Aeronautical Application

(Aero App)

Windows User Manual Version 1.2402

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Acknowledgements

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1 Introduction

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

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

- Provides an interactive, high-performance, worldwide Moving 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 Air Refueling Routes, Airways, Pins, and 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, NOTAMs, and Air Force Weather.
- Create, save, edit, or delete points within the Moving Map's 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 onto Aero App.
- Load and view PDF format.
- Many more.

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 moving 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, as well as 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 effortlessly.

3 Getting Started

The Aero App User Manual walks you through installing Aero App, loading pertinent data, managing significant data, and more. Conceptual explanations for features, tools, overlays, and various offerings of Aero App are found in this document. The following are required to get started:

1. Install Aero App following the criteria below.
2. Load an initial data cycle.
3. Update the data cycle every 28 days.

3.1 System Requirements

The following information is Aero App's system requirements and compatible devices.

- Required
    - Windows tablet with OS Windows 10
    - 16GB of available storage (needed to install Aero App and one complete data cycle)
    - .NET framework 6

- Optional
    - MicroSD card or USB with the minimum of 16 GB to sideload Aero App executable file and data
- An active internet connection (Wi-Fi or Cellular) or ethernet connection when downloading data

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

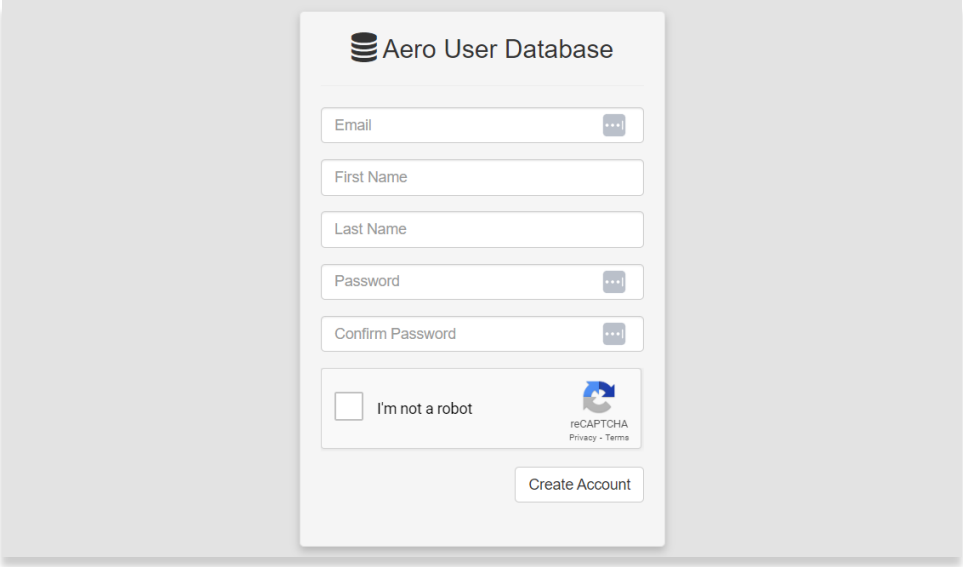
5 Accounts

In order to utilize Aero App, it is imperative to possess an active account for Aero User Database or GEOAxIS authentications. Detailed information regarding the various account 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 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: A valid .mil and .gov email is required to create an account.

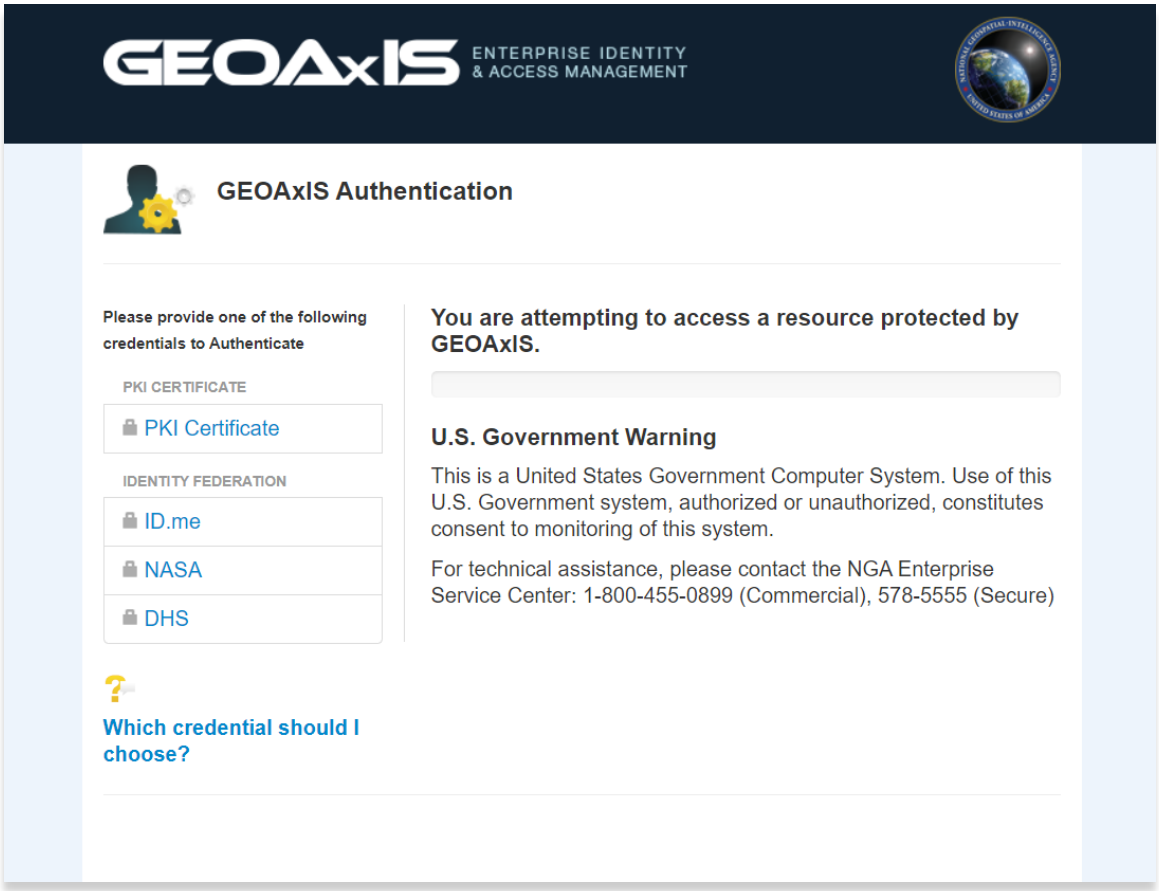
4. Click **Create Account** once all required fields have been filled. Once registered, a verification email has been sent to the user-registered email address.
5. Follow the instructions provided in the email to verify your AUD account.

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

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

6 Aero App Installation

There are several methods for obtaining the installation of Aero App. The following sections ahead will expand on the different options.

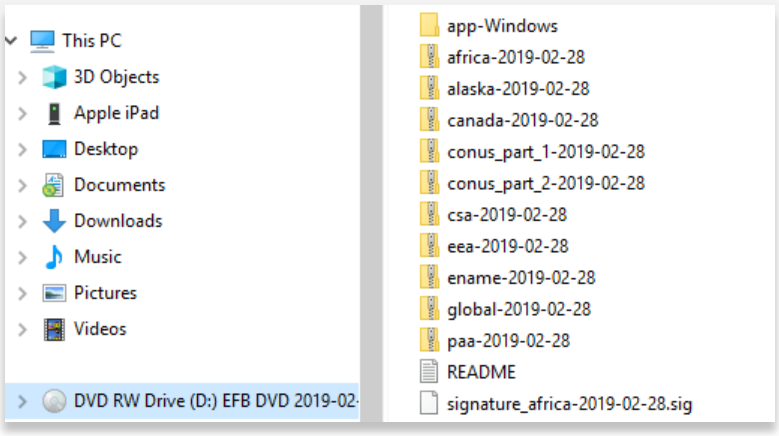
6.1 Where to Obtain Aero App

Aero App (National Stock Number [NSN] 7644016004225) is available from the following sources:

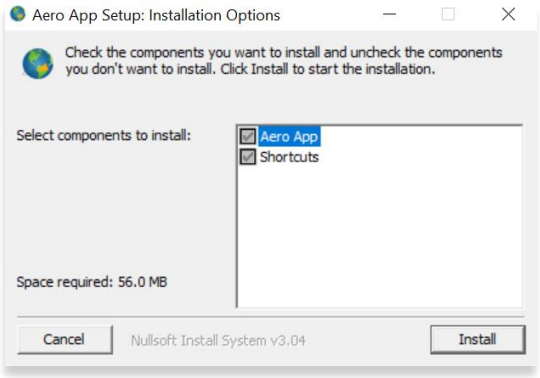
- **Aero App DVD** – National Geospatial Intelligence Agency (NGA) distributes the Aero App DVD to appropriate personnel.
  - **Defense Logistics Agency (DLA).** If you have any questions or need more information, contact Jorge Diaz (Jorge.Diaz@dla.mil).
  - **National Geospatial-Intelligence Agency (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 Aero App Installation From DVD

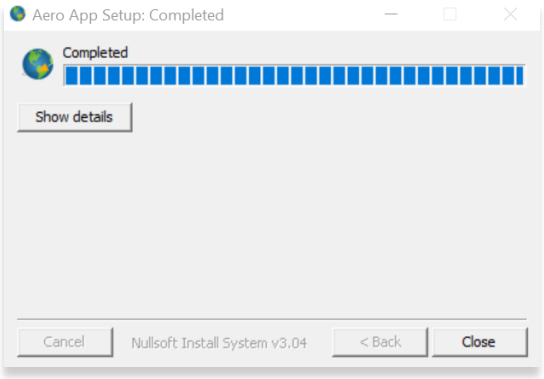
1. Insert the DVD onto your computer.
2. Locate and double-click on the DVD drive in your File Folders.



3. Once you have located the DVD on File Explorer, insert the microSD card into an adapter.
4. Insert the microSD card adapter into a Windows computer.
5. With both files simultaneously open, drag the Aero App executable files from the DVD onto the SD card.
6. Eject the microSD card adapter from the computer.
7. Insert your microSD card into a Windows tablet.
8. Open **File Manager** from the Windows tablet and navigate to your microSD card.
9. Double-click on the downloaded file.
10. A dialog box titled **Aero App Setup: Installation Options** will pop up.
11. Tap **Install**.

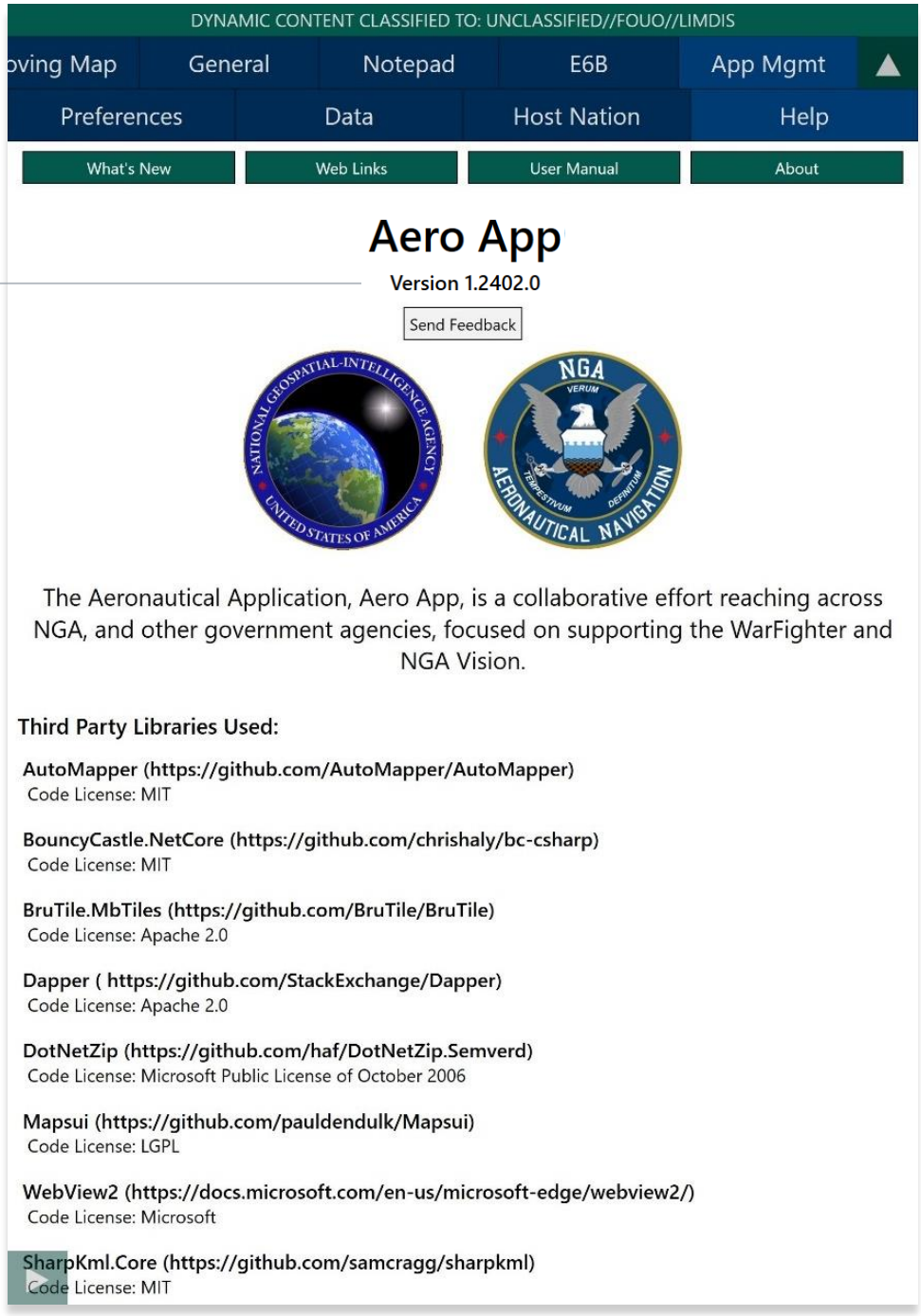


12. The dialog box should display Completed, tap **Close**.



13. To verify if the file has been properly installed, go to your Aero App and tap **App Mgmt** on the ***Main Menu***.

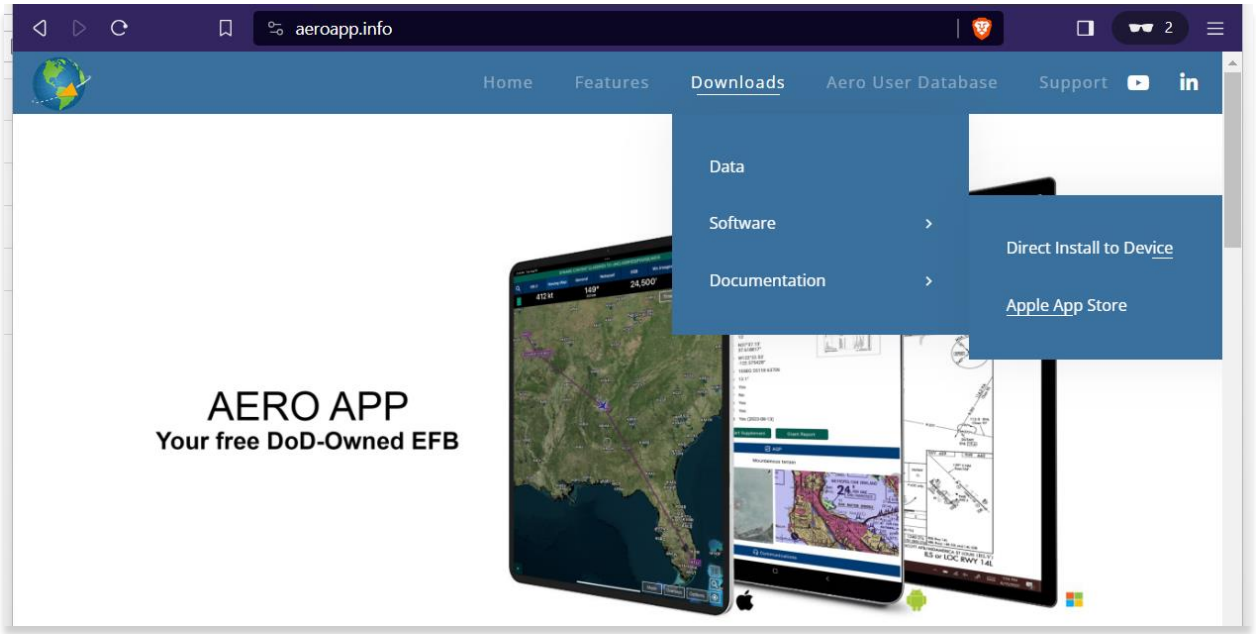
14. Tap **Help** on the ***Secondary Menu***.
15. Tap **About** and the version number will be displayed.



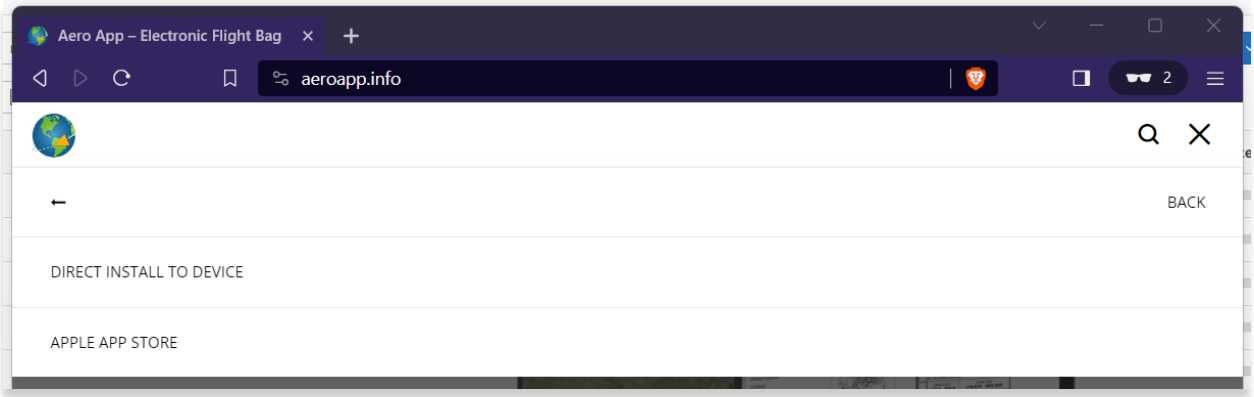
Aero App Version Number

6.1.2 Aero App Installation From Website

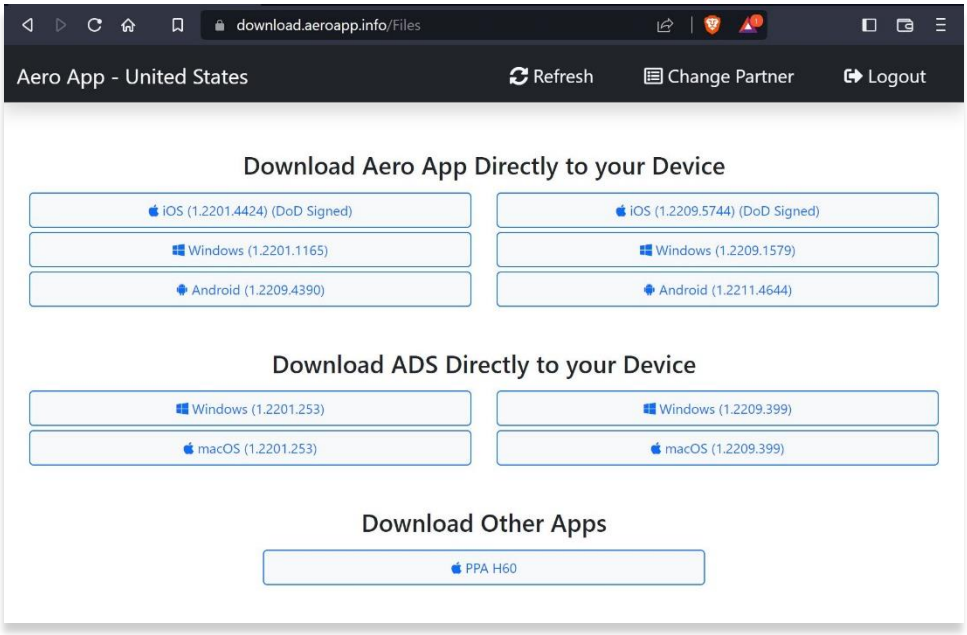
1. Open an internet browser of choice.
2. Enter https://www.aeroapp.info in the address bar.
3. Hover over Downloads. Option placement will vary depending on display size.
    - On larger screens, the ***Downloads*** option will be displayed on the ribbon located at the top of the page.



- On smaller screens, click the hamburger button. Select **Downloads** then **Software.**



4. Users are provided with two different ways to download Aero App:
    - Direct Install to Device
    - Apple App Store
5. Select **Direct Install to Device**.
6. Log in using *GEOAxIS* or *Aero User Database* credentials.
7. Select the Windows version of Aero App and download will begin.



NOTE: Users must have GEOAxIS or Aero User Database credentials prior to downloading the Aero App software.

7 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 available through 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 Aero App. GEOAxIS, and Aero User Database credentials are required.

NOTE: AWS authentication requires an account with GEOAxIS or Aero User Database. Refer to Section 5 for more information.

7.1 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
- Electronic – Instrument Procedure Library (E-IPL)
- FAA Sectionals
- Georeference
- Giant Reports
- Helicopter and Terminal Area Chart (TAC) Maps
- User Files

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

7.1.1 Aero App Maps

Aero App includes an advanced Moving Map that displays VFR and worldwide IFR charts. Aero App enables pilots to easily download the maps for their region of interest. Refer to Section 13.3.4 for more information on Maps.

7.1.2 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 13.3.3 for more information on Air Force Weather (AF Wx).

7.1.3 Core Data

Core Data includes Global zip file and the Africa, Alaska, Canada, CONUS 1, CONUS 2, CSA, EEA, ENAME, and PAA region files. Usable data products in the Core Data include, but not limited to, FLIP charts, Supplements, Planning Documents, Legends, Moving Map Overlays including Airports, Air Refueling Routes, Airways, ARTCCs, and many more. Users can choose to download zero or more regions. However, the Global zip file is always required. Refer to Section 8 for more information on how to load data from Aero App.

NOTE: Users have the option to sideload data, refer to Section 9 to view different methods of sideloading data.

7.1.4 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.

7.1.5 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 Moving Map. Users with Aero User Database (AUD) and GEOAxIS credentials will have access to FAA Sectionals. Refer to Section 13.4.1 to reference how to load FAA Sectional Charts. Refer to Section 13.3.4.1.1 to reference how to display FAA Sectionals onto the Moving Map.

NOTE: All FAA Sectionals, Helicopters, Terminal Area Charts (TACs), and IFR Enroute charts are updated on a 56-day cycle.

7.1.6 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.

7.1.7 Georeference

Georeference is an alignment of accurate location data to a map coordinate system for Aero App. Aero App enables users to show ownship on Airport Diagram, Instrument Approach Procedures, and their Moving Map, perfectly georeferenced. Refer to Section 14.1.2 on how to enable Show Ownship on APD and IAP and Show Airport Ring on APD and IAP.

7.1.8 Giant Reports

Giant Reports are PDF documents that are an assessment from the Air Force for safe operations at an airfield. These can be downloaded and viewable within Aero App. Refer to Section 13.2 for guidance in viewing Giant Reports.

7.1.9 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 Moving Map.

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

The georeferencing and spatial accuracy ensure that these charts can be used for an accurate, non-primary means of navigation. Refer to Section 13.3.4.3 for more information on Helicopter and Terminal Area Chart (TAC) Maps.

NOTE: All FAA Sectionals, Helicopters, Terminal Area Charts (TACs), and IFR Enroute charts are updated on a 56-day cycle.

7.1.10 User Files

User Files include User Map files and other PDF files and can be accessed from the data download screen in Aero App.

8 Download Data

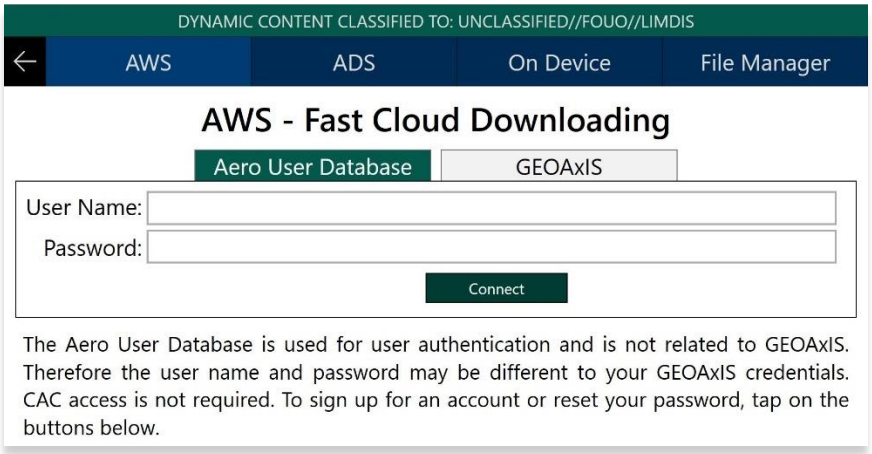
Aero App allows users to download data directly from the app. Sources such as Amazon Web Services (AWS) and Aero Data Server (ADS) are accessible within Aero App. Alternatively, users can visit the Aero App website (aeroapp.info) and download data directly to their devices.

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

8.1 Download Data Through Amazon Web Services (AWS)

Aero App enables users to download data from AWS using Aero User Database (AUD) and GEOAxIS credentials. To obtain core data files, Global must be included when downloading data.

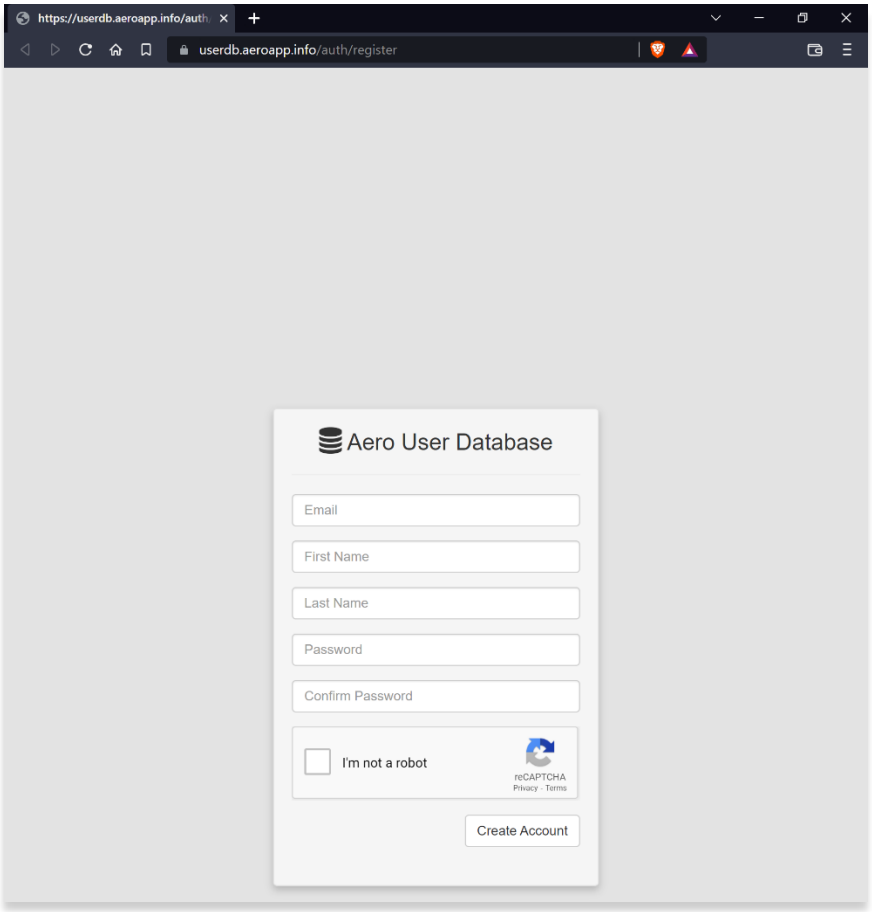
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download**.
4. Select the **AWS – Fast Cloud Downloading** option, if necessary.
5. Users are given the option to access data using Aero User Database (AUD) or GEOAxIS credentials.



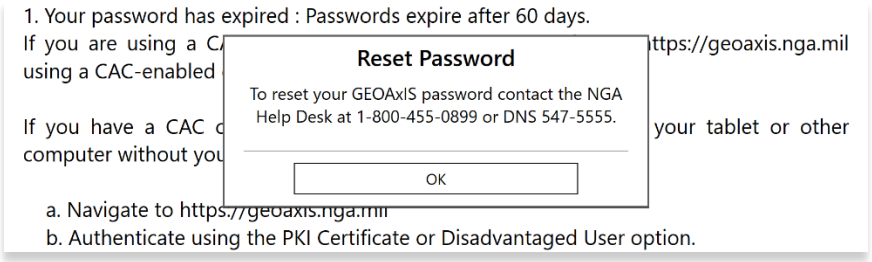
6. Below each user authentication option, users are presented the options to *Sign Up For An Account* and *Reset Password*.

7. Tap **Sign Up for An Account** to create an Aero User Database (AUD) or GEOAxIS account.
8. The following options are available for Reset Password:

    - Tapping **Reset Password** under ***Aero User Database*** will redirect users to Aero User Database management page on a separate browser.



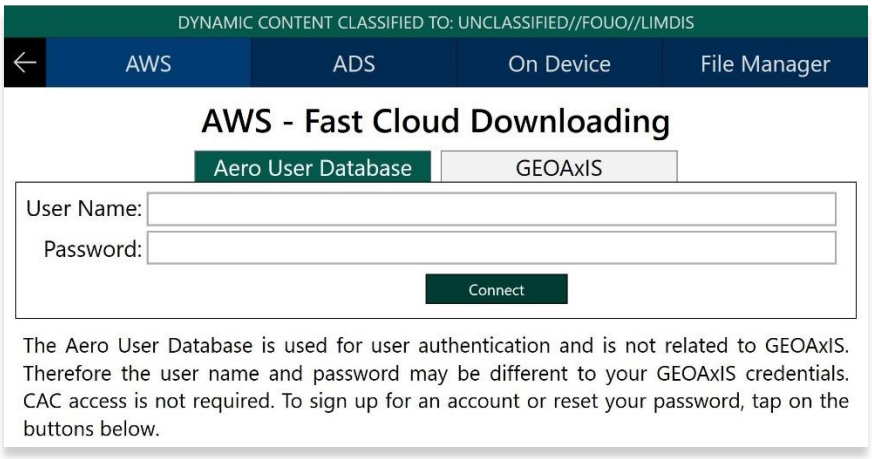
    - Tapping **Reset Password** under ***GEOAxIS*** will provide instructions for how to reset password.



8.1.1 Download Data Using Aero User Database (AUD)

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

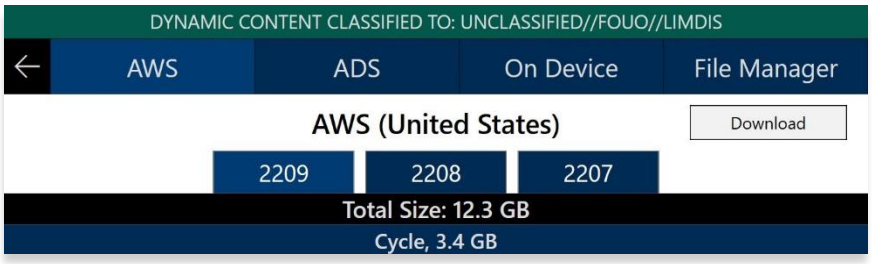
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download**.
4. Select the **AWS** option, if necessary.
5. Select the **Aero User Database** option.
6. Enter user's credentials then tap **Connect**.



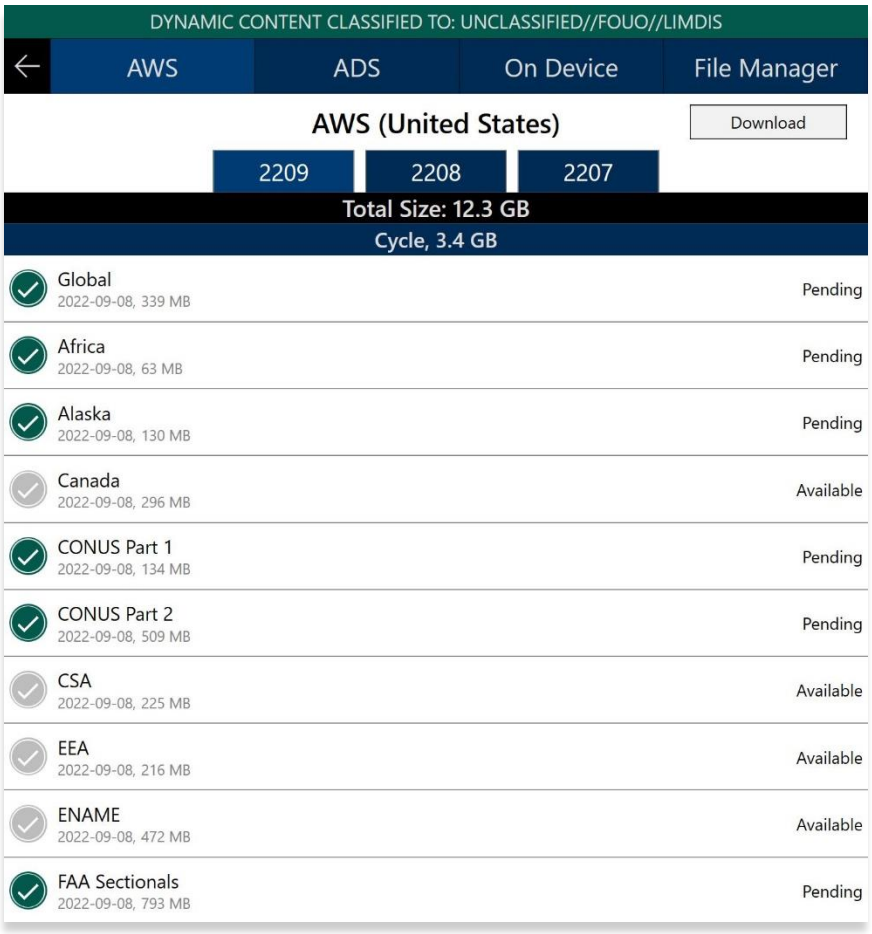
7. The Select Partner popup will display. Select from partners list.

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

8. Users will be prompted to the Data Cycle Download screen, select desired cycle.



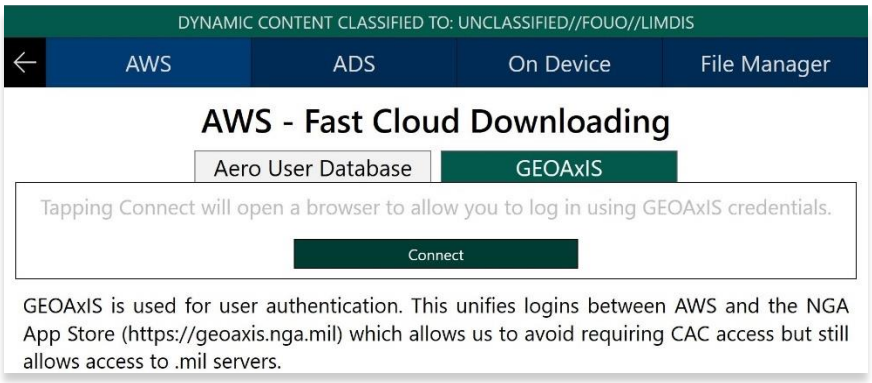
9. Available data pertaining to that cycle will be displayed on the screen. Select individual data files.
10. Tap **Download** once desired data files have been selected.



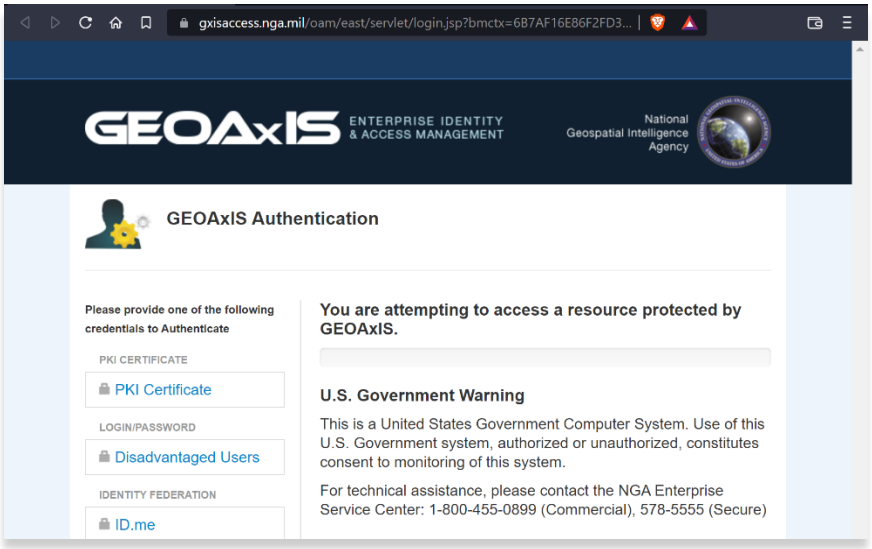
8.1.2 Download Data Using GEOAxIS

GEOAxIS allows for authentication of Disadvantage Users – users without a CAC card. A GEOAxIS account is required when GEOAxIS authentication is selected.

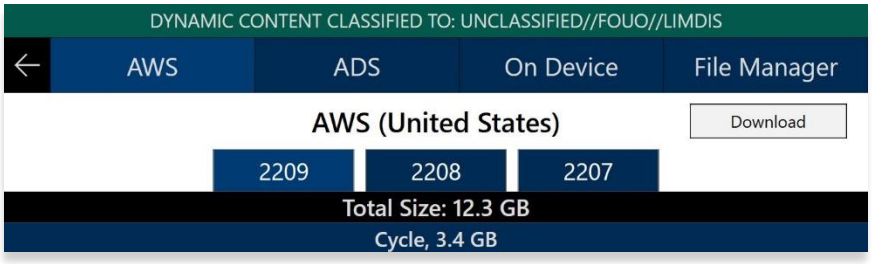
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download.**
4. Select the **AWS** option, if necessary.
5. Tap the **GEOAxIS** option.



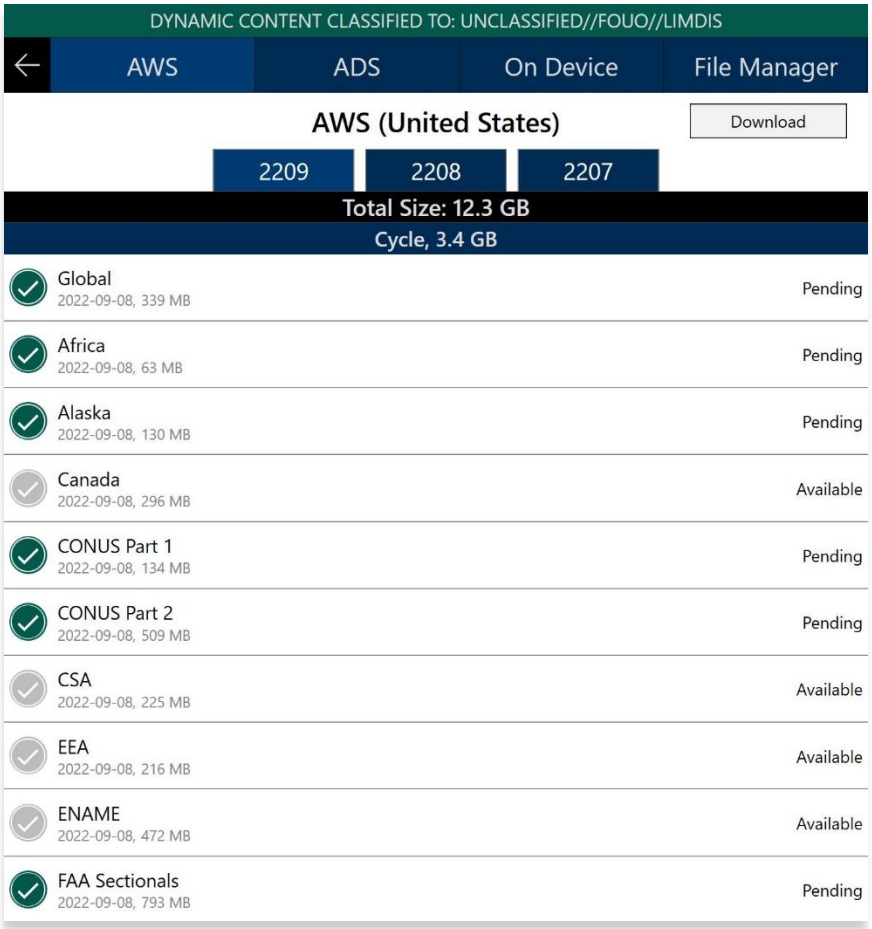
6. Tap **Connect** and users will be redirected to the GEOAxIS webpage.
7. Select desired authentication method.



8. Once authenticated, users will be prompted to the AWS download screen. Select a cycle located at the top of the screen.



9. Available data pertaining to that cycle will be displayed on the screen. Select individual data files.
10. Tap **Download** once desired data files have been selected.



NOTE: Refer to Section 5 for more information regarding registering for a GEOAxIS account.

8.2 Download Data Through Aero Data Server (ADS)

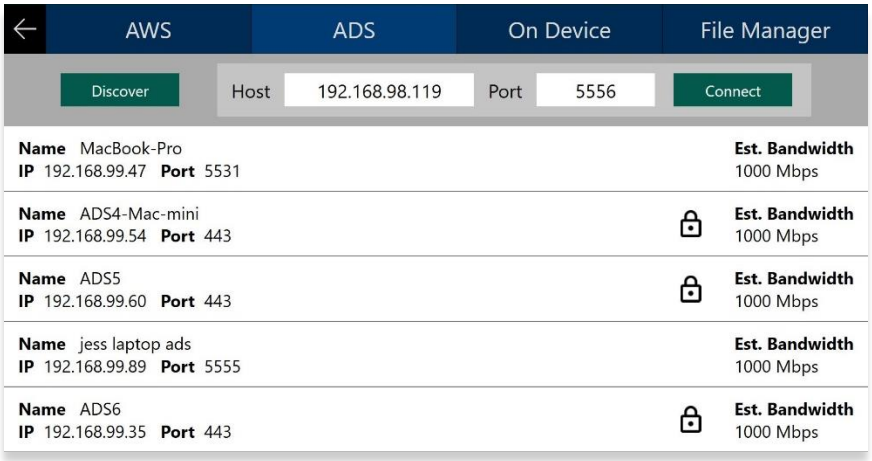
Aero Data Server (ADS) enables users to download Aero App data over a local Wi-Fi network to a Windows device. Global is required to be loaded in ADS for Aero App to access cycle, Aero App Maps, E-IPL, and other data, not including User Files or Map Library.

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download**.
4. Select the **Aero Data Server** option.
5. 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.

8.2.1 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 an IP address and the Port number of a server.

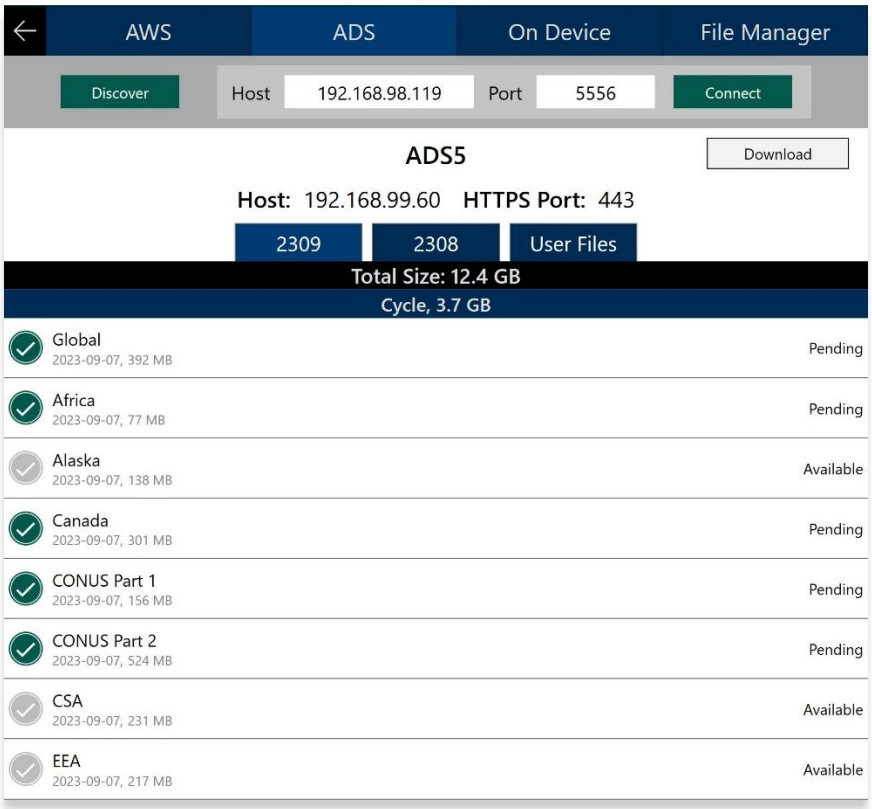
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download**.
4. Select the **Aero Data Server** option, then tap ***Discover*** and all available servers will display.



5. Alternatively, users can manually connect to a server by entering 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.

6. Once entered, tap **Connect** to connect to the new server.
7. Users will be promoted to the Data Cycle Download screen, select desired cycle.
8. Available data pertaining to that cycle will be displayed on the screen. Select individual data files.
9. 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.

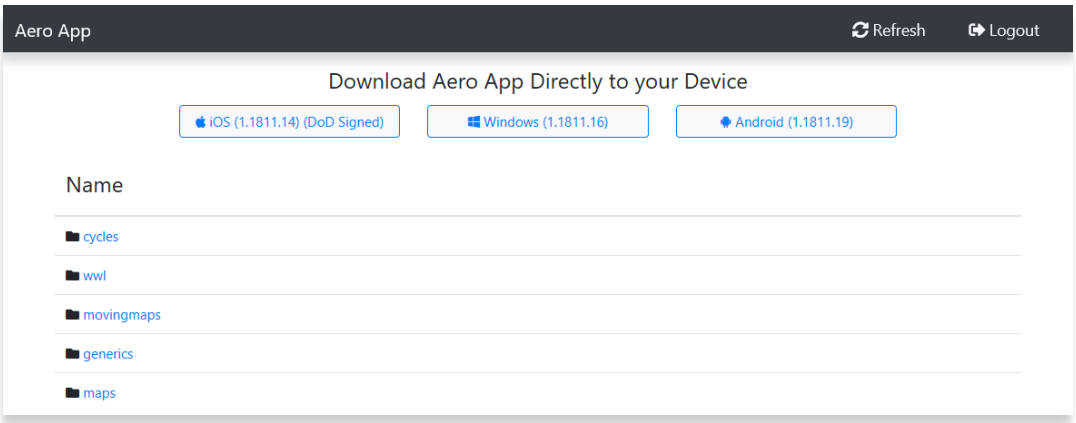
8.3 Download Data From the Aero App Website

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

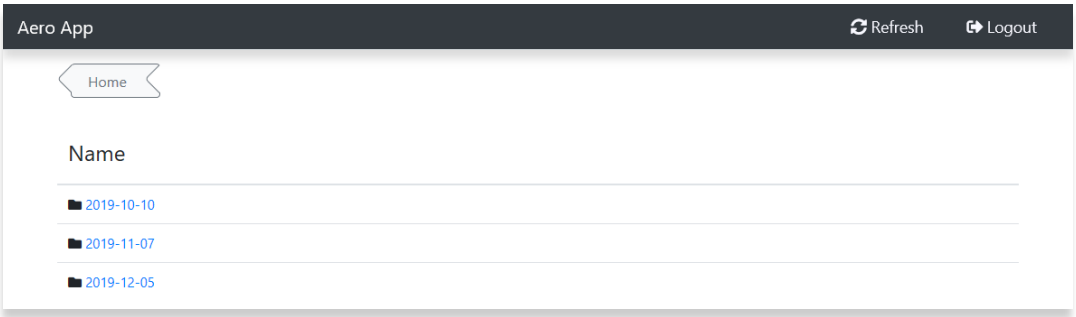
1. From your device, open an internet browser of choice.
2. Enter https://download.aeroapp.info in the address bar.

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

3. Log in using your GEOAxIS or Aero User Database credentials.
4. Aero User Database users will be prompted to select a partner upon login.
5. The data menu options page will display. Users are presented with various folders to choose from. Click **Cycles**.



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

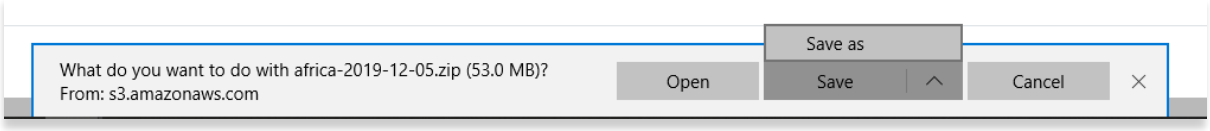


7. Users will be redirected to the download page. Located at the upper-right corner of the screen are options to choose from, **Full Data Files** or **Delta Files**, to download data.

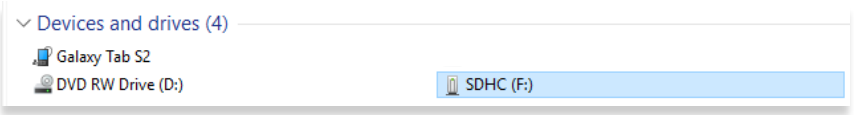
8. Once the data type has been selected, click on the **ZIP** and **SIG** buttons to desired region of choice: **Africa**, **Alaska**, **Canada**, **CONUS**, **CSA**, **EEA**, **ENAME**, and/or **PAA**.

NOTE: Global files must be included when downloading a full data cycle.

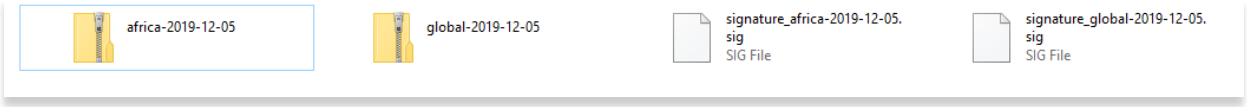
9. A download confirmation window will appear above the taskbar with options to Open, Save, or Cancel download. Click **Save** or click the up-arrow (icon) and select **Save as**.



10. Once the data has completed the download, select from options to **Open**, **Open folder**, or **View downloads**.
11. Connect your SD card to a Mac or Windows computer.
12. Open **File Explorer** and navigate to **Devices and drives** to locate your SD card.



13. Double-click on the SD card to open **Internal storage**.
14. Drag the downloaded data files from your Downloads folder onto your SD card.



NOTE: Refer to Section 11 on how to load and view data status.

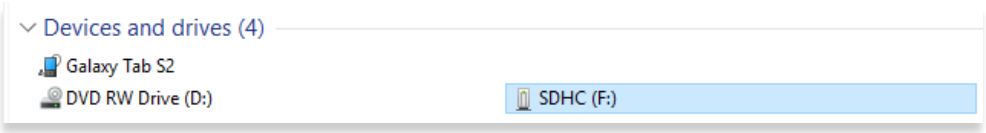
9 Sideload Data

This section describes how to sideload data cycles from the data DVD via USB and sideload data from their computer onto Device/SD Card.

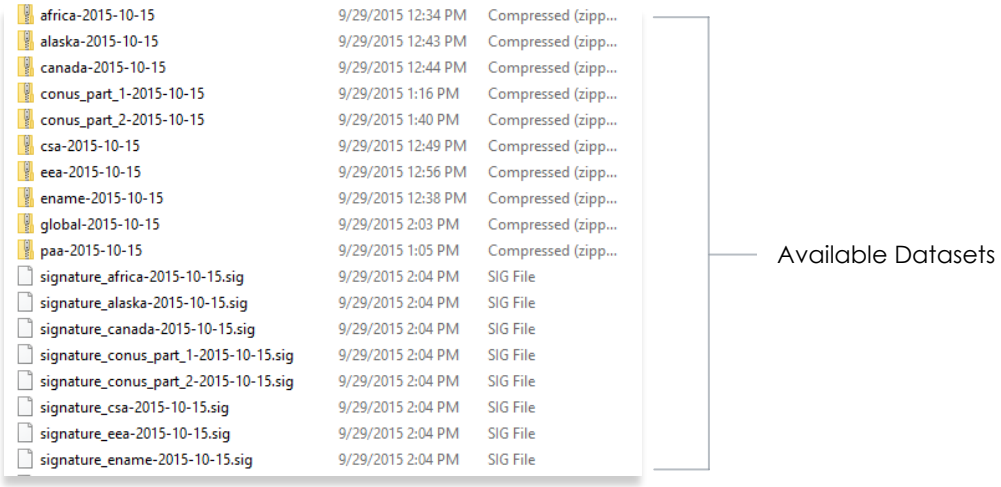
9.1 Sideload Data from Computer to USB or SD Card

Users can sideload data from their computer to USB or SD card.

1. Insert your USB or SD card to a Mac or Windows computer.
2. Once your USB or SD card is connected, open **File Explorer** and navigate to **Devices and drives** to locate your device.

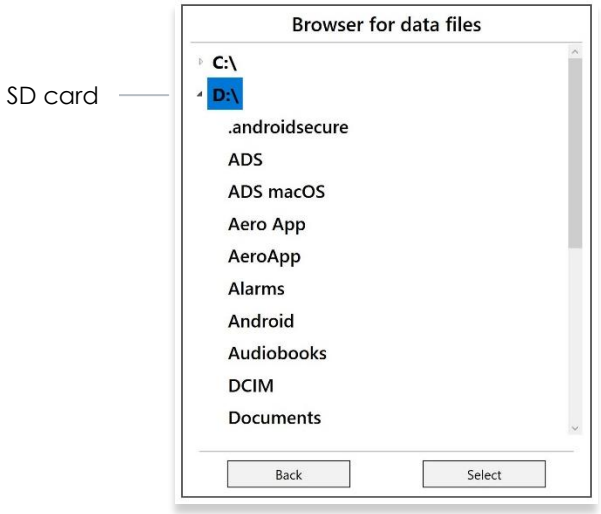


3. Double-click on the **USB** or **SD Card** to open **Internal storage**.
4. Drag the dataset files from desired source (DVD, AWS, or ADS) into a USB or SD card.

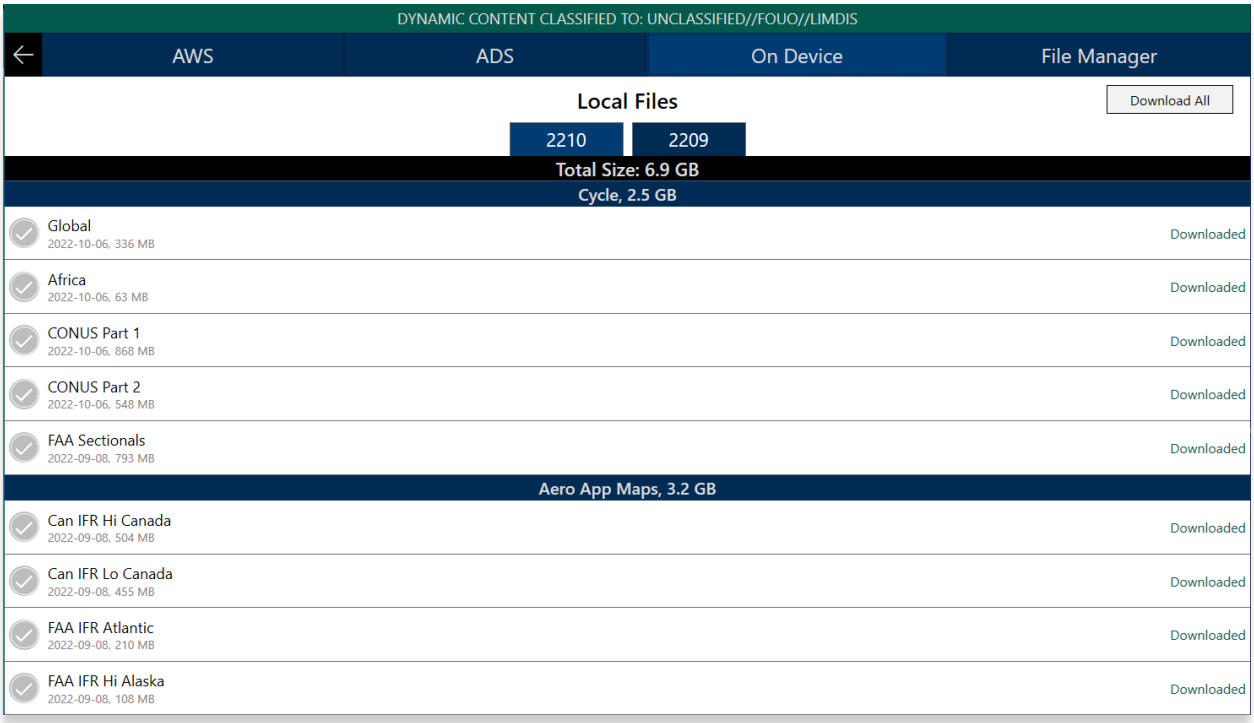


5. Eject USB or SD card from computer.
6. Insert USB or microSD card into the Windows device.
7. To confirm if the files were properly transferred, open **Aero App** on your Windows device.
8. Tap **App Mgmt** on the ***Main Menu***.
9. Tap **Data** on the ***Secondary Menu***.
10. Tap **Download** from the Data Status screen.

11. Tap **On Device** and the Browser for data files popup will appear.
12. Locate USB or SD card.



13. Select the downloaded data then tap **Select**.
14. Select desired datasets by tapping the **green checkmark** then tapping **Download**.

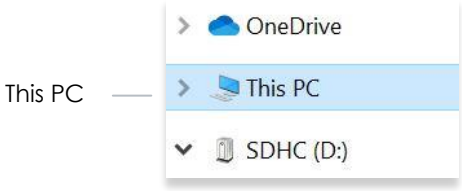


NOTE: Refer to Section 11 on how to load and view data status.

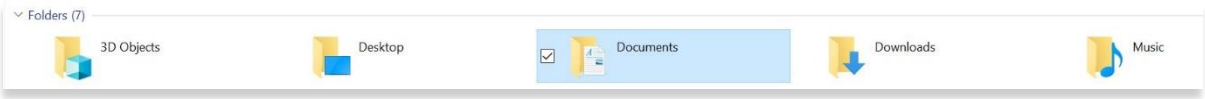
9.2 Sideload User Maps

Aero App enables users to load User Maps as their base Map. User Maps must be sideloaded. Refer to Section 13.3.4.3.1 for more information on how to overlay User Maps on the Moving Map.

1. Connect your USB or SD card to a Windows device.
2. Once the USB or SD card is inserted, open **File Explorer** and navigate to **This PC**.

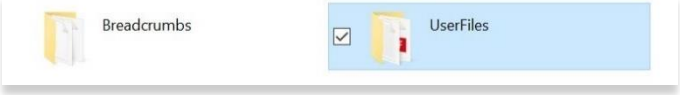


3. Double-click on **Documents**.

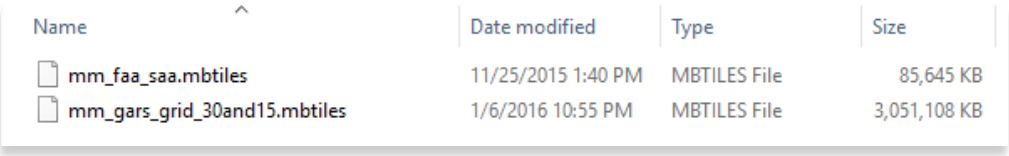


4. Double-click on **Aero App**.

5. Double-click on **UserFiles**.



6. Drag the desired User Map files into the UserFiles folder.

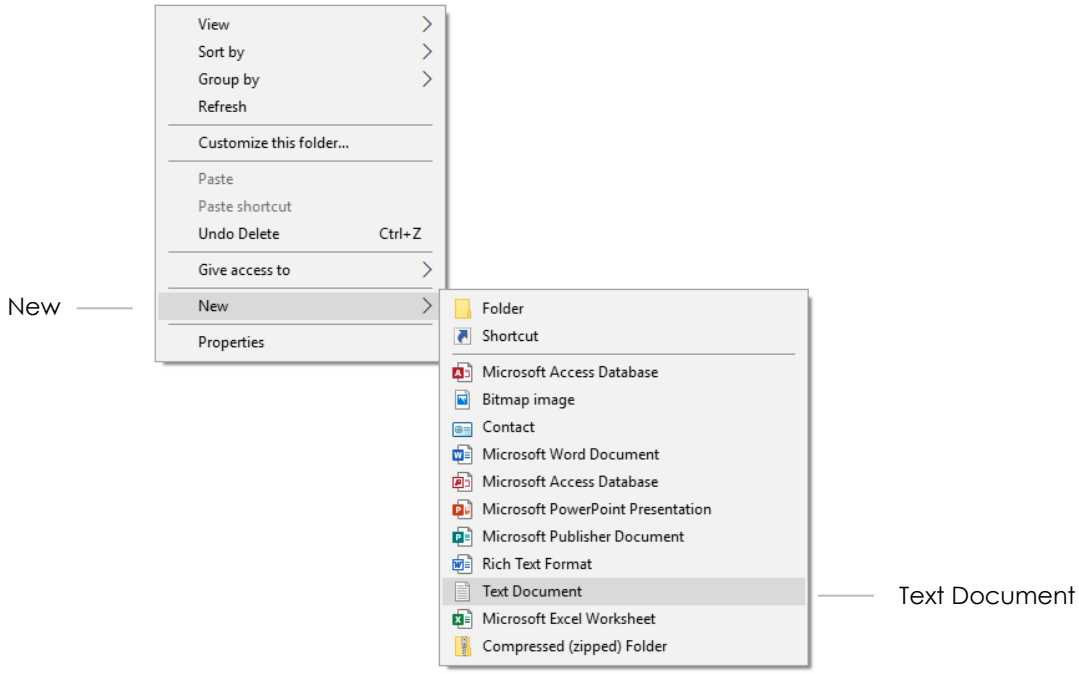


7. To confirm the files were properly transferred, insert your USB or SD card into your Windows device.
8. Open **Aero App**.
9. Tap **Moving Map** on the ***Main Menu***.
10. Tap **Maps**.
11. The Maps popup will display. Tap **User Maps** from the side menu and the loaded User Maps will be shown below.

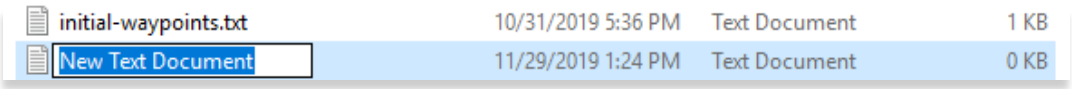
9.3 Sideload User Waypoints

Aero App enables users to load User Waypoints and overlay them on their Moving Map. Users can sideload or create User Waypoints. Refer to Section 13.3.12.1.1 for guidance on how to create User Waypoints.

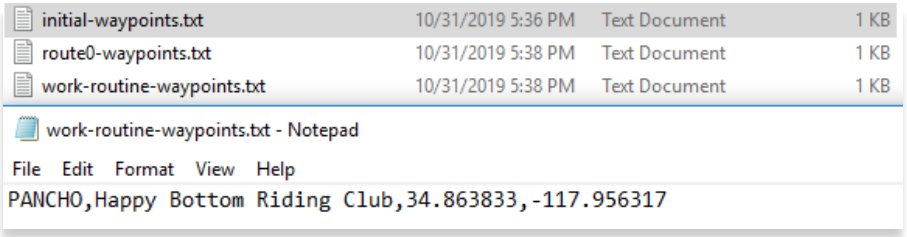
1. Create a folder in your desktop named User Waypoints.
2. Right-click inside the folder and a popup menu will appear.
3. Hover over the **New** menu option and a popup menu will appear.
4. Click **Text Document** from the popup menu.



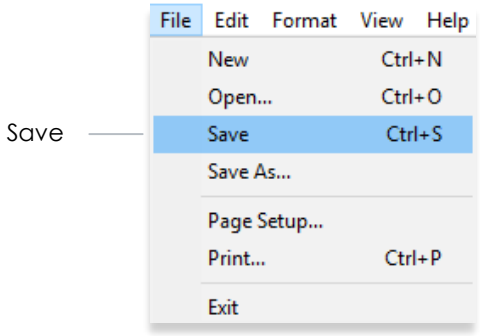
5. A new Text Document file will be created.
6. Create a name for the Text Document file ending in ***waypoints**.



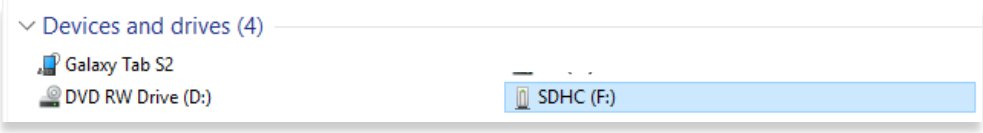
7. Double-click on the textfile to open Notepad. Create Waypoints following the format: **<ID>,<Name>,<Latitude>,<Longitude>**.



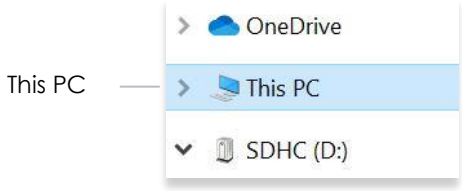
8. Once the User Waypoint has been created, click **File,** and select **Save**.



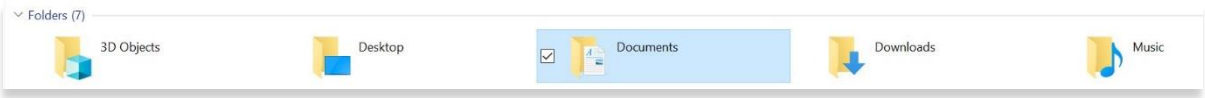
9. Connect USB or SD card to a Mac or Windows computer.
10. Drag desired User Waypoint files that were created into USB or SD card.
11. Disconnect USB or SD card from computer.
12. Connect USB or SD card to a Windows device.
13. Once USB or SD card is connected, open **File Explorer,** click **This PC** and navigate to **Devices and drives** to locate your device.



14. Double-click on your USB or SD card to open **Internal storage**.
15. Open a new **File Explorer** window and navigate to **This PC**.



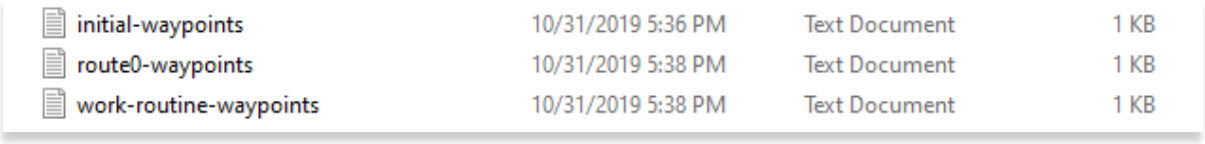
16. Double-click on **Documents**.



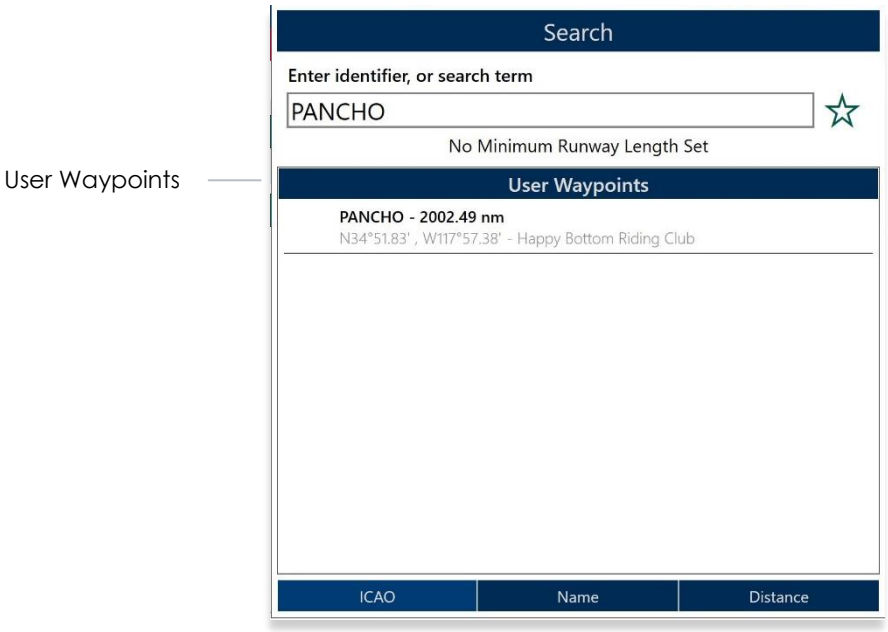
17. Double-click on **Aero App**.

18. Double-click on **UserFiles**.

19. Drag the desired User Waypoints files into the UserFiles folder.



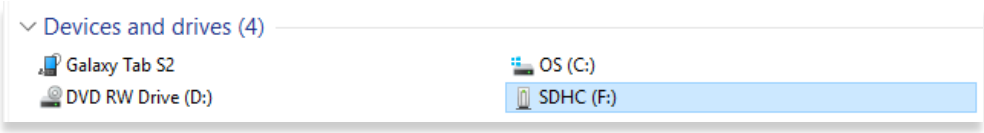
20. To confirm the files were properly transferred, insert your USB or SD card to your Windows device.
21. Open **Aero App.**
22. Tap **Moving Map** on the ***Main Menu***.
23. Navigate to the **Magnifying glass** icon and search for the loaded Waypoints textfile. The Waypoint should appear under User Waypoints.



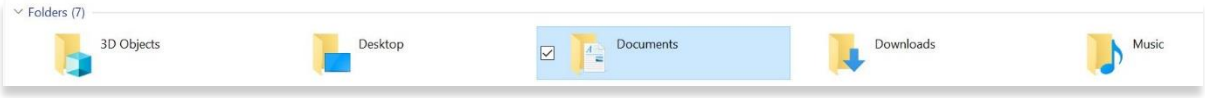
9.4 Sideload Common Route Definition (CRD) Files

Aero App enables users to sideload and import routes using Common Route Definition (CRD) files. Refer to Section 13.3.13.3.1.1 for guidance on how to load CRD files to Aero App.

1. Connect your USB or SD card to a Mac or Windows computer.
2. Once your USB or SD card is connected, open **File Explorer,** click **This PC** and navigate to **Devices and drives** to locate your device.



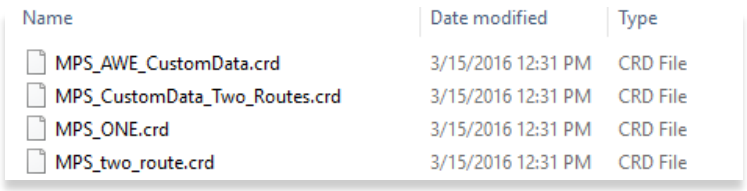
3. Double-click on your USB or SD card to open **Internal storage**.
4. Double-click on **Documents**.



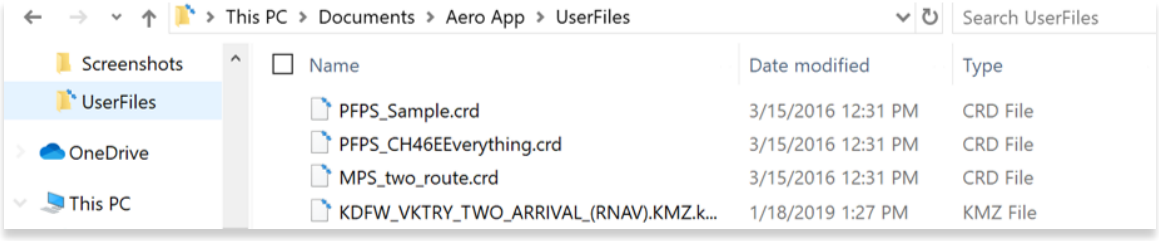
5. Double-click on **Aero App**.

6. Double-click on **UserFiles**.

7. Open a new **File Explorer** window and navigate to the folder containing the CRD files.



8. Drag the desired CRD files into the UserFiles folder.

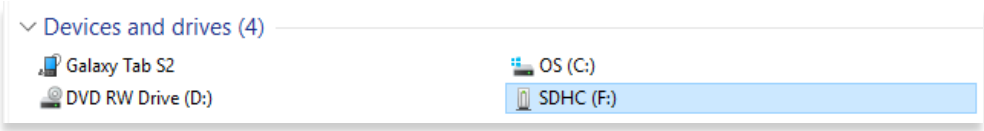


9. To confirm the files were properly transferred, insert your USB or SD card into your Windows device.
10. Open **Aero App**.
11. Tap **Moving Map** on the ***Main Menu***.
12. Navigate to the ***Route Panel***.
13. Tap **Route**.
14. The Route popup will appear. Tap **Actions** from the side menu, if necessary.
15. Tap **Load** and your CRD files will be shown below.

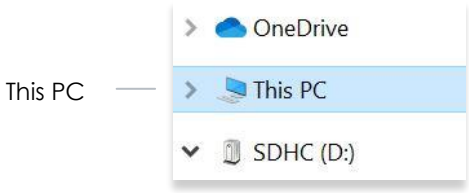
9.5 Sideload Pins

Aero App enables users to sideload and import Pins to Aero App. A file with the format pins.sqlite, stores pins which are dropped by users and can be individually deleted and added. Aero App will generate personal pins, created by users, which will be visible to users on the Aero App/UserFiles folder. Refer to Section 13.3.12.1.3 for guidance on how to Drop Pins.

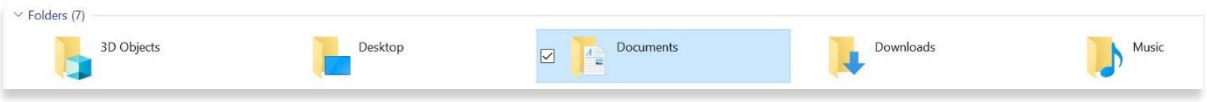
1. Connect your USB or SD card to a Windows device.
2. Once your USB or SD card is connected, open **File Explorer** and navigate to **Devices and drives** to locate your device.



3. Double-click on the USB or SD card icon to open **Internal storage**.
4. Open a new **File Explorer** window and navigate to **This PC**.



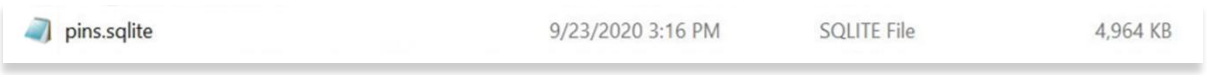
5. Double-click on **Documents**.



6. Double-click on **Aero App**.

7. Double-click on **UserFiles**.

8. Locate your pins.sqlite file.



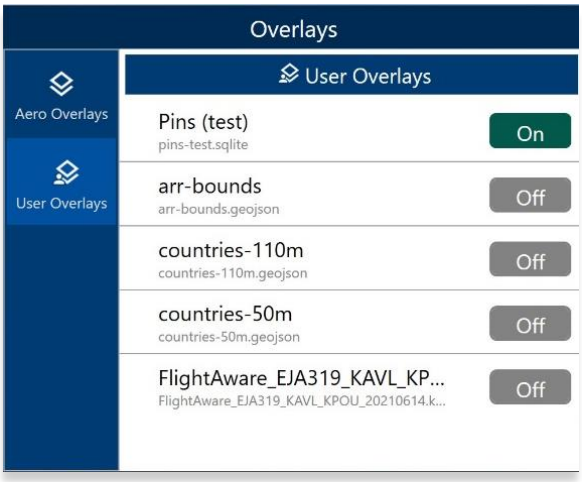
9. Drag the pins.sqlite file to your USB or SD card.
10. With your second Windows device, copy the pins.sqlite file that was sideloaded from your USB or SD card.
11. Rename the copied pins.sqlite file to the format, **pins-{Name}.sqlite**.

NOTE: If the imported file is not renamed, any pins in pins.sqlite saved on your second device will be overwritten.

12. To confirm if the files were properly imported, insert your USB or SD card into your second Windows device.
13. Open **Aero App**.
14. Tap **Moving Map** on the ***Main Menu***.
15. Tap on **Overlays** located at the bottom-right corner of the Moving Map.
16. Tap **User Overlays** from the side menu. Your sideloaded pins will be shown below.
17. Ensure that the Pins overlay is enabled.

NOTE: For guidance on how to enable Pins, refer to Section 13.3.5.1.4.

18. Tap to enable your desired imported pins file and your pins will overlay on the Moving Map.



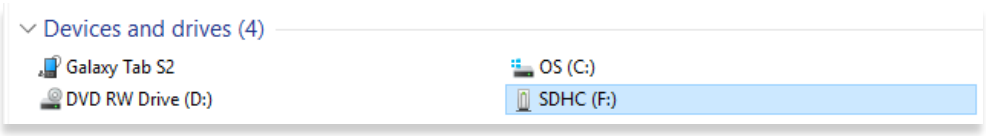
NOTE: Users are not able to delete the imported pins file. Attempting to delete the imported pins will display an error message stating, "**Only My Pins can be Deleted**."

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

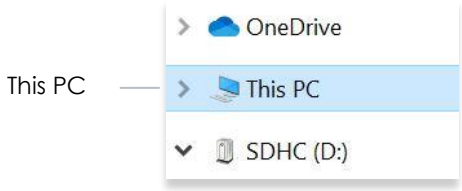
9.6 Sideload Documents

Aero App enables users to sideload user documents.

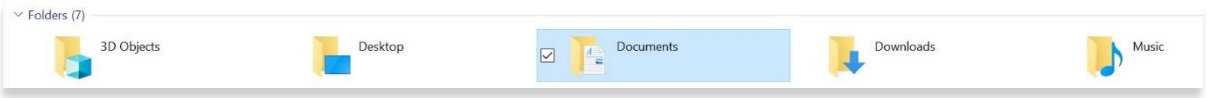
1. Connect your USB or SD card to a Mac or Windows computer.
2. Once your USB or SD card is connected, open **File Explorer** and navigate to **Devices and drives** to locate your device.



3. Double-click on the USB or SD card icon to open **Internal storage**.
4. Open **File Explorer** and navigate to **This PC**.



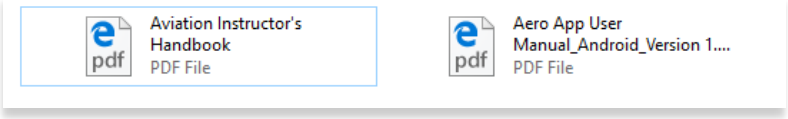
5. Double-click on **Documents**.



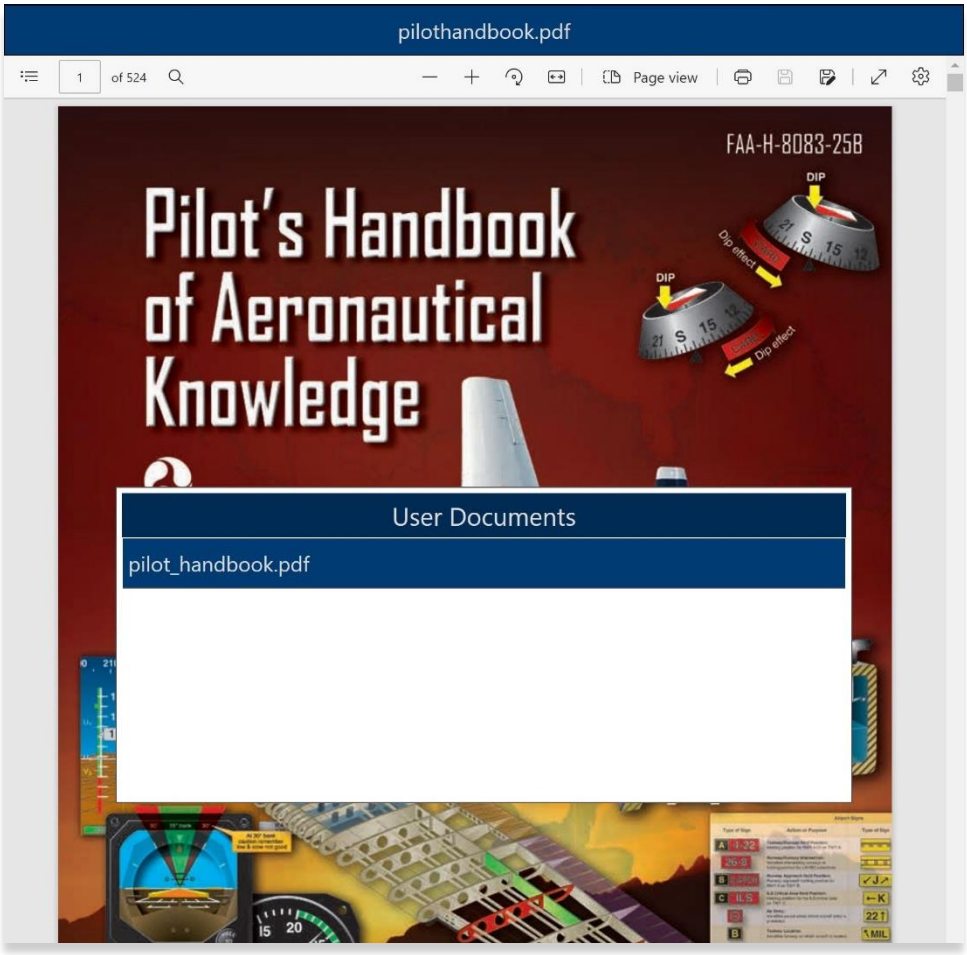
6. Double-click on **Aero App**.

7. Double-click on **UserFiles**.

8. Drag the desired PDF file into the folder.



9. To confirm if the files were properly transferred, insert your USB or SD card into your Windows device.
10. Open **Aero App**.
11. Tap **General** on the ***Main Menu***.
12. Tap **Docs** on the ***Secondary Menu***.
13. Tap the **actions ribbon** to select a document.
14. Your loaded PDF files will be shown below.



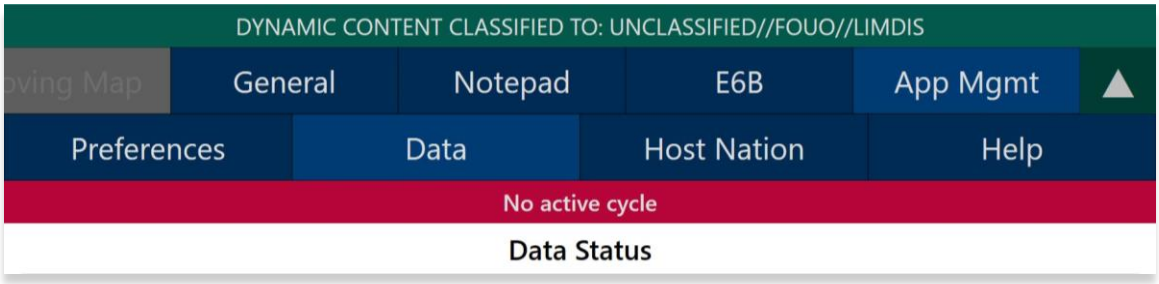
10 Updating Aero App Data

Aero App Data updates are released periodically. Users can load and manage up to two Data Cycles at a time. Data notifications are displayed when Aero App Data is not valid for the period of use.

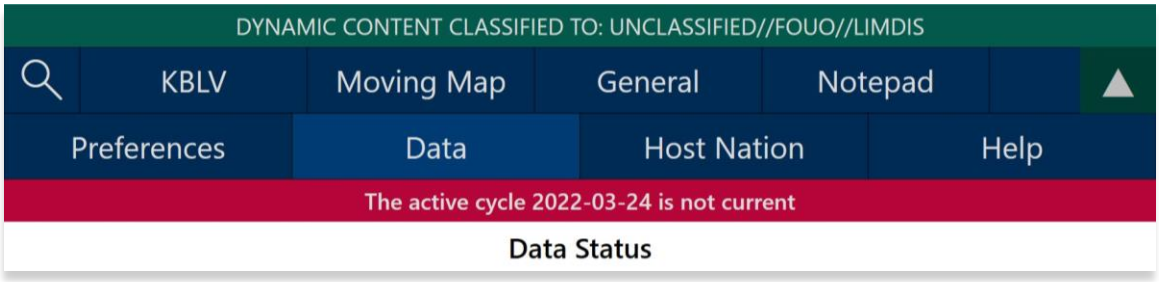
10.1 Data Notifications

Aero App will display data notification warnings if there is no active cycle, or 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 display a data notification if the Active Cycle is not current. In this configuration, Aero App will not display current information and it is recommended to ensure that the Active Cycle is always current.

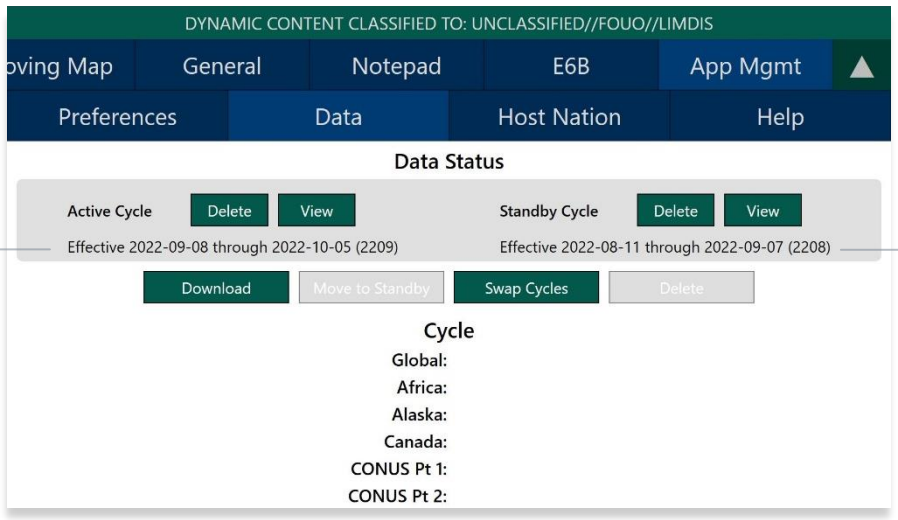


11 Manage Data

Aero App offers several data loading methods. This section will explain the different ways to load data and view data status.

11.1 Data Status

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu*** to view data information.
3. The Data Status screen will display.
4. The effective dates of the Active Cycle will be displayed on the left, and the Standby Cycle will be displayed on the right.
5. From this screen, you can also download new cycles when they become available.



Active Cycle Effective Dates

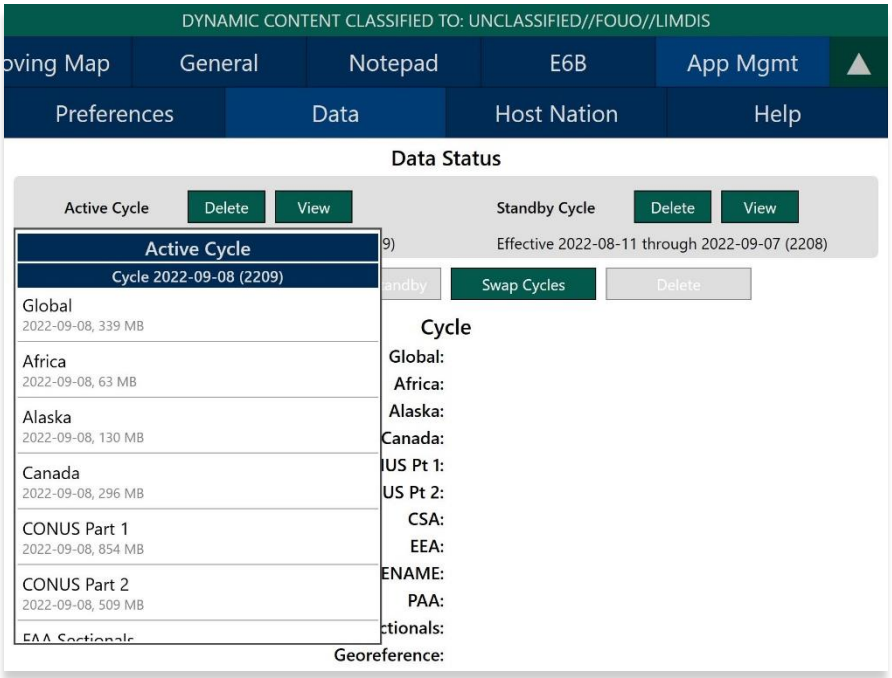
Standby Cycle Effective Dates

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

11.2 Manage Data on Device

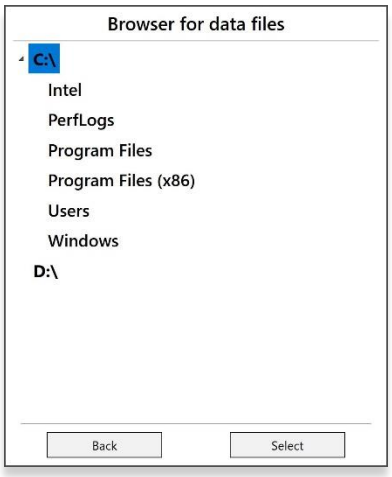
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu*** to view data information.
3. Tap **Refresh**. All the available data files will display **Found**.

4. Tap **Move to Standby** to load data onto Standby Cycle.
5. Tap **Swap Cycles** to load data onto Active Cycle which activates current data.
6. After data has been swapped, notice the effective dates of the data located below Active Cycle.
7. The downloaded maps will enable the **Load Maps** button to become selectable. Tap **Load Maps**.
8. Tap **View** to display loaded Active Cycle or Standby Cycle.



11.3 On Device

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Data** on the ***Secondary Menu***.
3. Tap **Download**.
4. Tap **On Device**.
5. Browser for data files will appear with two drives labeled **C:** and **D:**.



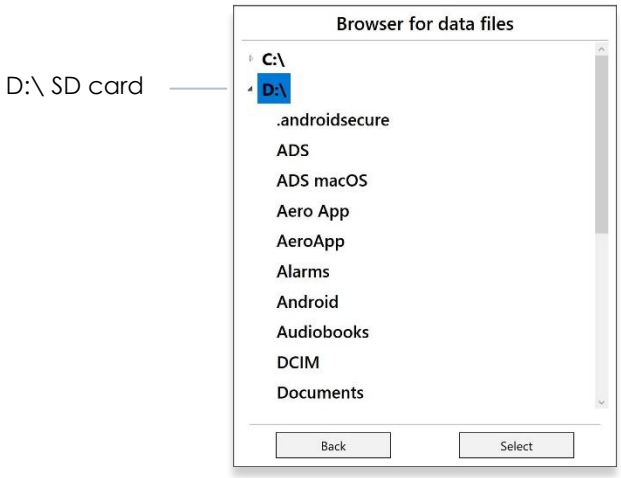
NOTE: C:\ is your internal hard drive. The D:\ is your SD card. When another drive is inserted onto the Windows tablet, the additional drive will be listed as another source of data files.

6. Tap **C:** to list all internal hard drive data.

C:\ internal hard drive

7. Tap **D:** to list all SD card data.

8. Select from desired drive to download data.
9. Once data has been selected, tap **OK**.
10. Tap **Download** when data has been selected.



11.4 File Manager

File Manager is responsible for storing, managing, and making modifications to files there were downloaded and loaded onto Aero App.

1. Tap **App Mgmt** on the ***Main Menu.***
2. Tap **Data** on the ***Secondary Menu.***
3. Tap **Download**.
4. Tap **File Manager**.
5. To view all loaded files, select from the following:
    - Downloads
    - Active
    - Standby
    - Aero App Maps
    - Other
    - Documents

6. Tap the **Delete** button for the files that you want deleted and the file will be removed from the list.

12 Introduction to Aero App Menus

The initial launch of Aero App will land on the About screen, which includes the app's version number and licensing information. The Main Menu is located above the Help screen and includes options to access features throughout Aero App. Data is required to access the Moving Map. The Secondary Menu is placed directly below the Main Menu. The following sections will elaborate on the different menus and their functionalities.

12.1 Main Menu Options

Aero App enables users to select an option from the Main Menu. The selected menu option will be highlighted to indicate selection. If necessary, scroll left-to-right to view hidden menu buttons.

	Search – The Search option is used to perform a search of different identifiers such as Airports, NavAids, Waypoints, User Waypoints, and Pins. A search can be refined by setting a minimum runway length, which can be done through preferences. Other actions such as adding identifier to Favorites as well as viewing the Giant Report of the searched identifier.
	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 through the Secondary Menu for searched Airports. 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.
	Moving Map – The Moving Map displays a high-performance whirly globe, 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 – General provides users access to a large library of material such as Charts, Supplements, Area Planning documents, User PDF documents and Terminal Legend Procedures.
	Notepad – The notepad allows users to create up to three pages of notes using their fingertips or a stylus.

	E6B – 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.
	App Mgmt – App Management enables users to download and manage data, configure Aero App preferences, and view additional information such as Help files and application details.
	Collapsible Menu Button – Tapping on the arrow will hide or show the Main and Secondary Menus.

12.2 Route Menu Options

Aero App enables users to select an option from the Route Panel. The options include Add Airport, NavAid, or Waypoint, Edit Route, display Route Options menu, and a collapsible route button.

	Collapsible Route Panel – The collapsible route panel is used to hide or show the Route Panel, enabling users to free up space on the screen when not in use.
	Add – Add allows users to search and add Airports, NavAids, Waypoints, Airways, User Waypoints, and Pins to the route. Other actions such as adding identifier to Favorites can be performed on the Add popup.
	Edit – Edit allows users to reorder and delete entries from the route.
	Route – Route provides various options that can be added as enhancements to the route. Options include Air Refueling Routes, Search and Rescue Patterns, and more.

12.3 Identifier Options

The selected identifier will appear to the left of the ***Moving Map*** button. When users tap on **Active Point**, the ***Secondary Menu*** will be displayed as illustrated below.

Info	Info – Displays detailed information about the selected Airport, including General Information, AQP, Giant Report, Communications, Runways, Chart Supplements, and Remarks.
APD	APD – Displays the Airport Diagram for the selected identifier.
IAP	IAP – Displays the Instrument Approach Procedures for the selected identifier.
Dep	Dep – Displays the Departure Procedure for the selected identifier.
Arr	Arr – Displays the Arrival Procedures for the selected identifier.
Min	Min – Displays charts for Alternate, RADAR, and Takeoff Minimums for the selected identifier.
Other	Other – Displays charts otherwise not displayed under the remaining tabs. They may include special procedures and RNAVs, among others.
Host Nation	Host Nation – Displays the APD, IAP, SID, STAR, Visual Approach, and other charts such as Docking/ Parking and VFR AIPs for airports outside the USA. Host Nation Charts are downloaded through App Mgmt.
Wx	Wx – Displays options for viewing METARs/TAFs and a button redirecting to the NOTAMs web browser.

12.4 General Menu Options

By tapping **General** on the ***Main Menu***, users can access a large library of material such as FAA data, FLIP Charts, Supplements, Area Planning Books, PDFs loaded into Aero App and Terminal Legend Procedures.

Charts	Charts – Displays a dialog box list from which you can select High and Low Enroute Charts, Area Charts, Graphic Charts, CONUS Chart Graphics, Military Training Routes (MTRs), and others. Charts can be selected through the drop-down menu or by swiping left and right.
Supplements	Supplements – Displays a dialog box list from which users can select the appropriate Supplements Book in the FLIP Chart Library. Supplement Books are in PDF format.
Planning	Area Planning Documents – Displays a dialog box list from which users can select the Area Planning Documents in PDF format. The General Planning Book is listed in this menu from the FLIP Area Planning Library.
Docs	User Documents – Displays access to user-defined content loaded into the Documents library.
Legend	Terminal Procedure Legend – Displays the Terminal Procedure Legend.

12.5 Application Management (App Mgmt) Menu Options

The **Application Management (App Mgmt)** Menu Option allows you to select preferences, load and refresh data, load Host Nation charts, and access detailed information about Aero App.

Preferences	Preferences allow users to modify various system settings such as User Interface, Miscellaneous, Data, GPS, and Reset. User Interface includes Night Mode. Miscellaneous includes Show Ownship on APD and IAP, Show Airport Ring on APD and IAP, Switch to APD on landing, Minimum Runway Length (ft), and the option to enable Secret. Data includes Store data on an external location. GPS includes GPS COM port search and GPS Connection Settings. Lastly, Reset includes Clear All Chart Markups.
Data	Data Status screen allows users to manage cycles.
Host Nation	Displays the Host Nation Charts Manager screen with an option to download the charts for the selected ICAO.
Help	Displays information for Aero App such as – What's New, Web Links, User Manual, and About.

13 Using Aero App's Main Menu

The Main Menu is used to display the main functions of Aero App and is located at the top of the screen.

13.1 Search Identifiers or Terms

Aero App enables users to enter identifiers or search terms by tapping the Magnifying Glass on the Main Menu. The Search menu returns the results for a searched identifier such as Airports, NavAids, Waypoints, User Waypoints. Users can then navigate to other tabs to display its information, Airport Diagram, Instrument Approach Procedures, and more.

1. Tap the **Magnifying glass** icon on the **Main Menu**.
2. The Search popup will appear. Tap the **text box** to open your device's keyboard.
3. Enter identifier or search term.
4. If necessary, scroll down to display Airports, NavAids, Waypoints, and User Waypoints results.

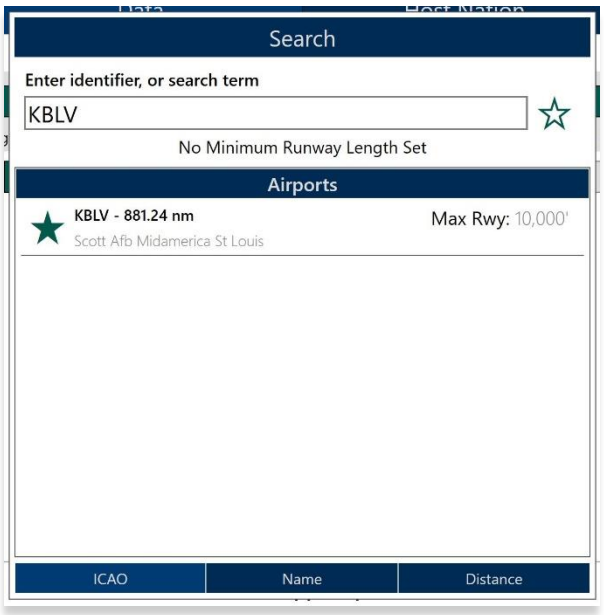
NOTE: An error message will appear indicating that data has not been downloaded.

NOTE: Users can add an identifier to their *Favorites* list as explained in Section 13.1.1.

13.1.1 Add an Identifier to Favorites

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

1. Enter a desired identifier in the search text 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** 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. The Favorites list will display respective to the type of identifier that was selected (e.g., Airports, NavAids, and Waypoints).



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

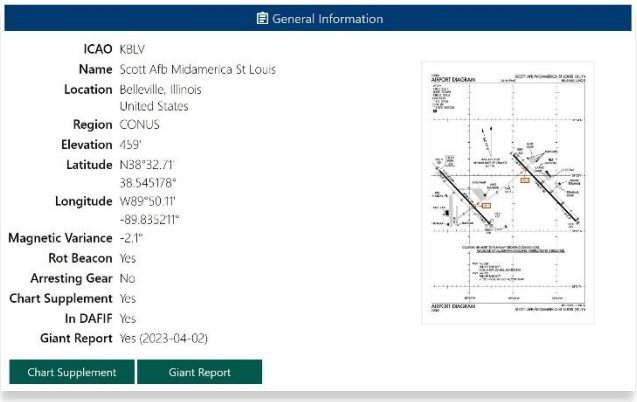
13.2 Information

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, and Giant Report are in the General Information section.

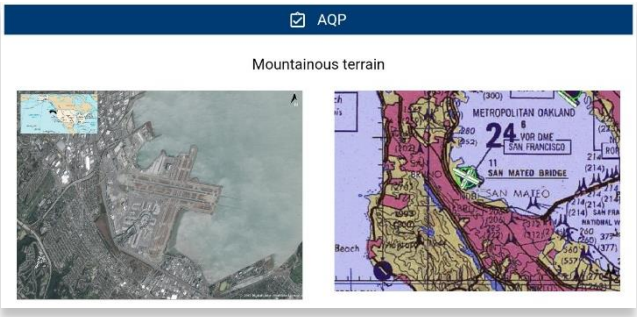
General and other relevant information for identifiers such as NavAids, Waypoints, and User Waypoints are available to users. Global is required to access identifier information.

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

General Information contains identifier details such as the ICAO, name, location, region, elevation, latitude, longitude, magnetic variance, and more. The General Information section includes Airport Diagram, Chart Supplement, and Giant Report. To view charts, users must download the respective region files and Global.

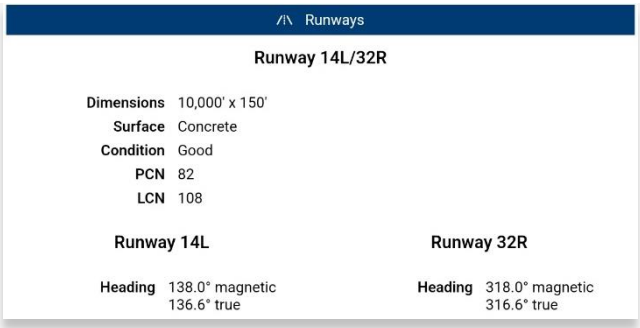


Advanced Qualification Program (AQP) is available for select airports.

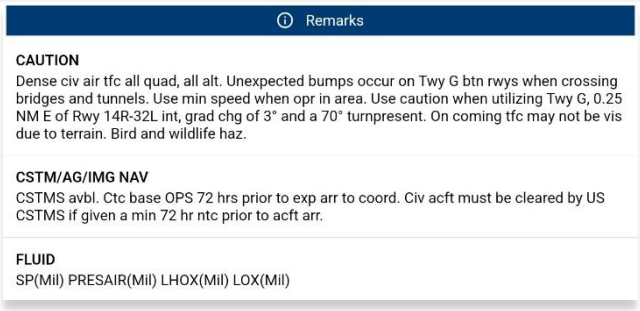


Communications includes tower frequencies, remarks, and call signs for the selected airport.

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.



13.2.1 Airport Charts

Aero App enables users to view charts such as Airport Diagram, Instrument Approach Procedure, Departure Procedure, Arrival Procedure, Alternate Minimums, RADAR Minimums, Takeoff Minimums, Other – displays special procedures and RNAVs among others, and Host Nation charts.

NOTE: Users can tap the **actions ribbon**, displayed below the Secondary Menu, to select and display specific chart types.

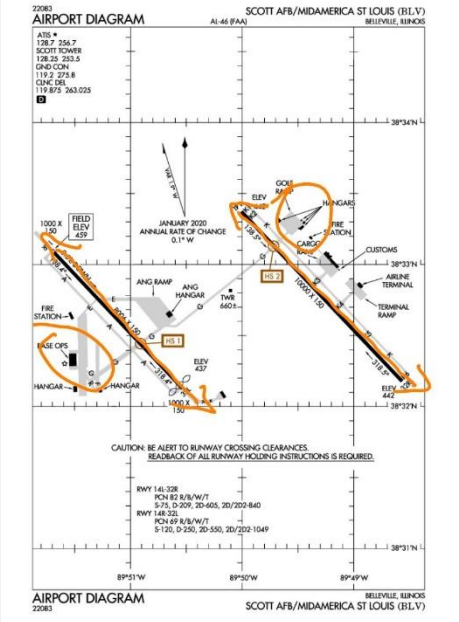
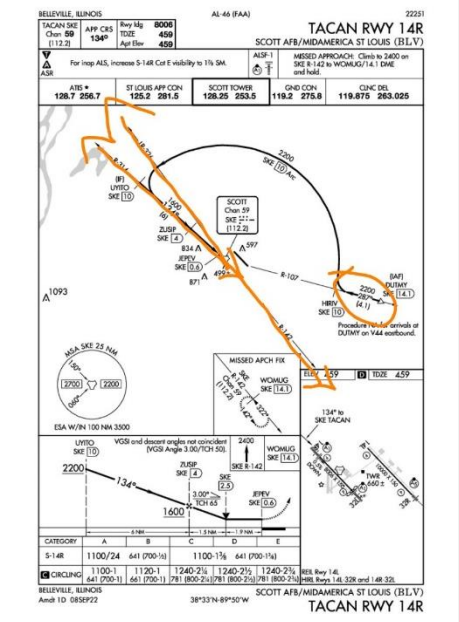
13.2.1.1 Draw on Airport Diagrams (APDs) and Instrument Approach Procedures (IAPs) Charts

1. Tap the **Active Point** on the ***Main Menu***.
2. Tap **APD** or **IAP** on the ***Secondary Menu*** and the selected chart will display.
3. The pencil symbol allows the user to draw on the Chart. There are options to Clear, Undo, Exit, and Rotate chart by 90 degrees.

Rotate charts by 90 degrees

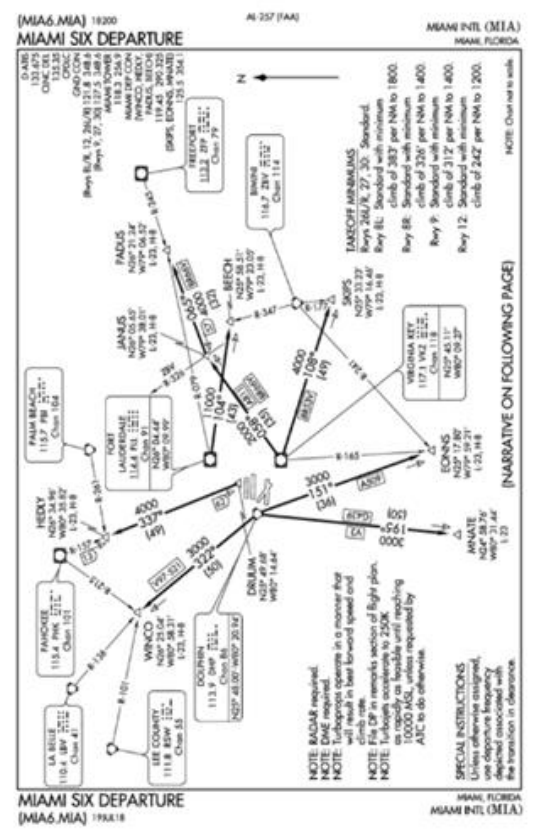
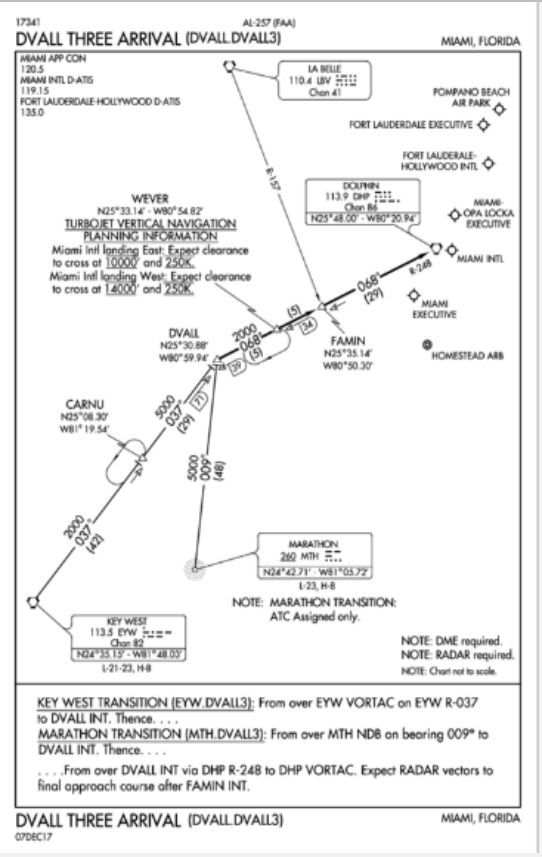
NOTE: Drawings on Charts persist across cycles for 6 months.

NOTE: Draw on Charts is available on Airport Diagrams and Instrument Approach Procedures.

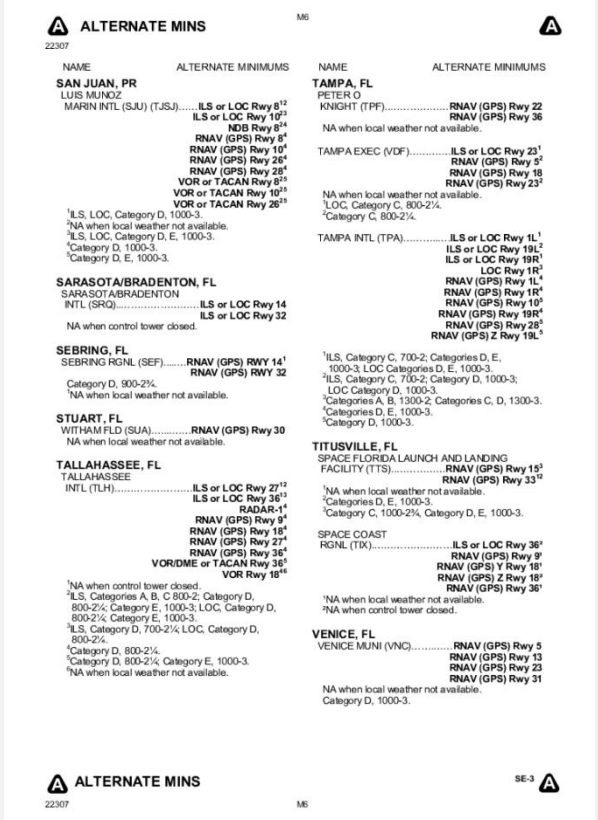
Airport Diagram (APDs)	Instrument Approach Procedures (IAPs)
	

13.2.2 Continuation of Charts

1. Tap the **Active Point** on the ***Main Menu***.
2. Select desired chart type on the ***Secondary Menu***.
3. Charts will display once selected.
4. Tap on the **action ribbon** to display additional chart selection.

Departure Procedures	Arrival Procedures
	

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

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

NA when control tower closed.

NA when local weather not available.

NA when local weather not available.

[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.
Category D, 1000-3.

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

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

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

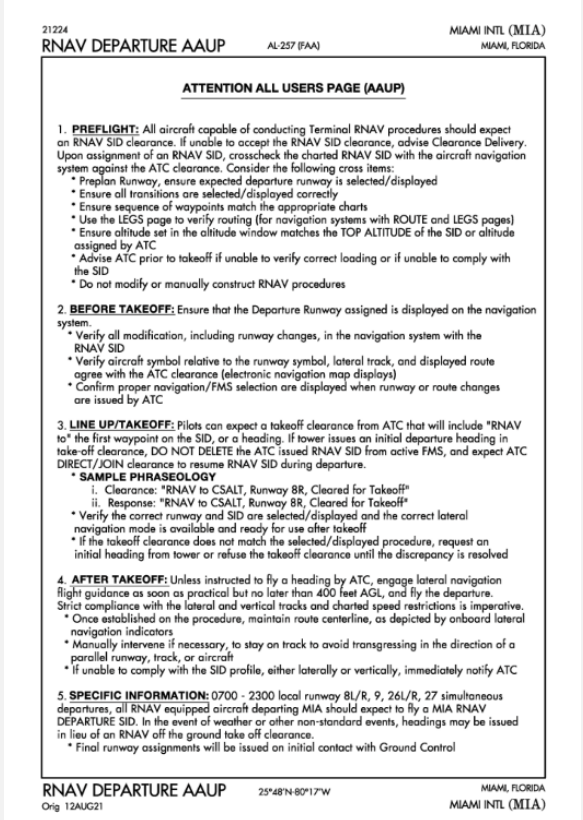
NA when local weather not available.
Category D, 1000-3.

ALTERNATE MINS

22307

M6

SE-3



21224

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

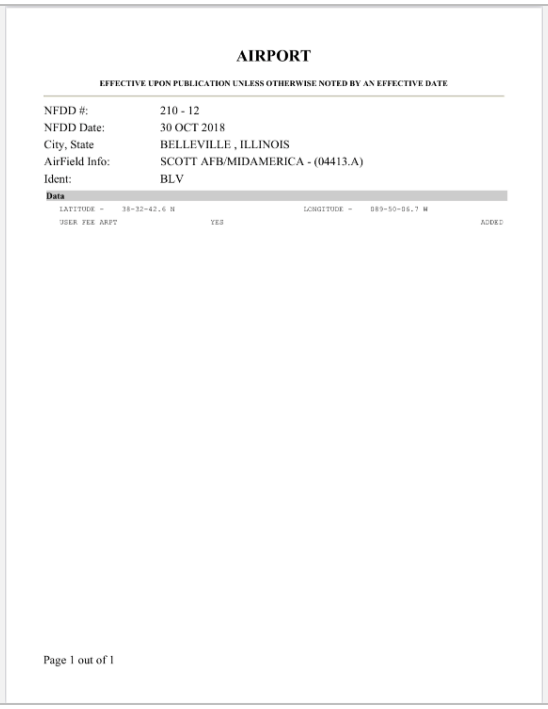
5. **SPECIFIC INFORMATION:** 0700 - 2300 local runway 8L/R, 9, 26L/R, 27 simultaneous departures, all RNAV equipped aircraft departing MIA should expect to fly a MIA RNAV DEPARTURE SID. In the event of weather or other non-standard events, headings may be issued in lieu of an RNAV off the ground take 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: The Min tab includes Alternate, RADAR, and Takeoff Minimums to select from.

Host Nation



AIRPORT

EFFECTIVE UPON PUBLICATION UNLESS OTHERWISE NOTED BY AN EFFECTIVE DATE

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

Data

LATITUDE - 38-32-42.6 N LONGITUDE - 089-50-06.7 W

USER FEE ARPT YES ADDED

Page 1 out of 1

NOTE: To zoom in and out of the airport diagram, users can use the pinch in and out method to perform this action.

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

13.2.3 Weather and Potential Hazard Information

An active internet connection is required for users to view weather and potential flight hazard information of the provided ICAO.

1. Tap the **Active Point** on the ***Main Menu***.
2. Tap **Weather (Wx)** on the ***Secondary Menu***.
3. The following options are available to users:
    - Internet
    - METARs
    - TAFs

13.2.3.1 Internet

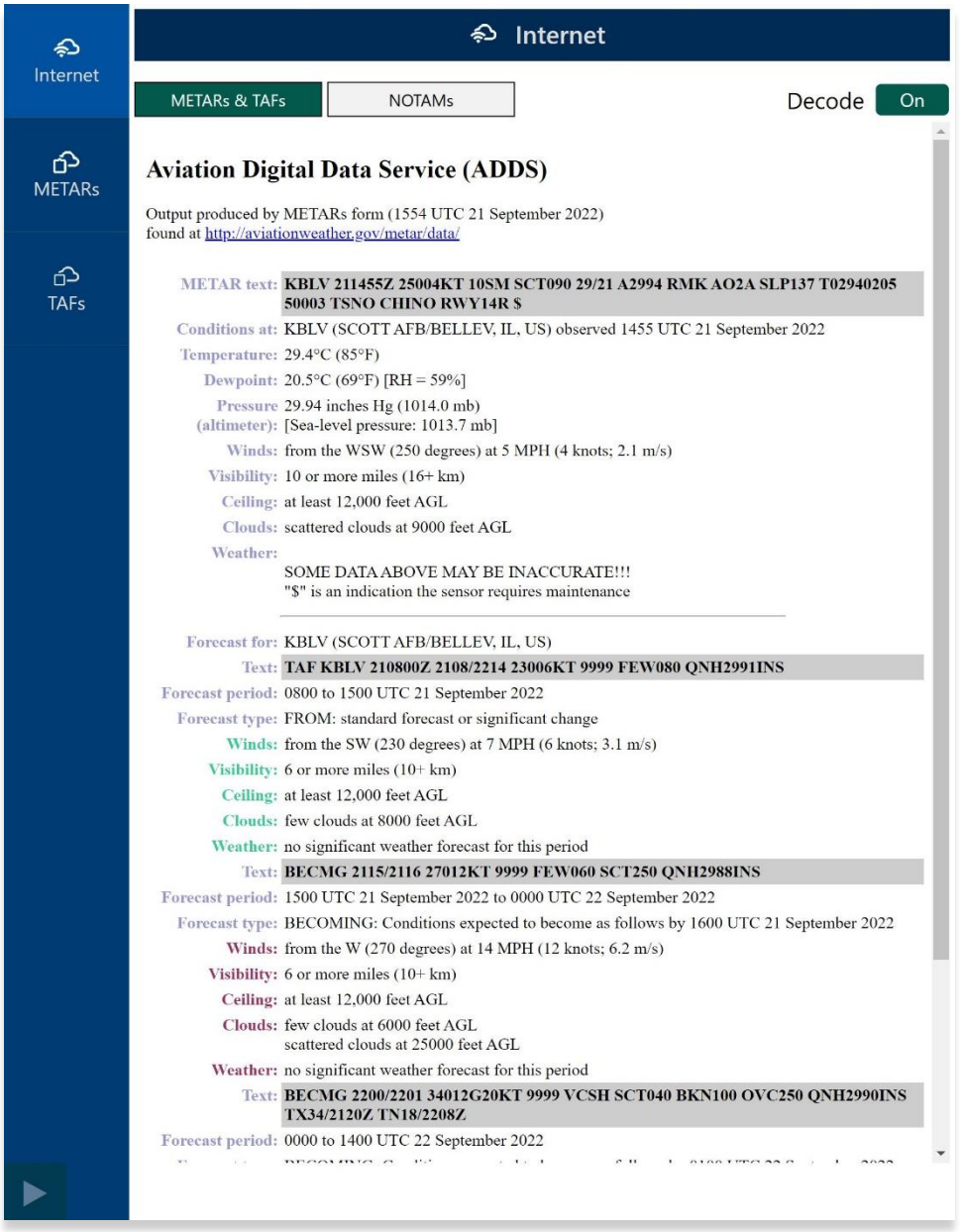
This section describes how to retrieve information from METARs, Terminal Aerodrome Forecasts (TAFs) view, and a button that redirects to the NOTAMs web browser.

13.2.3.1.1 METARs and Terminal Aerodrome Forecasts (TAFs)

Aero App displays METARs and Terminal Aerodrome Forecasts (TAFs) from the Aviation Digital Data Service and a button redirecting to the NOTAMs web browser. The steps below enable users to view METARs, TAFs, and NOTAMs.

1. Tap the **Active Point** on the ***Main Menu***.
2. Tap **Wx** on the ***Secondary Menu***.
3. Select **Internet** from the side menu, if necessary.
4. Select **METARs & TAFs** to view information for the selected airport.

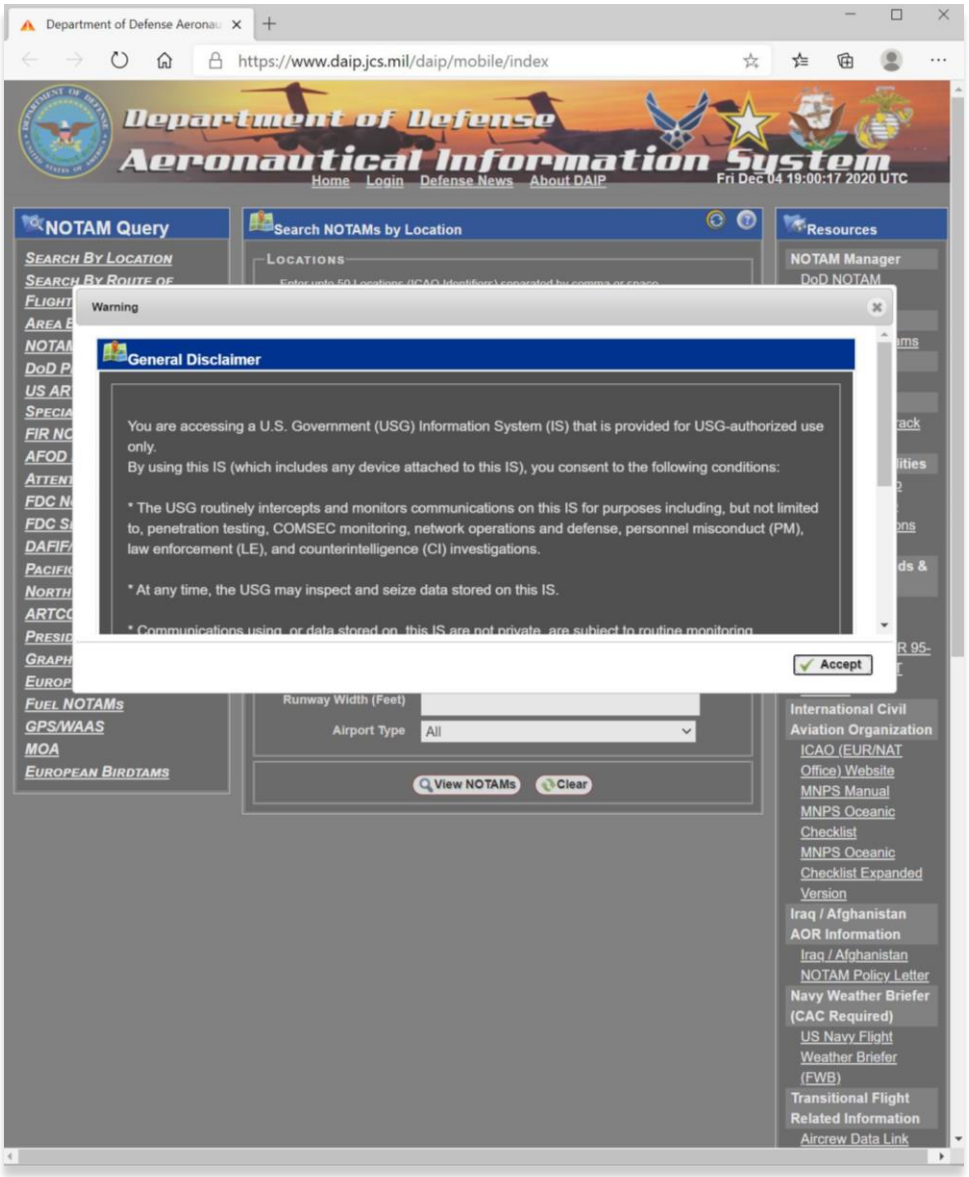
5. Tap the **Decode** button to enable the option located at the upper-right corner to view raw or decoded weather information.



13.2.3.1.2 NOTAMs

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. Tap the **Active Point** on the ***Main Menu***.
2. Tap **Wx** on the ***Secondary Menu***.
3. Select **Internet** from the side menu, if necessary.
4. Tap **NOTAMs** and users will be redirected to the DOD Aeronautical Information System browser.



13.2.3.2 METARs

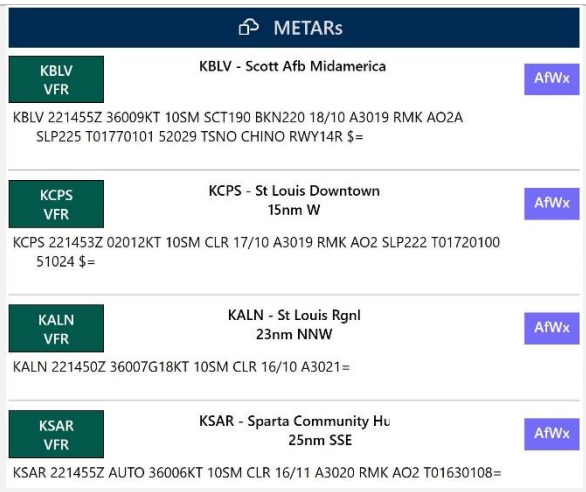
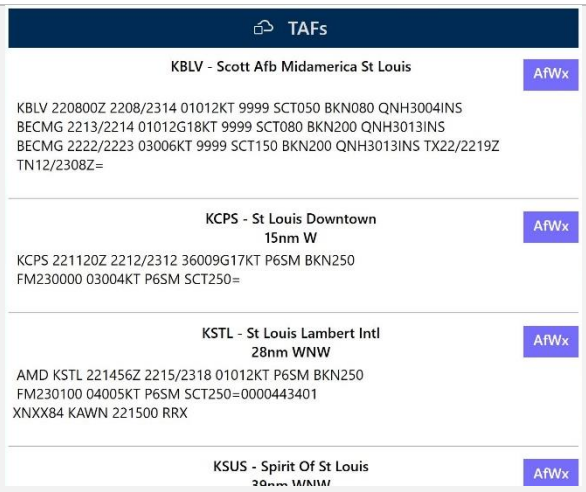
The METARs tab displays raw weather information for ADS-B and Air Force Weather (AF Wx) data that may include temperature, precipitation, visibility, barometric pressure, and other information of interest to pilots.

1. Tap the **Active Point** on the ***Main Menu***.
2. Tap **Wx** on the ***Secondary Menu***.
3. Select **METARs** from the side menu. Aero App will display ADS-B data information.

13.2.3.3 Terminal Aerodrome Forecast (TAFs)

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

1. Tap the **Active Point** on the ***Main Menu***.
2. Tap **Wx** on the ***Secondary Menu.***
3. Select **TAFs** from the side menu. Aero App will display the TAFs data.

METARs	Terminal Aerodrome Forecast (TAFs)
	

NOTE: Refer to Section 13.3.3 for information on Air Force Weather (AF Wx).

13.3 Moving Map

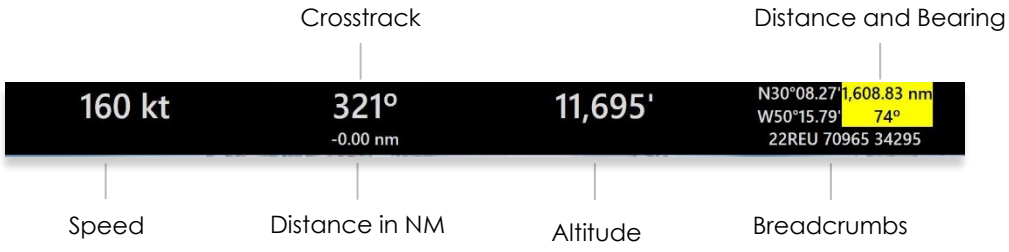
The Moving Map is an essential and powerful tool that provides a highly customizable and comprehensive worldwide map. With a variety of overlays available, it is effortless to navigate and stay informed while in-flight.

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

- Flight Information Panel
- Timer
- Air Force Weather (AF Wx)
- Maps
- Overlays
- Options
- Crosshair Icon (Snap to Location)
- Move Map to Location
- Split Screen
- Collapsible Route Panel

13.3.1 Flight Information Panel

The Flight Information Panel, located directly above the Moving Map, displays details of the user's current flight. The Flight Information Panel contains details such as the current flight's Speed, Crosstrack, Altitude, Breadcrumbs, and Distance and Bearing.



13.3.1.1 Speed

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

13.3.1.2 Crosstrack (XTK)

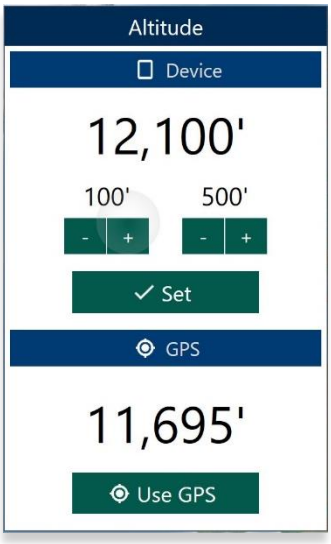
Crosstrack (XTK) represents the distance in nautical miles (nm). The digits and arrow below the Crosstrack symbolize the direction to get back to the route. The orientation of the arrow is the indicated difference.

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

13.3.1.3 Altitude

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

1. Tap **Altitude** on the black ribbon from the Moving Map screen.
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.

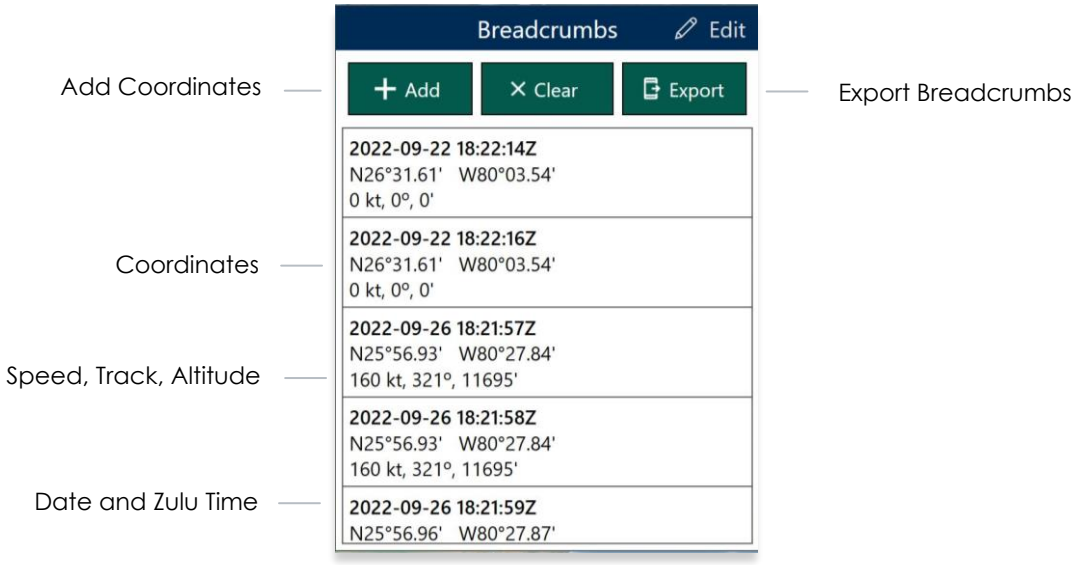


13.3.1.4 Distance and Bearing

Aero App enables users to measure distance and bearing. As the Moving Map is moved, the coordinates at the top of the screen change based on the location to which the center target is moved, provided the GPS is on. When in use, a yellow tag displays distance (in nautical miles) and bearing (in degrees) relative to current location. For guidance on how to measure distance and bearing, refer to Section 13.3.10.1.

13.3.1.5 Breadcrumbs

Breadcrumbs enables users to record coordinates throughout their course. A GPS connection is required. To view the recorded Breadcrumbs on the Moving Map, users must enable the option as described in Section 13.3.6.2.1.

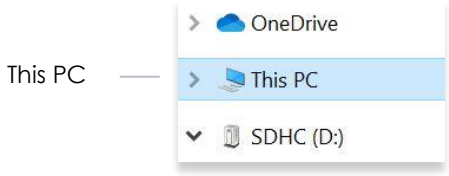


1. Tap the **coordinates** located at the upper-right corner of the Moving Map's Flight Information Panel.
2. A dialog window will appear displaying the recorded breadcrumbs.
3. Tap **Add** to manually store coordinates.
4. To delete individual breadcrumbs, tap **Edit** then tap the **Delete** button and the breadcrumbs will be deleted.
5. Tap **Clear** to delete all breadcrumbs.
6. To export and save breadcrumbs, tap **Export**. Users can export KML or SQLite.

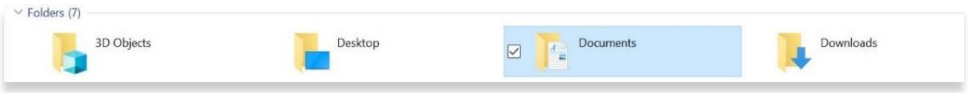
NOTE: Breadcrumbs are logged by individual days.

13.3.1.5.1 View Breadcrumbs in KML

1. Export Breadcrumbs in KML.
2. Connect your microSD card into the Windows tablet.
3. Once the microSD card is inserted, open **File Explorer** and navigate to **This PC**.



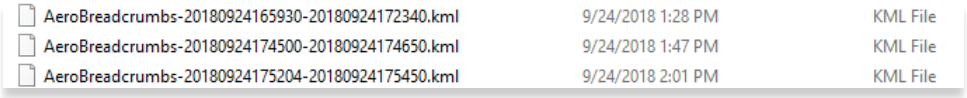
4. Double-click on **Documents**.



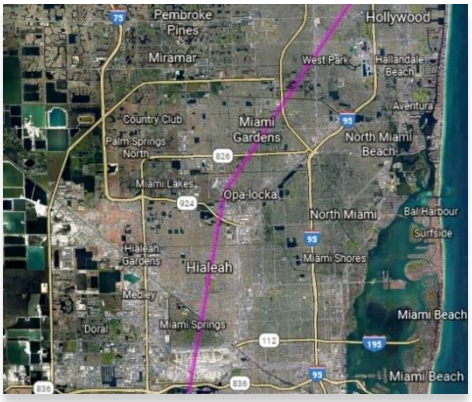
5. Double-click on **Aero App**.

6. Double-click on **Breadcrumbs**.

7. Your exported breadcrumbs will be listed. Copy KML files and create a folder on your desktop, specifically for KML files.



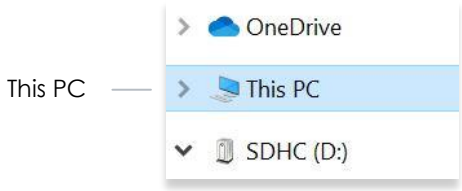
8. Open **Google Earth** to export KML files, and your points will appear.



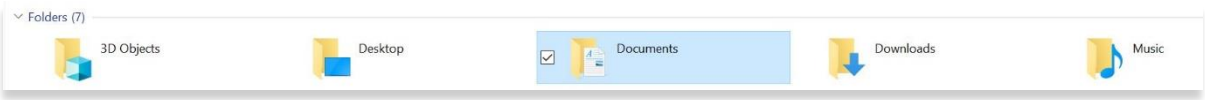
13.3.1.5.2 View Breadcrumbs in SQLite File

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

1. Export Breadcrumbs to SQLite Database.
2. Connect your microSD card into the Windows tablet.
3. Once the microSD card is inserted, open **File Explorer** and navigate to **This PC**.



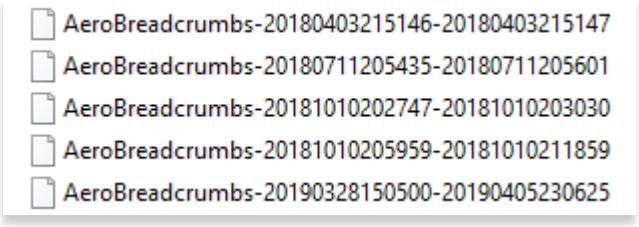
4. Double-click on **Documents**.



5. Double-click on **Aero App**.

6. Double-click on **Breadcrumbs**.

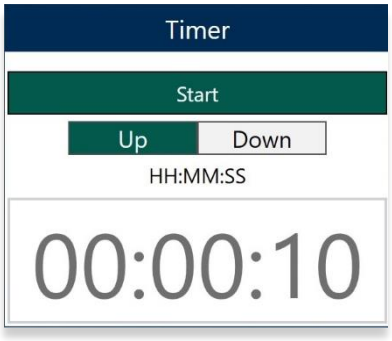
7. Your exported breadcrumbs will be listed.



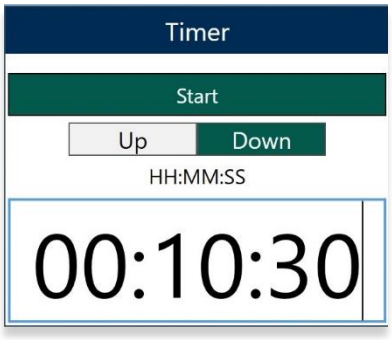
13.3.2 Timer

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

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Timer** located on the upper-right corner of the screen. A timer menu will display.
3. The Timer has two modes:
    - **Count Up** – Starts the timer at zero then begins counting.
    - **Counts 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 Count **Up** mode. Then tap **Start** to begin the timer.



5. To count down, tap to select the Count **Down** mode.
6. Enter desired timer duration following the format HH:MM:SS.

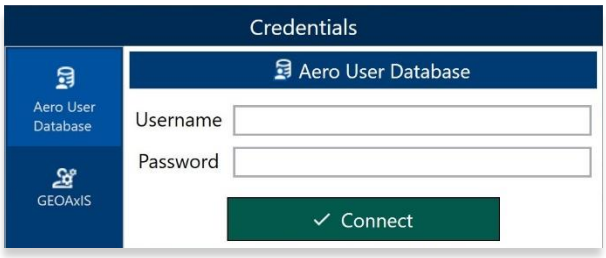


7. Tap **Start** to begin timer.
8. Tap **Stop** to end timer.
9. Tap **Reset** to restart timer.

13.3.3 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 Route panel and Wx tab. Air Force Weather data is only available to DOD crews and select partners.

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **AF Wx** tab on the upper-right corner of the ***Moving Map***.
3. The AF Wx popup will display. Tap **Credentials**.
4. Select desired credentials to authenticate using any of the following options:
    a. Aero User Database (AUD)
    b. GEOAxIS



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

NOTE: Credentials will be cleared when the user closes Aero App.

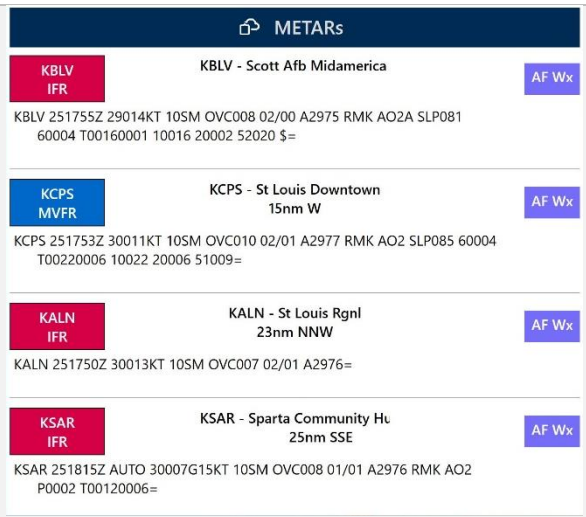
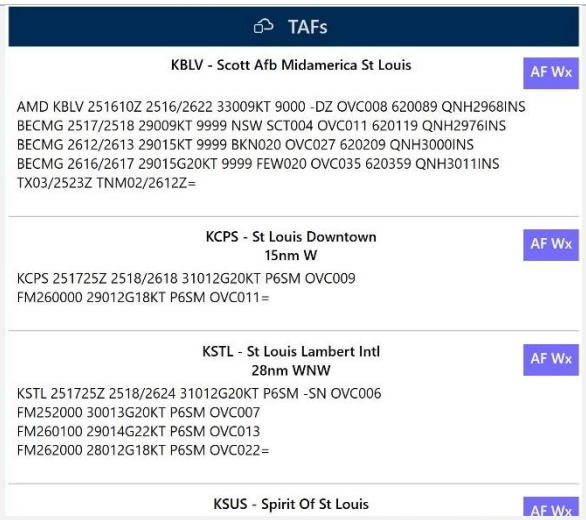
NOTE: Air Force Weather (AF Wx) is only available with an active internet connection and is updated every 5 minutes.

13.3.3.1 Air Force Weather (AF Wx) on the Route Panel

Air Force weather can be viewed on the Route Panel. Additional Air Force weather information can be viewed from the Wx menu as explained below.

1. Tap the **Route Tab** to expand the ***Route Panel***.
2. METAR information will be displayed for each ICAO on your route.
3. The different color dot indicates the airports flight rules:
    - **Green**: VFR
    - **Blue**: MVFR
    - **Red**: IFR
    - **Magenta**: LIFR

4. Additional Air Force weather information can be viewed by tapping an ICAO from the Route Panel. Tap an **ICAO** from the Route Panel.
5. The Moving Map popup will appear. Tap **Show** from the side menu.
6. Select **Info and Wx.**
7. The airport information will be displayed. Tap **Wx**.
8. Select **METARs** from the side menu to display METAR data that includes AF Wx.
9. Select **TAFs** from the side menu to display TAF data that includes AF Wx.

METARs	Terminal Aerodrome Forecast (TAFs)
	

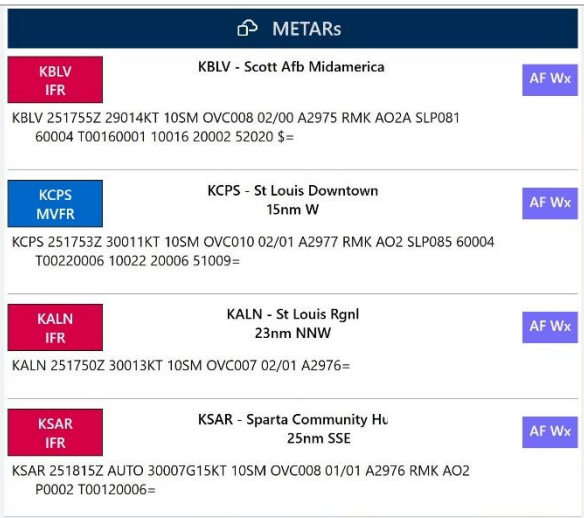
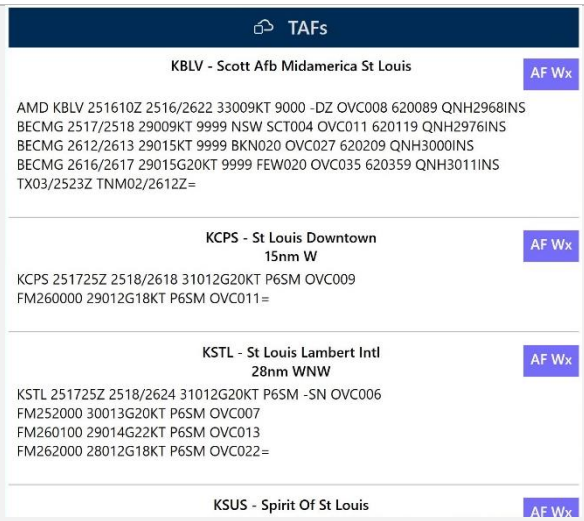
NOTE: METAR information on the Moving Map expires 3 hours after becoming available.

NOTE: Air Force Weather information can be viewed directly from the Active Point menu. Refer to Section for more information.

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

Air Force weather information can be viewed by accessing the Wx menu for the Active Point, or by selecting Info and Wx from the Route Panel.

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

METARs	Terminal Aerodrome Forecast (TAFs)
	

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.

13.3.4 Maps

Maps contain a library of mutable charts stored within Aero Maps, Base Maps, Helicopter and TAC Maps, and User Maps menus.

13.3.4.1 Aero Maps

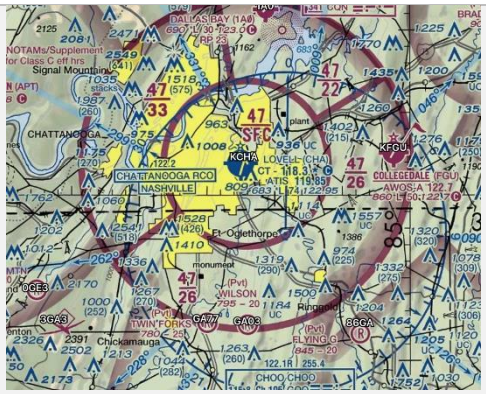
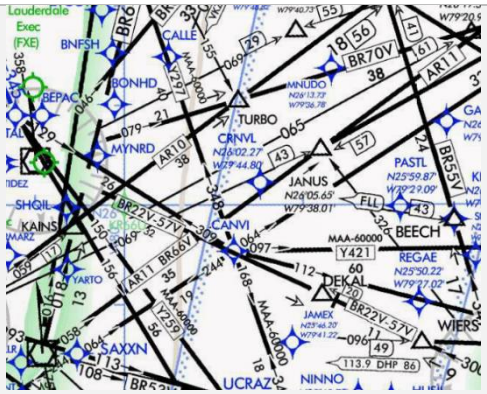
The Aero Maps section provides access to current VFR Sectionals, and worldwide IFR High and Low Enroutes.

13.3.4.1.1 FAA Visual Flight Rule (VFR) Sectionals

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Aero Maps** from the side menu, if necessary.
4. Tap **FAA VFR** to enable the option. The VFR sectional will be displayed on the map.

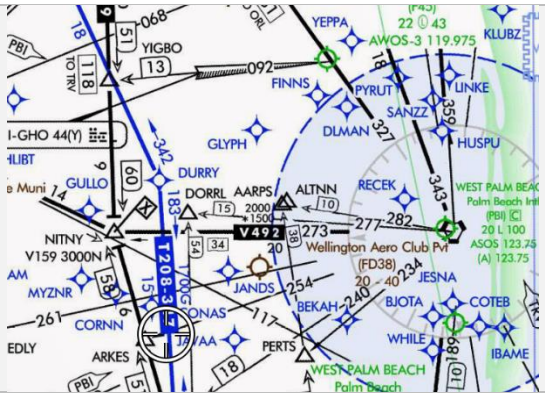
13.3.4.1.2 Instrument Flight Rule (IFR) High Enroute

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Aero Maps** from the side menu, if necessary.
4. Tap **IFR High** to enable the option. The high-altitude IFR Enroute charts will be displayed on the map.

FAA Visual Flight Rule (VFR) Sectionals	Instrument Flight Rule (IFR) High Enroute
	

13.3.4.1.3 Instrument Flight Rule (IFR) Low Enroute

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Aero Maps** from the side menu, if necessary.
4. Tap **IFR Low** to enable the option. The low-altitude IFR Enroute charts will be displayed on the map.

Instrument Flight Rules (IFRs) Low Enroute


13.3.4.2 Base Map

Base Map provides worldwide Earth and Gray Base maps to choose from.

13.3.4.2.1 Earth Base Map

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Base Map** from the side menu.
4. Tap **Earth** to enable the option. The earth base map will display.

13.3.4.2.2 Gray Base Map

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Base Map** from the side menu.
4. Tap **Gray** to enable the option. The gray base map will display.

Earth Base Map	Gray Base Map
	

13.3.4.3 Helicopter and Terminal Area Chart (TAC) Maps

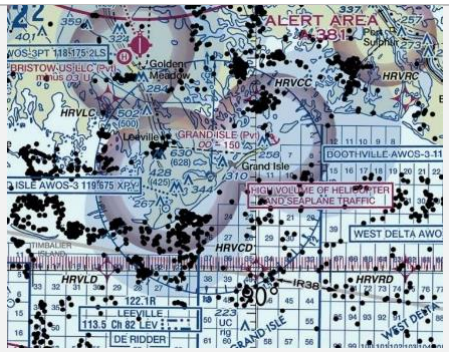
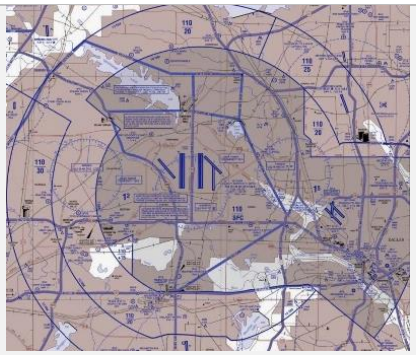
Helicopter and Terminal Area Chart (TAC) Maps provide access to Helicopter (Gulf Coast), Helicopter (Routes), and Terminal Area Charts (TACs) to overlay on the Moving Map.

13.3.4.3.1 Helicopter (Gulf Coast)

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Helicopter and TAC Maps** from the side menu.
4. Tap **Helicopter (Gulf Coast)** to enable the option. The gulf coast chart will overlay on the map.

13.3.4.3.2 Helicopter (Routes)

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Helicopter and TAC Maps** from the side menu.
4. Tap **Helicopter (Routes)** to enable the option. The helicopter chart will overlay on the map.

Helicopter (Gulf Coast)	Helicopter (Routes)
	

13.3.4.3.3 Terminal Area Charts (TACs)

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **Helicopter and TAC Maps** from the side menu.
4. Tap **TACs** to enable the option. The terminal area chart will overlay on the map.

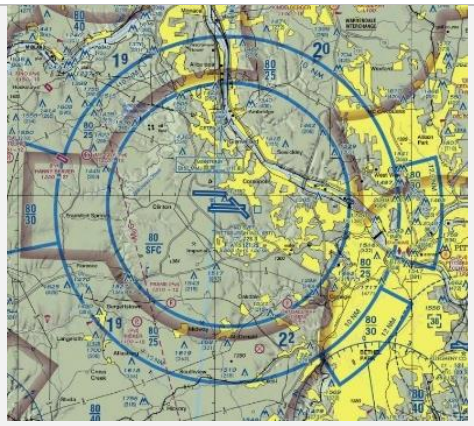
13.3.4.4 User Maps

User Maps are map overlays provided by users through the form of sideloading. Users can use their desired user maps to display on the Moving Map.

13.3.4.4.1 User Maps

1. Tap the **Moving Map** on the ***Main Menu.***
2. Tap **Maps** located at the bottom of the Moving Map.
3. Select **User Maps** from the side menu.
4. The loaded files will display under User Maps.
5. Enable desired file(s).
6. Overlays will display on the Moving Map.

NOTE: Refer to Section 9.2 for information on sideloading User Maps.

Terminal Area Charts (TACs)	User Maps
	

13.3.5 Overlays

Aero App provides various configurable map view overlays. The sections ahead will expand on the different Moving Map overlay options to choose from.

13.3.5.1 Aero Overlays

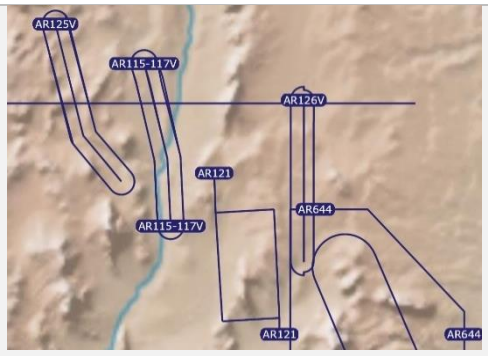
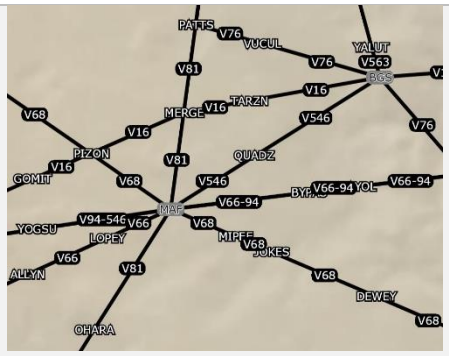
Aero Overlays include various options that enable pilots to customize their map view.

13.3.5.1.1 Air Refueling Routes

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Overlays** located at the bottom of the Moving Map.
3. Select **Aero Overlays** from the side menu, if necessary.
4. Tap **Air Refueling Routes** to enable the option. Air refueling routes will populate on the map.
5. By tapping on the AR labels on the map, a popup will appear with additional information.

13.3.5.1.2 Airways – Low

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Overlays** located at the bottom of the Moving Map.
3. Select **Aero Overlays** from the side menu, if necessary.
4. Tap the **Airways Low** option. The low-altitude airways that are below 18,000 ft will populate the map.

Air Refueling Routes	Airways – Low
	

13.3.5.1.3 Airways – High

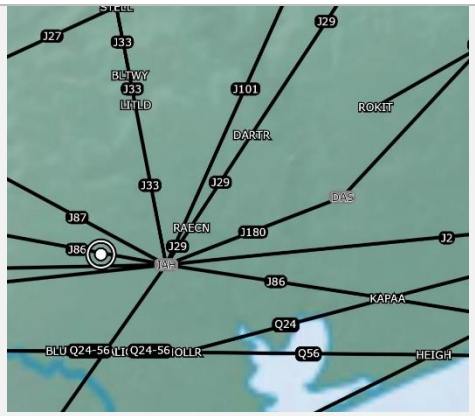
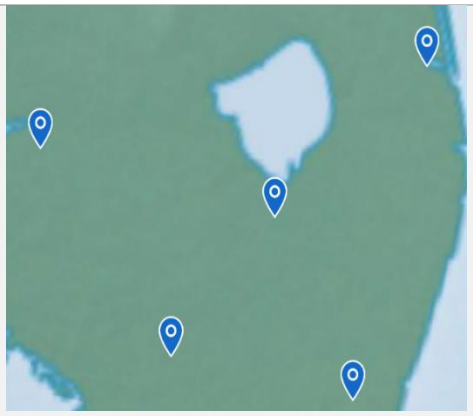
1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Overlays** located at the bottom of the Moving Map.
3. Select **Aero Overlays** from the side menu, if necessary.
4. Tap the **Airways High** option. The high-altitude airways that are between 18,000 ft and 45,000 ft will populate on the map.

NOTE: Refer to Section 13.3.13.1.2 on how to add Airways to the route.

13.3.5.1.4 Pins

Pins are marked locations on the Moving Map that were dropped by users. This option must be enabled to view dropped pins. If no pins were dropped, refer to Section 13.3.12.1.3 for additional information.

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Overlays** located at the bottom of the Moving Map.
3. Select **Aero Overlays** from the side menu, if necessary.
4. Tap **Pins** to enable the option. Dropped pins will populate on the map.

Airways – High	Pins
	

13.3.5.2 User Overlays

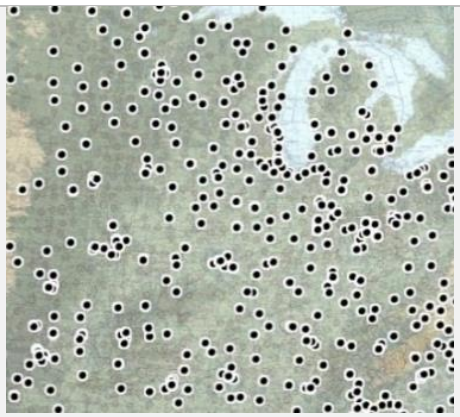
Aero App enables users to sideload User Overlays such as Shapefiles and GeoJSON files to their Aero App directory. For more information on sideloading, refer to Section 9.

13.3.5.2.1 User Overlays

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Overlays** located at the bottom of the Moving Map screen.
3. Select **User Overlays** from the side menu.
4. Tap one or multiple **User Overlays** from the sideloaded shapefiles or GeoJSON files to load onto the map.

NOTE: Users can sideload User Overlays by storing shapefiles and/or GeoJSON files in PC/Documents/Aero App/UserFiles directory.

User Overlays



13.3.6 Options

The Options menu provides Ownship and Location features to assist users in preflight or inflight operations.

13.3.6.1 Ownship

The Ownship menu provides customizable ownship options. Users can show or hide their Ownship from the map view, Snap to Location, and choose North Up as the orientation on the Moving Map.

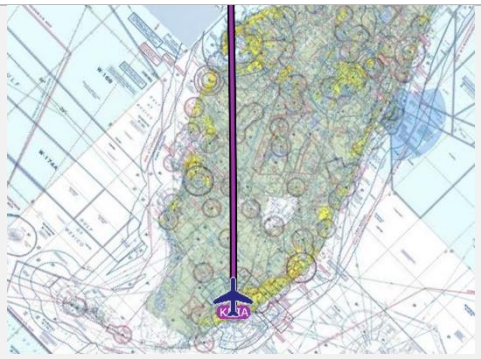
13.3.6.1.1 Ownship

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Options** located at the bottom of the Moving Map.
3. Select **Ownship** from the side menu, if necessary.
4. Tap **Ownship** to enable the option. An ownship will display on the map indicating your current location.

13.3.6.1.2 Snap to Location

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Options** located at the bottom of the Moving Map.
3. Select **Ownship** from the side menu, if necessary.
4. Tap **Snap to Location** to enable the option. The map will automatically snap to your current location after 15 seconds.

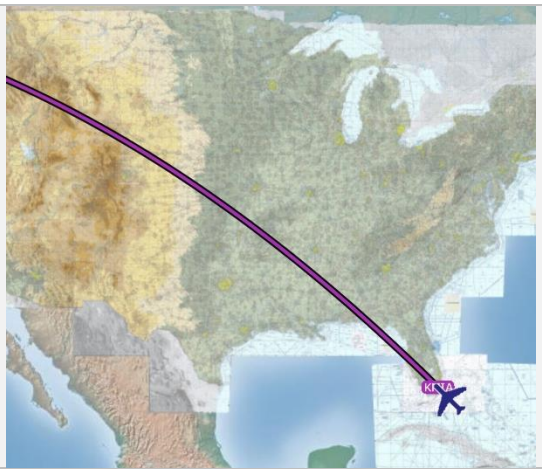
NOTE: Alternatively, users can access their Snap to Location feature by tapping the Crosshair Icon on the Moving Map as explained in Section 13.3.7.

Ownship	Snap to Location
	

13.3.6.1.3 North Up

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Options** located at the bottom of the Moving Map.
3. Select **Ownship** from the side menu, if necessary.
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.

North Up



13.3.6.2 Location

The Location menu provides options to show the recorded ownship's path and to include configurable distance rings around your ownship.

13.3.6.2.1 Breadcrumbs

1. Tap **Moving Map** on the ***Main Menu.***
2. Tap **Options** located at the bottom of the Moving Map.
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.

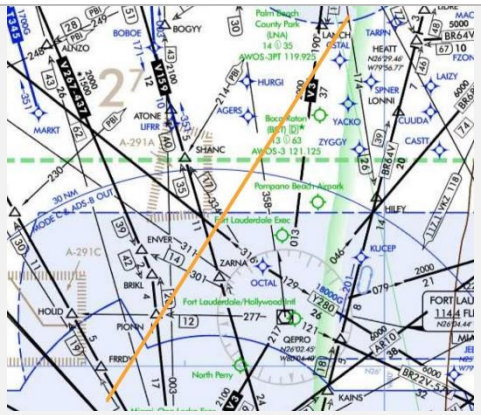
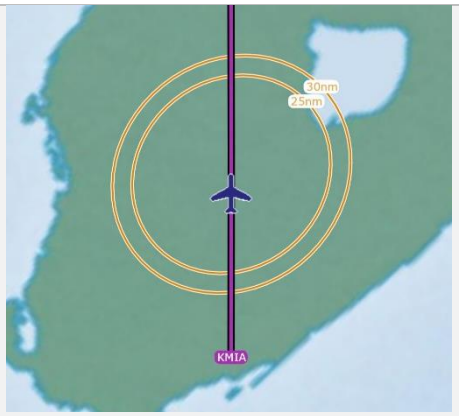
NOTE: Refer to Section 13.3.1.5 for more information about Breadcrumbs.

13.3.6.2.2 Distance Rings

1. Tap **Moving Map** on the ***Main Menu***.
2. Tap **Options** located at the bottom of the Moving Map.
3. Select **Location** from the side menu.
4. Tap **Distance Rings** to show additional options for distance rings.
5. Tap on the **Outer Ring Distance** text box and enter desired outer ring distance.

NOTE: Max outer ring distance is 999.

6. Tap to select desired distance from options 0, 2.5, 5, 10, and 25.

Breadcrumbs	Distance Rings
	

13.3.7 Snap to Location

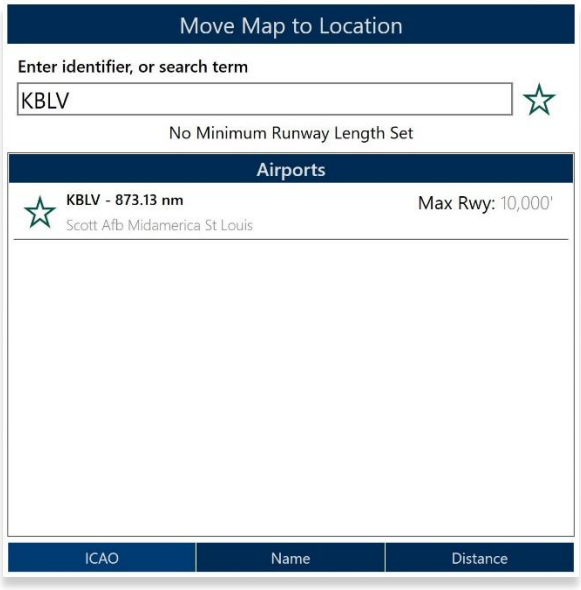
By tapping on the **Crosshairs Icon**, located at the bottom-right corner of the Moving Map screen, your location will snap to your current GPS location.

NOTE: Users can enable the Snap to Location feature, which returns to the user's current location after 15 seconds as explained in Section 13.3.6.1.2.

13.3.8 Move Map to Location

The Move Map to Location feature enables users to search Airports, NavAids, Waypoints, or User Waypoints by its identifier name, search term, MGRS, or latitude, longitude.

1. Tap the **magnifying glass** located at bottom-right corner of the screen.
2. Enter an identifier, search term, MGRS, or latitude, longitude.
3. Tap **Enter** on the device's keyboard and the screen will pan to its location.



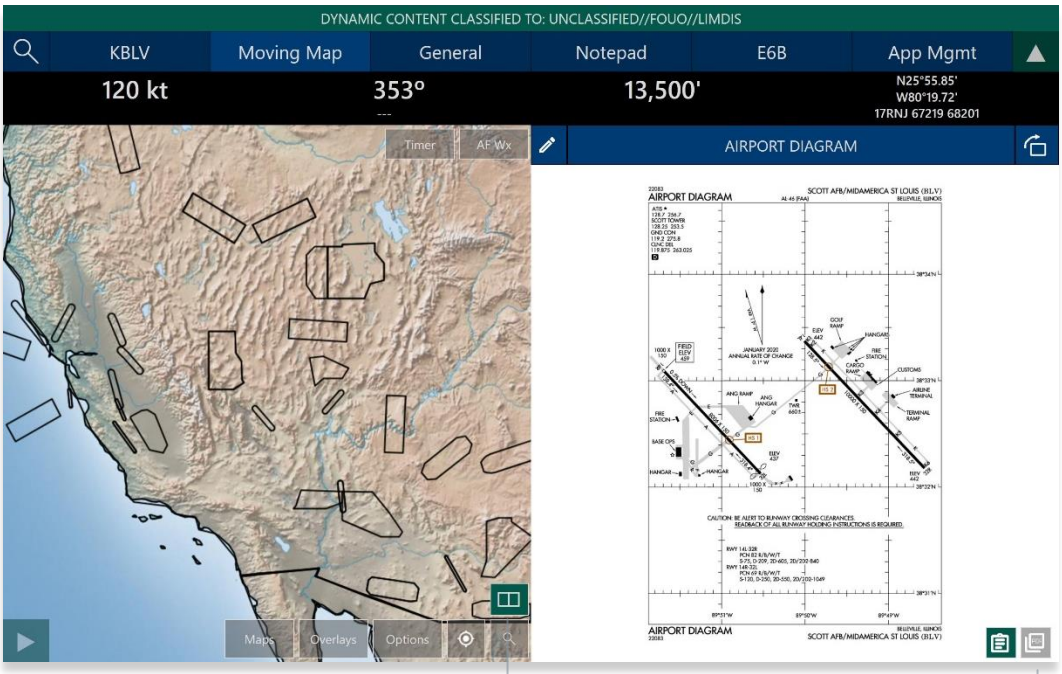
13.3.9 Split Screen

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

13.3.9.1 APD for Destination Airport

The APD charts for the route's destination airport may be displayed simultaneously with the Moving Map on the split screen.

1. Tap **Moving Map** on the ***Main Menu*.**
2. Tap on the **Split Screen** icon located at the bottom-right corner of the screen.
3. The destination APD will display.
4. Tap the **actions ribbon.**
5. Select a chart from the popup menu.



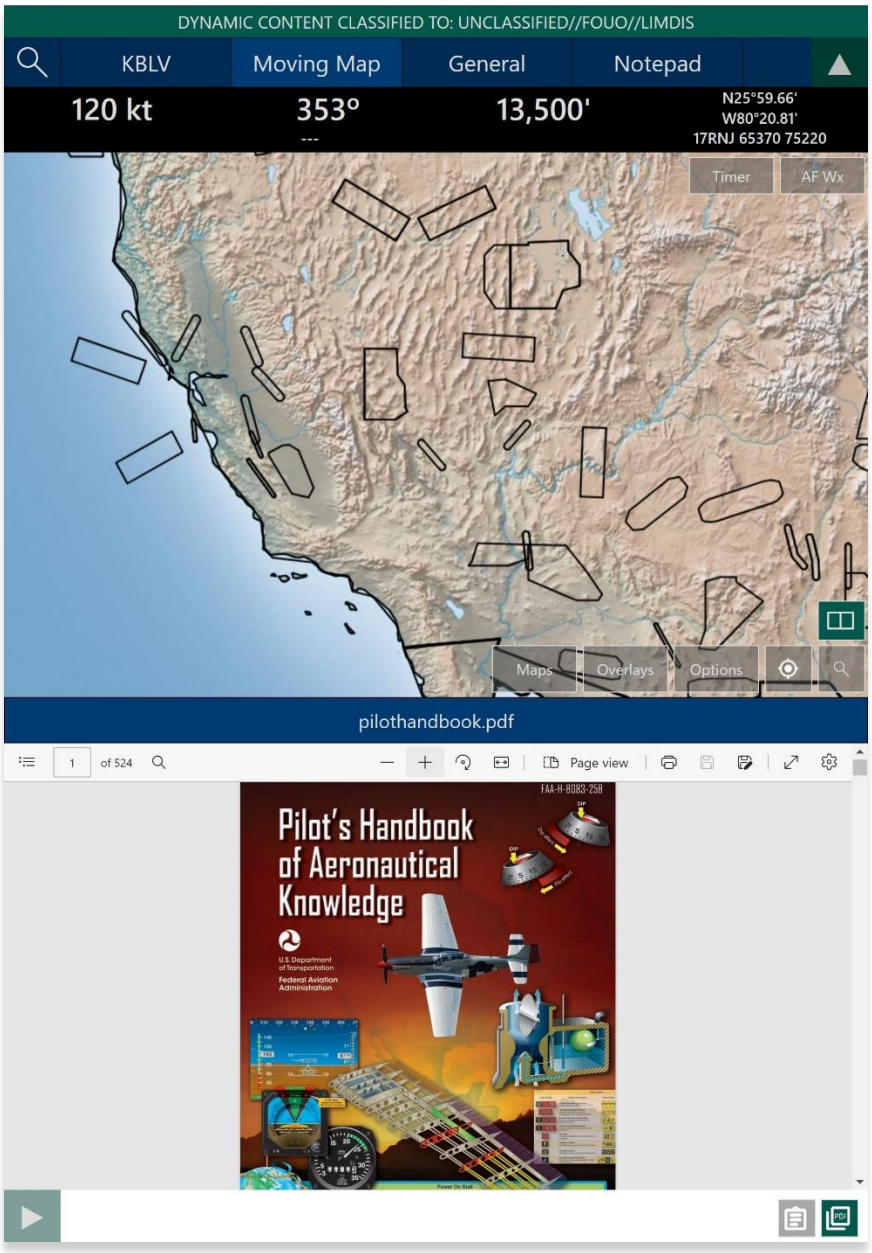
NOTE: If no route is loaded, no chart will display.

NOTE: Refer to Section 13.2.1.1 on how to draw on APD charts.

13.3.9.2 PDF Support

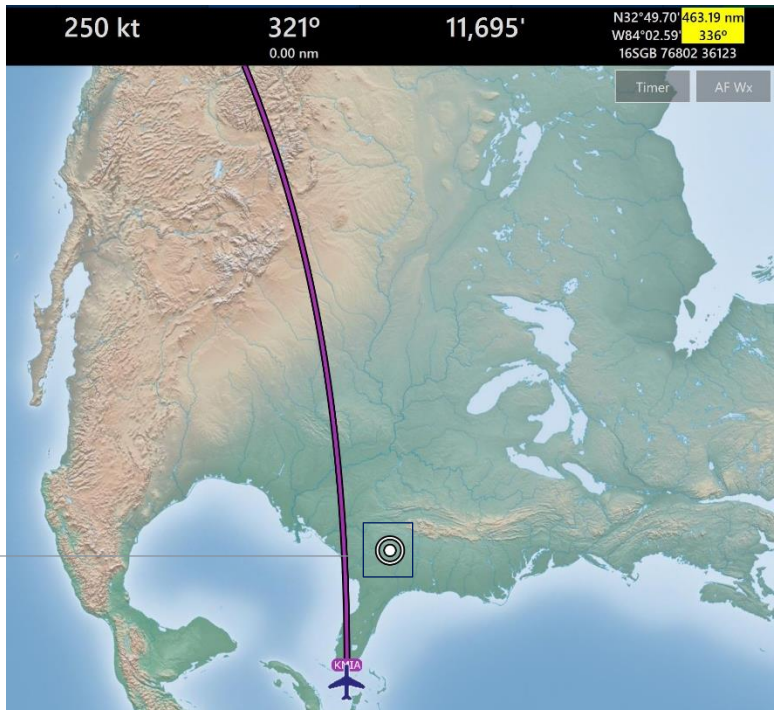
PDF Support enables users to view PDF documents in Aero App. User's documents must be sideloaded prior to viewing the document.

1. Tap the **PDF** icon on the split screen.
2. Tap the **actions ribbon** and the User Documents popup will appear.
3. Select desired document.
4. To return to the APD chart view, tap the **clipboard** icon.



13.3.10 Center Target

As the user moves the map, a target in the center of the screen will appear and its coordinates will show at the upper-right corner of the screen.



13.3.10.1 Measure Distance and Bearing Between Points

Aero App enables users to easily calculate the distance and bearing between two points on the Moving Map.

1. Tap on the **Target icon** on the ***Moving Map*** to set a starting point.
2. As you move the map, the distance and bearing between the starting point and new location displays.

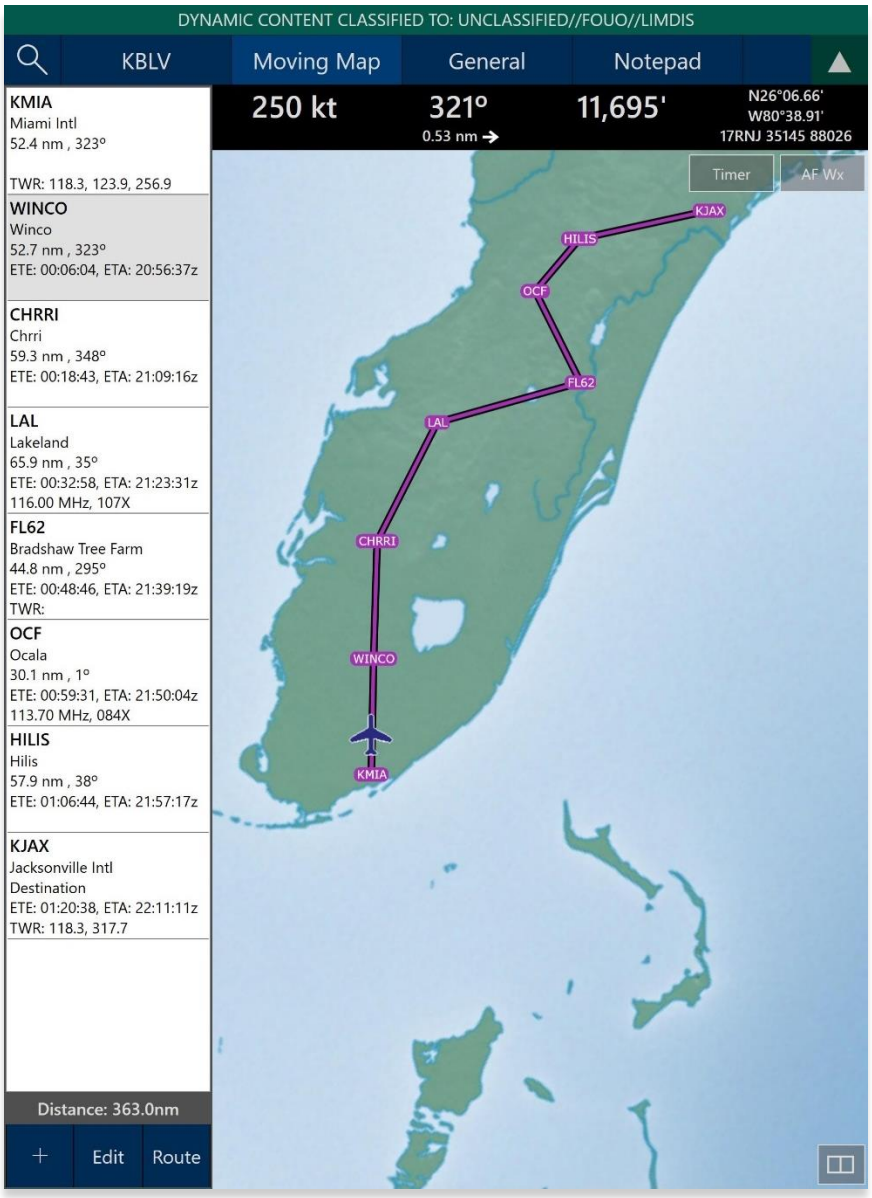
13.3.11 Drag and Drop

Aero App enables users to drag any point or segment of the current route and drag it to their desired point.

1. Navigate to the ***Route Panel***.
2. Tap the **Plus** button on the ***Route Panel.***
3. The Add popup will display.
4. Enter a desired route using identifiers, search term, or route, including MGRS or latitude and longitude.
5. Route will be displayed on the Moving Map.
6. With your mouse, right-click and hold a point or segment in the route and drag it to a desired point that you wish to add to the route.

7. The Nearest popup will appear displaying the latitude and longitude of the selected point with ten nearest Airports, NavAids, Waypoints, and User Waypoints.
8. Select which you desire to add.

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



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

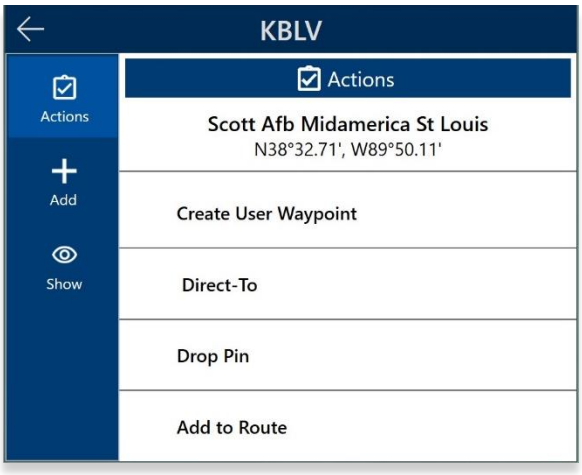
NOTE: Users can also tap and hold to drag and drop points or segments. Using touch is difficult; therefore, the primary method should be using the mouse.

13.3.12 Moving Map Popup Menu

Aero App enables users to perform actions to their Moving Map. Users can display the popup in two simple ways:

- Long pressing any point on the Moving Map.
- Tapping any point on the Route Panel.

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press a desired point on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. The Nearest popup will display. Tap an identifier or ICAO. The Moving Map's popup menu will display with each option grouped by Actions, Add, and Show.



13.3.12.1 Actions

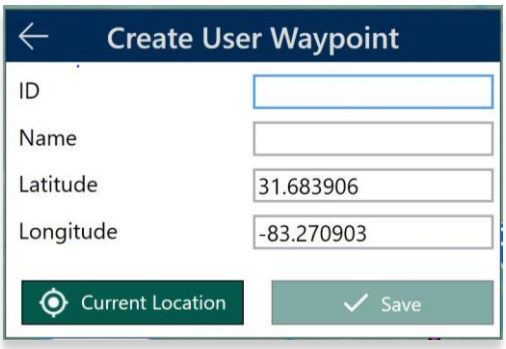
The Actions submenu section provides users the following options:

- Create User Waypoint
- Direct-To
- Drop Pin
- Add or Remove from the route

13.3.12.1.1 Create User Waypoint

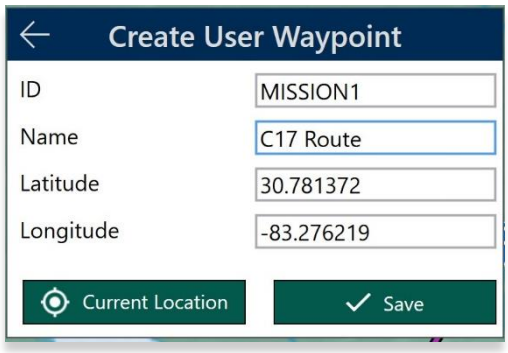
Aero App enables users to create user waypoints using a unique ID, Name, Latitude, and Longitude. The Current Location option is available to users when using their current location's coordinates.

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press a desired point on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. The Nearest popup will appear, select your desired point.
4. The Moving Map popup 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 Lat/Lon 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.



NOTE: The Name field is optional.

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



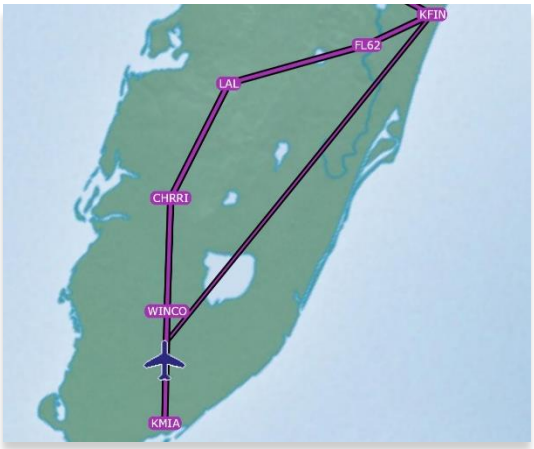
NOTE: User Waypoints can be added as a text file sideloaded into Aero App. Refer to Section 9.3 for information on how to sideload User Waypoints.

NOTE: Refer to Section 13.3.13.3.3.4 to view all saved User Waypoints.

13.3.12.1.2 Direct-To

Aero App enables users to create a route from their current location, direct to any point on the map. Users can choose to modify the current route by adding a point for which to fly direct to or, create a new route flying direct to the chosen point.

1. Tap **Moving Map** on the ***Main Menu***.
2. Ensure the route is empty.
3. Long-press a desired point on the Moving Map.
4. The Nearest popup will appear, select your desired point.
5. A popup for the selected point will appear. Select **Actions** from the side menu, if necessary.
6. Tap **Direct-To**.
7. A thin magenta line will be drawn from your current position to the direct-to position selected.



8. To add a direct-to option to the current route, follow the steps above and select **Add to Route and proceed Direct-To** or **Clear Route and proceed Direct-To**.

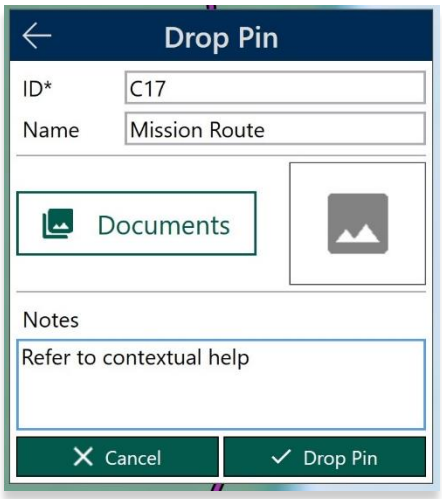
NOTE: Users can Direct-To an ICAO that is currently not on the route.

13.3.12.1.3 Drop Pin

The Drop Pin feature enables pilots to drop geographic pins in any specified area on the Moving Map and view additional descriptive information about the pins. Fields containing an asterisk are required.

Alternatively, In addition, Aero App enables users to sideload pins into Aero App. Refer to Section 9.5 for additional information.

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press a desired point on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. The Nearest popup will appear, select your desired point.
4. A popup for the selected point will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. The Drop Pin popup will appear with fields such as ID, Name, Documents, and Notes. Fill out the necessary information.



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

13.3.12.1.4 Add to Route

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press on a desired point on the Moving Map.
3. The Nearest popup will appear. Select a desired point.
4. The Moving Map popup menu will display. 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.

13.3.12.2 Add

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

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

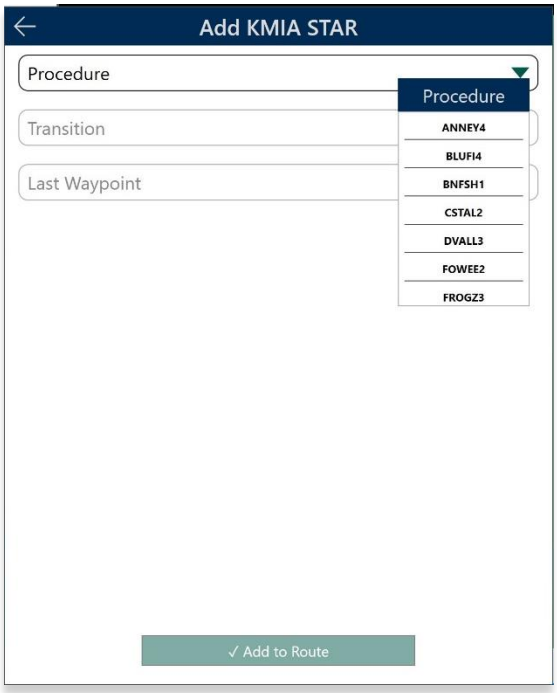
13.3.12.2.1 Add Departure Procedure (DP) or Standard Terminal Arrival Route (STAR) to Route

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

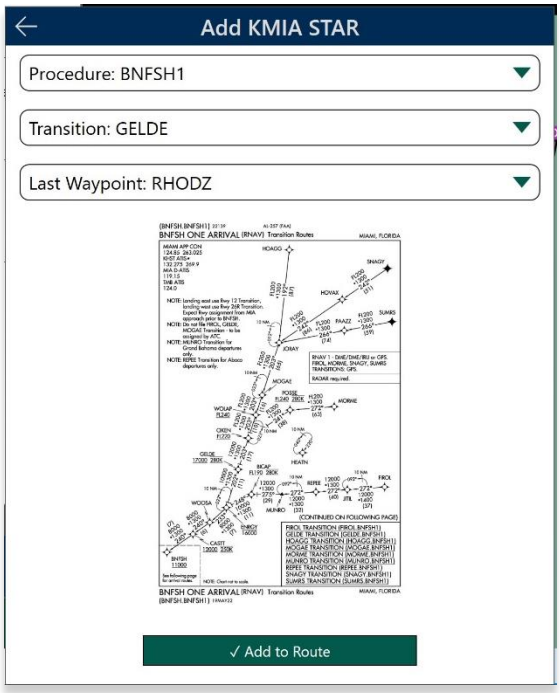
1. Select an airport from the Route Panel or the map.
2. The Moving Map's popup menu will appear. Select **Add** from the side menu.
3. Select **DP** or **STAR.**

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.

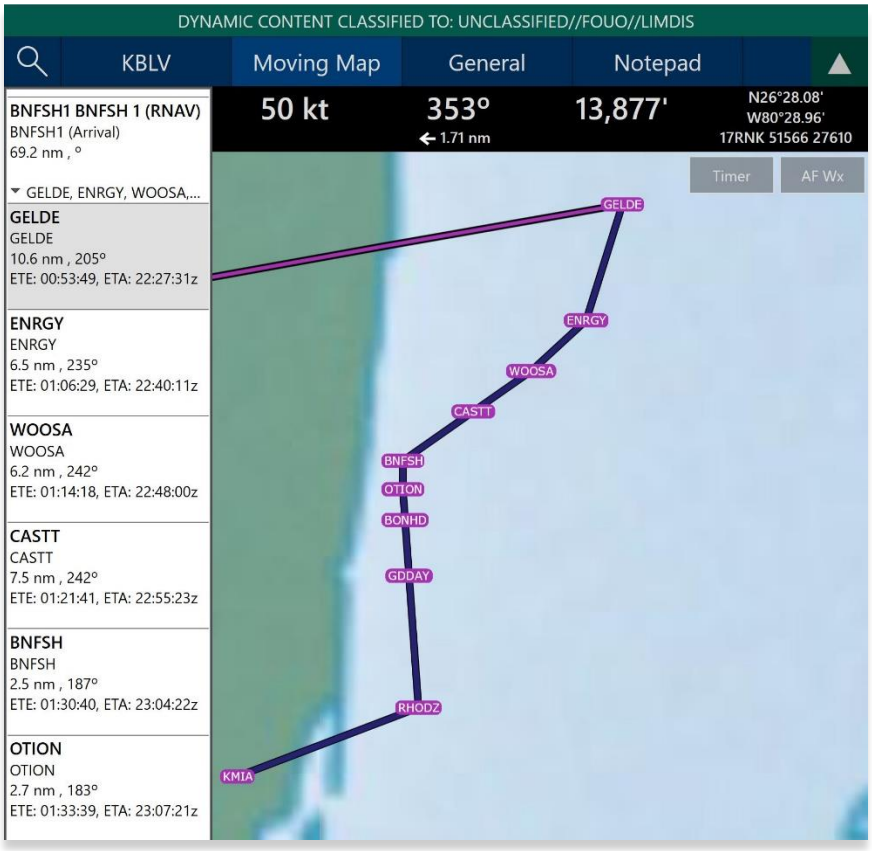
4. The procedure selection popup will display. Tap the Procedure drop-down and select desired **Procedure**.

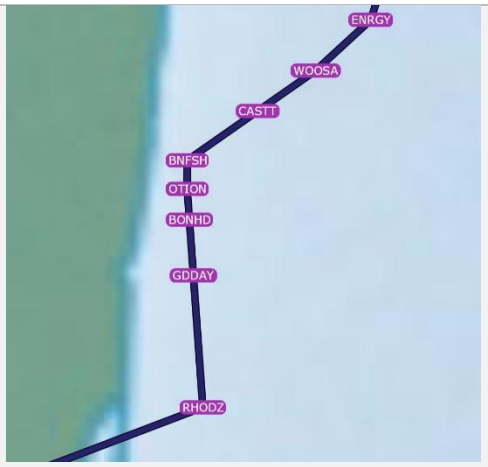


5. Transition will become selectable. Tap the Transition drop-down and select desired **Transition** point**.**
6. First Waypoint will become selectable. Tap the First Waypoint drop-down and select desired **First Waypoint.**
7. The Procedure preview will appear and Add to Route will become selectable.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



8. The procedure will be added to the current route and on the Moving Map.



Add DP to Route	Add STAR to Route
	

13.3.12.3 Show

The Show option enables users to select any procedure to display on the Moving Map.

13.3.12.3.1 Show on Map

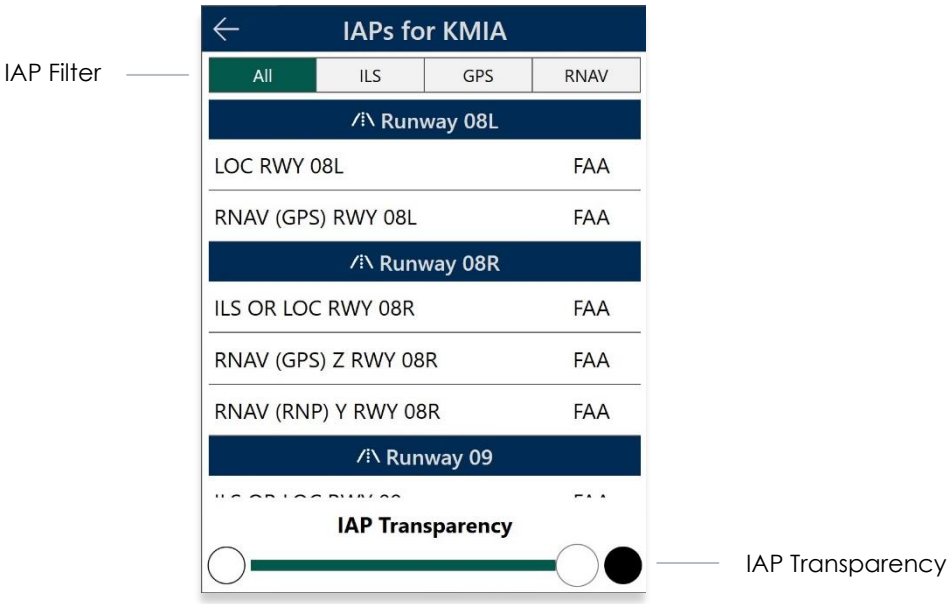
Show on Map enables users to be anywhere on the Moving Map and once the option is selected, the screen pans to the exact location of which the point or identifier is placed.

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press on a desired point or identifier on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. The Nearest popup will appear, select your desired point.
4. The Moving Map popup will appear. Select **Show** from the side menu.
5. Tap **Show on Map**.
6. The screen will pan to the selected location.

13.3.12.3.2 Instrument Approach Procedures (IAPs) on Map

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

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press on a desired point on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. The Nearest popup will appear, select your desired point.
4. The Moving Map popup will appear. Select **Show** from the side menu.
5. Tap **IAP on Map**.
6. A list of IAPs for the identifier will appear. Select an **IAP Filter** from the options button group.
7. IAPs are grouped by runways. Select desired **IAP** then the IAP will overlay on the Moving 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 Moving 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 Moving Map.

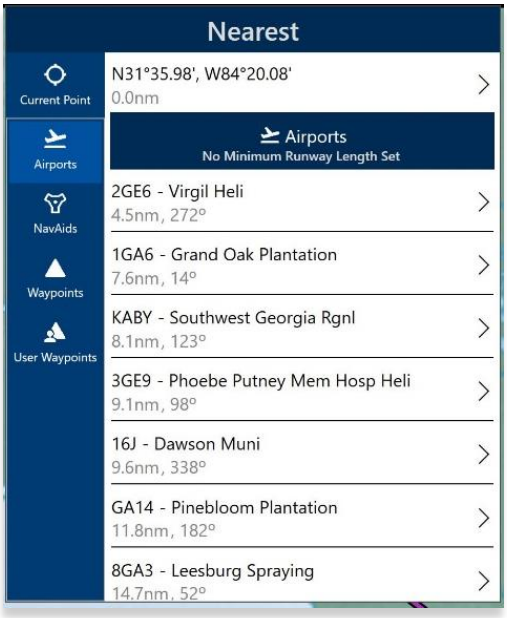
13.3.12.3.3 Information and Weather (Info and Wx)

The Information and Weather (Info and Wx) option can be accessed when tapping an identifier from the Moving Map or the Route Panel. When tapping an ICAO from the Moving Map or the Route Panel, additional airport information such as Info and Wx can be viewed. Refer to Section 13.2 for more information. Identifiers that are not an airport such as NavAids, Waypoints, User Waypoints, Pins, and others, will display only that identifier's information.

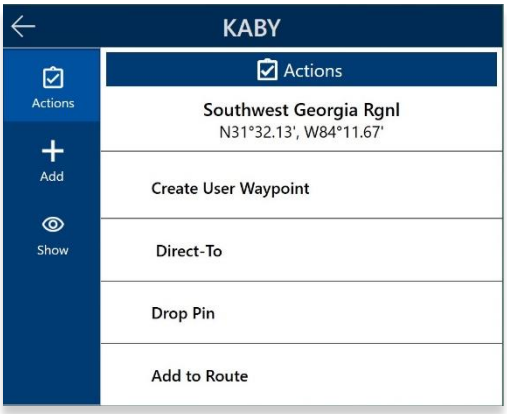
13.3.12.3.4 Nearest

The Nearest feature enables users to view nearby Airports, NavAids, Waypoints, and User Waypoints. Once the desired new point is selected, the Moving Map's popup menu will display.

1. Tap **Moving Map** on the ***Main Menu***.
2. Long-press on a desired point on the Moving Map. Alternatively, users can tap on an ICAO from the Route Panel.
3. Your current point and a list of the nearest Airports, NavAids, Waypoints, and User Waypoints will display, select desired point.



4. Select a desired point and a new Moving Map menu will display for your new point.



13.3.13 Collapsible Route Panel

The collapsible Route Panel enables users to hide or show the Route Panel to free up space on the screen when not in use. To expand the Route Panel, tap the red route tab located at the bottom-left of the screen. Once expanded, the following options are available in addition to route information:

- **Add** – enables users to add Airports, NavAids, Waypoints, User Waypoints, Airways, MTRs, enter a full route, or add individual coordinates (in Lat/Lon format) to route.
- **Edit** – enables users to delete and/or reorder entries within the route.
- **Route** – enables users to perform actions pertaining to the route or display additional features on the map.

13.3.13.1 Add to Route

1. Tap **Moving Map** on the ***Main Menu***.
2. Navigate to the ***Route Panel***.
3. Tap the **Plus** button and a dialog box will display.
4. Search by entering an identifier, search term, or route including MGRS or Lat, Lon in the search box.
5. Tap **Enter** from the device's keyboard and the entries will be added to the route. All entries will be displayed in the route panel in the order that they were entered.

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

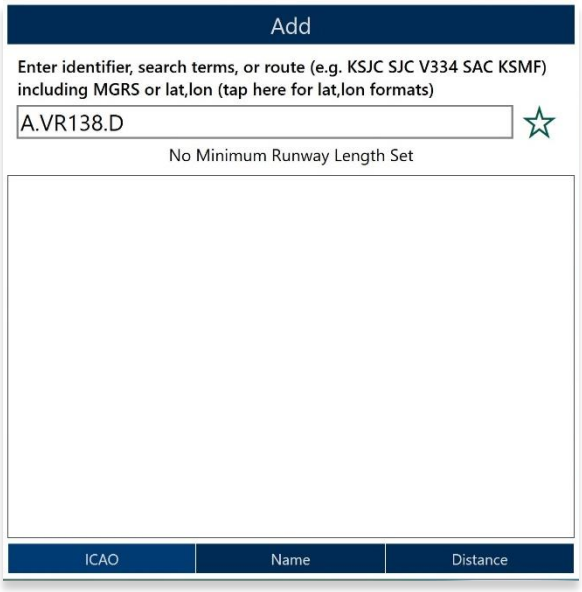
NOTE: To enter a route with multiple points, enter each identifier separated by a space. The entries will display in the given order.

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

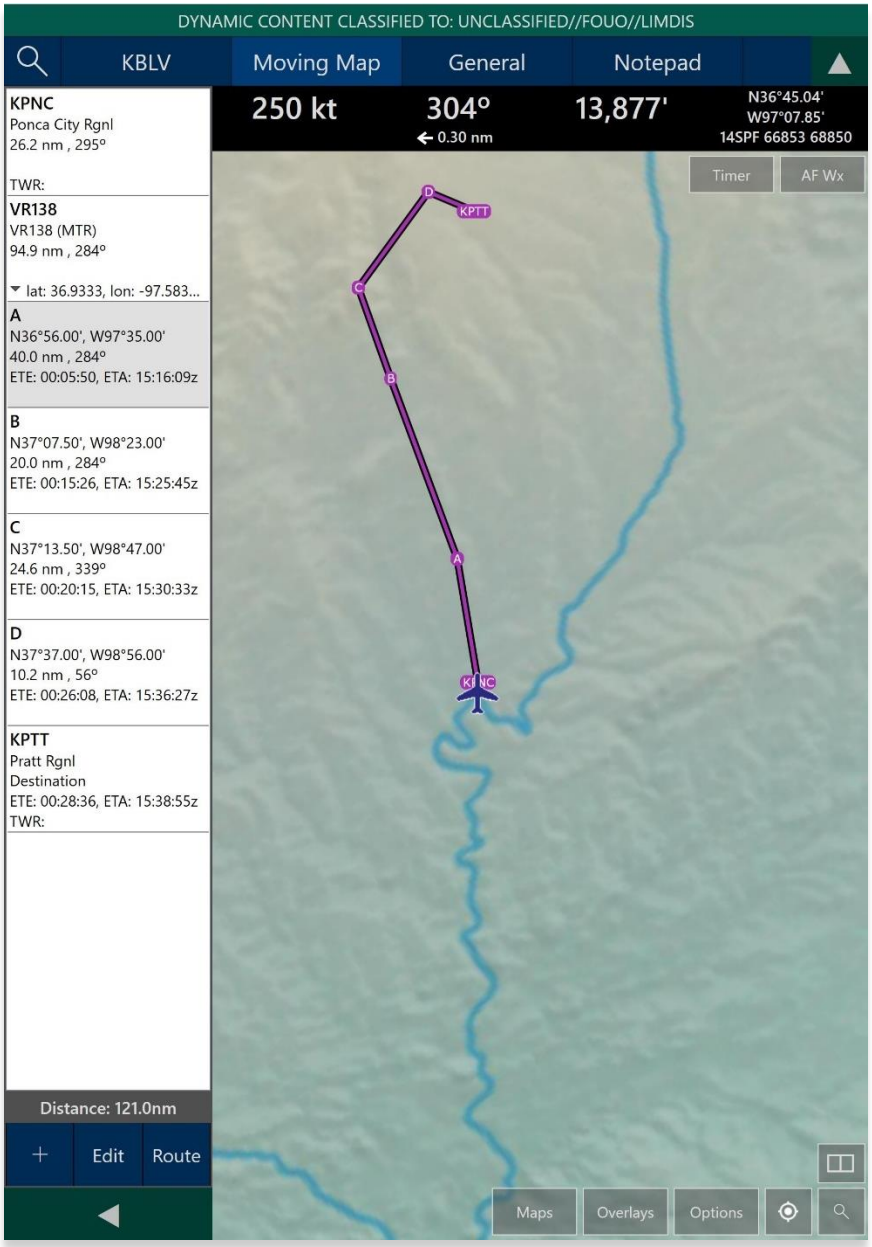
13.3.13.1.1 Add Military Training Routes (MTRs) to Route

Users can add Military Training Routes (MTRs) to the route.

1. Navigate to the ***Route Panel***.
2. Tap the **Plus** button on the ***Route Panel.***
3. The Add popup will display.
4. Use your keypad to enter desired MTRs to add to route following the format: **{starting point}. {MTR}.{endpoint}**.



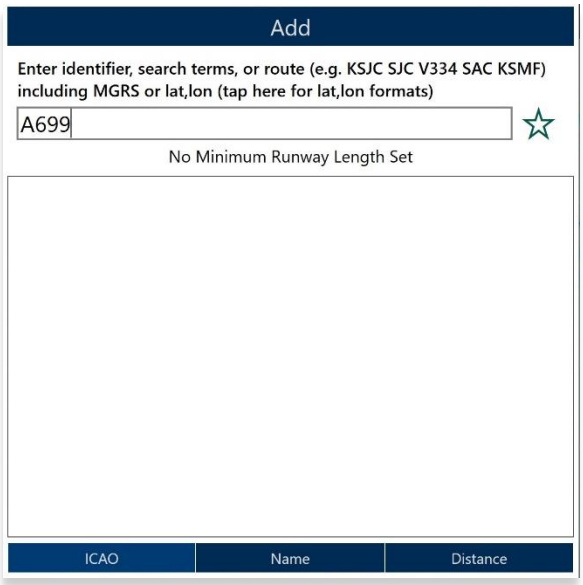
5. Your MTR will be displayed on the Route Panel.



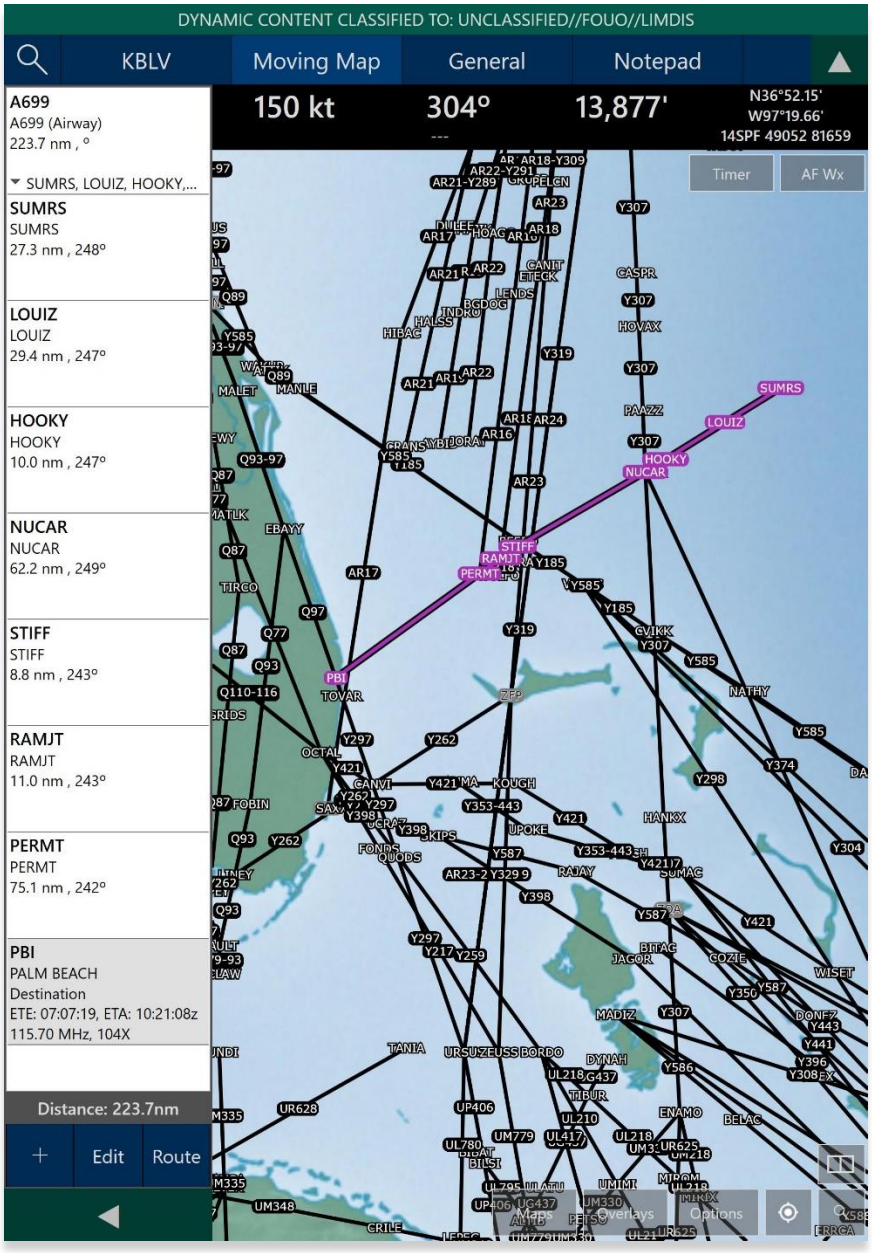
13.3.13.1.2 Add Airways to Route

Users can add Airways to the route.

1. Navigate to the ***Route Panel***.
2. Tap the **Plus** button on the ***Route Panel.***
3. The Add popup will display.
4. Use your keypad to search and select desired Airways to add to route.

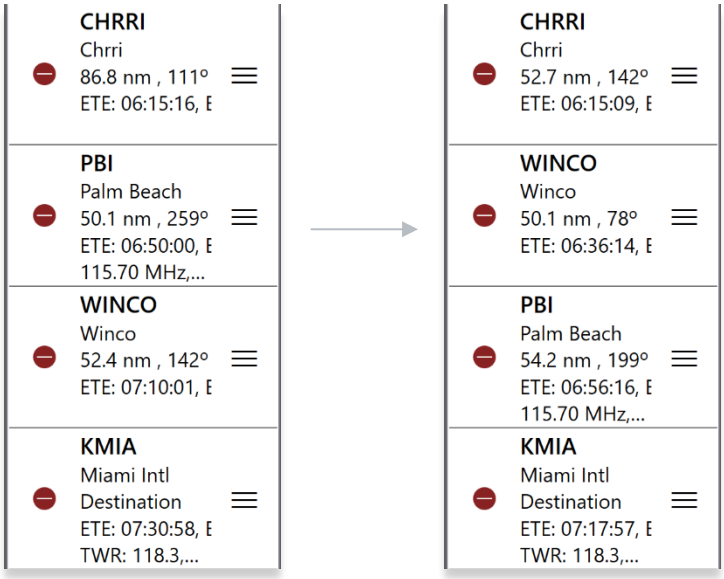


5. Your Airway route will display on the Route Panel.



13.3.13.2 Edit Route

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



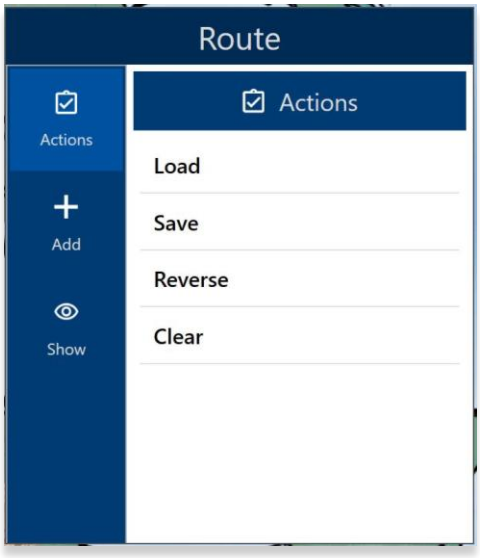
13.3.13.3 Route Menu Options

The Route Menu Options are a useful tool used to enhance the user's route capabilities. This menu allows users to expand on their route planning and additional options to configure their current route.

13.3.13.3.1 Actions

Actions provide users the capability to configure their route by providing the following options:

- Load
- Save
- Reverse
- Clear



13.3.13.3.1.1 Load

The Load feature enables users to load sideloaded files such as CRD or JSON files or saved routes onto the Route Panel. Refer to the sections ahead for reference in loading specific routes onto the Route Panel.

1. Navigate to the ***Route Panel***.
2. Tap **Route.**
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Select the route that you wish to load.
6. Route will display in ***Route Panel*** as the current route and on the Moving Map.

NOTE: Loading an invalid route such as a single or an empty route onto Aero App will result in an error message appearing to inform users that the points cannot be loaded. Users will be given options to **Save** or **Remove and Continue**.

13.3.13.3.1.1.1 Load a Common Route Definition (CRD) File

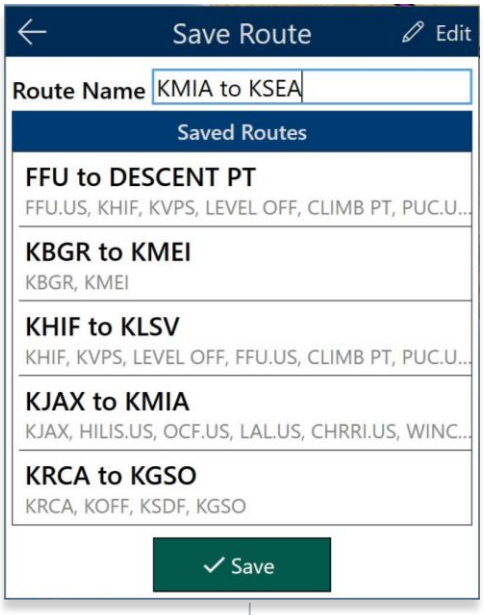
Aero App enables users to load CRD files onto Aero App. Refer to Section 9.4 for guidance on how to sideload CRD files.

1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. 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 CRD files will show on the ***Route Panel*** as the current route.

NOTE: When loading an invalid CRD file onto Aero App, an error message will appear to inform the users that the points cannot be loaded. Users will be given options to **Save** or **Remove and Continue**.

13.3.13.3.1.1.2 Save a CRD File

1. Navigate to the **Route Panel.**
2. Tap **Route.**
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Save**.
5. Tap the *Route Name* text box and change the route's name to a desired name.
6. Once the CRD files have been renamed, tap **Save,** and the changes will be added to the Saved Routes list.



Rename CRD File

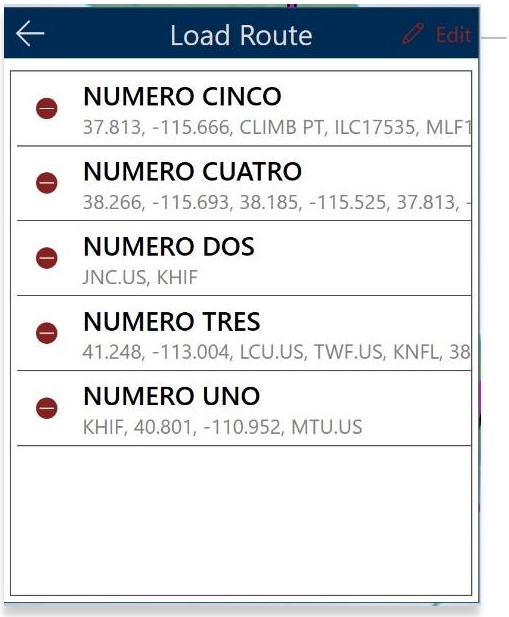
Save CRD File

13.3.13.3.1.1.3 View a CRD File

1. Navigate to the **Route Panel**.
2. Tap **Route**.
3. The Route menu will appear. Select **Show** from the side menu.
4. Tap **Routes.**
5. A list of saved CRD files will be listed. Tap to select a desired CRD file and the route will display on the map.

13.3.13.3.1.1.4 Delete a CRD File

1. Navigate to the **Route Panel**.
2. Tap **Route.**
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Tap the **Edit** button.

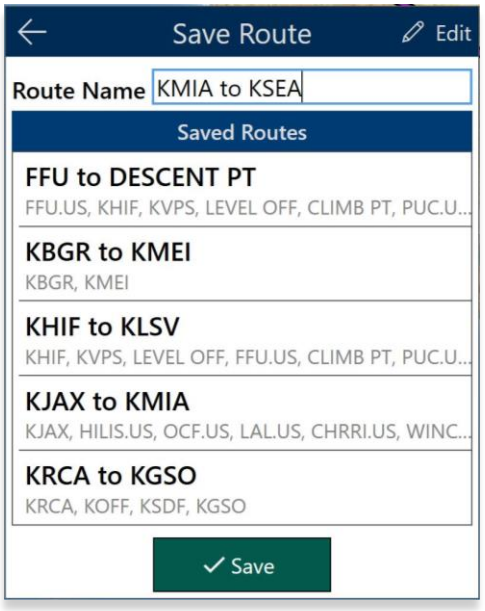


6. Tap the **Delete** button to delete the file. A warning message will pop up.
7. Tap **Delete** to agree with the warning message and continue the action.
8. Tap **Cancel** to void action.

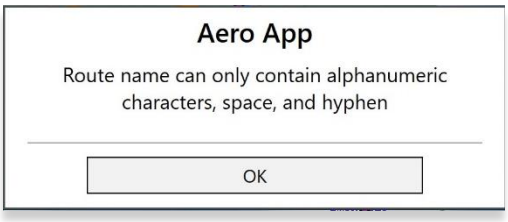
NOTE: Users can delete single CRD files when a single CRD route is sideloaded onto Aero App. Multiple routes will be deleted if the CRD route has associated routes.

13.3.13.3.1.2 Save Route

1. Create a route by loading desired points to the Route Panel.
2. Tap **Route**.
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Save**.
5. The Route Name will display a preselected name, containing the <Departure> to <Arrival> points. If necessary, rename the route name to the desired name.
6. Tap **Save**. The route is saved for future use.

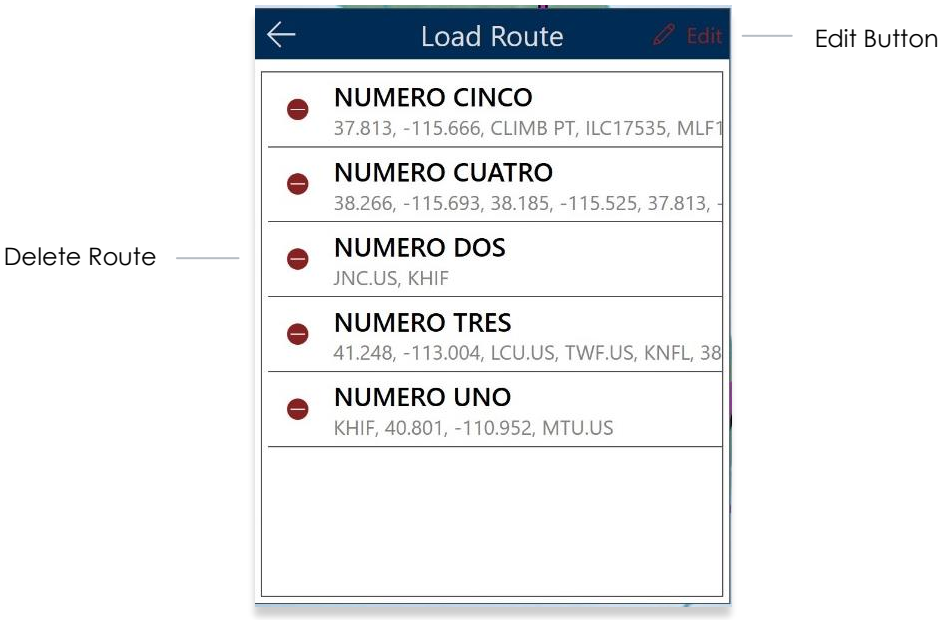


NOTE: When entering a new route name, the name can only contain alphanumeric (lower and upper case) characters, spaces, and hyphens. An error message will display if the name is not valid.



13.3.13.3.1.3 Delete Route

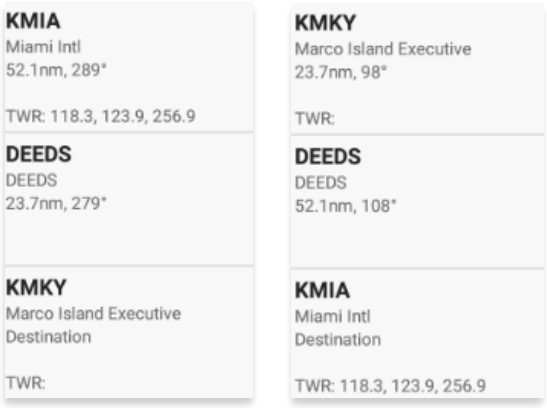
1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Select **Actions** from the side menu, if necessary
4. Tap the options ***Load*** or ***Save***.
5. Tap the **Edit** button.
6. Tap the **Delete** button.
7. The route will be deleted permanently.



NOTE: Notice the pencil icon changes to red when editing.

13.3.13.3.1.4 Reverse Route

1. Navigate to the ***Route Panel.***
2. Tap **Route**.
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Reverse**.
5. Departure reverts to arrival and arrival reverts to departure.



13.3.13.3.1.5 Clear Route

1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Clear**.
5. A confirmation popup will appear. Tap **Clear** to confirm action.
6. Tap **Cancel** to void the action.

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

13.3.13.3.2 Add

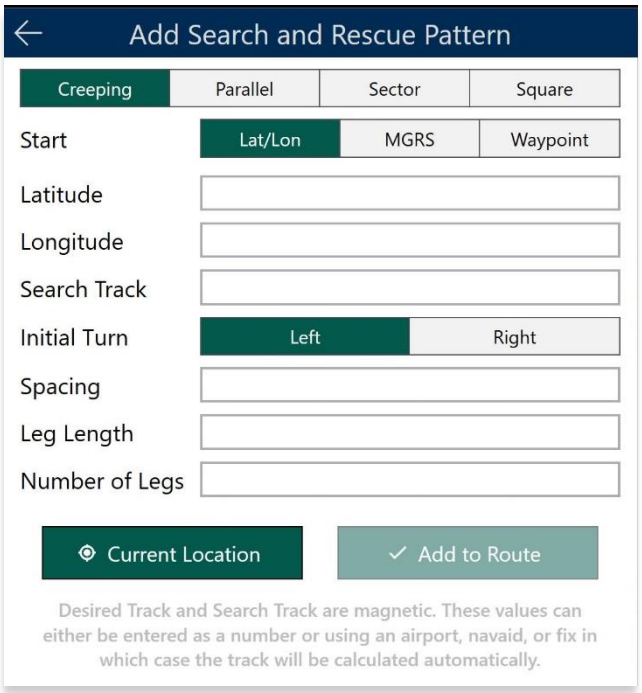
Add allows users to optimize flight planning and provides users the ability to predefine routes to ensure their missions run smoothly. The following option is available and will be further elaborated in the section to follow:

- Search and Rescue (SAR)

13.3.13.3.2.1 Add Search and Rescue (SAR) Pattern

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

1. Navigate to the ***Route Panel.***
2. Tap **Route.**
3. The Route menu will appear. Select **Add** from the side menu.
4. Tap **SAR**.
5. Tap to select **Creeping, Parallel, Sector**, or **Square.** Respective to the selection, different fields will be available to specific *Pattern* options.

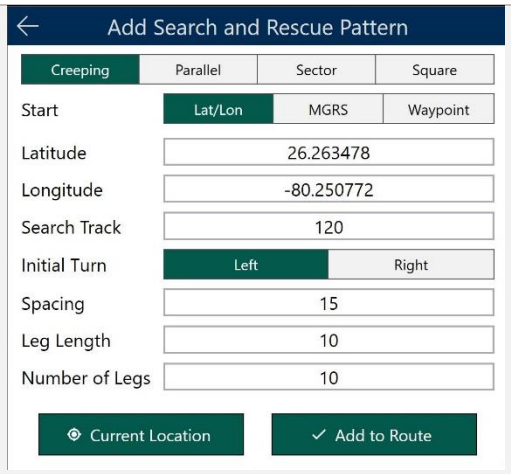


6. Tap to select **Lat/Lon**, **MGRS**, or **Waypoint**.
7. Users can tap **Current Location** to set their current position as the coordinates or manually enter them in the Latitude and Longitude fields.
8. All fields are required; therefore, all fields must be filled.

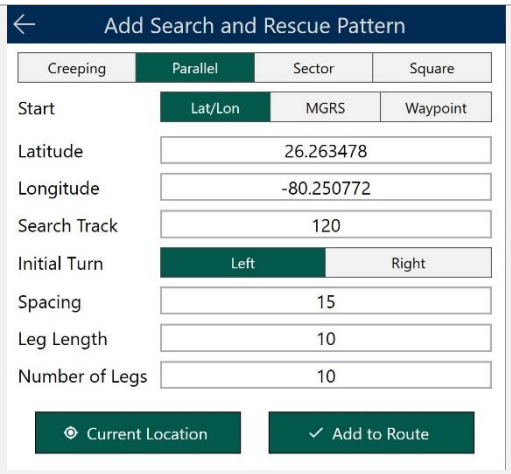
NOTE: When a decimal number is entered in the Search Track and Number of Legs fields, the field will revert to one. To prevent this action from occurring, enter only whole numbers in the Search Track and Number of Legs fields.

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

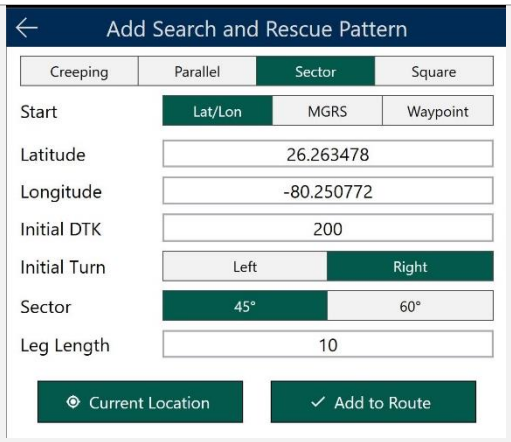
Creeping



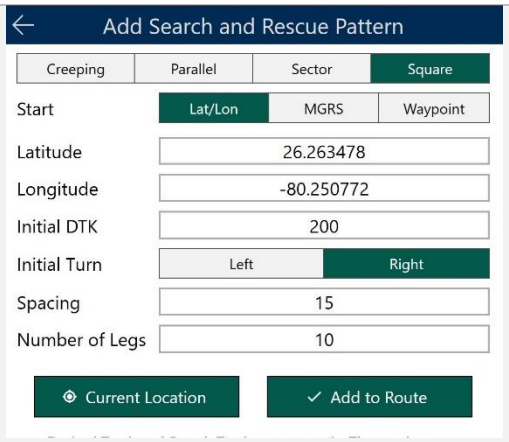
Parallel



Sector



Square



13.3.13.3.3 Show

Show provides features to enhance the user's situational awareness when flying any mission. Features are as follows and will be further elaborated in the sections to follow:

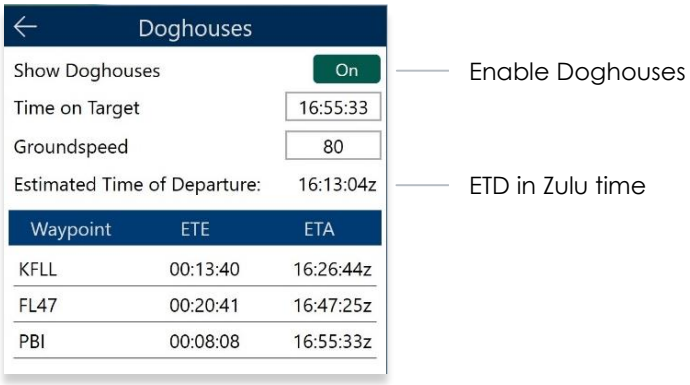
- Doghouses
- Dropped Pins
- Routes
- User Waypoints

13.3.13.3.3.1 Doghouses

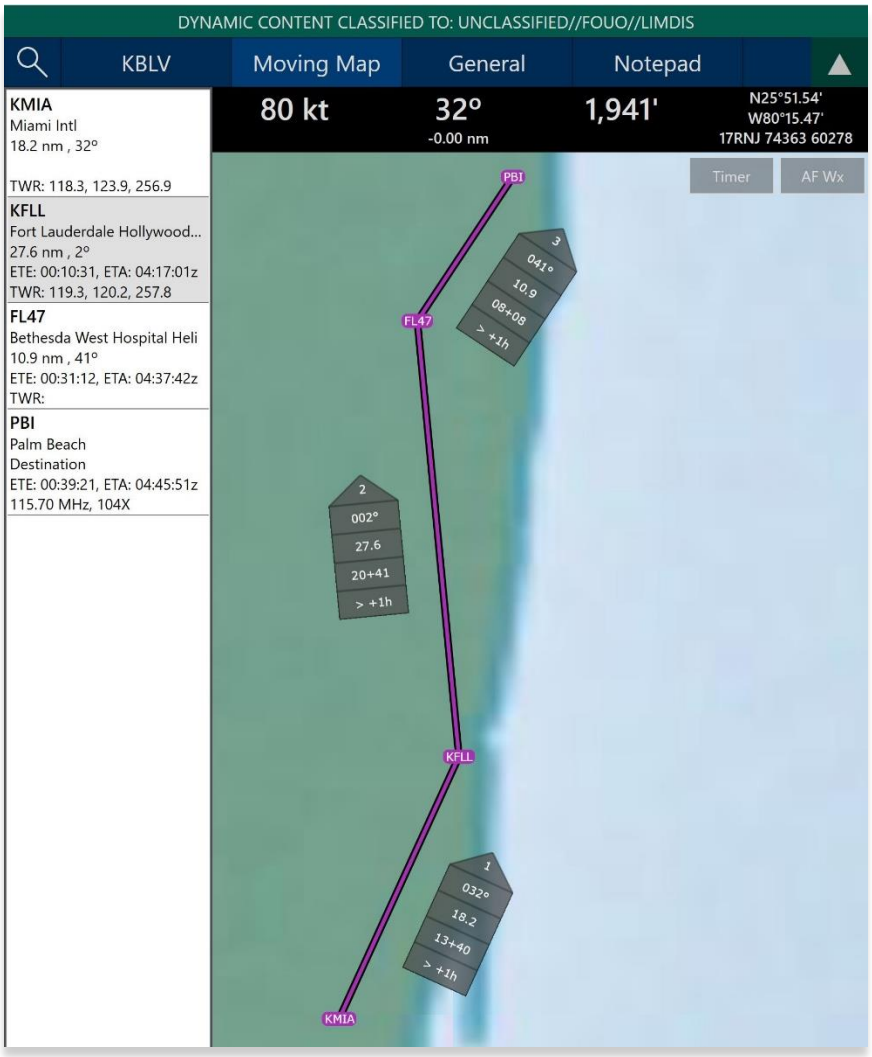
Doghouses enables users to display their route information such as their next point, heading, distance, time (MM+SS), and time ahead/behind/on schedule in order from top to bottom. Doghouses can display when entering Airports, Coordinates, MGRS, GARS, and Radial Off NavAids.

Once a route is entered, doghouses will populate on your Moving Map. The first doghouse on the current route will be displayed on the right side of the route. Each doghouse will be in the center between the last and next point on the route. Previous Doghouses will disappear as you pass the points on the active route.

1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Tap **Show** from the side menu.
4. Tap **Doghouses**.
5. From the Doghouses popup, enable **Show Doghouses**.
6. Tap on the **Time on Target** text box and enter your desired time in the format of HH:MM:SS.
7. Tap on the **Groundspeed** text box and enter your groundspeed in knots. When a decimal number is entered, the number will be rounded to the nearest whole number.



8. The Estimated Time of Departure (ETD) will adjust based on what is entered in Time on Target and Groundspeed. Your ETD will be calculated in Zulu time.
9. Tap outside of the Doghouses popup and Doghouses will populate on the Moving Map.



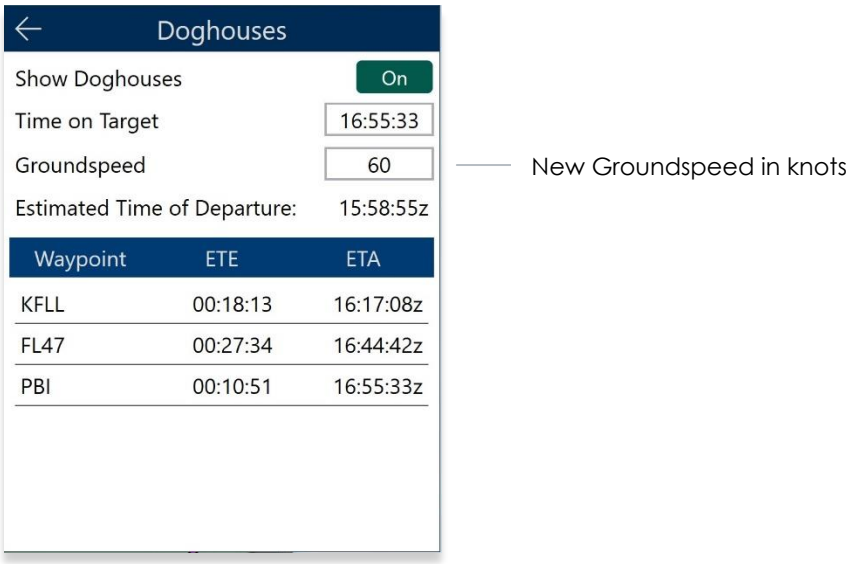
NOTE: Users may need to zoom in at least forty miles to view Doghouses.

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**".

13.3.13.3.3.1.1 Edit Doghouses

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

1. Navigate to the **Route Panel**.
2. Tap **Route**.
3. The Route menu will appear. Tap **Show** from the side menu.
4. Tap **Doghouses**.
5. The Doghouses popup will display.
6. Tap on the **Time on Target** text box and enter your new time in the format of HH:MM:SS.
7. Tap on the **Groundspeed** text box and enter your new groundspeed in knots. When a decimal number is entered, the number will be rounded to the nearest whole number.



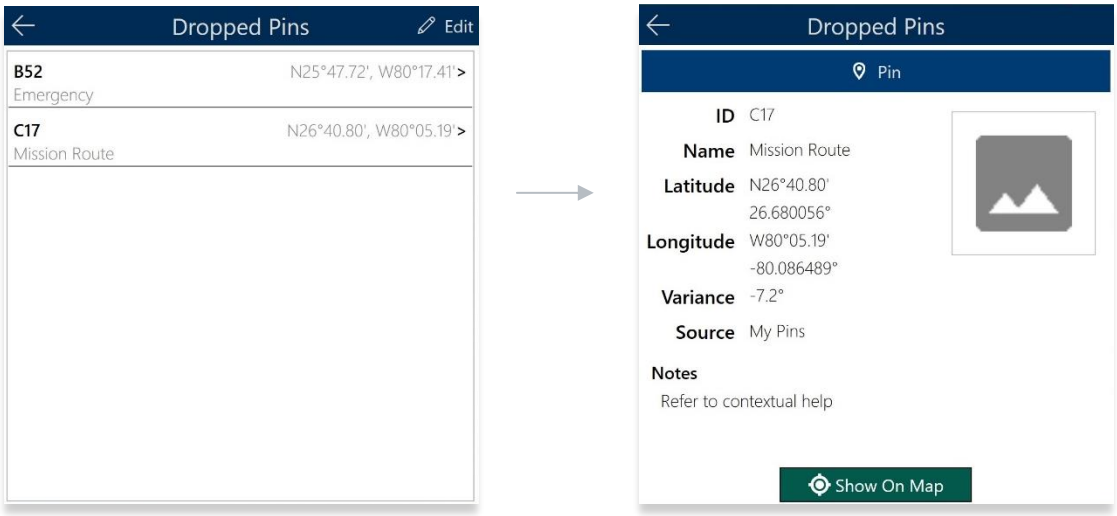
8. The Estimated Time of Departure will adjust based on what is entered in the Time on Target and Groundspeed fields.
9. Tap outside of the Doghouses popup and the Doghouses will recalculate based on the adjusted time and groundspeed.

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

13.3.13.3.3.2 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, Notes, and any associated attachments.

1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Tap **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** the map view will pan to the location of the dropped pin.

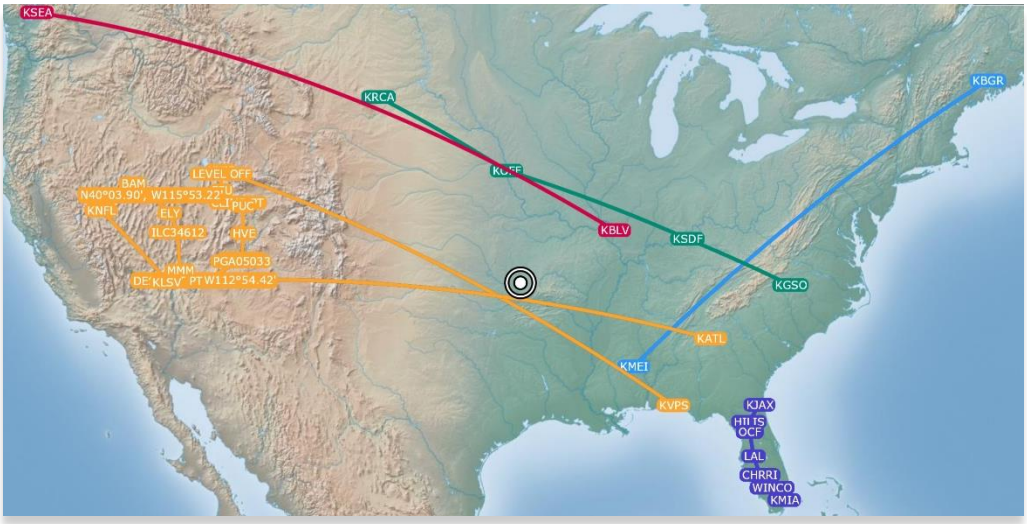
NOTE: To view the dropped pins on the Moving Map, users must enable Pins from the Overlays menu. Refer to Section 13.3.5.1.4 for additional information.

NOTE: To drop new pins, refer to Section 13.3.12.1.3 for additional information.

13.3.13.3.3.3 Routes

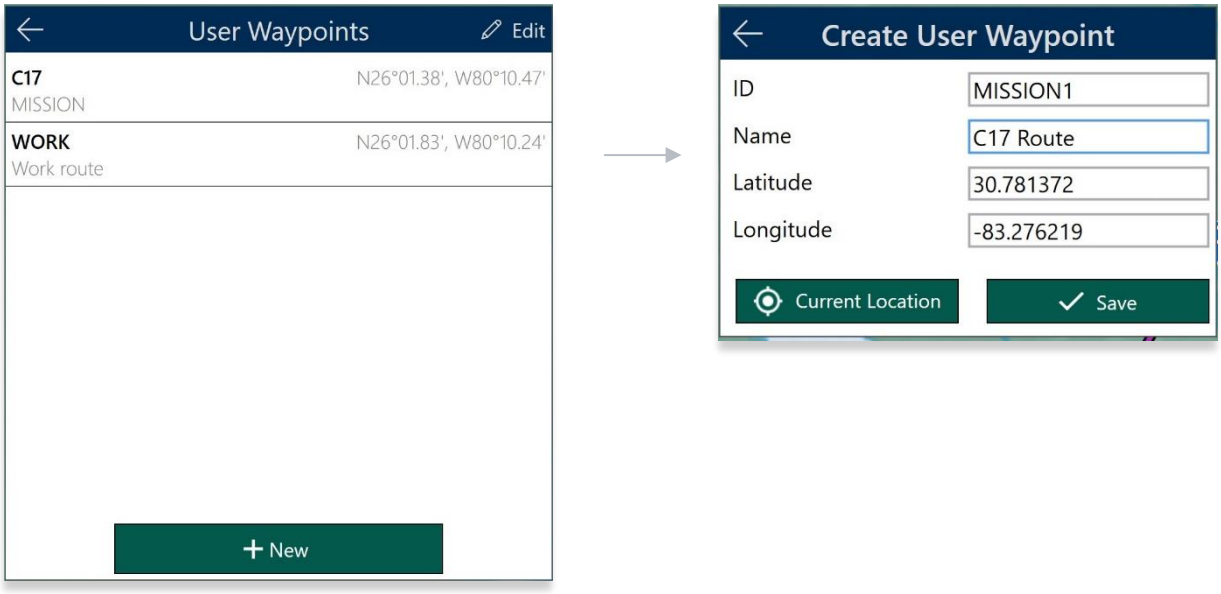
1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Tap **Show** from the side menu.
4. Tap **Routes**.
5. A list of saved routes will be shown below. Locate desired route then tap to enable selection and display them on the Moving Map.

6. Up to five saved routes can be displayed simultaneously. If you have a current route in the route panel, the route will show in a magenta line.



13.3.13.3.3.4 User Waypoints

1. Navigate to the ***Route Panel***.
2. Tap **Route**.
3. The Route menu will appear. Tap **Show** from the side menu.
4. Tap **User Waypoints**.
5. A list of User Waypoints will be shown below. Tap **+ New** to create a new Waypoint.
6. Fill in the necessary information such as the ID, Name (optional), Latitude and Longitude of the waypoint.
7. Tap **Current Location** to use your present location's coordinates.
8. Tap **Save** when done and your Waypoint will list under User Waypoints.



NOTE: Refer to Section 9.3 for information on sideloading User Waypoints.

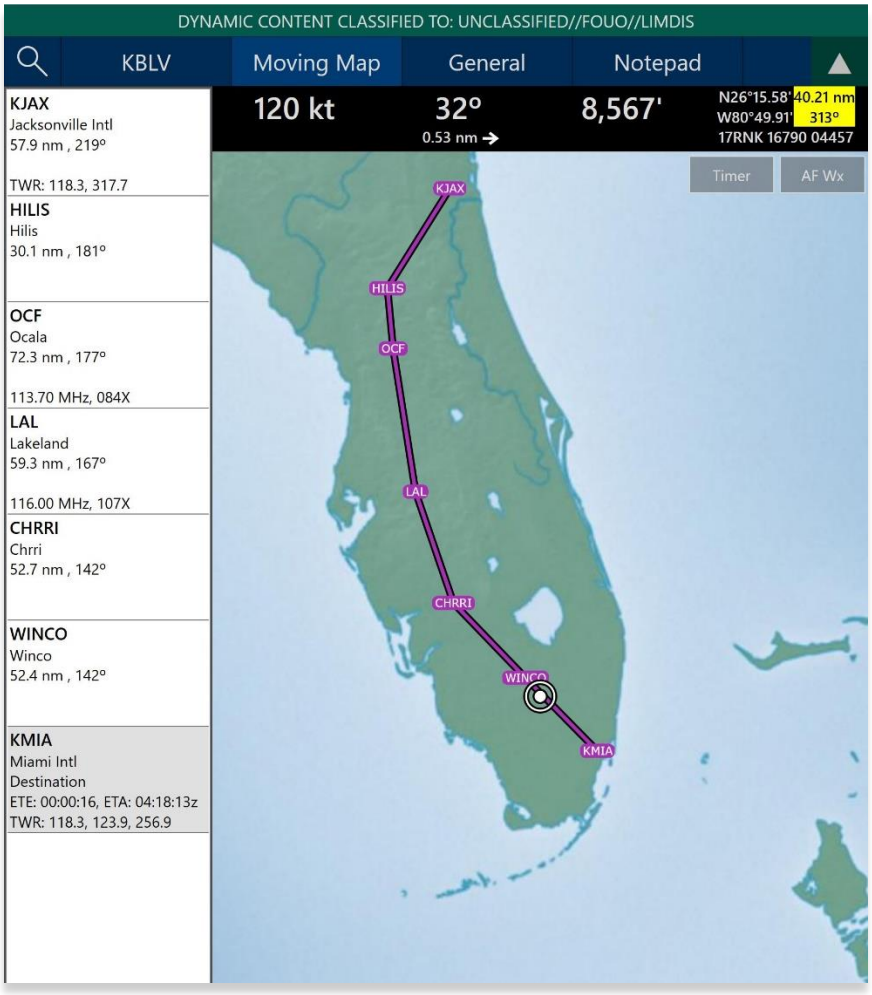
NOTE: The Name field is optional. When creating a name for User Waypoints, the name can only contain Alphanumeric characters (upper and lower cases), space, and hyphens. An error message will display if the name is not valid.

13.3.14 Estimated Time Enroute (ETE), Estimated Time of Arrival (ETA)

Estimated Time Enroute (ETE) and Estimated Time of Arrival (ETA) are calculated for each segment of a flight route. ETE is the estimated time which it takes to reach a point from your current location. The time gets updated as you move closer to the point. ETA is the estimated time at which you will arrive at the designated location.

In addition, users can add Departure and/or Arrival waypoints that will include ETE and ETA.

1. Tap **Moving Map** on the ***Main Menu.***
2. Navigate to the ***Route Panel.***
3. Each segment of the flight's route will display its ETE and ETA.



NOTE: Estimated Time of Arrival (ETA) will display in Zulu time. Under Preferences, users have the option to automatically snap route to current leg.

13.4 General

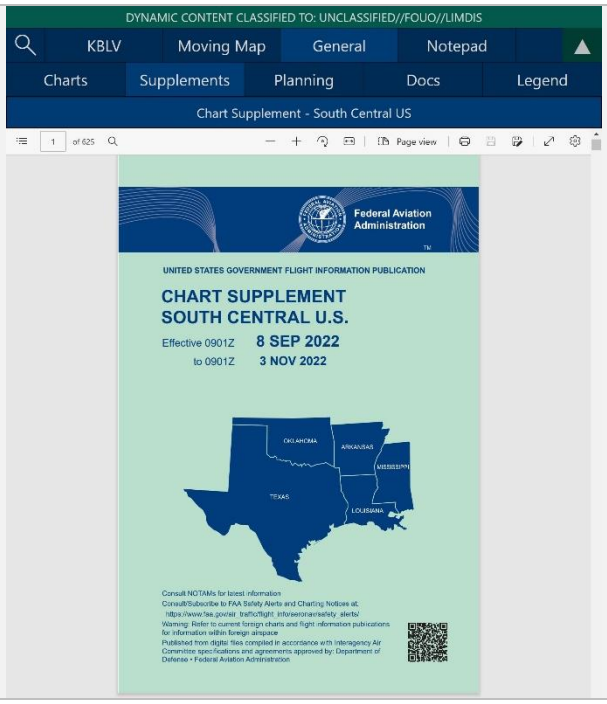
The General section includes significant Charts and documents such as Supplements, Planning, User Documents, and Legend.

13.4.1 Charts

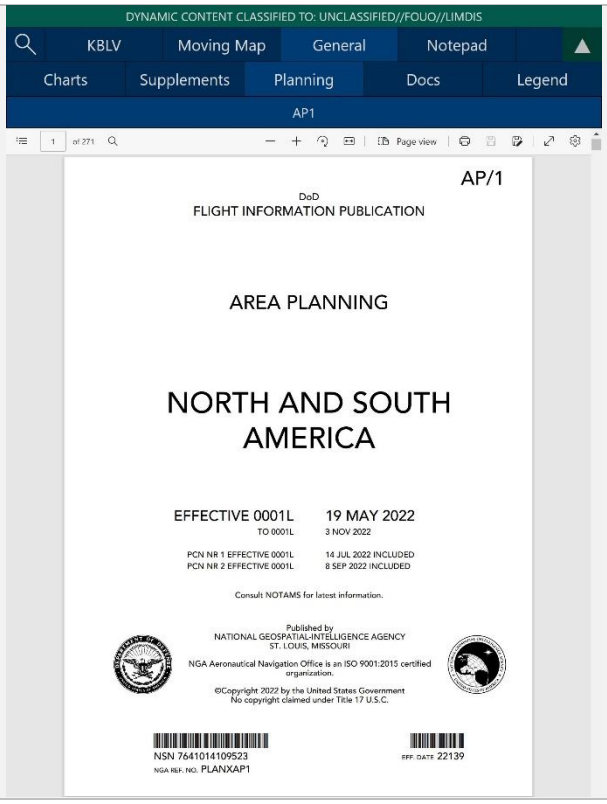
1. Tap **General** on the ***Main Menu***.
2. Select from Charts, Supplements, Planning, Documents, and Legend on the ***Secondary Menu.***
3. Tap on the **actions ribbon** and select desired chart, document, or legend, based on the respective selection.
4. A menu will display from which you can select High and Low Enroute Charts, Area Charts, Graphic Charts, CONUS Chart Graphics, Military Training Routes (MTRs), and other charts.

Charts

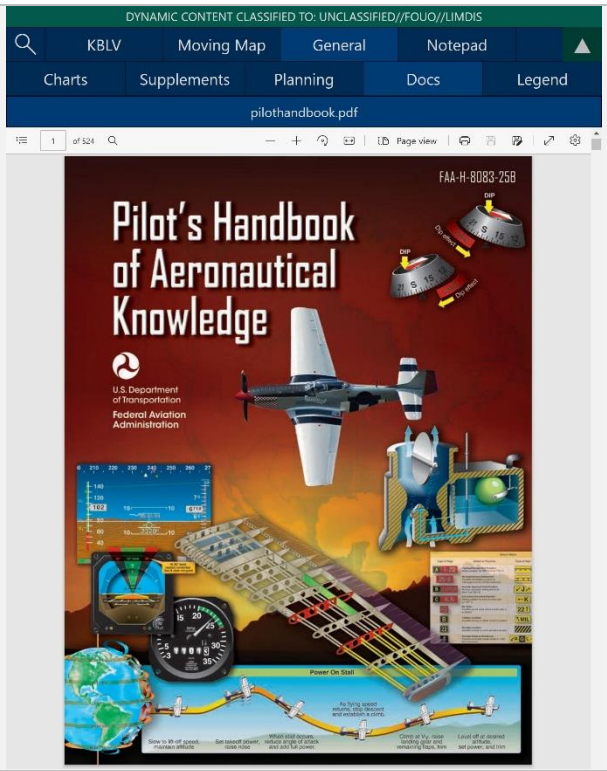
Supplements



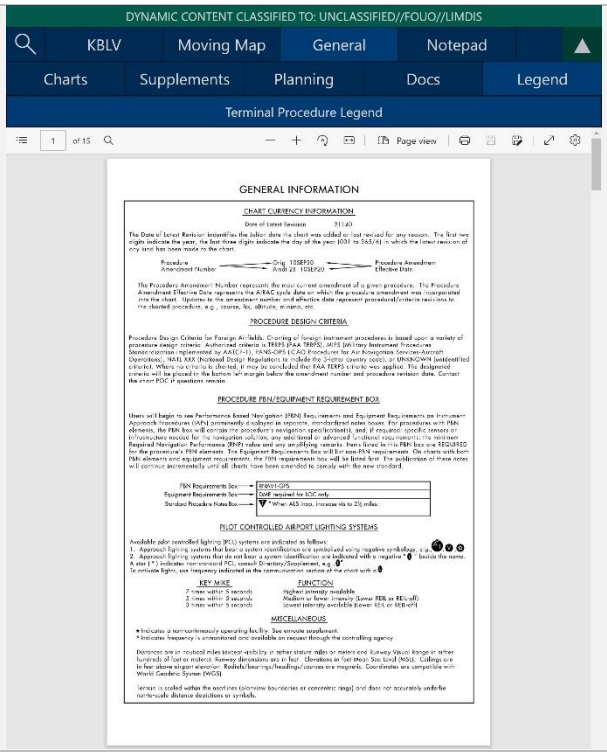
Area Planning Documents



User Documents



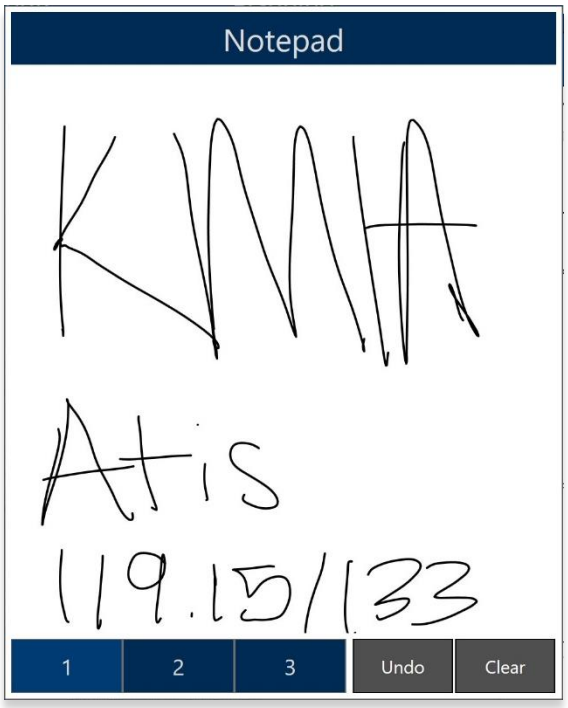
Terminal Procedure Legend



13.5 Notepad

The Notepad feature is a handy tool that creates up to three pages of notes. Notes can be drawn with your fingertips or by using a stylus. The notepad view includes Undo and Clear options.

- **Undo** – Undoes the most recent markings on the notepad.
- **Clear** – Erases all markings from the selected notepad page.



NOTE: The latest markups will automatically be saved when exiting the notepad view.

13.6 E6B Calculator

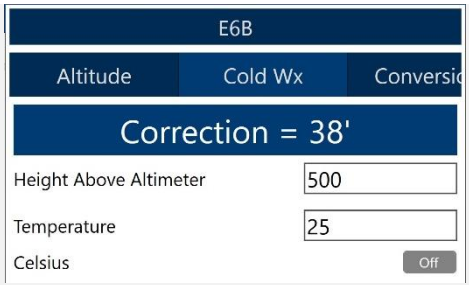
The electronic calculator enables pilots to perform a variety of calculations for preflight or inflight planning.

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.

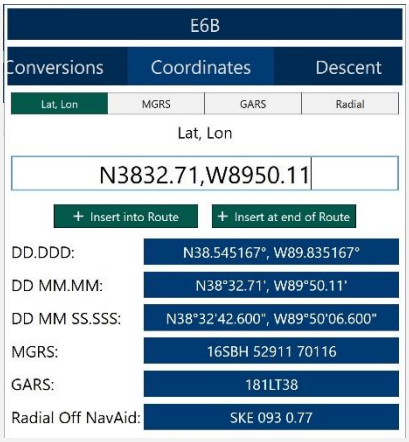


Conversions

Conversions converts Distance, Temperature, and Weight into different systems.

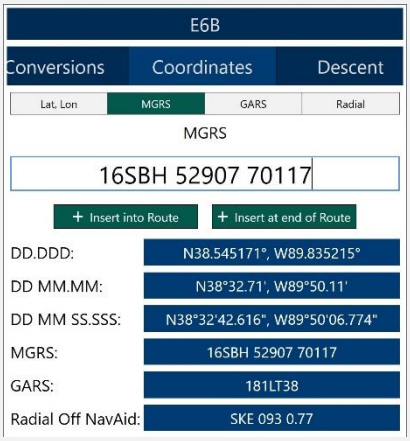
1. Tap on the desired conversions in Distance, Temperature, or Weight.
2. Enter the measurement value that you wish to convert (for instance, KG into Lbs).

Coordinates



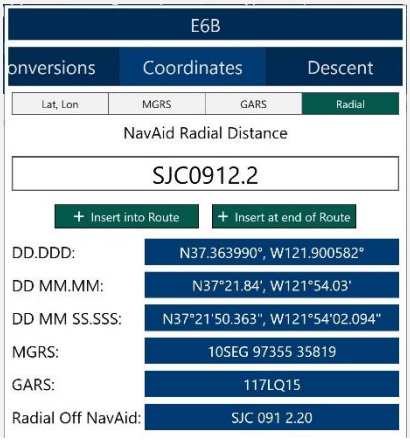
Coordinates allows users to get a reading on Lat, Lon, MGRS (Military Grid Reference System), GARS (Global Area Reference System), and Radial Off NavAid when you enter coordinates.

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



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

Distance is calculated by the speed in knots, the Time in the format 00:00:00 (hours, minutes, and seconds), and the Fuel Burn Per Hour in gallons per hour (gal/hr). The Total Fuel will display under the Fuel Burn Per Hour box and is calculated in gallons(gal). The Distance calculation will be displayed on the results bar above.

Speed is calculated by the Distance in nautical miles, the Time in the format 00:00:00 (hours, minutes, and seconds), and the Fuel Burn Per Hour in gallons per hour (gal/hr.). The Total Fuel will display under the Fuel Burn Per Hour box and is calculated in gallons(gal). The Speed in knots calculation will be displ**ayed** on the results bar above.

Time is calculated by the Distance in nautical miles, the speed in knots, and the Fuel Burn Per Hour in gallons per hour (gal/hr.). The Total Fuel will display under the Fuel Burn Per Hour box and is calculated in gallons(gal). The Time in the format 00:00:00 (hours, minutes, and seconds) calculation will display on the results bar above.

Instrument Flight Rule (IFR) Climb

IFR Climb calculates Climb Angle in degrees and Climb Rate in feet per minute by typing in Climb (Feet / NM) and Groundspeed (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: See reference notes located on the bottom of the E6B popup.

14 Application Management (App Mgmt)

Aero App's application management is a very useful tool for pilots as it is used to configure their application's settings, manage data, retrieve charts, as well as accessing the User Manual from the Aero App website (aeroapp.info), informational weblinks, and beneficial information available to users. Sections are as follows and will be further elaborated in the sections to come:

- Preferences
- Data
- Host Nation
- Help

14.1 Preferences

Preferences is a tool that provides users the capability to modify the behavior of Aero App using various options to customize the User Interface, Miscellaneous, Data, GPS, and Reset.

14.1.1 User Interface

1. Tap **App Mgmt** on the ***Main Menu.***
2. Tap **Preferences** on the ***Secondary Menu.***
3. The following option is available:
    - **Night Mode** – provides the option to view Aero App on a white-on-black or a black-on-white screen.

14.1.2 Miscellaneous

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Preferences** on the ***Secondary Menu***.
3. The following options are available:
    - **Show Ownship on APD and IAP** – provides the option to show ownship on FAA Airport Diagrams and Instrument Approach Procedures.
    - **Show Airport Ring on APD and IAP** – provides the option to verify the georeferencing by showing a small ring around the Airport center.

- **Switch to APD on Landing** – provides the option to switch view to APD upon landing.

NOTE: Users must enter desired speed (kt) to switch to APD. When a decimal number is entered in the Speed field, the number will be rounded to the nearest whole number.

NOTE: On the Moving Map screen, the APD will appear on a split screen, perfectly georeferenced.

- **Minimum Runway Length (ft)** – provides the option to filter Airports based on runway length.

NOTE: Users must enter desired length (ft). When a decimal number is entered in the Minimum Runway Length field, the number will be rounded to the nearest whole number.

- **Secret** – provides the option to designate 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.

14.1.3 Data

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Preferences** on the ***Secondary Menu***.
3. The following option is available:
    - **Store data in an external location** – provides users the option to store data on an SD card or a USB drive.

14.1.4 GPS

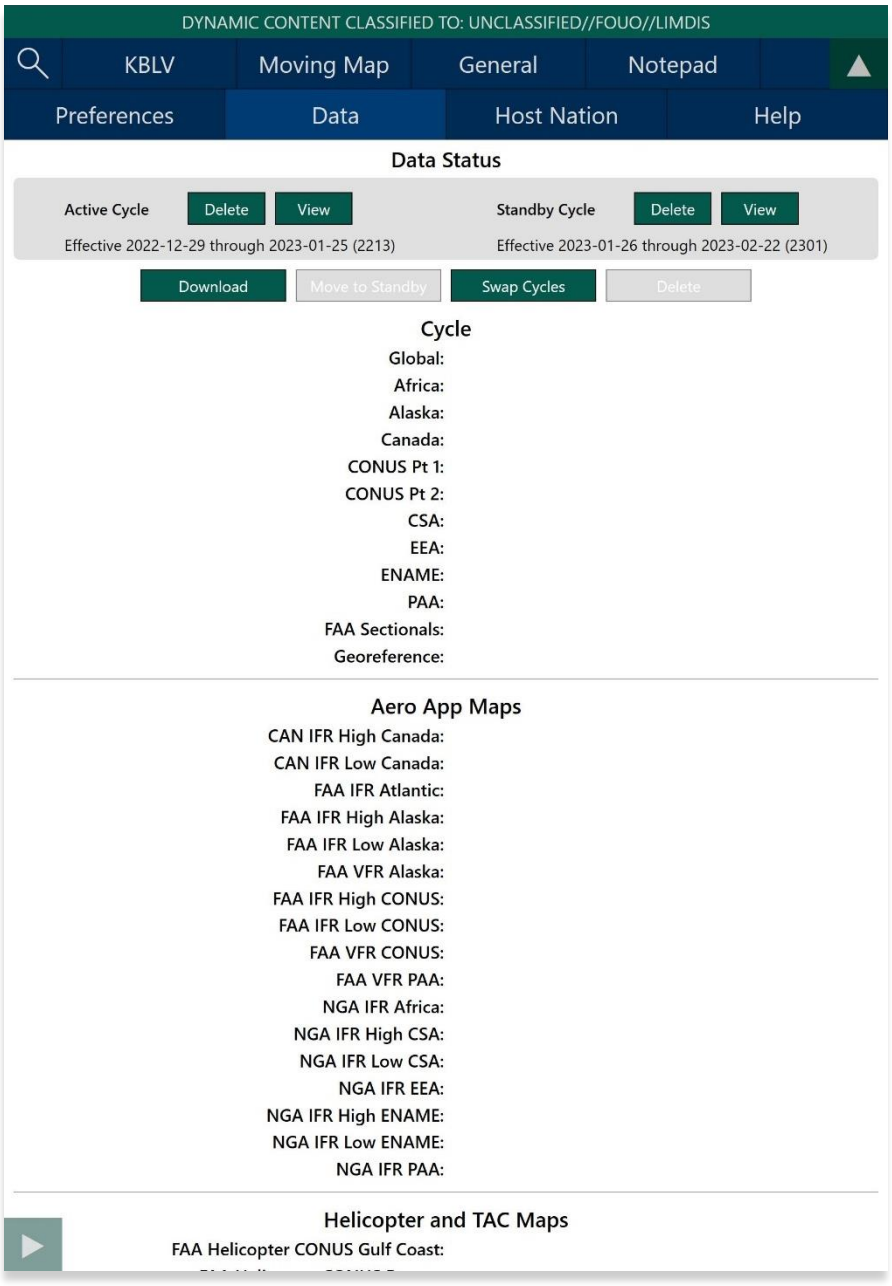
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Preferences** on the ***Secondary Menu***.
3. The following options are available:
    - **GPS COM port search** – provides users the option to connect to a GPS on all available COM ports.
    - **GPS Connection Settings** – provides users the option to connect to a GPS using specific settings.
4. A **GPS Settings** window will popup, select the configuration settings.
5. Tap **Reset** to reconfigure your settings.

14.1.5 Reset

1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Preferences** on the ***Secondary Menu***.
3. The following option is available:
    - **Clear All Charts Markups** – provides the option to clear all APD and IAP markups.

14.2 Data

The Data Status screen allows users to manage cycles. Refer to Section 11 for more information.



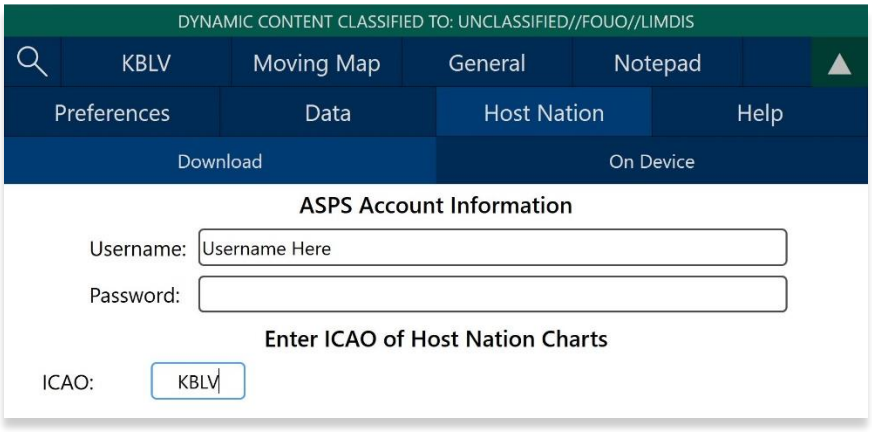
14.3 Host Nation

Host Nation charts can be downloaded and viewed for airfields outside the United States.

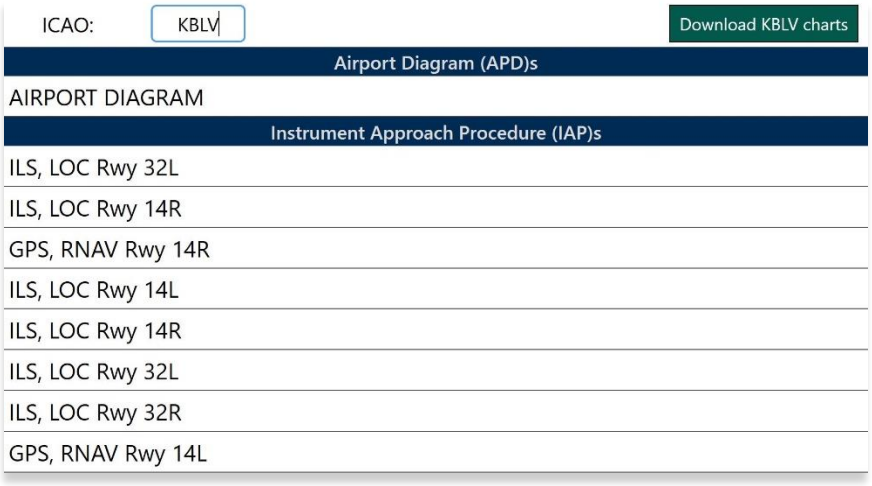
NOTE: Users must have ASPS credentials to access Host Nation Charts.

14.3.1 Download Host Nation Charts

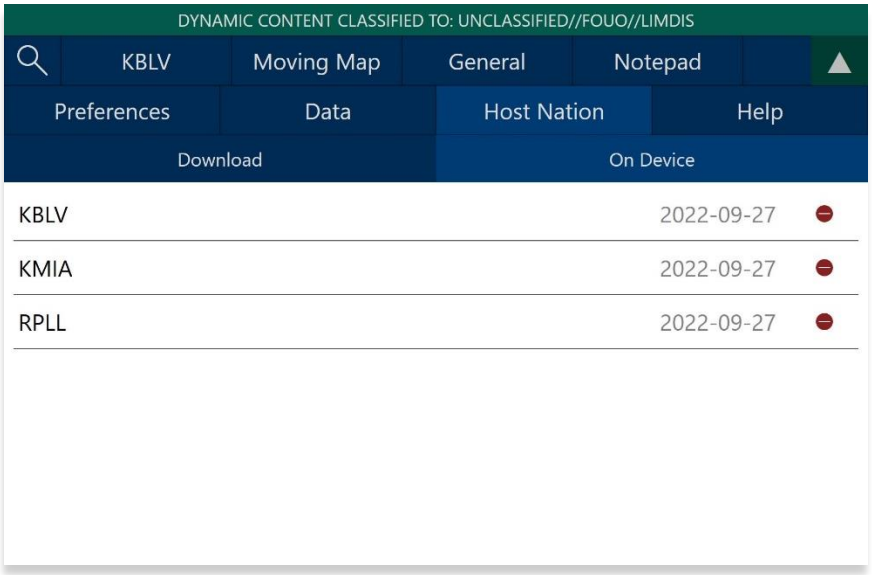
1. Tap **App Mgmt** on the ***Main Menu.***
2. Tap **Host Nation** on the ***Secondary Menu***.
3. Log in with your ASPS credentials.
4. Enter the ICAO for the desired Host Nation charts then tap **Enter** from device keyboard.



5. The chart list available for the ICAO will be displayed.
6. Tap on **Download ICAO charts** to download the charts to your device.



7. To verify that the Host Nation charts have been downloaded, tap **On Device**.
8. To view downloaded charts, refer to Section 13.4.1.



NOTE: In order to load Host Nation charts, an Active Cycle must be selected.

14.3.1.1 Create an ASPS Account

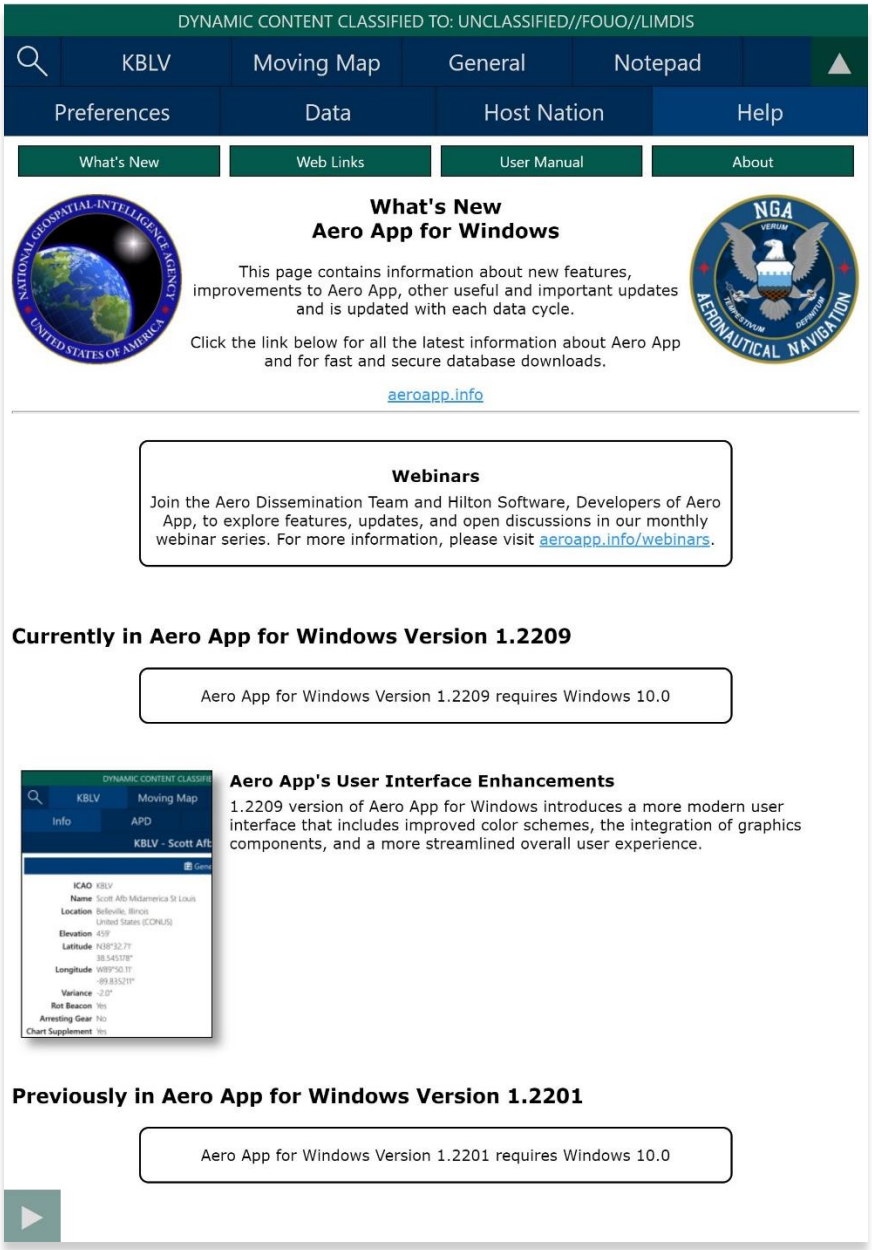
Pilots are required to possess an ASPS account to obtain host nation charts.

1. To access Aeronautical Source Packaging Service (ASPS), go to asps.leidos.com.
2. Tap on the **Request Account** button.
3. Fill in your information, including Government POC.

14.4 Help

The Help tab provides users with four options to select from:

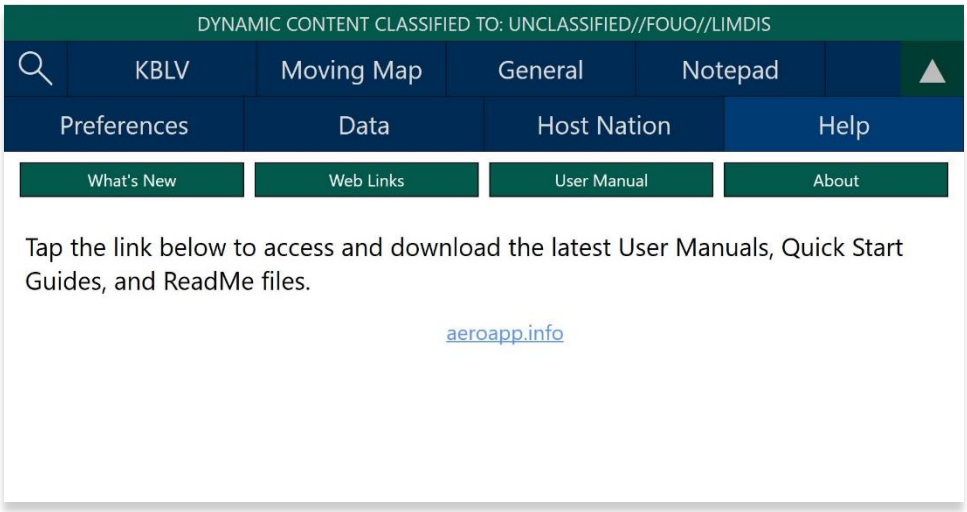
- What's New (Must have the global file loaded in Active Cycle)
- Web Links (Must have the global file loaded in Active Cycle)
- User Manual
- About



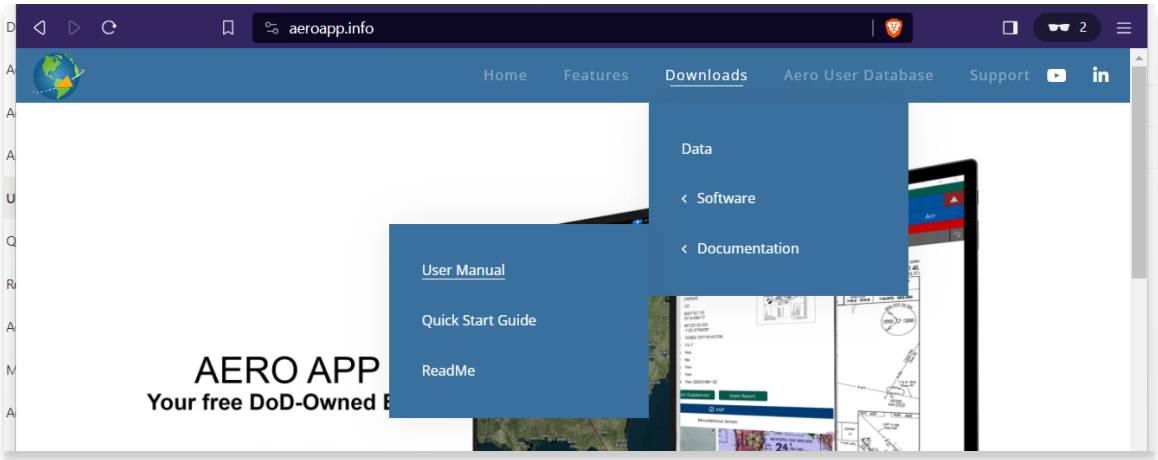
14.4.1 User Manual Access

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

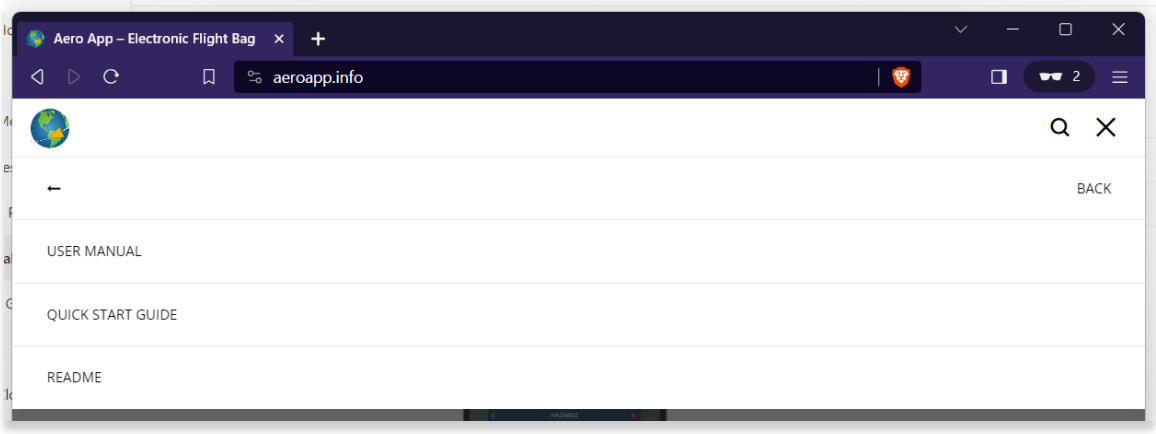
1. Tap **App Mgmt** on the ***Main Menu***.
2. Tap **Help** on the ***Secondary Menu.***
3. Tap the **User Manual** tab.
4. Tap the **aeroapp.info** link and you will be redirected to the Aero App homepage.



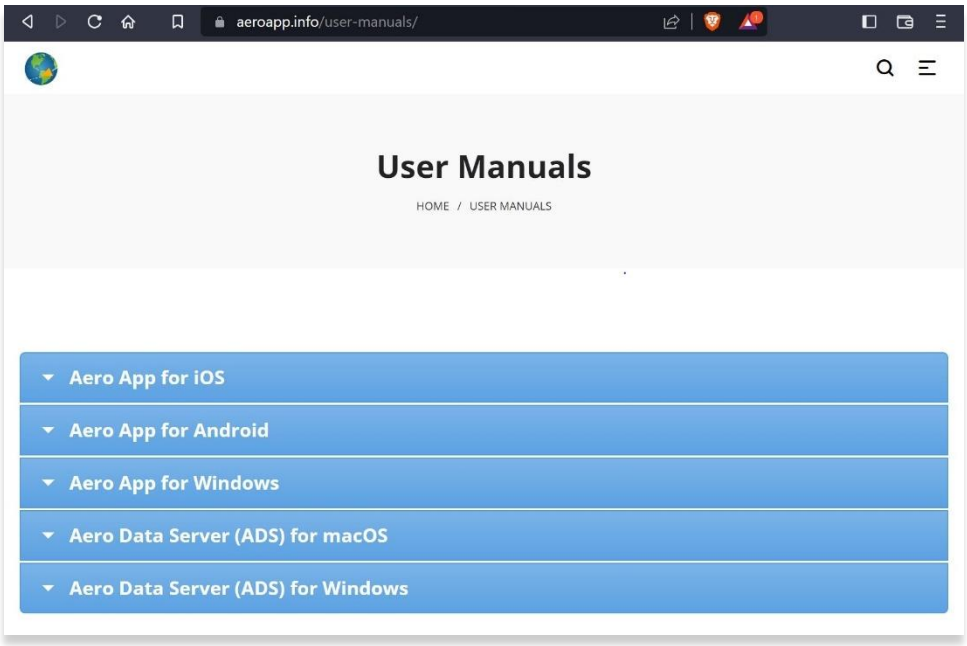
5. Hover over *Downloads*. Option placement will vary depending on display size.
    - On large screens, hover over **Downloads** from the menu ribbon to reveal additional download options.



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



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

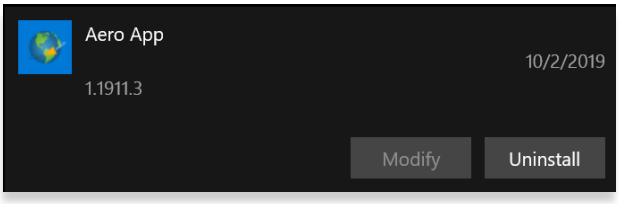


NOTE: The Aero App User Manual can be downloaded and uploaded into app. The PDF can be viewed at any time during their preflight or inflight experience with no internet connection needed. For more information, refer to Section 13.4.1.

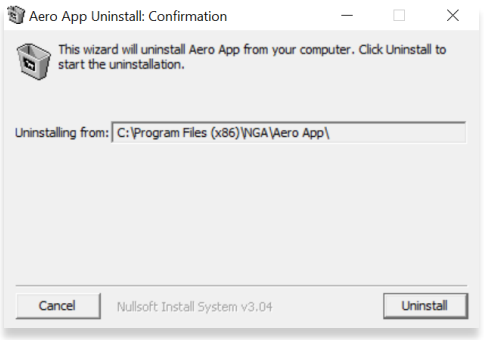
15 Appendix A | Uninstall Aero App

This section describes how to uninstall Aero App.

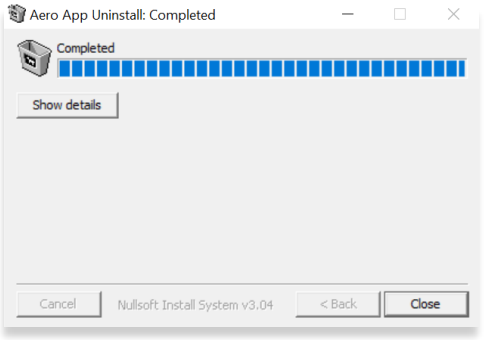
1. Go to **Settings** on your tablet.
2. Tap **Apps**.
3. Navigate to Aero App on the list provided.
4. Tap **Aero App**.
5. Tap **Uninstall** from the options provided.



6. A confirmation will pop up, tap **Uninstall**.



7. Once Aero App has been successfully uninstalled, a completed dialog box will appear, tap **Close**.



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

NOTE: Uninstalling Aero App will delete Aero App data.

16 Appendix B | User Waypoints and Coordinates

Enter Waypoints using Latitude and Longitude coordinates.

Coordinate formats include:

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

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

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

17 Appendix C | 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
Adobe	Software suite of graphic design, video editing, and web development applications
ADS	Aero Data Server
ADS-B	Automatic Dependent Surveillance-Broadcast
AF Wx	Air Force Weather
AFR	Africa (Central and Southern regions)
AIRMET	Airmen's Meteorological Information
Alt Min	Alternate Minimums
AP	Area Planning
APD	Airport Diagram
App Mgmt	Application Management
AQP	Advanced Qualification Program
Arr	Airport Arrival Procedures
ARTCC	Air Route Traffic Control Center
ASPS	Aeronautical Source Packaging Service
AUD	Aero User Database
AvGas	Aviation Gasoline
AWS	Amazon Web Services
Breadcrumbs	GPS points along a flight path
CAC Card	Common Access Card
CONUS	Contiguous United States
CRD	Common Route Definition
CSA	Caribbean and South America
Delta	Upgrades from previous data cycles that only include changes
Dep	Airport Departure Procedures
DINS	Defense Internet NOTAM Service
DLA	Defense Logistics Agency
Docs	User-defined content loaded into document library

DOD	Department of Defense
DP	Departure Procedures
DSN	Defense Switched Network
DVD	Digital Versatile Disc
E6B	Aviator's calculator
EEA	Eastern Europe and Asia
EFB	Electronic Flight Bag
E-IPL	Electronic - Instrument Procedure Library
ENAME	Europe, North Africa, and Middle East
ETA	Estimated Time of Arrival
ETE	Estimated Time Enroute
FAA	Federal Aviation Administration
FIR	Flight Information Region
FIS-B	Flight Information Services-Broadcast
FLIP	Flight Information Publications and Flight Information Products
Ft	Foot
GARS	Global Area Reference System
GB	Gigabyte
GEOAxIS	Credentials authentication provider for the government
GEOINT	Geospatial Intelligence
GPS	Global Positioning System
GS	Groundspeed
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

Kt	Knot
LAHSO	Land and Hold Short Operations
Lat, Lon	Latitude and Longitude
Lbs	Pounds
LIFR	Low Instrument Flight Rules
M	Meter
macOS	Current series of Unix-based graphical operating systems by Apple
MDM	Mobile Device Management
METAR	Meteorological Aerodrome Report. Aviation Routine Weather Report, a format for reporting weather information
Mgmt	Management
MGRS	Military Grid Reference System
Moving Map	Navigation system displaying the receiver's current location at the center of a map
MTRs	Military Training Routes
NavAid	A device or system that provides a navigator with navigational data
NEXRAD	Next-Generation Radar
NGA	National Geospatial-Intelligence Agency
NGA GEOINT	NGA web-based capabilities for online, on-demand discovery, and access to geospatial intelligence
NIPRnet	Non-secure Internet Protocol Router Network
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NSN	National Stock Number
OCONUS	Outside Contiguous US
PAA	Pacific, Australasia, and Antarctica
PDF	Adobe Portable Document
PIREP	Pilot Report
PKI	Public Key Infrastructure
POC	Point of Contact
Prog Chart	A map displaying the likely weather forecast for a future time
RNAV	Area navigation, a method of IFR navigation
SAR	Search and Rescue

SD Card	Secure Digital High-Capacity card
Shapefiles	Geospatial vector data format for geographic information system (GIS) software
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SM	Statute Mile
SQLite	Relational database management system
SR	Slow Speed Low Altitude Routes
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TACs	Terminal Area Charts
TAFs	Terminal Aerodrome Forecasts
TFR	Temporary Flight Restriction
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