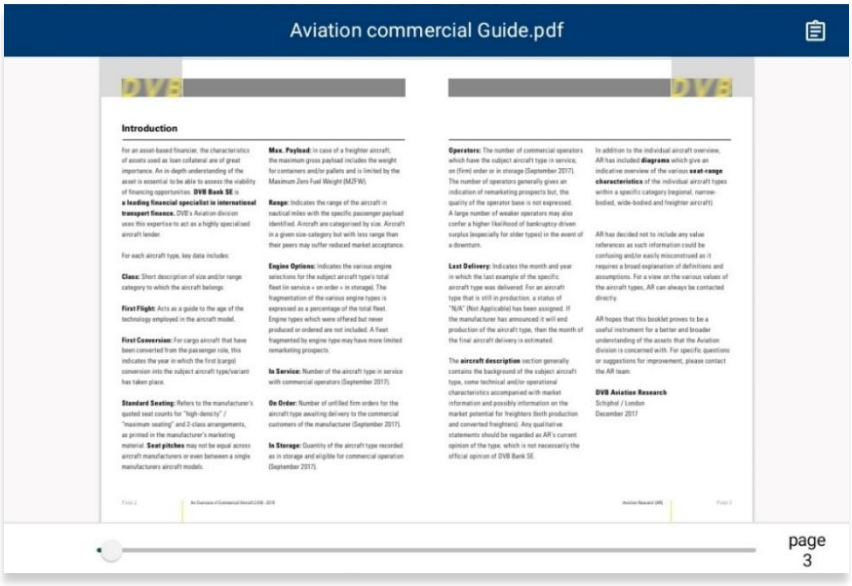
20.2 PDF Support

The Map's split screen view supports the display of PDF documents. To view your preferred user documents, ensure they are saved to your device and that the necessary permissions are granted to appear in the system file picker. Refer to Section 6.2 for additional information.

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



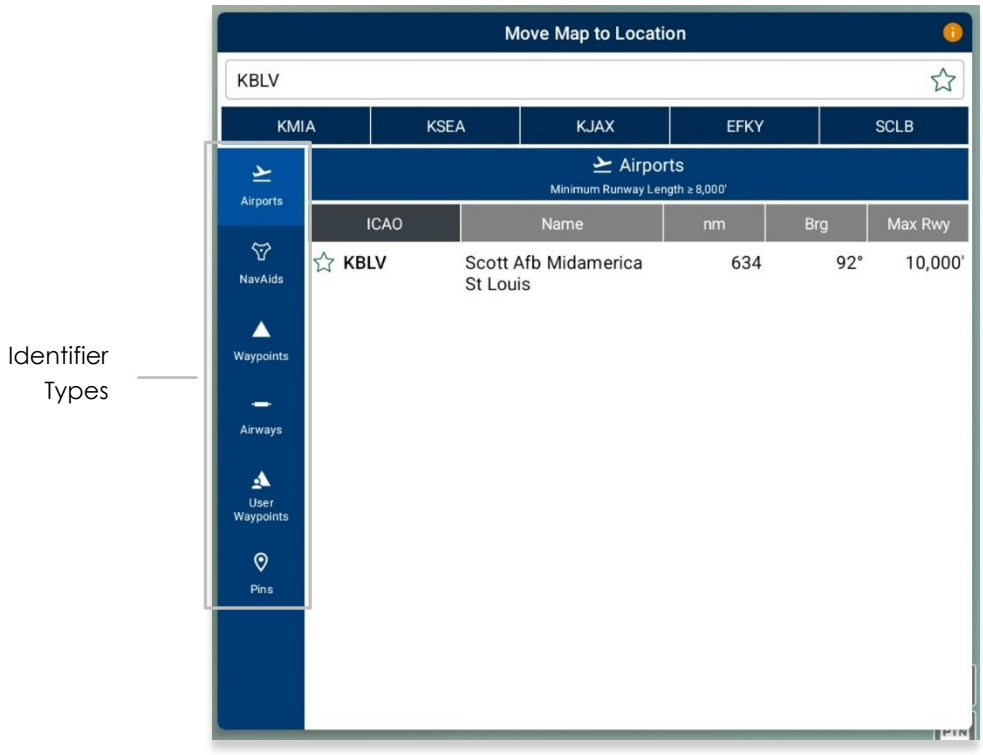
3. Select desired **document**. Your document will display on the split screen view.
4. Swipe the document to the right to move forward or swipe to the left to move backward from a page. Alternatively, you can move the slider to skip multiple pages.
5. To return to the IAP chart view, tap the **clipboard**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



21 Move Map to Location

The Move Map to Location (magnifying glass) feature can be found at the lower right of the Map view, directly below the *Dropped Pins* 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** (magnifying glass) button located at bottom right of the screen.
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, 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 lower right of the Map view, directly below the Move Map to Location feature. 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 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 **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 desired route in your Route Panel.
2. On the Map, hold a point or segment in your route and drag it to a point that you wish to add to the route.

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

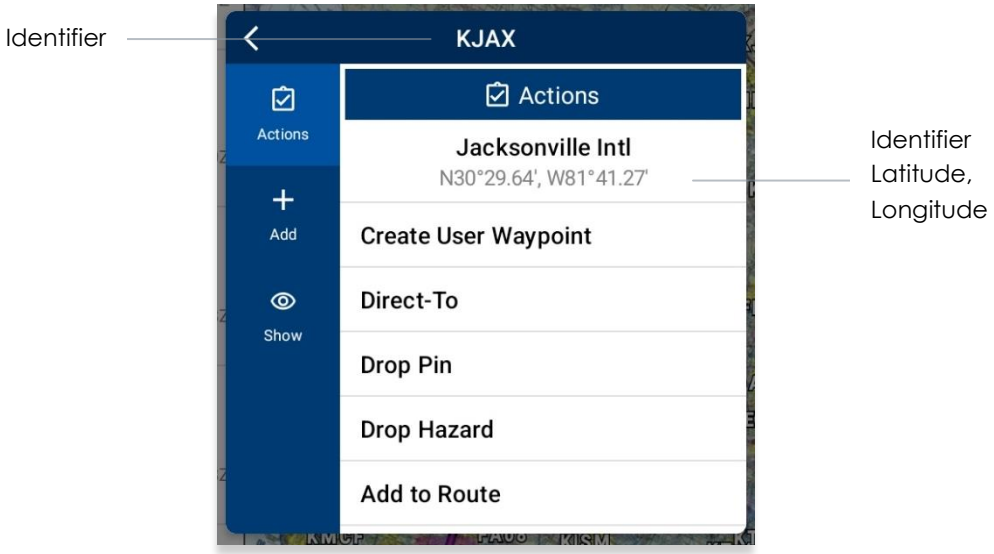
NOTE: Warning popups will appear when users try to drag and drop points that belong to a DP, ARR, STAR, SAR pattern, Airway, or MTR.

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



25.1 Actions

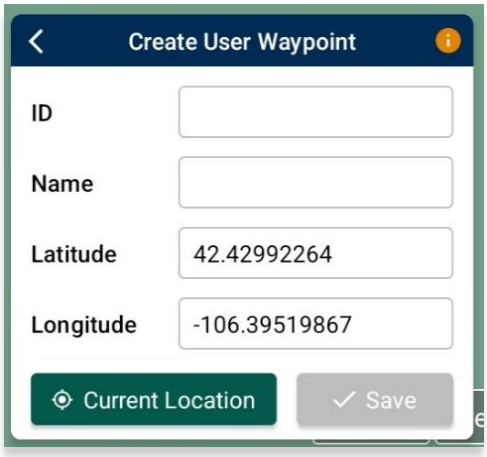
The Actions menu offers the following options and will be further elaborated in the sections below:

- 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.

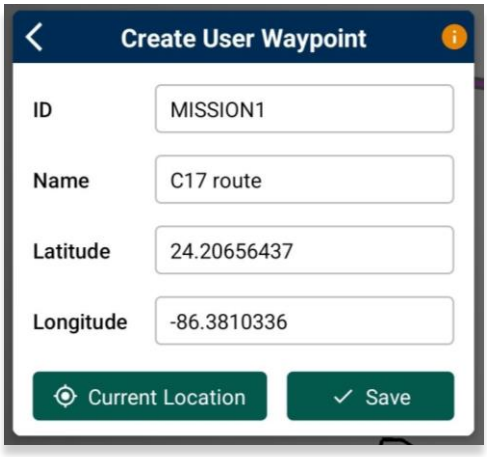
1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Actions**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

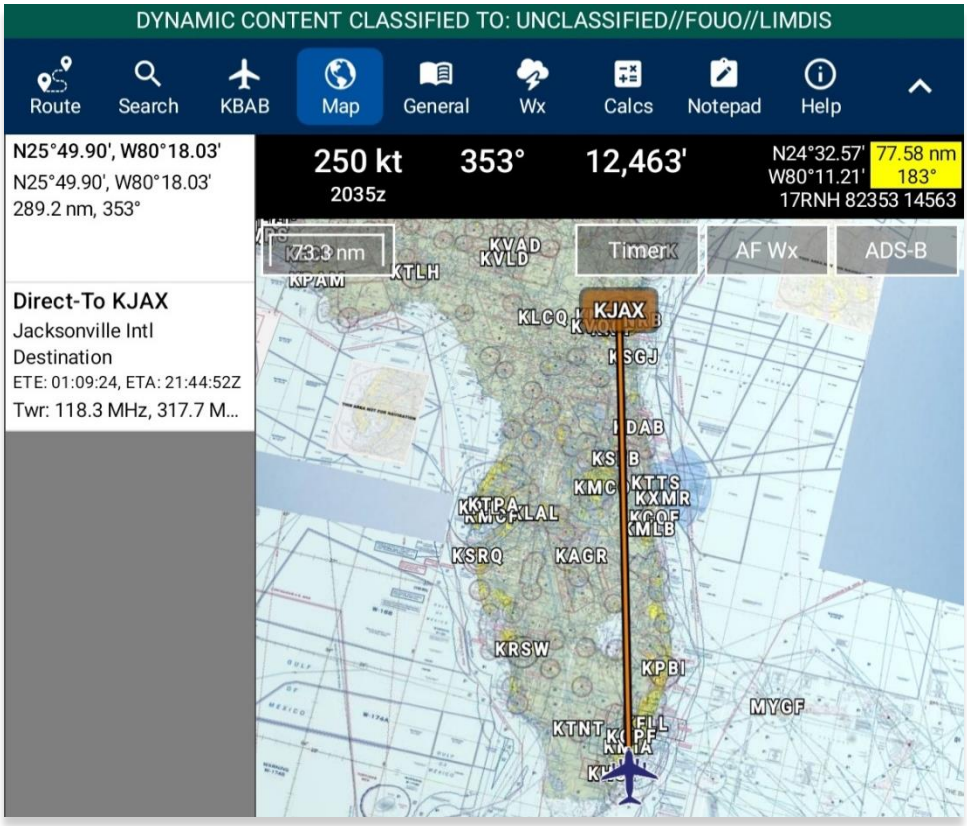
8. Once fields are filled, the Save button will be selectable. Tap **Save** and the waypoint is added to the User Waypoint list.



25.1.2 Direct-To on Empty Route

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

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



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

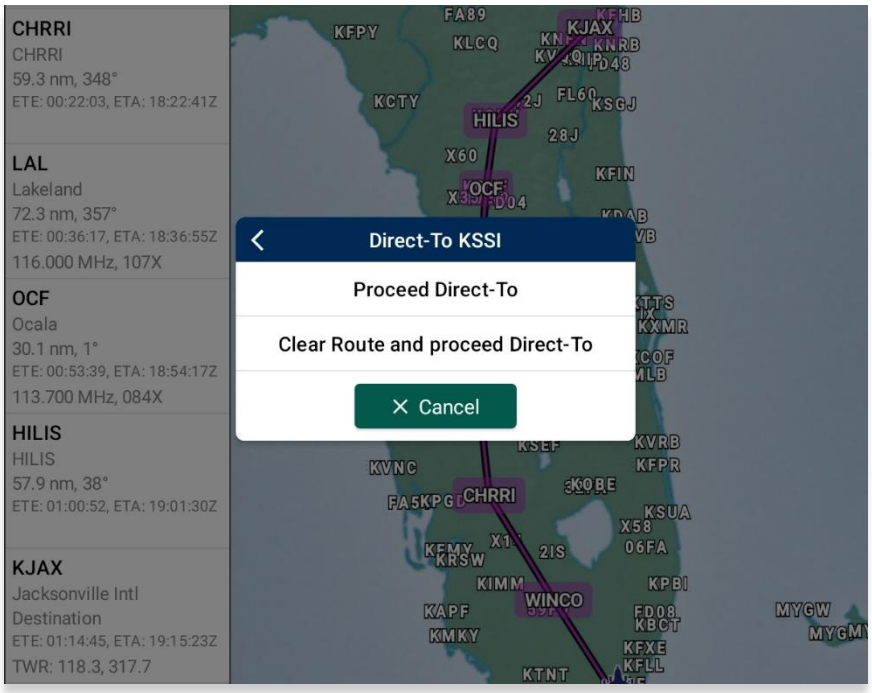
25.1.2.1 Direct-To on Existing Route

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.

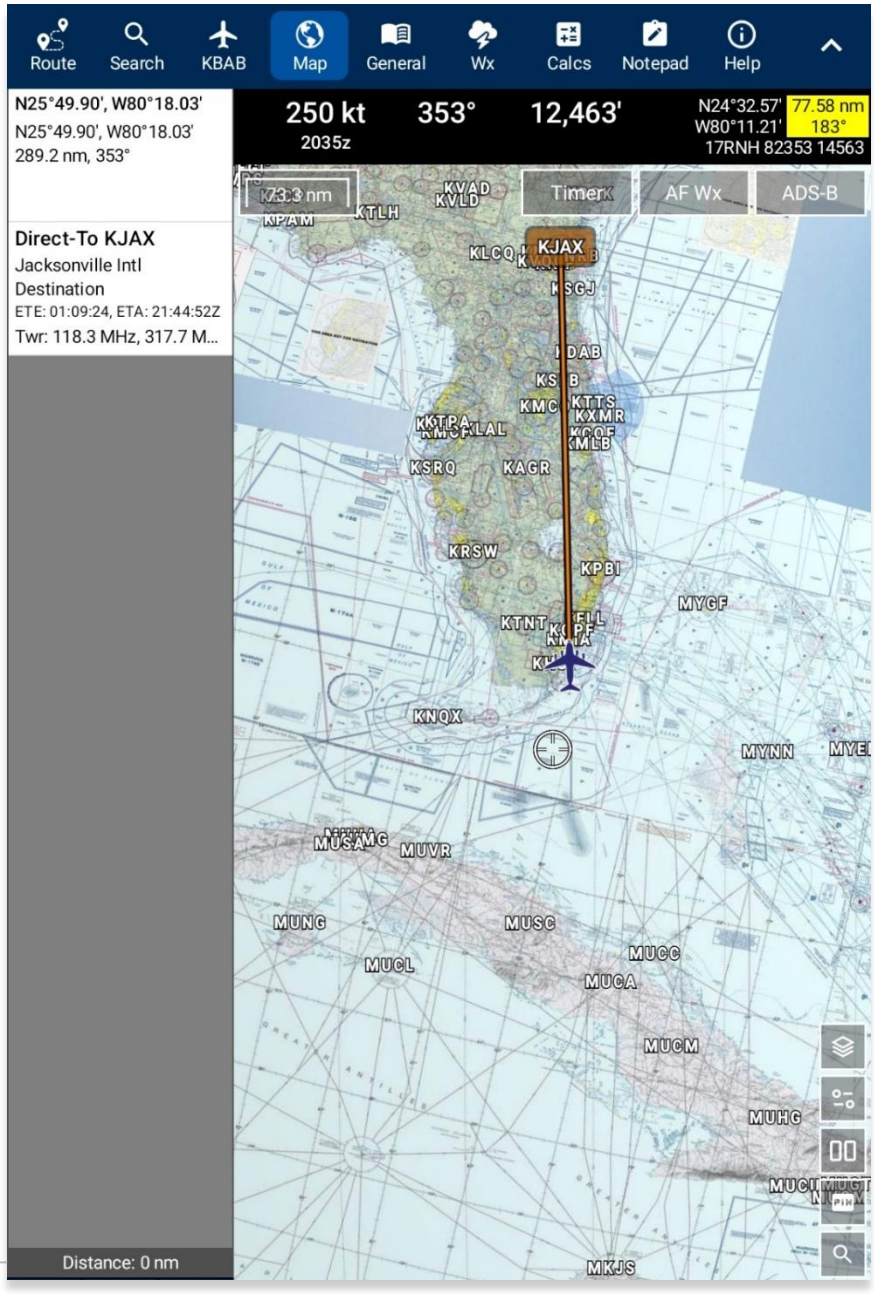
3. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map to directly display the Identifier Menu.
4. The Nearest popup will appear, select your desired point.
5. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
6. Select **Direct-To**.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

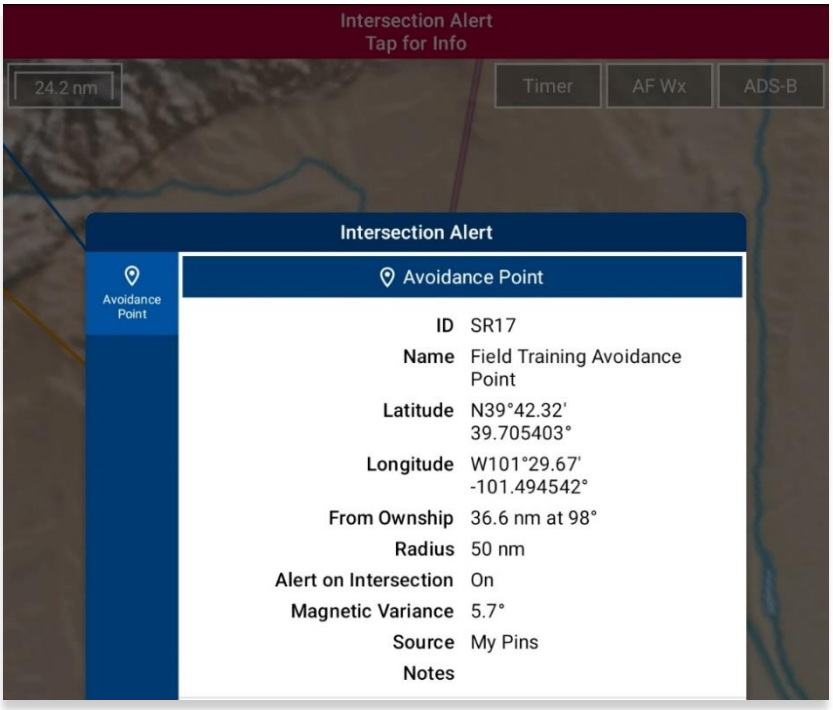
NOTE: Once the existing route has been cleared, users cannot revert to the original route when canceling Direct-To.

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 various pin types including Avoidance Point, Emergency Marker, Landmark, Photo Pin, and Pin. In addition, Aero App supports user-generated pins which can be sideloaded onto Aero App. Refer to Section 10.6 for additional information.

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

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

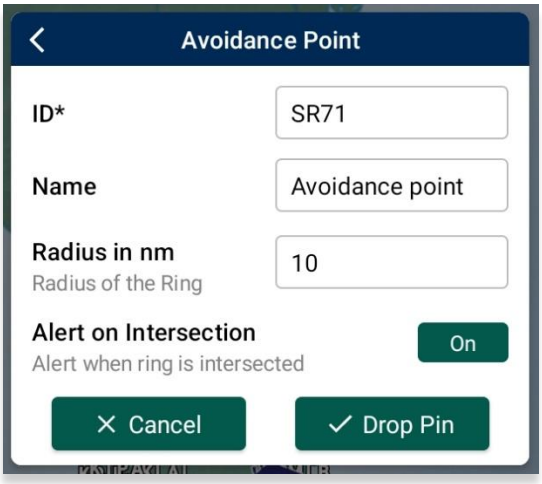


Alert on Intersection banner

Avoidance Point

An Avoidance Point pin is a location on the Map that should be avoided during a flight. Avoidance Point pin includes an Alert on Intersection feature, which notifies users when their ownship intersects with the marked location. Refer to Section 25.1.3 for additional information. Fields containing an asterisk are required.

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

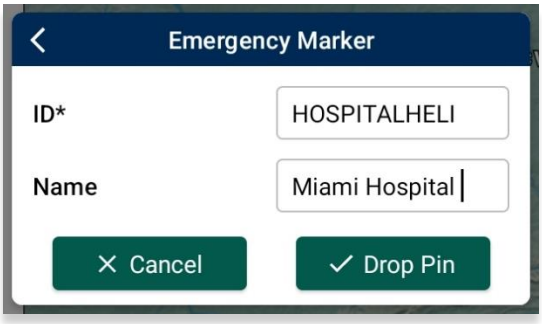


8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

Emergency Marker

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

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

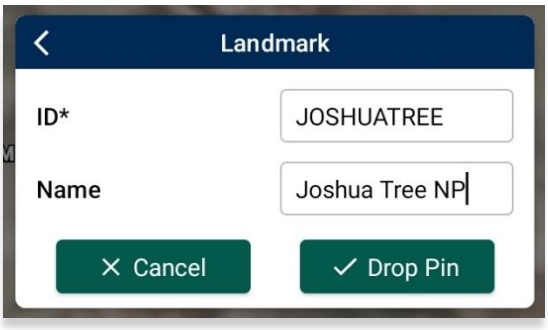


8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

Landmark

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

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

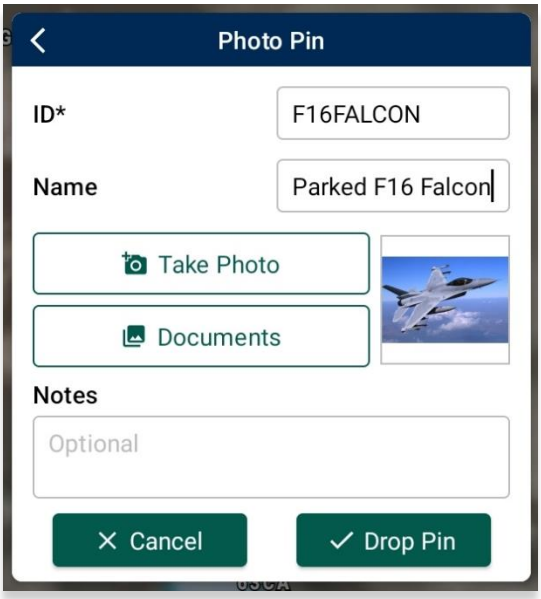


8. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
9. Tap **Cancel** to dismiss the action.

Photo Pin

A Photo Pin is a designated location on the Map that incorporates user-generated images. Fields containing an asterisk are required.

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



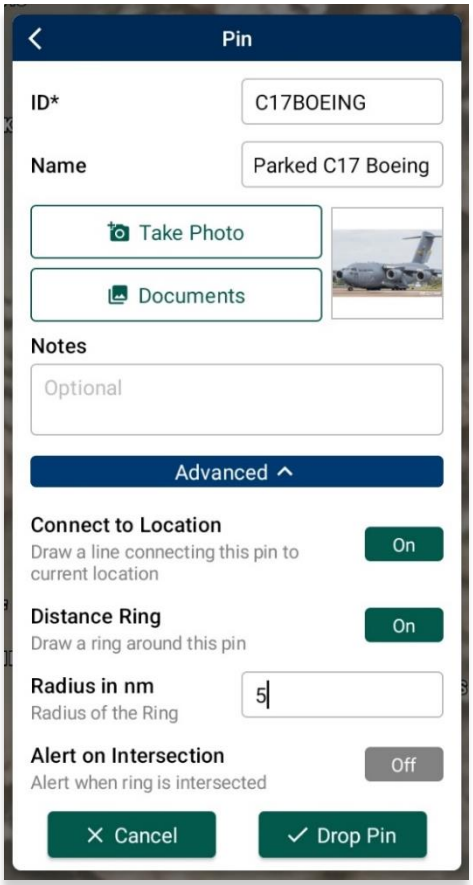
NOTE: Uploading an image is required for Photo Pins.

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

Pin

A Pin is used to mark a location on the Map. Pin includes additional options such as Connect to Location, Distance Rings, Radius in nm, and Alert on Intersection. Fields containing an asterisk are required. The Alert on Intersection feature notifies users when their ownship intersects with the specified radius of the pin. Refer to Section 25.1.3 for additional information.

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



8. Tap **Advanced** for additional options: Connect to Location, Distance Ring, Radius in nm or km (respective to which distance unit format users have set in their Settings), and Alert on Intersection.
9. Once the required fields have been filled, the Drop Pin button will be selectable. Tap **Drop Pin** and your pin will display on the Map.
10. Tap **Cancel** to dismiss the action.

NOTE: Creating Pins will require a unique identifier.

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**.

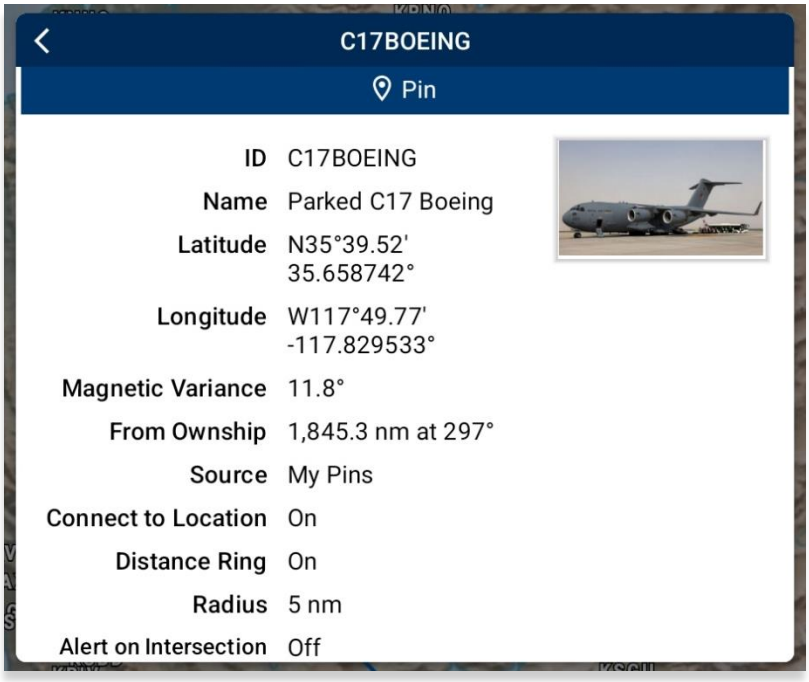
View Pin Information

Aero App provides users a display to view Pin information. The pin information is relevant to the pins that were dropped or pins that were sideloaded by users.

Pin Information is available under Information and Wx. Each pin contains relevant information such as its ID, Name, Latitude, Longitude, Magnetic Variance, From Ownship, Source, Notes, and any associated attachments.

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

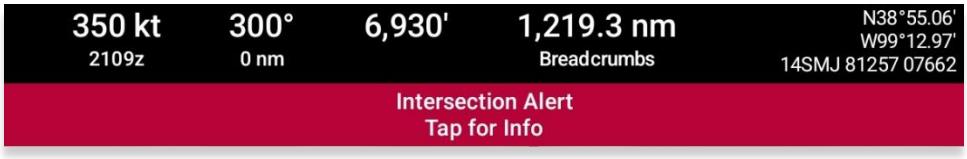
1. Navigate to Map and tap on your desired **Pin**.
2. The Identifier Menu will appear. Select **Show** from the side menu.
3. Tap **Info and Wx** to view any information associated with the pin.



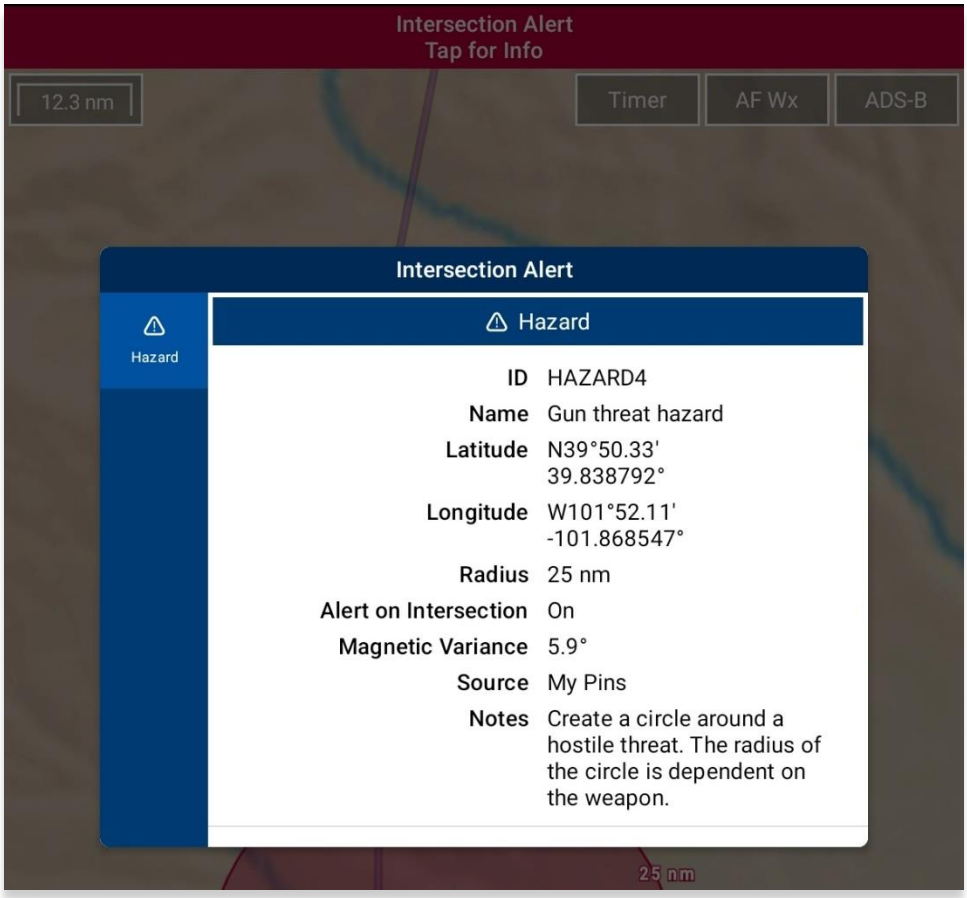
25.1.4 Drop Hazard

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 radius.

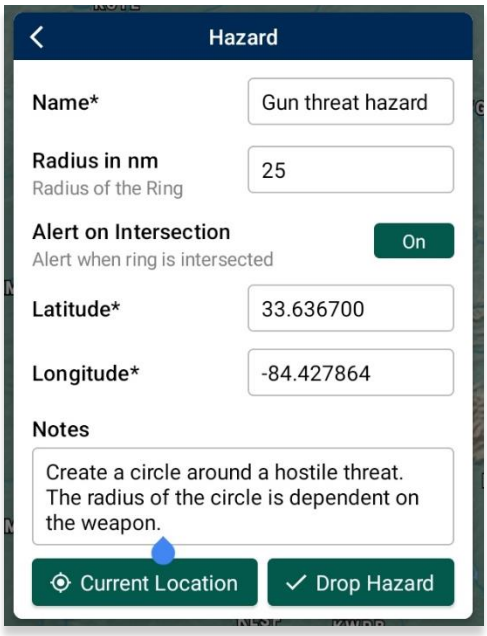


The duration of the banner display is determined by the value of the given radius and will disappear once your ownship is no longer intersecting the specified radius. The banner can be tapped to display Hazard information.



To drop a hazard at your current location or any location of your choice, follow these steps below:

1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Hazard**.
6. The Hazard popup will appear with fields for Name*, Radius in nm or km (based on which distance unit is set in Settings), Alert on Intersection, Latitude*, Longitude*, and Notes. Fill in the required fields.



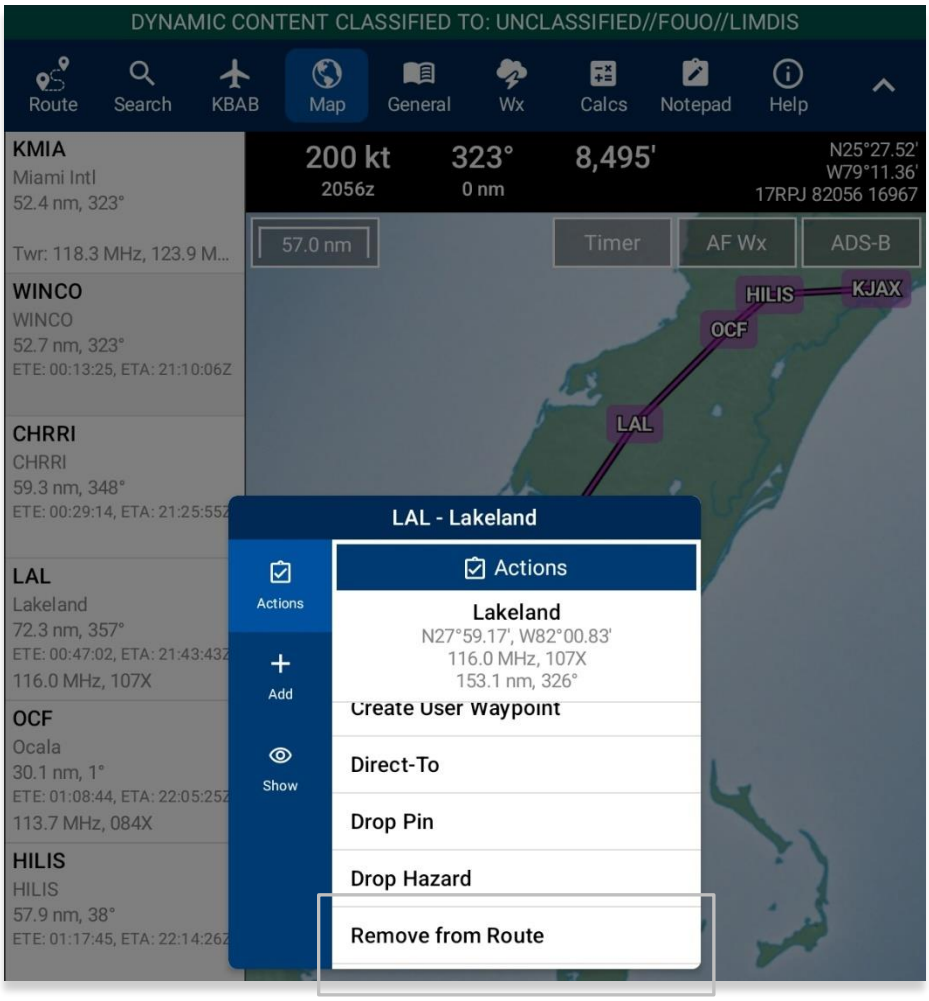
NOTE: If users set their Coordinates Unit to MGRS, the Latitude and Longitude fields will remain disabled, and a MGRS field will appear.

NOTE: If an invalid MGRS is entered, the Latitude and Longitude fields will be left blank.

7. Tap **Current Location** to set your current position as the coordinates.
8. Once the required fields have been filled, the Drop Hazard button will be selectable. Tap **Drop Hazard** and your hazard will display on the Map.

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 the option to add the following procedures to their route:

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

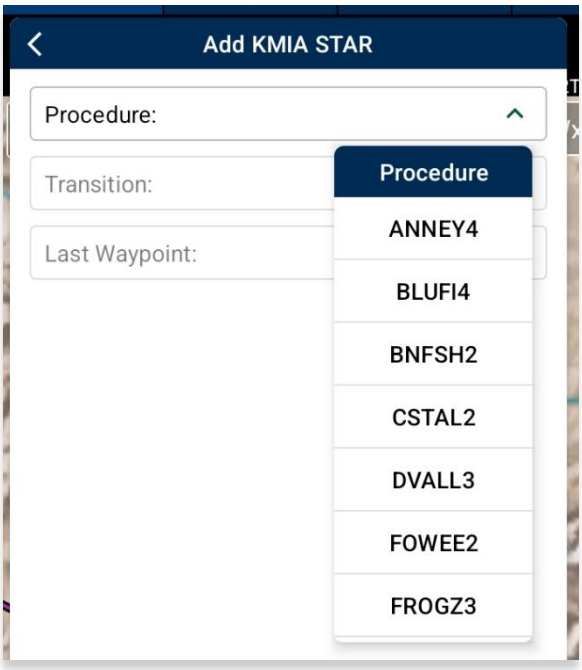
25.2.1 Add Departure Procedure (DP) or Standard Terminal Arrival Route (STAR) to Route

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

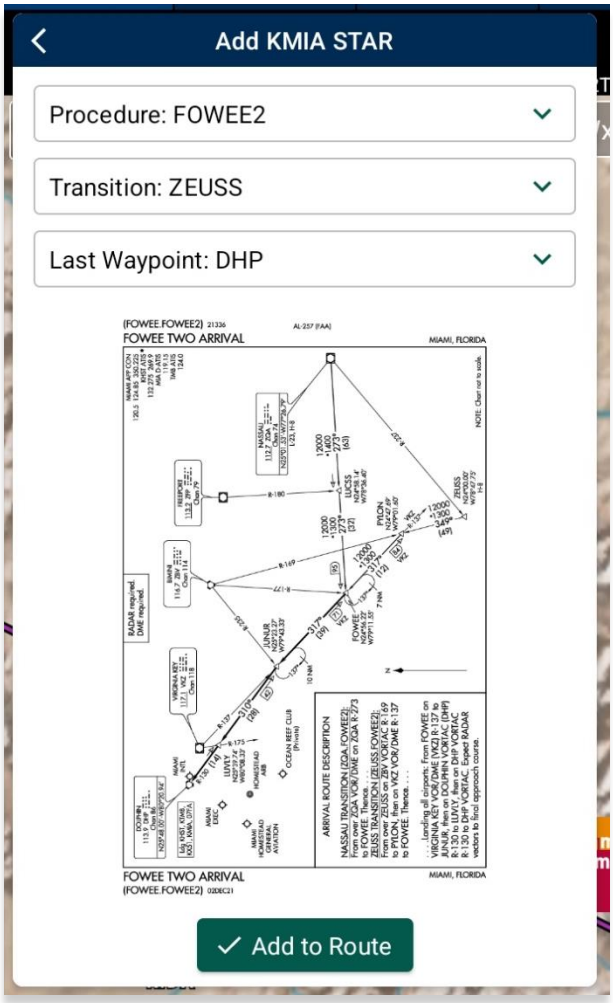
1. Select an airport from the Route Panel or on the Map view.
2. The Identifier Menu will appear. Select **Add** from the side menu.
3. Select **DP** or **STAR**.

NOTE: If both options, DP and STAR are disabled, it is due to the position of the selected airport. Select the appropriate departure and/or arrival airports to display procedure options.

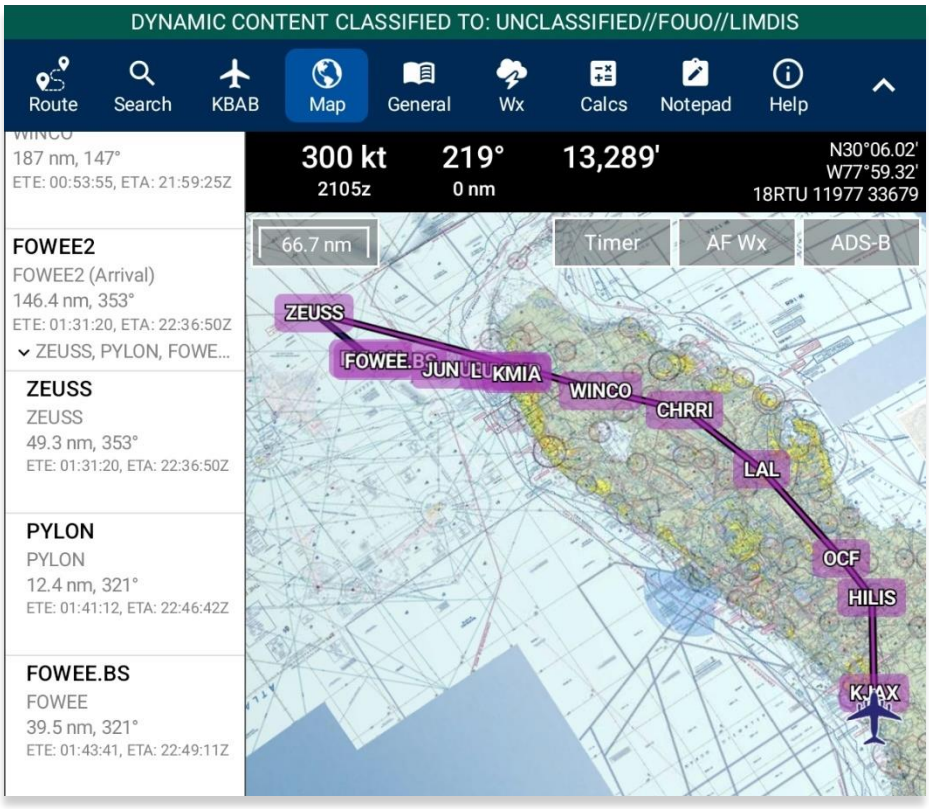
4. The procedure selection popup will display. Tap the Procedure drop-down and select desired **Procedure**.

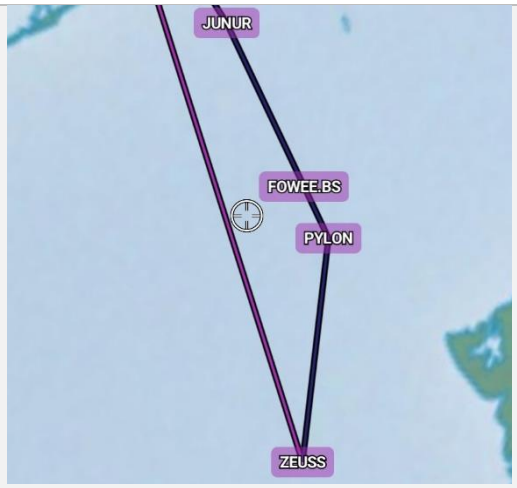


5. Transition will become selectable. Tap the Transition drop-down and select desired **Transition** point.
6. First Waypoint will become selectable. Tap the First Waypoint drop-down and select desired **First Waypoint**.
7. The Procedure preview will appear and Add to Route will become selectable. Tap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



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



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
- Nearest

25.3.1 Show on Map

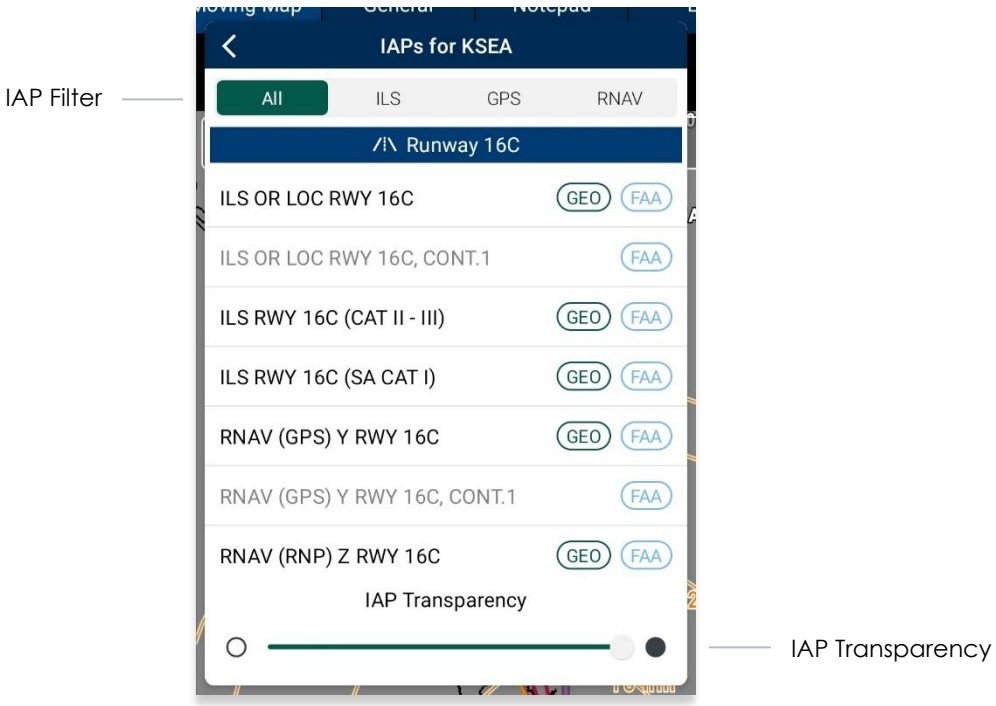
Show on Map pans the Map view to the selected point or identifier.

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.

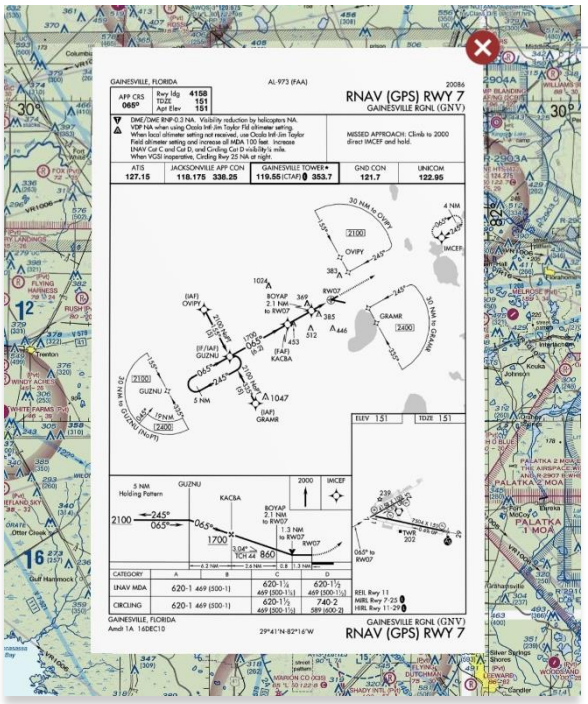
25.3.2 Instrument Approach Procedure (IAP) on Map

Aero App enables users to display Instrument Approach Procedures (IAPs) on the Map, perfectly georeferenced. IAP on the Map provides an additional level of situational awareness.

1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an ICAO on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **IAP on Map**.
6. A list of IAPs for the identifier will be displayed. Select an **IAP filter** from the segmented button group.
7. IAPs are grouped by runways. Select desired **IAP** then the IAP will overlay on the Map.
8. To adjust the transparency of the IAP, tap on the chart and drag the slider from left to right. By default, IAP transparency is set to 100%.



9. To remove the IAP from the Map, tap the red popup **X**.



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

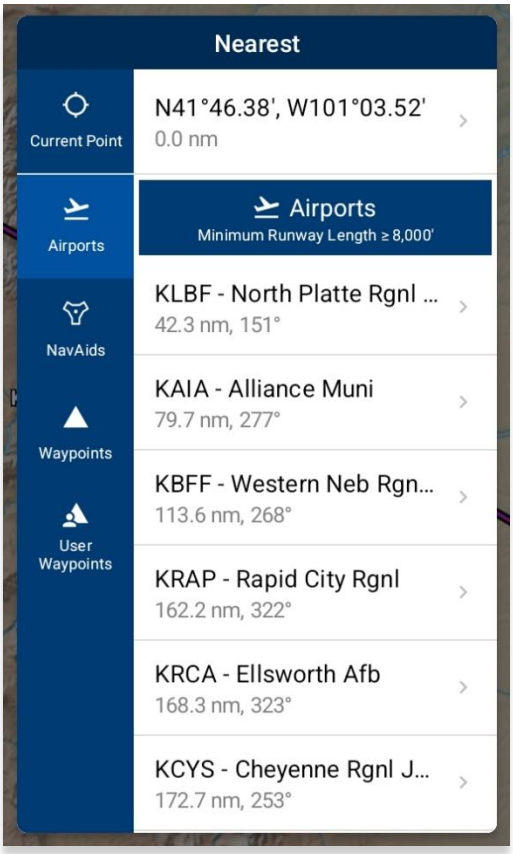
25.3.3 Info and Wx (Information and Weather)

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

25.3.4 Nearest

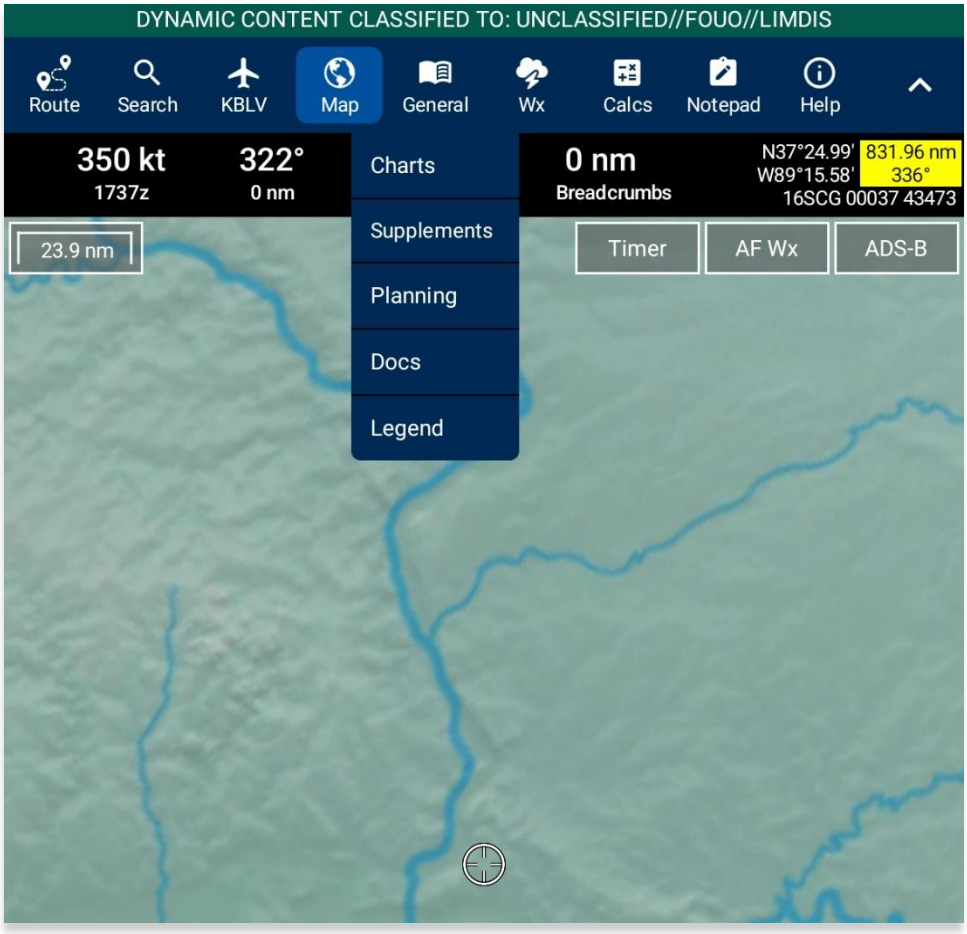
The Nearest feature enables users to view nearby Airports, NavAids, Waypoints, and User Waypoints. Once a desired point is selected, the Identifier Menu will display.

1. Tap **Map** on the ***Main Menu***.
2. Long-press a desired point on the Map. Alternatively, users can tap an identifier on the Map or the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **Nearest**.
6. Your current point and a list of the nearest Airports, NavAids, Waypoints, and User Waypoints will display. Select a desired point and the Identifier Menu will display.



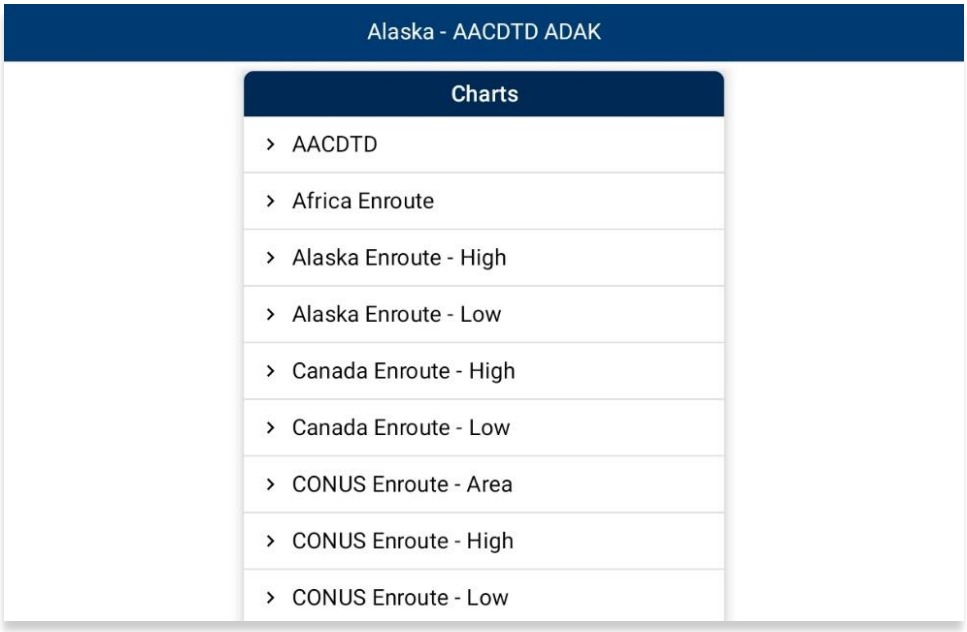
26 General

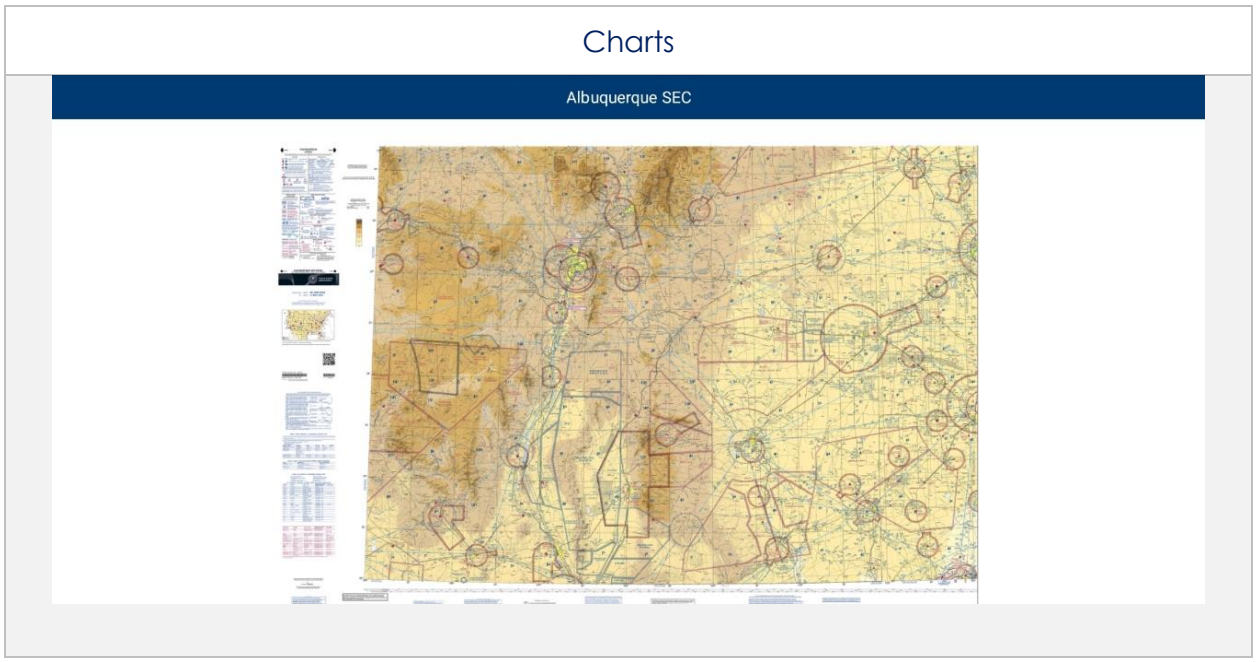
The General section includes significant charts and documents such as regional Charts, Supplements, Planning, User Documents, and Legend that users can view directly on Aero App. User must download the respective region(s) to view charts.



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.





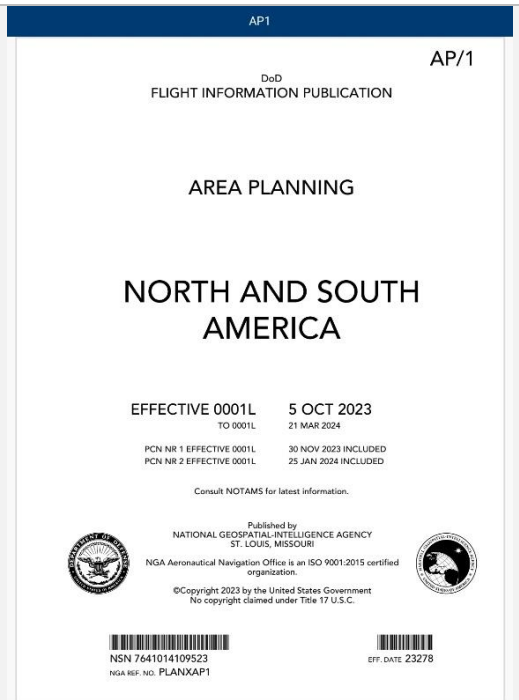
NOTE: A sliding tool is available for PDF documents, allowing users to swipe through individual pages of the selected document.

Supplements

Chart Supplement - East Central US

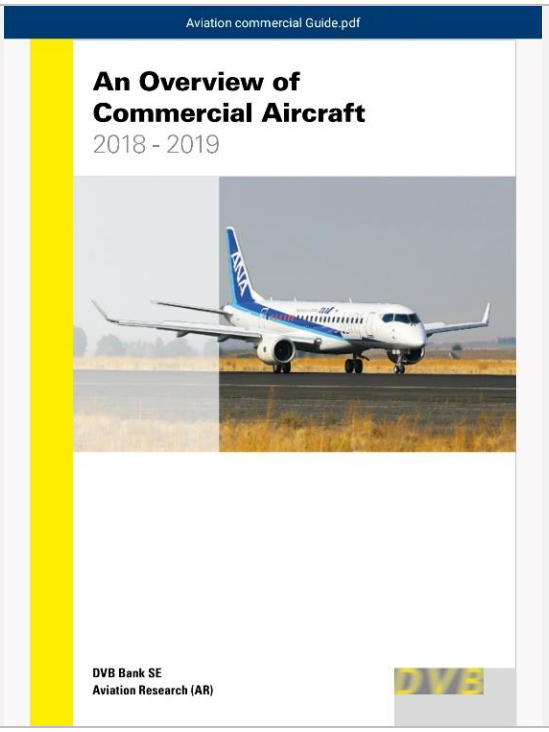
Area Planning Documents

AP1



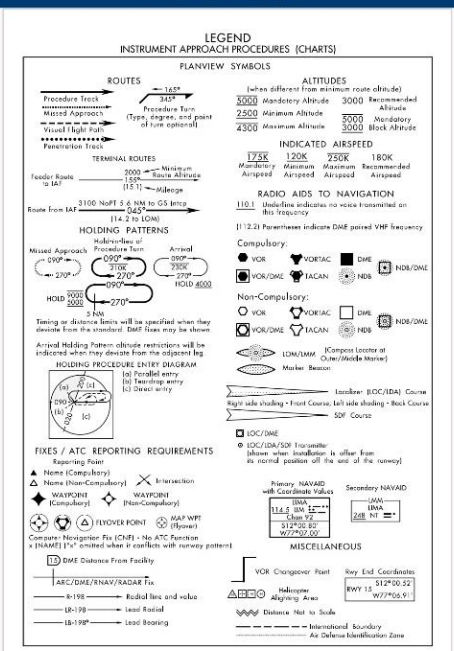
User Documents

Aviation commercial Guide.pdf



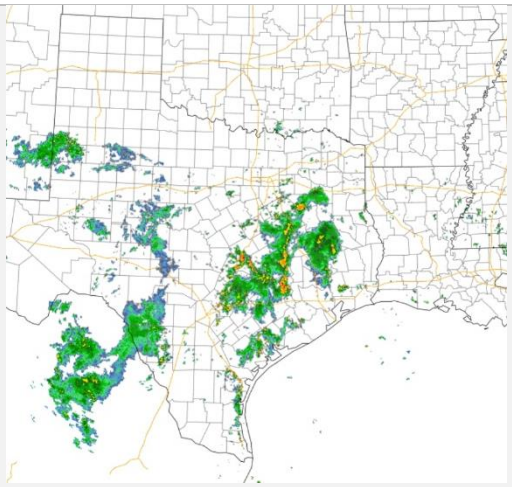
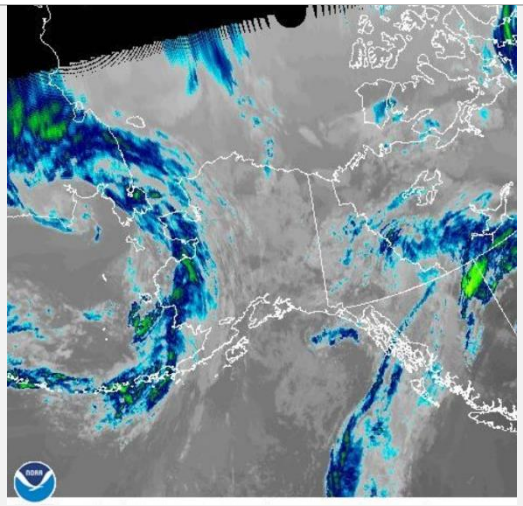
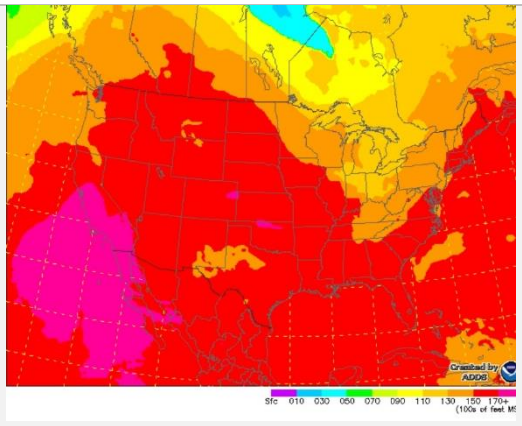
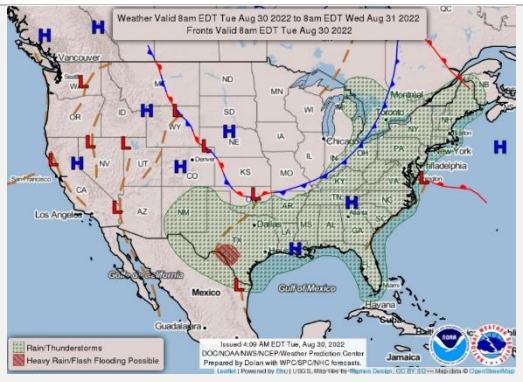
Terminal Procedure Legend

Terminal Procedure Legend

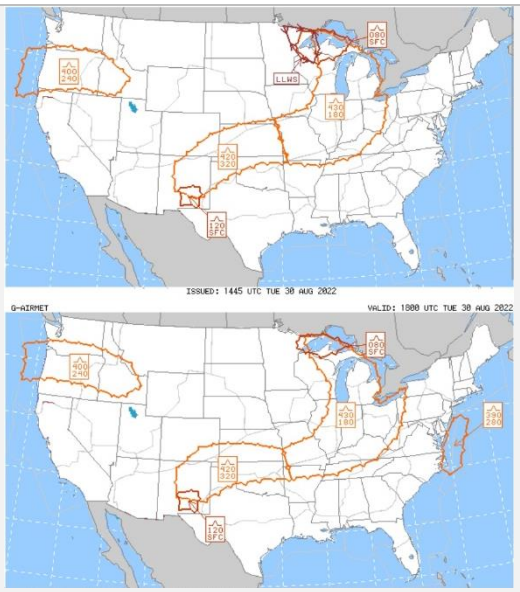


27 Weather (Wx) Images

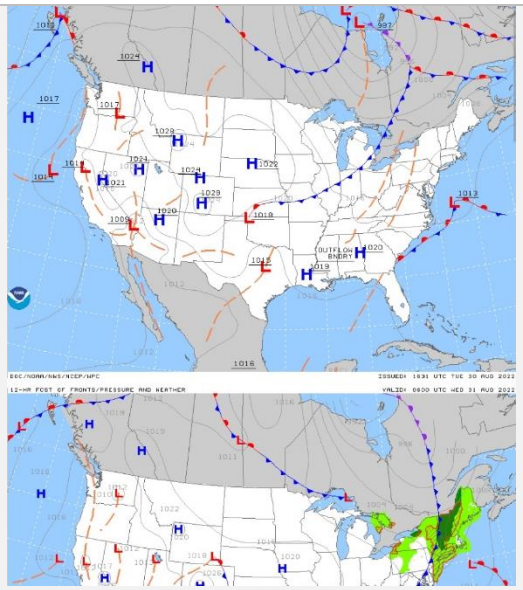
The Weather (Wx) Images are from the National Oceanic and Atmospheric Administration (NOAA) providing access to weather, hydrologic, and climatic forecasts and warnings for the U.S. and adjoining areas. The images can be panned and zoomed. An internet connection is required to view real-time weather images. Wx images are provided below:

RADAR	Satellite
	
Icing	**Weather Forecast**
	

AIRMETs and SIGMETs



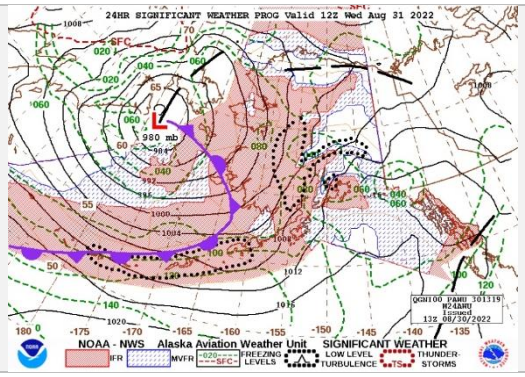
Prog Charts



Convective SIGMETs and Outlooks

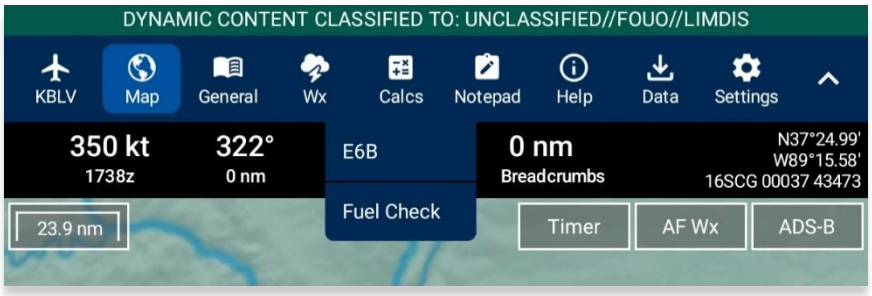
Current Convective Watches

Alaska



28 Calcs (Calculations)

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



28.1 E6B Calculator

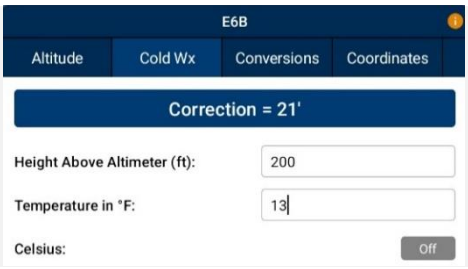
The electronic calculator enables pilots to perform a variety of calculations for preflight or inflight planning.

Altitude

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

Cold Weather (Wx)

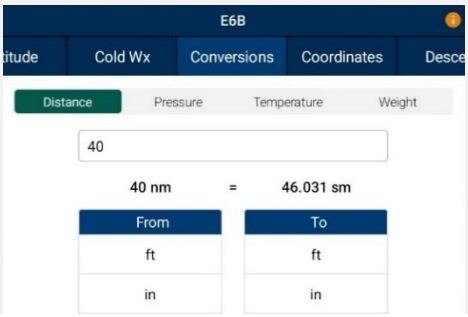
Cold Wx corrects Altitude for cold temperature operations. Users can switch between Celsius and Fahrenheit.



Conversions

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

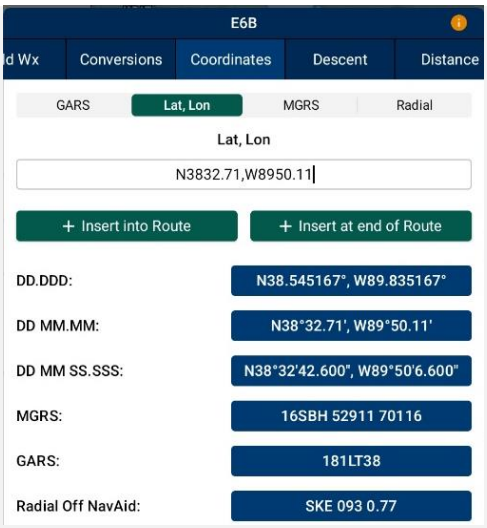
1. Tap to select the current unit in the left column and select the desired unit in the right column.
2. Enter a value in the text box.



Coordinates

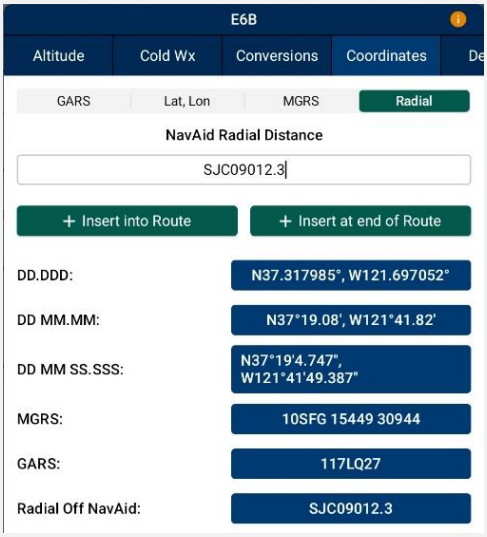
Coordinates allows users to get a reading on Lat, Lon, MGRS (Military Grid Reference System), GARS (Global Area Reference System), and Radial Off NavAid when you enter coordinates.

1. Select an option from ***Lat, Lon***, ***MGRS***, ***GARS***, or ***Radial*** by tapping your desired option on the segmented button group.
2. Enter coordinates in the text box.
3. Results will populate below.
4. ***+ Insert into Route*** and ***+ Insert at end of Route*** will be selectable. Select **+ Insert into Route** and the entered coordinates will be added to your current route.
5. Select **+ Insert at end of Route** and the entered coordinates will be added at the end of your current route.



Once the coordinates have been entered in for one of the tabs, you can tap an output field to automatically switch to the mode with those field values automatically populated.

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



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

Descent

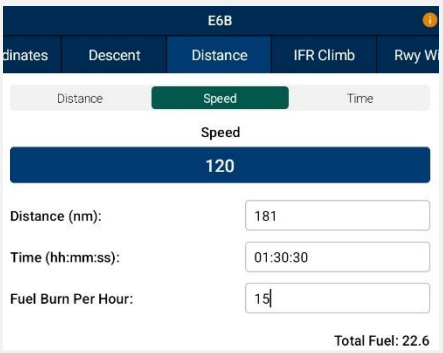
Descent Rate is calculated in feet per minute, enter the Descent Angle in degrees and Groundspeed in knots.

Distance

Distance calculates the Total Fuel by Distance measured in kilometers or nautical miles, respective to which Distance Unit users have set in their Settings. Speed which is measured in knots and Time following the format (hh:mm:ss). Tap or slide the segmented control to the desired distance calculation type.

Distance is calculated by the Speed, Time, and Fuel Burn Per Hour. The expected output is Distance measured in kilometers or nautical miles; respective to which distance unit format user have set in their Settings and the Total Fuel in gallons.

Speed is calculated by Distance, Time, and Fuel Burn Per Hour. The expected output is Speed measured in knots and the Total Fuel in gallons.



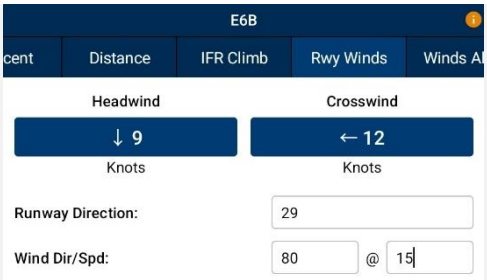
Time is calculated by Distance, Speed, and Fuel Burn Per Hour. The expected output is Time following the format (hh:mm:ss) and the Total Fuel in gallons.

Instrument Flight Rule (IFR) Climb

IFR Climb calculates the Climb Angle measured in Degrees and Climb Rate measured in Feet per Minute by providing the Climb in ft/km and ft/nm; respective to which Distance Unit users have set in their Settings. As well as providing the Groundspeed measured in knots.

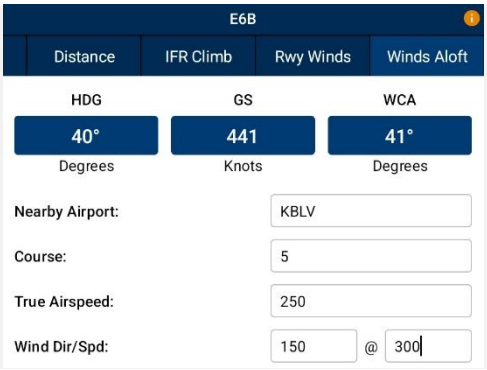
Runway (Rwy) Winds

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.

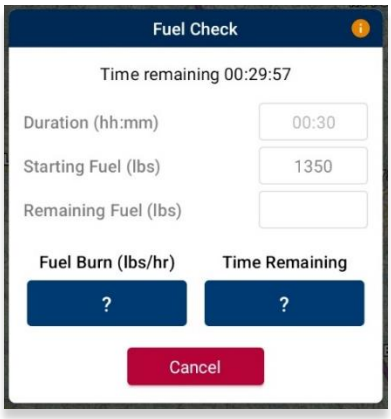


NOTE: Reference notes are located at the bottom of the E6B popup.

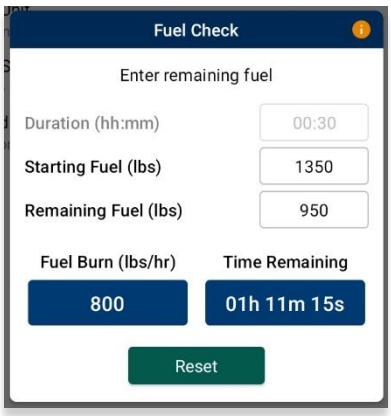
28.2 Fuel Check

The Fuel Check feature calculates fuel burn and estimates the time remaining until the fuel is consumed fully. Fuel Check includes fields for Duration (hh:mm), Starting Fuel (lbs), and Remaining Fuel (lbs).

1. Tap **Calcs** on the ***Main Menu***. The Calcs options will be displayed.
2. Select **Fuel Check**. The Fuel Check popup will appear.
3. Tap on the **Duration** field. Enter desired duration for the fuel check in hours and minutes.
4. Enter the exact fuel amount in the **Starting Fuel** field.
5. Tap **Start** to begin the timer.
6. Tap **Cancel** to stop the timer.



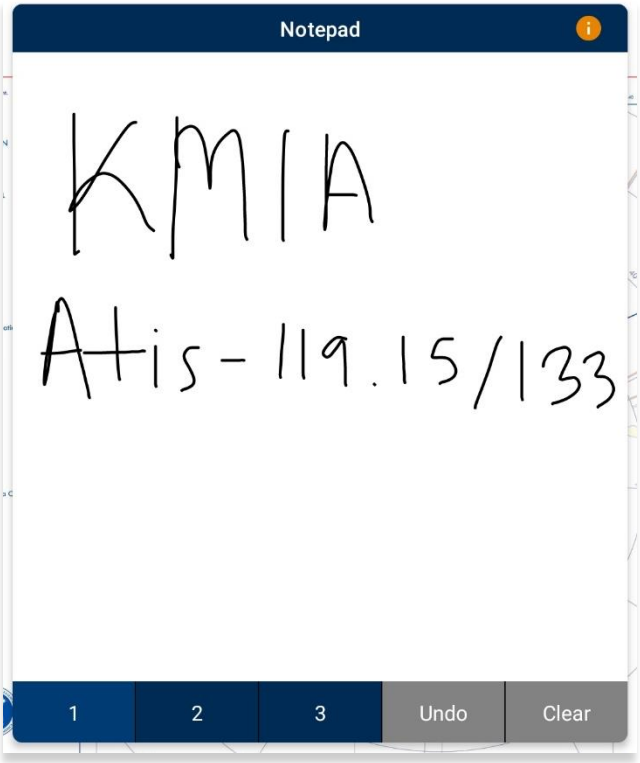
7. Once the timer has ended, users will be prompted to enter the remaining fuel. In the *Remaining Fuel* field, enter the **remaining fuel** in pounds.
8. The calculations will populate the Fuel Burn and Time Remaining results field based on the entered values. Tap **Reset** to clear the calculations.



29 Notepad

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

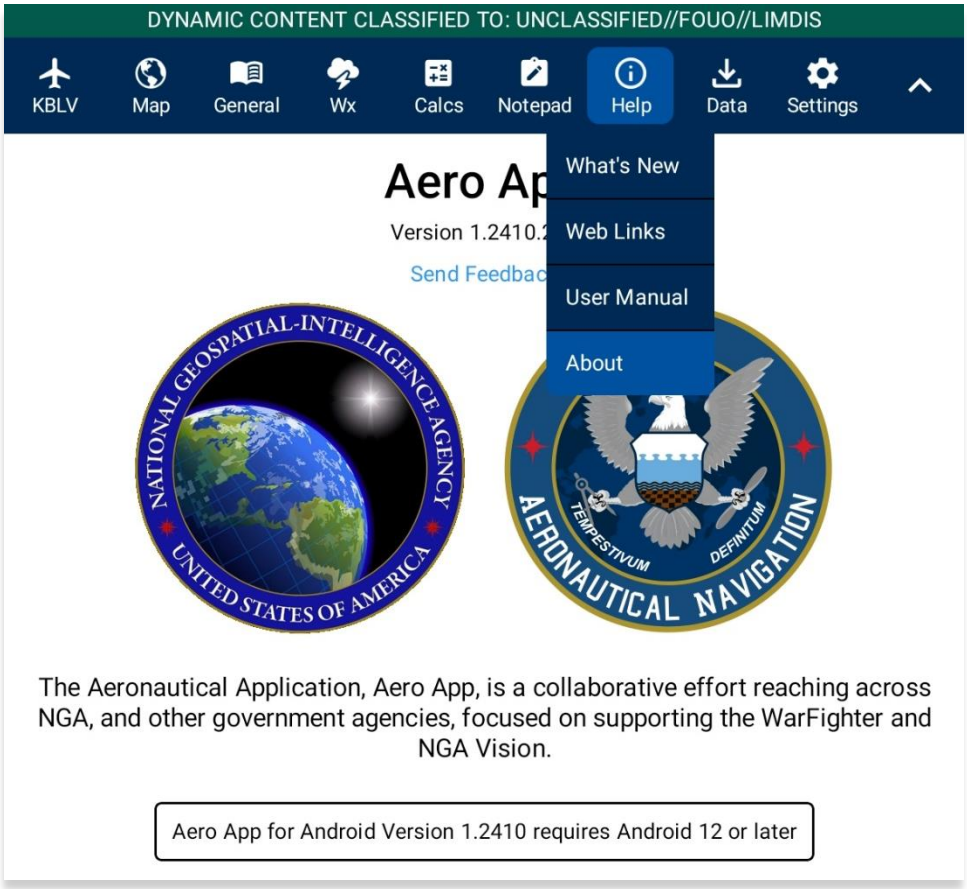


NOTE: Any notepad markings are automatically saved upon exiting the view.

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:

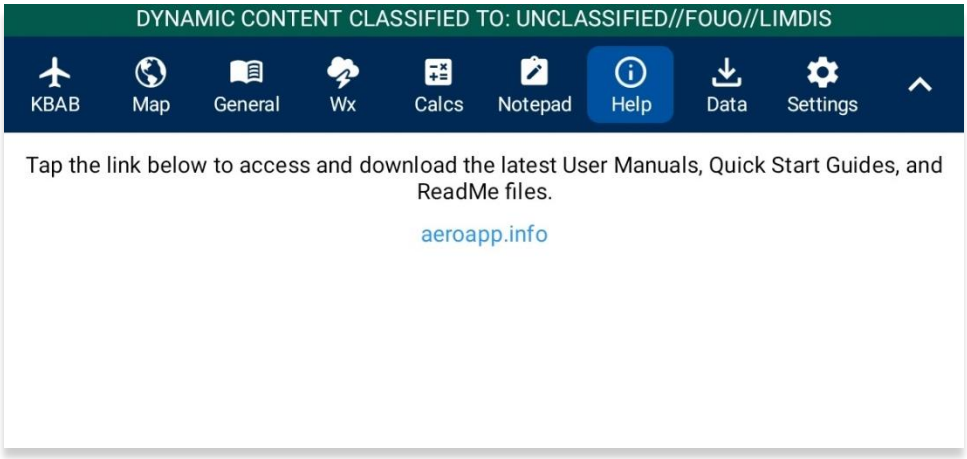
- **What's New** – contains app updates such as information on new features, app enhancements, and important updates. Global must be loaded in Active Cycle to view the What's New page. When a new cycle is loaded in Active Cycle, the What's new popup will display. Refer to Section 12.2 for additional 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



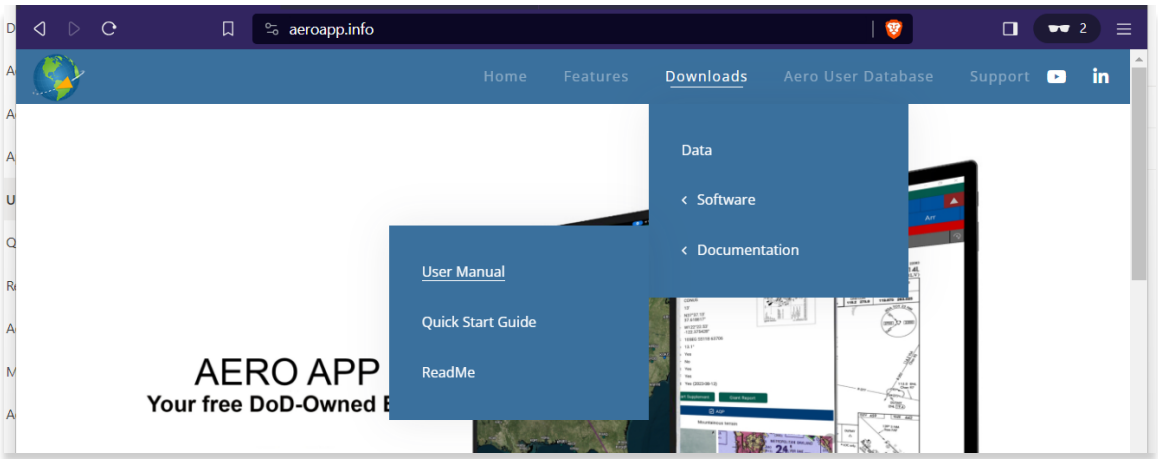
30.1 User Manual Access

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

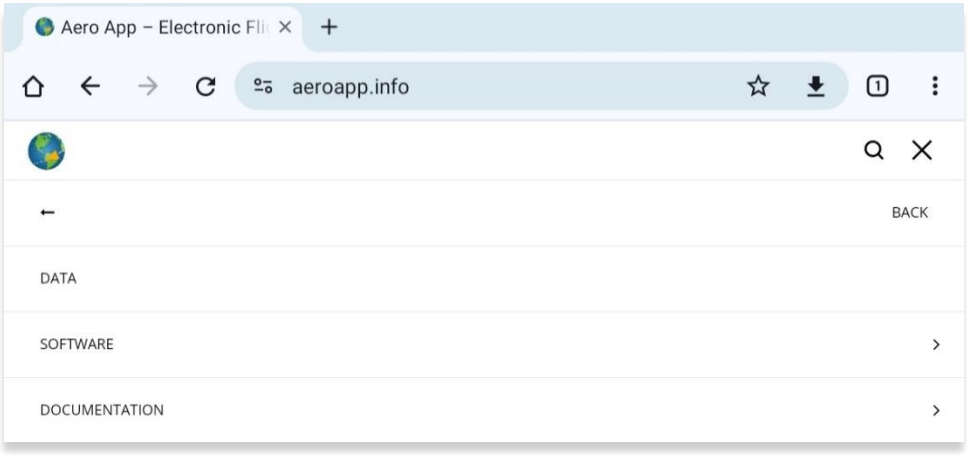
1. Tap **Help** on the ***Main Menu***. The Help options will display.
2. Select **User Manual**.
3. Tap the **aeroapp.info** link and users will be redirected to the Aero App homepage.



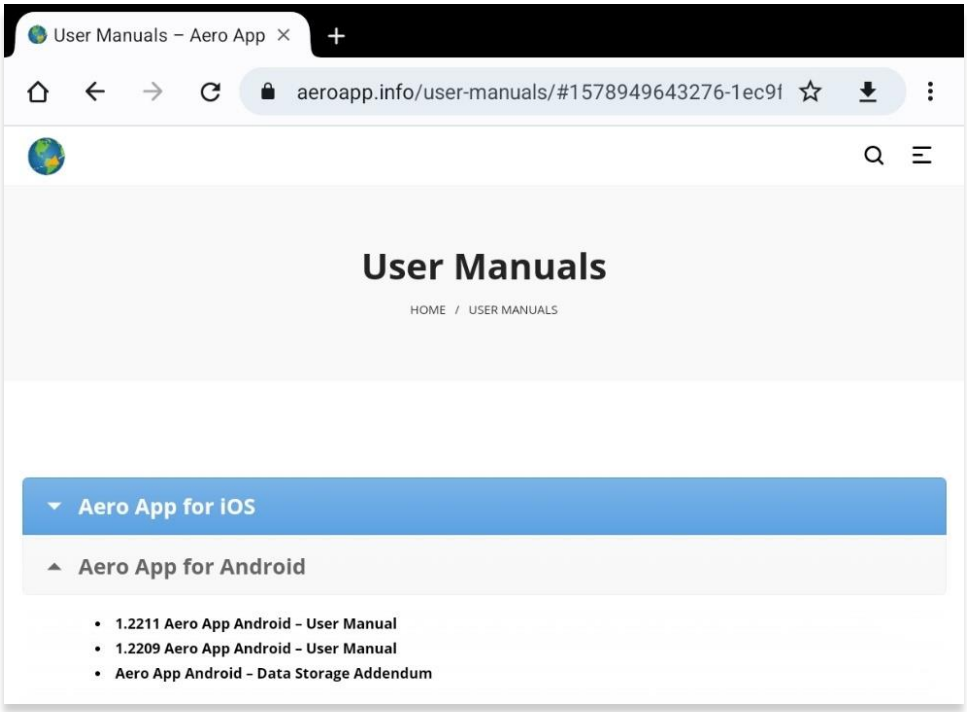
4. Navigate to the *Downloads* menu. Option placement will vary depending on display size.
    - On large screens, hover over **Downloads** on the menu ribbon to reveal additional download options.



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



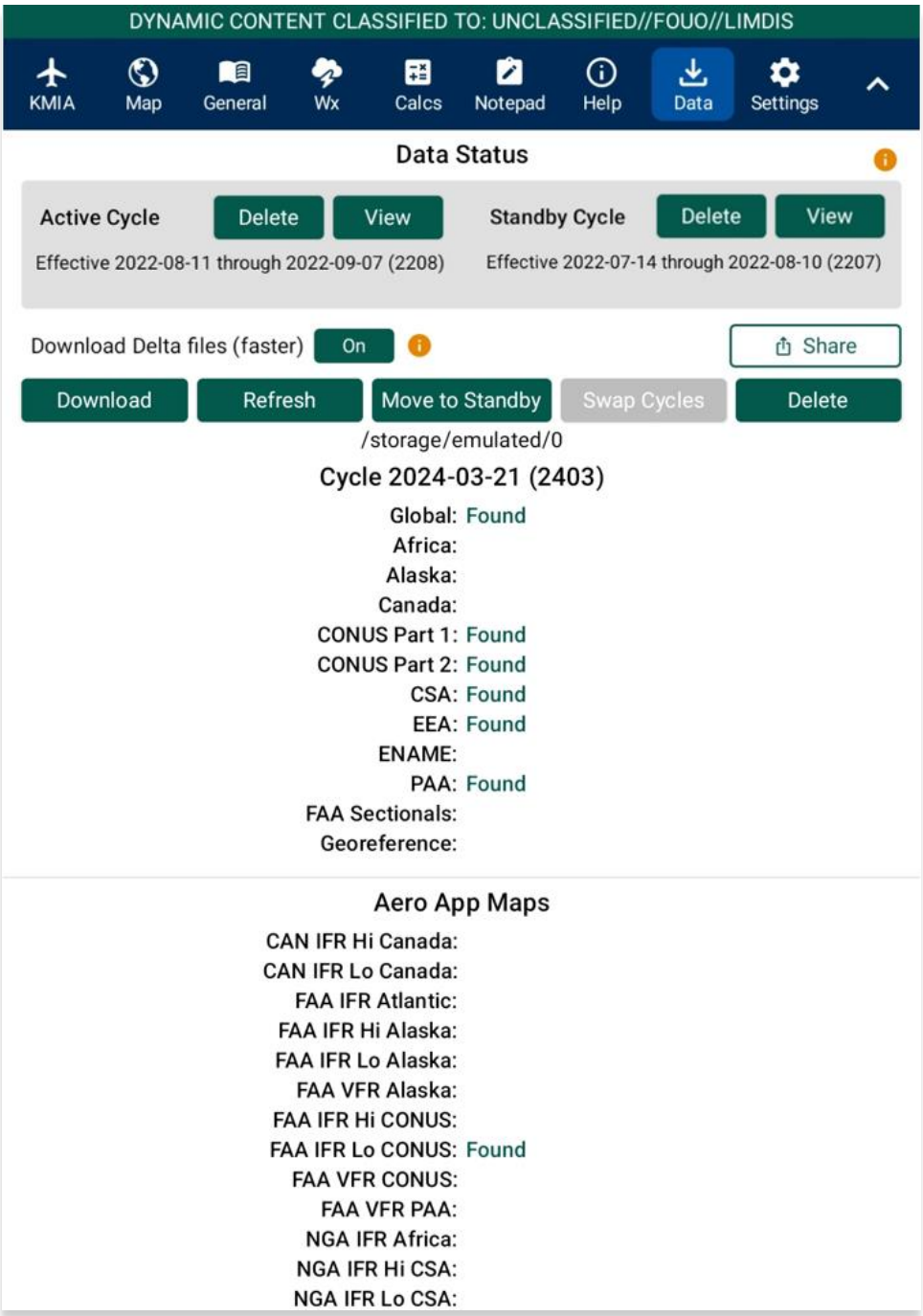
5. Select **Documentation** then **User Manual**.
6. Users are provided with several platforms to choose from. Tap **Aero App for Android** to reveal related user manuals.
7. Select desired user manual version and you will be redirected to the PDF.



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

31 Data

The Data Status screen enables users to manage cycles. Refer to Section 12 for additional information.



32 Settings

Settings is a tool that enables users to customize the behavior of Aero App. Various setting options are divided into Bluetooth, Data, Miscellaneous, Reset, Route, and User Interface.

32.1 Bluetooth

Bluetooth contains various options on connecting devices such as ADS-B and GPS receivers to Aero App. Section 17.4 elaborates on the connection of ADS-B receivers via Wi-Fi and Bluetooth.

The Bluetooth connection status is displayed at the top of the screen.

1. Tap **Settings** on the ***Main Menu***.
2. Select **Bluetooth** from the side menu.
3. The following options are available:
    - **Allow Background Location Collection** – allows Aero App to collect location information even when Aero App is in the background.
    - **Android Bluetooth Settings** – opens the system settings to manage Bluetooth status and pair device.
    - **Currently Connected Device** – breaks the connection of the currently connected device.
    - **Device Type** – selects from GPS or ADS-B device type.
    - **Select Paired Device** – selects the paired Bluetooth device to connect.

32.2 Data

Data contains the setting options for external storage devices to store Aero App data. Refer to Appendix D | Android Data Storage for additional information.

1. Tap **Settings** on the ***Main Menu***.
2. Select **Data** from the side menu.
3. The following options are available:
    - **Path for Data on SD Card and Computer** – selects the directory that you wish to copy files to before data loading**.**
    - **Search for Data on SD Card and Computer** – automatically searches device for Aero App files**.**
    - **Use SD Card to store Data** – uses the connected SD card to store Core, Map, and Other Data.

32.3 Miscellaneous

Miscellaneous contains the setting options to customize select Aero App features and views.

1. Tap **Settings** on the ***Main Menu***.
2. Select **Miscellaneous** from the side menu.
3. The following options are available:
    - **Airport Ring on APD and IAP** – verifies the georeferencing by showing a small ring around the Airport center.
    - **Home Field** – sets an ICAO as the default location on the Map upon opening the Map page and GPS is not available. This feature will take effect when the app is either rebooted or reopened and Map is selected for use.
    - **Minimum Runway Length (ft)** – filters Airports based on the specified runway length. The value must be in ft.
    - **Next Waypoint Buffer (nm)** – automatically changes to the next waypoint when the ownship is within a buffer radius around waypoint. The value must be in nm or km; respective to which distance unit format users have set in their Settings.
    - **Ownship on APD and IAP** – displays ownship on FAA Airport Diagrams and Instrument Approach Procedures.

- **Secret** – classifies your device as containing SECRET material.

NOTE: Once Aero App has been updated to SECRET, the action cannot be undone.

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

- **Switch to APD on Landing** – switches the screen to display an APD upon landing. When this feature is enabled, Speed (ft) will display. Enter desired value in kt. Once your ownship has reached the specified speed, the screen will switch to APD.

32.4 Reset

Reset clears all chart markups.

1. Tap **Settings** on the ***Main Menu***.
2. Select **Reset** from the side menu.
3. The following option is available:
    - **Clear All Chart Markups** – clears all markups on APDs and IAPs.

32.5 Route

The Route setting contains route configuration options.

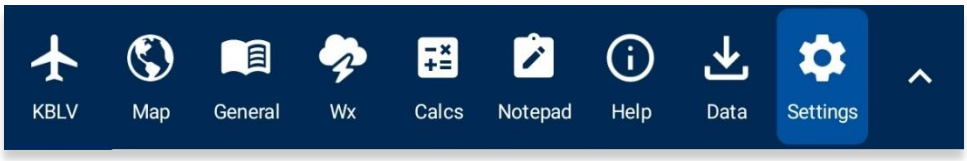
1. Tap **Settings** on the ***Main Menu.***
2. Select **Route** from the side menu.
3. The following option is available:
    - **Snap Route to Current Leg** – automatically scrolls to the current leg in route and highlights the current flight leg on the Route Panel.

32.6 User Interface

The User Interface setting allows users to customize the general appearance of the app and the format in which information is presented to the user.

1. Tap **Settings** on the ***Main Menu.***
2. Select **User Interface** from the side menu.
3. The following options are available:

- **Big Buttons on Main Menu** – enlarges the Menu button size; useful when wearing gloves.

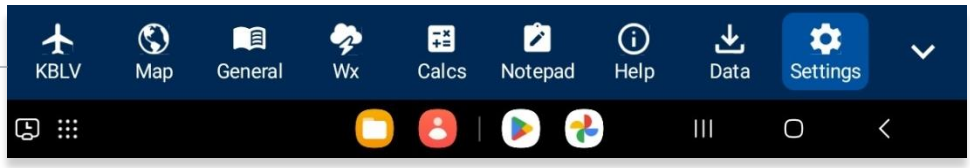


- **Confirm on Delete** – confirms deletion of an item in the route.
- **Coordinates Unit** – displays coordinates in Military Grid Reference System or Lat/Lon format.
- **Display Text for Main Menu** – displays text below each Main Menu option.

No text on Main Menu option

- **Distance Unit** – displays distance in km or nm.
- **Info Text Size** – sets Airport Information screen text size from small, medium, or large.
- **Main Menu at Top** – relocates the Main Menu to the top or bottom of your screen.

Main Menu on bottom of page

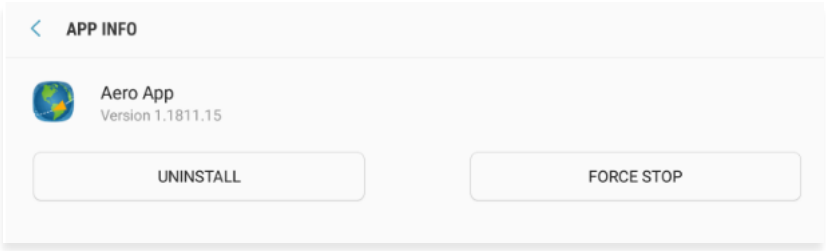


- **Night Mode** – uses white-on-black or a black-on-white screen while using Aero App.

33 Appendix A | Uninstall Aero App

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

1. Go to **Settings** on your tablet.
2. Tap **Apps**.
3. Navigate Aero App on the list provided.
4. Tap **Aero App**.
5. Tap **Uninstall** from the options provided.
6. A confirmation will pop up, tap **OK**.



NOTE: Alternatively, users can uninstall Aero App by going to their home page and long-pressing on the Aero App icon, then tapping **Uninstall**.

NOTE: Uninstalling Aero App will delete Aero App data.

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**	
Enter Example	Means	Enter Example	Means
37.12345, -121.12345	37.12345°N, 121.12345°W	3723.45, -11834.45	37°23.45N, 118°34.45W
NDD.DDD,WDDD.DDD		**NDDMM.MM,WDDDMM.MM**	
Enter Example	Means	Enter Example	Means
N37.12345, W121.12345	37.12345°N, 121.12345°W	N3713.4536, W12145.901	37°13.4536°N, 121°45.901W
DD.DDDN,DDD.DDDW		**DDMM.MMN,DDDMM.MMW**	
Enter Example	Means	Enter Example	Means
37.12345N, 121.12345W	37.12345°N, 121.12345°W	3713.4536N, 12145.90W	37°13.4536°N, 121°45.901W

NOTE: If you enter the values in degrees and decimal minutes, you need to ensure that there are at least four digits before the decimal point, i.e., for 1 degree and 12.5 minutes use 0112.5 because 112.5 will be interpreted as 112.5 degrees.

NOTE: When using E6B, you can leave spaces between degrees and decimal minutes. This is not possible when utilizing search boxes for the creation of routes.

NOTE: When adding MGRS to route, a minimum of six characters is required for a valid MGRS entry.

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 view.

In addition to dropping their own pins and hazards on the Map, users can create or modify SQLite files to share their pins and/or hazards with others to display on Aero App. This SQLite file must be saved as *pins-{name}.sqlite*, where *{name}* is replaced by the user. If the file does not follow that naming convention, Aero may not read the file, or it may cause existing Pins and Hazards to overwrite on Aero App. The sections ahead provide further details on creating a SQLite file.

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.

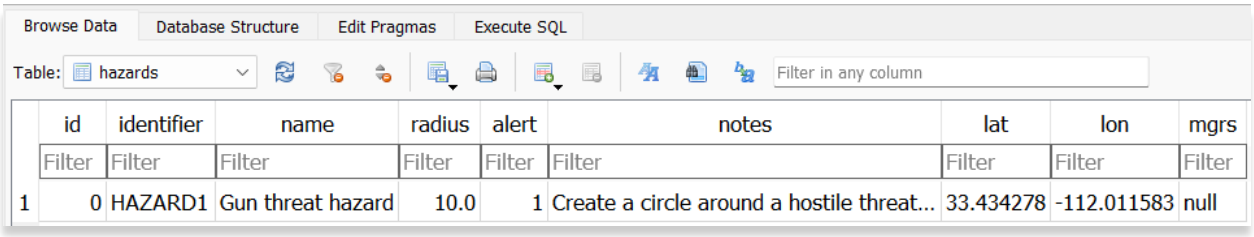
radius	REAL	The radius column represents the distance from the center of the ring to its outer edge that pilots should avoid when flying. If the radius column is left empty or a negative value is entered, the radius of the ring will be automatically adjusted to 0.
alert	INTEGER NOT NULL	The alert column 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. Users

	UNIQUE	should avoid using white spaces or leaving the field blank.
name	TEXT NOT NULL	The name column can contain any character from the ASCII table. However, it is recommended to limit it to alphanumeric characters and spaces.
notes	TEXT	The notes column is intended for additional information or context regarding pins.
lat	REAL NOT NULL	The lat column represents the latitude of the pin. Latitude cannot be greater than 90 or less than -90 but can be equal to either value.
lon	REAL NOT NULL	The lon column represents the longitude of the pin. Longitude cannot be greater than 180 or less than -180 but can be equal to either value.
timestamp	INTEGER NOT NULL	The timestamp column indicates the number of seconds since epoch time of when the pin was created.
radius	REAL	The radius column represents the distance from the center of the ring to its outer edge that pilots should avoid when flying. If the radius column is left empty or a negative value is entered, the radius of the ring will be automatically adjusted to 0.
radiusCircle	INTEGER NOT NULL	The radiusCircle column indicates whether Radius Ring is active or not. 1 is used to represent true while 0 is used to represent false.
radiusWarning	INTEGER NOT NULL	The alert column indicates whether an intersection alert is active or not. 1 is used to represent true while 0 is used to represent false.
connectToOwnship	INTEGER NOT NULL	The connectToOwnship column indicates whether Connect to Location is active or not. 1 is used to represent true while 0 is used to represent false.

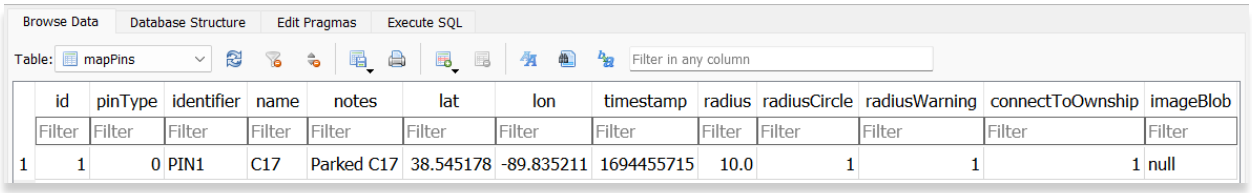
imageBlob	BLOB	The imageBlob column is intended to associate pins to relevant photos and can be viewed through Aero App. This field is required for Photo Pins.

Here's the schema for the Pins table. This schema includes the keys for each column mentioned earlier, with the necessary data types and constraints.

```
CREATE TABLE IF NOT EXISTS mapPins (
            id INTEGER PRIMARY KEY AUTOINCREMENT,
            pinType INTEGER NOT NULL,
            identifier TEXT NOT NULL UNIQUE,
            name TEXT,
            notes TEXT,
            lat REAL NOT NULL,
            lon REAL NOT NULL,
            timestamp INTEGER NOT NULL,
            radius REAL,
            radiusCircle INTEGER NOT NULL,
            radiusWarning INTEGER NOT NULL,
            connectToOwnship INTEGER NOT NULL,
            imageBlob BLOB);
```

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	10.0	1	1	1	null

36 Appendix D | Android Data Storage

Android data storage refers to the different methods used to save and manage Aero data. The sections ahead will provide detailed information on data storage.

36.1 Use SD Card to Store Data

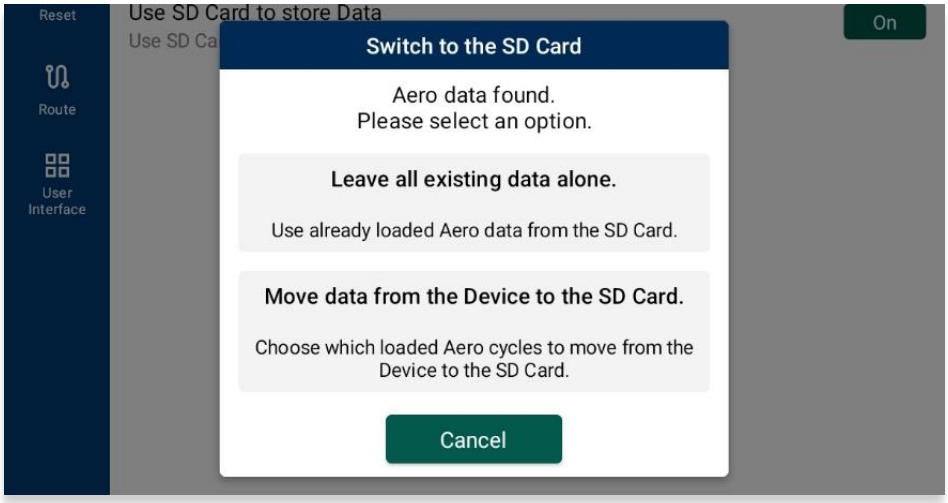
The Use SD Card to store data function allows users to store data in their preferred SD card. This feature provides the advantage of saving internal storage space and setting a primary location to store Aero data.

1. Insert an SD card into your Android device.
2. Open **Aero App** on your device.
3. Tap **Settings** on the ***Main Menu***.
4. Select **Data** from the side menu.
5. Tap to enable the ***Use SD Card to store Data*** option. The primary storage is now set to read and write from the SD card.

36.1.1 Switch to the SD Card

By enabling the *Use SD Card to store data* option, users are presented with the following options:

- **Leave all existing data alone** – Uses preloaded data from the SD card.
- **Move data from the Device to the SD Card** – Transfers desired Aero data from the Android tablet's internal storage to SD card.



36.1.1.1 Leave all Existing Data Alone

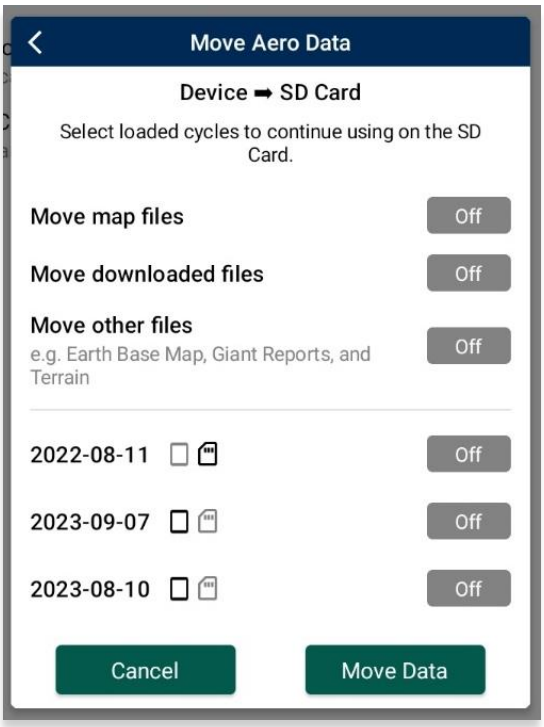
When selecting the *Leave all existing data alone* option, you are allowing Aero App to access preloaded data from your SD card. This allows Aero App to read data directly from the SD card.

1. Select the **Leave all existing data alone** option. A confirmation popup will appear.
2. Tap **Continue**. Aero App will read and store new data from the SD card. This does not move any existing data from the Android tablet.

36.1.1.2 Move Data from the Device to the SD Card

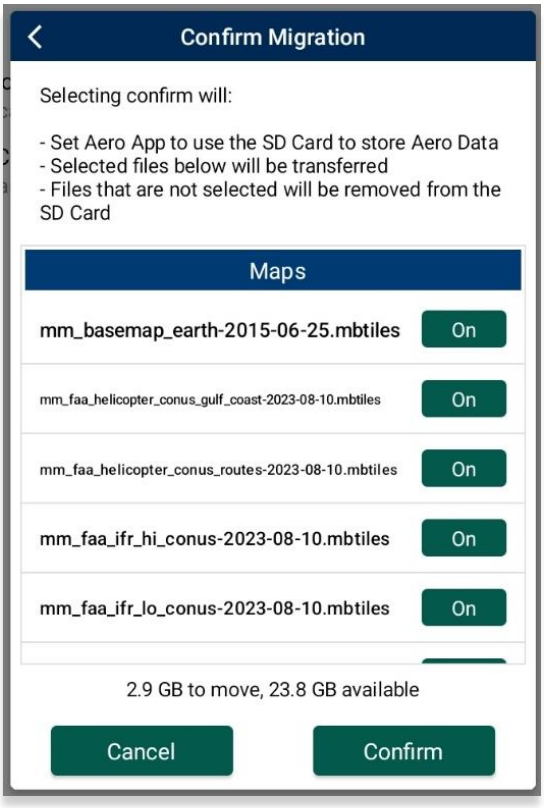
When selecting the *Move data from the Device to SD card* option, you are allowing Aero App transfer Aero data from their Android tablet's internal storage to the SD card.

1. Select the **Move data from the Device to the SD Card** option. A *Move Aero Data* popup will appear.
2. Select data that you wish to transfer into the SD card.
3. Tap **Move Data** once desired data is selected.

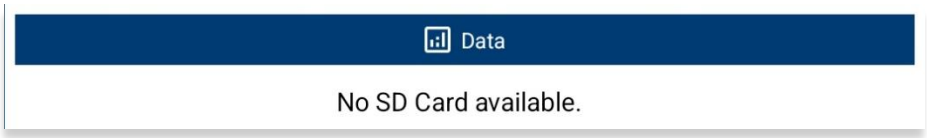


4. A **Confirm Migration** popup will appear containing the selected data.

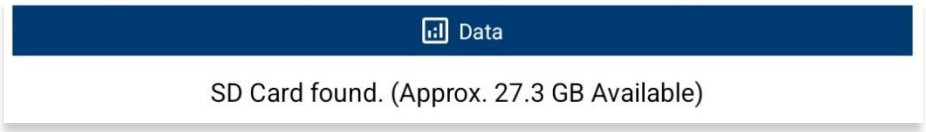
5. Tap **Confirm**. The transfer will begin. This process may take a while.



NOTE: If a user does not have an SD card inserted into their device, the following message will display under the Data subheading.

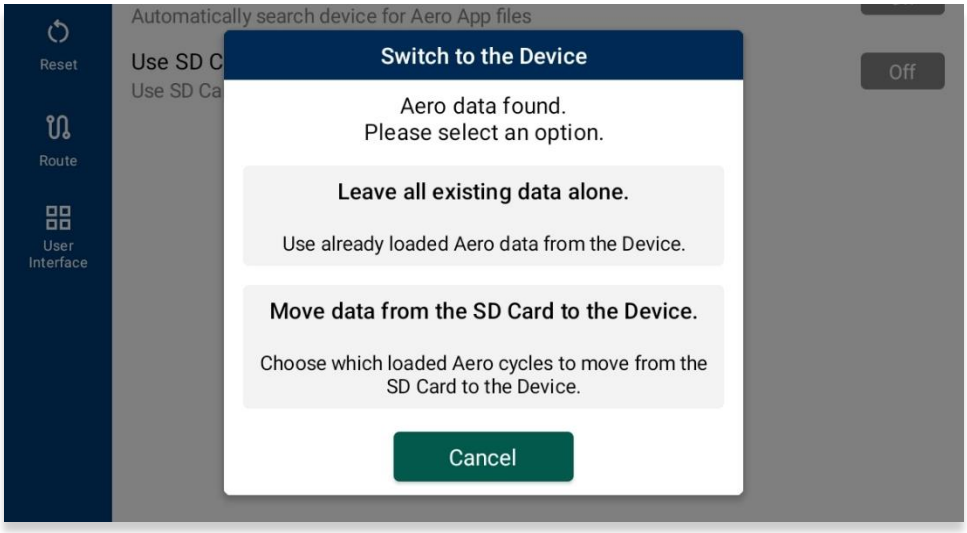


NOTE: If user does have an SD card inserted into their device, the following message will display under the Data subheading.



36.2 Switch to the Device

If you disable the *Use SD Card to store Data* option, you can use your Android tablet as the main resource for Aero App data. This means that you can use the pre-loaded Aero App data or transfer data from the SD card to the tablet.



36.3 Search for Data on SD Card and Computer

The Search for Data on SD Card and Computer option has an auto-discover function that scans your SD card and the Android tablet's internal storage for Aero App data. If your Android tablet has an SD card inserted, Aero App will check it for data; otherwise, an SD card is not required. Aero App will use any data found as the primary resource for Aero data.

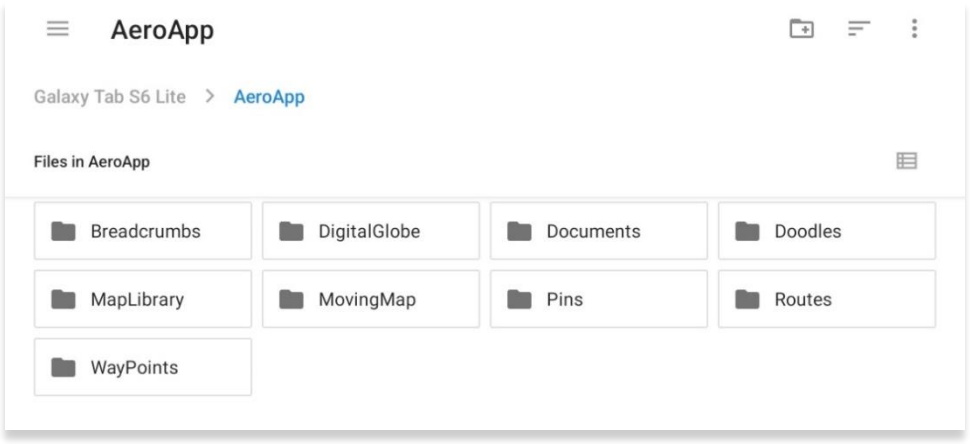
1. Open **Aero App**.
2. Tap **Settings** on the ***Main Menu***.
3. Select **Data** from the side menu.
4. Tap to enable the **Search for Data on SD Card and Computer** option.

NOTE: When the *Search for Data on SD Card and Computer* option is enabled, Aero App disregards what is set as the directory to store data.

36.4 Path for Data on SD Card and Computer

The Path for Data on SD Card and Computer feature gives users the ability to specify a preferred directory for loading Aero App data. Users with Android tablets that operate on Android 12 or newer versions, can opt to sideload data from the primary folder by enabling the *Search for Data on SD Card and Computer* option. If your Android tablet has an SD card inserted, Aero App will check it for data; otherwise, an SD card is not required.

1. Open **Aero App**.
2. Tap **Settings** on the ***Main Menu***.
3. Select **Data** from the side menu.
4. Tap **Choose** for the ***Path for Data on SD Card and Computer*** option.
5. Select desired folder or subfolder to set the directory in which will store Aero App data.



6. Once the directory is selected, tap **USE THIS FOLDER** to set the path.

7. A confirmation popup will appear. Tapping **Allow** will let Aero App access current and future content in the selected folder.
8. Tap **Cancel** to void action.

37 Appendix E | Aero App for Android on Windows 11

Aero App for Android supports cross-platform compatibility between Android and Windows operating systems. Aero App for Android can run on a Windows computer through the Windows Subsystem for Android (WSA) application. This feature will be further elaborated in the sections to follow.

NOTE: Currently, Surface tablets are not supported.

37.1 Requirements

Running Aero App for Android on Windows requires the following:

- Windows Subsystem for Android (WSA)
- Windows 11, minimum version 22H2 build 22621

37.2 Install Windows Subsystem (WSA)

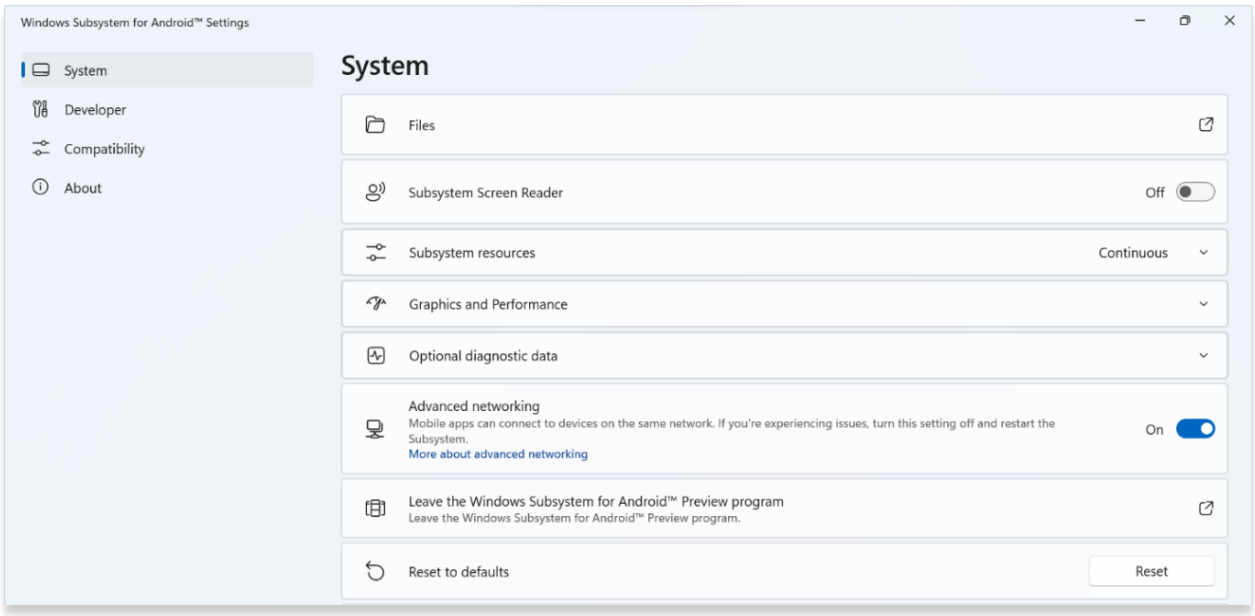
To install WSA on your Windows, users must install the Amazon Appstore from the Microsoft Store using their Microsoft account. Installing the Amazon Appstore will silently install WSA in the background.

Once the Amazon Appstore has been installed, a popup will appear that includes an installation guide of the Windows Subsystem for Android.

37.3 Windows Subsystem for Android (WSA) Settings

WSA is a Microsoft feature that enables Windows 11 devices to run Android applications such as Aero App. Windows Subsystem for Android (WSA) includes a Settings App. To access WSA search for "Windows Subsystem for Android" in the Start menu.

The WSA Settings App allows access to the WSA Virtual Machine's filesystem. Clicking the pop-out arrow for the ***Files*** option will open a window similar to the Android tablet My Files app.



NOTE: Users are not able to move files into Android from the Files window. Files can only be copied to Windows.

The **Subsystem resources** option enables users to set the duration in which the WSA virtual machine will be active. It is recommended for users to switch their settings from ***As Needed*** to **Continuous** for improved performance experience.

The **Advanced networking** option allows users to connect to other devices in the same network. This option must be switched **On** to access certain Aero App features, such as ADS Discover.

The **Developer Mode** should be enabled from the WSA Settings app. Enabling developer mode will be covered in the sections below.

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

37.4 Android Debugging Bridge (ADB)

Android Debugging Bridge (ADB) is used to facilitate the interaction between Windows and WSA. It is a command-line tool that requires users to enter adb commands.

37.4.1 Download and Extract Platform Tools

To begin using adb commands, users will need to:

1. Navigate to the Android Developer site - developer.android.com/studio/release/platform-tools.
2. Download and extract the Platform Tools.
3. Open the **platform-tools** folder.
4. Open a terminal window from this directory.
5. Execute the command, '.\adb devices'**.**

If located in the appropriate destination, the adb-server should start up and list any connected Android devices. Executing the command here will start the adb server. This confirms that your current setup operates effectively.

For additional information, visit developer.android.com.

NOTE: No device would be listed since you need the connection of the WSA address. This will be further explained in the sections to follow.

37.4.2 Add to PATH

ADB can only be used from the folder in which it is stored in. To run adb commands without specifying 'adb devices' or navigating to the folder:

1. Open the Environment Variables from the Control Panel.
2. Directly below *User Variables,* click **Path** to highlight, then **Edit….**
3. Click **New.**
4. Enter the path to the platform tools. The path is the complete directory of the platform tools folder location, i.e., C:\Users\username\Downloads\platform-tools_r33.0.3-windows\platform-tools.
5. Click **Ok.**

Once added, ensure to never move, or delete the platform tools folder.

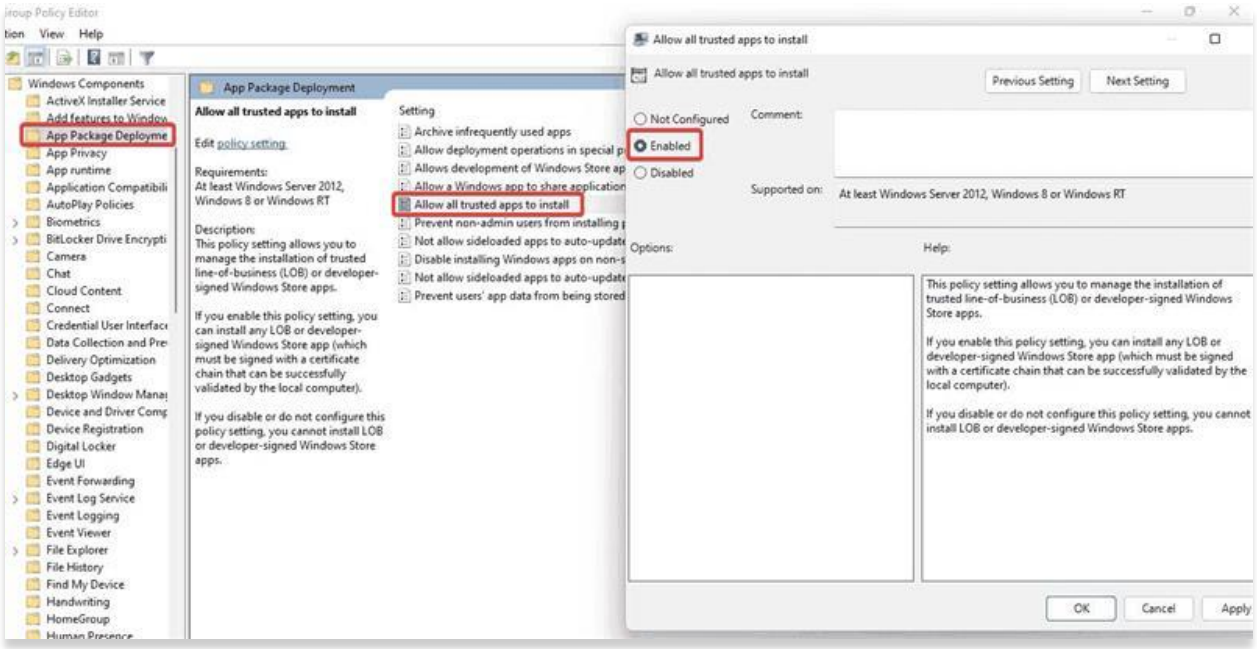
37.5 Enable Developer Mode

To enable Developer Mode, or access other settings:

1. Open the WSA Settings app.
2. Select Developer. Notate the IP address and Port number, i.e., 127.0.01:58584 to use further in this section.
3. Ensure Developer Mode is enabled.
4. Select **Manage developer settings** to ensure the WSA VM is running.
5. Search **Developer Settings** from the Windows search.
6. Navigate to **Settings**.
7. Click **Privacy and Security**.
8. Click **For developers**.
9. Enable **Developer Mode**.

If the options in the Settings application are not working or are disabled, users can use the methods below as an alternative. However, Group Policy Editor is only available for Windows 11 Professional, Enterprise or Education editions, not for Home Editions.

1. On your keyboard, press **Win + R** to open the Run dialog box. Enter “gpedit.msc" and click **Ok** to open the Local Policy Editor.
2. Navigate to the following path: ‘Computer Configuration > Administrative Templates > Windows Components > App Package Deployment’.
3. On the right side, find the policy "Allows development of Windows Store apps and installing them from an integrated development environment (IDE)".



4. Double-click and check the **Enabled** option in the Settings window.
5. Click **Apply** then click **OK.**

37.6 Install Aero App for Android into WSA

To install Aero App for Android into WSA:

1. Copy the ***Android apk file*** to any location on the Windows machine.
2. Open a Terminal.
3. Run 'adb connect <wsa-address>', with '<wsa-address>' being the virtual machine's address, i.e., 127.0.0.1:58584. This address is the same IP address used to enable developer mode.

NOTE: A message that reads "Failed to authenticate <virtual machine's address> may display.

   a. In the case where the device displays 'unauthorized' next to it:
      i. Go back to the WSA Settings App.
      ii. Click **Developer**.
      iii. Select **Manage developer settings**.
      iv. Scroll to **Use Debugging** and switch between on and off toggles.
      v. A dialog will display requesting authorization. Click to **Allow**.
      vi. Verify that WSA is connected; *adb devices* should now show authorized along with the list of devices attached i.e., <virtual machine's address> device.
4. Install the APK - adb install **<path-to-apk>**, where the **<path-to-apk>** is the full path, i.e., **C:\Users\username\ AeroApp_Android-1.2301.0-release.apk**.
5. Once installation is completed, the screen will display "Success"**.**

37.7 Sideloading Data

Sideloading data uses the **adb push <local> <remote>** command, where ***<local>*** is the path to the file to send to the WSA virtual machine, and ***<remote>*** is the location in the WSA virtual machine to put the file in. The paths in the WSA virtual machine that you'll need will begin with "/sdcard/". Refer to the examples provided below:

- Adding a global zip:
  - `adb push "C:\Users\username\Documents\global-2022-08-11.zip"/sdcard/'
- Adding a user MBTiles file:
  - `adb push C:\Users\username\files\map.mbtiles /sdcard/AeroApp/MovingMap/`
- Adding all files in a directory:
  - `adb push C:\Users\username\data\. /sdcard/Documents/`

NOTE: Depending on the number of files being sideloaded, it may take a while to complete the transfer. In the case where folder names include spaces, be sure to add quotation marks as seen on the first example above.

37.8 Unsupported Features

To run Aero App for Android on Windows, a Windows computer with the minimum operating system of Windows 11 is required. The list below displays Aero App for Android's unsupported features when running on a Windows machine:

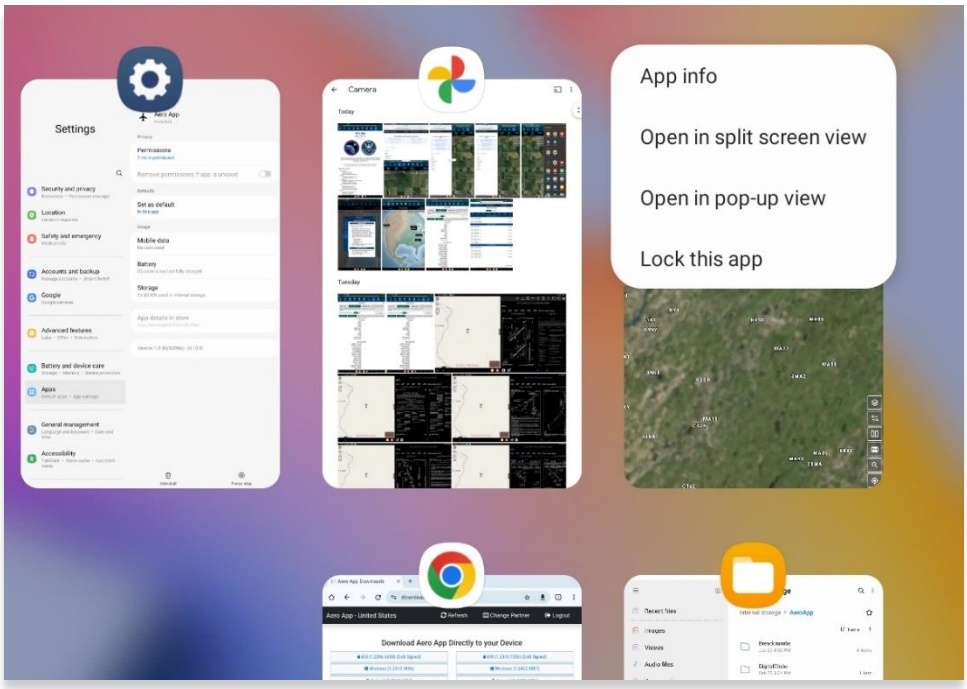
- SD card storage
- Bluetooth connectivity
- ADS-B connectivity
- MAGTAB
- Share KML/KMZ user overlays
- MDM
- GPS connectivity

NOTE: The Windows Subsystem for Android (WSA) is under continuous development by Microsoft. There may be updates to the WSA that can affect the performance of Aero App for Android. A temporary change in functionality may occur as a result. A feature may become blocked, or a previously unsupported feature may begin working. These changes are outside the control of the Aero App development team.

38 Appendix F | Multitasking on Android

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

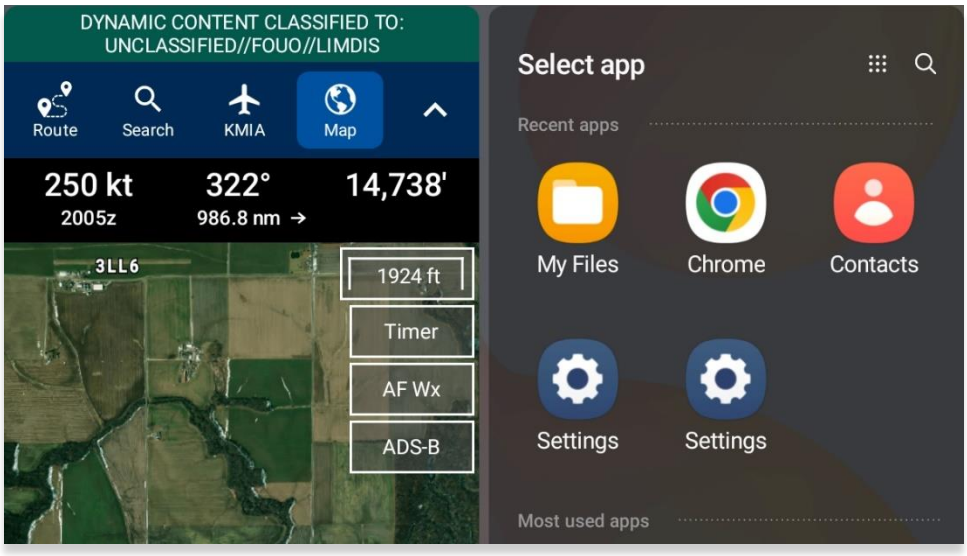
1. With Aero App open, tap the **Recents** icon located at the bottom-right of the screen.
2. All recently viewed apps will be displayed. Tap on the **app icon** of desired app.
3. A popup will display with the following options:
    - App info
    - Open in split screen view
    - Open in pop-up view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



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

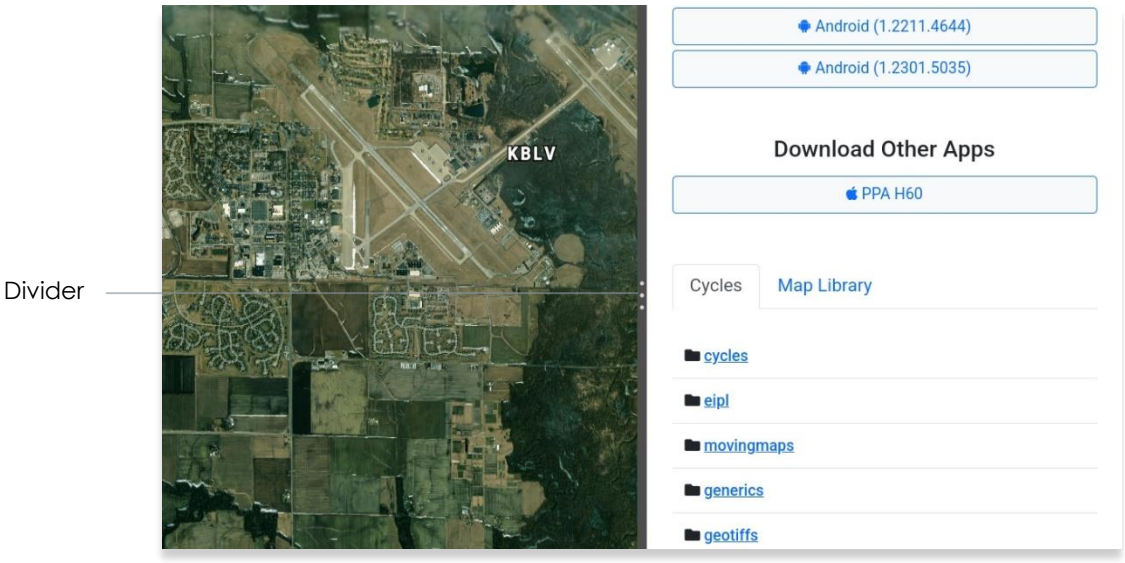
NOTE: Pop-up View is not supported by Aero App.

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



NOTE: Not all apps support Multitasking.

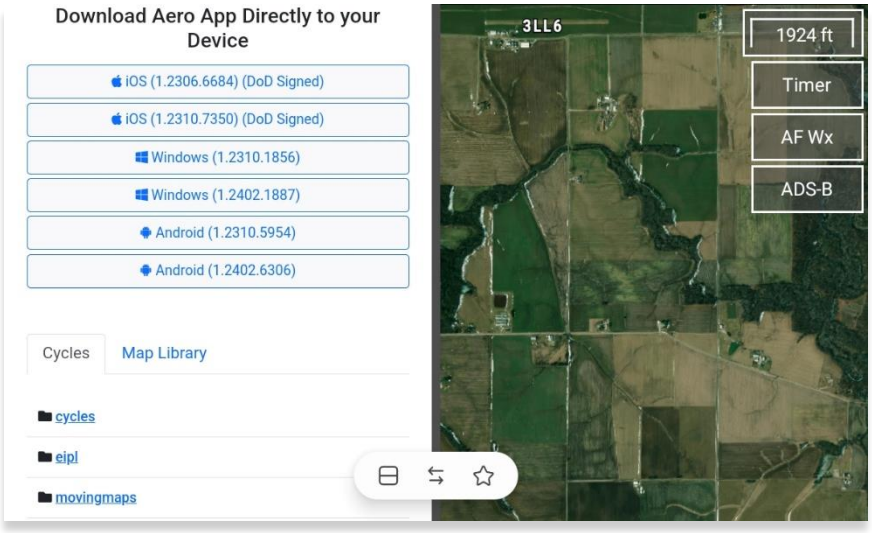
6. A divider is located between both apps to allow resizing of views when adjusted. Adjust your views to desired size preference.



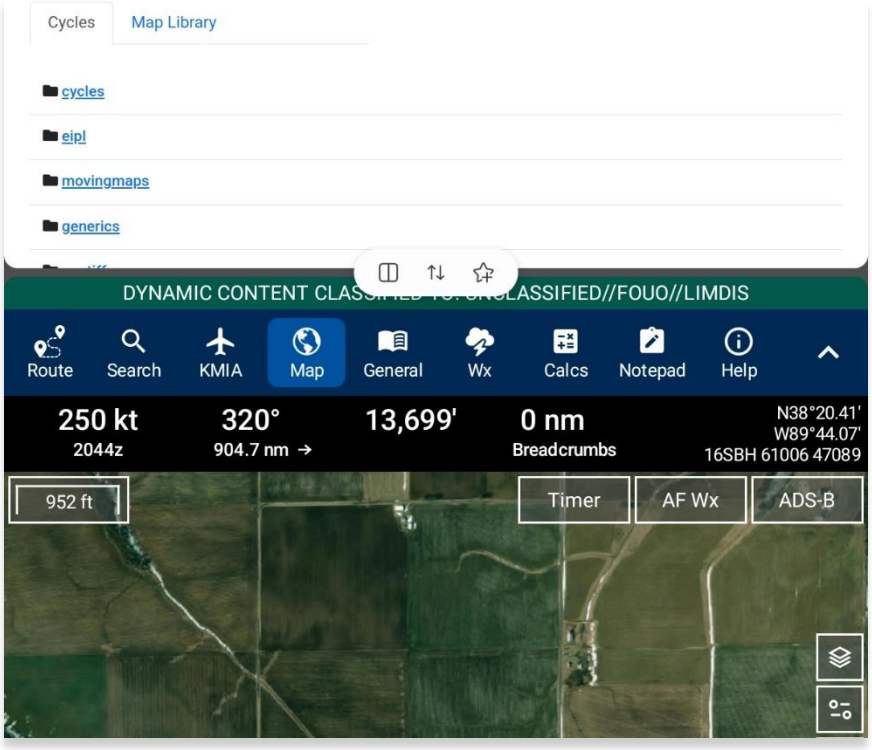
NOTE: For best practice, Aero App should be at 50/50 size to allow seamless user experience.

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

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



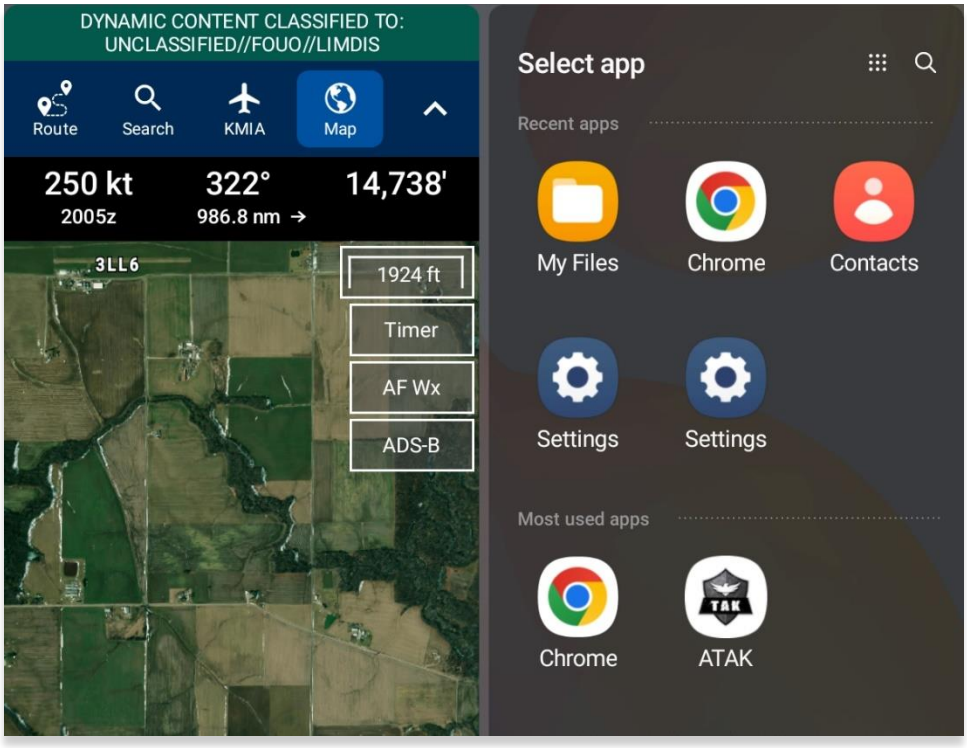
8. To switch your side-by-side view to a stack view, tap the **three dots** on the divider and select the **switcher** button.



38.1 Switch Between Apps in Split Screen View

Users can switch between different apps of their choosing.

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



38.2 Close Apps in Split Screen View

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

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

39 Appendix G | Acronyms and Glossary

.apk	Android package file format for distribution and installation of mobile apps and middleware
A/FD	Airport Facility Directory
ADDS	Aviation Digital Data Service
ADIZ	Air Defense Identification Zones
Adobe	Software suite of graphic design, video editing, and web development applications
ADS	Aero Data Server
ADS-B	Automatic Dependent Surveillance-Broadcast
AF Wx	Air Force Weather
AFR	Africa (Central and Southern regions)
AIRMET	Airmen's Meteorological Information
Alt Min	Alternate Minimums
AP	Area Planning
APD	Airport Diagram
App Mgmt	Application Management
AQP	Advanced Qualification Program
Arr	Airport Arrival Procedures
ARTCC	Air Route Traffic Control Center
ASPS	Aeronautical Source Packaging Service
AUD	Aero User Database
AvGas	Aviation Gasoline
AWS	Amazon Web Services
Breadcrumbs	GPS points along a flight path
CAC Card	Common Access Card
CAN	Canada
CNA	Canada North America
CONUS	Contiguous United States
CRD	Common Route Definition
CSA	Caribbean and South America
Delta	Upgrades from previous data cycles that only include changes
Dep	Airport Departure Procedures
DINS	Defense Internet NOTAM Service
DLA	Defense Logistics Agency
Docs	User-defined content loaded into document library
DOD	Department of Defense
DP	Departure Procedures
DSN	Defense Switched Network
DVD	Digital Versatile Disc
E6B	Aviator's calculator
EEA	Eastern Europe and Asia

EFB	Electronic Flight Bag
E-IPL	Electronic - Instrument Procedure Library
ENAME	Europe, North Africa, Middle East
ETA	Estimated Time of Arrival
ETE	Estimated Time En Route
FAA	Federal Aviation Administration
FIR	Flight Information Region
FIS-B	Flight Information Services-Broadcast
FLIP	Flight Information Publications and Flight Information Products
Ft	Foot
GARS	Global Area Reference System
GB	Gigabyte
GEOAxIS	Credentials authentication provider for the government
GEOINT	Geospatial Intelligence
GPS	Global Positioning System
GS	Ground Speed
Hdg	Heading
IAP	Instrument Approach Procedures
ICAO	International Civil Aviation Organization that assigns airport code or location indicator as an alphanumeric code designating aerodromes around the world
IFR	Instrument Flight Rules
IP	Internet Protocol
IPA	iOS application archive file which stores an iOS app
IR	Instrument Routes
KG	Kilogram
KM	Kilometer
KML	Keyhole Markup Language
KMZ	Keyhole Markup Language Zipped
Kt	Knot
LAHSO	Land and Hold Short Operations
Lat, Lon	Latitude and Longitude
Lbs	Pounds
LIFR	Low Instrument Flight Rules
M	Meter
macOS	Current series of Unix-based graphical operating systems by Apple
Map	Navigation system displaying the receiver's current location at the center of a map
MDM	Mobile Device Management
METAR	Aviation Routine Weather Report, a format for reporting weather information
Mgmt	Management
MGRS	Military Grid Reference System
MTRs	Military Training Routes
NavAid	A device or system that provides a navigator with navigational data

NEXRAD	Next-Generation Radar
NGA	National Geospatial-Intelligence Agency
NGA GEOINT	NGA web-based capabilities for online, on-demand discovery, and access to geospatial intelligence
NIPRnet	Non-Secure Internet Protocol Router Network
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NSN	National Stock Number
OCONUS	Outside Contiguous US
PAA	Pacific, Australasia, and Antarctica
PDF	Adobe Portable Document
PIREP	Pilot Report
PKI	Public Key Infrastructure
POC	Point of Contact
Prog Chart	A map displaying the likely weather forecast for a future time
RNAV	Area navigation, a method of IFR navigation
SAR	Search and Rescue
SD Card	Secure Digital High-Capacity card
Shapefiles	Geospatial vector data format for geographic information system (GIS) software
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SM	Statute Mile
SQLite	Relational database management system
SR	Slow Speed Low Altitude Routes
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TACs	Terminal Area Charts
TAFs	Terminal Aerodrome Forecasts
TFRs	Temporary Flight Restrictions
TFRs	Temporary Flight Restrictions
TO Min	Takeoff Minimums
UIR	Upper Information Region
USB	Universal Serial Bus
VFR	Visual Flight Rules
VO	Vertical Obstruction
VR	Visual Routes
Waypoint	A set of coordinates that identify a point in physical space
WCA	Wind Correction Angle
Wx	Weather
XTK	Crosstrack